Blockchain

Banking & Financial Markets

Healthcare

Operations

Automotive

Cloud

Finance

Energy & Utilities

Security

Life Sciences

Marketing & Sales

Government

Electronics

Insurance

Information & Technology

Consumer Products

Strategy & General Management

Media & Entertainment

Retail

AI, Cognitive & Analytics

Telecommunications

Chemicals & Petroleum

Human Resources

Travel & Transportation

IBM Institute for Business Value

IBM

All IBV studies are available via ibm.com/iibv. Recent studies can be viewed on our phone and tablet apps.

Go to the
Apple App Store
or Google Play and
search for "IBM IBV"

ibm.com/iibv

ibm.biz/ibvtwitter

ibm.biz/ibvyoutube

ibm.biz/ibvlinkedin

Contact us: iibv@us.ibm.com

Hot Topics

Industries

Professions

Global Benchmarking

Contact us

As a senior business executive, you need strategic insights on today's most important issues and opportunities. The **IBM Institute for Business Value** delivers research, analysis and subject matter expertise replete with global and local relevance.

01

Hot Topics

01

Hot Topics

We're in a new era. The era of the Cognitive
Enterprise. You can define new experiences
with AI and analytics while leveraging the cloud.
You permanently improve mobile experiences
and upgrade security. All that while business
is thriving through social engagement and is
handled with blockchain.

Blockchain

Fast forward Rethinking enterprises, ecosystems and economies with blockchains
Driven by blockchain, frictions fall, a new science of organization emerges, and the way we structure industries and enterprises will take novel shape.
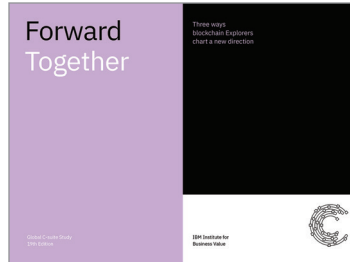
Forward Together Three ways blockchain Explorers chart a new direction
If you aren't exploring blockchain, you might be falling behind. Some of the most successful organizations in the world are starting to use it. C-suite executives say it can create new business models and revenue opportunities, as well as increase trust and transparency.

Additional Studies

Device democracy Saving the future of the Internet of Things
—

Empowering the edge Practical insights on a decentralized Internet of Things
—

The Economy of Things Extracting value from the Internet of Things
—

Trust in trade Toward stronger supply chains
—

First on the block Learn from early blockchain business networks
—

Unblocking the blockchain
—

Trust me Digital identity on blockchain
—

Central banks and digital ledger technology governance
—

Leading the pack in blockchain banking Trailblazers set the pace
—

Blockchain rewires financial markets Trailblazers take the lead
—

Healthcare rallies for blockchains Keeping patients at the center
—

Blockchain for mobility services Personalized mobility through secure data
—

AI, Cognitive & Analytics

The Cognitive Enterprise Part 1
The journey to AI and the rise of platform-centric business architectures
We are on the cusp of the next big shift in business architectures, driven by the pervasive application of AI and cognitive technologies to the core processes and workflows of organizations. The Cognitive Enterprise will leverage proprietary data, unique platforms and specialist expertise to achieve its goals.

Cognitive Catalysts Reinventing enterprises and experiences with artificial intelligence
Leading organizations are taking a strategic approach to enabling their enterprise with AI technologies; they are solving complex problems, infusing intelligent capabilities into processes and investing to create a new and preferred future.

Additional Studies

Fast start in cognitive innovation Top performers share how they are moving quickly
—

Mastering the art of data science How to craft cohesive teams that create business results
—

Accelerating enterprise reinvention with cognitive capabilities How to build a cognitive enterprise
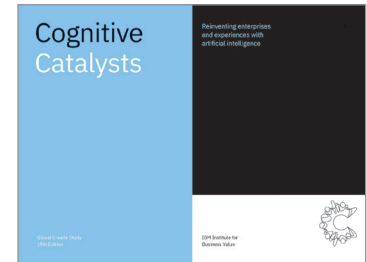—

Innovative analytics How the world's most successful organizations use analytics to innovate
—

Analytics The dawn of the cognitive era
—

Your cognitive future How next-gen computing changes the way we live and work. Part I: The evolution of cognitive
—

Your cognitive future How next-gen computing changes the way we live and work. Part II: Kick-starting your cognitive journey
—

Why cognitive manufacturing matters in electronics Activating the next generation of production success
—

Leap before you lag Nonprofits with deeper data capabilities see stronger impact, transparency, and decisions
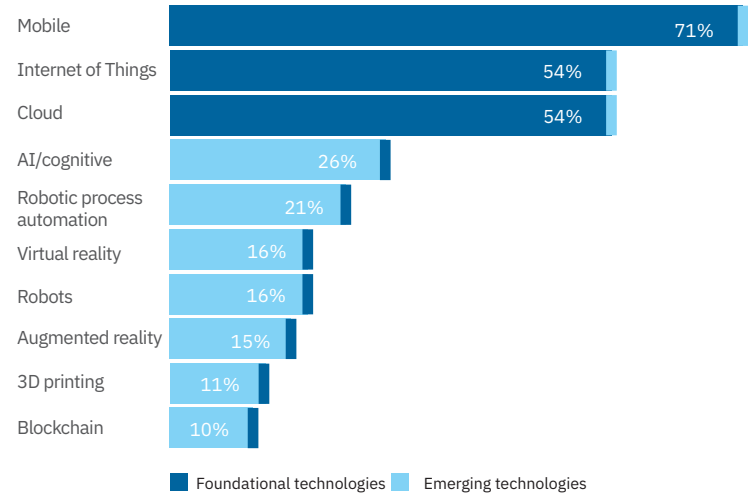—

AI, Cognitive & Analytics

The evolution of process automation
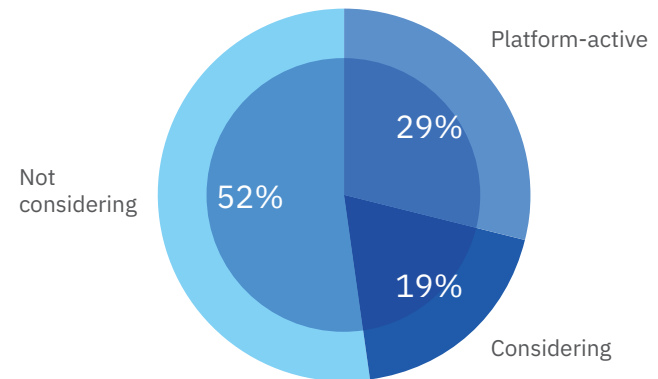Moving beyond basic robotics to intelligent interactions

IBM Institute for Business Value

Advancements in artificial intelligence (AI) are spawning a new phase of automation: intelligent automation. Intelligent automation is changing the way enterprises operate by using advances in technology to optimize processes, personalize customer experiences and enhance decision making.

