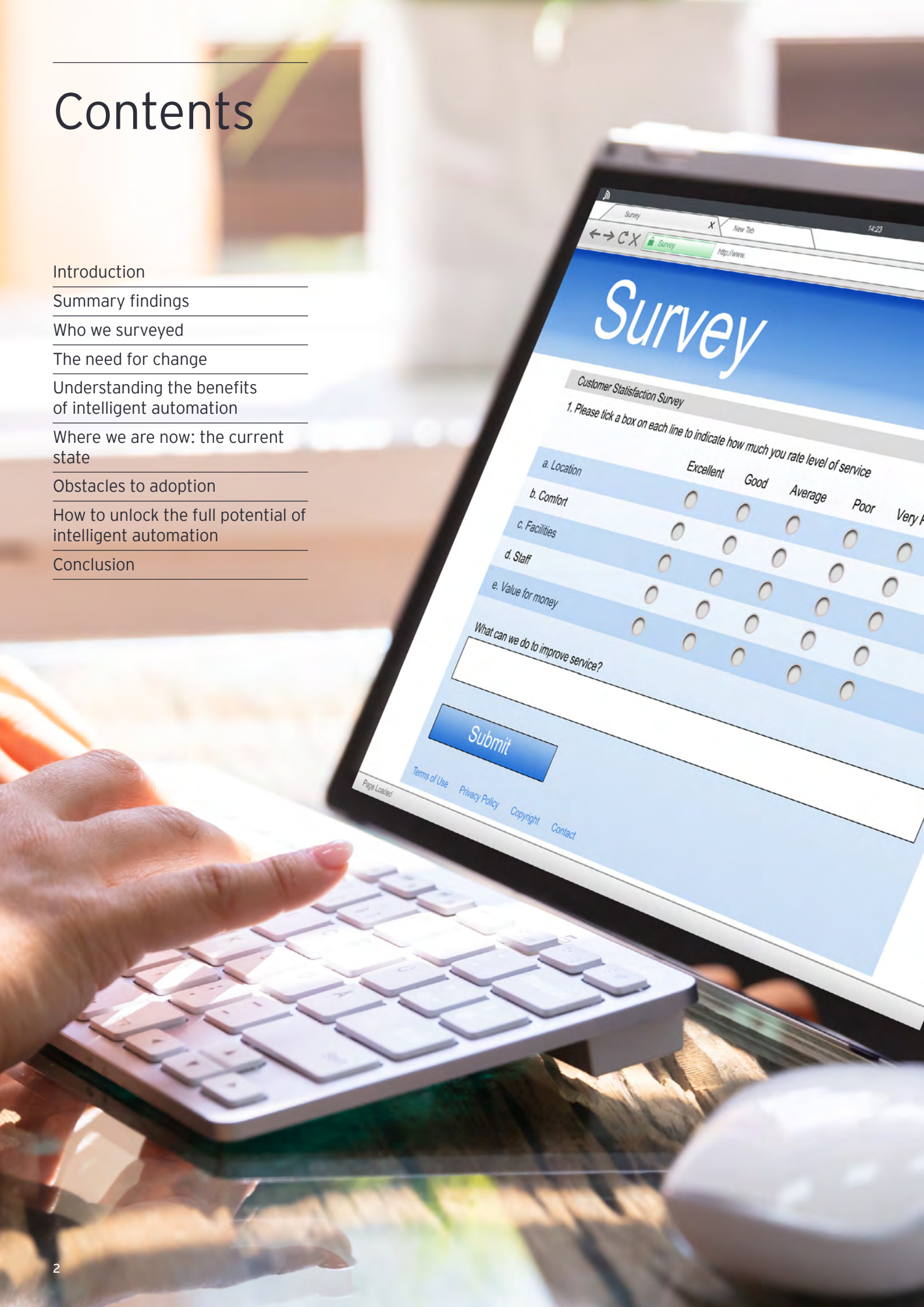
UK public sector driving strategic value with intelligent automation

EY
Building a better working world

Contents



Introduction

A digital revolution is under way, driven by intelligent automation (IA) in all its forms. This change offers public sector organisations new opportunities to transform the way they work and deliver better outcomes for the people they serve.

Against a background of budgetary pressures and rising demand for services, public sector organisations need to do more with the same or less resources. Simply pursuing 'business as usual' policies is no longer an option, especially in light of the new challenges brought by COVID-19. Organisations need to radically rethink the way they deliver services to the public and find new ways of tackling national, regional and local issues.

The adoption of new digital solutions therefore offers tremendous potential for public sector organisations, enabling them to accelerate transformation and unleash value for their organisations, employees, and the people they serve. When used as a strategic tool, digital solutions can provide the missing link that will help them deliver better outcomes for citizens in a more sustainable way.

IA will allow public sector bodies to keep up with increasing demands on services by delivering them more efficiently. But perhaps more importantly, it provides a way to free up the time of talented and dedicated public sector workers from undertaking administrative tasks to focus on what really matters – serving the citizen. It helps organisations to use data to generate insights that augment professional decision-making. And it releases capacity and resources that can be reinvested in innovation and in enhancing public value.

The successful implementation of automation is a complex process and technology alone is not the answer. It's the combined power of people working with technology that will deliver the greatest value. As organisations align their automation and people strategies to enable the transformation, there are five key considerations:

1. Align digital plans with overall vision and purpose
2. Adapt organisational culture and working practices
3. Identify operational pain points through organisation-wide review
4. Develop the right skills and capabilities
5. Embed trust in automation to harness the benefits

In 2019, EY concluded an online survey of 1,312 government and public sector employees across the UK to understand their views and attitudes towards automation.

Respondents included employees in local government (557), the civil service (510), police services (134), and higher education (44). We also carried out more in-depth face-to-face interviews with leaders in the Civil Service, the National Health Service (NHS) and local government.

The results of the survey gives a more in-depth understanding of where public sector organisations are currently on their automation journey. It also gives further clarity as to where the organisations see the benefits and the obstacles to adoption.

Summary findings

This report outlines what we have learned as a result of the survey and our key findings are summarised below.

Challenges facing public sector organisations

Survey respondents were asked about the most important challenges facing their organisation over the next three years. Their top three challenges were:

1. Operating within their budget
2. Meeting increasing demand for services
3. Improving the way they serve citizens, partners and communities

View of automation

The survey showed that respondents saw the value in automation in the following areas:

- Increasing efficiency and productivity
- Improving the citizen experience
- Improving the employee experience
- Using data to improve decision-making

Status of automation in public sector organisations

Currently within the public sector, more and more organisations are looking to utilise automation. So far, very few have managed to deliver this at scale.

