More than CSR:
Organizations must practice responsible innovation

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Problem of Practice:

For-profit organizations are prime engines of innovation, and even as they pursue commercial success, the onus is on them to become responsible innovators. Hence the question that innovation-focused CXOs (CTOs, VPs of Product Management, Product-led CEOs, etc.) should ask is: How can my organization become a responsible innovator? [Recent research](#) by Christian Voegtlin and team claims that such transformative goals require large-scale innovations, which should be evaluated and governed using a set of responsible innovation principles.[1] In this essay, we outline the need for responsible innovation, define the principles of responsible innovation, and provide recommendations on how for-profit organizations can turn these principles into practice

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[3] *Featured in the January 2022 issue of the Journal of Management Studies, authors Christian Voegtlin, Andreas Georg Scherer, Günter K Stahl, and Olga Hawn, in their article: "Grand Societal Challenges and Responsible Innovation", determined that truly transformative societal goals were limited by traditional CSR approaches, and instead needed the framework of Responsible Innovation.*

The importance of CSR – and its limitations

CSR today is practiced through two distinct models. The traditional model, generally followed worldwide, views CSR as a desirable, voluntary and discretionary decision by the firm. That is, CSR "consists of policies and practices of corporations that reflect business responsibility for some wider societal good.[2] Yet the precise manifestation and direction of the responsibility lie at the discretion of the corporation". Firms that follow this approach often identify specific initiatives that seek to create 'shared value' with stakeholders.[3] TATA, Unilever, Patagonia, and Danone are a few exemplary companies that have created significant and sustained social and environmental impact with this approach of 'doing well by doing good'.

A second, alternate model views CSR as a mandatory tax or spending directive. This model requires profitable firms above a specified revenue threshold to spend a certain amount on philanthropic activities that are not related to the firm's core business.[4] An example of such a mandatory model is in India, where CSR expenditure is required by the Companies Act of 2013, and has resulted in nearly 21,000 companies spending about $3.2 billion on CSR in the fiscal year ending March 31, 2021.[5] The expectation was that CSR "... will push the nation towards achievement of sustainable development goals and public-private partnership in transforming India".[6]

Both modes of CSR, as Voegtlin and team observed, are not well suited to sustainable development challenges, which are complex, fluid, extremely subjective, and contextual. In contrast, CSR solution approaches are usually top-down, linear, point-solution focused, and slow to react to changing realities. They conclude that this fundamental mismatch between problem type and solution characteristics is the reason why grand sustainable development challenges cannot be fully addressed through traditional CSR solution approaches.[7]

Both CSR models also suffer from underinvestment. In the mandatory model, the spend of individual companies is small compared to the massive investments that are needed to address grand challenges. And many firms are likely to believe that they have met their societal obligations by spending the mandated CSR funds and they, therefore, ignore any additional CSR considerations and opportunities. In the discretionary model as well, the amount spent by firms (consider the approximately $20B spent in 2022 by Fortune 500 firms) is a small fraction of the investment required for societal transformation.

Another limitation of both CSR models is under-leverage of a company's strengths. In the mandatory model, CSR is framed as philanthropy that should be distinct from the organization's core business. Such an approach does not leverage the unique business and technical strengths of the organization. For example, wouldn't a pharmaceutical company contribute more effectively to societal good by creating a version of their drug for the bottom of the pyramid rather than spending money on childhood education, a noble activity no doubt, but one that is unrelated to their core business? On the other hand, in the discretionary model, firms end up with a small portfolio of opportunistic CSR activities, some of which are related to parts of their core business. For example, one such activity could be introducing fair sourcing practices in the supply chain or reducing plastic content in packaging. However, a firm's portfolio of such desirable but essentially opportunistic CSR activities may not take full advantage of all its resources.

