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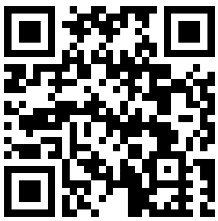
Corporate Transformation Orchestration (CTxo): Prescriptive Literature the Non-Digital-Native Companies Need Throughout Their Transformation Journey



Dr. Biland Sadek

Bocconi School of Management, Milan, Italy

ORCiD: 0000-0003-3166-2093, https://www.linkedin.com/in/bilandsadek/

ABSTRACT: In response to disruptions, non-digital-native companies embark on corporate transformation journeys. Research done indicate that most companies fail to survive such journeys. So, why success varies among companies, potentially costing the global economy trillions of dollars? My hypothesis is that those who orchestrate the three components of a corporate transformation (Business model transformation, Digital enabled transformation, and Organizational transformation) are more successful in their transformation journey compared to companies who don't. By conducting a case study research of twenty transforming non-digital-native companies based in the US and EU, I validated my hypothesis and developed a prescriptive orchestration framework that allows non-digital-native companies not only successfully navigate their corporate transformation journey but also switch their transformation to always-on.

KEYWORDS: business model transformation, digital enabled transformation, organizational transformation, meta-transformation, Mesa-transformation, corporate transformation orchestration framework, components of corporate transformation

A. INTRODUCTION

In response to modern days disruptions, companies embark on Corporate Transformation (CTx) journeys (Flamholtz & Randle, 2008; Levy & Merry, 1986; Muzyka, De Koning, & Churchill, 1995). When such CTx succeed, they radically improve the key business drivers. However, researches done indicate that most companies fail to survive such journeys (Michael Bucy, Finlayson, Kelly, & Moye, 2016; Jacquemont, Maor, & Reich, 2015; Litré, Michels, Walter, & Burke, 2018). Reality is that *companies spend trillions of dollars on business transformations*[1] *and yet few do it well.* Hence, the importance of my topic.

As a director in a non-digital-native company – Philip Morris International – that decided to disrupt itself by undergoing a CTx, I failed to find relevant academic prescriptive literature[2] that help us prepare to successfully navigate this challenging journey. This trigged my interest in developing a practical prescriptive framework, based on sound academic research at Bocconi School of Management, to be used by non-digital-native companies throughout their CTx.

A deep dive into CTx journeys reveals that they revolve around three not-mutually-exclusive components (Sadek, 2024): (1) Business model transformation, (2) Digital enabled transformation, and (3) Organizational transformation. My hypothesis[3] is that **companies who orchestrate the three components are more successful in their transformation journey compared to companies who don't.** Numerous research and literature have covered these three components, albeit in isolation. I believe my thesis will fill that void by:

a. Validating the CTx initiatives to be managed as an ecosystem - based on their interdependencies - that increases the probability of CTx success

[1] Worldwide spending on the technologies and services that enable the Digital Transformation of business practices, products, and organizations is forecast to reach $2.3 trillion in 2023, according to a new update to the International Data Corporation (IDC) Worldwide Semiannual Digital Transformation Spending Guide dated October 2019. Total spend on Corporate Transformation will be higher as it will include on top those related to Organizational Transformations.

[2] Prescriptive literature provides guidelines and blueprints.

[3] Hypothesis and propositions to be validated are elaborated in section N.

b. Validating a sequential multi-steps approach and orchestration processes (related to governance, change management, and compensation) that increase the probability of CTx success
c. Validating that transforming companies implement a sort of management system for an always-on CTx
d. Developing a *Corporate Transformation Orchestration Framework* (CTxOF) - a prescriptive playbook that senior executives of non-digital-companies and their strategy arms can use to navigate their CTx journeys - comprising of: *Corporate Transformation Plan* (CTxP), *Corporate Transformation Dashboard* (CTxD), *Corporate Transformation Orchestration Map* (CTxOM) that details the CTxP initiatives' phasing (and sequencing), Corporate Transformation Orchestration processes needed to orchestrate all CTx initiatives, and *Closed Loop Management System* how to lead an always-on CTx

Executives in non-digital-native companies will use Corporate Transformation Orchestration (CTxO) to ensure a well-orchestrated execution of a seamless CTx.

B. ACCELERATED DISRUPTIONS AND CORPORATE RESPONSES

The theme of disruptions started back in 1942 when Joseph Schumpeter coined the term "creative destruction" (Schumpeter, 1942) and later depicted by Clayton Christensen (Christensen, 1997). In our VUCA environment (Barber, 1992), innovative technologies (G. Moore, 1998) merged at an exponential speed (Bughin, Catlin, Hirt, & Willmott, 2018; Kurzweil, 2004), consumer preferences and behaviors evolved at an ever-faster rate (Johnson, Ratner, & Weaver, 2018; Morgan & Barden, 2015), e-commerce produced new channels, and nimble competitors emerged each year (Greer, 2017). These elements together with deregulation, evolution to open standards, geopolitical / demographic / economical / environmental / public health (e.g. COVID pandemic – though kind of Black Swan (Taleb, 2005)) structural changes, and "prosumerism" have been sources of discontinuity (Faeste & Hemerling, 2016; Prahalad & Oosterveld, 1999; Webb, 2020).

In response to disruptions and in order to maintain their competitiveness and viability (Sackmann, Eggenhofer-Rehart, & Friesl, 2009) and depending on the industries' pace of disruption (Faelli, Webster, Pratt, & Johns, 2019), companies calibrate their response (Bughin et al., 2018). Some reinvent themselves periodically (De Geus, 2002; Nunes & Breene, 2011; Toffler, 1970), some miss the train (e.g. Blockbuster, Polaroid, Kodak, Nokia) (Sull, 2005), and others embark on CTx journeys – **intense second-order change** (Levy, 1986), **organization-wide programs to enhance performance and boost organizational health**. This is also applicable to successful companies as "great strengths are inevitably the root of weakness" (Pascale, 1990). These core changes lead to a fundamental change in organizational logic (Muzyka et al., 1995) involving a metamorphosis from one state to another (Flamholtz & Randle, 2008).

In 2016, research done by McKinsey indicated that 70% of companies fail to survive their CTx journeys (Michael Bucy et al., 2016). Another research done by Bain & Company (2018) in 2018 showed that only 12% of companies achieve their full transformation targets and 68% fall well short of their ambition (Litré et al., 2018). And a third research done by BCG in 2020 (Reeves, Faeste, Bham, & Heje, 2020) showed that 27% of CTx are successful. Consequently, organizations appear to be faced with a classic paradox: "We have to change but most of our change initiatives fail" (Burnes & Jackson, 2011). Reality is **companies who fail cost the global economy trillions of dollars.**

C. COMPONENTS OF CORPORATE TRANSFORMATION

A deep dive into CTx journeys reveals that they revolve around three components: (1) **Business model transformation**: the systematic strategic change process of switching from one business model to another in order to gain or regain the competitive edge (Cozzolino, Verona, & Rothaermel, 2018; Osterwalder & Pigneur, 2010; Rivkin, 2000; Siggelkow, 2002), (2) **Digital enabled transformation**: the integration of digital technology into all areas of a business, changing how companies operate and deliver value to customers (Sebastian et al., 2017), and (3) **Organizational transformation**: the radical changes in an organization's mission, structures, systems, and culture (Brosseau, Ebrahim, Handscomb, & Thaker, 2019; Levy & Merry, 1986; Siegal et al., 1996; Troilo, De Luca, & Guenzi, 2017). Figure 1 also reveals the external factors and internal factors that influence the three components of a CTx.

Business Model Transformation

The complexity of a strategy (Mintzberg, Ghoshal, Lampel, & Quinn, 2003), coupled with limits on what managers know about rivals and can implement, raise a barrier to imitation of successful business models. Hence the need to identify a business model that works best for the transforming company (Sinfield, Calder, McConnell, & Colson, 2012). Throughout their business model transformation, companies will be toggling between running their core - today's engine - as efficiently as possible while creating their new business - tomorrow's engine (Allen, Root, & Schwedel, 2017; Birkinshaw & Gibson, 2004; Govindarajan, 2016; Raisch & Birkinshaw, 2008). It means defining a vision for the industry and company, often inspired by a fundamentally underserved

consumer need or an emerging and breakthrough technological solution (Faelli et al., 2019). Once the vision is defined, companies need to adapt their business models that are currently based on managing the supply of either a product or service to a business model based on providing whatever customers demand, using any means possible (Michael Bucy et al., 2016). Depending on their competitive advantage and strategy (Day, 1999; Hamel, 2001; Hamel & Prahalad, 1994; Porter, 1989, 1997), this will entail transforming either their *customer & channel engagement*, *products and services innovation*, *economic model*, or *operations model*.

Companies can change their business model either externally (through *M&A* or *Alliances*) or internally (through *direct integration* or *Corporate Venture Capital (CVC) and Incubator*).

There are two enablers of Business model transformation: *risk management* and *investment & funding*.

Digital Enabled Transformation

The reality is that for most large companies today, it is not a question of "if" digital will overturn their business but "when" (Arora, Becker, Simon, & Wunderlich, 2017) and we witnessed the acceleration of this phenomenon during the recent global COVID pandemic. Digital enabled transformation optimizes companies' operations, transforms their products, engages their customers, and empowers their employees (Haupter, 2021).

The digital strategy will have to identify how to use digital to access customers, engage with customers, address customers' needs, connect with customers, and collaborate with customers (Davenport, Mule, & Lucker, 2011; Rogers, 2016). Digital strategy drives also digital maturity (Kane, Palmer, Phillips, Kiron, & Buckley, 2015). There are four types of digital maturity: Beginners, Conservatives, Fashonistas, and Digirati[4]. The latter are the ones that understand how to drive value with digital transformation. They pursued new technologies and focused on all supporting behaviors, skills, culture, vision, and leadership (Westerman, Tannou, Bonnet, Ferraris, & McAfee, 2012). Digital should enable the Business model transformation *(*Sebastian et al., 2017*;* Westerman, Calméjane, Bonnet, Ferraris, & McAfee, 2011*)*. Digital business design (Slywotzky, Morrison, & Weber, 2001) is the art and science of using digital technologies to expand a company's strategic options. It is not about technology for its own sake. It is about serving customers, creating unique value propositions, leveraging talent, radically improving productivity, and increasing profits. It is about using digital options to craft a business model that is not only superior, but unique.

At the heart of the Digital enabled transformation are two ecosystems: *digital* & *data* (the first provides the software backbone that enables the latter) (Russo & Albert, 2018).

Companies can digital enable their business model by *focusing on agile*, *investing in "buy & scale" / corporate ventures / alliances*, *establishing a digital center of excellence*, *setting-up a digital business building*, or *building process / use-case transformation* (Arora et al., 2017; Forum, 2018).

There are three enablers of Digital enabled transformation: *Data & Analytics, Technologies*, and *Systems Integration.*

Organizational Transformation

An organizational transformation is an extreme change in an organization, "a drastic reshuffling in every dimension of its existence: its missions, goals, structure, and culture" (Levy & Merry, 1986). For an organizational transformation, companies need to *build the right capabilities*, *embrace new ways of working aiming for Continuous Improvement,* and *redesign their organization structure to fit the newly adapted business model.* The result will *shape their organization DNA and culture*.

