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HUMAN PROCESSES
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Me, We

For the past decade or two, the battle cry of IT was that of "aligning IT with the business". As important as that is, that alignment has met with only partial success. Nevertheless, a lot of effort has gone into enhancing the value of IT projects including improvements in business analysis, requirements and development, which have significantly improved alignment. Among many advances, Agile development processes and DevOps approaches have promoted the idea of measuring the business results of IT projects to improve that alignment. "Outcomes, not outputs" has replaced "business / IT alignment" as the new mantra. The forces of Digital Transformation and the need to quickly respond to COVID-19 with changes to business and operating models have made the measurement, achievement, adjustment and continuous improvement of outcomes more important than ever. But the pandemic has also shown that achieving outcomes is not enough. Meeting production targets at the cost of worker safety was not acceptable to many constituents and many companies actively promoted their attention to customer and employee safety. Evidence suggests that there is actual business value and competitive advantage to achieving "good". Of course, this idea is not new either. This article will look at past and present efforts to define and deliver outcomes that achieve more than just profits.

Triple Bottom Line

One of the earliest approaches to "goodness" (my term) came from British business consultant John Elkington in his 1994 article "Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development" where he introduced the idea of the Triple Bottle Line (TBL). TBL, further explained by Elkington in his 1999 book, "Cannibals with Forks: The Triple Bottom Line of 21st Century Business", provides a framework where organizations measure their success in terms of the 3Ps, or the positive and negative impact the organization has on People, Planet, Profit:

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- **People:** stakeholders, including employees, families, customers, suppliers, communities, and any other person affected by the organization.

- **Planet:** the natural environment, including reducing carbon footprint, usage of natural resources, toxic materials, the active removal of waste, reforestation, restoration, etc.

- **Profit:** the organization, local, national and international economy. This includes creating employment, generating innovation, paying taxes, creating wealth and other economic impact.

Elkington himself probably would agree that while the TBL opened up many minds, it may have become more of an accounting framework than something that motivated widespread meaningful corporate change. Nonetheless, the impact has been, and continues to be felt. For example, in a report I wrote in 2009, "Architecture for the Sustainable Enterprise", we defined sustainability as: "An enterprise is deemed sustainable if its products, services, policies, and assets are balanced across three dimensions: economic viability, environment responsibility and socially equitability".

As environmental issues and climate change move more to the forefront of popular concerns, the ideas of the "circular economy" are getting much more attention.

Circular Economy

The World Economic Forum describes: "A circular economy is an industrial system that is restorative or regenerative by intention and design. It replaces the end-of-life concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse and return to the biosphere, and aims for the elimination of waste through the superior design of materials, products, systems and business models. (See "Toward the Circular Economy"

https://reports.weforum.org/toward-the-circular-economy-accelerating-the-scale-up-across-global-supply-chains/from-linear-to-circular-accelerating-a-proven-concept/).

In today's predominate economic systems, goods are produced, used and discarded, i.e. a linear economy where the flow has a clear beginning and end. Rather, the circular economy aims to design out

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waste. Products are designed and optimized for a cycle of disassembly and reuse. Circularity introduces a differentiation between consumable and durable components of a product. Consumables are largely made of biological ingredients or 'nutrients' that are at least non-toxic and possibly even beneficial, and can safely be returned to the biosphere, either directly or in a cascade of consecutive uses. Durables such as engines or computers are made of technical material unsuitable for the biosphere, such as metals and most plastics. These are designed for reuse, and products subject to rapid technological advance are designed for upgrade. The Ellen MacArthur Foundation, an excellent source for information about the circular economy, provides the following graphic to explain this, the "continuous flow of technical and biological materials through the 'value circle'"

(https://www.ellenmacarthurfoundation.org/circular-economy/concept/infographic).

