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Digital Innovation

BENCHMARK REPORT

DIGITAL INNOVATION:

What's Holding You Back?

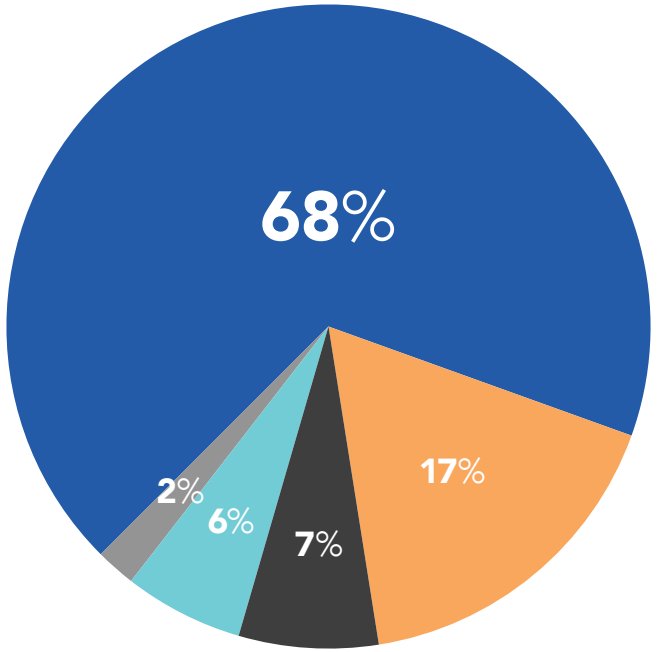
When it comes to successfully navigating the multifaceted arena of digital innovation, there is no single strategic approach. But, when it comes to the barriers to digital innovation, several common themes emerge.

At its core, digital innovation is the application of new technologies to existing business problems or processes. Research has consistently shown that the scope and scale of digital innovation has grown exponentially over the last decade.

Yet, despite the technological advances of our time, digital innovation consistently faces a relatively short list of observable hurdles.

We surveyed 140 technologists about their organizations' approaches to digital innovation.

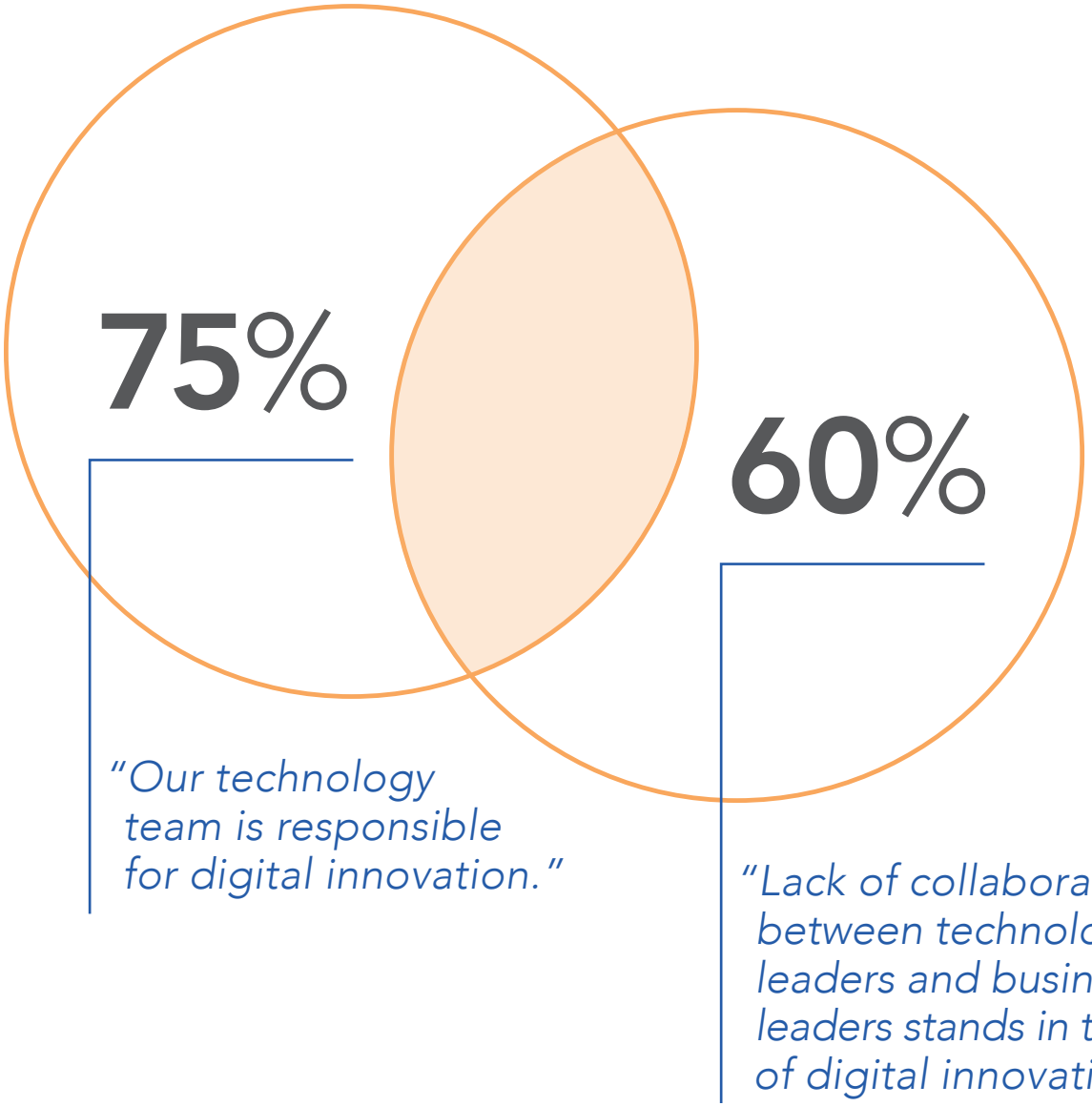
This report outlines their responses to questions regarding digital-innovation obstacles and goals, as well as the outcomes their organizations wish to achieve through investments in digital innovation.



