



MANUFACTURING barometer

ROBOT ADOPTION: THE SME CHALLENGE

NATIONAL REPORT AUTUMN 2019-20

JULY, AUGUST AND SEPTEMBER 2019 - SURVEYED IN OCTOBER 2019

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SIMON HOWES
MD
SWMAS

INTRODUCTION

A warm welcome to the SWMAS Manufacturing Barometer Autumn 2019-20 (Q2) national report.

It is now 10 years since the first Manufacturing Barometer began mapping the opinions and performance trends of the UK's SME manufacturing sector.

With the challenges of a downturn still evident and, at the time of writing, both Brexit and a potential change in government ongoing causes of uncertainty, the Manufacturing Barometer shows how manufacturers are planning operations for a potentially very different world. While manufacturers find their ability to recruit, invest and increase sales is increasingly restricted, finding technological solutions is becoming increasingly important.

The Manufacturing Barometer this quarter looks in depth at the attitudes to robots exhibited by UK SME manufacturers, and reveals some unique insight into what this means for manufacturers, equipment suppliers and the next government.

CORE TRENDS

Every quarter, the SWMAS Manufacturing Barometer records both actual and projected performance of UK SME manufacturers in sales, profits, investment (machinery and premises) and sales.

LAST SIX MONTHS

This quarter, we are left in no doubt that the sector is experiencing one of the toughest periods recorded during the 10 years of the Manufacturing Barometer. More SME manufacturers have experienced a reduction in sales, profits, and recruitment than ever seen before.

This is most remarkable in manufacturing profits where 44% of businesses experienced a reduction (an incredible 10% more manufacturers have seen fewer profits than last quarter).

Supporting the evidence that this is the worst performing quarter for nearly a decade, 35% of respondents said their sales figures have dropped in the last six months, and more than ever, nearly 30%, reported an active reduction in their staff numbers (driven, as reported previously in the Manufacturing Barometer, by talent shortages and the effect of uncertainty on growth plans).

There is slightly better news in investment performance. Reflecting intentions previously expressed in the Manufacturing Barometer, 40% of UK SME manufacturers tell us they have increased their investment in machinery and premises.

NEXT SIX MONTHS

Looking ahead, is there more reason to be cheerful? Although approximately a fifth of manufacturers note 'survival' or 'getting through Brexit' as an aspiration, over a quarter talk about growth and over a fifth reference investment whether in machinery and premises or people, automation, new products, and establishing new markets.

However, anticipated future performance figures evidence the lowest level of confidence expressed by the sector in nearly 10 years.

It is significant that for the first time less than half (44%) of SME manufacturers are expecting sales to increase. On top of that, nearly one third believe they will see a decrease in sales.

The picture is similar in profits where never before have we observed so many manufacturers facing a drop (26%). This is also reflected in investment where nearly one fifth expect to reduce their expenditure, and in employment where nearly one fifth are to actively cut staff numbers.

SPECIAL FOCUS

ROBOT ADOPTION: THE SME CHALLENGE

While UK is the 8th largest manufacturing nation, we rank only 22nd in the global league of robot adoption¹. Earlier this year, the International Robotics Federation reported that the UK was falling further back in the global automation stakes as UK robot sales sank 3% in 2018. Comparatively, Europe has more robots per 10,000 workers anywhere in the world, and robot sales here increased by 12%².

The UK government's Industrial Strategy, the continuing drive to improve productivity, and the need to find new ways to operate with fewer staff, all indicate there is opportunity to do more with robots, so why are we not?

This quarter's Special Focus looks at where SME manufacturers are successfully using robots, and where they are not, and what we can learn from them.

The context of this Special Focus is immediately set with just 16% of SME manufacturers saying they already use robots. Over 70% either do not plan to, or do not know if they will, use robots in their businesses.

Of those already using robots in their businesses, the impact of efficiency and effectiveness on their business operations is clear: better quality and repeatability, lower cost and faster operations feature highest in the benefits of utilising the technology.

The biggest drawbacks to using robots for this group are the inflexibility coping with product variation, a shortage of programming and maintenance skills, and the high implementation costs. How this differs to the barriers perceived by those "not sure" or "not planning" to use robots begins to highlight the challenges to greater adoption of robots by SME manufacturers.

Both those "not sure" and those "not planning" to use robots share the concerns about the cost of implementation but are more worried about the technology's inflexibility when it comes to coping with product variation and handling. Other concerns are that robots would not be applicable to the manufacture of bespoke or low volume products and small batch sizes would make it impractical to programme or set up.

When asked 'Do your competitors use robots?' over one third of manufacturers who do not yet use robots in their businesses said they are unsure if their competitors do. This raises questions regarding a general lack of awareness and benchmarking across the sector.

¹ UK Manufacturing Statistics; www.themanufacturer.com/uk-manufacturing-statistics/

² International Federation of Robotics (IFR.org); ifr.org/ifr-press-releases/news/brexit-uk-falling-back-in-global-automation-race-robot-sales-down-3

³ 'Automation and the future of work' report, BEIS; publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1093/109305.htm

CONCLUSION

UK SME manufacturers' confidence remains low, and their projected sales, profit and recruitment figures continue to be affected by the ongoing national uncertainty.

Robots could help to address relevant factors such as talent shortages and provide efficiency-boosting solutions that would positively contribute to profits and the economy. However, there are chasms to bridge.

One is between the significant number of SME who manufacture low volume and bespoke products and the providers of robots able to cope with products that are variable or are not easy to handle. We call on manufacturers to look at how their competitors are using robots, and for robot suppliers to look at solutions. If there is not a robotic solution for the large group of manufacturers who consider their variable products to be too difficult to handle, the drivers for robot adoption could fail.

It also seems to be true, as BEIS highlights³, that a lack of awareness around robots is harming the productivity of businesses, particularly for SMEs. For the potential of robots to be realised, the UK SME manufacturers need better information and tailored advice and support to help them plan and integrate robots into their businesses.

If you want guidance in starting or continuing your robot journey, get in touch.

We and our network of partners can help. Contact SWMAS on 01278 767 010 or email info@swmas.co.uk.

