

Regulatory Transformation in an Age of Disruption

The Regulator's Dilemma

We stand on the brink of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In its scale, scope, and complexity, the transformation will be unlike anything humankind has experienced before. We do not yet know just how it will unfold, but one thing is clear: the response to it must be integrated and comprehensive, involving all stakeholders of the global polity, from the public and private sectors to academia and civil society

Klaus Schwab, Founder and Executive Chairman, World Economic Forum, 2016

Satya Nadella, the CEO of Microsoft Corporation suggests that one of the most difficult challenges for leaders of successful businesses is dealing with the 'innovators dilemma'. That is, the disruptive events prompted by changing markets and technological innovation are relatively easy to identify and understand. The *real challenge* resides with the colossal task of changing business models, managerial styles, workforce competencies and cultural mindsets to embrace disruptive events and transform quickly enough to manage the risks and realize the benefits of a new economic reality before descending into irrelevancy.

Regulatory leaders, too, are often captive to successful models of regulation that have served societal interests reasonably-well. The incumbent models of regulation that have governed economic activities and social behaviors over the course of the last century have enjoyed a relatively undisrupted stretch of noteworthy successes and stability, which has rarely been challenged. The exception being incremental reforms concerned with enhancing competitiveness, improving the efficiency and effectiveness of regulation, and expanded (or limiting) the scope of regulation and authority of regulatory agencies in response to emerging public risks. However, the systems,

institutions, approaches and the *philosophical basis* of regulation have not evolved substantially over the course of the last few decades.

As the world enters a period of unprecedented technological, economic and social change, the global regulatory community are beginning to raise a pressing, existential question: *How must incumbent regulatory systems evolve to govern an entirely new world that will look radically different than what we are able to conceive and fully comprehend today?* This question is in response to a wider recognition that the global forces of disruptive change have begun to expose the vulnerabilities of incumbent regulatory systems that have been largely configured to govern a 20th century economic and social landscape, including the underlying assumptions used to justify contemporary approaches to regulation.

At a strategic level, the pace and impact of change is happening at velocities and scales that legacy regulatory systems, entrenched business models and social structures cannot keep up with. From the rise of populist movements in western democracies, disruptive technologies and business models prompted by the fourth industrial revolution, demographic change and global economic realignment, to the impacts of climate change, environmental degradation, and energy security challenges, national governments around the world are grappling with finding innovative solutions to address the defining problems of the 21st century. The magnitude of these challenges is further compounded by declining levels of public trust towards governmental and economic institutions, and the departure of civic engagement replaced by a polarized and corrosive style of policy discourse.

At a tactical level, regulatory authorities continue to be subjected and capitulate to the 'tyranny of the immediate' - responding to, and held captive by, the daily grind of operational pressures that play out under immense public scrutiny, conflicting stakeholder expectations, ambiguous policy objectives, limited resources and organizational competencies. These pressures crowd out the strategic space and broad-based support needed to make complex, analytically challenging and

contentious decisions needed to reframe and shape an uncertain future that is bound for disruption. Balancing the need ‘to gaze at the stars while having your feet planted firmly on the ground’ is a major challenge confronting the world’s regulators.¹

In an age of disruption, not only will these routine operational challenges persist, they will likely intensify further exposing the vulnerabilities of a rigid, legalistic and technocratic regulatory system that is not conducive to enabling an innovative and growth-oriented economic agenda structured to tackle the defining social, economic and environmental problems of the 21st century. Moreover, legacy regulatory systems will come under mounting pressures to perform basic functions of protecting the public interest as the rapid diffusion of technology, profound shifts in business models and evolving societal expectations undermine the basic assumptions that serve as the foundation of contemporary regulatory regimes. From network and utility regulatory commissions, to upstream oil and gas regulatory agencies, all the way to macro prudential financial authorities - all sectors of the economy and regulatory domains will be affected.

The strategic theme encompassing the ‘disruptive’ forces of change is not a novel concept. There is an extensive body of knowledge and work that is well underway that lay out strategies for dealing with digital disruption and emerging business models. *What is starting to emerge, and gaining traction globally, is the recognition of the central role that regulation must play to steer and enable society to realize the full promise of the opportunities, and mitigate against the risks, of an uncertain future bound for disruption.*

In an age of disruption, the global community of regulators faces a choice. On the one hand, we are presented with the prospect to re-think our approach to regulatory governance that conforms to the new realities of an evolving global economy and society that align with the aspirations and preferences of civil society and businesses nationally and globally. This option would eventually lead to the development an action-oriented and transformational strategy to pro-actively affect real

structural reforms. On the other hand, we allow the status-quo to prevail, incrementally adjusting and reacting to operational and strategic pressures bound by our conventional views on regulation. Perhaps a third, more realistic and pragmatic approach, may be to pursue a blended approach that looks at both incremental and transformational opportunities for change which consists of managing the present while preparing for the future, and letting go of the past.