SURVEY PARTICIPANTS

Software Engineers	**68%**
IT Management	**17%**
IT Operations or Support	**7%**
Executive Leadership	**6%**
Project Management	**2%**

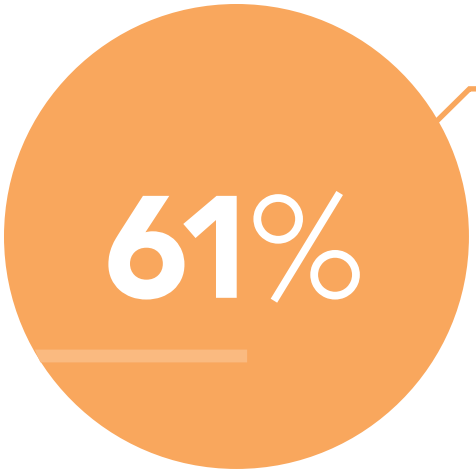
Within your organization, who is responsible for digital innovation?



According to our survey, most technologists believe that digital innovation is the responsibility of the technology team. Many also indicated that collaboration with departments outside of tech is essential to success.

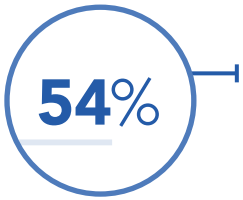
However, more than half of respondents said that lack of collaboration stands in the way of digital innovation.

What is the primary roadblock to digital innovation within your organization?

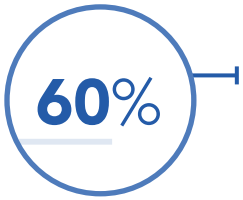


"Legacy technology systems stand in the way of our digital innovation."