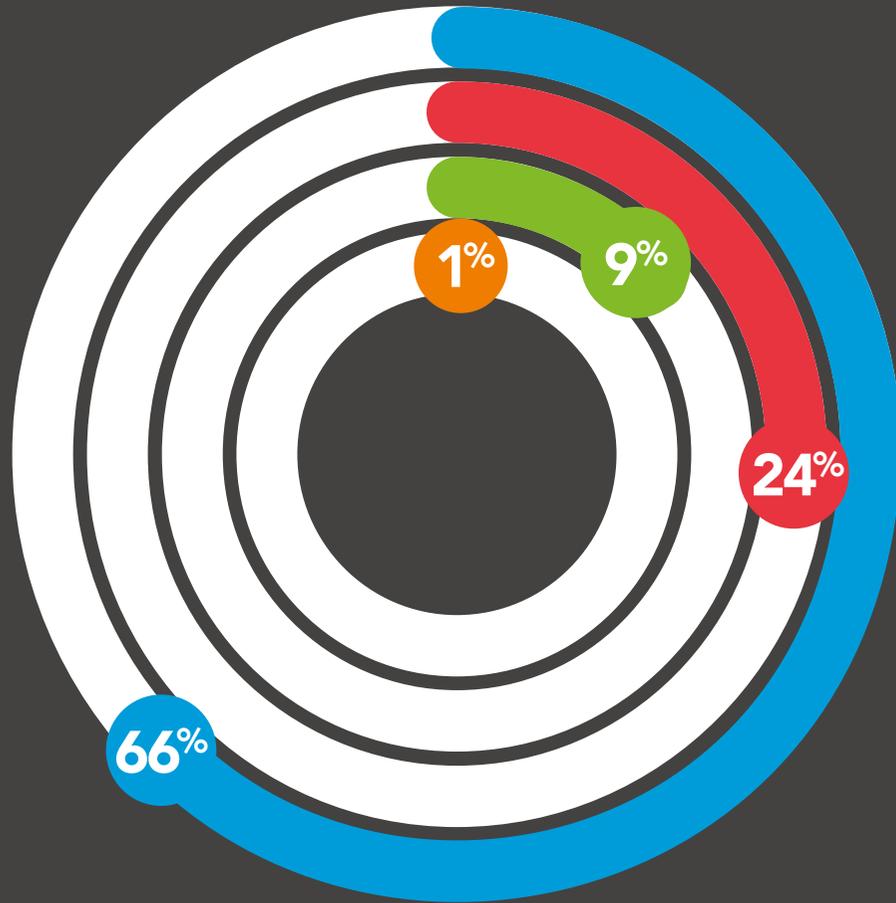


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SURVEY DEMOGRAPHICS



90%

OF RESPONDENTS ARE:

> **MANAGING DIRECTORS & CHIEF EXECUTIVE OFFICERS OR DIRECTORS**

Individuals with the highest level of strategic responsibility across their business.



BUSINESS ASPIRATIONS

“ Be able to get back our lost continental markets, complete the newly designed machine by recovering lost margins and enjoy work again instead of constantly worrying about new rules, cost increases and so-called Brexit problems.

Improve product design and grow export markets.

Survival.

NORTH WEST

“ Double in the next 5 years.

NORTH EAST

“ Finish reorganisation and succession, refocus, controlled growth.

Strategic plan in place to grow business primarily by addressing structural skill gaps before we move on to new service development and capital investment.

Increase productivity through efficiency and continuous improvement. Develop staff wellbeing programme and enhance employee engagement.

YORKSHIRE & HUMBER

“ Consolidation of business structures, operational efficiencies and leaner workflows to bring more responsive and flexible offering to clients identified through digital marketing campaigns for greater market exposure.

Short term - boost sales and reduce costs to become profitable again.

Survive Brexit. Find more long term customers, grow.

EAST MIDLANDS

“ Growth through product development. Significant investment short term. Medium term consolidation of sales through existing routes and more export effort. Long term growth through increased exports and possible vertical integration via acquisition of some small suppliers.

Improve delivery performance while increasing turnover. Improve quality of product and improve margins.

Short term - utilise slow sales to reorganise workshops to improve long term production. Medium to long term - look to implement own range of products to sell online.

EAST OF ENGLAND

BUSINESS ASPIRATIONS

Survive and then thrive in our market and then expand into other UK markets.

Move all legal entities out of the UK.

Market leadership in the UK...and achievement of a significant market share in this sector in the USA.

Expand by acquisition.

To reduce our dependence on the Automotive sector to make our work have more value added content and to reduce the dependence on low cost labour workforce.

WEST MIDLANDS

Organic growth.

LONDON

Short term: to survive the current lethargy in the UK market. Medium/long term: to grow the business by continuing to develop our sales to China.

Huge potential for global exports of our own specialised products, restricted by cash flow and lack of financial support. Very difficult recruiting the right talent/skills in our area.

Improve our capacity, service offering, internal efficiency and towards a sustainable profitable result.

With BREXIT still imminent, it is a very difficult time for industry, not knowing how things will change. Short term, we hope to retain sales both in the UK and in Europe and with the practice of LEAN, we hope that we will still have access to materials imported from the EU, so we can keep production running to meet demand. Mid term aspiration is to focus efforts on the USA market as the sales could prop up any reduction in our EU sales if there is any. Long term we want to get BREXIT out of the way and focus on increasing business strength globally without the looming doubt we have been living with for the past 3 years.

SOUTH EAST

Short term address internal inefficiencies to enable continued sustainable growth into medium and long term.

Increase customer base and grow business accordingly, we currently don't have any certainty on if this is possible as all of our current customers are seeing a decline in workload.

Short term, get Brexit done, orders have slowed. Medium: invest in more robots. Long term: new factory on a new estate...

Accelerate expansion of the business when Brexit is decided. Currently all medium and long term plans are on hold. And given the current state of affairs even some short term plans are on hold.

Meet present deadlines, invest to grow, cut overheads and automate.

We have dedicated our efforts to short term planning to withstand the uncertainty that Brexit process has imposed (like many others I am sure).

