

Emerging Technologies: From complexity to continuity



**Artificial Intelligence (AI),
Machine Learning (ML) and
Internet of Things (IoT) adoption
has increased significantly**

**Most CIOs are driven to seek
business innovation whether
enterprises are initiating large
scale projects or proof of concepts**

**Organisations are struggling to
realise some business benefits
from emerging technology
implementations**

Organisations are adopting new technologies at growing rates but struggling to realise the benefits

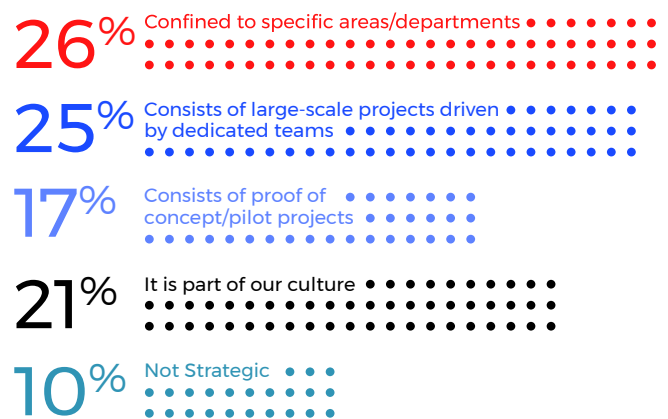
Emerging Technologies is the second report in our four-part series, evaluating the findings of Logicalis' Global CIO Survey. Logicalis' Global Survey is an annual study, now in its seventh year, which canvassed the opinions of over 800 CIOs from around the world.

Our first report, *The Changing Role of the CIO*, revealed that as digital transformation sweeps through the industry, it's no longer enough for CIOs to solely focus on the day-to-day management of technology. Rather, a significant shift was noted in the priority and measurement metrics of the CIO; changing from reduction in IT costs, to contribution to revenue growth.

In our second report, we build on these findings and analyse the impact of emerging technologies on the business landscape. It appears that CIOs new roles have resulted in the adoption of new technologies and innovation. As such, it's important to note which innovations are successful and to what extent.

How organisations approach innovation is changing; a quarter (25%) of respondents say innovation within their organisation consists of large-scale projects driven by dedicated teams, suggestive of an organisational willingness to evolve and an openness to new technologies.

Which best describes your organisation's approach to innovation?



According to Forbes, businesses depend on technology to remain competitive. It impacts every point of a business and as a result, technology projects are getting larger by the day.

90% of CIOs claim to have a strategic innovation process in place. The fact that so many have an innovation plan is testament to the importance CIOs are placing on innovation, and implicit within this is the adoption of emerging technologies such as IoT, AI and ML.

In with the new

The adoption of emerging technologies to drive business innovation is a major thrust for enterprises, with perceived business benefits being the main driver according to half (50%) of respondents. Yet despite wide-scale testing and usage of advanced technologies, many organisations are failing to realise the benefits in some areas of business according to our survey.

The results reveal that 61% of organisations are now using Internet of Things (IoT) technologies, while 41% of respondents have implemented AI in some way – double that from our 2018 survey. Despite this, only one in ten (9%) respondents believe their organisation has been successful in reaping the rewards of AI technology to enhance customer service, while 44% believe their organisation is not very successful at all.

9%

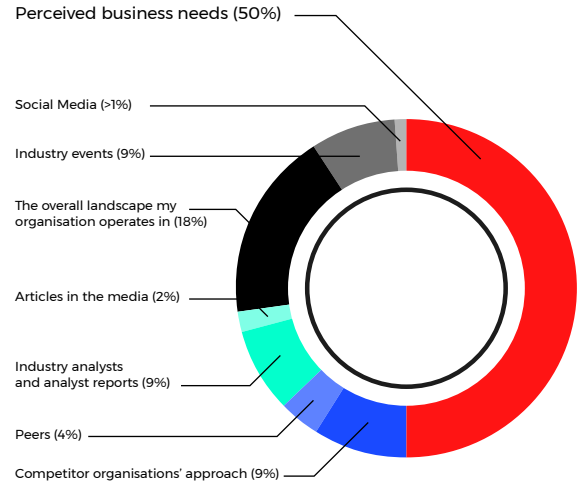
OF CIOs BELIEVE THAT THEIR ORGANISATION IS VERY SUCCESSFUL AT REAPING THE ADVANTAGES OF AI TECHNOLOGY TO ENHANCE CUSTOMER EXPERIENCE.

