



DIGITALISE TO DECARBONISE: KEY FINDINGS

Make UK Policy Team

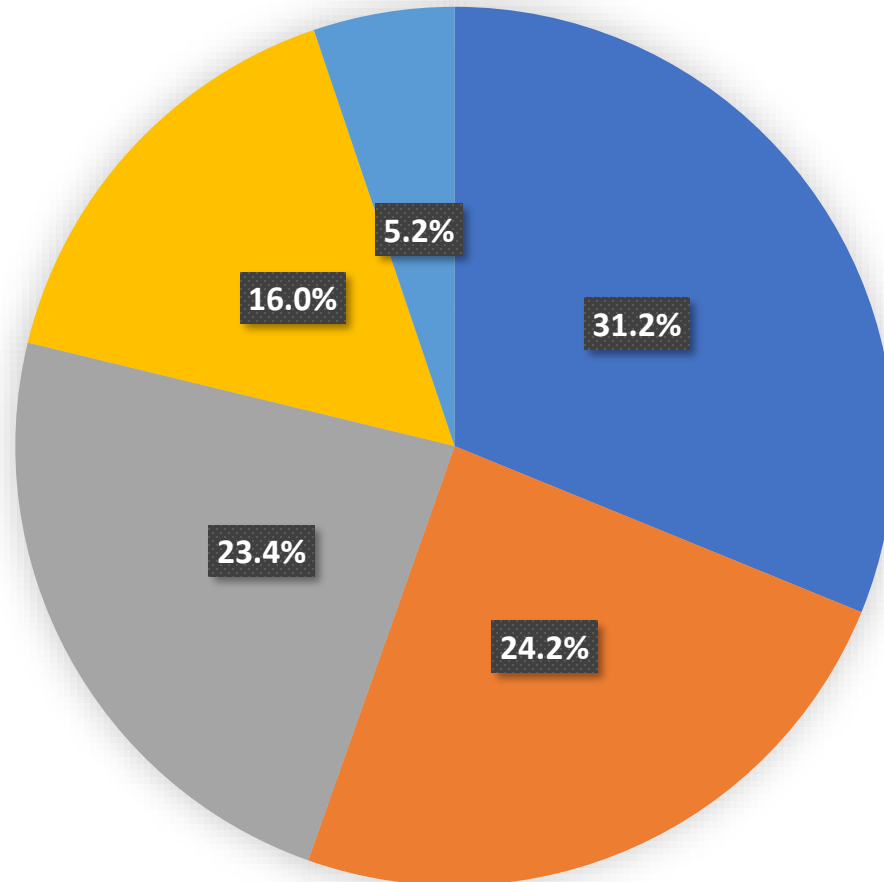
OVERVIEW

- **Manufacturers are digitalising to decarbonise:** Almost half of manufacturers have a plan to invest in digital technologies that will decarbonise their business.
- **Multiple digital technologies are being deployed:** In particular manufacturers are using new data analytics tools, new data capturing tools and supply chain management tools used to decarbonise manufacturing businesses.
- **There are net zero gains to be had:** Over a quarter of firms saw improvements in energy efficiency and 18% saw reduced carbon emissions.
- **Plus there are cost-saving benefits:** Investing in digital technologies brings cost savings in terms of reduced energy use and therefore bills, 62% of manufacturers made energy cost savings.
- **An array of digital and green skills will be required:** IT and engineering skills, data analysis, innovation skills
- **Confidence in acquiring these skills is mixed:** 29% are not confident, followed by 57% somewhat confident and 14% very confident

