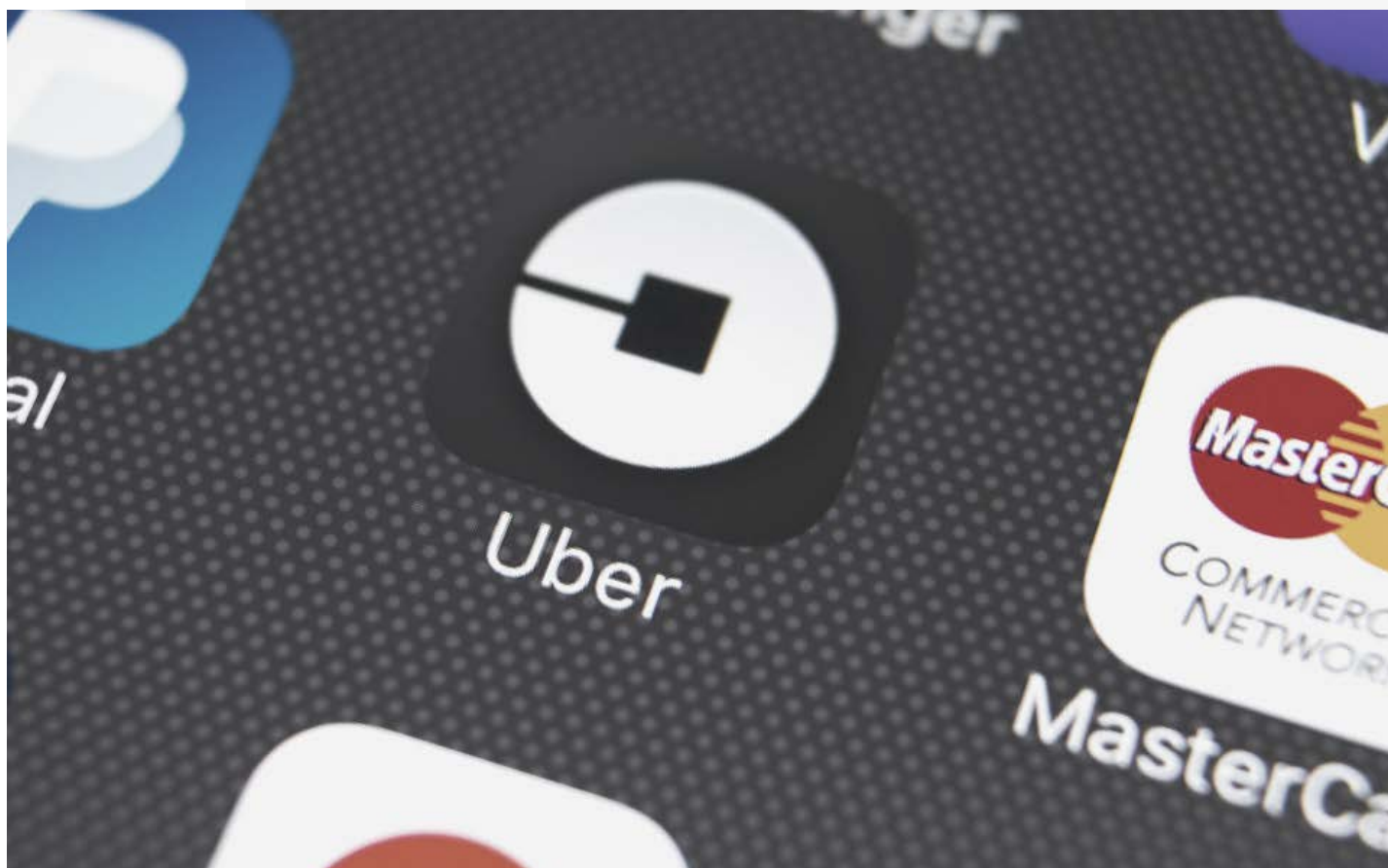


# A DIGITAL BUSINESS ROADMAP



## **PREPARED AND PRESENTED BY**

ATLE SKJEKKELAND, PRESIDENT  
THORNTON A MAY, COUNCIL CHAIR

THE DIGITAL VALUE INSTITUTE  
- A CXO THINK-TANK TO FAST-TRACK THE DIGITAL LEARNING CURVE

---

# THE LESSONS OF TECHNOLOGY HISTORY



Who remembers the “Dot.com Era”? Where were you in your career trajectory during this supposedly halcyon time of wholesale tech over-exuberance and naivete? A golden age when new technology was almost universally viewed as a “good thing” and technologists were hailed as heroes. An age when “eye balls” [i.e., customer touches] ruled and profits didn’t really matter.