Customer experience has become a crucial differentiator for global organisations. According to a recent IDC report, the worldwide spending on customer experience will reach \$641 billion by 2022 with AI-driven engagement being one of the use cases that will see the fastest spending growth over the next 5 years.

The fact that AI will stimulate an increased spending growth in the next few years was reflected in our survey. When asked which emerging technologies will impact the business in the next 2 years, over half of respondents (60%) think AI will have the biggest impact, followed by ML (56%) and IoT (48%). CIOs understand the influence of AI and are therefore eager to invest in this emerging technology. Surprisingly, just less than half (43%) of CIOs believe that 5G will have a significant impact on the business.

Given that the new networking capacity will provide the foundation for the success of many new technologies suggests that currently many enterprises are looking at relatively small emerging technology projects which don't require a lot of bandwidth. However, these are likely a steppingstone for much larger projects.

What influences you/your organisation most when it comes to innovation?



Internet of Things

When we look exclusively at IoT, the promise of enhanced real-time performance monitoring, inventory management and efficient facilities management is driving CIOs adoption of the technology.

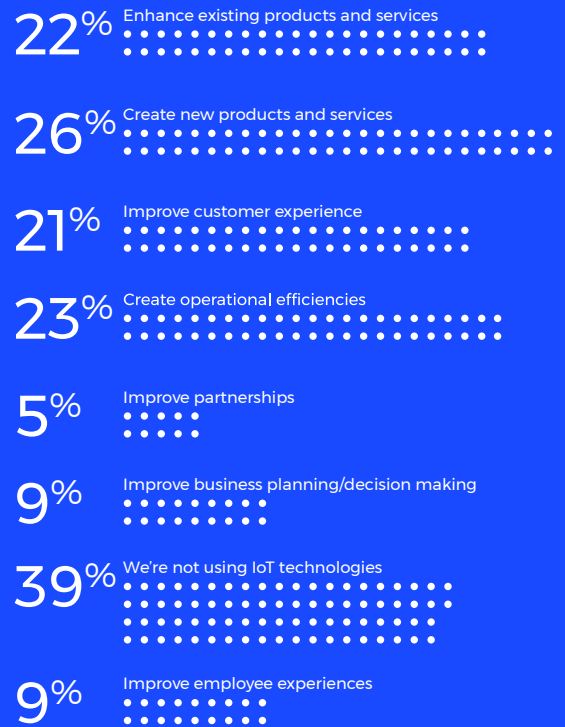
Almost two-thirds (61%) of businesses are now using IoT technologies, a 33% increase on last year's survey that demonstrates how commonplace the technology is becoming. Although we have witnessed a significant increase in the number of organisations using IoT, a high number (39%) of businesses are still yet to implement this technology.

Our results show how IoT technologies are being used by organisations to improve numerous different business processes. The most common uses are for creating new products or services (26%), creating operational efficiencies (23%), enhancing existing products (22%) and improving customer experience (21%).

However, just under half of respondents say their organisation is unsuccessful at realising the benefits from IoT within a range of departments including marketing and sales (47%), finance and operations (46%) and customer service (44%).

While IoT certainly has potential to deliver increased efficiency and optimised processes, the success rate highlighted by respondents is alarmingly low, suggesting that CIOs are struggling to come to terms with the complexity of implementing and managing IoT projects.

Are you currently using IoT technologies to do any of the following?



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We advise businesses in the retail industry to implement IoT. Using the technology in inventory management will allow brands to understand exactly what stock they have and locate it.

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In the public sector we believe IoT can be used to monitor and manage the lighting environment in the local government. In turn, smart lighting will deliver operational efficiency to identify lights that are about to fail and optimise the maintenance for replacement.

We are supporting condition monitoring in manufacturing. Factories are using IoT to monitor the performance of critical assets and automatically highlight when they are not performing optimally which will allow more efficient maintenance and reduce downtime.