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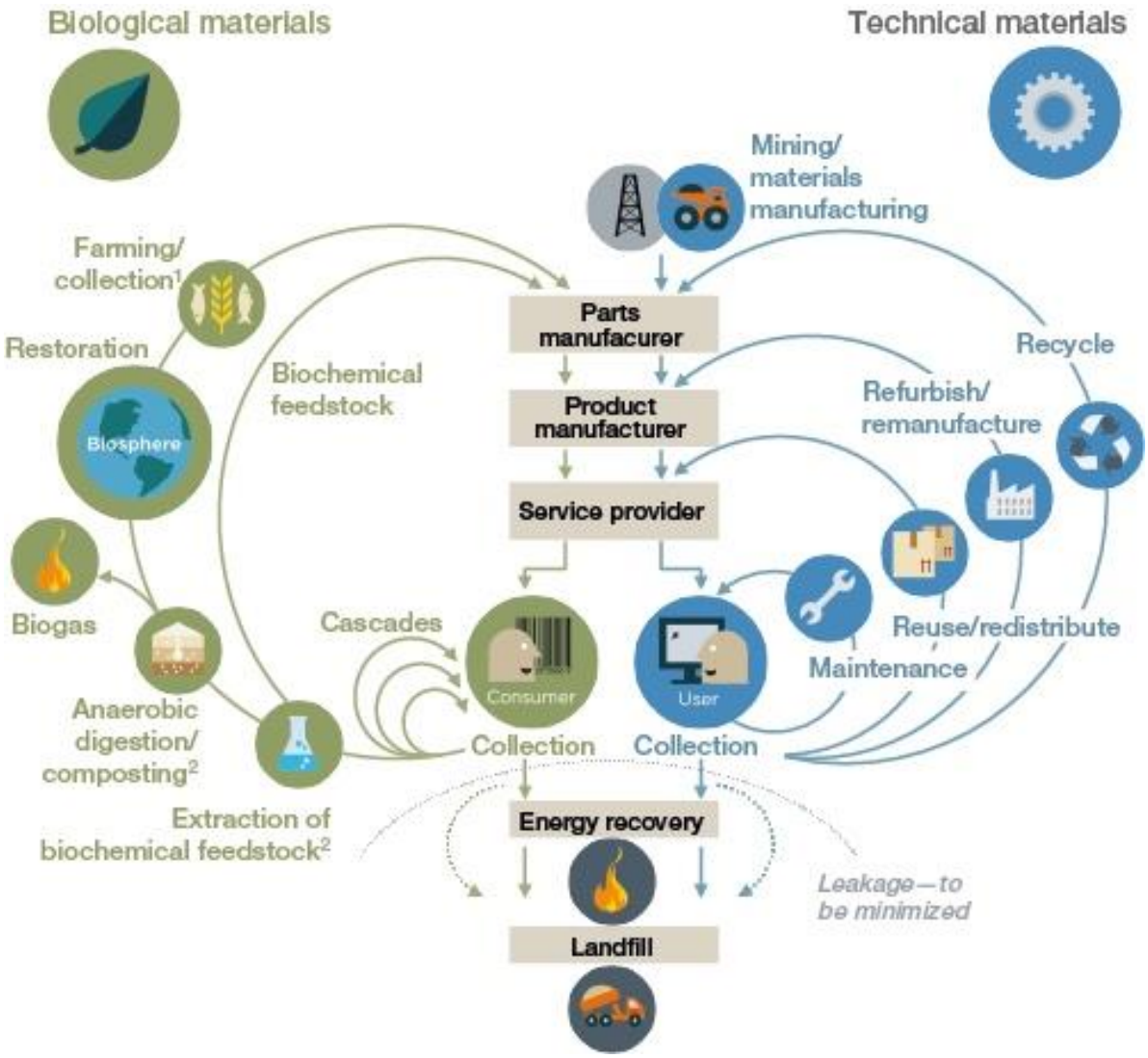

Figure 1 – Circular Economy Value Circle Flows

The circular economy is forcing companies to rethink everything from how to design, manufacture and distribute products, to their relationships with partners and customers. The focus is no longer on consumption, but instead on its lifecycle and use. Durable products are leased, rented or shared wherever possible. If they are sold, there are incentives or agreements in place to ensure the return and thereafter the reuse of the product or its components and materials. This places different demands on the organization's business models which now

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have to optimize total system performance as well as build long term relationships with partners.

Digital Transformation

The good news is that these changes to the business model can not only be compatible, but more so, complementary with other changes for digital transformation that support different lifecycle and customer engagement propositions. Among the many case studies on the Ellen MacArthur Foundation website is one for Caterpillar Tractor (https://www.ellenmacarthurfoundation.org/case-studies/design-and-business-model-considerations-for-heavy-machinery-remanufacturing) which coincides nicely with an example of digital transformation that I've used in many presentations.

