



DevOps and the Digital Backbone

Accelerate application and infrastructure change with seamless collaboration between development and operations teams, enhancing agility and delivering higher service quality.

CGI Business Consulting and Advisory insights



An end-to-end digital framework to power your success

In today's complex and competitive business landscape, it is common for organisations to embed digital technologies that enable their growth strategies. For many, this involves implementing IT throughout their organisation, but few develop a holistic business case or transformation roadmap covering everything they do, or have a comprehensive strategy that aligns their IT with broader strategic goals.

At CGI, we believe that true digitalisation isn't just about adopting new technologies; it's about embracing a holistic mindset. As a leader in IT and business consulting, we help organisations unlock their full potential, driving our clients' growth through the power of "digital".

But digital transformation isn't simple. That's why we developed our value-led, technology-enabled Digital Backbone framework, which delivers best practices and lessons learned to inspire your journey.

The Digital Backbone offers the fundamental building blocks to drive your transformation success. It helps you envision secure and sustainable solutions that combat your challenges and support your ambitions. Combined, your new capabilities will create a robust, IT-enabled structure – a digital backbone – that transforms everything you do, enabling your organisation to thrive in our ever-evolving world.



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What is DevOps?

In today's fast-paced business environment, organisations must deliver application and infrastructure changes swiftly to stay ahead of the competition. DevOps – and its security-integrated counterpart, DevSecOps – has become essential for businesses aiming to unlock the full potential of cloud technologies, accelerate delivery, and optimise resources.

Increasing business agility

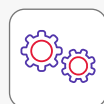
Client demand and competition have always driven innovation, but now, developers must get their code into production at an unprecedented rate. This requires platforms and processes designed to support such rapid delivery.

Enter DevOps; a combination of cultural philosophies, practices and tools that significantly improve software quality and provide faster resolution of issues. It transforms how organisations develop, deploy, and manage software, helping them stay competitive and improve customer satisfaction by accelerating time to market for applications and services.

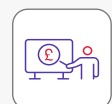
The benefits of DevOps go beyond speed. It also enhances efficiency through automation and resource optimisation, all while improving reliability. And when DevSecOps practices are integrated, security becomes part of every stage in the development process, ensuring both innovation and safety. This approach fosters continuous feedback loops, supports innovation, and reduces costs.

What successful DevOps looks like

Vastly improved engagement, with effective alignment of business and IT objectives.



Significantly increased productivity with reduced development costs.



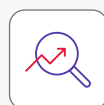
Accelerated software delivery.



Built-in quality with every release.



Enhanced delivery predictability with a better portfolio roadmap.



Improved security posture with best practices and repeatable processes engineered in.



Driving business success

DevOps has become a game changer for organisations looking to accelerate their digital transformation.

By breaking down silos, improving collaboration between development and operations, and integrating security at every stage, DevOps empowers businesses to innovate faster and with greater reliability.

The measurable benefits of adopting DevOps practices – such as increased deployment speed, enhanced security, and reduced costs – make it an essential strategy for businesses aiming to maintain a competitive edge.

30% **Higher performance and agility**
According to the DORA 2023 report, teams that adopt DevOps practices experience up to 30% higher organisational performance due to improved culture and collaboration. DevOps breaks down silos, fosters trust, and enables faster decision-making, helping businesses adapt more rapidly to changes in market conditions.

Source: DevOps Research and Assessment (DORA), Accelerate State of DevOps Report 2023.

35% **Increased deployment speed**
Implementing DevOps leads to a 35% increase in deployment speed, allowing companies to release features and fixes faster. This helps businesses stay competitive by responding more quickly to customer needs and market demands.

Source: Hutte, 120 DevOps statistics: Principles, success, & the future.

48% **Improved security**
DevOps teams that integrate security (DevSecOps) directly into their continuous integration and continuous delivery (CI/CD) pipelines see a 48% reduction in vulnerability exploits, improving the overall security posture.

Source: Hutte, 120 DevOps statistics: Principles, success, & the future.

50% **Cost efficiency and productivity**
Teams that adopt infrastructure as code (IaC), a key practice in DevOps, report a 50% reduction in infrastructure costs and can replicate infrastructure in minutes rather than days, resulting in significant time and cost savings.

