

COGNIZANT
COMMUNITY

United States • 2016

MASTERING DIGITAL

How to Navigate the Shift to the Digital Business Era



Cognizant

"A FIVE-STAR JOB."

"The WOW factor was off the charts ... tons of great takeaways."

"VERY INSPIRATIONAL AND MOTIVATING."

"The most thought-provoking conference I've attended."

– COGNIZANT COMMUNITY ATTENDEES



IN A WORLD OF GENERIC CONFERENCES AND
NOISY TRADE SHOWS, OUR CLIENTS SAY
COGNIZANT COMMUNITY STANDS ALONE.

For more than a decade, this unique event has provided busy executives with an opportunity to exchange ideas and insights both with each other and with acclaimed subject matter experts on the panoply of topics critical to advancing their business objectives today – and tomorrow.

Cognizant Community U.S. 2016 took this experience to another level. Captains of industry gathered just outside of Austin, TX, to hear world-

class authorities, fellow practitioners and Cognizant thought leaders delve deeply into tackling "digital that matters." Together they explored the next-generation infrastructure, process optimization and digital business solutions that are transforming individual companies and entire industries. Interactive break-out sessions revealed digital trends in specific industries and practical applications of automation, artificial intelligence, augmented reality

and more. The event also revealed the human side of digital, with thought-provoking cases and inspiring stories of digital innovation.

Read on for a sampling of these major technology and business themes – and experiences – that captivated attendees at our 2016 event and equipped them to master digital.

SEE THE COMING DIGITAL JOURNEY

WELCOME TO
Cognizant **Community**



DIGITIZATION: Managing the Shift

COGNIZANT COMMUNITY 2016 MADE CLEAR THAT THE DAYS OF DIGITAL AS TECHNOLOGICAL WINDOW-DRESSING ARE OVER.

The original digital building blocks – social, mobile, analytics and cloud – are now interwoven with adaptive manufacturing, artificial intelligence, augmented reality, blockchain, platforms and Internet of Things (IoT) ecosystems, forming a more fluid next-generation IT infrastructure that powers systems that think, learn and adapt. Such advancements promise to reshape process management, extract more value from systems of record and inform more enticing and elegant systems of engagement.

The capabilities of these combined drivers raise new strategic and competitive questions. As **Harvard Business School Professor Michael Porter** made clear, in an era of smart, connected things, the sale is only the start of the customer relationship, which can then be enriched by

remotely monitoring device performance and delivering proactive maintenance. That reality blurs boundaries between manufacturing, services and technology, forcing companies to reconsider what their true competitive differentiators are, how open they should be, what data is worth capturing and which business models will generate real value.

Succeeding with any of these possibilities requires companies to be digital throughout their organizations. Compelling customer engagement at the front end must be powered by hyper-efficient middle-office processes infused with insights from systems of intelligence. These systems of intelligence will voraciously consume fresh data from sensors, devices and transactions and correlate it with historic data

in systems of record to make new meaning that will power deeper engagement and innovation. As **Cognizant CEO Francisco D'Souza** explained, this combination of artificial intelligence and algorithms is emerging as “another frontier for competitive advantage,” with data as a new factor of production.

“You’re still running your car at the same time you’re changing the engine.”

Amy Brady
KeyCorp CIO

Underlying all this must be a flexible, resilient next-generation IT hybrid backbone that enables digital transformation while also ensuring optimal performance of existing business models. “You’re still running your car at the same

time you’re changing the engine,” **KeyCorp CIO Amy Brady** reminded attendees. It’s a formidable task that requires an intense focus on the present – managing heritage systems and lines of business – as well as being attuned to the emergence of new digital drivers and their impact.

Each company must chart its own course to making the big shift. While all organizations are using similar digital tools, and there’s no escaping the depths to which they must drive digital, each company’s unique strengths, challenges and opportunities will inform and shape its strategies and goals – as well as the paths taken to master digital.



EMBRACING BLOCKCHAIN BEYOND CRYPTOCURRENCIES AND FIN-TECHS



A panel of early blockchain adopters discussed the technology's potential for streamlining, securing and automating a wide range of transactions and other business collaborations.

Exploring blockchain technology is yet another way of mastering digital – and not just for financial services firms, as blockchain pioneers on Cognizant Community's main stage explained. Each expert offered attendees a glimpse of new business opportunities made possible because distributed ledger technology is able to create a shared, encrypted, immutable record that dramatically improves transparency and

security, while promising a more frictionless and trusted way of working.

