

SMART GOVERNMENT 2019

DATA-DRIVEN TRANSFORMATION IN EUROPE

RESEARCH REPORT | MAY 2019



EXECUTIVE SUMMARY

Although governments across Europe may differ in their ideologies, statutes and constitution – there are common threads that unite us all are facing pressures to “do more with less” under a public spotlight. In supporting millions of people, progressive governments in Europe share the need to prioritise and choreograph a growing array of services and to harness digital technologies in their transformation efforts.

Following “Smart Government – the Big Balancing Act”, a study of UK government departments released in early 2018, this research extends to cover the UK as well as Germany, France, Spain, Italy and the Netherlands. This year’s study explores the progress government departments in these countries are making in using digital technology to transform citizen outcomes. The research explores how foundations, such as data infrastructure and operating paradigms need to evolve over the next five years, so that modern governments in Europe can more effectively meet their transformation objectives and serve everyone.

Key stats from the research include the following:

THE OUTCOMES AGENDA IN EUROPE

- > The outcomes most likely to be seen as “extremely important” in digital transformation activities are improving citizen outcomes (56%), efficiency and speed of delivery (56%), managing existing and emerging security threats (52%) and improving agility and the ability to respond (48%)
- > 83% say improving the citizen experience is important in building trust in government
- > The citizen outcomes seen as most important in how technology investment is prioritised and online services are delivered are:
 - **Simple** (fewest online steps, including saving online sessions, pre-populated forms and smooth experience across channels): 47%
 - **Time efficient** (citizens can find what they need as quickly as possible): 47%
 - **Reliable access** (no downtime, uninterrupted connectivity and mobile optimised): 46%
 - **Highly functional** (delivers services citizens need when they need them): 40%
- > Although 74% claim to be satisfied with digital transformation progress so far, only 13% say they are extremely satisfied, dropping to 6% in the Netherlands

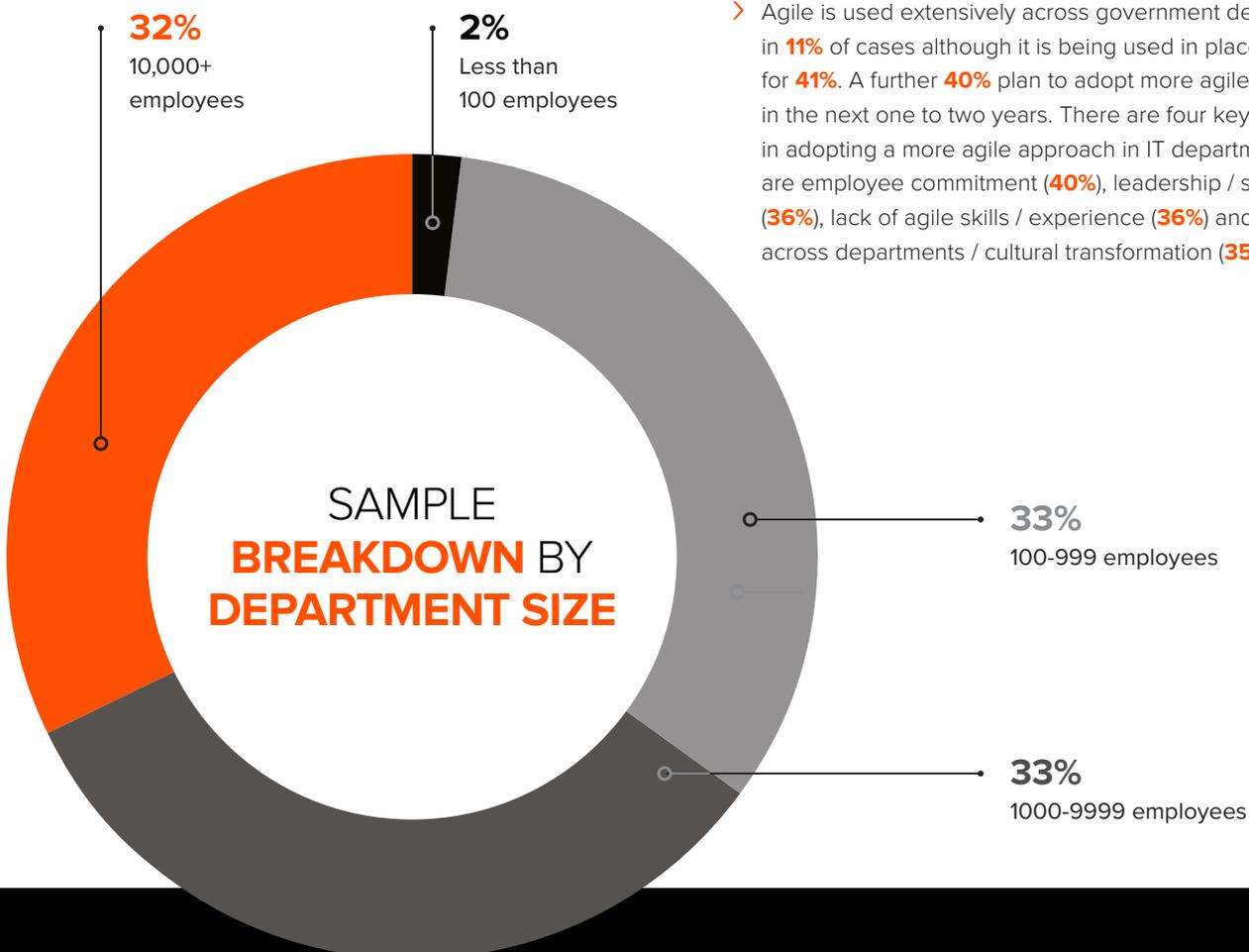
DIGITISATION DILEMMAS

- > 77% say they have a responsibility to make full use of available technology to deliver the best possible service to citizens (88% in Spain, 87% in Italy)
- > Only one in five (19%) say they are able to “very” effectively measure the impact of technology investment in terms of impact on citizen outcomes (increasing to 33% in the Netherlands and dropping to 8% in Italy) although 55% say they can do this quite effectively
- > The most significant barriers that are slowing digitisation of citizen services and process automation are: investment in data infrastructure (84%), investment in applications (82%), lack of collaboration with other departments and agencies (80%) and legacy processes and lack of agility (80%)
- > 68% think legacy infrastructure is holding up their digital transformation progress (85% in Italy, 77% in Spain)



DATA AND THE OUTCOMES AGENDA

- > **78%** recognise that they can transform citizen outcomes with better use of data
- > Government IT leaders see their department could be making more or better use of data and analytics in a number of areas, particularly in improving citizen outcomes (**58%**), delivering cost savings and getting more value from limited budgets (**48%**), informing real-time decision making (**44%**) and informing the development of new services (**43%**)
- > The areas where improvement is most needed to enhance service delivery are data infrastructure (**89%**), the ability to consolidate and visualise data (**81%**) and the ability to leverage data to improve service delivery (**81%**)
- > Just **7%** are very confident that their current data infrastructure enables their department to meet its transformation objectives. **62%** are quite confident. Confidence is lowest in the UK where **9%** are very confident and **48%** are quite confident. Current data infrastructure is seen to compromise department performance and service delivery in a number of ways – implications include decreased ability to meet citizen expectations (**83%**), increased operational costs (**82%**), reduced operational agility (**81%**), limited opportunities for digital innovation (**79%**), challenges with compliance and governance (**78%**) and increased exposure to cybersecurity attacks (**78%**)



SECURITY AND AGILITY IN GOVERNMENT

- > Looking at cybersecurity threats, over the next two years, **47%** expect malicious threats to increase whilst **20%** think inadvertent / human error threats will increase. **53%** see external threats increasing and **27%** see internal threats rising in this timeframe
- > Factors impacting confidence in managing future security threats include difficulty in keeping up with the speed of hackers' new approaches (**39%**), legacy infrastructure and outdated operating systems (**34%**) and the IT function lacking in cybersecurity resource / skills (**34%**). Other challenges are data on multiple devices in disparate locations (**32%**) and new technologies introducing new risks (**31%**)
- > **69%** say their department has sacrificed performance or tolerated performance degradation in technology to have enhanced security – increasing to **75%** in the UK and the Netherlands. **65%** think investment in infrastructure security is not keeping up with security threats
- > On average, **48%** of IT projects are considered to fully meet expectations and be delivered within time and within budget. Key reasons why government technology projects may not deliver maximum value are budgetary constraints (**56%**), skills issues (**45%**), integration and complexity issues (**40%**) and unrealistic expectations about what technology can deliver (**38%**)
- > Agile is used extensively across government departments in **11%** of cases although it is being used in places / tested for **41%**. A further **40%** plan to adopt more agile approaches in the next one to two years. There are four key challenges in adopting a more agile approach in IT departments. These are employee commitment (**40%**), leadership / sponsorship (**36%**), lack of agile skills / experience (**36%**) and collaboration across departments / cultural transformation (**35%**)