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DECARBONISATION THROUGH DIGITALISATION

% companies citing plans to decarbonise through digitalisation



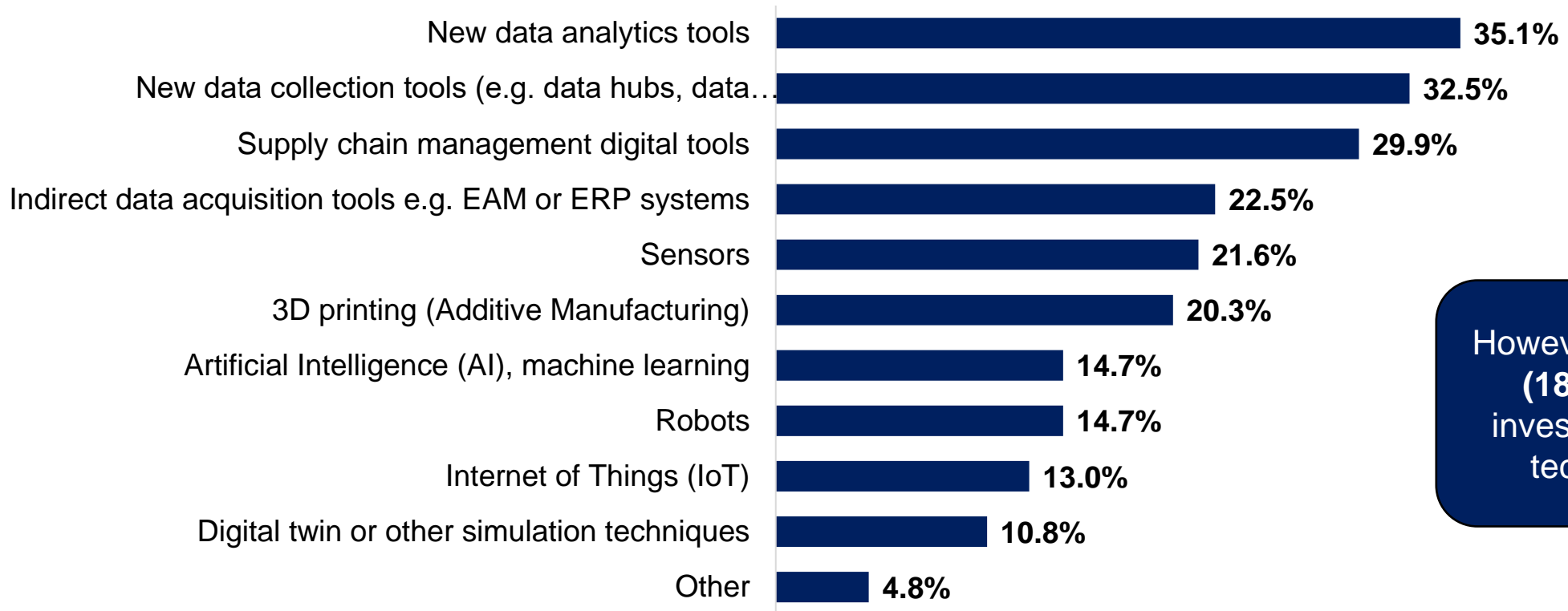
Almost half (47%) of manufacturers have a plan, with a further 31% considering a plan

- No, but we are considering developing a plan
- Yes, but we have not yet implemented the plan
- Yes, and we have already begun implementing the plan
- No, we have no plans to digitalise to decarbonise
- No, because we don't know where to start