Christopher Swanson, VP of Research & Development at U.S. Bank, is investigating where blockchain can add the most value by mitigating operational costs and delivering material customer improvements, and has found early opportunity in streamlining inefficient, limited-participant markets like those for syndicated loans.

Beyond banking, blockchain can reshape how content is created, produced and monetized, said **Ann Greenberg, Founder/CEO of Sceneplay**. Her company's in-progress innovation, Smart Script™ capitalizes on blockchain's ability to secure content, contract terms and ownership rights, and then track that content's consumption and royalty payments. Greenberg envisions marketplaces where artists sell personalized content directly

to – even co-created with – fans, with digital rights and payments managed by smart contracts on a blockchain.

All panelists exhorted attendees to experiment with blockchain through pilot projects and prototypes. "Who better to disrupt you than yourself?" said **Lata Varghese, leader of Cognizant's Blockchain Practice**.

"BLOCKCHAIN CAN BE THE FUNDAMENTAL BUILDING BLOCK OF COLLABORATION TOOLS FOR THE 21ST CENTURY, IN THE ENTERTAINMENT INDUSTRY AND BEYOND."

Ann Greenberg Entrepreneur, Founder of Gracenote and Sceneplay

AUTOMATION:

Powering Abundance in the Digital Business Era

JUST AS TEXTILE AUTOMATION LAUNCHED THE FIRST INDUSTRIAL REVOLUTION, AUTOMATION IS AGAIN AN ESSENTIAL COMPONENT OF THE SO-CALLED FOURTH INDUSTRIAL REVOLUTION.

From software bots to machine learning to narrow artificial intelligence, automation will enable organizations to participate in what **Cognizant Executive Vice-President Malcolm Frank** called “the great digital build-out.” Digital innovation in this phase will solve hard problems in healthcare, education, transportation, financial services and beyond, leading to a new era of abundance.

Insights from organizations already automating work illustrate its positive potential and impact. **Robotic process automation (RPA) expert Mary Lacity** noted how companies are using RPA to reduce paperwork, streamline processes, improve customer service – and thus free employees to focus on problem-solving, innovation and other rewarding activities. Contrary to common perception, Lacity’s research as Curators’ Professor of Information Systems, University of Missouri-St. Louis, shows RPA is primarily driven by productivity, not workforce reduction goals. In fact, humans working

alongside software bots often treat them as valued colleagues, giving them names, personalities and avatars.

RPA and artificial intelligence will provide employees with the insights to take “next best actions,” as well as free them up to be curious and innovative. Such advancements are the culmination of humanity’s amazing last century or so, during which more technological advances have occurred than in the previous 12,000 years, pointed out **Tim Urban, speaker, illustrator and author**. Urban posited that AI is advancing faster than we may appreciate and – alongside automation – is reshaping how we work and live.

AI and machine learning will grow increasingly smarter as these


technologies consume data from systems of record and sensors to feed a “virtuous positive cycle,” Frank explained. In a time when humanity’s collective intelligence will likely fit on a smartphone, businesses won’t base strategies and decisions on guesswork but on data-driven insights, unlocking new horizons of innovation. New products and services will emerge that will be simultaneously obvious and yet unimaginable. These discoveries and inventions will power new job growth and value creation. Naysayers, he noted, suffer from a “massive limitation of imagination” at a time when progressive businesses are poised to reap abundant benefits from machine intelligence, process digitization and analytic tools.

“The Fourth Industrial Revolution is unleashing this new machine. You just need the platform, the data and your brains, and you’re off and running with it.”

Malcolm Frank, Executive Vice-President, Strategy & Marketing, Cognizant

Frank detailed the opportunities for mass abundance to be realized as companies automate, compete on data and augment talent capabilities by deploying open and intelligent machine learning platforms.





"BY 2050, FOR \$1,000, YOU'LL BE ABLE TO BUY A COMPUTER THAT HAS THE PROCESSING POWER OF **ALL THE HUMAN BRAINS IN THE WORLD**, COMBINED."

Tim Urban, Speaker, Illustrator and Author, *Wait But Why* blog
Urban offered perspectives on the rise of artificial intelligence and its potential impact on human progress.



