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Business and technology working as one

Logicalis Global CIO Survey 2017–2018

Simplify, secure and engage: CIOs say massive infrastructure overhaul must be coupled with culture change if organisations are to unlock the benefits of digital transformation

A research paper from Logicalis based on a global study of CIO pressures and priorities

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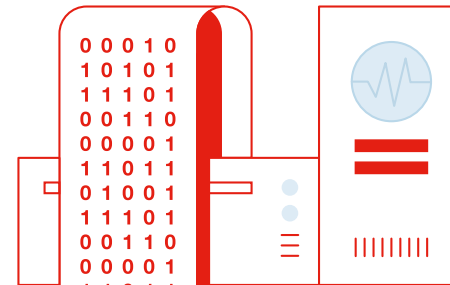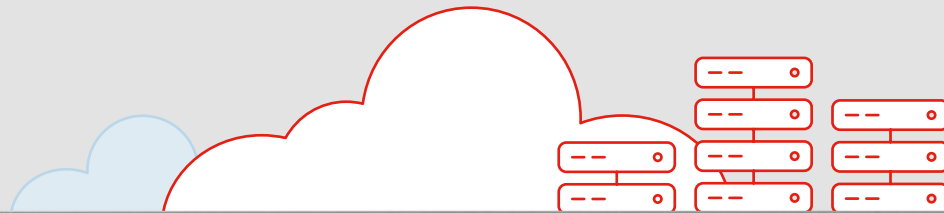
In summary

This report details key findings from the fifth annual Logicalis Global CIO Survey, which seeks to assess the role of CIOs and IT departments in driving the digital transformation of business.

This year, we draw on a survey of 890 CIOs in 23 countries to take a critical look at that transformation – how quickly and effectively it is taking place, the barriers to progress and the steps CIOs are taking to overcome them.

The benefits of digital transformation are clear to the majority of CIOs.

As we have established over the last four years, there is clear appetite for change: CIOs want a more strategic role – freedom from day to day management and a chance to transform the relationship between business and IT.

Indeed, only 11% of CIOs surveyed say that 'no desire to transform' was a barrier to digital transformation in their organisation (fig. 2).

They understand that digital opens up a wealth of possibilities – from new customer interfaces and experiences to greater operational efficiency. And they see that those able to derive actionable insight from analytics that seamlessly harnesses market, customer, operational and financial data will be first to market with new products and services, enhanced customer experience – even new business models.

But most CIOs still spend most of their time keeping the lights on.

They are discovering the scale of the transformation challenge – that complex legacy architecture, with an organisational culture to match, makes for a very wide turning circle.

Put that in the context of a world of constant change – market turmoil, a rapidly evolving cyber threat landscape – and it is easy to see why the focus remains largely on keeping the lights on.

In the meantime, an ever-increasing demand for new apps and services from line of business colleagues, along with the need to adapt to trends like Internet of Things (IoT), forces a pragmatic approach to digital. The resulting piecemeal transformation creates islands of digital that do not deliver benefits on the same scale as true digital enablement.

In short, CIOs are caught in a tricky situation: They are buffeted by change rather than shaping it – and it is their struggle to maintain the status quo that does most to prevent meaningful progress towards their transformation goal.

CIOs have big plans but many will be forced to look outside for help.

This year's survey finds CIOs in a determined mood, however – with big plans to overcome these challenges and unlock the benefits of digital transformation:

- More than half plan to simplify and streamline existing IT infrastructure, to overcome the barriers created by legacy technology

- A similar proportion plan to work with line of business colleagues to engage the wider business, acting as ambassadors for digital transformation, in an effort to drive organisational change

- A significant number will invest in security, training and development

That said, just 33% plan to increase digital transformation *budgets*, so it is hard to see how those plans can be realised without calling on external help – trusted partners able to simplify technology and take on the heavy lifting of day to day management.

Over the last five years, however, CIOs have reported only marginal moves in that direction. Despite a long held desire to increase reliance on third parties, the majority of IT remains on-premises and managed in-house – and CIOs still report big barriers to increased cloud services adoption.

It will, therefore, be interesting to see how that picture changes over the next twelve months given CIOs' plans to streamline, simplify and secure – and be makers, not managers, of change.

"Change is now the norm. Just as we set a course based on our understanding of the technology landscape, that landscape changes. CIOs must accept that change is constant and work out how to get on the front foot – to shape change rather than being governed by it."

Mark Rogers, Chief Executive Officer, Logicalis Group

Big Picture: Digital Transformation

Progress, barriers and keeping the lights on.

CIOs as change *makers*, not change managers

When it comes to delivering digital transformation, the headline is one of scant progress.

"A holistic and adaptable architecture for change should be a prerequisite for CIOs. A piecemeal approach to transformation, while well intentioned, will result in the same challenges currently being posed by legacy infrastructure."

Rodrigo Parreira, CEO Logicalis Latam

Overall, the classic bell curve we identified in 2016 remains, but fewer CIOs characterise their organisations as 'entirely digitally enabled' – as, perhaps, the scale of the transformation challenge becomes clear.

Compared with 2016 (fig. 1):

- Just 5% classify their organisations as 'digital innovators' (down from 6% last year)

- Fewer see their organisations as early adopters (19%, down from 22% in 2016)

- The proportion giving their organisations a middling score, characterising themselves as part of an early majority is up to 49% from 45%

- Around a quarter still put their organisations in the late majority or laggard category

This is a story of limited progress. As we explore in the 'In Focus' section of this report, CIOs are delivering islands of digital transformation – driven by pragmatism more than strategy. That is, the joined up, strategic transformation that delivers the true value of digital remains elusive.
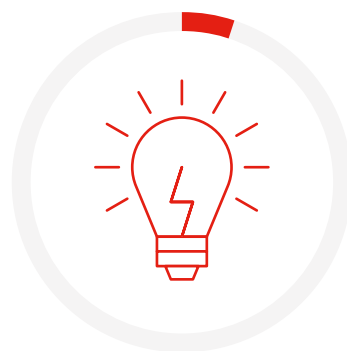
5%

Just 5% of CIOs see their organisations as 'digital innovators'.

