



Experience the commitment®

**Value
creation in a
digital world**

Rethinking how things get done
Emerging Technologies





Rethinking how things get done

Digitization is redefining value creation

Together on the journey

Technologies that transform

Actions for winning



Digitization is redefining value creation

In a sea of constant change, organizations are looking for new ways to add value to the lives of their customers or citizens and increase shareholder value. However, adding value is easier said than done. Today, 60% of executives interviewed as part of the CGI Client Global Insights said they have a digital transformation strategy at the enterprise level, but only 15% reported reaching a stage where they are highly agile in response to change. In addition, on average, only 12% are producing results from their digital transformation.¹

Today, value is delivered through innovation and agility. As a result, organizations are under pressure to rethink how things get done and **design an organization that generates ideas and value fast.**



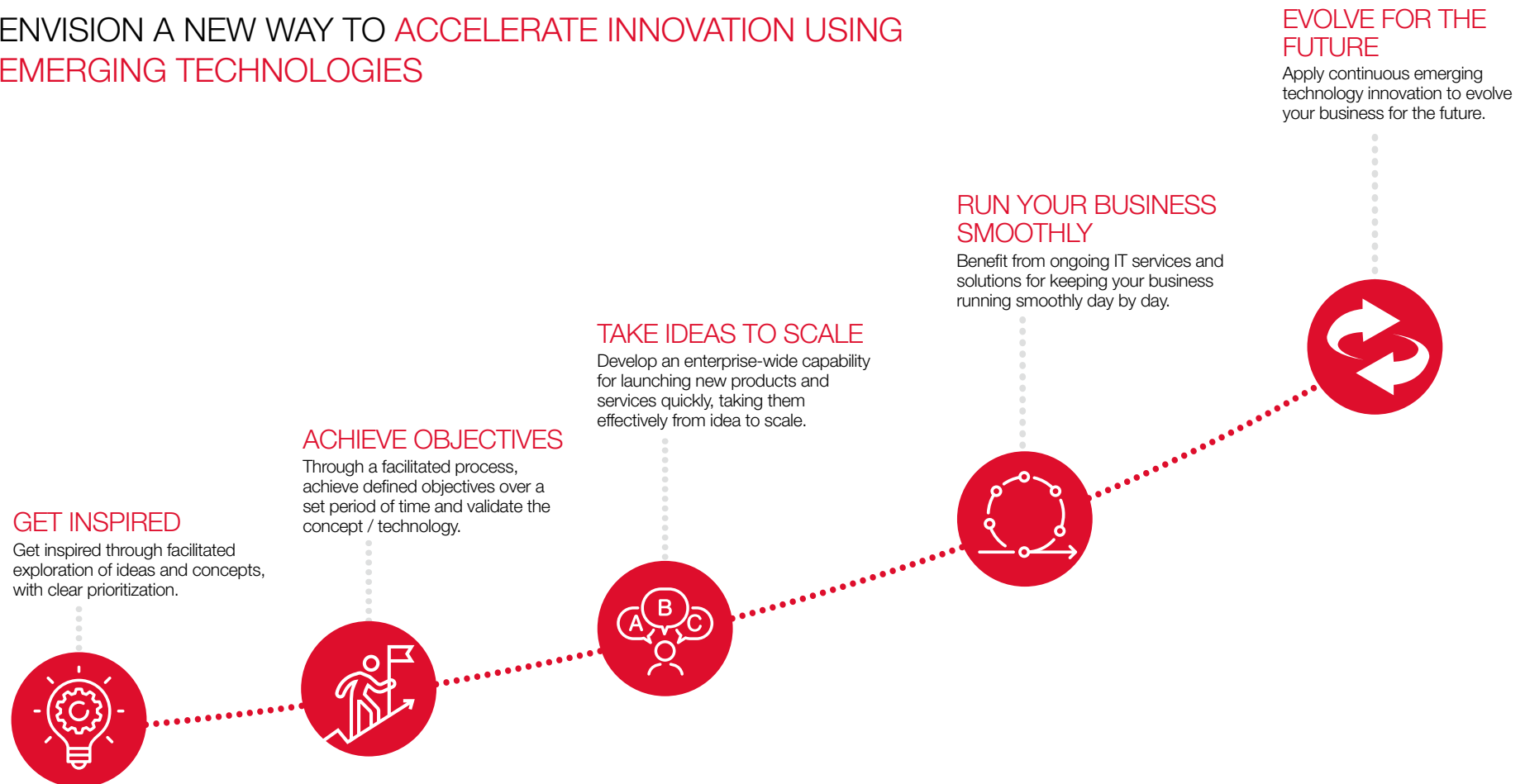
Through an agile operating model framework that spans an entire organization, including its business model and technology, CGI supports clients in creating value. We enable clients to continually **innovate, change, operate** and therefore respond faster and more efficiently to change.

When it comes to accelerating innovation, emerging technologies are key to changing the way things are done—rethinking business models, products, services, channels, interactions, processes, workspaces, and more. But, how does an organization move from technology hype to hero? How does it master the use of emerging technologies to drive innovation and agility and become a leader in its market, industry and geography?

As new technologies emerge and evolve every day, which ones are relevant to your organization and how can you get maximum value from them? How does your organization move past the prototype and scale your ideas to achieve fast and lasting results?

1. CGI Client Global Insights (2018)

ENVISION A NEW WAY TO ACCELERATE INNOVATION USING EMERGING TECHNOLOGIES



Together on the journey

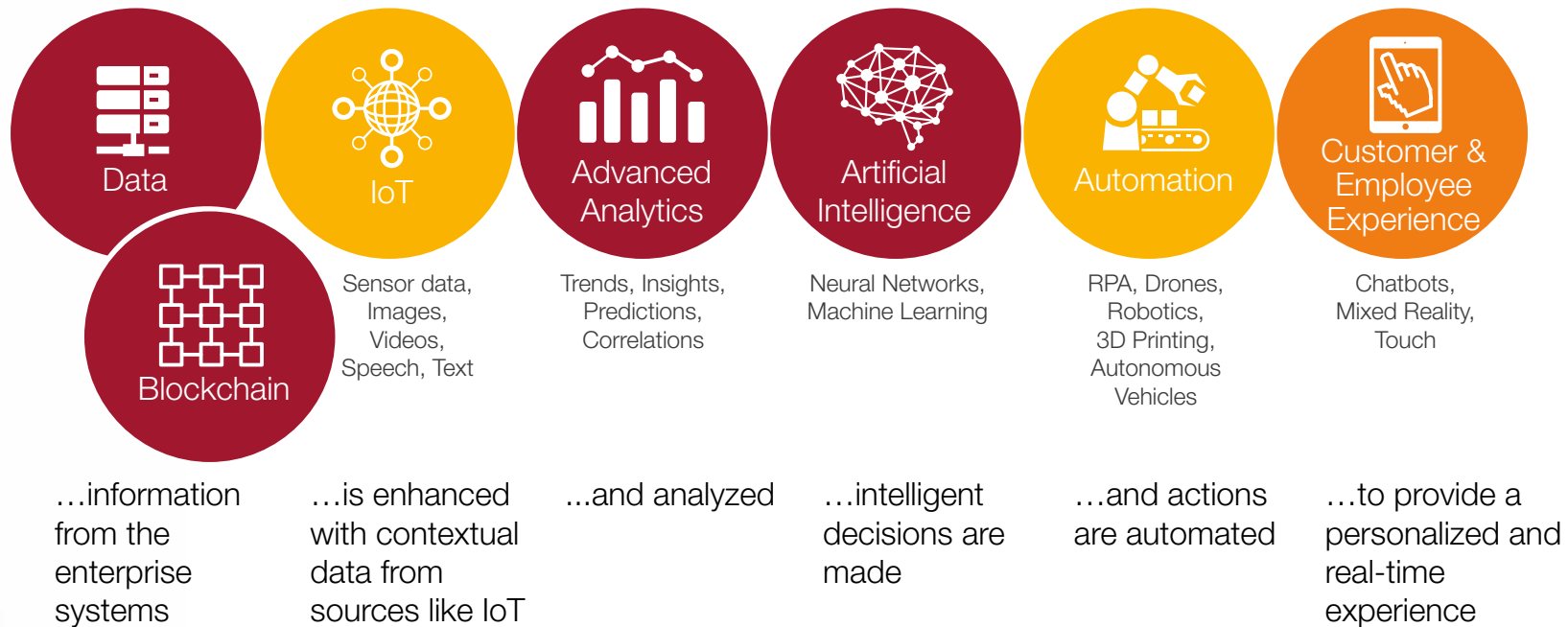
CGI serves as a mindful visionary to help you connect the dots (from end-to-end) and pursue strategic emerging technology investments that enable you to continuously innovate and realize value.

