New Business Models for Catalyzing Regenerative & Distributive Economies
Blueprint 4: New Business Models for Catalyzing Regenerative & Distributive Economies

Table of Contents:

1. About the Reporting 3.0 Platform and its Blueprints series
   1.1. Four Blueprints – one systemic approach
   1.2. Pre-competitive, collaborative, multi-stakeholder, global public good
   1.3. Audiences
   1.4. Link to the economic system design thinking
   1.5. Leadership & responsibility of the corporate sector
   1.6. The Reporting 3.0 integral design thinking

2. Executive summary

3. New Business Models for Catalyzing a Regenerative & Distributive Economy
   3.1. Background – The Birth of the New Business Models Blueprint
   3.2. Literature Review
      3.2.1. Of realities, models, and meta-models
      3.2.2. Of Tools, Design Principles, Patterns, and Methods
      3.2.3. On Innovation
      3.2.4. Literature Review Clustering
         3.2.4.1. Product-Service Systems
         3.2.4.2. Sustainable Business Model Archetypes
         3.2.4.3. Sustainable Value Assessments
         3.2.4.4. Strongly Sustainable Business Model Canvas
         3.2.4.5. Systems Theory-based Business Model Generation
   3.3. Viewing New Business Models through the Reporting 3.0 Lens
      3.3.1. Towards Sustainable Business Models – new ‘corridors’ of thinking
      3.3.2. Defining ‘Integral Business Models’
         3.3.2.1. Design Principles for ‘Integral Business Models’
         3.3.2.2. Selected Implementation Methods
            3.3.2.2.1. Governance & Strategy: From ESG to GSE, from Fiduciary Duty to Strategic Duty
               3.3.2.2.1.1. Accountability Design & Strategic Duty
            3.3.2.2.2. Risk & Innovation
               3.3.2.2.2.1. ESG + ERM
               3.3.2.2.2.2. Innovation
            3.3.2.2.3. Scenario Analysis & Transition Planning
               3.3.2.2.3.1. Taking the Long View: Scenario Analysis
               3.3.2.2.3.2. From Scenario Analysis to Transition Plans
            3.3.2.2.4. Roles & Strategic Leadership
               3.3.2.2.4.1. Work Levels, Enterprise Value & System Value
               3.3.2.2.4.2. Compensation & Incentives
3.4. Case Studies

4. Reporting
   4.1. Shortcoming of existing reporting standards
   4.2. The Green, Inclusive and Open Economy Principles and the Six Desiderata
   4.3. The New Impetus: Purpose, Success Measurement, Scalability
   4.4. The Strategy Continuum and the Integral Materiality Process
   4.5. Recommendations

5. Accounting
   5.1. Shortcomings of Current Accounting Standards
   5.2. Creating the Basic Infrastructure that Integral Accounting Needs to Offer
   5.3. Recommendations

6. Data
   6.1. Shortcomings of the Existing Data Continuum
   6.2. Creating a Seamless Data Flow Between Micro, Meso and Macro
      6.2.1. From the Daly Triangle to the Daly Hourglass
      6.2.2. Integral Information Systems
   6.3. Contextualization, Integration and Activation
   6.4. Recommendations

7. Conclusions
   7.1. Overall conclusions
   7.2. Next steps

8. Online repository

9. Annexes
   9.1. Authors
   9.2. Working Group members
   9.3. Online virtual dialog participants
   9.4. Steering Board
   9.5. About Oncommons

10. Endnotes

---End Table of Contents---
1. About the Reporting 3.0 Platform and its Blueprints series

Continuous improvement is better than delayed perfectionism.
– Mark Twain

The Reporting 3.0 Platform was launched in 2012 to test a premise: that corporate disclosure plays a key role in influencing the trajectory of the global economy; so, if the economic design is inherently flawed and unsustainable, reporting (and its interrelated elements) can help resolve this dilemma. Furthermore, if reporting regimes are not fit-to-purpose, they too can be reformed so as to play their proper function in triggering a green, inclusive, and open global economy.

To explore this premise, Reporting 3.0 (R3) held three major international conferences through 2015, gathering a diversity of international experts from four continents and 15 countries. In addition, R3 convened various Transition Labs and Regional Roundtables during that period. In the process, R3 curated a neutral, pre-competitive, global public good platform for diverse stakeholders to consider solutions that build off the foundations of existing standards, frameworks, and practices whereby the reporting field raises its level of ambition to play its rightful role in spurring a regenerative, distributive economy that promotes thriving for all humanity economy.

The platform thus performs an “open” research and development (R&D) think tank function where ‘positive mavericks’ – who work productively (not obstructively) toward positive change; challenge constraints, structural limitations, unconscious biases, and shadow agendas; think and act at systems levels; and seek transformative (on top of incremental) change – collaborate to co-create a new operating system that generates fit-to-purpose disclosure practices.

The third international conference in November 2015 represented a watershed, when the R3 community determined that the premise holds sufficient validity to warrant ongoing exploration and advocacy. Specifically, two determinations were made at the end of the conference:

- First, to better serve these interests and expand its global public good value, Reporting 3.0 spun off from its incubation under BSD Consulting to become the inaugural flagship program of “OnCommons,” a newly-formed independent not-for-profit, registered under German law as gGmbH (gemeinnützige GmbH).

- Second, to shift into a more active “solutions-generation” mode, R3 decided to launch a work ecosystem consisting of four interdependent Blueprint Projects in the areas of reporting, accounting, data, and new business models.
1.1. Four Blueprints – one systemic approach

This four-pronged Blueprint design stems from the recognition that this quartet of areas are distinct yet interconnected and interrelated elements of the overall disclosure regime, thus each element warrants in-depth focus in its own right, following a standardized, systemic approach, before synthesizing the resulting findings into a single report. Further, this recognition stems from the following outcomes of the earlier R3 conference deliberations:

- **Purpose:** Sustainability and integral disclosure need a clearly defined “North Star” purpose. The Reporting 3.0 community recognizes the absence of a clear end goal in current sustainability and integrated reporting standards, frameworks and practices. As government leaders at the United Nations Conference on Sustainable Development (Rio+20) in 2012 proclaimed in *The Future We Want* Outcome Document, the “overarching goal” is the achievement of a *green and inclusive economy* in the context of sustainable development and poverty alleviation. Yet current reporting generally lacks a direct connection to this purpose of creating a green, inclusive, and open economy. More frankly stated: no business can be truly sustainable in an unsustainable world; consequently, there will never be integral sustainability without a seamless connection to an economic system design whereby market mechanisms “do the right thing” through price signals and monetary incentivation, including subsidies and taxation.

- **Sustainability Context Gap:** While *The Future We Want* takes an overall macro perspective, sustainability reporting and integrated reporting focus on the micro-level, organization-specific perspective, thus creating a micro-macro gap between the UN goal and company reporting. The Global Reporting Initiative (GRI) advocates for closing this gap with its *Sustainability Context Principle*, which calls for “discussing the performance of the organization in the context of the limits and demands placed on environmental or social resources at the sector, local, regional, or global level.” This addresses “the underlying question of … how an organization contributes … to the improvement or deterioration of economic, environmental and social conditions, developments and trends.” However, “[r]eporting only on trends in individual performance (or the efficiency of the organization) fails to respond to this underlying question.” However, “to this day in the reporting world … Sustainability Context is incipient, uneven, and occasional,” said GRI Co-Founder and Inaugural Chief Executive Allen White (a Reporting 3.0 Validator). Today, sustainability and integrated reports describe company-specific incremental progress on issue-specific urgencies such as global warming, water shortages, biodiversity loss, human rights abuses and corruption; however, it is rare that companies account for their own proportionate contribution to these macro problems – and thus neither to their solutions.

- **Risk Management & Integral Materiality:** Material environmental, social and governance (ESG) information doesn’t yet automatically link through to fiduciary duties, creating a disconnect from risk management due to shortcomings in this
materiality determination. In consequence, now underscored by new research by the World Business Council for Sustainable Development (WBCSD) amongst its member companies, only 29% of the companies who outline material sustainability risks in sustainability reporting reflect the same information in their legal filings or disclosures. While 89% of companies indicate that sustainability issues could have a financial impact on their business, 70% don’t believe their risk management practices are adequately addressing those risks. This gaping gulf represents a stark reality check on the general failure of companies to link their sustainability efforts to their broader business disciplines and standard practices (such as Enterprise Risk Management). Attendees at Reporting 3.0 convenings consistently stressed the need for convergence of risk management, governance and remuneration with integral material sustainability, based on sound contextualization and proper impact assessments.

- **Collaboration & Ambition**: Reporting 3.0 convenings revealed broad perception of lagging collaboration and plateauing ambition levels amongst reporting and accounting standard setters, data analysts and information system architects, and new business model intrapreneurs and entrepreneurs, which are falling short on clarifying purpose, implementing sufficient success measurement, and achieving scalability at rates needed to be “on target” for ensuring the sustainability of the human race. That is what the four Blueprints aim to address collectively in order to align with the disclosure needs for a green, inclusive & open economy designed for regenerative and distributive capitalism.

- **Integral Blueprints**: The emergence of a third generation of “integral reporting” (after the first generation of financial reporting and the second generation of sustainability and integrated reporting) requires a fluid exchange of learning in all four areas described by the below Blueprint design. We also believe there needs to be a revolving process to update the Blueprints about every 3 years, given the speed of developments in all areas related to this set of recommendations.

![Figure 1: The Reporting 3.0 Blueprint Ecosystem (Source: Reporting 3.0)](image-url)
1.2. Pre-competitive, collaborative, multi-stakeholder, global public good

*Don’t compete! Create! Find out what everyone else is doing and then don’t do it!*  
– Joel Weldon

Reporting 3.0 does not seek to create yet another reporting or accounting standard, data analytics product or new business model canvas. We are building on the strong shoulders of the existing reporting, accounting and data infrastructure as well as existing ideas around future business modeling. We simply believe that the combination of these siloed pockets of expertise isn’t yet working towards the end-goal of necessary systems change at sufficient pace. As a consequence, humanity remains on a blind flight. These 55 years after Rachel Carson’s book *Silent Spring*, 45 years after *Limits to Growth*, 30 years after the *Brundtland Report* and 25 years after the first Rio Conference, it is still impossible to properly assess whether a company is sustainable or not. We therefore aim to boost cross-fertilization of these four as-yet distinct markets through crowd-sourced and well curated collaboration. So far, we see the Reporting 3.0 Platform as the only pre-competitive and open global public good community with this holistic ambition. Through our conferences and discussions, we know that there’s isn’t yet a curriculum that also offers this needed breadth between micro, meso, and macro aspects, cross-cutting economic theory, social and environmental education as well behavioral science. It is these lacks – of language, of forums to meet, and of sheer awareness of the magnitude of the urgency for global change – that holds colleagues back from even addressing what Reporting 3.0 aims to achieve. Institutional inertia, even in the seemingly forward-looking realms of ESG and corporate “sustainability,” create blockages to progress, triggering the emergence of positive maverick stances and actions from those who share the understanding that incremental change is necessary but insufficient. Reporting 3.0 aims to make a real difference here.

Reporting 3.0 offers flexible engagement opportunities via Sponsor Partners, Working Group Partners, Validation Partners, Pilot Project & Beta Testing Partners, Advocation Partners, and through various public engagement opportunities such as virtual dialogues, events and public comment periods. We aim to update the Blueprints every three years and disseminate them as a package to the constituencies that work with us and our target audiences. We hope to stimulate market reaction accordingly, so that the Blueprint recommendations will effect positive change of multiple actors while also catalyzing necessary systems change.

1.3. Audiences

The Blueprint ecosystem addresses four major areas that represent a baseline of the minimum necessary ambition to achieve a sustainable economy (much less a thriving society). These four areas attract the following audiences:
• **Reporting:** Reporting standards setters, reporters, governments (including statistics offices), NGOs, academics, and financial markets players (including investors as well as credit and sustainability rating agencies);

• **Accounting:** Accounting standard setters, accountants, CFOs, controllers; academics in accounting and controlling;

• **Data:** reporting standard setters, companies, CIOs, investors, software and analytics firms, data science experts, academics;

• **New Business Models:** Circular, sharing and collaborative economy entrepreneurs, business model designers, investors, NGOs, new business model initiatives, corporate intrapreneurs, funders, venture capitalists, academics.

We believe that **without these four areas in combination, breakthrough thinking and action will not emerge.** As an outcome, the new ‘common ground’ disclosure has to aim for a seamless information flow between corporations and their related supply and demand chains / cycles (micro level), industries, regions and habitats (meso), and nation states and global social and environmental ecosystems (macro).

We expect to address the outcomes of the Reporting 3.0 Blueprint deliberations to these actors in one major dissemination rollout after the completion of all four Blueprint Projects; but for now, **the main Blueprint chapters address the primary parties that need to contribute to breakthroughs in disclosure by actively applying our recommendations.** These are reporting standard setters; governments, legislators and multilateral organizations; corporations; and finally, investors and other stakeholders.

Of course, we invite all other constituencies (e.g. NGOs, academics, data scientists and statisticians, economists, consultants, etc…) to use the recommendations to inform their own practices. They are also invited to contribute to the outcome of the Blueprints and support the dissemination of their outcomes.
1.4. Link to the economic system thinking

The question is how to make the human race concur in its own survival?
– Bertrand Russell

Failures of economic system thinking, ecological system thinking and education system thinking are the main reasons for the failure of sustainability. We coin the term “triple-e-failure” to describe this triumvirate of shortfalls. Sustainability, in the way it is applied in corporations, in standard setting, in data collection and information systems, in business model creation, is only a redux version of what it was originally meant to be. The shift from the original three-pronged focus on people, planet and prosperity to people planet and profit, totally lost the prioritization on overall well-being through inter- and intragenerational equity. This shift in emphasis has enabled the “fatal” incrementalism that creates the “illusion of progress” while failing to truly solve global challenges, subordinated as it is to status quo economic system thinking.
However, capitalism, if focused on the right outcomes through the right incentives, can generally support a green, inclusive & open economy. Regenerative capitalism, a concept promoted most visibly by John Fullerton of the Capital Institute (who keynoted the 2015 Reporting 3.0 Conference), provides a solution geared toward financial market transformation. Overall, the main ingredients of the necessary readjustment for creating a new level playing field globally include:

- An adjustment of cost calculation by internalizing a full spectrum of externalized costs into cost accounting;
- The addition of benefit accounting;
- The translation into pricing; and
- An adjusted tax regime that burdens resource use while liberating tax on labor.

In sum, achieving sustainability requires ambitious scalability by incentivizing leaders and nurturing comprehensive followership through this new level playing field. This is one of the blunt truths we need to understand. Reporting 3.0 is therefore taking those necessities into account in the design of the Blueprints. They are integral parts of the “North Star” understanding.

1.5. Leadership & responsibility of the corporate sector

You cannot escape the responsibility of tomorrow by evading it today!
– Abraham Lincoln

At Reporting 3.0, we see a necessary interplay between the macro, meso and micro levels, organized both through the “push” of international policy, regulation and implementation standards, as well as the “pull” of fit-to-purpose innovation in new business models and governance systems aligned to the thriving, climate-resilient economy and society currently envisioned to emerge by mid-century. The existing economic system design has so far not enabled the emergence of true sustainability, but instead actively acts against a green, inclusive & open economy by neglecting the needs to a) serve the well-being of every global citizen; b) work within the cycles of nature; and c) align financial systems to serve the goals of a regenerative and distributive real economy. But very importantly, all that interplay needs leadership, and we think the corporate sector shows promise of supplying such leadership from enlightened boards and CEOs (incited by informed institutional investors) who recognize that future value creation requires significant transformation at the individual business model (micro), industry (meso), and economic system (macro) levels.