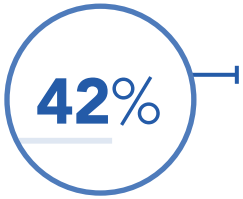
Other barriers to digital innovation include:



Keeping up with the demand for new application development



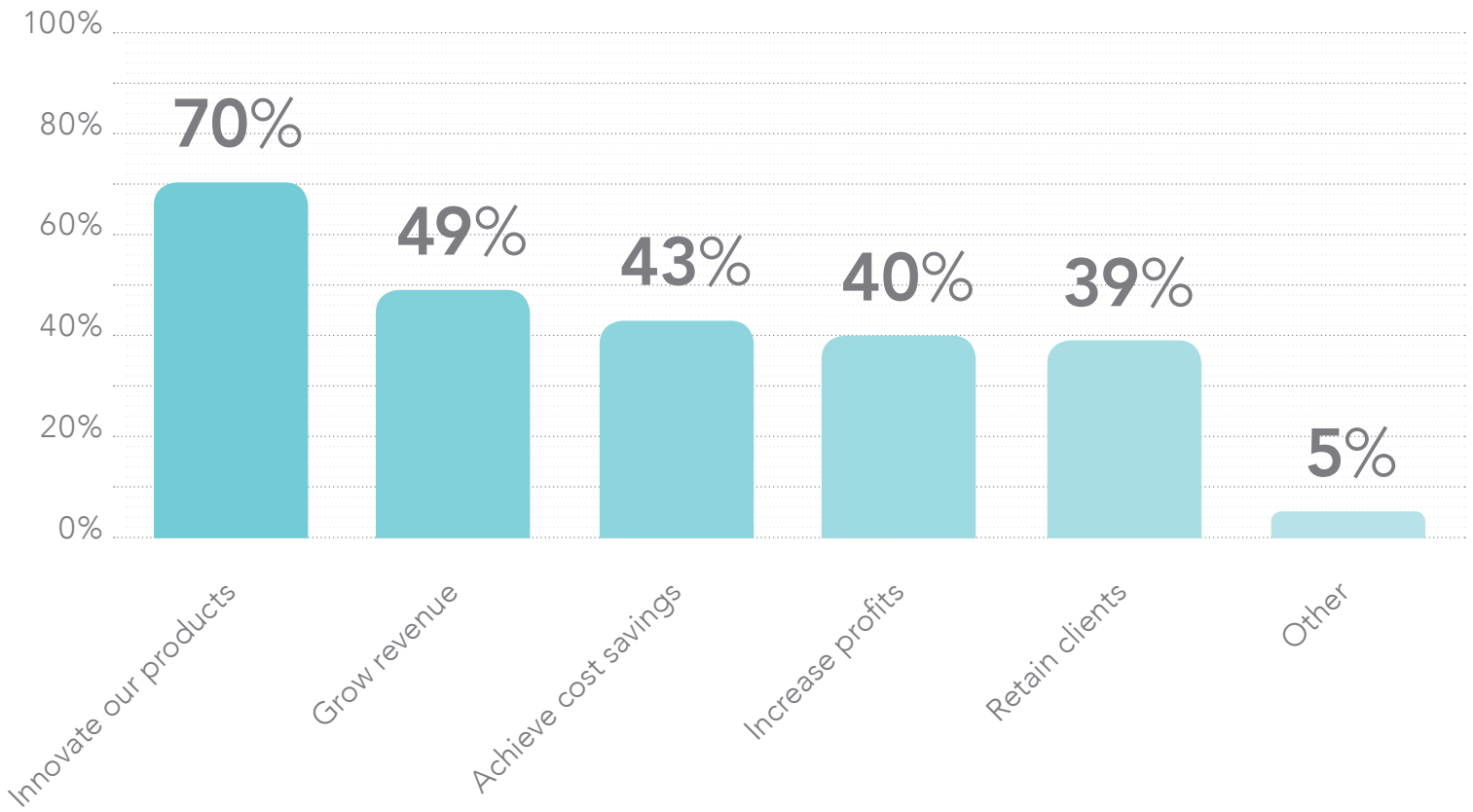
Lack of cross-functional collaboration within the business



Difficulty justifying ROI of digital innovation initiatives

Despite efforts to improve system standards used in enterprises, a significant number of technologists are still tethered to outdated applications for some of their most critical business functions.

When considering investments in digital innovation, what are your key business objectives?



70% of participants see investment in digital innovation as a means to product innovation. Revenue and profitability are generally seen as secondary priorities.

Although this survey cannot establish cause-and-effect assumptions, it is reasonable to hypothesize that many technologists see product innovation as the key driver of growth.