Challenges to implementing automation

The survey showed that the main obstacles to adoption of automation include:

- Fear of large-scale change programmes
- Changing nature of work and skills requirements
- Prioritising for the future
- Fear of job losses
- Concerns about trust and privacy

Unlocking the value

The results of the survey led us to conclude that focussing on the following areas will unlock the value of automation:

- Align digital plans with overall vision and purpose
- Adapt culture and working practices
- Identify operational pain points through an organisation-wide review
- Develop the right skills and capabilities
- Embed trust in automation to harness the benefits

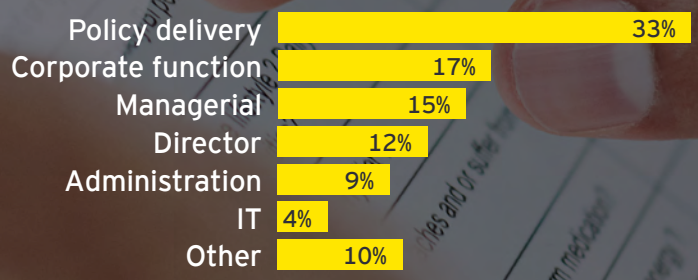
> “Automation is seen as a panacea to efficiencies in resourcing. I’d sooner see it as removing the mundane and allowing the staff to focus on meeting the citizens’ needs by providing a better quality of service or care.
>
> Survey respondent

Who we surveyed

We conducted an online survey of government and public sector workers across the UK.

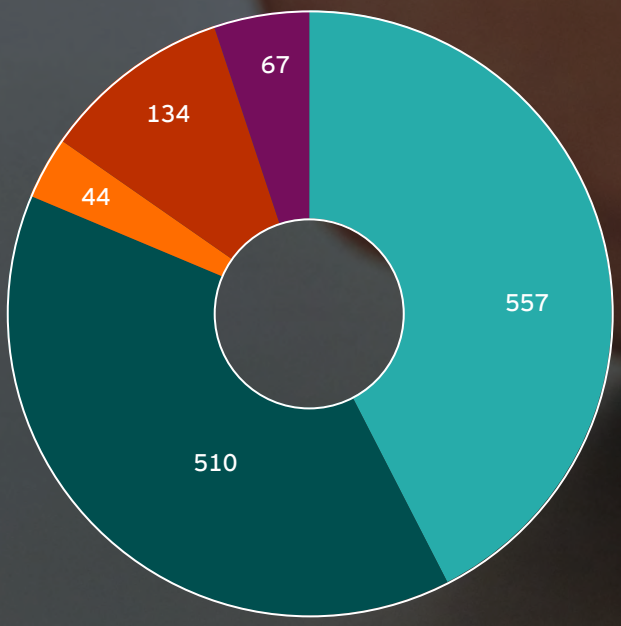
1,312
respondents

Job type



Area of public sector

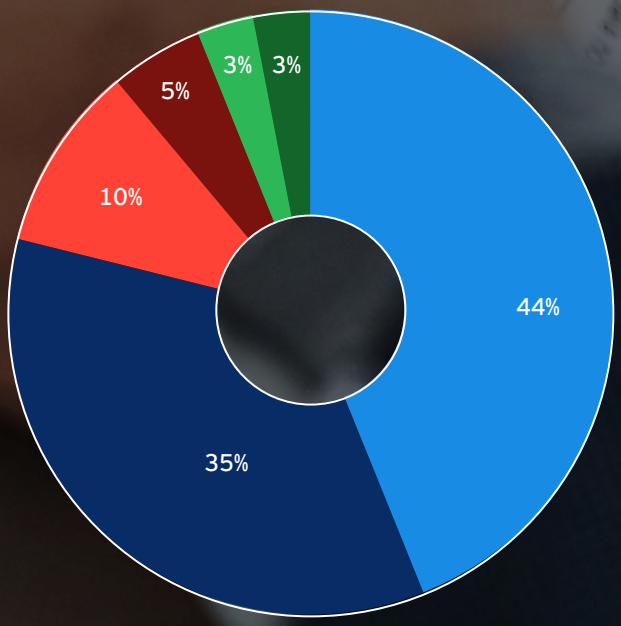
Number of respondents



- Local government
- Civil service
- Higher education
- Police
- Other

Length of service

% of respondents



- <2 years
- 2-5 years
- 6-10 years
- 11-20 years
- >20 years
- Other

> If you can relieve pressure in the administrative aspects, it helps. The fundamental question is: do you want a social worker spending 80% of their time filling in forms or helping someone? After all, a desire to help people is why they went into the profession in the first place.
>
> Survey respondent

The need for change

This survey was carried out prior to the onset of the COVID-19 pandemic. However, this has only reaffirmed many of the findings below, highlighting the period of rapid technological change we are in and the pace is only likely to accelerate. The innovations of the past three decades are just a prelude to more radical changes now on the horizon, driven by enhanced 5G communications networks and new technologies, such as artificial intelligence (AI), robotics and blockchain, all powered by exponential growth in the volume, accessibility and availability of data.

There are a number of reasons to utilise the power of automation and through the survey, three themes were repeatedly identified across organisations:

Challenging environments

These technological advances come at a time when globalisation, urbanisation, demographic shifts, and geopolitical and environmental threats are all changing the landscape for the government and public sector. These drivers are clashing with more immediate fiscal challenges. With budgets under pressure, organisations must do more with the same or less, even as demands on services are increasing.

User expectations

Citizens have begun to expect the same personalised and responsive service from the public sector that they get from the private sector. Data-centric private companies and disruptive service providers excel at using data to improve the customer experience.

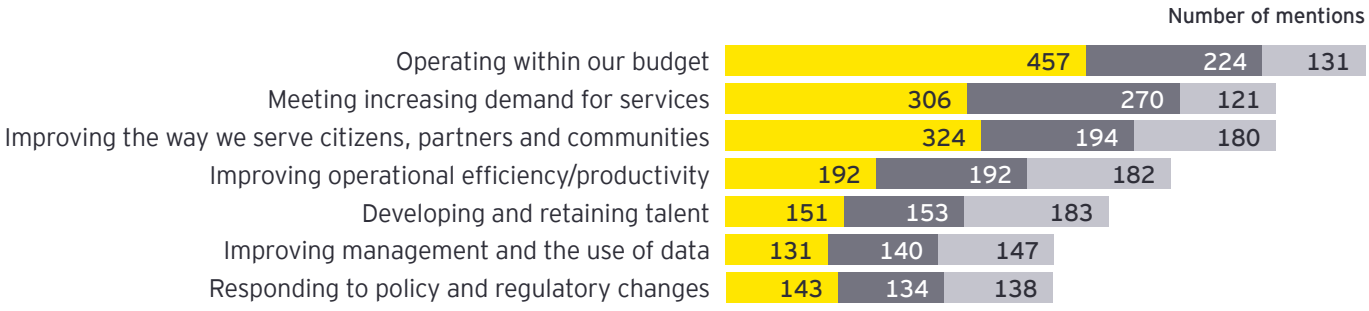
Legacy structures

Data remains an untapped resource for many public sector organisations. A survey respondent indicated: "We are still quite a bureaucratic organisation, and we collect enormous amounts of information about the work we do, the services and the people in our care. But we are nowhere near getting the value and the insight embedded in all that information to help us make better decisions and deliver better outcomes for citizens."