Fig.1: On a scale from 1 to 5, where 1 is 'entirely enabled' and 5 is 'not enabled at all', rate the extent to which you feel your organisation is 'digitally enabled'?

Scale	2016	2017
1	6%	5%
2	22%	19%
3	45%	49%
4	22%	23%
5	5%	4%

2016   2017
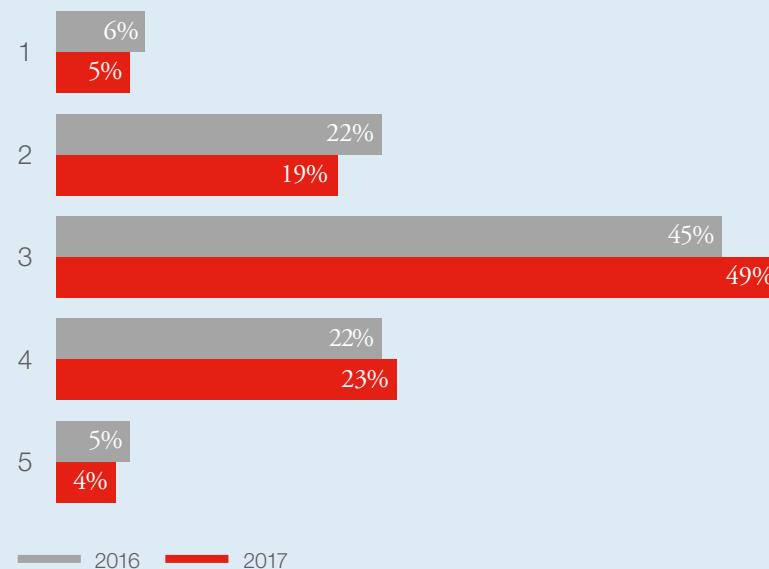
CIOs point to complexity, cost, culture, skills and security as the main barriers to digital transformation.

"There is a need for cultural change as organisations respond to the changing digital environment. This can be more challenging than product innovation or process transformation, but it will deliver superior and sustainable returns."

Vince DeLuca, CEO Logicalis US

Unlike their counterparts in digital start-ups, most CIOs do not have a blank sheet of paper. Digital transformation must be viewed in the context of complex, inflexible legacy infrastructure that is time consuming to maintain and ever more complicated to secure.

On top of that, legacy technology brings with it a legacy relationship between business and technology – an organisational culture that sees technology as an operational element of the business rather than a pervasive, strategic fundamental.

All this is borne out by CIOs' responses when asked about the barriers to digital transformation. Overwhelmingly, CIOs point to legacy and/or complex infrastructure, organisational culture and security – plus consequent issues like cost and skills – as the key barriers.

Legacy technology brings with it a legacy relationship between business and technology.
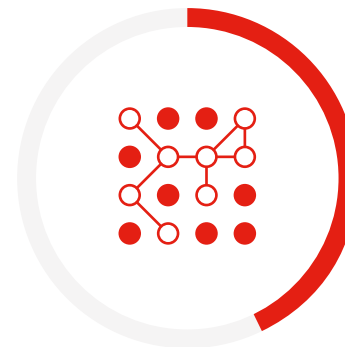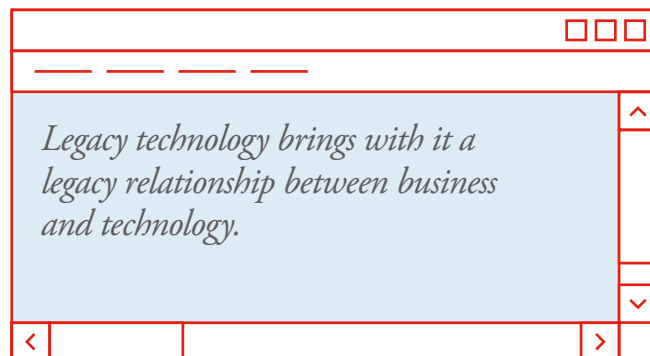
44%

of CIOs believe complex legacy technology is a main barrier to digital transformation.

Fig. 2: What are the main barriers to your organisation's digital transformation?