Irrespective of the preferred approach, the generally uncontested proposition is this - success in an age of disruption will rely on how quickly government regulators can adapt to a new reality by cultivating a constant drive for innovation and experimentation, embracing organizational agility, improving organizational competencies, and forging meaningful and collaborative partnerships with a network of international regulators, governmental and non-governmental institutions, businesses, and civil society.. As the world changes, excellent regulators are not content to hide behind the convenient confines of their sectoral mandates, but are consistently driven by an insatiable desire to seek out and capitalize on the opportunities that have the potential to transform entire economies and societies.

In this discussion paper, we offer a general overview of the key drivers of change and the vulnerabilities incumbent regulatory systems are currently exposed to, and will likely encounter, as the world enters an age of disruption. We then propose a path forward to frame a global dialogue with the purpose of revealing the wider structural reforms and incremental improvements necessary to position the world's regulatory authorities to successfully steer the transition of entire social and economic sectors.

The 'Golden Age of Regulation'

Regulation, as we know, plays a vital role in modern societies to ensure people are safe, the environment is protected, natural resources are developed responsibly, and markets run efficiently. High-performing, resilient and credible regulatory systems make up an indispensable piece of the

good governance puzzle that support well-functioning societies and free market economies essential to creating just, prosperous, and sustainable nations. As we enter an age of disruption, and despite the recent rhetoric of deregulation that have surfaced in one form or another, we have undoubtedly entered a 'Golden Age of Regulation' where regulation pervades every aspect of our lives.²

There is no shortage of criticism with respect to the efficacy and consequences of government regulation. However, the evidence points to an increase in the promulgation of rules and the rise of independent regulatory bodies that administer those rules. A notable feature of the modern governmental landscape is the establishment of independent or arms-length regulatory institutions mandated to deliver public goals. The general appeal of independent regulatory agencies as a mode of governance is often attributed 'by its capacity to combine professionalism, operational autonomy, political insulation, flexibility to adapt to changing circumstances, and policy expertise in highly complex spheres of activity'³. A World Bank study suggests that over 200 new infrastructure regulators had been established in a ten-year period between 1996 – 2006.

There are two reasons that explain the expansion of regulation as a dominant mode of public governance that are relevant to the theme of disruption. First, there is a correlation between the rise of a risk society and an expansion of government regulation. As economic sectors become increasingly specialized and technologically advanced, as new markets and business models emerge, as the pool of goods and services, finance capital, the global flow of trade increase, there is an expectation from civil society and businesses that this change will be managed safely and responsibly. Second, as market liberalize and governments scale back direct control of major sectors of the economy, and as new class of global risks emerge, governments will increasingly rely on regulation as a prominent policy instrument delivered by regulatory agencies as a governance model to advance economic, social and environmental goals.

² Le Faur

³ Baldwin

An example is the rise in demand for the convenience of e-commerce performed on a variety of mobile devices enabled by platform businesses. The consumer demands the convenience and accessibility these services provides, but equally expects that governmental authorities ensure that the financial institutions and provider of the platform manages cyber-security and privacy risks to an acceptable level. Moreover, in contrast to conventional wisdom, the business community too, expect governmental authorities to set clear, consistent and enforceable rules that establish a fair, safe and competitive market place that serve to minimize the risk to capital investments. One of the key tenets of well-functioning markets is the basis of trust in the system and the belief that regulatory authorities will respond objectively and fairly in an unbiased manner to violation of rules that place a firm's investment at risk. Take a small exploration and production company that own the mineral lease of a Canadian oil and gas play. The firm and shareholders expect that regulators will effectively respond to violations of subsurface rights from a rival producer that engages in nefarious reservoir management practices on a contiguous lease that affect the firm's production volumes.

Given the regulatory reforms currently underway affecting most sectors in the global economy, we anticipate the 'rise of the regulatory state' to persist raising some important issues. Governments do not always get it right. In an age of disruption where information asymmetries increase, global problems become nuanced and transcend jurisdictional boundaries, and where decisions are made quickly, so does the risk of regulatory failure. That is, inadvertently introducing market distortions or failing to identify and responding to emerging public risks, all of which erode confidence in the system. The trend towards independent regulatory agencies as a central mode of governance to advance public goals emphasizes the importance of building high performing, credible and resilient institutions that subscribe to the highest standards of excellence to strategically position regulators for success.

The Drivers of Change

Industry 4.0

The fourth industrial revolution is defined as the convergence of the physical, digital and biological worlds that have the potential to create significant opportunities for economic growth, environmental performance and improved social outcomes. Technological advances run at the heart of this revolution and are disrupting traditional businesses in all sectors of the economy.

Robotics, automation and 3D printing will fundamentally redefine manufacturing processes and global supply chains. The rapid automation of menial and linear tasks that could be easily replicated by robotics and automated processes will have a significant impact on the regulators' ability to assess the safety and reliability of industrial processes. Further, the disruption to labor markets will exacerbate social tensions in an economy that already suffer from income inequality. The public may become 'less-accepting' of large scale industrial projects that disproportionately distribute benefits and costs such as employment opportunities and environmental impacts. Regulators will have to reconcile these societal tensions that will likely surface through regulatory proceedings.