The Cat Reman® (or remanufacture) programs allows customers to increase the lifespan and TCO of equipment by providing product updates rather than buying a new machine. Caterpillar advertises that "Cat Reman® returns products at the end of their serviceable lives to same-as-new condition. This helps reduce your owning and operating costs by providing you with same-as-new quality at a fraction of the cost of a new part. Through the remanufacturing process Caterpillar reduces waste, lowers greenhouse gas production and minimizes the need for raw materials."

And this is not just to brag about sustainability, but rather a fundamental part of their business model. Through Cat Reman® and it's 3600 employees, the company has been able to increase profit margin whilst still producing high quality components, by replacing products before they break and rebuilding them with a mixture of new and used parts. To do this required a change to their product design. Rather than aiming to use less and less material, increasing consideration goes into creating a product that is intended to be remanufactured multiple times.

One of the most well-known examples involves an engine block with a removable sleeve in the cylinder bore. When the block is recovered, this sleeve can be removed and replaced to return the engine to as-new performance. While initially, this might be more complex and expensive, in the long run, TCO is much less. And, since Caterpillar products are expensive assets that most customers try to keep as long as possible, this provides competitive advantage, as well as establishing long term customer relationships.

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But to optimize options like this and to intercept products before they break, it is crucial to have consistent knowledge of the condition and use of the products and their key components. Where in the past, this would be monitored through regular maintenance, Caterpillar is now using the capabilities of CatLink® to collect the data. CatLink® is the technology behind their digital transformation IoT "connected products" business model which collects real time data on how their machines are being used to provide instant feedback and guidance to operators on loads, compaction, safety, hazards and more, and overall fleet management capabilities for the entire construction site to maximize efficiency, effectiveness, risk, and now, to optimize the circular product lifecycle.

As business architects and analysts, our role in helping organizations transition to the circular economy or improve the triple bottom line may be in helping to redefine the business model. Luckily, there are plenty of resources to help with those activities. Today, Osterwalder's Business Model Canvas is one of the most popular methods for describing the business model. Because of its ubiquity, many different variations have been spawned. For the triple bottom line, the standard canvas can be used to examine the profit aspect, while specialized canvases for social equitability (people) and environmental responsibility (planet) have been created to focus on those areas. One example I've used are the models found at https://www.enliveningedge.org/tools-practices/designing-sustainable-business-models-product-service-systems/ although you may want to do your own research to find the tools most appropriate for you and your organization. And it should be no surprise that there are also a variety of canvases and approaches for circular economy business models such as described on the Ellen MacArthur Foundation website or in the 2019 article "A Design Thinking Framework for Business Model Innovation" by Guldmann, Bocken and Brezet in the Business Model Journal (https://core.ac.uk/download/pdf/229011913.pdf).

And then, don't forget the importance of measuring your outcomes and the quick feedback of that information into your planning, implementation and delivery activates. BizOps, as describe in my last column, is a perfect approach for tying together your strategy, business model, planning, development, operations and delivery to achieve good outcomes. Whatever you choose to do, I hope this brief overview of the topics and resources helps you get started.

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Author

Keith Harrison-Broninski FRSA is an author, speaker, and technology/business consultant specialising in collaboration across organisational boundaries as well as social technology for wellness, community, and finance.

Keith's first book was "Human Interactions" (2005) Amazon (UK) Amazon (US)

- "Set to produce the first fundamental advances in personal productivity since the arrival of the spreadsheet" (Information Age)
- "The breakthrough that changes the rules of business" (Peter Fingar, author of "Business Process Management: The Third Wave")
- "The overarching framework for 21st century business technology" (BP Trends)
- "The next logical step in process-based technology" (Chair of the Workflow Management Coalition)

Keith went on to develop these principles for cross-boundary collaboration in further books and research and lead award-winning social enterprises for healthcare innovation, wellness, and community finance.

Out now is Keith's new book "Supercommunities", which brings together insights from recent academic research with original ideas about wellness, collaboration, and finance to explain how communities everywhere can become antifragile through social trading.

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