Artificial Intelligence & Machine Learning

AI and ML are two emerging technologies that are making significant inroads into the enterprise. The survey found that 60% of respondents believe AI is going to be one of the technologies to have a significant impact on businesses in the next two years followed by ML (56%). The predicted influence of AI and ML is understandable given the enormous potential of both.

While ML is an application of AI, both are built on providing machines with access to data which they learn to use for themselves. Both promise to enable the automation of time-consuming, inefficient processes, increasing overall productivity.

Over the last 12 months, the number of organisations using AI in some areas of business has more than doubled. Our 2019 survey found that 41% of companies have implemented AI to some extent compared to only 19% last year. However, it seems that for many, the business benefits across different departments are not being realised.

For instance, almost half (47%) of respondents say existing deployments are seeing very little success in marketing and sales, 46% in finance and operations, 44% in customer service and 42% in product service and information.

Alternatively, if we look exclusively at success rates; the figures are alarmingly low. Less than one in ten (9%) see the success in customer service and only 29% of CIOs acknowledge their organisation is realising the benefits in their marketing and sales department. Additionally, a quarter (25%) of respondents say their organisation understands the benefits in product service & information and 23% of CIOs claim positive results in finance & operations.



When we look at the traditional back office operations including IT, data governance, information security and compliance, and general enterprise security, it is a similar story.

35% say they are failing to see much success in IT, 40% in information security and compliance, 46% in data governance and 49% in general security.

Success rates in these areas are also low with only 23% claiming positive results in data governance, 28% in information security and compliance and 25% in general security.

These results show a clear split between how CIOs view their organisation's stance on AI and ML. Take marketing and sales for example. Almost half (47%) believe their organisation doesn't realise the business benefits of emerging technologies while 29% believe they do understand the advantages.

Logicalis has implemented an AI solution for National Cheng University in Taiwan. We have designed and deployed an AI-enabled, cloud-based virtual learning platform for professors to develop a variety of ML models and to provide AI courses.

Conclusion

The cumulative results of the Logicalis 2019 Global CIO Survey reveal a clear pattern. More enterprises are turning to emerging technologies such as IoT, AI and ML, as these technologies have the potential to shrink the gap between customer data and actionable insight, providing a strong competitive advantage to businesses that choose to invest in them.

However, the survey results clearly show that organisations aren't understanding the business benefits of these technologies in some departments.

To an extent, the fact that organisations are not realising the benefits in some areas of the business is understandable. Depending on how CIOs approach the use of emerging technologies they can be faced with a complex landscape often characterised by overwhelming management difficulties which hinders overall success. In short, it's easy to get lost in the complexity.

However, the key to successful implementations is to create key performance indicators that are like milestones on the way to meeting top line objectives; reducing complexity, aiding management and leading to company-wide participation, as what was previously difficult becomes easy.

Working with a respected third-party, that has successful experience in emerging technology implementations, can help organisations with their digital transformation roadmaps, enabling them to make the best use of AI, ML and IoT and deliver quantifiable success.



About

Logicalis

Logicalis is an international solutions provider of digital services currently accelerating the digital transformation of its 10,000 customers around the world.

Through a globally connected network of specialist hubs, sector-leading experts (in education, financial services, government, healthcare, manufacturing, professional services, retail and telecommunications) and strategic partnerships (including Cisco, Microsoft, HPE, IBM, NetApp, Oracle, ServiceNow, and VMware), Logicalis has more than 6,500 employees focused on understanding customer priorities and enhancing their experience.

As Architects of Change™, Logicalis' focus is to design, support, and execute customers' digital transformation by bringing together their vision with its technological expertise and industry insights. The company, through its deep knowledge in key IT industry drivers such as Security, Cloud, Data Management and IoT, can address customer priorities such as revenue and business growth, operational efficiency, innovation, risk and compliance, data governance and sustainability.

The Logicalis Group has annualised revenues of \$1.7 billion, from operations in Europe, North America, Latin America, Asia Pacific, and Africa. It is a division of Datatec Limited, listed on the Johannesburg Stock Exchange, with revenues of over \$4.3 billion.

For more information, visit <https://www.logicalis.com/>

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