



Being digital means being more human

The spoils of the digital economy will go to businesses that focus on people first — and keep technology in the background. By discerning customers' true needs and then using technology to develop solutions that fulfill them, winning companies will reap unfair competitive advantage in the form of more satisfied customers, lower operational costs and higher profits.



Table of contents

04

Executive summary

06

Quick take

11

Footnotes

“ One of the things I’ve always found is that you’ve got to start with the customer experience and work backwards to the technology (...) not starting with ‘Let’s sit down with the engineers and figure out what awesome technology we have and how are we going to market that?’ ”

– Steve Jobs, 1997¹

Executive summary

In the 20 years since the emergence of the commercial Internet, a digital approach to commerce has resulted in dramatic innovations in how businesses serve their customers, organize themselves and make money. But while the Internet has introduced many large-scale changes, the broader transition to a digital society is still in its early days. In fact, the most important digital innovations — systems that think and learn, for example, or fully scaled Internet of Things applications — are still ahead of us.

For businesses that want to steer themselves toward the digital horizon, the journey will likely not be an easy one. The number of failed IT projects during the last two decades is countless, and those failures have come with a big price tag. Five years ago, it was estimated that almost a trillion dollars a year of IT spending was being wasted.²

Worse, the increasing digitization of products and services doesn't inevitably lead to added value for consumers and the companies that sell them. Just ask the many employees or customers who have had to live through poorly designed and implemented IT systems what they think of digitization. Or ask U.S. car buyers; in 2016, technology for the first time topped the list of causes for customer complaints about their vehicles.³ As cars become more digitally enabled and connected, they threaten to become less and less valued by consumers.

We believe that future winners in the digital economy will be those that can deliver on one key insight: Put technology in the background and focus on people first. Executives who are able to discern customers' true needs, and then develop technological solutions to meet them, will satisfy consumers, reduce operational costs, enable higher profits and, as a result, create a more sustainably competitive position in the market.

Putting customers first does not diminish technology's importance; rather, a deep customer understanding should help guide the choice of which technologies to incorporate. In short, we believe executives should focus on three areas:

- Get people right. Companies should have a clear, customer-oriented vision for the digital transformation.
- Get technology right. Companies need to “be” digital, not merely “do” digital.
- Get the interplay right. Ensure that the two perspectives — a people and a technology focus — co-exist in the same project teams. None of these is easy to do well. To truly understand people, executives should tap into the world of the humanities and the social sciences, including disciplines such as anthropology, sociology and philosophy. And to truly get technology right, executives should draw heavily on software development and analytics. But the most important thing managers can do is to combine these approaches. They must build teams and organizations that embody the insight that, for companies to become more digital, they need to become more human.

Getting people right: developing a clear, customer-oriented vision

The first question executives should ask themselves when embarking on a digital transformation is not a technological one but a human one: What difference do we want to make in the lives of our customers? We have seen too often how digital transformation can be derailed when businesses are too focused on technology for its own sake. When an organization's digital strategy is largely a summary of how it will utilize the many technologies available, it's a clear sign the company is overtly focused on technology rather than putting people first. For example, the organization might have a “big data strategy,” an “infrastructure strategy,” a “social media strategy,” a “mobile strategy” or even a broad “digital strategy.” Sure, all of these are important, but they should not be the starting point. CEOs should be wary of CIOs who come to the discussion of digital transformation with an à la carte menu of possible digital dishes. And CIOs, in turn, should be careful not to present digital opportunities to CEOs in this way.

Instead, executives should start by understanding the difference their company aims to make in consumers' lives. This is a deeply non-technological question, applicable across industries:

