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Fast forward to the past
Is automation making
organisations less diverse?

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Introduction

Tackling inequality is a long endeavour, particularly when faced with deeply embedded structural inequalities, where inequality is woven into the very fabric of society.

While it is unlikely that the social structures underpinning such inequalities will be dismantled overnight, understanding where and why they emerge is a crucial first step towards tackling them. The gender and ethnicity pay gaps are evidence of structural inequalities in business, as are the higher rates of unemployment for people with disabilities.

As robotics and intelligent automation are in the process of transforming work practices throughout business, including in the public sector, this presents organisations with the risk of reinforcing structural inequality - as it is typically lower paid jobs comprising of routine tasks that are at most risk of being automated. On the other hand, automation can create opportunities for reducing inequality by bringing diverse groups into new work roles that require new skills, and ensuring the transformation is led with an inclusive mindset to maximise innovation and deliver value. It is estimated that by 2025 more roles will emerge

than be displaced by automation[1] and over the last 15 years new roles driven by technology adoption have been in higher skilled, higher paid jobs.[2]

The effect of automation programmes on diversity in the workforce has, so far, not been widely explored. This paper will highlight the potential risks of not considering the implications of automation on workforce diversity and inequality, and also look for ways to address those issues within automation programmes to ensure organisations can capitalise on the opportunity and the benefits that both automation and diversity bring to business outcomes.

The views expressed here are based on interviews with leaders in the public sector and experience derived from automation projects both in the private and public sectors, as well as some of our own thought leadership from Deloitte on building diverse and inclusive workforces.

Automation Definitions

Intelligent automation: The combination of RPA, AI and other related automation technologies.

Robotic process automation: RPA is the automation of business processes in which software performs tasks that can be codified by computers. It is often referred to as 'robotics' or 'robots', and is defined as the automation of rules-based processes with software that utilises the user interface and which can run on any software, including Web-based applications, ERP systems and mainframe systems.

Artificial intelligence: AI technologies perform tasks that previously required human intelligence, such as extracting meaning from images, text or speech, detecting patterns and anomalies, and making recommendations, predictions or decisions. They include machine learning, deep learning, natural language processing and generation.

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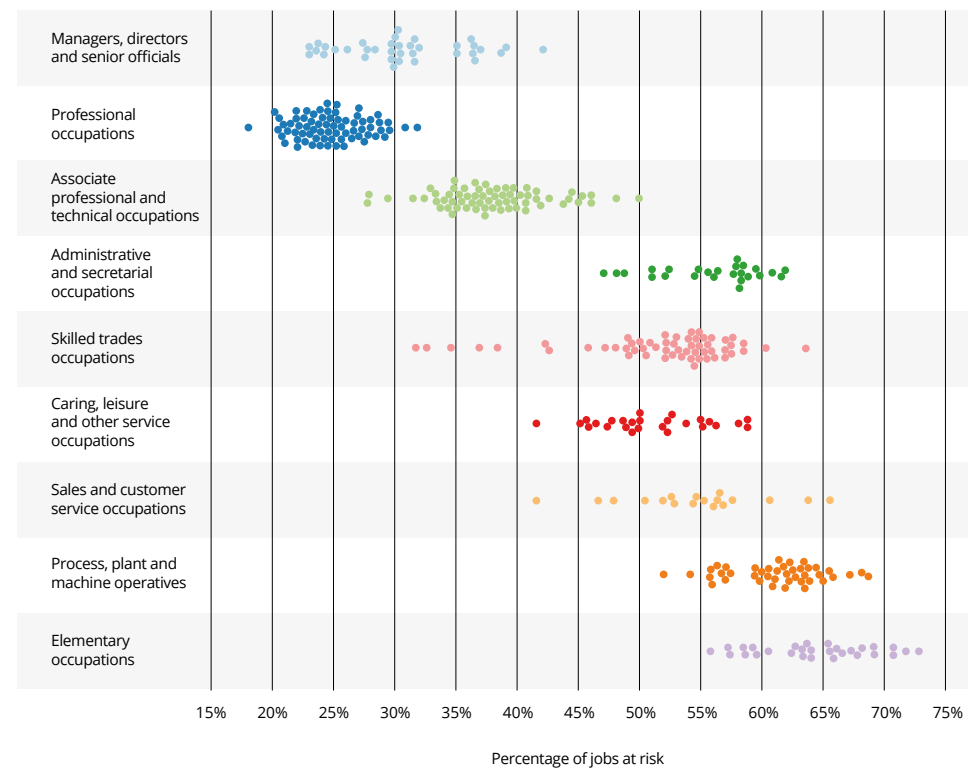# Automation risks reinforcing existing inequality