What do the 56 million Millennials [born 1981 to 1996 -35% of the modern American workforce]; the 53 million Gen Xers [born 1965 to 1980 - 33%]; the 41 million Boomers [born 1946 to 1964 - 25%]; the 9 million Post-Millennials [born 1997 and later - 5%]; and the 3 million Silent/Greatest Generation [born 1945 or earlier - 2%] remember of this time period?

Same question in a different temporal envelope - who remembers the “Y2K moment” – a brief technology hiccup when a design oversight induced by the limitations and economics of existing technology required a massive re-tooling/re-thinking of technology architectures.

What most do not realize is that these two moments in technology history occurred **SIMULTANEOUSLY**. We were simultaneously excited and threatened by technology.

Fast forward to the present. Big picture historians/futurists and strategic planners see similarities between our current situation and the dot.com/Y2K confluence. We exist at a moment of unprecedented technology opportunity. The technology stack available to virtually all market participants is capable of delivering exponential improvements in cost and functionality. Simultaneously, technology has fallen out of favor with regulators, legislators, many senior executives and broad swatches of the general public.

The challenge facing all those who would create value with technology is how do we generate positive forward momentum?

Lessons from hundreds of value creating digital pioneers indicates that the path forward requires better engaging with customers.

Organizations need a digital roadmap to provide path clarity [i.e., where have we been, where are we now and where are we going]. The Digital Value Institute is a new think-tank for identifying how technology is transforming industries and how leaders and organizations can respond. The goal is to fast-track the digital learning curve for business transformation and innovation.

The institute has, together with the following executives, developed this roadmap for how to better engage customers in a digital age.



**Kim Bartley**  
CMO  
**White Castle**



**Paul Gaffney**  
CTO  
**Dick's Sporting Goods**



**Brian Shield**  
VP IT  
**Boston Red Sox**



**John Crooks**  
IT Division  
Chair  
**Mayo Clinic**



**Tom Murphy**  
CIO  
**University of Pennsylvania**



**Greg Keeling**  
Director  
**Bank of Montreal**



**Yuri Aguiar**  
Director of  
Innovation and  
Transformation  
**Ogilvy**



**Curtis A. Carver**  
VP & CIO  
**The University of Alabama at Birmingham**



**Jane Alexander**  
Chief Digital  
Information  
Officer  
**The Cleveland Museum of Art**



**Vince Kellen**  
CIO  
**University of California San Diego**



**Michael A. Coleman**  
VP & CIO  
**Electric Power Research Institute**



**Dux Raymond Sy**  
CMO & MVP  
**AvePoint**



**Wesley Rhodes**  
COO  
**Kroger - Sunrise Technologies**



**Jupp Stoepetie**  
CMO  
**ABBYY**



**Louis Steinberg**  
CTO emeritus  
**TD Ameritrade**



**Lisa S. Stanley**  
CEO  
**OSCRE International**



**Stephen Ludlow**  
VP  
**OpenText**

The Institute would like to thank ABBYY, AvePoint, and OpenText for their input and recommendations. These companies are in the forefront of digital transformation and have helped the institute develop this roadmap.

Below are our recommended steps for better engaging customers in a digital age.

Yours truly,

Atle Skjekkeland  
President, The Digital Value Institute

Thornton A. May  
Council Chair, The Digital Value Institute



---

# DIGITAL CHALLENGES

New competitors in the digital space don't care about YOUR revenue and margin. They don't have legacy shareholders, executives, and customers expecting more of the same. A new competitor can therefore quickly disrupt an industry if this provides customers with better, cheaper, and smarter products. A lot of disruption comes from removing middlemen to better serve customers. Tesla is therefore selling cars directly to the consumer, while Coors have decided to sell beer directly to consumers in addition to their retail network.