Technology is all about solving business problems, and CGI works with organizations across sectors to effectively identify, master and execute emerging technologies that solve their problems and drive long-term profitable growth. We help organizations overcome the hype to become true technology heroes known for their tangible innovation and outstanding achievements.

We view emerging technologies as building blocks. While they may perform a certain function on their own, their value is limited until they are combined with others. By combining these building blocks for a specific use case, we can design a custom solution and, as patterns emerge through subsequent use cases, even more effective, reusable solutions can be developed, creating an environment of ongoing innovation and improvement.



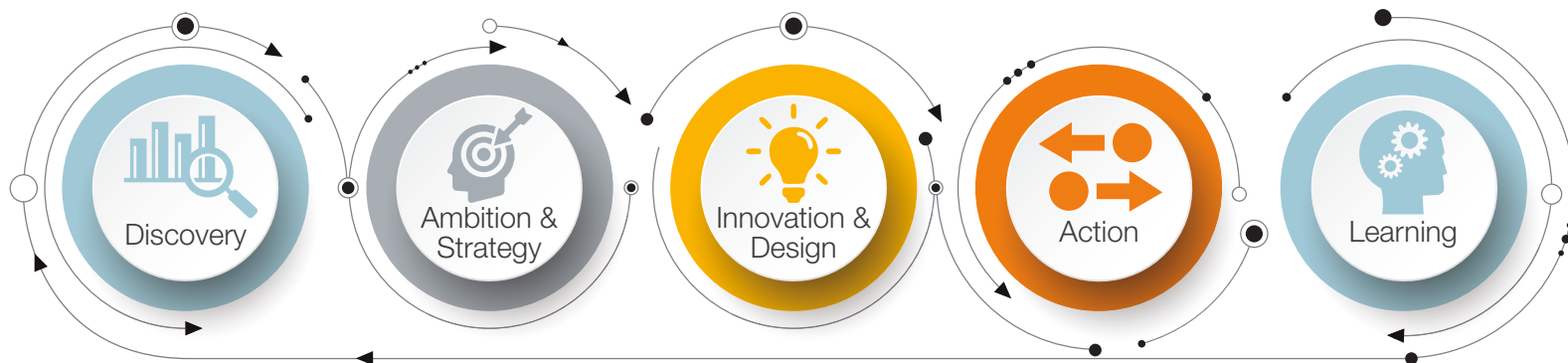
Consider the case
of an insight-
driven business,
where...



As new patterns continually emerge, organizations can make more strategic decisions with respect to emerging technologies to develop new products and services that meet evolving customer and citizen expectations.

CGI helps clients—big and small—make strategic investments in emerging technologies, taking great ideas to scale. Whether you're looking to understand the scope of one technology or looking to explore the value of combining technologies, we can help guide you through your journey.

DRIVING CONTINUOUS INNOVATION



Collaborating to drive clients' success

Partnering to break down communication barriers between the deaf and hearing

Chabla partnered with CGI and, in 2016, the two companies built and launched a first-of-its-kind mobile service for enabling the deaf to make and receive phone calls—to and from anyone, at anytime.

Chabla simplifies and speeds up access to sign language interpretation services by reducing steps and bottlenecks. Previously, it could take from two hours to two days to access an interpreter. With Chabla, it takes 20 seconds.

The solution also drives time and cost savings in the delivery of interpretation services. Prior to Chabla, an interpreted phone call required approximately 90 minutes of an interpreter's time. With Chabla, it can take only minutes. Chabla also eliminates the need for interpreters to travel.



“Without the Chabla app, it is literally impossible for a person who does not know sign language to call a deaf person. I’ve personally experienced this many times. Through our partnership with CGI, we developed a digital solution with an application that doesn’t merely enable communication, but significantly empowers the deaf community”

Signmark (Marko Vuoriheimo), Founder, Chabla

Human Centered Design
| DevOps | Cloud Native
Development

First-of-its-kind
mobile service

Award-winning
(design)

Revolutionary
impact

[Read full case study on
cgi.com](https://www.cgi.com/case-studies/chabla)

Using augmented reality and precision data to build a future smart city

To manage the world's largest city relocation, the City of Kiruna needed an innovative approach. After city management formed the Kiruna Sustainability Center (KSC) to develop and test new ideas for sustainable solutions, CGI approached the KSC with the concept of using augmented reality and precision data to digitally map the city's current and future underground infrastructures.

CGI invested in a proof-of-concept called Hidden City. With the city onboard, CGI technology experts used GPS-enabled data sources and augmented reality to map the city's existing underground infrastructure and envision its future infrastructure, avoiding expensive excavations, service disruptions and other related costs associated with traditional relocation efforts.

"It is important to capture the experiences and innovations that arise from Kiruna's urban transformation and transform them into business. The interest from the business sector is positive as it promotes economic growth and employment. The fact that CGI takes the step of using urban change as a basis for innovation is positive for Kiruna Municipality."

Kristina Zakrisson, Kiruna Municipal City Council Chair



Augmented / Mixed Reality |
Location Data | Wearables

Successful proof-of-concept

Concept verified
on both Microsoft
Hololens and iOS

Enables city
maintenance

Roadmap to
combine with IoT
data

[Watch video on cgi.com](http://www.cgi.com/watch-video)

Using sensors to monitor rail cars for early signs of wear and tear

Rail cars have no onboard electronics—or even electricity—to monitor their operation. Their basic technology has not evolved in more than 100 years. Maintenance based on historical wear-and-tear assumptions is costly and inefficient.

CGI helped a European railway implement track-mounted IoT sensors to monitor passing rail cars for early signs of wear and tear, enabling predictive maintenance. The smart sensors assess diagnostics such as wheel profiles, brake block thicknesses and axle bearings. Data is collected, aggregated, analyzed and stored in the cloud. Data visualization via web portals and apps then drives predictive maintenance.

The result is greater efficiency and cost savings for freight car owners, railway companies and railway infrastructure providers. Our solution is making a difference in the way that freight moves by rail across Europe.



Video Analytics | IoT | Cloud Computing

Improved **efficiencies**

Cost savings

Increased **reliability**

Improved **on-time performance**

Capturing the real-time emotions of concertgoers to ensure a festive experience

As an event organizer, what if you could digitally capture what attendees are experiencing as the event happens instead of relying on traditional post-event surveys? What if you could get real-time insight into people's emotions at any given time or location during the event?

Ruisrock, the most popular summer music festival in Finland, thought of the possibilities and turned to CGI for help. Through advanced video analytics, CGI enabled Ruisrock to capture more data on its 2017 festival crowd than it ever imagined, driving better decisions for an improved concert experience.

Using facial analytics and custom neural networks, we provided Ruisrock with rich, real-time data, including sentiment and demographic data, in real time and across festival grounds. With this data, Ruisrock gained valuable insight to help transform the concertgoer experience.

"We've had successful years previously, but we wanted to know what we could do even better. Of course, we have always done the traditional surveys, but never before have we had a chance to study peoples' emotional states during the festival. The biggest realization of this survey is what a large scale of emotions can be experienced during the festival, and from that we can draw conclusions on how to affect people's memories of Ruisrock by offering the right services at a right time."

Annakaisa Anttila, Producer, Ruisrock



Video Analytics | AI | High Performance Computing

Big data in **3 days**

310 million data points

105,000 people

1.6 million detections

[Read full case study on
cgi.com](http://cgi.com)

Improving enterprise-wide asset security through agile delivery

A global health services company wanted to improve the overall security of its enterprise-wide assets, not only to meet regulatory obligations but also to support sales by demonstrating strong customer data protection. Any cybersecurity solution adopted needed to be highly scalable and support a variety of platforms, including legacy systems.

Using SAFe agile delivery, continuous integration / continuous delivery practices and automated machine learning, CGI implemented a solution that has transformed risk management and control for the company's assets, enabling them to benefit from strong cybersecurity processes and better respond to incidents and audits. Based on the results, the company is expanding the solution internationally and to newly purchased subsidiaries. In addition, CGI is helping the client to build an enterprise-wide repository of private information.