The rise of the 'platform economy' populated by firms such as Amazon, iTunes, Uber, Netflix, and Airbnb incorporate "technology to connect people, organizations, and resources in an interactive ecosystem in which amazing amounts of value can be created and exchanged". The platform is "radically changing business, the economy, and society at large" that will disrupt incumbent business models. Incumbent regulatory frameworks that were designed to govern linear, 'pipeline' industrial modes of production will find it challenging to govern a platform economy.

We are already observing how business platforms are introducing peculiar and unfamiliar challenges for conventional regulators. "Regulators have a hard time fitting platform companies into preexisting regulatory categories". The uncertainty associated with not truly grasping the full extent of risks associated with an unfettered platform economy, regulators could cause "excessive,

unnecessary regulation” undermining the range of benefits that platforms could bring to the global economy and society. That said, if platforms operate “unchecked” leading to unfair business practices or risks to public safety, the public may eventually turn against the platform economy further undermining its potential.

Block chain technology, predictive analytics, automation, machine learning, the internet of things and artificial intelligence (IoT) in the private sector are changing how economic value is created. Regulators, too, have to embrace and adopt digitization strategies to stay relevant and deliver their public mandate that conforms to economic realities. What this means is that regulators will need to think of themselves as a data-driven, intelligence generating entity, whose success will depend on digital mastery. That is, generating vast amounts of data and analyzing it ‘intelligently’ to make optimal decisions in real time. Although relevant, regulatory performance will not necessarily be judged by jurisdictions that process more applications, inspect more facilities, or create more regulation. Excellence will be judged on the basis of regulators who possess the skills to use technology and analytics to understand what is going on and optimizing interventions strategies to change behaviors proactively, building enduring public trust and demonstrating that the needle on socio-economic and environmental outcomes are moving in a positive direction.

The Grand Energy Transition

Running in parallel to the fourth industrial revolution is the grand energy transition. The transition to a low carbon economy prompted by the Paris Climate Accord ratified at COP 21 coupled with an abundance of oil and gas resource enabled by the shale revolution, the increasing market share of renewables supplanting high-carbon fuels or electrification, geo-political instability and the realignment of the global economic order, and changing consumer preferences that are driven by an environmentally-conscious class of citizens are fundamentally redefining global energy systems. Terms such as ‘peak oil demand’, ‘de-carbonization’, the ‘globalization of natural gas markets through LNG’, ‘clean tech’, ‘dirty fuels’, ‘short-life cycle projects’, ‘social license to operate’,

‘indigenous rights’, and ‘distributed energy systems’ are becoming commonly accepted vernacular used to frame the policy discourse shaping future energy systems. Energy regulators around the world will play a substantial role in shaping that new reality. A key challenge for regulators that govern a piece of the energy landscape is understanding the evolution of energy markets, the changing composition of market players which includes new market entrants and evolution of business models for existing firms. Regulatory authorities will also be challenged to fully understanding emerging technologies and the associated risks and opportunities that will play a critical role in enabling the energy transition, and very importantly, understanding the regulator’s renewed role in terms of enabling the transitions or simply assuming a protective function and being reactive to changes in the market.

One way to encapsulate the challenge facing regulatory authorities is the ‘twin disruption’ of the mobility industry and the energy sector. The prospect of hydrogen and electric-powered autonomous vehicles operating on a ridesharing platform becoming the dominant form of mobility in major urban centers in India, China, the EU and North America is within realm of the plausible. The implications associated with a strategic shift in mobility will impact transportation networks, urban infrastructure, energy systems, the mobility industry, and law enforcement, which will have far-reaching consequences to sectoral regulatory regimes who are not accustomed to dealing these types of radical changes.

The Sustainability Imperative

One of the defining challenges of the 21st century is to achieve a just, prosperous and sustainable society that maximizes the welfare of people. That is, achieving the long-term stability of the economy, the environment and society. The only way to accomplish that goal is to clearly define what a sustainable future looks like and factor economic, environmental and social factors in decision making processes across the policy and regulatory spectrum that is inclusive, transparent and has general acceptance across different segments of society. This is not an easy task. Indeed, the

difficult task of defining the permissive term of 'sustainability' as an overarching policy objective has seen limited success. Nevertheless, operationalizing sustainability within a practical decision framework is essential to elevate, illuminate and frame many of society's contentious and consequential decisions that linear regulatory processes are not necessarily well-suited to deal with. The challenge for regulators is to manage the value-trade-offs that are in many cases at odds with one another, and making decisions without having a clear and coherent strategic vision of what success looks like. Compounding this problem is the transactional nature of regulatory functions that only look at a narrow piece of their sectoral mandate without having the time, resources or the incentives to make decisions that take a broader view.

The 'big prize', in an age of disruption, will be afforded to nations who resolve the 'sustainability puzzle', which, by all accounts, is a true measure of success indicative of human progress. And regulators, by virtue of where they reside at the nexus of civil society, business and government, have a role to shape its evolution.