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DIGITAL TOOLS BEING USED

% companies citing digital tools used to decarbonise



However, one in five
(18%) are not
investing in digital
technologies

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DRIVING ENERGY EFFICIENCY

% of manufacturers and the benefits of digitalisation

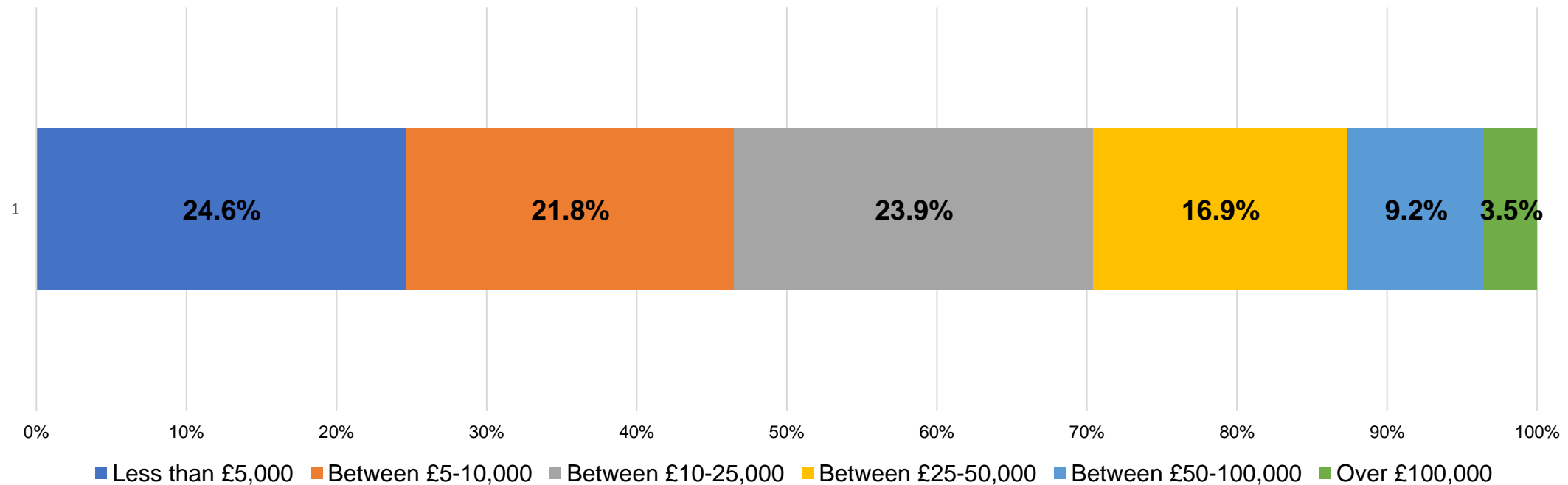


Only 3% of manufacturers who have invested in digitalisation saw no benefits

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SAVINGS THROUGH ENERGY EFFICIENCY

% of manufacturers made an energy cost saving through the adoption of digital technologies in monetary terms

