October 2014

WHITE PAPER

SYSTEMIC VALUE, RISK & RESILIENCE
Redefining corporate sustainability

By Geoff Lye & Yasmin Crowther

PLEASE CITE AS:
Crowther & Lye (2014). Systemic Value, Risk & Resilience: Redefining Corporate Sustainability. Available at: http://www.shinesustainability.com/ideas/systemic-value

lye@sustainability.com   yasmin@shinesustainability.com

Foreword

This paper began as an informal collaboration in the summer of 2013. We had worked together in different capacities for over ten years and had a combined experience of many decades addressing the challenges of corporate responsibility and sustainability.

We were both frustrated by prevailing conversations about the role of the market in delivering sustainable solutions, and the growing adoption of 'shared value' as a concept that corporates were embracing as the answer to profound sustainability challenges – when so often the results were insufficient and far from delivering the scale of solutions required.

We hoped to write a paper that made sense of our frustration and to examine how debates and actions seem to have been distracted by certain concepts that – to our minds – were not delivering substantive results. We also wanted to develop a framework that might help companies contextualise their operations and performance more effectively within the complex web of systems – social, environmental, economic – upon which their business models depend. This paper is the result of our collaboration.

We were delighted to receive informal positive feedback on our thinking from the Harvard Business Review and from other reviewers, colleagues and commentators. Their feedback also reminded us of the growing body of thought leadership on the systems dimension of corporate strategies; of the diverse interpretations of the term 'corporate sustainability'; and of the risks in oversimplifying the challenges and the responses for the business community. Indeed, we realise, that there is much more we could add – in terms of greater detail on previous and ongoing thinking about systemic risks and solutions, and also more detailed case-studies - all of which we hope to develop in future.

Meanwhile, we would like to share our thinking to date more widely and to invite additional feedback. Please do send us your thoughts - and share this paper with all who may be interested.

Geoff Lye & Yasmin Crowther
October 2014

Systemic Value, Risk & Resilience: Redefining Corporate Sustainability

White Paper

Contents

Acknowledgements

We would like to acknowledge our debt to the body of work around systems thinking and to the many organisations active in pioneering concepts and approaches that provide systemic solutions.

About the Authors

Geoff Lye is a Fellow of Green Templeton College, Oxford; has served as a Visiting Teaching Fellow at the Environmental Change Institute; and has contributed to Executive Development Programmes at Said Business School. He is also ex-chair and now non-executive director at SustainAbility; and founding partner and director of Volans Ventures. SustainAbility was founded in 1987 as a combined think-tank and consultancy, working to help business understand sustainability challenges and solutions. Volans Ventures was founded in 2007 with a focus on social entrepreneurship and breakthrough capitalism. Geoff draws on decades of experience of in-depth C-suite engagement at Barclays, BP, Coca-Cola, Ford, Nestlé, Nike, Shell and Toyota.

Yasmin Crowther is newly appointed Chief of Strategy & Research at big data and digital intelligence firm, Polecat. Polecat was founded in 2007 to provide advanced digital analytics and intelligence to many of the world's leading corporations and consultancies. Yasmin is also co-founder of sustainability strategy consultancy and think-tank, Shine. She was previously Head of Consulting at SustainAbility, CSR Director at international communications agency, Ketchum, and Strategic Risk Manager at environmental consultancy, URS Dames & Moore. Her clients include many of the world's leading corporations and institutions. She is a published author and editor of numerous thought-leadership publications, available at www.shinesustainability.com.

The ideas expressed in this publication are the authors' own and do not necessarily reflect the views of the organisations they represent.

Contact details:
lye@sustainability.com
yasmin@shinesustainability.com

1.0 Executive Summary

"Global risks are not only interconnected but also have systemic impacts. To manage global risks effectively and build resilience to their impacts, better efforts are needed to understand, measure and foresee the evolution of interdependencies between risks, supplementing traditional risk-management tools with new concepts designed for uncertain environments".
WEF Global Risks 2014[1]

"The world is on the threshold of a new era of innovation and change with the rise of the industrial internet. It is taking place through the convergence of the global industrial system with the power of advanced computing, analytics, low-cost sensing and new levels of connectivity permitted by the internet. The deeper meshing of the digital world with the world of machines holds the potential to bring about profound transformation to global industry, and in turn to many aspects of daily life."
GE 'Pushing the Boundaries of Minds & Machines'[2]

Pressures on global economic, environmental and social systems combined with rapid technological advance, weak global governance and powerful markets are set to put business and corporations under unprecedented pressure and scrutiny to explain their contribution to both systemic malfunctions and the delivery of systemic solutions and resilience.

Current corporate strategies and concepts have proven limited in their ability to help business anticipate, manage and communicate the systemic risks and opportunities ahead. The original concept of sustainable development had systems thinking at its core, but subsequent interpretations have tended to over-simplify and silo environmental, social and economic concerns. The result may have enabled incremental practical progress, but at the expense of joined-up thinking and an integrated systemic management approach.