CxOs are planning investments in emerging technologies

Technology	Percentage
Mobile	71%
Internet of Things	54%
Cloud	54%
AI/cognitive	26%
Robotic process automation	21%
Virtual reality	16%
Robots	16%
Augmented reality	15%
3D printing	11%
Blockchain	10%

■ Foundational technologies   ■ Emerging technologies

Stage of platform adoption

Platform-active 29%
Considering 19%
Not considering 52%

AI, Cognitive & Analytics

The Chief Data Officer playbook
Creating a game plan to sharpen your digital edge
The Chief Data Officer is quickly becoming a pivotal member of the C-suite. Organizations with a CDO tend to be more analytically mature, business-driven enterprises that outperform their peers.

From data deluge to intelligent insights
Adopting cognitive computing to unlock value for marketing and sales
This study explores the extent to which Chief Marketing Officers are embracing cognitive today, the challenges they face and the lessons they can learn from outperforming companies that are already applying cognitive solutions.

Additional Studies

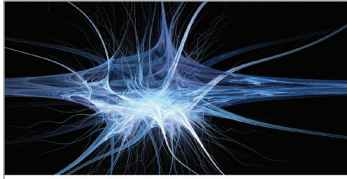**The cognitive CIO** How IT leaders can accelerate their reinvention
—

Data-driven dividends Get more from your data
—

Welcome to the cognitive supply chain Digital operations – reimagined
—

The cognitive CFO How "leaders" are increasing finance IQ
—

Enterprise innovation in the cognitive era Igniting cultural transformation for the future of work
—

Scaling safety expertise in life sciences A turning point in pharmacovigilance
—

Cognitive innovation in healthcare
—

Cognitive innovation in life sciences
—

Becoming a "living" media partner for your consumers A cognitive future for media and entertainment
—

Turning data into chemicals and petroleum insights How the industry is becoming cognitive
—

The cognitive effect on automotive Unleashing exceptional experiences from an abundance of data
—

Cloud

Winning cloud strategies How leading companies score
Cloud solutions melded with disruptive and emerging technologies – like blockchain, artificial intelligence (AI), the Internet of Things (IoT), big data and predictive analytics – can revolutionize businesses and industries.

Tailoring hybrid cloud Designing the right mix for innovation, efficiency and growth
Finding the right cloud technology begins with deciding what to move to the cloud and addressing the challenges affecting the migration, particularly as we enter the era of cognitive computing.

Additional Studies

Navigating the cloud continuum Electronics companies implement hybrid to deliver innovation
—

Beyond agility How Cloud is Driving Enterprise Innovation
—

Evolution of the API economy Adopting new business models to drive future innovation
—

Tailoring hybrid cloud for banking Designing the right mix for innovation, efficiency and growth
—

Innovation in the API economy Building winning experiences and new capabilities to compete
—

Cloud for banking Increasing efficiency, driving growth and gaining competitive advantage
—

Cloud for retail Improving data access, increasing demand and reducing costs
—

Cloud for healthcare Improving data access, streamlining business processes and reducing costs
—

Cloud for government Enhancing services, creating efficiencies and reducing costs
—
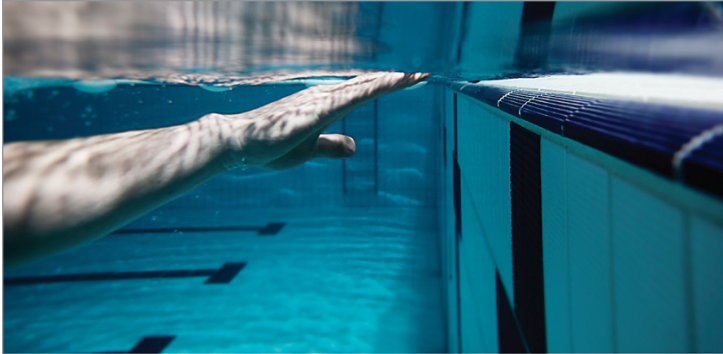
It's not where you start–it's how you finish
Addressing the cybersecurity skills gap with a new collar approach   IBM Institute for Business Value

Cybersecurity in the cognitive era
Priming your digital immune system   IBM Institute for Business Value
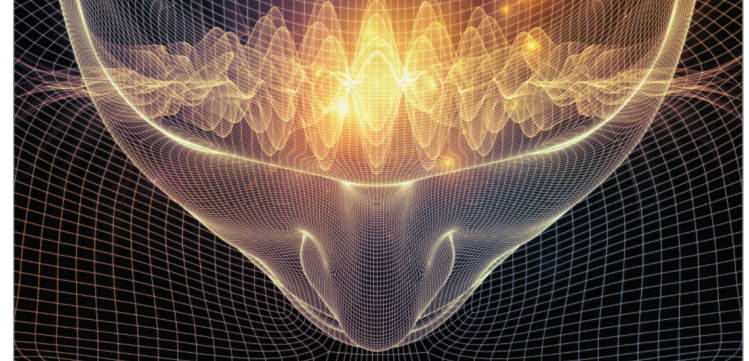
The security skills gap looms large. Many cybersecurity jobs can be filled by "new collar" workers, those that may not have a traditional college or university degree, but they have the necessary technical skills and aptitudes.

What will cybersecurity look like in the cognitive era? Organizations are facing a number of well-known security challenges. New approaches are needed, and cognitive security solutions may help close the gaps.

Additional Studies

Beyond the boom
Improving decision making in a security crisis
—

Accelerating security Winning the race to vehicle integrity and data privacy
—

Additional Studies

Securing the C-suite
Cybersecurity perspectives from the boardroom and C-suite
—

The cognitive CISO
How security leaders can accelerate their reinvention
—

02

Industries

02

Industries

Players in today's evolving industries face complex questions: How can I use AI to become more customer-centric? Can I make my organization smarter? What part will I play in my market's new ecosystem? Here's help in moving toward a radically different tomorrow.

Automotive
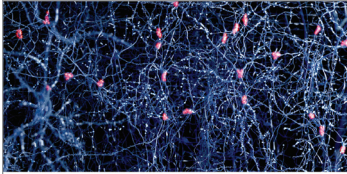
The cognitive effect on automotive
Unleashing exceptional experiences from an abundance of data

The cognitive effect on automotive
Unleashing exceptional experiences from an abundance of data
Automotive companies are turning increasingly to cognitive computing to unlock insights that can help them create more innovative solutions and experiences.

Accelerating security
Winning the race to vehicle integrity and data privacy

Accelerating security Winning the race to vehicle integrity and data privacy
In the era of the connected car, automakers need to institutionalize security into every process. Security must be a priority, just like safety.

