# Advanced Analytics

Unlock actionable insights to achieve outcomes and gain advantage

# Challenges and Opportunities

Organisations today face huge challenges as data complexity increases at a pace never seen before. Many organisations are unable to assess and maximise value from their increasingly complex data assets.

**Data complexity can be understood from a number of dimensions:**

**1** **Value:** It's critical to understand the business value an organisation is trying to achieve by exploiting its key data assets.

**Once the business value is defined and understood, the widely recognised Four Vs of big data help organisations understand its complexity:**

**2** **Volume:** IDC predicts that total worldwide data will swell to 163ZB by 2025, 10 times the amount today.[1]

**3** **Velocity:** Customer needs and digitalisation has led to growing numbers of sensors and devices, creating requirements to handle large amounts of real-time streaming data.

**4** **Variety:** It is expected that more than 80% of data will be unstructured in five years, and this trend will increase at rapid pace in the future led by sensor, smart devices and content based data.[2]

**5** **Veracity:** Lack of trust in data is a key issue for businesses. Research shows that one in three business leaders don't trust their data. It is also claimed that poor data quality costs the United States' economy $3.1 trillion dollars annually.[3]

Changing customer expectations mean being data-driven is no longer a choice for organisations wishing to remain relevant in their chosen markets. Today, more than five billion people use mobile devices with 60 percent of those being smartphones[4]. These digitally-native customers expect personalised products and services tailored to their individual needs.

While this might seem a daunting challenge, emerging technologies like big data, machine learning and artificial intelligence as part of Advanced Analytics, represent a real opportunity for organisations to differentiate themselves.

Notable examples of data-driven organisations include Netflix, Amazon, Spotify and Apple. These organisations utilise customer-centric business models by leveraging their data assets. Such a data-driven approach can help your organisation to increase agility, drive value and transform.

# CGI's Accelerated Advanced Analytics Capabilities

Our Advanced Analytics capabilities are underpinned by our global industry expertise. We combine business imperatives with data insights, to drive desired outcomes.

**We follow a three-phased approach to ensure successful delivery of Advanced Analytics solutions:**
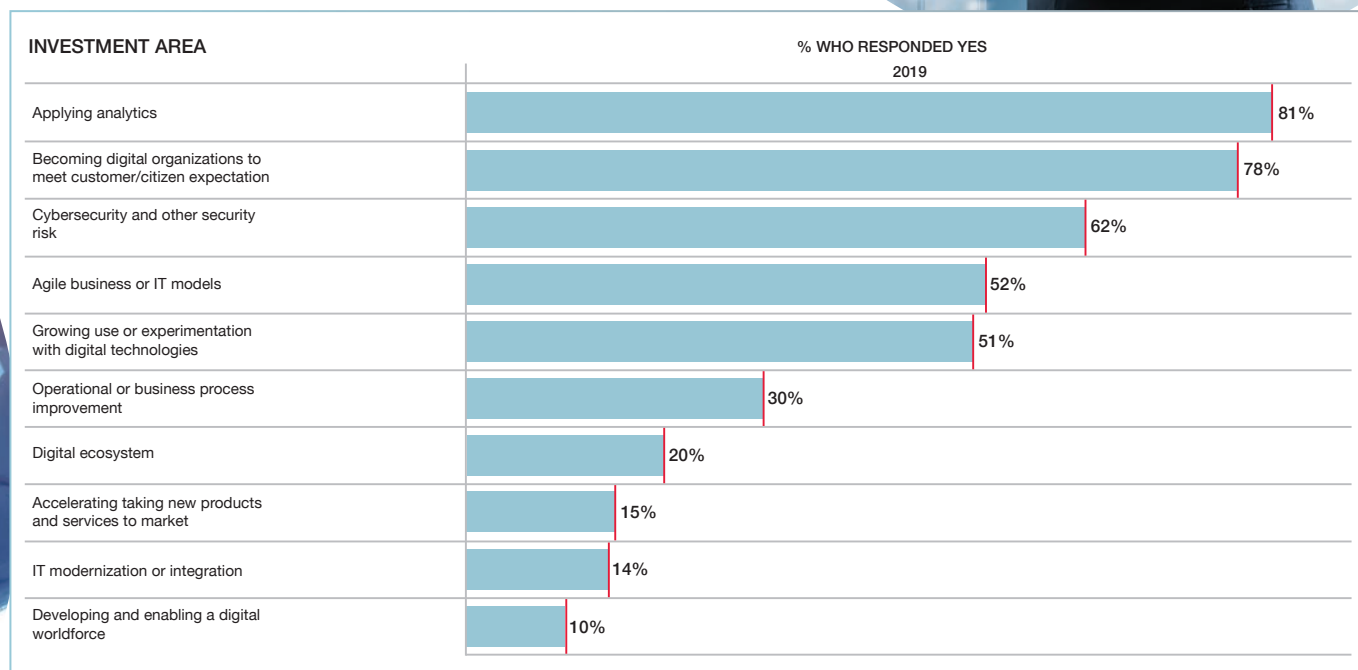
- **Assess:** Working with your organisation to understand its information landscape value and perform a fitness assessment to identify gaps and opportunities.
- **Define:** Developing a roadmap and target operating model to establish implementation priorities.
- **Deliver:** Delivering and embedding required changes in an agile way, measuring success against desired outcomes.

