



UNDERSTANDING SCOTLAND



A NEW SURVEY FOR SCOTLAND

TECHNOLOGY

January 2022





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UNDERSTANDING SCOTLAND

Understanding Scotland is a new quarterly survey tool measuring the most important facets of our lives and decision-making in Scotland: our society, economy, and environment.

This high-quality, large-scale survey tool is brought to you by Diffley Partnership and Charlotte Street Partners.

We are extremely grateful for this inaugural wave's sponsors who have made this exciting new endeavour possible.



INTRODUCTION

TECHNOLOGY- DECEMBER 2021

We are delighted to present this Understanding Scotland report exploring the Scottish population's attitudes to and expectations of new forms of technology.

We explore how people believe these new technologies will impact on Scotland's economy, public services, populace and future. We find that people are broadly optimistic about most new technologies, though to a lesser extent than when these questions were asked in 2020, and with the notable exceptions of driverless cars and augmented reality.

There is a clear belief that new technologies will improve public services, particularly with regards to education, and to a lesser extent, healthcare. There is also broad support for using new technologies for tackling crime in specific ways, most notably for tracking potential criminals and to trace missing people.

However, we also find clear (and often growing) concerns over privacy and misuse of new forms of technology, as well as potential job-losses. When it comes to regulation to mitigate against these risks, people believe that the Scottish and UK Governments should be responsible for drafting such regulation.

We compare our findings to previous results when the same questions were asked in January 2020 and find that attitudes towards technology are becoming consistently less positive. Subsequent waves of the survey will monitor further changes and trends in this data, and the value and insight of Understanding Scotland will grow exponentially over time, as we track, explain and anticipate long-term shifts and trends.

UNDERSTANDING SCOTLAND

TECHNOLOGY IN 10 POINTS

This edition of Understanding Scotland brings you insights from over 2,000 members of the adult (16+) Scottish public.



01

PEOPLE ARE BROADLY OPTIMISTIC ABOUT NEW TECHNOLOGIES

On all but two new forms of technology, a greater proportion of people believed they would be beneficial to Scotland's economy, future, populace, and public services than the proportion saying they would not.

02

BUT LESS SO THAN A YEAR AGO

There was a consistent fall in the proportion of people predicting positive impacts compared with 2020. The proportion of people saying that new technologies will have a broadly positive effect on public services, for example, dropped by 8 percentage points between 2020-21.

03

THERE IS CLEAR PUBLIC SUPPORT FOR USING NEW TECHNOLOGY IN TACKLING CRIME

At least 3 in 4 respondents supported all measures specified to tackle crime, rising to 93% supporting the use of technology to trace missing people.

04

BUT THERE ARE CONCERNS AND RISKS AROUND MISUSE AND OVER-REACH

There was considerable concern over personal privacy, with 87% of people concerned that their personal information might be shared without their knowledge. 86% and 77% were also concerned about businesses and governments, respectively, gathering data on them without their knowledge.

05

PEOPLE CAN SEE THE ECONOMIC AND SOCIAL BENEFITS OF NEW TECHNOLOGIES, BUT IT'S LESS CLEAR WHETHER/HOW THEY'LL BENEFIT PEOPLE

While a plurality of people believed that almost all technologies would benefit most people in Scotland, this proportion was considerably and consistently smaller than the proportion predicting positive impacts for Scotland's economy, future, and public services.

06

THERE ARE CLEAR BENEFITS FOR PUBLIC SERVICES IN THE PUBLIC'S MIND

Half (48%) of people believe that new technologies will impact positively on public services, with only 20% disagreeing. They predict especially large impacts on education, and smaller but notable impacts on healthcare.

07

PEOPLE ARE SCEPTICAL OF DRIVERLESS CARS AND AUGMENTED REALITY

A plurality of people did not believe that driverless cars or augmented reality would impact positively on the Scottish economy and society. 55% of people, for instance, disagreed with the suggestion that self-driving cars would benefit most people in Scotland.

08

YOUNG PEOPLE ENVISAGE CLEARER AND/OR LARGER IMPACTS OF NEW TECHNOLOGIES

64% of young people disagreed, and 23% did so strongly, with the suggestion that new technologies will make no difference to public services. The equivalent figures among those aged over 65 were 51% and 11%, respectively.

09

AND THERE IS CONSIDERABLE (AND GROWING) CONCERN AROUND JOB-LOSSES

Two thirds of people believed that many people delivering public services could lose their jobs due to new technologies, up 4 percentage points on 2020, and rising to 71% in the most deprived fifth of neighbourhoods.

10

PEOPLE BELIEVE GOVERNMENTS SHOULD BE RESPONSIBLE FOR REGULATING NEW FORMS OF TECHNOLOGY

67% and 56% of people believe that the Scottish and UK Governments, respectively, should be responsible for regulating against adverse impacts of new technologies, notably ahead of civil society (30%) and businesses (20%).

EXPECTED IMPACTS OF NEW TECHNOLOGIES

A plurality of people believed that all new forms of technology apart from driverless cars and augmented reality would have positive impacts on all given aspects of Scottish society, though in all cases, this optimism was more tempered than in 2020.

There is a high degree of consistency to the perceived positivity and/or negativity of new technologies with regards to the economy, public services, people in Scotland, and the future of Scotland.

3D printing performs best in all categories, while cloud computing performs second best in all categories. Conversely, self-driving cars had the most pessimistic expectations in all domains, followed by augmented reality (again, in all dimensions). In between these extremes, other items saw a degree of churn but were relatively consistent and stable.