Regulatory Competitiveness

A key feature of a market economy that transcend all sectors including energy, finance and manufacturing is the relentless effort for businesses to find and exploit the best regulatory and fiscal environment that drive down costs and increase their competitive advantage. Although regulatory risk is one of many factors that make up investment decisions, if an opportunity exists to expand a firm's competitive advantage by engaging in regulatory arbitrage, it is expected that a business will make use of this tactic to their advantage.

Policy makers have highlighted the use this business tactic as the main reason to justify regulatory reforms aimed to enhance economic competitiveness. Indeed, the vast majority of regulatory reforms were initiated on the basis to reduce the cost or 'burden' of regulation. In an age of disruption, regulatory arbitrage will persist where low-cost business environments will be well-positioned to attract investment, but not sufficient for creating a just, prosperous and sustainable

society. In an age of disruption, regulatory competitiveness cannot be reduced to a simple metric of 'less-regulation', just as questions of economic productivity cannot be explained by a simple business metrics such as the 'cost of labour'.

What this means is that a competitive regulatory environment will be judged by the ability of regulatory jurisdictions to build and sustain agile, innovative, and collaborative approaches to regulatory governance that is proactively responsive to changes in the market that seek out to balance competing objectives. Where new technologies and business models are redefining '*how the game is played*', regulators will have to continually reinvent '*the rules of the game*' that go beyond simple '*cost reduction objectives*' in order to stay relevant.

Further, as the fourth industrial revolution gains momentum, there will be increasing pressure to standardize and harmonize key elements of international regulatory systems to reduce transaction costs, eliminate inefficiencies, and enhance transparency while providing more certainty. The role of supranational institutions will likely play an expanded role in a globalized world to standardize processes effectively crowding out the space for regulatory arbitrage to occur.

Regulatory Competencies

Despite their best of intentions, the notion that regulators are well-equipped to make scientifically defensible decisions in an increasingly complex and nuanced economic landscape that incorporate technical, social, economic, environmental and legal dimensions in a timely manner is debatable. Moreover, the idea that the integrity of decision-making processes is preserved through an unbiased, objective and independent process adequately insulated from the narrow, short - term interests of businesses, politicians, opportunistic bureaucrats, and local constituents is questionable. In an age of disruption, the timing, quality, fairness, transparency *and credibility* of regulatory decisions will be instrumental for innovation to flourish in a way that advances economic growth in a just and sustainable manner.

Moreover, the interdependent nature of a global economy enabled by technology and new business platforms will challenge rigid, centralized and bureaucratic modes of regulatory structures. The “linear and mechanistic” regulatory design processes “evolved alongside the Second Industrial revolution” which was largely configured to follow a “strict top down approach’.

The technological solutions to complex problems such as cybersecurity, terrorism, energy security, and climate change will require a post-industrial regulatory practitioner populated within an agile organizational structure that is equipped with a diverse set of soft and hard skills that transcend disciplines and functions. Indeed, technicians, scientists, economist and lawyers will continue to populate the labour pool of regulatory agencies. However, these disciplines will need to be augmented by software engineers, data analysts and systems thinkers who are embedded within all areas of the organization that are able to quickly size-up, frame and analyze a complex and fluid market and regulatory environment and quickly design solutions supported by tailored and cost-effective technological platforms. The organizational model where regulators laboriously analyze problems in a centralized bureaucracy according to specific disciplines is not in alignment with how the world is evolving.

Recent developments in the workplace environment will also challenge the regulators’ conception on how we organize around work. Lina Nazerath, author of “Work is Not A Place: Reimagining our Lives and Our Organization in the Post-Jobs Economy”, contends that “transformation to a gig Economy is happening at an astonishing speed”. The transition from a “firm-based model” that retained a large and diverse in-house expertise to perform the operational tasks of the business made economic sense. Retaining a large supply of central staffing reduced transaction costs. Technology advancements in communications and flexibility in labour markets now make it possible to assemble the required technical skills on demand available from a vast global supply of skilled labour.

Regulators will also be faced with pushing the boundaries on regulatory innovation which consists of experimenting with alternative mechanisms of control that complement traditional tools of regulation. New and exciting approaches such as behavioral insight, user-centric design, management-based systems, lean processes and agile governance, decentered regulatory delivery, co-management and collaborative engagement hold promise that bend the linear and mechanistic approach to regulatory delivery.

Partitioned Regulatory Systems

One of prevailing issues that keep surfacing is the limitation of managing disruptive changes and multifaceted problems that transcend the traditional boundaries of regulatory jurisdictions. The fractured and narrow goals of sectoral regulation that are horizontally or vertically segregated into siloed government agencies make it difficult to advance a unifying and coherent strategy to address the big societal problems of the 21st century that require systems level thinking and action. The configuration of modern regulatory systems is built to focus on one economic sector (e.g. energy vs. mobility), separated into discrete value chains (upstream oil and gas vs. electricity) or categorized accordingly into broad functional domains (e.g. 'Environmental Protection', 'Public Safety') and specific risks receptors (e.g. 'Water Management', 'Air Quality').

