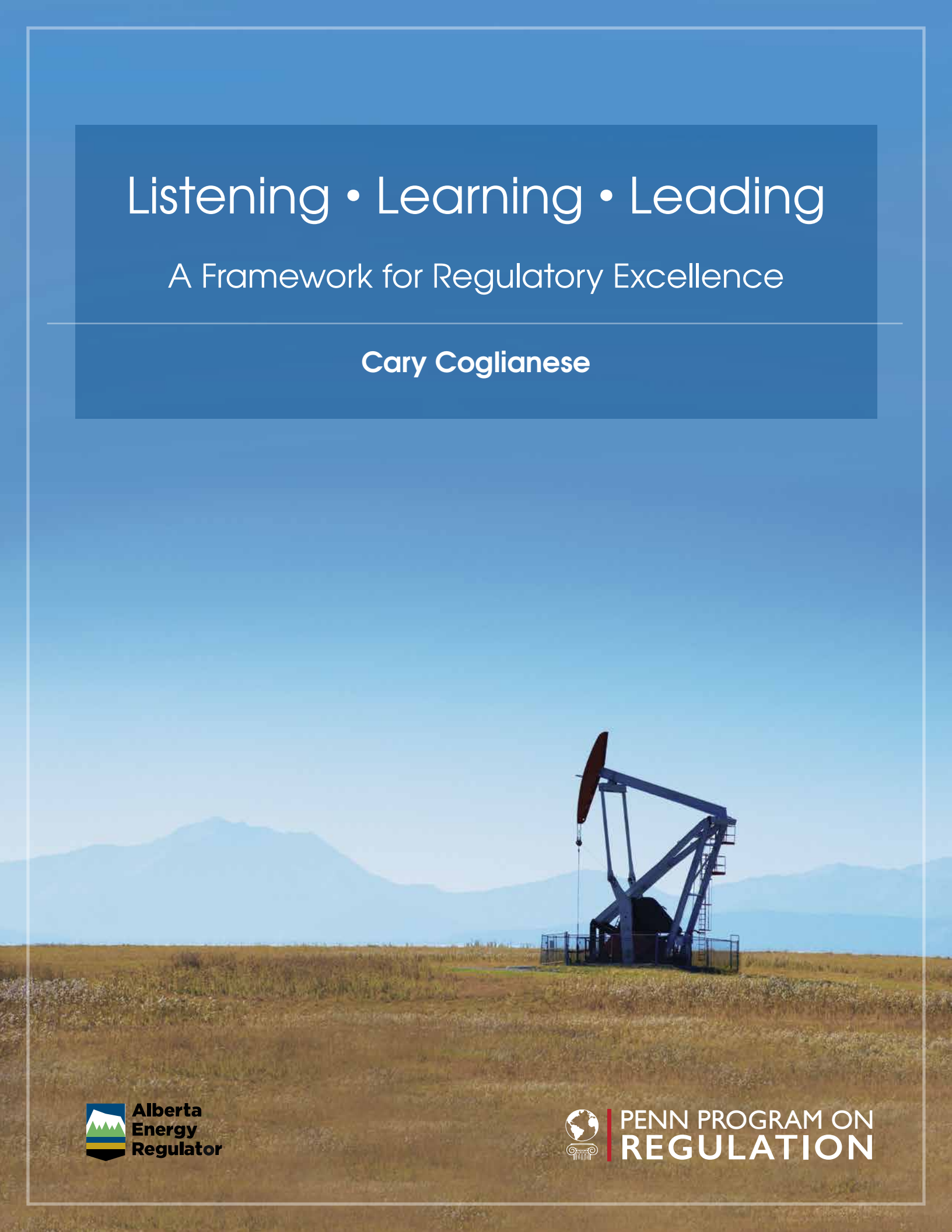
Listening • Learning • Leading

A Framework for Regulatory Excellence

Cary Coglianese



Alberta Energy Regulator

PENN PROGRAM ON REGULATION

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UNIVERSITY OF PENNSYLVANIA LAW SCHOOL

Penn Program on Regulation

The Penn Program on Regulation (PPR) brings together more than thirty experts from across six schools at the University of Pennsylvania, a private, Ivy-League institution known as one of the world's premier centers for teaching and research. Based at Penn Law, PPR delivers rigorous, balanced analysis from multiple disciplines that bears on important regulatory policy problems and alternative strategies to solve them, as well as on the processes of making and implementing regulation.

For more information about PPR, visit its website at www.pennreg.org or its daily blog at www.regblog.org.

Alberta Energy Regulator

The Alberta Energy Regulator (AER) is the single regulator of energy development in Alberta, Canada—from application and exploration, to construction and development, to abandonment, reclamation, and remediation. Its mandate is to ensure the safe, efficient, orderly, and environmentally responsible development of hydrocarbon resources over their entire life cycle. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for all Albertans.

For more information about the AER, visit its website at www.aer.ca

About the Author

Cary Coglianese is the Edward B. Shils Professor of Law and Professor of Political Science at the University of Pennsylvania, where he serves as the director of the Penn Program on Regulation and has served as the law school's Deputy Dean for Academic Affairs. He specializes in the study of regulation and regulatory processes, with an emphasis on the empirical evaluation of alternative regulatory strategies and the role of public participation, negotiation, and business-government relations in policy-making. His most recent books include *Does Regulation Kill Jobs?, Regulatory Breakdown: The Crisis of Confidence in U.S. Regulation, Import Safety: Regulatory Governance in the Global Economy*, and *Regulation and Regulatory Processes*. Prior to joining Penn Law, Coglianese spent a dozen years on the faculty at Harvard University's John F. Kennedy School of Government. He also has taught as a visiting law professor at Stanford and Vanderbilt, served as a founding editor of the peer-reviewed journal *Regulation & Governance*, and created and now advises the daily production of *RegBlog.org*.

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Listening, Learning, and Leading: A Framework for Regulatory Excellence

Cary Coglianese[1]

Background

The Alberta Energy Regulator (AER) serves as the single regulator of energy development in Alberta, Canada, overseeing the "efficient, safe, orderly and environmentally responsible" development of oil, natural gas, coal, and oil sands throughout the province. Not content simply to go about regulation as usual, the AER's leadership committed the organization to deliver and sustain a high level of public value – in short, to achieve regulatory excellence.

The AER's highly laudable vision, announced soon after the AER was created in mid-2013, is to be "recognized as best-in-class, ensuring the safe, environmentally responsible development of energy resources for the benefit of all Albertans." The AER's leadership has announced it is seeking to fulfill this forward-looking vision by delivering "protective, effective, efficient, and credible" regulatory performance.

In support of its strategic vision, the AER announced in mid-2014 that it was launching a Best-in-Class Project. The AER observed "that Alberta's resource development landscape requires a world leading regulatory organization that has a best in class mind-set, attitude, capabilities and regulatory systems to deliver superior performance." As the AER noted, "the question then becomes, what is a 'best in class' regulatory agency?"

The AER's Best-in-Class Project, convened independently under the auspices of the Penn Program on Regulation (PPR) at the University of Pennsylvania, constituted a process designed to help inform the AER and other regulators around the world about how to answer the question of what makes a best-in-class or excellent regulator. PPR convened four major dialogue sessions, including two in Alberta, involving more than 150 participants with extensive knowledge of and interest in the regulation of oil and gas production in Alberta or regulation more generally. PPR's faculty conducted face-to-face or phone interviews with more than 60 individuals interested in the work of the Alberta Energy Regulator.

PPR team members and outside experts produced an original study of regulators' strategic plans and wrote five other research papers synthesizing existing research on

major facets of regulatory operations. In addition, leading experts from around the world produced more than fifteen papers, each addressing the question of what makes a regulator excellent. Numerous other related seminars and meetings sponsored by PPR throughout the duration of the project, including seminars at the University of Pennsylvania Law School and a day-long meeting with sitting, high-level U.S. regulators in Washington, D.C., helped inform the project as well.

Findings

The AER called for a final convener's report "offering high-level principles to the field of regulatory management and practice." This report responds to that call by addressing the following questions:

1. What are the attributes of regulatory excellence?
2. To what do these attributes apply?
3. How can a regulator become or remain excellent?
4. How can a regulator measure its progress toward or its attainment of excellence?

The answers to each of these questions have been richly informed by the extensive discussions held with both Albertans and international experts during the course of this project, as well as by the literature reviews and research conducted under the auspices of the AER's Best-in-Class Project. This following summary provides the answers that have emerged.

1. What are the attributes of regulatory excellence?

Literally hundreds of attributes have been used to describe ideal or excellent regulators, both in our discussions with experts and citizens as well as in the myriad of reports and research papers reviewed as part of this project. Some of these attributes include: transparent, smart, fair, firm, consistent, flexible, accountable, adaptive, trustworthy, effective, credible, equitable, efficient, timely, responsive.... and so forth. The list could go on.

Although this convener's report documents all the adjectives the PPR team came across that describe an excellent regulator, simply knowing these terms is not useful. To create a framework for excellence that can be practically applied by the AER and other regulators, this report distills the essence of all these adjectives into three *core attributes* of excellence:

(1) *Utmost Integrity.* This is about much more than just a lack of corruption; it is also about the regulator's commitment to serving the public interest, to respecting the law, and to working with duly elected representatives.

(2) *Empathic Engagement.* This is about transparency and public engagement, but also about how respectfully the regulator and its personnel treat regulated entities, affected landowners, and all other concerned individuals.

(3) *Stellar Competence.* This is about the actual delivery of outcomes that maximize public value and the capacities built and actions taken to achieve a high level of performance.

These three core attributes – or atoms in a molecule we call RegX – capture and encompass all the other attributes reflected in the research literature and in our interviews and dialogue sessions. The adjectives "utmost," "empathic," and "stellar" indicate that although even good regulators need integrity, engagement, and competence, the excellent regulator needs these to the highest degree.

In addition to distilling the attributes of excellence into these three core elements, the PPR team's expansive research and discussions lead to nine essential tenets of regulatory

excellence. *These nine tenets constitute the most significant, comprehensive but still compact aspirational statements of regulatory excellence of any that we have encountered.* They also helpfully align, as should be apparent, with the three core "RegX" attributes.

Nine Tenets of Regulatory Excellence

An excellent regulator consistently holds itself to the highest standards of integrity.

1. *Fidelity to law:* An excellent regulator seeks to comply faithfully with all legitimate laws.
2. *Respect for democracy:* An excellent regulator recognizes and seeks to fulfill its role in a democratic system by yielding to clear and proper commands by elected officials, and also by seeking as needed to initiate or contribute to productive public dialogue on issues relevant to the regulator's mission.
3. *Commitment to public interest:* An excellent regulator strives to serve the public interest first and foremost, not to succumb to expediency nor to display bias toward select private interests.

An excellent regulator engages empathically with all segments of society when making decisions and exercising authority.

4. *Even-handedness:* An excellent regulator engages fairly with all affected interests, recognizing that sometimes even-handedness will require affirmative outreach to ensure that otherwise poorly represented views are adequately heard.
5. *Listening:* An excellent regulator hears what everyone who has values or interests at stake in its decisions has to say, seeking to understand how its decisions will affect others and trying to make decisions that benefit from the different knowledge distributed throughout society.
6. *Responsiveness:* An excellent regulator responds to concerns and explains its decisions fully and sincerely, being transparent not merely by providing access to information but also by giving reasons for its actions (including decisions not to act) and addressing all important arguments for and against its chosen course of action.

An excellent regulator demonstrates consistently stellar competence by using its available resources to maximize public value.

7. *Analytical capability:* An excellent regulator seeks out reliable data and conducts analysis sincerely with the aim of synthesizing the best available evidence to support its decisions, seeking to reduce and manage risks smartly (even though risk may never be eliminated entirely).
8. *Instrumental capacity:* With a sufficiently-funded and highly-trained staff working in a supportive organizational culture, an excellent regulator uses the best tools and technologies available to solve problems and it earnestly seeks continuous improvement through regular performance measurement and evaluation.
9. *High performance:* An excellent regulator consistently delivers significant positive public value, something which is not necessarily the same as making everyone happy (the latter which may be unattainable or undesirable anyway).

Although other propositions about regulatory performance might well be offered, these nine tenets distill the essence of regulatory excellence. A regulator that is not aligned well with all nine tenets might be a good regulator; it could not be said to be an excellent regulator.

2. To what do these attributes apply?

In discussing regulatory excellence and in reading what others have written about regulatory performance, the PPR team noticed that different people – or even sometimes the same people, speaking or writing at different times – offer three distinct types of answers to the question, "What makes a regulator excellent?" They conceptualize regulatory excellence in terms of whether the attributes of excellence apply to the (1) traits of the regulatory organization, (2) its actions, or (3) the outcomes of its actions. Taken together, these three ways of thinking about excellence are called the "TAO" of Regulatory Excellence:

- *Traits.* Some people think of excellence in terms of the traits of a regulator as an organization. They focus on the general "state" of the regulator or its general

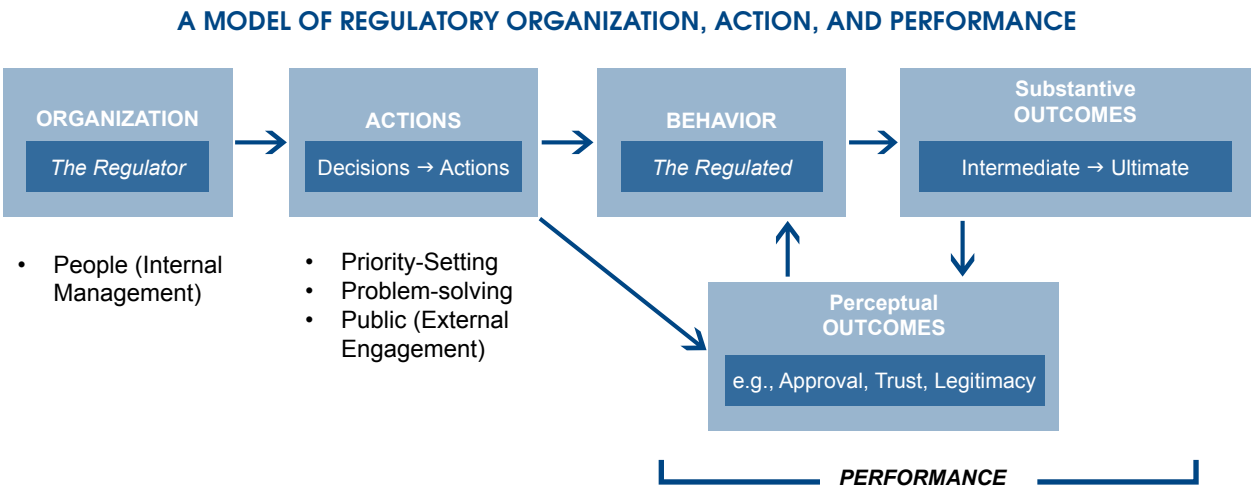
posture. Participants in the Alberta dialogues in particular spoke of fostering a "culture" or an "ethos" of excellence that pervades a regulatory organization.

- *Actions.* Another way to think of excellence lies in the types of actions a regulator takes in the course of regulating, whether in issuing new rules, inspecting regulated firms, responding to incidents, or undertaking other regulatory-related actions. Those who emphasize excellence in terms of action focus on whether regulators select the appropriate tools for the job or whether they use "best practices" in prioritizing risks and solving problems.
- *Outcomes.* Ultimately the traits of a regulator as well as its actions, should lead to publicly valued outcomes, such as reduced safety risks or improved market efficiencies. After all, that is what makes people want to define excellence in terms of certain traits and actions, because they think those traits and actions are connected to excellent outcomes. Some outcomes are substantive (e.g., reducing pollution, saving costs, etc.), while other outcomes are process-oriented (e.g., building trust, strengthening legitimacy, etc.).

The key is that to be truly excellent, the regulator needs to exhibit utmost integrity, empathic engagement, and stellar competence in the traits of its organization, in its actions, and in the outcomes of its actions. Although each of these are distinct ways of thinking about how to apply the attributes of excellence to a regulator, the regulator's traits, actions, and outcomes will in reality have a close bearing on each other. Regulatory excellence occurs when these three are well-connected and in sync with each other, reflecting the three core RegX attributes and the nine tenets of regulatory excellence.

3. How can a regulator become or remain excellent?

Just defining the core attributes and tenets of regulatory excellence is not enough to guide a regulator on a path toward excellence. How does the regulator ensure that its traits, actions, and outcomes can align with those core attributes and tenets? Although no simple formula or common recipe can be offered that applies to all regulators at all times, it is possible to offer a general model for any regulator seeking to pursue excellence. That model can be visually represented as a causal chain (illustrated on the next



page) that begins with the regulator as an organization (on the left) and proceeds to desired outcomes in the world (on the right).

A regulator becomes – or remains – excellent by ensuring that this regulatory "chain" operates in a way that aligns with the core attributes and tenets of regulatory excellence. As should be apparent, the TAO of Regulatory Excellence corresponds to three main parts of this model or chain: traits of the organization; actions; and outcomes in terms of behavioral changes, perceptual outcomes, and substantive outcomes (collectively, the regulator's "performance").

Embedded in the first two steps on this chain are actually four key facets of a regulator's organization and actions that affect its performance: *internal management*; *external engagement*; *priority-setting/decision-making*; and *problem-solving*. This report offers guidance for how a regulator can approach each of these key facets of its operations in order to pursue a path towards excellence:

(1) *Internal management.* Key organizational or management considerations include maintaining mission clarity, ensuring adequate resources, building strong human capital, and maintaining appropriate autonomy. Management is key to ensuring that the regulator has a solid basis for making sound decisions and executing appropriate, effective actions.

(2) *Priority-setting/decision-making.* An excellent regulator should rely consistently on careful, evidence-based decision making and should set priorities informed by consideration of risks. An excellent regulator should also be clear about which policy principles it uses when choosing how to prioritize different risks and make decisions.

(3) *Problem-solving.* Flexible regulatory approaches promise more cost-effective outcomes, as they give regulated entities the opportunity to choose lower-cost means of achieving regulatory outcomes. At their best, these approaches also achieve the regulator's ideal of leveraging the advantages regulated firms possess in knowing how best to solve the problems created by their activity. But flexible instruments will not work well under all circumstances. The ultimate test for problem-solving lies in finding the right tool for the purposes and circumstances at hand.

(4) *External engagement.* All things being equal, greater and earlier opportunities for public engagement are better. Such engagement should be empathic. Listening is essential. But so too is reason-giving. Especially if a regulator must make a decision that will be opposed or disfavored by some, the public deserves a full and forthright account of the policy reasons underlying the decision.

Taken together, how a regulator manages its organization, priority-setting/decision-making, problem-solving, and external engagement will affect its ultimate performance.

In improving these four factors and perfecting the chain of regulatory excellence in the model above, regulators ultimately need to develop "people excellence." Not only do they obviously need to ensure that the people serving in their organizations are technically knowledgeable and competent, but importantly they also need to ensure those people possess the utmost integrity and the skills needed to engage empathically with others. The excellent regulator works to establish an organizational culture that fosters and reinforces humility, empathy, and a steadfast commitment to public service on the part of the people who serve in the regulator's name – and on behalf of the public to which the regulator is accountable. Only if the people working in a regulatory authority are committed to doing their utmost to deliver public value, and to learning and improving their ability to deliver that value in a manner that demonstrates respectful engagement with others, can a regulator expect to achieve true excellence.

4. How can a regulator measure its progress toward or its attainment of excellence?

To assist in making progress on a path toward excellence, regulatory leaders can benefit from instituting systems for measuring regulatory performance. The proper design of any regulatory performance measurement system will depend ultimately on its purpose. Measurement is a vital tool for learning, and learning should be a core part of the excellent regulator's culture. But the point is not merely learning for learning's sake. Regulatory leaders need to be strategic about measurement. They need to determine clearly the purposes – internal and external – for measurement, and then plan a system that meets that purpose.

There exists no one-size-fits-all "best" measurement system, and no single measure can capture all that a regulator must accomplish to become excellent nor all that a regulator might seek to learn through measurement. Measurement can focus either (A) *narrowly* or *broadly* on (B) (i) the *regulator's* organizations and actions or (ii) conditions in the *world*, including industry behavior. *Narrower* measurements can be used to inform the regulator about specific conditions or problems (e.g., air pollution emissions) or about how specific policies, regulations, and programs are working (e.g., an air pollution regulation). *Broader* measures might help policymakers understand general patterns and trends in conditions or problems, such as with measures of overall ambient air quality. Or they can help provide a wide-angle picture of what the regulatory organization as a whole is doing, such as with measures of its total budget or the annual number of inspections. Very broad measures can inform the regulator's top leadership as well as political overseers and the public about the performance of the regulator as a whole. Excellent regulators need a range of measures, narrow and broad, on the regulator as well as on the world.

The broadest approach to measurement might be an overall "excellence assessment." Such an assessment *of* excellence is different from the strategic use of measurement any excellent regulator puts in place in order to run its operations well. Measurement *of* excellence, in other words, is different from measurement *for* excellence, and as such it may call for a different approach to measurement. For example, measurement *of* excellence must be comprehensive. It seeks to provide an overall account of how well the regulator is doing. Toward this end, the regulator seeking to determine if it is excellent needs to consider not merely whether it is getting better at aligning its organization, actions, and performance with the RegX core attributes and the tenets of excellence, but also whether it has done so overall to an extent that rises above a threshold of excellence. Such a task would require stipulating or coming to an agreement on what weights to give to different aspects of the regulatory model and attributes of excellence. In other settings, such as health care administration, accreditation systems have emerged that have achieved a professional consensus on such weighting and the necessary thresholds. In principle, such a system could be developed for a regulator as well.

Some public officials and members of the public might reasonably desire to compare regulators with each other. Such a task, though, must overcome at least four hurdles. First, not all regulators – even in the same general field – face the same problems, the same social and economic environments, or the same kinds of firms. The settings within which regulators operate can differ most dramatically across different regulatory jurisdictions. Second, different regulators also use different data systems, which complicates comparisons. Third, the available data that are comparable

– such as the rules "on the books" – are not generally the most meaningful measures. Finally, just because a regulator benchmarks well against other regulators doesn't necessarily mean it is an *excellent* regulator. It could just be that the regulator is simply better than other mediocre regulators.

Although performance measurement certainly must factor into any larger transformational effort of a regulatory organization, regulatory leaders should be realistic about performance measurement's role. Performance measurement systems depend on strong, active organizational leadership, and an organization should have a widely diffused "buy-in" to a performance measurement system if it is to induce meaningful organizational change. Furthermore, measurement *for* excellence should almost surely take precedence over measurement *of* excellence.

To use measurement for the purpose of achieving excellence, a regulator should include in its measurement portfolio some evaluation research that aims to trace out causal connections between the regulator's actions and outcomes in the world. Only causal evaluations can definitively answer persistent questions about whether and how well regulation is working. Of course, causal evaluation – conducted in a manner that approximates a randomized controlled experiment – is usually much more resource- and time-intensive than non-causal forms of performance measurement – as challenging as those measurement approaches can be. Consequently, no regulator can subject everything to careful, ex post causal evaluation research.

When it comes to being strategic about measurement, the regulator also needs to take pains to avoid what is known as the "lamppost problem." The regulator must start by determining what broad attributes of excellence it aims to improve and then proceed to define specific attributes, find indicators and obtain data sources, choose methods, and determine when third-party evaluators or peer review may be needed. Along the way, the regulator should exhibit empathic engagement in its selection of measures and design of measurement systems. Especially if the regulator intends at least some of its performance measures to speak to an external audience and serve a purpose of telling the regulator's story to others outside its organization, the measures selected and the ways they are analyzed will be more credible if they are based on input from members of that audience.

Recommendations

Regulatory excellence is like the summit of a mountain. But like real mountains, there is not necessarily a single way to the top. Some routes may be well-traveled, but new routes can be explored and invented too. Given the vital role that regulators play in the global economy, making sure that they can get to the top of their field is one of the most pressing imperatives facing the world today.

Defining regulatory excellence is itself the first step for regulatory leaders who seek to reach the top. We have seen that no shortage of definitions or attributes of excellence exist for regulators. Think of anything good that a regulator can do, and it will factor into someone's definition of regulatory excellence. But after probing deeply into the various attributes and definitions that exist – as well as listening carefully to all that we heard at PPR's dialogues and interviews – it became clear that the essence of all of these attributes can be distilled to three – *utmost integrity*, *empathic engagement*, and *stellar competence* – along with a set of nine core tenets of regulatory excellence.

What these essential attributes and tenets mean operationally, day-to-day, will vary from regulator to regulator – both

because of the differences in different regulator's missions as well as in the political, economic, and social milieus in which they are situated. Context matters. Moreover, a regulator's excellence is ultimately interdependent. It cannot be defined completely by the leaders of a regulatory organization themselves. The very definition of successful, excellent performance depends on the publics that the regulator serves and on elected officials. Moreover, the achievement of excellence does not depend entirely on what regulators do, but is also shaped by the conduct of regulated entities whose interests are not always fully aligned with the regulator's mission and whose behavior may be overseen by but cannot be completely determined by the regulator.

Although the precise meaning of excellent or high-quality regulation might be interdependent and vary from regulator to regulator depending on their mission and the type of entities they regulate, experts and members of the public alike do recognize and agree on a number of common attributes of excellent regulators. These attributes bear directly on the regulator's outward relationships (*empathic engagement*), its overall performance (*stellar competence*), and its inner virtues (*utmost integrity*). The excellent regulator is one that meets this three-part RegX test on a consistent basis and is ever-striving to learn how to improve. The excellent regulator, in short, is the one that listens, learns, and leads.

Recommendations. The outreach, dialogue, research, and analysis underlying this report inform the following five strategic recommendations for any regulator who seeks regulatory excellence:

Recommendation 1. Align strategic priorities around all three core attributes of regulatory excellence.

Based on our study of regulator, strategic plans from around the world, it would seem that most regulators give more attention to stellar competence than to empathic engagement or to utmost integrity. Obviously, there is nothing wrong with regulators aiming for competence, as they most emphatically should. But too often regulators today view regulation as primarily a technical enterprise and underappreciate the essentially social nature of regulation, which demands more than just stellar competence but also a high level of integrity and truly empathic forms of public engagement too.

Recommendation 2. Align organizational culture with the three core attributes of regulatory excellence.

The regulator's aim should not be just to make regulatory excellence a strategic priority for the next year, or even the next five years, but to bake regulatory excellence into the entire culture of the organization. Although cultural change never comes easily or quickly, it is essential for the regulator's leadership to set the example by "walking the walk" and by establishing management practices that appropriately align employee incentives with the attainment of all three RegX objectives. In addition, achieving excellence is not something that a regulator simply "accomplishes" but is an ongoing effort to strive toward perfection along all three dimensions.

Recommendation 3. Build human capital that maintains stellar technical competence as well as ensures empathic engagement and continued commitment to professional and public integrity.

Regulatory excellence is ultimately "people excellence." The RegX attributes of integrity, empathy, and competence are not merely virtues of an excellent regulatory organization; they are virtues that each individual who works for a regulator should strive to exhibit at the highest level. The technical demands for expertise are daunting for a regulator and much effort must be given to ensuring stellar competence, but the kinds of people skills required for empathic engagement should also be reinforced through training and the regulator's overall organizational culture. Integrity – of the deep kind that makes up the RegX molecule – is about much more than avoidance of corruption; it is about people too. Integrity is a kind of inner character people have that places the public and its needs above their own.

Recommendation 4. Involve the public in operationalizing regulatory excellence and in identifying management priorities.

As regulators' missions are ultimately interdependent ones – that is, neither defined entirely by the regulator's leadership nor solely achievable by the regulator alone – the best regulators master empathic engagement in all that they do. The regulator's strategic management should be no

exception. Even with the insights and frameworks provided in this report, the AER and other regulators will still need to undertake additional work to manage toward excellence. They must operationalize the three core attributes of excellence, giving them content and definition that match the distinctive mission and operational environment that each regulator faces, making strategic choices about improvement priorities and performance measurement. These will be important choices for the future of the regulator and the public it serves. As a result, the public will benefit – as it will with any regulatory decision – from open public input and engagement.

Recommendation 5. Take a strategic approach to evaluation and performance measurement.

Evaluation and performance measurement are themselves vital components of regulatory excellence – that is, a high-integrity regulator is one that wants to learn how it is doing so as to strive to do better – and they can also be used as vehicles or tools for ensuring progress toward or maintenance of excellence. Only with robust evaluation and performance measurement can a regulator know how well it is doing in terms of attributes of public engagement and substantive performance. But just because measurement and evaluation are central to regulatory excellence, this does not mean that merely counting beans will do. The excellent regulator must take a strategic approach to evaluation and performance measurement. Its leaders need to define the purposes of evaluation and performance measurement clearly, and then build learning systems to meet those purposes. No one single measure will serve all purposes; overall performance measurement is a portfolio that needs to be managed strategically.

Putting It Into Action. What concrete steps should a regulator take to align itself better with the core RegX attributes and the nine tenets of regulatory excellence articulated earlier in this report? The following four steps forward are recommended for any regulator seeking to move toward – or continue to maintain – regulatory excellence.

Step 1: Self-awareness. The first step in determining how to improve is to make a full mapping out of the regulator's organizational capacities, suite of activities, and current levels of performance. A regulator's managers will likely already have a considerable degree of familiarity with their organization, but even the most thoughtful and conscientious regulatory leaders often focus only on certain pieces of what the regulator is, does, and achieves. Regulatory excellence is "big picture" work.

Step 2: Scoping. For each box in the model of regulatory organization, action, and performance (see page v above), the regulator's managers should ask themselves how well aligned the regulator is with the RegX core attributes and the nine tenets of regulatory excellence. This second step would effectively entail a process that, either literally or heuristically, involves "filling in" something like the matrix shown on the next page.

Although this matrix provides completeness and illustrates the conceptual structure that grows out of the analysis in this report, it should not be taken to suggest that the cells can

A FRAMEWORK FOR RegX SCOPING

	ORGANIZATION					ACTIONS						OUTCOMES		
	Mission	Resources	Human capital	Autonomy	Culture	Decision-making	Public Engagement	Rule-making	Rule-application	Incident response	Evaluation	Industry Behavior	Perpetual Outcomes	Substantive Outcomes
Utmost Integrity														
Fidelity to law														
Respect for democracy														
Commitment to Public Interest														
Empathetic Engagement														
Even-handedness														
Listening														
Responsiveness														
Stellar Competence														
Analytical capability														
Instrumental capacity														
High performance														

be filled in with anything like precise, quantitative measures. The purpose at this step is one of scoping: to identify where the regulator's leaders should put their focus going forward. It would similarly be mistaken to take from the above framework the inference that every cell will matter equally.

Step 3: Strategic action. Based on a broad self-assessment and scoping, regulatory leaders should select priorities for further investigation and then move toward identifying improvement strategies and making performance measurement or evaluation plans. This step would likely benefit, even more than the first two, from input from others with whom the regulator interacts and serves.

Step 4: Assessment and continuous improvement. The regulator must keep assessing how well the improvement strategies selected work and then repeat the cycle, seeking continuous improvement. The goal, after all, is not merely to reach a single summit of regulatory excellence, but also to continue along down the trail to the summits of the further peaks that always lie off in the distance.

An "Excellent" Checklist for Regulators. A regulator's leaders will, of course, need to be selective in where to place their strategic emphasis. Toward that end, the following checklist provides a practical frame of reference for how to use the four key facets discussed on page v to align better a regulator's organization, actions, and outcomes with the RegX attributes and tenets of regulatory excellence.

Internal management (e.g., mission clarity, resources, autonomy, human capital, culture)

1. Does the regulator possess and communicate a clear, well-defined mission that aims boldly to maximize public value within the scope of the regulator's mandate?

2. Does the regulator have adequate financial resources and information technologies to deliver on its mission?
3. Does the regulator possess sufficient levels of autonomy to ensure its decisions are made consistently with expert judgment and in the long-term public interest?
4. Does the regulator have enough highly-trained staff members who keep up with developments and emerging trends within their scope of work?
5. Does the organizational culture support and value learning, innovation, and public service?
6. Does the regulator's culture align well with all three core RegX attributes and all nine regulatory excellence tenets?

Priority-setting/Decision-making (e.g., scientific and economic analysis and how it informs decisions)

7. Does the regulator seek out state-of-the-art evidence before making both regulatory and management decisions, and then does it incorporate that evidence in good faith into its decision-making and its reasons for its decisions?
8. Does the regulator actively investigate and seek to generate new knowledge of poorly understood risks, potential areas of concern, and regulatory impacts?
9. Does the regulator have in place adequate procedures for preserving the integrity of scientific information, including suitable processes of peer review?
10. Does the regulator ground its decisions on a solid understanding of the industry it is regulating, including an ongoing awareness of technological innovations?
11. Does the regulator understand and articulate clearly the normative principles it uses in combination with risk analysis to make decisions (i.e., what it means to be "risk-based" or "risk-informed")?
12. Does the regulator engage in analysis of its own rules and practices, including rigorous causal evaluation, to learn what works and what could work better?

Problem-solving (e.g., regulatory instrument design, inspection and enforcement strategies)

13. Does the regulator consistently determine that new regulations are really needed (and that non-regulatory solutions would not be as effective) before adopting new rules and directives?

14. Does the regulator select and apply regulatory instruments that equitably maximize net benefits (or, if specified by law, that meet other policy criteria)?
15. Does the regulator consider and, when appropriate, use a full range of regulatory instruments that will best achieve relevant policy goals, including regulatory instruments that preserve flexibility?
16. Does the regulator target its inspections in such a manner as to maximize the chance of finding and reducing significant regulatory violations?
17. Does the regulator deploy enforcement tools responsively, calibrating consequences so as to assure compliance and promote positive cooperation?
18. Does the regulator manage its own operations with efficiency, minimizing unwarranted delays in decision-making?

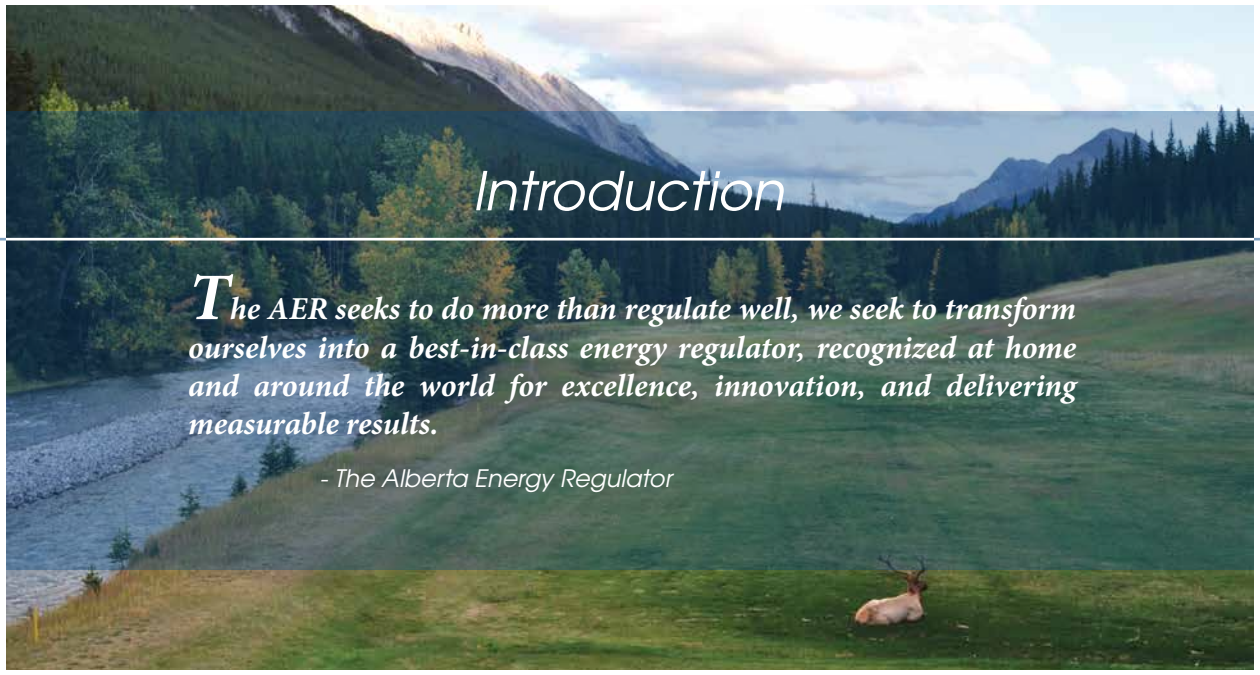
External engagement (e.g., transparency, public engagement)

19. Does the regulator provide open access to its information in a manner that is accessible and comprehensible both to industry users and to the broader public?
20. Does the regulator provide, whenever feasible, full drafts of regulatory decisions when it invites public comment?
21. Does the regulator generally provide opportunities for participation by any member of the public that is concerned with or will be affected by its decisions?
22. Does the regulator reach out to and welcome input by all individuals, organizations, and communities that are interested in or affected by its decisions?
23. Does the regulator provide well-reasoned explanations for its decisions that acknowledge and respond to all pertinent concerns expressed by members of the public?
24. Does the regulator ensure that its entire workforce interacts fairly, respectfully, and empathically with all segments of the public?

Conclusion

Regulating is hard work. Just doing it well is demanding and difficult. To achieve excellence at regulating requires still more. It requires consistently and superlatively mastering all the technical, analytic, and social tasks needed to solve public problems. It demands the utmost, the empathic, the stellar. It even requires boldness and vision – seeing ahead to where the puck will be, to use the famous Wayne Gretzky cliché, and then moving forward. The excellent regulator cannot stay in one place, content to have mastered solving the problems of the past. The world changes, its problems change, its economies change, and its social concerns change. Excellence as a regulator requires forward momentum, not static achievement.

* * *



Introduction

The AER seeks to do more than regulate well, we seek to transform ourselves into a best-in-class energy regulator, recognized at home and around the world for excellence, innovation, and delivering measurable results.

- The Alberta Energy Regulator

The Alberta Energy Regulator (AER) serves as the single regulator of energy development in Alberta, Canada, overseeing "the efficient, safe, orderly and environmentally responsible" development of oil, natural gas, coal, and oil sands throughout the province.[1] Not content simply to go about regulating as usual, the AER's leadership has committed their regulatory organization to deliver and sustain a high level of public value – in short, to achieve regulatory excellence.

Formed in mid-2013, following the merger and reorganization of other provincial energy and environmental regulators, the AER has set out a bold and important vision: to be "recognized as best-in-class, ensuring the safe, environmentally responsible development of energy resources for the benefit of all Albertans."[2] "We recognize it is not enough to do our job well and simply declare ourselves as best-in-class," the AER's President and CEO, Jim Ellis, has stated. "To be collaborative and transparent, we must define what that means, ensure that our stakeholders agree with that definition, and take the necessary steps to improve our regulatory performance," he has said.

In support of its strategic vision, the AER issued an international request for proposals (RFP) in mid-2014 to find "a globally respected outside party" to serve as a third-party convener to "administer a comprehensive suite of actions" designed to help the AER define and begin to measure its progress toward the attainment of its strategic vision.[4] In its RFP, the AER observed "that Alberta's resource development landscape requires a world leading regulatory organization that has a best in class mind-set, attitude, capabilities and regulatory systems to deliver superior performance."[5] Accordingly, it noted that "the question then becomes, what is a 'best in class' regulatory agency?"[6]

The AER envisioned both a process and a set of products to help it and other regulators around the world answer this question. The AER's RFP called first for a process of convening "symposiums" and "stakeholder roundtables," both to elicit the views of international experts as well as to engage with a broad range of members of the Alberta public, including businesses, environmental non-governmental organizations, Aboriginal communities, landowners, and

> *We know there's a club of top regulators in the world, and we want to be part of that club.*
>
> - Jim Ellis, *President and CEO, Alberta Energy Regulator*

regional thought leaders.[7] As part of the requested process, "labels that are commonly used to define superior regulatory performance, such as 'Best in Class,' 'World Class,' 'World Leading,' or 'Regulatory Excellence'" were expected to "be subject to discussion and debate."[8]

Second, the AER's RFP called for the production of a series of written works, including a thorough literature review that would, among other things, "focus on understanding the prevailing theory, practice and strategies that underpin the conduct of regulatory management and operations." In addition, the AER expected that the third-party convener it selected would generate other reports or white papers, including "a Final Report, offering high-level principles to the field of regulatory management and practice."[9]

This is that Final Report. In November 2014, the AER commissioned the University of Pennsylvania, through the Penn Program on Regulation (PPR), to serve as its third-party convener for its Best-in-Class Project.[10] In less than a year's time, the Penn Program on Regulation and its collaborators worked to convene an exhaustive and expansive process that has generated the independent findings and recommendations contained in this Final Report.