Additional Studies

Blockchain for mobility services
Personalized mobility through secure data
—

Driving digital destiny Digital Reinvention™ in automotive
—

A new relationship – people and cars
How consumers around the world want cars to fit their lives.
- China   - United Kingdom
- Germany   - United States
- India
—

The shift to electric vehicles Putting consumers in the driver's seat
—

Automotive 2025: Industry without borders Engage with consumers, embrace mobility and exploit the ecosystem
—

Driving security Cyber assurance for next-generation vehicles
—

Automotive industry insights from the Global C-suite Study
—

The "upwardly mobile" automotive enterprise Setting the strategic agenda
—

Transforming the automotive industry
A globally integrated enterprise point of view
—

Banking & Financial Markets

Realizing tomorrow today
Digital Reinvention in banking

Realizing tomorrow today
Digital Reinvention™ in banking
By embracing the philosophy of Digital Reinvention™, the banking industry will sustain its momentum by meeting and eventually exceeding customer's personal aspirations and life desires.

The cognitive bank
Decoding data to bolster growth and transform the enterprise

The cognitive bank Decoding data to bolster growth and transform the enterprise
Today, the banking industry faces a rebirth by necessity. As the digital age morphs into the cognitive era, success depends on radical transformation.

Additional Studies

Breakthrough banking Your cognitive future in banking and financial markets
—

Augmented intelligence in banking
The client at the heart of transformation
—

Unblocking the blockchain
—

The next-generation platform for banks
Securing superior customer experience for the digital age
—

Cloud for banking Increasing efficiency, driving growth and gaining competitive advantage
—

The modern mainframe A banking platform from the future
—

FinTech innovation
—

Leading the pack in blockchain banking
Trailblazers set the pace
—

Tailoring hybrid cloud for banking
Designing the right mix for innovation, efficiency and growth
—

RegTech in the cognitive era Insights from Gene Ludwig and Bridget van Kralingen
—

Banking on India Transformation, reinvention and the future of India's banking industry
—

11

Chemicals & Petroleum

Turning data into chemicals and petroleum insights
How the industry is becoming cognitive

Turning data into chemicals and petroleum insights How the industry is becoming cognitive
We look at what some of the most financially successful chemicals and petroleum organizations are doing differently with cognitive capabilities and what other organizations can learn from their success.

Additional Studies

Innovating chemicals and petroleum
Revenue and efficiency in a volatile age
—

Converting to the digital formula
Digital Reinvention™ in chemicals
—

Extracting digital rewards
Digital Reinvention™ in petroleum
—

Sharpening your digital edge
Digital Reinvention™ in industrial products
—

Finding common ground in oil and gas
Now is the time for stronger collaboration on capital projects
—

Consumer Products

Gen Z brand relationships
Authenticity matters

Gen Z brand relationships
Authenticity matters
To attract Gen Z consumers, brands must offer opportunities for engagement and co-creation, provide quality products and services, and be clear about what they stand for.

Additional Studies

Blockchain reinvents the consumer experience Building better supply chains and customer relationships
—

The 2017 Customer Experience Index (CEI) Study Customer expectations outstrip brands' capability to deliver the optimal shopping experience
—

Realizing the future today
Digital Reinvention™ in consumer products
—

Uniquely Generation Z What brands should know about today's youngest consumers
—

Electronics

Navigating the cloud continuum
Electronics companies implement hybrid to deliver innovation

Navigating the cloud continuum
Electronics companies implement hybrid to deliver innovation
As electronics organizations navigate their position in the cloud continuum, they are using key criteria to identify use cases for hybrid cloud adoption.

Using data by design
Digital Reinvention in electronics

Using data by design Digital Reinvention™ in electronics
Through Digital Reinvention™, electronics organizations can combine digital approaches and data by design to drive new capabilities, changing business from the ground up.

Additional Studies

Powering warranty reinvention
How electronics companies leverage new technologies to improve warranty management
—

Why cognitive manufacturing matters in electronics Activating the next generation of production success
—

Preparing for planet-scale security
Getting it right in electronics
—

Empowering the edge Practical insights on a decentralized Internet of Things
—

The Economy of Things Extracting new value from the Internet of Things
—

The Business of Things Designing business models to win in the cognitive IoT
—

Device democracy Saving the future of the Internet of Things
—

The sun shines on solar
Consciousness, efficiency and the surge in the solar economy   IBM Institute for Business Value

Mobilizing the utility workforce
How mobile technology and analytics will transform work   IBM Institute for Business Value

Decreasing energy costs, increasing public environmental responsibility and changing governmental policies are major factors prompting more and more consumers to consider renewable energy sources. How utilities respond to this changing environment will go a long way toward determining their future roles.
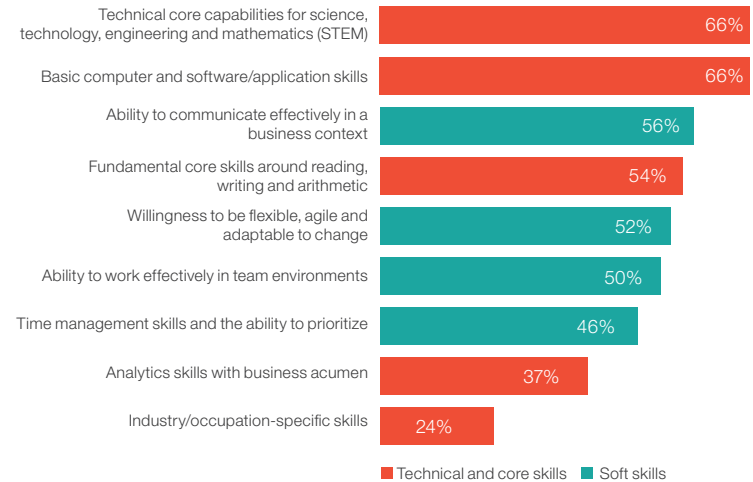
Mobile technologies have become imperative for utilities. By redesigning work processes and activities from a "mobile first" perspective, the industry will be positioned to aggressively innovate and evolve with rapidly changing energy markets.

A two-front battle

How governments can prevail in the face of the global skills crisis

IBM Institute for Business Value

Governments face many of the same skills-related challenges as the private sector. Leaders must work with ecosystem partners to build the workforce of the future.

Government executive views on high-demand skills

Skill	Percentage
Technical core capabilities for science, technology, engineering and mathematics (STEM)	66%
Basic computer and software/application skills	66%
Ability to communicate effectively in a business context	56%
Fundamental core skills around reading, writing and arithmetic	54%
Willingness to be flexible, agile and adaptable to change	52%
Ability to work effectively in team environments	50%
Time management skills and the ability to prioritize	46%
Analytics skills with business acumen	37%
Industry/occupation-specific skills	24%

■ Technical and core skills ■ Soft skills

Loneliness and the aging population
How businesses and governments can address a looming crisis
For the aging population, loneliness is more than a state of mind – it is an emerging risk factor that has implications for personal, economic and societal well-being.
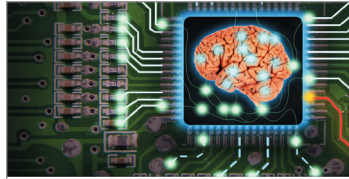
Your cognitive future How next-gen computing changes the way we live and work. Part I: The evolution of cognitive. Government edition
Why should cognitive be on your radar? Organizations have just begun to scratch the surface of cognitive computing capabilities. Here, visit the boundless potential value.
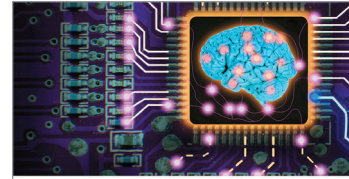
Your cognitive future How next-gen computing changes the way we live and work. Part II: Kick-starting your cognitive journey
Cognitive computing is changing how we perform our jobs, engage with others and learn and make decisions. Several pioneering organizations are already leveraging its capabilities. Explore lessons learned from these early adopters.
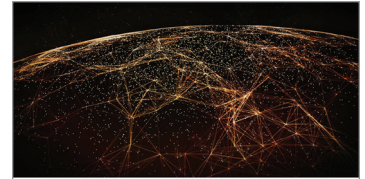
Global Location Trends
2017 Annual Report
As the global economy grows stronger, clouds of uncertainty shroud future prospects of global investment flows. Challenges and opportunities abound.