Companies can transform their organizations by *building commitment at all levels*, *creating & sharing the company's vision & purpose with a sense of urgency*, *addressing heuristics and biases*, and *accelerating the organizational learning*.

There are two enablers of Organizational transformation: *Communications, Trust and Empowerment.*

D. INTERDEPENDENCIES AND STRATEGIC ROUTES OF CORPORATE TRANSFORMATION

Managers must make choices along many components. Since these choices interact with each other, firms can be conceived as systems of interdependent choices (Khandwalla, 1973; Siggelkow, 2011). A successful transformation requires a substantial change in a wide range of a firm's activities (Milgrom & Roberts, 1990). Identifying and managing interdependencies among the three components will narrow down those activities to the essential ones (Lahrmann, Labusch, Winter, & Uhl, 2012). With that objective, I cross-referenced available literature. As an outcome, I confirmed that the three components of CTx are not-mutually-exclusive and their interdependencies (Sadek, 2024) (Figure 2) are: *business model adaptation, data ecosystem, digital ecosystem, capabilities*, *ways of working & continuous improvement*, and *org structure.* All these interdependencies are interlinked, **any change in any implies a change in the others**.

[4] Authors later changed the term "Digirati" to "Digital Masters" (Buvat et al., 2018).

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If a company would like to embark on a digital transformation, they will change their data and system ecosystems which implies changing their capabilities, ways of working & continuous improvement, as well as their org structure. By deduction, Digital Enabled Transformation is usually coupled with Organizational Transformation. But what about Business Model Transformation? The interdependency that relates to Business Model Transformation is business model adaptation which rules out the necessity of a "new" or "transformed" business model. Therefore, companies can embark on both Digital Enabled Transformation coupled with Organizational Transformation irrespective of whether the business model is "new" and "transformed". Consequently, companies have three strategic transformation routes (Sadek, 2024) (Figure 3):

(1) **Miss-Transformation:** this is when a company decides to change a business model without changing any of the other components or decides on embarking on a digital transformation without instilling changes in their organization and ways of working. Of course, changing only the organizational component, does not qualify as a transformation but rather a change management program
(2) **Mesa[5]-Transformation:** integrate digital into all areas of their incumbent business model coupled with an Organizational Transformation
(3) **Meta[6]-Transformation:** transform all three CTx components

E. HYPOTHESIS AND PROPOSITIONS

Surviving CTx journeys entails delicately navigating the interlinkages among the CTx components. Consequently, my hypothesis statement is: **Companies who orchestrate[7] the three CTx components** (Business model transformation, Digital enabled transformation, and Organizational transformation) **are more successful in their transformation journey compared to companies who don't**.

By employing the word orchestrate, I am drawing a juxtaposition between CTx and orchestras[8] where CTx components are apposed to the orchestra's families of instruments. To correctly perform a particular repertoire[9], the orchestra must be unified *as an ensemble* and played at the *right tempo* with *perfect intonation*. This translates into the three propositions that need verifying to validate my hypothesis.

-Proposition 1: **Successful companies manage the three components of a corporate transformation as one ecosystem**
-Proposition 2: **Successful companies manage the ecosystem in an orchestrated multi-steps approach**
-Proposition 3: **Successful companies implement a management system[10] for an always-on corporate transformation**

F. RESEARCH METHODOLOGY

To validate the hypothesis and propositions, I opted for a Case Study Research of twenty transforming non-digital-native (mainly in the US and EU) companies[11]. Two essential sources of data were:

- publicly available company records: quarterly earnings results, annual reports (e.g.: financial reports, integrated reports, sustainability reports), and events' presentations (e.g.: conferences, investor days, annual shareholders meeting). The records provided the studied companies' history & background, CTx journey & its milestones, key initiatives undertaken & their timelines, and financial & non-financial results

[5] Mesa is a prefix denoting intermediate or connective.
[6] Meta (from the Greek μετα-, meta-, meaning "after" or "beyond") is a prefix meaning more comprehensive or transcending. Meta does not refer to Facebook corporate company nor to software engineering.
[7] Orchestrate is a verb that denotes "to arrange or combine so as to achieve a desired or maximum effect".
[8] An orchestra is a large instrumental ensemble typical of classical music, which combines instruments from different families (including bowed string instruments, woodwinds, brass instruments, and percussion instruments) each grouped in sections.
[9] A musical repertoire is a collection of music pieces played by an individual musician or ensemble, composed for a particular instrument or group of instruments, voice, or choir, or from a particular period or area.
[10] A management system is a set of policies, processes and procedures used by an organization to ensure that it can fulfill the tasks required to achieve its objectives.
[11] Wells Fargo, Orbia, Philip Morris International, Enel, Europcar Mobility Group, Invacare, Signet Jewelries, PPG, Tapestry, Orange, MetLife, Pernod Ricard, Assurant, Alcoa, Teleperformance, Alcon, Campari Group, Hershey's, Carrefour, Coty

- my interviews[12] with senior (VP level and higher) executives in relevant functions[13]. The purpose of these interviews was to complement the company records by filling my knowledge gap on details, timings, circumstances, insights, and learnings. Interviewing executive from different functions allowed me to cross-check the integrity of interviews' content

Before interviewing the leaders, I identified their CTx initiatives and their timelines since the start of their CTx till end of the year 2020. Then, I conducted 37 interviews in a span of almost a year (11 Jun 2020 to 7 May 2021). I started by interviewing seniors in my company, PMI, which allowed me to tweak the questionnaire to its final version due to my familiarity with our business case.

Before analyzing the data, I identified three key features related to the twenty companies and charted the results in Figure 4:

(a) *duration of their CTx journey*. The "year of corporate transformation start" ranged from 2008 to 2019[14] with six out of the twenty in 2015.

(b) *strategic route of their CTx* whether they underwent a Mesa-Tx (transformed two CTx components out of three: digital enabled Tx and organizational Tx) or Meta-Tx (transformed all three CTx components). Eleven out of the twenty underwent a Mesa-Tx which constitutes a good mix for my analysis.

(c) their *Tx success* by measuring their Total TSR[15] since the start of transformation vs Industry Total TSR average since the start of transformation. Though the success assessment identified eight companies with a positive delta (difference between company Total TSR and industry Total TSR) ranging from 0.43% to 31.24%, I shall label:

-"Highly successful," the companies with a significant (above 5%) delta; consequently, selecting only four ranging from 7.04% to 31.24%.

-"Successful," the companies with a positive delta but below 5%; consequently selecting four ranging from 0.43% to 3.40%.

-"Non-successful," the rest of the companies ranging from -0.89% to -36.78%.

G. FINDINGS

I believe my thesis provides prescriptive literature (based on the Case Study Research results in Appendix A), that can empower non-digital-native companies to successfully orchestrate their always-on CTx journey by:

a. validating the CTx initiatives addressing the CTx components' "what," "how," and enablers that increase the probability of CTx success, and their best practices. These CTx initiatives will constitute an ecosystem as portrayed in Figure 5. This finding compliment previous findings that organizations that took a rigorous, action-oriented approach and completed their CTx report a 79% success rate. According to their results, no single action explains the difference; in fact, the more actions an organization takes, the more likely its CTx is to succeed (Goldstrom, 2019; Jacquemont et al., 2015; Kilmann, 1995).

b. validating a sequential multi-steps CTx initiatives approach that increases the probability of CTx success and their best practices. Practitioners have been advocating that CTx process goes through a series of phases requiring a considerable length of time (Buvat, Krishna Puttur, & Slatter, 2017; Caglar & Duarte, 2019). Skipping steps creates only an illusion of speed and never produces a satisfying result (Kotter, 2005). The key CTx phases/steps are the "what" and they relate to: *business model adaptation, data ecosystem, digital ecosystem, capabilities, ways of working & continuous improvement,* and *org structure*. The challenge was to sequence them. Leading consulting firms devised approaches to go about this challenge. At Boston Consulting Group (BCG), the process has four stages with clear milestones (Faeste & Hemerling, 2016). At McKinsey, one of the methodologies they suggest to lead large-scale change is "performance-and-health," advocating that by methodically putting equal emphasis on the hard and soft elements of leading change, organizations can more than double their odds of success (Keller & Schaninger, 2019a). Another methodology for organizational redesign includes nine rules to follow, also making the point that a structured approach yields higher success rates (Aronowitz, De Smet, & McGinty, 2015). From all these approaches stems the prioritization of *capabilities* and *ways of working & continuous improvement* and the de-prioritization of *org structure* (hence its last position in the sequence). This prioritization has been also covered by literature advocating that as companies transform their business model, the first key attention for a successful CTx should go to the organizational, people and capability aspects first (Buvat et al., 2017; Van Ommeren & Coelho 2019). To embark on a Digital

[12] All interviews were video-based interviews (due to COVID pandemic) and recorded.

[13] Interviewees fell into five categories: (1) C-suit, (2) Operations and Finance, (3) Commercial, Marketing, and Business Development, (4) Digital and IT, and (5) HR. Categories (2) and (3) had main input on CTx initiatives related to Business Model Tx component, category (4) on Digital Enabled Tx, category (5) on Organizational Tx, and category (1) on all three components.

[14] For the three companies that started their CTx in 2019, I had data covering two years (till end of 2020) and consequently enough to infer results and learnings.

[15] Total shareholder return

transformation requires the enablement of the business model with *data ecosystem* and *digital ecosystem* (with the latter being built based on the *data ecosystem*). Once *capabilities* and *ways of working & continuous improvement* start, time comes to *data ecosystem* and *digital ecosystem*. The less successful companies try to do the reverse (Ward & Uhl, 2012). And finally, any CTx (irrelevant of its strategic route) will start with *applying its business model*, hence it is first in sequence. By deduction, the sequence to be validated is: (1) *business model adaptation,* (2) *capabilities,* (3) *ways of working & continuous improvement,* (4) *data ecosystem,* (5) *digital ecosystem,* and last (6) *org structure.* Figure 6 shows the consequent sequential multi-steps CTx initiatives approach.

c. Validating that transforming companies implement a sort of management system for an always-on CTx. Companies start their CTx journey and soon realize that their CTx should become a state of mind. In that avail, they require a management system to keep their transformation always-on.

d. providing a *Corporate Transformation Orchestration Framework*[16] (CTxOF) that includes:
   - *Corporate Transformation Plan* (CTxP) and *Corporate Transformation Dashboard* (CTxD) - both inferred from point (a)
   - *Corporate Transformation Orchestration Map* (CTxOM) - inferred from point (b) – and includes the (governance, change management, and compensation) processes needed
   - *Closed Loop Management System* for an always-on CTx - inferred from point (c) above
   - Best practice inspired by the case analysis as well as interviews (Appendix C)

FRAMEWORK FOR FINDING ONE: MANAGE THE THREE COMPONENTS OF A CORPORATE TRANSFORMATION AS ONE ECOSYSTEM

Corporate Transformation Plan (CTxP)

CTx, similar to Turnarounds, require a coherent consistent plan (Kanter, 1984; Slatter & Lovett, 1999). Companies have to draft a *Corporate Transformation Plan* (CTxP) that includes all the CTx initiatives to be implemented - by CTx component - as well as the processes the company must undertake to ensure the orchestration of their CTx efforts (Caglar & Duarte, 2019).

