Navigating challenges embracing opportunities

Industry Insights Survey 2024

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Industry Insights report 2024

Having committed to driving industry progress, supporting member growth, and helping users make more informed technology decisions, Automate UK is proud to introduce the industry insights report for 2023/2024.

This report features the most up-to-date and relevant analysis of the challenges and opportunities faced by the UK's processing, packaging, robotics, and machine vision sectors today. Based on feedback from 165 respondents, including Automate UK members, wider industry experts, and end users of automation technology, our report gives an insightful overview; highlighting the developments that manufacturers and end users expect to see in 2024 and beyond.

Executive summary

I'm proud to present our new report, focused on helping our members understand key industry issues, challenges and opportunities.

As more end-users look to automation, our report sets out some of the perceived barriers to success – and how we can work collaboratively to support greater adoption.

One way to do this is through raising awareness of advances in technology. Greater understanding of the products and services our members offer ensures that end users adopt the most appropriate solutions for their needs.

Automate UK has a vital role to play in creating an environment that will allow for greater uptake in automation. This report identifies how we will work with a wide range of stakeholders to deliver this.

Here are our top takeaways:

- **Although there is a real appetite for greater adoption of automation in the UK, there are challenges to overcome.**

- **More than 83% of end users have reported how to successfully adopt automation as their number-one challenge.**

- **66% of automation suppliers have identified their main aim is boosting innovation for the development of automation technologies.**

- **67% of automation suppliers and end users are expecting to see the growing adoption of automation technologies in 2024.**

- **There is collective confidence in the trend of automation growth.**

The Challenges

With growing economic uncertainty and higher costs, there's no denying that 2023 was a challenging year for suppliers and end users of automation. Supply chain issues have had the biggest business impact, as confirmed by 73% of end users.

We've seen the continuation and worsening of supply chain issues that emerged during the pandemic as manufacturers have struggled to source vital components. The costs of parts and freight have continued to escalate over the last couple of years.

Supply chain challenges have also been caused by:

- **Difficulties in the forecasting of customer demand (with constant fluctuations resulting from the cost-of-living crisis)**

- **Geopolitical tensions and lengthy lead times, with events such as the Red Sea attacks preventing the access of materials and forcing the closure of major trade routes**

- **Cyber attacks, with the infiltration of vulnerable systems such as the IoT and the rearrangement of supplier networks**

- **The continued shortage of skilled and unskilled labour post-Brexit, with a resulting impact on wage costs and recruitment within manufacturing plants**

- **Shortages driving up the costs of raw materials, with fluctuations in the price and availability of key commodities**

- **Sustainability pressures, with the increased scrutiny of "greenwashing" and scope 3 emissions (resulting from activities within the supply chain).**

Automate UK's members have reported the ongoing impact of such supply chain issues. In particular, they have faced difficulty in the sourcing of automation components for system integrators that are to be built into special-purpose machinery. This is delaying the completion of projects and stopping our members from being paid.

Inflation has also continued to impact 50% of businesses, with labour and energy costs noted as key factors.

There was a slight decline in the growth of annual pay (excluding bonuses) in Great Britain, to 7.7% from July to September 2023. However, this still represents the highest level of annual growth since comparable records began in 2001.

