Attaining Digital Transformation Readiness

It does not matter whether it is Industry 4.0, a digital twin, the Internet of Machines, distributed system optimization in edge computing or just plain process digitization, digital transformation initiatives are about positively impacting an organization's operating model, its business model and/or those who the organization serves (**figure 1**).[1] This holds true whether the latter are in the public sector as citizens or in the private sector as customers or clients.

Unfortunately, while a positive outcome is expected from digital transformation efforts, barely one in eight are successful.[2] Even worse, only 3 percent of a sample of 1,733 business executives recently polled by a global consulting firm report any success at sustaining the change required for successful digital transformation,[3] a telling failure for possibly one of the most critical drivers of organizational sustainability at this point in the 21st century.

Based on the previous change statistic, the focus seems to be too much on the "digital" part and too little on the "transformation" part. Speculatively, a reason for the failure statistic could also be poor alignment between the transformational initiative and the organization's strategy. For the purposes of this discussion, it is assumed that the proposed transformation is appropriately aligned with the organization's strategy.

Key steps for digital transformation readiness, a major risk mitigation consideration for digital transformation and a means to significantly improve the chances of digital transformation success are detailed here. The readiness components to focus on are all in area D of **figure 2**.

The Customer and the Business Model

Unfortunately, many in IT may be unaware of the prime reason for effort- and cost-intensive activities such as digital transformation. IT practitioners are often not in touch with the ultimate organization-level "why" of the kinds of things they do. So, what is the big "why?"

It can be summed up in the words of Jan Carlzon, former chief executive officer (CEO) of SAS Airlines, who said, "If you're not serving the customer, your job is to be serving someone who is."[4] In other

Guy Pearce, CGEIT
Has served on governance boards in banking, financial services and a not for profit, and as chief executive officer of a financial services organization. He has played an active role in multiple enterprise digital transformation programs, experiences that led him to create a digital transformation course for a local university. He readily shares his experiences in publications and at conferences, and he is the recipient of the 2019 ISACA Michael Cangemi best author award for contributions to the field of IT governance. He serves as chief digital transformation officer at Convergence, a digital transformation company leading digital change in Canada, Australia, India and Mongolia.