As shown in Figure 7, there are five sections in the CTxP:

-Section A: describes the vision, purpose, and core values of the company (Mourkogiannis, 2007), why the company must transform, and what are its strategic priorities. This section helps leaders develop a clear change story to share internally and externally (Jacquemont et al., 2015; Kotter, 2007).

-Section B: includes all key CTx initiatives related to Business model transformation >> description of the new business model, transition plan from the current/old to the new business model, value creation plan, funding and investment plan, risk management plan to mitigate any possible risk instigated by the CTx, and all their KPIs.

-Section C: includes all key CTx initiatives related to Organizational transformation >> capabilities plan, learning plan, new ways of working towards a continuous improvement, new organizational structure, communication plan, trust & empowerment plan, and all their KPIs.

-Section D: includes all key CTx initiatives related to Digital enabled transformation >> digital strategy that will be highly influenced by the business model and lead to digital maturity, data and digital ecosystem plans, systems integration plan, and all their KPIs.

-Section E: includes all processes needed to orchestrate the CTx >> governance processes, change management processes, and compensation processes.

Corporate Transformation Dashboard (CTxD)

Metrics in Appendix D constitute a comprehensive list of relevant and possible input to the *Corporate Transformation Dashboard* (CTxD). Selection of metrics will depend on the chosen business model (Rockart, 1979) and its digital enablement. However, a simple set of metrics can quickly become complicated if additional layers are added. Evidence shows that only 29% of the metrics organizations claim to follow are actively used (Micheal Bucy, Fagan, Maraite, & Piaia, 2017).

The *Corporate Transformation Dashboard* (CTxD), Figure 8, incorporates all KPIs identified in the CTxP.

FRAMEWORK FOR FINDING TWO: MANAGE THE ECOSYSTEM IN AN ORCHESTRATED MULTI-PHASE APPROACH

Corporate Transformation Orchestration Map (CTxOM)

CTxOM is a guiding map (Figure 9) where key CTxP initiatives' phasing (and sequencing) are plotted. CTxOM have two characteristics. They are (1) "all-in" (not confined to one team or function) as the CTx initiatives cut across all the organization, and (2) iterative as CTx require multiple changes; strategies must be rewritten, organizational cultures realigned around different values, processes reworked, and value chains redesigned (Francis, Bessant, & Hobday, 2003).

-Phase 1:

[16] The framework will be the result of literature review and case study research (based on company reports, interviews, and analysis).

Companies will move from their current / core business model to the new one. While doing so, they make sure to manage the internal risks (business performance, concerns from the board, reactions of unions, etc.) and external risks (government regulations, financial market fluctuations, etc.). Companies will also have to fund their journey through organic revenue, organizational simplicity (delayering), capital efficiency, and cost reduction. To reallocate their resources, companies can use Zero Based Budgeting (ZBB) (Fritzen, Hawke, & Hoblet, 2018).

-Phase 2:

Capabilities - No matter how brilliant is the CTxP, success will depend on management's and employees' capabilities and attitudes. People can be a corporate's competitive advantage (Pfeffer, 1994). Although a workforce transformation will ultimately reach the entire organization, some people's roles and skill sets are critical to achieving the highest-priority business outcomes right away (Caglar & Duarte, 2019; Hemerling, Bhalla, Dosik, & Hurder, 2016). Most of the research respondents emphasized the importance of this point.

Learning for Incumbent Management and Employees - Training can also be useful way of changing, addressing heuristics, and/or reinforcing new behaviors and attitudes which are important to longer-term cultural change (Kelly, 1995). Once the type of program is selected and the required skills are identified, appropriate learning programs can be designed using a wide range of delivery techniques ranging from lectures in classrooms to web-based trainings[17].

Learning for Newly Recruited Talents - Companies can establish an onboarding program (leveraging digital[18]) with the aim of immersing the new talents within the transforming company and consequently accelerating their added value and external knowledge transfer.

-Phase 3:

New Ways of Working (NWoW) towards Continuous Improvement (CI) – In order to adapt to the ever-increasing pace of disruptions and yet aim for an always-on CI mentality, companies can foster agile, collaboration, and scaling. Companies can start with building the top team's understanding and aspirations, creating a blueprint to identify how agility will add value, and learning through agile pilots. Working across functions in multidisciplinary teams can shorten the time to market. This, plus agile working methods, is what accelerates digital customer engagement (Glaser, Ludolph, Schaubroeck, & Vendrig, 2019). New WoW will have to instill innovation, data-driven decision-making, collaboration, open culture, digital-first mindset, agility & flexibility, and customer centricity (Buvat et al., 2017). For these new WoW to prevail, companies can instill trust among all layers and functions / units of the organization and empower their employees (Dikert, Paasivaara, & Lassenius, 2016; Litré et al., 2018) and build commitment at all levels starting by leadership. Guaranteeing a psychologically safe environment is key where experimentation and failures are tolerated. Coaching is also key in CTx times. Ideally, each supervisor should act a coach.

-Phase 4:

Data Ecosystem – Five principles companies can follow when developing their data ecosystem: gather diverse Big Data[19] (on business processes, products or services, and customers), leverage predictive data to support decision making, apply data to boost innovation, ensure capturing behavioral and geolocation data, and combine data across silos (Rogers, 2016). Once they identify how the data will be sourced and from where [inside and outside (customers, lead users[20] participation, supply chain partners, public data sets, and purchase or exchange agreements) the company], they can architecture the data and identify the right data analytics tools to be used. Once the company knows how the data will be sourced, architected, and analyzed the processes can be designed accordingly. This is in-line with "reengineering" – the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical measures of performance such cost, quality, service and speed (Hammer & Champy, 1993) - when all assumptions and traditions of the way business has always been done have been disregarded (Champy & Cohen, 1995). Part of data strategy is developing a legal, risk management, and security plan (Rogers, 2016).

-Phase 5:

Digital Ecosystem – As the business model has been defined and data ecosystem has been designed, the company can deploy the necessary digital ecosystem. Data processing technologies include data-mining tools, cognitive computing, machine learning (ML), and artificial intelligence (AI). For data storage and accessibility, cloud computing is replacing owned infrastructure (Rogers, 2016). Enterprise resource planning (ERP) efforts have led to dramatic financial benefits (Brynjolfsson & Saunders, 2009). Companies can

[17] Key players in employees' learning: LinkedIn Learning @ linkedin.com, Google Analytics Academy @ analytics.google.com, General Assembly @ generalassemb.ly, Circus Street @ circusstreet.com, Guudjob @ guudjob.com, Qualtrics @ qualtrics.com, Unily @ unily.com.

[18] Key players in employees' onboarding: Guudjob @ guudjob.com, Qualtrics @ qualtrics.com.

[19] Big Data term was introduced in the mid-nineties by John Mashey, chief scientist of Silicon Graphics.

[20] Lead users was introduced by Eric von Hippel and refers to most active, avid, or involved customers.

achieve better results if their digital ecosystem is connected with other ecosystems (Sebastian, Weill, & Woerner, 2020). To ensure systems integration and connectivity with external stakeholders (Weill & Woerner, 2013), APIs can be used. They are sets of functions, protocols, procedures and tools that enable developers to access the features or data of another service or application (Kotter, 2007).

-Phase 6:

Structure - At this phase, as the employees have embarked on their CTx journey and data & digital ecosystems are in place, the redesigned organizational structure can be shaped. To be able to redesign their organization to fit the new business model, companies can use ZBO (zero-based organization) to design the "right" organization from a clean sheet, shifting talent from work that no longer contributes to desired outcomes to the distinctive capabilities and operating model required to fuel profitable growth (Jeruchimowitz, Colwill, Hudson, & McMillan, 2018).

Workspace – Companies can also amplify the outcome of the previous phases if they can afford to redesign the workspace. Their aim is to create physical and virtual spaces to facilitate communication and concentration among other criteria (Brunia, De Been, & van der Voordt, 2016).

Transformation Orchestration Processes

To the contrary of the other CTxOM content the following processes don't have a sequence, they just must be put in place and kept there to ensure proper orchestration.

Governance Processes

Control systems are important levers used to manage change. In situations of strategic change, control systems are used by top managers to formalize beliefs, set boundaries on acceptable strategic behavior, define and measure critical performance variables, and motivate debate and discussion about strategic uncertainties. Transforming companies need to implement a governance structure in place that links: Senior Management Team, Executive and Steering Committees, CTx Office, PMO, Finance, Digital, IT, HR, and Business Units (Brosseau et al., 2019; Eccles, 1994; Faeste & Hemerling, 2016) and devise governance processes to ensure: *extracting value*, *focusing attention*, *controlling business units / subsidiaries*, and *allocating tasks / roles*.

Change Management Processes

Technological change happens exponentially, but organizational change is dependent on factors that transition far more slowly (attitudes, thinking, structures, behaviors, culture) and so is logarithmic (Brinker, 2013). Hence, a more holistic, sensitive and people focused approach to CTx is required (Coulson-Thomas, 1997; Faeste & Hemerling, 2016; Jones, da Peter, Rutter, & da Somauroo, 2019). If there is mistrust, defensive communication, a withholding of information, deficient problem-solving skills, and little cooperation across departments, better formal systems can neither be designed nor be implemented (Biesdorf, Möller, & Thomas, 2018; Keller & Schaninger, 2019b; Kilmann, 1995; Ramakrishnan & Testani, 2011).

To successfully manage change, companies will have to *communicate constantly*, *embrace Diversity & Inclusion, address behaviors*, and *build commitment at all levels*.

Compensation Processes

Performance Appraisal – Many organizations switched to frequent performance assessments (leveraging digital[21]), often conducted project by project (Cappelli & Tavis, 2018) with a focus on assessing risk taking, innovation, and collaboration across parts of the business (Bughin, Deakin, & O'Beirne, 2019; Deakin, LaBerge, & O'Beirne, 2019; Kilmann, 1995). Rather than receiving a single rating at an annual review, employees now have more frequent check-ins with managers (Darino, Sieberer, Vos, & Williams, 2019; Kiron et al., 2019) which supports relational psychological contracts and reciprocal trust (Neely, 2002).

Reward System – Successful companies align their KPIs with their incentive systems (Buvat et al., 2017; Fitzgerald, Kruschwitz, Bonnet, & Welch, 2013; Kanter, 1984). As performance appraisals are evolving, so should the incentive system.

FRAMEWORK FOR FINDING THREE: IMPLEMENT A MANAGEMENT SYSTEM FOR AN ALWAYS-ON CORPORATE TRANSFORMATION

Closed Loop Management System for Always-on Transformations

In developing the tool, I was inspired by the work of Kaplan and Norton on the Balanced Scorecard (BSC) that relies on four processes to bind short-term activities to long-term objectives: translating the vision, communicating and linking, business planning, and feedback and learning (Kaplan & Norton, 1996).