There is mounting evidence that automation will remove many jobs, and that this will affect groups most disadvantaged by structural inequality. The 2020 World Economic Forum Future of Jobs report finds that "inequality is likely to be exacerbated by the dual impact of technology and the pandemic recession. Jobs held by lower wage workers, women and younger workers were more deeply impacted in the first phase of the economic contraction."[1]

In a 2019 joint IPPR and Deloitte report we found "twice as many women as men work in occupations with a high potential for automation (9 per cent compared to 4 per cent of men), and that 64 per cent of jobs in these occupations are held by women."[3]

An analysis of jobs at risk from automation was provided by the Office for National Statistics (ONS) in 2019 (Figure 1).

Figure 1. Occupations at greatest risk from automation

Source: Office for National Statistics

The ONS report found that as a result, women, young people, and those on zero-hour contracts are most likely to have their jobs replaced by automation.[4] Out of the estimated 1.5 million jobs in the UK at risk of being automated, 70% were held by women. In addition, compared to other age groups, jobs held by 20-24 year olds were at highest risk, because young people often enter the labour market in part-time roles in industries such as retail or customer services.[5]

Ethnic minorities are also disproportionately at risk. The 2018 Annual Population Survey shows a correlation between ethnic groups and occupations. A higher proportion of individuals in ethnic minority groups work in lower paid jobs, although the differences are less pronounced for administrative and secretarial workers (and there are also variations between ethnic groups: for example individuals from an Indian background are more likely to be in an executive role compared to those from Black backgrounds).[6]

Some regions of the country (for example, the West Midlands that has the largest ethnic minority populations outside London[7]) have seen above-average job losses compared to others (such as Greater London).[8] Given its important role in providing jobs in regions of traditionally low employment outside of the South East of England, it is particularly important that the public sector should ensure that its automation programmes do not reduce diversity in its workforce.

Figure 2. Percentage of workers of each ethnic group employed in various types of occupation
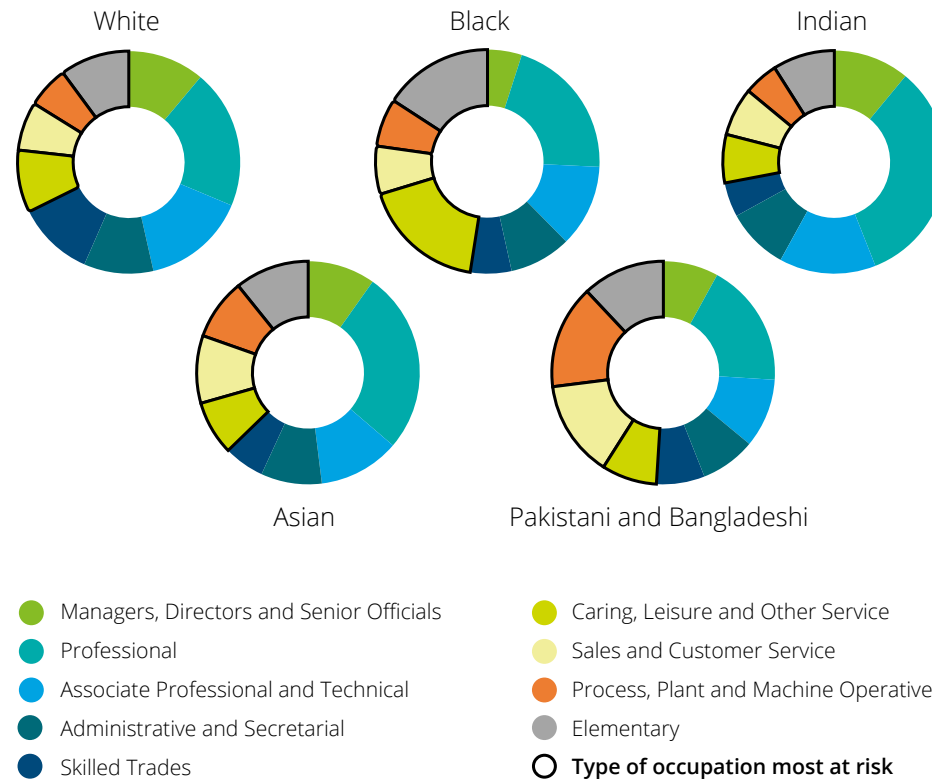
Source: 2018 Annual Population Survey