THE SOFTWARE BOTS TAKE A BOW

Digital Showcase: Robotic Process Automation

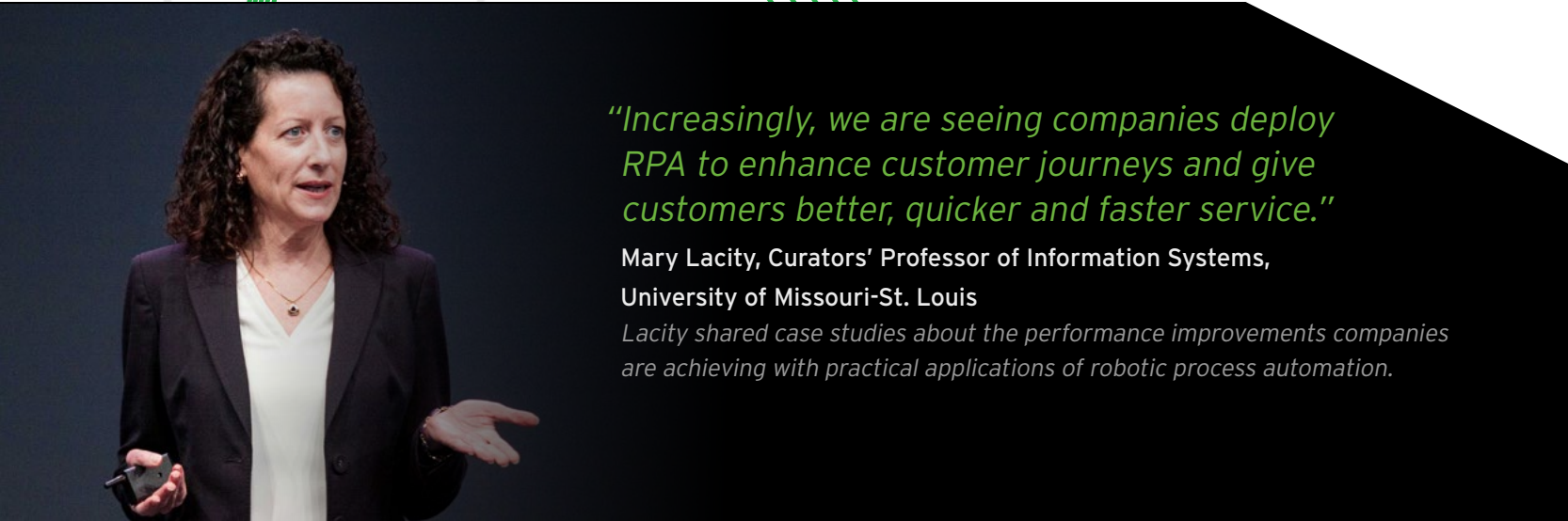
"OUR ORGANIZATION HAS FOUND A HALF-DOZEN OPPORTUNITIES FOR [RPA] TECHNOLOGY SINCE I RETURNED FROM COMMUNITY. THIS MAY BE A REAL GAME-CHANGER FOR US."

– Cognizant Community 2016 attendee

While they could not join the many renowned speakers on the main stage, software bots played a strong supporting role at Cognizant Community 2016. These bits of code are enabling companies to swiftly automate a wide array of repetitive, rules-based tasks, such as adjudicating medical claims and generating paperwork for financial transactions.

RPA can automate the connections among different systems to complete a transaction or assemble a comprehensive customer history, eliminating the "swivel-chair syndrome" that results from inter- and intra-process gaps and hand-offs, and giving employees more information for decision-making. RPA also frees employees from the drudgery of tedious, menial tasks so they can focus on work that's more rewarding to them – and to their organizations.

Cognizant Community 2016 breakout sessions offered guidelines for identifying processes ripe for RPA and detailed deployment strategies. (For an overview, see our white paper "[The Robot and I](#).")



"Increasingly, we are seeing companies deploy RPA to enhance customer journeys and give customers better, quicker and faster service."

Mary Lacity, Curators' Professor of Information Systems,
University of Missouri-St. Louis

Lacity shared case studies about the performance improvements companies are achieving with practical applications of robotic process automation.

DIGITAL EXPERIENCE

Understanding the Human Side of Digital

"THERE'S A GOOD REASON TO ASK HUMAN QUESTIONS AS WELL AS TECHNOLOGY QUESTIONS."

Christian Madsbjerg, Founder and CEO, ReD Associates

Paired with human imagination, digital technologies can unleash exciting new ideas, from augmented reality to self-driving cars. Yet innovations can also be confined by narrow perspectives and experiences. Querying sets of big data does not always expand these horizons because the queries themselves are often shaped by experiential and cultural biases.