Figure 10 shows the different steps a company should follow to reach an always-on CTx. Step 1 is about developing the vision & purpose (Ghoshal & Bartlet, 1998), core values and goals of the company – a kind of "north-star" to follow (Beer, Eisenstat, & Spector, 1990). In step 2, the company establishes a clear financial baseline (Davies & Huey, 2017) - as the value of a CTx is only measurable relative to a meaningful baseline – and will formulate their strategic priorities and enablers to allow them reach the

[21] Key player in employees' performance assessment: Guudjob @ guudjob.com.

"north-star". At this stage, the company will be able to draft its CTxP which will include the inputs for steps 3 [Business Model Transformation], 4 [Digital Enabled Transformation], and 5 [Organizational Transformation]. All projects pertaining to these steps (3 to 5) will be consolidated and managed by the Program Management Orchestration Office (PMOO) (Brosseau et al., 2019). Once these projects are executed, their results will be captured in the CTxD and their performance measures will feed-in step 6 where strategy and operations reviews take place to monitor and learn; and feed-in step 7 where profitability and strategy correlation analysis take place to test and adapt. Outcomes and decisions are taken back to step 2 [Formulate Strategic Priorities & Enablers] where the loop starts all-over.

Corporate Transformation Officer (CTx Officer)

CTx Officer orchestrates the CTx with the ability to strike the right balance between carrot and stick, short-term improvement and long-term value, and making sure line managers themselves take responsibility for ensuring they deliver results (Gorter, Hudson, & Scott, 2016; Jeruchimowitz et al., 2018). The Transformation Office (Tx Office) bring a different pace to planning and execution. It is the beating heart of a CTx, propelling the company forward at a new speed and instilling a new culture of delivery. Most organizations already have well-established Project/Programs Management Offices (PMOs) and/or Strategy Delivery Offices (SDO or OSM). Both are essential for driving performance improvement, but given their inherent complexity and criticality, managing a CTx cannot and should not be done using the same approach used for managing projects, strategy or performance (Lemaitre, Wyszkowsky, & Creelman, 2019).

CTxOF Counterargument

While the Corporate Transformation Orchestration Framework (CTxOF) presents a comprehensive approach to guiding non-digital-native companies through transformation journeys, it's important to consider potential critiques. Critics might argue that the framework's structured and sequential nature could limit flexibility and responsiveness—qualities paramount in today's rapidly changing business landscape. For instance, the sequential execution of transformation initiatives, while methodical, might delay critical adaptations in the face of unforeseen market shifts or technological breakthroughs. Additionally, the emphasis on orchestration and governance might lead some to contend that it could result in bureaucratic overhead, potentially stifling innovation and agility. However, it is essential to view CTxOF as a dynamic guide rather than a rigid blueprint; it is designed to provide structure to transformation efforts while still allowing for adaptability and responsiveness to emergent challenges. The framework's efficacy lies in its ability to balance strategic foresight with operational flexibility, ensuring that companies can navigate the complexities of transformation without losing sight of evolving market demands and opportunities.

H. CONCLUSION

For a successful CTx, non-digital-native companies must orchestrate the three components of a CTx (Business model transformation, Digital enabled transformation, and Organizational transformation) by managing them as one ecosystem, in an orchestrated multi-step approach, and by implementing a management system for an always-on CTx. Senior executives of those companies and their strategy arms can use the devised *Corporate Transformation Orchestration Framework* (CTxOF) to navigate their CTx journeys. The framework comprises of: *Corporate Transformation Plan* (CTxP) that details key CTx initiatives, *Corporate Transformation Dashboard* (CTxD) that includes performance metrics, *Corporate Transformation Orchestration Map* (CTxOM) that details the CTxP initiatives' phasing (and sequencing), and Corporate Transformation Orchestration processes (governance, change management, and compensation), and *Closed Loop Management System* for an always-on CTx.

The novelty that my thesis brings is the prescriptive literature that builds on interdependency dynamics among all three CTx components research streams (business model, digital, and organizations).

As we look to the future of corporate transformation, it is evident that the journey for non-digital-native companies will continue to evolve in complexity and scope. The rapid advancement of emerging technologies such as artificial intelligence, blockchain, and the Internet of Things (IoT) promises to redefine the parameters of digital transformation, pushing companies to continually adapt their strategies and operational models. Moreover, the growing emphasis on sustainability and social responsibility requires that future iterations of the Corporate Transformation Orchestration Framework (CTxOF) integrate principles of ethical business practices and environmental stewardship. This will not only ensure that transformations align with global sustainability goals but also resonate with the values of a new generation of consumers and employees. Furthermore, the intersection of digital transformation with geopolitical, economic, and public health challenges underscores the need for an increasingly agile and resilient approach to corporate transformation. Future research should thus focus on enhancing the CTxOF with adaptive mechanisms that enable companies to swiftly pivot in response to global disruptions, ensuring sustained relevance and competitiveness in an unpredictable world.

DISCLOSURE STATEMENT

The author reports there are no competing interests to declare. Further guidance on what is a conflict of interest and how to disclose it."

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Appendix A: Key Results

Results related to Proposition 1: Successful companies manage the three components of a CTx as one ecosystem

The data used for this analysis are available in Appendix B where I identified if the transforming company has implemented (marked by "1") or not (marked by "0") the pre-defined initiative (Figure 6) belonging to that CTx component category.

Results (Figure A1) accept the proposition as true and show that all Highly successful transforming companies implemented *almost all*[22] CTx initiatives addressing the ecosystem. The reason I stated *almost all* is the fact that Highly successful companies scored 50% (vs 100% on the rest) on Organizational Tx "how" because of lower implementation of initiatives *addressing heuristics & biases*. If the latter is removed while keeping the other initiatives belonging to that category (*building commitment at all levels,*

[22] Highly successful companies scored 100% on all (Business Model Tx "what," Digital Enabled Tx "what," Digital Enabled Tx enablers, Organizational Tx "what," and Organizational Tx enablers) except Organizational Transformation "how".

creating & sharing the company's vision & purpose, and *accelerating organizational learning*) the score will go to 100%. I believe, if the Highly successful companies who have not implemented initiatives addressing heuristics & biases would have otherwise done so, their success ratings might have been even stronger.

Results also show that when CTx initiatives are not treated as one ecosystem (consequently less pre-defined CTx initiatives are being implemented) the more likelihood of CTx failure. That was demonstrated in the reducing percentages of implemented CTx initiatives from Highly successful to Successful to Non-successful.

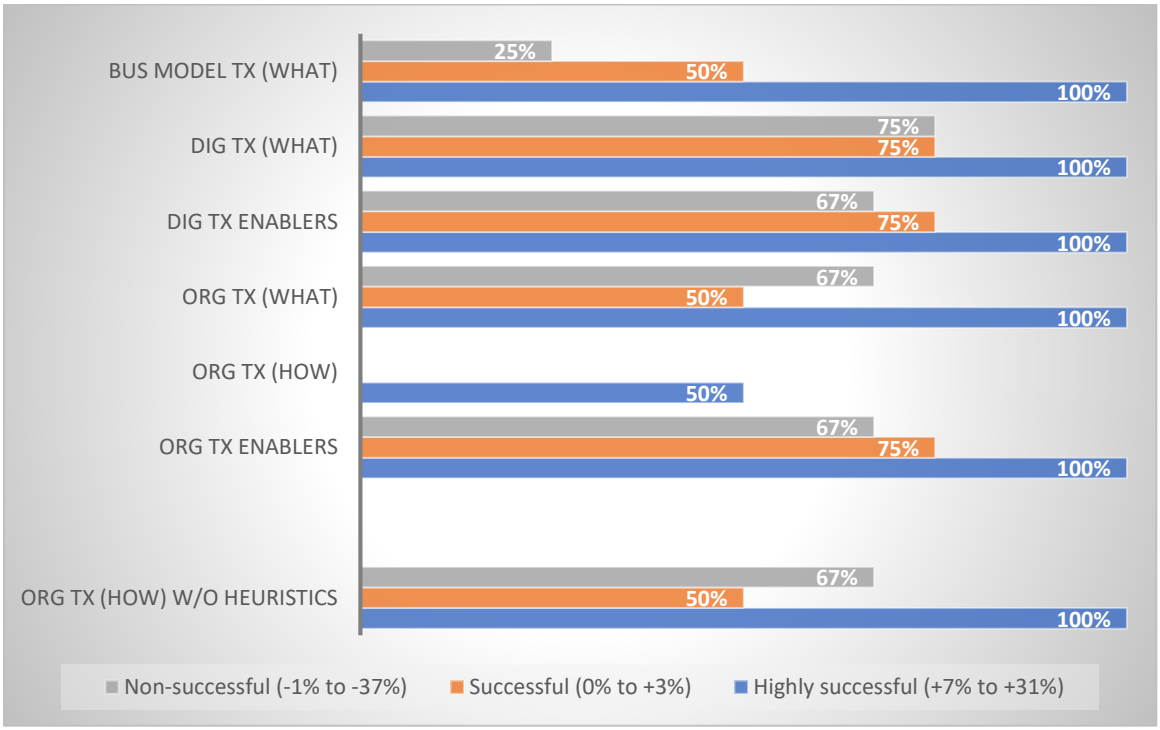

Figure A1: Percentage of transforming companies by success category who implemented CTx initiatives addressing the defines three CTx components' "what," "how," and enablers

Results related to Proposition 2: Successful companies manage the ecosystem in an orchestrated multi-steps approach

The data used for this analysis are available in Appendix B where I identified the conformity score of each of the companies to the pre-defined sequence (Figure 7). Conformity scores have been calculated using the formula that calculates the distance between two points $d=\sqrt{(x\_2-x\_1)^2}$ whereby x_2 is the company sequence of a particular CTx initiative and x_1 is the prescribed sequence. Therefore, the smaller the distance, the more conforming is the company sequence to the prescribed sequence.

Results (Figure A2) chart the median and mean of each of the three groups by success (Highly successful, Successful, and Non-successful). The Highly successful group has a lower median and mean from the other two groups (Successful and Non-Successful) and therefore more conforming to the pre-defined sequence. Therefore, results accept the proposition as true and show that all Highly successful transforming companies sequenced their CTx initiatives addressing the defined three CTx components' "what" in close conformity to my prescribed sequence. But how about the remaining two groups. Things are not as straight forward when it comes to Successful vs Non-successful groups as both showed the same median and mean. Going into the details of the Non-successful group, I realized that there are two companies (Company H and Company M) that had a conformity score of 2 (meaning very close from the pre-defined sequence) but with a very low performance rate (Company H: -37% and Company M: -15%). So, I dug deeper into both these companies starting with Company H. It is a group of companies undergoing a Meta-transformation for the last years. They did not score highly on the ecosystem (as they skipped CTx initiatives related to the Organizational Tx "how" and Organizational Tx enablers) but scored low on conformity (which is the objective). So, is their conformity score the result of a coincidence? As I did not have a straight answer, I tried to understand the reason(s) behind their negative performance (-37%, lowest among all twenty companies). What explains it is the fact that the group was on the brink of collapse due to liquidity issues taking them from round of debt restructuring to another. It became obvious to me why that company performed the worst among its industry. Company M is a group of companies undergoing a Meta-transformation but started recently. The fact that they scored very high on ecosystem (to the exception of addressing heuristics and biases – part of the Organizational Tx "how") and low on conformity, signals to me that they are managing well their CTx journey. What explains the negative performance (-15%) is the fact that the group wanted to divest their profitable businesses that don't fit with their sustainability vision which got them

penalized by investors. Having analyzed both companies, I treated them as outliers and removed them from the Non-successful group results. Consequently, the median and mean of the Non-successful group went higher than the Successful group. Therefore, results also show that the less sequence-conforming implemented CTx initiatives the more likelihood of CTx failure.