Given the inadequacy of current corporate approaches to anticipate and respond to global systemic challenges and opportunities, this paper proposes a framework for appraising business models according to their systemic contribution – be it degenerative, depletive, creative or regenerative. The paper also outlines a framework and principles to help business self-appraise systemic impacts, risks and opportunities to create value.

In summary, we advocate a reinvigorated definition of corporate sustainability, centred on the strategic pursuit of resilient systems and the delivery of net positive intergenerational outcomes for the environment, economy and society. Putting a systemically robust concept of sustainability at the heart of business strategy is essential if modern markets and technology are to rise to the unprecedented risks and opportunities ahead.

We welcome constructive feedback.

Geoff Lye & Yasmin Crowther

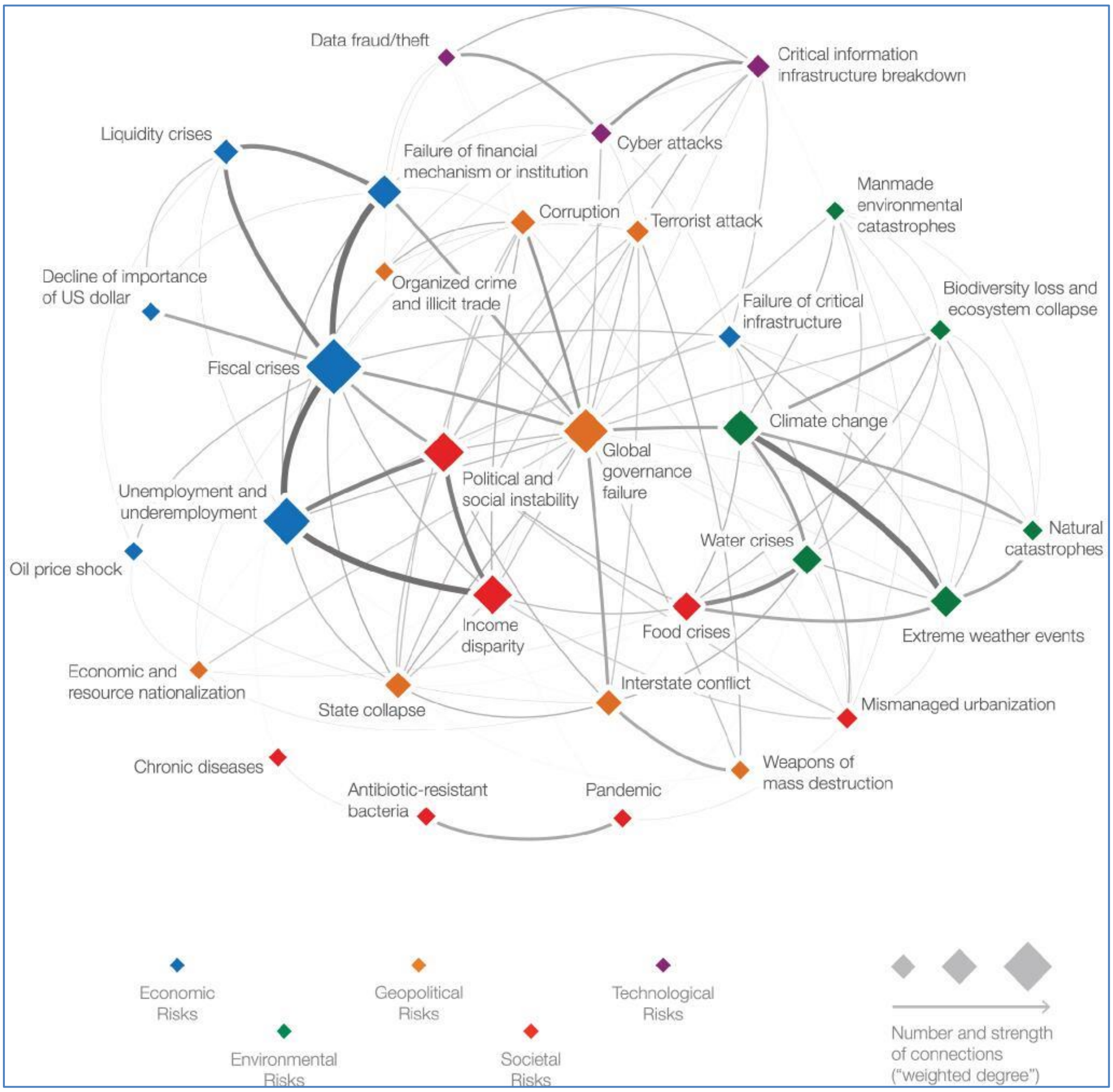
[1] http://www3.weforum.org/docs/WEF_GlobalRisks_Report_2014.pdf
[2] http://www.ge.com/docs/chapters/Industrial_Internet.