FUTURE-PROOFING DATA INFRASTRUCTURE IN GOVERNMENT

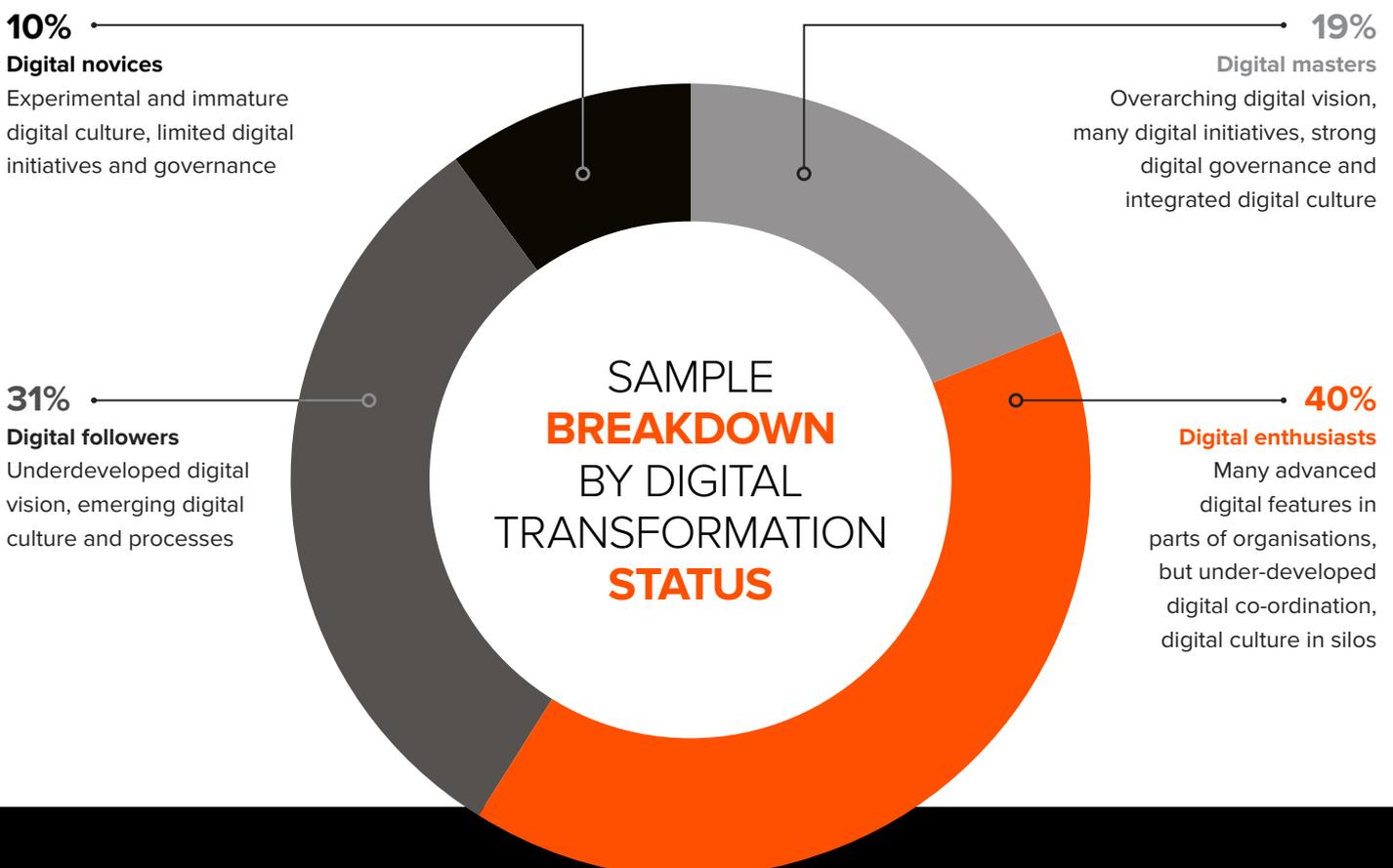
- > More than half (**54%**) plan to overhaul their data infrastructure to better support their department's strategic objectives within the next two years (**21%** say in the next 12 months). A number of factors are accelerating the need for departments to overhaul their data infrastructure – these include increased volumes of data (**44%**), need for increased collaboration and the move to a “connected” government (**42%**), evolving security threats (**41%**) as well as public scrutiny and increased citizen expectations (**39%**)
- > A number of technologies / trends are expected to transform service delivery by government departments over the next five years – particularly mobile / online-first economy (**84%**), surveillance technology (**75%**) and biometric monitoring (**71%**), followed by open source data (**68%**), AI / machine learning (**63%**) and cashless society (**62%**)
- > **73%** say they need to be creative in how they use technology so they can do more with less and **65%** say it is difficult to balance security, speed and innovation in their technology choices. **74%** think that governments in Europe can learn from each other in how they procure and use technology

The research shows that, across Europe, government departments are wrestling with outdated technology infrastructures, shrinking budgets and long-established, inefficient processes. There is an evident appetite to become more citizen-centric and outcome-focused and there has been some progress with transformation efforts. However, IT leaders are quick to admit that there are weaknesses with the “foundations”. Until data infrastructures, leadership and skills issues are properly addressed, the goals of smart government will remain elusive and transformation efforts will fall short of expectations.

RESEARCH METHODOLOGY

This report is based on research among 457 IT leaders in Central Government departments across Europe conducted during January / February 2019. This follows Smart Government UK research conducted in 2017. This research covers the UK, Germany, France, Spain, Italy and the Netherlands.

The research was managed by Insight Avenue, an independent research consultancy based in the UK.



THE OUTCOMES AGENDA IN EUROPE

Digital transformation has been a watchword for organisations in both the public and private sectors across Europe for many years now and yet it is still a term that confounds and confuses. It is still often seen as an endpoint rather than an ongoing process with ever-moving goalposts as strategic objectives shift and technology evolves. Digital transformation is as much about culture, leadership and skills as it is about “shiny new” technologies and extends beyond discrete processes and departments to impact wider government.

Understanding the outcomes that government departments see as most important in their digital transformation activities gives an insight into where focus and resources are currently targeted.

Figure 1 shows the outcomes most likely to be “extremely important” in digital transformation over the next twelve months are improving citizen outcomes (56%) and efficiency and speed of delivery (56%), followed by managing security threats (52%) and improving agility (48%).



This report discusses the viewpoints of 457 IT leaders in Central Government

FIGURE 1: OUTCOMES CONSIDERED “EXTREMELY IMPORTANT” IN DIGITAL TRANSFORMATION ACTIVITIES OVER THE NEXT 12 MONTHS

% SAYING “EXTREMELY IMPORTANT”