These findings and recommendations should help the AER refine, operationalize, and ultimately better achieve its vision – as well as demarcate the goalposts that other regulators around the world should aspire to reach. Specifically, through its Best-in-Class Project, the AER sought answers to three main regulatory performance questions:

1. What are the key attributes of a top performing regulatory organization, commonly referred to as 'World Class' or 'Best in Class'? In other words, how do we know when regulatory excellence is achieved?
2. How can these attributes be adopted by an organization like the AER and be used as an organizational model to deliver on its mandate?
3. How can superior regulatory performance be credibly measured and verified in a manner that is acceptable to a critical mass of stakeholders?[11]

For the AER, the Best-in-Class Project was not an effort to declare itself to be best in its class, but rather to answer questions that any regulator needs to know in order to chart its path toward excellence.

Over the last year, the Penn Program on Regulation and collaborators have pursued answers to these questions through a multi-faceted process of *research*, *expert elicitation*, and *public engagement*.

The Penn Program on Regulation's process included:

- Three major dialogue sessions involving more than 150 participants with extensive knowledge of or interest in the regulation of oil and gas production in Alberta or regulation more generally – and the production of three reports summarizing these dialogue sessions.
- Face-to-face or phone interviews with more than 60 individuals interested in the work of the Alberta Energy Regulator.
- The first-ever empirical study of regulators' strategic plans.
- Five other research papers synthesizing existing research on major facets of regulatory operations.
- More than twenty papers written by leading experts from around the world on the question of what makes a regulator excellent.
- Numerous other related seminars and meetings sponsored by the Penn Program on Regulation during the duration of the project, including seminars at the University of Pennsylvania Law School and a day-long meeting with U.S. regulators in Washington, D.C. on regulatory excellence.
- A peer review of a draft final report.

Summaries of the major dialogue sessions as well as lists of the individuals who participated in them and with whom we interviewed can be found in the appendices to this report. A complete list of all of the more than 35 papers and other reports produced can also be found in the appendix section of this report.

Given the massive volume of written work the Penn team completed during the short duration of this project – a treasure trove of more than a 1,000 pages of papers and reports in total – the summaries in the appendices of this report can provide no substitute for the full work. That is why we have released all of our papers and reports online at the project's website, BestInClassRegulator.org. Throughout the project, we have also encouraged public comment on all the materials we released on the website. We have gained much insight from the comments submitted – as we have from our many conversations with experts and interested members of the public. In the course of producing and sharing the collective work, the Penn team fulfilled one of the two main objectives the AER established with its Best-in-Class Project, namely to convene a process of engagement that would promote greater attention to regulatory excellence in Alberta, across Canada, and around the world.

The publication of this Final Report fulfills the project's second main objective, namely to develop a set of high-level principles of excellent regulatory practice. Drawing on all the research and engagement conducted during the course of this project, this report presents a multi-layered, practical framework for improving regulatory management and performance. It is not a summary of the processes convened under the auspices of the Best-in-Class Project but rather a synthesis and an independent guide to regulatory excellence.

The Penn Program on Regulation went to great lengths to inform our work with the views of a full range of interested members of the Alberta public. We paid close attention to challenges that arise in the domain of oil and gas regulation, as well as the particular needs and concerns of a broad range of interested organizations and individuals in Alberta, including landowners, industry, First Nations and Métis communities, environmental groups, municipal government officials, and other members of the public. We listened and learned much from our dialogue with others about the work of the AER and the challenges and opportunities for energy extraction regulation in the province of Alberta. That extensive, concrete engagement infuses the framework of excellence contained in this report.

Although the Best-in-Class Project was the brainchild of the AER's leadership, this report's framework of regulatory excellence has been from the start expressly intended to be general enough to be used by any regulator around the world, in any area of regulation. In addition, it should be noted that the Best-in-Class Project was never designed to serve as, nor has the Penn Program on Regulation ever attempted to provide, an evaluation of the AER's performance or its current status toward achieving excellent or best-in-class performance. In other words, this Final Report is not intended to give the AER a "grade" or a stamp of approval, nor does it even pretend to compare the AER's current level of performance with that of other comparable regulators around the world. Rather, this Final Report is intended to provide the AER (and any regulator) with practical direction about the core elements of regulatory excellence and a general performance management framework to draw upon to conduct either its own self-assessment or external assessments it might choose to commission.

This Final Report, though, is not a simple cookbook for the AER or any regulator. As the report itself makes clear, regulators' tasks vary greatly depending on local objectives and conditions. These tasks, and the problems they seek to address, also change over time. The Penn Program on Regulation has not conducted the kind of analysis needed to support specific action plans for the AER or any regulator. We have instead focused on identifying the goalposts of regulatory excellence and on articulating high-level principles for moving forward to reach those goalposts and to measure progress along the way. Even with the practical framework provided here, the AER and any regulator will still need to undertake additional work, such as to:

- Operationalize the attributes and tenets of excellence we identify, fine-tuning them and giving them specific content and definition relevant to its own distinctive mission and operational environment.
- Identify and develop concrete methods and practices for the collection of data needed for measuring its performance on the specific attributes the regulator has selected for priority.
- Measure its current level of performance against the attributes and determine the size and causes of gaps between its current performance and its desired performance.
- Implement management and operational steps designed to improve performance.
- Continue appropriate engagement with experts and members of the public on all of the above steps.

In other words, although applying the framework in this report will lead regulators down the path of regulatory excellence, it offers no easy shortcuts on that long trail.

After acknowledging that no one can ever achieve perfection, the famed American football coach Vince Lombardi once reportedly said that "if we chase perfection, we can catch excellence." Any regulator who reads this report will have to keep up the chase.

* * *

This report is organized into three main chapters, followed by a concluding chapter that offers recommendations for regulators who seek excellence.

Chapter 1 takes up the challenge of defining excellence in a regulatory context. Since this report is intended to present high-level, cross-cutting principles of regulatory excellence, Chapter 1 begins with a brief background on what regulation is and what regulators do. Among other things, this background section highlights how regulatory success is ultimately dependent not merely on what the regulator itself does but also upon the actions of others outside of the regulator, such as other governmental institutions as well as the regulated community itself. The chapter then proceeds to discuss many different adjectives that have been used by others to describe regulatory excellence and then it helpfully distills these adjectives into three essential attributes of excellence: *utmost integrity*; *empathic engagement*; and *stellar competence*. These three attributes make up a core "molecule" of regulatory excellence called RegX. For each of the RegX attributes, Chapter 1 elaborates more concrete characteristics of excellence that together constitute nine tenets of regulatory excellence. Chapter 1 concludes by explaining how, for a regulator to be excellent, each of these attributes and tenets must describe the

regulator's organizational traits, its day-to-day actions, and the outcomes it achieves. A regulator achieves excellence, then, when its "TAO" – traits, actions, and outcomes – are well-connected with each other and aligned with the RegX attributes and tenets.

Chapter 2 builds on the insights of the TAO of regulatory excellence by developing and presenting a more complete logic model of regulatory organization, action, and performance. In this model, a regulator's performance is broken down into several components, starting with the regulator's impact on the behavior of regulated entities and moving through to intermediate and ultimate outcomes (both substantive and perceptual). Taken as a whole, Chapter 2's model shows that the regulator achieves excellence by building an organization that fosters the kinds of regulatory and operational actions that lead consistently to superior performance. Chapter 2 explains what a regulator seeking excellence must do to be able to build or maintain an excellent organization and what types of actions it must strive to perfect. Although Chapter 2 cautions that no simple formula for excellence exists and that different regulators need to pursue their own specific paths, it does offer practical guidance for four main facets of a regulator's operations: internal management, priority-setting, problem-solving, and external engagement. In each of these four critical areas, the chapter discusses core issues of best practice, including building optimal organizational autonomy, developing risk-informed decision-making, deploying suitably flexible regulatory instruments, and frequently and fairly engaging with all interested members of the public. A major theme throughout Chapter 2 is that achieving regulatory excellence depends on much more than technical expertise. As important as it is for regulators to build highly knowledgeable workforces and draw upon all available evidence when making decisions, regulatory excellence requires more: it demands "people excellence" too. Not only must the members of a regulator's workforce be highly competent in a technical sense, they must also consistently demonstrate the utmost integrity and must interact empathically with everyone affected by the regulator's actions.

Chapter 3 turns to matters of measurement. It begins by distinguishing between measurement of excellence and measurement for excellence, explaining why the latter takes precedence over the former. Excellent regulators must constantly strive to learn how to do better, which means that performance measurement will always be an essential tool for achieving excellence. The chapter offers practical

guidance to regulators about how to approach performance measurement, explaining the importance of developing well-specified strategic objectives and highlighting the key role for active leadership in the development and implementation of any measurement system. The chapter cautions regulators to avoid common problems with performance measurement in public-sector organizations, including problems that can arise when measurement is linked too tightly with incentives. It explains why the measures used by a regulator must be relevant, reliable, and realistic, and why regulators should involve the public in developing performance measurement systems. The chapter also stresses the importance of including rigorous, causally-oriented evaluations in a regulator's overall measurement portfolio. Turning from measurement for excellence to measurement of excellence, Chapter 3 outlines a general strategy that regulators can take to gauge how far along they are on the path toward excellence. The main theme of Chapter 3 is that a regulator's efforts at performance measurement must be pursued in a deliberate, strategic manner to achieve its goals, the most important of which will always be to learn how to do better.

Chapter 4 concludes with recommendations and action steps for any regulator seeking to move forward on the path of regulatory excellence. Five main recommendations follow from the preceding chapters. These recommendations urge regulators to incorporate the RegX attributes into their strategic priorities, bake these attributes and the tenets of regulatory excellence into their organizational culture, build a workforce that exemplifies the kind of "people excellence" that regulators need, embrace public engagement in their pursuit of excellence, and take a strategic approach to performance measurement. Each regulator will, of course, need to analyze its own mission, capacities, and environments in order to operationalize these recommendations. To aid regulators in those efforts and offer guidance about next steps, the report concludes by offering a four-step action plan and a twenty-four-point checklist for regulators to use to gauge where their next priorities should be in pursuing regulatory excellence. The report concludes with a reminder that achieving regulatory excellence is not an end-point but an ongoing journey. The world that regulators inhabit, and the societies they serve and the industries they oversee, are constantly changing. To be truly excellent, regulators must be constantly striving to listen, learn, and lead.

Chapter 1.

Defining Regulatory Excellence

In searching after one virtue we have found many.

- Socrates, in *Plato's Meno*

Ancient Greek philosophers called it arête: "virtue" or, in what is generally thought the better translation, "excellence." For the ancient Greeks, excellence was the key to human fulfillment, a vital aspiration for citizens and rulers alike. Today, excellence remains the hallmark of professional achievement in every field of endeavor – as it especially should be when the well-being of others is at stake. Dr. Atul Gawande, for example, explains in his recent book, *Better*, why excellence on the part of physicians is so important: "lives are on the line... We also face daunting expectations...The steps are often uncertain. The knowledge to be mastered is both vast and incomplete. Yet we are expected to act with swiftness and consistency...We are also expected to do our work humanely, with gentleness and concern."

Dr. Gawande could just as well have been writing about regulators. Few government professionals today work so vitally at the front lines of human welfare as do regulators. Around the world, regulators play key roles in protecting their publics from harms associated with economic activity and technological change – injuries and illnesses, environmental damage, financial risks – while simultaneously promoting economic growth and development. Not only are many regulators doing work with lives on the line, but they also all face daunting societal expectations, with vast and uncertain challenges that call for swift, consistent action as well as humane, empathic interaction with the public. Confronted with the need to integrate and achieve multiple objectives in a manner consistent with democratic principles and the best available scientific knowledge, regulators' quest for excellence is often a monumental challenge.[12]

But what exactly does excellence mean for regulators? How can they move forward and achieve excellence? And how can they measure their progress toward that goal? This chapter answers the first of these questions. It begins by providing a foundation for the two subsequent chapters addressing the other questions, offering key understanding about regulation and regulators: defining regulation, discussing the common features of regulators, and explaining the implications of these features for the regulators' quest for excellence. This chapter then turns

to the definition and attributes of regulatory excellence. Drawing on the processes convened as part of the Best-in-Class Project, as well as a catalog of criteria found in a wide range of regulatory reports and guides reviewed as part of this project's research, this chapter distills the attributes of regulatory excellence to their very core: the *utmost integrity*, *empathic engagement*, and *stellar competence*. It then presents nine tenets of regulatory excellence that build on the three core attributes, and it concludes by explaining the features of a regulator that should exhibit these attributes: its traits, its actions, and its outcomes.

Why regulation?

To understand what regulatory excellence means, it first is necessary to understand why regulation exists at all. After all, economic markets can do a remarkable job of producing and allocating essential goods and services to people throughout the world. But still, markets can and do fail to meet all of a society's needs and solve all of its problems. Markets can even create problems of their own. Regulation is therefore needed to solve problems that markets create or leave unresolved.

The exact types of problems any specific regulator aims to solve will depend on the mandate it has been given by political leaders, with different regulators tasked to solve different types of problems. That's why there are different fields of regulation and different regulatory institutions associated with virtually every sphere of the economy: aviation safety regulation, banking regulation, consumer product regulation, drug regulation, environmental and energy regulation, food safety regulation, and so forth.

Although regulatory problems come in many varieties associated with nearly every part of life, the major problems they address are classically grouped into three categories that fall under the concept of *market failure*:[13]

- Concentrated power. Markets fail when competition either doesn't exist or when it breaks down. If left unchecked, monopolies can generate higher prices or reductions in service and access. Regulators that protect competition or regulate prices and services of natural monopolies are often referred to as "economic regulators." Regulation of water, electricity, and gas utilities is often justified as a response to the problem of concentrated market power.
- Externalities. Markets work best when the prices of goods and services reflect their full costs and benefits. But some market activities have spillovers, where their costs (or benefits) are borne (or enjoyed) by third parties who are not involved in transactions for the relevant goods or services. Environmental pollution is a classic example of a negative externality, as the costs of pollution are imposed on community members who are not compensated by market transactions with the entity creating the pollution. In cases with such negative externalities, societies can encounter the over-production of the

goods and services associated with the externalities – or an under-investment in the means of reducing those externalities.

- Information asymmetries. Markets also depend on the parties to economic transactions having full information about what they are contracting over. But in many situations, one party to an economic transaction lacks access to relevant information. A patient who buys medication, for example, seldom knows as much as the pharmaceutical company does about the medication's effectiveness and its side effects. Some regulators mandate disclosures to close the information gap.

Regulators also address many other kinds of problems, even if they do not fit neatly within the categories of market failure. For example, regulatory scholars increasingly call attention to various kinds of cognitive biases that prevent people from behaving in a manner they truly desire, which may justify certain kinds of regulatory interventions.[14] In addition, regulators are set up to protect civil rights, promote equity, and combat discrimination – advancing values selected by a democratic legislature and which less easily fit under the market failure rubric. Many times a regulator will be charged with solving a combination of several different types of problems at once.

What is a regulator?

A regulator is a public institution that seeks to solve problems falling under its purview by steering the behavior of regulated individuals and organization by implementing and enforcing laws or policies, among other tactics. Examples of regulators abound from around the world: the Alberta Energy Regulator; Australian Competition and Consumer Commission; Autorité des Marché Financiers (French Financial Markets Authority); U.K. Civil Aviation Authority; U.S. Food and Drug Administration; and so forth.

The ways that regulators seek to solve problems will vary, but by definition they tend to involve, at least at some level, the application of or enforcement of *regulations*. A regulation is typically understood as a rule backed up by consequences. To implement regulations, regulators issue permits or approvals upon an applicant's showing that criteria specified in applicable rules have been satisfied. For example, the U.S. Food and Drug Administration performs such a task when it approves new drugs as safe and effective.

Regulators also inspect and monitor the behavior of those subject to rules, or the outputs of that private behavior, to ensure that individuals or entities are operating in accordance with the rules. The U.K. Drinking Water Inspectorate, for instance, both monitors drinking water quality in England and Wales and inspects water suppliers for compliance with mandated protocols. When regulators find that rules have not been followed, regulators may take a variety of actions to respond, from helping the noncompliant entities come into compliance to imposing fines and taking enforcement actions.

But regulators are not merely rule-appliers and rule-enforcers. For one thing, they may also take a variety of other actions—from educating to subsidizing to adjudicating disputes, all in an effort to solve the problems they have a responsibility to address. The U.S. Environmental Protection Agency, for example, devotes considerable effort to public education and has created dozens of voluntary programs designed to encourage businesses to improve their environmental performance. Regulators may also adopt different kinds of rules, some of which tell regulated entities

EXAMPLE OF REGULATORS

exactly what to do (or not do) but also some that give a great deal of flexibility to regulated entities while making these entities solve problems on their own.

In addition, regulators gather information and produce research. They engage with different segments of the public, interacting not only with the regulated industry and other government officials but also with a myriad of individuals and organizations throughout the public who are interested in or affected by the activities they regulate.

The regulator as institution

A "regulator" can refer to an individual employee or official, such as when referring to an individual inspector or to the head of a regulatory body. But "regulator" also refers to public or governmental *institutions* – as it does in this report. Just as no two individuals can ever be identical, so it is that no two regulators as institutions can be identical. Regulatory institutions come in a variety of sizes and structures, serving different missions and performing different functions and tasks. Sometimes even private organizations can be considered "regulators," as when industries, insurance companies, trade associations, or standard-setting organizations set up their own codes of practice and expect their employees, managers, and suppliers to follow them. But usually the word "regulator" refers, as it does in this report, to public-sector organizations that regulate and carry out regulations.

Of course, even public regulatory institutions can take many forms. By and large, regulators are situated in the broader governmental sphere in such a way that they are positioned somewhere in between a legislature or a "government" and the public which the regulator is charged to serve. Elected officials in legislatures not only create laws but they also establish ministries, agencies, commissions, and other public institutions that set policies and standards and enforce them. These latter institutions that implement and enforce rules, and are separated in some fashion from the legislative bodies that make laws, are what we mean here as regulators.

Different regulators not only tackle different problems and oversee different industries, but the nature of their place in an overall system of government, such as their degree

of separation from the legislature, can vary too. Some are headed by a single director, while others are headed by a multi-member body. Some rely on funding from the legislature through normal governmental appropriations, while others are funded through fees collected from industry. Most regulators can set their own standards, norms, or directives to fill in gaps or provide clarity to laws created by legislatures or other policy-making bodies, but the nature and degree of regulators' rulemaking authority can vary from one regulatory domain to the next.

Even within the same regulatory domain – such as energy development regulation – the institutional structure, funding sources, powers and mandates of different regulators can vary markedly. The table on the next page provides a highly simplified overview of some of the salient institutional features of oil and gas regulators, making plain the high degree of variation that can exist in the powers and structures that regulators possess. If one were also to include in a table like this regulators from other policy domains – such as food and drugs, telecommunications, banking, and so forth – the institutional variation would only multiply.

Recognizing the breadth of variation in regulatory bodies holds an important implication for thinking about their excellence: no simple, concrete formula or recipe exists that applies across the board to all regulators. And yet, despite the fact that regulators in different jurisdictions and across different policy domains come in a host of sizes, shapes, and structures, it is still possible to identify general attributes of excellence for regulators and offer guidance for how to achieve and measure progress toward exhibiting those attributes.

INSTITUTIONAL STRUCTURES OF ENERGY REGULATORS

Regulator	Leadership Structure	Leadership Selection	Funding Source	Regulatory Powers	Scope of Mandate
Alberta Energy Regulator	Single head and multi-person board	Appointed	Industry levies	• Permitting • Enforcement	Multiple
Australia National Offshore Petroleum Safety and Environmental Management Authority	Single head and multi-person board	Appointed	Industry levies	• Permitting • Collecting revenues • Enforcement	Multiple
British Columbia Oil and Gas Commission	Single head and multi-person board	Appointed	Industry levies	• Permitting • Enforcement	Multiple
Colorado Oil and Gas Conservation Commission	Multi-person head	Appointed	Government appropriations & industry levies	• Permitting • Collecting revenues • Enforcement	Multiple
Mexico Comisión Reguladora de Energía (ERC)	Single head and multi-person board	Appointed	Government appropriations	• Permitting • Enforcement	Single
Norwegian Petroleum Directorate	Single head	Appointed	Government appropriations	• Permitting • Enforcement	Multiple
Pennsylvania Department of Environmental Protection	Single head	Appointed	Government appropriations	• Permitting • Enforcement	Single
Saskatchewan Ministry of the Economy	Single head	Elected	Industry levies	• Permitting • Collecting revenues • Enforcement	Single
Texas Railroad Commission	Multi-person head	Elected	Industry levies	• Permitting • Collecting revenues • Enforcement	Multiple
U.S. Bureau of Safety and Environmental Enforcement	Single head	Appointed	Government appropriations	• Permitting • Enforcement	Multiple
U.S. Bureau of Ocean Energy Management	Single head	Appointed	Government appropriations	• Permitting	Multiple
U.S. Office of Natural Resource Revenues	Single head	Appointed	Government appropriations & industry levies	• Collecting revenues • Enforcement	Single

Four common features of all regulators

Meaningful generalizations about regulatory excellence are possible because, despite their varied mandates and institutional structures, regulators around the world still share some common features that make it reasonable to think of them collectively and to consider their shared challenge of achieving excellence. The following four common features apply to regulators in democracies around the world:

1. Mission. No matter what industries or types of problems they address, regulators all have missions that call upon them to solve problems in a way that delivers public value, such as by solving market failures. Each regulator's mission will be defined largely by its legislative mandate. In pursuing its mandate, the regulator has an overarching responsibility to do so in a way compatible with the overall good of society.
2. Discretion with accountability. All regulators possess discretion. The day-to-day responsibility of implementing and enforcing laws, brings with it a degree of discretion over the regulator's priorities, including what aspects of a problem to focus on or what rule violations to target or overlook. In democracies, regulators are also accountable for how they use their discretion. Accountability runs through to other governmental authorities, including the legislature, as well as to the regulated industry, rights holders, community interests, and ultimately the overall public.
3. Complex, dynamic problems. Regulators tend to face some of the most difficult challenges in society, ones which often present difficult value tradeoffs.
    - Regulatory problems are by definition those that markets cannot solve. They also are often the problems that legislatures cannot solve either, whether for lack of expertise or lack of will. After all, if legislatures could solve all problems on their own, societies would not need regulators.
    - At times, political coalitions can only emerge for legislative action based on broad or even unrealistic principles – such as principles that combine mutually contradictory or at least competing objectives into a single regulatory "mission." Legislators sometimes tell regulators, in effect, to surf the crest of a treacherous wave, and then leave it up to the regulator to figure out how to stand up on the surfboard and do all the balancing, adapting, and adjusting to stay afloat.
    - Public problems addressed through regulation frequently involve complex technological operations, social interactions, or new technologies – the very sorts of problems about which there exists a great deal of uncertainty. Accident avoidance, for example, is a common regulatory objective, but the sources of accidents can be both legion and interactive, making it difficult to foresee every possible pathway that can lead to accidents in systems with highly complex interactions of many moving parts.
4. Regulated entities. Success for regulators – unlike in other fields of endeavor, such as eminence in the arts or sciences – depends on the choices and actions of others, namely, regulated entities. Those regulated entities, usually businesses, themselves have several important characteristics that affect the work of the regulator:
    - Regulated entities can be highly diverse, comprising both individuals and organizations. The U.S. Securities and Exchange Commission, for example, regulates both individual stock brokers as well as large, multinational corporations that issue stock.
    - Many regulated businesses are themselves large, complex organizations, often using advanced technologies in challenging industrial operations. The regulator is, in an important sense, a meta-manager of regulated organizations: managing their managers.

- Many regulated firms operate in a competitive market environment and, as a result, are constantly innovating with new technologies, operations, and products. This dynamism presents challenges for regulatory oversight.
- Regulated firms are themselves institutions that produce social value. Regulated businesses are employers in their communities and produce valued goods and services that make life possible and worthwhile. Although their private interests are not always fully aligned with the public interest—hence, market failures—regulated firms' conduct is seldom *banned* outright, as with criminal behavior that police officers enforce. Normal business activities, whether automobile manufacturing, energy development, or air transportation services, are *regulated*, not treated as something like narcotics trafficking, which is banned altogether.
- Regulated firms are made up of thinking, strategic managers. The world-class violinist does not have to worry about her violin actively moving its strings to avoid her fingers or the bow.

Implications for regulatory excellence

The combination of these common features of a regulator mean that the attainment of regulatory excellence will typically be different from, if not even more difficult than, excellence in other domains. To an extent greater than most other professions or endeavors, a regulator's performance is ultimately affected by those who reside outside the regulatory institution itself. Regulatory excellence, then, is *interdependent* on a *diverse* and *adaptive* collection of other individuals and entities.

- Interdependent. A regulator's performance depends on other institutions and entities in the overarching nexus of relationships within which it is embedded.[17] Its markers of success will depend on other institutions' goals (e.g., the legislature and public) that define its mission, and its attainment of success will crucially depend on choices made by those in the regulated industry. The regulator is just part of an overall "system" that includes both other governmental entities as well as the industry that it regulates.
- Diverse. The other entities and individuals upon which a regulator's success depends will often be quite heterogeneous.
  - The word "publics" would be more apt than "public." The public includes industry, its employees, and its investors. But it also includes regulatory beneficiaries and their representatives, other community members and interested persons, networks of experts, and even sometimes future generations. Minority opinions or groups also merit particular consideration.
  - Regulators need to interface effectively with other governmental officials and bodies in their own jurisdiction as well as with those in other jurisdictions and countries. When successful regulation demands international regulatory cooperation, the degree of heterogeneity a regulator encounters only increases.

- As already noted, regulated entities are themselves highly varied. Not only do they differ greatly in terms of their size and capacities (large vs. small firms vs. individuals), but they also vary in terms of their willingness to cooperate (responsible compliers vs. recalcitrant laggards).

- Adaptive. Scientific knowledge grows and changes over time. Public preferences can also shift over time, as can electoral and legislative coalitions, even if laws themselves are not amended. In addition, regulated firms are not static either, but they are changing because of the:
  - Competitive business environment in which they are situated (e.g., with incentives to innovate), and the
  - Imperfect alignment of private interests with public interest (e.g., some firms may adapt by complying with the letter but not the spirit of the rules, or they might try to evade detection of their noncompliance).

Of course, even though excellence for regulators may differ in these three ways from excellence in other domains, this hardly means that regulatory excellence is unattainable nor that it is not worthwhile to achieve. It only means that it could be all the more challenging and therefore all the more critical to act deliberately and try harder.

Regulating and parenting

It may help in understanding the nature of these challenges for a regulator – and what regulatory excellence really means – to see how, in the same three ways as just discussed, a regulator is a lot like a parent. The success of each – regulator and parent – is in some irreducible sense out of their hands. In other words, success for each is *interdependent*. Parents who are by all accounts excellent (e.g., caring, nurturing, and wise) could still have one of their children turn out to be rather self-centered, rude, needy, or indolent. On the other hand, examples abound of highly successful, self-actualizing individuals who nevertheless had parents who were, if not abusive, at least neglectful and decidedly subpar.

> *If risks are not managed successfully, it is not always the 'fault' of the regulator. Primary responsibility often lies with the generators of the risk, who may not have co-operated with regulatory demands or been capable of managing risks.*
>
> - Bridget M. Hutter, *What Makes a Regulator Excellent? A Risk Regulation Perspective* (2015)

In addition, as most parents with more than one child can attest, different children will have different needs. They are *diverse*. The best way to guide one child's growth may not work as well for another child, even within the same family. Although fairness may require a certain level of consistent treatment, parenting still requires recognizing children's differences and showing a willingness to adjust as appropriate to meet each child's own personality and needs.

Finally, it should be obvious that children are *adaptive*. How a parent treats a three-year-old should not be the same way the parent treats that same child at the age of ten, twenty, or thirty.

Regulators and parents have another thing in common: they only partially determine outcomes. In other words, as important as they can be in shaping behavior, whether of regulated firms or children, they are not the only important forces affecting that behavior. Children's behavior, and their ultimate success in life, will be shaped by more than just their parents. It will be shaped by nature (e.g., genetic predispositions or other ingrained qualities, such as personality) as well as by environmental influences (e.g., teachers, peers, and the larger culture). Similarly, much more than the regulator influences the behavior of regulated individuals and organizations. Regulated firms have their own version of "nature" – that is, their organizational culture and other internal factors. They also confront a variety of external factors, including economic and social pressures in addition to regulation. It is sometimes said that a regulated firm operates under more than just a regulatory license, but an economic license and social license too.[18]

Recognizing the myriad factors that affect outcomes leads to two implications for regulatory excellence. First, to be most successful, regulators will need to adapt their strategies to account for differences in economic and social factors. Regulators may need, for example, to vary their levels of inspections during different economic cycles, perhaps inspecting more frequently during times of economic distress. On the other hand, regulators may need to inspect less frequently those firms that are located in denser social networks where others – proxy "inspectors," such as unions, business competitors, or community groups – are keeping watch over regulated firms.[19]

Second, even when they take economic and social factors into account, regulators will not always be able to control regulated firms' behavior or its associated outcomes. Internal, economic, or social factors do matter, and to the extent that they overwhelm or counteract factors under the control of the regulator, even the most excellent regulators will not be able to prevent all problematic behavior or eliminate all undesirable outcomes.

Generalizing about excellence: reputation, leadership, consistency

"Obviously some things are better than others," author Robert Pirsig once wrote in his novel focused on the concept of quality.[20] Pirsig continued by asking, "But what's the 'betterness'?"[21] Pirsig's searching question about the meaning of quality can be asked about regulators too. What is *regulatory* quality – or regulatory "betterness"?

In an important sense, as already noted, regulatory quality is interdependent and can be determined only by reference to the regulator's mission, with its origins in the legal mandate establishing the regulator or authorizing it to exercise governmental authority. Good regulators accomplish their missions well, but excellent regulators accomplish their missions *exceedingly* well.

But can regulatory quality also transcend a specific mission, time, and place? Can we generalize about regulatory excellence?

These are critical questions that underlie this report – and the entire report is premised on affirmative answers. Just as it is possible to generalize about regulation and regulators, it is also meaningful to search for ways to generalize about regulatory *excellence*. But how exactly should we do so? This section considers three possible ways that one might generalize about regulatory excellence: reputation, leadership, and consistency. All are related and important, but the last of these – consistency – best reflects the main approach taken in this report, namely to identify attributes of excellence that regulators should *consistently* demonstrate in practice by and through their organizational traits, their actions, and the outcomes they achieve.

Reputation. The first way to generalize about excellence would be to treat as excellent any regulator that has obtained a reputation for excellence. This approach has considerable appeal because reputation in other settings is often a good indicator of excellence. Consider, for example, if you asked a hospital's receptionist which of its doctors are excellent. You would likely get names of physicians with a reputation for being excellent. And those reputations would help you in identifying which doctors are excellent.

But does that mean that reputation *defines* excellence? At least for regulators, though probably for others too, the connection between excellence and reputation is not very straightforward. For one thing, if a regulator's excellence

> ***One determinant of a government agency's effectiveness is its reputation, or 'brand.'... A good reputation can help the agency recruit skilled personnel, gain deference from courts, build credibility with business managers, and build popular support that can yield larger budgets and enhancements to its powers. An agency with a strong brand stands a greater chance of being effective than one with a weak brand.***
>
> - William E. Kovacic, former Chairman of the U.S. Federal Trade Commission, "Creating a Respected Brand: How Regulatory Agencies Signal Quality," *George Mason Law Review* (2015)

depended on its reputation, this would add yet an additional layer of complexity to the interdependency of its success. Regulators' reputations, after all, depend not only on how the public views what the regulator does, but also how the public views the regulated industry. And as noted above, the public comprises many different individuals, communities, and entities. If regulatory excellence was defined in terms of a regulator's reputation, this would only beg the question: its reputation among whom, exactly?

There is yet another important reason to be cautious about treating regulatory excellence as a matter of reputation. Reputations are affected by factors unrelated to the regulator and how it undertakes to fulfill its responsibilities. A reputation might well be heavily influenced, for example, by people's *satisfaction* with a regulator's decisions. And yet regulators – even, if not especially, excellent ones – cannot and should not always satisfy everyone.[22] If the best regulators make some people dissatisfied, then the best regulators may not always get much reputational credit for the tough choices they confront and make.

It is possible, of course, for a regulator to gain a positive reputation by pursuing or achieving excellence. But such an outcome is hardly guaranteed. As political scientist Daniel Carpenter has written:

> Reputations, while they do not emerge exogenously, also do not admit easily of strategic design. A reputation is not something fully chosen by an organization or its leaders but is shaped as well by an organization's audiences and less authoritative members.[23]

Not only is a good reputation not guaranteed, even if a regulator is truly excellent, it is also possible for a regulator's overall reputation to be tarnished by the failing of just one or a few individuals. Ultimately, the question is whether a regulator's reputation – good or bad – is *deserved*. That is really the question of regulatory excellence. A reputation for regulatory excellence can be a positive byproduct of regulatory excellence, and such a positive reputation may well be a resource upon which an excellent regulator can draw, but a good reputation does not by itself *define* excellence.

Leadership. If regulatory excellence cannot be generally or automatically defined in terms of a regulator's reputation, perhaps it makes more sense to think about excellence in terms of *leadership*. Here the connection could be quite straightforward if "leadership" were taken to mean simply being "best in class" or "excellent." In other words, if regulatory leaders are taken to be simply exemplary or excellent regulators, we have definitional equivalence—but no real advancement in understanding the meaning of regulatory excellence or leadership.

A broader understanding of leadership might help. One such understanding emphasizes how leaders are dedicated to the service of others even at personal cost to themselves. Former U.S. President Theodore Roosevelt had this kind of leadership in mind when he wrote approvingly of the leader who "dares greatly":

> The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly.[24]

In this sense of leadership, the leader stands apart not so much by accomplishment but by devotion and courage. By stepping forward to lead, leaders make themselves vulnerable to criticism, resistance, and highly visible failure.

Risks and Regulatory Leadership

Tobacco use leads to hundreds of thousands of premature deaths each year in the United States. Yet for decades, the U.S. Food and Drug Administration claimed that it had no legal authority to regulate tobacco products. The FDA possesses authority to regulate drugs, defined as a substance other than food "intended to affect the structure or any function of the body." In the early 1990s, FDA Commissioner David Kessler conducted an investigation that revealed evidence of industry manipulation of levels of nicotine, a highly addictive substance in cigarettes. The FDA argued that, given the evidence it accumulated, the industry intended nicotine to affect the body. It proceeded to regulate cigarettes. Throughout the process, Kessler came under intense pressure from many members of Congress from tobacco states, and ultimately the FDA regulation was challenged in court. The U.S. Supreme Court, in a 5-4 decision, found that the FDA had exceeded its regulatory authority. However, Congress subsequently passed legislation giving FDA authority to regulate tobacco, and the FDA eventually reissued a very similar regulation.

Given the challenges that most regulators face, excellence does require leadership in this sense. The nature of their work means that they will likely face criticism from competing or powerful interests in society. As already noted, all regulators confront tradeoffs in pursuing their work. Prompting industry to make environmental improvements, for example, may increase costs to otherwise vital and productive industries. Achieving greater fuel efficiency in automobiles may lead to lighter and smaller vehicles that provide diminished protection to their occupants during accidents.[25] An excellent regulator will certainly look for innovative strategies that can sometimes ameliorate or even side-step tradeoffs, but some tradeoffs will still be inevitable. The excellent regulator will need to confront these tradeoffs responsibly in order to make an optimal and appropriate "balance" between competing values. Since such an optimum will rarely mean splitting the difference evenly, the excellent regulator will need to act decisively even if doing so generates criticism, anger, or disappointment from segments of the public.

An excellent regulator may even need to show this kind of leadership at times by taking responsible action in the face of pressing, major problems falling within the scope of its mission, even if the regulator's legal mandate contains some ambiguities or gaps. The regulator may first look for at least partial solutions for which it does possess clear authority to implement. While still being respectful of the legislature that established it, the excellent regulator may also try to promote awareness within government—and perhaps also in the larger public—seeking to use persuasion and moral authority to affect change. In such an educative role, the regulator may try to bring along other parts of government, persuading them to clarify laws or close policy gaps. In exceptional or emergency situations, time may not allow for such persuasion and, after careful deliberation, the regulator may need to be prepared to take action on its own, accepting fully whatever legal risks might subsequently arise.

Of course, while it is clear that excellence in regulating requires courage, giving precision to *leadership* as a measure or definition of excellence is another matter altogether. Effective leadership surely demands more than just courage. After all, some leaders are good leaders, while others are truly excellent ones. What exactly are the qualities of leadership that would define excellent regulators? In other words, even with the concept of leadership, the question of what's the "betterness" of excellent regulators still remains.

Consistency. This report concludes that what makes certain regulators qualify as excellent will in the end be determined by the specific attributes that they exhibit. Do they set the right priorities? Do they make sound, evidence-based decisions? Are they inclusive and transparent? Do they deliver high public value? Excellent regulators will exhibit attributes like those reflected in these questions, attributes which the next section of this chapter will discuss and analyze in greater depth.

"Demonstrated" and "Enduring" Quality as Precondition for Regulatory Excellence

In his in-depth study of the U.S. Food and Drug Administration (FDA), Harvard political scientist Daniel Carpenter (2010) observes how the FDA for many years, in survey after survey, "has consistently been named or identified as one of the most popular and well-respected agencies in government." He also notes that despite "the rough and tumble of American politics," both "conservatives and liberals alike heap praise upon the agency." What was the source of the FDA's high reputation? Carpenter attributes it to an image of a regulator that possesses "a demonstrated capacity for citizen protection, a vigilance against threats to drug safety and medicinal effect, an enduring commitment to scientific principles of assessment, unremunerated work of regulation, [and] appropriate flexibility to pivotal constituencies."

- Daniel Carpenter, *Reputation and Power* (2010)

For now, it is enough to note that whatever the attributes may be that mark a regulator to be excellent, presumably most if not all of these attributes should also be present in many "merely" good regulators. A good regulator will surely set priorities well, rely on evidence, be inclusive and transparent, and so forth. What then distinguishes, as a general matter, the excellent regulators from the merely good ones?

Consistency. The good regulator will exhibit many of the same attributes, but not as consistently or at as high a level as will excellent regulators. Consistency – a well-established, demonstrated, and enduring pattern of superior performance in key attributes – is the general definition of excellence in any endeavor. A good tennis player, for example, can hit the ball over the net and keep it in the court, but an excellent tennis player hits the ball over the net and keeps it in the court on a highly consistent basis.

Much the same is true for regulators. The excellent regulator is one that consistently exhibits the attributes of excellent regulators. We now turn to those attributes.

A plethora of attributes

The Penn Program on Regulation's team found, as Socrates noted in the quotation at the beginning of this chapter, that when we went searching for one virtue – regulatory excellence – we found many other virtues. Throughout the Best-in-Class Project, the Penn team heard a plethora of attributes being used to define regulatory excellence: transparent, smart, fair, firm, consistent, flexible, accountable, adaptive, trustworthy, effective, credible, equitable, efficient, timely, responsive . . . and the list goes on. It is probably only a small exaggeration to say that almost every positive adjective one can imagine has been used by someone to characterize an excellent regulator.