Additionally, regulatory regimes are delineated into specific jurisdictional boundaries nested into national, territorial and regional regimes that are inclined to respond to the unique concerns of their respective constituents and absolve the responsibility of issues that does not conveniently fit into their respective mandate. To complicate matters, the emergence of a supranational order of governance prompted by an increasingly globalized and interconnected world that seeks to harmonize a consistent set of business standards in the name of efficiency runs counter to grass roots regulatory regimes that legitimize their existence by being responsive to the narrow views of local constituents.

Finally, regulatory authorities often operate under vague public mandates defined in permissive terms and provided with considerable discretion to interpret and balance conflicting legislative objectives. The absence of explicit executive or legislative guidance to make public interest decisions places regulators in a precarious position. Regulators may choose to define the public interest and use it as a frame to make operational decisions, abstain from making decisions or transfer responsibility without clear guidance from the executive branch of government, or base their decisions on narrow technical and legal grounds. All of these actions create unintended consequences for the legitimacy of the regulator and directly impact the interests of the public.

The contrived natures of regulatory regimes are quite often in tension with one another and raise some important questions about governing transformative change that requires system-level thinking and action. And given the varied jurisdictional context that regulators operate in, it is difficult to identify a superior model of regulatory governance with a high level of confidence based on sound empirical evidence. That said, it is reasonable to infer that an integrated and systems-wide approach must factor into discussions about the structural reforms needed to address a shifting strategic landscape.

The Crises of Confidence

Ian Bremmer, the President of the Eurasia Group, suggests that the global liberal order that has governed international relations for decades is entering a “geopolitical recession”. That is, the retreat of liberal values aided by the corrosive and divisive nature of the current state of our political discourse has “accelerated the descent into a Hobbesian state of international politics”. Largely propelled by the erosion of trust and confidence in technocratic and bureaucratic institutions, which is reflective of a deeper current of societal change that is rooted in a complex web of social, economic and political factors, the public’s views towards government regulators are evolving,

Regulators are now confronted by a social dynamic that is fragmented where local values diverge from broader national interests. Citizens are becoming less-deferential to centralized forms

of authority, and skeptical towards technical experts that too often understate the importance of community values and their perceptions of risk. Business leaders, too, have expressed deep reservations about the current state of regulatory affairs. They have repeatedly stated that antiquated regulatory systems are ill-equipped to deal with a new market economy of the 21st century consequently jeopardizing innovation and wealth-creating opportunities. Moreover, we are observing the social awakening of Indigenous communities in developed and developing nations reasserting their rights and resisting forms of economic and political reform that fail to seek their consent. Complicating matters is the prevalence of 'post-factual' political discourse and decentralized sources of information facilitated by social media that undermine and challenge the authority and expertise of governmental bodies.

In an age of disruption, regulators will find it challenging to remain independent and insulated from the narrow short-term interests of society that run counter to longer-term public interest considerations. Regulators are often placed in a position to make politically consequential decisions about the welfare of people, businesses and entire societies. The public's perception that decision making processes are inherently bias and captive towards narrow private interests raise questions about the democratic legitimacy and accountability of 'arms-length institutions'. Conforming to universal principles of quality regulation such as efficiency, fairness, inclusion and transparency, which are more than often in tension with one another, will become increasingly difficult.

All these developments will increasingly place more public pressures on regulators to provide assurances in a credible manner that the inherent risks to people, the environment and the economy associated with new business models and technologies are being well managed.

Strong relationships, public inclusion and meaningful engagement in decision-making processes at different scales will be a critical piece to a future regulatory environment that will struggle to build enduring public legitimacy, but perhaps not sufficient to turn the trend. What is needed is a commitment to revisit, and perhaps renew, a social compact between the state, civil society and

businesses that embody elements of deliberative democracy to govern a 21st century economy and society. In an age of disruption, governments will have to move away from a centralized mode of regulation, where authority is concentrated under the purview of a single public agency, and experiment with decentralized and open models of regulatory governance that exploit the diffuse expertise, knowledge, resources and influence of society to advance public goals.

And finally, reliable, accessible and scientifically credible information that objectively assesses a myriad of complex societal issues using an unbiased and objective analytical frame will play a decisive role to shape a civil and collegial public dialogue on contentious issues such as climate change.

Old Rules for a Modern World

The rapid diffusion of technology, shifts in business models such as the platform, and the introduction of new, far-reaching social, economic and environmental policies to address the defining challenges of our time highlights one of the key challenges for government policy makers: *reconciling the inherent tensions between promoting innovation and economic development - which typically argue for less-intrusive forms of regulatory interventions - against advancing public goals of protecting people, the environment, encouraging fair competition and market stability - which typically argue for more regulation.*

Although there is no simple solution to address the inherent tensions between 'protection' and 'growth', a useful starting point is to frame the discussion with a set of facts and operating principles that the public and business community would likely support. First, the world's regulatory regimes have an extensive stock of regulations that have accumulated over decades legitimized through various political and bureaucratic processes that may no longer be relevant, antiquated and inefficient. Second, government regulators will continue to invoke the authority of the state and promulgate new rules to address emerging public risks. That said, Government regulators should institutionalize formal mechanism to continually improve the quality and performance of regulation

within the context of explicit goals that reflect a new economic and social order as a core function of regulatory practice.

