Department for
Business, Energy
& Industrial Strategy

BUSINESS BASICS: ATTITUDES TO ADOPTION

Understanding the barriers and enablers to the adoption of best practice technologies and management practices by Small and Medium sized Enterprises (SMEs)

INDUSTRIAL STRATEGY

Contents

Executive Summary

Background

The UK currently lags behind its main international competitors in terms of productivity. In 2016, output per hour worked in the UK was 16.3% below the average for the rest of the G7 advanced economies[1]. The UK also has a larger productivity distribution compared to its key competitors, including a 'long tail' of low productivity firms[2]. This means there is a bigger dispersion of productivity levels amongst the business population. Whilst the UK hosts a large number of internationally leading firms, that have been willing and able to adopt innovative technologies and business practices, it also has a disproportionately large share of long tail firms compared with international competitors[2]. The diffusion of innovation – the spread of innovations through the population – has been identified as a key problem, with the UK ranking 12th in the world in terms of knowledge diffusion[3]. The UK Government's Industrial Strategy identified raising productivity as one of the government's key priorities[4].

A range of technologies and management practices have been reported to have a positive – and widely applicable – impact on the overall productivity of small and medium sized enterprises (SMEs)[5]. The Confederation of British Industry (CBI) has estimated that getting firms to adopt tried and tested tech and management practices is worth over £100 billion to the UK economy[6]. This is based on analysis by the McKinsey Global Institute which estimates that at least 55 per cent of labour productivity growth in developed economies like the UK will come from firms adopting best practice[6]. Reducing the gap between the weakest and strongest performers could boost UK productivity by 13% – and raise around £270 billion in terms of GDP (Gross Domestic Product)[2].

The Business Basics Programme[7] was one of three strategic packages announced in the Government's Industrial Strategy to improve UK productivity. The £9.2m programme will run over 4 years to test innovative ways of encouraging SMEs to adopt existing technologies and management practices that are proven to boost productivity. The programme has a strong emphasis on generating robust evaluation evidence to understand 'what works' to encourage adoption amongst SMEs.

In April 2018, BEIS commissioned Kantar Public to conduct qualitative research to support the wider Business Basics Programme. The research examines SMEs attitudes towards innovation, by exploring responses to a range of technologies and management practices that have been proven to boost productivity. The research is of relevance to a wider set of stakeholders outside of the Business Basics Programme.

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[1] ONS (2018), International Comparisons of UK Productivity (ICP), Final Estimates: 2016
[2] Andrew Haldane (Bank of England), The UK's Productivity Problem: Hub No Spokes (2018)
[3] Global Innovation Index 2019
[4] https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future
[5] OECD Science, Innovation and Technology Scoreboard (2015)
[6] From Ostrich to Magpie: increasing business take-up of proven ideas and technologies, CBI, 2017.
[7] https://www.gov.uk/government/collections/business-basics-programme

The research provides an insight into how SMEs differ in terms of their attitudes towards innovation, and how organisations could tailor their communications or interventions to account for these differences to encourage adoption. This research defines **key SME typologies** and illuminates the **drivers and barriers to the uptake of technology and management practices**. It also provides initial findings on SME responses to proposed intervention ideas and sets out guidelines for the type of interventions that SMEs may respond to in these areas of innovation.

Methodology

Between May and June 2018, **Kantar Public conducted 40 interviews with SMEs around England** (22 interviews were conducted in person and 18 on the telephone). Key decision-makers in SMEs were recruited from an existing sample from a BEIS tracking survey conducted by Kantar Public, who had agreed to be re-contacted for further research. SMEs were recruited to achieve quotas on **primary variables of size** (quotas were set for numbers of small and medium sized businesses) and **attitudes towards innovation within their business**. A range of secondary variables also influenced recruitment: sector, whether they were a "growth" business and the age of the business. Flexible quotas were applied to these secondary variables to ensure a broad sample of SMEs were recruited.

Various analytical tools were used to synthesise findings from interview data. The **Kantar Public Behavioural Model** helped frame the content of the interview discussion guide and understanding of the conscious and unconscious drivers of SME attitudes and behaviour. A **typology mapping exercise** helped create specific SME typologies, determined by their attitudes towards innovation and influence of key decisionmakers. Outputs from a **journey mapping exercise** conducted in interviews help understand the drivers and barriers to adoption of new technologies and management practices.

Influencing Factors

The research identified a number of structural and attitudinal factors that either drive or impede the adoption of technology and management practices:

- **Innovation mindset:** The degree to which a business is proactive or resistant to change impacts significantly on the likelihood of them successfully adopting new processes – for example perceiving change to be a necessity of running a successful business and sticking to 'tried and tested' methods.

- **Age and stage:** The degree to which a company has a growth or 'sustaining' mindset, and the length of time in operation plays a role in whether businesses are open to critically appraising the efficacy of their technology and management procedures.

- **Business focus:** The degree to which a business is aware of external competition, and whether they are oriented towards profit, or other values, shapes their openness to integrating new procedures or processes in order to stay abreast of industry developments.

- **People:** Businesses tended to be more open to increasing productivity and efficiency when the key decision makers had been in their role for a shorter time. Businesses that gave staff the opportunity for professional and personal growth tended to have a more innovative spirit.

- **Processes and capabilities:** The underlying knowledge-base and technical capabilities within a business was a powerful precursor to the openness of businesses to new technologies and procedures.