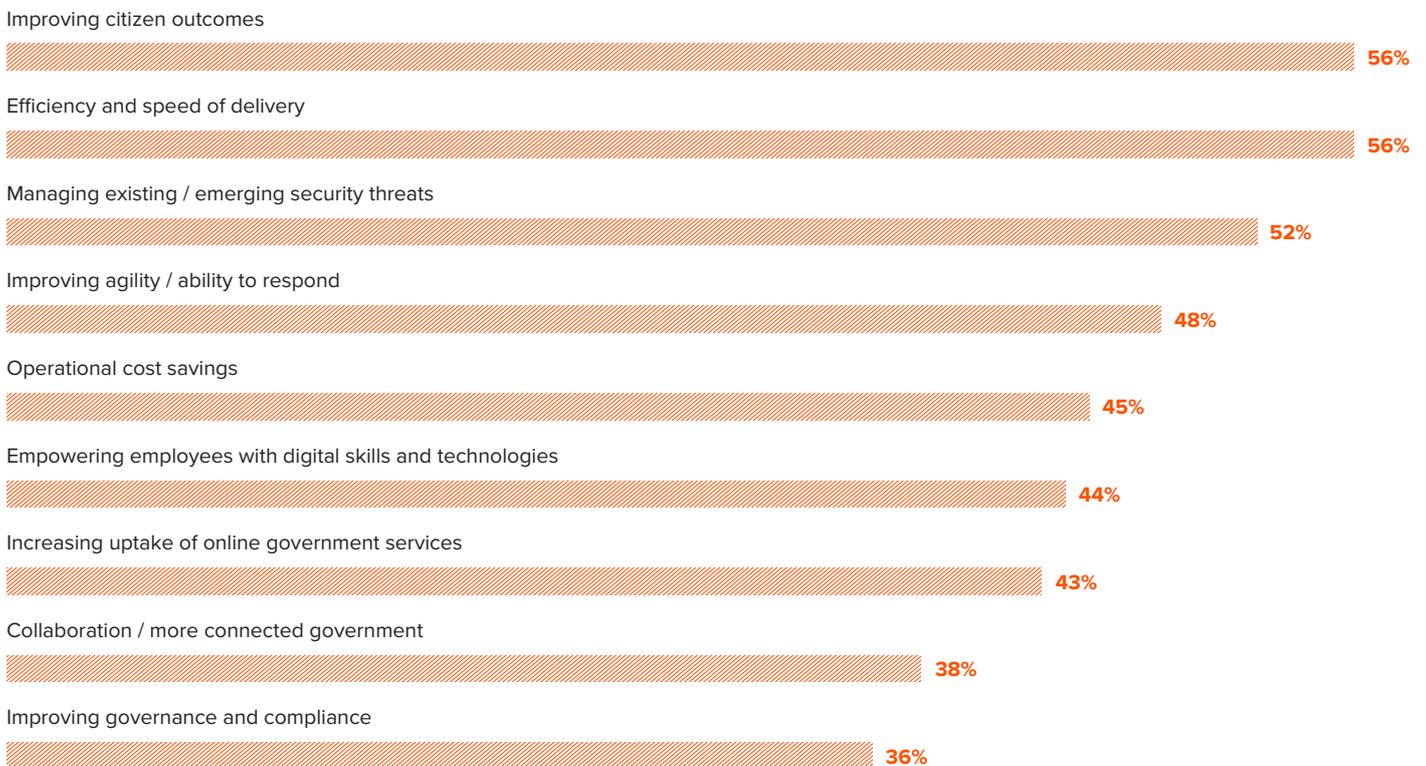
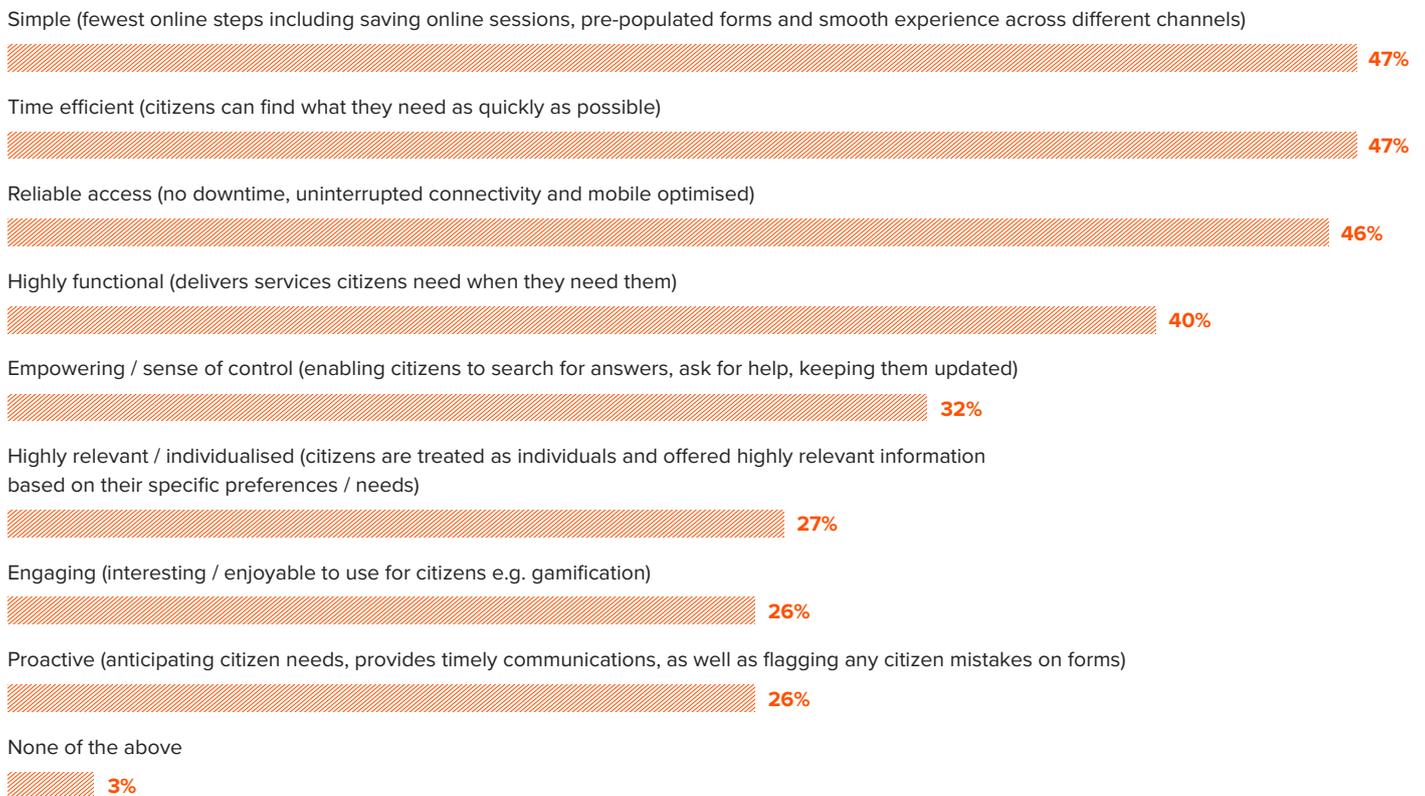


FIGURE 2: MOST IMPORTANT CITIZEN OUTCOMES IN HOW INVESTMENT IS PRIORITISED AND ONLINE SERVICES ARE DELIVERED



WHAT ARE CITIZEN OUTCOMES?

For all governments, to govern is to serve and improving citizen outcomes sits as the heart of digital transformation activity. Yet, it is important to recognise that this is **not the only priority for government** – alongside this government departments are juggling imperatives to inject more efficiency into processes, to manage ever-changing security threats, to become more agile and empower employees with digital skills and technologies.

Overall, 83% of IT leaders say improving the citizen experience is important in building trust in government. Getting this right is important as levels of trust are currently low. The 2019 Edelman Trust Barometer reveals low levels of trust in government across Europe¹. Only around 40% of citizens trust government in the UK, Germany and Italy, this figure dropping to **26%** in Spain. The Netherlands has slightly higher trust levels at **54%**. **Figure 2** shows the citizen outcomes that are seen as most important in how technology investment is prioritised and online services are delivered.

In summary, the top four citizen outcomes are:

- > **Simple** (fewest online steps, including saving online sessions, pre-populated forms and smooth experience across channels)
- > **Time efficient** (citizens can find what they need as quickly as possible)
- > **Reliable access** (no downtime, uninterrupted connectivity and mobile optimised)
- > **Highly functional** (delivers services citizens need when they need them)

Amid Brexit and associated geopolitical pressures, **74%** of IT leaders claim to be satisfied with digital transformation progress so far, but only **13%** say they are extremely satisfied, dropping to **6%** in the Netherlands. This suggests that governments in Europe are operating below their digital potential and that there is clearly more to do.

1. https://www.edelman.com/sites/g/files/aatuss191/files/2019-02/2019_Edelman_Trust_Barometer_Global_Report_2.pdf

DIGITISATION DILEMMAS

Keeping abreast of the latest technologies such as AI, IoT and blockchain is an ongoing challenge for IT leaders in governments across Europe. The same can be said for how these technologies can be applied in the delivery of public services within compliance, cost and procurement constraints. Three quarters (77%) believe they have a responsibility to make full use of available technology to deliver the best possible service to citizens so there is definite appetite to harness technology as part of an outcome-focused approach. In the UK, the DVLA, whose digital interfaces include road tax payment and ownership registration, is a good example of a department leading the way in providing accessible, convenient and citizen-focused services. Its digital unit model is now being adopted by many other countries including the US, Singapore, Argentina and Australia.²