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Ignoring diversity risks reduced automation benefit

Deloitte's 'Automation with intelligence'[9] report highlighted that in order to obtain the most value from automation, organisations must radically re-imagine their processes and ways of working. Innovation is a critical success factor and must be at the heart of an organisation's automation programme and there is evidence that workforce diversity is a key driver of innovation.

Data indicates that diverse work groups perform better than others: teams with diverse leadership achieve 19 per cent higher revenues due to innovation.[10]

A 2016 survey of Silicon Valley public companies, found that:

- when employees think that their employer is committed to diversity, their ability to innovate increases by 83 per cent

- companies in the top quartile for gender diversity outperformed their competition by 15 per cent

- companies in the top quartile for ethnic diversity outperformed their competitors by 35 per cent.[11]

Although the available evidence comes from the private sector, it may be assumed that greater innovation will result in the public sector from automation, if the workforce and its leadership is diverse.

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Action on workplace diversity is needed urgently

The combination of COVID-19 and automation is creating a "double disruption"; the World Economic Forum found that "jobs of tomorrow" will exceed the jobs lost, however the job loss is likely to be faster than job creation[1].

Prior to the onset of the coronavirus pandemic, automation since 2001 had created nearly four times as many jobs in the UK as it had lost, and the replacement of routine activities by non-routine tasks had added £140 billion to the economy in terms of wages.

It was predicted that the creation of new job roles would require major shifts in technical skills (stronger cognitive abilities, content and process skills, or more specialist knowledge) as well as 'soft skills' (creativity, originality, initiative, critical thinking, persuasion, emotional intelligence, leadership and social influence) at all levels within organisations.[2] The OECD Economic Outlook 2020 for the United Kingdom[8] indicates however that COVID-19 may be adding more urgency to the need for upskilling. The Outlook found that disadvantaged groups in society were "paying a heavy toll" from the consequences of COVID-19, with workers in the top earnings quartile more than twice as likely to work from home than those in the bottom quartile, and those in the bottom quartile twice as likely to have stopped working altogether.

Efforts by employers to upskill their workforce when automating processes should integrate diversity into their approach, to ensure that the transition to new roles is as rapid and equitable as possible.

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Barriers to diversity in public sector automation programmes

The UK public sector has long been committed to diversity in the workforce and to providing jobs in areas where there is socio-economic inequality, for example for top civil service jobs women made up 27 per cent of applicants but 37 per cent of shortlists in 2019.[12] Even so, there is still considerable work to do, for example in the same year ethnic minorities made up 20 per cent of applicants to top civil service jobs, yet only 9 per cent were shortlisted for interview.[12]

For many public sector organisations implementing automation whilst considering diversity is new and uncharted territory. This is not dissimilar to the private sector; our 2020 Global Human Capital Trends report found that organisations are least prepared to handle ethical dilemmas such as diversity where humans and technology intersect, particularly in the space of automation, use of AI and algorithms.[13]

From interviews with a number of public sector leaders and a review of Deloitte's experiences with automation in both the public and private sectors, we have identified a number of potential barriers to automation programmes creating greater diversity.