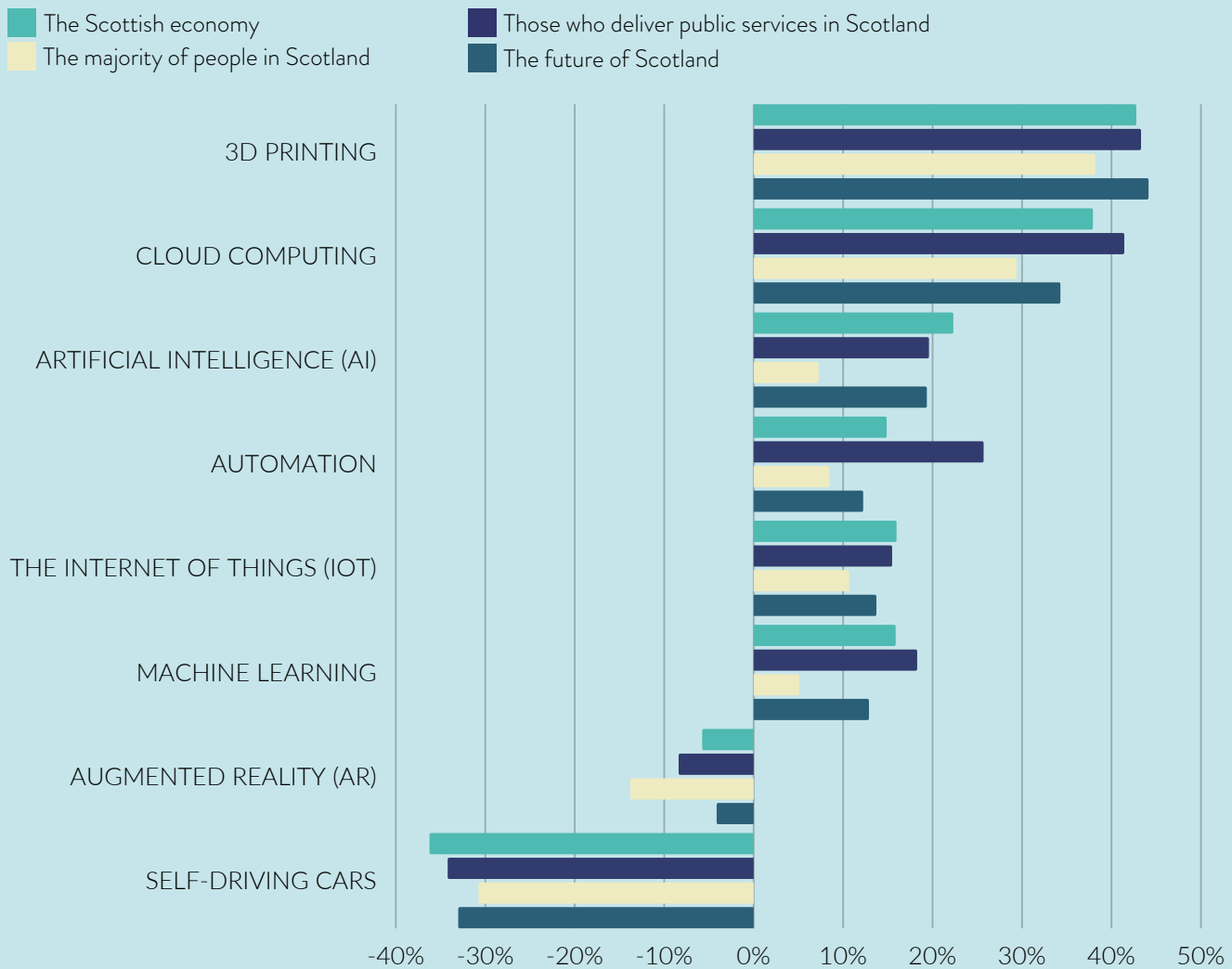
In almost all cases, it was more evident to respondents that/how new technologies would benefit the economy, public service-delivery, and the future of Scotland than whether/how they would benefit the majority of people in Scotland. There thus appears to be a consistent level of (relative) scepticism towards the extent to which new technologies will advantage normal people. Nevertheless, a plurality still anticipated net advantages to people for all but two technologies.

Younger people anticipated a clearer and/or larger impact of new technologies on public services in the coming decade; 64% of people aged 16-34 giving an opinion disagreed with the suggestion that new technologies will make no difference to public service delivery, compared to 51% of people over the age of 65. Almost a quarter (23%) of the former group disagreed 'strongly', compared to only one in ten of the latter group.



EXPECTED IMPACTS OF NEW TECHNOLOGIES

Net proportion of respondents saying that the following technologies will have a broadly positive impact on the following (2021)*

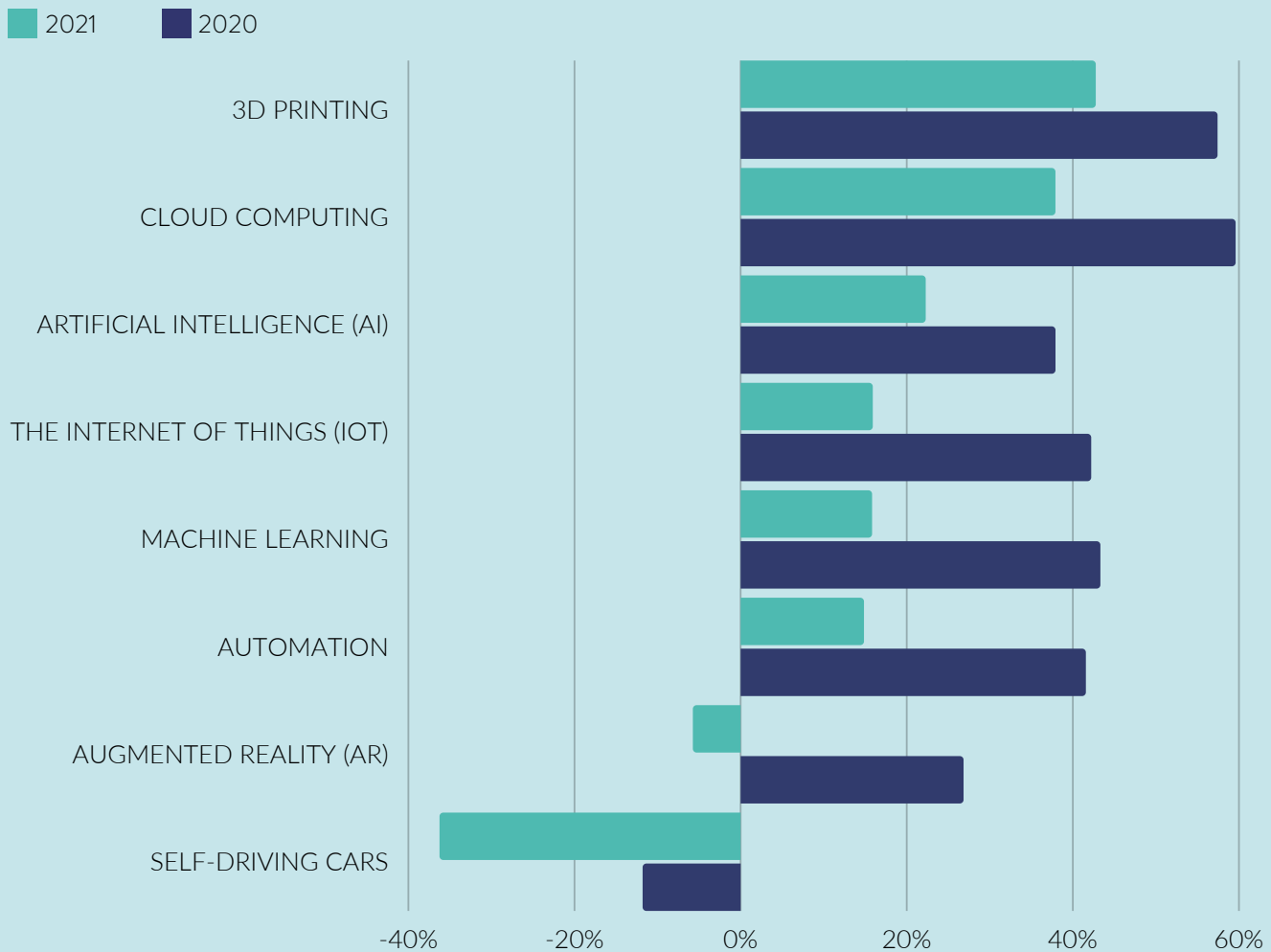


**Net proportion of people agreeing minus the proportion disagreeing*



EXPECTED IMPACTS ON THE SCOTTISH ECONOMY

Net proportion of respondents* saying that the following technologies will have a positive impact on the Scottish economy in 2020 and 2021 (Excl. 'Don't know' answers).