Manufacturers have seen a continued drop in the year-on-year costs of energy since 2022. This has been most marked in the average pricing of heavy fuel oil (down 14%) and gas oil (down 26%). However, prices have remained far higher than those seen in 2021.
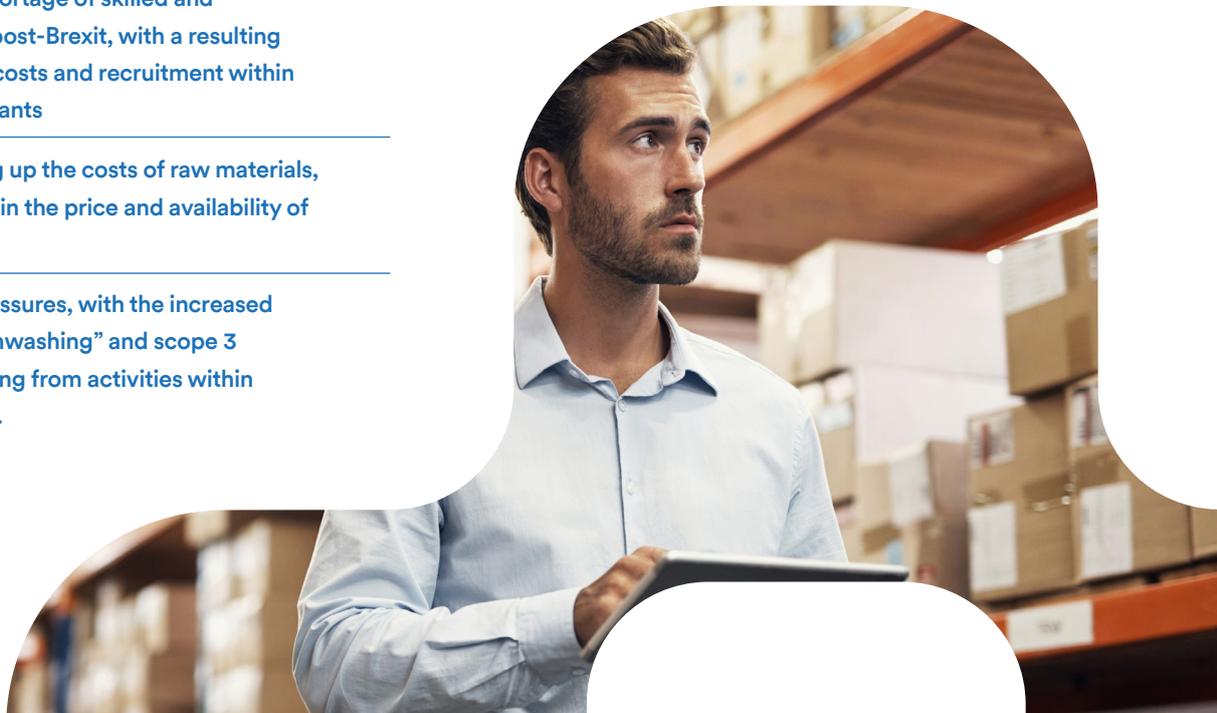
Automation remains a core challenge

Over 81% of end users confirmed that automation was their main challenge for 2023.

Recognised factors have included:

1. The challenge of automating bespoke products

2. The level of skilled labour needed to support automation

3. Difficulty in keeping abreast of technology developments

In particular, end users have struggled to stay up-to-date with technological developments such as the rise of AI, cobots, and effective uses in manufacturing.

Such challenges have been highlighted in Automate UK's Manifesto for Automation. More specifically, we've indicated the need for the development of a skilled workforce through a combined focus on STEM education and training.

Automate UK has also given these recommendations:

- Fostering a culture of innovation and entrepreneurship that supports the development and adoption of automation technologies

- Busting the *"robots take jobs"* myth through gradual adoption and education focused on the benefits of automation

- Providing financial support and guidance in the automation of manufacturing processes

- Developing policies and strategies that support the adoption of automation across all sectors, including the creation of a national automation strategy

- Ensuring that the benefits of automation are shared equitably across society and that the potential negative impacts are mitigated.

While it can be more of a challenge to automate bespoke products, support is being offered by an increasing number of system integrators and technology specialists. Automate UK also supports the forging of such connections through regular networking and exhibitions. We help end users stay abreast of the technology developments too, with the latest news being shared in our Machinery Update magazine and its online eBulletin.

There's also assurance for those manufacturers concerned about the need for skilled labour, with *"smarter"* equipment often being simpler to run and *"advice"* being provided by intuitive HMIs. Most original equipment manufacturers take end-user needs into account, offering a mixture of on and off-site training and support across all levels of equipment.
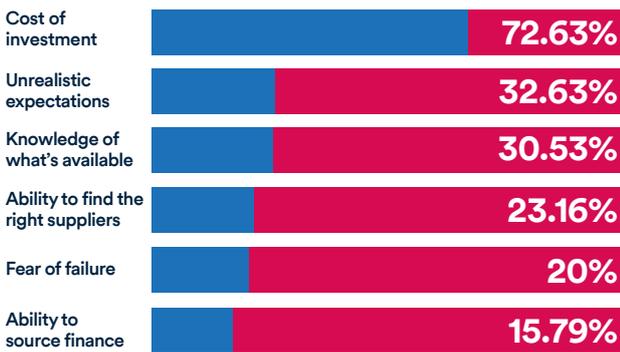
Adoption of automation

In positive news, there's been growth in the adoption of automation across industries. Indeed, 79% of respondents confirmed a year of automation growth within the UK manufacturing sector.

Growing Significantly	15.79%
Growing somewhat	63.16%
Staying stable	17.89%
Decreasing	2.11%
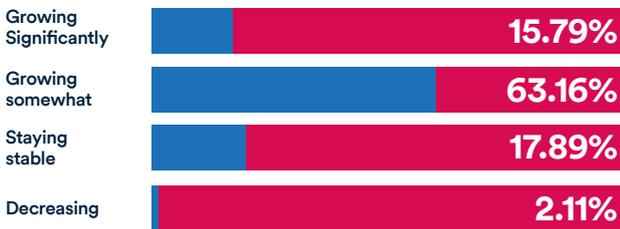
Still, there are significant barriers to the adoption of automation, with cost being the number one issue as confirmed by 73% of respondents. And 30% said that a lack of available knowledge has limited the scope of automation. This is particularly true of end users, with 46% recognising the need for better understanding.