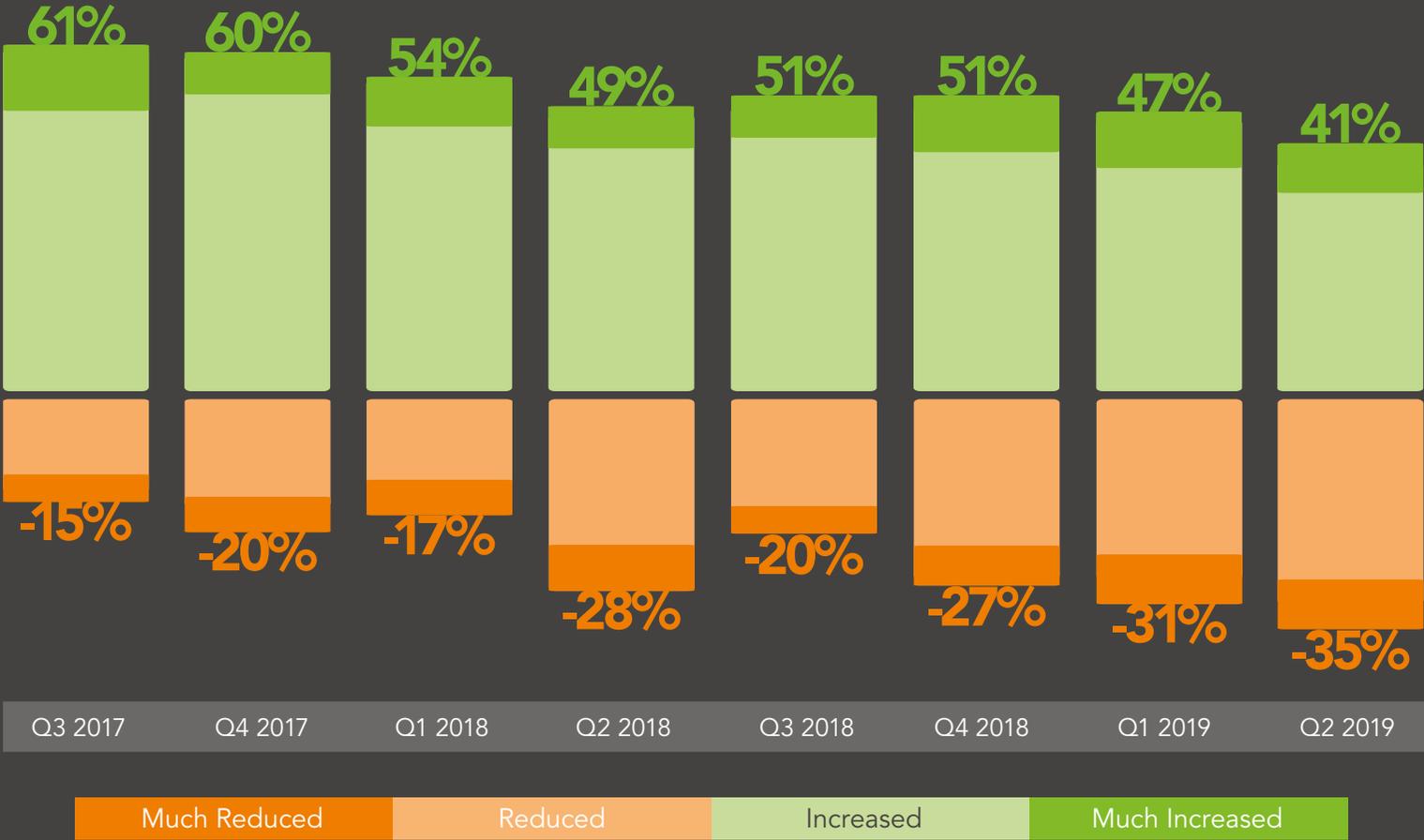
Consolidation of existing business activities, increased activities into new business sectors.

SOUTH WEST

CORE TRENDS

NATIONAL PAST SALES

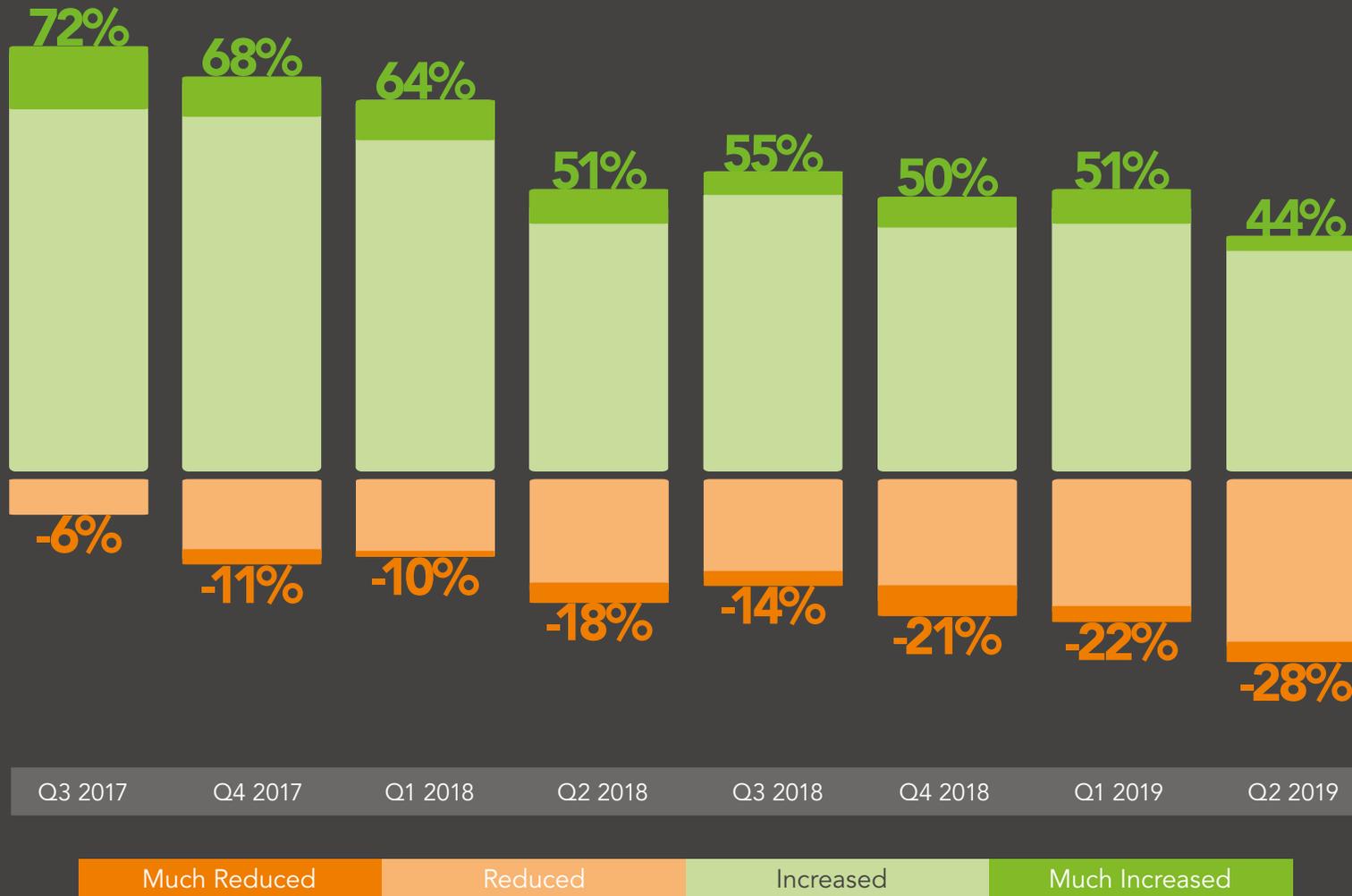
How has your sales turnover changed within the past 6 months?