The need for responsible innovation

Given the limitations of traditional CSR models, we need to look at other approaches. When faced with volatile, undesirable and untenable situations, individuals and society have always relied on innovation to transform such situations into desired outcomes. Indeed, during the COVID pandemic, governments and organizations collaborated and responded to the crisis through remarkable innovations (manufacturing safety equipment, creating new approaches to last mile delivery, reinventing work structures, developing vaccines, among others) that went well beyond the two models of CSR described above. More broadly, the COVID experience suggests that embedding societal considerations into organizations' innovation processes may be a promising approach towards supplementing traditional CSR and addressing many other pressing societal challenges.

But, while ambitious innovation is necessary to tackle grand challenges, many product, process or business model innovations have unintended and unforeseen consequences, more so when their novelty level is high. For example, consider the consequence of global warming from industrialization, the destruction of local businesses as a result of charitable gifting programs, ethical concerns associated with cloning, the rise of fake news on social media platforms, and biases and inequity arising from Artificial Intelligence (AI) algorithms, to name a few. Some innovations may even have terrifying existential consequences, as illustrated most recently by the naïve introduction of generative AI into society.[8] Therefore,

if society is to rely on innovation with high novelty to supplement traditional CSR and address grand challenges, it must do so cautiously, with innovations evaluated and governed by the principles of responsible innovation.

The AREA principles of responsible innovation

A [powerful framework for responsible innovation](#) – AREA, as it is popularly known – calls for framing innovation as a collective endeavor that requires society to have an active presence in the innovation process.[9] This seminal framework outlines four key principles that should guide the evaluation and governance of designing innovative solutions.

A *is for anticipation:*

The scope and consequences of any innovation are almost always broader than the original intent. Innovations may create new unintended consequences for intended beneficiaries. For example, a product that provides useful information may also cause anxiety. Innovations may also have implications on those other than the intended beneficiaries. For example, bottled water may improve health in communities that do not have access to clean water, but also adds trash to landfills. Therefore, innovation teams must broadly explore and anticipate the scope, trajectory and possible consequences of their solutions.

R *is for* (*organizational*) *reflection:*

It is well known that reflection improves judgment and decision-making at the individual level. But this is also true at the organizational level. Reflection at a team or organizational level allows the group to collect divergent information, to identify motivations, assumptions and dilemmas, to connect the dots and deliberate the meaning of the picture that emerges, and to face up to the potential social implications of their innovation. Therefore, innovation teams and their organizations must be reflective and deliberative in their designing approach.

E *is for engagement.*

Technology and innovation cannot be viewed in isolation from society. Many progressive organizations already view stakeholders not just as potential suppliers or users, but as contributors and co-creators of innovation. The open-source software movement is an example of how innovation thrives when diverse individuals work together across organizational bou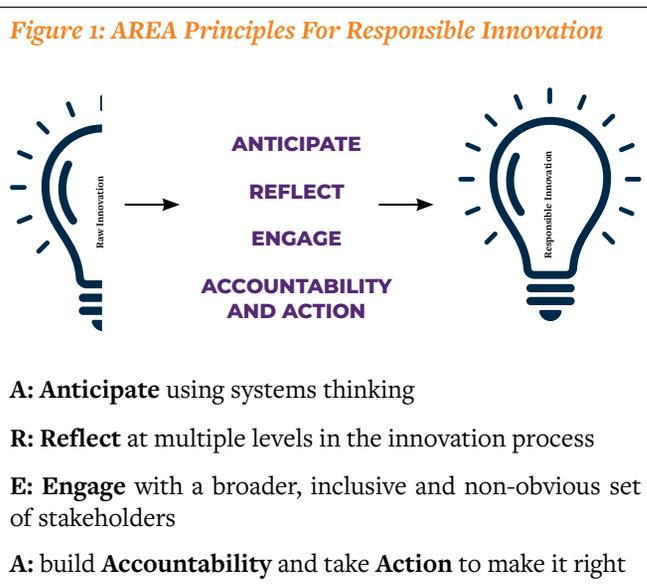ndaries. However, given the potentially unforeseen first- and second-order effects of an innovation, it is important to take a broader and more inclusive view of stakeholders early in the innovation process. Therefore, innovation teams must engage transparently with a broad range of external resources – both experts and laypersons – to incorporate their perspectives and reactions.

