

Digital Value to the Society through Digital Transformation

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Abstract: Digital innovation can both generate value for business and unlock benefits for society, by creating jobs, saving lives and reducing emissions. But these gains are not guaranteed – they depend on the decisions we make today.

Digital transformation and digital benefits are only achieved when the data undergoes intelligent analysis and triggers specific actions. The insights gained from the data can initiate actions that allow machines to keep running without problems for longer, reduce energy consumption, and ensure that exactly the required performance is achieved by rightsizing operations. Digital transformation makes the operation of machines **more economical and efficient**. This doesn't teach the machines how they can keep getting better, but operators are able to leverage their knowledge to take useful actions. The analysis of data provides specific information on how processes can be optimized and which components and process steps should be redesigned.

The benefits of digitalization are evident long before operations begin, however. In the planning and design phases, **time is saved through virtualization and simulations** and the development of innovative, secure, and powerful products is optimized. By defining requirements and performance characteristics, the functionality of devices can be simulated digitally, automated, and optimized before final designs have been completed and production starts. Design flaws are recognized in the virtual model before expensive prototypes are created.

Digital simulations include large new fields of business for product development and optimization. They do require, however, extensive skills of the companies who provide such solutions. And this is not limited to the fields of automation, production, and sensors — we're seeing this in IT and data analytics as well. Operational IT plays a central role in digitalization. It deals with practical aspects, ongoing operations. That's why all analysis results have to be verified to rule out errors. The goal is **preventing incorrect analog information being converted into incorrect digital information**, which can have serious consequences. Vendors need to know most of all how companies and industries operate in the real world. They need years of experience in the industry and a very large installed base so they can develop appropriate solutions and give their customers guidance and relative insights on the path to their digital transformation.

Keywords: Digital Value to the Society through digital Transformation, Digital Era

I. INTRODUCTION

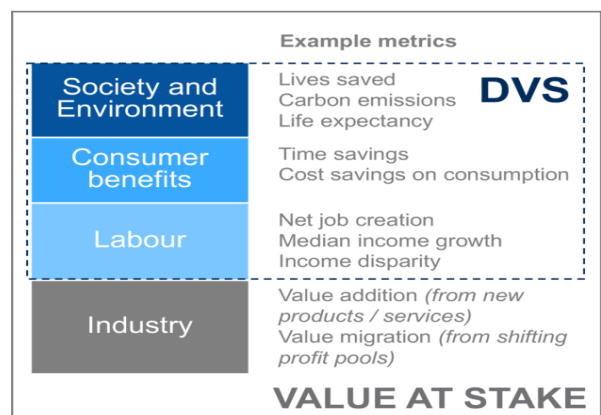
Our value-at-stake framework & Digital Value to Society: Our value-at-stake analysis assesses the impact of digital transformation initiatives on industries, customers, society and the environment over the next decade (2016 to 2025). Over the past two years, we have analyzed the potential for digital innovations as diverse as 3D printing, autonomous vehicles,

predictive maintenance, remote healthcare and drones to create value for different industries and society more broadly.

We have also created a new metric – Digital Value to Society (DVS) – by aggregating the key performance indicators (KPIs) that relate to the impact of digitalization on health and safety, employment, the environment and consumers. DVS offers a consistent approach to understanding how digital transformation creates value for business and wider society.

The DTI value-at-stake framework and Digital Value to Society

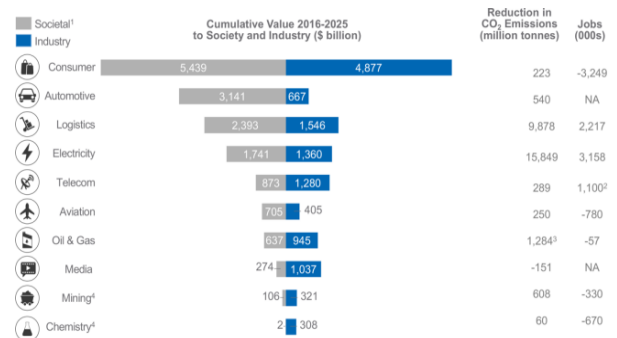
The components of value at stake and DVS



Source: Accenture / World Economic Forum

The building blocks of our value-at-stake analysis are digital initiatives, which are bundles of (digital) technologies – such as sensors, the cloud and big data analytics – in which we see the potential to deliver significant value for industry and wider society. We have quantified business and societal benefits at an initiative level in 11 industries, encompassing around 135 digital initiatives. The potential benefits of these initiatives vary because of differing levels of industry adoption, which are driven by factors such as the maturity of the technologies being used or the presence of regulatory barriers.

The potential impact of digital initiatives by industry



(1) Total societal value at stake includes impact on customers, society and the environment; the impact on external industries has not been considered; (2) Excludes the Extending Connectivity digital initiative; (3) Reduction in emissions for Oil and Gas refers to reduction in CO₂e emissions (4) Mining refers to Mining and Metals industry; Chemistry refers to Chemistry & Advanced Materials industry. Source: World Economic Forum/Accenture analysis

How value at stake and Digital Value to Society can help

Our value-at-stake framework takes a pioneering approach, which we believe provides a solid baseline for assessing the impact of digitalization. It offers a foundation and common

language for a private-public dialogue about unlocking the value of digital transformation.