CORE TRENDS

NATIONAL FUTURE SALES

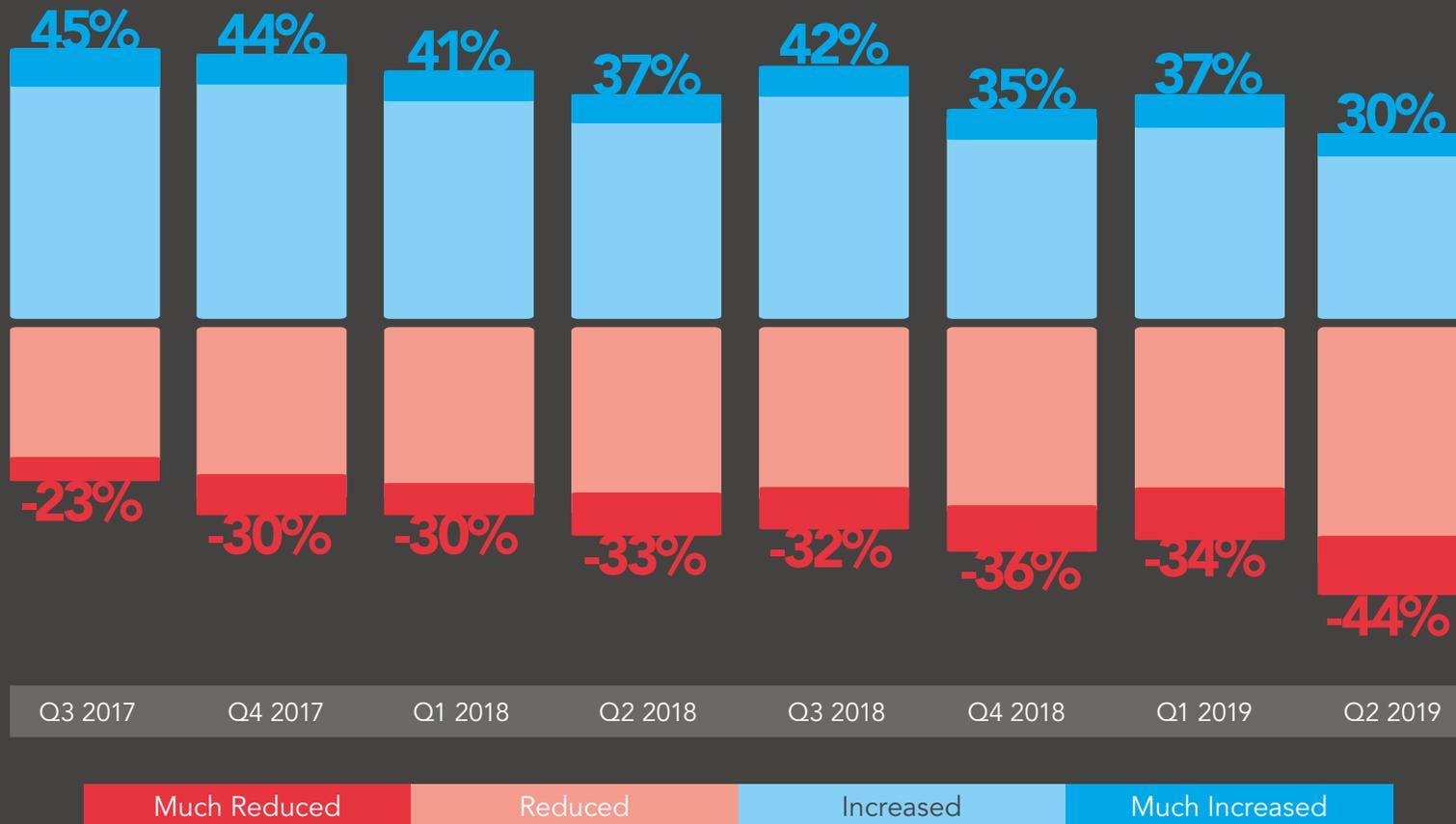
How do you expect your sales turnover to change over the next 6 months?



CORE TRENDS

NATIONAL PAST PROFITS

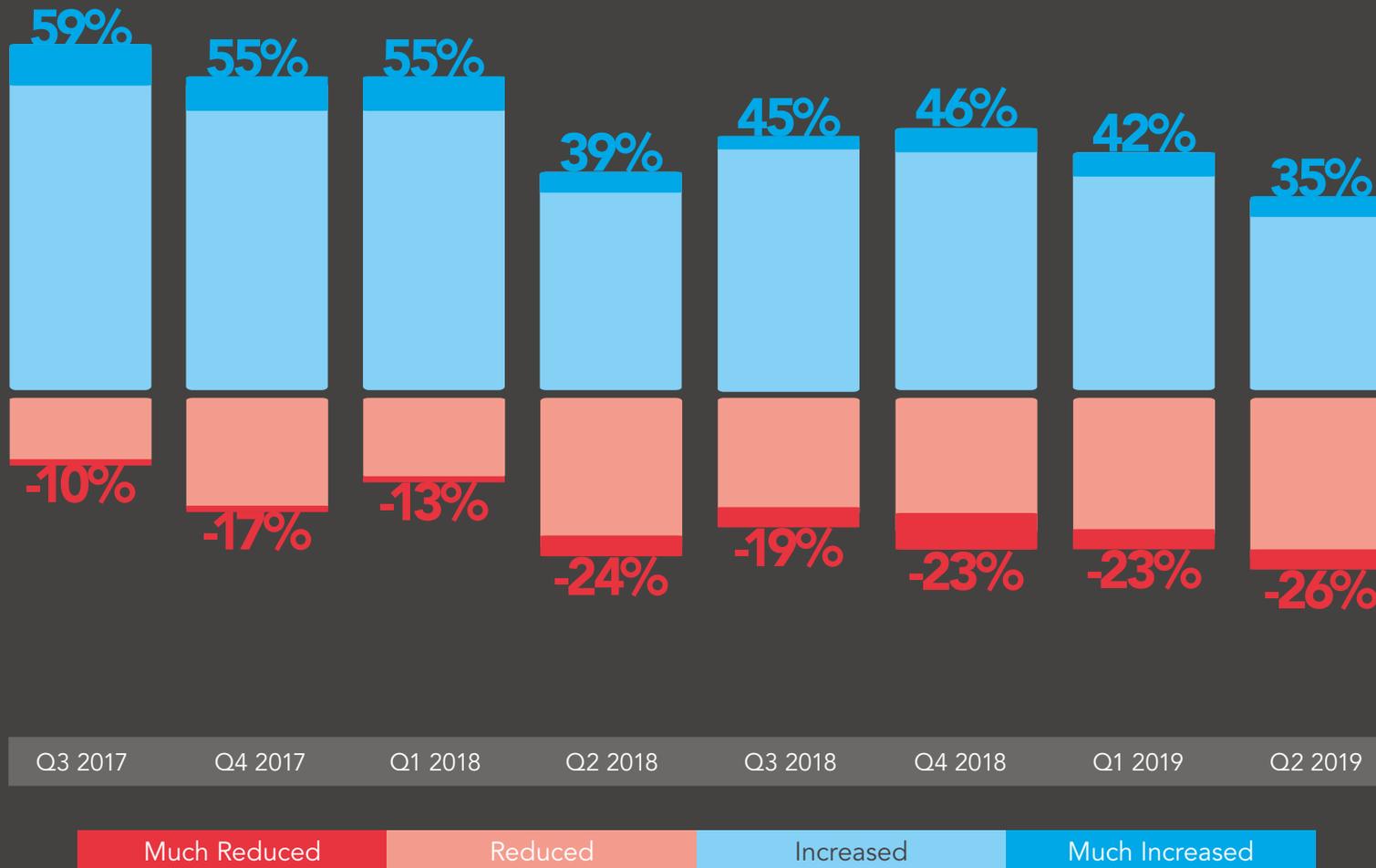
How has your profit changed within the past 6 months?