2: The Systemic Challenge

In 2014, the World Economic Forum published its annual report into Global Risks[3]. The identified risks were familiar and ranged from fiscal crises and corruption to climate change, extreme weather, water and food crises, income disparity, and social and political instability. (See Figure 1)

Beyond listing the risks, WEF's report went on to join the dots between different risks to reveal their interconnected nature and the systemic challenges posed to business and society at large. The risks were distilled from feedback from business-leaders and participants at WEF and so unsurprisingly correlated with many of the material issues facing corporations today.

Figure 1: WEF Map of systemic risks, 2014



At the centre of its web of systemic risks, WEF identified the meta-risk of global governance failure, which naturally begged the question of who is most influential and capable of leveraging solutions to such failure. In its report, WEF called for collaboration between business, governments and civil society to deliver greater resilience.

[3] http://www3.weforum.org/docs/WEF_GlobalRisks_Report_2014.pdf

This paper is focused on the role of business within global systems. The reason for this focus is the economic scale and power of modern business to invest and influence change. According to Fortune's Global 500 study for 2012[4], the turnover of the 500 largest corporations was approximately $30 trillion – roughly equal to the GDP of the EU and the USA combined[5]. Of these, just 100 companies have a turnover greater than China's. Add in their full value chains and the economic power of multinational corporations on our global system is greater than ever.

However, in spite of this leverage, corporate approaches to understanding, anticipating and responding to systemic risks and challenges remain limited in the face of potential system failure or actual collapse – as evidenced by the financial crash of 2008 and the scale of inertia in the face of climate science and realities of extreme weather (See Box 1). Given the scale of challenge, it is a false comfort for businesses to rely on current concepts of sustainability, corporate responsibility and risk management to pilot them through the systemic turbulence ahead. Rallying cries for alternative approaches are beginning to be heard and this paper hopes to contribute to the debate.

Box 1: Some systemic challenges ahead

- **Upward trends in extreme weather** and associated impacts of drought, flooding, forest and hurricanes - in 2012, Swiss Re estimated natural disasters contributed to the highest economic losses in history[6].
- **Rising inequality** within countries and globally – where 1% of the world population owns 40% of the wealth[7] - leading to increased incidences of unrest, often exacerbated by rising oil and food prices
- **The challenge of feeding** a rapidly growing world population - in the next 40 years, we will need to produce more food than in the past 10,000 years, while also addressing the double burden and healthcare cost of malnutrition that leaves one billion people undernourished and another one billion obese[8]
- **Geopolitics** as energy and resource rich countries leverage their power to political ends
- **Dramatic demographic shifts** - as population growth slows and ages in the developed world, while accelerating and increasingly youthful in emerging economies
- **The changing profile of global corporations** as new forms of business – e.g. B Corps, Social and state-owned enterprises – challenge the dominance of traditional US business models
- **A reconfiguration of where businesses are headquartered** with some 17% of Fortune 500 corporations currently headquartered in China and Emerging Markets, expected to rise to 50% by 2025[9]

3: The Limits of Current Corporate Approaches

Various concepts have evolved over the years to inform how business thinks about its impacts and contribution to the world at large beyond the delivery of shareholder value. Inter-related concepts of sustainable development, triple-bottom line, corporate social responsibility, shared value and thinking around materiality and reporting have all endeavoured to help business articulate its place in society at large. However, these concepts have only had limited success when it comes to equipping business to think in a 360° systemic way about its role, responsibilities and opportunities.

Without using the language of systems, 'sustainable development' always had systemic concerns at its core and the fundamental need to balance social, environmental and economic benefits and trade-offs for the

[4] http://money.cnn.es/magazines/fortune/global500/2012/full_list/
[5] CIA World Factbook: https://www.cia.gov/library/publications/the-world-factbook/fields/2001.html
[6] http://www.swissre.com/media/news_releases/nr_20120328_sigma_disasters_2011.html
[7] http://www.theguardian.com/money/2006/dec/06/business.internationalnews
[8] http://www.theguardian.com/environment/2013/jun/30/stephen-emmott-ten-billion
[9] http://www.mckinsey.com/Insights/Urbanization/Urban_world_The_shifting_global_business_landscape

benefit of current and future generations. The verb ‘balance’ captures the need to understand and navigate a dynamic flux of inputs and outputs - or system - over time.

However, with time, the tendency has been for this multi-faceted inter-generational concept of ‘sustainable development’ to be simplified, compartmentalised and dumbed-down into bite-sized ideas and issues. On the one hand, this simplification helped business make a start on thinking about environmental, economic and social dimensions, albeit often within silos and incrementally. On the other hand, the simplification came at a cost of forfeiting a nuanced appreciation of broader systemic ramifications, opportunities and liabilities.