A common theme in the interviews we conducted with public sector leaders was that automation is not usually seen as a transformative organisation-wide multi-functional programme, and so there is no leadership mandate or rigorous leadership-driven strategy for automation within the organisation. One of the public sector leaders interviewed for this research told us that: "Before they have got a mandate for RPA (robotic process automation) there was a lack of global ambition. Rather, projects were happening in little pockets around the government, in isolation from each other."

Deloitte's experience with automation in client organisations has shown that an 'isolated project' approach to automation of work limits opportunities for creativity and multi-functional collaboration across teams, such as between Operations and Human Resources, and the value added by isolated automation projects is relatively small. This task-based approach to automation assesses narrow activities without a consideration of the end-to-end process, and it therefore misses out on driving scaled transformation for maximum benefits.

A Deloitte report 'Automation with intelligence'[9] compares task-based automation where there may be many low-value opportunities with end-to-end automation where there are fewer opportunities but the potential for adding value – including greater workforce diversity – is much greater.

Three Strategies of Automation and Roles of Automation Programmes

Figure 3. Three strategies for automation and their potential value

The path to intelligent automation and beyond

- Reimagine automation (AI, some RPA and workforce redesign)
- Intelligent automation (RPA and some AI)
- Task-based automation (RPA)
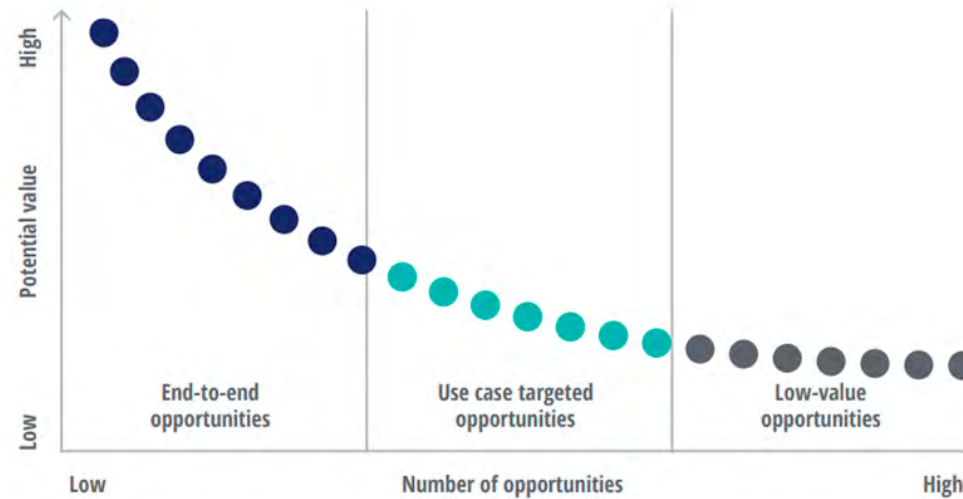
Source: Deloitte analysis

Successful organisations accelerate up this maturity curve capturing exponential benefits

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A task-based approach to automation (see figure 3) in isolated projects makes it difficult for public sector organisations to identify and address structural inequality and improve diversity, in both the processes selected for automation (on what roles they may have an impact) and the teams which make the selection (are they sufficiently diverse to challenge bias?).

If public sector leaders were to take a transformative approach to automation in their organisation, connecting multiple functions and deploying robust governance, they would be better able to identify inequality issues and safeguard against them. One public sector leader we interviewed explained that they had approached their automation programme as a transformation and highlighted the cross-functional benefits it had seen as a result: "We engaged with multiple business areas… Now we have to prioritise opportunities as so many departments want to utilise the new tech and automation."