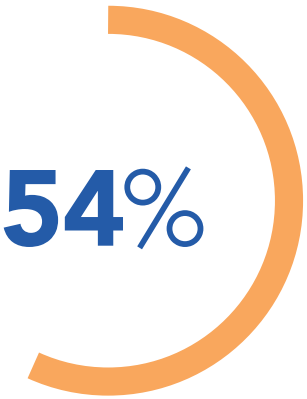
When considering investments in digital innovation, what are your technical objectives?

TOP PRIORITIES

Faster time to production

Improved application quality

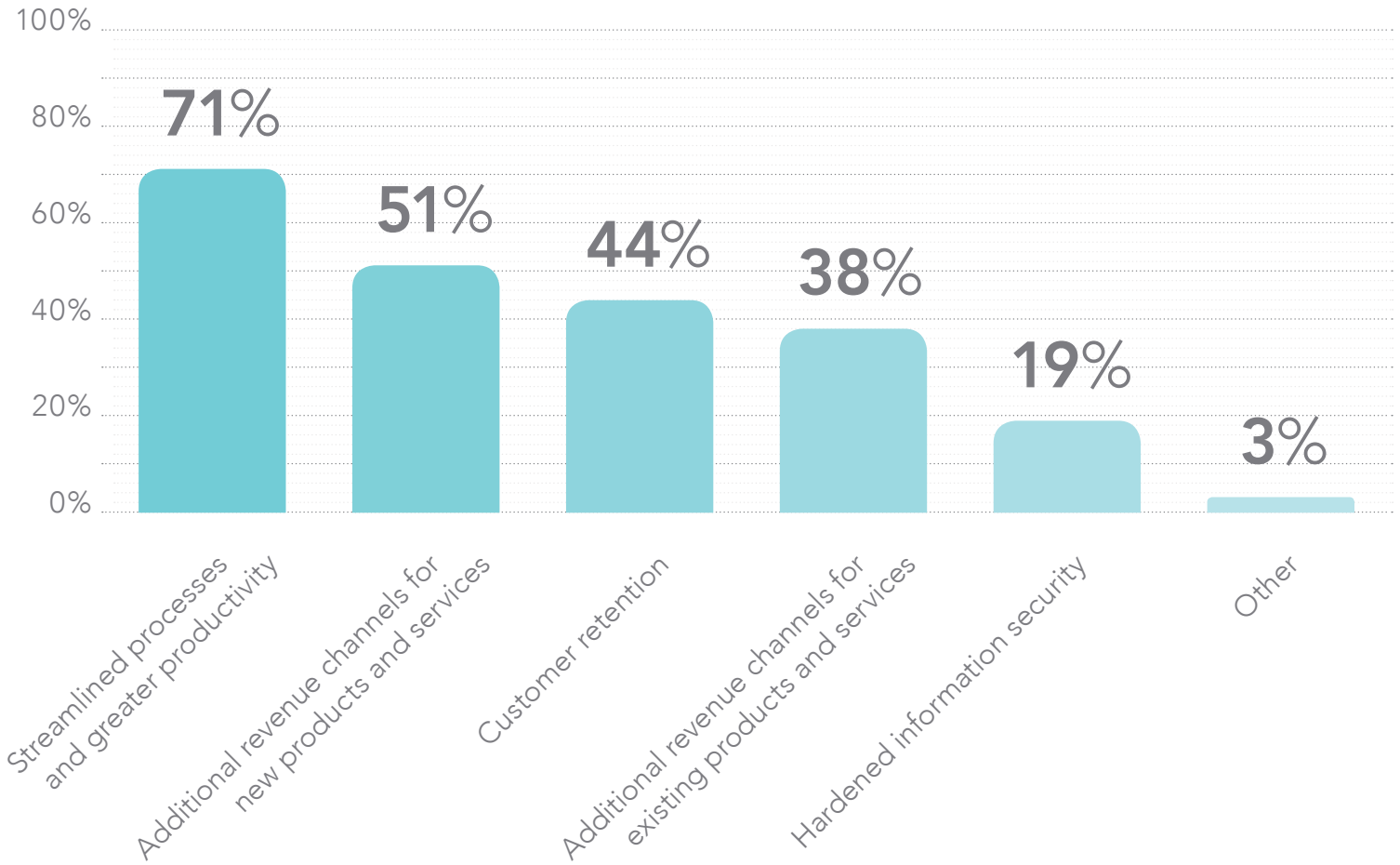
Shorter development cycles



The integration of software development with IT operations may accelerate the delivery of applications. Using this approach, companies are seeing increased productivity within their software-development teams, faster release of digital products and services, and improved customer experiences.