Additional Studies

Opening up government How to unleash the power of information for new economic growth
—

Smarter defense for a safer planet
—

How smart is your city? Helping cities measure progress
—

Fixing the future Why we need smarter water management for the world's most essential resource
—

Canada's comeback Turning the skills crisis into a competitive advantage
—

A two-front battle How governments can prevail in the face of the global skills crisis
—

Facing the storm Charting a path to navigate the global skills crisis
—

Germany's promise Opportunities to realize Germany's economic potential
—

An obligation to future generations Provocative change ahead for the government industry
—

Accelerating China Three steps to align China's higher education system to growth
—

Can the Millennial generation rescue government? Leveraging digital natives in your transformation efforts
—

Pursuit of relevance How higher education remains viable in today's dynamic world
—

Mission: Possible! Your cognitive future in government
—

Empowering governments through contextual computing How context can improve decision making and mission outcomes
—

Innovating India In pursuit of global leadership
—

Shifting gears Changing methods and mindsets to address long-term unemployment
—

Improving economic competitiveness and vitality A smarter approach to economic development
—

Accelerating economic growth and vitality through smarter public safety management
—

The power of analytics for public sector Building analytics competency to accelerate outcomes
—

Japan ascending Four steps to reignite growth and vitality
—

Healthcare

Loneliness and the aging population
How businesses and governments can address a looming crisis

Healthcare rallies for blockchains
Keeping patients at the center

Loneliness and the aging population
How businesses and governments can address a looming crisis
For the aging population, loneliness is more than a state of mind – it is an emerging risk factor that has implications for personal, economic and societal well-being.

Healthcare rallies for blockchains
Keeping patients at the center
This study analyzes the impact of blockchains on the healthcare industry and provides recommendations for how industry participants should approach blockchain solutions.

Additional Studies

A healthy outlook Digital Reinvention™ for healthcare
—

The evolving promise of genomic medicine How advanced technologies are transforming healthcare and life sciences
—

The India cure Remedying the challenges of the healthcare landscape
—

Consumers at the heart of healthcare Retailers are creating a new industry perspective
—

Analytics across the ecosystem A prescription for optimizing healthcare

Precision health and wellness The next step for population health management
—

IBV Benchmarking study US Healthcare Insurance Claims Processing and Payments Benchmarks Report
—

A booster shot for health and wellness Your cognitive future in the healthcare industry
—

The new age of ecosystems Redefining partnering in an ecosystem environment: Healthcare ecosystem edition
—

Insurance

Data: gold or kryptonite?
An insurer's guide to the resource of the future

Insurance 2025
Reducing risk in an uncertain future

Data: gold or kryptonite? An insurer's guide to the resource of the future
In a digital world, insurers need to collect data themselves, which means their customers must be willing to share this valuable resource. How can insurers make this happen?

Insurance 2025 Reducing risk in an uncertain future
This study discusses next steps for insurers to navigate cognition and distributed computing, along with moves that will help insurers' prepare for the future.

Additional Studies

You, me or us? Digital Reinvention™ in the global insurance industry
—

Disruption in the insurance industry Here comes the Internet of Things
—

Rethinking insurance How cognitive computing enhances engagement and efficiency
—

Cyber and beyond Insurance and risk in a digitally interconnected world
—

Innovating insurance Lessons from the world's leading innovators
—

Capturing hearts, minds and market share How connected insurers are improving customer retention
—

Understanding customers and risk Your cognitive future in the insurance industry
—

Insurers, intermediaries and interactions From channels to networks
—

Cloudy with a chance of mishap How weather insights can help insurers manage risk and drive client value
—

"It is not an innovation if customers can imagine it. To impress, it is necessary to surprise people."

Michitaka Sawada
President and CEO, Kao corporation
—

from **Incumbents Strike Back**
Insights from the Global C-suite Study

Scaling safety expertise in life sciences
A turning point in pharmacovigilance
Cognitive computing offers new capabilities to add speed, scale and consistency to the entire pharmacovigilance process.

Becoming a "living" media partner for your consumer A cognitive future for media and entertainment
Customer expectations are now far ahead of delivery – so far ahead, in fact, that broadcasters need to completely reinvent themselves. Successful media companies of the digital future will need to have a broad cognitive strategy and investment priorities that align to the goals of maximizing return on content investment while excelling at customer services.

Additional Studies

The evolution of life science ecosystems
Five effective innovation approaches for academia
—

Driving positive outcomes Digital Reinvention™ in life sciences
—

Prescribing a digital transformation for life sciences Your cognitive future in the life sciences industry
—

New and necessary in life sciences
Six innovation strategies from industry leader
—

Additional Studies

A new day in the world of content Your cognitive future in the media and entertainment industry
—

Redefining Boundaries Insights from the Global C-suite Study – Media and Entertainment
—

Digital Reinvention™ How the Media and Entertainment industry is preparing for a very different tomorrow
—

Beyond digital Connecting media and entertainment to the future
—

Retail

Ready to engage with tomorrow's shopper?
How retailers can distinguish themselves
IBM Institute for Business Value

Ready to engage with tomorrow's shopper? How retailers can distinguish themselves
The retailer of the future will embrace technology to create innovative solutions that extend the customer relationship beyond the shopping experience.
We share strategies to help retailers.

Additional Studies

Leading from the front
Digital Reinvention™ in retail
—

The 2017 Customer Experience Index (CEI) Study
—

Uniquely Generation Z What brands should know about today's youngest consumers
—

Thinking like a customer Your cognitive future in the retail industry
—

Greater expectations Consumers are asking for today, tomorrow
—

Telecommunications

Reimagining telecommunications with blockchains
From concept to reality
IBM Institute for Business Value

Reimagining telecommunications with blockchains From concept to reality
Communications Service Providers should seek a long-term view as they evaluate how blockchain can help drive revenue growth and platform business opportunities, as well as internal efficiencies.