Below are some of the most common mistakes that stop organizations from better engaging customers:

- **Focus on company offerings, not customer's needs.** Many digital transformation initiatives focus on how to better market and sell products and services, not better meet customer requirements.
- **Lack of customer insights.** To better serve customers, you need to understand EVERY customer at EVERY time of contact. Customer behavior changes over time and in the context of time [i.e. tax attorneys do not want to engage with your brand during tax season]. If we had a volatility index for consumer behavior, it would be at an all-time high.
- **The assumption that customer experiences are universal and the same across different types of customers.** Different regions and generations have different preferences (e.g asking an 87 year old widow the name of her first pet or car as a security question).
- **Concern for protecting current revenue.** It's difficult to get executives with revenue targets to support ideas for industry disruption if this could risk existing revenues and margin.
- **Relying on solutions built for organizations, not the actual users.** The commercial software industry has for decades built things for the buyer of the software, not for the user of the software. This makes it difficult meeting customer expectations based on their experience from Google and Apple.
- **Lack of integration between front-end customer facing systems and back-end business systems.** Customer engagement on social media and website are not connected to back-end systems.
- **Lack of integration between back-end systems.** Some information might be in a CRM system, some might be in a case management system, some might be in a financial system, some might be in emails, and the lack of integration between these systems forces staff to be human systems integrators as they connect the dots between the systems. This takes time, and the consequence is often slow customer service.
- **Do-it-yourself mentality.** Some companies are not partnering effectively (or at all) with other companies to advance capabilities thinking everything must be built in-house.
- **Security and privacy concerns.** The higher the impact of errors, the less willing we are to change. As an example, banking does don't have the luxury of being wrong. They have to get the information security and privacy right for a multi channeled environment, whether it's by phone, online, or in a bank branch. It wouldn't be the end of the world if we got 10 donuts instead of 12 from donut shop. But if a bank did a similar mistake, then the consequences will be a lot more severe.

Below are the recommended steps for improving how you engage customers in a digital age.

---

# STEP 1: DETERMINE THE RAW CUSTOMER NEEDS

Try to make sure you understand the customer needs without excessive regard for your own offerings. Do it like an anthropological study: This animal needs to get water, what problems does it encounter on the way to getting its water? Map the buyer journey from start to end to identify if you currently support the raw customer needs. Customer insights can be gathered from crowd-sourcing, focus groups, trials, online surveys, talking to employees in the front line, and by analyzing data from social media, website, commerce system, etc.



Demographics don't fully define your audience – people are more complicated than that. Many want a digital engagement, while some don't. It's all about personal preferences. Some just want to pay their utility bill online, while others want to follow their meter reading with peer benchmarking and gamification. It's therefore important to determine the different levels of digital requirements to design different levels of digital engagement.

Kroger sells groceries, but they are also a digital company with R&D centers in the US, Japan, and China. They make their own electronics, manufacture robots, and have their own analytics company. Traditionally, a lot of customer insights came from studies, focus groups, and trials. The focus is now on gathering data to identify personal preferences and predict customer behavior. The goal is to turn shopping into a conversation and create a one-to-one relationship.

---

# STEP 2: LEVERAGE MOBILE AND INTERNET-OF-THINGS

Smartphones are becoming an extension of our brains; we pull them out every time we need help. Every successful interaction reinforces the idea that whatever the problem, a mobile device is the gateway to the answer. The analyst company Forrester call this the MOBILE MIND SHIFT – it's the expectations that I can get what I want in my immediate context and moment of need.

Identify the mobile moments over the buyer journey. As an example, you might book a flight from your computer, but the rest of the journey will most likely be on a smartphone. You use your phone for online check-in, determine the right terminal, online boarding, in-flight entertaining, determine where to pick up your luggage, etc. Companies building the most effective buyer journeys master four interconnected capabilities according to McKinsey: automation, proactive personalization, contextual interaction, and journey innovation. Depending on what you sell, the key to better engagement may be mobile engagement. If so, then adopt a mobile-first strategy. Slapping a mobile browser interface on top of what really is desk-top heavy applicable isn't going to work.

Internet-of-things (IoT) opens up new opportunities for engaging customers. This can be used for more automation (e.g. managing inventory), recommendations (e.g. in-store deals), better security (e.g. access control), and new economic models (e.g. pay for what you use). The latter may be an opportunity for industry disruption, - will customers prefer to pay for usage instead of buying a product?



Levi's Stadium, home of the San Francisco 49ers, features nearly 17,000 Bluetooth beacons to better engage visitors. The beacons help visitors use the Levi's Stadium app to find their seats, the nearest restrooms, and concessions. Food and drinks can be delivered right to their seats. In the first season, 30 percentage of visitors downloaded the app generating \$2 million in revenue from food, beverage, merchandize, parking, and in-app sponsorship.