According to Reporting 3.0 Partner Organizational Capital Partners, “[f]orty years of strategic leadership, cognitive capacity, and crystallized intelligence research has identified that less than five percent of the world’s adult population has the critical thinking capacity to perform complex work and investment decision making at the higher levels of innovation and systems thinking complexity [that] is required for
conceptualizing and implementing new business and economic models." So the trick is to identify leaders with the cognitive capacities to think in inter-generational terms.

Leaders will understand that they will need to take action to advise of the overall economic system conditions, defining the necessary level playing field, in order to scale up sustainable policy making, technological changes and financing mechanisms. For their own organizations, the real challenge is how to become sustainable beyond reducing negative impact and how to excel through transformation capabilities that allow the organization to lead. **Leadership excellence and organizational transformation capabilities are necessary ingredients of being “future ready.”**

So far, reporting standards don't have any disclosure available for investors and other stakeholders to show where an organization stands on its pathway to be **future ready**. These are additional ingredients and new reporting elements that need coverage in an interplay between purpose, success measurement and scalability of any organization.

### 1.5. The Reporting 3.0 integral design thinking

> Where is the life we have lost in living?  
> Where is the wisdom we have lost in knowledge?  
> Where is the knowledge we have lost in information?  
> – T.S. Eliot

In sum, Reporting 3.0 aims to make an impact through the four Blueprints that make up the design ecosystem of fit-to-purpose disclosure for a green, inclusive and open economy. **Figure 3** summarizes the basic assumptions, the consequences, outcomes and impacts of our design thinking: achieving integral thinking in all sorts of organizations through a new level of transparency currently unknown; integral materiality deliberations that take a systems approach to assess and prioritize, integral data systems that allow for a seamless flow of information from the micro to the meso to the macro level; and finally integral business model creation that benefits from such new disclosures.
Figure 3: The integral design thinking of Reporting 3.0 (Source: Reporting 3.0)
2. Executive summary

To be added later
3. New Business Models for Catalyzing a Regenerative & Distributive Economy

*A new type of thinking is essential if mankind is to survive and move toward higher levels.*


This is the actual quote from Einstein, the humanitarian quantum physicist, who is more oft-quoted in now-ubiquitous Internet memes as saying: “Problems cannot be solved by the same level of thinking that created them.” The original carries several layers of particular interest for this *New Business Models Blueprint* that are not contained in the popularized version of the quote:

- **First, essential:** Einstein poses not a facile suggestion, but a requisite.
- **Next, survive:** Einstein made the statement with the specter of atomic annihilation hovering – a context similar to the current slow-motion unfolding of the existential crisis of climate change;
- **Finally, level:** Einstein applies the term not to *thinking* (which he instead describes as a *new type*), but rather he uses the term in the plural, accompanied by an adjective (*higher*) but nothing further – levels of *what?* Next developmental stages, he seems to suggest – Einstein’s more interested in the *results* of new types of thinking than in new thinking itself.

The popular quote, focused on *thinking*, applies well enough to the idea of *business models* – where the solution is a new level of *thinking* (or new business models). But we at Reporting 3.0 (r3.0) believe it’s instructive to read Einstein more literally. Remember, his *higher levels* refer not to *thinking* (nor to *business models* in our example), but rather to some undefined outcome – the next stages of development. Following this thinking to its logical conclusion, what’s *essential* for *survival* is not *new business models* in-and-of themselves, but rather what they create collectively – the higher levels of a *new economy*.

### 3.1. Background: The Birth of the New Business Models Blueprint

At the end of the 3rd International Reporting 3.0 Conference in 2015 – after three years testing the proposition that disclosure could transcend incremental improvement to trigger transformative change at the economic system level that’s necessary – the r3.0 Community concluded, “Yes, it can.” So we agreed our direction lay in blueprinting the future of disclosure *writ large*, focusing on its three foundations first: reporting, accounting, and data.

But we quickly realized that reporting, accounting, and data don’t *directly* spur the emergence of a new economy, but rather, they shine a light on underlying business models, revealing their ability to generate value across all the multiple capitals, now and into foreseeable future – or, conversely, its proclivity to degenerate these capitals (and the value they create) across time. A vibrant economy relies on its underlying
resource base, so business models must sustain and regenerate the value of common capitals. So to achieve our goal of a regenerative and distributive economy, we need to blueprint the future of business models – hence the New Business Models Blueprint.

The Reporting, Accounting, and Data Blueprints are consciously sequenced to first focus on identifying the North Star – the organization’s core purpose – and then on how it impacts the world at the micro- (company), meso- (sector / portfolio / habitat), and macro- (systems) levels. This holistic approach, linking the part to the whole, calls for aligning business models with the world they live in – and the economy they co-create. Indeed, if a degenerative economy derives from business models that degenerate capital resources in Earth’s systems, then business models that regenerate capitals and systems can collectively create a regenerative economy that distributes value inclusively. And reporting on how business models generate value across all the capitals is the key.

So this New Business Models Blueprint development process starts off with a comprehensive literature review, to identify how new business models are currently defined, and further, how they are linked into our broader economic system. The literature collection process spanned several months, with key recommendations from the New Business Model Working Group members. We have structured and clustered the existing literature in an attempt to see if and how the New Business Model Blueprint adds additional value and an additional layer of Einstein’s “new type of thinking” to spur the broader economic system to “move toward higher levels.” Building on the strong foundation of knowledge in the existing literature, we then propose an Integral Business Model Design, which augments additional elements. This segment of the chapter takes the reader there step by step.

In addition to this analysis of the literature, we also integrate the work already done in this first cycle of the Reporting 3.0 Blueprint developments, namely excerpting valuable content from the final reports (in first phase of an extended process that updates Blueprints on a biennial cycle) of the Reporting Blueprint and Data Blueprint and the Accounting Blueprint. We are embedding concepts from those earlier Blueprints into this Blueprint, such as:

- The Reporting Blueprint’s
  - Six Desiderata of a Green, Inclusive and Open Economy;
  - Web of 9 Principles;
  - Strategy Continuum;
  - Micro-/Meso-/Macro-Level Linkage
  - Integral Materiality Process (a Plan-Do-Check-Act Deming Wheel of Action as known from Quality Management);
- The Data Blueprint’s Integral Data as visualized with the Daly Hourglass for a seamlessly interconnected data architecture and information system; and
- The Accounting Blueprint’s next-generation approach that integrates sustainability, management, and financial accounting.
And as with the other Blueprints, the opening chapter (where we are currently in this Blueprint) is the longest, as it lays out the overarching thinking – in this instance, clarifying what defines and constitutes new business models that truly serve a green, inclusive and open economy. Using the literature review as our launching pad, we project the necessary next step of business model development – to what we call Integral Business Models.

We so name them because they integrate the “Four Quadrants” of Integral Theory, which span from the individual to the collective and from the interior to the exterior.\textsuperscript{11}

\textbf{Figure 4:} The Four Quadrants of Integral Theory (Source: Ken Wilber, “What Are the Four Quadrants?” Integral Life, 28 October 2014.\textsuperscript{12})

Integral Business Models amalgamate elements from all quadrants, while also attending to “work levels” and developmental stages.

The outcomes of this Blueprint’s deliberations are a set of highly vetted Recommendations. As in other Blueprints, these are mainly directed to a primary audience – in this case, NBM entrepreneurs and intrapreneurs – but we also address the Recommendations to standard setters, governments, multilaterals, investors and non-governmental organizations, to account for all rightsholder perspectives. We typically structure these Recommendations in three maturity levels: Educate; Advocate; and Accelerate.
3.2. Literature Review

The concept of business models is a relatively recent development, emerging in the dot.com bubble, while tracing its roots earlier to Peter Drucker’s “theory of the business” and Michael Porter’s definition of strategy. \(^{13}\) “All it really meant was how you planned to make money,” writes Michael Lewis now, casting back to the “term of art” he originally addressed back in 1999.

The year before, in his book Cannibals with Forks, John Elkington coined the term “Triple Bottom Line,” which laid out the conceptual framework for designing business models that seek to create value across economic, social, and ecological dimensions. \(^{14}\) Since then, the literature on business models has burgeoned, increasingly focusing on new business models and sustainable (or even flourishing) business models. \(^{15}\)

Early in this Millennium, Alex Osterwalder proposed a business model “design template” – or “canvas” – based on his business model ontology in his 2004 doctoral dissertation. \(^{16}\) Osterwalder’s Business Model Canvas focused at the micro level of the company, without integrating the meso or in particular macro / systems level dynamics, Antony Upward noted – and so asserted in his 2016 Ontology for Strongly Sustainable Business Models (with co-author Peter Jones) that led to his Flourishing Business Model Canvas. \(^{17}\) We go into these in more depth in the literature review proper, but for now, we refer to this work to establish a key definition “strong sustainability” as compared to “weak sustainability,” which the Reporting 3.0 Data Blueprint has already delved into, citing Simon Dresner in The Principles of Sustainability thus:

> There is controversy about whether to consider human-made capital and natural capital together (weak sustainability) or separately (strong sustainability). If they are counted together then increases in human-made capital can compensate for running down natural capital. Is that legitimate? Are the two kinds of capital substitutable in that way?

This distinction is important to establish in an initial broad mapping of the landscape we’re traversing, before diving into the literature review proper.

3.2.1. Of realities, models, and meta-models

Specifically, it’s helpful to distinguish between three levels when discussing business models: reality (actual companies), theory / model (business models), and meta-theory / meta-models (models of models, or ontologies). New Business Models Blueprint, Working Group Member Antony Upward explains it thus:

1. We have enterprises / businesses / organizations. These exist in the world. They operate. They have human stakeholders … Enterprises take biophysical stocks and move and transform them as resources. They rely on flows of ecosystem services to enable their activities. etc. etc.
2. Then we have business models. Each enterprise has a business model (or perhaps more than one), whether or not it is understood … One can say a business (#1) is an instantiation of a business model (#2).

3. Then we have meta-models - models of models. This is where Osterwalder's Business Model Ontology and my more recent Strongly Sustainable Business Model Ontology exist… Ontologies [#3] are models of business models - they claim to identify the necessary and sufficient factors in a business model (#2).¹⁸

![Figure 5: Business Ontology Development](Source: Antony Upward, xxx)

This three-level approach abstracts from an actual company to its theoretical description as its business model(s), to the more abstract level of a theoretical description of business models, generally speaking. This framework in some ways represents a horizontal representation of businesses, from actual to theoretical to general.

This horizontal representation on the micro level of businesses can also be turned into a vertical instantiation along the Reporting 3.0 micro/meso/macro framework, scaling up transformation from new business models to new sector ecosystems to new integral economies. Designing such holistic solutions is required in the face of the interconnectedness of “wicked problems” we now face – or even “super wicked problems” such as climate change where 1) Time is running out; 2) There’s no central authority; 3) Those seeking to solve the problem are also causing it; 4) Policies discount the future irrationally.)¹⁹ We will comes back to this issue of interconnected, holistic solutions again later.
3.2.2. Of Tools, Design Principles, Patterns, and Methods

“Ontologies” or “meta-models” are really just a fancy name for “tools.” Upward further explains:

Osterwalder and Pigneur’s insight was that an Ontology [#3] – a very technical artefact – could be transformed into a visual collaborative tool that anyone could easily learn and use to describe their current or future business models [#2]. We call these tools canvases. They provide a shared language (nouns and verbs from the underlying ontology) to allow people to have better conversations about all the business model factors.  

Before getting to the verbs, let’s finish defining the nouns.

In addition to representing business models visually, canvass “tools” pose questions whose answers suggest a set of “design principles” that companies apply in the nested reality of “an environment that contains society that creates the economy,” says Upward. He continues:

… If a tool user is aiming to describe strongly sustainable / future-fit / thriving / flourishing / integral business model [#2] to be instantiated as a real operating business [#1] to actually realize, for example, the “possibility for flourishing” in the world, how must the questions the tool asks [#3] be answered? To make this deep knowledge accessible to practitioners, the science has been summarized in various ways - we call these summaries "design principles" or sometimes "enabling
constraints"...Much more work must be done on this topic of design principles.\textsuperscript{21}

This \textit{Blueprint} proposes such principles for Integral Business Models later. And next in sequence from design principles, according to Upward, are \textbf{patterns}, which

...exist to provide inspiration / shortcuts to enterprise designers (aka strategists) / business model designers (aka tool users). They aim to capture elements / factors that are \textbf{known} from experience to lead to desired enterprise outcomes - e.g. profit, environmental regeneration, social benefit, etc... The value / purpose of patterns is that they have the potential to speed up the creation of, and de-risk, the creation of new business model designs.

To be useful, patterns need to be organized. And if a business model designer is going to use a tool, it would be most useful for them if the patterns were organized using that tool (or its underlying ontology); i.e. in this case the tool / ontology becomes a taxonomy for the patterns. So \textit{far this has not been done with any of the patterns work for sustainable business models that I am aware of.}

Patterns are the product of descriptive science - i.e. phenomena / something must exist in the world to be observed by the person trying to identify and describe patterns involving it. This is a problem if what we are looking for is patterns of business model factors i.e. typical combinations of answers to the questions asked by canvas tools that are "\textbf{known}" to lead to flourishing / future-fit / thriving / strongly sustainable / integral outcomes.

Why? Because today no enterprise aiming to create \textbf{only} these desirable outcomes can exist - it would not be financially viable and so would quickly go bankrupt. (We don't yet have social and environmental bankruptcy laws - we only have financial bankruptcy laws) ... We just don't know for sure the patterns derived from even today's best businesses are anything other than (at best) patterns of weakly sustainable business models - as there are \textbf{no} strongly sustainable / flourishing / future-fit / thriving / integrate enterprises \#1 whose business models can be studied \#2 to find patterns.\textsuperscript{22}

This conundrum – how do we create what doesn’t currently exist but what’s clearly needed, seeing as we don’t have examples to point the way – is as old...
as humanity, and we humans have always responded by tapping into our innate creativity. In the absence of such patterns, we can turn to methods. Upward continues:

So we need well designed, useful, proven methods to effectively use the tools to create "good" / useful business model designs (descriptions of future business models not yet instantiated in an operating business) that once instantiated will actually result in flourishing / strongly sustainable / future-fit / thriving / integral outcomes.23

3.2.3. On Innovation

This brings Upward to the verbs – namely, to innovate:

 Clearly business models [#2], that when instantiated in operating businesses [#1], lead to flourishing / strongly sustainable / future-fit / thriving / integral outcomes … must be (very) innovative [and] must design using backcasting.24

It should not be surprising that new business model creation that is simultaneously spurring the emergence of new sector ecosystems (at the meso level) and new integral economies (at the macro level) to solve our "super wicked problems" requires "super wicked innovation." (While the term "wicked" is intended to convey a sense of insoluble complexity when applied to problems, our use of the term as applied to solutions taps into the Boston vernacular, where “wicked” is used to amplify anything, negative and positive – so in this instance, we invoke a positive connotation that the insolubility can be overcome through particularly creative innovation – if for no other reason than our collective survival depends on it.)25

To summarize, Upward identifies the innovator’s dilemma of inventing that which does not currently exist, therefore lacking the luxury of pre-existing patterns, thus requiring her to rely on methods to innovate truly new business models that spur the emergence of new industry ecosystems and new integral economies.

3.2.4. Literature Review Clustering

We structured the fractal nature of the literature into a more systematic approach by identifying five distinct definitional categories:

1. Production-Service Systems26
2. Sustainable Business Model Archetypes
3. Sustainable Value Assessments
4. Strongly Sustainable Business Model Canvas
5. Systems Theory-Based Business Model Generator

Please note that this five-category approach to sustainable business models is neither temporally sequential nor mutually exclusive categorically. In other words, the categories did not develop in a historical progression; and they share cross-over characteristics. So we acknowledge that our categorization superimposes a somewhat developmental sequence, as well as introducing seeming separations where such may not exist.