- **Automotive:** Why do people drive? Automotive companies aiming to make cars more digital should start by understanding why people drive. We've conducted deep, qualitative studies with several hundred vehicle owners around the world, and found that drivers care about many other things than getting from point A to B. For example, they care deeply about the social interactions they share with family members when in the vehicle, as the car is often where some of their most emotional conversations occur — a son announcing his engagement to his parents, for instance, or a father telling his children he has been laid off. Business people might even conduct important meetings in an automobile. Because vehicles are not just neutral spaces, car companies need to think deeply about the kinds of experiences they want to design for.
- **Education:** Why and how do people learn? Companies serving the education market need to understand, before they start developing digital offerings, how people learn. What motivates people to learn, and when do they feel challenged and engaged? How do they access information, inside and outside the classroom? What feedback and support works well for them?
- **Banking:** What does money really mean to people? Banking executives need to understand the various ways people feel about and relate to money. How often and why do they go online to check their accounts? How does digital trust work? (For more on the topic of consumer trust, please read Cognizant's white paper "[The Business Value of Trust](#).") Is it possible, or even desirable, to replace physical branches with online branches, and what are the support mechanisms that need to be kept in place? Most banks by now are adept at enabling mobile and online services. What is less clear is how to establish new business models based on these offerings. (For a partial answer, please read Cognizant's white paper "[Digital Marketing in Banking: Evolution and Revolution](#).")

- **Fitness:** What makes people exercise? What role do fitness activities play for contemporary consumers? Companies in the sports and fitness industry need to think about this question and how it impacts the types of experiences their consumers would value. Do they want to support aggressive, competitive activities, or more contemplative ones? What is the balance between social pursuits and individual activities for their customers? How will they offer something uniquely valuable?

ReD Associates recently conducted a study for a supermarket chain that illustrates the need to deeply understand consumer needs before digitizing the shopping experience (see Quick Take, page 5).

The study reveals that for companies to be truly relevant to their customers, executives must understand how people really live. What are their deep needs and motivations, their dreams and frustrations? What experiences do they really value, and why? Answering questions like this is by no means straightforward. As Neil deGrasse Tyson, astrophysicist and director of the Hayden Planetarium, said in a recent tweet, "In science, when human behavior enters the equation, things go nonlinear. That's why physics is easy and sociology is hard."⁵

To develop this level of customer understanding, companies should spend extended periods of time with their customers, observing their interactions with friends and family, colleagues and other core social relations. The tools developed in the social sciences, such as sociology, anthropology and philosophy, are particularly useful for truly understanding deep customer needs.

The outcome should be a clear vision for how to best serve customers. This typically takes the form of a value proposition that can guide everything companies do, including their digital transformation plans. For Edison Energy, a subsidiary of Edison International that also owns Southern California Edison, the value proposition that emerged from a study we conducted was to "make energy simple again."⁶ By having a clear value proposition, Edison Energy, one of the largest utilities in the U.S., aims to capture a significant chunk of the corporate market for energy management solutions; the value proposition also gives the company a clear direction for its work on its digital toolbox.

Quick take

How one supermarket chain focused on understanding human needs

Nearly every large supermarket chain in the world is undergoing some sort of digital transformation. Typical areas of interest relate to optimizing the point of service, in-store productivity, in-store service management, shrink and gamification. Each of these areas is operationally important, and retail executives should have a clear perspective on each.

A first step, however, is understanding why and how people shop for food. What role does shopping for dinner really play in people's lives? The results of a study ReD Associates conducted for a supermarket chain suggest the answer is not as simple as it first appears.

A widely held assumption among retail executives is that consumers are increasingly drawn to discount stores because they value low prices. Red Associates learned something different, however, when its team of social science researchers spent multiple days with a group of customers, watching as they shopped, planned and made dinners with their families. While many executives have a mental model of families meeting around the dinner table on an ongoing basis, the actual dinner experience runs very counter to this. In fact, the research showed that stable family routines are dissolving, and that families increasingly struggle to predict what each week will look like.

One of the most telling pieces of data from the study was the disappearance of the weekday family meal. Families simply were not eating together at the same time every day. Many now had three or four different diets to consider.

This fundamental shift in behavior has dramatically impacted shopping behavior. People in the study met were shopping more than nine times a week on average; in one case, shopping occurred three times a day. People were not loyal to specific supermarkets, and generally did not search for discounts. Instead, they chose the supermarkets that fit their need for fast, convenient shopping. After working all day, the last thing they wanted to do was to carefully consider different prices at different stores.