CORE TRENDS

NATIONAL FUTURE PROFITS

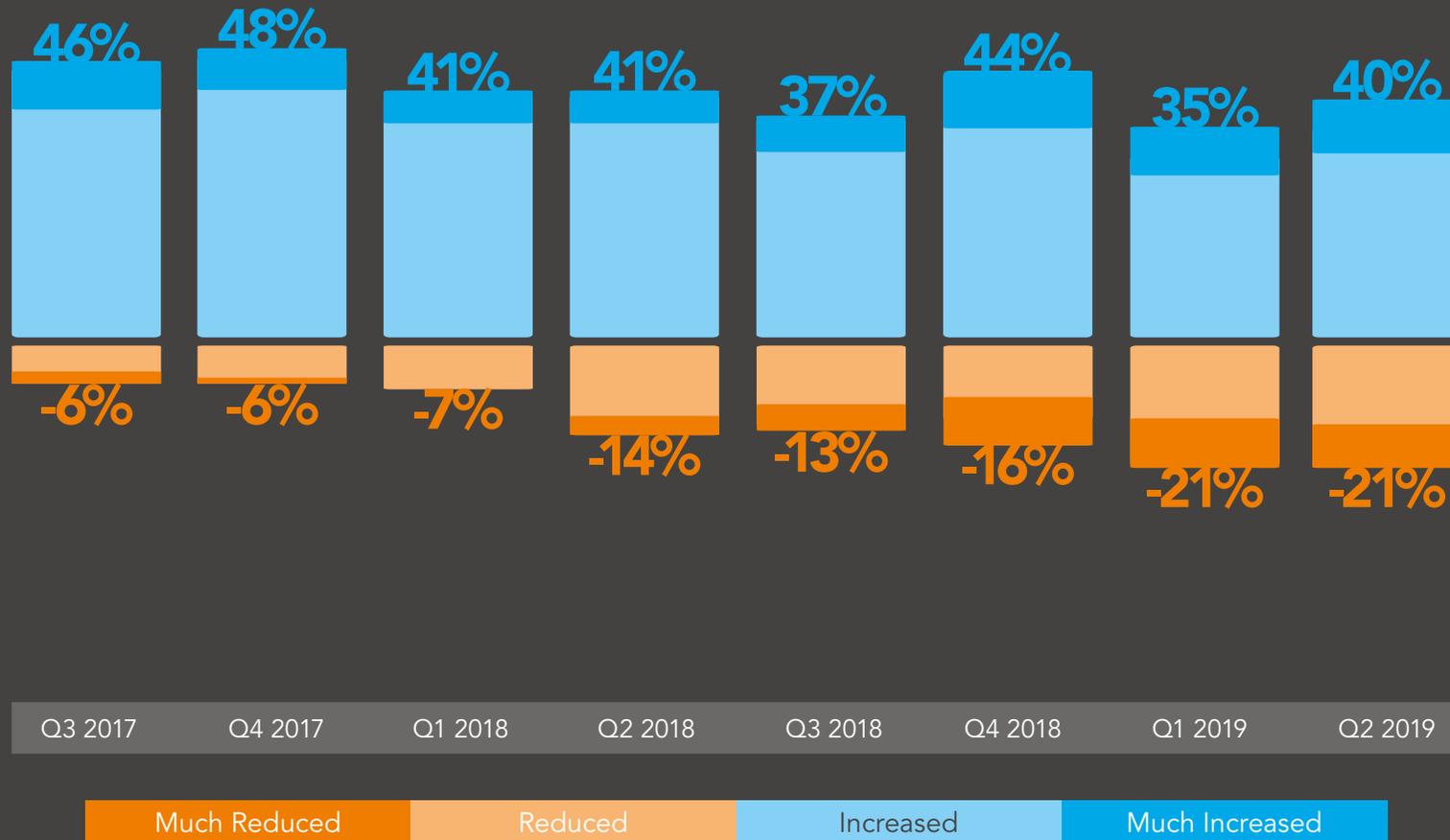
How do you expect your profit to change over the next 6 months?