View from the sector

Survey respondents were asked about the most important challenges facing their organisation over the next three years. They ranked operating within their budget, meeting increasing demand for services and improving the way they serve citizens, partners and communities, as being their top three challenges.

What are the most significant challenges facing your organisation over the next three years?



Source: EY survey 2019

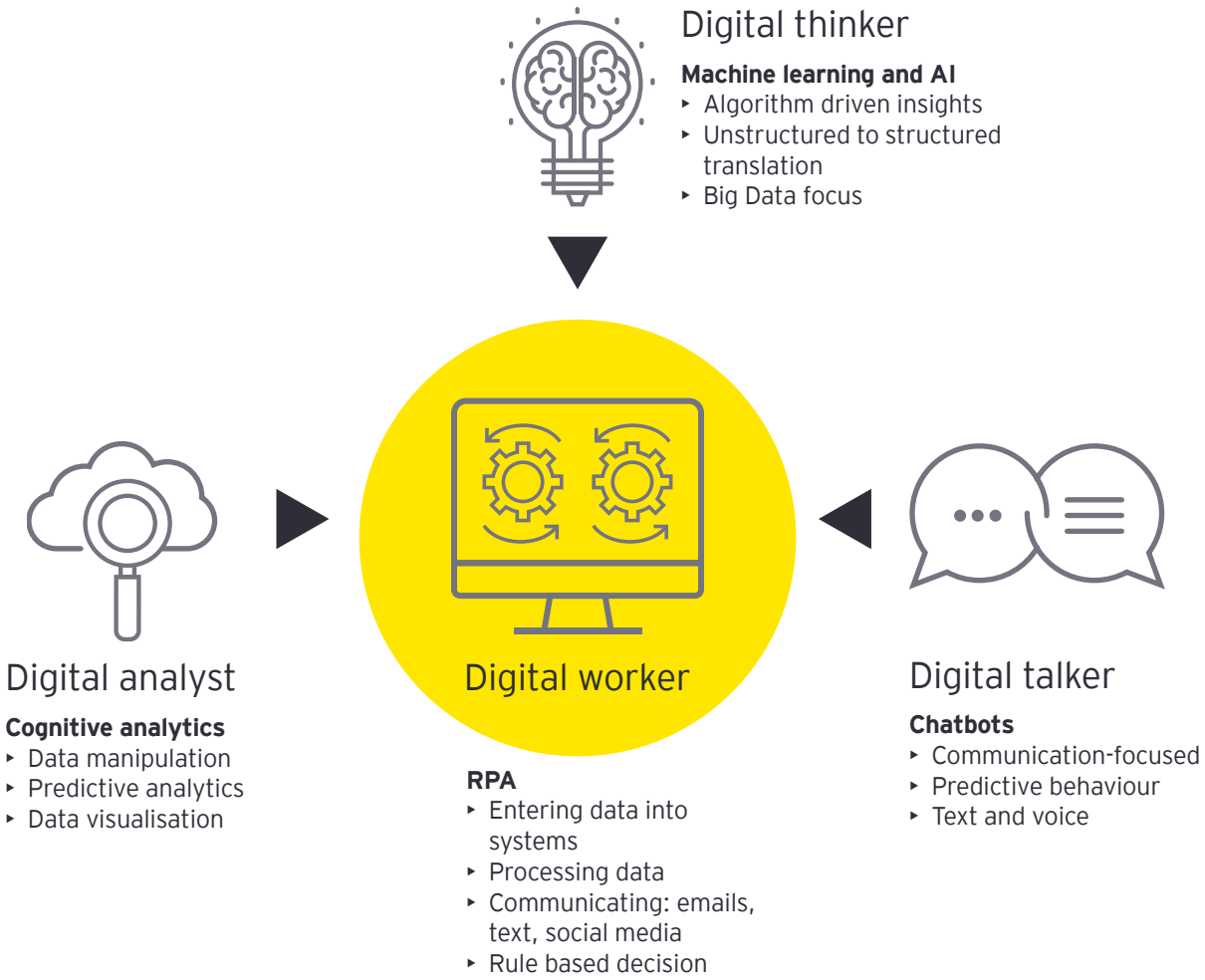
Understanding the benefits of intelligent automation

We're already seeing examples of how IA and machine learning can be used across the public sector to improve the citizen experience in interacting with public services; help reduce crime rates through predictive policing; improve urban transport by performing adaptive scheduling and route optimisation; provide critical information and analysis to improve disaster response and recovery; assess welfare eligibility and determine immigration decisions; triage health care and enable more personalised diagnosis and treatment of health conditions; and perform automatic grading of student exam papers, to give just a few examples.

Thinking has moved on from robotic process automation (RPA) and leaders in the field now talk about IA.

It merges multiple technologies to solve business problems. It is more than just the deployment of a suite of digital tools. It is a new way of enabling strategic transformation.

What do we mean by intelligent automation?



“

Automation is the future, it is already happening and should be embraced. I understand that some people are scared that their job may be at risk, and for some that will be the case. At the same time, automation will generate new opportunities for people.

Survey respondent

How can automation help?

We see four main areas of impact for automation technologies

1

Increasing efficiency and productivity

With budgets under pressure, organisations can improve productivity with the same resources by automating high-volume tasks and manual processes. RPA and machine learning tools, for example, may be cheaper, faster or more accurate than humans at tasks that involve lots of data, complicated calculations, or repetitive tasks with clear rules.

Public services have many common processes that can be managed and automated centrally for greater consistency and efficiency. Benefits will come from the economies of scale made possible by centralising and automating routine tasks, creating savings that can be reinvested back in the organisation.

Better outcome example

During our research, one of our respondents indicated that they process approximately 11 million invoices. Therefore by implementing a centralised RPA platform for processing invoices, they found that they could yield GBP 70 million worth of savings. It also meant that the time employees would spend on this could be used for more meaningful objectives, such as improving service quality.

"There is an opportunity to use developing AI technology to reduce repetitive, volume or repeat calls. The use of automation will release time and resources for staff to be better deployed to support the people that really need that support and assistance."
Survey respondent

2

Improving the citizen experience

Supplying the same information more than once, filling in long forms and negotiating complex online platforms mean accessing public sector services can be a time-consuming affair. IA technologies can help organisations improve the day-to-day experience for customers – and achieve much better outcomes.