As discussed in Appendix E, an original study prepared as part of the Best-in-Class Project examined regulators' strategic plans in the energy and environmental field from nine different countries, seeking to divine from their stated aspirations what they themselves think are characteristics of regulatory excellence. After carefully reviewing the mission statements and strategic objectives of twenty such plans, the authors of that study worked backwards to identify a total of 25 distinct attributes of excellence, which they then grouped into seven broad categories as shown in the table on the next page.[26]

ATTRIBUTES OF REGULATORY EXCELLENCE REVEALED IN REGULATORS' STRATEGIC PLANS

Attribute Categories	Specific Attributes
Efficient	Burden-Reducing; Timely; Economizing; Accessible
Educative	Didactic; Evangelistic
Multiplicative	Strict (when deterrence value is high); Cooperative within Government (solving joint problems); Collaborative with the Regulated; Enlisting the Citizenry
Proportional	Worst-First Oriented; Risk- and Benefit-Considering; Research-driven; Matching Regulatory Design to Context
Vital	Skilled and Diverse; Cutting-edge Technologically; Nimble; Evaluative (forwards and backwards)
Just	Attentive to Populations Vulnerable to Hazards/Risks; Attentive to Populations Vulnerable to Regulatory Costs; Consulting and Intervening in Two Complementary Fair Ways
Honest	Forthright; Independent (Avoiding Conflict of Interest and Regulatory Capture); Explanatory

In another effort to learn about what others perceive as the attributes of regulatory excellence, the Penn team read widely in the academic and policy literature on regulation and regulatory management. Appendix G displays the diverse and extensive set of attributes contained in numerous reports, articles, guidelines, and books from Canada and around the world.[27] Consider, for the sake of illustration, the attributes found in just two of these sources. In their *Handbook for Evaluating Infrastructure Regulatory Systems*, produced for the World Bank, the former regulator Ashley Brown and his co-authors present the following ten "principles" for regulators:

(1) Independence;
(2) Accountability;
(3) Transparency and public participation;
(4) Predictability;
(5) Clarity of roles;
(6) Completeness and clarity in rules;
(7) Proportionality;
(8) Requisite powers;
(9) Appropriate institutional characteristics; and
(10) Integrity.[28]

Similarly, in his book, *Preside or Lead? The Attributes and Actions of Effective Regulators*, utility attorney Scott Hempling describes an excellent regulator as one that is:

(1) Purposeful;
(2) Educated;
(3) Decisive;
(4) Independent;
(5) Disciplined;
(6) Synthesizing;
(7) Creative;
(8) Respectful; and
(9) Ethical.[29]

Many other sources provide similar lists of key attributes or qualities of excellent regulators (see Appendix G).

In addition, we reviewed the "guiding principles" for high-quality regulation adopted by the Organization for Economic Cooperation and Development (OECD), set

OECD Guiding Principles for Regulatory Quality and Performance (2005)

1. Adopt at the political level broad programmes of regulatory reform that establish clear objectives and frameworks for implementation.
2. Assess impacts and review regulations systematically to ensure that they meet their intended objectives efficiently and effectively in a changing and complex economic and social environment.
3. Ensure that regulations, regulatory institutions charged with implementation, and regulatory processes are transparent and non-discriminatory.
4. Review and strengthen where necessary the scope, effectiveness and enforcement of competition policy.
5. Design economic regulations in all sectors to stimulate competition and efficiency, and eliminate them except where clear evidence demonstrates that they are the best way to serve broad public interests.
6. Eliminate unnecessary regulatory barriers to trade and investment through continued liberalization and enhance the consideration and better integration of market openness throughout the regulatory process, thus strengthening economic efficiency and competitiveness.
7. Identify important linkages with other policy objectives and develop policies to achieve those objectives in ways that support reform.

out in the box above. Although the OECD prioritizes substantive principles of market reform, its guidelines also evince many of the same qualities found in the work by Brown et al., Hempling, and others whose work is listed in Appendix G, including transparency, fairness, efficiency, adaptability, and analytic rigor.[30]

The attributes contained in the literature also generally track what we heard from participants in our two dialogues in Alberta, in our international expert dialogue, and in meetings and interviews with other government officials and concerned members of the public. The vast number of attributes we heard turned out to be rather staggering.

To be sure, some overlap exists across sources. Hempling's "independent" matches Brown et al.'s "independence," and his "ethical" lines up with their "integrity," and maybe his "purposeful" is akin to their "clarity of roles." But the others in the Hempling and Brown et al. lists seem rather different – and yet all seem plausibly valid candidates for attributes of excellence. Would anyone argue against excellent regulators being "creative," "respectful," or "disciplined"? The point is that just by merely drawing on two sources, we can easily develop a list of at least fifteen or more distinct attributes. Add to those the other non-duplicative attributes in Appendix G, plus the twenty-five attributes in the Finkel et al. study of strategic plans, and the result is a rather unwieldy list.

There is no denying the value of any of these attributes individually. Using all of them to build a model of an excellent regulator, however, seems a bit like constructing a super-superhero by combining the powers of Iron Man, Hulk, Superman, Wonder Woman, Thor, Spiderman, and the Fantastic Four. This is not to suggest that an excellent regulator is superhuman. Nor is it to deny that combining all those superpowers would make for one formidable action figure! It is true that an excellent regulator *does* need to exhibit a plethora of attributes; it is just that the longer the list of attributes grows, the more it begins to look itself like a highly detailed rule-book.

It gets even more unwieldy if one were to take into account in a definition of excellence the very fine-grained objectives that individual regulators necessarily have when operating under their own legal mandates. To illustrate how many

more attributes could be offered if one were to define them in terms of the specific objectives of individuals regulators, contrast the attributes shown in Appendix G with just a few of the fine-grained regulatory objectives recently articulated by a single oil and gas regulator, the Railroad Commission of Texas:

- Reduce the occurrence of identified pollution violations associated with fossil fuel energy production in Texas from fiscal year 2002 levels.
- Identify and correct existing environmental threats through voluntary operator actions or with use of state funds.
- Protect public health and the environment by identifying, assessing, and prioritizing wells that require the use of state funds for plugging and provide assistance for operator-initiated corrective actions.[31]

As staggering as the number of general attributes in Appendix G may seem, the number of specific attributes, like those articulated by the Texas Railroad Commission, would necessarily be larger still. Indeed, if the attributes of regulatory excellence take the degree of specificity as illustrated by the objectives of the Texas regulator, the number of attributes for excellent regulators could proliferate dramatically—equaling the number of individual problems that a regulator aims to solve multiplied by the number of values or objectives that define success in solving those problems. Moreover, those problems will vary over time and, more greatly, from regulator to regulator.

The proliferation of potential attributes poses a conceptual and practical hurdle in developing a general framework of regulatory excellence. It is not that there is anything wrong with creating highly specific objectives for a regulator to meet. On the contrary, as Chapter 3 of this report discusses, excellent regulators will want to select specific metrics to measure and use to manage better their performance. What is important to see is that these more specific objectives do not constitute general "attributes of regulatory excellence;" that is, they do not define the essence of regulatory excellence. Rather, they help constitute or make operational the kind of high-level, generalizable attributes that are the central concern of the Best-in-Class Project.

To illustrate the difference between attributes of excellence and more specific performance objectives, consider a set of widely accepted public policy criteria: *effectiveness*, *cost-effectiveness*, *efficiency*, *equity*, *legality*, and *administrative feasibility*. Criteria like these are often used to guide policy decision-making, but to use them in making a concrete decision necessarily requires filling in the details—or making them operational. The policy criterion of *effectiveness* can, for example, help a mine safety and health regulator make decisions, but it needs to be operationalized in terms of something more specific, whether it is effectiveness in terms of "avoiding mine cave-ins" or in terms of "reducing black lung disease." The same thing is true for attributes of excellence, which might well overlap with some of the standard policy criteria. To move a large, complex organization like a regulator toward excellence, everyone in the organization needs to know and exhibit the essential components of regulatory excellence. The general attributes of excellence can and should focus management decision-making, even though each individual regulator will need to fill in the details about what each general attribute means in its own society, circumstances, and time period.

Core attributes: the "RegX molecule"

What qualities, then, constitute the core general attributes of regulatory excellence? The key task in this section is to distill regulatory excellence to its essence. Just as chemists break down matter into its component parts, we need to break down regulatory excellence into its core attributes. Treating regulatory excellence as a molecule – let us call it "RegX," for Regulatory Excellence – we have found that it is made up of three "atoms": (1) Utmost Integrity, (2) Empathic Engagement, and (3) Stellar Competence. (See the figure to the right.) The three atoms in the RegX molecule embrace the myriad attributes found in all the research, interviews, and dialogue sessions that were part of the Best-in-Class Project. The adjectives "utmost," "empathic," and "stellar" intentionally remind us that although even merely good regulators will need integrity, engagement, and competence, excellent regulators must possess these attributes in abundance and demonstrate them consistently.

The *Utmost Integrity* atom is about much more than just a lack of corruption – although it is certainly about that too. Foundationally, it is about the character of the regulator: its commitment to serving the public interest, to respecting the law and duly elected representatives, to taking evidence and analysis seriously, to admitting and learning from mistakes, and so forth. Attributes such as *honesty*, *humility*, and *public-spirited* all fit within this category. But so too will *courage*, as seeking to act in a way that advances overall public value will, by necessity for a regulator, require making decisions that will displease some segments of society, including sometimes some of the most powerful segments.

The *Empathic Engagement* atom is about transparency and public engagement; it is about how the regulator interacts with the public. Does the regulator, for example, provide adequate public notice of its activities? Does it affirmatively solicit public input and seek to educate the public? Just as importantly, empathic engagement refers to the attitudes a regulator's employees exhibit when they interact with others. This encompasses how inspectors treat the managers of the facilities they are inspecting – as well as how the person picking up the phone in the regulator's home office treats the non-native language speaker who has a question. Do they treat others respectfully? Do they assume at the outset that noncompliance might not always stem from ill will? Finally, when they make decisions, do they provide clear, sincere, and coherent reasons for them?

The *Stellar Competence* atom is about delivering substantive outcomes – achieving high performance – and everything a regulator does to advance those substantive outcomes that yield maximal public value. The criterion of *efficiency* – which 90% of the strategic plans in Finkel et al. referenced – fits into this category, and so too does *effectiveness* and the distributional *equity* of outcomes. Competence, though, is also about various qualities related to best regulatory practices, such as proportionality, flexible instruments, and risk-informed priority-setting. Finally, included too are numerous qualities that describe regulatory personnel, their technical knowledge and skill, as well as other organizational resources needed to deliver stellar outcomes: e.g., adequate fiscal resources, state-of-the-art information technology systems, and so forth.

The table on the next page shows how the three atoms of the RegX molecule can be used to organize and make sense of the attributes put forward by Brown et al. and Hempling. We use their lists merely for illustration; the same sorting and categorization into these three core "atoms" could be completed for any of the attributes in Appendix G, as well as those that Penn Program on Regulation team members heard in interviews and dialogues.

ORGANIZING SPECIFIC ATTRIBUTES BY THE RegX MOLECULE

RegX "Atoms"	*Brown et al. (2006)*	*Hempling (2013)*
Utmost Integrity	*independence; accountability; integrity; appropriate institutional characteristics*	*purposeful; independent; disciplined; ethical*
Empathic Engagement	*transparency and public participation; predictability; completeness and clarity in rules; appropriate institutional characteristics*	*respectful; synthesizing*
Stellar Competence	*clarity of roles; proportionality; requisite powers; appropriate institutional characteristics*	*educated; decisive; creative; synthesizing*

Nine tenets of regulatory excellence

Beyond distilling the attributes of excellence into three core "atoms," the expansive research and outreach conducted during the Best-in-Class Project led ultimately to nine essential "take-away" tenets about regulatory excellence. The nine tenets shown below together represent the most significant, comprehensive but still compact general aspirational statements of regulatory excellence of anything we have encountered. They are also helpfully aligned, as should be clear, with the three core RegX attributes.

An excellent regulator consistently holds itself to the highest standards of integrity.

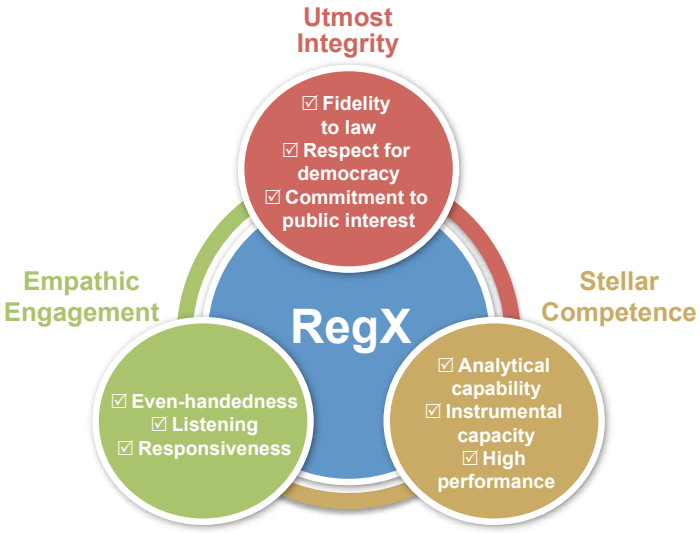
1. ***Fidelity to law**: An excellent regulator seeks to comply faithfully with all legitimate laws.*
2. ***Respect for democracy**: An excellent regulator recognizes and seeks to fulfill its role in a democratic system by yielding to clear and proper commands by elected officials, and also by seeking as needed to initiate or contribute to productive public dialogue on issues relevant to the regulator's mission.*
3. ***Commitment to public interest**: An excellent regulator strives to serve the public interest first and foremost, not to succumb to expediency nor display bias toward select private interests.*

An excellent regulator engages empathically with all facets of society when making decisions and exercising authority.

4. ***Even-handedness**: An excellent regulator engages fairly with all affected interests, recognizing that sometimes even-handedness will require affirmative outreach to ensure that otherwise poorly represented views are adequately heard.*
5. ***Listening**: An excellent regulator wants to hear what everyone who has values or interests at stake in its decisions has to say, seeking to understand how its decisions will affect others and trying to make decisions that benefit from the different knowledge distributed throughout society.*
6. ***Responsiveness**: An excellent regulator responds to concerns and explains its decisions fully and sincerely, being transparent not merely by providing access to information but also by giving reasons for its actions (including decisions not to act) and addressing all important arguments for and against its chosen course of action.*

An excellent regulator demonstrates consistently stellar competence by using its available resources to maximize public value.

7. ***Analytical capability**: An excellent regulator seeks out reliable data and conducts analysis sincerely with the aim of synthesizing the best available evidence to support its decisions, seeking to reduce and manage risks smartly (even though risk may never be able to be eliminated entirely).*
8. ***Instrumental capacity**: With a sufficiently-funded and highly-trained staff working in a supportive organizational culture, an excellent regulator uses the best tools and technologies available to solve problems and earnestly seek continuous improvement through regular performance measurement and evaluation.*
9. ***High performance**: An excellent regulator consistently delivers significant positive public value, something which is not necessarily the same as making everyone happy (the latter which may be unattainable or undesirable).*



Of course, other propositions about regulatory performance might well be offered. But these nine tenets, based upon considered judgment, extensive outreach, and in-depth research, distill the essence of regulatory excellence. A regulator that is not aligned well with all nine tenets might be a good regulator; it could not be said to be an excellent regulator.

Excellence is *not* error-free

Although excellence requires consistently living out the nine tenets of regulatory excellence, it should be made clear that excellence is not the same as perfection. As the American football coach Vince Lombardi said when urging his players to achieve perfection, in the end "perfection is not attainable." The excellent regulator will, and must, always strive for perfection and never be truly satisfied with anything short of it. Nevertheless, the reality is that mistakes inevitably will happen – and perhaps some of them could possibly be quite tragic if not catastrophic. The regulator is, after all, overseeing the behavior of others, and a mistake that arises within the operation of a regulated entity may at times be beyond what would be possible for even the most excellent of regulators to have prevented.

In the pursuit of excellence, regulators will make their own mistakes too. Acting entirely in good faith, they will find they need to adapt and learn by doing in order to refine their delivery on the three RegX attributes. Yet "learn by doing" is just another name for "trial-and-error," the latter which expressly acknowledges that mistakes do happen. Mistakes actually provide opportunities for knowledge generation. An organizational culture oriented around the avoidance of all mistakes would result in no action ever being taken – and even that would lead to mistaken delays and inaction. Regulating is itself a risky business, with risks from acting as well as risks from not acting. Too much risk aversion on the part of a regulator is definitely not conducive to regulatory excellence.

The TAO of regulatory excellence

Now that we have distilled the attributes of excellence into three core "atoms" and have articulated nine tenets of regulatory excellence, a further question naturally arises: To what do these attributes apply? In other words, exactly what aspect of a regulator must reflect the utmost integrity, empathic engagement, and stellar competence?

In discussing regulatory excellence and reading what others have written about regulatory performance, we have noticed that different people – and even sometimes the same people in different parts of a discussion – conceptualize a regulator's excellence three different ways, based on the regulator's (1) *Traits*, (2) *Actions*, or (3) *Outcomes* – or the "TAO" of regulatory excellence.

- Excellence as *traits*. Some people think of excellence in terms of the traits of a regulator *as an organization*. They use adjectives such as, "strong," "well-funded," "adequately staffed," "credible," "honest," "legitimate," and so forth. When they do so, they are not intending to describe specific actions or outcomes but rather a general "state" of the regulator—a standing set of "resources" upon which it has to draw or a general posture that it holds in conducting its day-to-day operations and affecting outcomes in the world. Excellence as traits means that the regulator, as an overall entity, reflects the utmost integrity, empathic engagement, and stellar competence.
- Excellence as *actions*. Another way to think of excellence lies in the type of actions the regulator takes in the course of regulating, whether in issuing new rules, inspecting facilities, prosecuting violators, or undertaking other day-to-day work. Adjectives sometimes describe the regulator's actions as "vigilant," "serious," "reasonable," "evidence-based," and so forth. Other times actions are described in terms of specific types of best practices, e.g., "an excellent regulator targets the worst risks," "an excellent regulator uses flexible regulatory instruments," "an excellent regulator adopts a problem-solving rather than a punitive approach to enforcement," and so forth.
- Excellence as *outcomes*. Ultimately the traits of a regulator, as well as its actions, should lead to publicly valued outcomes, such as reduced safety risks or improved market efficiencies. After all, that is what makes people want to define excellence in terms of certain traits and actions, because they think those traits and actions are connected to excellent outcomes. A regulator possessing the trait of "strength," for example, is thought to be more likely to achieve effective outcomes. A regulator who acts by using flexible regulatory instruments is expected to achieve more cost-effective or efficient outcomes.

  Clearly, outcomes matter. Adjectives describing desirable regulatory outcomes are often used to define regulatory excellence. Sometimes the outcomes are substantive ones, including:

  - *effective* (solving a problem or achieving a desired outcome);
  - *cost-effective* (achieving a specific level of some outcome, i.e., problem reduction, at a low cost);
  - *efficient* (balancing problem reduction with other concerns, such as costs, so as to achieve an optimal level of problem reduction); and
  - *equitable* (resulting in a fair distribution of the costs and benefits of regulatory action).

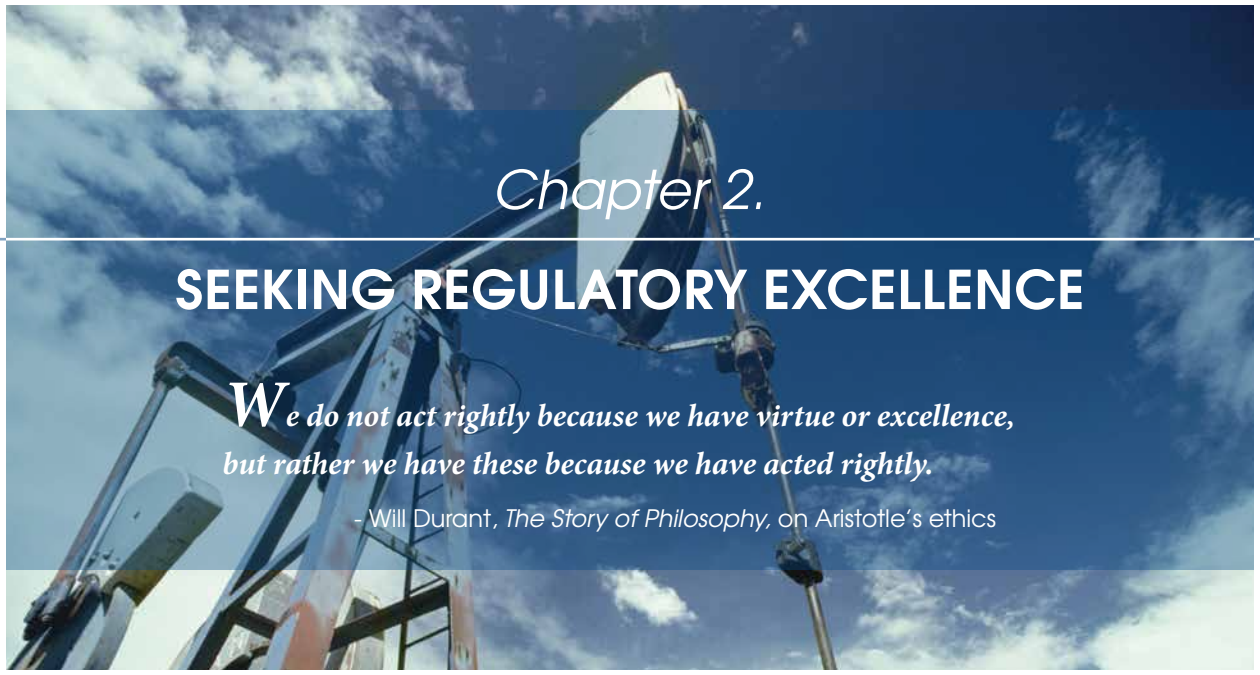
  In addition, adjectives can describe excellent process-oriented outcomes, such as: *legitimate*, *credible*, and *trustworthy*. Some of these process-oriented adjectives are the same as the ones used to describe general traits of a regulatory organization, but they can also describe the outcomes of specific processes. For example, do the regulator's public hearings leave members of the public feeling the hearing process is legitimate (i.e., that they were listened to and respected)?

Traits, actions, and outcomes have a close bearing on each other. Traits can help reinforce certain kinds of actions, while consistency in actions over time can help determine traits. Both traits and actions, as noted, affect outcomes.

Regulatory excellence occurs when a regulator's traits, actions, and outcomes are in sync with each other and align well with the core attributes and tenets of regulatory excellence. For example, consider the "responsiveness" tenet of regulatory excellence, which is a component of the RegX attribute of emphatic engagement. Responsiveness can be manifested as a trait, an action, or an outcome. A regulator exhibiting responsiveness as a trait will create and maintain an organizational culture that values openness and conveys a welcoming attitude to the public. A regulator takes responsive actions by, among other things, preparing

> *The highest excellence is like that of water. The excellence of water appears in its benefiting all things...*
>
> - Lao-tzu, *Tao Te Ching*

clear expository documents to accompany its regulatory decisions, openly acknowledging all the public concerns that the regulator heard, explaining how the regulator has addressed these concerns, and offering reasons for those concerns with which the regulator disagrees. A regulator achieves responsive outcomes when affected citizens show they understand the reasons provided by the regulator and when those disappointed in a decision nevertheless can at least reluctantly accept what the agency decided. In other words, when all three of these meanings of excellence – traits, actions, outcomes – reinforce each other, and when they exhibit the core attributes and tenets of excellence, a regulator has then attained the highest regulatory excellence.



Chapter 2.

SEEKING REGULATORY EXCELLENCE

We do not act rightly because we have virtue or excellence, but rather we have these because we have acted rightly.

- Will Durant, *The Story of Philosophy,* on Aristotle's ethics

How does a regulator achieve excellence? What steps can a regulator take to align its traits, actions, and outcomes better with the attributes and tenets of regulatory excellence articulated in Chapter 1? Just as it is helpful to think carefully about the core RegX attributes, it is also vital to think more deeply about what a regulator does – and, more importantly, what it *needs to do* to seek excellence.

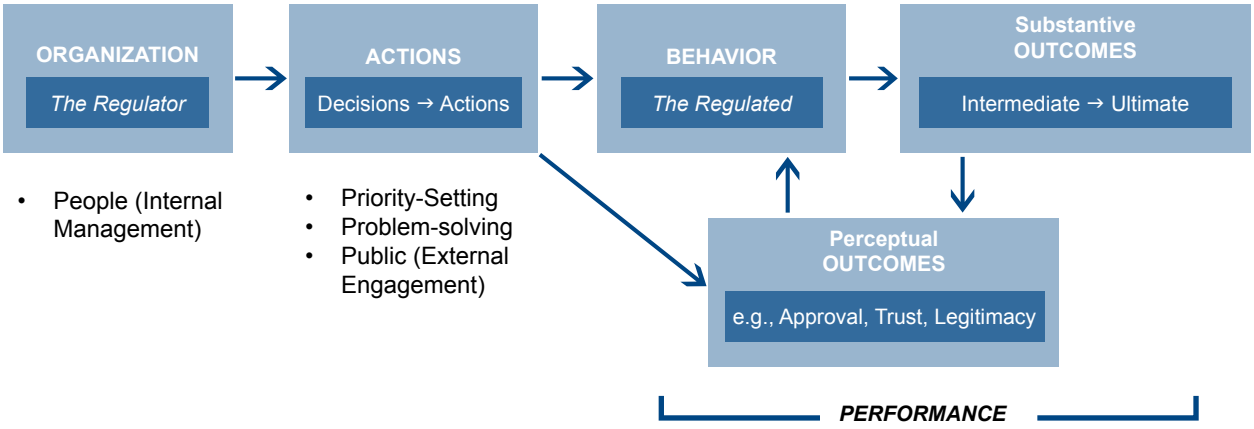
This chapter offers guidance about how a regulator can more consistently exhibit the attributes of utmost integrity, empathic engagement, and stellar competence. It begins by presenting a general model of regulation as a guiding framework that any regulator can use to seek or maintain excellence. That model consists of three major parts – the regulator's organization, its actions, and its performance, which parallel the TAO of Regulatory Excellence.

Building on the model presented here, this chapter then reviews a series of steps that regulators can take to move forward on the regulatory excellence path, focusing on steps it can take to improve its organization and its actions so as to yield better outcomes. Those steps encompass four major facets of a regulator's operations: (1) internal management, (2) priority-setting and decision-making, (3) problem-solving (e.g., rulemaking, enforcement, and incident response), and (4) external engagement. Throughout, this chapter reveals that regulatory excellence depends on the quality, professionalism, and empathy of the people who work for a regulator. Regulatory excellence is ultimately "people excellence."

A model of regulatory organization, action, and performance

To begin to see how a regulator can seek excellence, let us consider a very general model of a regulator's organization, action, and performance, as shown on the next page. Of course, as with any generalization, this one greatly simplifies a complex and interactive chain of causal relationships between a regulator and the world with which it interacts. But for purposes of understanding how a regulator moves toward excellence, this model marks an important conceptual starting point.

A MODEL OF REGULATORY ORGANIZATION, ACTION, AND PERFORMANCE



The model consists of five boxes connected with arrows to convey the logical and causal connections between each box. In any regulatory field or sector of the economy, regulation begins on the left side of the model, with the creation or authorization of a regulatory organization. For example, a decision is made to regulate the environmental impacts of oil and gas development and then a public organization is designated to oversee the operations of the oil and gas industry. That regulatory organization will take a variety of *actions* intended to influence the *behavior* of oil and gas companies in order to deliver *substantive outcomes* such as reduced pollution or other forms of risk reduction. In addition, how the regulator undertakes its work contributes to *perceptual outcomes* – such as varying degrees of public approval, confidence, trust, and legitimacy.

The model provides an important frame of reference that allows a regulator to think strategically about what parts of its operations need improvement, to plan new steps aimed at achieving improvement, and, as will be discussed in the next chapter, to measure how much improvement it makes. The model does not, of course, tell a regulator exactly what it needs to do to manage its organization better or what specific actions it must take to generate better performance. The actual appropriate and necessary actions may well be as varied as regulators themselves. After all, the problems they are charged to address vary, just as do the types of industries they oversee and the social conditions that exist in affected parts of their populations.

Consequently, although the general model of regulation applies across different regulators, *there can be no simple formula or checklist to guide all the myriad choices that regulators must make in the course of their day-to-day operations*. The model does not define at a fine-grained level what specific actions a regulator must take to be excellent within any particular domain. But it does reveal how a regulator must strategically approach its quest for regulatory excellence.

The model comprises five boxes, but it can also be divided in half along a vertical axis. The left-most two boxes – labeled "organization" and "actions" – correspond to what the regulator *is* (its traits) and what the regulator *does* (its actions). The remaining three boxes – the right-most ones arranged in a triangular fashion in relationship to each other – collectively represent the consequences of the regulator's organization and actions (its outcomes or performance). In this way, the model is actually a manifestation of the TAO of Regulatory Excellence. When different people think about regulatory excellence in terms of traits, actions, or outcomes, they are essentially thinking about the excellence of different parts of the regulatory model: excellence as *traits* of the organization, excellence as *action*, and excellence as *outcomes* that define the regulator's performance. Let us consider in the following section each of these three segments of the model before discussing, in the subsequent section of this chapter, four key facets embedded within the left two boxes of the model that regulators can use as key leverage points to improve their performance.

Organization

Moving from left to right in the model on page 31, the chain begins with the regulator's organization and its capacities and characteristics. These include its:

- Structure. Is it headed by a single official or a multi-member body? Can those members be removed at-will by political officials or is removal limited only for some good reason? These kinds of structural features may affect the types of actions the regulator takes as well as its performance.
- Resources. The size of the regulator's budget will be an important and obvious resource, but so too will be its informational and human resources. Regulators need information to make sound regulatory decisions, and their organization's information technology systems will affect how well it can act and perform. Ultimately, a regulator cannot be much better than the people who work for it. Knowledgeable, well-trained, motivated, empowered, and socially adept managers and employees make up a vital, if not the most vital, resource affecting what a regulator can do and how well it performs.
- Legal and political support. Other factors affecting the regulator's actions and performance will be the legal authority and duties given to it by the legislature as well as the ongoing level of political support it enjoys from the legislature and other political institutions that oversee and interact with it.
- Organizational culture. The regulator's organizational culture also matters. Culture refers to the widely held beliefs and values that pervade and persist over time within the organization. Does the regulatory organization possess a culture of learning and public service? Do the regulator's employees exhibit positive attitudes and a strong morale?

The regulatory organization's capacities and characteristics, in turn, affect how well the regulator can exhibit the RegX attributes. The organization's characteristics and capacities are not themselves the RegX attributes; rather, they can either enable or hamper the regulator's ability to achieve these attributes. Some organizational characteristics could even very closely affect these attributes. For example, an organization that is characteristically transparent can be expected, all things being equal, to possess greater integrity because special self-interested deals will likely be deterred more readily by the openness. Similarly, a regulatory organization with a culture that values and reinforces learning will more likely, all things being equal, achieve a greater level of competence than one that lacks such a learning culture.

Actions

The regulator's organizational capacities and characteristics describe what the regulator is. The next box, moving to the right in the model on page 31, reflects what the regulator does. The model makes the "action" box look deceptively simple, but in reality the "action" any regulator takes will be plenteous and varied. Each day, every single employee of a regulator takes multiple actions, each one of which in its own context will be different from those of others. Each of these actions could also have ripple effects on the regulator's performance. For example, a single misguided, negligent, or illegal action taken by an individual employee might well erupt into an unproductive scandal enveloping the organization, affecting how it is perceived, and possibly distracting it from other actions that would obtain positive substantive outcomes. On the other hand, a single thoughtful and responsible action – say, by the inspector who notices a problem that could have become catastrophic, an employee who conceives of an effective innovation, or another who goes out of her way to help a frustrated member of the public – can very well on its own (let alone in combination with other individuals acts) make an extraordinary positive difference in the regulator's performance.

This report does not – and indeed cannot – offer a fine-grained recitation of all of the individual actions that, within the myriad permutations of their specific regulatory contexts, will affect a regulator's excellence in terms of its integrity, engagement, and competence. But to generalize, consider the following six broad categories of actions, each of which falls within the second box in the model on page 31.

1. Decision-making. Deciding how to act is itself a kind of action. For example, regulators can make decisions on evidence or based on expediency. They can consult extensively or not at all with experts inside and outside of industry and with other regulators around the world. Two key types of decisions can be highlighted:

    - *Priority-setting.* Decisions must be made about how to allocate scarce individual and organizational resources, whether in terms of the problems on which to focus, rules that should be crafted, or regulated entities that should be targeted with limited inspection resources. Priorities should ideally be set to maximize public value from the resources available to the regulator.
    - *Solution selection.* In addition to setting priorities, regulators have to decide among possible alternative solutions to the problems they seek to solve. How thoroughly they understand the underlying causes of these problems, gather evidence, and analyze alternative possible solutions will likely affect the kinds of outcomes that arise from the selected action. It is also possible to consider how much time and effort the regulator ought to devote to such analysis, especially when problems are time-sensitive or if for other reasons the value to be gained from additional efforts at analysis cannot be justified.

    Various participants in the dialogues we held in Alberta emphasized how important it is for both priority-setting and solution selection to be informed by a full consideration of all the available scientific evidence. Some participants also emphasized that decision-making needs to be conducted in an administratively efficient manner so as to minimize delays and avoid duplication in processing time.

2. Public engagement. It also matters how the regulator interacts with the public, including industry, unions, advocacy groups, Aboriginal communities, think tanks, members of the media, property holders, community organizations, other governmental representatives, and other interested individuals or organizations, including from other countries. Public engagement can take many forms and be conducted in a variety of different ways. For example, it could be initiated early on in a decision-making process or only at the end when most options are settled; it could be brief and perfunctory or sustained and serious; it could be inclusive or circumscribed; and it could be conducted with arrogance or with sincerity and good will. Much the same could be said of the nature and extent of transparency a regulator provides the public. Most participants in the dialogue sessions we held in Alberta stressed the importance of an excellent regulator providing consistent transparency and affirmative public engagement throughout the entire regulatory process. They also emphasized what could be called a "transparency of reasons," by which regulators are open in providing justifications and responding to concerns with sincere, well-developed, and clear explanations.[34]

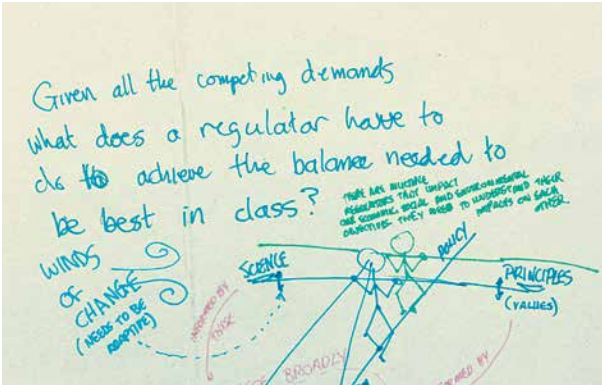
    As with decision-making, public engagement can (and should) either accompany or precede other kinds of actions, such as making rules. It can also be a component of a regulator's decision-making process about any kind of action.

    Steps the regulator takes to make itself transparent and to engage with the public will most obviously

affect what in the model on page 31 is labeled "Perceptual Outcomes," such as how the regulator is trusted and the degree to which it is viewed as legitimate. They might also affect what appears in the model as "Substantive Outcomes" too – either because more meaningful and informed public opinion can help the regulator make better substantive decisions, or because increased legitimacy bolsters positive behavior by the regulated community that advances the regulator's substantive outcomes.

Transparency and public participation can shape some of the regulator's organizational characteristics too. By acting transparently, for example, a regulator can build or reinforce a public-spirited organizational culture.[35]

3. Rule-making. Although the legislature makes laws that the regulator must execute, and in some systems of government ministries set authorizing and constraining policies separate from regulators, regulators usually have authority to create more specific rules. Through the making of rules or directives, or by issuing guidance documents, regulators can clarify ambiguities in underlying laws or close policy gaps. In other words, even if a regulator's role in rule-making is legally subsidiary to the legislator or policy-maker, sometimes as a practical matter the rule-making functions undertaken by the regulator matter much more in terms of solving real-world problems. Especially if the overriding law or policy is written only in the most aspirational generalities, rule-making by the regulator may be highly decisive. The way these rules are written will matter too. Some rules might be very stringent and others less so. Some rules give regulated firms a great deal of flexibility in how to meet the regulator's objectives, while other rules give no flexibility (perhaps appropriately in many circumstances). Careful choices about the stringency, flexibility, and other design features of rules will be important as a regulator seeks to shape industry behavior and ultimately deliver the kind of substantive outcomes desired.



4. Rule-application. In addition to making rules, regulators also apply rules to specific individuals and circumstances. Rule application can occur through the issuance of permits, licenses, or other authorizations. It can also occur through enforcement-related actions: inspections, responses to findings of violations, and issuance of variances. Regulators have a variety of ways to apply and enforce rules – e.g., some adversarial, some more cooperative – and the choices a regulator makes about these actions and the procedures used for making them can prove a test of its excellence. In their expert papers prepared for this project, scholars John Braithwaite and Neil Gunningham provide reasons for regulators to approach rule application with flexibility and to act responsively to instances of non-compliance.[36] The excellent regulator searches for an optimal mix of punitive and cooperative rule application. As political scientists Eugene Bardach and Robert A. Kagan wrote years ago, even though it is unreasonable and counterproductive for a regulator always to act punitively, its personnel still need sometimes to be very tough on non-compliant firms.[37] We heard similar sentiments in our dialogues with individuals from throughout Alberta. As one participant in the province-wide dialogue put it, "a regulator cannot be seen as a rubber stamp for industry or any other particular stakeholder group." Another participant, coming from an altogether different segment in the province, stated that the regulator must be "seen as being a fair and tough enforcer of rules and regulations; not seen

Model regulatory systems "would allow inspectors to permit enterprises, in the appropriate circumstances, to do less than the law requires. Regulations would not be enforced in situations where they do not make sense. And if, for whatever reasons, inspectors were denied discretion to suspend rule enforcement themselves, the good inspector would draw upon his experience in the field and inform top regulatory policymakers about overinclusive or ineffective rules...But the good inspector still would be tough when toughness was required. His effort to seek cooperation would not blind him to the possibility that personnel in the regulated enterprise may seek to evade even reasonable regulatory requirements, provide him with misleading information, or exaggerate the costs or technical difficulties of compliance."

- Eugene Bardach and Robert A. Kagan, *Going By the Book: The Problem of Regulatory Unreasonableness* (1982)

as protecting individual operators or the sector as a whole from criticism, embarrassment or financial impacts/penalties."[38]

5. Incident response. Although regulators may strive to prevent all accidents or harms from occurring, as long as some residual risk remains – which it will for any industrial activity – then accidents will still occasionally occur even under the best regulatory system. Of course, regulators can also make mistakes or overlook potential hazards. Responding responsibly and with all appropriate speed when incidents occur is a critical function of most regulators – even though this responsibility will also be shared with the responsible regulated entities and with other governmental authorities or services.

   Obviously, the nature of incidents can vary widely across regulators: a plane crash for an aviation regulator; a financial collapse for a banking regulator; or a chemical facility explosion for a workplace safety regulator. But how quickly and thoroughly the regulator responds, investigates, and takes corrective action speaks volumes about the regulator and affects its performance.