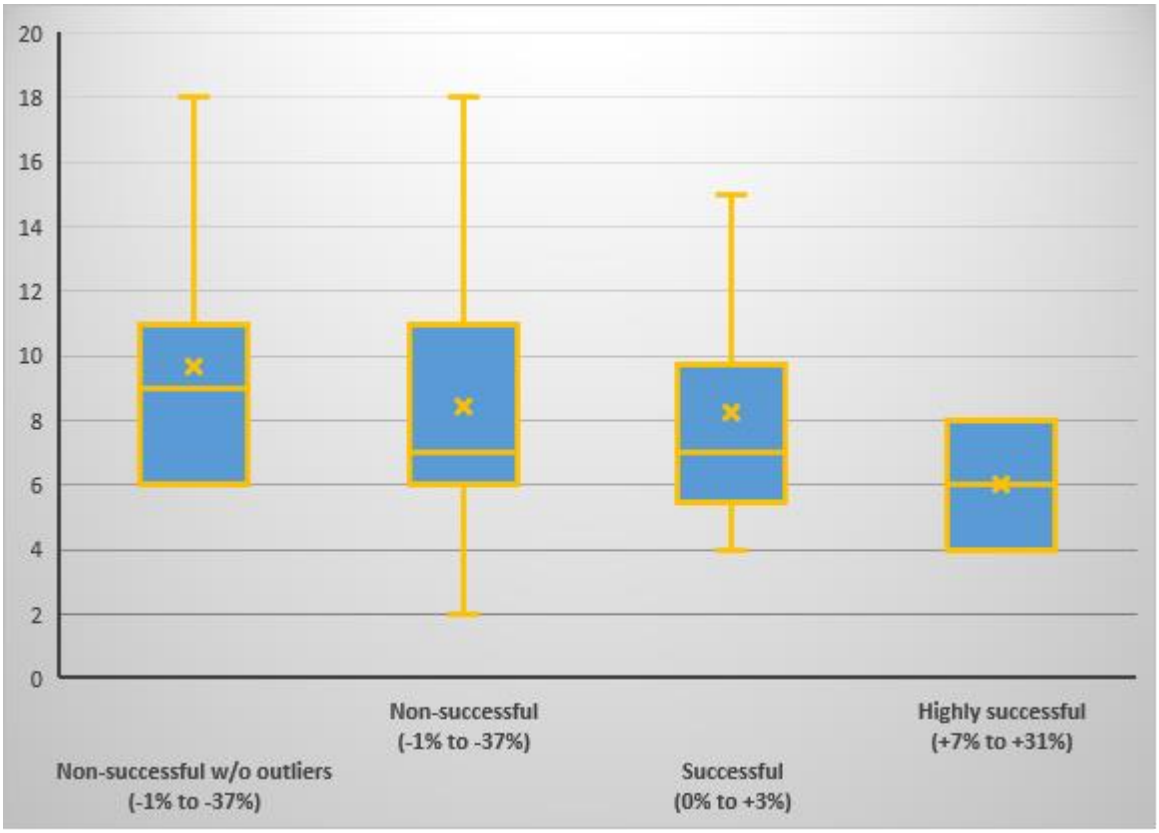

Figure A2: Median (orange line in the blue area) and mean (orange cross) of transforming companies by success category who conformed with my prescribed sequence

Results related to Proposition 3: Successful companies implement a management system for an always-on CTx

The data used for this analysis are available in Appendix B where I identified if the transforming company has implemented (marked by "1") or not (marked by "0") any sort of management system for an always-on CTx. To qualify, the interviewee would have confirmed that her company (1) established a forum where senior management follow-up the progress of their CTx, (2) implemented a set of processes & procedures related to managing their CTx, and (3) developed a dashboard to report the progress of their CTx.

Results (Figure A3) chart the percentage of companies in each of the three groups by success (Highly successful, Successful, and Non-successful) and show that Highly successful and Successful groups had the same rate of 50% and the Non-successful group had a lower rate. Therefore, results accept the proposition as true and show that the less the transforming companies implemented a management system for an always-on CTx the more likelihood of CTx failure.

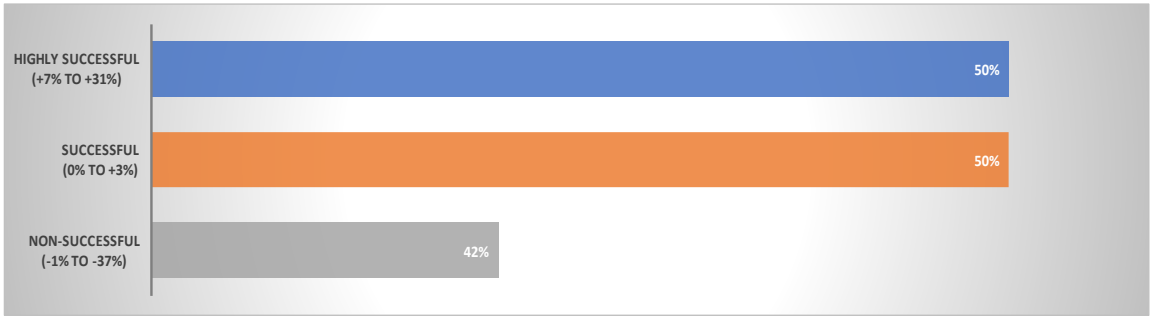

Figure A3: Percentage of transforming companies by success category who implemented a management system for an always-on CTx

Corporate Transformation Orchestration (CTxo): Prescriptive Literature the Non-Digital-Native Companies Need Throughout Their Transformation Journey

Appendix B: Data Used as Input for Analysis

Table B1. Transformation initiatives implemented

To substantiate, I identified and analyzed the relevant*related Tx initiatives implemented by each company

Company	Business Model Tx (what)	Dig Tx (what)		Dig Tx Enablers			Org Tx (what)			Org Tx (how)				Org Tx Enablers		Performance
		Data Ecosystem	Digital Ecosystem	System integration	Data & Analytics	Technology	New org structure	New Ways of Working	Capability	Building commitment across	Purpose & vision	Heuristics & biases	Org learning	Comms	Trust & empowerment	
A	0	0	1	1	1	1	1	0	0	1	0	0	0	1	1	-11%
B	0	1	1	0	1	0	1	0	0	0	1	0	0	1	0	-11%
C	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	7%
D	0	0	1	1	0	0	1	1	0	1	1	0	1	1	1	-4%
E	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	-11%
F	0	1	1	0	0	1	1	1	1	1	0	0	1	1	0	-14%
G	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7%
H	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	-37%
I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	17%
J	0	0	1	1	0	1	1	1	1	1	1	0	1	1	1	-16%
K	0	1	1	1	1	1	0	1	0	1	1	0	1	1	0	-1%
L	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0%
M	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	-15%
N	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	-1%
O	1	1	1	1	1	1	1	1	1	1	1	0	1	0	1	3%
P	0	0	1	1	1	0	0	0	1	0	1	0	0	1	1	3%
Q	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	-30%
R	0	1	1	1	1	1	1	1	0	1	0	0	0	1	1	2%
S	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	31%
T	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	-14%

*discarded Business Model Tx "how", "enablers", and Digital Enabled Tx "how"

The first column is for the transforming companies where I replaced the company name by a letter to maintain confidentiality. The last column is for the success rate (performance) of each of the companies. In between those two columns, I identified if the transforming company has implemented (marked by "1") or not (marked by "0") the pre-defined initiative (Figure 9) belonging to that CTx component category. For example, Company S - who belongs to the Highly Successful group as it scored 31% on its performance – has implemented all the pre-defined initiatives. Consequently, company I scored 100% on all categories.

Table B2. Sequence of transformation initiatives implemented

To substantiate, I identified the sequence of related Tx initiatives implemented by each company and calculated their conformity to my prescribed sequence

Company	Business Model Transformation (what)	Digital Enabled Transformation (what)		Organizational Transformation (what)			Conformity	Performance
		Data ecosystems -data sourcing -data architecture -data analytics (AI, ML, DL)	Digital ecosystems -systems & technologies -digital structure -business integration, APIs, & automation	Capabilities -building capabilities	New ways of working & continuous improvement -fostering agile, collaboration, and scaling -changing mindset towards CI	Organizational restructure		
A	1		3			2	15	-11%
B	1	3	4			2	11	-11%
C	1	6	4	2	5	3	8	7%
D	1				2		18	-4%
E	1	4	5		3	2	6	-11%
F	2		5	1	4	3	10	-14%
G	1	5	6	2	3	4	4	7%
H	1	4	6	2	3	5	2	-37%
I	1	2	3	5	4	6	8	17%
J	1		5	2	3	4	6	-16%
K	1	3	4		2		11	-1%
L	1	3	5	2	4		8	0%
M	1	4	6	2	3	5	2	-15%
N	1	3	4		2	5	6	-1%
O	1	6	5	2	3	4	4	3%
P	1		3	2			15	3%
Q	1	3	4	5	2	6	6	-30%
R	1	5	6	2	4	3	6	2%
S	1	3	4	2	5	6	4	31%
T	1	4	5	3	6	2	8	-14%

Denotes outliers (pls refer to discussion section in thesis)

The first column is for the transforming companies where I replaced the company name by a letter to maintain confidentiality. The last column is for the success rate (performance) of each of the companies. The before last column is the conformity score of each of the companies. Conformity score to the pre-defined sequence (Figure 10) has been calculated using the formula that calculates the distance between points $d=\sqrt{(x_2-x_1)^2}$ whereby x_2 is the company sequence of a particular Tx initiative and x_1 is the prescribed sequence. The smaller the distance, the more conforming is the company sequence to the prescribed sequence. In between the company column and conformity column, I marked the sequence the transforming company has implemented (marked by "1" to "6") the initiative related to Business Model Tx "what," Digital Enabled Tx "what," and Organizational Tx "what". For example, Company S - who belongs to the Highly Successful group as it scored 31% on its performance – has a conformity score of 4 (not 0) because of a "mis-step" when the company prioritized Data Ecosystem (recommended as step 4 not 3 as is the case of Company S) instead of New Ways of Working (recommended as step 3 not 5 as is the case of Company S).