Our scalable approach, combined with our Advanced Analytics solutions will accelerate the time to value for your organisation, increase its agility and drive return on investment.

In 2019, CGI leaders met face to face with 1,400 business and IT executives globally. The resulting Client Global Insight[5] report demonstrates key priorities for both business and IT leaders across the public and private sectors.

We asked respondents to rank their top priorities for innovation investment over the next three years. 81% of executives ranked Applying Analytics as their top priority for investment.

| INVESTMENT AREA | % WHO RESPONDED YES 2019 |
|---|---|
| Applying analytics | 81% |
| Becoming digital organizations to meet customer/citizen expectation | 78% |
| Cybersecurity and other security risk | 62% |
| Agile business or IT models | 52% |
| Growing use or experimentation with digital technologies | 51% |
| Operational or business process improvement | 30% |
| Digital ecosystem | 20% |
| Accelerating taking new products and services to market | 15% |
| IT modernization or integration | 14% |
| Developing and enabling a digital worldforce | 10% |

# CGI's Advanced Analytics Solutions

## Strategy and Business Outcomes

**Our experienced consultants create value from your data.**

- **Outcome-driven business management:** We work with your organisation at this most important transformation stage, to define the business outcomes your organisation is trying to achieve.

- **Products and services innovation:** Ideation workshops encourage creative ideas about what's possible and how data can support defined outcomes.

- **Monetisation concepts:** Together we identify how new ideas can be brought to market profitably, exploiting Minimum Viable Product (MVP).

- **Strategy and information landscape definition:** Our Enterprise Information Landscape approach will uncover your data assets and help to define priority value areas.

## Building and Integrating Solutions

**CGI assists you in assessing, designing and implementing best-fit solutions, working across our Partner Ecosystem using proven industry tools, methods and solutions.**

- **Big data sets:** We work with your organisation to understand and exploit the vast amounts of data generated for example, by the Internet of Things (IoT), visualisation, geospatial and cyber security.

- **Analytics as a Service:** We provide the flexible mechanism to enable you to gain the most from your data assets by exploiting big data platforms, machine learning and artificial intelligence (AI).

- **Data migration:** We can model and migrate your data, extracting it from legacy technology to secure, modern, scalable platforms.

- **Governance and Master Data Management:** Our solutions help your organisation meets its regulatory requirements by securely managing, updating and tracking its data assets.

## Generating Insights

**Our capabilities in visualising data, combined with machine learning techniques provide you with tools to manage your business.**

- **Business intelligence and predictive analytics:** Our business intelligence solutions support key operational decision making, combined with analytics to demonstrate market relevant trends.

- **Machine learning models and data visualisation:** Where data is vast or complex we use machine learning and artificial intelligence techniques to provide clarity.

- **Single customer view, procurement, sales analytics:** Merging and combining key information into a single customer or supplier view enables holistic decision making and detailed analysis for sales and procurement.

## Applying Insights

**We help create and improve digital services by bringing analytics to life.**

- **Value co-creation and delivery:** We work with you to build new solutions and efficient delivery models that will realise the value from new insights.