   In a sense, incident response is a special case of rule application, for an incident makes the need for an inspection evident. If warranted, the imposition of penalties will be part of the corrective response. But an incident is not the same as the general problem of promoting compliance that typically motivates inspections and other compliance assurance efforts; the salience and gravity of an incident makes it a distinct type of problem that must be planned for, managed, and responded to effectively.[39]

6. Evaluation. Just as a regulator takes a kind of action when it analyzes its priorities and options before it

Incident Response and Regulatory Excellence

As mentioned in the previous chapter, excellence does not mean error-free; it does not mean that accidents, leaks, spills, injuries, and even fatalities never occur. The excellent regulator does, of course, work diligently and effectively to reduce these tragic occurrences. But when they do occur, how the regulator responds will determine whether it can be judged an excellent regulator. As Harvard political scientist Daniel Carpenter has written, regulators' reputations are "shaped as much by ex post responses to events as by ex ante modeling of organizational structure."

Consider two examples of government officials from different roles, not regulators per se but each with a common thread in how they have responded to incidents and have been judged to be excellent based in part on how they have responded to calamities:

- The news outlet *Politico* recently profiled Cathy Lanier, the police chief of Washington, D.C.: "Even as police chiefs across the country are under siege ... Lanier is unassailable, roundly revered and breezing through her eighth year as chief under what is now her third mayor. Lanier is so well thought of that bestselling thriller writer David Baldacci created a character based on her ... in his 2009 novel *True Blue*. One public opinion poll pegged her approval rating at 84 percent in the District." The *Politico* report stated that "her personal style of community relations has been key to her success." She is, according to an experienced prosecutor, "a good listener. A lot of chiefs don't have that quality. She talks with you, not to you." In addition, she says herself that "responsiveness is huge." She insists her force acts responsively to community concerns, even to the point of giving out cell phone numbers of watch commanders to concerned citizens. The *Politico* report also noted her response to homicides: "During her first two years as chief, Lanier says she tried to show up at every murder. Now she or an assistant chief makes every homicide scene. 'Homicide is the worst thing that can happen to a community,' she says. 'You need to be there.'"
- Naheed Nenshi, the mayor of Calgary, came into office in 2010 with only 40% of the vote in a fractured election. But by 2013 he won reelection with a 74% landslide. He now possesses "Superman status," according to a report in the *National Post*: "Ads for the new movie *Man of Steel* have pictures of his head on them." His name has been featured adoringly on t-shirts and posters throughout the city. What explains his exceptional public approval? Most observers attribute it to the way he responded in the wake of horrific flooding in downtown Calgary. When floodwaters from the Bow and Elbow rivers forced thousands of city residents out of their homes, Nenshi demonstrated personal empathy and selflessness, providing frequent updates to the public and working tirelessly round the clock. He personally visited flooded areas, met with and praised volunteers, gave numerous press briefings, and used social media extensively. As one CBC report put it, he viewed his top priority as "to give people the information they need to stay safe." He also reportedly still uses social media to be responsive to citizens of Calgary, trying to answer personally as many tweets and messages as he is able. "He uses the medium as it was designed to be used – as an interactive communications technique," according to one observer.

Sources: Daniel Carpenter, *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA* (2010); Harry Jaffe, "The Capital's Top Cop," *Politico* (July 16, 2015); Dean Bennett, "'The Voice of All Calgarians': Flood Leaves Mayor Naheed Nenshi with Superman Status," *National Post* (June 28, 2013); John Rieti, "Alberta Floods: Keeping Up with Calgary Mayor Nenshi," *CBC News* (June 25, 2013); Dean Bennett, "Mayor Nenshi has Captured Calgary's Heart, But the Worst, at Least Politically, is Yet to Come," *The Globe and Mail* (June 28, 2013).

makes or applies a rule, it also takes an important kind of action by looking back to evaluate how well it is doing. The aim with evaluation should be to learn from past actions about how to make future actions still better, as an excellent regulator seeks continuous improvement and maintains a readiness to adapt to changing circumstances. The kind of evaluation a regulator should undertake will vary in its scope and sophistication. (This issue is explored in much greater depth in the next chapter of this report.).

For a regulator to achieve excellence, its actions need to reflect the three core RegX attributes and be aligned with the nine tenets of regulatory excellence. Regulators that

use best practices with respect to each of the major types of actions highlighted here will have at least a strong presumptive case that they have met the "stellar competence" test. (Of course, if even the best practices anywhere in the world are still decidedly subpar and ineffectual, then the stellar competence test will not be met.) In terms of the test for "empathic engagement," regulators meet it if they undertake all of their actions in the above-noted categories by reaching out to affected members of the public, listening to them, and providing responsive reasons and explanations. Regulators similarly meet the test of "utmost integrity" if, when undertaking their actions, they follow the law, respect elected officials and the democratic process, and exercise their discretion in a manner that promotes public value.

> *Excellent regulators constantly recalibrate their programs to ensure that the right processes, standards, and approaches are working.*
>
> - Wendy Wagner, *Regulating by the Stars* (2015)

Performance

A regulator meets a performance-based test of excellence when the outcomes that follow from its actions also evince high levels of integrity, empathy, and competence. The regulator's actions mark only one step in a causal chain that hopefully leads toward desired substantive outcomes. The ultimate substantive outcome is the regulator's ultimate goal, such as improving public health. Along the causal path toward that ultimate goal will lie a series of intermediate outcomes, as alluded to in the model on page 31. For example, reducing air pollution is an intermediate step on the way to reducing cases of asthma, which is a step toward (or a manifestation of) an ultimate outcome of improved public health. These intermediate outcomes could be numerous; their number will depend on however many steps there may be in the causal chain that leads to the ultimate outcome.

The first intermediate outcome in a well-understood regulatory causal chain is represented by the "Behavior" box in the model. That behavior is the principal intervention point for a regulator, and changing it should be the first step in a causal chain leading to the ultimate outcome.

The Minerals Management Service: Lessons in How Not to be Excellent

Following the explosion of the Deepwater Horizon oil rig and the subsequent massive oil leak in the Gulf of Mexico in 2010, the U.S. Minerals Management Service (MMS) came under intense scrutiny. Criticisms of the MMS fell across all the stages of the regulatory model presented in this chapter; thus, it was hardly surprising that the U.S. Congress responded by disbanding MMS and dramatically restructuring regulatory oversight of offshore drilling.

Organization: A major concern focused on the MMS's organizational culture. Questions arose about the MMS's *integrity* in the face of allegations of favors and even sexual relations between some MMS employees and members of the regulated industry. Inspectors and rig operators lived in the same communities and attended sporting events and participated in other recreational activities together. One MMS inspector had even "conducted inspections on a company's oil platforms while in the process of negotiating (and later accepting employment) with the company." Questions about integrity also emerged based on the fact that the MMS had a dual mandate both to collect oil revenues and to regulate the industry. A follow-up investigation of the spill by a national commission showed that "senior agency officials' focus on safety gave way to efforts to maximize revenue from leasing and production."

Actions: Another major set of concerns centered on MMS's *competence*. Subsequent reports indicated that the number of unannounced inspections of oil platforms had "plummeted" in advance of the accident and that there existed an overall pattern of laxity in scrutinizing offshore emergency response plans. According to the investigating commission's findings, a decade had passed since the MMS had last conducted any analysis of "critical data for promoting the safety of offshore operations." Despite evidence of problems with blowout preventers, the MMS never updated its regulations to require independent testing of these critical safety devices. Overall, the commission found that the MMS failed to "adapt its regulatory framework in response to significant ways in which the oil and gas industry has changed over time."

Performance: Once the Deepwater Horizon blowout occurred, the lack of excellent regulation seemed an obvious case of *res ipsa loquitor* – that is, "the thing speaks for itself." Although it is true that accidents can occur under the watch of even the best regulators, the fact remains that the catastrophic blowout in the Gulf was precisely the kind of extreme outcome the MMS had been set up to ensure would not happen. When it occurred, it called into question MMS's competence as well as that of the firms involved. Investigators found much to confirm their suspicions about MMS's failings.

The Deepwater Horizon incident illustrates the interconnectedness of the RegX attributes and the model of regulatory organization, action, and performance. Problems with one or more RegX attributes – in the MMS's case, major concerns about integrity and competence in particular – can undermine the regulator's organizational culture, its regulatory actions, and ultimately its performance.

Source: National Commission on the BP Deepwater Horizon Oil Spill and Offshort Drilling, *Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling* (2011)

Yet positive substantive outcomes might not always follow from behavioral change, even change that leads to perfect compliance with the rules. If the regulator has not understood the causal chain well enough, or if regulated entities can adapt their behavior so that it complies with the rules but still contributes to the problem, then behavioral change will not be well connected to the targeted problem and will not lead to improved substantive outcomes.

Changing unconnected behavior might still create positive perceptual outcomes, though. People feel safer. Rules requiring passengers to show identification before passing through airport security might be one such example of a rule that does little or nothing to contribute to a substantive goal of safety, as would-be terrorists can readily obtain false identification cards;vvv but it is a type of action that makes people feel more protected. Perceptual outcomes are another

kind of outcome (as shown in the model on page 31). They are included in the model because of the distinctive importance of trust, legitimacy, and other public perceptions for intrinsic and instrumental reasons. Perceptual outcomes may also provide valuable insights about a regulator's degree of empathy in its engagement as well as its overall integrity.[40]

In addition to *integrity* and *empathy* being connected with outcomes (even if perceptual ones), *competence* is even more closely related to outcomes. Stellar competence depends intrinsically on changing behavior to achieve substantive outcomes that deliver public value. As noted in Chapter 1, one of the nine tenets of regulatory excellence – the one labeled "high performance" – emphasizes that "an excellent regulator consistently delivers significant positive public value."

Consistent positive public value does not mean, of course, achieving perfection. Defining exactly how "high" performance must be to be deemed excellent will call for qualitative judgment. A ten percent reduction in a well-understood, highly tractable problem – say, the need to remove lead additives from gasoline – might be hardly enough to qualify as high performance in most circumstances. Yet when a regulator that is charged with addressing a more persistent problem – say, automobile accidents – achieves a ten percent decline, then that could very well constitute substantial public value and truly high performance. Similarly, a ten percent *additional* reduction in a problem for which much progress has already been made could also be quite significant.[41]

For some problems, the causal pathways leading to undesirable states of the world can be highly complex, changing, or insufficiently understood; a regulator might simply be unable to craft suitable rules that address each of these pathways. Excellence in regulation, though, is not necessarily the same as excellence in *crafting rules* to address each and every pathway. The regulator's purpose is ultimately to improve the world – that is, to solve problems – and it might be able to do that more effectively in many instances through means other than the creation of rules. The best strategies may well involve encouraging regulated entities themselves to take ownership in understanding and reducing regulatory problems. Although the interests of regulated entities will not always be fully aligned with those of the regulator or the public, those entities will have much better information about the causes of regulatory problems and much more ready access to solutions. If the regulator can harness regulated firms' informational advantages and steer them toward effectively solving public problems on their own and diffusing solutions through their industry networks and supply chains, that will be perhaps the most valuable kind of behavioral change a regulator could hope to achieve. In the end, *it is an empirical question whether the regulator has induced behavioral change and delivered public value*. From an outcomes-oriented conception of excellence, the proof will be in the performance pudding.

Connecting RegX and the Regulatory Model: Some Illustrative Questions

The connection between the main parts of the regulatory model presented in this chapter and the attributes of excellence discussed in Chapter 1 can be illustrated by asking questions such as those listed below.

Model Part: Organization

Attribute: Utmost integrity. Does the regulator's organization reinforce the kind of autonomy from narrow, short-term political pressures and industry interests that is needed for a regulator to act on the basis of an unbiased assessment of evidence and to deliver overall public value?

Attribute: Empathic engagement. Does the organization embrace and promote public awareness of and input into all aspects of its policies and practices?

Attribute: Stellar competence. Are the regulator's human, financial, and information resources up to the task of making sound, evidence-based decisions that consistently deliver stellar overall performance?

Model Part: Actions

Attribute: Utmost integrity. Do the regulator's actions evince sincerity and earnestness on a regular basis? Are these actions ones that are fair and optimally designed to deliver maximum public value?

Attribute: Empathic engagement. Are these actions, especially the regulator's interactions with the public, ones that treat others with respect and dignity and that start with the assumption of the good faith of all with whom the regulator relates?

Attribute: Stellar competence. Are the regulator's actions innovative, protective, and effective? Is the regulator constantly seeking to learn about best practices and refine them so that it uses the right tools to deliver superior performance?

Model Part: Performance

Attribute: Utmost integrity. Do the outcomes that follow from the regulator's organization and its actions consistently adhere to the law and advance the public interest?

Attribute: Empathic engagement. Is the regulator perceived by members of the public to be highly transparent, fair, and trustworthy?

Attribute: Stellar competence. Do the regulator's actions lead to desired changes in behavior by regulated firms? Does the regulator's leadership encourage regulated entities to embrace responsibility for solving regulatory problems on their own and for working cooperatively to make gains in the public interest? Ultimately, are the regulator's actions in fact making a significant difference in advancing its mission?

Moving forward on the regulatory excellence path

Up to now, this chapter has presented a general model of regulatory organization, action, and performance, showing how excellence can be pursued at each of the different stages leading from the regulatory organization to its actions and ultimately to their outcomes. This model also provides a framework for how a regulator can move forward on the regulatory excellence path. The basic challenge for the regulator is to ensure that each link in the model either exemplifies or supports utmost integrity, empathic engagement, and stellar competence – that is, the core attributes and tenets of regulatory excellence discussed in Chapter 1. Put another way, *the regulator moves forward by building an* organization *that provides a foundation for excellence in its* actions *and* performance.

No easy or generic formula exists to guarantee a regulator's attainment of excellence, but research and practice indicate that to move forward a regulator should concentrate on four main facets of its operations:

1. Internal management
2. Priority-setting
3. Problem-solving
4. External engagement

Lessons about all four facets gleaned from existing practice and research are detailed fully in the core research papers commissioned as part of the Best-in-Class Project (see Appendix E), but all four main facets are highlighted here. The following section does not claim to provide a comprehensive account of everything a regulator needs to know, but for each of the four facets of a regulator's operations, this section illuminates salient issues that a regulator seeking excellence needs to consider.

1. Internal management: Organizing for excellence. Organizations – their shape, size, structure, and values – are never completely static. Regulatory leaders seeking excellence need to understand their organizations and find ways they can be designed or changed to enhance better the quest for excellence. Some of the most salient organizational considerations are mission clarity, resources and human capital, organizational autonomy, and a culture of excellence. Although each of these considerations is discussed here discretely, they will often be interrelated. For example, recruiting the best employees may depend in part on the clarity of the regulator's mission and the degree of autonomy and level of resources they have to advance that mission. In organizing for excellence, the regulator keeps these kinds of interrelationships foremost in mind.

   - *Mission clarity.* As discussed by several participants at the International Expert Dialogue at Penn, public administration research indicates that the clarity of a public sector organization's mission can positively affect its performance.[42] Regulatory organizations with goal ambiguity tend to be less successful than those with clear missions.

     Some years ago, when the Chairman of the U.S. Federal Trade Commission (FTC) undertook a review of his agency's performance, one of his major recommendations centered on defining and communicating a clear mission for the agency: "With internal and external constituencies, the FTC should continue to build a consensus that the core purpose of the agency is to promote the well-being of consumers."[43] When a regulator's mission is clear throughout the organization, excellence will be more readily attainable.

   - *Resources.* Another key organizational factor will be the level of resources available to a regulator. Without sufficient resources to fulfill its mission, a regulator cannot expect to achieve excellence. (Of course, the converse is not true; that is, even with adequate resources, a regulator may still fail to achieve excellence.) The mechanisms for funding a regulator may vary, with some regulatory organizations receiving assurance of funding from mandatory industry fees, while other regulators must await

> *Regulatory excellence is difficult to achieve when you lack the resources necessary to accomplish the basic work of your agency. Even the best-intentioned regulators, when faced with budgetary challenges, will not be able to be effective in accomplishing their core missions.*
>
> - Shelley H. Metzenbaum and Gaurav Vasisht, *What Makes a Regulator Excellent?: Mission, Funding, Information, and Judgment* (2015)

annual appropriations from the legislature. Still others are funded by a mixture of both means. Whatever the funding mechanisms, resources need to be adequate for achieving stellar competence, including levels of high performance.

- *Human capital.* Regulators need more than fiscal resources. Human resources are foundational for regulatory excellence. Recruiting and retaining top personnel remain persistent challenges reported by government managers around the world, especially given wage differentials with industry. In addition to finding both a sufficient quantity and quality of regulatory personnel needed, regulators must train their workforces and ensure that they remain constantly abreast of relevant developments in the industries they oversee.

  Sometimes the regulatory instruments used by the regulator call for employees who possess different capabilities and knowledge. For instance, the U.S. Department of Agriculture inspector who (literally) "pokes and sniffs" beef carcasses may not have the skills needed to engage in oversight of management-based risk planning as a regulatory strategy.[44]

  Overall, the excellent regulator will maintain workforce morale, inculcate a sense of empowerment to innovate and learn, ensure open lines of communication (including protecting from retribution employees who report problems), and reinforce skills in treating the public empathically and respectfully.

- *Autonomy.* As discussed in Chapter 1, meeting the RegX attribute of utmost integrity demands that a regulator steadfastly aim to maximize overall public value, which at times may require it to act courageously in ways that may not be politically expedient or that conflict with the immediate desires of a political leader or powerful industry actors. Although regulators in a democracy need to be respectful and responsive to all interested members of the public and their political leaders, the public's overall interest is not best served by a regulator that succumbs to short-term or selective interest pressures merely for the sake of expediency.

  Legal structures and independence. To promote healthy independence, some regulatory organizations possess legal structures designed to promote autonomy from the elected parts of government, such as dedicated funding sources and limitations on at-will removal. Although these structural factors can help in ensuring the degree of independence needed to maintain consistency in the regulator's focus on the overall public interest, the research commissioned as part of the Best-in-Class Project indicates that such structures do not guarantee a regulator will maintain a consistent focus on the public interest. Regulators with such legal protections may still succumb to unrepresentative political pressures; conversely, regulators not having such structural features may still in practice function with optimal autonomy. Many regulators in Westminster systems, after all, are headed by elected members of parliament; if formal legal independence were required for a regulator to be excellent, then no ministerial regulator could ever be said to be excellent. The test ultimately is one of delivery of public value, not of the legal structure of a regulatory body.[46]

Can a regulator be excellent under suboptimal policy constraints?

In the interviews and dialogues conducted as part of the Best-in-Class Project, numerous participants stated that they found it difficult to evaluate a single regulator separately from the overall system within which that regulator is situated. This often raised the question: If underlying legislation or government policy is flawed, can a regulator charged with implementing and enforcing it ever be considered excellent?

In *Good to Great and the Social Sectors*, author and consultant Jim Collins expresses the view that public sector organizations can achieve greatness even if the larger system in which they operate is flawed. He writes: "It might take decades to change the entire systemic context, and you [the leader] might be retired or dead by the time those changes come." He advises that the relevant question is, "What can you do *today* to create a pocket of greatness despite the brutal facts of your environment?"

Collins' advice might explain exactly why then-FDA Commissioner David Kessler decided to regulate tobacco products that were leading to hundreds of thousands of premature deaths each year in the United States, even when his legal authority to do so may not have been clear (see Chapter 1). Another, perhaps less stark, example of a regulator facing a suboptimal policy constraint arose years ago when courts confirmed that the U.S. Environmental Protection Agency (EPA) could not consider compliance costs when setting key national ambient air quality standards that drive conventional pollution control regulation. According to the courts' interpretation, the underlying statute prevents the regulator from carefully weighing costs and benefits to arrive at an efficient set of standards, a preclusion that many people would view as decidedly *not* excellent. But the EPA in fact has never ignored costs when setting its national ambient air quality standards. The agency's staff still ensures the cost information is compiled and made available to the public, the White House, and legislators, so they all can understand the full consequences of the EPA's actions. And yet the agency still complies with the statutory prohibition by ensuring that the EPA administrator, who is charged with making the formal decision on standards, never sees the economic analysis. In this case, the EPA does all that it legally can do to make the relevant information available to everyone but the one official who is precluded from taking it into account.

Collins seems right to say that a leader of a regulatory organization should try to make the best of the circumstances given to it. "Greatness is not a function of circumstance," he writes. "Greatness, it turns out, is largely a matter of conscious choice, and discipline."

Although not the most frequent concern expressed during the course of the Best-in-Class Project, on more than one occasion individuals with whom the team from the Penn Program on Regulation (PPR) engaged raised the question of whether, in light of growing concern about climate change, any regulator of carbon-based energy development could be considered excellent, at least if it did anything less than enforcing major restrictions on such development. During the time period when the PPR's research was ongoing, for example, an analysis appeared in the journal *Nature* asserting that approximately three-fourths of the available oil resources in Canada, including virtually all unconventional oil reserves, should not be extracted if the world is to avoid a key climate change threshold.

Of course, even some of the same individuals who raised questions about climate change also told PPR team members that, with no immediate or realistic large-scale solutions in sight for climate risks, the world still needs excellent energy regulators. Excellence by energy regulators, they said, remains essential for driving improvements with respect to other environmental impacts associated with oil and gas development – as well as for achieving whatever politically or economically feasible goals can be pursued to address climate-change related impacts from current energy sources, such as reducing or eliminating methane leaks from natural gas operations.

Perhaps in the end, as environmental ethicist Dale Jamieson has argued in his recent book, *Reason in a Dark Time*, it is far from clear that "we will 'solve' the 'problem' of climate change any time soon." Jamieson suggests "we will have to manage and live as best we can, and hope that the darkest scenarios do not come to pass." Perhaps Jim Collins would agree. For regulators, as with other governmental institutions, greatness may come shining through even the shadows, if the regulator strives as best it can to solve the parts of a larger problem that are within its reach.

Independence from industry. In addition to maintaining a degree of autonomy from temporary political pressures, regulatory excellence also requires an appropriate level of autonomy from the regulated industry. Placing regulatory functions in a governmental entity – rather than leaving it to industry self-regulation – is itself a structural attempt intended to promote public-interested regulation. And yet, government regulators confront the perils of regulatory capture, as has been long and widely acknowledged. To be sure, regulators need to rely on industry for information as well as a good deal of voluntary compliance, but they cannot become boosters or rubber stamps for industry. Other kinds of structural features – such as transparency requirements and open participatory procedures – may be useful, if faithfully followed, for creating barriers to regulatory capture or at least perceptions of capture. They must be designed to achieve balance, preventing capture without isolating the regulator so much from business firms that it fails to learn from and understand the industry.[47]

- *Building a culture of excellence.* A regulator's leadership and its organizational culture, as well as informal norms about the regulator's role, can be as important as anything for ensuring the proper level of autonomy. True regulatory excellence, as has been noted, demands an organizational culture in which regulatory leaders and employees consistently act with utmost integrity, engage empathically with all interested members of the public, and make well-informed, highly competent decisions. Building such a culture starts with a clear mission. It also requires that leaders not only "talk the talk" but also "walk the walk." When a regulator's leaders themselves make bold and courageous actions in support of the public interest, this signals to the rest of the organization the importance of genuine integrity. When leaders recognize and reward those employees who demonstrate excellence, this also reinforces cultural expectations. On the other hand, if even a handful of employees should repeatedly act expediently, negligently, or arrogantly without encountering any repercussions, this will undermine efforts to maintain a culture of excellence. The genuine sincerity demanded of regulatory excellence calls for consistency across an organization. An ethos of excellence needs to diffuse throughout its various divisions; the regulator's desired external image needs to mirror its inner operations.

2. Priority-setting: Becoming risk informed. It is almost universally recommended today that regulators and regulation become "risk-based." The widespread enthusiasm for risk-based regulation may be partly a function of the ambiguity of the "risk-based" concept: it can mean different things to different people.[49] At one level, any regulator with a mission to address risks of economic activity – accident risks, environmental risks, financial risks, and so forth – will be inherently "risk-based." But risk-based surely must mean something more. An excellent regulator will need to define its approach to risk clearly and consistently.

   The importance of risk analysis. Interest in risk-based regulation often grows from a larger commitment

to incorporating rigorous analysis into regulatory decisions. Regulators around the world now use regulatory impact assessment or benefit-cost analysis to structure decision-making and anticipate the consequences of different regulatory options.[50] For regulators that manage risks, decision-making depends as well on a range of sophisticated techniques to analyze the probabilities and harmful effects associated with risky regulated activities.[51] With the benefit of careful risk assessments, regulators can understand more precisely (i.e., with less uncertainty) what the true risks of different activities might be, thereby enabling them to make better decisions about how to prioritize the allocation of regulatory resources and ultimately how to manage risks.[52] The more that a regulator conducts and relies upon risk analysis, and the more rigorous that analysis is, the more "risk-based" the regulator can be said to be. Excellent regulators – those that exhibit stellar competence – will rely extensively on careful, evidence-based decision-making and therefore will be, in this sense, highly risk-based.

"Risk-informed" versus "risk-based." Although an excellent regulator's consistent reliance on high-quality risk analysis allows it to be considered risk-based, suggesting that a regulator's decisions can be *based* on risks is not the same as saying that rigorous risk assessments *determine* the regulator's risk management decisions. At most, risk assessments *inform* regulators' decisions; they do not provide a full basis for them.[53] Risk management decisions – whether about how stringent to make a new regulation, what kind of regulatory instrument to use, what facilities to target with inspections, or how many penalties to impose on non-compliers – are normative or policy decisions. Risk assessment provides scientific or empirical answers about probabilities, hazards, and their distribution; it does not supply the policy principle or normative reason needed to make regulatory or risk management decisions about these hazards.[54]

To see how this is so, consider a highly simplified and hypothetical choice scenario reflected in the table above. Let us assume for sake of illustration that a regulator can choose only one of the four mutually exclusive risk management options labeled A through D. Let us further assume that the benefits and costs of each option affect the same people and that thorough analysis has yielded a high level of certainty in the numbers shown in the table. Although these numbers clearly can *inform* the regulator's decision between these options, nothing about them can determine which option the regulator should choose. The regulator actually might choose any of the options depending on the decision-making principle it selects. For example, the regulator could:

ILLUSTRATIVE RISK-INFORMED CHOICE SET

Option	Prob	Hazard	Benefits	Costs	Net Benefits
A	0.1	-$100	$10	$55	-45
B	0.3	-$80	$24	$40	-16
C	0.5	-$60	$30	$25	5
D	0.7	-$40	$28	$10	18

- *Target the biggest hazard*, in which case it would choose Option A.
- *Target the biggest risk*, in which case it would choose Option C.
- *Avoid excessive costs* (sometimes called a "feasibility" principle), in which case, if we stipulate that costs greater than $35 are excessive, it could choose either Options C or D.
- *Avoid unacceptable risk* (sometimes called a "safety" principle), in which case, if risks lower than -$20 are stipulated to be unacceptable, Options B, C, or D would pass muster.
- *Act on a "Hippocratic" principle* of avoiding making things worse, in which case it could choose between Options C and D.
- *Maximize net benefits*, in which case it would choose Option D.

Whichever of these options the regulator selects will be risk-based in the sense that it is "based" *in part*

on the results of rigorous risk analysis, the numbers shown in the table on the previous page. But nothing in the risk analysis that generated these numbers will dictate which decision-making principle the regulator should apply. That principle must be grounded in policy or normative considerations that fall outside the scope of risk assessment.

Although highly simplified, this illustration reveals much more than merely that "risk-informed regulation" is the more apt terminology than "risk-based regulation." It also illustrates the need for an excellent regulator to be clear about which decision-making principle it chooses when making risk management decisions. Although perhaps regulators will not always have to choose just one option from among four, they nevertheless face many more risks than their limited resources can target, so they must choose among them on some basis. *They need a decision-making principle as much as they need the results of sound risk assessment.*

A regulator could reasonably target the biggest hazards or the biggest risks, based on what is sometimes called a "worst-first" principle.[55] But that is not the only principle that could be used to decide which option to select.[56] A principle that maximizes efficiency would favor targeting a mix or portfolio of risks that maximizes net benefits. This portfolio could include smaller hazards if they have risk management costs that are correspondingly small, and it might well exclude some larger hazards if they have extremely low probabilities or are impossible or disproportionately costly to manage.

When the U.S. Federal Trade Commission undertook a review of its performance some years ago, its Chairman recommended precisely such a portfolio approach: "The agency should view all of its matters as part of a portfolio that should be balanced across low-, medium-, and high-risk activities."[57] From an efficiency standpoint, of course, the balancing of risks *per se* is not what matters; the key is to balance the benefit-to-cost returns of regulating them, so as to maximize overall net benefits across the full suite of the regulator's actions. The precise balance that will be efficient for any given regulator will vary based on the actual costs and benefits due to the types of problems and economic circumstances the regulator confronts.

A note on "enterprise risk management." To this point, the risks considered here have been public risks, the very kind that the regulator has been authorized or mandated to manage. What about risks to the regulator itself? Clearly the excellent regulator will not disregard risks to the regulators' employees (e.g., inspectors who might be exposed to hazardous conditions). Other risks, such as the loss of budgetary or political support, or the risk of bad "publicity," can also accrue to regulators as organizations, and enterprise risk management models developed for private sector firms can be instructive for reminding regulatory leaders to be attentive to these risks. It is vital that these leaders remember, though, that they have been established to deliver public value, not to advance their own organization's interests. Regulators are not businesses trying to protect their financial bottom lines but are public institutions dedicated to advancing the public's interests. At times, regulatory leaders will appropriately take bold action to protect and serve the public, even if doing so may pose some risk to their organizations.

3. Problem-solving: Pursuing performance-based regulation. Performance-based regulation is widely favored. An excellent regulator will be performance-based in the sense that its actions will consistently work well in solving problems

Risk Management: Private Sector vs. Public Sector

"There are fundamental differences between the objectives and approaches of government and private sector risk management:

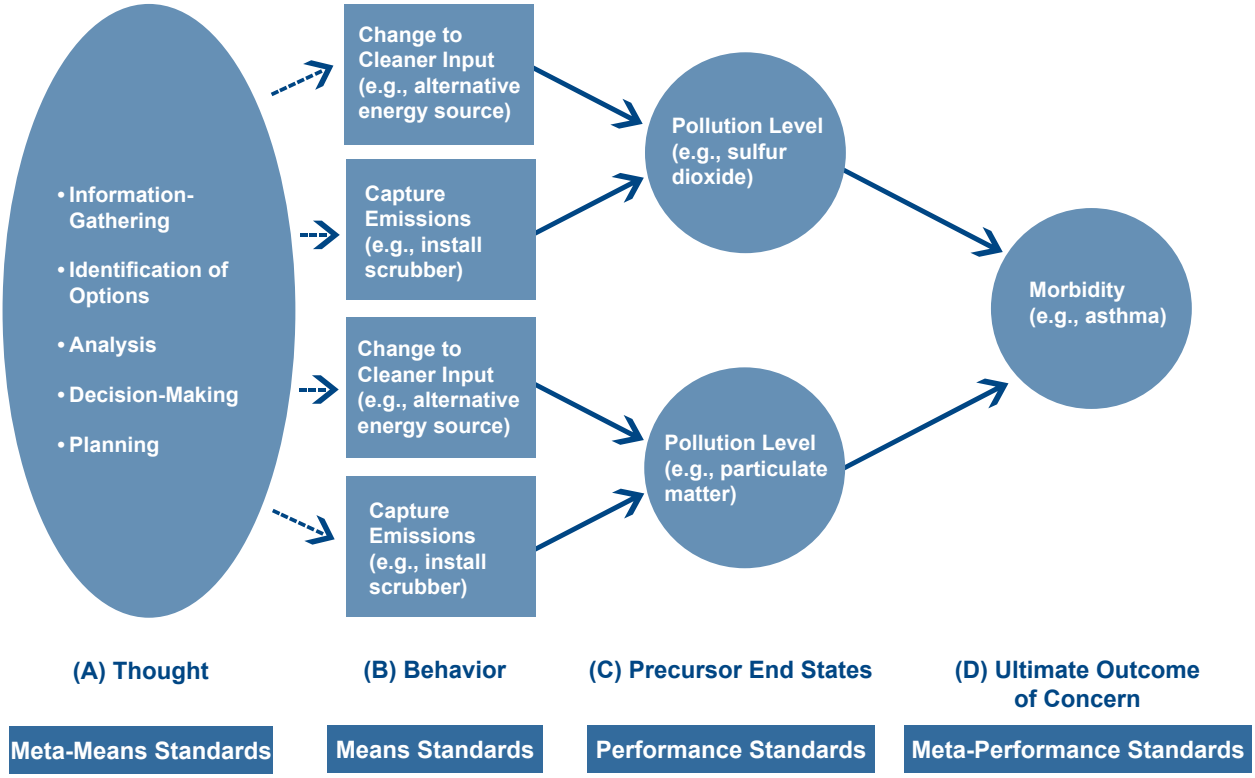
- In the private sector, risk management focuses on maintaining and enhancing profitability in a single agency, whereas in the public sector it is on the delivery of public value, 'the implementation of objectives and services to the citizen.' This is ultimately based on an assessment of what the public wants.
- Private sector risk identification and management paradigms are linked to risks to business objectives; in public sector risk management, in contrast, planning and key decision processes are oriented towards protecting external risk bearers.
- In the private sector risk assessment focuses on the possible adverse effects of a risk on the organization itself, to business value as perceived by shareholders and financial markets; in the public sector 'risk is more about systemic risks of failure to deliver services to citizens.'"

- Greg Paoli and Anne Wiles, *Key Analytical Capabilities of a Best-in-Class Regulator* (2015)

and delivering socially-valued outcomes. But performance-based regulation also often refers more specifically to a suite of related regulatory instruments that provide regulated entities with greater flexibility in achieving regulatory outcomes, directing businesses to achieve desired ends while allowing them to choose on their own the means to achieve those ends. About a decade ago, a Smart Regulation External Advisory Committee to the Canadian government recommended that for the field of oil and gas development in particular, "performance-based regulation should be developed in areas that would enable safety and environmental approaches to be adapted to specific risks as they are encountered, and new technology to be incorporated quickly, while meeting economic, social or environmental regulatory performance expectations."[58] More recently, Canada, Mexico, and the United States have committed, as one of ten "common regulatory principles" in a jointly adopted Regulatory Cooperation Framework, to "promote performance-based regulation" as much as generally possible.[59] The World Trade Organization also formally favors the use of performance standards, with the Agreement on Technical Barriers to Trade urging that, whenever appropriate, countries should base regulatory standards "in terms of performance rather than design or descriptive characteristics."[60]

Types of flexible instruments. Rather than telling regulated entities exactly what to do, regulators opting for a performance-based approach to regulation can choose from a variety of flexible regulatory instruments: default rules and other "nudges," information disclosure, performance standards, market instruments (such as tradable permits or taxes), and management-based regulation.[61]

The value of performance-based approaches. Flexible regulatory approaches promise more cost-effective outcomes, as they give regulated entities the opportunity to choose lower-cost means of achieving regulatory outcomes. At their best, these approaches also achieve the regulator's ideal of leveraging the advantages regulated firms' possess in knowing how best to solve the problems created by their activity. Flexible forms of regulation can encourage regulated organizations to assume ownership and help steer them toward effectively spotting and solving



Source: Cary Coglianese and Lori Bennear, *Flexible Approaches to Environmental Regulation* (2012)

problems before they even arise. They might even provide positive incentives for businesses to innovate and make improvements far beyond those that a regulator might have imagined possible.[62]

The figure above illustrates how regulations that are "performance-based" impose obligations farther down the causal chain, closer to the outcome of concern, and thus preserve a greater number of options for actions that can achieve the desired outcome (hence, flexibility).[63] Prescriptive regulations that specify the particular means that must be used foreclose other options which might, at least for some regulated entities, prove more effective or at least equally effective but less costly.

Instrument choice and regulatory excellence. Notwithstanding their advantages, performance-based approaches do not define regulatory excellence. An excellent regulator, like an excellent physician, will use the best available tools to perform its duties. As Dame Deirdre Hutton, the chair of the UK Civil Aviation Authority, noted in keynote remarks at the international expert dialogue that was part of the Best-in-Class Project, the critical challenge for regulators is "choosing the right regulatory tool and understanding which one to use when and with whom."[64]

Flexible instruments work better under some circumstances than others.[65] They will not work well if it is not possible for performance to be monitored accurately. A regulator may need monitoring technology or knowledgeable human capability to deploy flexible approaches well. For example, as suggested earlier, the type of skills an inspector needs to review risk management planning will be different than just knowing how to check boxes. The regulator's capacity to monitor remains important because, even though regulated entities have a superior understanding of their own operations and are better positioned to find cost-effective solutions,

their incentives are not fully aligned with the public interest – something that is axiomatic if regulation is needed in the first place. In addition, sometimes regulated entities will be more likely to modify their behavior if the regulator simply makes it easy by telling them exactly what to do – a virtue of specific rules that smaller firms with lower capacity to invest in innovation may welcome.

This is hardly to suggest that excellent regulators should not use performance-based approaches to regulation; rather, it is to say that regulators can be excellent even if they do not always, or even usually, rely on performance-based approaches. The ultimate test of a regulator's choice of instruments lies in the outcomes achieved; the challenge is to find the right tool for the purposes and circumstances at hand. Before choosing performance-based regulation, as with any regulatory instrument, the excellent regulator should seek to analyze thoroughly both the expected positive outcomes as well as the possible pitfalls.

4. External engagement: Reaching out early, often, and empathically. Chapter 1 explained how a regulator's success is *interdependent* with a diverse group of other public and private entities. It also emphasized how the excellent regulator acts with integrity by serving the public interest and how it engages empathically with those with whom it interacts, even if at times it must act punitively. Although excellent public engagement will vary to some degree from person to person and encounter to encounter, what it takes to treat people fairly has a considerable degree of generality to it.[66] Research on procedural justice supports several general principles:

   - All things being equal, a greater number of opportunities for engagement will be better than fewer opportunities, and earlier opportunities will be better than later ones. Of course, all things are not always equal, and engagement can demand time and resources. Time and resources devoted to engagement present opportunity costs, as they are time and resources not devoted to something else. Although the regulator's general imperative to take action will mean that engagement opportunities necessarily cannot be completely unbounded, a helpful heuristic would be for regulators to err on the side of starting public engagement earlier than they think needed and making the scope of that engagement broader than they might be inclined.[67] Narrow restrictions about who has "standing" to be heard by a regulator may seem administratively efficient in the short-term, but in the long-term such restrictions can be counterproductive if they keep interested individuals and organizations from feeling like they have voice and if they deny the regulator the opportunity to learn from those with perspectives and information to share.
   - Those who are interested in regulatory decisions should have opportunities both to learn about what the regulator is doing and to provide input. Although regulatory employees may well have good reason to have more conversations with industry representatives during the course of their practice, excellent regulators avoid giving any qualitative favor to one segment of the public over the other in their engagement practices. Of course, as sociologist Bridget Hutter has written, although "excellence in regulation demands impartiality ... this does not necessarily mean that all parties involved 'win' and 'lose' in equal measure: it does not follow that the interests of various groups and stakeholders are equally weighted."[68] Fairness will at times require taking affirmative efforts at outreach and engagement: for example, translating websites or documents into different languages, providing financial or expert support for less-advantaged groups or communities, and acknowledging and embracing cultural differences.
   - At least as an ideal, public engagement aims to be conversational – not just a regulator talking "at" members of the public. As with personal relationships, *listening is essential*. Listening,

Twelve Ideas for More Effective Public Engagement

1. Make engagement an institutional priority and allocate sufficient internal resources to this function.
2. View members of the public as partners in the decision-making process.
3. Conduct an initial scoping of any new regulatory issue to determine with whom to engage and how.
4. Notify all potentially interested parties and ask them whether and how they would like to participate.
5. Create, where appropriate, a different process of engagement tailored to each type of stakeholder, especially for those groups that have fewer resources or expertise.
6. Set clear expectations up front for the role that engagement will play in regulatory decision-making.
7. Participate in dialogue with the public by sharing detailed proposals and inviting comment, keeping the public apprised of what the regulator is thinking as the process is going along.
8. Provide feedback (e.g., give reasons) on how information from the public engagement process has been factored into the regulator's decision-making.
9. Take action consistent with representations to the public.
10. Take into consideration public concerns about cumulative effects, including issues that might lie outside of the regulator's direct purview.
11. Provide opportunities for public engagement throughout the entire lifecycle of a regulated project.
12. Perform ongoing follow-up, monitoring, compliance, reporting, and engagement.