44% Large and /or complex legacy infrastructure

50% Cost

56% Organisational culture

34% Skills

32% Security

11% No desire to transform

7% N/A
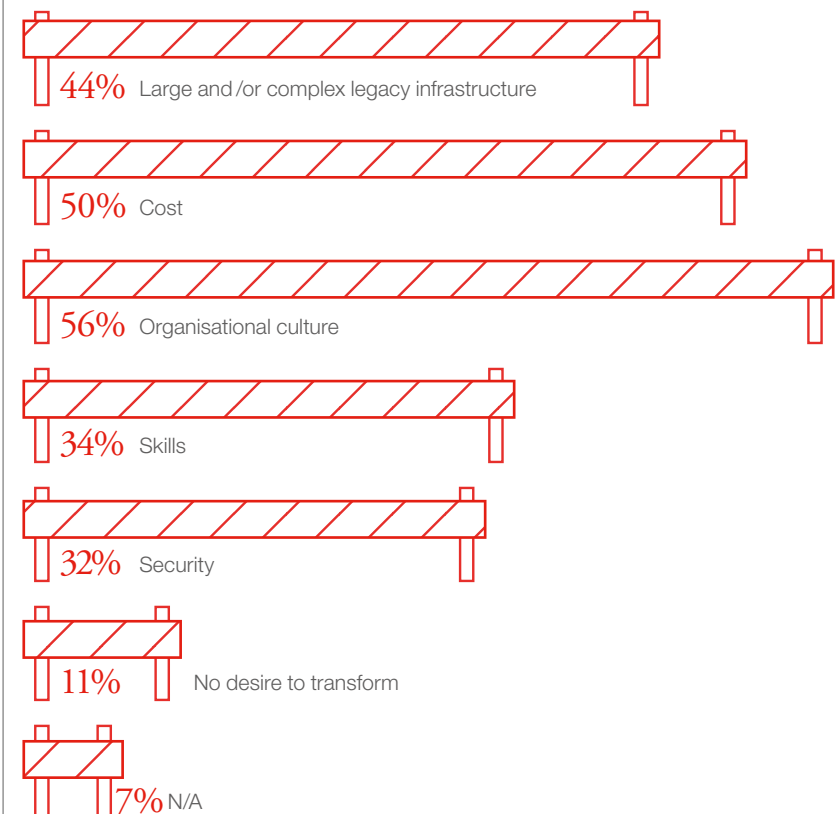
In an ever-evolving threat landscape, security concerns have a disproportionate impact on IT innovation.

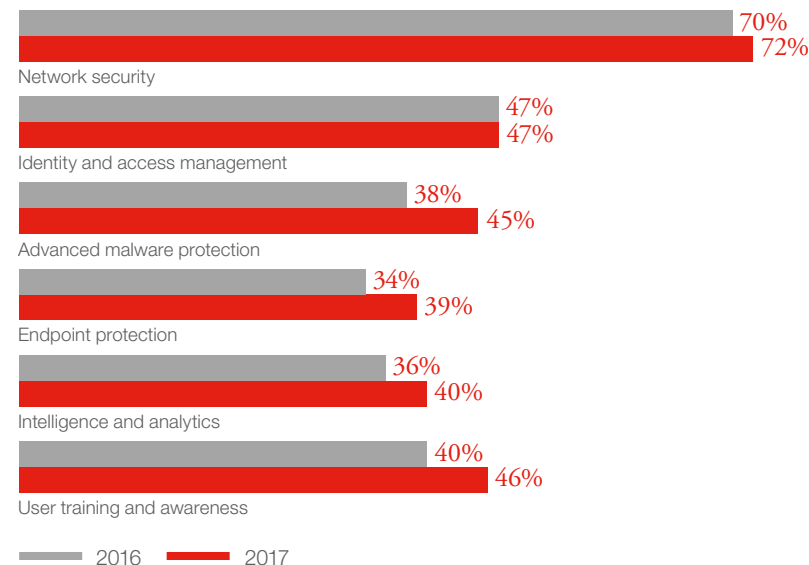*"Every organisation, in every market is under relentless, systematic attack from an increasingly sophisticated community of professional hackers. The only effective approach to security is holistic and architectural – one that is manageable, adaptable, resilient and responsive."*

Ricky Magalhaes, Head of Offshore Security (MSS), Logicalis Channel Islands

Ally the complexity of legacy infrastructure with the increasingly distributed, open nature of IT, and add the expanding array of cyber threats CIOs must defend against (fig. 3) – and it is easy to imagine security concerns bringing IT projects to a halt.

Indeed, CIOs' responses suggest that security is a key delaying factor when it comes to any IT project delivery, let alone digital transformation. A third of all CIOs questioned admitted that security issues or concerns had seen IT projects cancelled or halted (fig. 4).

Meanwhile, it is instructive to note that the dominant response amongst CIOs is to focus on securing the network (fig. 5). Once again, they are forced by external factors to focus on maintaining existing, legacy infrastructure, rather than on strategy and transformation.

A third of CIOs admit that security issues had seen IT projects cancelled or halted.

Fig. 3: Which of the following IT security threats do you think will pose significant risk to businesses over the next 12m?

	2016	2017
Increasingly sophisticated social engineering attacks	61%	58%
Ransomware and corporate extortion	56%	72%
Attacks targeting corporate systems and application vulnerabilities	52%	60%
Identity and credential hijacking	47%	43%
Malicious insiders	30%	30%
Ghostware concealed attacks evading forensics	28%	27%

Fig 4. Have security issues or considerations prevented or stopped new IT projects within your organisation?

33% Yes

67% No

Fig 5: Which of the following areas of security investment will be priorities for your organisation over the next 12 months?

	2016	2017
Network security	70%	72%
Identity and access management	47%	47%
Advanced malware protection	38%	45%
Endpoint protection	34%	39%
Intelligence and analytics	36%	40%
User training and awareness	40%	46%

▬ 2016   ▬ 2017

Security concerns, amplified by local data regulations, are also hampering efforts to streamline IT through cloud services adoption.

It seems obvious that CIOs finding their digital transformation plans hampered by complex, legacy IT could turn to cloud services for ready-made solutions.

SaaS, PaaS and IaaS providers could take over some of the heavy lifting, leaving CIOs with a streamlined and simplified infrastructure to manage, maintain and secure.

But here too security remains an issue for CIOs – it is still the biggest challenge for CIOs seeking to use cloud services (70% cite security as a barrier).

Now however, data security issues, along with considerations around data sovereignty, are exacerbated by concerns around local data regulations (fig. 6.) The fact that European CIOs are more likely to cite data regulations as a barrier (fig. 7) may well be driven by the imminent implementation of General Data Protection Regulation (GDPR) – an added complication for those attempting to deliver digital transformation.