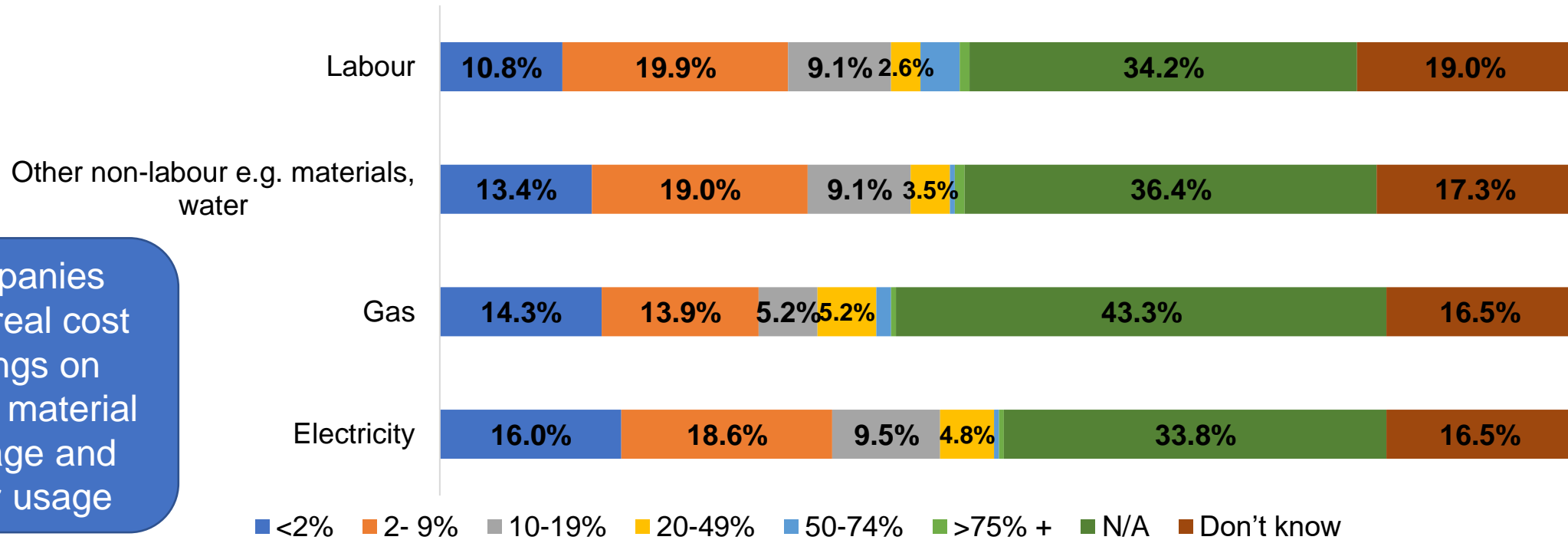


62% of companies who have adopted digital technologies reported energy cost savings – over half said those savings were between £10,000 and £100,000 the last 12 months.

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WIDER COST SAVING BENEFITS

% companies citing cost saving benefits as proportion of total business costs



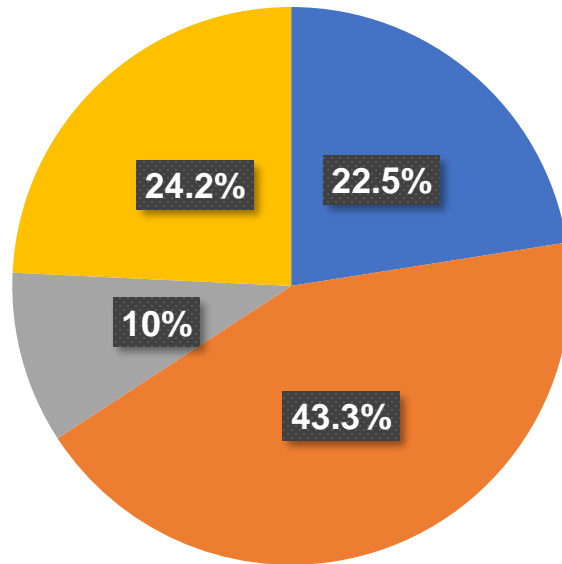
Companies cited real cost savings on labour, material wastage and water usage

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DIGITAL TECH IS POSITIVELY IMPACTING UK MANUFACTURERS' NET ZERO AMBITIONS

% companies citing whether digital technologies have had a positive impact on their net zero ambitions

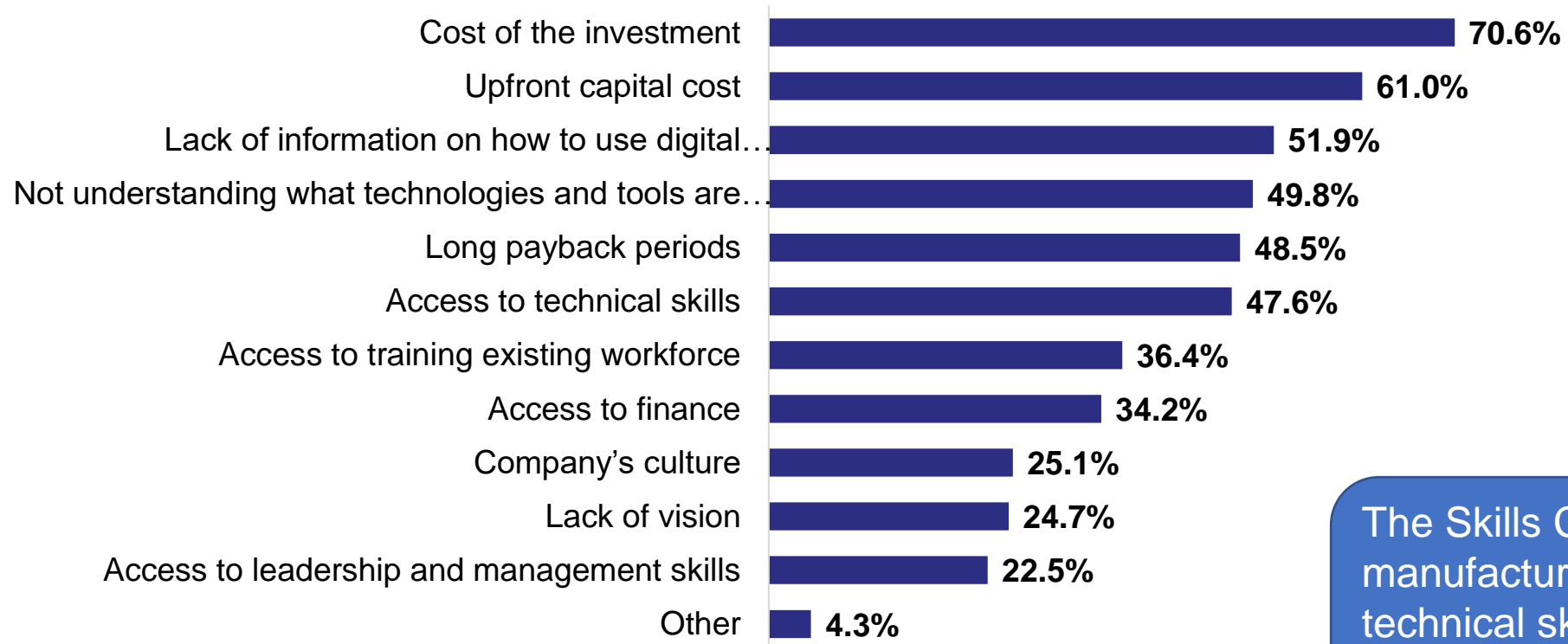
Nearly a quarter (22.5%) of Britain's manufacturers reported new digital technologies have already had an impact on decarbonisation and their ability to achieve challenging Net Zero targets