Automation can also help organisations design and deliver more customer-centric services by enabling the end-to-end digitisation of services, from the customer interface right through to back-end processes. By mapping the end-to-end customer journey, they can focus on making each touchpoint better, faster and more efficient, and can integrate all of them into one seamless experience for the customer.

Better outcome examples

We're seeing examples from around the world of public sector bodies using automation to answer queries, deal with applications, route requests, auto-fill documents, process payments, and handle complaints. 'Tell us once' services ensure that people don't have to refill their personal data online for different public services. Virtual assistants, or chatbots, allow citizens to access services when it suits them and receive speedier responses. This ability to self-serve gives them more control over their interactions with organisations and improves satisfaction levels.

"The average citizen wants to be able to interact with agencies, governments, in the same way they would interact in their personal life. These individuals want to be able to access you as and when they want and need to."
Survey respondent

3

Improving the employee experience and offering more personal support

Automation allows employees to work in more purposeful roles by freeing up their time to focus on what really matters – human connection.

Automation doesn't displace a team or service but complements it so that it is truly customer-centric.

Public service workers can apply qualities such as empathy and judgment which computers can't replicate. This is vital in services such as long-term unemployment assistance, drug addiction treatment and prisoner rehabilitation, which require the expertise of highly specialised employees offering personalised support and advice. IA can provide insights to aid their decision-making, but the human connection is still essential.

Better outcome example
If nurses and social workers, for example, don't need to handle repetitive, administrative tasks, they can dedicate more time to caring for patients or helping vulnerable children and families. If schools use automatic computer grading for homework and exam papers, teachers will get more time to plan lessons or help students who are struggling. The benefits can be seen in improved morale and job satisfaction, and better outcomes for citizens.

"Automation tends to be seen as primarily about reducing long-term costs and cutting human contact. In fact, it should be about freeing up people to do what they can do better than machines, be creative about solving problems and empathising with people."
Survey respondent

4

Using data to improve decision-making

Public sector organisations hold vast amounts of information from many sources. But because there's so much of it, and because it is often unstructured, unlocking its value can be difficult. Automation technologies offer huge potential to sift through and make sense of this data – including text, images and voice – to extract insights to augment human decision-making.

Organisations can use data to create predictive models that identify risk cases earlier and enable them to make better use of resources by providing more targeted services.

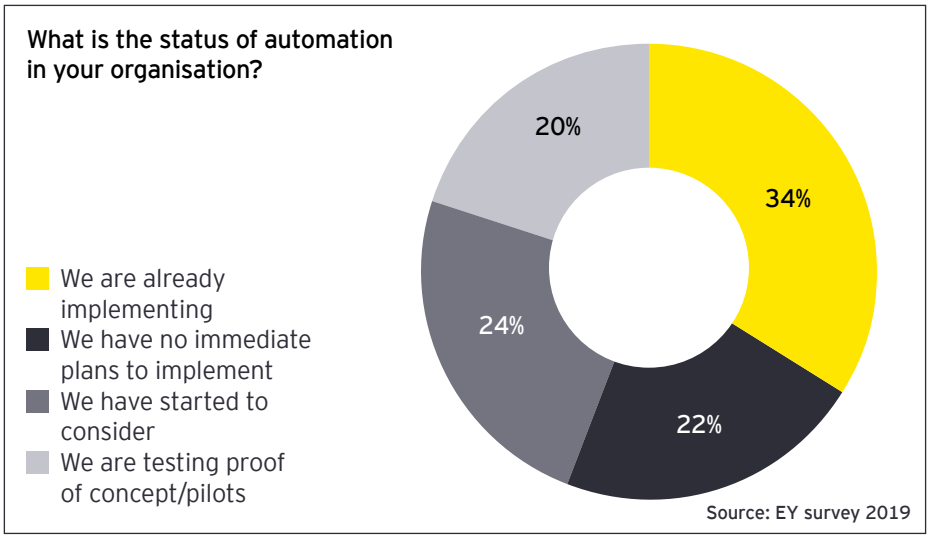
Better outcome example
Delivering the right services, at the right time and in the right places can improve preventative actions – for example, intervening with vulnerable children before they reach the point of crisis – and reduce pressure on downstream services. EY, for example, is helping councils unlock the potential of early intervention and transforming the way services address the needs of the most vulnerable people[1].

"It (automation) would ensure that access to information and services for children, young people and families is swift and early. It would ensure that data and information is analysed effectively to predetermine needs and therefore target services effectively. It can contribute to evidencing the need for services and therefore ensure that budgets and funding are appropriately designated."
Survey respondent

1. For further information, see the EY report *How can data tell a story that keeps a vulnerable person safe?*

Where we are now: the current state

Our survey shows that automation is well underway in the public sector. Over one-third of respondents who were aware of the status of automation in their organisation said they were already implementing it, and a further 20% are at the pilot/proof of concept stage.



Uses for intelligent automation within the government and public sector

At present, automation is mainly being introduced on a tactical basis, with a focus on improving manual, repetitive back office administrative tasks. Examples include processes that require typing in information from one system to the other; or reading case files from multiple systems and then extracting relevant data. Many organisations want to 'get it right' in the back office before they introduce it in citizen-facing activities.

One Executive Director gives the example of contract management. "(We are) training robots to repeat certain tasks, and the efficiency of that is enormous because they don't need to stop working, and they can cover our entire caseloads instead of small samples and ultimately require fewer people to do the compliance checks. We can then use our contract management expertise to focus on higher-value business conversations and how to improve the quality of public services."

Our survey showed that popular processes included:

> "We are seeing increasing interest in automation as leaders square the circle of rising expectations and tightening resources.
>
> Survey respondent

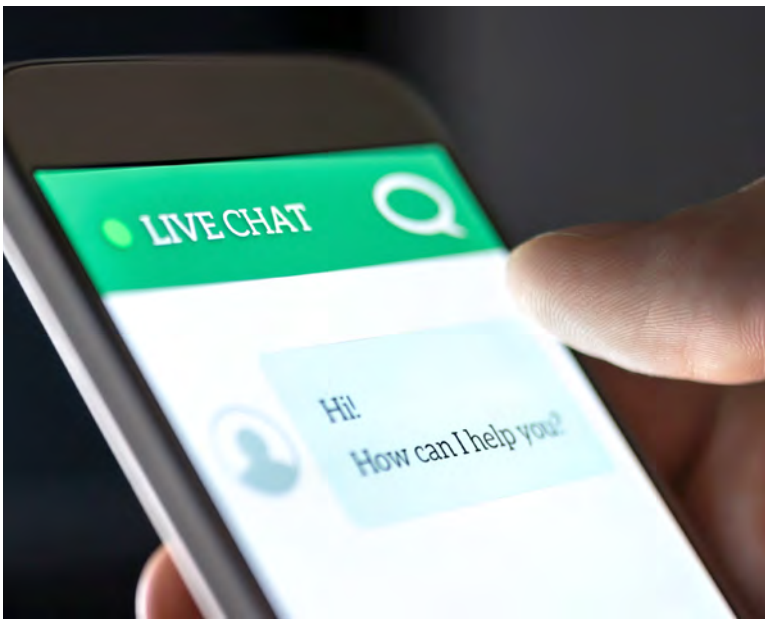
Claims/benefits handling
e.g., online forms