Source: Hutte, 120 DevOps statistics: Principles, success, & the future.

72% **Employee satisfaction and retention**
DevOps isn't just about technical improvements – it also boosts team morale. 72% of teams that adopt DevOps practices witness improved job satisfaction, as the culture promotes collaboration, continuous improvement, and reduced operational silos.

Source: Hutte, 120 DevOps statistics: Principles, success, & the future.



DevOps and the Digital Backbone

Unlocking your organisation's full potential – **transformation done right**

What is a digital backbone?

A digital backbone goes beyond simply applying IT to areas of your organisation as a support mechanism. When designed effectively, a digital backbone becomes the cornerstone of a successful modern organisation; it embeds technology throughout all operations, using the power of IT to create a robust structure that enables continuous innovation and transforms everything you do.



Increased **efficiency and productivity** across streamlined operations.



Increased **revenue** alongside more cost efficient processes.



Greater **agility and growth** with a faster time to market.



Better **regulatory compliance**, including empowering sustainability initiatives.



Improved **service and product quality** for customer, employee and stakeholder satisfaction.



Improve **decision making** through data-driven insights.

The Digital Backbone

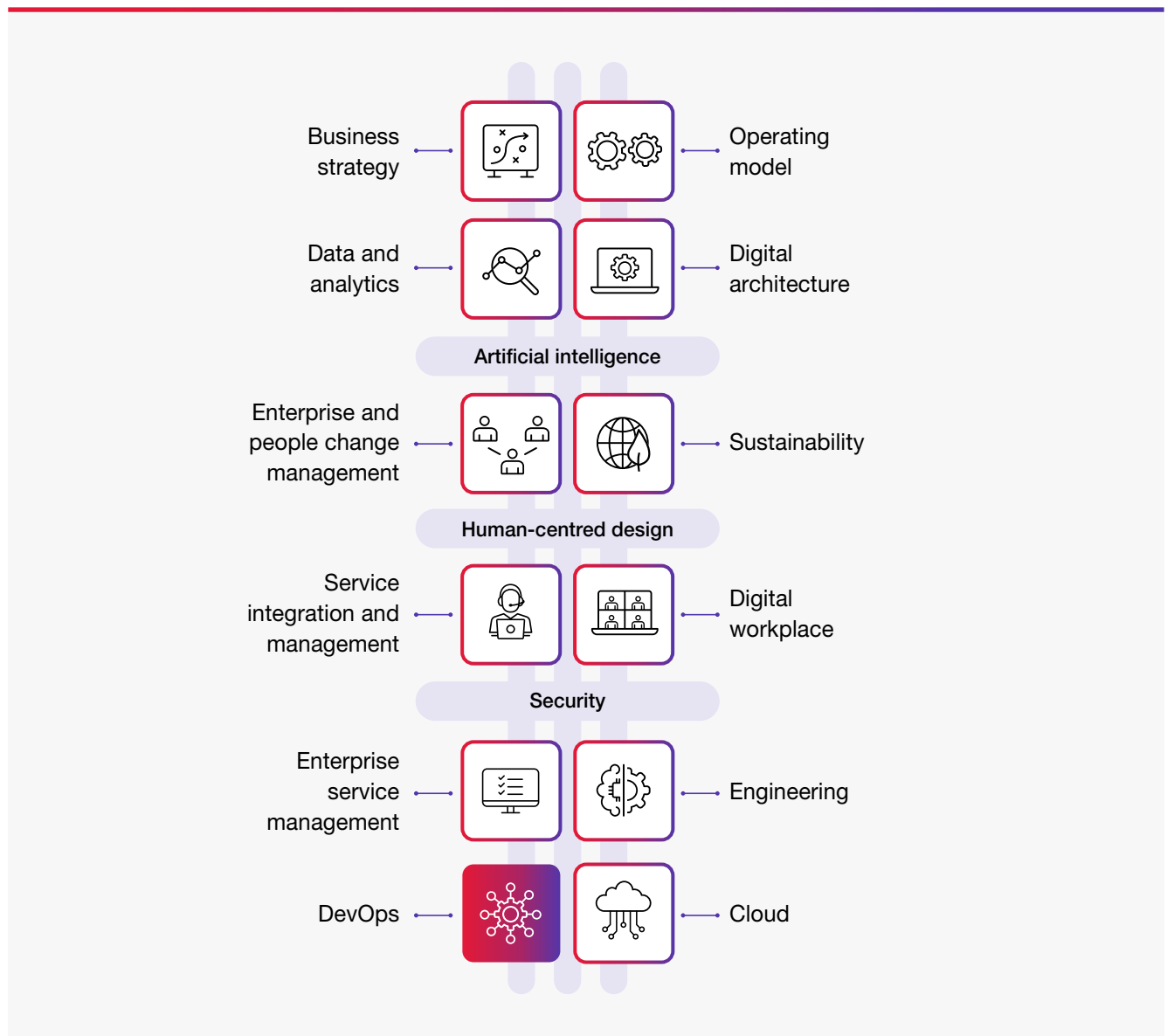
Our end-to-end framework that will make IT the enabler of your success