The study also revealed that the traditional assumptions around price vs. quality were superficial. Study participants didn't categorize supermarkets as "discount" or "premium" but instead seemed to be guided by the mood and experience of the stores. Some stores projected a mood of efficiency, while others felt fresh and local, and still others seemed practical and thrifty, offering good everyday value.

According to these findings, supermarket chains need to reconsider their vision for serving customers and fundamentally update their value proposition, well before embarking on a digital transformation.

Getting technology right: 'being' digital vs. 'doing' digital

With a clear customer-centric purpose in place, powerful ideas will emerge for digital innovations that will thrive in the marketplace. Companies that do not implement such ideas in concrete technological solutions, however, will remain stuck in the pre-digital era.



The key challenge is “being” vs. merely “doing” digital. Companies that do digital will launch a series of discrete initiatives, none of which will significantly change the business model. For example, sales and marketing may want to launch a series of apps to engage customers, while the finance department may want to reduce costs by optimizing internal processes. No one, though, will think deeply about how these initiatives fit together, or how they jointly add value for customers.

To be digital, on the other hand, is to always think digital first, and to take a whole-company approach to digital transformation. It means having a common language for digital across the organization and a shared understanding of the goal of the digital transformation. It typically also means that the digital transformation is driven by a task force that works across units.

Further, leading executives don’t start by asking about the business case for digitizing a process; they assume there is a digital answer to any business goal, whether it’s thriving in a challenging market, attracting a new consumer type, improving the user experience of a product, rejuvenating a problematic business model, developing more engaging employment training initiatives or identifying entirely new revenue streams. They then analyze whether that is or is not the case (see Figure 1, next page). (For more on “being digital,” please read [“Making Digital Real and Rewarding,”](#) Cognizanti Journal, Volume 9, Issue 1, 2016.)

More concretely, companies that are truly digital have typically recognized, put in place and ensured collaboration among five critical components of digital solutions: ⁷

- **Data:** The capture and use of consumer information, including user location data, spending history, social media behavior, device usage.
- **Amplifiers:** The systems that generate, collect and manage the data, including smartphones, modems and cloud servers.

- **Interfaces:** The interactions and relationships between devices, solutions and users, including apps, websites, dealerships and touchscreen features.
- **Algorithms:** The software that ascribes meaning and value to the data, including the code that identifies which books to recommend on Amazon, the timing for sending a personalized note of congratulations for a “personal best” run time from Nike, or the insight to send a notification when an old friend has joined Facebook.
- **Business logic:** The benefits to the business of the ascribed meaning and value, including the revenue, margins, penetration and brand metrics.

The difference between doing digital and being digital may seem subtle, but it has enormous consequences for how executives run their organizations. While one drives a culture of digitization, the other influences a culture of risk aversion, which is detrimental to digitization.

To be digital is to always think **digital first, and to take a whole-company approach to digital transformation.**

Get the interplay right between the human and technology perspectives

Even if a company is able to get the “human” insights right — and even if it makes the transition to being digital — the risk of failure increases if the two cancel each other out. If a strategy arising from a deep customer understanding is not technologically feasible, or if the complexity of digital offerings undermines the customer value proposition, then the entire investment will be not just expensive and painful but also fruitless.







	Doing digital	Being digital
 Strategy & innovation	Digital initiatives are a core part of the strategy; digital innovation comes from a dedicated task force and internal crowdsourcing, fueled by design thinking.	The strategic planning process has been replaced by continuous innovation processes; roadmaps are replaced by a strategic compass indicating which envisioned future scenario is being realized.
 Use of insights	Big data platforms become monetized, and start to affect data-driven decision-making.	Insights-based decision-making is the new way of working. Customers opt-in on data, which predicts emerging customer behavior patterns. Products and services become social.
 Leadership & culture	Digital initiatives are a core part of the strategy; digital innovation comes from a dedicated task force and internal crowdsourcing, fueled by design thinking.	The strategic planning process has been replaced by continuous innovation processes; roadmaps are replaced by a strategic compass indicating which envisioned future scenario is being realized.
 Products & services	Digital channels are in place; opensourced innovation and mass customization are enabled.	Products are enhanced through sensors; products and services are continuously innovated and personalized; product experience is enhanced through social channels.
 Systems & processes	All processes are redesigned to align with a centralized, fully integrated digital strategy led by a C-level executive.	Processes are standardized and operated by business process as-a-service platforms or bots. A next-generation, modular IT architecture supports autonomous management of data.
 Customer touchpoints	A seamless connection exists between customer journeys and back-end processes; the strategy responds to insights gathered from customers.	Customer autonomy is enabled; customers control their data and participate in meaningful, personalized experiences.