Table B3. Companies who implemented a management system for an always-on transformation

To substantiate, I identified the transforming companies who implemented a management system for an always-on Tx

Company	Tx Mgt Sys	Performance
A	0	-11%
B	0	-11%
C	0	7%
D	0	-4%
E	1	-11%
F	0	-14%
G	1	7%
H	1	-37%
I	0	17%
J	0	-16%
K	0	-1%
L	1	0%
M	1	-15%
N	1	-1%
O	0	3%
P	0	3%
Q	1	-30%
R	1	2%
S	1	31%
T	0	-14%

The first column is for the transforming companies where I replaced the company name by a letter to maintain confidentiality. The last column is for the success rate (performance) of each of the companies. In between those two columns, I identified if the transforming company has implemented (marked by "1") or not (marked by "0") any sort of management system for an always-on transformation. For example, Company S - who belongs to the Highly Successful group as it scored 31% on its performance – has implemented some sort of management system to ensure an always-on transformation.

Appendix C: Best Practices from successfully transforming non-digital-native companies

CTx Component	Best practice
Business Model Tx	• **Disrupted themselves** before being disrupted • Went **beyond their internal boundaries and accelerated** by either traditional (buying a business/brand through M&A or partnering through alliances) or emerging (investing, incubating, or being open) approaches • **Innovation** alone doesn't work unless it is **implementable** and **creates value** • Their **stakeholder** policy didn't focus only on shareholders but took an **ecosystem approach** of employees, communities, shareholders, & environment • **Funded** their Tx journey mainly by creating **efficiencies** (e.g.: global business service centers, automation) • Played a **balancing act** in managing **both engines** (the old and new business models) • Invested in their operations' technology with the aim of **operational excellence** • Kept their **innovation** open to internal and external stakeholders through **crowdsourcing**
Digital Enabled Tx	• **Did not confuse** Digital Enabled Tx with an ERP system deployment • Invested in **technology** AND **training** AND **new ways-of-working** • Went **beyond their internal boundaries and accelerated** by either traditional (buying a business [mainly start-ups] through M&A or partnering through alliances) or emerging (investing, incubating, or being open) approaches • Kept their **systems open to APIs** aiming for end-to-end integration including B2B2C • Fostered **cross-functional teams** (chapters [provide expertise] & digital factories [provide digital/system solution]) and didn't confine digital to IT/IS • Digital systems & tech were configured **around their data ecosystem and redesigned processes** (influenced by their consumer/costumer journeys) • Kept **business-critical-capabilities in-house**, the rest they outsourced to suppliers/partners

Corporate Transformation Orchestration (CTxo): Prescriptive Literature the Non-Digital-Native Companies Need Throughout Their Transformation Journey

Organizational Tx	• **Prioritized acquiring capabilities**; starting by assessing internally > identifying gaps > prioritizing > buying & reskilling (depending on priority) > accelerated the added value of new-comers through onboarding programs • Instilled **new ways-of-working**, **psychological safe** environment, **continuous-improvement** mindset, & ensured servant leadership that **walked-the-talk** • Went beyond the basics of **diversity**, **inclusion**, and **belonging** • Restructured to matrixed organization and **centered** it around their **consumer/customer** • Fostered a continuous learning culture through **leaning platforms** amplified with **coaching**, **reverse mentoring**, and **shadowing**

KPIs	Best practice
Business Model Tx KPIs	○ Specified targeted revenues & operating income **contribution from new business model** ("engine 2") ○ Did not overlook **core/old business model** ("engine 1") KPIs ○ Set aggressive **targets for efficiencies and savings** as key funder to the new business model ("engine 2") ○ Included **consumer/customer related KPIs** (e.g.: experience [CX], NPS) ○ Identified **innovation related KPIs** (e.g.: Proof of concept [POC] number, scaled POC number, money generated and/or saved) ○ Quantified **R&D expenditure** dedicated to new business model ("engine 2")
Digital Enabled Tx KPIs	○ Set **aggressive targets for APIs** ○ Included **number of digital tools development** ○ Quantified **digital investment** split between business as usual [BAU] and new business model ("engine 2") ○ Specified **targeted contribution from digital platforms**
Organizational Tx KPIs	○ Set **targets for talent attraction** KPIs ○ Identified **upskilling and reskilling** related KPIs (e.g.: training, learning) ○ Included **Employee Experience** [EX] KPIs (e.g.: engagement, eNPS) ○ Quantified **diversity and inclusion** [D&I] KPIs

CTx Orchestration Process	Best practice
Governance processes for a harmonious orchestration	▪ Drove their Tx **all-in**; not by HQ or single function (e.g.: HR) ▪ Mandated the Tx orchestration to **one of the Senior Leadership Team** (e.g.: CTxO, Chief Strategy Officer, Chief Growth Officer) ▪ Assigned the **KPIs monitoring to a specific function** (e.g.: PMO, Strategy team) ▪ Monitored their initiatives progress with a **unified dashboard** ▪ Established governance forums with outer and inner **feedback loops** ▪ Kept the **Tx freewheel** by launching an evolutionary next Tx plan (2-4 years post the first plan) mostly under the theme of **acceleration**
Change management processes to influence	▪ **Shifted the "head"** by communicating (ideally through storytelling) their vision, purpose, values, and behaviors ▪ **Won the "heart"** by nurturing belonging where employees feel welcomed, included, valued, and connected / committed ▪ **Activated the "hand"** by empowering and fostering trust

company culture	▪ Deployed **change agents/ambassadors**
Compensation processes to motivate employees and fulfill their potential	▪ **Did not restrict rewards to only financial** (e.g.: rewards for wellbeing, rewards for education & development, days-off) ▪ Allocated **stock options to junior** talents ▪ Formulated **short-term and long-term financial incentives** built on company-wide, country, function/team, and individual results ▪ Included **employees' family in benefits** (e.g.: health insurance, assistance programs)

Appendix D: Comprehensive list of Performance Measure Metrics relevant to Corporate Transformation orchestration

Component	Sub-Component / Enabler	Performance Measure Metric	Reference
Business Model Transformation	Financials	• Market capitalization, Stock price, Return to shareholders • Value creation, Revenue growth, EBITDA, Share of market • Profitability, Profit margins • Cost management, Asset utilization • Market capitalization • Share of market	(Dubosson-Torbay, Osterwalder, & Pigneur, 2002; Faeste & Hemerling, 2016)
	Transforming customer and channel engagement	• Net Promoter Score (NPS), Customer satisfaction, Customer Effort Score (CES), Loyalty economics • Customer profitability • Customer retention, Customer acquisition • Customer appreciation of functionality, quality, price, timeliness, brand image • Customer appreciation of availability, shopping experience, relationship • Customer conversion rate, Onboarding/early usage tracking • Customer segmentation, Customer classification • Feedback mechanisms among employees, Cost of interaction	(du Toit, Engelhardt, Sager, & Fruechtl, 2018; Dubosson-Torbay et al., 2002; Lemon & Verhoef, 2016; Markey & Springer, 2017; Reichheld, 2004)
	Transforming products & services	• Innovation: Top-down & bottom-up, Number of patents (per 1000 employee), R&D effectiveness & expenditure (per employee), Number of new products, Originality, Pipeline • Product development: Speed to market, Product performance, Design performance • Competitors intelligence	(Burgelman, Kosnik, & Van Den Poel, 1988; Chiesa, Coughlan, & Voss, 1996; Dubosson-Torbay et al., 2002; Forum, 2018)
	Transforming economic model	• Launch of new economic models: Analytics as a service (AaaS), Over The Top services (OTT), Pay per use (PPU), Subscriptions, Free/mium, Platforms, Data monetization • Lifetime value of a typical customer (LTV), Churn/exit rate, Cost to acquire a customer (CAC), Months to recover CAC • Revenues from up-selling / cross-selling	(Anderson, O'Keeffe, & Lancry, 2019; Bain&Co, 2018; Chiesa et al., 1996; Faeste & Hemerling, 2016; Forum, 2018; Gupta & Lehmann, 2005; Padhi et al., 2018)

	Transforming operations	• Value chain • Real time supply and demand, Capacity planning, Process streamlining, Flexibility, Build to order, Demand sensing • Asset performance management, Smart asset planning • Process innovation: Effectiveness, Speed, Development cost, CI • Robotics, Aditive manufacturing	(Camara, Hu, Singla, Sood, & van Ouwerkerk, 2019; Chiesa et al., 1996; Dubosson-Torbay et al., 2002; Forum, 2018; Schlaepfer, Von Radowitz, Koch, & Merkofer, 2017)
	Risk management	• Operations risk • Asset impairment risk • Competitive risk • Franchise risk • Technology risk	(Hornung & Adler, 2013; Simons et al., 2000)
	Investment & funding	• Resource availability and allocation, Percentage of projects delayed or cancelled due to lack of funding • Funding from revenue growth (pricing, sales efficiency, marketing) • Funding from cost reduction (COGS, personnel cost, non-personnel cost) • Investment shift to new business model, to digital • Investment cost, Capital efficiency (net-working-capital, fixed-assets productivity)	(Anderson et al., 2019; Chiesa et al., 1996; Faeste & Hemerling, 2016)
Organizational Transformation	Structure	• Headcount • Layers, Span of control, Span of attention • Autonomy, Role clarity • Formalization, Specification	(Faeste & Hemerling, 2016; Pennings, 1973)
	Ways of working	• Percentage of employees contributing to innovation • Number of Minimum Viable Products (MVP) • Knowledge capturing, Knowledge sharing, Capturing external ideas & competitor insights • Climate: risk taking, creative, entrepreneurial, collaboration across-functions	(Berlin, de Smet, Singhal, & Winn, 2012; Chiesa et al., 1996; Faeste & Hemerling, 2016)
	Culture	• Change tracking • Culture climate surveys • Inspirational leaders, 360 surveys	(Berlin et al., 2012; Forum, 2018)
	Building commitment at all levels	• Employee engagement level, Personal ownership, Productivity (per employee), Organizational Commitment Questionnaire (OCQ) • Employee referrals • Employee NPS, Employee satisfaction surveys • Affective Commitment (AC), Normative Commitment (NC), and Continuance Commitment (CC)	(Forum, 2018; Markey & Springer, 2017; Meyer & Allen, 1997)
	Creating and sharing the vision and purpose	• Strategic clarity • Meaningful values • Vision indicator • Employee advocacy	(Berlin et al., 2012; Forum, 2018)