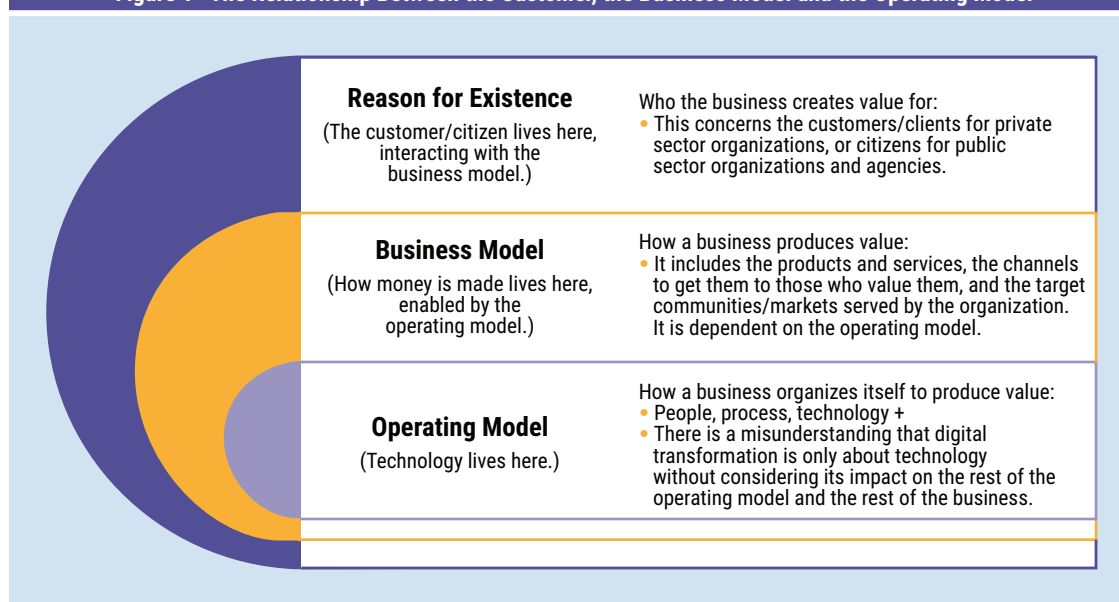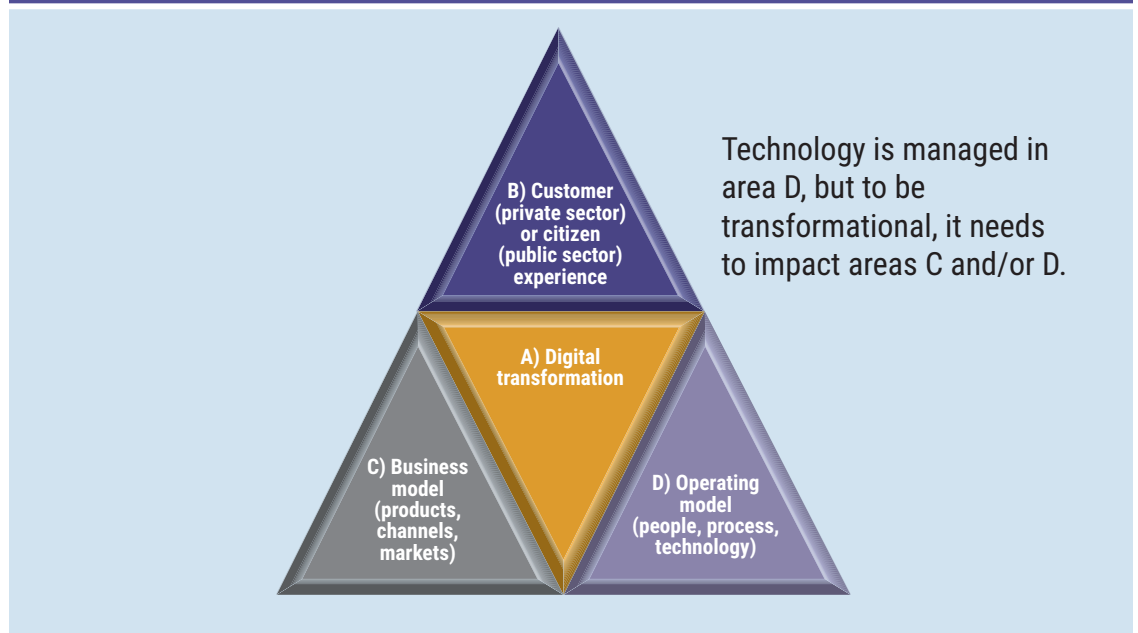Figure 1—The Relationship Between the Customer, the Business Model and the Operating Model

Reason for Existence
(The customer/citizen lives here, interacting with the business model.)

Who the business creates value for:
- This concerns the customers/clients for private sector organizations, or citizens for public sector organizations and agencies.

Business Model
(How money is made lives here, enabled by the operating model.)

How a business produces value:
- It includes the products and services, the channels to get them to those who value them, and the target communities/markets served by the organization. It is dependent on the operating model.

Operating Model
(Technology lives here.)

How a business organizes itself to produce value:
- People, process, technology +
- There is a misunderstanding that digital transformation is only about technology without considering its impact on the rest of the operating model and the rest of the business.

Figure 2—The Organization Impact of Digital Transformation

Technology is managed in area D, but to be transformational, it needs to impact areas C and/or D.

- B) Customer (private sector) or citizen (public sector) experience
- A) Digital transformation
- C) Business model (products, channels, markets)
- D) Operating model (people, process, technology)

words, everything that is done must directly or indirectly serve the customer (area B in **figure 2**), and activities that are not aligned with this are pure cost, e.g., legal, compliance and accounting, or even simply redundant.

Validation of this can be found in the words of Peter Drucker, a prominent global leader in management education, who said, "The purpose of business is to create and keep a customer."[5] In the case of the public sector (government), it is citizens (vs. customers) who are the purpose of the organization.

One of the first questions asked about a prospective digital transformation initiative should be what it directly or indirectly means for the customer because digital transformation is not just another "must-have" bright and shiny technology claiming to be the silver bullet to the organization's technological debt and its business and operational challenges.

The business model (area C in **figure 2**, with examples of digital business models in **figure 3**) is the means by which the organization engages with the customer.

…[It] *concerns the organization's strategy for making a profit, including the products and services the organization plans to sell to the target market. Distribution (channels), pricing and advertising are further business model elements.*[6]

Figure 3—Examples of Digital Business Models

Digital Business Model	Example
Subscription	Netflix
Freemium	Spotify
Free (the user is the product)	Facebook
Marketplace	AirBnB
Hypermarket	Amazon
Experience	Tesla
On-Demand	Uber
Ecosystem	Google

Source: Marsden, P.; "The 10 Business Models of Digital Disruption (and How to Respond to Them," Digital Wellbeing, 26 August 2015, *https://digitalwellbeing.org/the-10-business-models-of-digital-disruption-and-how-to-respond-to-them/*

The business model is, thus, about the means to create and deliver value to the customer or citizen, at a price.