- Yes they have already had a positive impact
- No, but we expect them to have a positive impact in the future
- No, and we don't expect them to have a positive impact
- Not sure yet

BARRIERS AND BLOCKERS

% companies citing barriers preventing them from digitalising to decarbonise

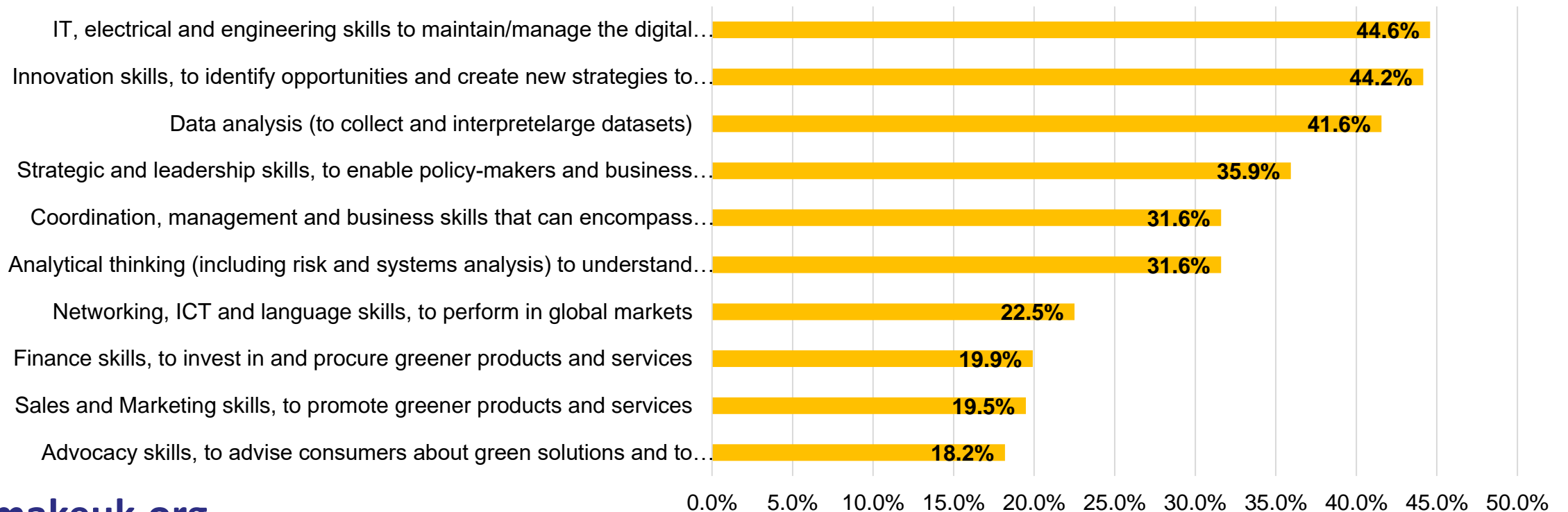


Only 4% of companies cited no barriers

The Skills Confidence Gap: 47% of manufacturers identified access to technical skills as a barrier, with a further 36% citing access to training for their existing workforce

WHAT SKILLS ARE NEEDED?