- **For business:** Digital enables transparency and speed. The world has a front-row seat to business decisions and operations; no company can make decisions that are unacceptable to public opinion without scrutiny, severe penalty or – in the most extreme cases – extinction. Our framework helps companies account for their potential impact on wider society and reduce the risk of creating a public backlash.
- **For government.** Our framework can provide guidance in identifying and prioritizing the most effective digital initiatives and investments, by incorporating the appropriate KPIs and offering a consistent way to calculate return on investment (ROI).

Regional findings on Digital Value to Society

In 2016, the DTI team analyzed how DVS can be unlocked in a large developed economy (the United Kingdom), a smaller developed economy (Denmark) and a large emerging economy (India), as well as in the Indian state of Telangana. We focused on initiatives with the potential to create significant value for society.

United Kingdom: Thanks to its fast-growing digital industry,¹ the United Kingdom is one of the most digitally ready countries in the world.² Despite these advantages, barriers to further increasing the adoption rates of digital technologies exist. These include connectivity challenges, a digital skills gap and an unclear ROI in technology.³ A significant opportunity remains to maximize DVS. We estimate that the cumulative value of digital transformation to the UK economy, combining benefits to both industry and wider society, will be more than \$1 trillion (£800 billion) over the next decade. Our analysis suggests that just six digital initiatives could unlock \$335 billion (£270 billion) of value for industry and society in the same period. This represents approximately 13% of national GDP in 2015.

Denmark: Denmark is a highly advanced digital economy and scores well in comparison to other EU nations across a range of metrics. It is ranked first in the EU on the Digital Economy Index, with a high proportion (93%) of the Danish population online regularly. We analyzed four digital initiatives, which could unlock \$54 billion for business and wider society over the next decade, equivalent to around 20% of the country's GDP in 2015.

India: Expanding at an annual rate of 7.6%,⁴ India has emerged as one the fastest-growing major economies in the world. Despite this strong growth, around half of the rural populations do not have access to basic connectivity.⁵ We estimate that broader access to digital technologies has the potential to generate approximately \$5 trillion of value for India over the next 10 years. Our analysis focused on four digital initiatives, which could generate as much as \$1.2 trillion of value for industry and society over the next decade, representing about 40% of national GDP in 2015.

Telangana: Formed just two years ago, Telangana is India's newest state. Its Digital Telangana program aims to enhance digital connectivity, improve digital literacy, digitalize government processes, and promote innovation and support growth in start-ups. Our research in Telangana is ongoing and we are only sharing preliminary findings at this point.

For business

Business leaders need to consider the growing importance of DVS. It is a helpful metric for measuring, creating, optimizing and communicating the societal impact of their digital investments. Companies that focus only on generating value for industry are falling short, as they generate only asymmetrical benefits and risk attracting a public backlash. We plan to develop an innovative framework and tool set collaboratively with governments and business leaders to advance the use of non-financial metrics, valuation and the reporting of digital benefits to society.

For government

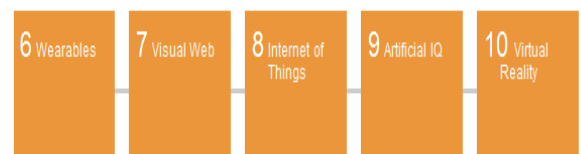
The indicators of societal value used in our analysis capture several objectives that have traditionally been the concern of government leaders, regulators and civil servants: reducing carbon emissions, enhancing productivity and saving lives. Our value-at-stake framework potentially gives policy-makers an additional tool to track progress in tackling perennial challenges and to measure ROI from digital investments at a national level. The analysis also lifts the lid on the huge societal benefits that digital transformation can deliver, putting the focus on how policy-makers can create the conditions for new digital initiatives to flourish. Policy-makers may also need to rethink how they measure economic growth (particularly as GDP often fails to capture the benefits of digitalization); convene stakeholders to overcome disincentives blocking societal benefits; and address the concerns of citizens about emerging technologies.

Top 10 Priorities for Digital Transformation in 2016

Top Priorities



Watch and Prepare



1. Customer Experience.

One of the biggest problems with digital transformation is that it spans the entire organization. We've found that the key to aligning these disparate interests is to have a common understanding and approach to serving customers. So when internal conflicts emerge around strategy and tactics, you can turn to your customer experience priorities to help with the decision making process.

And to build these customer experiences well, ground it in behavior-based customer data. Collecting and using that data will require a thoughtful approach to ethical data use.

Top priority: map out and actually use the digital customer journey for your organization. Related research: The Customer Experience Cloud, State of Digital Transformation, Ethical Data Use.