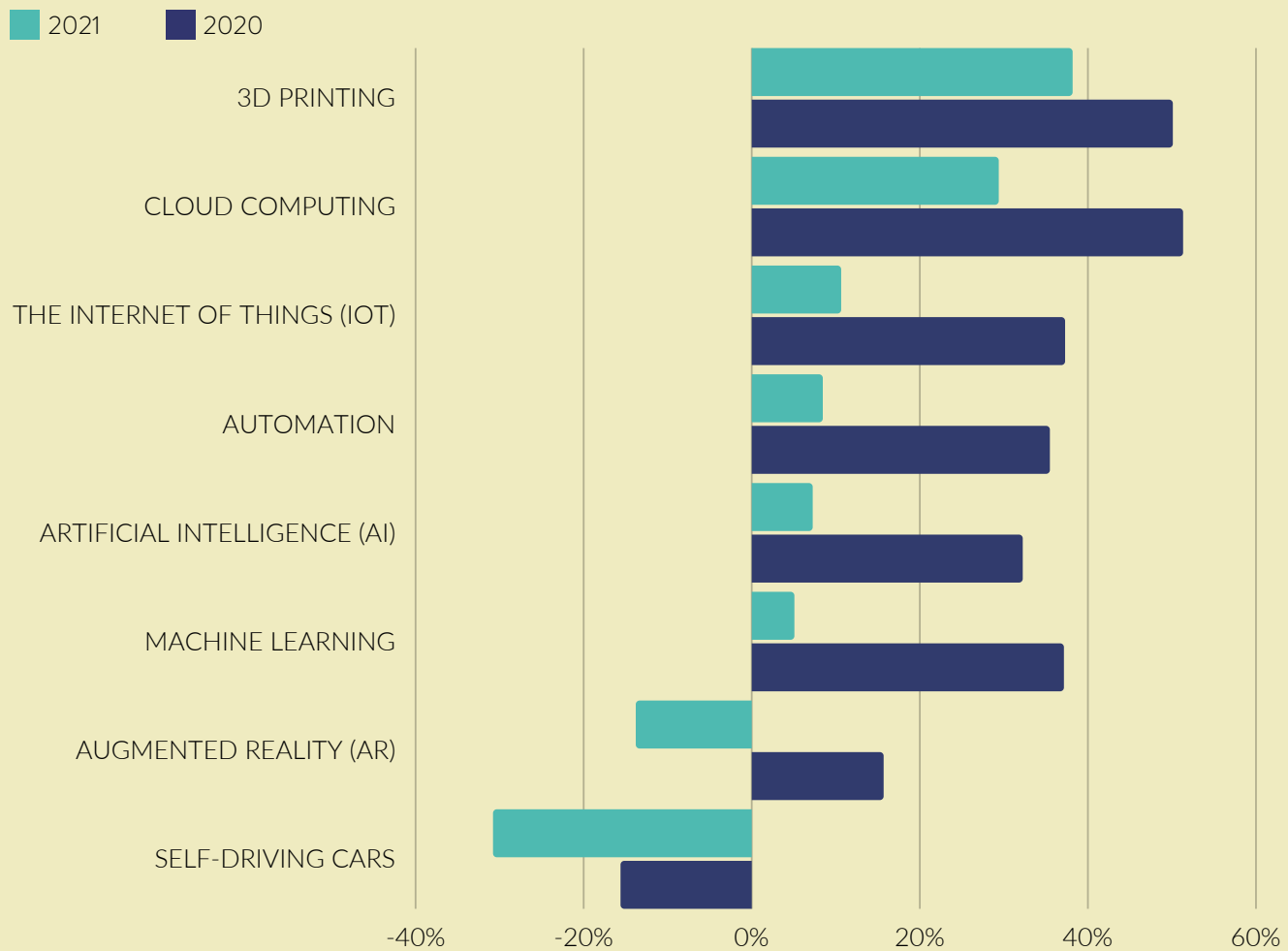
Thinking broadly about the issue of new technologies, to what extent do you agree or disagree that these technologies will have a positive impact on the Scottish economy?

*Net proportion of people agreeing minus the proportion disagreeing



EXPECTED IMPACTS ON PEOPLE IN SCOTLAND

Net proportion of respondents* saying that the following technologies will improve the quality of life for the majority of people in Scotland in 2020 and 2021 (Excl. 'Don't know' answers).

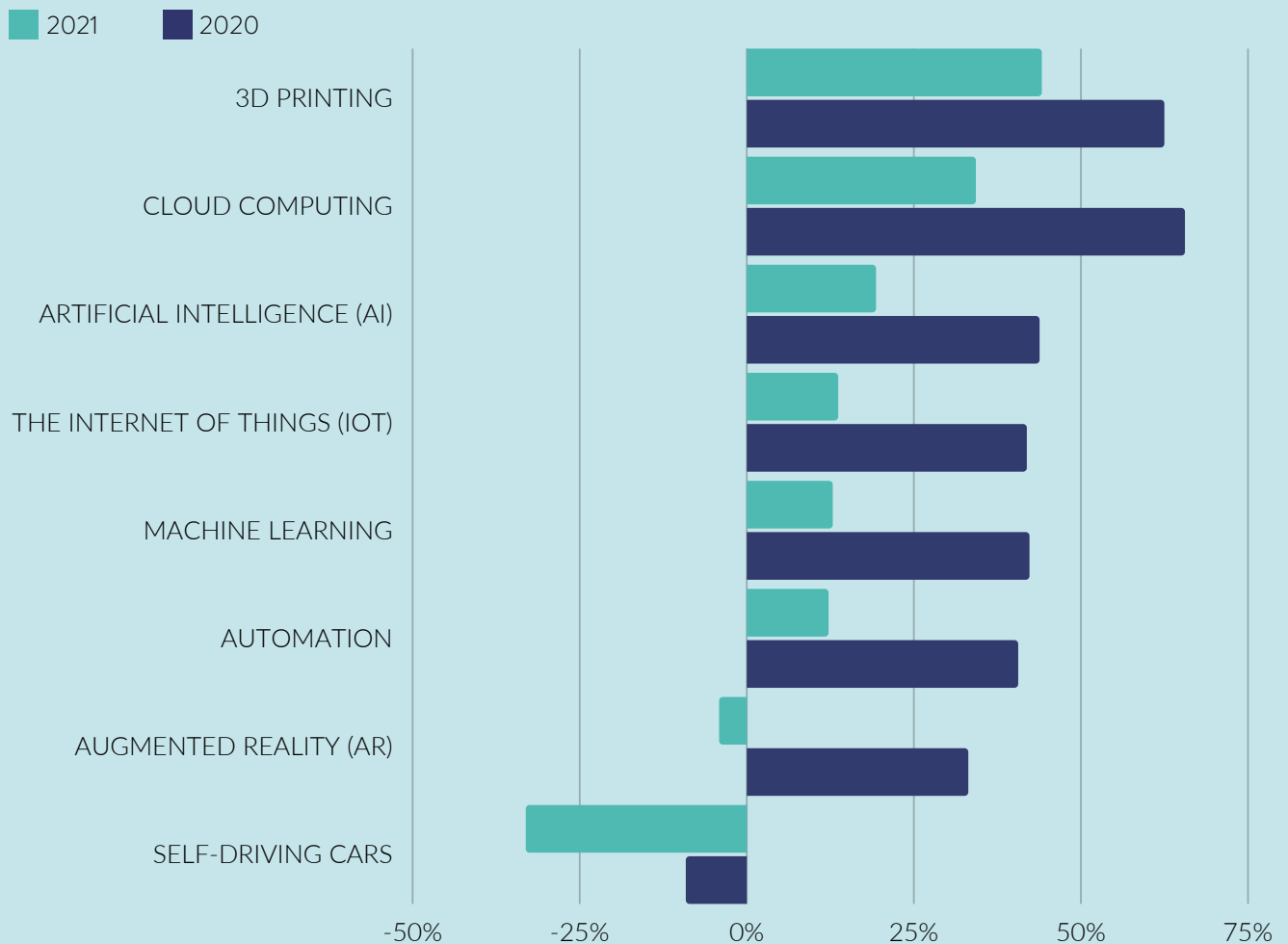


Thinking broadly about the issue of new technologies, to what extent do you agree or disagree that these technologies will improve the quality of life for the majority of people in Scotland?