After observing and clustering this progression, we assessed the degree to which they fulfill our earlier Blueprint Recommendations, and found gaps. To fill it, we propose a sixth category of Integral Business Model, which we explain later.

Now, we lay out the distinguishing features of these 5 categories:

3.2.4.1. Production-Service Systems

Production-service systems (PSS) were the first extrapolation from a purely economic and market-based approach into the environmental sphere, as documented by Arnold Tukker in a 2004 study that identified 8 distinct PSS typologies, as assessed for economic and environmental potential.27 We are not covering this early development in this Blueprint, as it is of lesser importance to the development of new business models in the way as we see them needed regarding a) the completeness of what we focus on (e.g. missing the social dimension), and b) the level of transformation needed. However they can be seen as a necessary stepping stone into the development of sustainable business models.

3.2.4.2. Sustainable Business Models Archetypes

A proliferation of approaches to sustainable business models emerged, which warrants clustering them into archetypes,28 helping us understand the directionality of business models that seek to achieve sustainability (or reduce unsustainability) – primarily by optimizing within the existing system. These are all bottom-up symptom cures – of procedures, processes and value chain activities. They remain focused on the micro-level, not on overall impact, scalability and change potential for the meso- and macro-levels.
Figure 7: Sustainable Business Model Archetypes (Source: Bocken et al., “A literature and practice review to develop sustainable business model archetypes”, Journal of Cleaner Production, 2014)

The discussion of maturity is another form of defining archetypes of strategies.29 This clarification is helpful, as it shifts the perspective from inside-out to outside-in, and so recognizes the shift of perspective to create value for the Common Good. However, the awareness of this shift of value creation for the Common Good is still based on optimizing within an existing economic design. There is no link to the macro-level need to change the economic system design towards incentivizing different market mechanisms— for example through internalization of external effects or smart taxation that rewards behavior we want and punishes anti-social behavior, to name just a few.

Dyllick & Muff (2016) propose a 3-stage developmental approach to defining sustainable business (beyond business-as-usual) (see Figure X) that echoes elements of the Reporting 3.0 Strategy Continuum. Dyllick & Muff state:

Truly sustainable business shifts its perspective from seeking to minimize its negative impacts to understanding how it can create a significant positive impact in critical and relevant areas for society and the planet. A Business Sustainability 3.0 firm looks first at the external environment within which it operates and then
asks itself what it can do to help overcome critical challenges that demand the resources and competencies it has at its disposal.\textsuperscript{30}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{chart.png}
\caption{Dyllick & Muff: Clarifying the Meaning of Sustainable Business: Introducing a Typology from Business as Usual to True Business Sustainability (2016)}
\end{figure}

It warrants noting the distinction between descriptive and normative approaches to research. The former identifies things as they are and the latter as they should be, based on clear and rational criteria. Much of the literature and research we review falls into the descriptive category, while the Reporting 3.0 approach is inherently normative.

### 3.2.4.3. Sustainable Value Assessments

Another approach to steer sustainable business models is based on the idea of value creation. There is broad variability on what value creation is, particularly around the desired outcomes (what “value” is being created?) Take, for example, the 2011 Harvard Business Review article where Porter and Kramer conceived their notion of “Creating Shared Value,”

which involves creating economic value in a way that also creates value for society by addressing its needs and challenges. Businesses must reconnect company success with social progress. Shared value is not social responsibility, philanthropy, or even sustainability, but a new way to achieve economic success. It is not on the margin of what companies do but at the center. We believe that it can give rise to the next major transformation of business thinking.\textsuperscript{31}
Others are not as optimistic in their assessment of the transformative potential of Shared Value as the “Next Evolution in Capitalism.” Crane, Palazzo, Spence & Mattern voice significant concern about Creating Shared Value (CSV).  

- Porter and Kramer advance a caricature of CSR in order to prop up Creating Shared Value as an attractive counter-proposal. They neglect literature about stakeholder engagement and stakeholder management and other existing approaches to social innovation (social entrepreneurs, B-Corps). Their assumption that CSR is separate from the realization of profit and therefore qualifies as philanthropy enables them to pose CSV as a distinct concept directly connected to profit maximization. Crane et al identify these “straw man” arguments as weak support for CSV.  
- CSV ignores trade-offs between social and economic target setting and is therefore naive in its conceptual design. Porter and Kramer say that CSV could solve such trade-offs. In practice, CSV is typically applied in win-win situations for which a business case can easily be designed, but when difficult trade-offs are presented, CSV strategies often doesn’t suffice as a means of mitigation. This in consequence means that CSV isn’t suitable for cracking really transformational issues and becomes a ‘cherry-picking’ instrument, creating significant risk of greenwashing.  
- CSV doesn’t discuss the ethical issue of the role of corporations, so it doesn’t add to the deeper discussion about the legitimacy crises of capitalism. Instead, CSV offers a reduced and simple efficiency-oriented answer to partially normative questions. The firm as a political and ethical actor is totally neglected.  

In sum, CSV falls short of tackling the entrenched societal problems, and is more rightly considered an extension of the ‘Competitive Advantage’ doctrine into the social sphere. It is an optimization in a given economic system and unable to tackle the proclaimed redesign of capitalism. We even think it endangers such radical change.

Defined more rigorously, the notion of value creation provides a very useful lens for identifying sustainable business models, spawning specific tools for this purpose. For example, Bocken et al (2013) propose a model that distinguishes various forms of value (value captured, value missed, value destroyed, and new value opportunities) and four major stakeholder groups (environment, society, customer, and network actors). This mapping tool enables entrepreneurs and intrapreneurs alike assess the transformative potential of their new business models.
A updated version of this model was recently introduced in a 2016 Network for Business Sustainability report that embraces the multicapital approach propounded by the International Integrated Reporting Council (IIRC) (and generally advocated in the Reporting, Data and Accounting Blueprints of Reporting 3.0) to advance a “Total Value Creation” approach to new business models. Visually, this report melds the above graphic with the IIRC “Octopus” to arrive at an hourglass depiction of value creation.
This report introduces a systems-level approach, and so qualifies for cross-categorization in System Theory-Based Business Model Generation (see our #5 further down below). However, the report also uses the “Shared Value” frame that has been critiqued above for, among other things, inadequately addressing value destruction and little effectiveness of value creation. While the report addresses value destruction, its embrace of the Shared Value framing muddies the waters.

### 3.2.4.4. Strongly Sustainable Business Model Canvas

In their 2016 “Ontology for Strongly Sustainable Business Models” paper, Upward and Jones advance the definitional rigor of “sustainability” as applied to business models by appealing to the distinction between “strong” and “weak” sustainability.

Strong sustainability demands an understanding of the “macro-economy as a sub-system of the finite ecosystem” (Neumayer, 2013, p. 28) informed by
natural science. On the other hand, weak sustainability “can be interpreted as an extension to neoclassical economics” (Neumayer, 2013, p. 28), where such containing systems are not considered (Victor, 2008). “Strong sustainability” is explicitly informed by current natural science observations about the importance of certain stocks of “critical natural capital” to sustaining “basic life support functions” (Neumayer, 2013, pp. 26-27).

For another take on the distinction, the Reporting 3.0 Data Blueprint quotes Simon Dresner in The Principles of Sustainability:

There is controversy about whether to consider human-made capital and natural capital together (weak sustainability) or separately (strong sustainability). If they are counted together then increases in human-made capital can compensate for running down natural capital. Is that legitimate? Are the two kinds of capital substitutable in that way?

“No,” is strong sustainability's answer, adding a key element to the field of new business model theory. Upward & Jones also helpfully integrate the “business model canvas” approach popularized by Osterwalder. They perform a comparative analysis between their canvas and the “Osterwalder profit-oriented ontology … to deconstruct and evaluate its affordances and gaps with respect to the relevant sciences informing business sustainability.” Unsurprisingly, the Osterwalder approach contains significant blind spots when viewed through a (strong) sustainability lens.

Recently, Upward has shifted semantic labeling from “strongly sustainable” to “flourishing,” a move that aligns with the Reporting 3.0 Strategy Continuum that places “regenerative” and “thriving” beyond “sustainable.”

![Flourishing Business Model Canvas](Source: Flourishing Business Model Canvas)

**Figure 12:** Flourishing Business Model Canvas (Source: Flourishing Business Model Canvas)

### 3.2.4.5. Systems Theory-Based Business Model Generation

The recognition of systems dynamics as an influencing factor in business models was proposed a decade ago, with Stubbs & Cocklin (2008) addressing it as a key component of holistic sustainability:

Organizations can make significant progress towards achieving sustainability through their own internal capabilities, but ultimately organizations can only be sustainable when the whole system of which they are part is sustainable (Jennings & Zandbergen, 1995). Changes to the socioeconomic system, both structural (such as redesigning transportation systems and taxation systems) and cultural (such as attitudes to consumption and, economic growth and wellbeing), are required to facilitate firm-level and system-level sustainability.\(^{37}\)

This micro-macro link between the firm and the systems it operates within encapsulates the Reporting 3.0 approach.
Abdelkafi and Täufer (2016) extend the Stubbs & Cocklin approach first by mapping generic business model logic into a systems dynamics stocks-and-flows chart.

Figure 14: Stock and flow diagram of a generic business model logic (Source: Abdelkafi & Täufer, “Business Models for Sustainability from a System Dynamics Perspective,” Organization & Environment, Vol. 29(1), 2016 pp 74–96)

Then, Abdelkafi & Täufer introduce systems dynamics thinking into new business model design, consciously tapping into both positive (reinforcing) and negative
(balancing) feedback loops, amongst and between stocks and flows of capital resources.

**Figure 15:** System dynamics-based representation of business models for sustainability (Source: Abdelkafi & Täufer, “Business Models for Sustainability from a System Dynamics Perspective,” Organization & Environment, Vol. 29(1), 2016 pp 74–96)

However, Abdelkafi and Täufer make only passing mention of limits and thresholds, and no mention of carrying capacity, thus falling short of laying out a holistic – and Contextualized – approach to sustainability.

Summary figure 14 puts all five categories into one connecting circle. These categories aren’t mutually exclusive or sequential. They summarize the current main areas of discussion around New Business Models.
3.3. Viewing New Business Models Through the Reporting 3.0 Lens

*The part can never be well unless the whole is well.*
Plato, *Charmides*, 360 BCE

*No man is an island entire of itself; every man is a piece of the continent, a part of the main…*  
John Donne, “Meditation XVII” *Devotions upon Emergent Occasions*, 1623

The Sustainable Business Models literature as a whole advances a strong and comprehensive case for business model transformation. However, the literature generally approaches the business model outside the context of the “super wicked problems” business and society now faces, and thereby focuses primarily at the micro level, attending less to meso- and macro-level effects. One distinguishing aspect of Reporting 3.0’s approach is its insistence on attending to micro-meso-macro interlinkages, as a key to scalability and sustainability.

As the epigraphs to this section show, the notion of a micro-macro link is hardly a novel concept that Reporting 3.0 invented; to the contrary, it is a key interrelationship recognized since time immemorial. Looking to a re-articulation of this issue from a half-century ago proves particularly instructive for our present purposes. In his seminal 1968 essay, “The Tragedy of the Commons,” Garrett Hardin exhumed an obscure 1833 pamphlet where William Forster Lloyd coined the idea of the “commons.” Lloyd describes “a pasture open to all” that supports multiple herds, with natural forces keeping impacts “well below the carrying capacity of the land” – until the “day of reckoning” when
the rational herdsman (sic) concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another... But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited.38

Replace "herdsman" with "company" and "animal" with "growth" and voilà, we have the 21st Century’s super wicked problem! What’s perhaps most interesting about Hardin’s essay is his lead-in to Lloyd: Adam Smith. Hardin bridges to the Commons from Adam Smith’s (in)famous notion of the “invisible hand” – namely, the assumption that “decisions reached individually will, in fact, be the best decisions for an entire society”).

However, what Hardin fails to acknowledge is that Smith implicitly called for an “invisible band” to guide and constrain the invisible hand. Smith first proposed his “invisible hand” concept in The Theory of Moral Sentiments (1759), applying it to a micro / meso example of landowners distributing the excess production of their fields to the laborers who harvested it, simply because the bounty exceeds the capacity of the landowners’ stomachs. Such landowners

are led by an invisible hand to make nearly the same distribution of the necessaries of life, which would have been made, had the earth been divided into equal portions among all its inhabitants, and thus without intending it, without knowing it, advance the interest of the society, and afford means to the multiplication of the species.39 [emphasis added]

In the better-known appearance in The Wealth of Nations (1776), Smith addresses a micro / meso / macro example of individual production in the domestic and foreign contexts:

By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was not part of it.40 [emphasis added]

Perhaps it shouldn’t surprise us that a mechanism that’s by definition impossible to see (and hence to prove) gained such entrenched traction. Stating the obvious like the boy in The Emperor’s New Clothes, Nobel laureate economist Joseph Stiglitz points out “the reason that the invisible hand often seems invisible is that it is often not there.”41 In other words, there’s a difference between “invisible” and “non-existent.” And the problem is, as with the Emperor, it can be hard to distinguish between invisibility and non-existence, or to establish credibility in contexts intermediated by political power.

For example, Smith’s Moral Sentiments example presupposes the “invisible” existence of a sufficiently abundant crop and a social fabric that promotes noblesse oblige or a religion that preaches charity or a tax code that incentivizes such donations, etc... Such
conditions can be just as “invisible” in their presence as in their absence – that’s the rub.

For the invisible hand to work, it really requires an “invisible band” of preconditions that can elude the eye. In the Reporting Blueprint, we shed light on some of the key elements of that “invisible band”:

For example, sustainable performance at the micro level benefits from level playing fields at the meso sector level, which require pre-competitive collaboration amongst industry peers as well as regulators and others;

At the macro / economic system level, transformation of taxation protocols is due. As Stubbs & Cocklin (2008) write:

“Interface stated that the structure of the tax system is a barrier to sustainability. To fully realize an [sustainable business model], modifications to the taxation systems are required to shift the tax burden from ‘goods,’ like income and labour, to ‘bads,’ like ecological damage and consumption of nonrenewable resources (Costanza, Cumberland, Daly, Goodland, & Norgaard, 1997). According to Interface, this would encourage organizations to redesign their products and practices to eliminate negative environmental impacts and create a ‘level-playing field.’”

Boiled down to its essence, the tragedy of the commons results from the aggregation of unintended consequences from incremental impacts by individual actors, none of which on its own seems egregious, but taken collectively, cross tipping points that trigger systems out of their dynamic balance into disequilibrium, which creates cascading consequences.

But what if we can use the same mechanics of the problem to create solutions? For example, instead of aggregating impacts that add up to overshoot (tragedy of the commons), what if we aggregate positive impacts that, in toto, rebalance systems by restabilizing the cycles that make up systems? In this way, we can “scale up” change that transcends incrementalism to achieve necessary transformation.

This is precisely what New Business Model Blueprint Workign Group members John Elkington and Lorraine Smith (collaborating with Jacqueline Lim) of Volans advocate in their Breakthrough Compass report when they call for “exponential” breakthroughs.42
Says Elkington in the Harvard Business Review:

Our conclusion: instead of pursuing incremental goals, we need to start chasing goals that will have 10x or 100x the impact on anywhere between a million and a billion people. The horizontal axis ("impact") tracks the spectrum of outcomes created by business, from negative to positive. The billion-people-impacted scale may seem far-fetched, but two brothers define the outer limits here. Google’s Larry Page invests in solutions that potentially benefit a billion people, while his brother Carl (at the Anthropocene Institute) focuses on problems that could disadvantage – even kill – a billion of us. The vertical axis ("scale") moves from incremental change to increasingly exponential outcomes. To address the realities of climate change and other ways in which we are increasingly overrunning planetary boundaries, we must now shift our mindsets, technologies, and business models from left to right, and from bottom to top.