Accounts and payments processing
e.g., bookings and payments

Data capture and analysis
e.g., minor incident recording

Citizen interaction
e.g., self-service portals and chatbots

Contact centres
e.g., omni-channel and customer data management



Attitudes towards automation

The survey shows that public sector workers can see the value of automation as a strategic play. Almost 80% of respondents were neutral or in agreement that automation would have a positive impact on their organisation. More than 60% of respondents agreed or strongly agreed with the statement "in the future, automation will support my organisation to address our operational challenges," while fewer than 7% disagreed.

More than 80% were positive or neutral on whether automation could deliver more positive outcomes (81%), free up employee time for higher value activities (82%), help staff make better decisions (83%), and improve performance and productivity in their organisation (85%).

While respondents can see the value of automation for their organisation, there are also concerns about the possible impact on people's jobs. Just over 60% said they had concerns about the impact of automation on their own role; and 45% agreed that it would reduce the overall size of the workforce.

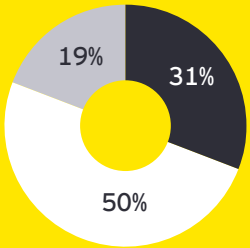
Respondents at director level and those working in corporate functions were more positive than other respondents, particularly those working in administrative roles. For instance, 72% of directors agreed that automation would help improve performance and productivity, compared with 48% of administrators. Similarly, 57% of directors agree that automation is critical to delivering more positive outcomes, but the equivalent figure is just 38% for administrators. The data suggests that those who expect to be personally affected by the changes are more likely to be negative about the potential impact. Just 29% of directors were concerned about the impact automation might have on their role, compared to 41% of managers and 69% of administrators.

When survey respondents were asked where automation can deliver the greatest value to their organisations, the majority ranked 'enabling operational service delivery' (41%) and 'internal support functions, such as Finance, HR, Procurement' (38%) as the two key areas, while fewer than 15% selected 'engaging with citizens, partners and communities.'

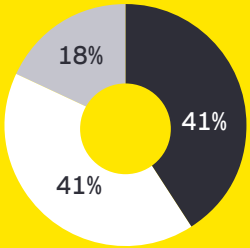
Key survey results

Agree Neutral Disagree

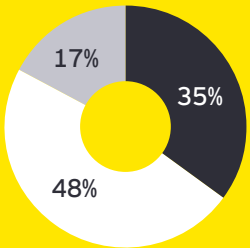
Automation is critical to delivering more positive outcomes for citizens, partners and communities in the future



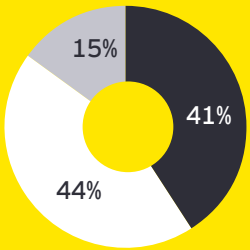
Automation will free up employees' time to spend on higher value activities and increase their engagement at work



Automation can help staff make better decisions, based on data and evidence



Automation will help us improve performance and productivity in our organisation



Source: EY survey 2019

Obstacles to adoption

Our research suggests that most public sector organisations are not yet considering automation as a strategic tool or capturing the real benefits that it offers. Several barriers are holding back progress.

> It will require sustained investment to implement automation and build the skills and organisational construct to drive it.
>
> **Survey respondent**

Fear of job losses

The 'fear factor' around the impact on people and jobs is one factor. Our survey revealed a tension between people's acknowledgement of the potential benefits of automation and their concerns about the wider implications. While the majority (69%) believe that automation will help their organisation to address its operational challenges, respondents were concerned about the impact it will have on their organisation (47%), their department (44%) and their own role (37%). And 45% think it will reduce the overall size of the public sector workforce.

Fear of large-scale change programmes

In the public sector, there is sometimes a reluctance to embark on large-scale transformation programmes due to past experiences. "There are parts of the public service who have almost resigned themselves to the fact that technology-enabled change is very hard and very slow and very expensive, and that's clearly not actually the case," says a survey respondent. "It's just we have ended up where every time we try and deploy technological change we do it in very traditional, large-scale technology programmes that often end up taking way longer than we thought."

But technology is very often not the problem.

Organisations need to tackle the cultural change that can create a barrier to successful implementation. This means getting buy-in from the business for automation and overcoming initial scepticism or resistance to any required changes to working practices.

Changing the nature of work and skill requirements

Automation is likely to give rise to new roles and skill requirements. "I am not convinced yet that it would change the size of the workforce dramatically. I think it will change the nature of the work," says one survey respondent. "The reason I say that is because we are in the business of data. We are constantly trying to understand how you can collect more and what you can do with it. Therefore we need to increase skills and knowledge in the areas of data analysis and insight gathering."

Many survey respondents mentioned the lack of skills and organisational structures needed to drive automation in their organisations. As one digital director put it, "It's going to take some investment to implement automation and build the skills and organisational construct to drive it." At the moment, there is often no strategy or centre of excellence to drive it, nor the resources required to manage the short-term disruption.

We asked survey respondents, **"What do you see as the main challenges associated with planning and implementing automation?"** The main themes emerging from the responses include:

- Cost and budgetary constraints
- Technology and outdated legacy systems
- Improper deployment
- Lack of trained personnel to manage deployment
- Inability to adapt to new roles
- Staff morale and resistance to change
- Lack of understanding and expertise amongst senior leadership
- The need for citizen acceptance
- Data privacy and security
- Inability of automation to cater to complexity of public sector organisations

Prioritising for the future

Another challenge is the complex and uncertain external environment, which is diverting attention and resources away from automation. "We are trying to create headroom to drive conversations around automation," noted a digital director. "But for governments, there is always going to be some major distraction." Another respondent concedes that there are other bigger pressures – such as hospital buildings that need significant investment – as well as a short-term mindset. Faced with the challenge of delivering services today, organisations can see automation as lower priority.

Concerns about trust and privacy

Finally, trust will be key for harnessing automation in the government and public sector. Data that contains personal and sensitive information about an individual comes with responsibility. Organisations will have to consider how to balance data privacy concerns with the benefits of actionable insight to improve services.