So the more the digital transformation enables new products and services to be created or enhances existing ones , and the more conveniently it can get these to the customer, the more meaningful the efforts are for the customer and, thus, the more successful the transformation.

The Operating Model: Readiness Lives Here, if the Organization Is Ready

Readiness is assessed by an organization's operating model, which describes its people (organization), process and technology (systems and information), and elements such as location and suppliers.

> *Culture, governance and measurement are further operating model elements, as are assets and resources such as buildings, patents and other intellectual property. In some industries such as fisheries, forestry, mining, agriculture and manufacturing, equipment plays a large part in the operating model.*[7]

Consider why some of the key elements of the operating model are important from a digital transformation readiness perspective.

Process

From a sample of 1,988 business and technology executives, 34 percent found that inflexible or slow processes were the top barrier to executing a digital strategy.[8] Strong processes are the heart of ensuring repeatable, consistent, error-free and efficient activities within the organization. To qualify process gaps, the core business processes must be identified, analyzed and assessed across multiple dimensions, including:

- Process inputs, outputs and handovers
- Process governance (compliance)
- Completeness of documentation
- Process performance measurement and measures
- Process ownership
- Process swim lanes and handovers

Technology

In a sample of 1,988 business and technology executives, 30 percent of those surveyed found that technology integration was the second highest barrier to executing a digital strategy.[9] Much of this barrier comes in the form of technological debt, an outcome of underinvestment or poorly integrated investments in technology within the organization over many years, decades even.

It is much more than only about technology though; it is also about data. Just like with technology, some organizations try to avoid the considerable investment required to maintain their data/technology, often taking shortcuts to avoid qualifying the relationships between data/technology, only to find that the technology does not properly enable the business model, at significant risk and loss of opportunity for the organization.

From the sample of 1,988 business and technology executives, 26 percent found that ineffective third-party partners were the fourth highest barrier to executing a digital strategy.[10] This brings to light the whole governance matter of third-party due diligence, this time not from typical perspectives such as product/service, track record, performance,

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capability, sustainability and security, but from aspects such as work ethic and commitment.

People

From a sample of 1,988 business and technology executives, 29 percent found that skills were the third highest barrier to executing a digital strategy.[11] Organizational capability is a significant driver of IT success. Capability is a function not only of people—leadership, staff complement, skills, experiences, performance—but also resources such as budget, human productivity tools and intellectual property.

It is not only organizational capacity and capability, though; it is also about organizational design (the organizational structure) to ensure that work is appropriately divided across the organization with little duplication and clear differentiation of accountabilities and responsibilities.

> " UNDOUBTEDLY, READINESS IS TO BE FOUND NOT ONLY IN UNDERSTANDING THE CURRENT STATE OF THE ORGANIZATION'S OPERATING MODEL, BUT ALSO IN SEEING IT ALL IN A CONTEXT OF A DEFINED FUTURE STATE. "

IT practitioners know that in spite of their best efforts, if the user base demonstrates behaviors such as detachment, is in denial, is ambiguous in its communication or subverts processes, the technology being deployed will more than likely fail. This is no surprise, as culture is a critical success factor for the IT risk management pillar of the enterprise governance of IT (EGIT).[12]

Changing behavior is difficult, and resistance to change is often underestimated. Developing a

sound plan for building momentum for change must be based on an accurate understanding of the organization. A primary catalyst for change can be to identify a shared pain point; the more people that share the same pain, the easier it becomes to create a change management program that will move the organization toward a desired outcome.

Governance

In a sample of 1,988 business and technology executives, 24 percent found that lack of appropriate governance structures were the fifth highest barrier to executing a digital strategy.[13] Policies, procedures, standards and guidelines (PPSG), coupled with effectively designed roles and responsibilities (R&R), are instrumental in ensuring that everyone knows their role in the engagement and how they relate to other members of the engagement team.

Bringing It All Together

One organization focuses on a staff survey and benchmarking for its digital readiness assessments.[14] Another focuses on people, process and technology with a value (business model) dimension,[15] while yet another focuses on the major issue of technical debt.[16] And still another takes a more abstract view of readiness by considering the dimensions of operational sustainability, organizational and strategic agility, and culture.[17]

Undoubtedly, readiness is to be found not only in understanding the current state of the organization's operating model, but also in seeing it all in a context of a defined future state, as in **figure 4**.