If we take our colleague John Elkington’s concept of the Triple Bottom Line[10] (TBL), it clearly worked powerfully and simply to help business understand and take accountability for three key impacts: environmental, social and economic. As a result, the sustainability reports of many corporations evolved to communicate performance against these three elements – albeit often as if they were discrete from one another. For instance, discussion of climate change in many corporate reports tends to be largely ‘environmental’ and focus on information about carbon footprint and reduction strategies. The social and economic consequences and implications for issues directly related to climate change – e.g. displaced communities, depleted resources, insurance costs - may not even get a mention. This was certainly not the intention behind TBL, but may have been a consequence.

There is a similar issue with the current popular concept of Shared Value[11], championed by Michael Porter of Harvard Business School. The concept is straight-forward: that business can call upon existing core skills to collaborate with society and deliver solutions of mutual value to pressing environmental and social problems. Doubtless, the concept has helped certain companies reframe challenging social and environmental ‘issues’ as opportunities to create ‘new markets’ or drive ‘innovation’ that deliver ‘win-win’ progress and value. (See Box 2: Nestlé’s approach to Shared Value)

However, by its focus on the low-hanging fruit of ‘win-win’ activities, Shared Value explicitly ignores more challenging ‘win-lose’ or ‘lose-lose’ scenarios, and the authors accept their approach assumes these thornier systemic challenges are being addressed by the business elsewhere[12] - which is quite an assumption. So although Shared Value may reframe elements of a business’s contribution, it remains explicitly disconnected from thinking about the business model and systemic context as a whole.

Box 2: Shared Value or Business as Usual?

Nestlé[13] has long been the lead flag bearer for the concept of Shared Value. Its website explicitly identifies the company’s activities in the areas of nutrition (‘providing nutritious products’), water (‘the protection of scarce water resources’) and rural development (‘where the rural materials we need are grown’) as inspired by Shared Value. The question this positioning begs is whether or not a modern business shouldn’t be doing these things anyway – even if Shared Value had never existed as a term.

Significantly, Nestlé’s website does go on to explain that Shared Value has simply reframed what the company did before: ‘In the past, corporate investment in community and environmental initiatives were often seen as ‘obligations’ or simply philanthropy: added costs that had to be borne to minimise operational risks and protect reputation. Creating Shared Value redefines many of these obligations as opportunities to strengthen the business long-term – adding value for shareholders and our stakeholders.’

---

[10] http://www.economist.com/node/14301663
[11] http://hbr.org/2011/01/the-big-idea-creating-shared-value
[12] For a highly critical appraisal see: Contesting the Value of the Shared Value Concept by Crane, Palazzo, Spence & Matten - York University, Canada. Abstract: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2368387
[13] http://www.nestle.com/csv/what-is-csv/csv-explained

Corporate Social Responsibility (CSR), as the discipline that evolved around these concepts, has similarly tended to be incremental and issue-focused. In the 1990s, CSR was largely about reputation management – initially responding to challenging human rights issues or environmental catastrophes. More recently, it has evolved to take on board economic concerns with issues such as taxation, fair pay and transfer pricing, and also political dimensions involving lobbying and financial donations. The overwhelming tendency remains, however, for each issue to be tackled incrementally and within narrowly defined boundaries that limit wider systemic considerations.

Corporate reporting and concepts like materiality have endeavoured to anchor the identification and management of such issues in a robust analytic framework that takes into account impact on and concerns of key stakeholders within a company's broader sphere or system of influence, as well as shareholders. However, over time, materiality has similarly been dumbed down and many corporate decisions on priority issues now lack clear rationale and appear to owe more to expediency and convenience than systemic savvy and transparency.

The danger of all these approaches – of, at best, looking too narrowly at issues facing business – is twofold. On the one hand, business leaders think they have the issue licked, because it is over-simplified in their minds. For instance, in UNGC's study of 2013[14], 76% of CEO respondents perceived their specific businesses were 'doing enough' to address sustainability challenges. It is this narrowly defined sense of security which leads directly to the second danger of a failure to appreciate and manage broader systemic challenges and crises, such as the 08 financial crash. Indeed, the same UNGC study also showed that while many CEOs feel satisfied with their own business performance on sustainability, 67% do not think business as a whole is 'doing enough' to address global sustainability challenges. It is this disconnect between expressed satisfaction with individual corporate performance, but clear dissatisfaction with collective business impact that should sound an alarm bell of potential systemic failure. Individual businesses are not islands – they cannot sit comfortably on their laurels when the systems upon which they depend are being undermined, and they cannot assume society has a limitless ability to bail out when the system fails.

To ensure we learn the lessons of the 2008 financial crisis and to ensure we reconcile the disconnect between CEOs who may be satisfied with their own corporate charges, but not with the system at large, this paper calls for a reinvigorated definition of corporate sustainability that is built first and foremost on the strategic pursuit of resilient systems. To be sustainable, corporate value must be derived from the delivery of net positive systemic outcomes for the environment, economy and society at large.