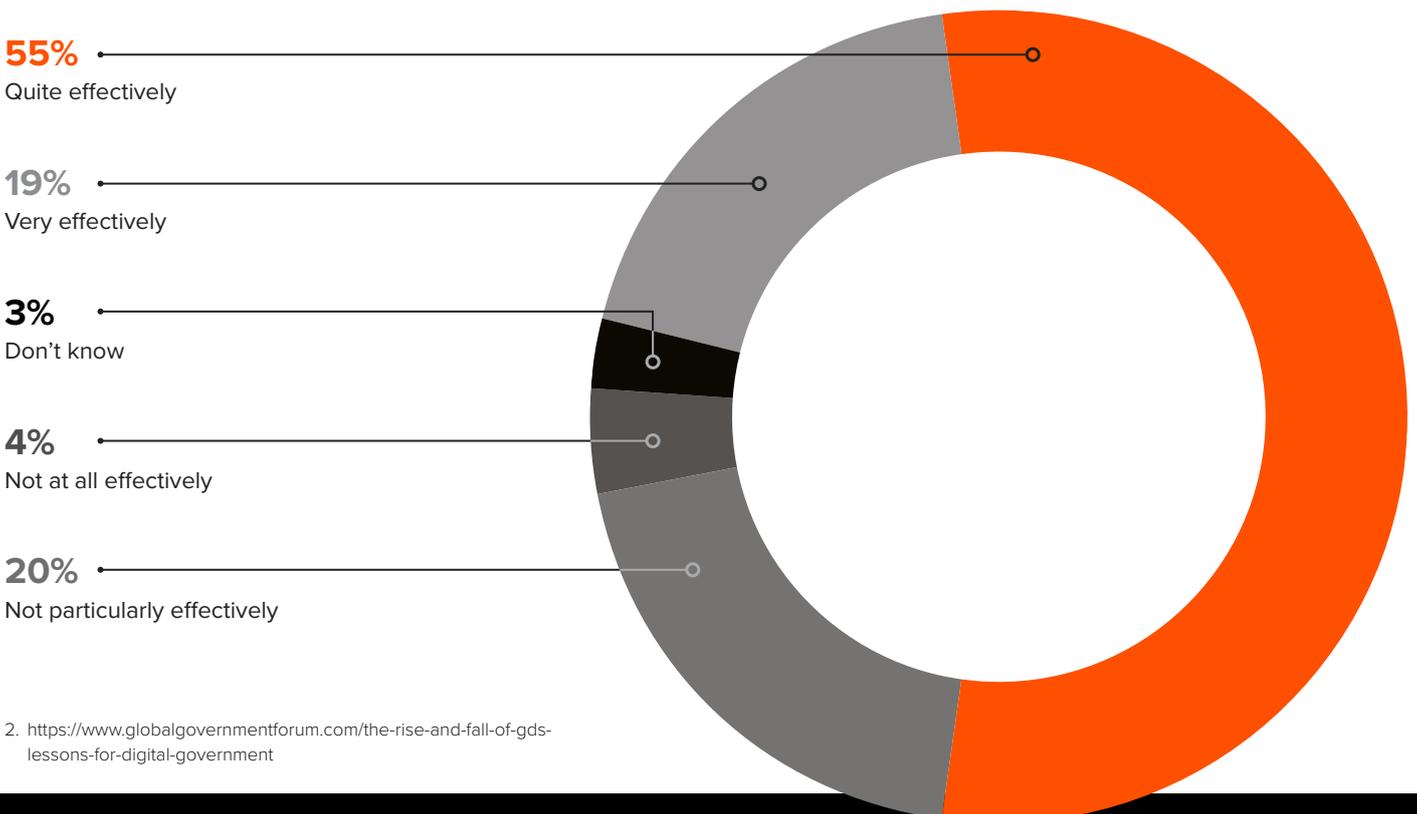
Experiences in the private sector are mirrored in the public sector, with citizens increasingly expecting governments to deliver the fast, seamless service they have become accustomed to elsewhere. **Figure 3** shows that one in five (19%) say they are able to very effectively measure the impact of technology investment in terms of impact on citizen outcomes. Overall though, 55% think they can do this quite effectively. This proportion believing they can very effectively measure outcomes increases to 33% in the Netherlands and drops to 8% in Italy. The Netherlands typically

show a higher level of satisfaction with transformation progress, prioritising reliable access as a citizen outcome, whilst Italy is more likely to say “quite effectively” and to focus on simplicity as a citizen outcome. For all countries though, understanding what citizen outcomes any investment is designed to deliver against is a critical first step in ensuring any measurement is telling the real story and is meaningful.



Improving the citizen experience is important in building trust in government

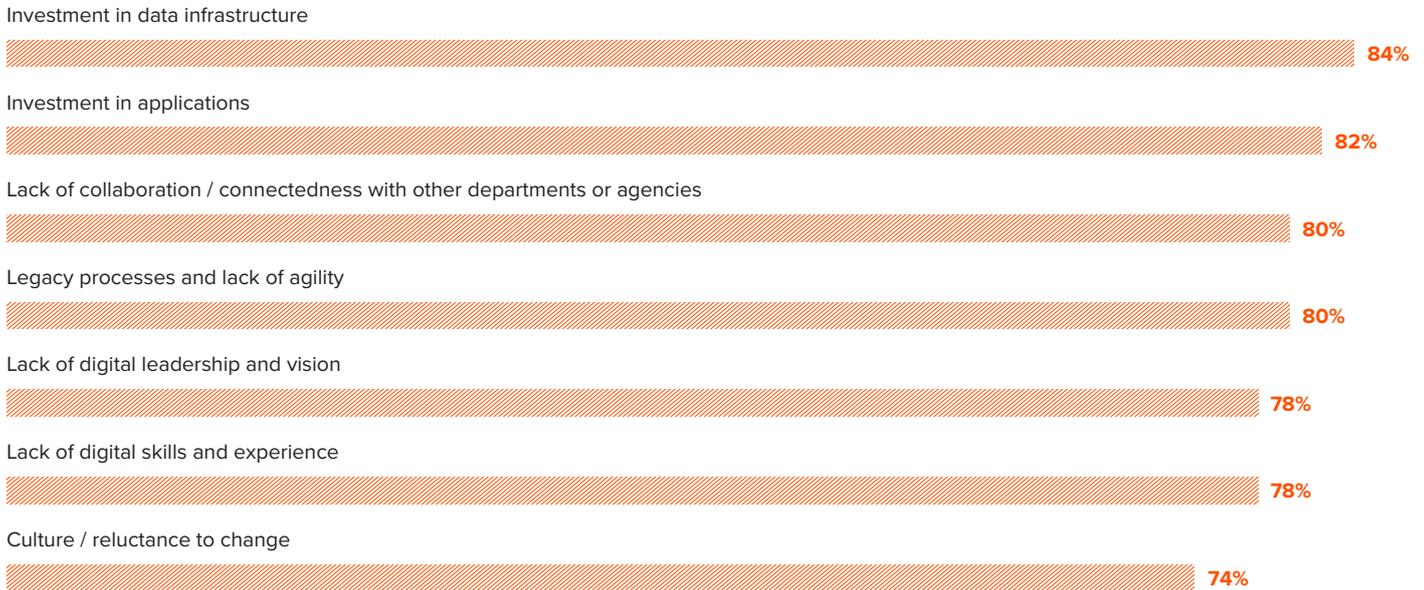
FIGURE 3: ABILITY TO MEASURE IMPACT OF TECH INVESTMENT ON CITIZEN OUTCOMES



2. <https://www.globalgovernmentforum.com/the-rise-and-fall-of-gds-lessons-for-digital-government>

FIGURE 4: BARRIERS TO DIGITISING CITIZEN SERVICES AND AUTOMATING PROCESSES

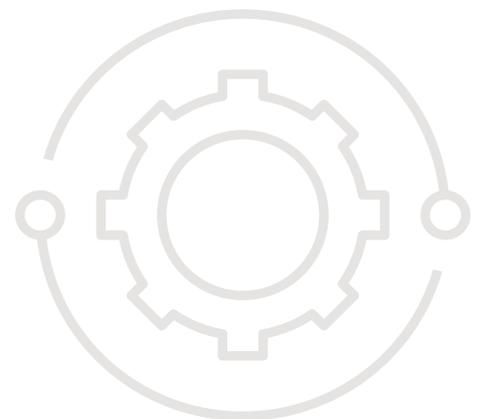
% SAYING "SIGNIFICANT" OR "MODERATE BARRIER"



WHAT IS HOLDING UP DIGITISATION?

Figure 4 shows the most significant barriers that are slowing digitisation of citizen services and process automation in Europe are: investment in data infrastructure (84%), investment in applications (82%), lack of collaboration with other departments and agencies (80%) and legacy processes and lack of agility (80%). Together, these point to a clinging on to the old whilst simultaneously trying to embrace the new. Infrastructure may not be the most exciting part of transformation, but without strong and scalable foundations, citizen-focused applications may falter and the impact of technology investment on citizen outcomes compromised. Overall, two thirds (68%) think legacy infrastructure is holding up their digital transformation progress, increasing to 85% in Italy and 77% in Spain. Italy, again seems to emerge as the country where progress is considered to be most held back by technology although there is a strong sentiment that citizen outcomes can be transformed with better use of data here (87%).