Figure 1

Source: Abstracted from “[Making Digital Real and Rewarding](#),” Rob Asen, Ted Shelton and Burkhard Blechschmidt, Cognizanti journal, Volume 9, Issue 1, 2016.

The difference between doing digital and being digital may seem subtle, but it has enormous consequences for how executives run their organizations.

While one drives a **culture of digitization**, the other influences a culture of risk aversion, which is detrimental to digitization.

Pitfalls on the journey to being digital

For all its successes, the history of digitization is also one of massive disappointment, in particular for companies that were not born digital. Failures include digital projects running over time and over budget, promised benefits not being realized, and users and employees feeling deeply frustrated by failing technologies. As much as 80% of IT projects are estimated to significantly exceed originally estimated costs.⁸

In the early days of digital transformation at industrial companies, a portion of the failure of digitization programs could be traced to governance logic. Inspired by traditional stage-gate governance models, waterfall development processes were common. A key problem was that early-phase development teams tended to over-specify system requirements, which, in turn, led to elongated development processes and large cost overruns.

As a counter-reaction to the waterfall technique, many companies have employed different methodologies, sometimes referred to as the “lean startup approach.”¹⁰ The core idea here is that companies should simply launch a number of initiatives, see which ones do well after initial tests, and then double down on those.

While useful when the business problem is clearly defined, the lean methodology can do more harm than good — especially if used in larger transformation programs. In one telecom company ReD Associates worked with, the IT department had asked teams in the different markets to “simply try something;” that is, rather than spending too long analyzing needs and solutions, they were told to launch as many initiatives as they could and then evaluate them at a later point. At a strategy workshop ReD Associates helped facilitate, it became clear there was no shared purpose across the different initiatives and, thus, nothing to hold them together. Employees were frustrated about the lack of a common vision that would provide a sense of direction for the many initiatives.

Truly getting the **customer right** will set a clear direction that **executives can use to** select the technologies that are most relevant to **fulfill customer needs**. This in turn will help them **get the journey right**.



We suggest thinking of the two transitions — getting people right and being digital — as inevitably happening in lockstep with one another, encompassing a single journey. The process may vary depending on the level of disruption in the industry, the agility of the organization and its current capabilities. In all cases, though, organizations can follow three principles to realize success:

- End-to-end collaboration across disciplines. With each handover from social scientists to data scientists to engineers, there is a risk of losing clear direction. Even at the early stage of understanding consumers, the company should strive to develop an understanding of the business and technological context.
- Non-linear processes. Successful innovation results in changes to the marketplace, and new technologies should support new customer behaviors. A clear customer value proposition should never be thought of as final; insights, design and implementation should be continuously revisited and refined.
- A clear strategy, even when involved with tactical decision-making. The teams embarking on this journey will number in the thousands, and many facilitators of innovation — such as crowdsourcing and rapid prototyping — can cause atomistic thinking designed to optimize a siloed piece of the strategy at the expense of the core customer value proposition.

In our work with leading companies around the world, we see quite clearly that being digital comes most naturally to companies born after the emergence of the commercial Internet — in other words, companies that were born digital. For these organizations, digital solutions are not an active choice but a standard way of operating. It is the non-digital solutions that need careful consideration, not the digital ones. For example, should the company supplement the company website with a physical call center, or build physical stores to complement the online sales channel?