*Net proportion of people agreeing minus the proportion disagreeing

EXPECTED IMPACTS ON THE FUTURE OF SCOTLAND

Net proportion of respondents* saying that the following technologies will be more positive than negative for the future of Scotland in 2020 and 2021 (Excl. 'Don't know' answers).



Thinking broadly about the issue of new technologies, to what extent do you agree or disagree that these technologies will be more positive than negative for the future of Scotland?

*Net proportion of people agreeing minus the proportion disagreeing

USES & APPLICATIONS

There was broad support for the police using new technologies to tackle crime and criminality.

All given uses commanded majority support, with at least 73% of those registering an opinion supportive.

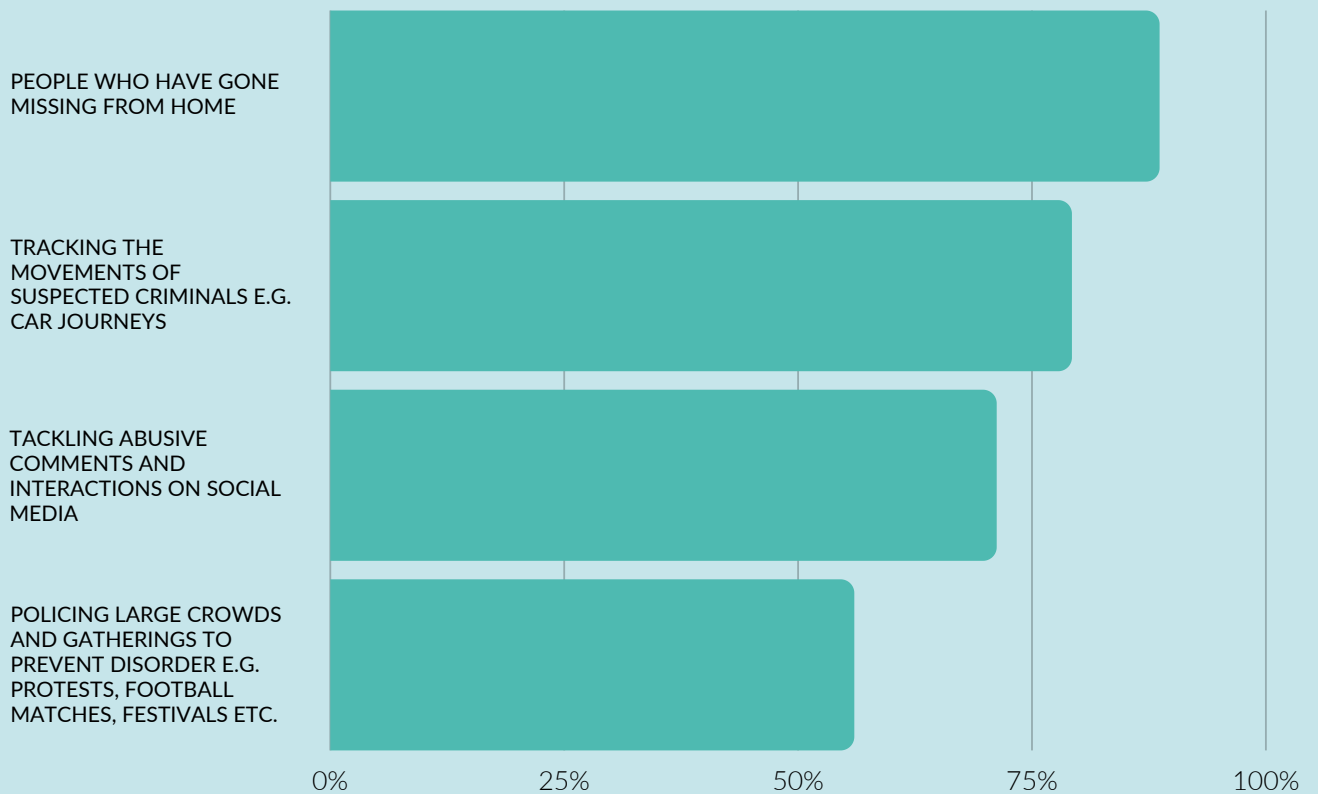
3 in 4 people (73%) supported the use of new technologies to police large crowds to prevent disorder, 81% to tackle abusive interactions in social media, 86% to track the movements of suspected criminals, and 93% to find missing people. With regards to the latter, two thirds of people described themselves as 'very supportive'.

Older people were markedly more supportive of using new technologies for the purposes of policing; for instance, people aged over 65 were 31 percentage points more likely than those aged 16-34 to support the use of new technologies to police large crowds.



USING NEW TECHNOLOGIES TO TACKLE CRIME

Net proportion of respondents expressing support* for the use of new technologies in the following circumstances (Excl. 'Don't know' answers).



How supportive would you be of the police using new technologies in the following situations?

*Net proportion of people expressing support minus the proportion not expressing support



EXPECTED IMPACTS ON PUBLIC SERVICES

People expect technology to have a clear impact on public services in Scotland, with only 22% of people suggesting that it will make no difference to delivery in the next 10 years, compared to 50% disagreeing. Excluding those answering 'don't know', these figures rise to 26% and 56% respectively.

People broadly believe that new technologies will have a positive impact on public services (with 48% agreeing and only 20% disagreeing), and half of people say that they will make public services 'smarter'. People are more evenly split on questions of cost, where 36% believe that new technologies will cut costs of delivering public services, and 30% disagree. However, on all of these dimensions, people are less optimistic than they were in 2020.