The Digital Backbone delivers twelve fundamental building blocks to inspire digital transformation and unlock your organisation's full potential. These can be implemented either individually or as a whole programme, with every step strengthened by three embedded enablers – artificial intelligence, human-centred design and security – so no matter where you are on your journey, the Digital Backbone provides a comprehensive vision for your transformation strategy.

That's why we made DevOps a key component of the Digital Backbone. As a practice that accelerates application and infrastructure delivery, DevOps

empowers your organisation to stay agile, collaborate more effectively, and respond swiftly to market demands.

By integrating our DevOps best practices, you can streamline processes, reduce manual errors, maintain security, and foster innovation through continuous integration and automation. You'll not only accelerate delivery, but also enhance quality and operational efficiency for your organisation's ongoing success.



Preparing for your DevOps journey

While DevOps offers significant benefits, the path to implementation is not without challenges. These obstacles, when anticipated and addressed, can be navigated to ensure a smooth transition.

Successfully implementing DevOps requires more than adopting new tools. It demands a cultural shift, the right governance, and a commitment to continuous improvement. Organisations therefore often struggle to build cross-functional teams and align them with agile principles, which are essential for achieving DevOps success.

Here are some of the key hurdles you may encounter:

- **Cultural change:** One of the biggest challenges is overcoming resistance to change. Employees may be accustomed to established processes and struggle to adapt to new ways of working. Breaking down silos and fostering effective communication and collaboration across teams is crucial for success.
- **Skills gaps:** DevOps requires a “build to operate” mindset, closely linked to agile principles. Many teams may lack experience with these principles. DevOps practitioners must not only be technically proficient but also skilled communicators who can work closely with developers, architects, scrum masters, and other stakeholders.
- **Tool chain:** The abundance of tools in the market can lead to poorly integrated systems, which creates inefficiencies. With so many options, teams often struggle to choose the right tools, and conflicting opinions can hinder progress.
- **Balancing speed and security:** The pressure to add new features, capabilities, and fix bugs quickly can conflict with the need to maintain strong security practices. Ensuring security is embedded throughout the DevOps pipeline (DevSecOps) is essential but can be difficult to balance with rapid delivery.



By acknowledging these challenges and preparing your teams, you'll be better equipped to overcome them and successfully implement DevOps in your organisation.

A vision for DevOps transformation



Accelerate application and infrastructure change with seamless collaboration between development and operations teams, enhancing agility and delivering higher service quality.

In a rapidly changing digital landscape, DevOps plays a crucial role in helping businesses respond quickly to market demands. By adopting a DevOps culture, you can foster innovation, break down silos, and ensure continuous improvement across all stages of development.

But it's not an overnight transition. It requires time to adapt, upskill, and embed new ways of working, including lean, agile, SAFe principles, and DevOps practices.

The key steps

To successfully implement DevOps, it's essential to:

- Break down silos and promote a culture of continuous improvement.
- Collaborate openly with your product teams to transfer knowledge and enhance working practices across the entire software development lifecycle.