- **Entrepreneurs and Intrapreneurs**

In order to scale exponentially, new business models must apply not only to entrepreneurial startups, but also to intrapreneurial transformation of existing business models in even the largest multinational corporations. The NBS report notes that new business models apply differently to startup entrepreneurs than to intrapreneurs seeking to transform existing (and often entrenched) business models in order to align them to the systems they operate within. But in general, this is the exception, not the rule, with the sustainable business model literature.
The Reporting 3.0 approach recognizes that new, sustainable business models need to emerge both from the bottom-up (via entrepreneurialism) as well as inside-out (intrapreneurialism). In fact, the new term “system entrepreneur” has emerged over the last several years as “a person or organization that facilitates a change to an entire ecosystem by addressing and incorporating all the components and actors required to move the needle on a particular social issue.” While this definition is clearly broader than the traditional scope of entrepreneurship to business, it does apply to new business model entrepreneurs in light of the fifth category above. But interestingly, the term “system intrapreneur” has yet to produce a Google footprint.

- **Red Flags: Greenwashing New Business Models**

While the discussion in this chapter has primarily focused on ‘upward’ dynamics that enhance new business models, we’d also like to caution against dynamics that drag new business model design ‘downwards’. To identify some of the primary red flags, we developed this chart of potential greenwashing:

**Red Flags: Greenwashing New Business Models**

![Figure 18: Red Flags - Greenwashing New Business Models](Source: Reporting 3.0)

Sustainability information in many sustainability reports often pride themselves with programs that derive at efficiency gains, productivity gains and dematerialization gains. While the global footprint is still growing and the number of organizations publishing information is still limited to less than 10% of global multinationals, these messages create an illusion of progress. The above image describes the reason for such misplacing of such initiatives as ‘increasing’ sustainability. In general these messages derive from only partial recognition of impacts, ignoring so-called ‘rebound effects’
which can be material, financial, political, and even psychological. In total they often produce more unsustainability than progress, no matter how well-intended. Life-cycle analysis, combined with circular (or even “cyclical”) economics and contextual assessment can be a critical application to reveal these total impacts. Again, most likely this phenomenon and the sheer existence of greenwashing is simply another sign of the desperation to find a “business case for sustainability” in our unsustainable economic system.

3.3.1. Towards Sustainable Business Models – new ‘corridors’ of thinking

Chapter 3.1. gave an overview of existing business model literature, and placed it in the context of Reporting 3.0’s Reporting, Data and Accounting (forthcoming) Blueprints. In essence, this has revealed a gap between the ‘what is’ and ‘what should be’ and leads us now into the definition of an ‘integral’ business model design, taking on board the ‘differentiators’ that we have seen arising from the current state of the discussion, as we have seen it.

Shining through in the archetypes and other literature is a new structure that differentiates various new ‘corridors’ in which new business models manifest themselves. We have observed the following approaches to business models:

- Circular
- Sharing
- Collaborative / Cooperative
- Benefit Corporation
- Impact Business Models
- Community-Based Business Models

There is a whole body of literature and increasing instantiation for each of these corridors, as well as emerging hybridization between and amongst them. However, these solutions, in isolation, will not result in the level of transformation required to trigger the emergence of a truly regenerative and distributive economy – because each only solves for discrete elements of our “super wicked problems.”

In order to succeed, new business models will need to advance context-based solutions that apply synergistically across the multiple capitals. In other words, integral business models need to take a sufficiency-based approach, whereby their impacts ensure sufficiency of all capitals, within their broader carrying capacities. Indeed, unless business models achieve these objectives, they will not create the sustainability that is minimally necessary to prevent systemic collapses on the one hand, and on the other hand, serve as the foundation for flourishing.

3.3.2. Defining ‘Integral Business Models’

The modus operandi of the Reporting 3.0 Blueprint process is to test existing and proposed practices against the test of whether they will lead to an overall system that
promises to be fully sustainable, and even regenerative and thriving. What we typically find is that current progress, as important and profound as it is, often falls short of what could logically be expected to be “needed” transformation. In this sense, the Blueprints could be viewed as “required reading” (we say with as much humility as we can, realizing that this sounds pompous.) Reasonable people can disagree with our conclusions, but our goal remains to identify all necessary work toward fit-to-purpose transformation in order to address the magnitude of the urgency. We believe that conventional business models should not be an option. Making “transformation” the new norm is the message of the New Business Model Blueprint. This is also the reason why further chapters transfer the knowledge from the other Blueprints and interpret their tools and methodologies for the use of creating 'integral business models'.

To that end, we propose this new category of “Integral Business Models” which we describe in more depth here. Figure 25 shows differentiators we derived at from comparing existing literature with the current Reporting 3.0 Blueprint Recommendations and tooling. The rest of this chapter concentrates on defining general characteristics and selected areas of implementation of Integral Business Models.

![Figure 25: Integral Business Models: a ‘sixth’ category for new business model design (Source: Reporting 3.0)](image)

3.3.2.1. Design Principles for ‘Integral Business Models’

Earlier in this chapter, we proposed the need to extend the existing thinking in the new business model literature with what we call “Integral Business Models.” And taking our cue from Antony Upward, we recognize the need for design principles (or “enabling constraints”) that define the general characteristics an Integral Business Model must exhibit. And Upward said “[m]uch more work must be done on this topic of design principles,” so we are taking up this gauntlet to contribute to this important work.
In this section, in an effort to further define this new concept, we provide a general specification, identifying its “design principles” as a set of 8 key characteristics that are distinctive to any of the before-mentioned Sustainable Business Models in the literature as a collective. It is important to stress that an ‘integral business model’ cannot live without any of these 8 key characteristics. One can argue that they all overlap, but as you can see from the individual descriptions total integrity can’t be achieved by leaving any of those characteristics out. This is also a differentiator to any of the ‘corridors’ mentioned at the beginning of 3.2. For example, a circular business model in itself will be hard to achieve at all if it doesn’t also think how the economic incentives work on macro level. A sharing business model that avoids to define a multi-capital success measurement will remain incomplete, to name just two examples.

These 8 key characteristics that define the design principles of Integral Business Models are:

- **Micro- / Meso- / Macro-Based:** Sustainability, across economic, social, and environmental dimensions, is inherently nested, with movement at one scale interdependent upon movement at broader and narrower scales simultaneously. Uncoordinated movement (e.g., micro-level change without commensurate meso- and macro-level transformation) can act as a strait jacket of short-term optimization that will produce only incremental outcomes. Backcasting scenarios from the end-goal of a regenerative and distributive Green, Inclusive & Open Economy design is therefore a precondition, and the tools of the other Blueprints are helping with that backcasting (see further down and in chapters 4/5/6). An integral business therefore needs to define its contribution to transformation at all three scales:
  - **on the micro level:** the company’s business model(s) must operate within the carrying capacities of all capitals it impacts, in order to uphold its proportionate responsibility for upholding the necessary and sufficient preconditions for achieving at least sustainability at broader scales.
  - **on the meso level:** in business, new industrial sectoral ecosystems emerge to create new level playing fields and market conditions that enable competition within “invisible band” sustainability constraints; in investment, portfolio construction screens in companies with integral business models and applies forceful stewardship engagement encouraging companies to fulfill their fiduciary duty of sustainable performance across all three bottom lines; and in habitats, commoners create smart social contracts that preserve, regenerate, and enhance the health of capital resources in the commons that are vital to the wellbeing of all inhabitants.
  - **on the macro level:** dynamic equilibrium of cyclical regeneration is established and maintained in ecological, social, and economic systems to enable ongoing creating of system value.
• **Purpose-Driven**: In addition to focusing on excellence in product/service delivery, Integral Business Models embed a larger purpose into their DNA to survive leadership changes and provide a “North Star” for all decision-making. Purpose-driven business models anchor themselves to holistic economic system design and are therefore systems-oriented. Instead of simply curing symptoms (the focus of many current sustainability strategies), Integral Business Models instead take a root-cause approach to addressing such issues as environmental degradation (in all its forms), social injustice and bias, and economic inequality and concentrated wealth distribution. Such root-cause curing applies at the organizational level what its leaders might consider “legacy-building” that can be summarized on gravestone epitaphs. A legacy-building approach needs longer-term-thinking, maturation pathways and backcasting from there to what is needed for the short- and mid-term. Embedding micro/meso/macro views into purpose positioning purpose makes legacy development more efficient.

• **Contextualized (with a Big C)**. Integral Business Models comprehensively assess their impacts within the Sustainability Context of carrying capacity thresholds of all resource systems they operate within. A successful business model insulates itself against risk of environmental, social, and economic risks and opportunities by ensuring sufficient resource stocks and flows within a fair share allocation at the firm level, which scale vertically to meso and macro levels when practice of Sustainability Context scales horizontally at the micro level. Context (with a Big C) is arguably the most fundamental design principle embraced by Reporting 3.0, the golden thread running through all four Blueprints and advocated in the Beta Testing Program, with the Global Thresholds & Allocations Council stewarding governance of Sustainability Context.

• **Multicapitalist**. Integral business models adopt a comprehensive approach across all of the multiple capitals (natural, human, social, financial, built, etc…), in order to embrace a holistic approach to system value creation. Optimizing performance on one capital (e.g. generating financial profit) at the expense of the viability of other capitals undermines business models, so an Integral approach assesses all the vital capitals. Furthermore, when accounting for a company’s total contribution to society, Integral Business Models take care to measure and account for impacts on capitals separately, and refrain from cross-capital “offsetting” – the distorting practice of counting positive impacts on one capital as “credit” against the “debits” of negative impacts on other capitals.

• **Scalable**. Integral business models are designed to scale needed change across the business as well as catalyzing scalable change beyond the business through education, collaboration and advocacy, and towards accelerating bigger systemic change. While this may have altruistic outcomes, it’s ultimately grounded in self-interest, as ongoing business viability and enduring future value creation is contingent upon strong systemic health. This key characteristic is strongly connected with being ‘purpose-driven’ and ‘leadership-driven’. As so often we hear...
'success is dependent very much on how leadership defines it and what our ambition level is'. Scalability of successful 'integral business models' is, as mentioned before, not just dependent on the positioning of the product and/or service defining the core of the business model, but how the Board of an organization also advocates for the economic system design change on meso and macro level. As the Reporting Blueprint explains, this also needs education and collaboration willingness for the life support system this planet provides us with.

- **Leadership-driven.** The Reporting Blueprint and Data Blueprint call for assessing individual development in the context of broader cultural development (Integral Theory / Spiral Dynamics) and cognitive capacity (Work Levels) in order to align leadership roles with their need for understanding of complexity and horizon thinking. None of this is normally covered in any sustainability or integrated report, as if leadership is 'sacrosanct' to the need to learn and adapt to the new realities of business. Aspects like the definition of the ambition level of an organization, the willingness to develop a legacy, the existence of a corporate mindset and thereby a collective worldview, are dependent on the quality of leadership in an organization.

- **Thriveable.** Integral Business Models set their sights beyond sustainability into regeneration and gross positive impact (ie engineering negative impacts out of their design to the degree possible). This ideal state can only be achieved after collective action in industries and habitats and a clear transformation of the economic system design change. The Reporting 3.0 Strategy Continuum, an essential tool first developed for the Reporting Blueprint, and prototyped and tested in the Beta Testing Program shows that being ‘thriveable’ is way beyond sustainability as nowadays understood (namely a redux of the original concept). The Strategy Continuum also reveals that wellbeing for everyone on this planet needs the economic system design changes to be able to move from ideation to reality.

- **Synergistic.** Integral Business Models recognize the interconnected nature of change, and so design interventions that synergize across multiple variables. This approach was propounded in the work of the ThriveAbility Foundation as described in the book *A Leader’s Guide to ThriveAbility* and continued by ThriveAbility Foundation Co-Founder Robin Lincoln Wood in the sequel book, *Synergize* as well as in the paper “Regenerative Inclusive Pathways to a Thriveable 2050: A Framework for Business Model Innovation and the Reporting 3.0 Business Model Blueprint”. It is a worthwhile addition to the Micro / Meso- / Macro-based key characteristic as it adds an action-based layer of creating the synergy between those three levels that are now so often bluntly disconnected. Wood also recommends ‘six pathways to 2050’ as a way to structure thinking and action, laid out in *Synergize* in more depth.

We pick up here on one very relevant consideration – the importance of the meso level impact as one of the most neglected focus area in systems approaches.
Wood identifies 6 C’s and applies them to the system’s approach. With regard to thinking through new business models and thriveable innovation, he identifies context, combinations and constraints (first three c’s) to think through an “outside-in” approach from macro to meso:

Figure 20: An outside-in approach from macro to meso for new business model design (Wood, R. L.: ‘Regenerative Inclusive Pathways to a Thriveable 2050 - A Framework for Business Model Innovation and the Reporting 3.0 Business Model Blueprint’, 2017)

This is combined with containers/platforms, catalysts and connection (second three c’s) to describe an ‘inside-out’ approach from micro to meso.


We present this model here as it clarifies the need for a meso perspective in more depth where, as explained earlier in Figure 16 – most of the impacts materialize, either as an industry impact (the collective impact of an industry to drive thriveable
change) or in a habitat (a place or region in which collective thriveable action of various industry players show an impact) or in an investment portfolio (where selection criteria can help boost investments). Seldom is this articulated in the literature so far, so we emphasize this specific component.

Figure 22 summarizes the 8 key characteristics in one picture:

![Integral Business Model General Characteristics](image)

**Figure 22:** Key Characteristics of an Integral Business Model (Source: Reporting 3.0)

We expect the use of these 8 key characteristics to be an essential check at the beginning of the ideation phase of any new ‘integral business model’ design as well as an evaluation tool for further adaptation or improvement of an existing business model striving for becoming integral. You can see this in the below Integral Business Model Flowchart. This flowchart is our attempt to combine the learning of the other Reporting 3.0 Blueprints into an integral business model creation process, including ideation phase, prototyping phase, go-to-market phase and adaption/improving phase. We are presenting the overall flowchart here and will pick up the parts from the Reporting, Data and Accounting Blueprint in chapters 4, 5 and 6. This flowchart can be used for the design of completely new integral business models (entrepreneurs) as well as for the adaptation of existing business models with the attempt to change them to become integral (intrapreneurs).
Figure 23: The Integral Business Model Design Flowchart for Entrepreneurs & Intrapreneurs (Reporting 3.0)

This flowchart also serves various functions as it combines the integral business model creation process with:

- Tools and methodologies of the Reporting, Accounting and Data Blueprint. E.g., the Reporting 3.0 Strategy Continuum, the Integral Materiality Process, the Data Architecture Flowchart and the Accounting System Flowchart (to be added when ready);
- The clusters of information that we would expect in an organization's (true) sustainability report, namely proper sustainability context and impact assessment, a clear definition of purpose and legacy in the line of that context, a context-based multicapital measurement, and finally a specific view in how far the integral business model is scalable for meso and macro level activities;

We have developed an Integral Business Model Design Template as a self-assessment for entrepreneurs and intrapreneurs. Chapters 4, 5, and 6 will pick up aspects of this template; a complete version can be found in Annex X. Chapter 3.4 excerpts aspects from various case studies that we carried out in the process to finalize this Blueprint.