Companies planning to invest deeply in digital technologies should "de-risk" those investments by pairing big data with "thick data," said **Christian Madsbjerg, who leads ReD Associates**, a human sciences consultancy and Cognizant partner.

Madsbjerg and his ReD Associates colleagues gather thick data using social science and anthropological study techniques to explore target consumers' relationships

with particular products or services to reveal important insights. This enables ReD researchers to understand, for example, why automotive lane-keeping features are welcomed in Detroit or Munich but greatly annoy drivers in India and China, where road lanes are casual and rarely honored.

"When you only use 20% of what's in your car, that's expensive and dumb," Madsbjerg asserted, pointing out the propensity for many businesses to make blind bets on which and how many functions to include. Big data plus contextual thick data gives companies a better real-world understanding of which features will solve problems customers actually care about. "You must ask the right queries to get real value from investments in big data," he said.



"You have to reduce the benefit of the status quo before you can get people enthusiastic about change."

Adam Grant, Professor, Wharton School, University of Pennsylvania, and Author of *Originals*, a *New York Times* best-seller

Grant provided insights about how to encourage original thinking and drive change and innovation in large organizations.



Disrupting the Status Quo with Digital

FOR MOST COMPANIES, SUCCESSFULLY NAVIGATING THE SHIFT TO DIGITAL BUSINESS REQUIRES CHANGE.

INSPIRATION:

For all their promise, digital drivers such as automation, APIs and augmented reality are inert tools until they are applied with human imagination, creativity and persistence. The challenge is that many organizations remain comfortable with the status quo. "Before you can lead with hope about change, you have to destabilize [people's] enthusiasm for the way they already operate," noted **Adam Grant, professor at the Wharton School of the University of Pennsylvania and best-selling author.**

Deutsche Telekom's Chief Product & Innovation Officer Christian von Reventlow enthusiastically explained how the company asked its customers of the future – today's 10- to 16-year-olds – what they want from telecom providers. The answer: free service – because these young digital natives see connectivity as a right. "The kids were saying there will be no phones. This really challenged the foundations of telecom," von Reventlow pointed out.

With its comfort in the status quo sufficiently shaken, Deutsche Telekom is now laying the groundwork for new business models that don't necessarily have phone service at their core.

Developing digital business models and innovating the next "obvious yet unimaginable" product or service may seem as ambitious for industrial-era organizations as it is for humankind to go to Mars – or for twin brothers to go from New Jersey to outer space. Yet **retired NASA astronauts Mark Kelly and Scott Kelly** shared their strategies for how they did just that.

Scott recounted his experience as an "18-year-old failure" reading Tom Wolfe's *The Right Stuff*. The book inspired him to begin a journey that started in flight school and culminated with his year-long mission aboard the International Space Station.

His brother Mark explained how persistence, practice

and perseverance enabled him to "overcome a lack of aptitude" for flying and eventually become a decorated aviator who piloted two space shuttle missions and was commander of two more.

Disrupting the status quo, gaining necessary new skills, pushing limits – none of that is easy. Yet excelling at challenging, difficult work is what the Kellys like best about being astronauts. In closing the event, the brothers echoed the exhortation of Cognizant's Malcolm Frank that now is the time to transition from digital that's fun, to digital that matters. As Scott said, "If we choose to do the hard things, the sky is definitely not the limit."

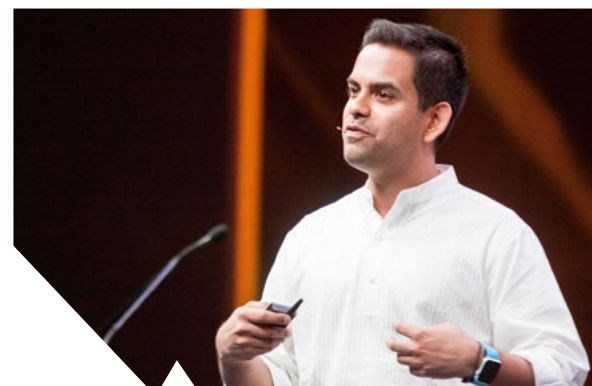


"YOU NEED TO TEST THE STATUS QUO. YOU CAN'T BE AFRAID TO MAKE MISTAKES – AND IF WE WORK AS A TEAM, WE CAN ACCOMPLISH ANYTHING."

Mark Kelly and Scott Kelly, Captains, U.S. Navy, Retired American Astronauts

The Kelly brothers shared their personal stories and strategies they have adopted to overcome obstacles and rise to the challenges of space exploration.