Source: Cary Coglianese and Shari Shapiro, *Summary Report: Alberta Dialogue on Regulatory Excellence* (2015)

of course, is not the same as agreeing. The regulator needs to deliver public value, which means that it will at times (perhaps even often) make decisions that are respectfully in tension with some interests in society.

- Transparency is also "conversational." Merely uploading raw data on a website does not make for meaningful transparency. Information disclosed needs to be accessible, relevant, and comprehensible as well as accurate for all potential users – both those in industry as well as for individuals in the public more broadly.[69]
- Transparency involves more than just disclosure of *information*, but also disclosure of *reasons*. Especially if a regulator must make a decision that will be opposed or disfavored by some,

The Hazards of a "Closed, Consensus-Driven System"

Following a damage-inflicting earthquake in 1012 in the town of Huizinge in the province of Groningen, Netherlands, the Dutch Safety Board initiated an investigation that found that the quake had been caused by industrial gas extraction operations. The Safety Board faulted a decision-making process that it described as "a closed, consensus-driven system, offering little room for opposing viewpoints." Both regulatory oversight and industry practices had for decades followed what the Board described as a "technocratic approach," according to which "insufficient consideration was given to the anxiety and safety concerns of the citizens" – concerns that ultimately, but tragically, came to be realized.

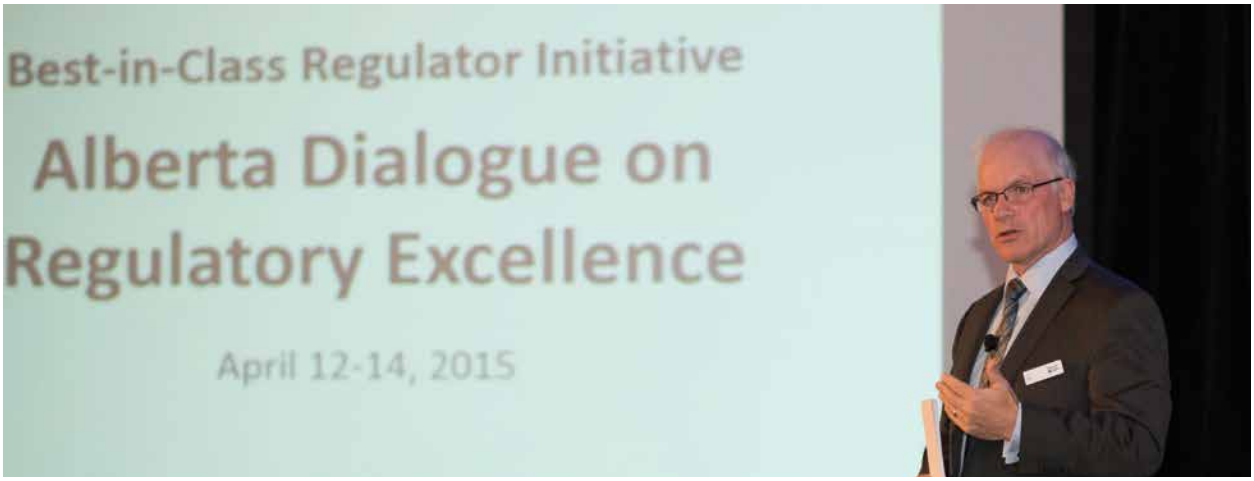
- Dutch Safety Board, *Summary: Earthquake Risks in Groningen* (2015)

the public deserves a forthright account of the public policy reasons underlying the decision.

- Just as with regulatory instruments, regulators have available to them a variety of different tools for soliciting public input: public notices, comment periods, public hearings, informal meetings and phone conversations, advisory committees, workshops, adjudicatory proceedings, negotiations, and the Internet and social media. As with regulatory instruments, the excellent regulator uses a variety of methods, adapting them to the purposes and circumstances at hand (including the capacities and needs of interested or affected individuals and groups). That said, having a default procedure that encourages public participation – such as developing standard practices of advance notice and public comment periods – will help embed public input into the regulatory culture.
- For the public to be able to contribute meaningfully and intelligently during comment periods, regulators should, whenever feasible, disclose a full, detailed draft of their proposed actions. If time does not permit a regulator to allow for public comment on the full draft, comments should be accepted after the action is taken so that any appropriate amendments could be made or reasons could be given as to why changes are not made.
- Excellent regulators communicate clearly with the public about expectations. When regulators undertake collaborative forms of engagement, they should be especially clear about the goal of the engagement as well as what will happen if agreement cannot be reached.
- Public engagement is not something that just takes place in formal hearings or via comment periods. It occurs in every individual interaction between a regulatory employee and someone outside the regulatory organization, whether on the telephone, in a meeting, or in an inspection encounter. Just as private businesses train their employees how to interact with customers, public sector organizations should train their workforces how to interact fairly, respectfully, and empathically with members of the public. The excellent regulator bakes empathic engagement into its culture.

Regulatory excellence as people excellence

Regulation is widely associated with technical expertise. After all, the issues regulators confront are highly complex and they demand in-depth knowledge of science, engineering, technology, economics, and more. To achieve excellence, regulators must obtain detailed mastery of the technical aspects of their work and the operations of the industries they oversee. Even if they cannot match industry entirely in technical research and development, they must ensure they have the in-house capability to assess the actions and associated risks of industry operations sufficiently to be able to oversee the industry.



> ***M**any participants seemed to lay stress much more on the* **how** *of regulation – its processes – than on the* **what** *– its substantive outcomes.*
>
> - Cary Coglianese and Shari Shapiro, *Summary Report: Alberta Dialogue on Regulatory Excellence* (2015)

Yet as vital as it is for a regulator to possess adequate technical skill and knowledge, such expertise is only a *necessary* component of regulatory excellence. It is not *sufficient*. To move from good regulation to excellent regulation, the regulator also needs to master the people side of regulation. Regulation, after all, is relational. It is motivational. It is fundamentally about affecting the behavior of people. The regulator is seldom directly fixing problems; rather, it is working with and through members of the public to identify problems needing to be prevented or redressed, and then working with and through the people in the businesses it regulates to shape, steer, and change their behavior and to motivate them to prevent and redress the problems. Moreover, the problems regulators seek to redress are ones that affect other people, outside of the industry, who take great interest in the work of the regulator, who want to know what it is doing about those problems, and who want to have voice in the process. The regulator also undertakes its work in a governmental setting which is affected by other people serving in other governmental institutions, whether elected or appointed officials, courts, auditors, and others. The regulator, finally, is itself an organization filled with people who need to be managed, motivated, and led effectively because what each employee does reflects on the regulator and affects its performance.

It should be apparent by now that regulators who seek to achieve regulatory excellence need to focus on "people excellence." They need to ensure, yes, that the people serving in their organizations are technically knowledgeable and highly competent. But they also need to ensure an organizational culture and structure that fosters and reinforces humility, empathy, and a steadfast commitment to public service on the part of the people who serve in the regulator's name – and on behalf of the public to which the regulator is accountable. Only if the people working in a regulatory authority are committed to doing their utmost to deliver public value, and to learning and improving in their ability to deliver that value in an environment that requires respectful engagement with others, can a regulator expect to achieve true excellence.

Chapter 3.

MEASURING REGULATORY EXCELLENCE

Real 'performance management' requires active leadership. It is not a mere data-collecting chore that can be delegated to a few measurement wonks.

- Bob Behn, Harvard University, "What Performance Management Is and Is Not"

Measurement systems abound in our everyday lives. *Michelin Guide* books rate restaurants and hotels. *Consumer Reports* magazine provides ratings for new washing machines, microwave ovens, and a host of other products. Movie reviewers summarize their assessments using symbols that range from stars to thumbs up to the ripeness of tomatoes. The weekly news magazine, *U.S. News and World Report*, publishes an annual ranking of American colleges and universities. Accreditation bodies rank hospitals, schools, and other institutions on different criteria. In some jurisdictions, restaurants must display a hygiene rating near their entrances, disclosing to potential customers information about the results of their most recent health code inspection. A host of systems for rating corporations exists to guide investors, from the Institutional Shareholder Services' Corporate Governance Quotient to the Dow Jones Sustainability Indices. Numerous popular magazines routinely rank the "best cities" in which to live, whether for unmarried individuals, retired persons, outdoor enthusiasts, and so forth.

Rating systems also proliferate in the governmental sphere. Management consultants have applied a range of assessment tools, such as the Balanced Scorecard or Six Sigma, to governmental organizations. The financial news site, *24/7 Wall St.*, issues an annual survey of the "best and worst run states in America." The U.S. federal government has formally institutionalized performance measurement systems, including the annual program performance reporting called for under the Government Performance and Results Act (GPRA) and a six-year experience with the Program Assessment Rating Tool (PART) used during the George W. Bush Administration. The United Nations rates governments' use of information technology to connect with their citizens. The World Bank and the OECD have created rating systems that seek to capture the level of government regulation as well as the ease of doing business across different countries. The journal *Global Competition Review* has, for the last fifteen years, issued its own annual rating of antitrust regulators around the world, purporting "to gauge exactly how capably and efficiently they are policing their economies for anti-competitive activity."

> *Good metrics must be aligned with the regulatory agency's vision and goals—and designed to focus attention on the most critical priorities.*
>
> - Daniel C. Esty, *Regulatory Excellence: Lessons from Theory and Practice* (2015)

With the proliferation of rating systems for all aspects of life, including regulation, the question naturally arises of how best to approach the measurement of regulatory excellence. What exactly is the role that measurement should play in a regulator's quest for excellence? This chapter takes up this question. It explains why measurement is a vital tool that regulators need to use *for* achieving regulatory excellence: because measurement is how a regulator learns how it is doing and sees better what it must do to improve. In addition, this chapter also considers how measurement could be used to gauge a regulator's overall level *of* excellence. Whether using measures *for* excellence or *of* excellence, regulators need to take a strategic approach to performance measurement and evaluation. That is, they should not simply measure what is easy to measure, and not simply measure for measurement's sake. The aim of an excellent regulator should be to use measurement to learn how to improve its organizational traits, action, and outcomes. In addition to explaining the performance measurement's role in tracking progress, this chapter discusses important issues about data sources and evaluation methods in measuring regulatory excellence.

Why measurement?

Measurement and ratings systems exist to help inform and guide choices. These systems articulate a set of criteria or attributes of quality, and then in some fashion they aggregate the various attributes to achieve an overall rating or score. For example, *Consumer Reports* generates an overall rating for cell phones based on factors such as "ease of use," "battery life," "voice quality," and so forth. The *Consumer Reports*' system works – at least, its popularity would suggest it works – because these are the types of things that many people care about when selecting a cell phone. Staff members at *Consumer Reports* have identified attributes to score that matter to people and then have selected a method of *weighting and summing* these attributes to achieve an overall score or ranking. All popular measurement systems like the one used by *Consumer Reports* succeed because the attributes being measured – and the way they are weighted and aggregated – help fulfill the needs of users.

When it comes to the measurement of regulators, who are the users and what do they need? One type of user would obviously be the senior leaders of a regulator. They need measures that can tell them how well they and their organization are doing. Of course, even though a regulator's leaders may be a single type of user, their needs for performance measures will still be highly varied. They will vary across different kinds of regulators; the performance measures for oil and gas regulators will differ from those for banking regulators. But oil and gas regulators in different locations or at different time periods will need different measures too. Even the leaders of the same oil and gas regulator will need different measures for both *internal* and *external* needs. They need measurements that can help them and others inside the organization make improvements, but they also need measurements to communicate with those outside their regulatory organization, such as elected officials, community members, regulated industry, and perhaps even customers of the regulated industry. In this way, even when just considering the needs of one user – say, the leader of an oil and gas regulator – the needs and purposes of others will become relevant and essential. This is yet another implication of regulators' interdependent location within a web of government, the economy, and society.

Decisions about how to design measurement systems for regulators depend ultimately on the types of needs they are being used to fill. During his time as the Commissioner of the Connecticut Department of Energy and Environmental Protection, Dan Esty used different measures for different purposes, internal as well as external. One of the main internal measures he used was how long permit applications were in "pending" status, as he and his leadership team wanted to improve the timeliness of decisions on permit applications. On the other hand, his department also

collected other measures for external purposes. These tended to include measures of environmental quality, such as the levels of nitrogen loading in the Long Island Sound.[70]

Bob Behn, a leading authority on public management at the Harvard Kennedy School, goes further to argue that there are eight different purposes served by performance measurement in the public sector:

1. To evaluate...
2. To control ...
3. To budget...
4. To motivate...
5. To promote...
6. To celebrate...
7. To learn...
8. To improve.[71]

Undoubtedly still more purposes of measurement could be articulated. But no matter the actual number, all these purposes cannot be served equally well by the same set of measures. "There is," Behn aptly observes, "no one magic performance measure that public managers can use for all … purposes."[72]

Measurement *for* excellence versus measurement *of* excellence

When designing performance measurement with regulatory excellence in mind, another subtle but key distinction emerges: measurement *for* excellence versus measurement *of* excellence. Measurement *for* excellence refers to the kinds of measures and measurement practices that an excellent regulator would put in place in order to run its operations. It is measurement for the myriad of internal and external purposes that professors Behn, Esty, and others have articulated. Yet measurement *of* excellence is different; although it is related to measurement *for* excellence, it also will usually require taking a somewhat different approach in practice.

The central purpose of measurement *of* excellence is to answer the question: Is a specific regulator excellent? As such, it seeks to determine how well a regulator's organizational traits, actions, and outcomes are aligned with the three RegX attributes. Measurement *of* excellence is comprehensive. It seeks to provide an overall account of how well a regulator is doing. A regulator, after all, might be excellent at some aspects of its operations but not at others; presumably excellent regulators will be excellent – or at least very good – across the board.

The difference between *measures for* and *measures of* regulatory excellence is therefore very much like the difference between (i) university professors using exams to grade their students – a type of measurement that would be found at any university aiming *for* excellence, and (ii) the editors at *U.S. News and World Report* using measurement to rank the excellence *of* universities overall. Measurement *of* excellence may in some cases rely upon some of the same measures used *for* becoming excellent; however, since measuring excellence is a distinct purpose, it will necessitate a different measurement approach.

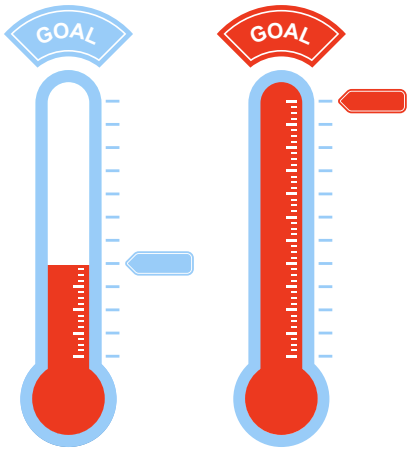
The comprehensive nature of measurement *of* excellence means that a measurement system must search either for comprehensive measures of excellence or find ways to aggregate and weight more discrete measures. A regulator would need presumably to tally up its performance across a number of different facets of its operations, perhaps using some common unit of measure, and then arrive at a single score which if sufficiently high would provide the basis for deeming the regulator "excellent." Getting measures about all of a regulator's goals into a common unit may well be impossible, but it still would be theoretically possible to weight scores and force them all into a predetermined regulatory excellence algorithm, much like *Consumer Reports* does for appliances and other consumer products and *U.S. News & World Report* does for colleges and universities. The key question, though, would be how meaningful such an exercise would be.

At times, regulators seek to maximize seemingly incommensurable, if not utterly conflicting, objectives. Consider, for example, a regulator charged with reducing risks from an industrial activity while also keeping compliance costs low, promoting distributional equity, and acting transparently, thoroughly, and quickly.[73] If all of the regulator's operations with respect to each of these objectives could be monetized accurately, then the negative impacts could be subtracted from the positive ones to yield a net-benefits estimate, which would in principle provide a meaningful measure of the regulator's overall excellence. But while compliance costs may be readily accessible in monetary terms, and while

sophisticated (albeit sometimes criticized) techniques exist to estimate the monetary equivalent of risk reductions, no well-accepted way exists to monetize the value of distributive equity or process values like transparency.

As a result, the measurement of overall regulatory excellence will unfortunately never be easy or tidy. Measurement *for* excellence therefore should presumably take precedence over measurement *of* excellence. Regulatory leaders are also advised not to go about, as Harvard Kennedy School public management scholar Mark Moore puts it, "losing their minds in the quixotic pursuit of a single numeric value" that might purport to reveal the regulator's overall level of excellence.[74] Rather, the aim should be to use measurement, as Moore puts it, "to engage in 'value-oriented' management that puts the production of public value front and center but acknowledges the complexities of defining and recognizing value in the public sector."[75]

Nevertheless, one reason a regulator might wish to use measures *of* excellence would be to motivate major transformations throughout its organization and in its culture, so as to encourage its workforce to improve by measuring how far the regulator is coming along on the regulatory excellence path. Measurement for this purpose is analogous to community fundraiser signs that look like thermometers to indicate how close the fundraising campaign is to reaching its goal. The more contemporary example in today's digital era is GoFundMe.com's symbol based on a cell phone's battery level.



Calling to mind the oft-repeated aphorism that "what gets measured gets managed," it is reasonable to think that performance measurement could play a key role in effectuating major cultural change at a regulatory organization. Dutch officials, for instance, presumably want to transform what their Safety Board characterized as the highly "technocratic" culture of their energy extraction regulatory system into one that is more receptive to and empathetic about citizen concerns and criticisms.[76] Perhaps their leaders should institute, or recalibrate, a performance measurement system in order to facilitate transformation toward greater and more meaningful public outreach.

Although performance measurement will certainly factor into any larger transformational effort, it is important to understand the role measurement can play in a process of organizational change. By itself, measurement will not likely facilitate major change, old aphorisms notwithstanding. As Allen Schick, a public management expert at the University of Maryland, explains, "the great mistake of the performance measurement industry is the notion that an organization can be transformed by measuring its performance."[77] He continues: "This optimism is not justified, for organizations – public and private alike – can assimilate or deflect data on performance without making significant changes in their behavior."[78] He believes that rather than performance measurement leading organizational change, organizational change needs to lead performance measurement. In other words, managers and staff within a regulatory organization need to buy into the notion that measurement is important. They need to have a reason to use performance measurement and take it seriously, not merely to game the system. This is another reason why, as Bob Behn argues, "real 'performance management' requires active leadership."[79]

What measurement systems need

For a regulator's leaders, measurement of regulatory performance is not an abstract, academic exercise. It is a tool they can use actively and purposively to get feedback, demonstrate progress, identify weaknesses that need shoring up, and serve other internal and external needs for information. Measurement helps leaders learn better what

Leadership and Measurement

Although many participants supported performance measurement as a tool for regulatory improvement, some participants pointed out that simply measuring performance is insufficient to achieve improvement. Rather, leadership is needed. As one participant put it, 'systems of performance measurements cannot accomplish what strong leadership can. They can support it, but not replace it.' Another participant stressed that measurement systems will only work well if they are embedded in the organization and are clearly embraced by regulatory leadership.

- Cary Coglianese and Shari Shapiro, *Summary Report: Penn Dialogue on Regulatory Excellence* (2015)

works (and what does not), identify and track regulatory problems, communicate progress, and ultimately manage toward continuous improvement.

As participants emphasized at the province-wide dialogue that the Penn Program on Regulation organized in Calgary, ongoing measurement is essential for promoting a "learning culture" within the regulatory organization, so the regulator can be innovative and nimble as the industry it regulates dynamically transforms. Measuring progress toward excellence also demonstrates the regulator's commitment to holding itself accountable to the public for delivery of its mission.

Measurement's importance is probably equal only to its difficulty. Public management expert Dall Forsythe highlights three major problems that often arise with performance measurement in the public sector:

1. "Confusion about the goals or audiences of performance information"
2. "Inattention to measurement challenges"
3. "Poor choices of incentives"[80]

These three limitations were echoed by many of the participants at the international expert dialogue organized by the Penn Program on Regulation. An excellent regulator will keep these potential problems in mind and design performance measurement systems to avoid them, whether they are using measurement *for* excellence or seeking measurement *of* excellence.

The first of the three problems identified by Forsythe has already been discussed above in connection with the different purposes that performance systems can serve. Even within the same regulator, these purposes are likely to change over time, not only with changing conditions in the industry but also whenever changes occur in political leadership which in turn result in changed priorities. The reason to recognize that measurement serves distinct and varied purposes is, simply put, to make sure that systems of performance measurement are designed and implemented with those purposes in mind.

In the end, the challenge in measuring regulatory performance lies not in coming up with some measures to use, but, as Forsythe indicates, in establishing measures that speak to the regulator's goals, that are meaningful and reliable, and that, if they are connected to incentives at all, are sensibly linked. The next two sections of this chapter discuss the second and third of these challenges.

Mastering measurement challenges

The second challenge centers on the use of meaningful and reliable measures. What makes measures meaningful will, of course, in large part be determined by how they speak to the purposes measurement aims to serve. But they also have to align with the values and priorities of their audience. In other contexts, as already noted, ratings and measures work when they speak to and support the choices that people wish to make. The attributes and weighting used by the raters need to match up with the preferences of an individual decision-maker. *Consumer Reports* may prioritize "ease of use" in a smart phone, but a savvy, young computer engineer and a senior citizen are likely to care about that attribute differently. Parents of young children probably find those movie rating systems that measure violence and sexual content more useful than do other adults.

The U.S. Centers for Medicare and Medicaid Services cautions about overreliance on its rating system for nursing homes precisely because of the potential for mismatch between ratings and the needs of individuals who might be affected by their use:

> No rating system can address all of the important considerations that go into a decision about which nursing home may be best for a particular person. Examples include the extent to which specialty care is provided (such as specialized rehabilitation or dementia care) or how easy it will be for family members to visit the nursing home resident. As such visits can improve both the resident's quality of life and quality of care, it may often be better to select a nursing home that is very close, compared to a higher rated nursing home that would be far away.[81]

In addition, even if a measurement system captures the "right" attributes, it still has to measure them accurately, which is not always guaranteed. For example, a restaurant's hygiene scores are typically based on the results of a single visit by a health inspector; they do not guarantee that kitchen countertops are wiped down cleanly on the day that you dine there.

It is also possible for a measurement system to miss the forest by focusing on the trees. Studies of corporate governance rating systems, for example, have found that the rankings these systems provide do not necessarily correlate well with firms' actual financial performance, presumably what investors care about most.[82] In the wake of the 2008 financial crisis, credit rating agencies have been subjected to intense criticisms for favorable ratings given to Lehman Brothers and other firms heavily invested in risky mortgage-backed securities. Ultimately, the sum of the parts may not necessarily lead to an accurate "whole" assessment of quality.

Like their private-sector counterparts, public-sector performance measurement systems face similar measurement challenges. That is, they might not rely on the "right" attributes (key performance indicators); errors might arise in measuring the attributes; the weights given to different attributes by the rater might differ from the weights others think they should have; and the sum of the attributes might not lead to the resulting "whole" that the decision-makers care about most.

> *Key Performance Indicators (KPIs) and risk reduction metrics can be deeply dangerous things. They have a place but must be kept in their place. ... KPIs risk the more measurable driving out the more important.*
>
> - John Braithwaite, *Responsive Excellence* (2015)

But public sector performance measurement may face some unique challenges too. One potentially distinctive challenge in the governmental sphere relates to the relative importance given to the "parts" versus the "whole." The specific attributes, or parts, of an electronic product like a cell phone do matter to people, so it makes a lot of sense to rate such products based on these attributes (e.g., display quality, battery life, etc.). With respect to governmental programs or agencies, it is less clear that the specific parts matter as much, at least to the general public. To many people, what matters most are the outcomes that a government program or organization achieves -- the "whole." Is the air getting cleaner? Is the economy prospering? Are highways safe?

To be sure, citizens do and should care about certain attributes or parts of a governmental entity, such as its fidelity to democratic principles, its transparency, and so forth. Indeed, what we know from social psychologists about procedural justice suggests that, in addition to substantive outcomes, people care about the nature of their interactions with government; they care about process and how they are treated. Nevertheless, on many attributes that might be used to measure governmental quality, perhaps few will care very much about the specific attributes of the program or agency, such as its organizational practices and its processes. As long as government "works," it matters little to many people whether governmental entities organize their routines in specific ways, what kind of human resources and computer systems they deploy, whether they use specific policy tools (e.g., performance standards versus means standards), or whether they rely on adversarial versus cooperative enforcement strategies. One might well imagine that if Rome were burning (or if it were prospering beyond measure), few people will ultimately care whether their governmental entities checked all the boxes in a rating system of regulatory quality.

Performance measurement in the regulatory sphere will also be complicated by the fact that government's performance – especially the performance of government regulators – is ultimately dependent on the performance of others, namely those they regulate. Unlike the rating of a manufacturer's cell phone, which can be based on the individual phones that the company produced and rest in the tester's own hands, a regulator's performance is in the hands of someone else (the regulated entity).

Regulators' interdependency not only creates some difficulties in accurately measuring their performance (especially when comparing across different regulators), but the multi-layered nature of regulatory performance holds another important implication. A regulator could rate very highly on any number of metrics (e.g., it could be highly transparent about its rules; it could treat its employees well and train them to meet high professional standards), and yet, for whatever reason, the industry it regulates might still experience a disaster that the regulator was supposed to prevent. In other words, since responsibility for risk control in the regulatory sphere is by necessity shared between the regulator and the regulated, a failure by the latter will inevitably be viewed as a failure on the part of the former, notwithstanding even a high ranking of the former in terms of metrics in a performance measurement system. The best measures of regulatory performance will therefore be those that are closely connected to – or capable of being connected to – the regulator and not susceptible to dilution or signaling noise by the actions of others.

In sum, to be meaningful, regulatory performance measures need to exhibit the following characteristics:

1. **Relevant**
   - *Related.* Measures need to speak to the goals of the user. If they are not related, they cannot be useful.
   - *Tight.* The more closely or tightly connected measures are to their purpose and to what they represent (e.g., the *regulator's* performance), the better they will be.
2. **Reliable**
   - *Accurate.* Measures obviously need to be accurate. Garbage in, garbage out.
   - *Resistant.* Measures that can be easily gamed or manipulated will not turn out to be very reliable.
3. **Realistic**
   - *Available.* Measures should have data associated with them or such data should be able to be gathered with reasonable time and money.
   - *Intelligible.* Measures should be understandable to their intended audience.

Measurement and incentives

The final problem with public sector performance measures concerns their linkage with incentives. When performance measures are used to evaluate employees and provide internal incentives, they may crowd out intrinsic motivations and lead to problems captured under the banner of "teaching to the test." Shelley Metzenbaum, who headed up the U.S. Office and Management and Budget's responsibilities for

implementing performance management in the Obama Administration, has cautioned about overreliance on government rating scores for management decisions in government:

> [P]erhaps the biggest problem is that [directly linking incentives to performance measures] mistakenly suggests that the true objective of performance management is hitting a target rather than improving performance and increasing public-value return on investment. Many of us working in and with government are trying hard to reset this mistaken mind-set, treating target attainment as the purpose rather than a means to an end. It is my hope that researchers, in choosing areas and methods of study, will redirect their inquiries to the real purpose of performance management: continually finding and applying government practices that work better.[83]

Of course, the potential for misuse of performance measurement systems exists in any setting where ratings are used to measure the performance of individuals, teams, or organizations, whether in the private or public sector. But if rating systems in the public sector are primarily intended to be used for managerial decisions, concerns about misuse or misaligned incentives may well take on heightened importance. Public management scholar Donald P. Moynihan, in his expert paper written as part of the Best-in-Class Project, advises managers to avoid altogether linking "high-powered incentives to goals you can only imperfectly measure."[84]

A strategic approach to measurement

Overcoming the limitations of performance measurement by getting clarity about its purpose, using meaningful measures, and avoiding dysfunctional incentive structures will not always be easy. But Moynihan's twelve principles for performance management, set out on the box on this page, offer practical guidance to the regulator seeking excellence. What he terms "purposeful" measurement is a good tool for learning, and learning, after all, should be a core part of the excellent regulator's culture. But using performance measurement to learn does not mean the goal should be learning for learning's sake alone. Regulatory leaders need to be strategic about measurement. To use measurement well, regulatory managers need to know what they seek to learn, who will use that knowledge, and how it will contribute to decision-making.

Measurements can focus either *narrowly* or *broadly* on (1) *regulators'* organizations and actions, or (2) conditions in the *world*, including industry behavior. *Narrower* measurements can be used to inform decision-makers about specific conditions or problems (e.g., automobile exhaust emissions) or about how specific policies, regulations, and programs are working (e.g., an auto emissions regulation). At their narrowest, performance review measures apply to individual employees and their work.

KEY PRINCIPLES FOR PUBLIC SECTOR PERFORMANCE MANAGEMENT

First Principles *tell us about nature of performance management*

1. Performance management can be a helpful tool, but does not eliminate complexity or constraints.
2. Performance data are socially constructed.
3. Performance data are used in different ways.
4. People approach performance data with a negativity bias.

Precautionary Principles *stop bad things from happening*

5. Every measure should have a purpose.
6. Do not attach high-powered incentives to goals you can only imperfectly measure.
7. Don't let performance management prevent you from managing what you can't measure.

Positive Principles *encourage purposeful use of performance data*

8. Communicating performance data is a form of storytelling.
9. Build your performance regime around learning.
10. Use data to engage in exploration and exploitation.
11. Build learning forums.
12. Encourage performance information use.

Source: Quoted from Donald P. Moynihan, *Performance Principles for Regulators* (2015)

Contrasted with narrow and focused measurement are broader ones that serve different purposes. *Broader* measures might help policymakers understand general patterns and trends in conditions or problems, such as with measures of overall ambient air quality. Or they can help provide a wide-angle picture of what the regulatory organization as a whole is doing, such as with measures of its total budget or the annual number of inspections. A still broader, overall "excellence assessment" – at the extreme, that "quixotic" hope for a single number – would be the widest conceivable measurement. Very broad measures can inform a regulator's top leadership as well as political overseers and the public about the performance of the regulator *as a whole*.

Regulators need a range of measures, narrow and wide. Narrower measures, focused on existing programs and ongoing problems, are the kind that regulators routinely track. They sometimes fall under an established performance measurement or performance management system. Examples of such systems include the Balanced Scorecard, Six Sigma, and Lean.[85] Whatever system is used, the key is for the regulator to obtain feedback on a regular basis so as to inform decisions about adjustments to existing programs and practices or about whether to start new ones. The excellent regulator needs that kind of performance information on a regular basis – even daily – so as to be able to learn continuously how to allocate resources and design or modify specific rules, practices, or programs.[86]

> *What matters is not finding the perfect indicator, but settling upon a consistent and intelligent method of assessing your output results, and then tracking your trajectory with rigor.*
>
> - Jim Collins, *Good to Great and the Social Sectors* (2005)

A comparative approach to measurement

Regulators can learn from other regulators. They should seek out knowledge from regulators in different jurisdictions, even different policy domains. But beyond the sharing of knowledge and best practices, might there be value in one regulator comparing its performance measures with those of different regulators? The appeal of such benchmarking against other regulators is strong for much the same reason that people find appealing the rankings of colleges, football teams, and any number of other popular schemes for comparing different entities. Yet to be meaningful and credible, any comparative effort at regulatory performance measurement must overcome at least four important hurdles.[87]

The first two hurdles deal with comparability. First, not all regulators – even in the same general regulatory field – face the same problems, the same social and economic environments, or the same kinds of regulated firms. The U.S. Office of the Comptroller of the Currency and the Rhode Island Department of Business Regulation's Banking Division both regulate banks, but they are hardly comparable institutions nor do they confront the same magnitude or type of regulatory problems. The Pennsylvania Department of Environmental Protection oversees a large and growing natural gas industry, but it does not have large oil sands operations to regulate like the Alberta Energy Regulator does.

A second hurdle lies with comparability of data systems. Data are not always well aligned across different jurisdictions. What counts as a "spill" in one jurisdiction might not be a "spill" elsewhere. In 2012, the Energy Resources Conservation Board (ERCB), a predecessor of the Alberta

Energy Regulator, commissioned a pipeline safety review that sought to compare the efficacy of pipeline regulation in Alberta with that in other jurisdictions. The authors of the review report concluded that such a comparison was not possible: "The presentation and comparison of pipeline leak or failure statistics for Alberta with other Canadian and international jurisdictions is not possible, as each jurisdiction has unique requirements as to which incidents, and what detail[s, must be] reported."[88]

Comparability of data systems across jurisdictions is not, of course, an insurmountable hurdle. If jurisdictions can cooperate and coordinate, they can harmonize their data systems so as to facilitate comparative measurement and assessment. The International Regulators' Forum on Global Offshore Safety has initiated a Performance Measures Project to develop a "common framework" for data collection across its members for metrics such as gas releases, collisions, fires, and other well-related activities.[89]

A third hurdle to comparative measurement is presented by the classic breadth-versus-depth tradeoff. Superficial comparisons may be possible using tractable data. Some studies try to compare the rules on the books, for example. But such comparisons are not all that meaningful if the implementation and enforcement of rules are not also compared. The law on the books is almost never the same as the law in action. Moreover, laws on the books are not the same as outcomes or actual performance in terms of solving the problems the regulator has been charged to solve.[90]

Finally, comparative assessments face yet another hurdle if the goal is to use them as a measure *of* excellence: just because a regulator benchmarks well against other regulators does not necessarily mean it is an *excellent* regulator. It could be that the regulator is just better than a lot of mediocre regulators.

As with performance measurement generally, learning should be the priority when it comes to comparative assessments. The greatest value for a regulator in benchmarking against other regulators may lie less in finding out how it "stacks up" against peers in some kind of rating system than in learning potentially better ways of doing the hard work of regulating. Sharing and learning from other regulators' concrete ideas about regulating risks, conducting public engagement, and ensuring compliance should always be encouraged.

Public input on measurement

The core RegX attributes can be used to assess how well a regulator conducts performance measurement. Not only should such measurement be conducted with integrity and competence, but also with empathic engagement. As public administration scholar Allen Schick has written:

> A number of parties have a legitimate interest in the fruits of performance measurement, including service providers, policymakers, clients or customers, and policy analysts. To satisfy their interests, it is essential that these parties have input into the assumptions underlying measures and timely access to the results. Good measures that are locked away ... do little good.[91]

Especially if the regulator intends some of its performance measures to speak to an external audience and help tell the regulator's story to others outside its organization, the measures selected and the ways they are analyzed will be more credible if they are based on input from those to whom they are intended to speak.[92]

Methods for assessing excellence

Although performance measurement should first and foremost be used as a tool *for* achieving excellence, those who want measures *of* excellence face, as already indicated, a difficult task. Indeed, especially if the goal is to generate a single, meaningful number, it would be an impossible task. That is exactly what the news journal, *Global Competition Review (GCR)*, says about its annual attempt to rate competition regulators around the world: "it is impossible to compare all authorities on an absolute scale."[93]

However, putting aside the pipe-dream of a single number, is it still possible, at least in principle, to use a diverse set of performance measures in combination to make an overall assessment of a regulator's performance? Yes – and the way to do so would be through the process of *consensus-building*

or *stipulation*. Stipulation occurs when someone (a) decides to adopt certain performance measures and specific weights of those measures in determining whether excellence has been achieved, and then (b) specifies a threshold over which a regulator's score must rise to be declared excellent. Consensus-building occurs when others agree upon or collectively make such a stipulation.

If someone were simply to stipulate how important different measures were, they could be weighted and combined to generate an overall assessment. That person just would need to choose from among the (nearly) infinite number of ways that different attributes could be weighted.

Who might that person be? The head of the regulator could decide, based on how important she thinks each measure is or after hearing suggestions from experts, interested organizations, or members of the public. Alternatively, the regulator could assemble an expert advisory body or a public advisory body comprising a diverse group of representatives from industry, nongovernmental organizations, community groups, and so forth. Whatever weights the committee comes up with, the regulator could then use them to create an overall assessment.

Alternatively, an outside evaluator could simply collect a lot of data about different regulators and come up with its own overall assessment, which is what the *GCR* does. As even the authors of the annual *GCR* rankings acknowledge, the data they collect cannot be added together to yield an overall score. Their measures are not in the same units: "budgets, staff size, cases opened and closed."[94] As a result, *GCR*'s authors purport instead to assimilate qualitatively the different types of data collected as well as incorporate interviews with regulatory staff, impressions of knowledgeable outsiders, and their own attendance at various regulatory meetings. All of this forms a kind of gestalt that leads *GCR* staff to give regulators rankings of up to five stars. Of course, in the end, the *GCR* reports that a lot seems to come down to resources: "the bigger a government's competition budget, the better the enforcement agency gets."[95]

When measures vary in expression and units – some are dichotomous, others are continuous; some are percentages and rates, others are absolute numbers – these differences will make it rather meaningless to add the measures together to generate a single, overall "score." Even assuming these equivalency problems could be solved, it would hardly be self-evident how each of these measures should be weighted in an overall assessment of the regulator. Do superb measures of substantive outcomes cancel out mediocre measures of process or perceptual outcomes? Excellence, if it is an overall compilation of quite different measures that have been stipulated or agreed upon as important, ultimately becomes a qualitative judgment, much as occurs with the *Global Competition Review*'s annual exercise.

To those who might object that stipulations and qualitative judgements are somewhat arbitrary, it is important to recognize that there are ways to constrain such evaluative decisions, such as by assigning responsibility for making qualitative judgments to a committee, making them in the open, and requiring that judgments come accompanied with statements of reasons. Even if qualitative, judgments about excellence can be grounded in *something*: a process. That process could range from being the thought process of a regulatory leader, a consensus reached among experts after their consideration of evidence, the majority views of members of a "multi-stakeholder" committee, or something else. The framework of excellence in this report – with its emphasis on three core attributes and its model of regulatory organization, action, and performance – would provide a firm foundation upon which to convene such a process of building consensus around common metrics of regulatory excellence.

Such processes of expert consensus-building around quality metrics are hardly novel or outlandish. On the contrary, most accreditation standards operate along these lines. The U.S. hospital sector, for example, relies on a set of standards issued by a non-profit organization called the Joint Commission. Its standards have been developed by teams of experts, including physicians, who, after consulting widely, stipulate as to what the standards of quality should be, both in terms of thresholds for each item on the quality checklist as well as in effect the number of checked boxes that must meet the threshold. Those hospitals that meet standards under the Joint Commission's "Key Quality Measures" are deemed "top performers," with the Joint Commission

revising its standards from time to time so that it encourages continuous improvement.[96]

Similar processes are used routinely in developing international standards of all sorts. As already noted, the International Regulators' Forum (IRF), a global organization of a dozen national safety regulators of offshore oil and gas development, has developed a protocol for reporting of its members' safety-related data. As the IRF notes, "in order to be able to compare offshore safety performance among IRF participants a common framework is needed."[97] To achieve that framework, IRF members have agreed on common criteria, definitions, and data compilation standards for a limited number of key performance measures such as fatalities, injuries, collisions, and releases of gas. A similar project could be undertaken by regulators around the world, in any regulatory domain, to agree upon other measures related to regulatory excellence.