Additional Studies

Victorious or vanquished
Digital Reinvention™ in telecommunications
—

Becoming a "living" media partner for your consumers A cognitive future for media and entertainment
—

A new day in the world of content
Your cognitive future in the media and entertainment industry
—

Outthinking disruption in communications The 2020 CSP in the cognitive era
—

The trust factor in the cognitive era
How CSPs can capitalize on personal data while preserving privacy
IBM Institute for Business Value

The trust factor in the cognitive era How CSPs can capitalize on personal data while preserving privacy
Communication service providers are among the most trusted organizations for personal data security by consumers. But a single security lapse can seriously erode that trust.

Dialing in a new frequency Your cognitive future in the communications industry
—

Connections are limitless, the network is not A "living" network thinks ahead and continually transforms
—

Measuring CSP success for a digital world
—

Keeping telecom on target How CSPs tap the transformative power of data and analytics
—

Travel & Transportation

Here, there and everywhere
Digital Reinvention in travel
IBM Institute for Business Value

Here, there and everywhere
Digital Reinvention™ in travel
By embracing Digital Reinvention™, the travel industry can work to sustain its momentum by meeting and eventually exceeding travelers' most personal aspirations and deepest desires.

Additional Studies

Beyond bots and robots Exploring the unrealized potential of cognitive computing in the travel industry
—

Accidental agitators
Digital Reinvention™ in transportation
—

Mobile mavens Leading the travel experience revolution
—

All hands on deck New directions in shopping and booking for the cruise industry
—

Travel loyalty: Cognitive connections Enhancing loyalty programs to connect with all travelers, not just million-mile mavens
—

03

Professions
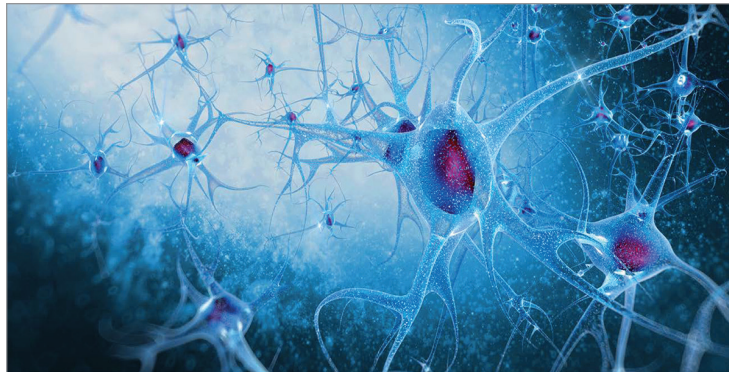
03

Professions

Leaders need a big-picture perspective.
Get savvy insight on how to harness
the new power of partnerships, innovation,
big data, global transformation and the
Millennial workforce.

Finance

The cognitive CFO
How "leaders" are increasing finance IQ
IBM Institute for Business Value

For Chief Financial Officers (CFOs), it is no longer enough to understand what has happened and apply that to what might happen in the future. Cognitive computing can help uncover previously unknown opportunities to improve operational efficiency and create the potential for faster profitable growth.

Additional Studies

Insights from the Global C-suite Study
The CFO perspective
—

Cost transformation for the digital era
Funding growth and reinvention from the inside out
—

Unlocking the potential of digital Digital Reinvention™ in finance
—

New CFO horizons The dawn of cognitive performance analytics
—

Human Resources

Mastering the art of change in the digital domain
IBM Institute for Business Value

Amplifying employee voice
How organizations can better connect to the pulse of the workforce
IBM Institute for Business Value and IBM Smarter Workforce Institute

Mastering the art of change in the digital domain
The rate of change is advancing in the blink of an eye. The traditional change curve no longer applies to an organization seeking to undertake a major transformation — and employees expect to be engaged differently, personalizing their roles in the journey.

Amplifying employee voice
How organizations can better connect to the pulse of the workforce
To build an engaged workforce, it's more important than ever to understand and act on employee concerns. See how emerging social platforms make it easier to uncover potential workforce issues— and take action.

Additional Studies

Redefining Talent The CHRO perspective of the Global C-suite Study
—

Chatbots worth talking to How cognitive solutions can accelerate human resources reinvention
—

Mastering the art of change in the digital domain
—

Three keys to securing your future technical workforce
—

Facing the storm Charting a path to navigate the global skills crisis
—

New expectations for a new era CHRO insights from the 2013 Global C-suite Study
—

Working beyond borders Insights from the Global Chief Human Resource Officer Study
—

Cultivating organizational creativity in an age of complexity A companion study to the IBM 2010 Global CHRO Study
—

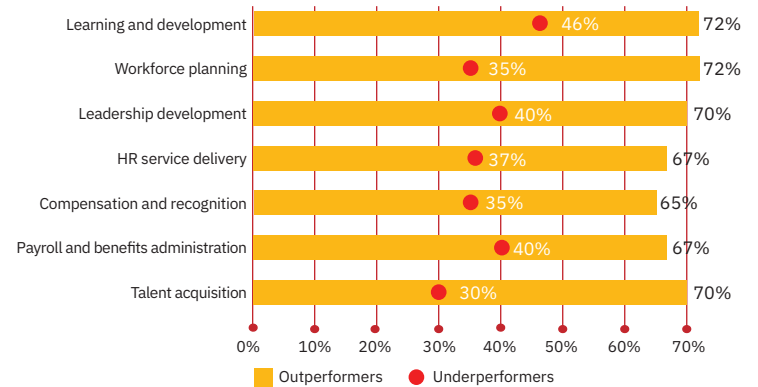**Focal jobs** Viewing talent through a different lens
—

A new way of working Insights from global leaders
—

Making change work… while the work keeps changing How Change Architects lead and manage organizational change
—

Extending expertise

How cognitive computing is transforming HR and the employee experience

IBM Institute for Business Value
IBM Smarter Workforce Institute

Cognitive solutions can uncover more efficient ways to interact with employees, insights from vast amounts of data, and information tailored to specific needs.

HR executives from outperforming organizations recognize the value cognitive computing can bring

Category	Outperformers	Underperformers
Learning and development	72%	46%
Workforce planning	72%	35%
Leadership development	70%	40%
HR service delivery	67%	37%
Compensation and recognition	65%	35%
Payroll and benefits administration	67%	40%
Talent acquisition	70%	30%

■ Outperformers ● Underperformers

Pursuit of relevance
How higher education remains viable in today's dynamic world

Myths, exaggerations and uncomfortable truths
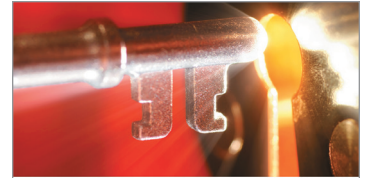*The real story behind Millennials in the workplace*

Shifting gears
Changing methods and mindsets to address long-term unemployment

Unlock the people equation
Using workforce analytics to drive business results

Pursuit of relevance How higher education remains viable in today's dynamic world
While demands on higher education have never been greater, academic and industry leaders believe the system is broken. Learn how its repair requires change that prioritizes applied curricula, disruptive technologies and ecosystem partnerships.