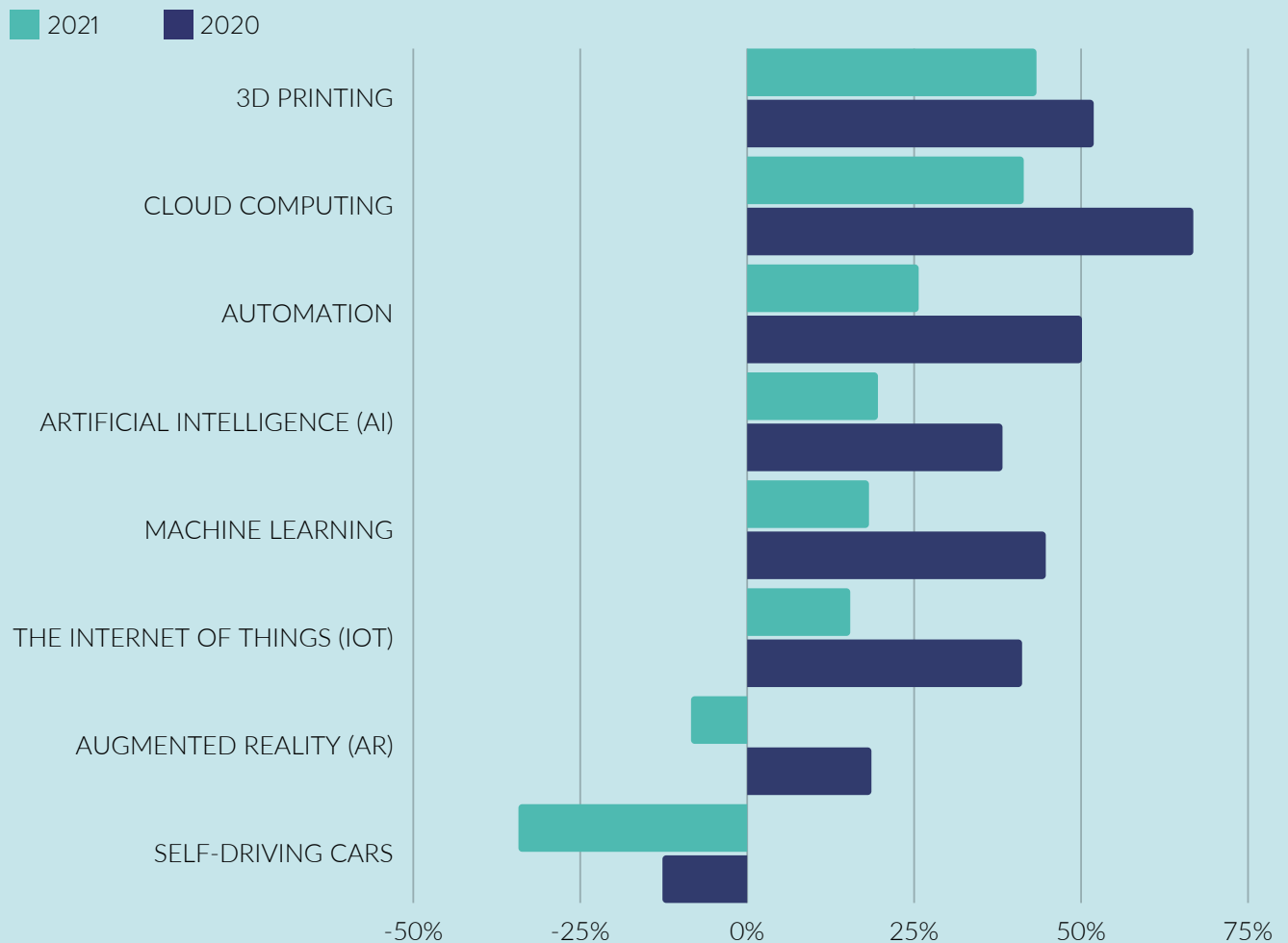
People anticipated the largest impacts on education, including helping children to learn at school, and ensuring that students have the right skills.

Respondents expected smaller, though still notable, impacts on healthcare services and delivery, including tackling waiting times and securing a GP appointment more quickly. However, 13% of people said that new technologies would have no impact on the latter.



EXPECTED IMPACTS ON PUBLIC SERVICES

Net proportion of respondents* saying that the following technologies will help those who run public services in Scotland in 2020 and 2021 (Excl. 'Don't know' answers).



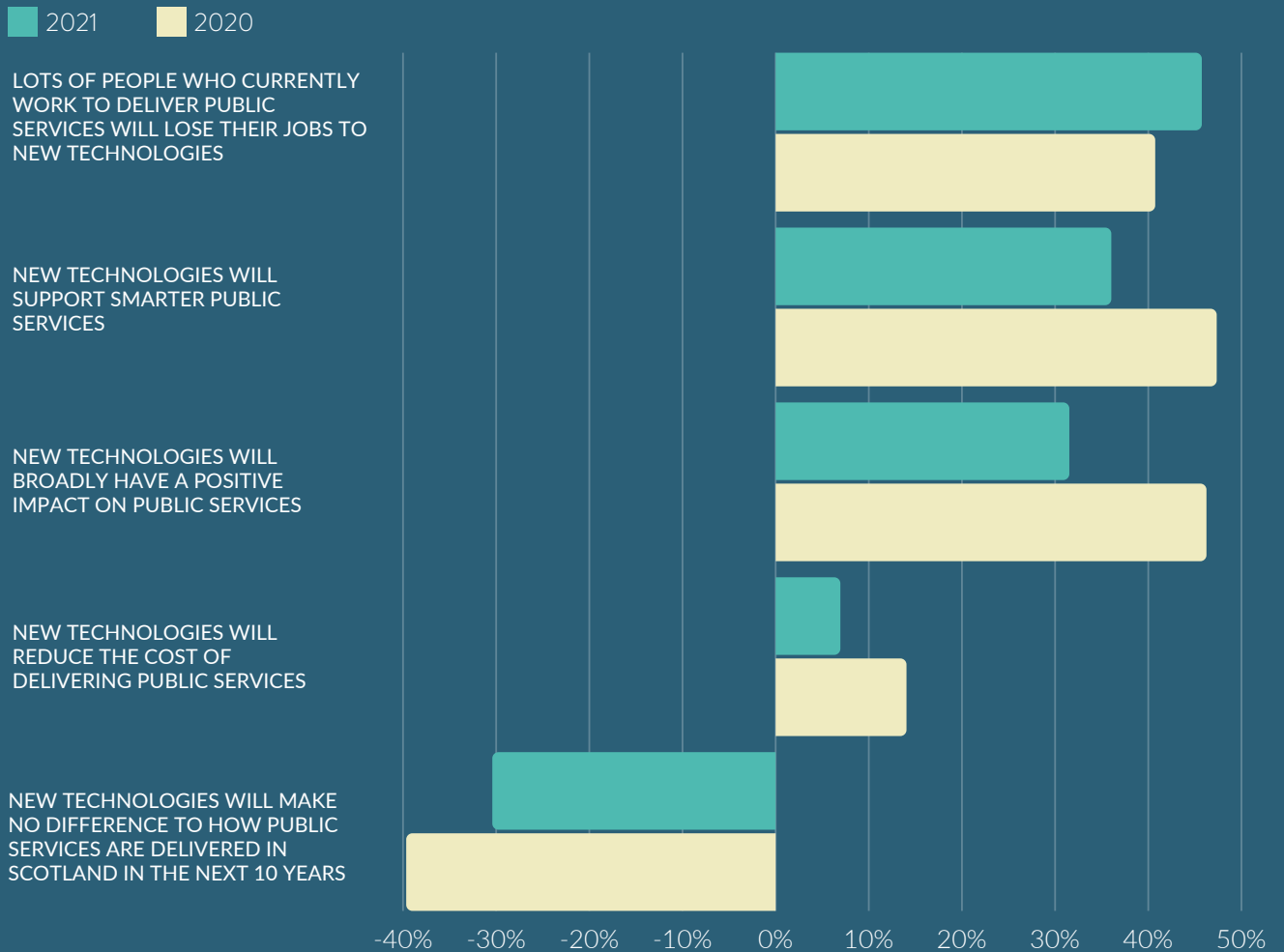
Thinking broadly about the issue of new technologies, to what extent do you agree or disagree that these technologies will help those who run public services in Scotland?

*Net proportion of people agreeing minus the proportion disagreeing



EXPECTED IMPACTS ON PUBLIC SERVICES

Net proportion of respondents agreeing* with the following statements in 2020 and 2021 (Excl. 'Don't know' answers).