A strategic approach ... redux

A measurement system like a stipulated accreditation process is conceptually and practically possible for regulators. After all, some type of stipulation occurs with *any* measurement system. For example, if the goal of measurement is for the leaders of a regulatory organization to gain a better picture of their operations and impacts so they can manage the overall organization better, then the measurement system should be based on those leaders' judgments about the metrics (specific attributes) that should be included, the weights to be used in aggregating different metrics, and the thresholds that should apply to each metric or combination of metrics. On the other hand, if the measurement system is intended to inform elected officials or the public about how the regulator is performing, then just having the regulator's leaders do the stipulation may lead to measurements that do not speak to what elected officials or members of the public think the metrics, thresholds, and weights should be. If the aim is to build a measurement system that promotes accountability and allows an excellent regulator to demonstrate its quality to overseers and the public, then the measurement system needs credibility and legitimacy. Given the interdependent nature of the regulator's mission and definition of success, it would be imperative to involve others in the design of the system and the stipulation of metrics.

What about having a multi-regulator quality "accreditation" system along the lines of what the Joint Commission provides for hospitals? This too is conceptually possible and likely to be attractive for some purposes, such as to help raise the performance of different regulators around the world.[98] And yet, there are some important differences between regulators and hospitals that will create greater challenges in bringing together representatives from different regulatory authorities to craft some common quality standards. Although research hospitals can be quite different from community hospitals, and rehabilitation hospitals different from both, hospitals everywhere are committed to the same basic mission: to treat people who have health problems so they get better (and don't get worse). The same cannot be said of regulators; they do not all share the same goals. A telecommunications regulator, a drug regulator, and a mine safety regulator are all regulators, but the gulfs between them will be much wider than with any between two hospitals. Even with respect to regulators in the same sector doing the same line of work, they can still differ considerably from one another. They are, after all, creatures of their legislative mandates, which can vary considerably from jurisdiction to jurisdiction. As a result, if a national or international organization of regulatory quality sought to create a quality standard that demanded, say, a robust benefit-cost analysis for all new major rules, a regulator operating under a mandate that precludes it from taking costs into account when setting rules would lose points. Such a regulator might well be judged to be less than excellent even though it was only refraining from a practice that its legislature determined should not be a part of its regulatory milieu.

The key take-away is, again, that the regulator needs first to think through the purpose of the measurement system, and only then to select metrics and build a measurement system designed to advance that purpose.

Causal attribution evaluation

Depending on the purposes a regulator's leaders have in mind, this chapter has indicated that performance measurement could focus (a) *narrowly* or *broadly*, and (b) on the *regulator* (organization/actions) or on the *world* (performance). To these choices – narrow/broad, regulator/world – can now be added a third choice between *evaluation* and *non-causal measurement*. Evaluation seeks expressly to link together measures of the regulator and measures of the world, with the aim of determining whether the regulator is indeed *causing* positive change in the world.

The regulator can choose from one or more of the following three ways of measuring performance, the first two being types of *non-causal measurement,* while the third constitutes *evaluation*:

1. *Regulator.* Learn about the regulator and what it is doing (measures of "organization" and "actions," in the model on page 31).
2. *Outcomes.* Learn about the world outside the regulator (measures of "behavior," "perceptual outcomes," and "substantive outcomes," in the model on page 31).
3. *Causation* (*Administration* → *Outcomes*). Learn how much the regulator (#1) is causing any (positive) changes in the world outside the regulator (#2).

Only the last of these three – causal attribution evaluation – can definitively answer persistent questions about whether and how well regulation is working. Only evaluation can begin to explain reliably *why* problems are getting better (or worse) and whether the work of the regulator has anything to do with whatever change occurred.

To undertake non-causal measurement, a regulator's measurement team needs "only" relevant, reliable, and realistic measures. To undertake evaluation, however, that same team needs more than just valid measures on both the regulator and outcomes; it also requires the use of a *method* of evaluation that will support valid causal inferences. For evaluation, these methods must involve either randomization or statistical techniques that essentially replicate randomization. These latter techniques include multiple regression, propensity scoring, differences-in-differences, instrumental variables, and regression discontinuity (see box below).

Although these techniques can be used to evaluate many aspects of a regulator, special care needs to be given if the evaluation centers on any so-called recognition or voluntary program, as the likelihood of what is called *selection bias* will be high. That is, those who volunteer may well have been those already inclined to undertake the investments the voluntary program is intended to encourage. Thus,

Statistical Methods for Evaluation

- *Multivariate regression*. Tests for effects of the regulatory treatment while controlling statistically for possible confounding variables.
- *Matching estimators/Propensity scoring*. Statistically matches those firms subject to regulation with those that are not.
- *Differences-in-differences*. Statistically exploits differences over time in two different groups, one subject to regulation, the other not.
- *Instrumental variables*. Substitutes a variable that correlates with the regulatory treatment but lacks confounding effects.
- *Regression discontinuity*. Tests for regulatory effects by studying variation immediately above and below thresholds for regulatory treatment.

Criteria for Choosing Rules to Evaluate

Close calls. Rules should be evaluated rigorously when they had, at the time they were promulgated, high expected costs or benefits but relatively small expected net benefits in their RIAs. If the costs of such a rule turned out after implementation to be substantially larger than estimated, or the benefits substantially smaller, the rule would no longer have benefits that justify its costs.

High uncertainty. Relatedly, rules expected to impose high benefits or costs merit subsequent evaluation if the prospective benefit or cost estimation exhibited high levels of uncertainty. For these rules, a follow-on investigation would reduce the uncertainty.

Common issues. Rules that present common issues of either benefit or cost estimation – or that rely on common assumptions – are prime candidates for rigorous retrospective review, as serious efforts to evaluate their benefits and costs retrospectively would help validate or improve prospective estimation techniques applicable to other rules.

- Cary Coglianese, "Moving Forward with Regulatory Lookback," *Yale Journal on Regulation* (2013)

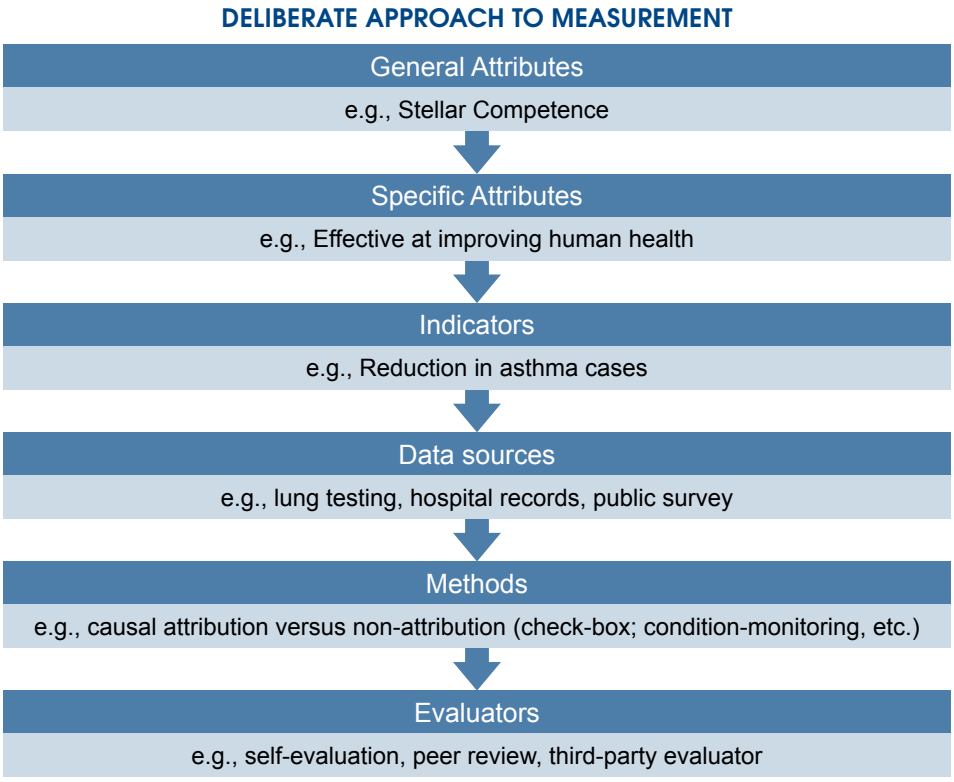
the conditions under which these programs or initiatives operate will seldom function in a fashion that approximates the randomized experiment.

Even when the treatment under study is not voluntary, causal attribution evaluation is still more challenging and often more time-consuming than non-causal forms of performance measurement, as challenging as those measurement approaches can be. An excellent regulator does not need to subject everything to the most careful, ex post causal evaluation research. But as one former regulator remarked at the Penn Program on Regulation's international expert dialogue, it is always good to have a few of these evaluations ongoing at any time. The best regulators will have dedicated staffs who can conduct rigorous causal evaluations on an ongoing basis. Again, only these kinds of evaluations can definitively answer the question of whether particular regulations, programs, or enforcement strategies are or are not working.

Putting it all together

When it comes to being strategic about measurement, the regulator must take pains to avoid what is known as the "lamppost problem." This problem's name derives from an old joke about a drunk who at night looks under a streetlight outside a bar for the keys he knows he dropped in the parking lot, well away from the lamppost. But the drunk person says he is looking under the lamppost "because that is where the light is."

The excellent regulator must obviously be more deliberate. It must start by determining what attributes of excellence it aspires to achieve and then proceed to define specific attributes, find indicators and obtain data sources, choose methods, and determine when third-party evaluators or peer review may be needed. The figure on the next page summarizes the steps in a deliberate approach to performance measurement.



This figure also helps show how a regulator can make the RegX attributes operational and measurable. Taking the RegX attributes in their most general form will make getting direct, quantitative measures *of* excellence seem elusive. "Stellar competence," for example, begs for the evaluator to answer a series of questions: "Competence at what?" and "How stellar is stellar?" As the figure suggests, the regulator and its measurement team will need to define more specific attributes, such as what specific kinds of competence are desired. The nine tenets of regulatory excellence from Chapter 1 of this report point toward the kind of additional specificity needed. Yet since the substantive goals of regulators vary greatly, excellence still needs to be defined by each regulator and members of its public. For example, what counts as "high performance" in the nine tenets will depend on the regulator's specific context. As illustrated in the figure, one possible specific manifestation of the general attribute of stellar competence could be, where relevant, effectiveness at improving human health.

More specific attributes will sometimes take the form of *proxies* for the more general attributes, while other times they will be *building blocks*. For example, the presence (or absence) of a whistleblower policy might provide the basis for a measure of integrity, even though it is a building block toward integrity and not itself a direct measure of overall integrity. Indeed, perhaps no direct measure will exist for integrity qua integrity, in its most general form. One may need to rely entirely on building blocks and proxies. For example, proxy measures could take the form of surveys of people's *perceptions* of the integrity of a regulator. Or building blocks like transparency could be measured. Since a highly transparent regulator will presumably have less ability to cover up poor or biased decisions, measures of transparency might provide good indicators for integrity.

> *The excellent regulator scans for cases that offer strategic, macro opportunities to create public value, potentially by transforming an entire industry, even an entire economy or a crucial aspect of freedom in a society.*
>
> - John Braithwaite, *Responsive Excellence* (2015)

Of the three attributes or atoms constituting the RegX molecule, engagement seems to be the one that could be most easily measured through direct means. Simple counts of the number of public notices issued, data on the duration of public comment periods, analyses of the readability of government documents, or other conceivable metrics might be considered concrete measures of a regulator's level of external engagement. But of course, none of these measures get to the "empathic" part of engagement – nor do they address any of the substantive or perceptual outcomes that follow from engagement and will likely matter greatly to a regulator. Other less direct methods – such as, say, perceptual surveys – might still need to form part of an overall effort to gauge the success of the regulator's external engagement.[99]

The point is that even if direct measures are not available, the RegX core attributes can be operationalized and indirectly measured. Of course, the specific ways of operationalizing these core attributes will vary from regulator to regulator, and some ways will be clearly more relevant, reliable, and realistic than others. These ways will also likely need to change over time. Regulators' priorities change; as some old problems are solved, new ones take priority that then call for measurement. Industry changes too. Data on horse-and-buggy crashes are no longer needed, but data related to automobile drivers' distraction certainly are. When oil and gas drilling techniques change, so too may an oil and gas regulator's performance measures need to change.

As industry and societal needs change and as the regulator learns more, prompting changes in measurement protocols, a tradeoff will emerge that the excellent regulator must seek to address: a tradeoff between adaptation and continuity. The greater precision and relevance that derives from updating measures over time can come at the cost of comparability across time, sacrificing what is needed to discern trends and conduct causal attribution evaluation. In an excellent regulator, some performance measurement data will need to stay the same to serve some purposes, while other measures will always change to serve other purposes.

Measurement and learning

In the end, learning is the key to measurement, but it should always be learning with a purpose. Learning objectives should motivate and guide all choices about regulatory performance measurement. How useful is a measurement system? That can only be answered by asking further: useful to whom and for what purposes? Measurement needs to be realistic. Not all performance measurement can take the form of causal evaluations, as sometimes these will take too long to generate useful results. On the other hand, if a regulator never seeks to draw any causal inferences, it will never be sure that it is not investing large amounts of organizational resources to accomplish little or nothing, when those resources could possibly be better spent somewhere else. One purpose of measurement is to find out if actions are effective, cost-effective, and efficient. If they are, they should be continued and even emulated. If they are not, they should be ended or modified. Without measurement, and without at least some causal evaluation research, the regulator cannot learn very well.

Chapter 4.

RECOMMENDATIONS

There are no uniform recipes, because each country or region has its own problems and limitations.

- Pope Francis, *Laudato Si* Encyclical on the Environment and Human Ecology

Regulatory excellence is like the summit of a mountain. Given the vital role that regulators play in today's global economy, making sure that they can get to the top of the summit of excellence is one of the most pressing imperatives facing the world today. And yet, as with real mountains, there is not necessarily just one way to the top of each peak. Some routes may be well-traveled, but new routes can be explored and invented too. Despite the different pathways available to regulators, it is possible to offer general guidance and recommendations for any regulator seeking regulatory excellence.

As we have seen, the starting point is to define and understand what regulatory excellence means. Although adjectives to describe the ideal regulator are in no short supply, the essence of all of these adjectives can be distilled to three essential attributes. These three attributes bear directly on the regulator's outward relationships (empathic engagement), its overall performance (stellar competence), and its inner virtues (utmost integrity). These attributes, when elaborated, lead to nine major tenets of regulatory excellence. The truly excellent regulator manifests these three attributes and tenets in its organizational traits, its actions, and its outcomes.

To seek regulatory excellence, the regulator must focus its attention on four core parts of the model of regulation over which it has direct control, taking steps to improve the internal management of its organization, refine its efforts to set priorities and make sound decisions, enhance its external engagement with the public, and ultimately strengthen its ability to solve problems in ways that deliver greater value to the public. It also needs to build appropriate systems for measuring its progress, so it can learn how well its efforts to improve management, priority-setting, engagement, and problem-solving are working. Only by learning what works, and what does not, can a regulator expect to make real progress on the path toward excellence.

What exactly a regulator must do on an operational basis, day to day, to exemplify the attributes and tenets of excellence will vary from regulator to regulator – both because of the differences in different regulators' missions as well as the different political, economic, and social milieus within which they are situated. Nevertheless, the RegX attributes

and tenets offer a clear lodestar for regulators everywhere. Both experts and members of the public alike recognize and expect that excellent regulators will consistently align their organizations, actions, and outcomes with the highest attributes of empathy, integrity, and competence on a consistent basis and in ways that keeps them striving always to improve. The excellent regulator, in the end, will be the one that listens, learns, and leads.

Recommendations for reaching excellence

Informed by the outreach, dialogue, research, and analysis that comprised the Best-in-Class Project, this report concludes by offering regulators in the oil and gas sector, as well as other regulatory domains, five central recommendations to reach the summit of regulatory excellence.

Recommendation 1. Align strategic priorities around all three core attributes of regulatory excellence.

Regulators need to align their organization and operations with all three core attributes and nine tenets of regulatory excellence. Too many regulators fail to recognize all three as part of their strategic priorities. In the study of regulators' strategic plans conducted as part of the Best in Class Project, the most frequent attributes that emerged were those connected with *stellar competence*, rather than those related to *empathic engagement* or the *utmost integrity*. There were more attributes among the 25 attributes identified that related to competence, and these competence or outcome-oriented attributes were found in more plans than others. For example, the attribute category of *efficiency* was emphasized in 90% of the plans studied, while mention of attributes in the category of *educative* could be found in only 40%.

Of course, there is certainly nothing wrong with regulators aiming for competence; they most definitely should. But too many regulators today are heavily dominated by professionals who view regulation as primarily a technical enterprise and underappreciate the fundamentally social nature of regulation, which demands not just stellar competence but also confidence-boosting integrity and empathic forms of public engagement.

This point came through resoundingly clear at the Penn Program on Regulation's dialogue sessions in Alberta. Participants in these dialogue sessions explained that they value *process* greatly in defining regulatory excellence. For example, the three major themes that emerged from the Aboriginal dialogue in Edmonton all focused on excellence in terms of human relationships, not just technical skill:

- Establishing credibility through a fair, inclusive, and transparent process
- Building and maintaining relationships of trust and reciprocity
- Ensuring clear and consistent lines of reciprocal communication[100]

Likewise, engagement, responsiveness, respect, and fair treatment figured prominently throughout the discussions at the province-wide dialogue session held in Calgary. In one small group session at the Calgary dialogue, a pointed discussion ensued about whether process matters more than substantive outcomes, with participants sincerely expressing the importance of the former. They said they could accept that they will sometimes end up on the "losing" end of a regulatory decision, but such acceptance depends on their feeling like they have been listened to and treated with respect and dignity. At other points in the same dialogue, participants emphasized that while an excellent regulator cannot make decisions with which everyone will agree, they can and ought to strive to make decisions with outcomes with which most people can accept.

Recommendation 2. Align organizational culture with the three core attributes of regulatory excellence.

The regulator's aim should be not merely to make regulatory excellence a strategic priority for the next year, or even the next five years, but rather to *bake regulatory excellence into the entire culture of the organization*. Achieving excellence is not something that a regulator simply "accomplishes." It is an ongoing effort to strive toward perfection along the three dimensions of regulatory excellence.

Furthermore, the path of excellence leads not to a single summit, but actually a series of peaks that emerge repeatedly while proceeding along the trail. The regulator's strategic priorities need to become more than just goals for the regulator's leadership; they need to become embedded in the day-to-day workings of all the regulator's employees. The public image that an excellent regulator seeks to project – its integrity, empathy, and competence – should mirror the consistent practices and beliefs inside the regulator's organization.

Although cultural change never comes easily or quickly, it is essential for the regulator's leadership to set the example and establish management practices that appropriately align employee incentives with the attainment of all three RegX attributes.

Recommendation 3. Build human capital that maintains stellar technical competence as well as ensures empathic engagement and continued commitment to professional and public integrity.

Regulatory excellence is ultimately people excellence. The RegX attributes of integrity, empathy, and competence are not merely virtues of an excellent regulatory organization, but they need to be virtues that each individual who works for a regulator strives to exhibit at the highest level.

The technical demands for expertise are daunting for a regulator, and much effort must be given to ensuring stellar competence. But the kinds of people skills required for empathic engagement should also be reinforced through training and the regulator's overall organizational culture. The integrity of the deepest kind that makes up the RegX molecule is about people too; it is a kind of character that places the public and its needs above those of each individual staff member. That is in part why governmental leaders like Cathy Lanier and Naheed Nenshi earn so much public respect when they go out of their way to show up at a site of a disaster or otherwise go to great lengths to listen to what others say. They are demonstrating the kind of selflessness that integrity demands.

As Deirdre Hutton, the Chair of the UK Civil Aviation Authority, put it in her remarks at the Penn Program on Regulation's international expert dialogue:

> Make no doubt, it is tough leading a regulator and there can be pressure from a variety of external sources, some of it fairly rough. So as an individual you do need to be personally resilient with a thick skin. I believe you also need a belief in a purpose, or a lodestar, which will help you confidently to make judgments and stop you from being pushed around by each last source of pressure. But the flip side of that, and it makes for a nice balance, is that you also need humility to recognize that you may well be wrong and others may have better ideas or judgments.[101]

Hutton describes qualities of professional virtue. What makes an excellent regulator, in the end, is not entirely different from what makes an excellent human being.

Of course, no regulatory institution can be perfect, nor can anyone expect that each and every individual working for one will be perfect either. A regulatory institution should, though, be structured and managed so that it supports, values, and encourages what U.S. President Abraham Lincoln once called the "better angels of our nature."

Recommendation 4. Involve the public in operationalizing regulatory excellence and in identifying management priorities.

As regulators' missions are ultimately interdependent ones – that is, neither defined entirely by the regulator's leadership nor solely achievable by the regulator alone – the best regulators master empathic engagement in all that they do. The regulator's strategic management should be no exception.

In working through the frameworks and recommendations in this report, a regulator will need to undertake additional work to move down the path of regulatory excellence. It must operationalize the three core attributes of excellence, giving them a content and definition that matches the distinctive mission and operational environment that the regulator faces, making the necessary strategic choices about improvement priorities and performance measurement.

These will be important choices for the future of the regulator and the public it serves. As a result, these choices will benefit – as with other important choices facing the regulator – from open public input. Involving the public extensively in any organizational reorganization or management transformation not only delivers all the informational and trust-building benefits that come from empathic engagement in any setting, but it also models for the rest of the regulatory organization the kind of respectful treatment of all segments of the public that needs to be "baked into" an excellent regulator.

Along these lines, one intriguing and insightful suggestion made by several participants at the province-wide dialogue held in Calgary bears emphasizing as any regulator embarks on a new improvement plan: ask interested members of the public how and when they would like to be involved in a new strategic initiative.[102]

Recommendation 5. Take a strategic approach to performance measurement and evaluation.

Evaluation and performance measurement are vital components of regulatory excellence, for any high-integrity regulator wants to learn how well it is doing in order to strive to do better. Evaluation and performance measurement can also be used as tools for ensuring progress toward or maintenance of excellence. Only with robust evaluation and performance measurement can a regulator know how well it is doing in terms of its ongoing public engagement and substantive performance.

But just because measurement and evaluation are central to regulatory excellence, this does not mean that merely counting beans will do. The excellent regulator must take a strategic approach to evaluation and performance measurement. Rather than succumbing to the lamppost tendency and counting things that are readily available, such as inputs and activities, the excellent regulator needs to be purposive. Its leaders need to define the purposes of evaluation and performance measurement clearly, and then build learning systems to meet those purposes. No one single measure will serve all purposes; overall performance measurement is a portfolio that needs to be managed strategically.

At least a few key policy and management questions should always be investigated with rigorous evaluations designed to yield causal inferences. Others will be better addressed through real-time monitoring of conditions which afford opportunities for management responsiveness and innovation.

When making strategic decisions about performance measurement, the excellent regulator will also build in opportunities for external involvement in and validation of regulatory performance measurement and evaluation. Especially when the purpose of measurement aims at an external audience, the development of a measurement system should involve a role for those outside the regulator in order to be credible. This applies not only in designing the system but also in implementing it, whether by contracting out for performance measurement to a third party or subjecting measurement or evaluation studies to peer review by outside experts. The excellent regulatory aims continuously to seek feedback on the performance measurement work that it undertakes.

Planning for excellence

Let us now return to two central questions motivating this report: How does a regulator achieve or maintain excellence? What steps can a regulator take to align itself better with the core RegX attributes and the nine tenets of regulatory excellence articulated earlier in this report? These are the questions that the Alberta Energy Regulator (AER) and any other public-spirited regulator with aspirations of improved management and quality must ask and answer.

In light of everything discussed in this report, the following four steps forward are recommended for any regulator seeking to improve. At each of these steps, the regulator

will have opportunities to engage in dialogue with others, whether elected officials or members of the public, to get their input. The models and frameworks provided in this report not only provide a basis for informing the thinking of the regulator's leadership, but they also form a basis for that essential public dialogue.

- *Step 1: Self-awareness.* The first step in determining how to improve must be to gain greater familiarity with the regulator's organizational capacities, suite of activities, and current levels of performance. A regulator's managers will likely already have a considerable degree of familiarity with their organization, but even the most thoughtful and conscientious regulatory leaders may well focus on only certain pieces of the overall picture of what the regulator is, does, and achieves. Regulatory leaders should take time consciously to create an overall picture of their own organization as well as to involve others in a process of increasing self-awareness. The general model provided in Chapter 2 of this report provides the basic framework that the AER or any regulator can use to gain this overall self-awareness. But obviously the regulator's leadership must fill in the boxes in that model with specifics about its own organization and operations.
- *Step 2: Scoping.* For each box in the model of regulatory organization, action, and performance found in Chapter 2, the regulator's managers should ask themselves how well aligned the regulator currently is with the RegX core attributes and with the nine essential tenets of regulatory excellence, as discussed in Chapter 1 of this report. For those who are more visually inclined, this second step effectively would entail a process that, either literally or heuristically, involves "filling in" a matrix like that shown in the figure below.

A FRAMEWORK FOR RegX SCOPING

	ORGANIZATION					ACTIONS						OUTCOMES		
	Mission	Resources	Human capital	Autonomy	Culture	Decision-making	Public Engagement	Rule-making	Rule-application	Incident response	Evaluation	Industry Behavior	Perpetual Outcomes	Substantive Outcomes
Utmost Integrity														
Fidelity to law														
Respect for democracy														
Commitment to Public Interest														
Empathetic Engagement														
Even-handedness														
Listening														
Responsiveness														
Stellar Competence														
Analytical capability														
Instrumental capacity														
High performance														

Although the figure provides completeness and shows the conceptual structure that grows out of the analysis in this report, it should most decidedly not be taken to suggest that all or even many of the cells can be filled in with anything like precise, quantitative measures. The purpose at the second step is one of scoping, to identify where the regulator's leaders should put their focus going forward. Going through the boxes provides focus.

It would also be mistaken to take from the figure here any inference that every cell will matter equally. In this regard, it should be noted that some RegX attributes and related tenets will be more relevant to some cells or boxes than others. To offer just two examples:

- "Public Engagement" in the "Actions" category is obviously much more closely connected to RegX's "Empathic Engagement" than are the other boxes (and that is true even though a regulator must approach such engagement with the utmost integrity and will rely on engagement to learn better what it needs to know to provide stellar competence).
- The "High Performance" tenet (part of "Stellar Competence") is obviously much more closely connected to the "Outcomes" category than are the other boxes.

And so it will be with the other attributes and tenets. Although everything an excellent regulator is, does, and achieves should be imbued with integrity, empathy, and competence, some aspects of the regulator and its operations will be more important to certain attributes of excellence than others. The scoping step is needed to inform decisions about where to place the regulator's priorities for improvement.

With all of the possible organizational characteristics, regulatory actions, and outcomes that could make up a more concrete manifestation of the model in Chapter 2, any overall exercise in assessing each of the parts of that model against the three RegX attributes – let alone the nine tenets – will by necessity need to be highly qualitative. As noted, no one should be under

any illusions that every feature and facet of a regulatory organization can be measured with precision. Even if they could, nothing from the public engagement, expert elicitation, and research conducted by the Penn Program on Regulation during the Best-in-Class Project gives any reason to believe that there would be a clear or definitive way of converting such measures into a common unit and then combining them to yield some kind of total "score" based on some undetermined way to weight each cell's "score." The only way to proceed with such a comprehensive, overall measurement and ranking or scoring scheme would be, as discussed in Chapter 3, through a process of stipulation, possibly based on broad consensus.

This is not to suggest that regulators must try to attend to improving everything all at once. An inherent tradeoff always exists between breadth and depth. From the standpoint of overall management, it will be more important for a regulator to focus the range of key indicators on a smaller, manageable number. Finding that smaller number of priorities is what the next step is all about. At the second step – simply of scoping – what regulatory leaders should be doing is making a first, soft look at the entire organization with everything on the table so they do not overlook possible areas in need of improvement.

- *Step 3: Strategic action.* Based on a broad self-assessment and scoping, regulatory leaders next should select their

priorities or opportunities for greatest improvement. Then they should move toward identifying improvement strategies and making performance measurement or evaluation plans. This step of strategic action would likely benefit, perhaps even more than the first two, from input from others with whom the regulator interacts and serves.

As discussed in the section of Chapter 2 on "Moving forward on the regulatory excellence path," the primary candidates to be considered in identifying improvement strategies fall across four principal facets of a regulator's operations. The following questions suggest the range of considerations for a regulator to consider in developing strategic actions that will move it closer toward excellence or help it stay on that path.

Internal management (e.g., mission clarity, resources, autonomy, human capital, culture)

1. Does the regulator possess and communicate a clear, well-defined mission that aims boldly to maximize public value within the scope of the regulator's mandate?
2. Does the regulator have adequate financial resources and information technologies to deliver on its mission?
3. Does the regulator possess appropriate levels of autonomy to ensure its decisions are made consistently with expert judgment and in the long-term public interest?
4. Does the regulator have a sufficient level of staff members who are highly-trained and keep up with developments and emerging trends within their scope of work?
5. Does the organizational culture support and value learning, innovation, and public service?
6. Does the regulator's culture align well with all three core RegX attributes and all nine regulatory excellence tenets?

Priority-setting/decision-making (e.g., scientific and economic analysis and how it informs decisions)

7. Does the regulator seek out state-of-the-art evidence before making both regulatory and management decisions, and then incorporate that evidence in good faith into its decision-making and its reasons for its decisions?
8. Does the regulator actively investigate and seek to generate new knowledge of poorly understood risks, potential areas of concern, and regulatory impacts?
9. Does the regulator have in place adequate procedures for preserving the integrity of scientific information, including suitable processes of peer review?
10. Does the regulator ground its decisions on a solid understanding of the industry it is regulating, including an ongoing awareness of technological innovations?
11. Does the regulator understand and articulate clearly the normative principles it uses in combination with risk analysis to make decisions (i.e., what it means to be "risk-based" or "risk-informed")?
12. Does the regulator engage in analysis of its own rules and practices, including rigorous causal evaluation, to learn what works and what could work better?

Problem-solving (e.g., regulatory instrument design, inspection and enforcement strategies)

13. Does the regulator consistently determine that new regulations are needed (and that non-regulatory solutions would not be effective) before adopting new rules and directives?
14. Does the regulator select and apply regulatory instruments that equitably maximize net benefits (or, if specified by law, that meet other policy criteria)?

15. Does the regulator consider a full range of regulatory instruments that will best achieve relevant policy goals, including when appropriate, regulatory instruments that preserve flexibility?
16. Does the regulator target its inspections in such a manner as to maximize the chance of finding and reducing significant regulatory violations?
17. Does the regulator deploy enforcement tools responsively, calibrating consequences so as to assure compliance and promote positive cooperation?
18. Does the regulator manage its own operations with efficiency, minimizing unwarranted delays in decision-making?

External engagement (e.g., transparency, public participation)

19. Does the regulator provide open access to its information in a manner that is accessible and comprehensible both to industry users and to the broader public?
20. Does the regulator provide, whenever feasible, full drafts of regulatory decisions when it invites public comment?
21. Does the regulator generally provide opportunities for participation by any member of the public that is concerned or will be affected by its decisions?
22. Does the regulator reach out to and welcome input by all individuals, organizations, and communities that are interested in or affected by its decisions?
23. Does the regulator provide well-reasoned explanations for its decisions that acknowledge and respond to all pertinent concerns expressed by members of the public?
24. Does the regulator ensure that its entire workforce interacts fairly, respectfully, and empathically with all segments of the public?

These questions form a useful checklist for any regulator seeking to improve. This list of questions could certainly be useful at the scoping step too, but it is important to keep that earlier step focused on the RegX *attributes* and the corresponding qualities found in the tenets of regulatory excellence. Although checklists can be useful, regulatory excellence is not merely a matter of checking off boxes. It is an ethos that thoroughly and deeply pervades the traits, actions, and outcomes of a regulator.

The regulator should keep in mind that initiatives like risk-informed regulation or performance-based regulation are not themselves attributes of excellence *per se*. Excellence is ultimately encapsulated in the RegX attributes and tenets. When deployed smartly, initiatives like risk-informed or performance-based regulation can be strategies that help achieve or better maintain excellence by delivering greater public value.

The same is true with the other improvement options implicit in each of the twenty-four questions shown above. If these improvement strategies do yield improved substantive outcomes, they help a regulator better meet a stellar competence tenet of "high performance" by ensuring that the regulator can "consistently deliver significant positive public value." If they yield improved perceptual outcomes of public trust and legitimacy, they will help a regulator better demonstrate the achievement of the attribute of utmost integrity and empathic engagement. And so forth.

To illustrate what types of practical "next steps" the list of two dozen questions shown above could prompt for a regulator, Appendix H provides a brief illustration of what a regulator might do if it identified Question 16, on inspection targeting, as one of its priority items for strategic attention. The appendix material shows how a regulator could go back to the five main recommendations presented earlier in this chapter to begin to develop a strategic plan to improve inspection targeting.

- *Step 4: Assessment and continuous improvement.* To the preceding three steps must be added a fourth on assessing how well any strategic plan for improvement has worked, and then repeating the full cycle by seeking continuous improvement. Chapter 3 offers guidance on the use of performance measurement and evaluation to undertake the necessary assessment. The inclusion of continuous improvement in this fourth step reminds the regulator that the goal with regulatory excellence is not merely to reach a single summit, but also to continue along down the trail to summit the further peaks that always lie off in the distance.

Coda: Excellence as momentum

Regulating is hard work. Just regulating well is demanding and difficult. To achieve excellence requires more. It requires full, consistent, and superlative mastery of all the technical, analytic, and social tasks involved in the enterprise of regulating. Excellence demands the utmost, the empathic, the stellar.

Part of what makes achieving excellence so difficult lies in the complexity of the challenge. Not only do today's regulators oversee complex technologies and business practices during the course of their work, but regulators as organizations operate in complex social, economic, and political systems where their success is ultimately defined and shaped by their interactions with others, including, in the end, by the actions of regulated entities. This report has distilled the high principles of regulation and offered accessible frameworks that can be used by regulators anywhere, and yet even what is presented here suggests the extreme complexity to regulatory excellence. The core attributes of regulatory excellence presented here have been described by *nine* major tenets, each of which the regulator should manifest across *three* dimensions: its organizational traits, regulatory actions, and policy outcomes. Looking at this mathematically, that equates to *twenty-seven* layers of excellence!

Finally, regulators do not operate in a static environment. Regulatory excellence requires listening attentively to changing public concerns. It requires constantly learning on the job. It also requires boldness and visionary leadership – seeing ahead to where the puck will be, to use Wayne Gretzky's famous advice, and then moving forward. Just as with any successful hockey player, the excellent regulator cannot stay in one place, content to have mastered the past or the present. The world changes, its problems change, its science and technologies change, its economic conditions change, and ultimately its social fabric can change too. In such a world, regulatory excellence demands forward momentum, not static achievement.

APPENDIX A: ABORIGINAL DIALOGUE

The Penn Program on Regulation convened a one-day dialogue with members of Aboriginal communities in Alberta. The dialogue was held at the Sawridge Inn and Conference Center in Edmonton on March 26, 2015. Participants included representatives from each of the three First Nation treaty areas in Alberta (Treaty 6, Treaty 7, and Treaty 8), representatives from two Métis organizations (the Métis Nations of Alberta and the Métis Settlements General Council), as well as participants from the Indian Resources Council and the CEO of Indian Oil and Gas Canada. The discussions were organized and facilitated by the Penn Project on Civic Engagement, led by Dr. Harris Sokoloff, and they were observed by several representatives from the AER, including its President and CEO, Jim Ellis.

Neither a formal consultation between AER and participants nor a consensus-building endeavor, the dialogue brought together diverse participants to generate ideas about the characteristics, practices, and outcomes that constitute a "best-in-class" regulator. The day's dialogue was divided into two main sessions, with the first devoted to identifying those attributes that characterize an excellent regulator and the second focused on methods and measures for determining a regulator's success. Drawing on a detailed dialogue summary report which can be found on the Penn Program on Regulation's Best-in-Class Project website, we highlight here some of the major insights and perspectives shared.

An excellent regulator, according to most participants, is one that has "earned credibility, built trusting and reciprocal relationships, and maintained clear, regular communication."[103] To build and maintain credibility, participants offered the following specific suggestions:

- All Aboriginal groups as well as various stakeholders should have the ability and resources to present their case and respond to the case and presentations of others in a regulator's proceedings.
- Regulatory processes should make common sense and be thoroughly unbiased.
- Regulators should provide explicit acknowledgment and consideration of trade-offs.
- Regulatory processes should be transparent.
- Participants expressed a desire for meaningful Aboriginal representation on AER's board.[104]

Participants also sought a "common sense" approach for building trusting relationships between regulators and members of the public it serves. They thought that excellent regulators ought to act with honesty and respect and demonstrate both understanding and empathy in interactions with people from different cultures and ways of living. One suggestion to improve the relationship between the AER and the Alberta government in particular was for regulators to assign dedicated representatives to serve as a continuous point of engagement with Aboriginal groups, instead of such groups needing to adjust repeatedly to varied offices or changing personnel. In seeking to ensure clear and consistent lines of reciprocal communication, participants highlighted that excellent regulators ought to communicate in a way that speaks "to everyday people about their clear everyday concerns" in a manner that avoids "legalistic and industry-related jargon."[105] Participants also offered several concrete suggestions for a regulator to communicate effectively:

- The key to effective communication is for a regulator to listen, learn, and educate.
- An excellent regulator should provide proactive and early communication.
- In dealing with Aboriginal communities, an excellent regulator needs to be aware of and sensitive to Aboriginal methods and norms of communication. Not everyone has email, and even regular mail can be very slow.
- An excellent regulator should use language that is easy to understand by all parties.
- Effective communication must include feedback cycles and follow-up.

- A regulator should work to develop explicit and co-produced communication lines between itself, affected Aboriginal communities, and industry.[106]

Participants tended to see the work of an excellent regulator as involving more than just solving technical problems. It also includes the management of social relationships—recognizing and relating well to the variety of cultural perspectives possessed by individuals and communities comprising the broader public. Most participants emphasized that an excellent regulator would foster trust and credibility by how it interacts with interested individuals and organizations. The key to achieving success in managing relationships, participants suggested, lies with effective communication and empathic connection with the various members of the broader public which the regulator must serve.

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APPENDIX B: PROVINCE-WIDE DIALOGUE

The Penn Program on Regulation organized a three-day dialogue session held at the Sheraton Suites Eau Claire in Calgary from April 12-14, 2015. This dialogue brought together approximately 65 individuals from across Alberta, including oil and gas industry representatives, environmental group leaders, landowners, Aboriginal community representatives, municipal and other government officials, academic experts, and other concerned members of the public. A number of managers and staff members from the AER joined as observers to the discussions.

Much as with the Aboriginal dialogue, the province-wide dialogue aimed to generate attributes of regulatory excellence as well as identify ways regulators can measure and credibly demonstrate their institutions' progress toward the achievement of excellent regulatory performance. Its purpose was not to evaluate the quality of the AER but to learn about the participants' aspirations for the AER and other provincial regulatory and governmental bodies.

We heard repeatedly from varied sources at the dialogue – as we did in our separate one-on-one interviews (Appendix C) – that achieving excellent energy development regulation in Alberta is not a challenge solely up to the AER to meet. Many individuals believe that what matters more than just excellence at the AER is the excellence of the entire governmental system. The AER might be an excellent regulator, these individuals said, but if government policy in the province is flawed, then even the AER's excellence cannot make up for those flaws. Throughout the dialogue, many participants raised concerns about specific aspects of government policy – or the lack thereof – related to energy development, ecosystem planning and land management, and Aboriginal consultation, rather than about the AER specifically. The point, of course, is not to imply that these concerns are valid or not, but rather to highlight a major theme that emerged with some force in all that we heard, namely that regulatory excellence requires excellence in the *entire system* of regulatory governance, not merely excellence in one governmental institution in the overall system.