This process would include the retrospective review and evaluation of existing rules against defined outcomes and principles, and the upfront, ex-ante appraisal of proposed and new rules. There are a number of methodological approaches to operationalize this approach that have been documented and practically applied extensively which will not be reviewed as part of this discussion. The main point, however, is to inculcate a culture to what Green refers to as a ‘culture of constant experimentation and evaluation’⁴ where the ultimate goal of regulation is to first, create public value at the least possible cost, second, ensure that regulatory actions do not impede or limit innovation possibilities, and third, enhance the credibility of regulatory institutions by making sure regulators deliver their mandate in a way that holds credence with the broader public domain. In an age of disruption, the philosophical basis of regulation must move beyond the role of ‘public risk manager’ to a role defined as ‘enabling and driving’ innovation that seeks opportunities for transforming entire economic sectors and societies that is justified and reinforced under a regulator’s mandate.

A Path Forward

“Avoid reform and political institutions, and even the strongest of them will weaken over time. The legitimacy of institutions depends on their credibility”.

Ian Bremmer, 2018

Regulators serve a critical governmental role in advancing just, prosperous and sustainable societies. In an age of disruption, the global regulatory community not only has a statutory

⁴ Green

obligation, but is well-positioned by virtue of where they reside at the intersection of markets, citizens and government to shape its evolution that maximize longer-term opportunities while minimizing public risks.

It appears that there are some open questions about the current structure and performance of regulators to position for, and shape, an uncertain future. I suppose that few of these problems such as economic competitiveness, emerging technologies, credibility and the cyclical nature of market conditions would strike the regulatory community as new or novel. In fact, the catalyst of many contemporary reforms initiated in the last few decades were a culmination of these common challenges. What is new is the rapidly shifting strategic context that regulators will operate in, which will likely exacerbate existing systemic issues and introduce a new set of challenges and opportunities.

We suggest that the centerpiece of this strategy be informed by the first principles of regulatory excellence exemplified in the “Framework for Regulatory Excellence”. Second, building off the attributes of Regulatory Excellence, identifying the key strategic and operational problems discussed. And finally, exploring opportunities that address those problems in an effort to position the world’s regulatory authorities for success in, and shape a world, that is bound for disruption.

Regulatory Excellence

The pursuit of excellence is a laudable goal that many of the world’s regulatory authorities and practitioners have come to embrace, the public expects and stakeholders demand. The question then becomes, what does it mean to achieve regulatory excellence, and how does a regulator chart a pathway to excellence? Although there is no simple formula to answer that question, a useful starting point is identifying the attributes that define regulatory excellence, and understanding where these attributes apply.

In this vast market place of ideas, regulatory practitioners, policy pundits and academics have offered an exhaustive list of attributes to describe quality regulation and what constitutes high performing regulatory organizations. Some of these attributes include: efficient, transparent, fair, just, innovative, lean, competent, effective, honest etc.

Building on the recent advancements in the spring of 2013, the Alberta Energy Regulator (the AER) was created to ensure the responsible development of one of the world's largest energy resource base, which ushered in a new era of regulatory governance. The CEO and President, Jim Ellis, presiding over one of the largest subnational energy regulators in world, quickly recognized that the AER needed to elevate its organizational performance to succeed in an evolving global energy paradigm that is transitioning and increasingly becoming much more complex. Given these challenges, the AER needed to transform into a high-performing regulatory agency that subscribe to the highest standards of regulatory excellence to successfully deliver social, environmental and economic outcomes in a principled, competent and credible manner that sustains public trust. Public trust, as we know, forms the basis of well-functioning market economies and democratic systems.

The first challenge we encountered was finding the 'lodestar' of regulatory excellence that provided 'sound guidance'. In other words, who was the leading authority for regulatory excellence? Where do regulators go to for assistance to elevate their performance to confront the challenges of the 21st century? Although many reputable multi-lateral institutions, academic organizations and established consulting firms provide good frameworks, expertise and guidance in regulatory policy, the AER identified a broader need in defining regulatory excellence with a higher level of precision that could be practically applied by regulators around the world to improve performance and modernize that is unique to their jurisdictional context.

In response to this need, the AER commissioned the University of Pennsylvania distinguished Penn Program on Regulation to define the attributes of regulatory excellence that could be used by regulators to evaluate and improve their performance. The framework, *'Achieving Regulatory*

Excellence', advances *Stellar Competence, Empathic Engagement, and Utmost Integrity* as the key attributes of regulatory excellence as a means for regulatory authorities to succeed in the following ways:

- ❖ Strategically position regulators to deliver their legislative mandates exceptionally-well
- ❖ Manage regulatory systems in a principled and credible manner that builds public trust
- ❖ Transform regulatory agencies to be agents of transformative change

Stellar Competence

Consistently demonstrating that regulators deliver on their mandate and create public value; being competent in their capabilities to ensure that energy development occurs safely and responsibly; including organizational and individual competence.