Speed is a top priority for technologists, challenges to digital innovation — outdated technologies, lack of collaboration, and keeping up with internal demand – notwithstanding.

When considering investments in digital innovation, what are your internal objectives?

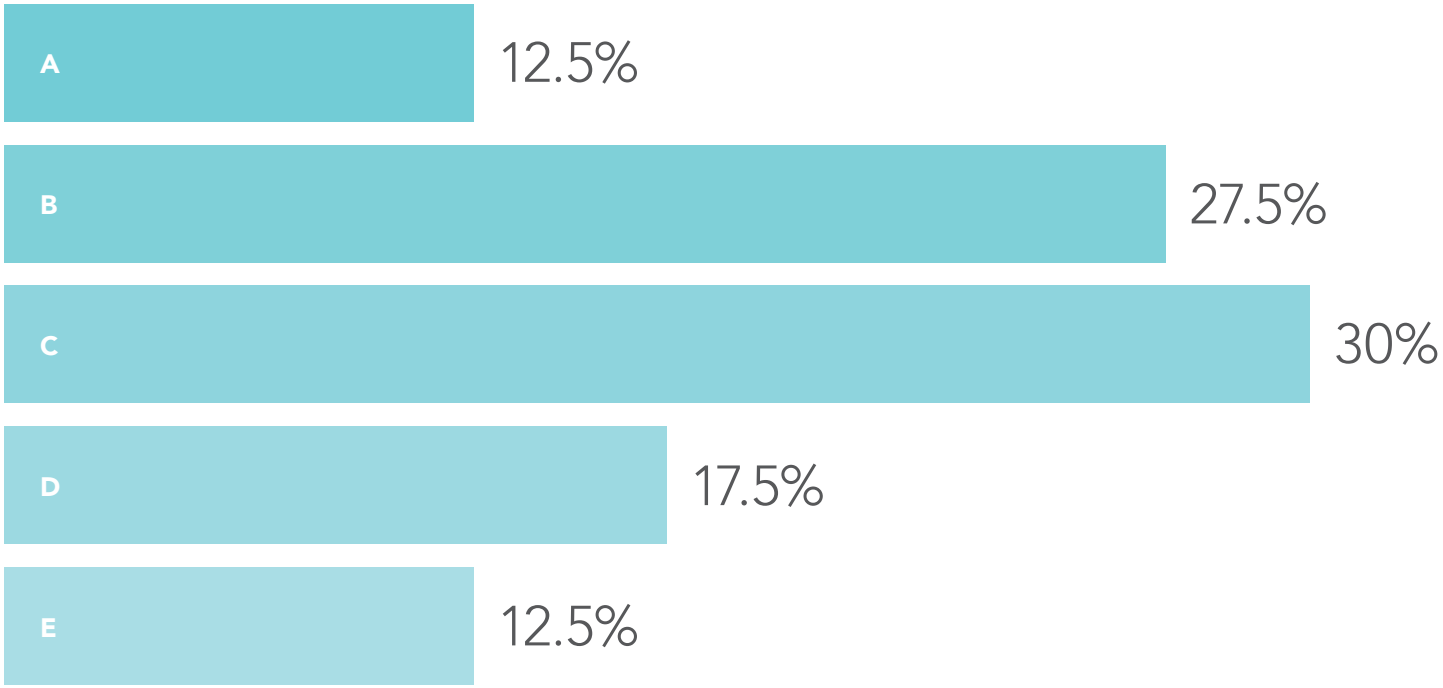


When considering investments in digital innovation, internal objectives are often focused on streamlining processes and increasing productivity.

Interestingly, a commonly held belief in the corporate world is that innovation is directly at odds with efficiency. Although either can produce economic growth, many business models are more attuned to efficiency than they are to innovation.

Innovation introduces risk and uncertainty with an indefinite outcome, whereas efficiency streamlines existing processes.

Describe the DevOps maturity of your organization.