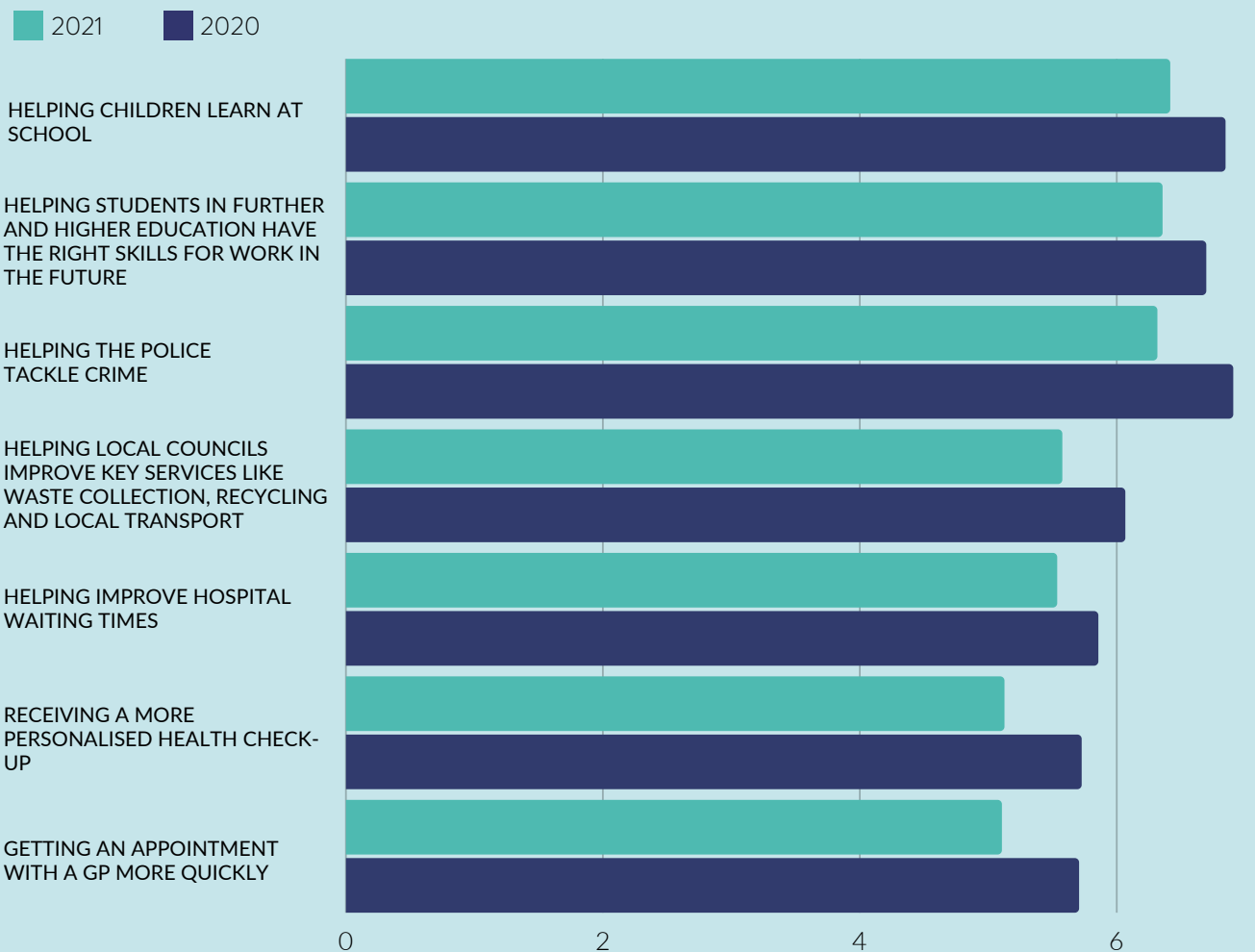
Thinking about how new technologies might have an impact on delivering public services like the NHS, education and policing in Scotland; to what extent do you agree or disagree with the following statements?

*Net proportion of people agreeing minus the proportion disagreeing

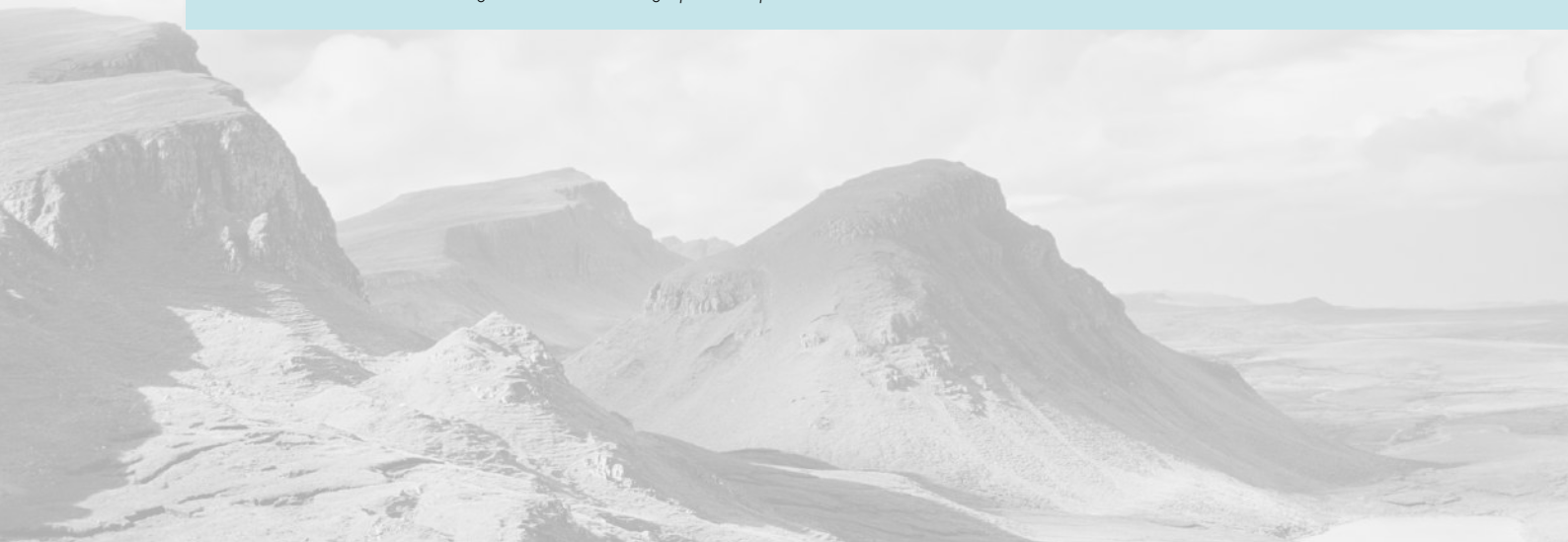


EXPECTED IMPACTS ON PUBLIC SERVICES

Weighted average, on a scale from 0-10, of how large an improvement people believe new technologies will make to the following in 2020 and 2021 (Excl. 'Don't know' answers).



Thinking about the key public services in Scotland, listed below, for each please rank how you think new technologies might improve, if at all, the delivery of that service to the public. Please rate on a scale of 0-10 where 0 is that new technologies will not improve the service at all and 10 is that new technologies would have a significant improvement on the service



RISKS & CONCERNS

There are evident concerns at the potential impacts and applications of new technologies.

59% of people (or 64% of those expressing an opinion), believed that a lot of people working to deliver public services would lose their jobs to new technologies, up 4 percentage points on 2020. These concerns were especially pronounced in less affluent areas, with people living in the most deprived fifth of communities over ten percentage points more likely to say so than those in the least deprived areas.