Cybersecurity | Agile |
Automated machine learning

Transformed risk
management

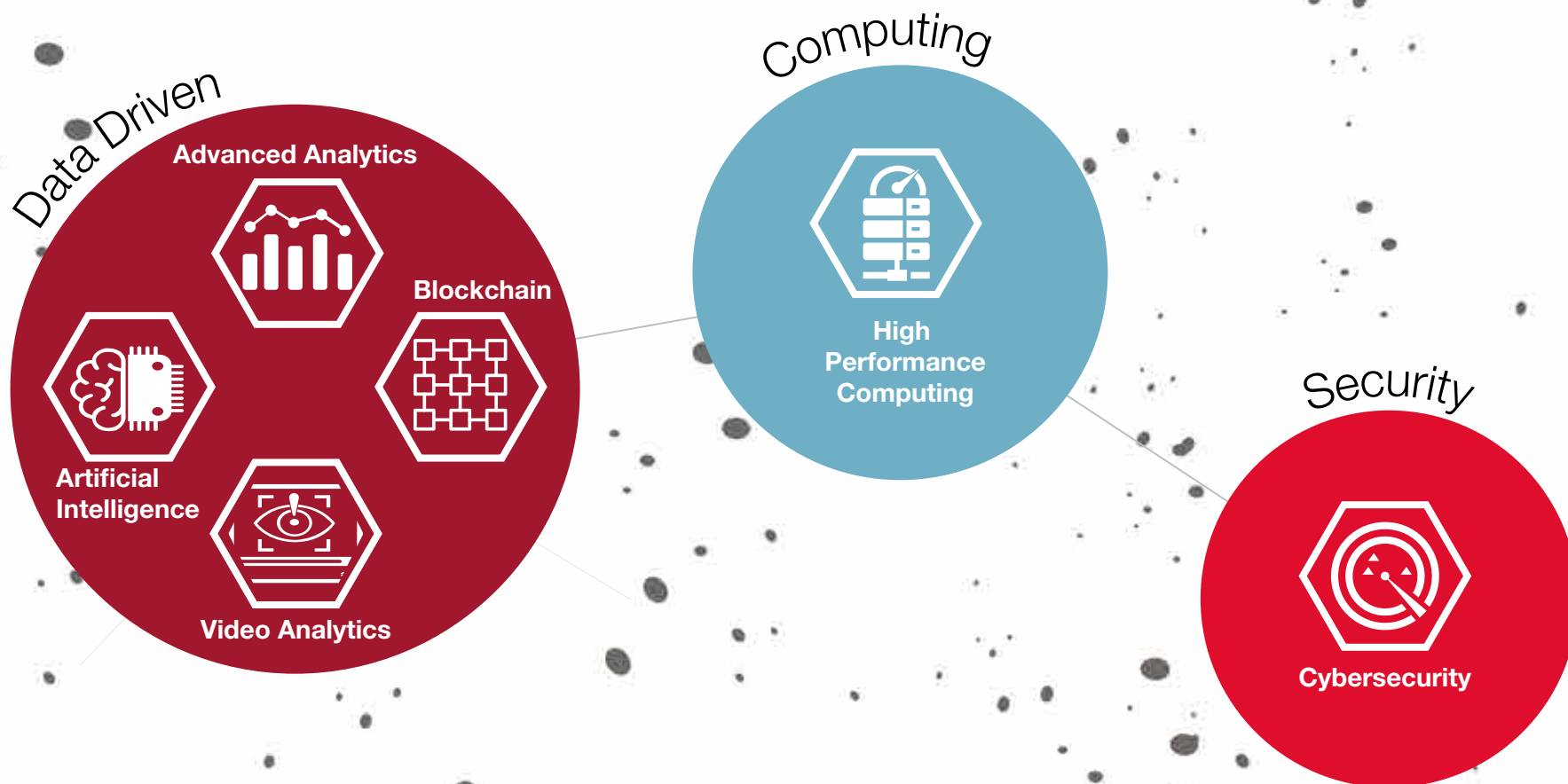
Increased velocity
and reduced manual
efforts from Agile
DevOps practices
and automated
machine learning

International
expansion of solution

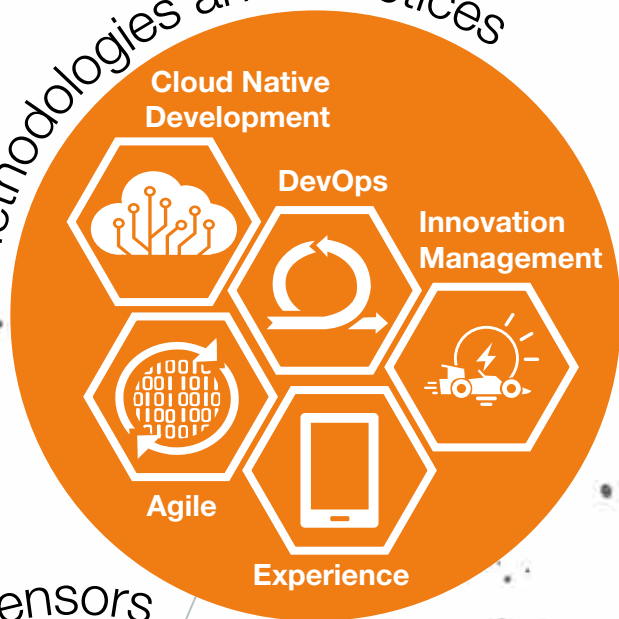
Technologies that transform

Emerging technology value propositions CGI can deliver—NOW.

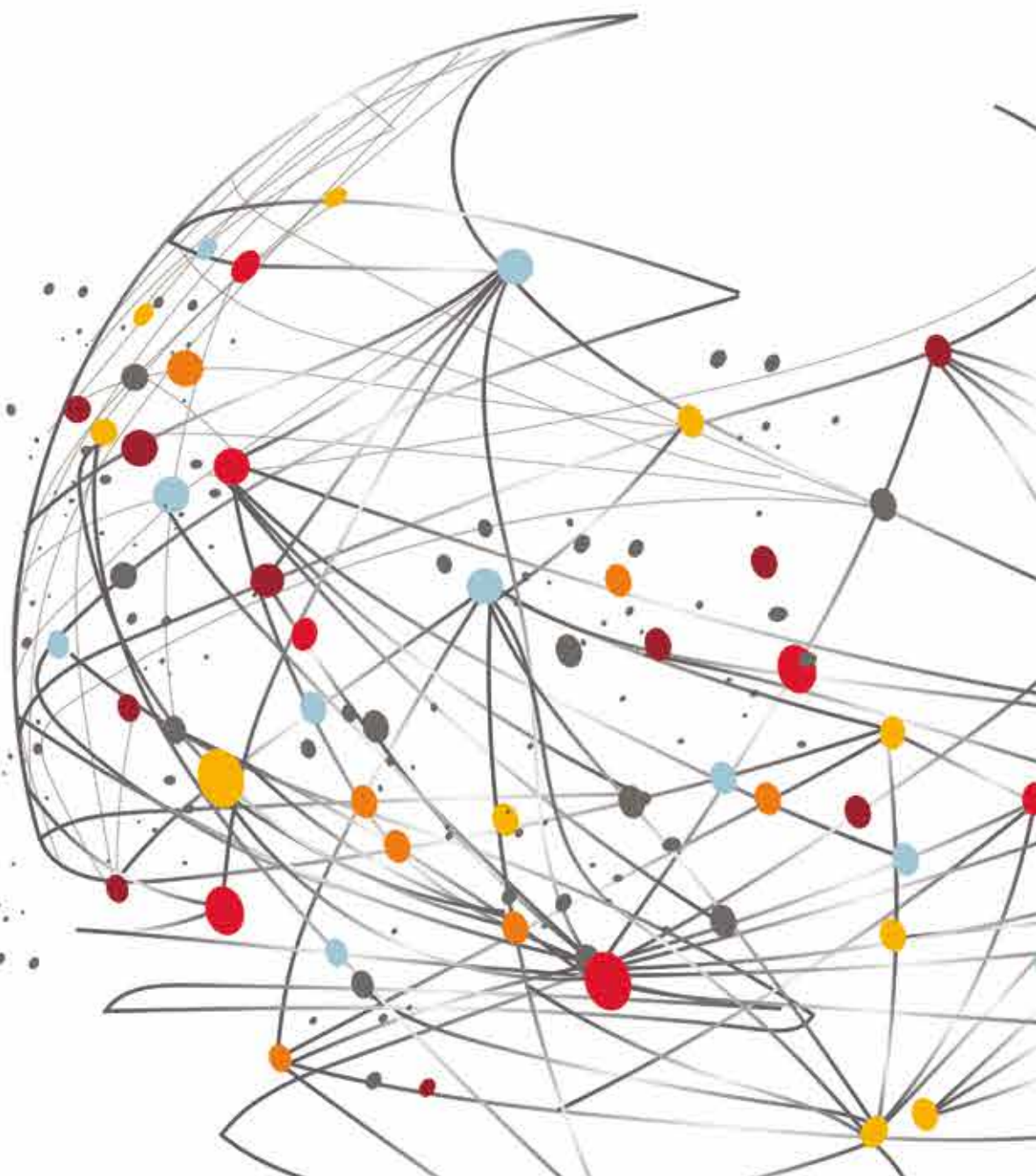
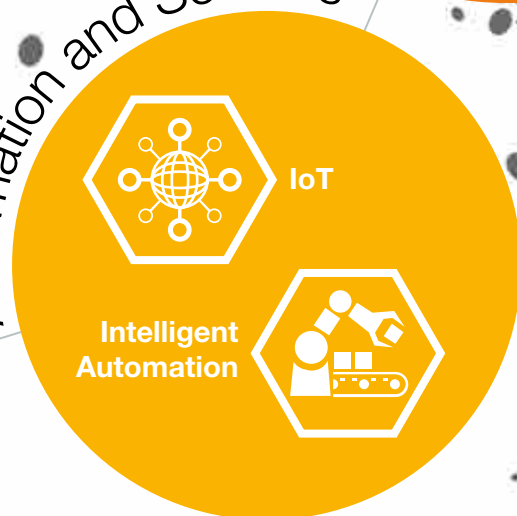
CGI's global network of 46 Emerging Technology Practices are constantly tracking emerging technologies and offer clients a portfolio of more than 70 value propositions for individual emerging technologies and emerging technology combinations.