Cost of investment	72.63%
Unrealistic expectations	32.63%
Knowledge of what's available	30.53%
Ability to find the right suppliers	23.16%
Fear of failure	20%
Ability to source finance	15.79%

Many businesses (SMEs in particular) perceive the costs of automation to be out of reach. There is also a cultural issue as to the speed at which such investment should be paid back, with the potential for cost offsetting through improved efficiencies not being taken into account.

What's more, end users are keen to resolve their biggest production issues through automation, rather than looking to gain operational efficiencies by automating more simple tasks. This alternative approach would make for the gradual building of trust and experience, with stakeholders coming to see the return on investment over time.

Automate UK continues to drive progress by:

- Lobbying organisations and government departments on key industry issues

- Providing practical support and grants to help reduce the skills shortage

- Promoting career progression through Automate BEST

- Sharing insights and enabling access to trends and technologies.

The fact that robots don't take jobs but do fill vacancies was emphasised during the first event run by the UK Automation forum. This has been supported by Make UK, with the estimation that there are 79,000 vacancies across the manufacturing sector at present. While the scope for automation is limited, robots can take on tasks within the dull, dangerous, and dirty categories. This allows employees to be retrained and move into more rewarding roles that make full use of their knowledge and skills.

MAKEuk
The Manufacturers' Organisation

End-user adoption challenges

Difficulty of integration is the number one challenge for end users of automation technology. This is followed by and associated with the lack of workforce skills. Cost is also a key factor, with many SMEs lacking the funds and struggling to see the case for automation given their limited production needs.

15% of end users have faced difficulty in finding suppliers of automation technologies. Automate UK will address this challenge with the upcoming release of the updated Machinery Finder app, showcasing the 000s of products offered by Automate UK's 580+ members.

Challenge	Percentage
Technology integration	73.08%
Workforce skills	50%
Regulatory compliance	34.62%
Supply chains	30.77%
We don't face any challenges	7.69%

Equipment suppliers and manufacturers from organisations such as the MTC and BARA also offer a great deal of independent information and advice, with the number one recommendation being to take baby steps for limited risk. Cobots and newly developed technologies can be an entry point with less of a *"fear factor"* for users. And the process is bound to be that much simpler when stakeholders are fully committed.

In terms of expense, there'll always be a better case for investment in automation if it will solve business problems. As mentioned, relatively affordable cobots can be a good entry point for many manufacturing organisations. Some companies also offer leasing deals and robots as a device (RaaS) options for larger industrial models. The setting of more realistic payback terms makes for a rapid return on the automation investment.

For those worried about the lack of programming skills, suppliers typically offer full training on how to get the best outcomes from robot installations. Automate UK are also working to introduce more people to tech-sector careers for greater speed in the deployment of robots and automation. However, this isn't a quick fix.

With the increasing integration of AI and software options, robots are of undeniable appeal to young people. This is a key focus for Automate UK, as we support businesses taking on apprentices through Automate BEST. We are also looking at implementing effective Robot and Vision Integrator Schemes that will help identify those businesses that have the relevant skills and match them to end users.

The limited availability of workforce skills is an issue not just for the integrator/machine builder, but also for the end user. This has been highlighted by our traditional PPMA members, plus the BARA and UKIVA members, with the sourcing of skills for the operation and maintenance of equipment being a massive drain on resources. Further investment in operator and maintenance staff upskilling by the end user (supported by our members) would go some way to resolving these issues.

The adoption of more appropriate technology would also make a positive difference. As such technology develops there are more opportunities for implementation by adventurous and capable end users. Although some specialist training may be required, end users are increasingly able to install tech such as AMRs and Cobots with support and guidance from the suppliers.

Innovation within automation technologies

66% of suppliers said that their main aim for 2024 is to boost innovation for continued success in the development of automation technologies. However, a mere 22% said that they weren't facing any barriers to innovation.

The lack of insight from end users is an apparent issue, with 30% of suppliers citing this as a barrier to deciding the best course of innovation. However, such insights may become more readily available with the introduction of the UK Automation Forum and greater engagement with end users by Automate UK. Bringing industry experts, end users, policymakers, and technology suppliers together, this will be a vital platform for the discussion of challenges and topics relating to the adoption of automation technology in the UK.