Myths, exaggerations and uncomfortable truths The real story behind Millennials in the workplace
If you believe the buzz, Millennials are either lazy narcissists or energized optimists. Our global, multigenerational employee study shows how Millennials not only bring workplaces value as digital natives but also resemble their older colleagues.

Shifting gears Changing methods and mindsets to address long-term unemployment
While finding work in a competitive market is challenging, doing so after being unemployed more than a year is even more difficult. Read about new methods and mindsets to help governments better focus and intervene for improved LTU outcomes.

Unlock the people equation Using workforce analytics to drive business results
Increasingly, organizations are facing difficult people-related questions that are central to their success. Our report observes that, as the complexity of these workforce challenges continues to rise, so will demand for more quantitative approaches to address them.

Additional Studies

Designing employee experience
How a unifying approach can enhance engagement and productivity
—

The Customer-activated Enterprise
Insights from the Global C-suite Study

The new economic environment
A strategic workforce perspective
—

Leadership in a distributed world
Lessons from online gaming
—

A new way of working
Insights from global leaders

Getting smart about your workforce
Why analytics matter

Creating an adaptable workforce
Important implications for CIOs
—

Transforming the workforce
Seven keys to succeeding in a globally integrated world
—

A new approach, a new capability
The strategic side of human resources

People and innovation
Getting ideas on the table

Closing the generation divide
Shifting workforce demographics and the learning function
—

Gray matter matters Preserving critical knowledge in the 21st century

Building the business case for a knowledge initiative

20/20 vision for the 2020 CIO
Welcome to the golden age of technological innovation, where personal and organizational relationships are radically reimagined through digitization. CIOs need to elevate their innovation IQ if they are to remain functionally relevant.

Enterprise innovation in the cognitive era Igniting cultural transformation for the future of work
IBM's Cognitive Build was designed to equip employees and leaders to take on disruption, embrace new work methods and foster continuous reinvention. This approach can work for other enterprises.

Additional Studies

Redefining Connections Insights from the Global C-suite Study – The CIO perspective
—

Powering warranty reinvention How electronics companies leverage new technologies to improve warranty management
—

Three keys to securing your future technical workforce
—

Innovation in the API economy Building winning experiences and new capabilities to compete
—

Evolution of the API economy Adopting new business models to drive future innovation
—

New technology, new mindset Strategic IT infrastructure to compete in the digital economy
—

The IT infrastructure conversation New content, new participants, new tone
—

Continuing the IT infrastructure conversation Why building a strong foundation requires more than technology
—

The essential CIO Insights from the Global Chief Information Officer Study
—

Connect more Intersecting insights from the IBM CEO, CMO and CIO Studies
—

"New competitors from other sectors are usually small, so it's difficult to recognize them in time."

Valerio Cortese, CIO, Finiper, Italy
—

from **Redefining Connections** Insights from the Global C-suite Study The CIO perspective

The experience revolution
Digital disappointment – why some customers aren't fans
IBM Institute for Business Value

From data deluge to intelligent insights
Adopting cognitive computing to unlock value for marketing and sales
IBM Institute for Business Value

Companies are betting they'll reap significant benefits by digitally transforming their customer experience. This is only possible if customers adopt new digital experiences, and our findings reveal that many consumers aren't enthusiastic about making the switch.
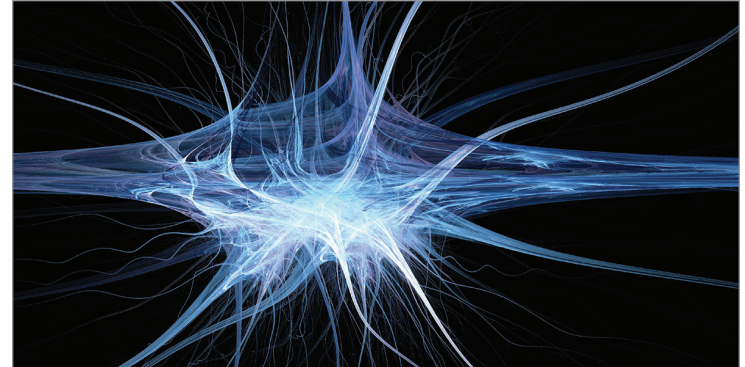
This study explores the extent to which CMOs are embracing cognitive today, the challenges they face and the lessons they can learn from outperforming companies that are already applying cognitive solutions.

Additional Studies

The experience revolution New teams, new rules
—

The 2017 Customer Experience Index (CEI) Study
—

Design Language Systems for branded, end-to-end experiences
—

Redefining Market Insights from the Global C-suite Study - The CMO perspective
—

The experience revolution The game is on
—

The experience revolution Mobilizing to win – are you ready?
—

Designing employee experience How a unifying approach can enhance engagement and productivity
—

Stepping up to the challenge CMO insights from the Global C-suite Study
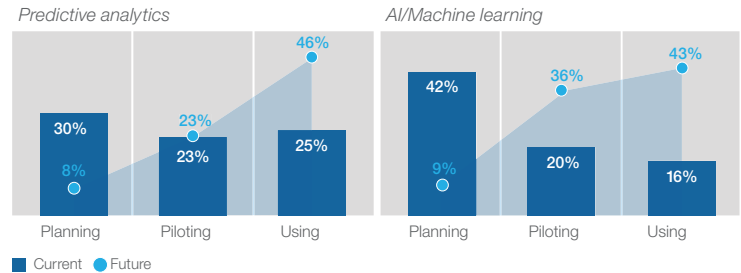—
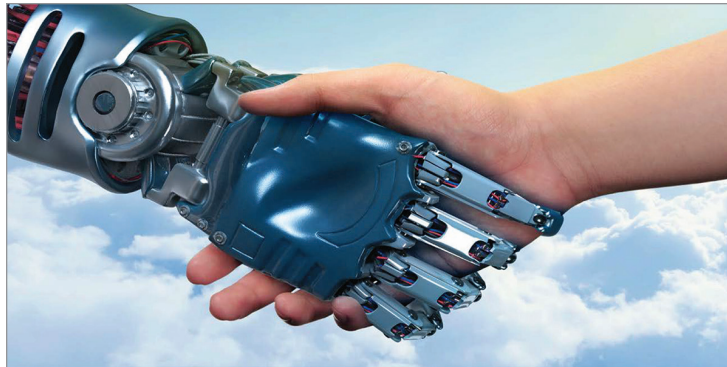
The human-machine interchange

How intelligent automation is reconstructing business operations

IBM Institute for Business Value

Companies must train their employees to work with machines in new ways and redesign business processes to optimize them for automation.