---

# STEP 3: INTEGRATE ALL CUSTOMER TOUCH POINTS



Identify where you have customer touch-points and data about the customer, e.g. systems for marketing automation, CRM, ERP. Determine if you need a new digital platform to improve digital engagement over the buyer journey, or if existing systems can be connected to provide a 360-degree view of customers. Master Data Management helps to ensure information availability, quality, and completeness across the buyer journey.

The better you can sell the value proposition of customers providing information, the better data you have to work with. Ensure privacy by design and default, and let customers control their own data.

If some customer touch-points depend on manual tasks or paper-based processes, try then to digitize and automate these to improve responsiveness and customer service. Customers in a digital age want instant gratification, and business at the speed-of-paper is unacceptable.

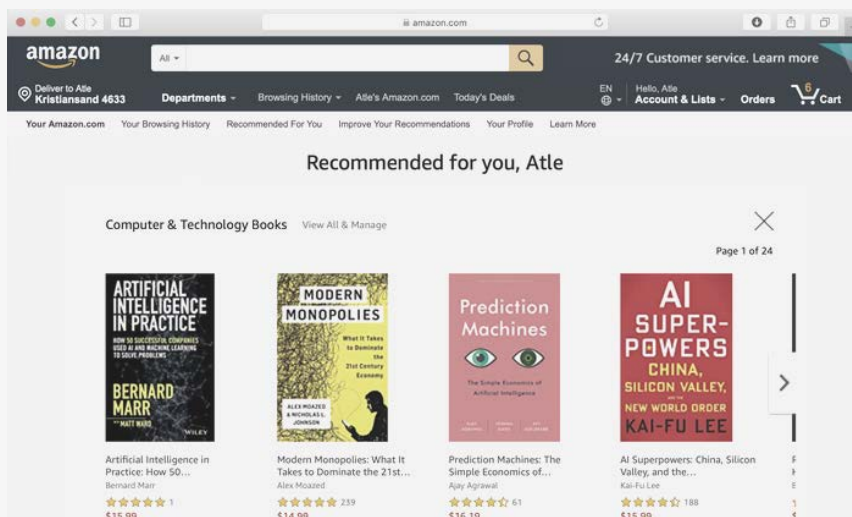
Marks & Spencer has connected all customer touch points to grow revenues. Customers don't need to re-tell their story every time they make contact by mail, phone, text-message, social media, or website. Customer service agents have a 360-degree customer view, and customers can easier see the status of their order.

# STEP 4: USE ANALYTICS AND MACHINE LEARNING TO PERSONALIZE, PREDICT, AND CHANGE CUSTOMER BEHAVIOR

Data and information with analytics and machine learning can be used to customize how you serve every unique customer. Customer segmentation is therefore dead, and you need to establish models to determine the unique preferences of every customer. Personalization works when people understand the value and are not creeped out by a surveillance economy approach.

nib provides health insurance to more than 1.5 million people, and identified the first 30 days as a crucial step in the customer journey. They decided to focus its efforts on the welcome email campaign that now includes a personalized video that summarises the basics of what's included in their coverage. nib has deployed an AI-powered platform along with its Customer Communication Management solution, OpenText Exstream, to automate the video creation and delivery and is exploring new areas where emerging technology can be used in its marketing mix.

According to research by McKinsey, 35% of Amazon sales come from recommendations.



Tesco uses a loyalty program to track which stores customers visit, what they buy, and how they pay. Analytics has enabled the retailer to customize offerings at the individual levels. For example, shoppers who buy diapers for the first time get coupons not only for baby wipes and toys but also for beer since data analysis revealed that new fathers tend to buy more beer since they spend less time at the pub.

University of Kentucky is using historic information about students that dropped out to identify existing students that may decide to drop out, and then engage with them before they decide to drop out. They have also gamified it by showing students their K-score in the mobile app with recommendations for how to improve their score.



---

# STEP 5: DETERMINE IF THERE IS A PLATFORM PLAY

A traditional supply chain with a linear strategy for producing a products has value generated from each stage from suppliers to customers. A platform business derives value from people using the platform. It owns the infrastructure and facilitates transactions between multiple parties. This opens up new opportunities for better serving customers in a digital age, and also may make it more difficult for competitors to disrupt your business.