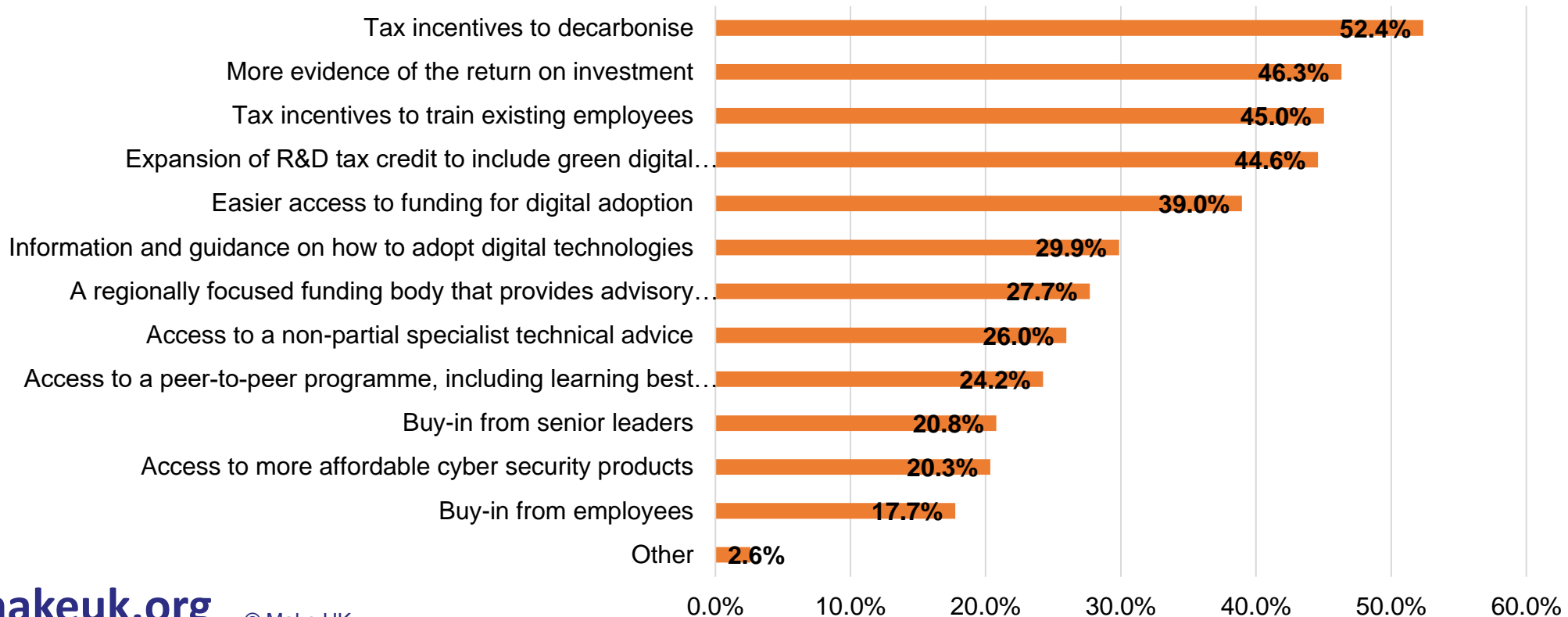
Building on our previous work with Sage, the skills that are in demand are a blend of technical skills, cognitive skills and social skills



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MOTIVATING INVESTMENT

% companies citing what would motivate them to invest in digital tech to help decarbonise their business