There was also evident concern at potential misuse and/or over-reach of new technologies. Chief among these were concerns over personal privacy and data. Of those expressing an opinion, 87% of people were concerned that private information might be shared without their knowledge, with half of people 'very concerned' about this. Similarly, 86% of people were concerned about big companies collecting their data without their knowledge.

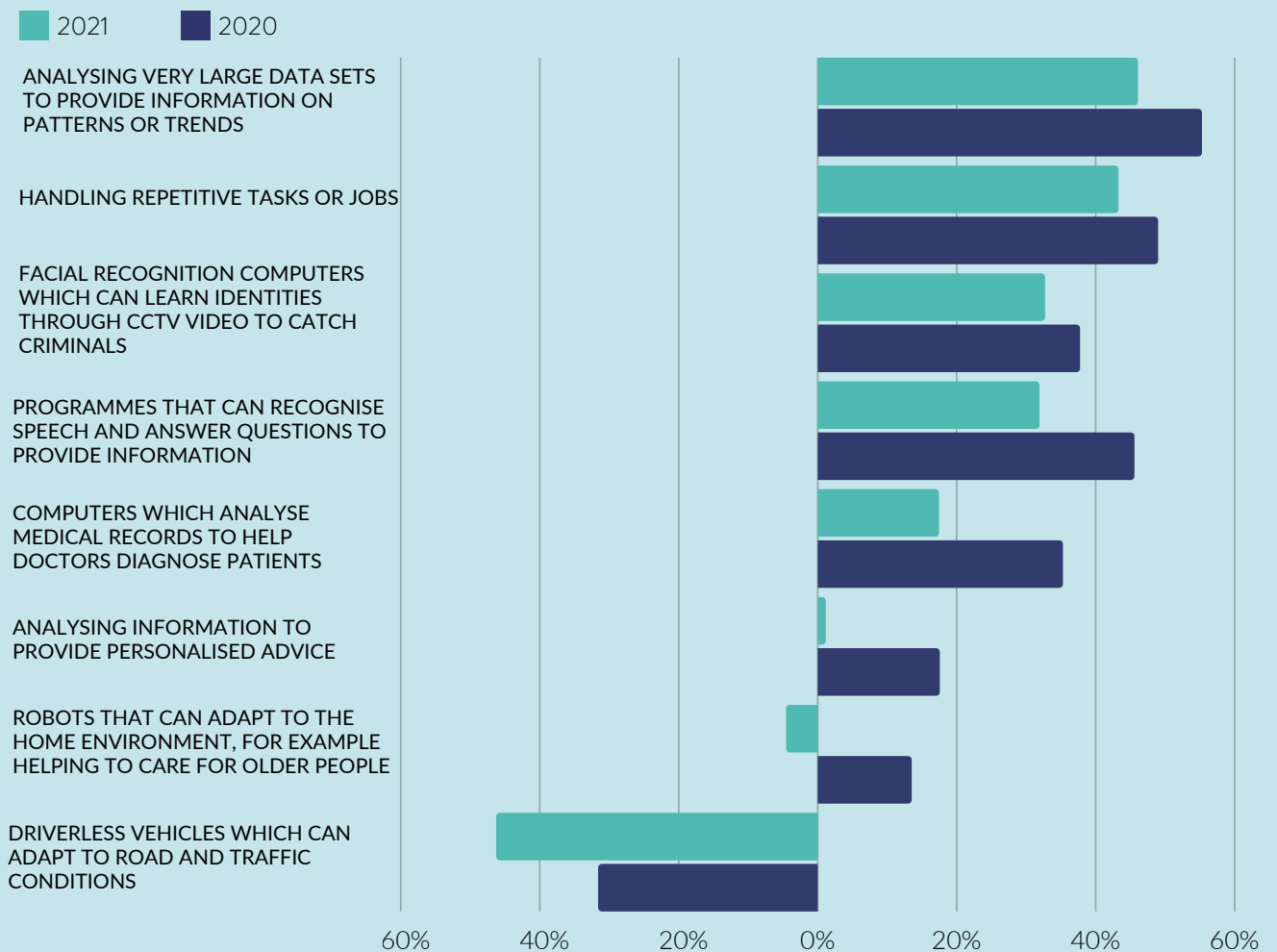
Governmental over-reach was a less prominent, albeit still significant, concern, with 77% of people concerned that the government might use information about them without their knowledge, rising to 83% of people in the most deprived neighbourhoods.

In most cases, people believed that the benefits of new technologies largely outweighed their associated risks. There was an especial consensus that there were greater opportunities than risks from using technology to expedite otherwise laborious or complex processes: 54% said that the benefits outweighed the risks of using technology to analyse very large data sets, and 53% said the same of handling repetitive tasks.

There was also a broad recognition of the benefits that technologies might bring with regards to catching criminals through face recognition software, and to diagnosing patients by analysing medical records. However, there were two areas where people overall believed that the risks outweighed the potential benefits. A clear majority (60%) of people believed that this was the case when thinking about driverless cars, and a plurality said so of robots that can adapt to a home environment and carry out caring work for the elderly. In the latter case, of those expressing an opinion, 43% said the risks exceeded the benefits, while 38% said the inverse.

RISKS VS OPPORTUNITIES

Net proportion of respondents* saying that the benefits will outweigh the risks of the following applications of new technologies in 2020 and 2021 (Excl. 'Don't know' answers).