Alongside being thwarted by legacy infrastructure, legacy processes and a lack of collaboration across government are slowing digitisation processes. Technology alone is not the answer as much of the problem is embedded in the fabric of government departments and requires leaders to recognise functional and cultural weaknesses whilst developing and communicating a vision for change.



Making better use of data is both a requirement and a driver of digital transformation

DATA AND THE OUTCOMES AGENDA

For all types of organisation, making better use of data is both a requirement and a driver of digital transformation and **78%** of IT leaders recognise that they can transform citizen outcomes with better use of data. The question then becomes whether they are and what needs to improve here.

Specifically, **Figure 5** shows the key areas where IT leaders feel their department could be making more or better use of data and analytics are in improving citizen outcomes (**58%**), delivering cost savings or getting more value from limited budgets (**48%**), informing the development of new services (**44%**) and real-time decision making (**44%**). Ultimately, the benefits are compelling with optimising data and analytics seen to have an impact on both key operational and policy mandates whilst also improving citizen outcomes.

There are, however, a number of areas that IT leaders think need to be improved to positively impact service delivery by their department. These include data infrastructure (**89%**), the ability to consolidate and visualise data (**81%**) and the ability to leverage data to improve service delivery (**81%**). As the governments explore “opening up” their data, as in the private sector, visualisations and dashboards emerge as a way of getting quick insights into patterns that can help drive efficiencies and inform decisions.



FIGURE 5: TOP AREAS WHERE DEPARTMENTS COULD BE MAKING MORE OR BETTER USE OF DATA AND ANALYTICS

FACTORS RANKED IN TOP THREE

To improve citizen outcomes



To deliver operational cost savings / get more value for limited budgets



To inform the development of new services



To inform real-time decision making



To foster more experimental and innovative practices



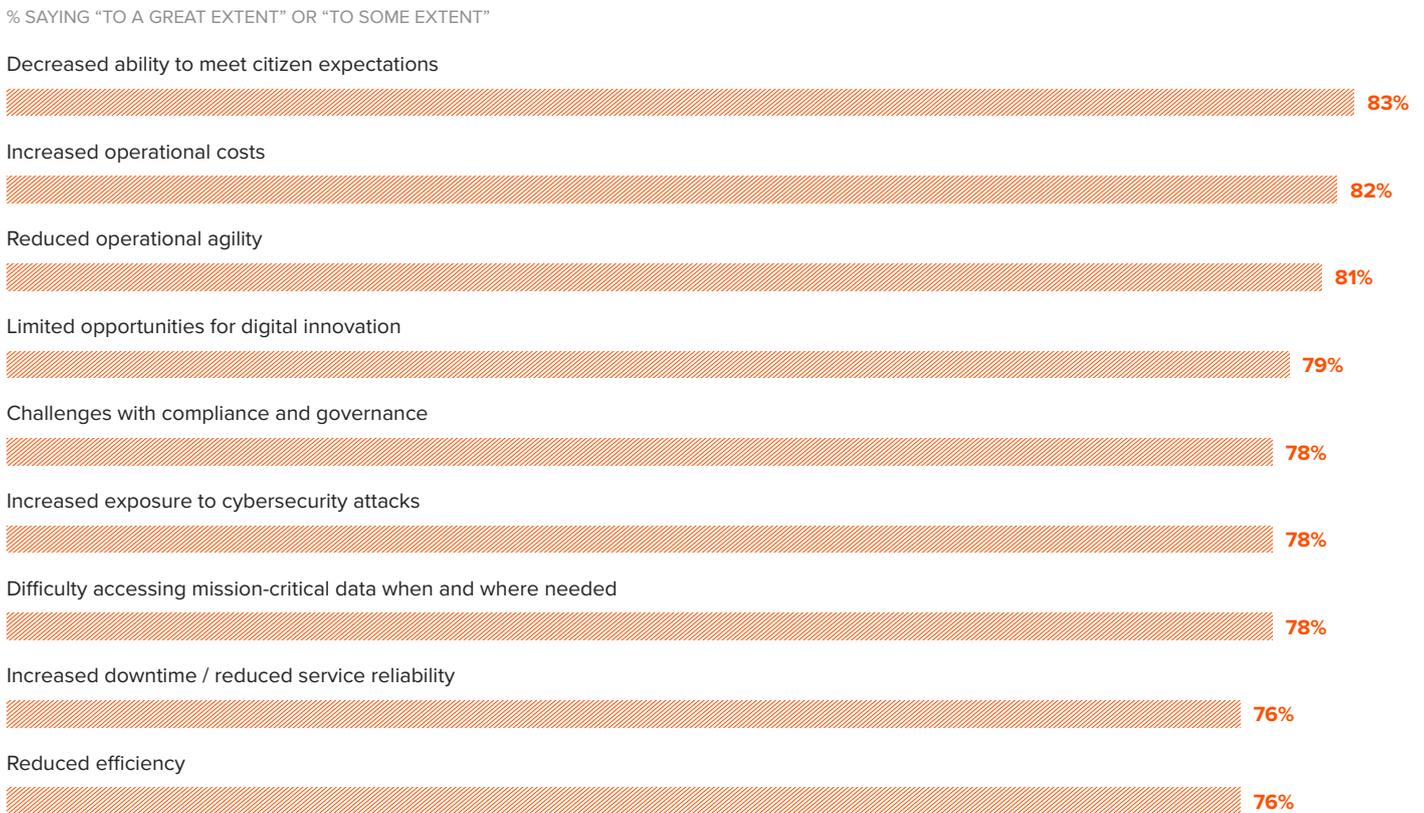
To break down departmental silos and foster collaboration across government



To enable evidence-based policy



FIGURE 6: HOW DATA INFRASTRUCTURE SHORTCOMINGS COMPROMISE DEPARTMENT'S PERFORMANCE AND SERVICE DELIVERY



HOW ARE DATA INFRASTRUCTURE SHORTCOMINGS UNDERMINING THE OUTCOMES AGENDA?

Across Europe, data infrastructure is compromising the value and reach of data across government departments. Just **7%** are very confident that their current data infrastructure enables their department to meet its transformation objectives. In Spain this drops to **2%** and in the Netherlands to **4%**, the latter arguably having higher expectation and a mindset of continual improvement. Overall across all countries, **62%** say they are quite confident. Confidence is lowest in the UK where **9%** are very confident and **48%** are quite confident. Whilst government departments may be adopting more shared applications and centralised technologies, it is clear many are still grappling with redundant systems and managing the overhead costs to support them.

As such, department performance and service delivery is being compromised by data infrastructure shortcomings in many ways, as shown in **Figure 6**. Government departments report implications of this as decreased ability to meet citizen expectations (**83%**), increased operational costs (**82%**), reduced operational agility (**81%**), limited opportunities for digital innovation (**79%**), challenges with compliance and governance (**78%**) and increased exposure to cybersecurity attacks (**78%**) – the very areas that digital transformation should be enhancing.

Data infrastructure is compromising the value and reach of data across government departments

SECURITY AND AGILITY IN GOVERNMENT

WHAT MAKES CYBER-RESILIENCE DIFFICULT?

In the wake of a range of high profile threats, there is a growing focus on cyber-resilience in central government. Safeguarding government services and infrastructure from cyber-attacks whilst ensuring continuity is vital in protecting quality of life. The threat landscape is constantly mutating and over the next two years, **47%** expect malicious threats to increase whilst **20%** think inadvertent / human error threats will increase. **53%** see external threats increasing and **27%** see internal threats rising in this timeframe.

Many factors are undermining confidence in managing these future security threats include keeping up with the speed of hackers' new approaches (**39%**), legacy infrastructure and outdated operating systems (**34%**) and the IT function lacking in cybersecurity resource / skills (**34%**), as shown in **Figure 7**.

Other challenges are data on multiple devices in disparate locations (**32%**) and new technologies introducing new risks (**31%**). This combination of external and internal vulnerabilities means IT leaders need to keep on top of the threat landscape but whilst also future-proofing their processes, skills and infrastructure. Two thirds (**65%**) believe that investment in infrastructure security is not keeping up with security threats, increasing to **83%** in Italy.

With **69%** of IT leaders admitting their department has sacrificed performance or tolerated performance degradation in technology to have enhanced security (**75%** in the UK and the Netherlands), is there a sense that compromise is inevitable rather than recognising that the challenge may lie at the infrastructure level?