Lack of capital is a barrier to innovation

19.40%

We lack a skilled workforce to optimise innovation

17.91%

Innovation is hampered by a lack of long term commitment by customers

26.87%

We sometimes lack insight from end-users to decide the best path for innovation

29.85%

As Mike Wilson, Chief Automation Officer at the Manufacturing Technology Centre (MTC) and chair of the new Forum, said,

" *We are creating a community of leading experts and businesses to ensure that all members of the industry have a voice. We will then use this voice to work together to drive improvements for mutual benefit.*"

The lack of long-term customer commitment has also been recognised as an innovation hurdle. So, it's unsurprising that "better insight about end user needs/strategies" is the number one ask from automation technology suppliers in terms of supporting growth. This is closely followed by *"better connection between users and suppliers of automation technology"*.

Again, Automate UK is playing a leading role in the arrangement of networking events, and world-class exhibitions for the growth and development of our members. We also continue to share the latest news stories and industry insights in our Machinery Update publication.

End-user satisfaction

69% of end-users have said that the levels of supplier innovation are sufficient to meet their needs. Among the 23% who are unsatisfied with the levels of innovation, some said that they'd struggled to find technological solutions to consumer demands. Others said that integration had proven a challenge.

Better insight about end-user needs/strategies

59.70%

Better connection between users and suppliers of automation technology

52.24%

Support with improving skills within the industry

43.28%

Support with attracting young people to the industry

31.34%

Support with technical and regulatory information

22.39%

Change of government policy

17.91%

Easier access to finance

14.93%

Here are a selection of comments from end-user satisfaction.

"We are looking to digitise our batch manufacturing records, but need a link into our stock control system, plus this system needs to be robust enough to pass through GMP validation for use in pharmaceutical manufacture"
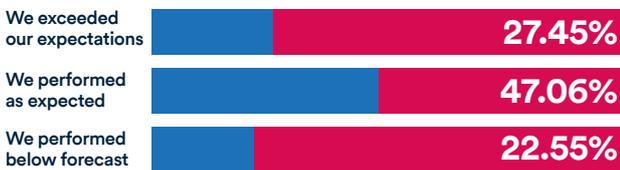
"The push towards cobots still seems to be through integrators who don't seem to have the appetite/knowledge."

Performance and future expectations

Performance was mixed in 2023.

We exceeded our expectations	27.45%
We performed as expected	47.06%
We performed below forecast	22.55%

Still, automation suppliers and end-users are seeing a brighter outlook for 2024. 67% said that they feel optimistic or very optimistic about the coming months, with just 9% being pessimistic.

Very optimistic	14.71%
Optimistic	52.94%
Neither optimistic nor pessimistic	22.55%
Pessimistic	8.82%
Don't know	0.98%
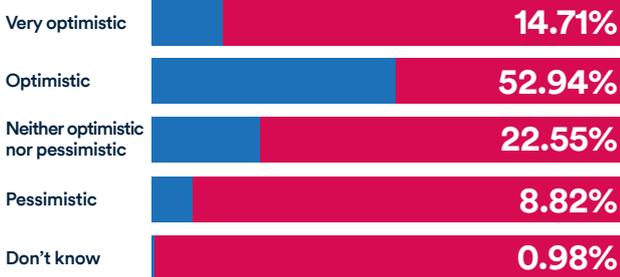
A growth in capital expenditure is widely expected for 2024, with AI being vital to the shaping of automation technologies. As we enter Industry 5.0 it will also become increasingly common to see humans working more collaboratively with automation. This will result in benefits such as greater efficiency and the reduction of health and safety risks.

The biggest impact will likely be seen in the connection of AI with machine vision and learning. This will mean that all forms of automation, can replicate human tasks and then improve on them by constantly evolving.

There will be a growth in capital equipment expenditure in 2024

50%

Capital equipment expenditure will stay the same in 2024

30.43%

There will be a decline in capital equipment expenditure in 2024

13.04%

"AI will change the way companies use Automation."

The recognised need and shortage of skills to support the integration of new technology will be issues that continue to dominate in 2024.

"It is not so much the automation itself, it is having the skilled people to maintain the automated systems that have been installed."

Partnering with the government and major manufacturing organisations, Automate UK will have a key role to play in supporting the improvement of technological skills and getting more young people into the industry. These aims must be realised if automation suppliers are to successfully achieve their growth objectives.

29% of respondents confirmed that the enhancement of digital skills is a key ambition for their organisations in 2024. Again, Automate UK is offering valuable support in securing grants and educating the next generation through Automate BEST. We're proud to be inspiring young people with a variety of apprenticeship grants and bursaries for the development of skills that will shape the future of our industry.

Support with improving skills within the industry

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Next steps

From the development of the tech workforce to the sharing of up-to-date insights, Automate UK is striving to support continued economic growth. In driving industry progress, guiding our members, and helping users make more informed technology decisions, we can fulfil our role as the go-to partner for success in the increasingly competitive marketplace.

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Visit **automate-uk.com** to find out more.