Methodologies and Practices



Automation and Sensors





Advanced Analytics

There is more data to store and analyze than ever before, along with more contextual data (e.g., images, videos, social media, location tracking). Organizations are seeking to overcome human limitations in managing data and better exploit the power of data to drive agility, performance and competitiveness.

CGI helps organizations evolve from just rethinking and optimizing their operations to rethinking their products, services and experiences and driving innovation through the use of advanced analytics.

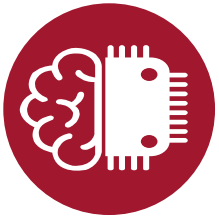
Transforming travel in the Netherlands through behaviour modification

CGI worked with the Dutch Ministry of Infrastructure and the Environment and major regions to launch SmartTravel—a solution that combines digital technologies such as mobility, gamification, big data analytics and travel mode detection to influence and reward driver behavior. The aim is to encourage drivers to change their behavior by, for example, using a bicycle instead of a car and, when using a car, traveling outside of rush hour times.

[Read full case study on cgi.com](#)

Helping you become insight- and idea-driven

Analytics Critical Information Map	Analytics Idea Exploration Workshop	Analytics Sprint	Analytics Production & Scale	Analytics Advanced Technology
Identify information critical to the business and ensure its quality	Use the critical information and other big data sources to identify business value through use cases	Take one of the use cases and use data and advanced analytics to prove its value	Build a future-proof, secure and scalable data analytics platform that drives innovation	Drive ongoing development and innovation through new data sources and advanced analytics



Artificial Intelligence

Artificial Intelligence (AI) is the ability of computers to perform cognitive tasks normally associated with humans: decision-making, reasoning, learning and emotions. The possibilities for applying AI in improving human lives are growing exponentially.

CGI is a trusted AI advisor and partner for clients, helping demystify and deliver responsible AI. We combine our end-to-end capabilities in data science and machine learning with deep domain expertise and technology engineering skills to create new insights, experiences and business models enabled by AI. In doing so, we leverage cloud-based and on-premise AI accelerator platforms, including access to high performance computing. We also help clients evolve to an industrialized and mature AI operating model.

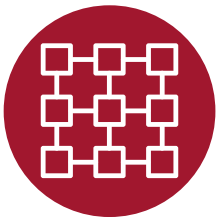
Using machine learning to predict cracks in steel

Steel manufacturer Uddeholm turned to CGI to increase steel quality and reduce unnecessary waste due to cracks in steel. CGI developed a solution for predicting steel cracks that uses big data and IoT to capture relevant data, along with machine learning and advanced analytics to generate insights. With the solution, cracks can be predicted with 70% accuracy.

[Watch video on cgi.com](#)

Combining responsible AI with human creativity to propel you to new horizons

AI Spark Session	AI Data Science - Use Case Validation	AI MVP / POV / POC	Production & Scale	Enterprise AI Operating Model	Continuous Improvement
Half to one day workshop to demystify AI, with two goals—inspire what's possible with AI and envision AI use cases	1-2 weeks of data scientist-led use case validation	4-6 week project typically involving a design lab and rapid prototyping and/or an MVP sprint	Leverage AI platforms to scale prototypes / MVPs into production	Assess AI operations and offer recommendations for an industrialized operating model	Leverage production platform for continuous model improvement and life cycle management



Blockchain

Technology advances and privacy concerns are driving organizations to explore the use of blockchains—records, or blocks, of data connected and secured using cryptography. As an open, distributed ledger, a blockchain can record transactions between two parties efficiently and in a verifiable and permanent way.

We help clients unlock the value of blockchain-enabled business networks and create new business models. By creating next generation secure, trusted, efficient business networks and value chains using blockchain, clients can become future-proof and gain the trust of their customers and citizens. We also enable close cooperation and enhanced trust across extended ecosystems and increase the velocity of technology implementation and business change.

From paper to blockchain: Transforming trade finance

Trade finance is complicated and paper-intensive, which can result in delayed buyer and seller transactions. The Bank of Montreal, Royal Bank of Canada, Mitsubishi UFJ Financial Group and National Bank of Canada partnered with CGI to integrate Trade360 with Skuchain's blockchain platform to solve the paper bottleneck.

The project led to groundbreaking interoperability and an end-to-end, purchase-to-pay solution that eliminates paper, time and effort, while increasing transparency, security, and working capital efficiency.

[Read press release on cgi.com](#)

Unlocking the value of blockchain

Blockchain Education Program	Blockchain Industry Use Case Builder	Blockchain Sprint	Blockchain Production & Scale	Blockchain Ecosystem Integration
Conduct a set of education programs on blockchain	Facilitated process that helps you develop a structured use case	Develop your structured use case into a testable solution that demonstrates value	Development of business critical services required to manage a blockchain solution	Management and integration across network partners to ensure the blockchain solution's operational effectiveness



Video analytics

Video analytics encompasses technologies for acquiring, processing, analyzing and visualizing digital images. The technology extracts high-dimensional data from the real world to produce numerical or symbolic information, which, in turn, systems use to make decisions. It also relies on other emerging technologies such as high performance computing, edge computing and 5G.

CGI works with clients to assess and envision the use of video analytics, as well as rapidly prototype and prove solutions and then quickly scale. From developing software and learning models, to engineering and maintaining hardware systems, to continuously improving the learning models, we provide end-to-end services.

Driving customer insight and sales with real-time video analytics

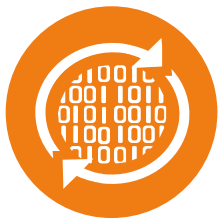
Using video analytics, we helped Power — Finland's consumer electronic giant — to identify patterns in the behavior of different customer segments. Power is using these insights to drive targeted marketing campaigns and test the attractiveness of different products, services and messages.

"We have now a much more fundamental understanding of who our customers are," said Mikko Inkeroinen, head of digital commerce at Power. "Targeted advertising has increased the sales of selected products by as much as 120%."

[Watch video on cgi.com](https://www.cgi.com)

Helping you multiply your data currency

Readiness Assessment	Co-creation Workshop	Rapid Prototyping & Proofing	Production & Scale	Continuous Improvement / Managed Services
Short assessment of client's current physical environment from a technology, security, HR and legal perspective	Envision with the client, validate use cases, and prioritize prototyping	Weekly sprints to prove the use case and a 4-8 week project to deliver an MVP	Set up of production environment to scale the VA application at an enterprise level	DataOps service model to continuously improve and adapt the AI models; for managed services, we maintain the health of the platform.



Agile

CGI is at the forefront of helping clients transform to agile and digital operating models. Using the SAE model, we have introduced enterprise-wide agile in a range of organizations since 2010. From implementing agile transformation projects to providing coaching/training on agile practices, we help clients use agile to drive their competitiveness.

CGI is a **gold partner of SAI** (Scaled Agile Inc.), an organization dedicated to helping enterprises discover more efficient ways of realizing value through the adoption of SAE. We offer more than 100 SAE trainers and one of the few SAE Program Certification Trainers in the world, together with cross-functional teams, including business analysts, developers, UX designers and scrum masters, to ensure maximum value creation.