FIGURE 7: FACTORS IMPACTING CONFIDENCE IN MANAGING FUTURE SECURITY THREATS

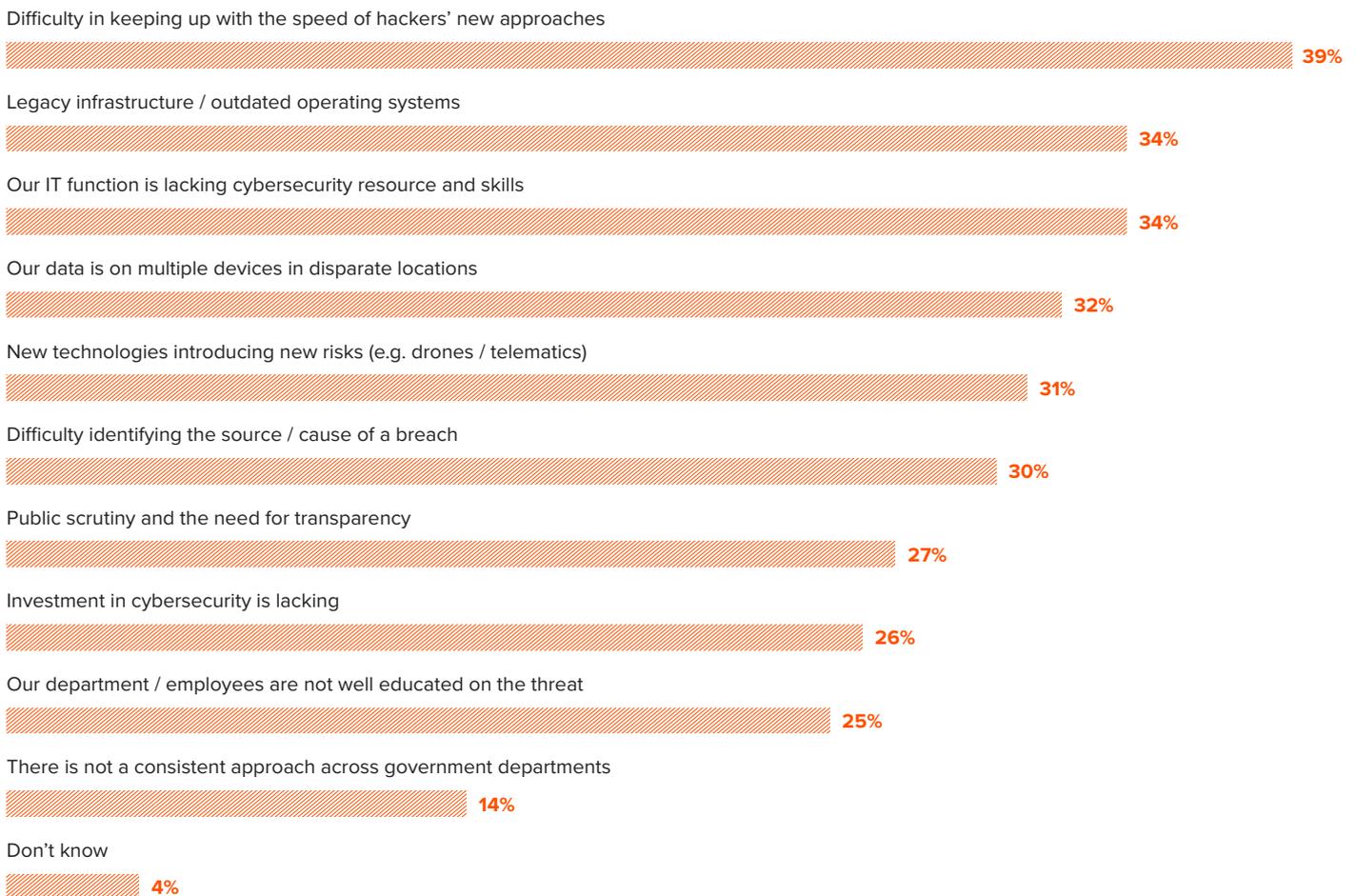
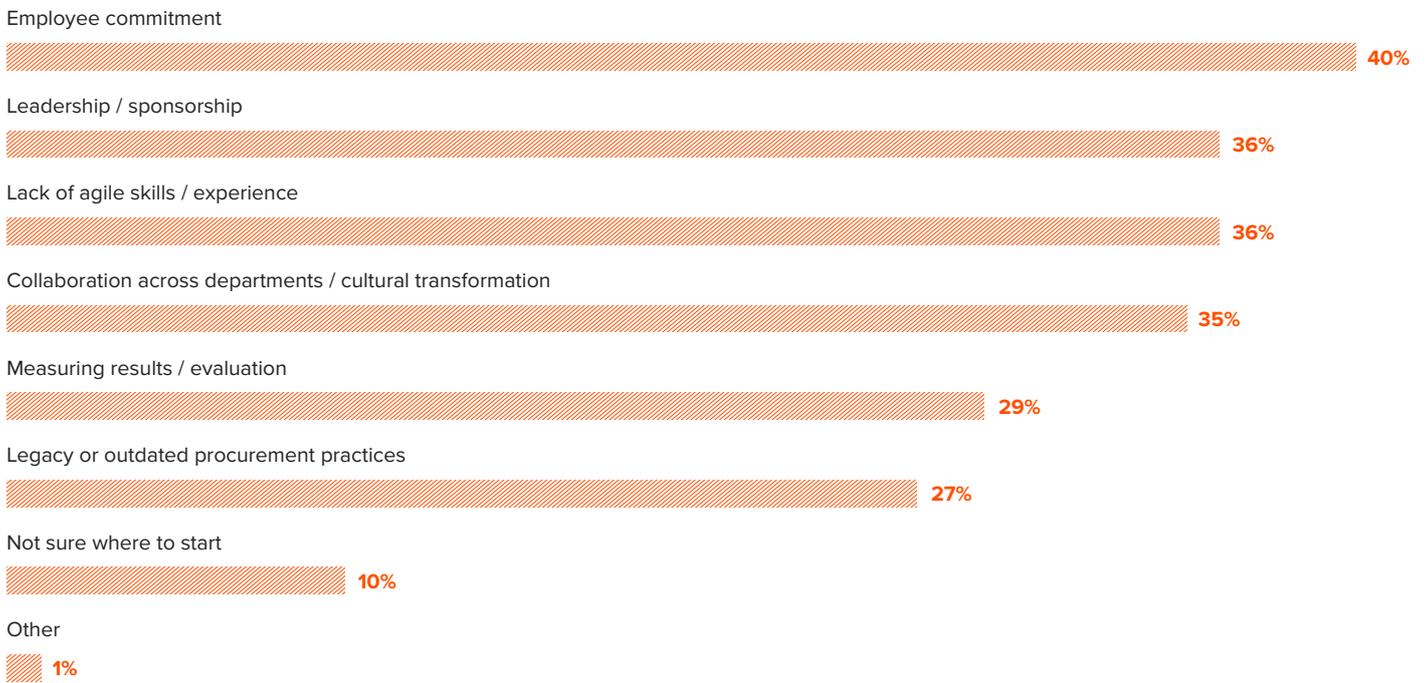


FIGURE 8: CHALLENGES IN ADOPTING A MORE AGILE APPROACH IN IT



WHAT PROGRESS IS GOVERNMENT MAKING WITH AGILE IT?

On average, less than half (**48%**) of IT projects are considered to fully meet expectations and are being delivered within time and within budget. Key reasons why government technology projects may not deliver maximum value are: budgetary constraints (**56%**), skills issues (**45%**), integration and complexity issues (**40%**) and unrealistic expectations about what technology can deliver (**38%**). Unsurprisingly, money and manpower are implicated in project “failure”. Complexity is also a concern as departments attempt to integrate old and new. Here and elsewhere, keeping core outcomes at the centre of processes helps keep projects on track. Whilst government is often seen as big and slow – agile is starting to gain momentum and is used extensively across government departments in **11%** of cases although it is being used in places / tested for **41%**. A further **40%** plan to adopt more agile approaches in the next one to two years. IT leaders highlight four key challenges in adopting a more agile approach – employee commitment (**40%**), leadership / sponsorship (**36%**), lack of agile skills / experience (**36%**) and collaboration across departments / cultural transformation (**35%**). Reducing back-end complexity, communicating a clear vision and enabling knowledge sharing are key to shifting mindsets as well as methods, ultimately enabling value to be delivered sooner.