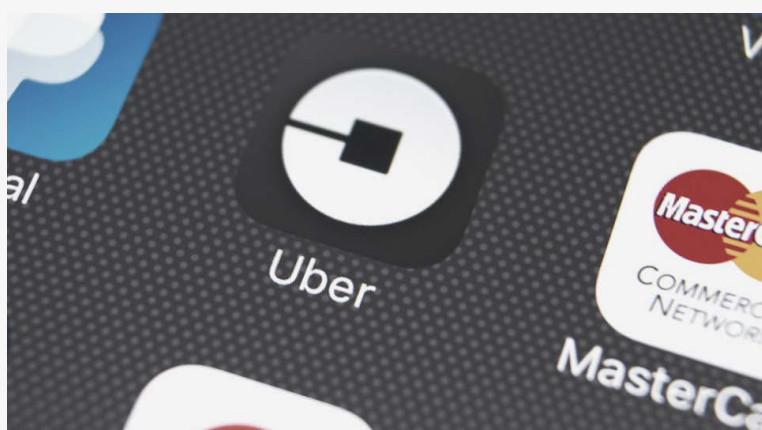
A platform has four types of stakeholders:

- Owner: Platform provider, e.g. AirBnB
- Customers, e.g. AirBnB travelers
- Producers, e.g. AirBnB hosts
- Partners, e.g. payment providers, insurance providers

Some platform businesses focus on providing transactions like AirBnB and Uber, others on innovation like IBM Watson and Sony Playstation. A few companies like Apple, Google, and Microsoft do both.

These platforms leverage the network effect. The more users, the more value, the more users. Establishing a platform requires successful matchmaking, tools and services, rules and standards, and audience building, according to Alexandra Larsson, Chief Information Architect at Combitech.

Use the platform to expand the range of opportunities - such as local attraction marketing to AirBnB users and partnering for exclusive promotions - using new channels to reach new untapped audiences. Get partners to benefit from your platform by providing value-added products or services. In the context of digital platforms, ecosystems are collections of economic actors not controlled by the platform owner, yet who add value in ways that go beyond being a regular user.



UBER is more than a ride sharing business, - it's a transportation ecosystem. Uber plans to connect people to restaurants, bikes, buses, car rentals, and maybe even flying taxis. Partners include technology providers for maps, GPS, payment, data analytics, but also financial partners and banks for car loans for drivers, hire car partners to provide Uber-ready vehicles, and insurance providers.

---

# STEP 6: PRIORITIZE AND FOCUS YOUR EFFORTS

Jeffrey Steward and Michael Moon's opus last year about how to prevail in the age of accelerations made a good point about using the **Cynefin** framework to improve decision making.

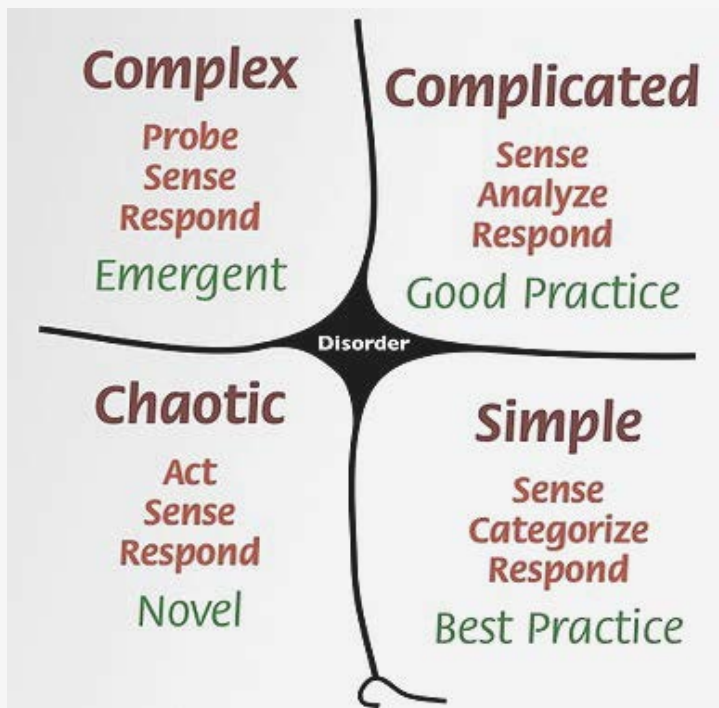


Image source: Wikipedia

Our decision model used to be:

**Sense → Analyze → Respond**

In faster moving environments there is less time for analysis and less ability to predict. A new model for making decisions is needed in fast evolving complex environments with volatility, uncertainty, complexity, and ambiguity.