CORE TRENDS

NATIONAL PAST CAPITAL INVESTMENT

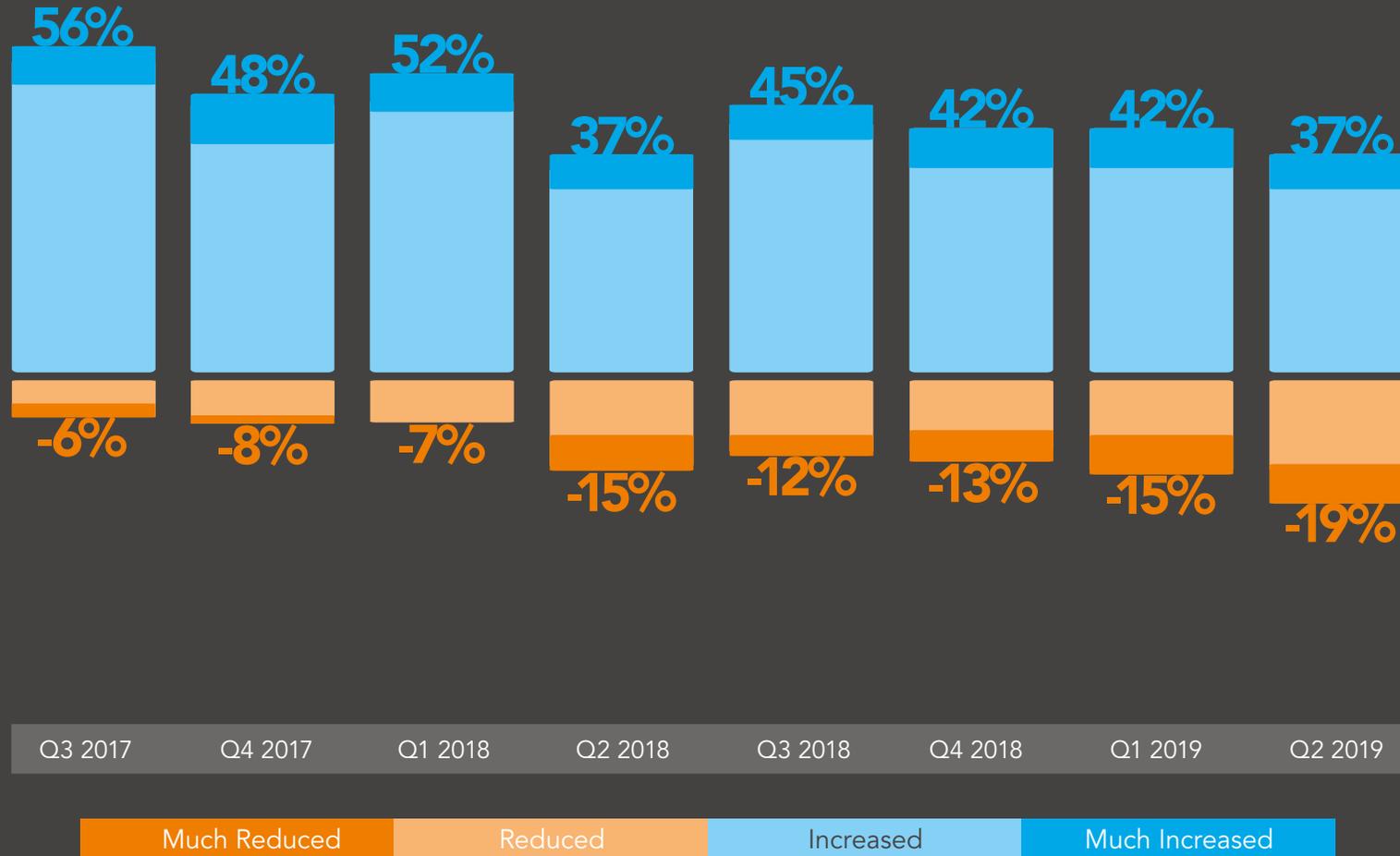
How has your investment in new machinery/premises changed in the past 6 months?



CORE TRENDS

NATIONAL FUTURE CAPITAL INVESTMENT

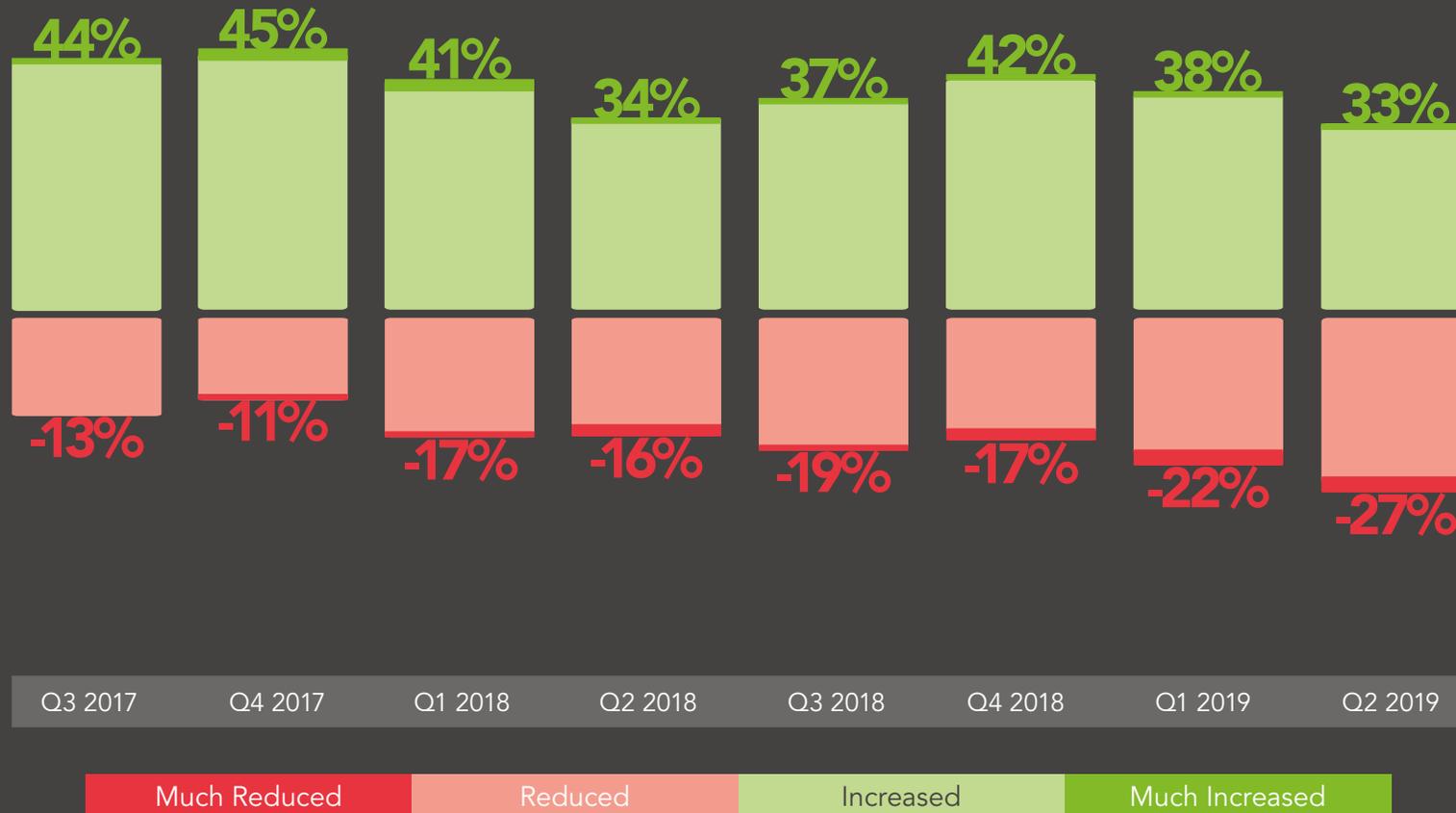
How will your investment in new machinery/premises change in the next 6 months?