The rest of this paper introduces the concept of Systemic Value Creation as a more fundamental re-direction of corporate sustainability framing and planning.

4: Integrating the Systemic Imperative

In spite of the narrowing and dumbing down of the systemic context of concepts like sustainability, a number of corporate leaders are seeking to understand and embed their businesses in concepts of systemic resilience and longevity that go beyond doing 'less harm' to deliver 'net positive' results.

Unilever's CEO, Paul Polman, is a flag-bearer with his commitment to the Sustainable Living Plan[15]. Others are also working to push back boundaries. Jochen Zeitz, former CEO of PUMA, pioneered new levels of transparency on environmental profit and loss accounting[16]. Nike drove celebrated levels of transparency around labour standards and is following that up with commitments to zero toxic discharges[17]. These leaders

---

[14] http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture-UN-Global-Compact-Acn-CEO-Study-Sustainability-2013.PDF
[15] http://www.unilever.co.uk/sustainable-living/uslp/
[16] http://about.puma.com/puma-completes-first-environmental-profit-and-loss-account-which-values-impacts-at-e-145-million/
[17] http://nikeinc.com/news/nike-roadmap-toward-zero-discharge-of-hazardous-chemicals

all play a part in stimulating interest in the systemic responsibilities, ambitions and role of business and what might be possible.

In parallel, unprecedented levels of innovation as a result of new technology, 'big data' and 'the internet of things' are providing new insights to systems dynamics, issues and solutions. IBM's work in cities has helped identify 'orphan' systems of feedback loops that may currently be un-owned, but whose stewardship looks set to pose some of the defining entrepreneurial opportunities of the future[18]. GE anticipates that the joined-up thinking to be enabled by the 'industrial internet' – and the revelations, efficiencies and innovations that result – could be the equivalent of $10-15 trillion being added to global GDP over the next two decades[19]. In coming years, technological evolutions and ever more intelligent and user-friendly apps are set to give consumers and citizens greater insight and choice than ever before into what enhances or depletes the resilience of their lives, livelihoods, communities and world. In effect, systemic connections will become radically more transparent, and with that transparency will come increased accountability, risk and opportunity.

In this context of rapid systemic revelations and innovations, unprepared businesses face a threat of massive disruption. A self-comforting adherence to outmoded and inadequate concepts of sustainability will provide nothing more than false comfort, inadequate reputation management, and a costly attachment to business models and assets that are increasingly obsolete, stranded and liable for systemic damage already done.

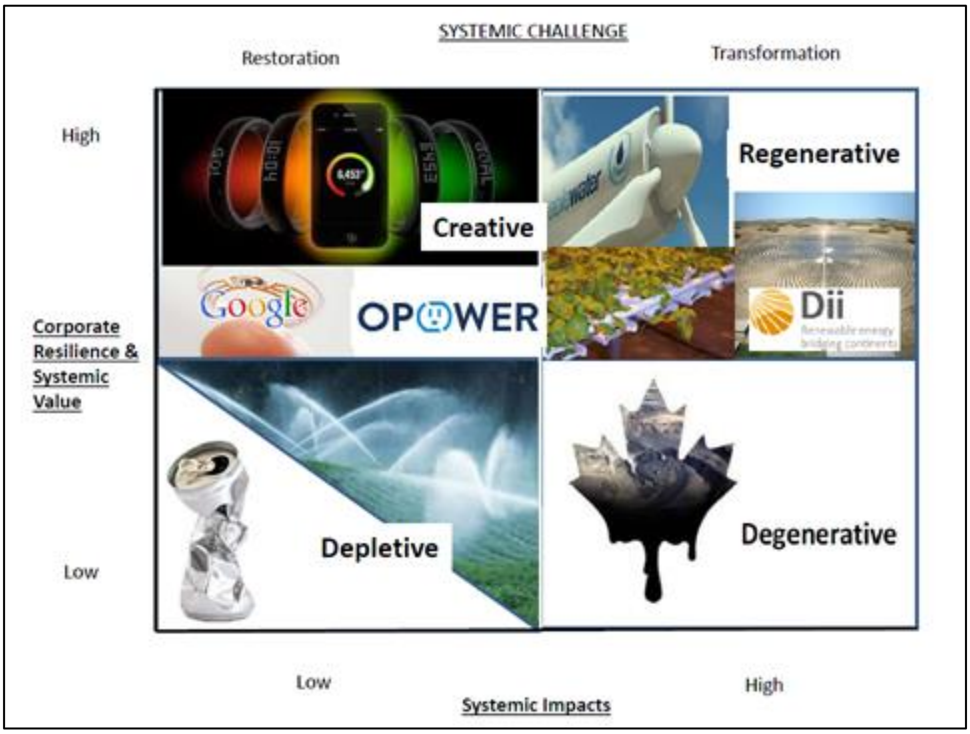
To survive and thrive, businesses will need to embed coherent systems thinking in their approach to corporate strategy and sustainability, with the objective of evolving business models that deliver net positive outcomes and systemic value, while winding down activities that deplete resilience and pose liability.