Tax incentives

Information, guidance & evidence

POLICY RECOMMENDATIONS

- 1. Commit to Made Smarter across the UK and expand its remit:** There remains untapped potential to digitise factories across the country that could help to stimulate economic growth. Made Smarter is a proven concept that has brought great benefit to those companies that have engaged in the progress.
- 2. Expand the R&D tax relief to include capital equipment relating to industrial decarbonisation:** The cost of upgrading capital equipment is cited as the biggest barrier to manufacturers decarbonising their processes. Government should build on the most recent qualifying extensions of the R&D tax relief to include capital equipment for green processing and industrial decarbonisation.
- 3. Introduce a Help to Grow Green scheme:** Existing funds such as the Industrial Energy Transformation Fund (IETF) should be extended, increased and reshaped into a more accessible fund.

POLICY RECOMMENDATIONS

4. **Introduce a green skills tax credit:** Focused support for investment in green skills through a dedicated tax credit would incentivise businesses to begin the transition to developing green skills, and reward those who are taking active steps to ensure that they can produce goods more sustainably with a suitably skilled workforce
5. **Introduce employer incentives for digital and green apprenticeships:** The Government has previously used employer incentive payments for apprenticeships to great effect, most notably during the pandemic. In order to address concerns about skills shortages and support more effective employer investment in apprenticeships, employers should benefit from incentive payments for apprenticeship standards that relate to green skills and jobs.
 6. **Enable employers to invest in upskilling and retraining through a reformed apprenticeship levy:** Allowing greater flexibility in the use of apprenticeship levy funds has long been a key demand of manufacturers. Creating an Employer Training Fund to give businesses the potential to invest a portion of funding in non-apprenticeship technical training or areas such as leadership and management would help to improve the effectiveness of employer investment and target it at the digital and green skills needs of their workforce.

POLICY RECOMMENDATIONS

- 7. Renew the Industrial Decarbonisation Challenge (IDC) support for the development of low-carbon technologies and infrastructure beyond its current expiry date of 2024:** The £210m Industrial Decarbonisation Challenge (IDC) is contributing to the UK's drive for clean growth by supporting the UK's six largest industrial clusters in their mission to decarbonise at scale.
- 8. Improve micro and SME engagement and collaboration with the Digital and Energy Systems Catapult Centres:** The UK's Catapult Centre system is truly-world leading, providing invaluable support for innovation in manufacturing. Yet, despite offering an unparalleled asset to industry many smaller firms fail to engage with Catapult Centres and thus benefit from the potential of collaboration, insights and innovation. The government should work with industry bodies, including Make UK, and subsector specific groups to help encourage increased engagement from smaller firms
- 9. Set the long-term direction and boost incentives for industrial energy efficiency:** the government can incentivise increased investment in and adoption of digitalise to decarbonise technologies through policy, procurement practices, and precedent. This could include establishing industry coalitions and designing sector and place-based plans for energy efficiency, using procurement levers to drive adoption, and leading by example through the dissemination of best practice and insights information gathered from publicly run institutions including the NHS

RECOMMENDATIONS FOR INDUSTRY

- 1. Adopt a digital mindset:** Manufacturers need to adopt a digital mindset and embrace the opportunities that digitalise to decarbonise technologies can offer. This will help firms to improve efficiency, reduce emissions, and create new products and services
- 2. Invest in digital technologies:** There are clear benefits for firms that invest in digital technologies, such as artificial intelligence (AI), machine learning (ML), and the Internet of Things (IoT). These technologies can help businesses to improve their efficiency, reduce their emissions, and create new products and services. Firms should explore which types of digitalise to decarbonise technologies would be most beneficial to them and invest in the skills required to implement and optimise that investment
- 3. Measure and track progress:** Once new technologies have been adopted manufacturers need also to measure and track their progress in digitalising their manufacturing and reducing their carbon emissions. This will help them to identify areas where they can improve and make sure that they are on track to meet their growth goals
- 4. Share best practices:** Firms should share best practices with other manufacturers to help accelerate the adoption of digital technologies and reduce carbon emissions across the sector. It is in everyone's interest to tackle climate change together