It may therefore make sense to instead:

**Probe → Sense → Respond**

This means digital experimentation is key to digital transformation. Avoid analysis paralysis since customer preferences may change before you know it. Digital transformation is a journey, not a destination. Don't spend a lot of time and resources determining the destination. Establish instead a goal and try to be nimble and agile and deliver quick results. Prioritize progress over perfection.

The notion of a big digital change that takes three years is probably not a digital change. It's more like the digital glacier, and the world may have changed before you have reached your destination.

Ensure that you have the foundation in place for becoming a digital business. Best-selling author, speaker, and advisor Geoffrey A. Moore recommends organizations to work their way up the following steps:

- **Reframing your infrastructure model** by leveraging cloud, mobile, social, and AI
- **Reframing your operating model** to improve customer intimacy and operational efficiency
- **Reframing your business model** to get net-new revenue

Start by reframing your infrastructure model to establish IT as a partner for business enablement. Once this is done, then work your way up to reframing the operating model and business model.

---

If your business and IT function is slow at making the required changes, consider then setting up a separate digitization company to identify and develop improvements. Moore makes this point in his book ZONE TO WIN, and this new incubation company or department should be managed as a start-up. New projects get seed-money, and then more funding when delivering results.

Kroger has established Sunrise Technology to drive a digital transformation within the company with the mind of a startup. Sunrise thinks about the problem differently, takes Kroger technologies and add others to solve Kroger problems. It can move at a different pace than the established enterprise.

Partner for success. Don't try to do it all by yourself. Determine your core value proposition and manage the rest as a resource with partnerships to help you achieve your goals.

Remember that culture eats strategy for breakfast, lunch, and dinner. Ensure therefore that excellent customer service become part of the organizational DNA with executive leadership, education for staff, and customer-centric KPIs. This also means that staff have to be empowered to better serve customers, - it can't be a command and control culture requiring management approval of every step. Plan, hire well, value your staff, and reward them - all aligned with the business goal.







## NEXT STEPS

### TASK

[Click here for video library](#)

Check out video interviews with experts like Geoffrey A. Moore, Dion Hinchcliffe, Ted Schadler, and Thornton A. May.

---

[Click here to sign up for the in-person event](#)

Join the Digital Value Studio event in St. Augustine November 13-14, 2019 (not for IT solution and service providers)

---

[Click here to get help developing a digital strategy](#)

Get help developing a digital strategy for your business.

---

## ABOUT THE AUTHORS:

### THORNTON A. MAY FUTURIST, AUTHOR, EDUCATOR



Twitter: @deanitla

Thornton May is a futurist, author and educator. At Dartmouth College, Keio University [Tokyo] and the Center for Japanese Studies at the University of Michigan, Thornton studied Japanese technology policies and practices during the Meiji Restoration [1868 through 1912], post-World War II and 1970s. Living in Tokyo Thornton worked at a series of global Japanese companies assisting managing “emerging technology” investments.

Thornton was hired by noted futurist Alvin Toffler [Future Shock, Third Wave, Power Shift and Revolutionary Wealth] to assist the “technology futures” program for Toffler Associates. Toffler Associates designed and delivered the strategic plans for South Korea [President Kim Dae-Jung] and Singapore [Minister of Finance Lew Kuan Yew]. These plans specified the technology investments necessary to sustain economic dominance in the twenty-first century.

Thornton returned to America to lead technology research at the Nolan Norton Institute. His research team is credited for coining the phrase “Chief Information Officer” in 1981. Thornton pioneered the multi-client research program designed to discover strategic and operating insights associated with emerging technologies.

His work as a futurist and anthropologist position him as part Paul Revere [the one to sound the alarm] and part Arnold Toynbee/Edward Gibbon [the one who explains what has happened/what is happening].

Thornton has taught at four major universities, written columns on technology for multiple leading publications [25 plus years at Computerworld], advises major organizations and government agencies on how to think differently about technology, all the while conducting seminal anthropological field research into technology-use behaviors of the various tribes comprising modern society.