Automation is about enhancing skills and innovation, not just cutting costs

Our interviewees referred to the pressure that leaders in the public sector feel when striking a balance between engaging with employees about planned automation, while still driving the project forward at low cost.

Initially automation in the workplace was seen as a way to cut costs, by replacing people with robots. We have seen recently that some organisations have started to look at the broader benefits of automation — how it can assist their workforce rather than replace them. Some of our interviewees saw this as the purpose for introducing automation in the organisation, with one individual saying: "Automation is not to reduce the number of staff but rather enable staff to do better, more high value, decision making work." Another said: "'We need a different set of skills in the organisation we haven't seen before…. We want to push our people to take on new horizons." We found there is also a recognition that automation can provide decision makers

"We engaged with multiple business areas… Now we have to prioritise opportunities as so many departments want to utilise the new tech and automation."

with valuable information and evidence on which to base their decisions, in an environment of increased scrutiny.

However, this approach is so far still relatively uncommon in the public sector. Our interviews showed that many organisations are focusing on automating to reduce costs. For example, one healthcare representative identified austerity in the public health sector and cost efficiency as key drivers for using Robotic Process Automation.

The potential risk with leaders focusing solely on cost as a driver for automation is that diversity in the workforce is not considered as important a strategic priority. A primarily cost reduction mind-set can lead to a closed culture within

an automation programme that is a significant barrier to diversity with a low focus on innovation and transformation, and not enough recognition of the value that retaining and increasing diversity will bring to the success of automation and ultimately business outcomes.

We have found that an inclusive culture integrated with diversity drives maximum business benefit. An inclusive culture requires an environment in which employees feel connected to each other, valued for their unique contributions, that they fit within the culture, and that they can be their authentic selves in the workplace.

For automation programmes this means shifting from late consultation to early representation with an emphasis on diversity within teams and governance structures. This approach ensures there is the ability to critically assess how best to automate processes and embed a diversity and inclusion lens on the transformation to ensure success and value.

Preparing the workforce for automation

Many of the public sector leaders we interviewed recognise the need for new skills, but our research shows that many are opting to develop technical skills (either through recruitment or internal upskilling) and are not giving attention to the soft skills such as problem-solving, creativity and communication. It is those softer skills that are more likely to be required for the jobs into which disadvantaged groups will be displaced e.g. moving from data processing to complex case work. Ensuring that disadvantaged groups consider these new skills as viable opportunities for them is critical to achieving a diverse workforce in the future. This will require a shift within organisations to recognising soft skills based jobs as critical and potentially transformational to their operations.

We have heard differing views about where the responsibility lies for upskilling of staff. Some leaders interviewed believe that this is a wider societal issue, whereas others think that the responsibility for enhancing skills lies with the employee; globally 94 per cent of business leaders expected employees to pick up new skills on the job[1]. Our view is that in order to create a diverse workforce for an automated workplace, the employer must accept much (or even all) of the responsibility[13]. This makes the integration of HR with a transformational perspective critical to ensuring that inequality is not reinforced by an automation programme.

Organisations should prioritise building workers' resilience, focusing on capability and training within the workplace, and not take a narrow approach to reskilling which consists largely of attempting to precisely tally current skill needs, prescribing discrete training programs to suit, and then doing it all over again once the organisation's needs change[13].

This approach to staff upskilling will ensure that the public sector has these new 'must have' softer skills as their demand increases and that disadvantaged groups have an early opportunity to upskill and access new jobs.

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A way forward: diversity and automation in the public sector

Our conversations with UK public sector leaders and a review of our experience with automation engagements in client organisations have led us to the view that there is a need for public sector organisations to develop a perspective on the impact of automation on diversity in the workforce. Our interviewees recognised the opportunities and also the challenges that automation will bring to their organisations and people; they also agreed that more should be done.