	Addressing heuristics	• Heuristics & bias proof • Employee diversity & inclusion	(Tversky & Kahneman, 1978)
	Accelerating the organizational learning	• Results (meeting goals or targets) • Access to learning (reach of learning opportunities across the org) • Learner satisfaction (satisfaction of learners with their learning and personal growth opportunities) • Cost effectiveness (capital efficiency of learning investments), ROI, Digital learning journeys • Learning effectiveness (impact of learning on the organization's strategic direction), Behavior (individual behavior change, team behavioral change), Learning attainment (degree of acquiring the intended knowledge, skills, attitudes, confidence, and commitment) • Management satisfaction	(Brassey, Christensen, & van Dam, 2019; Chiesa et al., 1996; Goh & Richards, 1997; Kirkpatrick & Kirkpatrick, 2006; J. Moore, 2005; Schlaepfer et al., 2017)
	Internal communications	• Number of townhalls / small interactive sessions • Open & click-through rates on digital channels • Increased awareness or understanding	(Faeste & Hemerling, 2016; Forum, 2018; Meng & Berger, 2008)
	Trust & empowerment	• Feedback surveys • Making decisions related to one's work activities • Fairness of recognition system • Clarity of goals	(Forum, 2018; Herrenkohl, Judson, & Heffner, 1999)
	Building capabilities	• Fit/gap analysis (Right people, skills, positions) • Talent acquisition, Hiring goals based on specific skill needs, Outsourced expertise • Talent development, Process-based capabilities	(Anderson et al., 2019; Berlin et al., 2012; De la Boutetière, Montagner, & Reich, 2018; Faeste & Hemerling, 2016)
Digital Enabled Transformation	Business model digital enablement	• Technology acquisition • Customer engagement improvements through digital and content • ROI, Future net asset value • Number of visitors, Unique users, Number of registered users, MOM (month-on-month) growth in registrations, Organic user acquisition • Number of active users, Daily active users (DAU), Monthly active users (MAU), Ratio of new users to repeat users/customers, Number of repeat users/customers, Conversion rate, Abandon rates • Time on site, Bounce rate, Sources of traffic, Customer concentration risk, Posts contributed, Photos/videos uploaded/shared and views completed, Number of likes and shares	(Anderson et al., 2019; Chiesa et al., 1996; Forum, 2018)
	Digital business integration	• Optimal coupling of applications, Digitally enhanced cross border platforms • Minimal project expenses (time and costs) for integrating applications into the present application architecture • Systems speed, Reduction of complexity within the present application architecture	(Anderson et al., 2019; Forum, 2018; Johnson et al., 2018; Schwinn, 2007)

		• Minimal costs for and number of infrastructure components	
	Data and Analytics	• Data architecture • Number of data scientists, Data-time-to-value • Descriptive analytics, predictive analytics • Completeness, uniqueness, timeliness, validity, accuracy, consistency • Customer privacy, Data security	(Cupoli, Earley, & Henderson, 2014; Everson, Sviokla, & Barnes, 2018; Hillenbrand, Kiewell, Miller-Cheevers, van Ostojic, & Springer, 2019)
	Systems and Technologies	• Corporate spending on new technologies • IT infrastructure, Cloud computing, Systems speed, Cybersecurity • Use of AI, machine learning, cognitive agents • Dashboards, Apps	(Anderson et al., 2019; Bain&Co, 2018; Brosseau et al., 2019; Burgelman et al., 1988; Camara et al., 2019; Chiesa et al., 1996; Forum, 2018; Markey & Springer, 2017; Naegle, Lozada, & Solanki, 2019; Padhi et al., 2018)

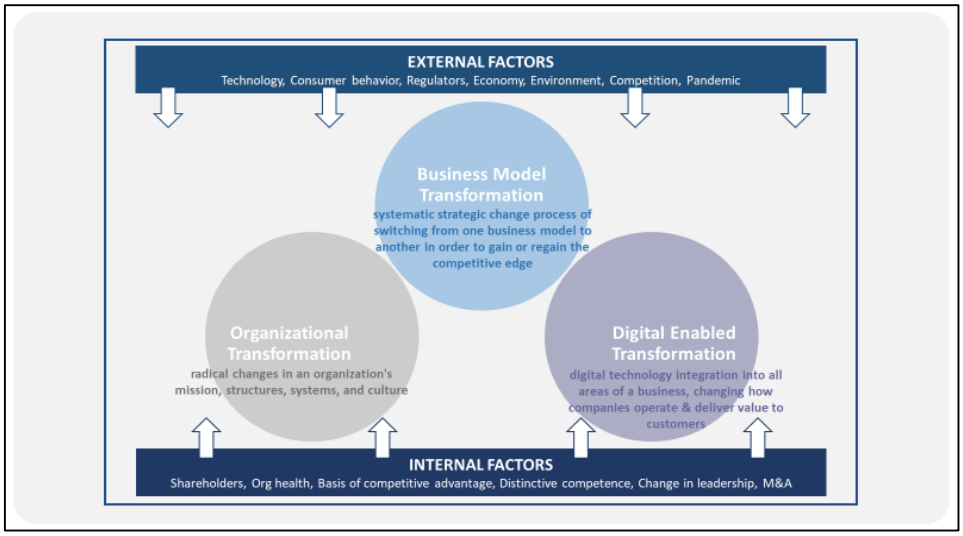

Figure 1: The three components of a Corporate Transformation: Business Model Transformation, Digital Enabled Transformation, and Organizational Transformation

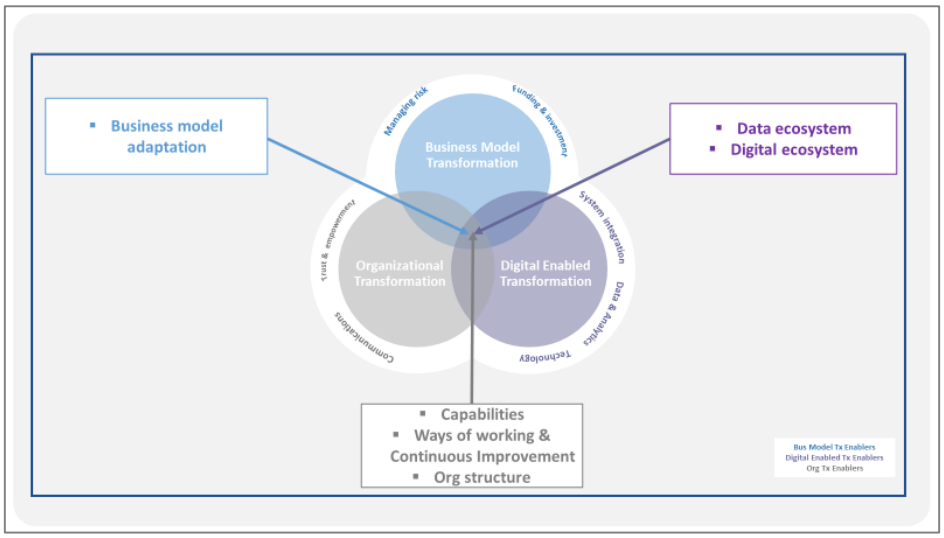

Figure 2: The interdependencies among the three components of Corporate Transformation

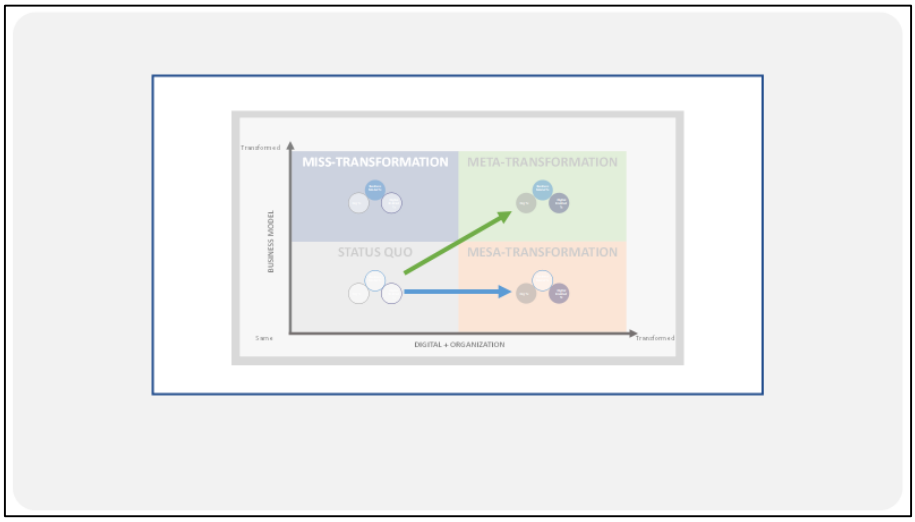

Figure 3: The two strategic routes of Corporate Transformations: Meta-Transformation (Business Model Tx + Digital Enabled Tx + Organizational Tx) and Mesa-Transformation (Digital Enabled Tx + Organizational Tx)

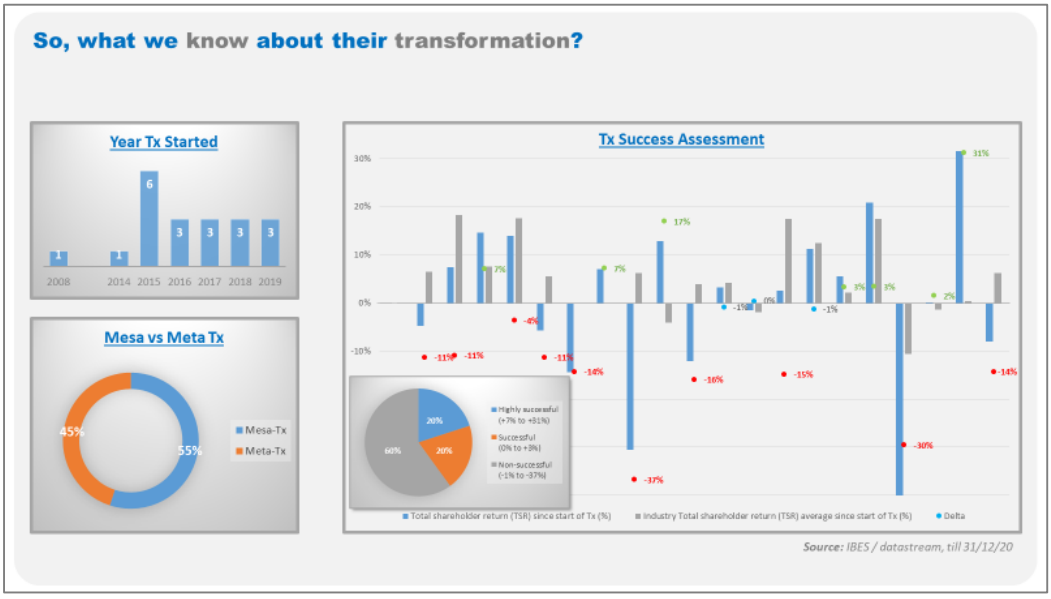

Figure 4: Key aspects related to the sample companies: (a) duration of their Tx journey, (b) strategic route of their Tx (whether they underwent a Mesa-Tx or Meta-Tx), and (c) their Tx success (by measuring their Total TSR since the start of Tx vs Industry Total TSR average since the start of Tx)

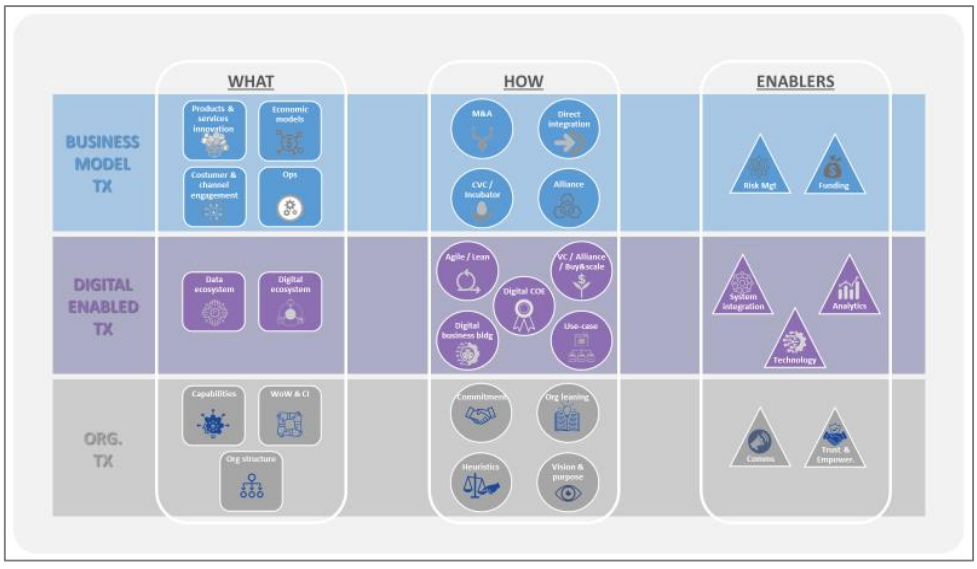

Figure 5: The ecosystem that encompasses the defined three CTx components' "what," "how," and enablers.