The future of emerging technologies lies in their use

Predictive analytics

AI/Machine learning

- 30% | 8%
- 23% | 23%
- 46% | 25%

Planning | Piloting | Using

- 42% | 9%
- 36% | 20%
- 43% | 16%

Planning | Piloting | Using

■ Current ● Future

Teaching humans to work with machines begins with "feeling" comfortable

82%
Employees need training and **encouragement to feel comfortable** working with intelligent machines

70%
Intelligent machines will lead to **higher-value work** for our employees

61%
Intelligent machines will have a meaningful impact on **job descriptions and activities** in the next three years

45%
Employees resist working with intelligent machines

Operations

Who's leading the cognitive pack in digital operations? Progress, priorities and profits
Senior executives are reinventing their companies with analytics-enabled digital operations. Both strategy and execution have a way to go, as a new generation of cognitive computing promises greater value – and presents fresh challenges.

Welcome to the cognitive supply chain
Digital operations – reimagined
When combined with advanced automation, thinking and learning, supply chains can enhance human decision making and bring about a new level of unparalleled operational excellence.

Additional Studies

Sharpening your digital edge Digital Reinvention™ in industrial products
—

Global Location Trends 2017 Annual Report
—

Redefining Ecosystems Insights from the Global C-suite Study - The COO perspective
—

The digital overhaul Rethinking manufacturing in the digital age
—

Trust in trade Toward stronger supply chains
—

Thinking out of the toolbox How digital technologies are powering the operations revolution

Digital operations transform the physical
How real time insights can revolutionize value chains
—

Orchestrating a customer-activated supply chain CSCO insights from the 2013 Global C-suite Study
—

Global transformation from the inside out Optimizing the entire ecosystem
—

Global Location Trends 2016 Annual Report
—

The journey to value Transforming procurement to drive the enterprise agenda
—

Creating a smarter enterprise The science of transformation

Strategy & General Management

Digital Reinvention™ in action What to do and how to make it happen
To succeed in this disruptive environment, organizations will need to offer compelling new experiences, establish new focus, build new expertise and devise new ways of working. Please check our Hot Topics, Industries or Professions pages for related derivatives.

More than magic How the most successful organizations innovate
This executive report highlights how the most successful organizations approach innovation and identifies specific strategies that can help all organizations innovate like an outperformer.

Additional Studies

Reinventing the rules of engagement CEO insights from the 2013 Global C-suite Study
—

Digital reinvention™ Preparing for a very different tomorrow
—

Growing China Regional contributions to economic success
—

Enterprise innovation in the cognitive era Igniting cultural transformation for the future of work
—

The new age of ecosystems Redefining partnering in an ecosystem environment
—

The Customer-activated enterprise Insights from the Global C-suite Study

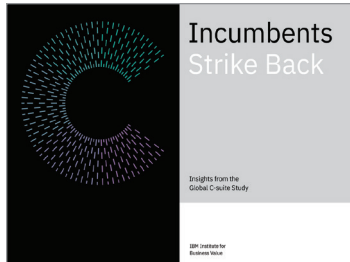**Business is being digitally reinvented** Strategy should be too
—

Data-driven dividends Get more from your data
—

Indian Century Defining India's place in a rapidly changing global economy
—

Entrepreneurial India How startups redefine India's economic growth
—

Belt & Road framework driven globalization 3.0 (China only)
—

**Upskilling India** Building India's talent

Incumbents Strike Back Insights from the Global C-suite Study
Today, winner-take-all organizations are on the rise, but collaborative ecosystems are also flourishing. Organizations that are prospering recognize that remaking the enterprise isn't a matter of timing but continuity. What's required, now more than ever, is the fortitude for perpetual reinvention.

Intelligent Connections Reinventing the enterprise with Intelligent IoT
As virtually everything becomes connected and data proliferates, enterprises should address three great opportunities: enabling deeper customer relationships, finding new sources of value through data and accelerating the digital transformation of their operations.

Forward Together Three ways blockchain Explorers chart a new direction
If you aren't exploring blockchain, you might be falling behind. Some of the most successful organizations in the world are starting to use it. C-suite executives say it can create new business models and revenue opportunities, as well as increase trust and transparency.
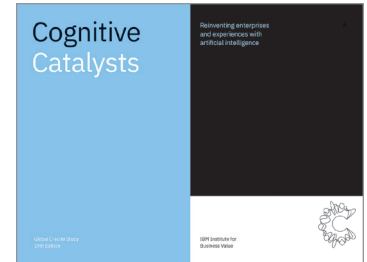
Cognitive Catalysts Reinventing enterprises and experiences with artificial intelligence
Leading organizations are taking a strategic approach to enabling their enterprise with AI technologies; they are solving complex problems, infusing intelligent capabilities into processes and investing to create a new and preferred future.

Additional Studies

Redefining Boundaries Insights from the Global C-suite Study
—

In or out? Succeeding in the ecosystem economy
—

Digital Reinvention™ in action What to do and how to make it happen
—

More than magic How the most successful organizations innovate
—

Enterprise innovation in the cognitive era Igniting cultural transformation for the future of work
—

Accelerating Digital Reinvention™ with component business modeling
—

Thinking out of the toolbox How digital technologies are powering the operations revolution
—

Device democracy Saving the future of the Internet of Things
—

Empowering the edge Practical insights on a decentralized Internet of Things
—

Fast forward Rethinking enterprises, ecosystems and economies with blockchains
—

Trust in trade Toward stronger supply chains
—

First on the block Learn from early blockchain business networks
—

Bridging the divide How CLS and IBM moved to blockchain
—

Leading the pack in blockchain banking Trailblazers set the pace
—

The Cognitive Enterprise Part 1
The journey to AI and the rise of platform-centric business architectures
—

Mastering the art of data science How to craft cohesive teams that create business results
—

Fast start in cognitive innovation
Top performers share how they are moving quickly
—

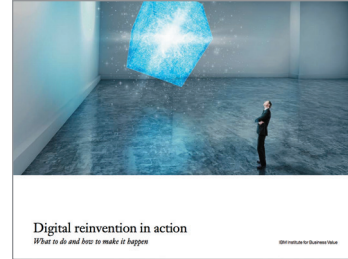**Analytics** The dawn of the cognitive era
—

Accelerating enterprise reinvention
How to build a cognitive organization
—

> "Disruptive technologies could change the fundamentals of our business and cause totally unpredictable effects, if they become widespread."

Kazuo Hirai, CEO, Sony Corporation, Japan
—
from **Redefining Boundaries** Insights from the Global C-suite Study

Digital reinvention in action
What to do and how to make it happen

Germany's promise
Opportunities to realize Germany's economic potential

Digital Reinvention™ in action What to do and how to make it happen
To succeed in this disruptive environment, organizations will need to offer compelling new experiences, establish new focus, build new expertise and devise new ways of working. Please check our Hot Topics, Industries or Professions pages for related derivatives.

Germany's promise Opportunities to realize Germany's economic potential
Germany is an industrial leader respected around the world. While significant risks are emerging, opportunities are still present. If it takes the right steps to address risks and seize opportunities, Germany could become a model economy for generations to come.