With that important caveat in mind, participants in the Alberta Dialogue identified several dimensions of a regulatory organization and its operation as central to the attainment of regulatory excellence. Notably, the regulator's institutional culture and workforce – as well as its leadership and overall governance structure—were highlighted by participants as core factors contributing to the sustenance of a "culture" or "ethos" of excellence that many participants saw as essential. An institutional *culture* of excellence requires a strong and urgent commitment by both the regulator's leadership and all of its personnel to a clearly defined set of policy principles informed by public input and to a high level of consistency in action that comports with these principles. In other words, the excellent regulator is one that not only talks the talk, but also walks the walk. Participants also emphasized that the regulator's culture ought to reinforce a sincere and ongoing commitment to public engagement, learning, and continuous improvement.

Participants recognized that the performance of regulatory organizations, as with any organization, depends ultimately on the values and competence of their employees. To excel in its performance, a regulator must have a highly trained *workforce* with both the technical capabilities needed to analyze data and make sound operational decisions and also the social skills required to engage with a culturally diverse public. A regulator's employees ought to be willing to listen to the concerns expressed by all groups in society and eager to explain thoroughly the rationale behind regulatory decisions. They need to be empathetic and respectful in their interactions with the public. Furthermore, a number of participants thought the regulator's workforce ought to be "at least roughly representative of the different stakeholder groups and the community at large" and "physically located within or near the community and distributed throughout the province, with more field personnel and field offices."[107]

In making regulatory decisions, regulators often must confront difficult tradeoffs, choosing how to proceed even in the face of policy uncertainty as well as the likelihood that any appropriate course of action will displease some

(if not many) segments of society. Participants reported that, when facing such difficult choices, excellent regulators dedicate attention both to collecting broad public input and analyzing the best available scientific information in order to make decisions that maximize overall public value. Success demands neither making everyone happy nor leaving everyone feeling equally unhappy. It also does not mean satisfying the demands of the most vocal critics or the best-resourced or most-organized set of interests. At a minimum, regulators will recognize competing priorities and weigh tradeoffs among multiple competing values and interests in making decisions. Participants highlighted a particular challenge when a regulator is responsible for fulfilling mixed legal mandates that at times seem to require incompatible outcomes. If the regulator is charged with fulfilling two objectives in tension with each other – say, promoting both public safety and reducing regulatory burdens – it may be impossible for the regulator to achieve excellence with respect to each policy objective.

In the design of its decision processes, an excellent regulator should set up procedures to ensure it receives a broad range of views from the public, across the full range of interests, regions, demographic characteristics, and even generations (with regulators addressing not only present priorities but also taking into account future impacts). Decision processes should be designed to produce thorough analysis and synthesis of the best possible data including, where appropriate, various forms of traditional knowledge recognized in Aboriginal communities. The regulator's procedural rules ought to be clear, consistent, predictable, and applied uniformly to all. At the same time, participants recognized that circumstances may demand some flexibility and discretion from the regulator—as well as the consideration of alternative processes such as forms of alternative dispute resolution.

Robust public engagement was repeatedly mentioned by many participants as a hallmark of an excellent regulator. For them, achieving excellence in engagement requires demonstrating empathy and building trust across all segments of society, showing respect, and treating people with dignity even when making decisions that adversely affect their interests. Communication with the public should be a two-way street, with feedback loops built into regulatory processes that allow both for informal and formal opportunities for public input. Regulators should make available a variety of avenues for input, some of them tailored to the capabilities and needs of different individuals and communities. When resource constraints limit the ability of some groups to participate meaningfully in regulatory proceedings, regulators would do well to consider providing resources that allow such groups to hire their own professional experts to support their participation. Participants recognized that the investment of time and resources in public engagement can come at the expense of other priorities, including timeliness in decision-making, but many participants expressed the belief that such investments were worthwhile in the long run. By building trust in its regulatory processes, the regulator strengthens its reputation and enhances its credibility.

Dialogue participants also stressed the vital role transparency plays in supporting informed public participation—as well as its essential role overall in achieving regulatory excellence. They emphasized several key dimensions to transparency. Transparency includes not only a regulator providing open access to its records and data but also offering clear, detailed explanations for its decisions. Most especially, at its core, transparency entails truthfulness: participants expressed particular disdain for being "'lied to,' 'kept in the dark' or 'blindsided' by regulators."[108] Participants wanted access to information and clear explanations even when they accompany "bad news."

In terms of the substance of regulatory decisions, a number of participants favored regulators' reliance on performance-based standards that mandate the attainment of outcomes but give regulated entities the ability to choose how to achieve those outcomes. Substantive flexibility was also included in discussion of inspections and related enforcement activity. Many participants cautioned against reliance on rigid, rule-based protocols for targeting regulated entities for inspections, instead recommending that regulators choose to deploy enforcement resources more strategically. Some suggested that so-called laggard firms should receive greater scrutiny than more responsible firms and other regulated entities. Others favored a risk-based approach which would

incorporate into targeting decisions not only firms' history of and propensity for compliance but also their overall hazard potential. While participants highlighted flexibility in carrying out enforcement activities, they also valued firmness. Excellent regulators, participants repeatedly said, ought to "show resolve" and "stand up to industry and 'say no' from time to time."[109]

Dialogue participants identified the following as the most salient aspects of an excellent regulator's enforcement program:

- *Purpose of enforcement.* ... A regulator can't achieve excellent enforcement…"until it knows what it is managing for."
- *Stringency of enforcement.* Many participants wanted the regulator's enforcement actions to have a clear impact on changing business behavior and not just become a "cost of doing business" or ... a "rubber stamp of industry practices."
- *Role for innovations.* Some participants suggested innovative ways of enhancing enforcement effectiveness [such as] finding a reliable mechanism for third-party reporting of violations [and using] incentives to reward ... firms to go "beyond compliance."
- *Timing of enforcement.* Some participants admonished that regulators should address compliance concerns quickly before they grow into larger problems.
- *Rigor of incident investigation.* ... Several participants stressed that an excellent regulator will have a clear process for following through on incidents and reporting back to the public on what actions have been taken.
- *Public disclosure of non-compliance.* Many participants seemed to agree that non-compliance information should be publicly available.
- *Regulated entities' response to non-compliance.* Several participants recommended that non-compliant companies be required to provide clear follow-through information to the regulator on how it will ensure that future violations do not occur.
- *Role for alternative dispute resolution (ADR) in enforcement.* ... Some participants expressed the opinion that an excellent regulator should affirmatively provide a form for ADR, making collaborative resolution of disputes the norm and not the exception.[110]

Participants from across a variety of segments of Alberta emphasized that a regulator that is perceived to act as a booster for industry or that simply serves as a rubber stamp on industry plans will not be taken seriously as an effective regulator. A regulator's ability to show resolve will, though, depends in part on the authority the rest of government has given it, participants noted. They recognized how the existence of policy gaps within an overall regulatory system can constrain any regulator's ability to act resolutely, especially with respect to new problems that were not contemplated in the regulator's legal mandate. But even if hampered by ambiguities or gaps in regulatory authority, an excellent regulator should not stand idly by while pressing public problems go unaddressed. Participants agreed that an excellent regulator should work diligently with government authorities to secure any needed policy clarification or grant of new regulatory authority. Some participants thought that in extraordinary circumstances an excellent regulator might even need to exert greater creativity in the interpretation or exercise of its existing regulatory authority in order to respond to pressing public problems.

Finally, participants noted that an excellent regulator should devote attention to measuring and evaluating its own performance. Measurement and evaluation, they indicated, are vital for achieving continuous improvement and for reinforcing a "learning culture" within the regulatory organization, enhancing the regulator's ability to remain nimble as regulated industries and their practices continue to evolve dynamically. Much as with other regulatory decisions, participants stated that an excellent regulator should ensure public involvement in the process of setting performance goals and establishing metrics. Participants offered a variety of suggestions for a regulator like AER to use both in assessing substantive outcomes as well as regulatory processes, drawing on both quantitative and qualitative metrics. Examples of possible metrics included the number of disputes and complaints, rate of violations

found in inspections, the number of businesses operating in the regulator's jurisdiction, and public perceptions and willingness to engage cooperatively with the regulator. In taking measurements and conducting performance analyses, some participants articulated a preference for a regulator to involve an independent third party, whether in the direct implementation of performance measurement or in an auditing or peer review role.

Overall, participants viewed measurement and evaluation as just the final means of "closing the loop" in what should be an ongoing cycle or process of regulation. For most participants, excellence was not perceived as a static "end point" that a regulator simply "achieves," but rather a dynamic, ongoing pursuit that requires constant learning, vigilance, and improvement.

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APPENDIX C: INTERVIEW RESPONDENTS*

In advance of the dialogues the Penn Program on Regulation convened in Alberta, we undertook a scoping process that involved interviews with dozens of interested individuals from throughout the province who shared their perspectives with us. These interviews with the individuals listed below helped provide background context and allowed us to begin to hear the range of concerns and aspirations held by various segments of Alberta. What we later learned at the two Alberta dialogue sessions was consistent with what interview respondents told us, but the interviews allowed us to identify individuals to invite to the dialogues, learn how best to balance the panel and group discussions, and find various research studies and reports that we read and incorporated into our overall analysis.

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APPENDIX D: INTERNATIONAL EXPERT DIALOGUE

A two-day dialogue, held at the University of Pennsylvania Law School in Philadelphia, on March 19-20, 2015, brought together some 40 participants spanning multiple countries and representing an array of regulatory fields, including academic experts, industry representatives, environmental group leaders, and other experts. This international expert dialogue endeavored to achieve the following two objectives:

- Identify a set of common attributes characteristic of best-in-class regulatory performance, and
- Articulate ways of evaluating a regulator's progress towards regulatory excellence across diverse policy fields and societies.

In advance of the dialogue, fifteen dialogue participants circulated short papers as a means of stimulating deliberations. Following the dialogue, we prepared a detailed summary report.[111]

The first objective of the expert dialogue was to define attributes of excellent regulators—common qualities of excellence that apply irrespective of institutional setting. Although it was not the aim of the dialogue to achieve consensus, many participants seemed to agree with the following ten major characteristics of an excellent regulator:

1. *Mission Clarity:* Dialogue participants thought that an excellent regulator must have a clear mission. Clarity focuses personnel internal to the agency, guides the regulator in setting priorities, limits distractions, and prevents an undue fixation on short-term interests and pressures. Externally, clarity provides outside overseers with benchmarks for assessing progress.

   Dialogue participants expressed differing views on the source of the regulator's mission. Some viewed the regulator's capabilities for action as circumscribed solely by legislative authority, while others thought other expressions of public preferences as well as a reliance on an independent "moral compass" could also factor into defining a regulator's mission.

2. *Autonomy:* Although participants agreed that regulators in a democracy should be politically responsive and accountable, they also emphasized the need for a sufficient degree of independence to ensure that the regulator relies on independent, expert analyses and remains free of undue industry and other special-interest influence. The challenge is to achieve an appropriate balance between democratic responsiveness and autonomous expert judgment.

   Participants also noted that the source of a regulator's funding may affect its ability to achieve the right balance. Funding based on industry fees can help a regulator achieve autonomy from undue legislative pressures, yet might nevertheless detract from the regulator's real or perceived autonomy from industry.

3. *Intergovernmental Cooperation:* An excellent regulator needs sound working relationships with other governmental institutions that are integral to the achievement of the regulator's mission. Particularly when regulators encounter ambiguities or gaps in policy, they need to communicate and collaborate to ensure that government policy is updated or clarified. If the regulator lacks the authority or resources to address a pressing public problem, many dialogue participants thought that regulators should affirmatively bring these issues to the attention of relevant policy makers and help persuade them to rectify the situation.

4. *Sound Decision-making:* Regulators face significant challenges in making sound decisions. They often must make tradeoffs among competing objectives, priorities, and even, at times, multiple or conflicting missions. In setting priorities and making decisions, regulators ought to consider public views, technical expert opinion, and other decision-making inputs. Participants noted that regulators with a capacity for high-quality analysis strengthen their credibility. They also recognized, though, that all regulators must make decisions under uncertainty and that, in any

event, regulators' decisions are policy decisions that also call for normative as well as scientific judgment.

5. *Expertise with Humility:* An excellent regulator possesses skillsets beyond technical expertise. The dynamic process of regulation often necessitates leadership skills and effective public engagement. As such, regulators should make sure their workforces not only possess sound technical skill but also know how to engage well with all segments of the public. In their interactions with the public, regulatory employees need to "show a little humility."[112] Knowing well their own limitations, they regularly seeks outside perspectives by asking questions and actively listening to industry and all affected members of the public.

6. *Boldness:* Many dialogue participants emphasized the need for an excellent regulator to exhibit bold leadership. Some participants thought that when a regulator encounters severe problems that nevertheless fall within the gaps of policy or legislative authority, an excellent regulator will actively seek to respond, even if it must to some degree push against the envelope of its authority.

7. *Responsive, Robust Enforcement:* Regulatory excellence requires effective enforcement, including robust monitoring and inspection protocols. Rather than regulators relying solely on punitive measures, participants also recommended responsive enforcement strategies such as persuasion, engagement with industry leaders, and the use of incentives or rewards to secure improved behavior from firms.

8. *Agility, Learning, and Adaptation:* An excellent regulator pursues continuous improvement. In an ever-changing business environment, regulators must keep up with relevant, emerging industry technologies and constantly adapt and innovate. They also need to keep up to date with communication technologies, such as social media, so as to engage most meaningfully with the public.

9. *Transparency and Public Engagement:* The experts at the dialogue agreed that effective public engagement and transparency are hallmarks of regulatory excellence. Good public communication and outreach can improve a regulator's overall effectiveness and generate useful reputational benefits. Participants emphasized that regulators must reach out to the public proactively, not only to inform the public of proposed regulatory actions but also to listen attentively to all public concerns. They also noted that transparency is essential to making public input meaningful. Although participants differed in what exactly should be made public – some, for example, "cautioned against intruding too much on the regulator's deliberative process"[113] – all seemed to agree that transparency is key for building trust and credibility.

10. *Reputation:* A regulator's reputation for excellence can help it achieve or maintain excellence. Nevertheless, some dialogue participants noted that excellent regulatory performance does not always equate to an excellent reputation—and vice versa. Since a regulator's success often cannot be observed, at least not nearly as clearly as its failures, regulators frequently lack tangible evidence of their effectiveness. Several participants cautioned against regulators placing too much emphasis on their reputations. They suggested that regulators should pursue excellence for its own sake – "in terms of promoting public value" – and should treat reputations as "only a tool and a means to an end, not an end in itself."[114]

In addition to identifying ten major attributes of regulatory excellence, the expert dialogue sought to uncover ways that regulators can evaluate and track their progress towards regulatory excellence. In other words, how does a regulator know if it is doing better or worse over time? Participants discussed both the promise and pitfalls of performance measurement—what to measure, the purposes of measurements, and the qualities of different performance metrics.

Participants supported the value of performance measurement but emphasized how important it is for a regulator to define clearly the purpose that any

measurement system will seek to achieve. Does a regulator seek to use measurement internally to learn how to improve its practices? Or does it seek to tell a story to those outside the regulator, whether governmental overseers or the public more generally? The design of a performance measurement system will vary depending on its purpose. Different purposes will call for different metrics – qualitative versus quantitative, perceptual versus validated – or for different methods of measurement and analysis.

Although participants supported the use of performance data to help regulators track their progress and make improvements, they also enumerated a series of considerations that excellent regulators should keep in mind when designing performance measurement systems:

- *Moving Targets.* Performance measurement must be dynamic. With changes both in industry and in society overall, a regulator's performance targets can – and indeed should – shift over time.

- *Causal Attribution.* Beyond just tracking progress, excellent regulators will also identify key issues for closer scrutiny through evaluation research that seeks to discern causal connections between the regulator's actions and targeted outcomes.

- *Access to Data.* Regulators often face the daunting challenge of accessing needed data. Sometimes, the best data reside with regulated businesses. In other cases, quantitative data may simply be unavailable. For regulators that tackle very low-frequency accidents, outcome measures may be needed to find proxies for the rare incidents, such as near misses.

- *Resources.* Regulators need adequate information technology and human capital to make effective analysis and use of performance data.

- *Gamesmanship.* The regulator must be cognizant of the likelihood that regulatory employees or regulated firms will collect or report data strategically. Independent governmental or third-party auditors may be needed to supplement or oversee performance measurement.

- *Aggregation.* Aggregating performance measures to create an overall performance score or ranking may be useful for a regulator, especially in telling its story, but aggregation may also obscure important tradeoffs or varying weightings between different performance measures. According to dialogue participants, "trying to combine two or more performance measures that conflict and are tracked in different units could render meaningless any attempt to create overall performance scores."[115]

- *Goals.* Goals are an important part of overall performance management. They can be ambitious or realistic, aspirational or operational. While high aspirational goals might help in motivating regulatory employees to deliver their best work, goals that are too ambitious may place a regulator's reputation at stake if left unmet. On the other hand, as one participant articulated, "if you under-promise, nobody pays attention."[116]

- *The Importance of Leadership.* Although useful as a tool for improving regulatory performance, no organization will accomplish ambitious goals by measurement alone. Effective leadership is needed. As one participant put it, "systems of performance measurements cannot accomplish what strong leadership can. They can support it, but not replace it."[117]

When it comes to performance measurement, regulators may be tempted to adopt a "'method-of-the-month' mindset that places all hope in getting the 'right' performance measurement and thinking that all else will follow from there."[118] However, the experts who gathered at the dialogue held at University of Pennsylvania suggested that regulators instead ought to invest in leadership efforts that cultivate an organizational culture dedicated to producing public value and making continuous improvement.

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APPENDIX E: RESEARCH OUTPUTS

The Best-in-Class Project produced more than 35 papers and reports. Among the total output included a unique collection of white papers by regulatory experts from around the world about how to achieve excellence, a first-ever original empirical study of a wide range of regulators' strategic plans inductively discerning attributes of excellence from regulators' own goals, and five in-depth research papers comprehensively reviewing the literature on four main facets of regulatory operations. This appendix summarizes these major research products of the Best-in-Class Project and then provides a list of all the papers and reports produced during the duration of the project. Full copies of the items summarized and listed here can be found on the project website, BestInClassRegulator.org.

Expert Papers on "What Makes a Regulator Excellent?" We asked more than fifteen leading scholars from around the world to answer the question, "What makes a regulator excellent?" Their answers appeared in a series of short discussion papers that were later developed into longer papers which will be published in 2016 by the Brookings Institution Press in a collection entitled, *Achieving Regulatory Excellence*. These expert papers approach the general question of regulatory excellence from the diverse disciplinary and research-based perspectives of the individual authors, producing a rich array of ideas – as well as many commonalities – which are reflected in various parts of this Final Report.

Strategic Plans Analysis. Members of the Penn Program on Regulation's research team conducted a first-of-its-kind research project that identified and extracted regulator-identified attributes of excellence from strategic plans for about twenty regulators around the world. The analysis distilled from what these other regulatory agencies identified in their own strategic plans to be the common attributes of superior regulatory performance. In selecting plans to study, the researchers deliberately aimed for a degree of diversity on a variety of dimensions, including the country of origin, regulatory structure, and the subject matter. Twenty plans from different regulators in nine countries were selected. Most, but not all, of these plans were in the English language, and most, but not all, were focused on energy regulation.

From this sample of 20 plans, the researchers grouped statements made by the agencies and drew out themes implicit in their plans, eventually uncovering and organizing the underlying attributes into seven major categories:

(1) Efficient
(2) Educative
(3) Multiplicative
(4) Proportional
(5) Vital
(6) Just
(7) Honest

Statements fitting these categories of attributes – along with a total of 25 distinct sub-attributes – were generally found in at least several, and, in some cases, nearly all plans. For example, most agencies identified honesty as a key component of excellence—and they further defined it as embodying the specific sub-attributes of clarity (transparency and comprehensibility of rules, guidance, citation/penalty documents, etc.), independence (avoiding capture by special interests), and forthrightness (commitment to explaining the evidentiary and political bases for its decisions).

Research Papers on Core Facets of Regulatory Operations. The Penn Program on Regulation separately commissioned a series of major research papers to synthesize the state of knowledge on the following four core facets of regulatory operations: people (internal management); *priority-setting/decision-making*; *problem-solving*; and *public* (external engagement). For each paper, researchers exhaustively examined the research literature, seeking to identify lessons about best practices as well as gaps in knowledge. They produced a total of five papers; two papers addressed different aspects of internal management.

1. Internal Management. Regulators are organizations. We commissioned two papers to investigate how organizations affect regulatory excellence. Specifically, these papers analyzed (a) the internal cultures that regulatory organizations possess, and (b) how organizations are structured with respect to other aspects of government as well as internally with respect to different tasks.

   Organizational culture. The first paper, *What Regulators Need to Know About Organizational Culture*, was written by Jennifer Howard-Grenville, an associate professor of management at the University of Oregon's Lundquist College of Business and the Diageo Reader in Management Studies at the Judge School of Business at Cambridge University, Stephanie Bertels, an associate professor at the Beedie School of Business at Simon Fraser University, and Brooke Boren, a doctoral candidate at the Lundquist School.

   Howard-Grenville, Bertels, and Boren explain the various conceptualizations of organizational culture and its influences in order to suggest ways for regulatory leaders to pursue regulatory excellence in the ways they manage their organizations. They counsel that leaders who seek to change their organizational culture ought to adopt a patient and realistic approach. At a minimum, managers and employees at all levels within a regulatory organization must learn to "walk the talk."

   Highly adaptable cultures have been associated with better performance, particularly in competitive business environments. As with other challenges, leaders must engage in explicit, mindful tending of organizational culture if they are to achieve their goals. They need to undertake the following steps:

   1. Clearly define the elements of organizational culture from the highest level; beliefs need to be communicated and translated into desired actions throughout the organization.
   2. Base cultural aspirations both in terms of an ideal and in reference to grounded features of the organization—that is, its history, internal divisions, multi-faceted goals and former cultural commitments.
   3. Guarantee consistency between words and actions at every level, ensuring they reflect and reinforce the desired culture.
   4. Adopt a long-term view when undertaking efforts to guide or shift organizational culture. To effectuate cultural change, familiar patterns of action need to be altered—a process that can be threatening as well as prone to regression.

   Howard-Grenville, Bertels, and Boren indicate that beyond these broad steps, no single tool exists for measuring, maintaining, or changing organizational culture. Regulators must adopt a nuanced understanding of culture and employ diverse forms of assessment for taking the "cultural pulse" of their organization.

   Organizational Structure. In *Structuring Regulators: The Effects of Organizational Design on Regulatory Behavior and Performance*, Christopher Carrigan and Lindsey Poole, both at George Washington University's Trachtenberg School of Public Policy and Public Administration, focus on two key structural factors that might affect the performance of a regulatory organization: (1) how regulators are structured in their relationships with the rest of government, in particular their degree of independence from the legislature (vertical structures), and (2) how regulatory tasks are structured internally, specifically whether to task a single agency to undertake competing missions (e.g., regulate an industry and promote an industry) (horizontal structures). They show how choices about organizational structure – both vertical and horizontal structures – can affect the behavior and performance of regulators.

   Three main conclusions emerge from extensive research on both kinds of regulatory structures. First, the impact that organizational structures have on organizational behavior will be mediated by organizational characteristics that are typically

unrelated to structure, such as the larger political environment within which the regulator is situated. Second, tradeoffs exist in all choices about organizational structure. For example, structures that reinforce regulatory independence can reduce regulators' democratic accountability. These kinds of tradeoffs need to be explicitly accounted for when making decisions about how to structure regulatory organizations. Finally, while structure can matter, it does not fully determine a regulator's performance; management and culture matter too. For the regulatory leader, structure will also usually be an aspect of the regulatory organization about which they exercise the least control, as structural design is often determined via complex, interest-driven political processes.

2. Priority-Setting/Decision-Making. In *Key Analytical Capabilities of a Best-in-Class Regulator*, Greg Paoli, Principal Risk Scientist and Chief Operating Officer of Risk Sciences International, and Anne Wiles, a Senior Research Associate at Risk Sciences International, show how an excellent regulator needs to assess risks and select priorities from the universe of possible problems within the scope of the regulator's authority. Excellent regulators, especially when charged with managing risks to the public, require a multitude of analytical capabilities, including the following:
    - Risk governance models for regulated sectors.
    - Risk-related policy frameworks for guiding day-to-day analytical and decision-making functions.
    - Broad causal models for regulated systems.
    - Approaches to determine risk tolerability, drawing on expertise from the social sciences and interdisciplinary assessments.
    - Appropriate firewalls between public risk assessments and enterprise risk management functions (the latter considers managing risks from the perspective of organizational objectives without necessarily giving full regard to another bearer of risk – namely, the public).
    - Priorities for action given the diverse sources of risk a regulator is called to address within the scope of its mandate.
    - Formal risk assessments with respect to guiding principles as well as main steps and sub-tasks for consideration.

    Paoli and Wiles show that the term "risk-based," especially its use as a qualifier and "badge of legitimacy" for regulatory organizations, has no clear formal meaning. A primary motivation for employing the term "risk-based" with respect to regulatory decision-making relates to the principle of proportionality -- both in risk assessment and in the degree of requisite risk controls. But they indicate that a regulatory system will inevitably be a mix of risk-based and rule-based approaches, the latter which may themselves be indirectly risk-based if the underlying rules were created with risk in mind. But following rules for their own sake is not at all consistent with a risk-based approach, nor is creating rules for symbolic purposes or in an ill-informed manner unaware of risk. Being "risk-based" means making decisions about rules or their enforcement with explicit consideration of the expected level of risk or risk reduction. But exactly how risk gets "considered" and how it enters into the regulator's decision-making calculus is something a regulator must still specify. The regulator ultimately must define for itself what the notion of "risk-based" will ultimately mean to the agency, regulated industries, and key stakeholders.

3. Problem-solving. In *Choices in Regulatory Program Design and Enforcement*, Christopher Carrigan, Assistant Professor of Public Policy and Public Administration at the George Washington University Trachtenberg School of Public Policy and Public Administration, and Elise Harrington, research assistant at the University of Pennsylvania's Kleinman Center for Energy Policy, focused on what

should be in the toolkit of an excellent regulator and what the research literature says about how these tools should be applied.

They show that a diverse array of regulatory strategies exist for solving regulatory problems, allowing regulators to tailor the design of regulatory programs to accomplish particular goals and ensure compliance from regulated entities. In terms of regulatory instruments, policy problems tend to be tackled with either means-based or performance-based regulation. Performance regulation specifies the desired targets or outcomes a firm needs to achieve, without specifying precisely how the firm must meet these goals. In contrast, means-based regulation defines exactly how a firm can meet the regulatory requirement and what technologies must be used to do so. In addition, regulators have a multitude of other instruments to choose from, including market-based mechanisms, management-based regulation, mandated information disclosure, and voluntary programs. Carrigan and Harrington discuss the strengths and weaknesses of these different instrument designs as well as the conditions under which different regulatory designs tend to work better.

Akin to the array of regulatory instruments available, regulators also retain flexibility in designing enforcement programs, thus allowing a regulator to make decisions along numerous dimensions including the level of stringency, the use of targeting, strategies for achieving deterrence, and defining its regulatory style. Carrigan and Harrington show that the research indicates that no single enforcement approach can achieve all regulatory goals simultaneously, and thus excellent regulatory authorities will avail themselves of the full enforcement toolkit.

4. External Engagement. Regulators ultimately serve the public. How they interact with affected individuals and organizations when making and implementing decisions is key to achieving regulatory excellence. In their paper, *Public Engagement and Transparency in Regulation: A Field Guide to Regulatory Excellence*, Jennifer Nash, the executive director of the Regulatory Policy Program at Harvard University's John F. Kennedy School of Government, and Daniel Walters, the Regulation Fellow at the Penn Program on Regulation, comprehensively assess the literature on regulatory transparency and public participation. A "field guide" for regulators striving for excellence, Nash and Walters' paper provides a comprehensive and balanced analysis of available options and best practices.

Through effective public engagement and transparency, regulators not only improve the democratic legitimacy of regulators and their decisions, but they also can foster better information-sharing, which in turn helps regulators learn and make better decisions. Of course, public engagement and transparency can also lead to various unintended and undesirable consequences, such as heightened administrative costs, decision-making uninformed by expertise, and increased risk of regulatory capture. The best regulators will ensure that the advantages of engagement and transparency outweigh the disadvantages.

Nash and Walters show that research on participation and transparency suggests *five key principles* for excellence:

1. Early efforts to promote public engagement and transparency pay off. Taking initiative during the earliest decision-making stages, including priority-setting, can help regulators maximize decision-making benefits and minimize administrative costs.
2. A regulator's behavior will affect its perceived legitimacy in the eyes of the public. Regulators should engage stakeholders by actively listening, demonstrating respect, and explaining the reasoning underlying their decisions and actions.
3. Regulators ought to be attentive to disparities in participation by different segments of society

and take proactive steps to seek a diverse array of perspectives, experiences, and values.

4. A "purpose-driven" approach should be adopted when selecting among available public engagement or transparency alternatives. In other words, regulators should identify the option most appropriate for the purpose and context at hand.

5. Regulators can enhance their own institutional learning and foster ongoing "pragmatic experimentalism" by encouraging and investing in evaluation of their public engagement and open government practices.

List of Best-in-Class Project Papers and Reports

EXPERT PAPERS

Regulatory Excellence and Lucidity
Robert Baldwin
London School of Economics

Responsive Excellence
John Braithwaite
Australian National University

Insurance and the Excellent Regulator
Cary Coglianese
University of Pennsylvania
Howard Kunreuther
University of Pennsylvania

A Systems Approach to Regulatory Excellence
Angus Corbett
Penn Program on Regulation

Regulatory Excellence: Lessons from Theory and Practice
Daniel C. Esty
Yale University

Beyond Best-in-Class: Three Secrets to Regulatory Excellence
Adam M. Finkel
University of Pennsylvania

Regulatory Equilibrium
Ted Gayer
Brookings Institution

Beyond Process Excellence: Enhancing Societal Well-Being
John D. Graham
Indiana University
Paul R. Noe
American Forest & Paper Association

Compliance, Enforcement, and Regulatory Excellence
Neil Gunningham
Australian National University

Regulatory Excellence and Democratic Accountability
Kathryn Harrison
University of British Columbia

What Makes a Regulator Excellent? A Risk Regulation Perspective
Bridget M. Hutter
London School of Economics

What Makes a Regulator Excellent When Faced with Extreme Events?
Howard Kunreuther
University of Pennsylvania

Regulatory Excellence via Multiple Forms of Expertise
David Levi-Faur
Hebrew University of Jerusalem

What Makes a Regulator Excellent?: Mission, Funding, Information, and Judgment
Shelley H. Metzenbaum
Volcker Alliance
Gaurav Vasisht
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Performance Principles for Regulators
Donald P. Moynihan
University of Wisconsin

Regulatory Excellence: The Role of Policy Learning and Reputation
David Vogel
University of California, Berkeley

Regulating by the Stars
Wendy Wagner
University of Texas

DIALOGUE REPORTS

Cary Coglianese and Shari Shapiro, *Summary Report: Penn Dialogue on Regulatory Excellence* (March 19-20, 2015)

Harris Sokoloff, Shari Shapiro, and Cary Coglianese, *Summary Report: Aboriginal Dialogue on Regulatory Excellence* (March 26, 2015)

Michele Anderson, *Visuals@Work, Graphical Reporting of the Aboriginal Dialogue* (March 26, 2015)

Cary Coglianese and Shari Shapiro, *Summary Report: Alberta Dialogue on Regulatory Excellence* (April 12-14, 2015)

RESEARCH PAPERS

Christopher Carrigan and Elise Harrington, *Choices in Regulatory Program Design and Enforcement*

Christopher Carrigan and Lindsey Poole, *Structuring Regulators: The Effects of Organizational Design on Regulatory Behavior and Performance*

Adam Finkel, **Daniel Walters**, **Angus Corbett**, *Planning for Excellence: Insights from an International Review of Regulators' Strategic Plans*

Jennifer Howard-Grenville, Stephanie Bertels, and Brooke Boren, *What Regulators Need to Know About Organizational Culture*

Jennifer Nash and Daniel E. Walters, *Public Engagement and Transparency in Regulation: A Field Guide to Regulatory Excellence*

Greg Paoli and Anne Wiles, *Key Analytical Capabilities of a Best-in-Class Regulator*

KEYNOTE REMARKS

Dame Deirdre Hutton, Chair, UK Civil Aviation Authority, *The Role of Stakeholder Relationships in Regulatory Excellence* (Keynote Address, March 19, 2015)

VIDEO PRESENTATIONS

Cary Coglianese, *Opening Presentation at the Alberta Province-wide Dialogue*, April 12, 2015

Jim Ellis, *Opening Presentation at the Alberta Province-wide Dialogue*, April 13, 2015

INTERIM CONVENER'S REPORT

Cary Coglianese, *Listening and Learning: Toward a Framework of Regulatory Leadership*

OTHER PROJECT PAPERS

Cary Coglianese, *Defining and Assessing Regulatory Excellence*

Cary Coglianese, *Rating Governmental Excellence*

Angus Corbett, *Reflections on Regulatory Excellence*

ONLINE ESSAYS

Jessica Bassett, *What Makes a "Best-in-Class" Regulator?*, RegBlog.org (July 30, 2105)

Cary Coglianese, *Rating Regulatory Excellence*, RegBlog.org (July 28, 2015)

Alexandra Hamilton, *How Can Regulation Reduce the Risks of Fracking?*, RegBlog.org (May 4, 2015)

Dame Deirdre Hutton, Chair, UK Civil Aviation Authority, *The Role of Stakeholder Relationships in Regulatory Excellence*, RegBlog.org (July 27, 2015)

RegBlog Series, *The Search for Regulatory Excellence* (July 27-30, 2015)

Daniel E. Walters, *Regulatory Leadership in Tackling Tobacco*, RegBlog.org (July 29, 2015)

APPENDIX F: PEER REVIEWERS*

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* Titles and organizational affiliations, current as of the dialogues, are provided for identification purposes only. This listing of names and affiliations does not necessarily imply any endorsement of the findings or content in this report by the individuals listed or the organizations with which they have been or are affiliated.

APPENDIX G: ATTRIBUTES OF REGULATORY EXCELLENCE

Canadian Sources

Alberta Energy Regulator (2014)

1. Protective
2. Effective
3. Efficient
4. Credible

Environment Canada (2012)

1. Evidence based decision making
2. Effectiveness
3. Efficiency
4. Transparency
5. Adaptability

External Advisory Committee on Smart Regulation (2004)

1. Effectiveness
2. Timeliness
3. Cost-efficiency
4. Transparency
5. Accountability and performance

Government of Alberta (2010)

1. Effective
2. Efficient
3. Adaptable
4. Predictable
5. Fair
6. Transparent

Government of Alberta (2006)

1. Necessity
2. Effectiveness
3. Proportionality
4. Transparency
5. Accountability
6. Consistency

MMK Consulting Inc. (2012)

1. Clarity and communication
2. Consistency and coordination
3. Regulatory effectiveness
4. Operational efficiency and timeliness
5. Regulatory revisions

Treasury Board of Canada (2012)

1. Protect and advance the public interest
2. Advance efficiency and effectiveness
3. Make decisions based on evidence
4. Promote a fair and competitive market economy.
5. Monitor and control the administrative burden.
6. Create accessible, understandable & responsive regulation
7. Require timeliness, policy coherence and minimal duplication

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MMK Consulting Inc., Province of Alberta Business Regulatory Benchmarking Report: Quality of Business Regulation (2012) *available at* http://www.albertacanada.com/files/albertacanada/SP_Alberta-Regulatory-Benchmarking-Rpt.pdf

Treasury Board of Canada, Cabinet Directive on Regulatory Management (2012) *available at* http://www.tbs-sct.gc.ca/rtrap-parfa/cdrm-dcgr/cdrm-dcgrtb-eng.asp

Other Sources

Australian Communications and Media Authority (2013)

1. Bridging to the Future
2. Transforming the Agency
3. Major program delivery
4. Effective regulation

Brown, *et al* (2006)

1. Independence
2. Accountability
3. Transparency and Public Participation
4. Predictability
5. Clarity of Roles
6. Completeness and Clarity in Rules
7. Proportionality
8. Requisite Powers
9. Appropriate Institutional Characteristics
10. Integrity

Czaga (2004)

1. Transparency and openness of regulatory decisionmaking
2. Nondiscrimination
3. Avoidance of unnecessary trade restrictiveness
4. Use of internationally harmonized standards and technical regulations
5. High quality technical regulations
6. Recognition by countries of other countries' regulatory measures
7. Regulatory coordination and consistency

Farrell & Goodman (2013)

1. Use of better evidence for decision-making
2. Greater engagement and empowerment of citizens
3. Thoughtful investments in expertise and skill building
4. Closer collaboration with the private and social sectors

Gardner, *et al* (2013)

1. Accelerating … strategic goals
2. Using efficient and transparent processes
3. Strengthening capabilities
4. Building expertise
5. Providing customers with cross-functional support
6. Working as a coordinated and cohesive internal team

Hempling, Scott (2013)

1. Purposeful
2. Educated
3. Decisive
4. Independent
5. Disciplined
6. Synthesizing
7. Creative
8. Respectful
9. Ethical

Mumford, Peter (2011)

1. Growth supporting
2. Proportional
3. Flexible and Durable
4. Certain and predictable
5. Transparent and accountable
6. Capable Regulators

New Zealand Ministry of Business (2011)

1. Efficiency
2. Effectiveness
3. Transparency
4. Clarity
5. Equity

New Zealand Treasury (2012)

1. Growth supporting
2. Proportional
3. Flexible
4. Durable
5. Certain and predictable
6. Transparent and accountable
7. Capable Regulators

Riefberg, *et al* (2013)

1. Clear articulation of strategy and overall agency direction
2. Well defined operating model based on efficient and effective processes and systems
3. Organizational culture that harnesses the unique talents of employees and steers those talents towards achieving the agency's mission

Texas Dept. of Insurance (2011)

1. Timely
2. Prompt
3. High-quality
4. Efficient
5. Accurate
6. Limited Disputes/Prompt Resolution
7. Cost-Effective

UK Civil Service (2009)

1. Set direction (Leadership)
2. Ignite passion, pace and drive (Leadership)
3. Develop People (Leadership)
4. Set strategy and focus on outcomes (Strategy)
5. Base choices on evidence and customer insight (Strategy)
6. Collaborate and build common purpose (Strategy)
7. Innovate and improve delivery (Delivery)
8. Plan, resource and prioritize (Delivery)
9. Develop clear roles, responsibilities & delivery model(s) (Delivery)
10. Manage performance and value for money (Delivery)

UK Department of Energy and Climate Change (2009)

1. Set direction (Leadership)
2. Ignite passion, pace and drive (Leadership)
3. Take responsibility for leading delivery and change (Leadership) model
4. Build Capacity (Leadership)
5. Focus on Outcomes (Strategy)
6. Base choices on evidence (Strategy)
7. Build common purpose (Strategy)
8. Plan, resource, and prioritize (Delivery)
9. Develop clear roles, responsibilities & delivery model(s) (Delivery)
10. Manage performance (Delivery)

UK Environment Agency (2013)

1. Proportionate
2. Targeted
3. Customer-focused
4. Consistent
5. Accountable

UK Food Standards Agency (2005)

1. Delivering outcomes
2. Practical and timely interventions
3. Consistent, risk-based, proportionate and transparent decision-making
4. Using the market & applying effective incentives & sanctions
5. Continuous learning
6. Delivering value for money
7. Changing the landscape

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Czaga, Peter, "Regulatory Reform and Market Openness: Understanding the Links to Enhance Economic Performance." OECD Trade Policy Working Paper No. 9. Paris: OECD (December 15, 2004), *available at* http://www.oecd-ilibrary.org/trade/regulatory-reform-and-market-openness_315070506641

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Mumford, Peter, Best Practice Regulation: Setting Targets and Detecting Vulnerabilities (2011), *available at* http://igps.victoria.ac.nz/publications/files/f34b30a11f9.pdf

New Zealand, Code of Good Regulatory Practice (1997), as cited in Guerin, Kevin. Encouraging quality regulation: Theories and tools. No. 03/24. New Zealand Treasury (2003), *available at* http://www.brad.ac.uk/irq/documents/archive/Encouraging_Quality_Regulation_New_Zealand_Treasury.pdf

New Zealand Treasury, The Best Practice Regulation Model: Principles and Assessments (2012), *available at* www.treasury.govt.nz/economy/regulation/bestpractice/bpregmodel-jul12.pdf

Riefberg, Vivian, Navjot Singh, & Jeff Smith, "Regulatory Excellence," in McKinsey Center for Government, Regulatory Excellence: Achieving Public Health Impact through Distinctive Regulatory Management Systems (2013), *available at* www.mckinsey.com/~/media/mckinsey/dotcom/client_service/public%20sector/regulatory%20excellence/mcg_achieving_public_health_impact_through_distinctive_regulatory_management_systems.ashx

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UK Department of Energy and Climate Change, Baseline Assessment (2009), *available at* http://www.civilservice.gov.uk/wp-content/uploads/2011/09/DECC-phase2-Dec2009.pdf

UK Environment Agency, Regulating for People, the Environment and Growth (2013), *available at* https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312703/LIT_9902.pdf

UK Food Standards Agency, Being a World Class Regulator (2005), *available at* tna.europarchive.org/20120419000433/http:/www.food.gov.uk/multimedia/pdfs/board/fsa070905.pdf

APPENDIX H: ILLUSTRATING THE RECOMMENDATIONS

After a regulator's leaders have soberly completed the steps of self-awareness, scoping, and strategic action outlined in Chapter 4 of this report, they will have generated a list of priority opportunities for improvement. Let us assume that, for a hypothetical regulator, its inspection targeting system looms high on its list of priorities for improvement. Then let us proceed to use targeting as a concrete illustration of how a regulator might implement the five recommendations in Chapter 4 of this report.