Organisations will also have to take steps to build employees' trust. Any scepticism can be overcome by emphasising the benefits of the tools in aiding their own decision-making. However, a digital director acknowledged that the cultural adoption of automation tools has been a challenge, particularly when it comes to augmented decision support for trained professionals. "There were some people who found that difficult and trusted their judgment ahead of the evidence space," he says. "But our best practitioners are becoming better practitioners because of the evidence base, and they see the benefit of having enabling tools to support them."

"The opportunities for automation are closely linked with wider technological change, including ensuring the infrastructure is capable of handling millions of transactions, the data is stored in a way which maximises the availability for analysis and organisations have the technical skills and creative thinking to use analysis and insight to make changes that are genuinely transformative. In the public sector that is always likely to be hampered by a lack of direction and long-term strategic planning, insufficient funding and a shortage of the requisite skills and infrastructure to make best use of developments."
Survey respondent

How to unlock the full potential of intelligent automation

To automate intelligently – driving the greatest long-term value for the organisation while minimising disruption to the workforce – leaders must align their technology with their people strategies. This requires them to carefully plan their transformation journey and fully understand how IA can accelerate it. In this section, we set out some key considerations to help organisations successfully navigate their IA journey.

1

Align digital plans with overall vision and purpose

Initiating, launching and deploying automation initiatives requires strong support and commitment from leadership who have a clear understanding of how it can be used strategically to help meet broader organisational goals.

Focus on the vision

Leaders must start by considering the 'big picture' – the overall vision of the organisation to deliver on its core mission. This means clearly articulating what value they need to create and for whom, then developing the solutions and technologies that help deliver that value. One digital director indicated that an "Organisation has many levers, and so the leader's responsibility is to help at least tease out the priorities relative to the ambitions of the organisation. Making sure you pass on the right levers to affect your outcomes is your job."

Leadership

New leadership capabilities and mindsets will be crucial in a world where change is constant and the external environment is rapidly evolving. Leaders will need strategic, digital, multigenerational and empathetic competencies to lead in a digital working world. Collaboration, creativity, curiosity and adaptability to lead through continuing change will also become critical.

Senior executives are ideally positioned to sponsor automation programmes. But beyond top-level support, the most effective IA programmes are governed by steering committees made up of senior stakeholders from across the organisation – including strategy, IT, finance, human resources, procurement and communications – to provide programme direction, oversight and sponsorship, and to achieve alignment across the entire organisation.

The IA team should be led by influential leaders with an ability to build networks and relationships across functions, a willingness to challenge existing behaviours and mindsets, and a desire to innovate. They must help forge genuine partnerships between the digital team and the administrative and operational teams responsible for service delivery.

Strategy is key

A clear strategy and implementation plan is needed to translate the vision into reality. In creating this, public sector organisations can learn from innovators who have effectively managed digital transformation in their own organisations. See the following page *Learning from the innovators: Inside the 'black box' of digital transformation*.

The strategy should set out the scope and purpose of the new technologies, and their potential to deliver public value. It should define the roles and organisational structure to develop and scale the use of automation across the enterprise; assess, monitor and facilitate mitigation of any risks associated with the deployment of automation (including issues surrounding data integrity, security and privacy protection, and ethical and legal ramifications of using automation technologies); and establish a mechanism to evaluate progress and track/measure benefits on an ongoing basis. The strategy also needs to address the rapid advances in technology and impact on jobs. As some tasks are eliminated and new tasks and roles emerge, a more sophisticated approach to workforce planning is needed over short-, medium- and longer-term horizons.

Learning from the innovators: Inside the 'black box' of digital transformation

Analysis of the success or failure of public sector digital transformation projects tends to focus on the technology that has been introduced. Seldom discussed is the role played by organisational culture and by people's willingness to embrace new approaches and working practices. Yet these will be critical to successful automation.

EY sponsored a research study from INSEAD, examining in depth five important digital public sector implementations in Russia, the UAE, Spain, Italy and France. We wanted to look inside the 'black box' of digital transformation to find out what really goes on within the teams responsible for delivery. The following key insights provide guidance for leaders who are embarking on their own transformation journey.

Create new structures and entities to drive innovation: Public sector bodies should not be constrained by existing organisational structures that may not be equipped to drive digital transformation. They must be prepared to create new entities specifically designed for the task in hand. These may be entities that drive the entire digital transformation process or that are tasked with delivering or facilitating particular elements.

Build agile and autonomous teams: The characteristics of teams that successfully manage digital transformation tend to be small, with access to specialists so they can flex as required; non-hierarchical and welcoming of bottom-up ideas; and agile, with the autonomy to make decisions swiftly. They cut across departmental or functional siloes and are empowered through the backing of a project champion, likely to be a senior leader in the organisation.

Engage and collaborate with external bodies and stakeholders: Successful project teams acknowledge they don't have all the answers. They carry out genuine consultations with external stakeholders that may be vital to the viability of the project. And they look outside the organisation's own walls and collaborate with third parties that bring fresh perspectives on the challenges in hand.

Put the customer front and centre: Successful digital transformation projects adopt the private sector's customer-centric approach, building services around the needs and convenience of end users, rather than their own internal structures and procedures. They also recognise the need to educate key stakeholders and employees to put citizens' needs front and centre and provide the necessary training and support to accomplish this.

Learn from the disruptors: Successful transformation teams tend to borrow practices from disruptors and start-ups, which may be unfamiliar and uncomfortable for public sector organisations at first. They use practices such as prototyping, piloting and phased introductions of new services. They are willing to embrace trial and error, flexible enough to change direction when things go awry, and prepared to tolerate uncertainty rather than nailing down every aspect of the project in advance.

Continue the journey: Those organisations that are most successful at digital transformation don't assume there is an endpoint on the horizon. Instead, they view innovation as a continual process during which new ideas and possibilities evolve.

Source: *Inside the black box: Journey mapping digital innovation in government*, October 2018, INSEAD and EY, 2018.

2

Adapt culture and working practices

A resilient culture is needed to manage and sustain significant, rapid change, because it is the workforce that will be responsible for executing the strategy. Without a culture ready to embrace new technologies that change their everyday roles and work, success will be limited.

When employees feel confident and understand that the technology is there to work with them, not replace them, they're more likely to start pitching ideas for the automation pipeline. The first step is also to make sure employees understand the art of the possible so that they can relate the technology to their own pain points.

"Your ability to understand how technology will affect your role has a direct correlation to the fear you have," says one respondent. With the right approach, automation can be shown to complement and augment the work people do. For staff, this means more time to focus on more meaningful tasks; to unleash their talents in value added areas; and potentially provide a better work/life balance.