Business models may be defined simply according to their systemic impacts and strategy as:

- **Degenerative:** Business models that do not give meaningful consideration to systemic context and fundamentally destroy the systems upon which they depend. e.g. The tar sands sector destroys landscapes and ecosystems, and builds in economic and social dependencies that are unsustainable.
- **Depletive**: Business models that erode and undermine key aspects of systemic resilience. e.g. Many fast food and soft drink companies sell products that undermine health, while the pesticide sector intrinsically destroys components of biodiversity to enable large-scale intensive agriculture.
- **Creative**: Business models that seek to enable greater systemic resilience. Many new technology initiatives fall within this category by providing creative solutions that empower and enable greater systemic resilience. For example, Opower's use of cloud-based technology, big data, and behavioural science helps utilities reduce energy consumption and improve customer relationships[20]. A variety of wearable tech similarly empowers users – from tracking physical performance via Nike+[21] to Google's contact lens that can measure glucose levels and help monitor diabetes[22].
- **Regenerative**: Business models that offer solutions to profound systemic challenges. For example, Eole Water[23] uses wind turbines to source drinking water from air. Desertec industrial initiative (Dii)[24] seeks to use desert solar technology to address regional energy and climate security challenges, and deliver local development. Hydroponics is a technology that aims for closed-loop high yield agriculture with less environmental impact[25].

[18] http://www.ibm.com/smarterplanet/uk/en/?re=CS1
[19] http://www.ge.com/docs/chapters/Industrial_Internet.pdf
[20] http://opower.com/
[21] https://secure-nikeplus.nike.com/plus/
[22] http://www.bbc.co.uk/news/technology-25771907
[23] http://www.eolewater.com/
[24] http://www.dii-eumena.com/
[25] http://www.amhydro.com/about-us/the-environment-and-us.html

Figure 2: Business models within a systemic matrix[26]



While many degenerative and depletive business models may justify and rationalise their contribution through a single lens of economic value creation, their position is profoundly compromised from an environmental or social value creation perspective. By contrast, creative and regenerative business models deliver value across the multiple facets of economic, social and environmental resilience – which this paper terms Systemic Value Creation.

We hope that by introducing concepts of creative and regenerative systemic value creation, we will encourage degenerative or depletive models to reflect on their own risks and opportunities and the potential to transition and transform to more genuinely sustainable activities that deliver systemic resilience.

5: Systemic Value Creation – a pilot framework

How then can corporate activity be re-aligned with the original systemic intent of sustainable development? This paper proposes Systemic Value Creation as a way to evaluate a business's ability to weather systemic disruption and create value from solutions that contribute to, rather than deplete, resilience.

The framework aims to be a straight-forward model that helps join-up thinking between the key internal levers of a business and its external systemic impacts.

(a) The key **internal dimensions or levers** include:

- Vision, brand and strategy
- Governance and transparency;
- Engagement and collaboration; and
- Innovation and capital investment.

[26] Figure 2 adapts and builds upon John Elkington's MetaMatrix in *The Chrysalis Economy* (Capstone, 2001)

(b) The key **external dimensions or impacts** include:
- o Economic systems of equitable wealth creation and distribution
- o Social systems of cohesive communities and human development, and
- o Ecological systems that support human life and biodiversity within finite resources

For each dimension, the framework identifies **five tiers of potential performance**:
- Tier 1: Minimal consideration for systemic concerns
- Tier 2: Incremental management of issues as they arise
- Tier 3: Adaption of business models in response to changing systemic context
- Tier 4: Evolution of new business models that contribute to systemic resilience
- Tier 5: Systemic value creation through the delivery of systemic solutions, the managing out of stranded assets and creative disruption of dysfunctional markets

In the instance of each dimension, the tiers of performance cover the following illustrative spectrum:

- **Vision, Brand & Strategy:**
  - o A top tier regenerative approach will have the delivery of systemic resilience, resource efficiency and restoration, social and economic empowerment, and justice as core components.
  - o Lower tier depletive and degenerative approaches may still acknowledge systemic challenges, but hold to narrower boundaries and activities in practice in order to resist the liabilities of broader systemic thinking.

- **Approach to Governance & Transparency:**
  - o A top tier regenerative approach will involve governance structures that challenge and seek to widen awareness of systemic challenges and accountabilities. Transparency will be 24/7, with the organisation involved in ongoing active engagement around its performance and trade-offs.
  - o Lower tier depletive and degenerative governance structures will be more insular and self-referential. Engagement and reporting on performance will be sporadic and in silos – i.e. financial performance and risk seen as separate to social, economic and environmental impacts.