- **New services and business models:** Whether it's a new digital service delivered by mobile apps or a major new product line, we can provide the business and development expertise to support it from inception to delivery.

- **Improving customer experience:** We help your organisation understand the insight generated by analytics to improve products and services, generating a more profitable customer journey and improved experience.

## Managing Services

**Our range of Advanced Analytics support services help your organisation maximise value from its data assets. These services include:**

- Advanced Analytics as a Service

- Flexible consumption of data

- 24x7 delivery, support and maintenance

- Training and team augmentation.

# CGI's Advanced Analytics Case Studies

### Public Sector

Need: Exploit big data to optimise decision-making.

Outcome: Help protect mission-critical systems from cyber threats. Save lives.

Solution: Data as a Service (DaaS).

### Leading Investment Bank

Need: Overcome limitations of legacy data warehouse.

Outcome: A scalable, cost effective big data solution maintaining existing feeds.

Solution: Our global teams created modular solutions using proven components and methods.

### International Retail Operation

Need: Improve decision-making and improve functionality of legacy customer portal.

Outcome: Customer retention and business wins enhanced.

Solution: New hub sits above legacy systems. New functionality can be added without disrupting day-to-day business.

### International Business Operation

Need: Increase flexibility and control at all customer contact points.

Outcome: Autonomy for operators, reduced time to market for new offerings, real-time transaction data, creating significant cost savings.

Solution: New hub sits above legacy systems. New functionality can be added without disrupting day-to-day business.

### Shipping Services

Need: Business transformation from construction to logistics services.

Outcome: Optimised loading and appropriate course/ speed responses to predicted sea conditions.

Solution: Sensor-based visual real-time analytics view of cargo loading and ocean-going.

### Mobile Phone Services

Need: Monitor and react to all customer journey points.

Outcome: Improved customer care and product development.

Solution: Real-time corporate-level analytics delivered on Platform as a Service.

1 Information Age, 'The Value of Data: forecast to grow 10-fold by 2025'. Available at https://www.information-age.com/data-forecast-grow-10-fold-2025-123465538/, published 5 April 2017.

2 Data Management Solutions Review, '80 Percent of Your Data Will Be Unstructured in Five Years'. Available at: https://solutionsreview.com/data-management/80-percent-of-your-data-will-be-unstructured-in-five-years/, published 28 March 2019.

3 IBM Big Data and Analytics Hub, 'The Four V's of Big Data'. Available at: https://www.ibmbigdatahub.com/infographic/four-vs-big-data, accessed July 2019.

4 GSMA, The Mobile Economy 2019 Infographic. Available at https://www.gsmaintelligence.com/research/2019/02/the-mobile-economy-2019, published February 2019.

5 CGI, 'Client Global Insight - Insights to Action' report. Available at https://www.cgi.com/en/client-global-insights, published July 2019.

# There is no Planet B

**At CGI, we recognise that growth must not come at the expense of the communities where we do business or the wider environment. We are committed to contributing to the protection of the environment through responsible operating practices.**

We have introduced a UK-wide member driven "10-Point Planet Plan" programme to continually reduce our environmental impact, including how we will increase the use of public transport, increase our commitment to tree planting and continue to drive down our use of plastics.

Most of our offices have been ISO 14001 (the globally recognised environment management system) certified since 2006 and over 80% of our waste is recycled. We buy 100% of our electricity from renewable sources and we are planting 5500 trees in the Scottish Borders, one for every CGI UK member, to offset some of our carbon emissions. To support the wellbeing of our communities, our members are also working with community groups to plant over 1000 trees in parks, schools, care homes and natures reserves across the UK.

## About CGI

Founded in 1976, CGI is among the largest independent IT and business consulting services firms in the world. With 77,500 consultants and other professionals across the globe, CGI delivers an end-to-end portfolio of capabilities, from strategic IT and business consulting to systems integration, managed IT and business process services and intellectual property solutions. CGI works with clients through a local relationship model complemented by a global delivery network that helps clients digitally transform their organisations and accelerate results. With Fiscal 2019 reported revenue of C$12.1 billion, CGI shares are listed on the TSX (GIB.A) and the NYSE (GIB).

Visit www.cgi.com for more information.

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