### 3.3.2.2. Selected Implementation Methods

Making the leap from generic Integral Business Models (IBMs) to specific IBMs to actual companies in the real world – by translating the IBM design principle characteristics into innovative new businesses – requires either patterns (based on known experience) or methods (based on theory Instantiating business models) into:
3.3.2.2.1. Governance & Strategy: From ESG to GSE, from Fiduciary Duty to Strategic Duty

“Business model disruption and competition for increasingly scarce talent—which contribute to major industry upheaval—are also ranked among the top five 2018 trends, suggesting boards are concerned about a dramatic transformation in how enterprise value is created and their companies’ ability to effectively adapt.”

So stated the National Association of Corporate Directors (NACD) in its 2017-2018 Public Company Governance Survey. Indeed, more than half (58%) of the thousand-plus directors and executives surveyed see the need for industry transformation (at the meso level) and almost half (46%) foresee the need for business model innovation (at the micro level).

What they miss (perhaps predictably) are the systemic risks at the macro level, with a mere 6% viewing climate change as an impactful trend. In other words, boards aren’t seeing how current enterprise value creation depends on future system value creation.

![Figure 24: 2017-2018 NACD Public Company Governance Survey](image-url)
Integral Business Models require governors to shift from their current monocular focus on near-term enterprise value creation to a more full-spectrum view of perpetual system value creation across the multiple capitals, fueled by business model reinvention on the micro level that drives industry ecosystem transformation on the meso level to trigger macro level shifts toward flourishing systems.

An Integral Business Model is distinguished by its shift from being driven by an ESG (Environmental, Social, Governance) Push (i.e. external factors “pushing” for the integration of ESG factors, in that order) to a GSE (Governance, Social, Environmental) Pull (i.e. strong internal governance structures drive sustainable financial profitability and future value creation through sustainable environmental and social performance).

The primary change needed at the board level is to expand the time horizon for strategic planning. Research by Organizational Capital Partners finds:

- The longest strategic planning horizon is less than 5 years for 85% of companies surveyed
- The longest horizon for CEO succession planning is less than 3 years for 70% of Directors surveyed

Organizational Capital Partners’ Mark Van Clieaf labels these statistics the “Elephants in the Room,” underlining his call for the shift from ESG to GSE. Alan Willis graphically represented these concerns in the Elephants in the Room figure below (Figure 25).

The lack of strategic duty creates a series of “elephants in the room” that are knowable but not yet comprehensively addressed by corporate boards nor by the investment trustees whose duty is to create sustainable value for investment beneficiaries.

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**Figure 25:** Elephants in the Room Framework (Source: Organizational Capital Partners, January 2018)
3.3.2.2.1.1. Accountability Design & Strategic Duty

Investment trustees and corporate boards have a fiduciary duty to manage the assets under their care strategically, for perpetual returns to their beneficiaries – a duty of care unseen in current asset ownership and management. With Integral Business Models, boards hold themselves accountable not only for the risks they take, but also the risks they make – at all levels, from the local to the global. They see it as their duty to create system value – that is, create value not just for the company and its financiers at the micro level (the doctrine of shareholder primacy), but value for all impacted rightsholders at the meso level and for all the systems it operates in – economic, social, and ecological – at the macro level.

Van Clieaf argues for a maturation of the concept of fiduciary duty to encompass a duty for strategic foresight, making the case that corporate boards and officers – as well as investment trustees – can only fulfill their fiduciary duty by attending to their responsibility to set a long-term strategic vision that attends to sustainable future value creation. He calls this Strategic Duty, a concept that can be tested in legal settings to set a new bar of accountability for those who carry these responsibilities to their beneficiaries. So Integral Business Models will integrate Strategic Duty into their Board design, and integral investors will enact their own form of Strategic Duty by demanding implementation of long-term strategic planning of the boards and officers of their investee companies.

Van Clieaf bemoans the current implementation of fiduciary duty from a compliance mindset, calling instead for a strategic mindset:

The problem with this emphasis on “compliance governance” is that compliance and oversight constitute only a portion of a director’s duty to ensure that the business and affairs of a corporation are managed “by or under the direction of” the board. The ultimate goal of corporations is to continue to create wealth as a viable and growing entity for the long term; directors have a proactive responsibility to ensure that the corporation they serve has those processes and metrics in place — including strategic and financial plans — that they believe will accomplish this end. In other words, they have a “strategic duty,” not just a compliance duty.

Performance Metrics & Periods

Strategic Duty calls for long-term planning, including the following considerations:

- 10 year+ enterprise strategy
- 10 year+ Research & Development (R&D) & Capital Expenditure (CAPEX) plan
- 10-20 year Succession Plan for CEO
- 5-10 year metrics aligned to the strategy
- 5 years+ ESG metrics aligned to strategy
5 year Long-Term Incentive Program (LTIP) design

Says Van Clieaf:

In my clients’ Boardrooms and C-Suites, when we define "sustainability" as sustainable cash flows and returns on invested capital over 10 - 20 years-plus, then we have all the directors’ attention in regards to long term business strategy and the need to invest for innovation for long term performance, including investing in talent assessment / development for four-plus generations of C-Suite executives. This is core to their fiduciary duty as Directors!\(^{51}\)

True Future Value Equation

The core job of Integral Business Models is to create system value, from now into the future. However, measuring this value requires new metrics, such as the True Future Value Equation from the ThriveAbility Foundation – which measures value creation contextually across the multiple capitals, identifying innovation opportunities. There are three primary components:

- The Equation anchors performance with Social and Environmental Sustainability Factors in the denominator, setting the operating space as “safe and just” between ecological ceilings and social foundations à la Kate Raworth’s Doughnut Economics (with data based on science-based goals, according to the principles of context-based sustainability);
- Also in the denominator is a sustainable innovation optimizer for synergizing natural and manufactured capitals;
- The numerator synergizes the “anthro capitals” (human, social, relationship, intellectual) which are the key to creating value through positive impact.

![Thriveable Governance Systems](image)

**Figure 26:** True Future Value Equation (Source: ThriveAbility Foundation)
3.3.2.2.2. Risk & Innovation

The World Economic Forum *Global Risks Report 2018* counterbalances the NACD survey, with climate-related risks as seven of the top eight populating the upper right quadrant of the likelihood / impact matrix.\(^\text{52}\)


Applying this intelligence to the corporate setting, Integral Business Models take a holistic approach to risk, encompassing not only traditional risk categories that impact the enterprise directly, but also broader sustainability-related risks that impact the enterprise more indirectly. Furthermore, integral business models factor not only “internal” risk (i.e. risk to the enterprise from the external environment), but also “external” risk (i.e. risk from the enterprise to the external environment – which of course circles back as risk to the enterprise).
And on the flipside, Integral Business Models similarly approach innovation holistically, viewing sustainability-related factors as “enabling constraints” (that inform the “design principles,” per Upward.) Viewed through this lens, innovation is an ongoing practice that takes a lifecycle approach to business models, acknowledging their natural birth / growth / maturation / decline cycles, and intervening before the decline phase to transform them toward ongoing viability and thriving.

3.3.2.2.2.1. ESG + ERM

There are emerging signs of the integration of sustainability and Enterprise Risk Management (ERM). At the micro level, for example, Lockheed Martin recently created a new position for Matt Swibel, who had headed up the sustainability function there, with the new title combining oversight for sustainability and ERM. And the Moore Foundation is supporting work by the World Business Council for Sustainable Development (WBCSD) and Ernst & Young exploring the intersection of sustainability and ERM. A preliminary report released in 2017 extended work by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) that looks at the relationship between ERM and governance, culture, strategy, and performance.

EY and WBCSD added COSO to the fold for a 2018 report that more comprehensively integrates ERM and ESG / sustainability. They start by identifying the Principles of COSO’s ERM Framework:

**Figure 27:** Principles According to COSO’s Framework (Source: WBCSD & COSO, *Enterprise Risk Management: Applying enterprise risk management to environmental, social and governance-related risks*, February 2018)
The 2018 report builds on this foundation by integrating sustainability considerations into the ERM Framework:

The 2018 report builds on this foundation by integrating sustainability considerations into the ERM Framework:

The ESG-ERM “Wheel” integrates elements of the Reporting 3.0’s vision of next-generation practices. For example, in the first step on Governance, it calls for assesses “organizational bias,” reflected in r3.0’s Positive Maverick attribute of challenging “the constraints, structural limitations, unconscious biases and shadow agendas of the systems, networks, institutions and organizations they work in and with.” The ESG-ERM Wheel also largely overlaps with the r3.0 Integral Materiality Process (discussed further in Chapter 4).

However, the ESG-ERM model falls short of the level of ambition promoted by r3.0 – for example by recommending scenario analysis, in line with the Task Force on Climate-Related Disclosure (TCFD), but only implicitly pointing toward the need for Transition Planning (discussed in more depth in the subsequent section.)

Perhaps more significantly, the COSO Framework upon which the ESGERM report is based essentially takes an internal approach to risk – framing risk as something that impacts an enterprise. This neglects to address the risk that company impacts impose on external to the enterprise – and that circle back around to impact the enterprise in the form of “systemic risk.”
This issue of systemic risk management (on top of enterprise risk management) rises in significance when shifting from the micro-level lens of individual enterprises, to the meso-level lens of investment portfolios, particularly for “universal investors” whose portfolios essentially hold the entire economy. Such investors are increasingly recognizing the reality that “beta” is not necessarily endogenous, as Modern Portfolio Theory assumes, but rather exogenous. In other words, systemic risk erodes “beta.” Raj Thamotheram and Ed Waitzer capture this in their November 2017 IPE Magazine piece, “Long-Term Matters: Elephants in the Sustainability Room”:

Managing risks and rewards at the systems level (environmental, social, financial) while at the same time achieving competitive returns at the portfolio level is among the most difficult challenges facing corporate and asset owner fiduciaries/managers.55

3.3.2.2.2.2. Innovation

Counterbalancing the downside risk associated with (un)sustainability is the upside opportunity of innovation that addresses sustainability, according to Van Clieaf and Cathy Hansell:

COP21 – like the SDGs – is bounded by a 30-year+ planning horizon. Both goal sets are just beginning to be part of companies’ business and innovation strategies by way of R&D and CAPEX plans for long-term value creation. This transition includes sustainability and environment, social and governance factors (ESG) being transformed away from primarily legal compliance, operational impacts on processes and downside risks to longer term, upside value creation.
The downside risk view considers how ESG and sustainability scenarios may negatively impact revenues, margins and cash flows from current operations, and thus may adversely impact company long-term valuation.

However, the International Energy Agency (IEA) has shifted the global playing field to the ‘upside’. It has modelled the less than 2 degree centigrade COP21 target by 2050, demonstrating the need for business model transformation and electrical grid/ distributed eco-systems transformation to achieve 95% clean power systems for the world. Yes, 95% clean power is the required business model change to be COP21 aligned.\(^{56}\)

Van Clieaf, Hansell, and their Organizational Capital Partners colleagues take a lifecycle approach to business model innovation, recognizing the need for dynamic balancing of current enterprise value creation with future system value creation, as a means of creating “evergreen” sustainable value creation. Specifically, Organizational Capital Partners maps business models into a lifecycle flow (Figure 30), delineating nine distinct phases that correspond to nine value quadrants (Figure 31).\(^{57}\)

![Figure 30: Corporate Lifecycle Stages & Future Value That Align to 9 Value Quadrants (Source: Organizational Capital Partners)](image-url)
Clearly, the goal is to align business models toward the upper right quadrant (3), such that downward migration (4) triggers the need to innovate in order to refresh business models. All directors of companies should know which value quadrant they are in relative to their peers and their industry as part of strategy review, strategic goal setting, long-term incentive program design and CEO succession and selection. So stated a Public Comment Letter from the Network for Sustainable Financial Markets (NSFM) to the Taskforce on Climate-Related Financial Disclosure (TCFD) that was lead-authored by Van Clieaf.

Designing Regenerative Cultures author Daniel Christian Wahl applies the “Three Horizons” approach conceived by Bill Sharpe and colleagues at the International Futures Forum, where Horizon 1 (H1 – in red in Figure 32 below) is “business as usual”; Horizon 2 (H2 – in blue) represents the “world in transition”; and Horizon 3 (H3 – in green) is how we envision a “viable world.”
Note that business model lifecycles can be mapped onto this framework, with H1 representing the standard trajectory of business model lifecycles. Integral Business Models seek to bridge H1 with H3 via H2 innovations. Wahl adds nuance to this kind of bridging innovation, pointing out that it's useful to classify H2 innovations into two categories. The first category is called H2 minus. H2- innovations change the technology employed and therefore disrupt “business as usual” temporarily but without leading to a profound systemic transformation. The second category is H2 plus. H2+ innovations offer a bridge to H3, leading to a structural change and transformation of the system in question.\(^{59}\)

Applying this thinking to business model lifecycles, the Integral Business Model approach is to consistently seek H2+ innovation when business models mature into quadrant 4, “Create Innovation Renewal.”

### 3.3.2.2.3. Scenario Analysis & Transition Planning

Bridging current realities with future potentialities requires a certain amount of crystal-ball-gazing – otherwise known as scenario analysis, when implemented with discipline. And analysis alone is useless without innovative planning for transition in response to the most likely unfolding future.

#### 3.3.2.2.3.1. Taking the Long View: Scenario Analysis

Scenario analysis is certainly not new, according to Peter Schwartz in *The Art of the Long View*. The discipline emerged post-World War II, with the US Air Force imagining what its opponents might do, then entered corporate consciousness via Herman Kahn, who applied Air Force learnings to business prognostication that reached a state-of-art with Shell's London Group Planning office in the 1970s.\(^{60}\) However, it is safe to suggest a gap between Shell's future visioning and its business
modeling. Alex Steffen would call this predatory delay, or the conscious choice to postpone known transformation imperatives in order to profit off the “spread” between recognition and action.61

The TCFD has clearly raised the bar for mainstream financial reporting as it relates to sustainability issues – specifically climate change. In particular, the TCFD Recommendations, released in June 2017, prominently endorse scenario analysis as a key strategy for assessing future business model viability.

One of the Task Force’s key recommended disclosures focuses on the resilience of an organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C Celsius or lower scenario. An organization’s disclosure of how its strategies might change to address potential climate-related risks and opportunities is a key step to better understand the potential implications of climate change on the organization. The Task Force recognizes the use of scenarios in assessing climate-related issues and their potential financial implications is relatively recent and practices will evolve over time, but believes such analysis is important for improving the disclosure of decision-useful, climate-related financial information.62

The actual Recommendation itself calls for companies to “describe how resilient their strategies are to climate-related risks and opportunities, taking into consideration a transition to a lower-carbon economy consistent with a 2°C or lower scenario…”63 The term “transition” is important here, as it applies to the overall economy at the macro level, but is not applied at the micro level: the transition of the company’s own business model in response to the scenario analysis.

3.3.2.3.2. From Scenario Analysis to Transition Plans

Preventable Surprises (PS), a member of this Blueprint’s Working Group and a r3.0 Advocation Partner, has for several years been calling for transcending (and including) scenario analysis by producing Transition Plans for transforming business models in light of climate change (and other sustainability impacts). After engaging its global network of Positive Mavericks, PS decided to focus its efforts first on the energy utility sector as the most strategic leverage point. It produced a Guidance Note for companies in the sector, as well as investors with exposure to the sector and thus opportunities to conduct forceful stewardship engagement consistent with their strategic fiduciary duty.

Companies and investors must work together to understand the implications of the transition to a clean power system, which must occur by 2050. Failure to do so threatens shareholder value and the possibility of meaningful emissions reductions. To facilitate discussion between investors and utilities, we developed this guidance note focusing on eight key questions. The publications cover emissions goals; the development of new business models
that take account of new opportunities, new technologies and new entrants; the capital expenditure required for the transition; and the internal changes to personnel and incentives needed to facilitate the transition.  