The cultural change required—as highlighted in the people future state—is a critical part of successful digital transformation that specifically addresses the "transformation" part of "digital transformation." This requires in-depth expertise in business transformation to address effectively, and it will involve interventions including communication, role modeling, training and behavioral reinforcement.[18]

With the information collected for the current state and future state, readiness is only assessed once the gap between the current state and the future

| Figure 4—Notes on the Inputs to Assessing the Gap Across the Primary Operating Model Dimensions		
Operating Dimension	**Current-State Artifacts**	**Considerations in Determining the Future State**
Process	Core processes identification, process maps, process owner identification, process risk assessments, process handovers, process performance measures, process audit and compliance findings	Determine which processes need enhanced automation (digitization), and perform full process optimization and integration aligned with the workflows encouraged by the new tool (assuming they are compliant with the organization's policies and the country's laws). Some organizations try and fit existing (old) processes into new technology, resulting in unmanageable levels of technology customization.
Technology	Conceptual architecture; logical architecture; physical architecture; data-flow maps; data quality measures; business and technical metadata; extract, transform, load (ETL) reports (data transport validation); operational logs; IT audit and compliance findings	Take care defining the future state for the technology dimension; the extent of technological debt could blow a hole right through even the deepest corporate pockets. To be effective, the desired state needs to relate to the strategy of the organization, and it needs to consider the full stack (hardware and software), with a particular focus on data (and compliance) and integration. The desired state for IT governance and data governance need to be qualified.
People	Organizational structure, training records, job descriptions, staff survey to assess behaviors (culture) and perceptions of digital leadership and the organization's current challenges	Build capability, a function of the complement, skills and experience needed to perform the tasks defined in the process and technology dimensions of the proposed transformation. Include new tasks in individual performance contracts. Conduct cultural transformation. A fail in this last task will be a fail for the transformation.
Governance	R&R, PPSG, compliance and audit findings	Update and formalize from an organization perspective and from both IT governance and data governance perspectives

state is articulated in sufficient detail for each dimension in an action plan.

For communication purposes, a diagram similar to the one shown in **figure 5** could be created for each operating model dimension being assessed for gaps—in this case, one each for people, process, technology and governance—with the diagram detailing the current state, the future state and the key steps required to close the gap. One of the biggest challenges in readiness assessments is that not only is there insufficient effort applied to defining the future state of each dimension, but there is also insufficient effort applied to determining what it will take to close the gap—the action plan. Without the latter, how can organizational resources be applied to closing the gap?

" TO PERFORM DIGITAL TRANSFORMATION WITH A BETTER SUCCESS RATE THAN ONE IN EIGHT, BE SURE TO PROPERLY UNDERSTAND THE GAP AND TO HAVE THE RESOURCES AT HAND TO CLOSE IT. "

Figure 5—Creating an Action Plan to Close the Gap
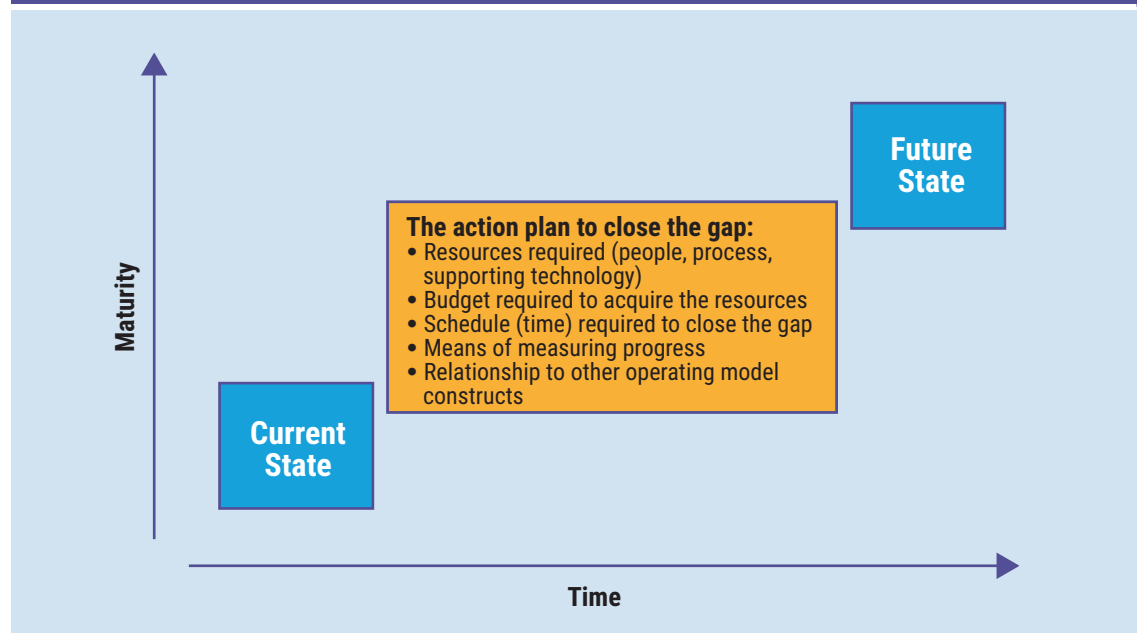
Conclusion