Additional Studies

The Cognitive Enterprise Part 1 The journey to AI and the rise of platform-centric business architectures
—

Innovation 2.0 Riding the next wave in innovation
—

The Individual Enterprise How mobility redefines business
—

Canada's comeback Turning the skills crisis into a competitive advantage
—

Innovating China From "made in" to "imagined by"
—

China's challenge Maintaining economic leadership in an uncertain world
—

Accelerating China Three steps to align China's higher education system to growth
—

Made in China 2025 (Chinese only)
—

Indian Century Defining India's place in a rapidly changing global economy
—

Innovating India In pursuit of global leadership
—

Japan ascending Four steps to reignite growth and vitality in the Japanese economy
—

Comparing business performance against peers

IBM is an international leader in business process optimization. The IBM Institute for Business Value provides a process benchmarking service that helps clients measure their current state and compare their performance against peers.

These benchmarking services can be provided as part of a process transformation initiative or similar engagement. This is a mature offering supported by robust content and specialized tools. Our patented custom survey method and toolset enable us to provide meaningful and accurate comparisons of performance tailored to each client's priorities.

Our Open Standard Benchmarking database offers:

Data from more than 21,000 business entities in more than 70 countries
—

More than 1,000 performance metrics, supported by business practices
—

Coverage for all geographies and all industries
—

Numerous peer group types for comparisons
—

"I don't see why a corporate customer would go anywhere else for benchmarking work."

Global Programme Controller, multinational FTSE 100 Company
—

Sample metrics from our areas of benchmarking expertise

IBV benchmarking analyzes business processes in six functional areas: Finance, Human capital, Information technology, Marketing and sales, Product development and Supply chain. For each of those areas, here is the latest benchmark. How does your organization stand against these findings?

Finance

30

= days to complete the annual budget cycle

Human capital

5

= learning days on average per employee

Information technology

3.23%

= average IT cost as percentage of revenue

Marketing and sales

85%

= three-year customer retention rate

Product development

60%

= of product/service development projects launched on budget

Supply chain

9.6

= finished goods inventory turns per year

Contact the IBV's Global Benchmarking team to learn how you can benchmark your performance Send an e-mail to global.benchmarking@us.ibm.com

Contact us

For general questions, contact us at iibv@us.ibm.com or visit us at ibm.com/iibv (or at w3 for employees). For more specific inquiries, e-mail one of the leaders below.

Global Leadership Team

Peter J. Korsten
+31-20-513-6026
peter.korsten@nl.ibm.com

Anthony Marshall
+1-646-413-1630
anthony2@us.ibm.com

Steven Davidson
+852-2825-7233
steven.davidson@hk1.ibm.com

David Zaharchuk
+1-703-869-4228
david.zaharchuk@us.ibm.com

Functional Area Leaders

Analytics
Brian Goehring
+1-917-319-7569
goehring@us.ibm.com

Blockchain
Veena Pureswaran
+1-919-543-8368
vpures@us.ibm.com

C-suite and Finance
Carl B. Nordman
+1-650-222-3199
carl.nordman@us.ibm.com

Cloud
Lynn Kesterson-Townes
+1-818-521-6095
lkt@us.ibm.com

Cognitive
Brian Goehring
+1-917-319-7569
goehring@us.ibm.com

Human Resources
Janet Mertens
+1-416-803-7451
jmertens@ca.ibm.com

Operations
Karen Butner
+1-972-948-1556
kbutner@us.ibm.com

Security and Information Technology
David Jarvis
+1-401-952-1922
djarvis@us.ibm.com

Marketing and Sales
Carolyn Baird
+1-770-329-9752
cbaird@us.ibm.com

Strategy and General Management
Anthony Marshall
+1-646-413-1630
anthony2@us.ibm.com

Global Benchmarking
Kirsten Crysel
+1-678-642-6248
global.benchmarking@us.ibm.com

Industry Leaders

Automotive
Ben Stanley
+1-810-247-4704
ben.stanley@us.ibm.com

Banking and Financial Markets
Nick Drury
+65-9840-6874
nickd@sg.ibm.com

Chemicals and Petroleum
Spencer Lin
+1-773-456-7898
spencer.lin@us.ibm.com

Consumer Products
Jane Cheung
+1-714-338-9834
jane.cheung@us.ibm.com

Electronics
Cristene J. Gonzales-Wertz
+1-302-319-7894
cristeneg@us.ibm.com

Energy and Utilities
Haynes Cooney
+1-919-452-5513
hacooney@us.ibm.com

Government
David Zaharchuk
+1-703-869-4228
david.zaharchuk@us.ibm.com

Healthcare and Life Sciences
Heather Fraser
+44-7734-325459
hfraser@uk.ibm.com

Insurance
Christian Bieck
+49-170-563-1242
christian.bieck@de.ibm.com

Retail
Simon Glass
+44-7841-499626
glasss@uk.ibm.com

Telecommunications
Rob van den Dam
+31-20-513-9632
rob_vandendam@nl.ibm.com

Travel and Transportation
Steven J. Peterson
+1-720-939-7919
steve.peterson@us.ibm.com

IBV Offices

Americas (New York)
Amanda Black
+1-720-395-5819
ablack@us.ibm.com

EMEA (Amsterdam)
Mayuko van der Schoor
+31-20-513-6086
mayuko.van.der.schoor@nl.ibm.com

China (Beijing)
Vivian Ding
+86-10-6361-5721
dingw@cn.ibm.com

Asia Pacific (Bangalore)
Madhuri Banda
+91-97415-77266
madhuri.banda@in.ibm.com

Japan (Tokyo)
Shuma Okamura
+81-050-3149-7900
oshuma@jp.ibm.com

Be the first to receive the latest insights from the IBM Institute for Business Value
Subscribe to IdeaWatch, our monthly e-newsletter featuring executive reports that offer strategic insights and recommendations based on IBV research: ibm.com/gbs/ideawatch/subscribe.

Where you can find our studies
Please note that full reports are available at ibm.com/iibv (ibm.biz/ibvonw3 for IBM employees) or on the IBV tablet app. Summaries are available on the IBV phone app. To download, go to your Apple App Store or Google Play on the device and search for "IBM IBV."

About the IBM Institute for Business Value
The IBM Institute for Business Value is a worldwide network of 60 experienced strategy and operations consultants who have extensive industry knowledge and connections to a broad range of experts across the IBM Corporation. Our primary offices are located in Amsterdam, Bangalore, Beijing, Cambridge (USA), Moscow and Tokyo. The Institute's mission is to create fact-based insights that help clients realize business value. For more information about our organization and our research, visit ibm.com/iibv.

The right partner for a changing world
At IBM, we collaborate with our clients, bringing together business insight, advanced research and technology to give them a distinct advantage in today's rapidly changing environment. Through our integrated approach to business design and execution, we help turn strategies into action. And with expertise in 17 industries and global capabilities that span 170 countries, we can help clients anticipate change and profit from new opportunities.

Order our studies now: send an e-mail to iibv@us.ibm.com

IBM®