The market is starting to respond. While the lion’s share of <2°C shareholder resolutions since 2016 ask for scenario analyses, one resolution (at the utility Southern Company) has asked for transition plans, with strong support (34%) in 2016 and near-majority (45.7%) support in 2017. That year that saw majority support for scenario analysis resolutions at Occidental (67.3%), ExxonMobil (62.1%), and PPL (56.8%).

In 2018, the tide is starting to turn – with transition plan resolutions filed at Chevron, ExxonMobil, and Valero. And companies are starting to produce transition plans. For example, on 6 February 2018, American Electric Power produced a Strategic Vision for a Clean Energy Future 2018 report that presents a plan to “transition to a more balanced resource portfolio will help mitigate risk for our customers and shareholders alike and ensure a more resilient and reliable energy system into the future,” said CEO Nicholas Akins.

3.3.2.2.4. Roles & Strategic Leadership

Business models come to life when we humans breathe them into being. Indeed, businesses are nothing more than collections of people aligned around a common purpose. The key to meeting companies’ micro, meso and macro challenges is to align people’s roles to their cognitive capacities.

3.3.2.2.4.1. Work Levels, Enterprise Value & System Value

Organizational Capital Partners pursues such a “Work Levels” approach, calculating Enterprise Value as the sum of Current Value and Future Value. The metric distinguishes itself by aligning value creation with Work Levels, which correlate to individual cognitive capacity, particularly around time horizons for strategic thinking and accountability (and by extension, organizational innovation capacity). Current Value creation is associated with the lower Work Levels with more transactional innovation capacity and shorter strategic horizons, while Future Value is associated with the higher Work Levels with more complex innovation capacity and longer strategic horizons (over two decades at Work Level 7).
From an Integral Business Models perspective, the Work Levels approach (which traces its roots to the work of Elliot Jacques\(^67\)) addresses

- micro-level business model innovation (with 5-10 year strategic horizons) at Work Level 5;
- meso-level industry structure / habitat ecosystem transformation (with 7-20 year strategic horizons) at Work Level 6; and
- macro-level economic system transformation (with 20+ year strategic horizons) at Work Level 7.

The higher Work Levels transcend and include the previous Work Levels, so Work Level 7 encompasses the considerations of all the lower Work Levels.

In implementing Integral Business Models, entrepreneurs and intrapreneurs will ideally work at Work Levels 5 (micro / 5; meso / 6; and macro 7).

3.3.2.2.4.2. **Compensation & Incentives**

Van Clieaf also contends that current board setting of compensation and incentive structures are misaligned with sustainable future value creation, and are instead focused on short-term profitability (often at the expense of long-term value creation). Such entrenchment is further reinforced by investors (including ESG investors), who overwhelming approve these Pay for Performance packages and Say on Say votes. This dynamic further entrenches unsustainable business models, because the compensation structure isn’t incentivizing sustainable business models. For example,
the study mentioned above also found the longest performance period is less than 4 years in long term incentive planning (LTIP) design for 80%+ of surveyed companies.

Van Clieaf sees the opportunity to further link compensation to long term planning aligned with the achievement of societal sustainability targets, such as the COP21 / Paris Agreement targets of below 2°C global warming and the more concrete IEA goal of 95% renewable energy by 2050.

3.4. Case studies

The design of an integral business model and the flowchart discussed in the earlier parts of this chapter (supported by the forthcoming chapters 4, 5 and 6) are an ideation that until now have not been applied in practice. However we got interest from several startup organizations to test the flowchart and the advice given in this Blueprint. Reporting 3.0 developed a template in which organizations can self-assess their awareness, readiness and to-do's to validate their existing (young) businesses. Three case studies will be worked out to exemplify steps for further implementation.

Figure 34: Key Characteristics of an Integral Business Model (Source: Reporting 3.0)
Entrepreneurs

The three startup companies are:

**VDMBee – IT sector:** VDMbee is a Value Management Platform that enables companies to map their business models and project implications from various strategic scenarios. The platform is built around a Business Model Portfolio that utilizes Multi Business Model and Technology Innovation (BMI) to assess variables of business model options. In order to enable Integral Business Model projection, VDMbee is integrating the MultiCapital Scorecard into its platform as a Reporting 3.0 pilot project under the Beta Testing Program.

**Homie – Circular Economy** – Home appliances sector: Homie is a TU Delft spin-out, on a mission to transform the global white goods industry and minimize its ecological footprint. With Pay-Per-Use we introduce a unique circular business model that combining sustainable production and sustainable use. Their solution is based on avoidance of customer ownership of white goods by shifting towards a product-service-system, in which users only pay for using a home appliance. As a representative of the circular business it is interesting to review the business model from the perspective of the 8 key characteristics and learn about the added value of integral business model design.

**ReBlend – Circular and Sharing** – Fashion/Apparel sector: Over 3% of all available water on earth is used in the textile industry every year. In 2030 the demand for water will be 40% above supply if we keep making textiles like we do. It is time to challenge

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**Figure 35:** The Integral Business Model Design Flowchart for Entrepreneurs & Intrapreneurs (Reporting 3.0)
the fashion status quo by making fabrics & fashion with minimal use of water. ReBlend truly believes in the need to think and act differently. That is why ReBlend develops high quality fabrics and a ReBlend collection of fashion and beyond. And ReBlend enables designers and brands to put circularity into practice by collaboration and co-creation projects. The ‘integral business model design’ will help to challenge the boundaries of the ReBlend business model with regard to the full potential. Aspects like synergy-based, context based, multicapital-based are of specific importance with regard to the case study that will be worked out with ReBlend.

Intrapreneur Case Studies

To be added

This concludes chapter 3 of the New Business Models Blueprint. We aimed to showcase the need for a wider and more concise perspective on new business model creation, deriving from existing literature and earlier Reporting 3.0 outcomes.

Chapter 4, 5, and 6 will take this outcome into more practical applications in the areas of Reporting, Data and Accounting. These chapters should give new business model intrapreneurs and entrepreneurs more hands-on guidance in applying the new business model approach.
4. Reporting

Reporting 3.0 released the final report of the Reporting Blueprint at the 4th International Reporting 3.0 Conference in May 2017, and so its Recommendations are ripe for integration into the subsequent Blueprints – particularly this New Business Models Blueprint, which leans heavily on other Reporting 3.0 thinking.

4.1. Shortcoming of Existing Reporting Standards

We have laid out the shortcomings of current reporting standards in the Reporting Blueprint chapter 3.2.6. We are picking up on these shortcomings here to analyze and clarify in how the integral business model design needs to adapt and take further actions based on these shortcomings.

We specifically assessed that:

- Sustainability Context is chronically forgotten in GRI-based sustainability reports due to the neglect of the sustainability context principle. An attempt to include an impact assessment as a pre-step to define context for impacts was recommended in the G4 draft, but again take out in the final version. A proper context integration process was never further enforced since then (G4.1. and GRI standards).
- Current reporting standards don’t follow a multicapital approach, but are topic-focused based on the differing materiality processes whose depth and focus are based on which preference is given to certain stakeholder groups. Some standards are focusing on financial risk for stakeholders whereas GRI takes a multistakeholder approach.
- Focus only on company-produced data, and not thinking about designing indicators that fundamentally explain the performance of an organization vis-a-vis thresholds and allocation. From an indicator perspective GRI reporting delivers numerator data while the denominator data are missing. Excluding that information due to non-availability is less and less an argument towards rightsholders who can demand a ‘right to know’ from companies who are responsible for duties & obligations based on their business model and impacts.
- There is no link to meso and macro level considerations in sustainability reports that can be based on impact assessments based on thresholds & allocations. So whatever a company or business model designer says, how do we know its really integral and ‘good enough’ to create systemic impact.
- Reporting standard strongly focus on ‘less footprint’ instead of ‘more handprint’. We have put much emphasis on doing less bad and reducing negative impact. This – on aggregate- hasn’t brought us anywhere closer to what really excites people, and that is creating positive impact (while not losing to reduce negative impact out of sight). The discussed ‘Future Value Creation’ actually combines both.
- The 8 key characteristics of an integral business model include to be purpose-driven and leadership-driven. Outcomes of these would be a higher capability of any organization to adapt and allow transformational change. It needs to close
what we called the ‘organizational transformation gap’ and the socio-cultural leadership gap, both not at all described in sustainability reporting, that, as we learned, isn’t even offering information on how to close the Sustainability Context gap.

The Integral Business Model design will move away from these shortcomings completely, mainly based on the integral approach that the two most prominent tools from the Reporting Blueprint of Reporting 3.0 offer: the Reporting 3.0 Strategy Continuum (SC) and the Reporting 3.0 Integral Materiality Process (IMP). They are built into the Integral Business Model Flowchart at those places where it makes best sense of using them.

4.2. The Green, Inclusive and Open Economy Principles and the Six Desiderata

Before delving into tooling for the Integral Business Model Process Workflow we’d like to remind of some basic considerations about what a Green, Inclusive and Open Economy actually means, and in how far it builds out the mindset on which we’re basing our deliberations.

The Reporting 3.0 Reporting Blueprint coined the saying, “there is no sustainable business in an unsustainable world,” a more concise version of the earlier mentioned quote from Stubbs & Cocklin in our fifth category of Sustainable Business Models:

Organizations can make significant progress towards achieving sustainability through their own internal capabilities, but ultimately organizations can only be sustainable when the whole system of which they are part is sustainable.  

Both of these statements hearken back to the philosophy of Plato linking the part to the whole. The Reporting Blueprint picks up on this “micro-macro link” by asserting the need to transform the economic system design to a green, inclusive and open economy. In other words, an economy based on what John Fullerton of The Capital Institute calls Regenerative Capitalism, in particular its two (of eight) principles focused on Balance (regenerate the multiple capitals by respecting systems balance) and Robust Circulatory Flow (circulate value instead of extracting and concentrating it). Kate Raworth picks up on these threads in her work on Doughnut Economics by calling for the transformation to an economy that is regenerative and distributive by design.  

This link between the micro (firm) level and macro (economy) level undergirds the Reporting 3.0 framework and respective tooling, as laid out earlier and in the Reporting Blueprint and Data Blueprint, which warrant coverage here:

- **Six Desiderata and Nine Principles:** Chapter 3 of the Reporting Blueprint describes an ‘ideation of the Green, Inclusive and Open Economy’ through Six Desiderata and Nine Principles. These are helpful to new business model intrapreneurs and entrepreneurs as guideposts for interlinking organization-level
design with systems level considerations, in order to align with normative foundations of an ideal end-state.

<table>
<thead>
<tr>
<th>Sustainability: Natural Capital; Manufactured Capital</th>
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</thead>
<tbody>
<tr>
<td>1. A circular and regenerative economy</td>
</tr>
<tr>
<td>a. Natural and man-made materials and ecosystems are regenerated through circular economic processes</td>
</tr>
<tr>
<td>b. All impacts are managed proportionately to the carrying capacities of the multiple capitals</td>
</tr>
<tr>
<td>2. Long term resource planning for intergenerational equity</td>
</tr>
<tr>
<td>a. Technologies, Products, Services and Businesses are designed for durability to continue serving future generations</td>
</tr>
<tr>
<td>b. Innovations are inspired by natural systems by engineers, designers, entrepreneurs and others working with the grain of nature</td>
</tr>
<tr>
<td>Organizational; Intellectual Capital; Financial Capital</td>
</tr>
<tr>
<td>3. A transparent and level global playing field that delivers True Value</td>
</tr>
<tr>
<td>a. Apply accounting principles that measure true costs including externalities, and calculate true returns with full transparency</td>
</tr>
<tr>
<td>b. Level the playing field towards renewable and regenerative industries through true taxation and incentives</td>
</tr>
<tr>
<td>4. Strategic Decision-Making to Scale-Up to Thrive Able Sectors</td>
</tr>
<tr>
<td>a. Nurture multi-stakeholder collaboration to amplify and scale up positive impacts and increase advocacy for a green, inclusive &amp; open economy</td>
</tr>
<tr>
<td>b. Investment decisions based on the solutions of the 3-Cap Challenge dimensions (new measurement needed)</td>
</tr>
<tr>
<td>Socio-Cultural: Human Capital; Social Capital; Reputational Capital</td>
</tr>
<tr>
<td>5. Holistic Education to Develop Complex Systems Thinking &amp; Leadership</td>
</tr>
<tr>
<td>a. New open business models for education that integrate physical wellbeing, mental depth, emotional maturity and spiritual development</td>
</tr>
<tr>
<td>b. Developmental pathways based on co-working and co-creation between disciplines and sectors that are aspirational and compelling for future generations</td>
</tr>
<tr>
<td>6. Governance Systems Aligned to Inclusive Stakeholder Wellbeing</td>
</tr>
<tr>
<td>a. Radically inclusive and transparent governance structures that serve the different priorities and needs of different developmental levels</td>
</tr>
<tr>
<td>b. Innovative structures for new approaches to interworking between governments, NGO’s, businesses and academia that focus on stakeholder ThriveAbility</td>
</tr>
</tbody>
</table>

**Figure 36:** The Reporting 3.0 Six Desiderata (Source: Ralph Thurm, *Reporting Blueprint: A principles-based approach to reporting serving a green, inclusive & open economy.* Reporting 3.0, 2017.)

- The **Six Desiderata** are structured according to the Triple Bottom Line and clustered around the Multiple Capitals. The Desiderata propose vital design
elements for a regenerative and distributive economy to which new business models entrepreneurs and intrapreneurs can align their organization-level design.

- The **Nine Principles** introduce values-based considerations and due process recommendations that can be applied to new business model generation:

![Figure 37: Nine Principles Supporting Disclosure Serving a Green, Inclusive and Open Economy (Source: Ralph Thurm, Reporting Blueprint: A principles-based approach to reporting serving a green, inclusive & open economy. Reporting 3.0, 2017.)](image)

The nine principles served the design of new the impetus for reporting as laid out in the Reporting Blueprint and chapter 4.3. here, which in turn informed the design of the tools now described in chapter 4.4.

4.3. **The New Impetus: Purpose, Success Measurement, Scalability**

**The New Impetus for Reporting:** The *Reporting Blueprint* proposes a new framework for reporting, covering **Purpose, Success** and **Scalability** for telling the ‘story’ of new business model instigation. These three lenses offer a series of questions for disclosures to answer:
**Purpose:**
- What beneficial “reason-to-exist” does the business model assert?
- How does the business model assess root-cause solutions to establish its ‘right-to-exist’ claims?
- What legacy does it aim to build?

**Success:**
- Does the report take a context-based, multicapital approach to success measurement?
- Does the report handle failure transparently, comprehensively, and accountably, accompanied by proposed remedies?
- What is the horizon for the board and officers to measure true future value creation, and how does this tie into governance decisions, strategy setting, enterprise risk management, compensation, performance metrics, and valuation?

**Scalability:**
- How do intrapreneurs scale transformation to sustainability and beyond across the entire business – and catalyze it throughout the value cycle?
- How do entrepreneurs build scalable impact into new business models?
- How does the business model and the corporate leaders activate and accelerate transformation of the economic system design?