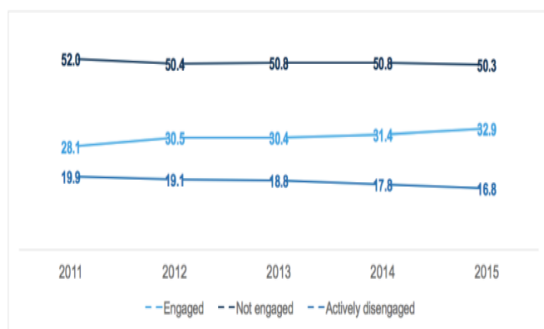
2. Culture & Leadership.

Our research also found that the biggest barrier to digital transformation is culture — and leadership drives culture. The percentage of engaged employees in US companies continues to be in the low 30's, despite the introduction of enterprise social networks and collaboration tools like Slack (see below). And leadership remains mired in excuses not to use digital channels to extend their leadership, citing “lack of time” or that “it’s marketing’s job.”

Employee advocacy is about to break through, as 45% of organizations have it as one of their top initiatives — but face concerns about giving too much control to employees.

Top priority: determine how your culture will need to shift to support the customer experience. Related research: Strengthening Employee Engagement, The Engaged Leader.

PERCENT OF US EMPLOYEES, BY ENGAGEMENT LEVEL
Figures shown are for February of each year



Source: GALLUP

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3. Content Strategy

To engage your customers, you’ll need content. While it’s a cliché to say that “every brand is a media company”, the actual fact is that most companies don’t have a coherent, cohesive content strategy. They may engage in *content marketing* where content is being created on put on different traditional, digital, and social channels, but it’s not clearly tied to business value.

What’s desperately needed is a strategy that not only lays out content touch points across the customer journey, but also looks outside of marketing and communications for sources of expertise — areas like customer service, sales, product development, and human resources. Marry content creation with employee advocacy and you’ll get an explosive mix of social selling, employee-led customer service, and social recruitment.

Top priority: a cohesive content strategy that addresses the content needs across the organization. Related research: Culture of Content, Content Marketing Performance.

BUSINESS VALUE OF CONTENT STRATEGY



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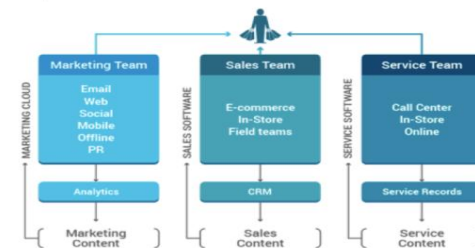
4. Digital Ecosystem Rationalization.

As digital spreads throughout the organization, who “owns” digital strategy and transformation has become muddled. There’s a disconnect — while 82% of organizations wanted to integrate social and digital in 2015, only 36% had a plan.

This isn’t easy — the three major places where digital lives today are in Marketing, Sales, and Service — and all three typically have different platforms, data, content, and metrics. I believe that the three C-Suite level players who need to be in lockstep with each other are the CMO, CIO, and the CHRO. Yes, human resources. Because digital transformation is at its core a people problem — and having the CHRO play a strategic *role is essential to digital transformation success.*

Top priority: Break down digital silos, distribute digital throughout the organization and leadership. Related research: Customer Experience Cloud, 2015 State of Social Business, The Engaged Leader.

Break Down Silos to Align Customer Experience Priorities



- Different KPIs lead to competing efforts
- Consumer data lives in silos, each department has partial insight
- Same channels have disparate content

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5. Paid Social

This priority is a little different, but primarily because it exemplifies in so many ways the challenge of digital transformation. The channels like Facebook, Twitter, and LinkedIn become increasingly effective at delivering reach and frequency. This puts social channels at the center of digital transformation — what role will it play in the customer experience.

For example, as organic social engagement diminishes in effectiveness, will brands shift traditional community engagement in social channels to customer care, and use paid social instead for reach? Or will employee advocacy grow in effectiveness and obviate the need for paid social? And will paid social ads themselves be used to drive awareness at the top of the funnel — or drive commerce with offers?

To answer this question, organizations will have to answer the four questions above — alignment on the customer journey, culture and leadership, content strategy, and a rationalized digital ecosystem. Think of it as the canary in the coal mine — if paid social is a silo or organizational mess, it’s likely your digital transformation is too.

CONCLUSION

As we look ahead to 2017, the third and final year of the DTI programmed, we intend to build on our analysis so far to maximize the future impact of the initiative. Testing our value-at-stake framework and putting it into practice will be at the heart of our work this year. Our priorities will be to broaden the geographic scope of the initiative; empower policy-makers to run their own analysis; and identify and share best practices.

The ultimate objective of the DTI programmed has never been to produce more research. It has always been to help ensure, through new concepts and their practical application, that we, as a global community, deliver a digital revolution that unlocks new levels of prosperity for all

“Digital innovation will enable and help realize a new smart society, and how we make this future is in our hands.

Let us all look forward for the successful implementation for this project for the brighter and prosperous India and hope India will again called a Golden Sparrow.

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