Digital transformation readiness is instrumental in ensuring that the cost and efforts involved in digital transformation initiatives are not wasted and that the organization benefits through enhanced growth and sustainability. A primary goal of readiness is to identify operating model gaps that have the potential to constrain the success of even the best technical deployment of the most viable digital transformation technology.

With the gap between current and desired states appropriately articulated, the organization is better positioned to qualify the state of readiness of the organization and establish what needs to be done given an appropriately detailed action plan to close the gap, which can also be quantified in financial terms for budgeting purposes.

Digital transformation is not a minor undertaking. It is an initiative that is meant to better and sustainably reposition the organization so that it can be more competitive in its chosen markets. To perform digital transformation with a better success rate than one in eight, be sure to properly understand the gap and to have the resources at hand to close it. Above all, even if everything else is right, skimping on addressing the cultural considerations demanded by digital transformation will likely lead to the efforts not being sustainable, that is, if they do not fail outright in their objectives.

Endnotes

1 European Data Portal, "Read the Report on Open Data and Digital Transformation," 19 January 2016, *https://www.europeandataportal.eu/en/highlights/read-report-open-data-digital-transformation*

2 Rogers, B.; "Why 84% of Companies Fail at Digital Transformation," *Forbes*, 7 January 2016, *https://www.forbes.com/sites/brucerogers/2016/01/07/why-84-of-companies-fail-at-digital-transformation/#b0531c1397bd*

3 Boulton, C.; "12 Reasons Why Digital Transformations Fail," CIO, 20 May 2019, *https://www.cio.com/article/3248946/12-reasons-why-digital-transformations-fail.html*

4 Morgan, B.; "101 of the Best Customer Experience Quotes," *Forbes*, 3 April 2019, *https://www.forbes.com/sites/blakemorgan/2019/04/03/101-of-the-best-customer-experience-quotes/#5269869845fd*

5   Stern, S.; "The Importance of Creating and Keeping a Customer," *Financial Times*, 10 October 2011, *https://www.ft.com/content/88803a36-f108-11e0-b56f-00144feab49a*

6   Pearce, G.; "Enhancing the Board's Readiness for Digital Transformation Governance," *ISACA® Journal*, vol. 5, 2019, *https://www.isaca.org/archives*

7   *Ibid*.

8   *Op cit* Marsden

9   *Ibid*.

10 *Ibid*.

11 *Ibid*.

12 Pearce, G.; "The Sheer Gravity of Underestimating Culture as an IT Governance Risk," *ISACA Journal*, vol. 3, 2019, *https://www.isaca.org/archives*

13 *Op cit* Marsden

14 KPMG, "Digital Readiness Assessment," April 2016, *https://assets.kpmg/content/dam/kpmg/pdf/2016/04/ch-digital-readiness-assessment-en.pdf*

15 Crandall, G.; "What Is a Digital Transformation Readiness Assessment?," Aristotle's Alexander, 29 May 2018, *https://www.arisalex.com/blog/digital-transformation-readiness-assessment/*

16 i-Scoop, "Digital Transformation Readiness 2018: Between DX Plans and Technical Debt Obstacles," 2018, *https://www.i-scoop.eu/digital-transformation/digital-transformation-readiness/*

17 Institute for Digital Transformation, "What Is Digital Readiness?," 2019, *https://www.institutefordigitaltransformation.org/readiness-framework/*

18 *Op cit* Pearce, "The Sheer Gravity of Underestimating Culture as an IT Governance Risk"