Redesigning a bank’s operating model using agile at scale and distributed agile

A bank from France sought to build and implement a flexible, reliable and robust platform to support the orchestration and management of all business processes within the bank’s retail groups, both from an omnichannel and omni-media perspective. Post-implementation, the bank wanted to speed up the production of 300 business processes.

CGI helped the bank achieve its objectives by setting up a large-scale agile transformation program involving 10,000+ man-days and a five-year plus roadmap. As a result, the bank has achieved its goals quickly, improved its time-to-market, and increased its flexibility and speed in responding to changing business and customer needs.

Using agile methods to accelerate innovation

Agile Readiness Assessment	Agile Training	Agile Coaching & Support	Agile Resource Augmentation	Agile Transformation Enablement	Agile Delivery Model
Recommendations for next steps of agile transformation based on readiness assessment	Training curriculum and courses on agile tailored for your organization’s needs	Tailored coaching plan developed by CGI’s agile coaches to take your agile teams to the next level	Augmentation of your agile team through CGI’s certified agile practitioners—from individual roles to complete teams	Long-term partnership to guide your agile transformation, including coaching, agile model design, agile roadmap development, KPIs, etc	Critical application(s) developed by CGI using an agile delivery model



DevOps

With agile methods going mainstream and more recent technological enablers like cloud, virtualization, containerization, integrated toolchains and service automation, DevOps has emerged as an end-to-end IT delivery approach that makes business change faster, more flexible and more reliable. **DevOps** removes cultural and organizational silos between key stakeholders and introduces a high degree of process integration and tooling automation in an IT environment.

As a trusted **DevOps** partner and change agent for clients, we help clients in their DevOps transformation journey to become high performing agile organizations.

Achieving growth through digitalization using a DevOps model

Finnair, one of the longest-operating airlines in the world, needed a more flexible, agile approach to the development and maintenance of its digital services. With the help of CGI, Finnair adopted a DevOps model and its first mandate was to use the model to build an API platform to drive ancillary product sales.

CGI built the platform and, since then, Finnair's ancillary product sales have grown by more than 10% each year since 2016. The Finnair mobile app also is one of the most downloaded apps in Finland, with around 210,000 active users.

Transforming your business and IT service delivery with DevOps

DevOps Exploration	DevOps Assessment	DevOps CoE	DevOps Change Program	Managed DevOps Services
1-day DevOps simulation game with senior executives, plus 1-2 day quick look analysis based on a capability survey	Multi-dimensional detailed maturity assessment, resulting in a DevOps transformation strategy and roadmap	Set up of Center of DevOps Enablement (CoE) that offers standards, best practices, templates and coaching	Customized learning, re-skilling and certification based on CoE best practices and a transformation roadmap	Partial or fully managed DevOps services as professional services or part of a full ITO engagement



Experience

Experience involves looking at what the user (customer or employee) experiences in every part of his or her relationship with an organization. This involves evaluating all aspects of an organization’s operations that involve interactions with customers or employees, online or otherwise. In today’s digital world, experience is table stakes. To differentiate in the marketplace, organizations need to serve customers based on insights and provide real value. They also need to empower their employees.

CGI helps clients understand user (customer/employee) needs, pains and gains. We collaborate to drive experience transformation by generating ideas and concepts, prototypes and designs, storyboards, and minimal viable products, with the aim to deliver continuous innovation and improvement.

Transforming into a ‘digital lifestyle provider’ through omni-channel retailing

With roughly 600 brick-and-mortar stores, mobilcom-debitel is embracing digitalization to transform its business model. Ultimately, its vision is to become a “digital lifestyle provider”—creating a digital lifestyle for its customers that improves their quality and enjoyment of life.

CGI developed a cross-channel e-commerce platform in just six months. The platform offers a wide range of cross-channel features, enabling customers to order the same products from each channel and even initiate a sale in one channel while completing it in another.

[Read full case study on cgi.com](#)

Bringing ideas to life in your local market

Experience Future Vision Workshop Define ambition, desired reputation and customer value	Experience New Business Ideas Workshop Develop innovative ideas through a structured process	Experience Service Sprint Take an idea, design a concept and build a prototype	Refer to Cloud Native Build an MVP that can be tested with a customer focus group	Experience Growth Hacking Continue to scale and learn form insights, adapting and improving the solution to deliver greater value
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Innovation management

Innovation management must be implemented as a strategic initiative in a structured and consolidated manner to successfully harness and monetize creative ideas from within the organization.

Our experienced experts offer an end-to-end innovation service suite to help clients establish a structured and consolidated innovation management process. We assist from organizational design to operations transformation, shaping and enabling cultural change. We coach our clients' experts in how to operate as successful innovators. Leveraging our design and innovation studio space, we run design sprints to develop minimum viable products and minimum viable organizations, incubating and continuously improving clients' internal innovation agencies.

Innovative service improvement

Within the Munich University of Applied Sciences, central IT provides a variety of services for different areas, such as the university's administration, libraries, faculties and other departments.

"To meet the expectations of users today and in the future, IT needs new approaches. Using CGI's analysis and methodology, we were able to identify specific options for action and, together with the specialist departments, develop common ideas for improving service quality."

Prof. Dr. Manfred Paul, Head of Central IT at Munich University of Applied Sciences

[Read full case study on cgi.com](https://www.cgi.com)

Opening up the innovation fast lane

Innovation Focus Day	Innovation Sprint	Lean Innovation Agency	Innovator Coaching	Innovation "Run" Services	Innovation Culture Hacking	Innovation at Scale
One-day workshop to envision how innovation should work in alignment with your strategy and to identify innovation use cases	One or several innovation sprints to demonstrate how innovation can work fast	Set up of a customized innovation incubator with tailored frameworks and blueprints	CGI innovation coaches guide your innovators, helping to perfect and deliver their innovation ideas	CGI runs all or some of your innovation processes, executing innovation campaigns, design thinking and MVPs	CGI helps change your organization's culture to help you become a fast-moving, agile and courageous, innovator and, ultimately, a digital leader	End-to-end services—from discovery and ambition setting, to ideation, to organizational design, implementation and operation, to continuous improvement



Cloud native development

Cloud native development is an approach to building and running applications that fully exploits the advantages of cloud computing. It’s about how applications are developed and deployed—not where.

Most importantly, it delivers nearly limitless computing power—on demand—along with modern data and application services for developers. Cloud native also allows velocity—the ability to increase the frequency of deploying new or improved features to production environments.

CGI helps clients transform their application development capabilities, working with them to create an environment (platform, tools, methods, culture) that delivers new products and services at the pace demanded by the market, customers and other stakeholders.

Agile transformation lab for a Fortune 50 retailer

CGI completed a project for a Fortune 50 retailer that transforms the way it writes software. Using Pivotal Labs as a template, the team used agile pair programming and continuous integration/continuous delivery approaches to re-platform an invoice management application to Pivotal Cloud Foundry.

Enabling speed and velocity of change

Cloud Native Portfolio Analysis	Cloud Native Design Workshop	Brownfield or Greenfield Cloud Native Sprint	Cloud Platform Setup & Configuration	Cloud Native Transform	Cloud Native Production & Scale
Structured analysis of the existing application portfolio, identifying candidates for cloud native application transformation	Leverage human centered design methods to design an MVP	Migrate an initial set of representative existing applications or develop an MVP for a new application	Cloud platform implementation and operational hardening	Expertise to lead application transformation projects, manage an application transformation program, and scale cloud native adoption across the enterprise	Manage the cloud native platform, ensuring it's continuously patched, regularly upgraded and maintained at the highest level of security



High performance computing

High performance computing (HPC) is an advanced technology that often powers other emerging technologies, such as advanced analytics, artificial intelligence, blockchain and intelligent automation. The term HPC has been around for decades and typically describes the most powerful computing solutions at the time (e.g., super computers). Today, we define HPC as high performing computing, storage and network connectivity that powers unconventional or specialized workloads. It can be in the form of physical hardware at a client or CGI location, but is found more often these days in the cloud.

CGI designs, builds, tests and launch HPC solutions for clients that power emerging technology specialized workloads and business use cases. We also provide ongoing management, often in the cloud, through managed services.

Providing secure, scale-out production environments

CGI is working with a European critical national infrastructure program to help facilitate a new level of scalable development that will accommodate higher levels of operational data and traffic.

Using hyperscale cloud technology, CGI is creating multiple production environments to complement the client's existing development, testing, pre-production and legacy environments. These new environments will simplify new development, upgrades and replacements as well as existing tools and processes. They will also manage workloads in compliance with commonly recognized best practices for secured cloud environments.