Utmost Integrity

Achieved by regulators delivering on their mandate in a way that captures the broader public interests of society, which speaks to preserving the integrity and the character of our public institutions.

Empathic Engagement

Listening, learning, collaborating, and responding to the concerns and values of diverse and varied stakeholders, indigenous communities, and the regulated community.

Excellent regulators consistently display utmost integrity, empathic engagement, and stellar competence in the 'traits of its organization, in its actions, and in the outcomes of its actions. The traits of an organization refer to the "posture" or the general disposition of the regulator that permeates the 'character' or 'culture' of the organization such as consistently displaying a spirit of public service and integrity blended in with an ethos of innovation and entrepreneurialism. The

actions a regulator takes refers to the actual delivery of regulation such as developing new rules, issuing licenses, managing compliance, responding to emergencies, or engaging with the public. Looking at excellence through the lens of regulatory actions tends to focus on using best operating practices and using the most appropriate tools when delivering regulatory functions. Outcomes refers to the actual value the regulator produces in society such as increasing public safety, reducing the discharge of harmful pollutants or ensuring the stability of financial system. “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.”

Second, the AER understood the critical importance of creating an independent global institute specifically built to serve the unique requirements of regulatory authorities. The institute would serve as the global center of excellence where regulators could unite under a safe and collaborative environment to learn, innovate and develop their competencies to enhance performance and find novel solutions to the world’s most pressing challenges.

ICORE - The International Center of Regulatory Excellence

ICORE’s Offerings

Vision

Achieving regulatory excellence for a just, prosperous, and sustainable world.

Mission

Help the world’s regulatory authorities build modern, high-performing, and credible organizations that subscribe to the highest standards of excellence.

Approach

ICORE supports regulatory authorities pursue a pathway to regulatory excellence in three ways:

- ❖ **Enabling Regulatory Diplomacy** by providing a safe, politically neutral and collaborative platform to forge strategic partnerships in pursuit of common goals, convene the exchange of ideas, learn and build trusting relationships.
- ❖ **Driving Regulatory Innovation** by providing the global regulatory community an innovation ecosystem to conceptualize, design, prototype and test novel solutions to complex regulatory problems.
- ❖ **Strengthen Regulatory Competencies** by offering customized assistance, professional training and leadership development to support the operational and strategic capabilities of regulators.

Enabling Regulatory Diplomacy

The currency of tomorrow's success will be measured by the ability of regulatory authorities to forge genuine strategic partnerships, collaborate, learn, and share ideas in order to confront the defining problems of the 21st century.

Zeeshan Syed, VP International Relations and Business Development, ICoRE

Regulatory independence is a vital principal to uphold the integrity of decision making processes that serve the public interest, which requires being insulated from the biased and narrow interests of society. As a consequence, regulatory executives have traditionally been inclined to isolate themselves - retreating from meaningful public engagement beyond minimum statutory consultation requirements - including regulatory peers. For this reason, ICoRE provides the global regulatory community with a safe, politically neutral and collaborative environment to engage in an open and honest dialogue to learn, share ideas, and co-create solutions to complex problems. The world's collective wisdom, expertise and varied jurisdictional insight form critical assets that should be accessible and disseminated for the benefit of regulators on a global scale.

Driving Regulatory Innovation

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.

Cary Coglianese, 2016

Faced with unprecedented pressures to perform exceptionally-well, regulators will have to come together to unlock the creative potential of regulatory ingenuity and push the boundaries on innovation. ICORE provides the global regulatory community with an open and collaborative platform to bring the leading thinkers and practitioners in the field of regulatory policy, the private sector, governments, academia, and civil society to conceptualize, design, prototype, and test novel solutions to the world's most pressing operational and strategic challenges. These solutions could then be standardized and adopted as regulatory best-practices and applied and evaluated in a variety of jurisdictional settings. ICORE's innovation lab seeks to create an ecosystem to bring the regulatory community together to find smarter ways to use people, processes, regulatory instruments and technology to improve regulatory performance to meet broader societal outcomes.

Strengthening Regulatory Competencies

The disciplined mind recognizes regulation as a profession and strives continuously for mastery.

Scott Hempling, 2010

Simply put, regulators succeed when they consistently and credibly deliver their legislative mandates exceptionally-well, and doing so in a principled manner that hold credence with the public. ICORE assists regulatory authorities strengthen professional skills, improve operational and strategic capabilities, and cultivate leadership qualities for success today, and become agents of transformative change to shape the future. ICORE support regulators build and strengthen their competencies by offering customized professional training programs, and assist regulators build and

transform their organizations that subscribe to the highest standards of excellence that is unique to their jurisdictional context.