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**Figure 38:** The New Impetus for New Business Model Disclosure (Source: Ralph Thurm, Reporting Blueprint: A principles-based approach to reporting serving a green, inclusive & open economy. Reporting 3.0, 2017.)
The new impetus is also helpful to envisage to tell the story about the integral business model. As we’ve seen from the eight characteristics it needs all parts of the organization to share the same vision, if small or big. The Reporting Blueprint’s new impetus is the right mechanism to prepare that storytelling right from the outset. What can be avoided is the typical ‘beginner’s fault’ in which – starting with reporting to funder like venture capitalists or other investors – the ROI is implemented as the only measure of success. Describing an ‘ROI for sustainability’ will always fall short of a more holistic context-based multi-capital success ultimis test that looks at the total contribution. Also, the components of the now following Strategy Continuum and Integral Materiality Process will be needed to fully satisfy such reporting based on the new impetus.

We know from yearly Edelman studies that trust in corporations (and their business models remains at very low percentages, whereas the translation of sustainability into innovation is prey to the transformation capabilities and missing leadership levels of corporate leaders. We also know that a resilient economy is far from sight given a 1.7 planet's ecological footprint. Current sustainability reporting has no answers how to solve these challenges, while transparency is known to be one of the best triggers of change – if done right. The new impetus aims at reviving this trigger function.

4.4. The Strategy Continuum and the Integral Materiality Process

The Strategy Continuum and the Integral Materiality are two essential tools embedded in the Integral Business Model Flowchart.

- **The Reporting 3.0 Strategy Continuum**: After framing the need for new business models to spur the emergence of a Green, Inclusive and Open Economy, the Reporting Blueprint asks the question: what strategies would best realize this objective? Enter the Reporting 3.0 Strategy Continuum.

![Figure 39: Reporting 3.0 Strategy Continuum (Source: Ralph Thurm, Reporting Blueprint: A principles-based approach to reporting serving a green, inclusive & open economy. Reporting 3.0, 2017.)](image)
First, here is a general take that we used for plotting existing sustainability strategies into the continuum. This helps as a first nearing to generally understand where and why an integral business model in the down left quadrant. Several of the eight key characteristics come to the front, e.g. context-based, multicapital-based, micro-meso-macro focus, thriveability-based, etc..

This figure has proven one of the most clarifying and at the same time challenging in the Reporting Blueprint, as it offers a two-dimensional means of mapping the maturity of strategies triggering the achievement of sustainability, regeneration, and thriving on the one hand, and economic system transformation on the other hand. Reporting 3.0 has been working with Beta Testing Program Working Group Members to map their current practices as well as their existing goals onto the dual-axis continuum. This has led to the exploration of additional uses of the Strategy Continuum:

![Strategy Continuum Diagram](image)

**Figure 40**: Uses of the Strategy Continuum of Reporting 3.0 for the design of integral business models (Source: Reporting 3.0)

An empty Strategy Continuum can be used to plot ideas around a future business model, assessing it with regard to the ambition level that is connected to it, as well as to assess how far meso and macro aspects are obstructions and/or potential benefits. A generic positioning of a business model ideation is the outcome of this assessment.

Perhaps more importantly, we worked together to spec out “Maturation Corridors” and more specific “Maturation Pathways” for moving into the target zone of the lower right quadrant.
For **intrapreneurs**, it is a ‘reality check’ on ‘what is’ and an ambition level check with regard to ‘what should be’. It also clarifies the need to understand and then act upon more than just a product or service portfolio, but to address an overall portfolio of responsibilities for business leaders to advocate for change at the micro (firm), meso (sector), and macro (economy) levels.

The Strategy Continuum also mentally prepares **entrepreneurs** for designing Integral Business Models. Whereas intrapreneurs are challenged with reverse-engineering unsustainability out of their business models, entrepreneurs have the opportunity to design new business models “from scratch,” and the r3.0 Strategy Continuum can focus attention on the “sweet spot” of the lower right quadrant that encourages thriving at the micro (firm) and macro (economy, ecological, and social) levels.

At the same time, the Strategy Continuum also shines a light on the risk of business models that fall short of sustainability and economic system design change.

**Figure 41**: Reporting 3.0 Strategy Continuum with Maturation Pathway
(Source: Reporting 3.0)
Clearly, this latter challenge cannot be achieved alone, that’s why the Reporting Blueprint clearly lays out the need for education, advocation, and acceleration in the following New Impetus.

Finally the Strategy Continuum can be used for effective goal-setting based on both axis, including and IS to PLAN roadmap, as well as to control & to evaluate performance after the go-to-market phase.

**Figure 42** shows the areas in the integral business model flowchart where the Strategy Continuum can be best positioned for use:

- **The Integral Materiality Process**: while the above mentioned variations of the Strategy Continuum help to describe, position, and clarify ambition levels, we developed the ‘Integral Materiality Process’ to embed the consequences of the use of the Strategy Continuum into process steps for actual implementation and integration. This redefined materiality process correlates perfectly with what we will later describe as key elements of the ‘Integral Business Model’. We refer to the main steps in the Reporting Blueprint in detail, but in short it refers to ‘external contextualization’ through definition of rightsholders, areas of impact, thresholds & allocations, as well as ‘internal contextualization’ through governance, risk, innovation, leadership, target-setting and controlling thereof. And in the final steps of the Deming Wheel (the “Act” aspect of the Plan-Do-Check-Act Cycle), we tie back to industry and the broad economy, as well as to society and natural ecosystems to close the loop to meso- and macro-level transformation needs.
The IMP is designed to help an integral business model entrepreneur and intrapreneur to build the necessary information and process infrastructure in the form of a Deming wheel. The application of those phases best belong in the prototyping and evaluation phase of the integral business model flowchart. As mentioned earlier, it’s not the product and/or service alone that is important for the success of an integral business model, it’s also dependent from the whole information infrastructure around it.

Figure 43: The Reporting 3.0 Integral Materiality Process (Source: Reporting 3.0)

Figure 44: Using the Integral Materiality Process in the prototyping and go-to-market phase of the integral business model flowchart (Source: Reporting 3.0)
4.5. Recommendations

[to be added after case studies are finished: should contain tips for entrepreneurs and intrapreneurs, but should also focus on investors in their capacity to supply support of integral business models]
5. Accounting

The Accounting Blueprint development is paralleling the New Business Models Blueprint development, with both in Exposure Draft 2.0 phase – which is close enough to complete to start integrating elements from the former into the latter.

5.1. Shortcomings of Current Accounting Standards

The Reporting Blueprint clearly advocates for context-based multicapital accounting as a basic litmus test if a company can call itself ‘sustainability’, best per capital they depreciate (destroy value) and appreciate (add value). This already differentiates ‘integral business model’ description from any other business model tooling so far. Embedded into a seamless data flow from micro-performance through meso-performance (of an industry, a portfolio, or a habitat) up to the point of assessing how such accounting clarifies the need for regulators and/or standard setters to adjust an economic system incentive design, the information gathered and the accounting necessary to translate data into information for a future-ready assessment if an ‘integral business model’ serves a green, inclusive and open economy is not yet available. In that sense the Blueprints and their work ecosystem define an ideation of a setup that can be integrated piece by piece, step by step, learning by learning. It will surely take a decade or maybe longer until this system is globally applicable and globally accepted and in place, maybe even longer. From our perspective it is necessary to start building this information infrastructure right into the design of an ‘integral business model’, also in realization of the 8 key characteristics that we defined in chapter 3.

It is good to repeat from the Accounting Blueprint that there are currently 3 disconnected accounting disciplines – financial accounting, management accounting and sustainability accounting. While management accounting is not regulated and standards-driven, it is dependent though from the rules and regulations of financial and non-financial (=sustainability) accounting. The three are also not taught together and mostly also not coordinated within one department of an organization. The Accounting Blueprint asks for a convergence of the three, as the below figure shows.

![Figure 45: New accounting as a comprehensive discipline - three accounting subdisciplines lay the foundation for diverse communications (Source: Reporting 3.0)](image-url)
A context-based and multicapital accounting system converging these three disciplines would also help in designing the necessary pieces as described in the Integral Materiality Process, our recommended management p-d-c-a process and as described in chapter 4. Many of the 12 steps are reliant on information from context-based multicapitalism.

The Accounting Blueprint therefore also asks for a redefinition of the reporting principles. The below figure shows how the principles pick up aspects from the other Blueprints: ‘Relevance’ is a consequence of the neglect of sustainability context when defining materiality, and ‘Multicapital’ is based on a holistic success measurement that all Blueprints pick up on. This set of principles is also based on a p-d-c-a logic.

<table>
<thead>
<tr>
<th>Relevance (symbiosis of sustainability context and materiality)</th>
<th>Sound &amp; Quality Governance (accountable stewardship, integrity, trustworthy, continual improvement)</th>
<th>Intertemporal Value (integrated impact, weighing implications of actions for future, longer term value)</th>
<th>Integrated Risk &amp; Opportunity Management (probability &amp; magnitude, compliant &amp; innovative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic (dynamic business logic, forward looking)</td>
<td>Responsive Entity (entity-specific but open, transparent, responding to stakeholders)</td>
<td>Comparability (consistent and standards-aligned)</td>
<td>Decision-useful &amp; Actionable (measurability, clarity &amp; timeliness)</td>
</tr>
<tr>
<td>Multicapital (interconnected, circular)</td>
<td>Interdisciplinary (integrating inputs from diverse disciplines, teams)</td>
<td>Assurability (verifiable, replicable, transparent on method)</td>
<td>Faithful Representation (reliable, accurate, objective, balanced &amp; complete)</td>
</tr>
</tbody>
</table>

**Figure 46:** Recognized Comprehensive Accounting Principles as the basis for Reporting 3.0’s ‘New Accounting’ (Source: Reporting 3.0)

As a result of current accounting we have profit & loss accounts that are focusing on financial capital only, whereas multicapital accounting is needed, also to take into account thresholds and allocations, externalities, and non-monetary information in the valuation of the multiple capitals. Balance sheets are falling short of answering what the difference between book value and market value entails as they do not differentiate between owned assets (e.g. human and intellectual capital) and shared assets (e.g. social and natural capital). In addition there is no view on long-term risks (and opportunities). Finally, narrative reporting falls short in deepening necessary information and especially fails to address the new quality of ‘ethical management’ and
its consequences for corporate governance. This is where this Blueprint hints towards aspects of renewed accounting for the design of ‘integral business models’.

5.2. Creating the Basic Infrastructure that Integral Accounting Needs to Offer

We used the below figure in chapter 4 already where we elaborated on the Integral Materiality Process. In this chapter we want to alert to the accounting consequences. We propose to set the seeds for integral accounting in the prototyping phase of a new and integral business model. This would be the moment where the implementation of the integral materiality process would go hand in hand in planning the necessary accounting steps.

Figure 47: Preparing a revised accounting for success (Source: Reporting 3.0)

In addition to that the Accounting Blueprint also advises a full Accounting Department cycle that would later be implemented fully, but its instigation and implementation starts in the prototyping phase of integral business model design.
Figure 48: Accounting Department Cycle supporting the integral business model design (Source: Reporting 3.0)

The Reporting and Accounting Blueprint especially concentrate on the shortcomings of the current materiality principle. It was advised to combine materiality and sustainability context into one principle called ‘relevance’. As a shortcut to the full description of the process flowchart the following steps are rudimentary aspects to take care of when starting to build out the accounting infrastructure for an integral business model, as also advised in the Integral Materiality Process:

- Map your Integrated Value Creation Process, including Value Proposition and Business Model with their associated intended impacts
- Assess your Impacts, including impactful unintended consequences of your business, relying on scientific opinion on risks associated with carrying capacity and impacts on vital capitals
- Assess innovation opportunities, including opportunities around enhancing use of different capitals and ways of turning negative impacts or risks into opportunities and positive impacts
- Consider your organizational Policy, Values and Strategy, including different types of values such as business values, ethical values, behavioral values and cultural values
- Consider industry and market trends, including peer behavior, evolving industry norms, standards and foresight
- Consider societal trends, including societal behavior and norms, governmental laws and regulations
- Engage with prioritized rightsholders on findings related to the above, seeking to improve understanding, prioritize topics and validate your management approach
- Discuss conclusions from the above with internal leadership, agreeing on follow-up actions in view of implications for accounting systems, processes, data requirements, different disclosure documents and aligned performance communications
The Accounting Blueprint also advises on a set of changed designs for the income statement, balance sheet and recommends to add a statement of long-term risk and aligning all three of them with a better narrative, especially how corporate governance is creating the creative processes necessary to have a constant push on continuous improvement.

Figure 49: Statement of Full Comprehensive Income (Source: Reporting 3.0)

The multilayered Statement of FCI presents (i) Other Comprehensive Income, (ii) Value Added Distributed, as well as (iii) Indirect Benefits and Costs to arrive at a total FCI. It separates internalities (covered in the Value Added Distributed section) and externalities (covered in the Indirect Benefits / Costs section). The former presents monetary values based on recorded transactions between the reporting entity and others, while the latter presents monetary values based on scientific estimations. The items listed under the former covers the fields of ID Materiality and ED Materiality, while the items listed under the latter cover the fields of ED Materiality and EI Materiality. Breakdown categorization of the items in the externalities layer can be refined to reflect capitals such as Human, Societal and Relationship, as well as Intellectual Capital. The “external” dimension of Human Capital in the form of “own employees” relates to issues such as work/life balance and the health impacts of societal phenomena such as epidemics.
The Accounting Blueprint also presents an expanded balance sheet, the Comprehensive Statement of Financial Position for the current or past year. It adds a new layer to the conventional balance sheet, referring to the market value of the enterprise to come up with a new total which is Total Comprehensive Liabilities including market capitalization of Owners Equity. The market value and associated Price/Book Value Ratio is calculated on the basis of share price as at 31 December. To avoid the impact of short-term shock events, the share price can be taken as the average price of the last month.

On the left-hand side of the expanded balance sheet, the reporting entity is invited to give its estimation of the relative contribution of its non-purchased IAs with indefinite life to the difference (gap) between market value and book value. If the share is undervalued, the reporting entity can give an estimation of the relative values of such non-purchased IAs which are not effectively recognized by the market and which would make the difference in taking the Price/Book Value Ratio to par and beyond 1/1. Of course, each enterprise would make the case that its shares are worth substantially more. If a reporting enterprise added up more or less scientific estimations of the assets involved - for example brand value, reputation value, or employee value – it may result with a grand total far more than Total Comprehensive Liabilities (including Market Value of Owners Equity). However, short of giving reporting entities a complete blank check in suggesting the real value of their enterprises, the expanded statement uses current Market Value to set a ceiling.

Note also that the second layer of the expanded balance sheet differentiates between “own” and “shared” capitals, the latter providing for the social, relationship and natural capitals. The former includes Human Capital and the workforce, one of the most obvious assets whose absence on conventional balance sheets many find surprising. Most financial accountants would agree that IASB recognition criteria could be met for Human Capital. An entity can measure the value of its workforce, and prove future economic benefit associated with the cost and investment involved. Why then could...
the value of the workforce not be capitalised on the balance sheet? The value that a reporting entity would enter on our expanded balance sheet would focus not on expenditure on employees, but rather on investment in employees – i.e. capturing activities that are expected to generate income beyond one year (longer term). Calculating the value of Human Capital will therefore be based on components such as total compensation and expected income – the reporting entity will generate economic income returns from Human Capital in future periods.

The Social and Relationship Capital is dependent on the reporting entity taking action, meaning it co-creates the capital and can bring it to an end if it so wishes. Being co-created, it remains at best shared and cannot be owned. In the case of Natural Capital, this refers to external assets that may belong to others or may be a public good. Different from a company’s own land and assets, as reflected in the conventional balance sheet, these external Natural Capital assets can at best be shared and its services purchased. As the expanded balance sheet uses Market Value to set an overall ceiling to what is reported as Total Comprehensive Assets in the Comprehensive Statement, the real value of external Natura Capital assets that the reporting entity relies on is likely to be substantially greater than what is reflected in this statement. The statement only gives an estimation of relative importance, as currently recognized by the market, of that portion of Natural Capital services on which the entity is directly and highly dependent.