Powering your innovation and digital business models

HPC Solution Engineering Workshop	HPC Proof-of-Technology	HPC Build to Scale	HPC Managed Services
1-2 days with emerging technology workload experts to design a high-level technical concept for a specialized use case	Building and proving the HPC solution using DevOps, including conducting a feasibility study for scaling, regulatory compliance and support of an MVP	Building, testing and releasing the full-scale HPC environment to support the specialized emerging technology workload and business case using the DevOps method and setting up a cloud-based DevOps operating model	Maintaining and continuously improving the HPC solution using a DevOps model



Intelligent automation

Intelligent automation (IA) is CGI's concept and framework for using emerging technologies such as robotics, IoT, advanced analytics and artificial intelligence to transform the way organizations do business. IA can support relatively simple solutions such as robotic process automation, more complex solutions like chatbots, or highly complex solutions that, for example, involve cognitive virtual agents or augmented reality.

CGI helps clients develop their IA strategy by holistically identifying IA areas and technology approaches. We also develop IA prototypes and pilots to prove the business case, leverage agile factory/lab approaches to scale up quickly, support organizational change management, and deliver IA managed services.

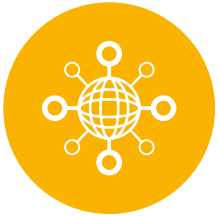
From proof of value to “factory scale” RPA

With a need to reduce operational costs, Engie, a global energy and utilities company, wanted to automate or outsource mundane IT tasks. CGI engaged with Engie and initiated a robotic process automation (RPA) proof of value (POV). From initial analysis to production, the RPA POV was delivered in less than three weeks. Automation of three business processes was completed, with expected annual cost savings of more than €300k based on the pilot business case and a combined reduction of four full-time equivalents (FTEs).

After this success, Engie and CGI scaled up the program using CGI's RPA Factory Scale approach, delivering significant cost savings to the client by leveraging agile and RPA expertise.

Helping you deliver the best customer experience and most efficient operations in the digital age

IA Strategy & Assessment	IA Sprint	IA Production & Scale	IA Change Management	IA Managed Service
Work to define IA ambition, structured workshops, process assessments, IA roadmap, tech / vendor ecosystem	Select 1-3 IA use cases or processes; develop and test automations; run in controlled pre-production; prove value and business case	Establish agile design factory; manage process / use case backlog; prioritize use cases, build / test / release bots; build and integrate production infrastructure	Develop change management plans; update HR policies; develop new roles and job descriptions; establish training; develop IA Center of Excellence (COE) model	Manage bot control room; provide bot maintenance, support and optimization; optimize license usage; manage KPIs; leverage lean process reengineering; leverage botsaaS model



Internet of things

The Internet of Things (IoT) enables multiple assets to act in unison, which results in “ambient intelligence.” Through ambient intelligence, our world becomes “smarter” and more interconnected, driving significant economic, social and business benefits.

We help organizations across industries realize the full value of IoT by connecting them to new revenue streams and process improvements. We help them better respond to consumer demands, increase compliance, strengthen security and drive cost savings. Clients can count on us to demonstrate early value, achieve scale and drive continuous innovation and improvement.

Closer to customers with IoT platform

C.C. Jensen, a global leader in oil filtration and purification systems, collaborated with CGI to develop a scalable IoT platform that brings the company closer to its end customers with new, value added services. The CGI solution harnesses the powers of IoT, big data, cloud and advanced analytics using data from multiple sensors that measure oil viscosity, particles, chemicals, pressure, temperature, humidity, etc. Now C.C. Jensen customers can benefit from live visualization 24/7 and predictive monitoring to minimize the risk of unexpected downtime, ensure increased efficiency and reduce maintenance costs.

Combining technology and engineering with business knowledge to deliver value

IoT New Ideas Workshop	IoT Explore Kit	IoT Production & Scale	Intelligent Buildings	Industry 4.0	IoT Managed Service
Discover new ideas to drive innovation through IoT	Select a use case, install hardware and apply analytics to assess how IoT can add real value before making a big investment	Scale quickly by building and running the IoT environment with the help of CGI's proven accelerators and framework	Leverage CGI's integrated building management solution with proven benefits	Use CGI's proven approach to help drive business and IT optimization across the functional domains of the end-to-end supply chain	Focus on the business by relying on CGI to maintain, optimize and update the IoT environment



Cybersecurity

Cybersecurity is critical for today’s digital organizations. Board-level accountability for cyber attacks and data breaches is the new norm, and adversaries are outrunning organizations.

CGI delivers end-to-end cybersecurity capabilities. We help our clients to assess and manage their risks, secure systems and operate with confidence through expert talent, deep technical and business knowledge, global scale, and a longstanding security heritage. Cybersecurity is part of everything we do.

Enabling “cyber data as a service” for the UK Ministry of Defence

The UK Ministry of Defence (MOD) sought to drive flexibility and rapid deployment in its operations, as well as reduce legacy system costs and increase funding for more innovative and expansive capabilities.

The UK MOD chose CGI to design, build and operate an enterprise cyber threat defence capability called Cyber Situational Awareness Fusion Architecture (CySAFA). The cyber data as a service will enable large amounts of data to be analyzed to derive focused cyber situational awareness which will support enhanced decision making in cyber defense

Ensuring security part of everything you do

Cybersecurity Strategic Validation	Cybersecurity Strategy	Cybersecurity Policies & Standards	Cybersecurity Information Classification	Cybersecurity Outcomes	Cybersecurity Managed Detection & Response
Conduct a comprehensive assessment; identify, quantify and prioritize your cyber risks	Develop a comprehensive cybersecurity strategy, covering IT, OT, ICS, cloud, mobile, social, internal, regulations	Implement policies, standards and governance frameworks to ensure compliance (including regulatory)	Conduct comprehensive data / information discovery and classification (baseline, policy, governance)	Deliver secure systems engineering and design; secure the software life cycle; ensure security is built-in; secure digital labs; leverage DevSecOps	Operate with confidence with comprehensive advanced manage security services (monitor, detect, hunt, respond, intelligent SOC)



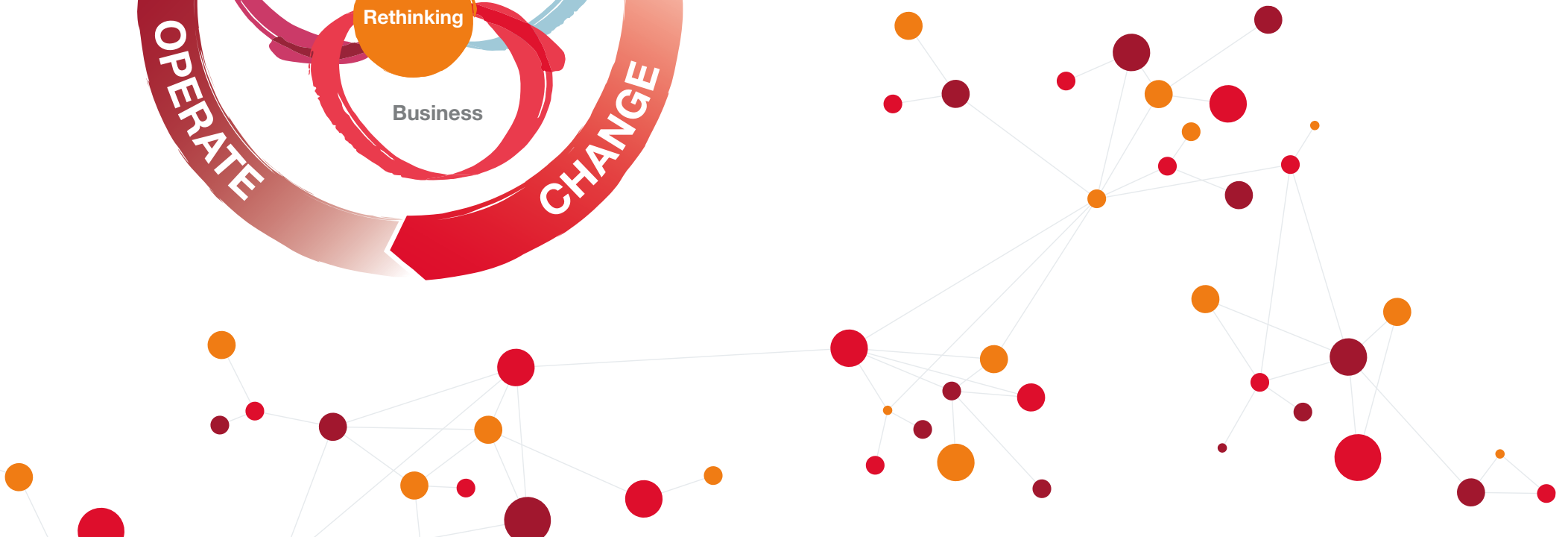
Actions for winning



Leading agile organizations are using technology as a strategic enabler. They recognize technology can generate new opportunities for enhancing their capabilities, products and services to deliver more value.