Thornton began his career as an anthropologist studying tribal behavior in the modern Japanese corporation. He received a bachelor’s degree from Dartmouth College, a master’s degree from Carnegie Mellon University, and did post-graduate work in Japanese Studies at the University of Michigan. At five feet, seven inches, he played professional basketball in Japan.

Thornton brings a scholar’s patience for empirical research, a second-to-none gift for storytelling and a stand-up comedian’s sense of humor to his audiences. His book, *The New Know: Innovation Powered by Analytics* examines the intersection of the analytic and executive tribes.

The editors at eWeek honored Thornton, including him on their list of ‘Top 100 Most Influential People in IT.’ The editors at Fast Company labeled him ‘one of the top 50 brains in technology today.’ Thornton is a founding member of the Internet of Things World Forum.

---

## ABOUT THE AUTHORS:

### ATLE SKJEKKELAND DIGITAL BUSINESS EXPLORER AND EVANGELIST



Twitter: @skjekkeland

Atle is a digital business explorer and evangelist. His interest in the business impact of cloud, social, mobile, IoT, and artificial intelligence has made him a frequent keynoter and workshop facilitator at events across the world.

Atle has a MSc in Economics and Business Administration from the Norwegian School of Economics with a specialization in business strategy and marketing. He has since 1996 spent his career in IT and Information Management, with a focus on how information can be used to add value, reduce costs, manage risks, and/or create new opportunities. This has made him into a leading information management innovator and educator.

From 2004 to 2018, he worked as VP, COO, and SVP at AIIM – a global association for intelligent information management. While at AIIM, he founded the AIIM annual conference, online community, certification, and training programs with over 30,000 students. He also served several years as the General Secretary of the DLM Forum for the European Commission, responsible for creating standards for electronic records management and digital archiving.

Atle led for almost a decade AIIM's information management think-tank in EMEA and NA with a focus on identifying the future and impact of cloud, mobile, social, AI, etc. He also participated in several task-forces about the future of Enterprise IT with industry experts like Geoffrey Moore [best-selling author of *Crossing the Chasm*] and Andrew McAfee [best-selling author of *Race Against the Machine*]. The task-force with Geoffrey Moore introduced the concept Systems of Record vs Systems of Engagement, and a *Forbes* blogger named this the best social media idea of 2011. While at AIIM, he also developed and delivered custom information management programs for several large organizations like Chevron, European Central Bank, HP, Konica Minolta, and Oracle.



---

## ABOUT THE TECHNOLOGY PARTNERS:



ABBYY is a global provider of content intelligence solutions and services. We are a global company that sets the standard for content capture with innovative language-based technologies that integrate across the information lifecycle. ABBYY solutions optimize business processes to mitigate risk, accelerate decision-making and drive revenue. For more information about ABBYY, visit [www.abbey.com](http://www.abbey.com)

---

## ABOUT THE TECHNOLOGY PARTNERS:



AvePoint accelerates your digital transformation success. Over 16,000 companies and 6 million Office 365 users worldwide trust AvePoint software and services for their data migration, management, and protection needs in the cloud, on-premises and hybrid environments. AvePoint is a Microsoft Global ISV Partner and four-time Microsoft Partner of the Year Award winner. Founded in 2001, AvePoint is privately held and headquartered in Jersey City, NJ.

---

## ABOUT THE TECHNOLOGY PARTNERS:



OpenText delivers information advantage with world-class Enterprise Information Management (EIM) technologies, transforming how insight is created and decisions are made. OpenText EIM solutions enable enterprises to leverage information assets to their full potential – on and off the cloud – to drive productivity, growth, and lasting competitive advantage. With a focus on world-class EIM technologies and services, OpenText continues to innovate and provide customers with the capabilities they need to become tomorrow's disruptors.