What the expanded Balance Sheet does is to provide for more informed decision-making related to the gap between book value and market value today (this year). It seeks to present a more complete Statement of Financial or Value Position. But related to future direction and prospective outlook, a remaining question is that of future risks related to long-term assets as reflected on the conventional balance sheet. To address this, we suggest a Statement of Long-Term Risks and Estimated Non-Current Asset / Liability Value. Partially a Future Balance statement addressing future value, this statement presents a combination of quantitative, financial and qualitative, explanatory information. The reporting entity is invited to provide estimations (range) of what may be the value of its long-term assets and liabilities twenty years from now. For industries such as oil & gas, mining, power generation and water services it is common to do planning related to assets with lifespans of for example 50 – 100 years. For the purposes of facilitating a discussion on long-term risk across industries, a period of 20 years however suffices – a period for which demographic and other trends are understood with greater certainty.
New Accounting will therefore challenge the reporting entity to illustrate to stakeholders that it is prepared and able to exercise informed decision-making about long-term risks associated with its non-current tangible and intangible assets. These include land, reserves and building property that may be vulnerable in the face of global climate change. The brief descriptive text provided by the reporter in the Statement of Long-Term Risks can be expanded on in narrative reporting. Compared to the Comprehensive Income Statement and its coverage of flows, this combination of the expanded balance sheet and statement of long-term risks addresses current and future stocks. Its presentation of financial and explanatory information in a balance sheet type structure serves to enhance integration and narrow the gap between narrative discussion and financial statements. It presents an approach more focused on timely values and less on the reliability of numbers, resulting in what ICAEW (2016: 18) has referred to as a form of Full Fair Value Accounting. It follows the prediction that ‘in the New Economy, companies will need to continuously measure and report all assets at fair value to all users’ (Boulton et al, 2000). And the fair or market value of today incorporates expectations of future value.

These are just glimpses of accounting that can ideally be expected in the years to come, with steps that can be taken right from the start.

5.3. **Recommendations**

[to be added after case studies are finished: should contain tips for entrepreneurs and intrapreneurs, but should also focus on investors in their capacity to supply support of integral business models]
6. Data

Reporting 3.0 released the Data Blueprint alongside the Reporting Blueprint at the 4th International Reporting 3.0 Conference in May 2017, so the Recommendations and concepts it contains are also ripe for integration into the New Business Models Blueprint.

6.1. Shortcomings of the Existing Data Continuum

The primary shortcoming of the existing data continuum is the so-called “Sustainability Context Gap” (or shortened to simply “Context Gap”) which the Data Blueprint documents by referencing the 2017 Danish mega-study of ~40,000 sustainability reports issued since 2000, of which only 5% discuss ecological limits at all, and only 0.3% of reporting companies (31 of ~9,000) link their discussion of ecological limits to innovation or strategy. This latter finding is, of course, particularly pertinent to applying the Data Blueprint to the New Business Models Blueprint, as Integral Business Models clearly need to bridge the Context Gap to operate in the “safe and just operating space for humanity” described by Johan Rockström with the Planetary Boundaries concept and Kate Raworth’s addition of the Social Foundations concept from her Doughnut Economics work.


6.2. Creating a Seamless Data Flow Between Micro, Meso and Macro

The Data Blueprint seeks to lay out what a seamless flow of data that covers the multiple capitals and closes the Context Gap by linking company’s micro-level impacts to the broader macro-level economic, social and ecological systems they operate within.
6.2.1. From the Daly Triangle to the Daly Hourglass

A key resource for this is *Limits to Growth* Co-Author Donella Meadows’ 1998 report, *Indicators & Information Systems for Sustainable Development*, in which she proposes a framework for designing a data architecture for tracking progress toward sustainability and development. She presents her framework graphically through the Daly Triangle, an image first proposed by World Bank Economist and Ecological Economics Co-Founder Herman Daly that Meadows augmented by layering in the Multiple Capitals atop Daly’s 4 categories of **Ultimate Means**, **Intermediate Means**, **Intermediate Ends**, and **Ultimate Ends**.

![Figure 53: The Daly Triangle](source)

Reporting 3.0 follows in Meadows’ footsteps by augmenting the inherited Daly Triangle, making a series of transformations – for example, merging two opposite-facing triangles into an hourglass to equally emphasize the Ultimate Means and the Ultimate Ends, and flipping it over so the Ultimate Means are atop, like the reservoir of sand that creates an hourglass’ flow. As well, we added corresponding stocks of capitals, and the flows between them. Finally, we added thresholds, as Meadows discusses the key role that carrying capacities of capitals play in measuring and determining sustainability.
Figure 54: Daly Triangle → Daly Hourglass (Source: Bill Baue, *Data Blueprint: Data Integration, Contextualization & Activation for Multicapital Accounting, Reporting 3.0, 2017*)

What results is Reporting 3.0's vision of a "Daly Hourglass".\(^{72}\)

Figure 55: The Daly Hourglass (Source: Bill Baue, *Data Blueprint: Data Integration, Contextualization & Activation for Multicapital Accounting, Reporting 3.0, 2017*)
As stated in the Data Blueprint:

Now that we can see the hourglass design in its entirety, its implications crystallize. First and foremost, an hourglass is traditionally a timepiece, reminding us that the process of transforming natural capital resources into anthro capitals for the ultimate purpose of supporting wellbeing and enhancing fulfillment is embedded in the flow of time – one of the key defining aspects of sustainability indicators, according to Meadows (“How long can this activity last? How long do we have to respond before we run into trouble?”)

Simultaneously, the Daly Hourglass demonstrates the feasibility of transcending the “ticking clock” aspect of 21st Century life (ever-aware as we are that overshooting ecological ceilings and shortfalling social foundations can only last so long before systems collapse) by tapping into cyclical balance for the perpetual regeneration of capital stocks and flows inherent in the natural order.

This underlines the vital importance of a data / information systems architecture that encompasses this multicapital, contextualized orientation. Our current monocapital, uncontextualized data architecture, wedded as it is to the status quo or to incrementalism at best, yields information shackled to the illusion of progress, thereby damning itself to always fall short of sustainability. So, a fit-to-purpose data / information systems architecture creates seamless data and information flows across 3 dimensions:

- Across the multiple capitals;
- Across the micro / meso / macro levels interlinking companies / industries & habitats / socio-ecological systems;
- Across value cycles.

So, what we arrive at with the Daly Hourglass is a general specification for data architecture and information systems that are fit-to-purpose for spurring the emergence of a truly regenerative, green, inclusive, and open economy. Indicators and metrics built to represent financial, economic, environmental, and social sustainability should align with this general specification.73

New business model intrapreneurs and entrepreneurs can use the Daly Hourglass to design data flows and information systems that track their organization’s impacts, importantly interlinking from Ultimate Means (natural capital – think of information from sensors in the environment) to Ultimate Ends (wellbeing – think of health, satisfaction, fulfillment, transcendence). As well, data architects can design information systems that filter for carrying capacities of capitals, with algorithms to determine if a company’s impacts are within their fair share allocation of respecting thresholds.
6.2.2. Integral Information Systems

Integral information systems build atop existing data architecture for new business model generation, which typically focuses on firm-level information, sometimes related to same-sector peers. Integral information systems, on the other hand, embeds micro-(firm) level data within the broader context of the macro-level data on the economic, social, and ecological systems within which the firm operates. Integral information equations place firm-level data in the numerator, with systems-level data in the denominator, enabling direct micro / macro interlinkages.

Furthermore, denominator data contextualizes thresholds that represent the carrying capacities of capital resources that firms impact, with allocation calculations enabling assessment if the proportionate impact falls within the fair share of the accountability for collectively maintaining resources within thresholds.

After the publication of the Data Blueprint, Reporting 3.0 devised the below Data Process Flowchart:

![Data Blueprint Process Flowchart](image)

**Figure 56:** Data Blueprint Process Flowchart (Reporting 3.0)

The visualization builds off the existing International Integrated Reporting Council (IIRC) “Octopus” that tracks inputs of resources across the multiple capitals, their transformation though the business model via company activities to create outputs that result in outcomes:
Figure 57: The IIRC “Octopus” (Source: International Integrated Reporting Council, *The International <IR> Framework*, 2013.)

The Dutch Federation of Accountants (NBA) Integrated Reporting Value Creation Model adds “impacts” after outcomes:

![NBA Value Creation Model](image)

Figure 58: NBA Value Creation Model (Source: Paul Hurks, *Dutch Federation of Accountants 2017 Value Creation Model*)
The Data Blueprint notes that:

The BASF Value-to-Society Methodology goes one step further, adding not only Impact but also Societal Benefits / Costs: how do people value the change of their lives and well-being due to the impact? Note that this extension enters the realm of Meadows’ Ultimate Ends of well-being.

![Figure 59: BASF Value-to-Society Methodology (Source: BASF, *We create value*)](image)

However, Christian Heller of BASF acknowledges that even this representation falls short of capturing key data needs for sustainability: specifically, thresholds and allocations of capital resources. Heller notes that “our business model will not last into the future” due to systemic risks — “how can we get the system to change?” he asks.

The Reporting 3.0 Data Process Flowchart fills in these gaps with a number of further features:

- It sources data not only from the micro (firm) level but also from the meso (habitat) and macro (ecological, social, and economic systems) levels;
- It contextualizes data within the carrying capacities of the multiple capitals by integrating thresholds & allocations;
- It therefore enables performance assessment and benchmarking that distinguished between “sustainable” and “unsustainable” performance;
- It allows for the re-aggregation of data to the macro, meso, and micro levels, per the performance context in question (i.e. national statistics offices to assess performance on Nationally Determined Contributions (NDC) to Paris Climate Treaty goals, for example);
- It allows for assessment of “System Value Creation” that integrates Current Enterprise Value Creation calculations into broader Future System Value Creation determinations.
6.3. **Contextualization, Integration and Activation**

The Data Blueprint advances a general specification based on three primary dimensions necessary for building out a data infrastructure that fulfills the potential of triggering transformative systems change:

- **Integration** of the multiple capitals (natural, human, social, built, and financial) to optimize positive synergies (and mute / eradicate negative interaction) between and amongst them, to better support the creation of financial, societal (shared), and system value (to employ a recently coined term.) In Daly’s and Meadows’ terms, this integration links the “ultimate means” of natural capital through the intermediate means and ends of human, social, built, and financial capital, all the way through the “ultimate ends” of well-being.

- **Contextualization** of organization-level impacts on the multiple capitals within the carrying capacities of those capitals at the systems level, either a virtuous (regenerative) or vicious (degenerative) cycle. Context-Based Sustainability (an implementation mechanism of the Principle of Sustainability Context) calls for identifying thresholds separating sustainability from unsustainability, as well as assessing allocations of fair-share contributions to maintaining the overall sufficiency of vital capital resources and cycles.

- **Activation** of responses when the sustainability of any capitals – and hence the potential for biota well-being and human fulfillment – is placed at significant risk. Data without engagement falls short of its potential; “activated” data fulfills its potential of driving the change signaled by integrated, contextualized data. The key to activation is evidence-based advocacy by context-driven stakeholders. And activated data also catalyzes “acceleration” to scale up change to trigger tipping points of systems change. Indeed, properly contextualized data embeds a gap analysis to signal the magnitude of unsustainability and hence the pace and scale of reform needed to achieve sustainability.

6.4. **Recommendations**

[to be added after case studies are finished: should contain tips for entrepreneurs and intrapreneurs, but should also focus on investors in their capacity to supply support of integral business models]
7. Conclusions
   7.1. Overall conclusions
   7.2. Next steps

8. Online repository

9. Annexes
   9.1. Authors
   9.2. Working Group members
   9.3. Online virtual dialog participants
   9.4. Steering Board
   9.5. About Oncommons
10. Endnotes

1 See http://www.reporting3.org for conference reports of 2014 and 2015. The 2013 conference was held in German language only.


6 We acknowledge that the term ‘North Star’ is more come in the Northern hemisphere, whereas the ‘Southern Cross’ might be better fitting in the Southern hemisphere.


9 Or Southern Cross in the other hemisphere.

10 At the time of writing this Exposure Draft 1.0 of this New Business Models Blueprint, the Accounting Blueprint is in Exposure Draft 2.0 form, with the final report slated for publication by the end of 2017, at which point we will embed useful concepts from it into Exposure Draft 2.0 of this Blueprint.


15 Cite Antony Upward


19 Kelly Levin, Benjamin Cashore; Steven Bernstein & Graeme Auld, "Overcoming the tragedy of super wicked problems: constraining our future selves to ameliorate global climate..."

20 Ibid
21 Ibid
22 Ibid
23 Ibid
24 Ibid
25 Ibid

See https://en.wiktionary.org/wiki/Appendix:Glossary_of_Boston_slang#W. To respect decorum, we will refrain from going full-on Bahstan and calling it “super wicked pissa innovation.”

20 (that we won’t cover as this area was still much baked in just the economic and environmental field, see article from Tucker (2004) [need footnote], we see 5 additional main focus areas:

30 Same
32 Ibid

47 Robin Lincoln Wood, ‘Synergizel!’ 2017
51 Mark Van Clieaf, email correspondence with authors, 28 September 2017.
58 ibid
63 ibid
64 https://preventablesurprises.com/publications/guidance-notes/flip-the-switch/


![Georgescu-Roegen Hourglass](image)

“The hourglass on the left is an isolated system; no sand enters, no sand exits. Also, within the hourglass there is neither creation nor destruction of sand; the amount of sand in the hourglass is constant. This, of course, is the analog of the First Law of Thermodynamics, the conservation of matter and energy. Finally, there is a continual running down of sand in the top chamber and an accumulation of sand in the bottom chamber. Sand in the bottom chamber has used up its potential to fall and thereby do work. It is high-entropy or unavailable matter-energy. Sand in the top chamber still has potential to fall; it is low-entropy or available matter-energy (still useful). This is the analogy of the Second Law of Thermodynamics: Entropy, or “used-up-ness,” increases in an isolated system. The hourglass analogy is particularly apt because entropy is “time’s arrow” in the physical world—that is, we can tell
earlier from later by whether or not entropy has increased. However, unlike a real hourglass, the entropy hourglass cannot be turned upside down!

With a bit of license, we can extend the basic analogy by considering the sand in the upper chamber to be the stock of low-entropy fossil fuel on Earth, depicted in the right-hand figure. Fossil energy is used at a rate determined by the constricted middle of the hourglass, but unlike a normal hourglass, humans alter the width (i.e., they change the rate of consumption of fossil fuels). Once consumed, the sand falls to the bottom of the chamber, where it accumulates as waste and interferes with terrestrial life processes.

To represent solar energy, the top of the hourglass on the left would be vast (from the human perspective) as would the bottom; solar energy, too, ends as waste heat, but it is not confined to the Earth. It does not disappear, but it radiates into outer space, and unlike waste matter does not accumulate on Earth. The constricted middle, however, would be quite small, and humans would be unable to adjust it. The solar source of low entropy is stock-abundant but flow-limited. In other words, there is a lot of it, but we get only a little at a time. The terrestrial source is stock-limited but flow-abundant, until the stock runs out. The asymmetry is important. With industrialization we have come to depend more and more on the least abundant source of low entropy. However convenient in the short run, this will be uneconomic in the long run."

73 Bill Baue, Data Blueprint: Data Integration, Contextualization & Activation for Multicapital Accounting, Reporting 3.0, 2017.
75 Christian Heller, Reporting 3.0 Beta Testing Program Phase 2 European Meeting, Dutch Federation of Accountants (NBA), Amsterdam, 1 February 2018.