- **Innovation & Capital Investment:**
  - o Top tier regenerative approaches will involve businesses being prepared to invest in the pursuit of disruptive innovations and collaborations to drive new markets and job creation.
  - o Lower tier depletive and degenerative behaviour will tend to regard innovation as the pursuit of incremental process and product efficiency improvements that cut jobs and deliver cost savings.

- **Engagement & Collaboration:**
  - o Top tier regenerative approaches will see high value stakeholder engagement as key to revelation and innovation, rather than focused on lower tier relationship-building and endorsement. Top tier approaches will seek out new methods to identify and engage atypical stakeholders and influencers to deliver novel insights and collaborations that inspire future models and markets.
  - o Lower tier degenerative and depletive approaches will tend to have a narrow, traditional approach to engaging a handful of stakeholders and 'usual suspects' who largely confirm the pre-existing corporate world view.

- **Economic Resilience:**
  - o Top tier regenerative business models evaluate economic success on the basis of the overall systemic value and resilience created. Assets and investments are expected to deliver and enhance social and environmental systems for the economic value to be sustainable. The costs

and liabilities of unsustainable practices are not treated as externalities, but are acknowledged, accounted for, and seen as an opportunity to innovate alternative approaches that build future markets and resilience.

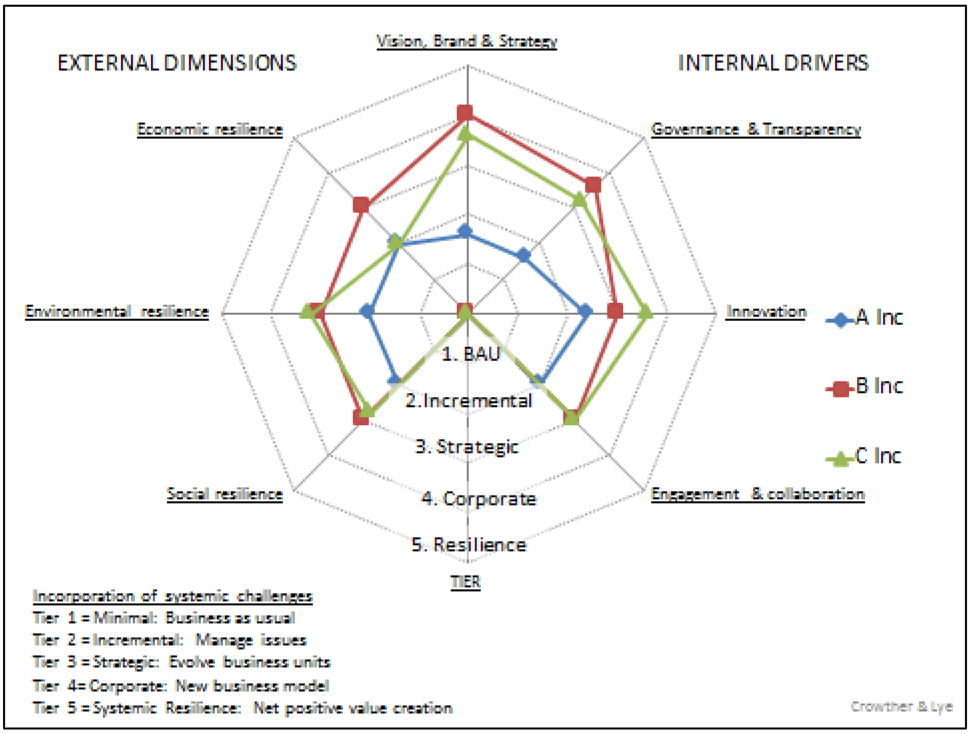
  - Lower tier degenerative and depletive models see their economic contribution as mainly delivered via profits, tax and wages, regardless of systemic impacts, which – unless regulated - are treated as externalities. Aggressive tax avoidance is seen as legitimate alongside opaque transfer pricing, controversial employment practices and levels of executive pay that are regarded as excessive, but defended as competitive.

- **Environmental Resilience:**
  - Top tier regenerative companies are in constant pursuit of the active restoration and rebalancing of ecosystems to deliver net positive benefits and healthy living environments.
  - Lower tier depletive companies may well focus on reducing current environmental impacts and addressing resource challenges on a case-by-case basis in a quest to do 'less harm'. More degenerative business models effectively write off the environment as an expendable externality.

- **Social Value:**
  - Top tier regenerative companies will be focused on demonstrating their social relevance and pursuing business models and public policies that contribute to healthier, happier, smarter societies and lives. Inequality and access issues will be seen as opportunities to collaborate and innovate services and products that empower and raise living standards.
  - Lower tier depletive and degenerative companies may frame their business as delivering benefits to society, but these claims may be mostly expedient when examined in the round.