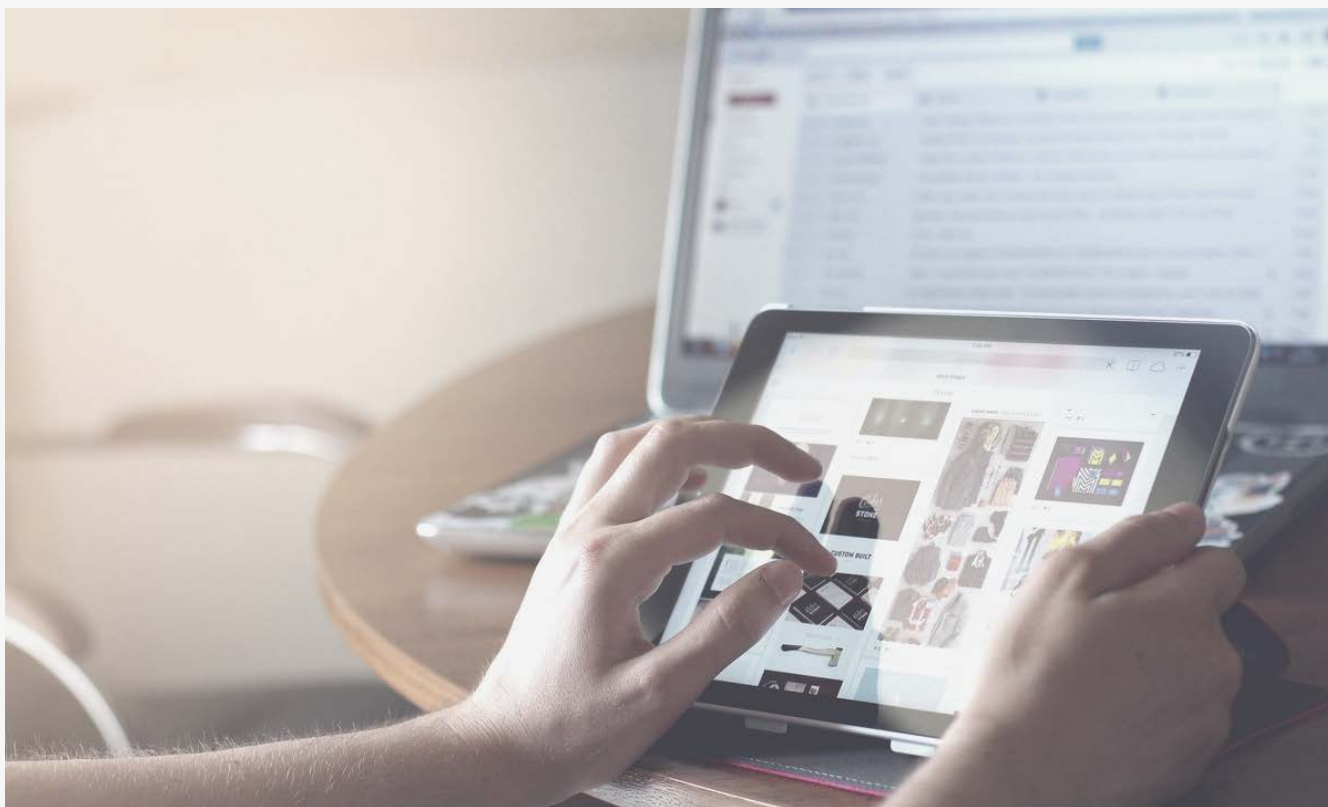
Using integration, automation, and AI, OpenText connects, synthesizes, and delivers information where it's needed to maximize its value. OpenText offers deployment options, consulting, and integrations for on-premises, hybrid, cloud, and managed services solutions to ease the transition to cloud and help customers leverage existing technology investments. With 13,000 leading experts focused on delivering EIM to 130,000 customers across 40 countries, OpenText understands and addresses the complexity of information flow, so you can:

- Build automation and agility into business processes
- Integrate operations and improve supply-chain efficiency
- Create more engaging customer experiences
- Turn mountains of data into new insights
- Improve content management, information discovery and security
- Detect and respond to digital threats or extract forensics from all your endpoints

OpenText helps customers realize an information advantage with an industry-tailored approach to process, governance, culture, and technology to deliver solutions that address industry-specific trends, business challenges, and regulations.

Learn more about OpenText (NASDAQ/TSX: OTEX) at [www.opentext.com](http://www.opentext.com)





## SOURCES

---

Digital Value Institute web interviews

Digital Value Institute calls with CXO Advisory Council members

Geoffrey A. Moore; Zone to Win

Geoffrey A. Moore; Escape Velocity

Jeffrey Steward and Michael Moon; Prevailing in the age of accelerations

Thomas H. Davenport, Leandro DalleMule, John Lucker; Know what your customers want before they do

Alexandra Larsson, Satsa på sylten, og inte burken! presentation at OpenText event