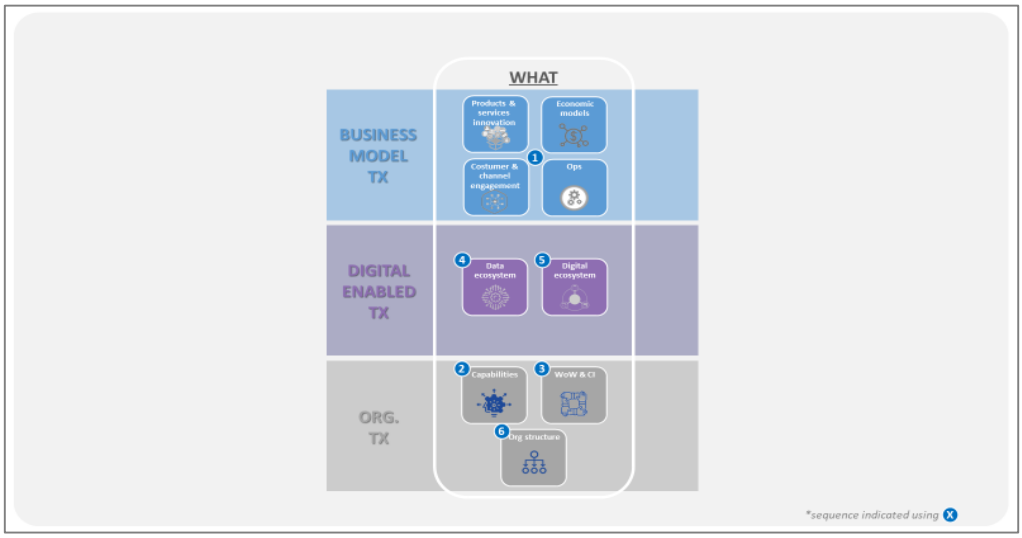

Figure 6: The multi-steps sequence of the defined three CTx components' "what"

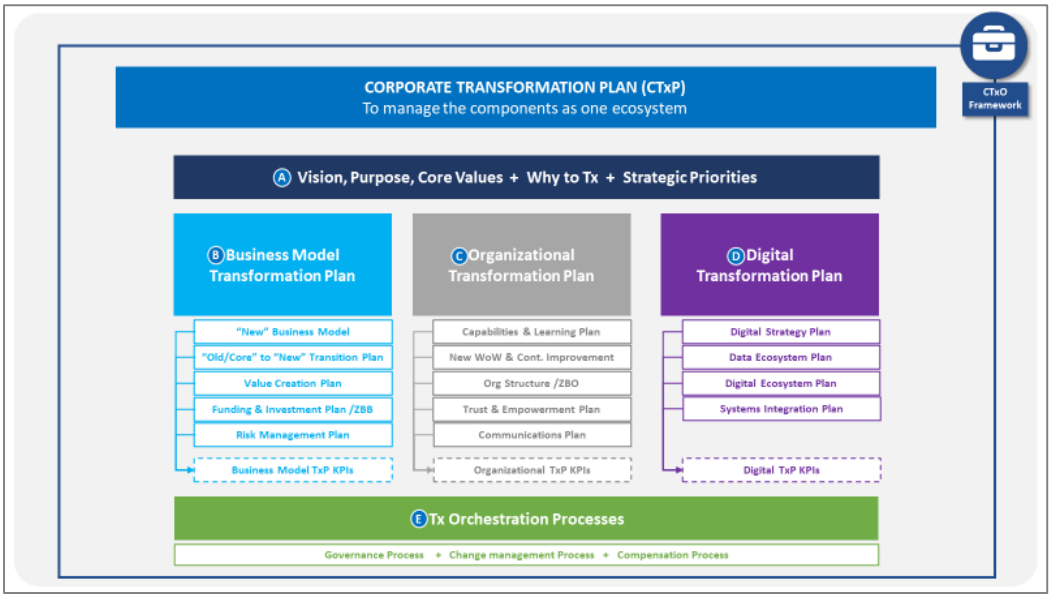

Figure 7: The Corporate Transformation Plan (CTxP) is one element of the CTx Framework

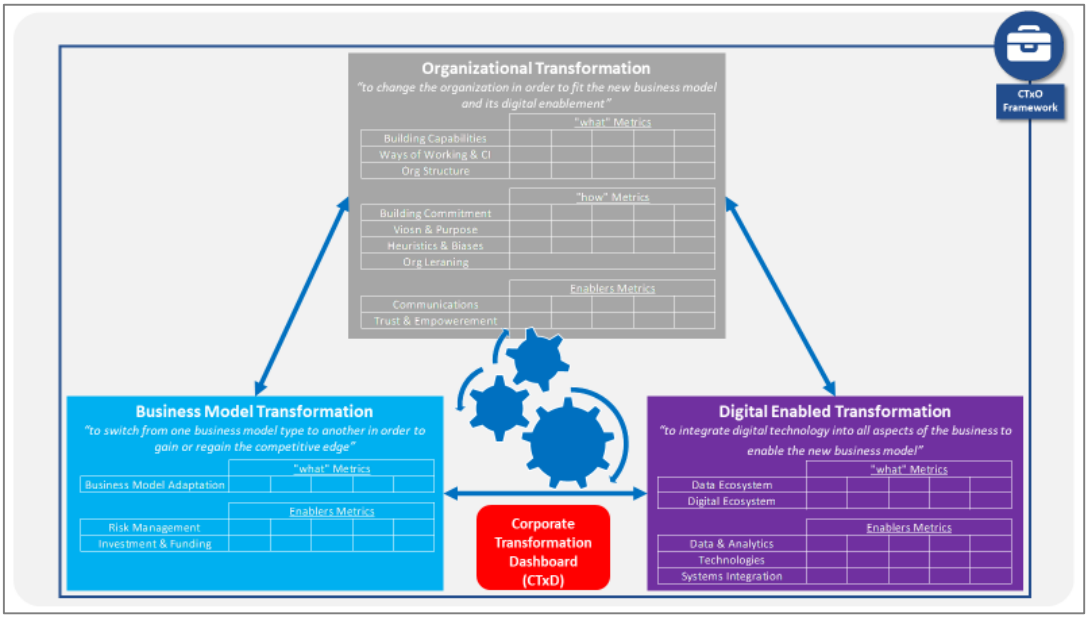

Figure 8: The Transformation Dashboard (CTxD) is one element of the CTx Framework

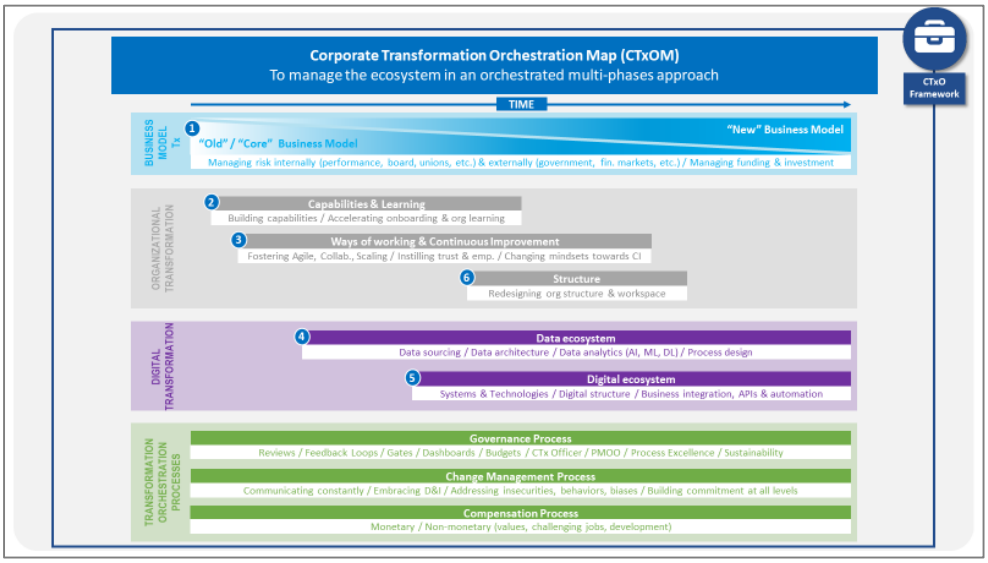

Figure 9: The Transformation Orchestration Map (CTxOM) is one element of the CTx Framework

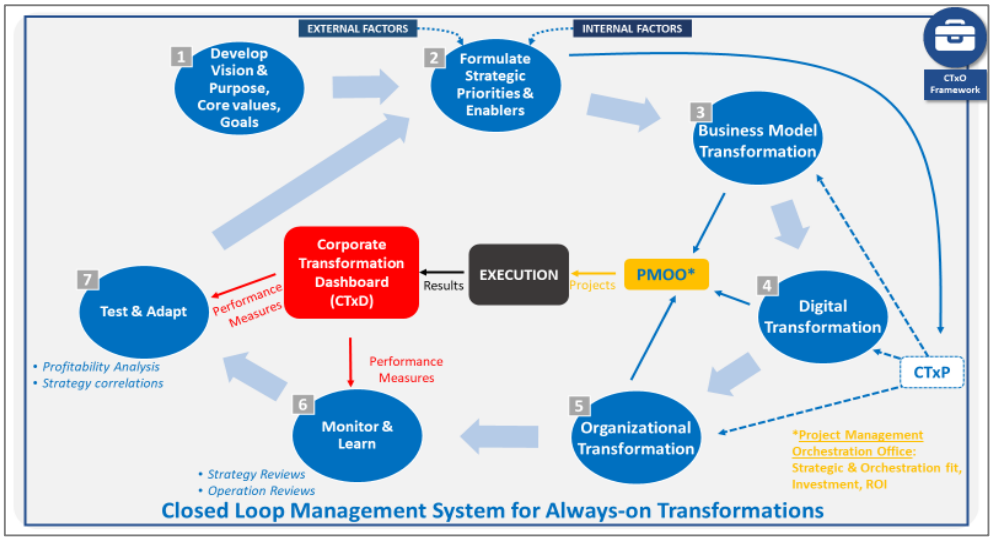

Figure 10: The Close Loop Management System is one element of the CTx Framework