FUTURE-PROOFING DATA INFRASTRUCTURE IN GOVERNMENT

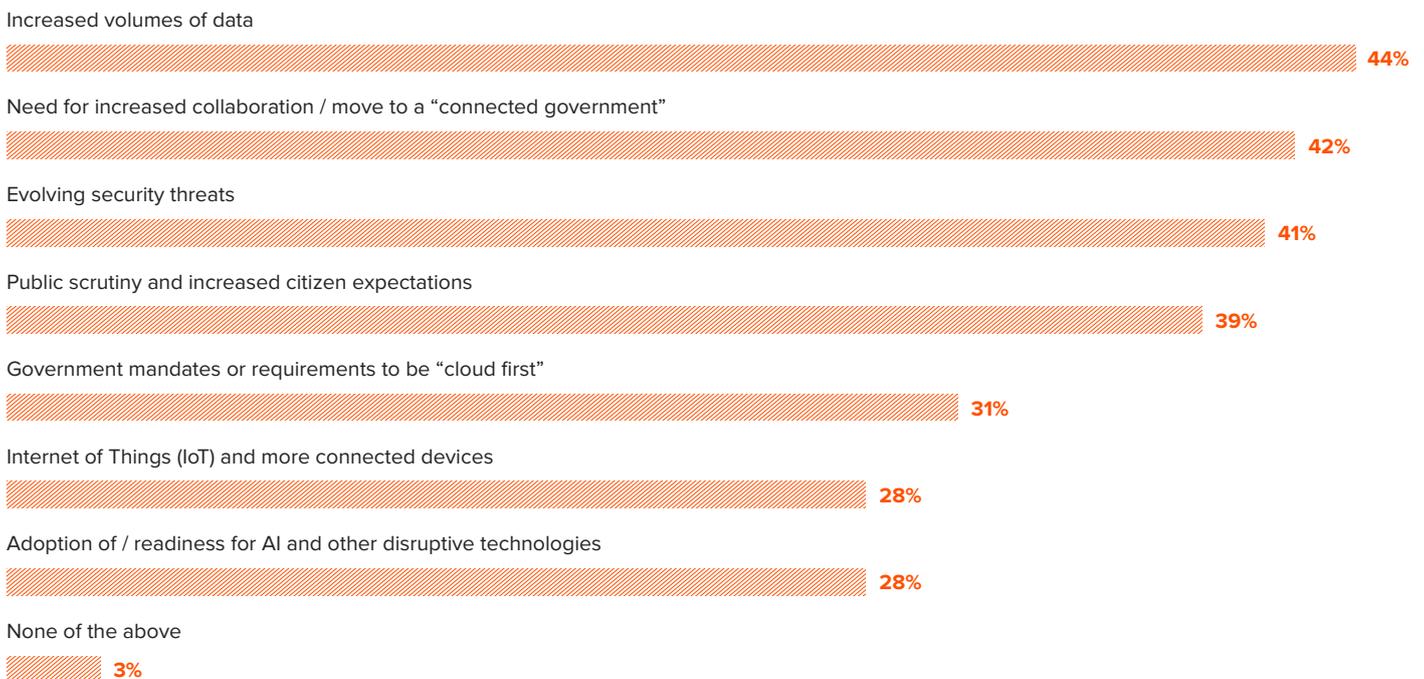
Creaking infrastructures are holding back government departments from creating value out of data. More than half of central government departments plan to overhaul their data infrastructure to better support their department's strategic objectives within the next two years (21% say in the next 12 months). Plans are most likely in the Netherlands (62%) and Italy (67%). Various factors are accelerating the need for departments to overhaul their data infrastructure, as shown in **Figure 9**.

Across Europe, these include increased volumes of data (44%), need for increased collaboration and the move to a "connected" government (42%), evolving security threats (41%) as well as public scrutiny and increased citizen expectations (39%). Italy is most likely to be driven by increased volumes of data whilst the Netherlands, see IoT and more connected devices as the key accelerators. Together these factors are creating an intolerance for the status quo and an urgency for change.

Various factors are accelerating the need for departments to overhaul their data infrastructure



FIGURE 9: FACTORS ACCELERATING NEED TO OVERHAUL DATA INFRASTRUCTURE



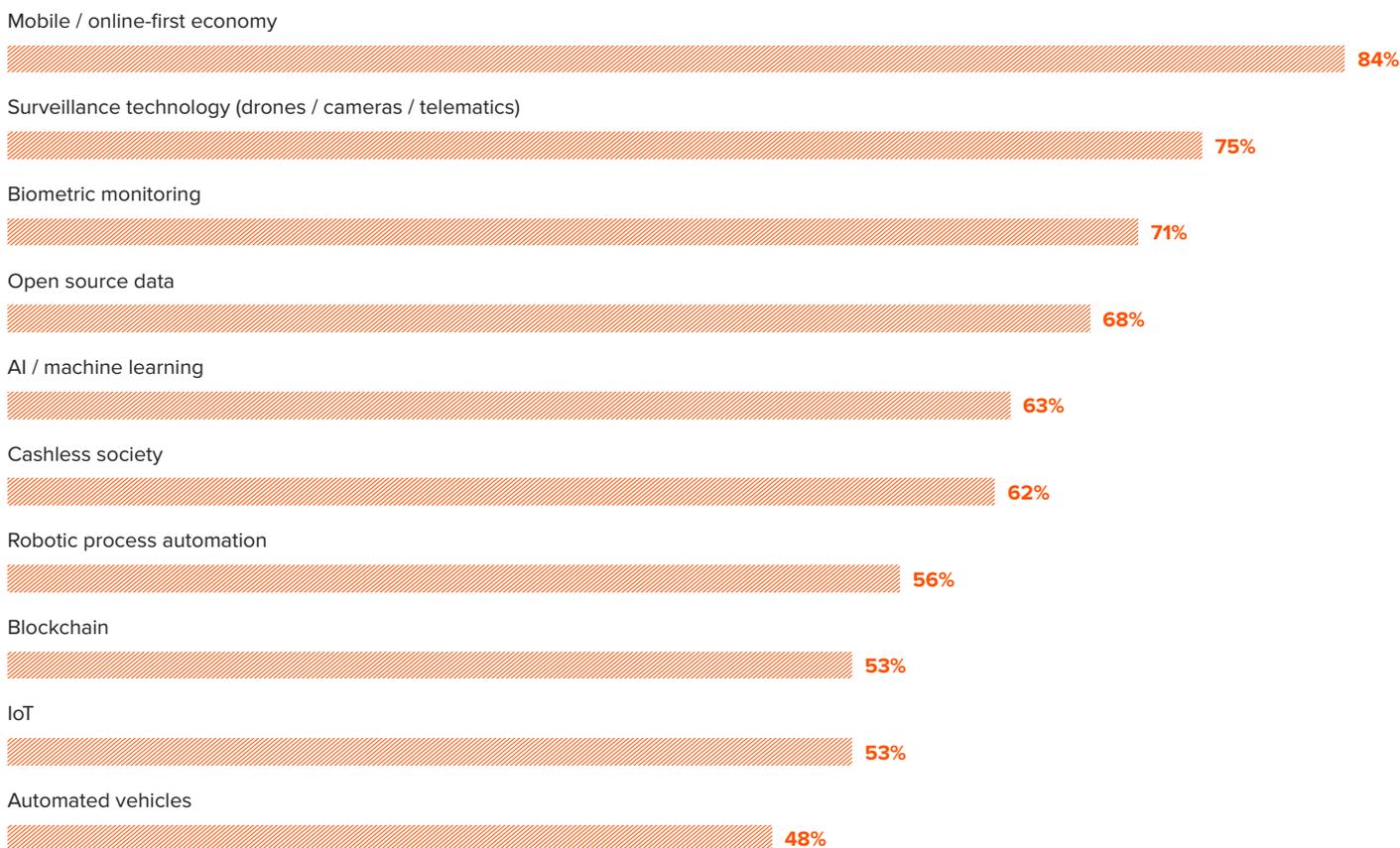
Looking specifically at the technologies most expected to transform departments in central government over the next five years, **Figure 10** shows that the mobile / online-first economy (**84%**), surveillance technology (**75%**) and biometric monitoring (**71%**), followed by open source data (**68%**), AI / machine learning (**63%**) and cashless society (**62%**) are seen to be particularly impactful. As many of these technologies are data-intensive and big data-producing, many departments look to be preparing themselves for this “hot” data environment by overhauling their data infrastructures.

Although two thirds (**65%**) say it is difficult to balance security, speed and innovation in their technology choices there is an appetite to adapt and learn from others. With unifying challenges such as political uncertainties, climate change, job displacement, demographic shifts, globalisation of commerce – three quarters (**74%**) think that governments in Europe can learn from each other in how they procure and use technology.