70%
of CIOs cite security as a barrier to cloud services adoption.

Fig.6: What are the challenges facing your organisation, related to the increased use of using cloud services?
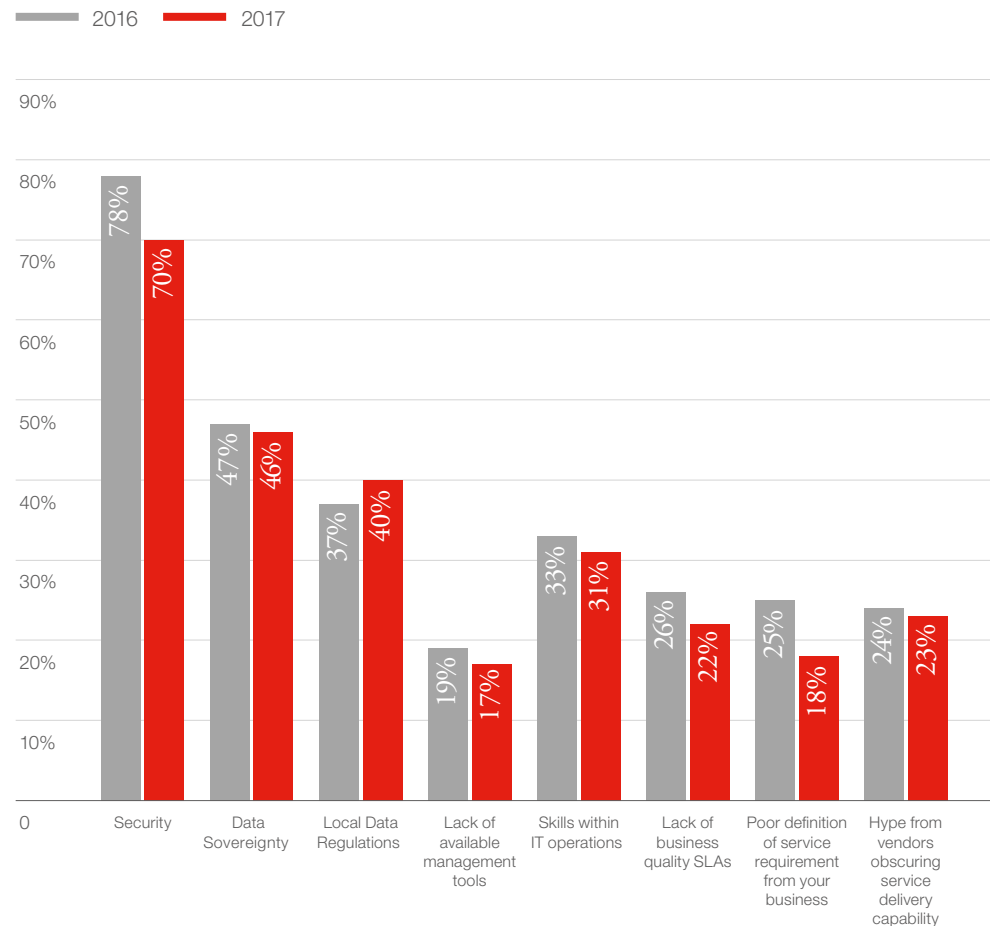
Legend: 2016 | 2017

Challenge	2016	2017
Security	78%	70%
Data Sovereignty	47%	46%
Local Data Regulations	37%	40%
Lack of available management tools	19%	17%
Skills within IT operations	33%	31%
Lack of business quality SLAs	26%	22%
Poor definition of service requirement from your business	25%	18%
Hype from vendors obscuring service delivery capability	24%	23%

Fig.7: Respondents citing local data regulations as a barrier to using cloud services
(APAC does not include Australia)

Region	%
Europe	55%
APAC	41%
Southern Cone	38%
Australia	30%
Brazil	27%
US	23%
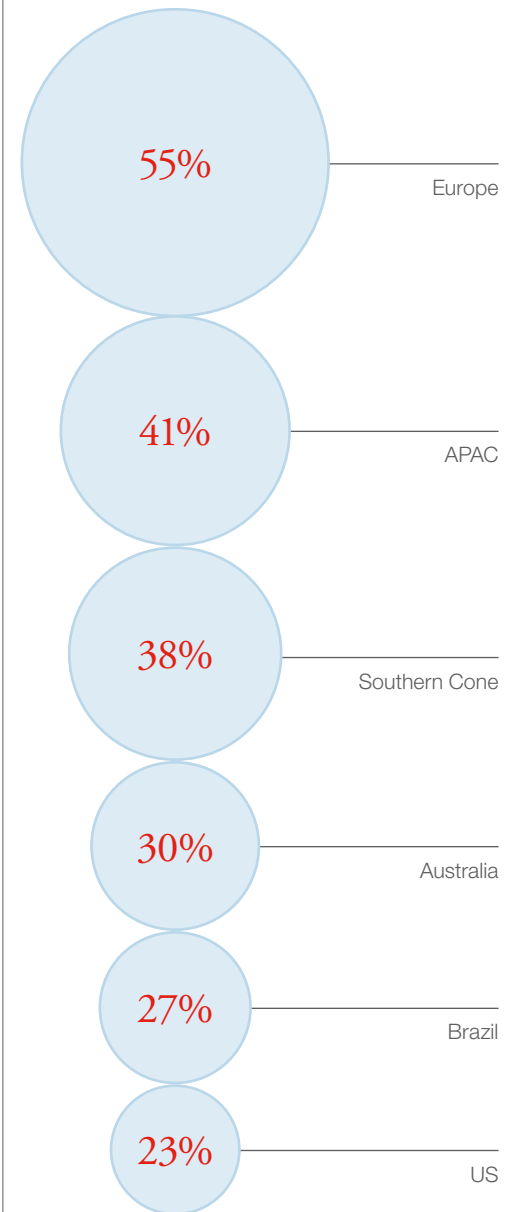
All this means CIOs are still spending too much time focused on keeping the lights on. There is precious little time for strategy.