The basic challenge with targeting is how best to deploy a very small number of inspectors to inspect a very large number of regulated facilities. This poses both an operational problem and a conceptual/measurement problem:

- The operational problem is how to minimize false positives ("sheep in wolves' clothing") that waste precious time and divert resources conducting inspections of what turn out to be fully compliant facilities. This also tends to alienate the best performers in the industry, and of course much worse, every wasted visit is a visit to a non-compliant facility that does not get made. The regulator, of course, also needs to minimize false negatives, because some fraction of these, by definition, will turn into costly mistakes where disasters could happen.
- There is also a more overarching conceptual/measurement problem: *Does increasing the percentage of inspections that find hazards (or increasing the number of hazards found per inspection) constitute success or failure?* It could be, a priori, either one. A greater "yield" may mean that the regulator is getting better at finding problems (wasting less time), or it might not be getting any better at all but the world is getting worse, which is itself a worrisome indicator of the regulator's overall performance. (A similar, mirror-image conceptual problem would arise if the level of hazards that were found decreased.)

What is a regulator to do to address these problems and improve its inspection targeting? To illustrate how the five recommendations for regulatory excellence presented in Chapter 4 could provide direction for a regulator in working on inspection targeting, we offer some suggested implementation ideas below:

1. *Align strategic priorities.* Improving inspection targeting might seem simply a matter of improving the regulator's competence. It is indeed partly that; the regulator might benefit from, say, improvements in the algorithms and statistical techniques used to identify inspection targets. But the regulator also has an opportunity to align this priority area with the other core RegX attributes as well:
    - *Empathic engagement.* The regulator could invite the regulated industry and members of the affected public to brainstorm about how to improve targeting. It could also consider ways to leverage diffused knowledge about non-compliance to improve targeting or understand better how well its targeting is working. For example, depending on the nature of the problem, perhaps the regulator could create a mobile phone app to facilitate citizen reporting. Or perhaps it could give out monitoring devices to community groups so that residents can transmit to the regulator real-time data of possible problems that might affect their neighborhoods. Sometimes regulators have created voluntary recognition programs to encourage select firms to come forward to transmit information that could provide a basis for improved oversight of the rest of their industry.
    - *Utmost Integrity.* The regulators may have opportunities to strengthen safeguards in targeting protocols, so the public can feel more confident the agency is not sparing any "friends" in the industry from being targeted, nor that is it playing out any vendettas against firms against which it is otherwise ill-disposed.

2. *Align and move the organizational culture.* Assuming that dramatic budgetary increases to fund many more inspections is not a realistic possibility, the regulator might consider:
    - Creating incentives for inspectors to do more inspections per year when they are finding many compliance-pristine facilities (get out of there quicker) but not to penalize them for taking longer to do more thorough inspections at bad sites.
    - Allowing greater problem-solving by field inspector staff, letting them tweak a headquarters-generated targeting list because they know better local concerns and conditions.
    - Creating an institutional firewall between the part of the conformity assessment staff responsible for a controlled-experiment evaluation study of inspection targeting (see number 5 below) and the part of the staff responsible for day-to-day operational targeting.
3. *Build human capital.* In addition to taking steps to improve the organizational culture – steps which in their own right can help keep and attract a skilled workforce – the regulator could consider also increasing the training of inspectors. Perhaps it could also find ways to increase the collaboration among field offices to use better the human resources already available. When one field office finds a pattern of violations, it should routinely share this with others who might be missing a similar pattern in their territory. Improved communication along these lines is a means of making the workforce smarter and stronger.
4. *Involve the public.* Throughout the entire process of seeking to improve inspection targeting, the regulator will have many opportunities to engage the public. What are their priorities for how an inspection algorithm should be constructed? Much as with the discussion of what "risk-based" regulation means in Chapter 2, a regulator seeking to improve inspection targeting will need to define its principles and priorities: for example, should the regulator target firms that might pose the largest risks or the ones that might have the lowest amount of compliance? Public input on these vital questions will be quite useful and appropriate. An additional opportunity for public engagement might arise after inspections have taken place. What information can workers or neighbors be given about what was learned from the inspection? Is there an opportunity to use each inspection as a "teachable moment" to others in the industry?
5. *Measurement and evaluation.* Regulators have a lot they must learn about how targeting works in practice. In addition to ongoing efforts to encourage feedback from industry and the broader public, regulators could undertake additional steps to learn:
    - The regulator might bifurcate the inspection program so that some inspectors are doing purely random inspections to get a statistical baseline and ongoing trendline for how bad things may be in general. Data collected in this fashion can then be used to draw inferences about not only the performance of targeting protocols for the rest of the regulator's inspections but it also can inform overall measurement of other aspects of the regulator's performance.
    - Although not directly tied to targeting *per se*, a regulator might create formal feedback processes between the part of its organization that handles inspections and the part that handles directives and rules. Perhaps every year, the two disparate parts of the agency should meet, so that the inspectors could inform the rule-writers about problems or potential problems that have been observed but which break no rules. Presumably this could help in initiating new or revised rules when appropriate, and the new rules may help inform future inspection targeting.

The discussion in this appendix illustrates the kind of thought processes that a regulator might go through in contemplating just one of the two-dozen questions presented near the end of Chapter 4. The concrete steps a regulator might consider taking will obviously depend on the priority

question under consideration as well as the regulator's particular mission and surrounding circumstances. Other questions and different kinds of regulators will obviously generate different ideas altogether. The important thing to see is how the recommendations in Chapter 4 can be operationalized and that a regulator, if it wanted to, could take any one of the other twenty-four questions posed at the end of Chapter 4 and apply similar thinking.

NOTES

[1] Alberta Responsible Energy Development Act, SA 2012, c R-17.3 (REDA), at §2(1)(a).

[2] Alberta Energy Regulator, 2013/14 Annual Report, at 6, *available at* http://aer.ca/documents/reports/201314_AERAnnualReport.pdf#page=23

[3] Alberta Energy Regulator, *Alberta Energy Regulator (AER) Announces Best-in-Class Project* (Nov. 12, 2014), *available at* http://www.aer.ca/documents/news-releases/AERNR2014-21.pdf.

[4] Alberta Energy Regulator, Request for Proposal (RFP No. 14RFP-SR002, July 23, 2014), at 3.

[5] Ibid.

[6] Ibid.

[7] Ibid.

[8] Ibid.

[9] Ibid., at 3-4. The AER asked for "a generic framework that defines the concept of a Best in Class regulatory framework that has practical value and one that regulatory organizations can use as a basis to form an organizational model but not the actual design and implementation." Addendum to RFP#14RFP-SR0002 (Aug. 7, 2014), at 2.

[10] The Alberta Energy Regulator, Best-in-Class Project, *available at* https://www.aer.ca/about-aer/spotlight-on/best-in-class-project.

[11] The three questions are quoted from Alberta Energy Regulator, Request for Proposal (RFP No. 14RFP-SR002, July 23, 2014), at p. 4.

[12] Interestingly, although arête once meant "virtue" to the Ancient Greeks, today it means to mountaineers a thin, sharp ridge – also a fitting metaphor for the summit of regulatory excellence. Like the mountain climber traversing an arête, the regulator seeking excellence also often has to navigate carefully along a narrow trail, with serious risks if they fail to take their steps carefully or lose their focus.

[13] US Office of Management and Budget (OMB), *Circular A-4: Regulatory Analysis* (2003), *available at* https://www.whitehouse.gov/sites/default/files/omb/inforeg/regpol/circular-a-4_regulatory-impact-analysis-a-primer.pdf; Stephen G. Breyer, *Regulation and its Reform* (1984).

[14] Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions About Health, Wealth, and Happiness* (2008); Alberto Alemanno & Anne-Lise Sibony, eds., *Nudge and the Law: What Can EU Law Learn from Behavioural Sciences?* (2015).

[15] For an emphasis on the importance of regulators identifying problems and then working to solve them, see Malcolm K. Sparrow, *The Regulatory Craft: Controlling Risks, Solving Problems, and Managing Compliance* (2000).

[16] Public management scholar Mark Moore defines "public value" in terms of the "aspirations of citizens" – that is, the "public purposes" that citizens find "important enough to tax and regulate themselves to produce." Mark Moore, *Recognizing Public Value* (2013), at 40.

[17] Sanford V. Berg, *Best Practices in Regulating State-Owned and Municipal Water Utilities* (2013), at 12 ("The regulatory agency is one institution that is part of a regulatory system."); United Nations Economic Commission for Europe, *Risk Management in Regulatory Frameworks: Towards a Better Management of Risks* (2012) ("A key feature of any system is that the whole is worth more than the sum of its parts. Regulatory processes – such as developing regulations, assessing conformity with regulations and reviewing the existing stock of regulations – need to be designed to function as a single system."); Ashley C. Brown, Jon Stern, Bernard Tenenbaum, and Defne Gencer, *Handbook for Evaluating Infrastructure Regulatory Systems* (2006), at 17 ("*Any evaluations of*

regulatory effectiveness must examine the entire regulatory system—not just the characteristics and actions of the formally designated regulatory entity.") (emphasis in original).

[18] Neil Gunningham, Robert A. Kagan, and Dorothy Thornton, *Shades of Green: Business, Regulation, and Environment* (2003); Jennifer Howard-Grenville, Jennifer Nash, and Cary Coglianese, "Constructing the License to Operate: Internal Factors and Their Influence on Corporate Environmental Decisions," *Law & Policy* 30:73-107 (2008), *available at* http://ssrn.com/abstract=1085058; Dorothy Thornton, Robert A. Kagan, and Neil Gunningham, "When Social Norms and Pressures are Not Enough: Environmental Performance in the Trucking Industry," *Law & Society Review*, 43:405-436 (2009), *available at* http://dx.doi.org/10.1111/j.1540-5893.2009.00377.x; Neil Gunningham, Robert A. Kagan, and Dorothy Thornton, "Social License and Environmental Protection: Why Businesses Go Beyond Compliance," *Law & Social Inquiry* 29:307-341 (2004), *available at* http://dx.doi.org/10.1111/j.1747-4469.2004.tb00338.x.

[19] Ian Ayres and John Braithwaite, *Responsive Regulation: Transcending the Deregulation Debate* (1992).

[20] Robert M. Pirsig, *Zen and the Art of Motorcycle Maintenance* (1974), at p. 184.

[21] Ibid.

[22] For an account of one recently created regulatory agency in the United States, the Consumer Financial Protection Bureau, that appears to be building a positive public reputation while "striking fear" into its regulated industry, see Massimo Calabresi, "The Agency That's Got Your Back," *Time* 43-47 (August 24, 2015) ("If the public has come to respect the CFPB, the lending industry still can't stand it."). On the more general limitations of using satisfaction to measure success, see Cary Coglianese, "Is Satisfaction Success? Evaluating Public Participation in Regulatory Policy Making," in Rosemary O'Leary and Lisa Bingham, eds., *The Promise and Performance of Environmental Conflict Resolution* 69-86 (Resources for the Future Press, 2003).

[23] Daniel Carpenter, *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA* (2010).

[24] Theodore Roosevelt, *The Man in the Arena*, Address at the Sorbonne (Apr. 23, 1910).

[25] See Committee of the National Research Council's Transportation Research Board, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards* (2002). Although tradeoffs between health or environmental benefits and negative economic impacts, such as costs or employment, may be the most widely cited, the example of fuel efficiency in automobiles makes plain that tradeoffs may arise between different kinds of risks. John D. Graham and Jonathan B. Wiener, *Risk vs. Risk: Tradeoffs in Protecting Health and the Environment* (1997).

[26] Adam M. Finkel, Daniel Walters, and Angus Corbett, *Planning for Excellence: Insights from an International Review of Regulators' Strategic Plans* (2015), *available at* https://www.law.upenn.edu/live/files/4460-finkel-walters-corbett-strategic-plan-analysis-ppr.

[27] A similar list of sources can be found in the Interim Convener's Report for the Best-in-Class Project, available online at www.bestinclassregulator.org.

[28] Ashley C. Brown, Jon Stern, Bernard Tenenbaum, and Defne Gencer, *Handbook for Evaluating Infrastructure Regulatory Systems* (2006), at 59-63.

[29] Scott Hempling, *Preside or Lead? The Attributes and Actions of Effective Regulators* (2013), at v.

[30] Organization for Economic Cooperation and Development, *OECD Guiding Principles for Regulatory Quality and Performance* (2005), *available at* http://www.oecd.org/fr/reformereg/34976533.pdf.

[31] Railroad Commission of Texas, *Strategic Plan: Fiscal Years 2015-2019* (July 7, 2014).

[32] Some of the attributes contained in other sources may touch upon or fall into more than one of the "atoms," so here a chemistry analogy must end.

[33] Adam M. Finkel, *Beyond Best-in-Class: Three Secrets to Regulatory Excellence* (2015), *available at* https://www.law.upenn.edu/live/files/4715-finkel-ppr-bicregulatordiscussionpaper-06-2015pdf.

[34] For a discussion of the transparency of reasons, see Cary Coglianese, The Transparency President? The Obama Administration and Open Government, *Governance*, Volume 22, Issue 4, pages 529–544, October 2009, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1433815.

[35] Although the arrows in the model on page 31 all point in a single direction, this is another simplification for the purpose of explication. In reality, the boxes on the left in the model can well be, and often are, influenced by the boxes on the right too.

[36] John Braithwaite, *Responsive Excellence* (2015), *available at* https://www.law.upenn.edu/live/files/4712-braithwaite-ppr-bicregulatordiscussionpaper-062015; Neil Gunningham, *Compliance, Enforcement, and Regulatory Excellence* (2015), *available at* https://www.law.upenn.edu/live/files/4717-gunningham-ppr-bicregulatordiscussionpaper-06.

[37] Eugene Bardach and Robert Kagan, *Going by the Book: The Problem of Regulatory Unreasonableness* (1982).

[38] For the Best-in-Class Project's report on the province-wide dialogue, see see Cary Coglianese and Shari Shapiro, *Summary Report: Alberta Dialogue on Regulatory Excellence* (April 12-14, 2015), *available at* https://www.law.upenn.edu/live/files/4705-0412-1415-alberta-dialogue-summary-reportpdf.

[39] United Nations Economic Commission for Europe, *Risk Management in Regulatory Frameworks: Towards a Better Management of Risks 20-22* (2012).

[40] It is possible, of course, that a regulator truly acting with integrity might nevertheless be viewed as unpopular and hence rate unfavorably in perceptual surveys, even those asking about integrity. On cautions about perceptual criteria of success, see generally Cary Coglianese, "Is Satisfaction Success? Evaluating Public Participation in Regulatory Policymaking," in Rosemary O'Leary and Lisa Bingham, eds., *The Promise and Performance of Environmental Conflict Resolution* 69-86 (Resources for the Future Press, 2003).

[41] The difficulties associated with delivering yet additional public benefits after already achieving a substantial amount of such benefits is well described in Stephen Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulation* (2009).

[42] Cary Coglianese and Shari Shapiro, *Summary Report: Penn Dialogue on Regulatory Excellence* (March 19-20, 2015), *available at* https://www.law.upenn.edu/live/files/4703-0319-2015-penn-dialogue-summary-report-pdf.

[43] William E. Kovacic, *The Federal Trade Commission at 100: Into Our 2nd Century, The Continuing Pursuit of Better Practices* (January 2009), at 178.

[44] Cary Coglianese and David Lazer, "Management-Based Regulation: Prescribing Private Management to Achieve Public Goals," *Law & Society Review* 37:691-730 (2003).

[45] As Carrigan and Poole put it, "formal independence does not necessarily equate with actual independence." Christopher Carrigan and Lindsey Poole, *Structuring Regulators: The Effects of Organizational Design on Regulatory Behavior and Performance* (2015), *available at* https://www.law.upenn.edu/live/files/4707-carriganpoole-ppr-researchpaper062015pdf, at 4. *See also* Laurenz Ennser-Jedenastik, "The Politicization of Regulatory Agencies: Between Partisan Influence and Formal Independence," *Journal of Public Administration Research and Theory* (2015), *available at* http://jpart.oxfordjournals.org/content/early/2015/08/23/jopart.muv022.full?papetoc.

[46] Even analysts who favor formally independent governance arrangements recognize the differences between independence at law and independence in action, and they acknowledge that even formal independence may not always be desirable or achievable. For example, despite its advocacy of a model of formal independence, a recent World Bank-funded study notes that "from a practical point of view, this regulatory model may not be

the appropriate starting point (that is, the best governance model) at all times and for all countries." Jamal Saghir, "Foreword," in Ashley C. Brown, Jon Stern, Bernard Tenenbaum, and Defne Gencer, *Handbook for Evaluating Infrastructure Regulatory Systems* (2006), at xiii.

[47] Edward A. Parson, Cary Coglianese, and Richard J. Zeckhauser, "Seeking Truth for Power: Informational Strategy and Regulatory Policy Making," *Minnesota Law Review* 89: 277-341 (2004).

[48] Jennifer Howard-Grenville, Stephanie Bertels, and Brooke Boren, *What Regulators Need to Know About Organizational Culture* (2015), *available at* https://www.law.upenn.edu/live/files/4708-howard-grenvillebertelsboren-ppr-researchpaper0620; Adam M. Finkel, Daniel Walters, and Angus Corbett, *Planning for Excellence: Insights from an International Review of Regulators' Strategic Plans* (2015), *available at* https://www.law.upenn.edu/live/files/4460-finkel-walters-corbett-strategic-plan-analysis-ppr

[49] Greg Paoli and Anne Wiles, *Key Analytical Capabilities of a Best-in-Class Regulator* (2015), *available at* https://www.law.upenn.edu/live/files/4710-paoliwiles-ppr-researchpaper062015pdf.

[50] Jonathan B. Weiner, "The Diffusion of Regulatory Oversight," in Michael A. Livermore and Richard L. Revesz, eds., *Cost-Benefit Analysis Goes Global* (2013).

[51] For discussion of the field of risk assessment, see National Academy of Sciences, *Science and Decisions: Advancing Risk Assessment* (2009).

[52] Comparable rigor is appropriate for estimating regulatory costs and any corresponding uncertainty about any negative economic effects of risk regulation. *See, e.g.*, Adam M. Finkel, "The Cost of Nothing Trumps the Value of Everything: The Failure of Regulatory Economics to Keep Pace with Improvements in Quantitative Risk Analysis," *Michigan Journal of Administrative and Environmental Law* 4:91-156 (2014); Cary Coglianese, Adam M. Finkel, and Christopher Carrigan, *Does Regulation Kill Jobs?* (2014).

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[55] For example, the AER has defined "risk-based regulation" to mean regulation that "will allow us to be more effective by concentrating our resources on higher-risk activities." It says further that under a risk-based approach to regulation "regulatory responses are proportional to the level of risk posed by energy development, with a focus on those areas that present the greatest risk to achieving regulatory objectives." AER, *Play-Based Regulation Pilot Application Guide* (July 14, 2015), *available at* https://aer.ca/documents/manuals/Manual009.pdf.

[56] See generally Adam M. Finkel and Dominic Golding, *Worst Things First?: The Debate Over Risk-based National Environmental Priorities* (1995).

[57] William E. Kovacic, *The Federal Trade Commission at 100: Into Our 2nd Century, The Continuing Pursuit of Better Practices* (January 2009), at 181-82.

[58] External Advisory Committee on Smart Regulation, *Smart Regulation: A Regulatory Strategy for Canada* (2004), http://publications.gc.ca/collections/Collection/CP22-78-2004E.pdf.

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http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1998849; Christopher Carrigan and Elise Harrington, *Choices in Regulatory Program Design and Enforcement* (2015), *available at* https://www.law.upenn.edu/live/files/4706-carriganharrington-ppr-researchpaper062015pdf.

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[65] Coglianese and Bennear, supra; Carrigan and Harrington, *supra*.

[66] E. Allan Lind and Tom R. Tyler, *The Social Psychology of Procedural Justice* (1988).

[67] Jennifer Nash and Daniel E. Walters, *Public Engagement and Transparency in Regulation: A Field Guide to Regulatory Excellence* (2015), *available at* https://www.law.upenn.edu/live/files/4709-nashwalters-ppr-researchpaper062015pdf.

[68] Bridget M. Hutter, "What Makes a Regulator Excellent? A Risk Regulation Perspective" (2015), *available at* https://www.law.upenn.edu/live/files/4719-hutter-ppr-bicregulatordiscussionpaper-06-2015pdf.

[69] Cary Coglianese, "Enhancing Public Access to Online Rulemaking Information," *Michigan Journal of Environmental and Administrative Law* 2: 1-66 (2012).

[70] For an exceedingly insightful discussion of regulatory management based on his experience heading the Connecticut Department of Energy and Environmental Protection, see Daniel C. Esty, *Regulatory Excellence: Lessons from Theory and Practice* (2015), *available at* https://www.law.upenn.edu/live/files/4714-esty-ppr-bicregulatordiscussionpaper-062015pdf.

[71] Bob Behn, "Why Measure Performance?: Different Purposes Require Different Measures," *Public Administration Review* 63:586 (2003).

[72] Ibid.

[73] For a list of more than fifteen commonly conflicting objectives, see Adam M. Finkel, *Beyond Best-in-Class: Three Secrets to Regulatory Excellence* (2015), *available at* https://www.law.upenn.edu/live/files/4715-finkel-ppr-bicregulatordiscussionpaper-06-2015pdf.

[74] Mark Moore, *Recognizing Public Value* (2013).

[75] Ibid.

[76] Dutch Safety Board, *Summary: Earthquake Risks in Groningen: An Investigation into the Role of the Safety of Citizens During the Decision-making Process on Gas Extraction (1959-2014)* (2015), *available at* http://www.onderzoeksraad.nl/uploads/phase-docs/844/972d8bf7f1d1summary-gaswinning-groningen-en.pdf.

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[79] Robert D. Behn, "What Performance Management Is and Is Not," *Government Executive* (November 19, 2014), *available at* http://www.govexec.com/excellence/promising-practices/2014/11/what-performance-management-and-not/99284/.

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[81] Centers for Medicare and Medicaid Services, "Five-Star Quality Rating System" (2015), https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/CertificationandComplianc/FSQRS.html.

[82] Roberta Romano, Sanjai Bhagat, and Brian Bolton, "The Promise and Peril of Corporate Governance Indices," *Columbia Law Review* 108:1803 (2008).

[83] Shelley Metzenbaum, "Performance Management: The Real Research Challenge," *Public Administration Review* 73: 857–858 (2013).

[84] Donald P. Moynihan, *Performance Principles for Regulators* (2015), *available at* https://www.law.upenn.edu/live/files/4722-moynihan-ppr-bicregulatordiscussionpaper-06.

[85] Managers at a number of governmental entities have found systems such as Lean and Six Sigma to contribute positively to process improvements. See, e.g., U.S. Environmental Protection Agency, *Lean Government* (2015), http://www.epa.gov/lean/government/index.htm. Practitioners understandably seek to know which of these ongoing performance measurement systems is "best." The answer, of course, is "it depends." Notwithstanding what might be said by proponents of each of these approaches – including by consultants who deploy them – no single, magic formula exists that will work for all regulators for all purposes. Some will work better than others, *depending on the objectives that the regulator seeks to achieve with measurement*. Even in the business world, "there really is no one alternative that's best for all processes and circumstances." Tom Davenport, "Why Six Sigma is on the Downslope," *Harvard Business Review Online* (January 8, 2008), https://hbr.org/2008/01/why-six-sigma-is-on-the-downsl/.

[86] Measurement systems are only going to be as useful as they are maintained and used. A measurement system cannot be meaningful if no one maintains it or follows it.

[87] In their *Handbook for Evaluating Infrastructure Regulatory Systems*, Brown et al. review three main approaches to evaluating regulatory systems, two of which are explicitly comparative in orientation. They conclude by recommending single-country case studies, not comparative analyses. Similarly, although not focusing specifically on regulatory organizations, Cole and Parston note that any comparative assessment across public sector organizations must be "limited to those that deliver the exact same outcomes for very similar demographic groups, and we acknowledge that there are not very many of those that similar." Martin Cole and Greg Parston, *Unlocking Public Value: A New Model for Achieving High Performance in Public Service Organizations* (2006), at p. 108. They believe that the "main value is in comparing performance within one organization over time." Ibid.

[88] Group 10 Engineering, *Alberta Pipeline Safety Review* (December 7, 2012), at 5, *available at* http://www.energy.alberta.ca/Org/pdfs/PSRfinalReportNoApp.pdf.

[89] IRF Performance Measurement Project, http://www.irfoffshoresafety.com/country/performance/-scope.aspx.

[90] Brown et al. caution that "[t]he danger of limiting an evaluation to what is written in laws and decrees ... is that it may give an inaccurate picture of how the regulatory system works in practice. Although such evaluations can be done quickly, they may also be very mistaken." Ashley C. Brown, Jon Stern, Bernard Tenenbaum, and Defne Gencer, *Handbook for Evaluating Infrastructure Regulatory Systems* (2006), at 39.

[91] Schick, *supra* at 44.

[92] Participants at the province-wide dialogue held as part of the Best-in-Class Project expressed support for involving the public in setting strategic goals and selecting metrics. Some suggested public polling while others recommended the use of advisory committees comprising representatives offering different perspectives and speaking from different vantage points. Cary Coglianese and Shari Shapiro, *Summary Report: Alberta Dialogue on Regulatory Excellence* (April 12-14, 2015), at 12, *available at* https://www.law.upenn.edu/institutes/ppr/bestinclassregulator/-research.php.

[93] Global Competition *Review, Rating Enforcement 2015* (June 18, 2015).

[94] Ibid.

[95] Ibid.

[96] Subashnie Devkaran and Patrick N. O'Farrell, "The Impact of Hospital Accreditation on Quality Measures:

An Interrupted Time Series Analysis," *BMC Health Services Research* 15:137 (2015), *available at* http://www.biomedcentral.com/1472-6963/15/137

[97] International Regulator's Forum, *IRF Country Performance Measures*, *available at* http://www.irfoffshoresafety.com/country/performance/.

[98] Based on the belief "that regulation can improve if it certifies its practitioners," attorney Scott Hempling has considered what features a certification regime for regulatory officials might possess. Scott Hempling, "Certification of Regulatory Professionals: Why Not?" (Part I) (April 2015), *available at* http://www.scotthemplinglaw.com/essays/certification; Scott Hempling, "Certification of Regulatory Professionals: Why Not?" (Part II) (May 2015), *available at* http://www.scotthemplinglaw.com/essays/certification-part-ii.

[99] For discussions of methods of assessing public engagement, including some limitations to perceptual surveys, see OECD, *OECD Framework for Regulatory Policy Evaluation* (2014), *available at* http://dx.doi.org/10.1787/9789264214453-en; Cary Coglianese, *Measuring Regulatory Performance: Evaluating the Impact of Regulation and Regulatory Policy*, OECD Expert Paper No. 1 (2012), *available at* http://www.oecd.org/gov/regulatory-policy/1_coglianese%20web.pdf; OECD, *Measuring Regulatory Performance: A Practitioner's Guide to Perception Surveys* (2012), *available at* http://www.oecd-ilibrary.org/docserver/download/4211251e.pdf; Cary Coglianese, "Is Satisfaction Success? Evaluating Public Participation in Regulatory Policy Making," in Rosemary O'Leary and Lisa Bingham, eds., *The Promise and Performance of Environmental Conflict Resolution* 69-86 (Resources for the Future Press, 2003).

[100] Harris Sokoloff, Shari Shapiro, and Cary Coglianese, *Aboriginal Dialogue Summary Report* (2015).

[101] Dame Deirdre Hutton, Chair, UK Civil Aviation Authority, *The Role of Stakeholder Relationships in Regulatory Excellence* (Keynote Address, March 19, 2015), *available at* https://www.law.upenn.edu/live/files/4727-hutton-keynote-address-penn-law-2015pdf.

[102] Cary Coglianese and Shari Shapiro, *Summary Report: Alberta Dialogue on Regulatory Excellence* (April 12-14, 2015), *available at* https://www.law.upenn.edu/live/files/4705-0412-1415-alberta-dialogue-summary-reportpdf.

[103] Harris Sokoloff, Shari Shapiro, and Cary Coglianese, *Summary Report: Aboriginal Dialogue on Regulatory Excellence* (March 26, 2015), *available at* https://www.law.upenn.edu/institutes/ppr/-bestinclassregulator/research.php, at 2.

[104] All of these bulleted lines are quoted from ibid., at 4.

[105] Ibid.

[106] All of these bulleted lines are quoted from ibid., at 4-5.

[107] Cary Coglianese and Shari Shapiro, *Summary Report: Alberta Dialogue on Regulatory Excellence* (April 12-14, 2015), *available at* https://www.law.upenn.edu/institutes/ppr/bestinclassregulator/-research.php, at 3.

[108] Ibid., at 7.

[109] Ibid., at 6.

[110] All of these bulleted lines are quoted from ibid., at 11.

[111] Cary Coglianese and Shari Shapiro, *Summary Report: Penn Dialogue on Regulatory Excellence* (March 19-20, 2015), *available at* https://www.law.upenn.edu/live/files/4703-0319-2015-penn-dialogue-summary-report-pdf.

[112] Ibid., at 7.

[113] Ibid., at 9.

[114] Ibid., at 10.

[115] Ibid., at 17.

[116] Ibid., at 17.

[117] Ibid., at 17.

[118] Ibid., at 18.

ACKNOWLEDGMENTS

It is no small task to undertake an initiative with the level of ambition and speed reflected in the Alberta Energy Regulator's vision for the Best-in-Class Project. Although the cover of this report bears the name of its single author, the process leading up to the pages in this Final Report has been anything but a solitary enterprise. This report is based on the work of many individuals across the University of Pennsylvania and around the world.

The value of any convener's report depends vitally on the insights of the individuals who have been involved in the process being convened. The ideas presented in this report derive foremost from my efforts to listen to and learn from the many individuals who we interviewed and who participated in our several dialogue sessions. I am exceedingly grateful to all of those whose names are listed in the appendices for giving of their time, experience, and perspectives. They enriched enormously my own thinking and that of the entire project team, serving as critical sources of direction for the frameworks presented in this Final Report.

At the University of Pennsylvania, the project received outstanding support from the university's Law School. I am exceedingly grateful for the exceptional support this project received from the two deans whose terms overlapped with it: Wendell Pritchett and Ted Ruger. I am also enormously grateful to members of the law school's executive leadership, including Beth Brown, Ernie Gonsalves, and Jo-Ann Verrier. In important ways, Mike Fitts and Allen Model helped lay the institutional groundwork upon which this undertaking could be built.

The Penn Program on Regulation's Best-in-Class Project's leadership team was also superb. Adam Finkel, the Program's Executive Director, and Shari Shapiro, the Best-in-Class Project Manager, provided incredible energy and ideas at every step along the way. Their extensive experience in the world of practice helped ground and strengthen this project in innumerable ways. We could not have so smoothly and meaningfully convened our several dialogues had it not been for the talent of Harris Sokoloff, the Faculty Director of the Penn Project for Civic Engagement. In addition to Harris's many efforts organizing and facilitating our successful deliberations, he brought much helpful substantive input to this project as well. Dan Walters, who served as the Penn Program on Regulation's Regulatory Fellow during most of this project, shouldered many vital tasks and consistently delivered at a superhuman pace and quality. On a day-to-day basis, no one proved more instrumental to the success of this project than Anna Gavin, who as Penn Law's Faculty Events Coordinator conscientiously and gracefully kept the wheels moving forward. I could not have managed without her steadfastness and commitment to excellence.

The project benefited greatly from the thorough and efficient work conducted by the authors of the many other, earlier papers and reports it generated. The authors of our core research papers completed extraordinary feats under tight timeframes: Stephanie Bertels, Brooke Boren, Chris Carrigan, Angus Corbett, Adam Finkel, Elise Harrington, Jennifer Howard-Grenville, Jennifer Nash, Greg Paoli, Lindsey Poole, Daniel Walters, and Anne Wiles. I am also very grateful for the incredible knowledge about regulation and public management shared in the expert papers prepared by Robert Baldwin, John Braithwaite, Angus Corbett, Dan Esty, Adam Finkel, Ted Gayer, John Graham, Neil Gunningham, Kathryn Harrison, Bridget Hutter, Howard Kunreuther, David Levi-Faur, Don Moynihan, Shelley Metzenbaum, Paul Noe, Gaurav Vasisht, David Vogel, and Wendy Wagner. I am grateful to Harris Sokoloff and Shari Shapiro for their work producing the dialogue summations. Angus Corbett deserves additional mention for the probing written comments he produced after virtually every seminar and team meeting. Finally, I was honored we could host Dr. David Kessler and Dame Deirdre Hutton as keynote speakers at our international expert dialogue. Chair Hutton went above and beyond any reasonable expectations a host has any right to hold, not only delivering incredibly wise dinner remarks but then subsequently agreeing to turn her speech notes into an additional paper which we released publicly as part of this project.

Many members of the broader project team contributed to this project and report. Allen Barstow, Mark Alan Hughes, Stan Laskowski, and Eric Orts stimulated especially helpful discussions at seminar meetings. I have learned much from interacting with Andrew Huemmler, Howard Kunreuther, Sophia Lee, Sarah Light, Jennifer Nash, Kent Smetters, Arthur von Bentham, Christopher Yoo, and David Zaring. Ted Enoch and Linda Breitstein played key roles in supporting our dialogue sessions. James Klima, Sarah Melanson, Miriam Posner, Andrew Schlossberg, Kiara Vaughn, and Megan Yan provided much-needed research support, and Kaiya Arroyo, Chris Henry, Elise Harrington, Matt McCabe, Andrew Schlossberg, Zach Sinemus, and Dan Walters took invaluable notes at the international expert dialogue held at Penn Law. Cory Colijn, Elise Harrington, Shari Shapiro, and Dan Walters delivered a virtuoso performance facilitating dialogue sessions in Calgary under the leadership of Harris Sokoloff. Jennifer Evans, Matthew McCabe, Andrew Schlossberg, Shana Starobin, and Megan Yan helped proofread myriad reports and papers, although just as with the substance of this Final Report, any and all remaining errors or omissions are on me.

I appreciate the institutional support provided by our affiliated programs at Penn, including the Penn Project for Civic Engagement, the Penn-Wharton Public Policy Initiative, the Wharton Initiative for Global Environmental Leadership, and the Wharton Risk Management and Decision Processes Center. I am especially grateful for the partner-level collaboration the Penn Program on Regulation forged on this project with the university's new Kleinman Center for Energy Policy. Scott Kleinman's vision and generous support has been remarkable, and we have been grateful to benefit from Mark Alan Hughes' collegiality and energetic leadership of the Center.

Silvana Burgese and the members of the outstanding faculty support team at Penn Law have, as always, my abundant thanks. I appreciate in particular the support received from Jennifer Evans, Kelly Farraday, Norva Hall, and Debbie Rech. In addition, Christine Droesser, Sudeshna Dutta, and Matthew Salp provided greatly valued IT support, and Steve Barnes and his talented team in the Penn Law communications office extended well the reach of our work. I do not think I can thank Yoko Takahashi enough for expertly formatting this Final Report, and I am very grateful as well to Lisa Dirr for helping with earlier graphics support. Jessica Bassett, Alexandra Hamilton, and Kate Sell contributed through their leadership of *Reg-Blog.org*. Dallas Grundy, Heather Twadell, Stuart Watson, and Michelle Werner in their different ways played key roles in handling budgetary and associated matters. For his pivotal role in financial administration, as well as his integrity and tirelessness, I offer my deeply felt gratitude to Jerel Wohl.

Several individuals played substantial roles in the development of this Final Report. Shana Starobin wrote an early draft of what became Appendices A, B, D, and E; Shari Shapiro and Shana Starobin helped with much research underlying Appendix G and the table of institutional structures of energy regulators in Chapter 1; Adam Finkel provided the inspiration for and drafted a well-formed first version of what became Appendix H. I am grateful to all of the peer reviewers listed in Appendix F who gave of their time to read an initial draft of this Final Report and to offer their extensive and constructive comments, criticisms, and suggestions. Alberto Alemanno, Adam Finkel, Lorenza Jachia, David Lewis, Shari Shapiro, and Dan Walters deserve special thanks for offering insightful and helpful written comments on earlier drafts as well.

I am also grateful for the many edifying conversations along the way with other colleagues, regulators, and students, including those with whom I interacted at a Penn Program on Regulation workshop on regulatory excellence organized separately with a group of high-level U.S. regulators and those at an international meeting of the OECD's Network of Economic Regulators. In particular, I am grateful for discussions with Jessica Bassett, Luigi Carbone, Bruno Cunha, Gustavo Donoso, Bill Finan, Charlie Howland, Ken Kulak, Erwann Michel-Kerjan, Mark Moore, Angela Pachon, Michiel Scheltema, Kate Sell, Christina Simeone, and Malcolm Sparrow.

Finally, I cannot adequately convey the respect I have for the leaders of the Alberta Energy Regulator in conceiving, initiating, and commissioning a project of this kind. As much I am grateful for their confidence in the Penn Program

on Regulation to undertake this important work, my respect for their leadership of this effort is borne largely of nearly two decades' worth of urging regulators around the world to take more seriously the need for rigorous measurement and results-oriented management. It has been a privilege to convene a process and produce a series of products for a regulator so genuinely committed to demonstrating and improving performance, as well as to sharing what it learns with others. I am grateful for the cooperation of various members of the AER staff as we convened this project's several dialogues and for the respectful manner with which they all approached the independent nature of the process, from start to finish. Our interactions with AER team members, and the opportunity we had to learn from them and other Albertans about the AER's work, challenges, and aspirations, kept this effort focused and grounded. I am particularly grateful to Jim Ellis for his inspiring leadership, and to Kirk Bailey, Tim Church, Richard Dixon, Deborah Eastlick, Tristan Goodman, Cal Hill, Diane Holloway, Eric Kimmel, Tiffany Novotny, Carey-Ann Ramsay, Jennifer Steber, and Zeeshan Syed, among others at the AER, for their cooperation as we carried out our work.

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