Building on the emerging body of knowledge around how organisations, their leaders and their employees are shaped by the disruptive effects of intelligent automation, we have defined a four-stage framework for integrating diversity into the automated workplace (see Figure 4). It is based on the premise of embedding diversity into your automation programme, the roles and structures, to enable the wider organisation to become more diverse.

This framework looks at an automation programme, its leadership and its workforce, and takes into consideration the stage or maturity that the organisation has reached in adopting intelligent automation. Becoming a diverse organisation is a gradual process and requires targeted interventions at each stage.

"Our interviewees recognised the opportunities and also the challenges that automation will bring to their organisations and people."

Figure 4. A four-stage framework for diversity with automation

STAGE 01
Understand

Organisational   **Understand** what jobs are impacted and how through a diversity lens.

Leadership   **Educate** on diversity and inclusive mindset to understand the impact, and also the opportunity.

Employee   **Educate** on the importance of diversity and inclusion, and how to have a more inclusive mindset.

At this stage, the organisation and its leaders develop an understanding of how the organisation can be transformed by automation, and both leaders and employees learn about the importance of diversity to enable success and derive most value. HR is engaged up front to support workforce and skills strategies. Approaches that may be taken at this stage are to conduct a **diversity impact assessment** of the automation programme to understand its impact from a diversity perspective. **Re-imagination labs** that radically change process for areas of work where automation will be introduced, with an emphasis on diversity, can help the organisation challenge assumptions and ensure that they are automating the right thing in the right way.
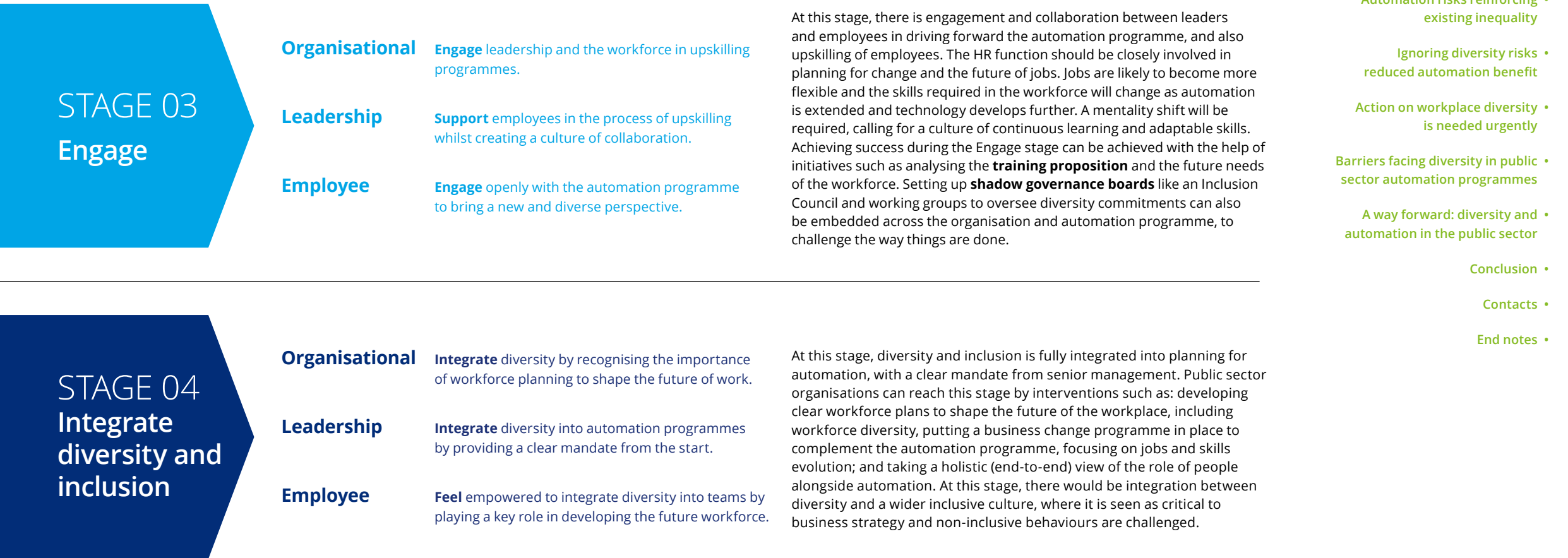
STAGE 02
Represent

Organisational   **Understand** what jobs are impacted and how through a diversity lens.