A	We use DevOps practices, principles, and tools exclusively
B	We use DevOps practices and principles for more than half of our development deliverables
C	We use DevOps practices and principles for less than half of our development deliverables
D	We have not yet implemented DevOps practices and principles but we plan to do so
E	We have not implemented DevOps practices and principles, and we have no plans to do so

The value of implementing DevOps can be significant with respect to productivity and speed to market, but organizations still face barriers to adoption.

This could be because the integration of development teams with operational teams requires strong collaboration between business leaders and technology leaders — a commonly cited barrier to digital innovation.

OUR POINT OF VIEW:

Businesses Must Converge to Survive

As digitization consumes the enterprise, the lines between physical and virtual domains become less and less concrete. Successful business leaders are taking advantage of opportunities to "think outside of boxes" they never even realized existed.

Because these new strategies are unlike anything that's been tried before, the old ways of using software – productivity suites, single-purpose programs, proprietary platforms – are often no longer practical.

Businesses that wait for commercial software companies to build the digital tools they need from the ground up risk being left behind; those that converge with technology solutions built on existing foundations are more likely to realize rapid growth and success.

RECOMMENDATION:

Rather than relying on commercial, off-the-shelf software, make the move to open source solutions.

Advantages of open source solutions:

- Reduced investment and lead time required to drive digital innovation
- Ability to develop software and systems that truly fit the needs and goals of the business
- Rapid delivery of fully realized solutions, significantly boosting speed to market
- Flexibility to customize code over time, allowing for more agile and effective progress
- Elimination of vendor lock-in associated with commercial software

OUR POINT OF VIEW:

For a Competitive Edge, Innovate Incrementally

Our respondents identified speed to market and increased productivity as the main goals of innovation investments but identified legacy applications as barriers to success. A company can only expand as far as its tools and resources allow, and legacy technology systems are the prime culprit of prohibited growth and expansion.

RECOMMENDATION:

To help accelerate your development cycles, consider a microservices architecture pattern. A microservices architecture enables you to build large applications from multiple, individual services, each of which can be developed, tested, deployed, scaled, operated, and upgraded as a separate unit, allowing you to gain agility, reduce complexity, and scale your business.

Benefits of a cohesive microservice architecture:

- Increase in software speed through alignment of a system's services with the supporting organization's operational structure
- Elimination of unnecessary dependencies, resulting in services that can evolve at the pace business dictates
- Enhanced system efficiency through service cohesion and consequent reduction in the necessity for highly orchestrated message exchanges between components

See how microservices could benefit you.

About OCI

We deliver mission-critical software solutions that accelerate innovation within your organization and stand up to the evolving demands of your business. Our full lifecycle software engineering capabilities span multiple technology domains and are architected for superior quality, operational efficiency, extensibility, and adaptability.

OUR SERVICES

INDUSTRIAL IOT

We equip industrial environments with seamless connectivity and real-time analytics that reduce operating costs and deliver on customer demands. The threat of new market entrants demands software-led innovation. Our Industrial IoT solutions complement — or in some cases replace — legacy applications and infrastructure, delivering value directly at the edge.

BLOCKCHAIN CONSULTING

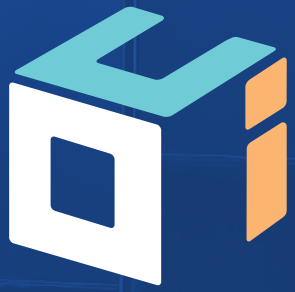
We are at the forefront of blockchain technology, and we have practical, real-world experience with its implementation. Our team of software engineers will work closely with you to build and implement a smart blockchain strategy. Our blockchain consulting services include architecture, development, testing, general consulting, and training.

MACHINE LEARNING

We can modernize your legacy applications and enable scalable, integrated AI capabilities that accelerate growth. Achieve new levels of operational efficiency with intelligent automation. Our machine learning solution portfolio includes image analysis, video analysis, and custom, predictive solutions tailored to your unique set of data.

CLOUD SOLUTIONS

We combine software engineering expertise with cloud-native architecture to accelerate innovation within your organization. Legacy infrastructure puts your business at risk from competitors who can swiftly scale their applications and introduce new market offerings. Our cloud solutions enable you with new levels of agility, resilience, security, and efficiency.



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