CORE TRENDS

NATIONAL PAST EMPLOYMENT

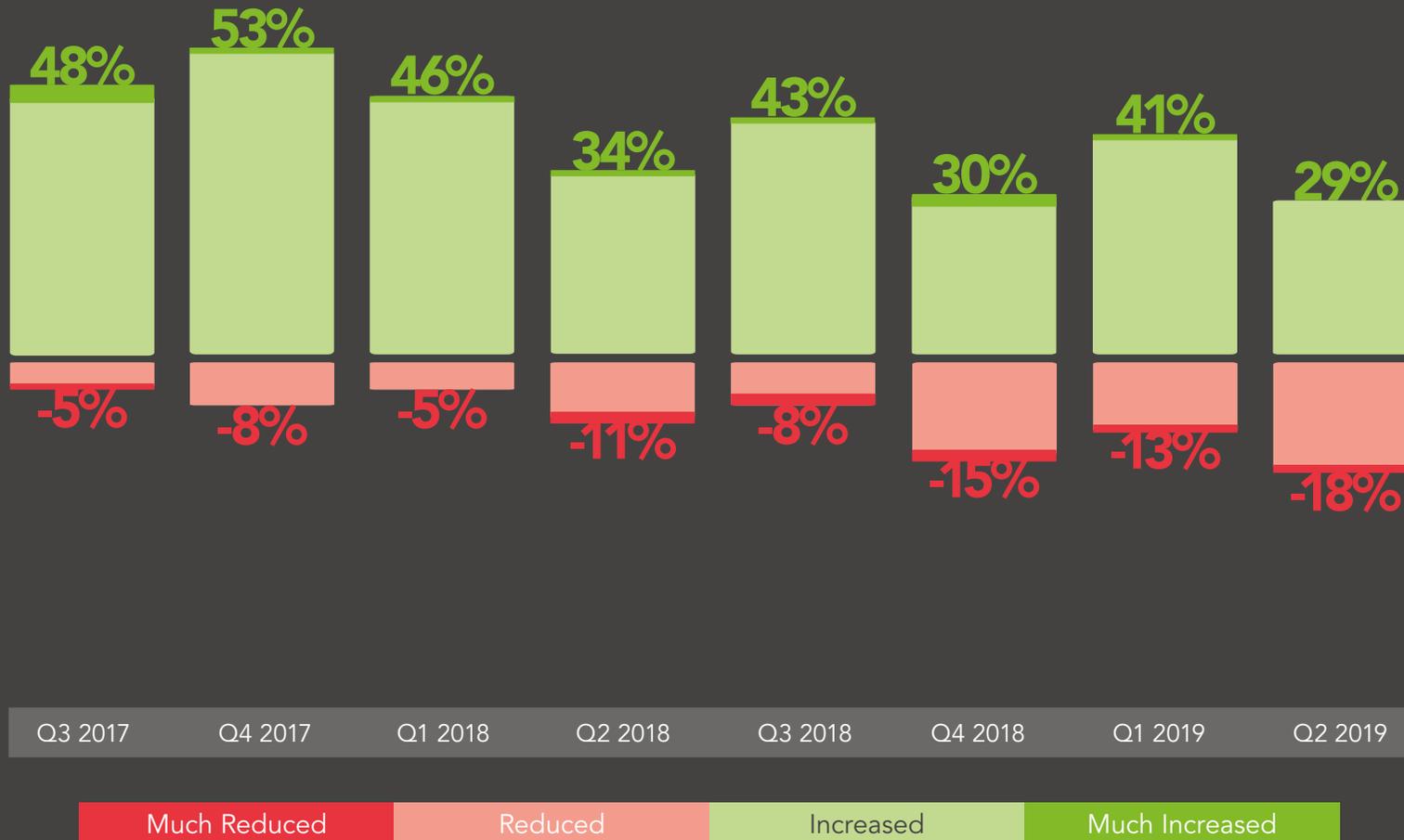
How have staff numbers in your company changed in the past 6 months?



CORE TRENDS

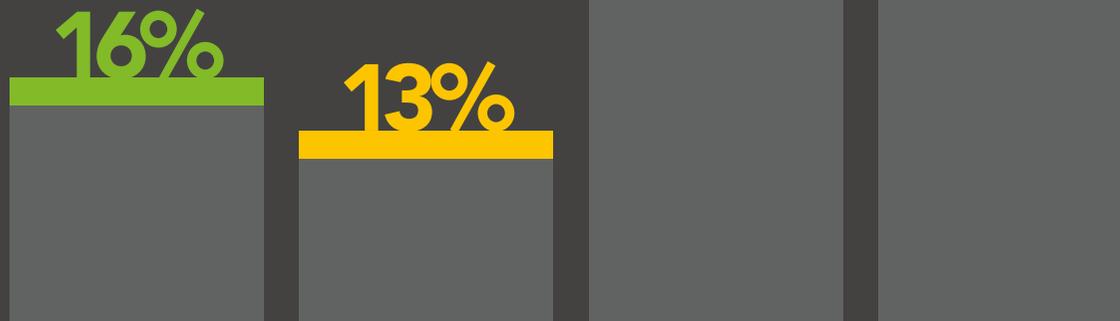
NATIONAL FUTURE EMPLOYMENT

How do you expect staff numbers in your company to change in the next 6 months?



SPECIAL FOCUS

ROBOT ADOPTION: THE SME CHALLENGE



“ I can no longer rely on new employees, automation is the way to go, but difficult to implement within a sub-contract environment. ”

— MD, EAST MIDLANDS —

“ I think very few SME's would be inclined to use robots...as most of us are manufacturing at a volume too low or where 'hand assembly' is needed - for instance calibration. ”

— MD, WEST MIDLANDS —

- Already use robots in their business
- Plan to start using robots
- Do not plan to start using robots
- Not sure if they will use robots

