

TECHNOLOGY

Securing the Upside of Digital Transformation BEFORE Implementation

by Işık Biçer



Image Credit | Headway

How to keep digital transformation simple, explicit, and customer-centric.

✔ **INSIGHT** | OPINION 07 May 2022

Digital transformation lures senior executives seeking lofty growth rates and operating profits. Companies have poured **\$4.1 trillion globally into it the last year**. Yet, a whopping **70% of these investments are estimated to fail!** In 2004, for example, **HP's attempt to centralize its digital system ended in disaster, causing a loss of \$160 million**. The high failure rate can be attributed to process-engineering approach (commonly followed in digital transformation), such that organizations divide complex operations into sub-tasks and try to align them with their resources. If a misalignment occurs, they rework on problematic parts. Such efforts would end up with no improvement in the end. An *insightful article* published in the California Management Review proposes that effective task monitoring and enforcement are key elements to benefit from digital transformation. Yet, this top-down attitude would trigger resistance to transforming businesses, which would risk the success of digital transformation projects. Instead, organizations should not postpone operational risk analysis to the implementation step. They ought to exercise operational due diligence to justify these risky bets and avoid potential failures. But limited understanding, in practice, obscures how due diligence should be performed effectively for digital transformation.

RELATED CMR ARTICLES

“Digital Transformation and Organization Design: An Integrated Approach” by Tobias Kretschmer & Pooyan Khashabi (Vol. 62/4) 2020.

The main objective of due diligence is to help senior executives understand the operational risks when a new digital system assumes control of existing operations. A successful analysis should reach beyond risk mitigation: it must also encourage senior management to develop a successful **transformational strategy**. To this end, successful due diligence should emphasize the importance of simplicity, customer centricity, and explicitness. Over the last 15 years, I have been involved in several digital transformation projects. [1, 2] One key observation? There is no magic formula for success. Rather, applying these three

principles gears officials to identify unforeseen risks and soften resistance to transforming their businesses. Thus equipped, executives are much more likely to win the digital transformation race with a headstart in its implementation.

Simplicity

In a business transaction, companies exchange information, capital, goods and services with their customers or suppliers. Operational due diligence should thus focus on the most salient factors influencing that transfer of information, capital, goods and services with external and internal participants. One mistake in practice is that due diligence commonly lays out all operational risks along four dimensions (supplier management, people, processes, and customer management) in *siloes*. While there are fundamental risks in organizations, other risk factors are, indeed, derivatives of these fundamental risk elements. To establish simplicity, operational due diligence should be conducted around basic factors. But their spinoffs also need to be clearly delineated. One of the advantages of simplicity is that it helps senior executives focus their attention on a few important factors so they can identify team responsibilities under each of their segments.

In manufacturing, for instance, simplicity can be assured by identifying five key factors: (1) supply lead time, (2) demand lead time, and days of (3) inventory, (4) receivables, (5) and payables. These five factors suffice to characterize the business dynamics and describe operational risks. The longer the supply lead time, the higher the supply risk. Operational due diligence should examine supply lead times for critical suppliers. If a manufacturer can only procure some supplies after lengthy delays, the reasons and contingency strategies for long supply lead times must be included in the due diligence reports. Manufacturers keep inventory in stock to fulfill customer demand rapidly. Yet, more days of inventory incur higher cost of capital. Therefore, operational due diligence must show days of inventory for a menu of pricey products and outline reasons for potential inventory expansion. Demand lead time is time elapsed from the moment of customer order until delivery. The higher this metric, the more powerful the producer's market position. Here, customers may willingly wait a long time to take delivery of the manufacturer's products. Yet, sales teams can impair demand lead time by letting some customers place last-minute orders for a critical product even when customers are in a position to wait.

Digital transformation addresses key inefficiencies regarding the storage, retrieval, and transfer of information that would help economize the first three factors. Secondary benefits of digital transformation blossom when companies apply advanced analytics to improve decisions such as how much inventory to keep to fulfill uncertain demand. To maximize spinoff benefits, companies should determine how much flexibility is needed for the crucial factors. For example, a manufacturer's sales strategy could be standardized where all customers are offered the same demand lead time. An alternative would be to offer customers different demand lead times and charge a premium for quick delivery. In the former case, analytical models compute how much inventory to keep. In the latter, models also optimize the pricing decision for differentiated deliveries.

The first three key factors relate to physical product flow. Here, an effective flow to customers may not translate into high profitability and growth if it is not coupled with effectiveness in generating revenues. Manufacturers often permit customers to make payments well beyond order delivery. Extending days of receivables may well attract new customers and market share, but this is a costly rise in working capital needs. Therefore, due diligence experts must explain whether long days of receivables for some customers are justified. On the other hand, extending days of payables is deemed an effective procurement strategy to reduce manufacturers' working capital needs. However, manufacturers may need to pay suppliers early to secure the supply of critical components or discount pricing. Differences in payment terms between suppliers need to be stated clearly.