The truth is, the vast majority of corporate IT is still hosted, managed and maintained in-house – and this situation has changed little over the last five years.

As in 2016, CIOs report a slightly greater reliance on outside help. But those outsourcing most of their IT (more than 50% outsourced) still represent a quarter of the sample (25% in 2017, 24% in 2016).

Meanwhile, the number outsourcing none or just 10% of their IT has fallen again – respectively, to 8% (9% last year, 13% in 2015) and 17% (19% last year, 26% in 2015).

However, as fig. 8 makes abundantly clear, the bulk of IT remains in-house.

This has significant consequences for the role of the CIO.

Despite a long stated desire to take on more strategic roles – in our 2013 survey most suggested they would like to spend 70% of their time on strategic activities – most CIOs remain focused on the day to day.

As figure 9 shows, the majority of CIOs spend between 60% and 80% of their time on day to day IT management, leaving little time for strategy – and still less to deliver the wholesale digital transformation that promises to unlock such rich rewards.

Today, CIOs are in essence, change managers – keeping the lights on and reacting to external issues like security, IT trends and demand for new capabilities and services.

Fig.8: Approximately what percentage of your IT is provided or managed by external service providers, including cloud
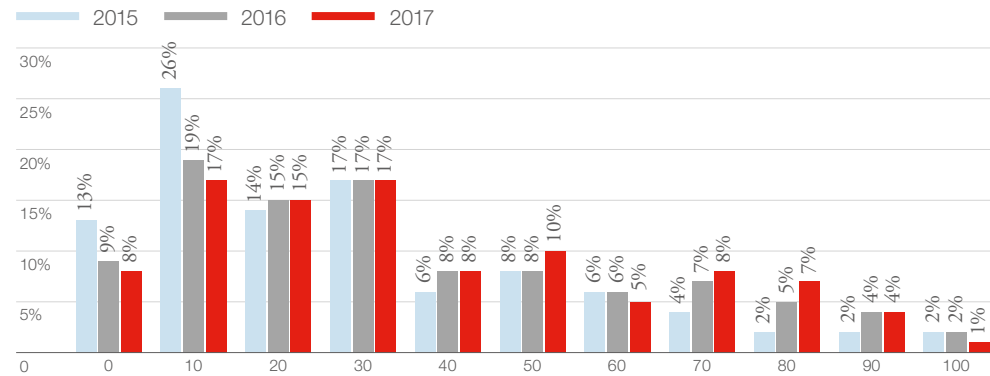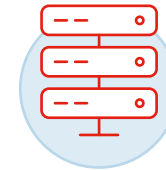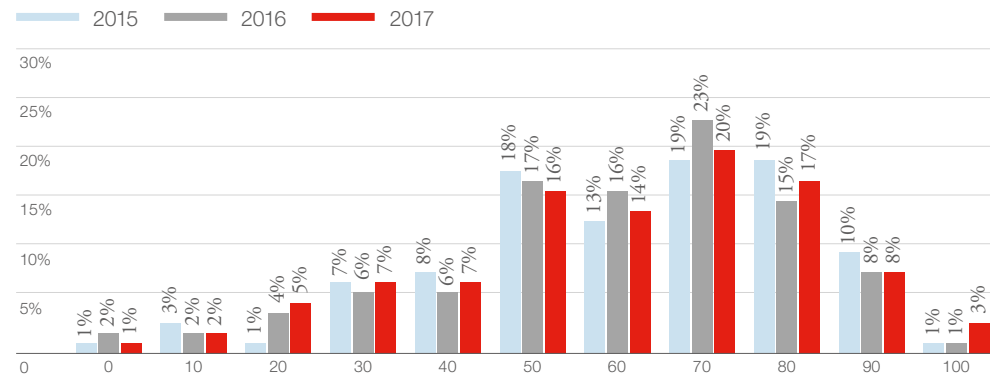

Fig.9: Approximately how is your time split between day-to-day management of technology and strategic planning/initiatives?
Chart details percentage of time spent on day-to-day initiatives

The vast majority of corporate IT is still hosted, managed and maintained in-house.

CIOs are in essence, change managers – keeping the lights on and reacting to external issues like security, IT trends and demand for new capabilities and services.