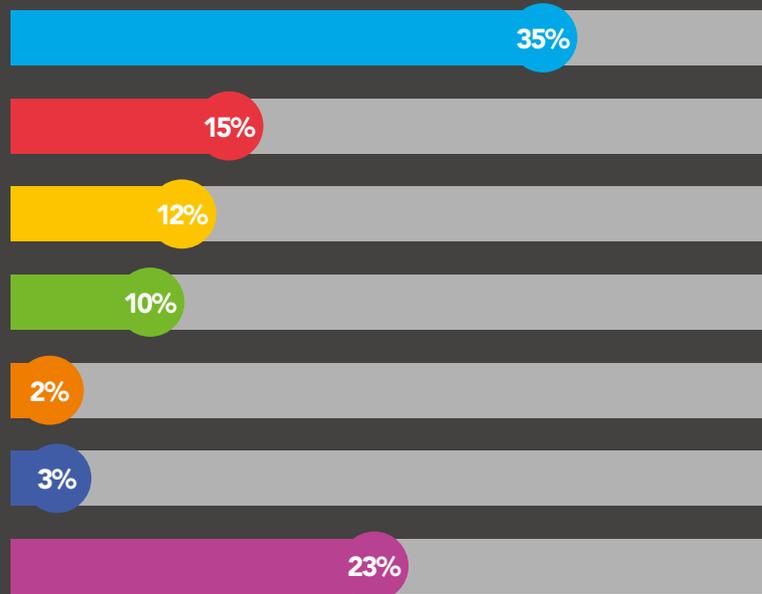
SPECIAL FOCUS

ROBOT ADOPTION: THE SME CHALLENGE



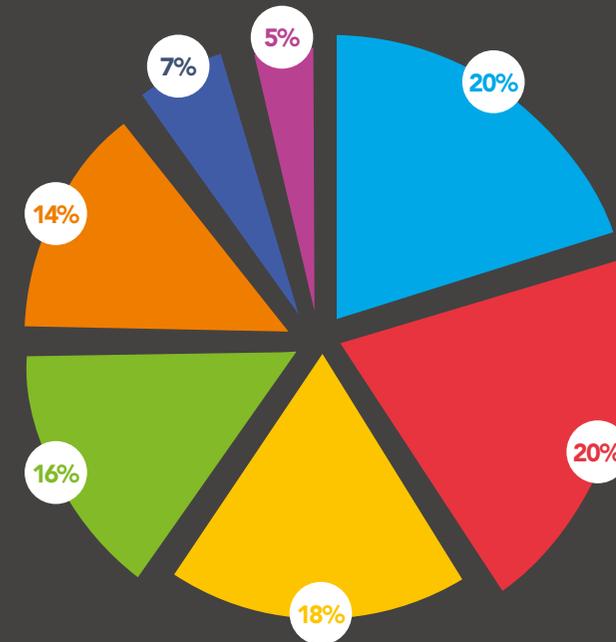
WE ASKED THOSE WHO ALREADY USE ROBOTS IN THEIR BUSINESSES:

Where in your business do you use robots?



- Machine loading/unloading
- Assembly
- Cutting/forming
- Welding
- Testing/inspection
- Painting/coating
- Other

What are the main benefits of using robots?



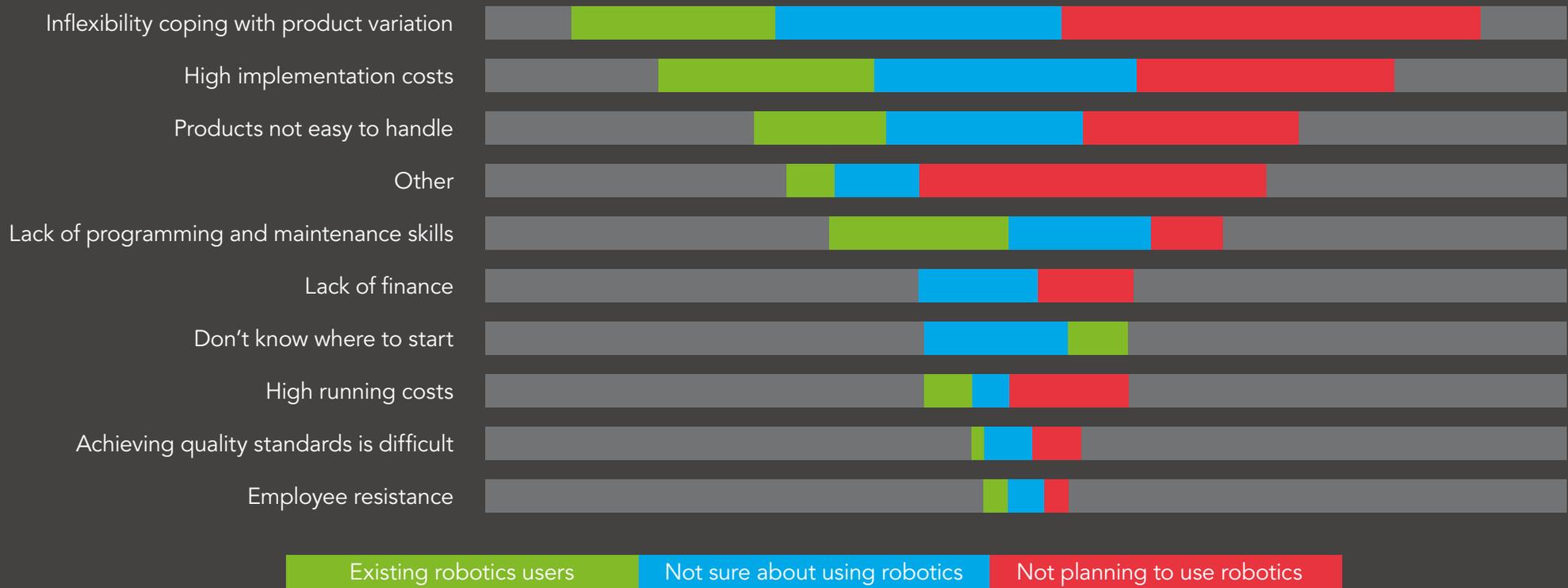
- Better quality and repeatability
- Lower cost of operations
- Faster operations
- Improved safety/well being of staff
- Increased flexibility and responsiveness
- Business image
- Other

SPECIAL FOCUS

ROBOT ADOPTION: THE SME CHALLENGE

DRAWBACKS OR PERCEIVED BARRIERS TO USING ROBOTS IN SME MANUFACTURING BUSINESSES

Drawbacks or perceived barriers to using robots

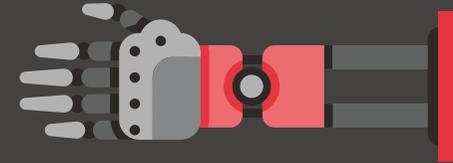


Nearly 50% of those selecting 'Other' cited robots were not applicable because they manufacture bespoke or low volume products.

SPECIAL FOCUS

ROBOT ADOPTION: THE SME CHALLENGE

DO YOUR COMPETITORS USE ROBOTS?



Of those SME manufacturers who **do not already use robots**



...are unsure if their competitors do.

ABOUT THE MANUFACTURING BAROMETER

MANUFACTURING
barometer



The Manufacturing Barometer is a quarterly survey that charts the experiences of UK SME manufacturers. It is the largest survey of its kind and has informed both government industrial strategy and the national debate on manufacturing.

Run by SWMAS, part of the Exelin Group, since 2009 in the South West of England and recently partnering with Economic Growth Solutions, the Manufacturing Barometer records trends in employment, turnover and investment. Each quarter, a 'special focus' explores an issue in greater depth. In the past this has included issues such as productivity, overseas production and energy efficiency.

Companies are able to use this quarterly Manufacturing Barometer to compare themselves against other firms within their sector or region.

The Exelin Group are experts in productivity and growth. If you would you like one of our team to undertake a diagnostic review, helping identify opportunities in your business, or for more information on this report, please contact:

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