Leadership   **Create** a diverse senior leadership to ensure representation at every stage of organisational decision-making.

Employee   **Feel** represented at all levels of the decision-making process.

At this stage, the workforce should be represented in the automation process, and not just consulted after decisions are taken. There should be diversity among the decision makers who are involved in shaping the automation programme. To help achieve this outcome, a series of interventions may include: reviewing **diversity governance;** developing a **diversity engagement plan;** developing a representative set of **KPIs that include diversity measures;** and using **impact platforms** to encourage representation at all levels within the organisation.

Source: Deloitte analysis

Figure 4. A four-stage framework for diversity with automation

STAGE 03
Engage

Organisational — **Engage** leadership and the workforce in upskilling programmes.

Leadership — **Support** employees in the process of upskilling whilst creating a culture of collaboration.

Employee — **Engage** openly with the automation programme to bring a new and diverse perspective.

At this stage, there is engagement and collaboration between leaders and employees in driving forward the automation programme, and also upskilling of employees. The HR function should be closely involved in planning for change and the future of jobs. Jobs are likely to become more flexible and the skills required in the workforce will change as automation is extended and technology develops further. A mentality shift will be required, calling for a culture of continuous learning and adaptable skills. Achieving success during the Engage stage can be achieved with the help of initiatives such as analysing the **training proposition** and the future needs of the workforce. Setting up **shadow governance boards** like an Inclusion Council and working groups to oversee diversity commitments can also be embedded across the organisation and automation programme, to challenge the way things are done.

STAGE 04
Integrate diversity and inclusion

Organisational — **Integrate** diversity by recognising the importance of workforce planning to shape the future of work.

Leadership — **Integrate** diversity into automation programmes by providing a clear mandate from the start.

Employee — **Feel** empowered to integrate diversity into teams by playing a key role in developing the future workforce.

At this stage, diversity and inclusion is fully integrated into planning for automation, with a clear mandate from senior management. Public sector organisations can reach this stage by interventions such as: developing clear workforce plans to shape the future of the workplace, including workforce diversity, putting a business change programme in place to complement the automation programme, focusing on jobs and skills evolution; and taking a holistic (end-to-end) view of the role of people alongside automation. At this stage, there would be integration between diversity and a wider inclusive culture, where it is seen as critical to business strategy and non-inclusive behaviours are challenged.

Source: Deloitte analysis

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Stage 01: Re-imagination labs

Most of the automation programmes we have seen focus on task-based opportunities that have fallen short of expectation, because the costs and complexity of adopting RPA were underestimated. In order to unlock the potential of automation, organisations need to understand what value means to their end users and completely re-design their processes end-to-end. A re-imagination lab allows organisations to define the processes required, by taking a transformational challenge to traditional orthodoxies and 'bringing to life the art of the possible'. It also creates an opportunity to build in the practical steps for moving towards transformation through automation. Ensuring diverse representation and an inclusive environment in these labs where all voices are heard and valued, will ensure the most innovative and effective solutions.

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Stage 02: KPIs-powered Black Action Plan

The Black Lives Matter movement and events have brought once more into light that inequality is still deeply rooted in our society. The scale of the challenge meant that more is needed to be done. This is how the Black Action Plan came to life at Deloitte. Following extensive engagement, listening sessions and comments, a plan built around five key commitments was developed.