A *is for accountability and action:*

The essence of responsibility is taking ownership for one's actions. An innovator's work is not done when the innovation is introduced into society. Post introduction, innovators need to be aware of how their creations are impacting society, and should take responsibility for responding to the consequences. A poignant example from the Netflix film – *[The Social Dilemma](#)* – contains an interview with the inventor of the Facebook "Like" button, expressing surprise and regret about how his innovation unintentionally contributed to teen anxiety and depression.[10] While publicly admitting such regret is admirable, responsible innovation also requires innovators to be accountable and responsive, and to "fix what you break".

Today, these principles are applied mostly in reactive 'post-innovation' regulatory situations, as governmental or pan-governmental entities conduct 'hearings' to understand and perhaps respond to the implications of innovations unleashed on society. For example, consider US Senate or EU or UN hearings on cloning, genetically modified food, data privacy, AI and bias, and so on. But, by this point, the genie is out of the bottle; the horse has left the barn!

It would be better if these seemingly idealistic responsible innovation principles were proactively embedded into

Figure 1: AREA Principles For Responsible Innovation

A: Anticipate using systems thinking

R: Reflect at multiple levels in the innovation process

E: Engage with a broader, inclusive and non-obvious set of stakeholders

A: build **Accountability** and take **Action** to make it right

existing organizational routines by the innovating entities themselves (see figure 1). But can that be done without compromising their innovation engines and economic objectives? We believe it is possible, as outlined below.

Practicing responsible innovation

We suggest five practices that can start you down the path of becoming a responsible innovator. The first sets the overarching context. The next four implement the AREA principles.

Build accountability by stating your innovation purpose and values:

Get explicit about the purpose and values that guide innovation at your organization: What are you looking to achieve beyond economic benefits and what are you looking to avoid? While it is commonplace for companies to publish their core values and mission, such statements rarely include innovation-specific do's and don'ts. An exception is Google, which tries to explicitly translate its philosophical principles such as "you can make money without doing evil" into specific design principles for their engineers.[11] Another example is Patagonia, an outdoor clothing manufacturing company, that explicitly requires that its clothes be high quality, repairable, recyclable, and resalable (the exact opposite of the 'fast fashion' trend).[12] Building on the Facebook 'Like' example presented earlier, it is likely that the world would be a better place today if Facebook developers had been guided by a corporate innovation purpose and values statement such as "we develop engaging products that connect people without causing addiction or social anxiety".

Use systems thinking to anticipate outcomes:

While a clear set of values can focus innovation on the right things, unanticipated consequences are still likely to emerge even with the best of intentions. So, how can you make your innovation teams mindful to the potential implications of their actions? A popular approach for innovation is to use design thinking principles to frame problems and solutions from the point of view of the end user, who is viewed as the most important stakeholder. But this approach does not adequately identify the broader stakeholder universe and real-world dependencies.[13] Some innovators also apply critical thinking principles, routinely asking 'why' to test logic and identify assumptions. But the questions of 'what happens next' or 'what else can happen' are not part of the critical thinking lexicon. Therefore, design thinking and critical thinking should be supplemented with systems thinking, an approach that is used widely in policy intervention design, but less so in commercial innovation.[14] For example, product managers in digital product innovation teams typically write a broad 'epic' and narrower 'user stories' to describe a product feature set. Ask your digital product managers to also develop a 'system story' per epic that outlines potential second- and third-order consequences of the feature set, not only for the intended user, but also for a broader range of stakeholders. System stories can also be built into the waterfall methodology commonly used in innovation projects.

Create opportunities to reflect at multiple levels in the innovation process:

Ensure that the consequences identified by your innovation teams are discussed and deliberated at several levels. 1) High-performing innovation teams usually hold a retrospective review at the end of the project (to review lessons learned) and again after the product has been in the field for a period of time (to review key metrics of adoption and success). Teams should additionally reflect on the actual emerging effects of their innovation on society at the second retrospective review and identify additional actions. 2) Most organizations conduct some version of a 'quarterly business / management review', wherein senior-level executives discuss their portfolio of important initiatives. Expand the scope of this review so that the executive team also deliberates the potential and emerging consequences of their planned and completed initiatives. 3) Responsible innovation requires making difficult trade-offs between economic, societal, and environmental considerations. Adding an agenda item to your board meetings to discuss some of these key trade-offs is an effective way to involve your board in the governance of responsible innovation.