If CIOs are to deliver digital transformation they must be change *makers*, not change managers – and they have big plans to be just that.
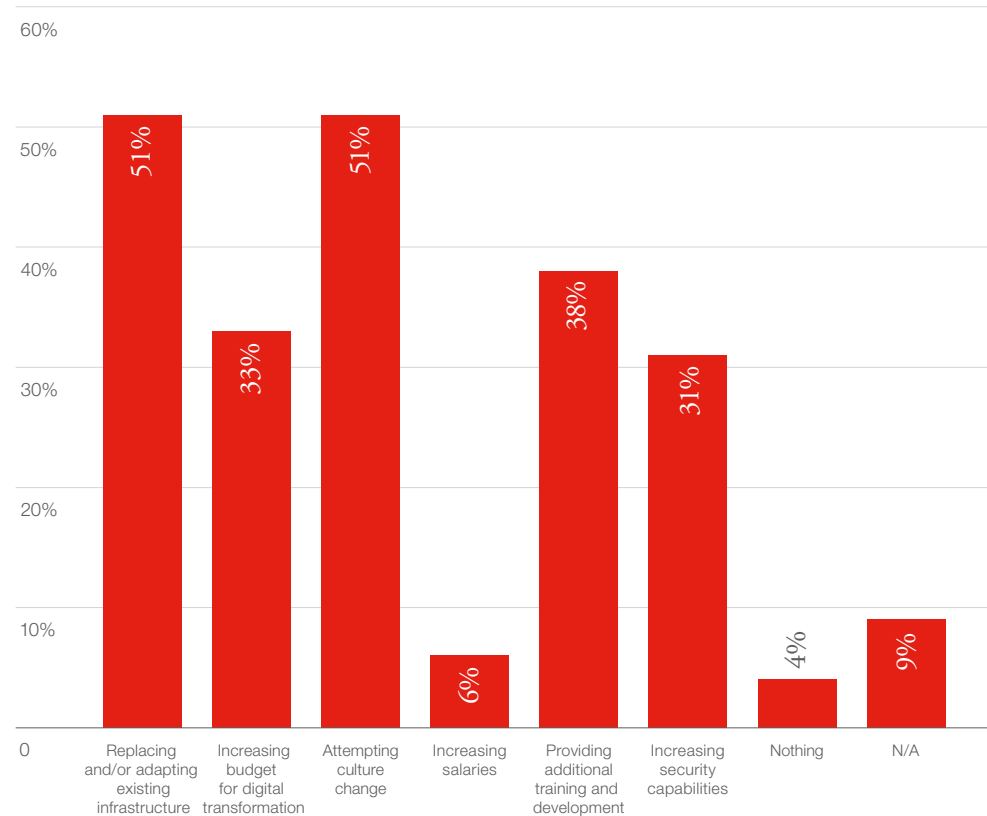
According to this year's Logicalis Global CIO Survey, IT leaders are well aware of the issues holding back digital transformation, and have ambitious plans to overcome them.

Rather than reacting to change, they want to be agents of change. They are planning to deal with legacy complexity and change the relationship between business and IT, engaging with line of business colleagues and acting as ambassadors for digital transformation – on a significant scale (fig. 10):

- 51% plan to replace and/or adapt existing infrastructure
- 51% plan to attempt culture change
- 38% want to address skills shortages through increased training and development

Perhaps tellingly, just 33% expect to increase digital transformation budgets – is this a case of big plans without the budget to deliver them, or will CIOs find efficiencies by turning to outside specialists for help?

Fig 10: What are you doing to overcome these (digital transformation) barriers?

Category	Value
Replacing and/or adapting existing infrastructure	51%
Increasing budget for digital transformation	33%
Attempting culture change	51%
Increasing salaries	6%
Providing additional training and development	38%
Increasing security capabilities	31%
Nothing	4%
N/A	9%

51%

51% of CIOs plan to replace and/or adapt existing infrastructure and attempt culture change.

33%

Just 33% expect to increase digital transformation budgets.

In Focus: Apps, IoT and Analytics

Islands of digital enablement fail to deliver the big benefits that come with wholesale transformation

Progress towards full digital enablement may be slow, but CIOs ARE delivering new, digital services and capabilities.

It would be unfair to suggest that CIOs are entirely failing to address digital. As we have seen already in this report, moving from cumbersome, legacy IT to agile and digitally enabled is complex and challenging.

What's more, CIOs are delivering new digital services and capabilities – albeit in reactive mode as they respond to business demand and market dynamics.

As we will see in the following sections, they are delivering the apps required to seize new revenue opportunities and drive operational efficiency, and they are grasping the opportunities created by IoT.
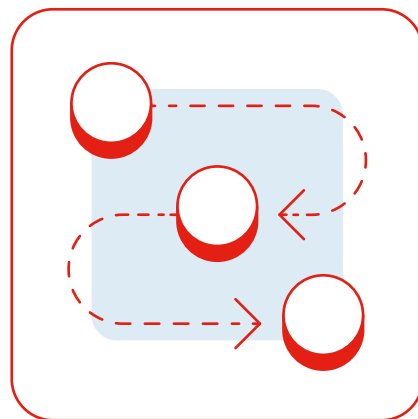
73%

of businesses are still in the software developing business in one form or another – the majority using a combination of in-house and third party developers to build new apps.

Fig. 11: Does your organisation develop internal and/or customer apps?
Chart shows global responses

57%
(2016: 63%)
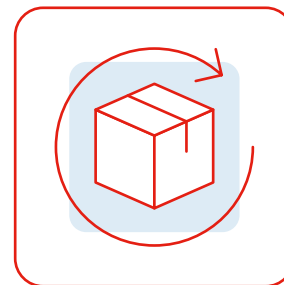Internal applications for streamlining existing business processes

48%
(2016: 57%)
Building new services/revenues through new applications
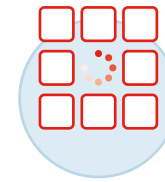
40%
(2016: 42%)
Moving an existing product or service to an application experience

19%
(2016: 23%)
Marketing activity to promote a product or service

Fig.12: What is your organisation's app development aimed at?