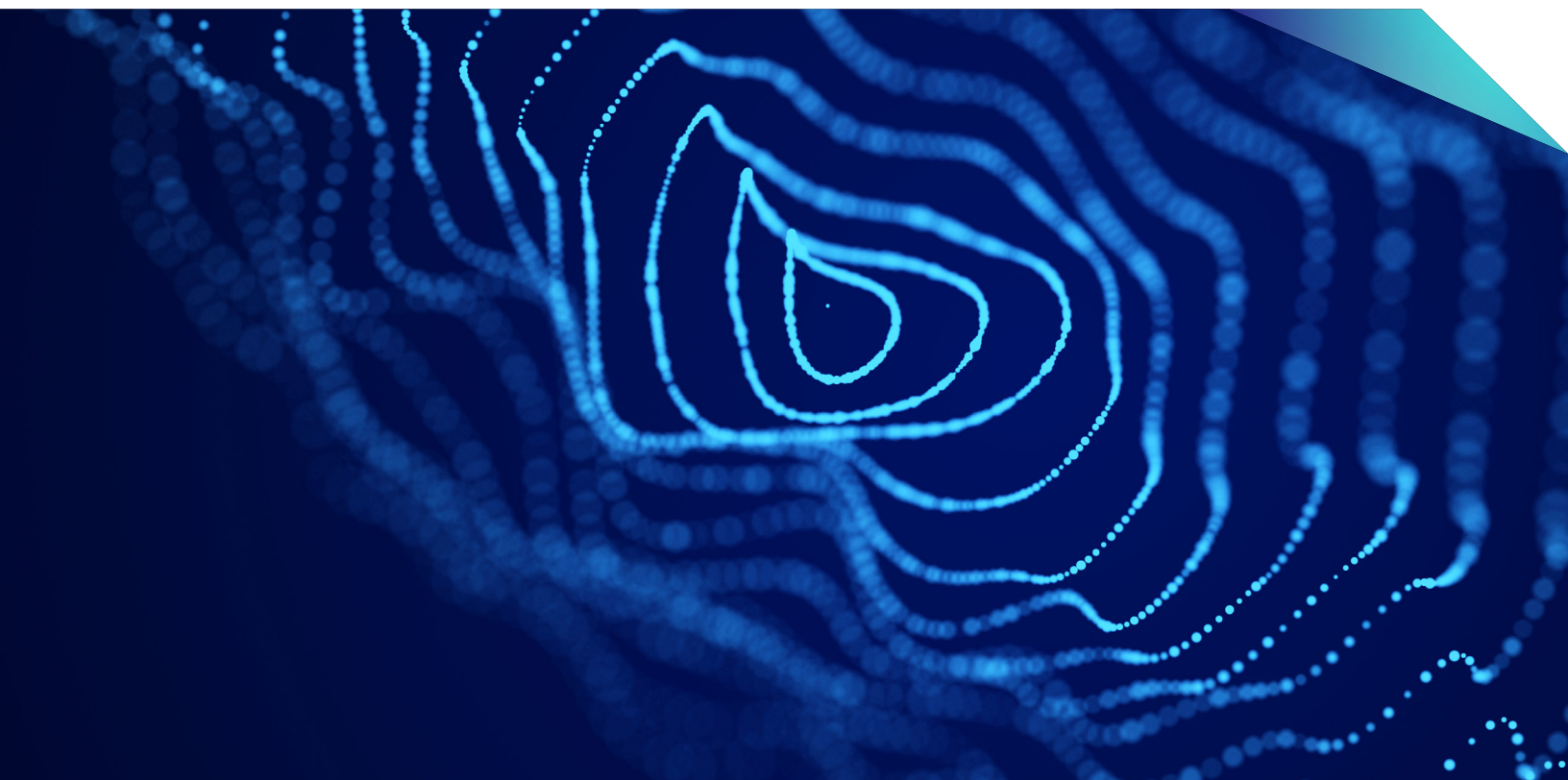
For companies that were born before the digital era, the transition to being digital is often much more complicated, as the business model is centered on pre-digital practices. In these cases, executives need to resist the temptation to simply do digital, such as taking a piecemeal approach to digital transformations. In these cases, the IT organization develops a long list of initiatives that the company can tackle utilizing new technologies, and top management sets a course of simply “trying things out” to see what works. This approach may work for smaller initiatives but not for larger-scale transformations (see Quick Take, previous page).