One of these is around developing a set of measures to report on the targets set and the outcomes. Its aim is to ensure we stay on track, communicate progress widely and hold people to account. KPIs that include diversity measures offer an opportunity to increase transparency and build trust and thus encourage a positive virtuous circle where more voices have the confidence they will be represented beyond the immediate leadership or programme team.

Stage 03: Shadow boards as an initiative to foster diversity

A shadow board is "a group of non-executive employees that works with senior executives on strategic initiatives" (Harvard Business Review, 2019: 'Why you should create a shadow board of younger employees'[14]). Companies with a shadow board currently use it as a vehicle to drive engagement with younger members of the workforce, who may have in-depth knowledge of the subject matter (such as digital technology). However, shadow boards could also include representatives from different sections of the workforce, and are a way of achieving representation rather than consultation about automation. The focus of the board should reflect the specific diversity issues the organisation is facing.

In practice: Organisation-wide Ethnicity Council and working groups as an initiative to foster diversity

The Executive Team at Deloitte has sponsored setting up an Ethnicity Council to help boost the firm's ambition for ethnic diversity by 2025, across all levels of the organisation. Its representatives are the most senior leaders at Deloitte, and work closely with all the departments through working groups to embed target interventions on ethnicity that span recruitment to development and retention.

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Conclusion

Automation of the workplace presents both opportunities and challenges. Originally seen as a way of reducing costs by replacing people with machines, automation is now recognised as a means to enable remote working and to create more engaging jobs which promote more innovation. At the same time, it poses a risk of reinforcing structural inequalities and reducing diversity in the workforce, and ultimately eroding potential value. The public sector has a role in protecting or promoting diversity in automation programmes, but more needs to be done to achieve this ambition: at the moment the impact of automation on people and workforce diversity is insufficiently considered. There is a need for initiatives to drive forward diversity in the workplace.

The topic of automation, inequality and diversity has not yet been widely explored, and we are in uncharted territory; but this is an appropriate time to put forward conclusions and proposals on the basis of what we do know.

For this reason, we believe that it is time to start a dialogue within the public sector to inform and define practical initiatives for the implementation of automation with a diversified workforce, based on the following principles:

- approach automation as an organisation-wide transformation initiative

- enable a culture of representation and inclusivity

- take steps to prepare the workforce for changes in jobs and skills

- put diversity at the core of measures for change, both to enhance innovation and reduce inequality.

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End notes

1. https://www.weforum.org/reports/the-future-of-jobs-report-2020

2. https://www2.deloitte.com/uk/en/pages/growth/articles/from-brawn-to-brains--the-impact-of-technology-on-jobs-in-the-u.html

3. https://www.ippr.org/research/publications/women-automation-and-equality

4. https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/whichoccupationsareathighestriskofbeingautomated/2019-03-25

5. https://www.bbc.co.uk/news/business-47691078

6. https://www.ethnicity-facts-figures.service.gov.uk/work-pay-and-benefits/employment/employment-by-occupation/latest

7. 2011 England and Wales Census: https://www.ethnicity-facts-figures.service.gov.uk/uk-population-by-ethnicity/national-and-regional-populations/regional-ethnic-diversity/latest#full-page-history

8. http://www.oecd.org/unitedkingdom/Employment-Outlook-UnitedKingdom-EN.pdf

9. https://www2.deloitte.com/content/dam/insights/us/articles/6502_deloitte-review-26/DI_Deloitte-Review26.pdf

10. https://www.weforum.org/agenda/2019/04/business-case-for-diversity-in-the-workplace/

11. https://www.forbes.com/sites/shereeatcheson/2018/09/25/embracing-diversity-and-fostering-inclusion-is-good-for-your-business/#78a58ee472b1

12. https://civilservicecommission.independent.gov.uk/wp-content/uploads/2020/07/CSC-ARA-Repo-2019-20.pdf

13. https://www2.deloitte.com/us/en/insights/focus/human-capital-trends/2020/changing-role-of-human-resources-management.html

14. https://hbr.org/2019/06/why-you-should-create-a-shadow-board-of-younger-employees

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