Intelligent Automation

Enabling digital transformation through accelerated adoption of automation
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Intelligent automation overview

A key enabler of digital transformation

Business and government organizations are accelerating their digital transformation to meet customer and citizen demands, increase efficiency, and enable new business models.

Greater use of technologies such as automation, analytics and artificial intelligence (AI) is cited as a top trend by 59% of the business and IT executives interviewed in CGI's Client Global Insights.* These organizations increasingly are investing in automation to help alleviate cost pressures, increase productivity and reinvent the way they operate their business and serve their customers and citizens.

CGI uses its **Intelligent Automation Framework** to help clients identify and apply the right automation technologies to advance their digital agenda. Our work with clients ranges from using robotic process automation (RPA) to digitize routine processes, to using advanced analytics, AI and the Internet of Things to enable complex, decision-driven interactions.

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* CGI Client Global Insights - In 2017, CGI leaders conducted more than 1,300 in-person interviews with business and IT leaders across 10 government and commercial industries and 17 countries.

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63% of clients interviewed are executing on robotic process automation (RPA)

Source: CGI Client Global Insights, 2017

57% of clients interviewed are investigating and experimenting with algorithmic and artificial intelligence applications

Source: CGI Client Global Insights, 2017
Addressing key priorities with automation

As validated in the CGI Client Global Insights, government and commercial organizations are seeking ways to transform the entire digital value chain—from the front-end customer experience to back-end operations. Automation can contribute to digital transformation at all stages of running operations, from driving change that supports new digital services and enhances the customer experience, to growing the business.

Key drivers of automation for our clients include:

- **Customers**: using contextual information to gain insights into customer behaviors and preferences, and creating new interaction experiences models with chatbots, virtual agents and more
- **Business models**: develop new digital value propositions and business models
- **Modernization**: automating systems and processes to support digital transformation
- **Efficiency**: reducing costs and increasing process capacity
- **Speed/agility**: meeting rising customer and citizen demands for speed of service and new capabilities
- **Cybersecurity**: digesting and understanding massive flows of network data and making automated judgements to identify cyber threats
- **Quality**: increasing consistency of service and compliance and reducing human errors

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CGI’s iterative intelligent automation delivery approach helps our clients to focus on practical use cases and bring the appropriate automation, AI and analytics technologies to bear. The steps include:

**Exploratory workshop:** providing automation strategy and roadmap; identifying candidate areas with high-level cost / benefit and business case

**Ideation:** designing innovative automation solutions using appropriate AI technology mix; defining business change needs and optimizing processes

**Prototype:** developing and testing the automation; defining pilot implementation and business change plans

**Pilot:** performing user acceptance testing; preparing users for change; rolling out the pilot, monitoring and fine tuning to maximize benefits

**Production:** supporting the ongoing automated service as “business as usual,” through cloud hosting, proactive monitoring and dynamic scaling

In the RPA area, we can help accelerate deployments through our factory approach.

**How we work together**

CGI collaborates with you to create automation solutions that target specific, high-value use cases and that work for your organization and regulatory environment.

We also provide an environment for bringing insight and practical experience to promote meaningful dialogue between the business, operations and IT.

Finally, we can assist in making critical connections across industries, technologies and partners to link our business consultants to IT professionals and deliver greater value to customers, citizens, suppliers and employees.

In the RPA area, we can help accelerate deployments through our factory approach.
**Back office (banking)**
RPA automates high-volume, repetitive tasks in financial services back office
- 20%-50% process cost reduction
- 350 processes identified for automation
- RPA factory model deployed

**Financial crimes prevention**
Reducing false positives and speeding outcomes
- Machine learning increases accuracy of Anti Money Laundering screening for enterprises
- Advanced analytics and machine learning identify financial fraud in real-time

**Back office (utility)**
Factory-scale RPA speeds production, reduces costs in utility back office
- POV live in 4 weeks with €300,000 annual savings
- 4 FTE's freed for higher value work
- >1,500 hours of workload per week delivered by software robots
- 60% reduction in average transaction processing time
- Post-POV, 40 processes automated in factory model

**Business process outsourcing**
RPA in business process outsourcing improves quality and capacity in banking middle office / loan processing
- 15% higher availability of human resources
- 20% fewer human errors
- Better service level agreements and controls

**Account service**
Chatbots and digital advisors enhance account and customer service in financial services
- Virtual service agent chatbots help insurance clients more closely engage with customers
- Digital advisor combines robo advice and human advice to enable high-end customer experience in wealth management
Customer service processes
Conversational AI agent (chatbot) helps utility automate customer interactions
- Initial use case focused on customer address changes / moves
- Supports >100K contacts per month with text chat then adding natural language processing, voice recognition, image recognition, and integration with ERP and CRM integration
- Target is 80% of interactions handled by conversational AI

IT operations
Autonomics and machine learning reduce costs and improve availability of IT operations for communications provider
- 30% labor cost reduction
- 50% drop in mean time to repair
- >50 self-healing virtual engineers free employees for value-creating activities
- 1,450 hours of workload delivered by virtual engineers

Enterprise optimization
Advanced analytics and modeling optimize energy trading
- 400 FTE operation optimized
- $95M per quarter incremental profit optimization potential identified

Preventive maintenance
Machine learning, IoT data-enabled preventive maintenance for global elevator manufacturer
- Cloud, machine learning and IoT framework leveraged to reduce downtime (currently scaling to 1 million elevators globally)
- Resource planning, cost forecasting and maintenance scheduling improved

Claims fraud prevention
Advanced analytics and machine learning reduce fraud, waste and abuse for health insurers
- False positives avoided with >98% accuracy
- >$2.8B in improper payments recovered
CGI’s intelligent automation services

Automating throughout the digital value chain

We deliver our automation services through consulting, managed services and outsourcing engagements. Our end-to-end Intelligent Automation Services help clients leverage leading technologies and practices to innovate and dramatically transform their operations. We apply and integrate automation, analytics and AI technologies from leading vendors as well as innovative start-ups.