To succeed in this market, you need a strategic approach that leads to true organizational agility and the achievement of your end goal—better serving your customers and delivering value to your shareholders. All of this begins with asking the right questions.

We recommend three key actions for rethinking how things get done and creating your winning cycle.





Innovate

Becoming an innovation leader requires more than just building innovation capabilities; you also have to deliver innovation. This requires closing any agility gaps and implementing innovations quickly across the enterprise at scale.

Here are a few key recommendations to go about meeting this challenge:

- 1 **Drive innovation from the shop floor**—from the people who are working closest to your customers.
- 2 **Focus your innovation efforts** using insights around what customers want and need.
- 3 **Develop the right mindset** by investing in building a learning culture.
- 4 **Build a collaborative working environment**, which, in turn, drives innovation.
- 5 **Ensure good governance** to help bring innovation ideas quickly to the table and deliver the right innovations.
- 6 **Broaden your ecosystem** as a way to gain access to new technologies that will help you innovate.
- 7 **Think holistically** about the role of partners and customers in driving innovation.
- 8 **Simplify** not only in terms of designing minimum viable products (MVPs), but also in terms of building a lean organization that can operate more agilely.
- 9 **Master emerging technologies** and capitalize on them to provide the foundation for innovation across different areas of the business



Change

This involves having a clear value-focused roadmap to transform your organization, business operations and technology. Start by assessing where you are in comparison to the design criteria of a true agile organization that enables innovation. Then, set the overall vision by establishing ambitions and identifying initial interventions—whether that means a small modification to the existing vision and strategy or a major repositioning.

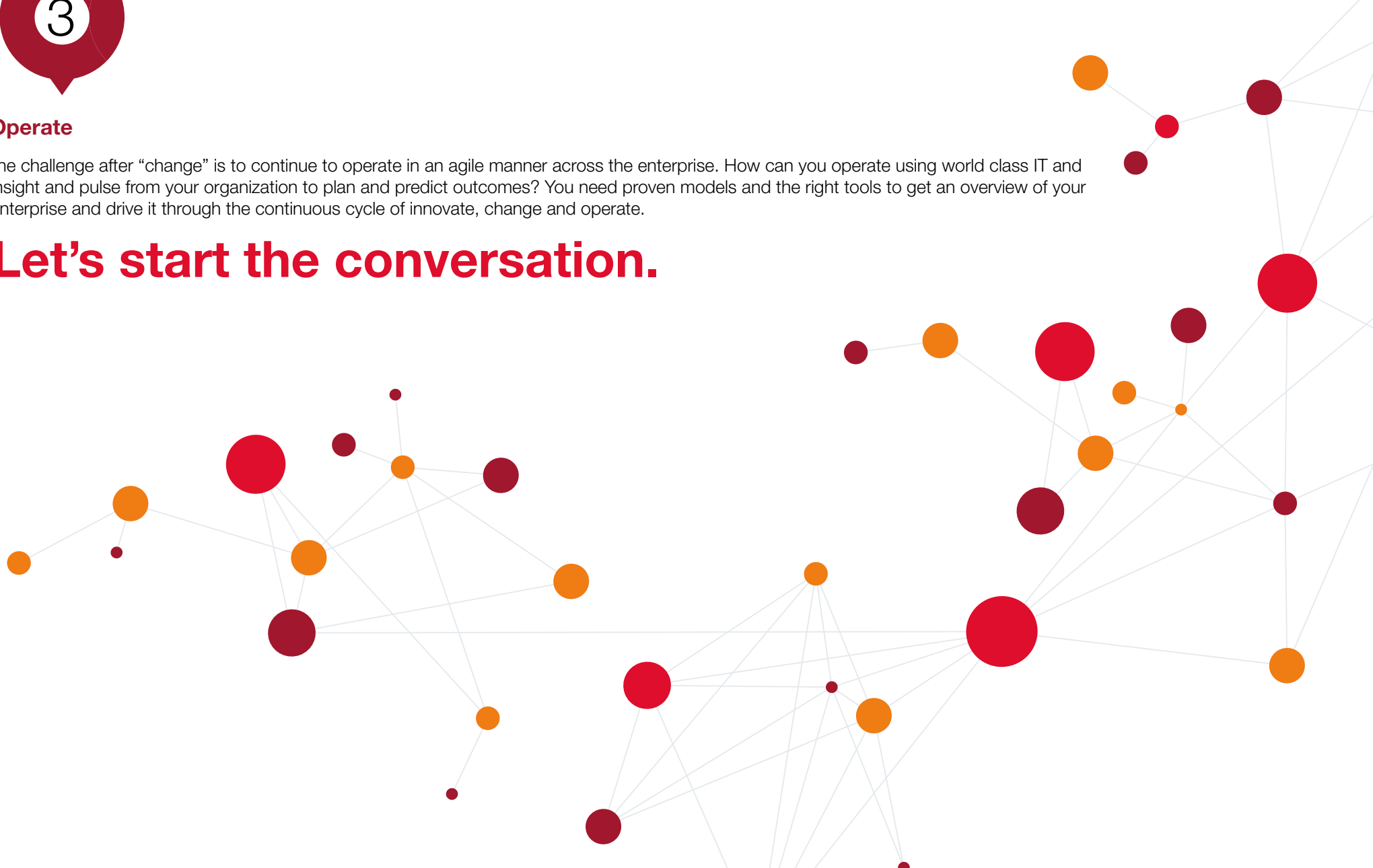
	Criteria	We're happy	We need to improve	We need to make big changes
1	Employees freed up to work on value-add activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Decisions made based on insights generated from customer and operational data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Culture and management system that encourage a curious mindset, collaboration and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Clusters of smaller, focused autonomous business units that partner and collaborate with other business units, making decisions faster	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Integration with an ecosystem of partners that collaborate, share, innovate and deliver increased value to a networked and shared economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Co-designed market opportunities, products and services informed by customer needs and behaviors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Agile, simplified and frugal operational processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Smart, fast, integrated and automated technology platforms and solutions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Operate

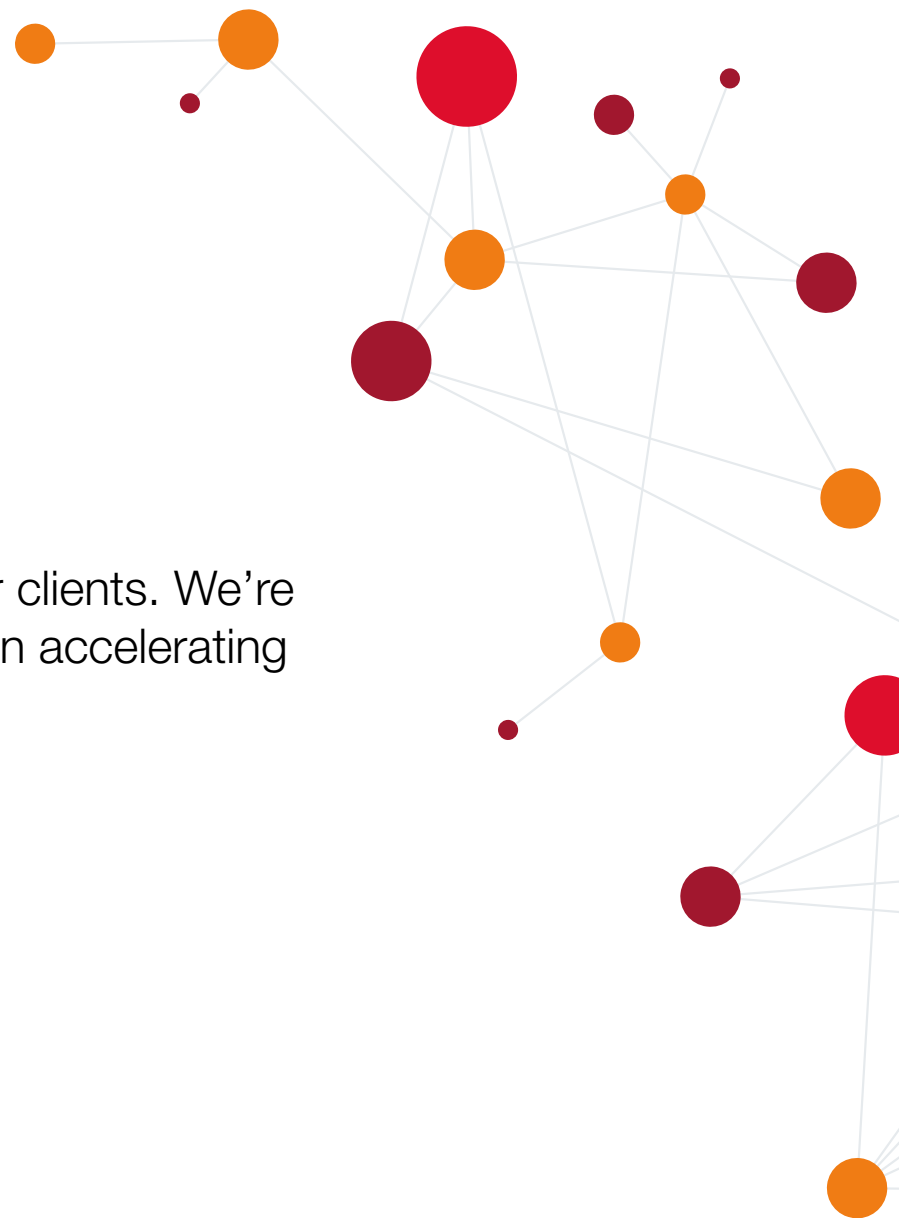
The challenge after “change” is to continue to operate in an agile manner across the enterprise. How can you operate using world class IT and insight and pulse from your organization to plan and predict outcomes? You need proven models and the right tools to get an overview of your enterprise and drive it through the continuous cycle of innovate, change and operate.