Put into practice, an appraisal of an individual company's performance – or the performance of its portfolio components - may find aspects of the business to be high tier on some dimensions, but lower tier on others. Mapping the results on a radar framework (see Figure 3) can help illustrate overall performance and enable discussion around the significance of strengths, weaknesses, disconnects and blind spots.

Fig 3: Resilience radar: mapping systemic value creation



For instance, a lower tier approach of token engagement and outreach would likely handicap quality of innovation and identification of new growth opportunities. Similarly, a low tier approach to innovation and capital investment would likely impact economic value creation and hinder insight to new markets that may prove disruptive in future. By contrast, a technical advance or innovation that is top tier, but lacks prioritisation due to lower tier vision and strategy may languish and never realise its full market potential.

The idea behind the framework is to enable a company to appraise the combined levers and systemic impacts of its activities in the round and identify opportunities to enhance performance, build resilience and mitigate risks. As well as looking at an enterprise as a whole, the framework can also help a company think about the quality of its approach to a particular issue or product, and to appraise whether the management strategy and associated value creation is being optimally leveraged to deliver systemic value. Application of this framework to the individual components of a company's portfolio will also help to identify which parts perform better at the systemic level and help develop a sense of direction for the portfolio mix. This could be the case, for example, with an energy company which might be active in everything from oil sands to renewables.

6: Into Practice

The development and delivery of systemic value requires a business to reflect on its contribution and impacts to interconnected, dynamic systems at a micro and macro level. We hope the framework outlined in this paper plays a part in enabling a business to review and develop its performance. In tandem, we recommend the following steps and considerations to help enhance corporate analysis of systemic challenges and solutions:

1. **Embrace Multiple Focus:** In the same way that a camera lens can be refocused for different perspectives, businesses need to learn to do the same when appraising the different and interconnected systems to which they contribute and also derive value. This isn't about looking in different directions at different systems - environment, social and economic - but about understanding how systems cross-connect and the dynamic inter-relationships, along with the related risks and opportunities for business investments and value creation.

2. **Employ Scenarios**: Scenario planning is a proven approach for a business to explore and interrogate emerging challenges and opportunities across multiple-dimensions and time-spans. Well facilitated scenarios of potential systemic disruptions (both positive and negative) will help a business anticipate future landscapes and ensure it has a robust strategy for managing risk and delivering corporate and societal resilience.

3. **Move from 2-D to 3-D:** Resist too simple 2-D linear analysis and rather seek to understand 3-D synergies and positive / negative feedback loops between different interdependent systems essential to, and impacted by, your business. This need not be excessively complex, but should allow the consequences of other systemic variables to come into focus and inform understanding and planning.

4. **Specify systemic trade-offs and tipping points:** Be overt in appraising and evaluating the various inter-connected systemic trade-offs that inform decisions and how / why one systemic benefit may outweigh another systemic draw-back, and clearly specify the consequences and the thresholds for reappraisal and redirection of such decisions.

5. **Mine digital intelligence:** Technology tends to answer the questions asked of it. As such, more sophisticated thinking around systemic value will allow richer interrogation of digital and big data insights to inform business decisions and planning.

7:0 Conclusion

The world faces unprecedented environmental, social and economic challenges that, in total, present an interconnected dynamic of systemic risks and opportunities to modern society. At the same time, modern technology, big data and the industrial internet are set to make such systemic challenges and solutions ever more transparent to the world – providing unprecedented opportunities for innovation that delivers resilience and creates systemic value.

Previous management concepts and frameworks, such as Triple Bottom Line, CSR and Shared Value, have tended - often inadvertently - to compartmentalise the systemic challenges facing business into discrete areas of environment, social and economic impact. This has led to a narrow issue-based approach and a failure to join-up thinking across a company's whole business model to assess system-wide risks and also opportunities to create systemic value. As the revelations of big data and the industrial internet come into focus, business will need an alternative systemically robust approach to navigate the risks and opportunities that arise.

As such, this paper argues for the re-definition of corporate sustainability to embrace the original intention behind 'sustainable development' – i.e. the strategic pursuit of resilient systems and the delivery of net positive intergenerational outcomes for the environment, economy and society. We offer some simple concepts and frameworks to help a business self-appraise its systemic contributions – from degenerative through to regenerative – and identify some of the levers, measures and practices to help navigate transition towards a more resilient model of systemic value creation.

We welcome constructive feedback.

Contact Details:	
Geoff Lye lye@sustainability.com +44(0)7785-500200 www.sustainability.com www.volans.com	Yasmin Crowther yasmin@shinesustainability.com +44(0)7947-754768 www.shinesustainability.com www.polecat.co

The ideas expressed in this publication are the authors' own and do not necessarily reflect the views of the organisations they represent.