We believe the best way for such companies to take full advantage of digital transformation is to go back to the customer value proposition as described above. Truly getting the customer right will set a clear direction that executives can use to select the technologies that are most relevant to fulfill customer needs. This in turn will help them get the journey right.



Footnotes

1. "Humanizing Technology: The 100-Year Legacy of Steve Jobs," ZD-Net, 2011, <http://www.zdnet.com/article/humanizing-technology-the-100-year-legacy-of-steve-jobs/>.
2. Michael Krigsman, "Worldwide Cost of IT Failure Revisited: \$3 Trillion," ZDNet, April 2012, <http://www.zdnet.com/article/worldwide-cost-of-it-failure-revisited-3-trillion/>.
3. "Technology Problems Top a List of Car Complaints," The New York Times, Feb. 26, 2016, http://www.nytimes.com/2016/02/26/automobiles/wheels/technology-problems-top-a-list-of-car-complaints.html?_r=0.
4. Mikkel B. Rasmussen and Andreas W. Hansen, "Big Data Is Only Half the Data Marketers Need," Harvard Business Review, Nov. 16, 2015, <https://hbr.org/2015/11/big-data-is-only-half-the-data-marketers-need>.
5. Tweet from Neil deGrasse Tyson, Feb. 5, 2016, <https://twitter.com/neiltyson/status/695759776752496640?lang=en>.
6. "Edison Energy, 2016: The New Energy Future — Challenges and Opportunities in Corporate Energy Management," Edison Energy, March 29, 2016, <http://www.edisonenergy.com/2016/03/the-new-energy-future-challenges-and-opportunities-in-corporate-energymanagement/>.
7. For more on this topic, please read "Code Halos: How the Digital Lives of People, Things, and Organizations are Changing the Rules of Business," by Malcolm Frank, Paul Roehrig and Ben Pring, John Wiley & Sons, April 2014, page 38, <http://www.wiley.com/WileyCDA/WileyTitle/productCd-1118862074.html>.
8. Alexander Budzier and Brent Flyvbjerg, "Double Whammy: How ICT Projects Are Fooled by Randomness and Screwed by Political Intent," Eureka Research Repository, 2011, <http://eureka.sbs.ox.ac.uk/897/>.
9. For more on the concept of the lean startup, read "The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses," by Eric Reis, Random House, September 2011, <http://www.penguinrandomhouseaudio.com/book/210088/the-lean-startup/>.





Learn how Cognizant helps clients lead with digital at

www.cognizant.com

www.cognizant.com/cognizant-digital-business

About ReD Associates

At ReD, we put a deep understanding of real people back at the center of business decision-making. Our teams solve some of today's hardest problems. Over the last 10 years, ReD has led a quiet revolution in thinking about business. All of our work begins with an exploration of the customer's worlds — using social science tools to understand how people experience their reality and, in turn, offering businesses a “reality check” on what is meaningful to people. More information can be found at <http://www.redassociates.com/>.

About ReD Associates and Cognizant

ReD Associates and Cognizant have formed a strategic partnership where strategy experts, behavioral economists, anthropologists, sociologists and ethnographers from ReD Associates work with digital strategists, designers, technologists, and data scientists from Cognizant Digital Works™ to help businesses connect more closely to real-world consumer behaviors and experiences.



Cognizant (Nasdaq-100: CTSI) engineers modern businesses. We help our clients modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at www.cognizant.com or [@cognizant](https://twitter.com/cognizant).

World Headquarters

300 Frank W. Burr Blvd.
Suite 36, 6th Floor
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277

European Headquarters

1 Kingdom Street
Paddington Central
London W2 6BD England
Phone: +44 (0) 20 7297 7600
Fax: +44 (0) 20 7121 0102

India Operations Headquarters

#5/535 Old Mahabalipuram Road
Okkiyam Pettai, Thorajipakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060

APAC Headquarters

1 Changi Business Park Crescent
Plaza 8@CBP # 07-04/05/06
Tower A, Singapore 486025
Phone: + 65 6812 4051
Fax: + 65 6324 4051

© Copyright 2022, Cognizant. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the express written permission of Cognizant. The information contained herein is subject to change without notice. All other trademarks mentioned here in are the property of their respective owners.