Legend: 2016, 2017

- Moving an existing product: 42%, 40%
- Building new services/revenues: 57%, 48%
- Marketing activity to promote: 23%, 19%
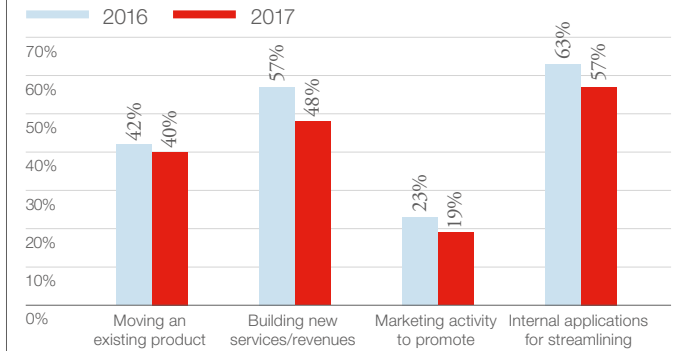- Internal applications for streamlining: 63%, 57%

Fig.13: Much is being made of IoT and its effect on products, services and operations. Thinking of your own organisation, over what timeframe do you think IoT will affect you?
Chart shows global responses

Legend: 2016, 2017

- Already using: 19%, 24%
- 6–12m: 14%, 17%
- 12–24m: 26%, 25%
- 24–36m: 17%, 15%
- 36m+: 13%, 12%
- Not at all: 11%, 7%
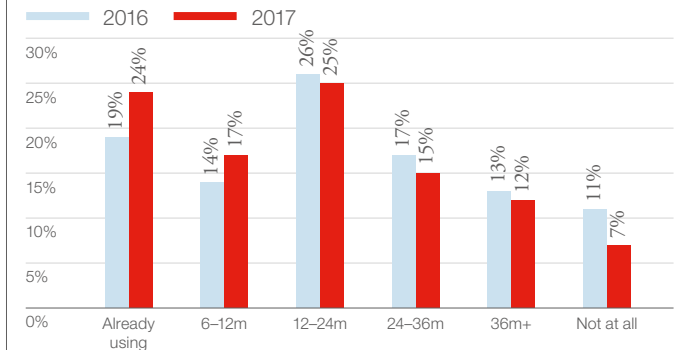
Fig. 14: How do you anticipate IoT complementing your business?

- Enhanced products and services: 50%
- New services and product lines: 46%
- Improved customer service: 55%
- Improved operations: 56%
- Improved partnerships: 21%
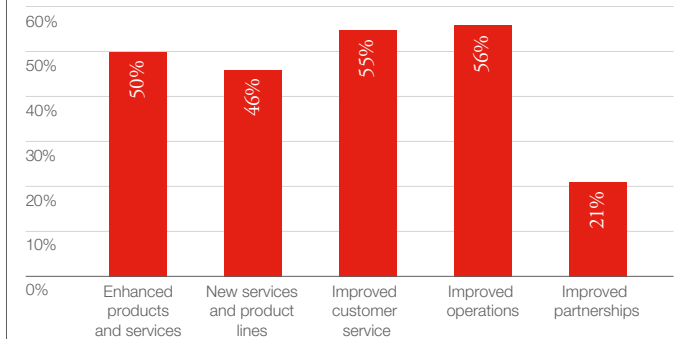
However, the lack of overarching strategy means they are worthy, but piecemeal developments.

These developments are islands of transformation – they do not deliver the full benefit of digital enablement because they are disconnected. They do not contribute to a wholesale transformation that leverages the wealth of data created by digital services to deliver actionable insight, underpin better, faster decision making and enable constant innovation.

The fact that progress in developing digital apps and adapting to IoT is not matched by similar progress developing analytics capabilities amply illustrates the point.

Interestingly, CIOs' plans to overcome barriers to analytics implementation are a microcosm of their plans to unlock digital transformation – relying on structural and cultural change, particularly greater collaboration with line of business.

63%

In 2015, 63% of CIOs ranked analytics as very important or critical in driving business innovation.

54%

More than half of the CIOs surveyed are working with line of business colleagues to understand their needs, 39% are addressing data challenges and a similar percentage are setting up working groups to unravel complexity.

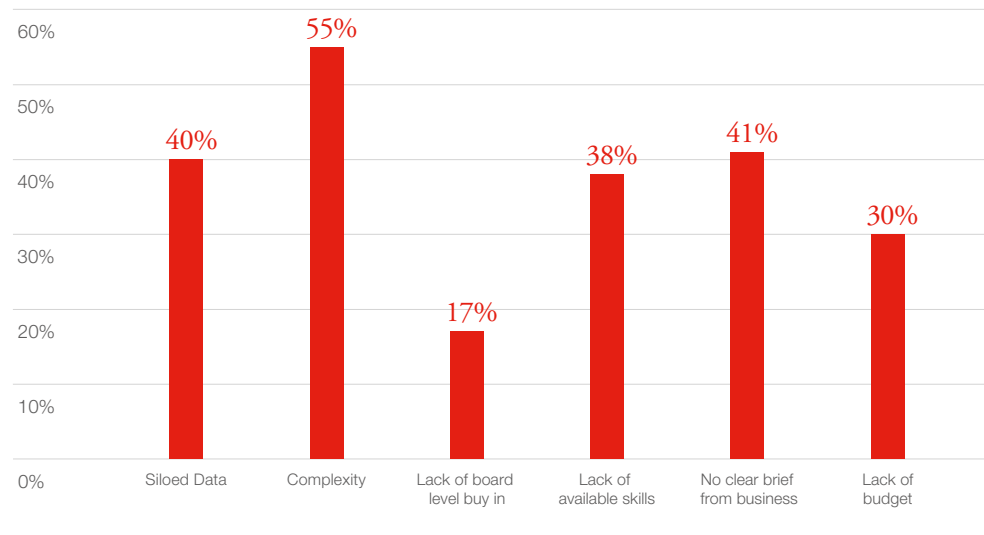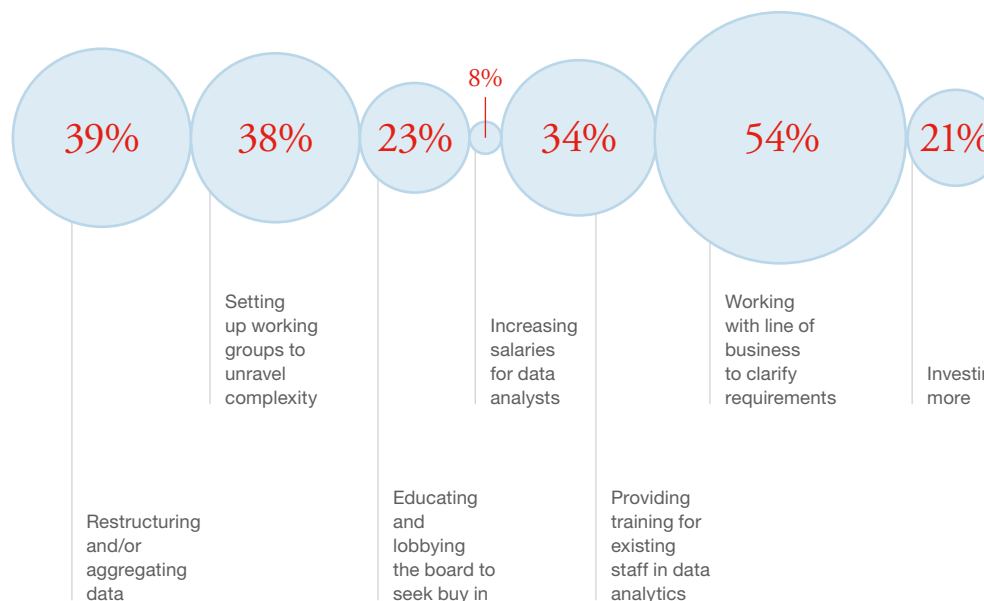**Fig.15: What challenges and problems do you face in getting the most from business analytics?**