Looking together to the future

Building employee awareness of the vision is an important first step. To be able to adapt, people need to be ahead of any change and be actively engaged in taking the actions that will secure their ongoing employability, such as continuing learning and development, managing change and career planning in an uncertain world.

Transparent communication

The benefits of automation in helping agencies achieve their mission needs to be clearly communicated to different stakeholder groups. Employees are more likely to cooperate if they understand how the change will affect them and what part they are expected to play in achieving the vision. There must be frequent and transparent communication to mitigate employees' concerns, encourage adoption of new ways of working, and drive alignment across the enterprise. This should allow for two-way communication rather than just top-down. Leadership teams will not be able to steer the ship in the right direction without input and intelligence from all parts of the organisation. A crucial element of this is seeking input from business users on the design of the automation solution so that it responds to their needs and is user-friendly. As one respondent put it, "The people who are using the tech need to be at the very centre of everything. The best thing you can do is get a doctor and a nurse on the (automation) project panel."

Managing the transition

A detailed action plan should outline the transition to revised roles and responsibilities, development and redeployment activities for those affected by the automation. This must cater to the skills, motivations and related needs and preferences of different workforce segments.

A crucial element is to seek input from business users on the design of the automation solution.

3

Identify operational pain points through an organisation-wide review

One of the most important activities in automation projects is identifying and selecting which processes to automate. Traditionally, support functions such as finance, human resources and procurement have been primary candidates. But there are also major potential benefits in automating aspects of service delivery and operations.

A well-defined blueprint is needed to provide a strategic narrative and guide investment decisions.

The EY approach

EY's Intelligent Automation Assessment (IAA) approach ensures that the automation teams are always working in strict order of benefit and business priority. Through the four stages we (1) establish the scale of the automation opportunity available; (2) assess the potential organisational impact; (3) identify priority focus areas for automation implementation; and (4) determine the right operating model approach.

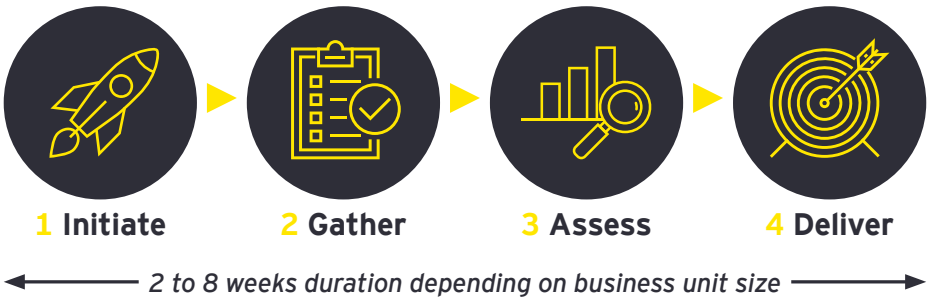
Our Automation Assessment method has been implemented over the past three years with a large number of major public and private sector clients, globally across multiple sectors. Through each of the stages the team works with the client to:

- Quantify the potential intelligent automation 'value on the table'
- Provide input to the strategic narrative for digital transformation at the client organisation; for example, answering the question, "How could our workforce change over the next one to three years?"
- Provide a baseline of processes and intelligent automation potential for each process
- Identify the range of intelligent automation technologies that can be applied to transform processes
- Identify areas of greatest benefit potential and where to start
- Provide input to a business case by estimating automation benefits and implementation costs
- Provide candidate prioritisation and a directional implementation blueprint

EY's method is not just about finding processes that can be automated. It is about finding the right processes that align to the organisation's business need and strategic plans. Using our wider sector experience, we also identify improvement opportunities by lean process methodologies and looking at holistic technology options. Public service teams considering automation must also first decide whether they could do without the process entirely.

Organisations will need to get the basics sorted first, which means ensuring that the processes themselves are ready for automation. As a digital director put it, "Governments will always have competing priorities but automation enables rather than distracts from the ability to respond."

Intelligent automation assessment key stages



4

Develop the right skills and capabilities

Public sector leaders must ensure that the workforce of the future has the right skills and capabilities to deliver automation and to adapt to the new roles that are being created. This is one of the most challenging areas for the public sector, as many of the required skills are in short supply. As one survey respondent put it, for employees it also means "learning a new skill set while still keeping up with the (existing) workload."

A greater emphasis on workforce planning, training and capability building, and recruitment programmes to attract talent is essential to help organisations adapt to future requirements. Organisations must first analyse the skill set of existing employees to identify the gaps, and second, design a talent strategy to help fill those gaps.

Recruitment and retraining programmes

Recruiting and retraining talent will be a particular focus area – and a challenge when it comes to planning ahead for jobs that don't yet exist. Research from Gartner, for example, predicts that by 2023, half the roles that public sector chief information officers will oversee do not exist in public sector IT today.[2] New roles will be needed in supporting the introduction of emerging technologies such as AI and the internet of things (IoT). These will include machine trainers, conversational specialists and automation experts. They will gradually replace the specialists in legacy technologies.

New technology skills

Organisations will also need to consider training employees to work with the new technologies. In this regard, learning experiences will shift towards self-directed learning, where knowledge sharing and learning networks are combined with new technologies such as virtual reality and augmented reality. Organisations must be prepared to provide these solutions to accelerate employee development and present enhanced on-demand learning opportunities.[3]

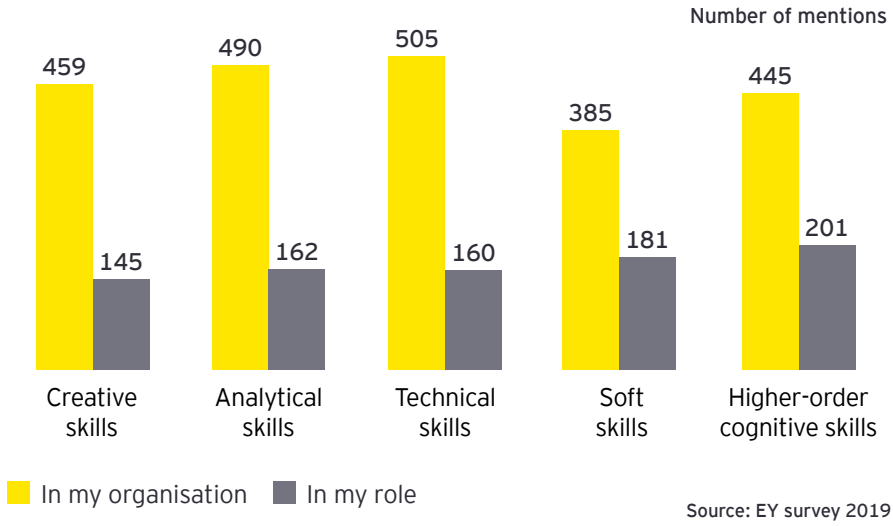
Another focus area is to upskill people whose time is redeployed to tasks further up the value chain. This is work that requires lateral thinking, empathy, collaboration and creative thinking – all things at which humans continue to outperform even the most sophisticated AI programme. Much of the training that is offered today is skewed towards hard skills. But these soft skills will be increasingly valuable.