Include and engage transparently with a broader and non-obvious set of stakeholders:

You may implement systems-thinking based anticipation and multi-level reflection, but the quality of these activities depends on who participates in them. Conventional cross-functional innovation teams (typically involving product management, technology development, design, marketing, sales and operations personnel) are no longer enough. Consider: 1) Bringing new internal perspectives into the innovation process as McKinsey & Co., the global consultancy, has: It now includes legal and human resource specialists within their innovation. Also consider systematically including your CSR specialists in cross-functional innovation discussions. 2) Incorporating outside experts, since organizations are used to seeking inputs from analysts and consultants on topics of competitiveness and market viability. This practice could be easily expanded to discuss potential societal consequences by incorporating think tanks, academics, and even peers in deliberative forums. An early and still relevant example is the Asilomar conference in the 1970s that brought together scientists and journalists to discuss and shape the trajectory of recombinant DNA. On the other hand, a tragically missed, recent opportunity is generative AI technology – what if OpenAI had involved outside AI ethics experts from reputed AI think tanks before unleashing their generative AI models, instead of doing so only after many well-known technology leaders raised concerns about the existential threats posed by such AI?[15] 3) Non-experts individuals view the world differently from experts and can often provide surprisingly wise insights. Traditional interactions between company and such lay individuals typically manifest as interviews and focus groups seeking to identify customer needs and wants. But organizations that practice responsible innovation can also tap into the wisdom of non experts to get new perspectives on the benefits and pitfalls of their planned innovations on the society. Consider constituting an advisory group of lay individuals for your major innovations, and systematically incorporate their perspectives into your anticipation and reflection activities.

Take ownership for outcomes and act to make it right:

Organizations often respond to the impact of their innovation reactively, when faced with mounting pressure from lawmakers, regulators, activists, public opinion, and the stock market. Typical examples include recalls of faulty products, eliminating child labor from supply chains, and more recently, calls for a non-binding moratorium on the

development of generative AI.[16] In contrast, responsible organizations take ownership of their creations and respond proactively, as Johnson & Johnson did in 1982 when their products were tampered with and resulted in several deaths.[17] The following practices will help your organization take ownership proactively. 1) Instruct your market scanning teams that routinely analyze customer sentiment and competitive moves to also look for early indicators of unexpected societal or environmental consequences, and to include such information in their meetings with innovation teams. 2) Create incentive plans that reward executives and innovation teams for longer-term, triple bottom-line contribution. 3) Empower product teams to continue to tweak market offerings in the direction of desired outcomes. 4) Make it acceptable for innovation teams to recommend a delay in the introduction of innovative features because their consequences are not fully understood, and 5) Consider adding a section in the annual report that highlights the organization's proactive accountability mindset.

Call to action

Meeting sustainable development goals will require contributions from individuals, government, and for-profit and non-profit organizations. For-profit organizations should no longer assume they have met their obligations through their CSR activities. Instead, they should raise the bar, and embrace responsible innovation.

This is not a naïve manifesto. Certainly, there are specific innovation situations where the need for speed and proprietary advantage might make it difficult to implement the principles of responsible innovation. Involving more people, more perspectives, more openness, more deliberation, and more time can certainly slow down the pace of innovation. But the same argument was made against process changes that sought to improve product quality, until it became apparent that quality translated

to long-term profit. We look at responsible innovation similarly – it improves the quality of innovation, and it makes markets and future profits sustainable. In fact, we would argue that you have no choice but to become a responsible innovator because that is what your enlightened customers expect from you. Responsible innovation will ensure your business' sustainability, and if that innovation also helps build a sustainable society, so much the better.

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If you have some inputs you would like to share, you can also reach out to us
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