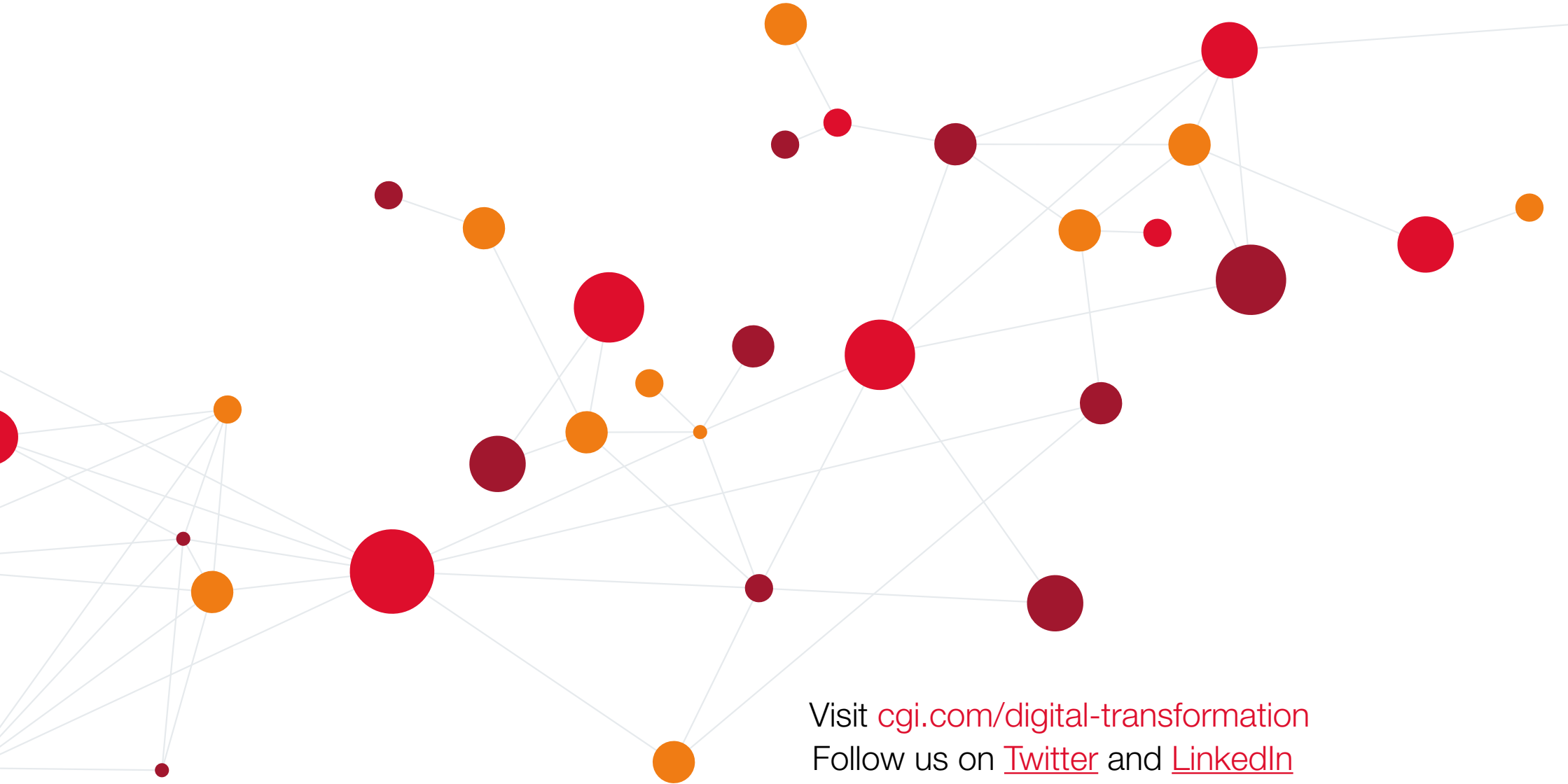
Let's start the conversation.



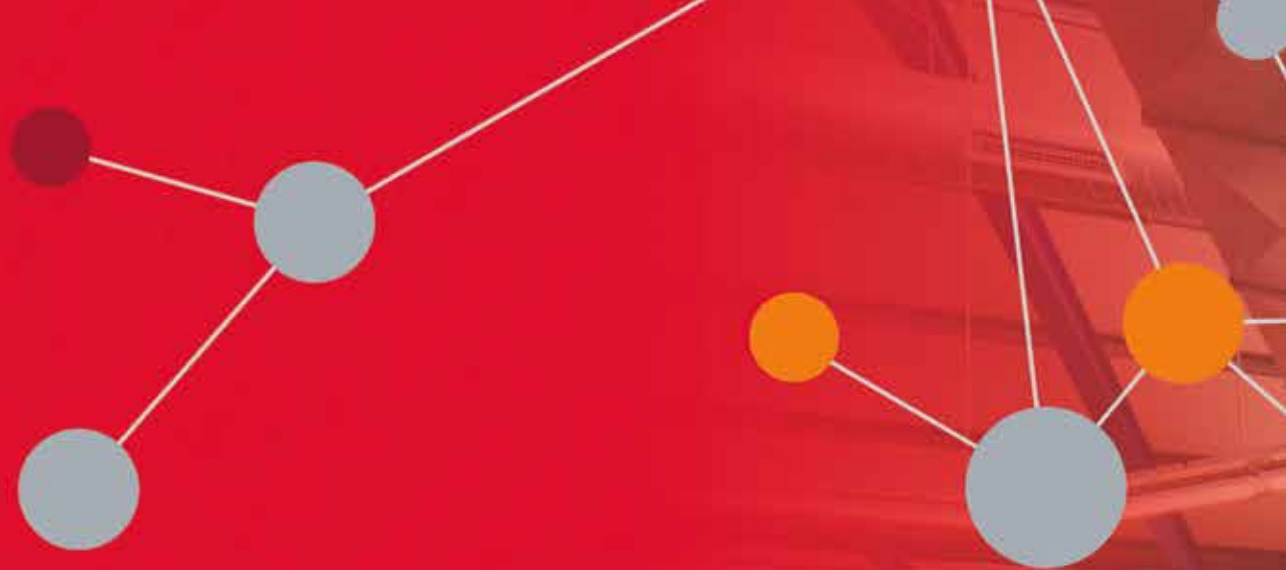
We're a trusted advisor and end-to-end partner to our clients. We're happy to help you, wherever you are on your journey in accelerating innovation. We invite you for a dialogue.

Contact us at info@cgi.com.





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Founded in 1976, CGI is one of the largest IT and business consulting services firms in the world. Operating in hundreds of locations across the globe, CGI professionals help clients to achieve their goals, including becoming customer-centric digital organizations. We deliver an end-to-end portfolio of capabilities, from high-end IT and business consulting to systems integration, outsourcing services and intellectual property solutions that help accelerate clients' results. CGI works with clients around the world through a unique client proximity model complemented by a global delivery center of excellence network to help clients accelerate results, transform their organizations and drive competitive advantage.