	Siloed Data	Complexity	Lack of board level buy in	Lack of available skills	No clear brief from business	Lack of budget
%	40%	55%	17%	38%	41%	30%

Fig.16: What are you doing to address these issues?

- 39% – Restructuring and/or aggregating data
- 38% – Setting up working groups to unravel complexity
- 23% – Educating and lobbying the board to seek buy in
- 8%
- 34% – Increasing salaries for data analysts
- 54% – Working with line of business to clarify requirements / Providing training for existing staff in data analytics
- 21% – Investing more

Conclusion

We are living in an exciting period of technological change: A digital revolution that promises massive benefits for businesses and individuals.

Conclusion

Digital technologies are changing everything – change that will only accelerate. Right now, Uber is built on a digitally-enabled business model, but before we know it, autonomous vehicles will change the very nature of travel.

This transformation will not, of course, simply happen. It will be shaped and delivered by individuals, governments and businesses – and, for those ready to take the lead, the opportunities are almost limitless.

These digital pioneers will be change makers, not change managers and, as this year's CIO Survey demonstrates, the race to take on that role is underway – and CIOs are seeking to play crucial roles.

They are adapting to the ubiquity of shadow IT, addressing the barriers created by legacy IT and seeking to take control of change – to take leadership roles in setting and driving digital strategies.

But CIOs are also realistic. They understand the scale of the digital transformation challenge and they are prepared to look outside for help – to trusted partners able to both take on the heavy lifting of day to day IT and to simplify technology in creating environments in which digital enablement can flourish.

At Logicalis, we see ourselves as 'architects of change,' clearly differentiating through our depth of expertise and experience of managing end-to-end delivery of projects from initial concept, through to delivery of desired business outcomes, and in our view, this requires some degree of digital modernisation of the core network areas.

We have been working with our customers to ensure data platforms become highly automated self-service platforms, data and information capabilities create new value and business optimisation from existing data, the network connects more things securely, supporting mobility, new applications and communication tools, and IT operations are modernised to interconnect and automate everything. Logicalis has the tools and methodologies to help customers realise this transformation in a manageable and secure manner.

Our challenge is to understand the increasingly complex world of technology that offers so much opportunity for growth and efficiency, and make it as simple as possible for our customers.

Our work supporting digital transformation is diverse, but it is also shaped by a single minded vision: **Technology must be an asset for businesses, not a problem. It must help to make our complex, fast-changing world a simpler, more inspiring place to live, work and grow.**

"Technology must be an asset for businesses, not a problem. It must help to make our complex, fast-changing world a simpler, more inspiring place to live, work and grow."

Rüdiger Rath, CEO Logicalis Europe

To find out more about our vision for digital business, and the work we are doing to deliver it, read our Annual Review, **here**.

About the research

All figures are drawn from a survey of 890 CIOs and IT Directors
from mid-market organisations in 23 countries spanning Europe,
North America, Latin America and Asia-Pacific.

About Logicalis

Logicalis is an international multi-skilled solution provider providing digital
enablement services to help customers harness digital technology and
innovative services to deliver powerful business outcomes.

Our customers span industries and geographical regions; and our focus is to engage in the dynamics of our
customers' vertical markets; including financial services, TMT (telecommunications, media and technology),
education, healthcare, retail, government, manufacturing and professional services, and apply the skills of
our 4,000 employees in modernising key digital pillars; data centre and cloud services, security and network
infrastructure, workspace communications and collaboration, data and information strategies, and IT
operation modernisation.

We are the advocates for our customers for some of the world's leading technology companies including
Cisco, HPE, IBM, CA Technologies, NetApp, Microsoft, Oracle, VMware and ServiceNow.

The Logicalis Group has annualised revenues of over $1.5 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 and the AIM market of the LSE, with revenues of over $6 billion.

For more information, visit **www.logicalis.com**