While digitally transforming their businesses, companies can enlist supply chain finance solutions to increase income from treasury operations. Employing both reverse factoring and dynamic discounting, for example, companies can delay payment to some suppliers and use the extra cash to exploit early-payment discounts of other suppliers. A detailed analysis of payment terms in the due diligence would give managers ideas about potential supply chain finance strategies, which would later be part of digital transformation.

Customer Centricity

Due diligence practices often identify operational risks and their potential costs without knowing *why* organizations accept these risks. This is a big mistake. It not only hides the role of operational risks in boosting market share, but also misdirects business transformation initiatives. HP's failure cited above exemplifies how cost-only strategies can kill market share. Digital transformation should fixate on creating value for customers and expanding revenue streams. Operational due diligence should thus encourage senior executives along these lines. It needs to clarify the value proposition for customers, how long it takes to create value, and how long it takes to collect revenues from customers. Vital customer retention metrics, too, must tie with fundamental risk factors.

Time length to create value is called *operating lead time* and should be reported in due diligence reports for different product categories. Yet, it must be excluded from data collection efforts since it really derives from key factors—that is, the sum of supply lead time and days of inventory. Operating cycle—the time length to generate revenue—is also a derivative of the fundamental factors found by summing days of inventory and days of receivables.

Explicitness

Managers sometimes develop skillsets to merely “manage” a problem *without truly solving it*. When they are also responsible for other operations surrounding the problematic part, no one may notice there is a problem in the system. After transforming businesses, operations would be managed in a different way, but such problems would still reduce the efficiency of new systems. Various product or sales teams may act differently when facing the same situation. For example, one sales team might allow a customer to place last-minute orders, even though this may not be a preferred sales strategy for other teams. When transforming businesses, executives need to address hidden problems and decide to what extent they would give employees the flexibility to act independently in the future.

An effective operational due diligence would help companies spotlight hidden problems and determine how much flexibility is needed for certain tasks. This would be possible by laying out operational risks and by developing the risk indicators. A bizarrely long days of inventory for a product would signal the existence of potential hidden problems along its

production process. Likewise, a long supply lead time would indicate a high supply disruption risk. Companies could suffer demand risk due to order uncertainty, leading to mismatches between inventory in stock and demand. Decision lead time can 'red flag' a firm's exposure to demand risk. This is computed by subtracting demand lead time from operating lead time as another derivative of the Big Five.

Customers with a high default risk may request extended payment terms, so days of receivables could prove long for those customers. In addition to default risk, cash flow uncertainty is another important financial risk. Cash conversion cycle is an indicator of cash flow uncertainty, which is obtained by subtracting days of payables from operating cycle time.

Identification of operational and financial risks and their explicit formulations, derived from key factors, are critical for risk-return analyses in digital transformation. By performing such analyses, firms can calibrate their digital transformation efforts in accordance with targeted risk and return levels.

Steps to take

Target simplicity, customer-centricity, and explicitness in gradual order: Exercising operational due diligence is a daunting task, and organizations should approach it in a systematic way to complete it efficiently. Data and information collection efforts should be limited to the first step. The last two steps should focus on data analysis and the development of practical insights as to customer-centricity and operational risks. To promote a smooth transition from data collection to analysis, key factors in the first step should be clearly identified and linked to customer-satisfaction and risk metrics.

Identify risk ownership of fundamental factors: Companies seek to utilize different external and internal resources to produce a variety of goods or to deliver select services to their customers. For key resources, products and customer segments, they need to identify teams' responsibilities for each segment of the fundamental factors. This helps senior executives detect any differences in operational practice among teams. One advantage of this approach is the rewarding of high-performing team managers with larger possible

input toward the digital transformation project. Team champions can later help other teams improve their capabilities, communicating with them the important aspects of transforming the business.

Allocate overhead costs to risk entities: Companies incur operational cost when mitigating risks. To minimize supply risks, for example, procurement teams would order raw materials in large quantities and incur cost of capital tied up to unused raw materials. Production teams may produce finished goods in large quantities in anticipation of high demand that may not arrive. Here, firms write off inventory and incur write-off costs. For high cash flow uncertainty, finance may increase working capital and incur additional interest costs. Enlisting risk indicators and ownership structure over fundamental factors, these costs can be allocated to different teams responsible for certain segments of the fundamental factors. Quantifying risk-bearing costs can catalyze collaboration among teams who might have resisted changing their practices. This can resolve a major obstacle in digital transformation—the intrinsic resistance of teams to transforming the business.

Conclusion

We have witnessed burgeoning interest toward digital transformation over the past two decades unlikely to ebb any time soon. **The IDC FutureSpace 2021 report** has revealed that global spending on digital transformation is expected to approach \$7 trillion in 2023. Yet, many initiatives fail due to organizational barriers in transforming the business. An opening move establishing effective operational due diligence can markedly raise likelihoods of attaining digital transformation goals.



Işık Biçer [Follow](#)

Işık Biçer is Assistant Professor of Operations Management and Information Systems at the Schulich School of Business, York University, Canada. He is an expert in digital transformation with practical experience in automotive, consumer packaged goods, agriculture, pharmaceutical and finance industries.