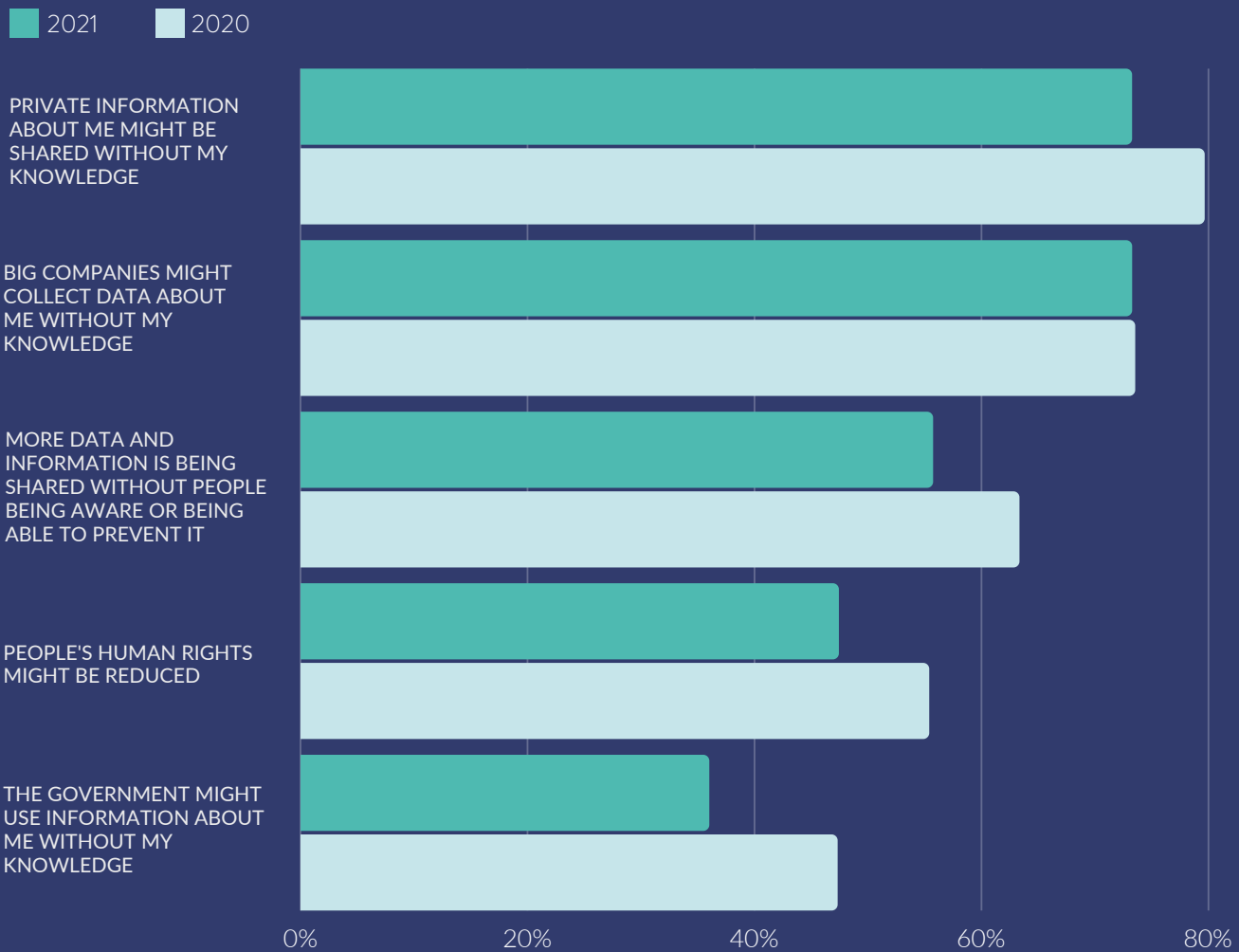


There are a number of ways in which Artificial Intelligence could play a greater role in all of our lives in the future. For each of the following examples, please say to what extent the benefits outweigh the risks or the risks outweigh the benefits.

*Net proportion of people saying that benefits outweigh the risks minus the proportion saying that the risks outweigh the benefits

CONCERNS OVER NEW TECHNOLOGIES

Net proportion of respondents* reporting concern at the following in 2020 and 2021 (Excl. 'Don't know' answers).



To what extent if at all, are you concerned about the following in relation to new technologies?

*Net proportion of people reporting concern minus the proportion not expressing concern

REGULATION & RESPONSIBILITY

There was a clear preference for governmental regulation of new technologies to protect against adverse impacts on people and society.

Most people expressed a preference for regulation at the Scottish level, closely followed by the UK Government. With increased support for the former, and marginally decreased support for the latter since 2020, we have seen a slight shift in favour of the Scottish Government.

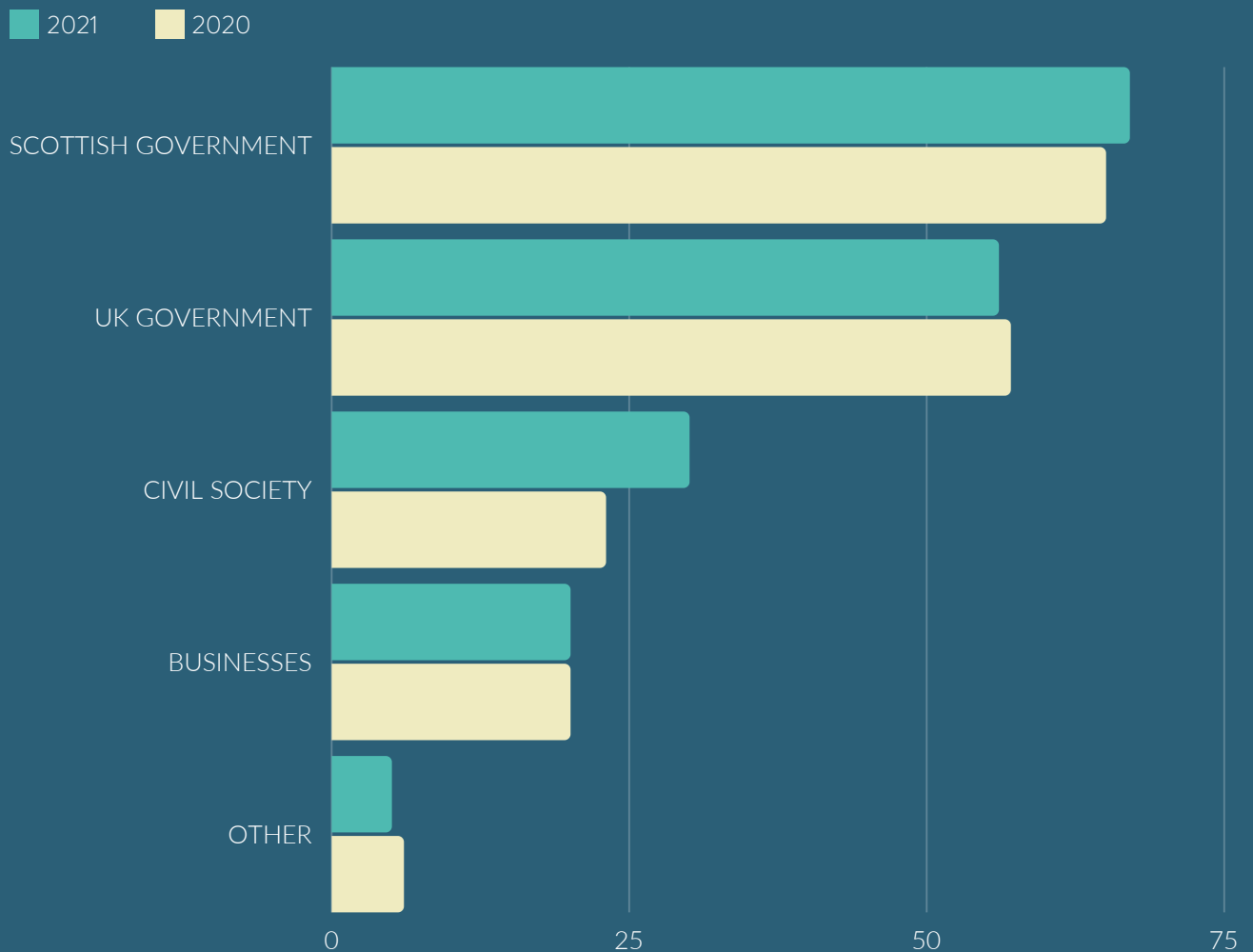
These actors lead the way, significantly ahead of civil society (who 30% of people believe should be responsible) and businesses (20%).

Young people were especially likely to say the Scottish Government should be responsible for regulation (78%), while older respondents were evenly split between the UK and Scottish Governments (both on 59%)



RESPONSIBILITY FOR REGULATION

Proportion of respondents deeming each actor responsible for regulating new forms of technology



Which of the following organisations do you think should be responsible for regulating new technologies and their impact on individuals and society?





TECHNICAL DETAILS

The survey was designed by Diffley Partnership and sponsored by the Scottish Police Authority. Invitations were issued online using the ScotPulse panel. Fieldwork was conducted between the 29th September - 1st October, and received 2,203 responses from the adult population, aged 16+, across Scotland. Results are weighted to the Scottish population by age and gender.



FIND OUT MORE

To explore the results for yourself, visit our website [here](#), and register for exclusive updates and a quarterly bulletin [here](#).

If you are interested in having your own questions asked and answered in future waves of Understanding Scotland, email us at contact@understanding-scotland.co.uk



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