Guests at Cognizant Community had opportunities to experience digital innovation firsthand, from examining a 3-D printed Jeep, to exploring virtual worlds.



"Children are invited to design and make things that are personally meaningful to them."

Gokul Krishnan, Ph.D., SciPlay Research Fellow, NYSCI

Krishnan explained how the mobile makerspaces he designed for children's hospitals provide creative outlets that also contribute to better medical outcomes.



ACTION Mastering Digital: What to Do Now

ATTENDEES LEFT COGNIZANT COMMUNITY 2016 WITH ACTIONABLE INSIGHTS TO PURSUE DIGITAL MASTERY. TAKEAWAYS INCLUDED:

Compete on data.

Businesses need to instrument products and transactions, investigate the human context and invest in systems of intelligence. This will enable them to make meaning and create insights that guide customer engagement and fuel continuing cycles of innovation and improvement.

Automate.

RPA is contributing handily to organizational cost reduction and productivity, as well as employee satisfaction, by freeing up people from rote work and enabling them to apply creativity to more meaningful and valuable activities. Identify your rules-based and repetitive processes and turn those over to software bots.

Find your platform.

Explore how your organization can benefit from the power of platforms (whether focused on innovation, transactions or intelligent insights) and open application programming interfaces (APIs), whether by launching a platform, participating on existing platforms or engaging in a hybrid strategy.

Embed change management planning throughout the organization.

Digital business changes the way the sales and marketing functions interact with customers and how software developers collaborate with IT operations experts. Both talent and reward structures are impacted by digital. Be prepared.

Develop your next-generation IT hybrid infrastructure.

Hybrid infrastructures using cloud, platforms, open APIs, micro-services, service providers, etc. will give companies the flexibility and scalability they need to support heritage systems.

Understand blockchain.

Investigate how your organization and industry can apply blockchain-based technology and approaches to automate and secure a wide array of interactions and transactions; invest in cryptography talent now before demand outstrips supply.



KEYNOTE SPEAKERS

Amy G. Brady

Chief Information Officer, KeyCorp

Francisco D'Souza

Chief Executive Officer, Cognizant

Peter C. Evans, Ph.D.

Vice-President, The Center for Global Enterprise

Theodore "Theo" Forbath

Global Vice-President of Digital Transformation, Cognizant

Malcolm Frank

Executive Vice-President, Strategy & Marketing, Cognizant

Adam Grant

Professor, The Wharton School of the University of Pennsylvania and Author of Originals, a New York Times best-seller

Ann Greenberg

Entrepreneur, Founder of Sceneplay

Gajen Kandiah

Executive Vice-President and President, Cognizant Digital Works

Mark Kelly

Captain, U.S. Navy, Retired American Astronaut

Scott Kelly

Captain, U.S. Navy, Retired American Astronaut

Gokul Krishnan, Ph.D.

SciPlay Research Fellow, NYSCI

Lynne LaCascia

Assistant Vice-President, Global Director of Brand Narrative, Cognizant

Mary Lacity

Professor of Information Systems, University of Missouri-St. Louis

Christian Madsbjerg

Founder & Senior Partner, ReD Associates

Michael E. Porter

Professor, Harvard Business School

Paul Roehrig, Ph.D.

Vice-President, Global Managing Director, Center for the Future of Work, Cognizant

Christopher Swanson

Vice-President Innovation Research and Development, U.S. Bank

Tim Urban

Speaker, Illustrator and Author, Wait But Why blog

Lata Varghese

Assistant Vice-President, Blockchain, Cognizant

Christian von Reventlow

Chief Product & Innovation Officer, Deutsche Telekom

ABOUT COGNIZANT

Cognizant (NASDAQ: CTSI) is a leading provider of information technology, consulting, and business process outsourcing services, dedicated to helping the world's leading companies build stronger businesses. Headquartered in Teaneck, New Jersey (U.S.), Cognizant combines a passion for client satisfaction, technology innovation, deep industry and business process expertise, and a global, collaborative workforce that embodies the future of work. With over 100 development and delivery centers worldwide and approximately 244,300 employees as of June 30, 2016, Cognizant is a member of the NASDAQ-100, the S&P 500, the Forbes Global 2000, and the Fortune 500 and is ranked among the top performing and fastest growing companies in the world. Visit us online at www.cognizant.com or follow us on [Twitter: Cognizant](https://twitter.com/Cognizant).

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