With the savings in recruitment costs and efficiency resulting from automation, the retraining of staff and cost of redeploying into new roles should be affordable in the short-term. And with an aging workforce and rising skill shortages, it could prove a valuable long-term investment.

Building skills for the future

In our survey, we asked respondents where they saw the biggest skill gaps for their organisation and their own role. Technical skills ranked first by a narrow margin as the area with the greatest skill gap. Analytical and creative skills were also seen to be a major gap for organisations, while soft skills represented a significantly smaller gap. However, when asked about their own role, respondents were more likely to see higher-order cognitive skills and soft skills as the main areas of development for the future.

Where do you see the gaps in skills that will be crucial to success in the future?



Source: EY survey 2019

2. Gartner CIO survey, October 2018, https://www.gartner.com/en/newsroom/press-releases/2018-10-16-gartner-survey-of-more-than-3000-cios-reveals-that-enterprises-are-entering-the-third-era-of-it.
3. For further information, see the EY report *Will you wait for the future to happen, or take a hand in shaping it?*

5

Embed trust in automation to harness the benefits

With key elements of the automation and people strategies aligned, organisations must consider how to maximise the transformative potential of their automation programme.

There are huge opportunities to bring datasets together and glean insights that would not previously have been possible. But the proliferation in the scale and availability of data raises questions about the extent to which organisations can share and use the data they have while remaining within the boundaries of ethicality and public concerns over data privacy and security.

Building trust

Organisations will need to build trust with different stakeholders, including employees, citizens, suppliers and partners. This should extend to the strategic purpose of the system, the integrity of data collection and management, the governance of model training and the rigour of techniques used to monitor system and algorithmic performance.

To build trust, it's vital for each stakeholder group to have confidence in the purpose, integrity and security of these technologies and to have the ability to clearly see that the benefits outweigh the risks.

The need for transparency

Transparency is key for the public to have trust in IA algorithms, so that everyone understands what factors decisions are based on. The IA system should also have a clear line of accountability to an individual, who is able to explain the system's decision framework. But in complex and sensitive cases, such as support for vulnerable individuals, it is still essential to combine the analytical power of the machine with the context and understanding of a human case worker who can make a final judgement.

Importance of governance

In any intelligent automation project, a good governance approach is needed to provide oversight, direction and accountability for progress. A multidisciplinary advisory board, reporting to and/or governed by the senior leadership, can provide independent guidance on ethical considerations in artificial intelligence development. The board can capture perspectives that go beyond a purely technological focus. Design policies and standards for the development of artificial intelligence, including a code of conduct and design principles, can help define IA governance and accountability mechanisms.

Focus on protocols

As with existing manual processes, protocols should be created to govern the sharing and use of data across different systems. These agreements define the purpose and basis for sharing, and provide details about storage, security, retention and deletion. Reviews of datasets should also be scheduled at key points throughout the development of the project to ensure that the data being used is relevant, significant and proportionate.

Organisations that embrace these good practices in ethical design and governance will be better equipped to mitigate risks, safeguard against harmful outcomes and, most importantly, build the trust that is needed to maximise the potential benefits of intelligent automation.

> "The biggest challenge will be building and maintaining trust in the system — in the organisation, with stakeholders and citizens.
>
> **Survey respondent**

Conclusion

Through IA, public sector organisations have the opportunity to radically rethink the way they deliver services to the public and find new ways to tackle national, regional and local issues. Automation in the public sector can drive a broad range of benefits far beyond cost savings: a better citizen experience and improved outcomes; more efficient operations; higher job satisfaction for public employees that are able to take on more purposeful roles; and using data to improve decision-making.

Public sector leaders need to take a strategic and transformational approach to manage the change that goes beyond the technology implementation. They must align their digital plans with the organisation's overall vision and purpose; make the behavioural and cultural changes needed to manage the transformation; communicate the case for change and allay fears about the possible impact on jobs; select the right processes for automation that align to business needs and strategic plans; develop the skills and capabilities to deliver automation and to adapt to the new roles that are being created; and instil a sense of trust in the use of data that will maximise the transformative potential of the automation programme.

In the early phases of automation, organisations will often deploy proof of concepts, however, they need to move beyond this stage if they are to realise significant benefits. By scaling up automation, organisations can maximise the value that automation can bring. To do this, organisations need to think to the longer term, develop a clear strategy and establish central governance and expertise such as through a Centre of Excellence.

The automation revolution is fast paced and the challenge for public sector organisations is to stay current and adopt new technologies while remaining rooted in their core values. This has never been more relevant in these unprecedented times. COVID-19 has brought uncertainty to the future landscape but by embracing new technologies, public sector organisations can increase their resilience, unlock value and provide the best possible services for their citizens.

"There has never been a better time to invest in automation, creating not only innovatively delivered public services, but a more interesting workplace and a better working world."

Neil MacLean, EY UK Digital Finance Lead Partner

Further information

To find out more about how taking a strategic approach to intelligent automation can help you transform delivery and increase service quality, please contact:

Neil MacLean
EY UK Digital Finance Lead Partner
nmaclean@uk.ey.com

Ed Mitchell
EY UK Head of Intelligent Automation for Government and Public Sector
emitchell2@uk.ey.com

Susan Weerts
EY UK Intelligent Automation Delivery Lead
sweerts@uk.ey.com

Nick Flemming
Intelligent Automation Business Development Lead
nflemming@uk.ey.com

Alison McManus
Business Development Manager – Government and Public Sector
amcmanus@uk.ey.com

Julie McQueen
Lead Analyst for Government and Public Sector, EY Global
jmcqueen@uk.ey.com

Liz Tosolini
Brand Marketing Communications Lead – UK Consulting
ltosolini@uk.ey.com

EY | Assurance | Tax | Strategy and Transactions | Consulting

About EY
EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

EY refers to the global organization, and may refer to one or more, of the member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. Information about how EY collects and uses personal data and a description of the rights individuals have under data protection legislation are available via ey.com/privacy. For more information about our organization, please visit ey.com.

Ernst & Young LLP
The UK firm Ernst & Young LLP is a limited liability partnership registered in England and Wales with registered number OC300001 and is a member firm of Ernst & Young Global Limited.

Ernst & Young LLP, 1 More London Place, London, SE1 2AF.

ED None

In line with EY's commitment to minimise its impact on the environment, this document has been printed on paper with a high recycled content.

ey.com/uk