We recommend you spend time understanding and embedding the key stages of the DevSecOps lifecycle:

- 1 **Continuous development** – Enable faster development cycles through iterative processes.
- 2 **Continuous integration** – Merge code changes to catch issues early.
- 3 **Continuous testing** – Automate testing to ensure quality.
- 4 **Continuous monitoring** – Track performance and health in real-time.
- 5 **Continuous feedback** – Build feedback loops for ongoing improvement.
- 6 **Continuous deployment** – Automate release processes for speed and reliability.
- 7 **Continuous operations** – Maintain optimised infrastructure for high availability.

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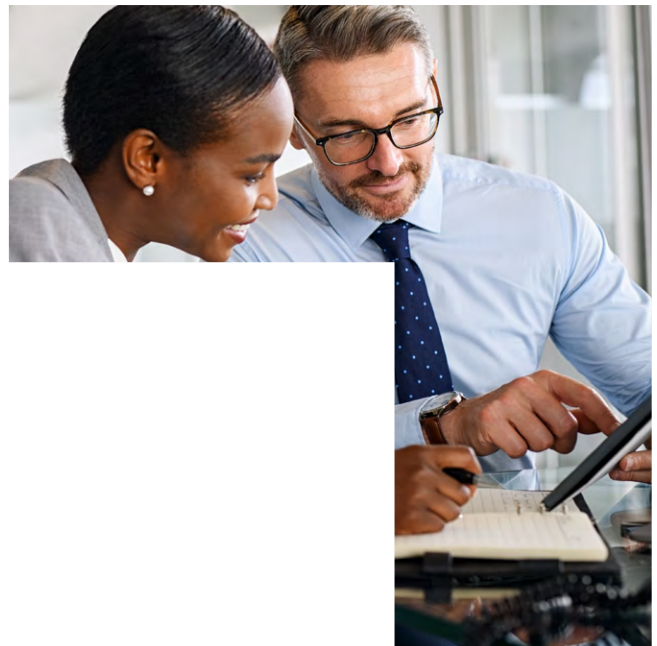
Built over 50 years, CGI is one of the world's largest providers of high-end IT and business consulting services. We are trusted to transform organisations with innovative solutions, so developed our Business Consulting and Advisory (BC&A) team to share our knowledge and experience with you.

Offerings to support your organisation

Wherever you are on your transformation journey – whether you're looking to develop a forward-thinking business strategy, improve the effectiveness of specific processes, or implement an innovative solution – we're here to help.

We understand that transformation isn't simple. That's why **our experts developed all our BC&A offerings around the Digital Backbone's twelve key propositions**, embedding artificial intelligence, human-centred design and security throughout to support you with the right approach and solutions to address your challenges, achieve your ambitions and build your own digital backbone capability.

Whether you'd like to build a complete digital backbone that will become the cornerstone of your growth, or if there's one specific area standing in the way – perhaps that's DevOps – we have the offerings and solutions to ensure your transformation project succeeds.



Our DevOps offerings include:

- **DevOps organisational transformation:** We'll guide your organisation through the cultural and operational shifts needed to adopt DevOps, helping to foster collaboration, break down silos, and create a continuous improvement mindset across your teams.
- **DevOps engineering services:** Our expert engineers deliver end-to-end DevOps solutions, from automation and continuous integration to infrastructure optimisation, enabling faster, more reliable software delivery at scale.

BC&A places you at the heart of our offerings. We work to understand your unique challenges and opportunities – whether you require strategy development, or solutions design and implementation – and we'll guide you every step of the way.

Our teams cover a range of sectors such as higher education and healthcare, as well as specialist areas including business consulting, technical advisory, service management, and sustainability.

We remain supplier agnostic, but also have teams designated to our **strategic alliances** with the likes of Microsoft, ServiceNow, Google, Dell, NetApp (and more), enabling us to design you the right solutions, working with the right partners to deliver the best outcomes.

So whatever your specific requirements, challenges or industry, with BC&A's breadth of knowledge and experience, we'll empower you with a team that is hand-picked to enable your success.



To find out more:

Explore the Digital Backbone and its twelve key propositions in more depth on [our webpage](#). Fill in [this short form](#) and we'll be in touch to discuss how our DevOps offerings or our overarching Digital Backbone framework can support your specific needs.



About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

cgi.com/uk/digital-backbone

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