ICORE's Distinctive Features

ICORE offers a distinctive and unique experience for the global regulatory community in the following ways:

Built by regulators for regulators - ICORE is an open, collaborative platform built for the benefit of regulatory authorities who are accountable to govern the development of the world's natural resources.

Mission to serve a higher purpose: ICORE is a purpose-driven, not-for-profit, independent, global institution that focuses on finding novel solutions to advance the sustainable development of the world's natural resources to improve the lives of people. ICORE's success is measured by the social return generated from supporting regulators improve their performance that leads the creation of public value.

Global networks of regulatory experts: ICORE's vast network of trusted partners provides unique access to regulatory expertise, innovative ideas and insight from around the world.

Truly independent, impartial and politically neutral – ICORE serves the interests and needs of the global regulatory community guided by a public interest lens and insulated from the narrow interests of society. We take bold and courageous actions necessary to push the boundaries on regulatory innovation.

Six Strategic Areas of Interest

As a starting point, we suggest that the global regulatory community frame a renewed strategic approach to regulation according to the following six broad themes that looks at all parts of the regulatory system.

1. Adopting sustainability as the philosophical basis of regulatory governance - the philosophical basis for regulatory governance should evolve to align with broader sustainability development goals that emphasize the long-term stability of the economy, environment and society. As civil society and businesses realign their positions and expectations to succeed in an age of disruption, they will increasingly expect regulators to reinforce, or even 'redefine', their narrow sectoral mandates that enable them to seize opportunities to advance the broader public interest. This could only be accomplished by applying a decision framework that explicitly factors in economic growth, environmental performance, and social well-being as the foundation of regulatory decisions. The United Nations Sustainability Development Goals is a useful framework that could be modified to account for varied jurisdictional and sectoral contexts. Indeed, the participation of a wide range of stakeholders and the explicit sanction from the executive legislative branches of government would likely be required.

2. Moving from 'public risk manager' to 'enabling innovation' as a core area of regulatory practice

Regulators must expand their traditional societal role of 'public risk manager' and move into an enabling role that fosters a culture of constant experimentation and evaluation. Rather than respond to 'disruption', regulators have an opportunity to incubate their own disruptive cells to be agents of transformative change. Through its innovation lab, ICoRE plans on creating a governance platform akin to the 'business platform' to facilitate and translate the evolution of disruptive ideas into practical reality.

3. Renewing the regulators' social compact with civil society, business and governments

Declining levels of public trust and confidence in regulatory systems are threatening to undermine the long-term productive growth of the economy, social cohesion and the stability of democratic institutions. Policy makers, regulatory authorities, business leaders and civil society must come together and reconsider the role of public engagement for an

evolving 21st century landscape that values inclusion, openness, and transparency that informs regulatory policy in meaningful way. Further. Regulators must contemplate the use of distributed governance systems. That is, recruiting and empowering players that reside outside the regulatory environment to monitor behaviors, resolve problems, and even penalize poor performance.

4. Integrating key decision making areas of the wider policy system and internal business functions for regulatory agencies

Taking a systems-wide and integrative approach to regulatory reform, risk control and problem solving that move beyond the sectoral approach to regulatory governance that address the defining challenges of the 21st is a strategic imperative. This includes looking at opportunities to streamlining governance and operational processes for government regulators.

5. Standardizing regulatory best practices to support contemporary global trade agreements

Contemporary trade agreements are moving towards formalizing commitments to adopt uniform and consistent standards on regulatory best practices that transcend national boundaries. In particular, the US Trade Representative have stated a clear negotiating objective on attaining national commitments on standardizing regulatory best practices as part of a reformed NAFTA. ICORE's Innovation Lab will establish a universal, standardized benchmarking framework that could be used as a gauge to assess regulatory best practices that provides an invaluable tool underlying modern trade agreements.

6. Reinventing the regulatory operating model suited for an age of disruption

As the world moves into the digital age and governments come under increasing public pressure to do more with less, make complex decisions rapidly and accurately, regulators must embrace organizational agility and data science & analytics as core functions of regulatory practice, and focus on unlocking the value of people, business processes, and regulatory instruments. ICORE plans to fill a gap in national training needs and establish a

graduate- level executive program on regulatory excellence focused on leadership and workforce development to address current and future needs.

We have come to understand that the status-quo is no longer acceptable; thus, we should seize this generational moment to shape a common future that is reflective of our shared values and principles. To do this, we must develop a coherent vision of what success looks like underpinned by a comprehensive regulatory strategy that show actionable results. The International Center of Excellence proposes to convene the global regulatory community with the objective of laying path forward to transform the world's regulatory authorities to position for, and shape, a world that is on the cusp of disruption.

Regulatory authorities around the world will take part in a historical journey to shape a 'new global order' that will reframe the 'rules of the game' that place us on a trajectory to achieve a just, prosperous and sustainable future. To do this requires two things: First, imaging the realm of possibilities that push the boundaries on innovation. And second, bold and courageous action.