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### Accelerating the RPA Opportunity

- As part of our intelligent automation offering, we offer a robust capability to help clients use software robots (RPA) to operate their existing tools and processes.
- CGI’s RPA delivery approach provides an accelerated and iterative path to success that starts with a
  - ½ day RPA exploration workshop
  - Followed by a 6-week proof of value
  - Followed by an RPA Factory engagement where process automations are developed, tested, deployed and optimized using a repeatable, industrialized method

### Key Services

<table>
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<tr>
<th>Offering</th>
<th>Value Proposition</th>
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<tbody>
<tr>
<td>Business &amp; IT Consulting</td>
<td>• Proven progressive RPA delivery methodology</td>
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<td>• Cross-industry benefits from 100s of automations</td>
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<td>• Innovation labs</td>
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<td>• Holistic approach to technology, process and people change</td>
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<td>Systems Integration &amp; Managed Services</td>
<td>• Technology agnostic</td>
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<td>• Flexible commercial models</td>
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<td>• Proven RPA templates, factory approach &amp; global delivery network</td>
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<td>Outsourcing</td>
<td>• Advanced automation / AI / IoT / analytics</td>
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### Offering

- Enterprise automation strategy & roadmap, from RPA to AI
- Intelligent automation (IA) ideation & integrated solution design
- Technology evaluation, selection & integration
- RPA factory approach: automation development & management
- Flexible IA platform hosting & operation (including secure cloud & on demand)
- Integration of enhanced capabilities like chatbots, virtual advisers, AR / VR, advanced analytics, machine learning, AI, IoT
- RPA as a Service
- Automation and AI as an integral part of transformation
- Automation of IT Ops in ITO & business processes in BPO
- Accelerated digital delivery and operations
- Annual IA / AI innovation plan
- Accelerated transformation with IA as a driver
- New, insight-driven, connected operating models
- Continuous innovation and experimentation
- Security that’s “designed in,” not bolted on

### Value Proposition

- Technology agnostic
- Flexible commercial models
- Proven RPA templates, factory approach & global delivery network
- Advanced automation / AI / IoT / analytics

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> 250 RPA practitioners; >1,000 Advanced Analytics/AI; 50+ R&D; seamless global delivery

- RPA
- IT Ops autonomics
- Chatbots / virtual service agents

### CGI Intelligent Automation Platform

- Machine learning / deep learning
- Natural language processing
- Digital image processing
CGI’s Intelligent Automation Platform was created to automate CGI’s IT and business process outsourcing services. It provides virtual service agents, virtual workers and virtual engineers—from simple RPA task automation to complex machine learning and decision-driven interactions.

CGI uses open source technologies, along with CGI IP and third-party solutions, to provide AI-powered automation solutions such as:

- Intelligent process automation, including RPA for business and IT processes
- Autonomic IT operations for performance and security monitoring, event correlation, diagnostics, self-healing, incident resolution and service orchestration
- Intelligent machine learning and deep learning for advanced automation scenarios across processes, transactions and operations
- Customer interactions and service automation via conversational AI, virtual agents and chat bots
- IoT-based analytics integrated with automation for predictive maintenance, smart community management, supply chain and logistics optimization
Why CGI?

- One of the few global firms with the talent, scale and end-to-end services and solutions necessary to help clients succeed with their digital transformation through the many aspects of intelligent automation
- 40 years of experience in automating business processes, working across commercial and government sectors
- Client solutions and CGI intelligent automation IP developed through joint prototyping and innovation with clients
- Global network of Automation Centers of Excellence and Innovation Labs
- 250+ RPA experts certified in leading platforms and 1,000+ advanced analytics and AI experts
- Holistic, technology-neutral approach to automation goes beyond point solutions to maximize overall benefits for clients
- Strategic relationships with leading automation, AI and analytics technology providers
- Hundreds of process automations delivered
Driving your digital transformation

CGI helps clients achieve superior value through end-to-end digital transformation. Our expertise across legacy and digital environments uniquely enables us to support clients at every point in their digital transformation journeys.

We have the methodology and capabilities to assist clients in defining their digital strategies and roadmaps, as well as the breadth and depth of experience to deliver their transformations through key enablers.

CGI’s enterprise digital transformation capabilities and industry expertise help clients embark on their transformations and succeed in becoming customer-centric digital organizations.

Learn more about our digital transformation capabilities and industry expertise by visiting:

cgi.com/digital-transformation or by contacting us at info@cgi.com.
About CGI

Founded in 1976, CGI is one of the largest end-to-end IT and business process services providers in the world. Operating in hundreds of locations across the globe, CGI helps clients become customer-centric digital organizations. We deliver high-end business and IT consulting, systems integration and outsourcing services, complemented by intellectual property, to support clients in transforming into digital enterprises end to end.