In addition, **73%** say they need to be creative in how they use technology so they can do more with less. Current infrastructures are not only inhibiting the ability to do more with data, but they are also inhibiting innovative thinking about how to deliver better citizen outcomes. Across Europe, data is as important as our energy and transport networks and should be treated as such – investing in the skills and technologies to get the most out of data enables it to become an engine for efficiency and innovation. Uncertainty is the “new normal”, but now more than ever, remaining outcomes-focused is vital to maintain transformation momentum and deliver both operational and citizen imperatives.

FIGURE 10: TECH MOST EXPECTED TO TRANSFORM DEPARTMENTS IN NEXT FIVE YEARS

% SAYING “TO A GREAT EXTENT” OR TO “SOME EXTENT”



COUNTRY DASHBOARDS

CITIZEN OUTCOMES

	GERMANY	SPAIN	FRANCE	UK	ITALY	NETHERLANDS
% of "digital masters"	10%	19%	31%	18%	17%	16%
Top 3 outcomes in digital transformation activities	Improving citizen outcomes, efficiency / speed of delivery, managing security threats	Improving citizen outcomes, efficiency / speed of delivery, increasing uptake of online government services	Efficiency / speed of delivery, improving citizen outcomes, managing security threats	Improving citizen outcomes, efficiency / speed of delivery, managing security threats	Efficiency / speed of delivery, improving citizen outcomes, improving agility / ability to respond	Empowering employees with digital skills and tech, efficiency / speed of delivery, managing security threats
% extremely satisfied with digital transformation progress	13%	17%	18%	11%	8%	6%
% satisfied with digital transformation progress	69%	71%	75%	72%	83%	80%
% agreeing that improving citizen experience is important in building trust in government	85%	81%	82%	83%	88%	80%
Top 3 citizen outcomes in how tech investment is prioritised	Time efficient, reliable access, simple	Time efficient, highly functional, reliable access	Simple, reliable access, time efficient	Time efficient, reliable access, simple	Simple, time efficient, highly functional	Reliable access, highly relevant / individualised, time efficient, functional
% able to very effectively measure impact of tech investment on citizen outcomes	16%	25%	22%	14%	8%	33%
% able to quite effectively measure impact of tech investment on citizen outcomes	50%	60%	51%	51%	75%	53%

BARRIERS AND DATA INFRASTRUCTURE

	GERMANY	SPAIN	FRANCE	UK	ITALY	NETHERLANDS
Top 3 barriers to digitising citizen services / automating processes	Lack of digital skills / experience, investment in applications, lack of digital leadership / vision	Investment in data infrastructure / lack of collaboration with other departments / investment in applications	Investment in applications, investment in data infrastructure, lack of digital leadership and vision	Investment in data infrastructure, investment in applications, legacy processes and lack of agility	Lack of collaboration with other departments, investment in data infrastructure, legacy processes and lack of agility	Investment in data infrastructure, legacy processes and lack of agility, investment in applications
% saying they have responsibility to make full use of available tech to deliver the best possible service	71%	88%	73%	76%	87%	73%
% saying they can transform citizen outcomes with better use of data	76%	88%	72%	83%	87%	63%
Top 2 ways department could be making / more better use of data and analytics	Improve citizen outcomes, deliver operational savings	Improve citizen outcomes, inform development of new services	Improve citizen outcomes, inform real-time decision making, inform development of new services	Deliver operational savings, improve citizen outcomes	Improve citizen outcomes, inform real-time decision making	Deliver operational savings, inform real-time decision making
Top 2 areas where extensive improvement is needed to enhance service delivery by department	Data infrastructure, ability to consolidate / visualise data	Data infrastructure, ability to consolidate / visualise data	Ability to consolidate / visualise data, data infrastructure	Ability to consolidate / visualise data, data infrastructure	Ability to consolidate / visualise data, data infrastructure	Data infrastructure, ability to consolidate / visualise data
% very confident that data infrastructure enables department to meet transformation objectives	10%	2%	5%	9%	6%	4%
% quite confident	58%	71%	67%	48%	77%	63%

DATA INFRASTRUCTURE

	GERMANY	SPAIN	FRANCE	UK	ITALY	NETHERLANDS
Main ways data infrastructure shortcomings compromise performance and service delivery	Increased operational costs, reduced operational agility to meet citizen expectations	Increased operational costs, decreased ability to meet citizen expectations, increased exposure to cybersecurity attacks, limited opportunities for digital innovation	Decreased ability to meet citizen expectations, reduced operational agility, difficulty accessing mission critical data	Reduced operational agility, increased operational costs, challenges with compliance and governance	Increased downtime / reduced service reliability, increased exposure to cybersecurity attacks, decreased ability to meet citizen expectations	Increased operational costs, decreased ability to meet citizen expectations, limited opportunities for digital innovation
% looking to overhaul data infrastructure in next two years	50%	57%	52%	49%	67%	62%
Top 3 accelerators of need to overhaul data infrastructure	Increased volumes of data, evolving security threats, need for increased collaboration, increased citizen expectations, requirements to be "cloud first"	Need for increased collaboration, increased volumes of data, evolving security threats	Evolving security threats, increased volumes of data, increased citizen expectations	Requirements to be "cloud first", increased citizen expectations, increased volumes of data, need for increased collaboration	Increased volumes of data, need for increased collaboration, evolving security threats, increased citizen expectations	IoT and more connected devices, need for increased collaboration, increased volumes of data
% agreeing that legacy infrastructure is holding up their digital transformation progress	69%	77%	58%	67%	85%	61%
% agreeing it is difficult to balance security, speed and innovation in our technology choices	63%	73%	62%	68%	63%	63%

83% say improving the citizen experience is important in building trust in Government

SECURITY

	GERMANY	SPAIN	FRANCE	UK	ITALY	NETHERLANDS
% thinking external threats will increase over the next two years	46%	50%	57%	53%	62%	51%
% thinking internal threats will increase over the next two years	32%	27%	29%	24%	23%	24%
% thinking malicious threats will increase over the next two years	47%	52%	47%	52%	35%	45%
% thinking inadvertent / human error threats will increase	16%	23%	24%	17%	19%	24%
Main factors impacting confidence in managing future security threats	Difficulty identifying source of breach, difficulty keeping up with hackers' new approaches	Legacy infrastructure / outdated operating systems, IT function lacks cybersecurity resource & skills, data on multiple devices in disparate locations	Difficulty keeping up with hackers' new approaches, IT function lacks cybersecurity resource & skills	Legacy infrastructure / outdated operating systems, IT function lacks cybersecurity resource & skills	Difficulty keeping up with hackers' new approaches, legacy infrastructure / outdated operating systems, IT function lacks cybersecurity resource & skills	Difficulty keeping up with hackers' new approaches, department / employees not well educated on the threat
% agreeing investment in infrastructure security is not keeping up with security threats	60%	73%	64%	62%	83%	57%
% saying department has sacrificed performance in technology to have enhanced security	65%	71%	70%	75%	54%	75%
Average % of IT projects that fully meet expectations and are delivered on time / budget	50%	51%	46%	49%	44%	47%

AGILE AND FUTURE-PROOFING DATA INFRASTRUCTURE

	GERMANY	SPAIN	FRANCE	UK	ITALY	NETHERLANDS
Top reasons why tech projects may not deliver maximum value	Budgetary constraints, skills issues	Budgetary constraints, integration issues	Budgetary constraints, skills issues	Unrealistic expectations, budgetary constraints, integration issues	Budgetary constraints, integration issues	Budgetary constraints, skills issues
% using agile extensively	5%	6%	18%	15%	11%	12%
% using agile in places / testing	39%	54%	39%	37%	50%	33%
Challenges in adopting a more agile approach	Leadership / sponsorship, lack of agile skills / experience	Collaboration / cultural transformation, leadership / sponsorship, employee commitment	Employee commitment, collaboration / cultural transformation	Lack of agile skills / experience, leadership / sponsorship, employee commitment	Employee commitment, collaboration / cultural transformation	Employee commitment, lack of agile skills / experience, leadership / sponsorship
Top 3 tech / trends likely to transform service delivery over next five years	Mobile / online-first economy, surveillance tech, biometric monitoring	Surveillance tech, mobile / online-first economy, biometric monitoring	Mobile / online-first economy, surveillance tech, biometric monitoring	Mobile / online-first economy, surveillance tech, open source data, cashless society	Mobile / online-first economy, open source data, surveillance tech	Mobile / online-first economy, open source data, surveillance tech
% saying Governments in Europe can learn from each other in how they procure and use technology	69%	81%	73%	74%	81%	69%
% saying need to be creative in how they use tech so they can do more with less	67%	92%	70%	72%	81%	67%

Progressive governments in Europe share the need to prioritise and choreograph a growing array of services