SME typologies

The most prominent factors of influence – key decision makers possessing an "innovation mindset" and the tenure of those key decision makers – led to the emergence of **five business types**[8], highlighting different innovation profiles within the SME cohort. Figure 1 plots these five business types along two dimensions; approach to innovation and length of time key decision makers had been in role.

Figure 1: Five business typologies identified
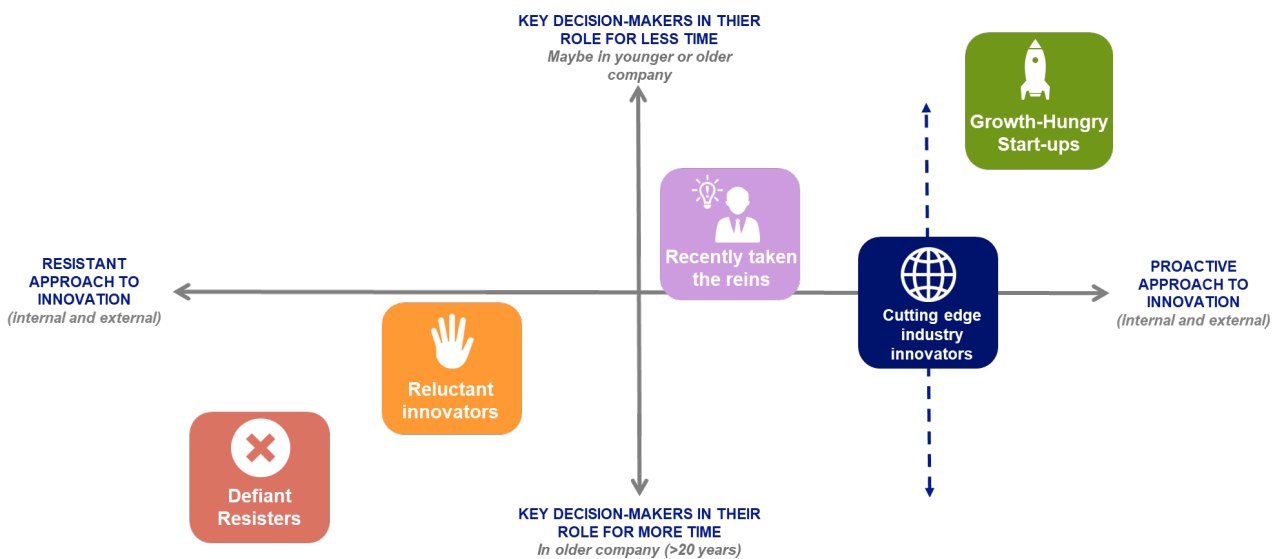
- **Defiant Resisters:** were the most defensive about their current practices, culturally opposed to innovation – instead, preferring tried and tested methods over change.

- **Reluctant Innovators:** often lacked the knowledge or capability to keep up to date with technological changes and saw management practices as 'for bigger companies'. However, when the need arose (either through declining profits or regulation), this group could be motivated to adopt new ways of working.

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[8] Another SME typology emerged from the research; 'people, not profit'. They were determined to be out of scope for this research, and therefore are not referenced in the findings.

- **Recently Taken the Reins:** having recently taken on the role as key decision-makers this group brought professional and personal experience to the business – driving innovation and the adoption of new processes to make their mark on the business. However, they wanted to see the real-world benefit before adopting.

- **Cutting Edge Industry Innovators:** working in highly competitive, and technologically advanced industries, this group were, by the nature of the market, innovative. Constantly seeking new technologies and practices to improve efficiency and stay ahead of the competition. Decision-makers could be in new in role or have a longer tenure in older companies.

- **Growth-Hungry Start-Ups:** the perpetual growth and expansion of their business in the start-up phase meant that this group were in the process of constantly adapting and improving processes and procedures as they consolidate. This group sought information about how to run their business more effectively from a plethora of sources.

A number of case studies are included in the report and in appendix 3.

Key findings and recommendations

To effectively target SMEs, organisations delivering interventions (e.g. those delivering through the Business Basics Programme) should consider the following principles:

- **SME typologies can be differentiated by propensity to innovate within their organisation and how long key decision-makers have been in situ.** Business support interventions for technology and management practice adoption should consider how to pitch at specific typologies, mindful of the specific needs of the SME and levels of understanding regarding technology and management practices.

- **Words such as "productivity", "success" and "innovation" are perceived differently by different typologies.** There needs to be caution around language and tone when creating interventions, to ensure they resonate sufficiently with the target audience.

- **SMEs engage with the adoption of new technology more readily than adoption of management practices.** Understanding and relevance of management practices was found to be low and less 'tangible' to businesses in the SME cohort. Interventions regarding management practices should communicate clear and tangible benefits with relatable case studies.

- **Each business / organisation believes it is unique and wants to be able to identify itself in any marketing materials.** Business support interventions cannot speak to every SME individually, but should focus on the inclusive benefits of adoption and give sector-specific examples.

- **SME typologies which have a lower propensity to innovate within their organisation are unaware of what help they might need and what the benefits are.** There is an opportunity to first raise awareness on how these businesses might evaluate where they need to innovate and why this would be beneficial to them.

The challenge for business engagement

A number of intervention ideas were tested with SMEs, which generated a number of challenges for engagement:

- **Define the target audience:** The proposed intervention ideas appear to be pitched at a basic level and resonated more with the less innovative businesses with the greatest needs, e.g. Defiant Resister and Reluctant Innovator typologies. Those typologies further up the innovation spectrum exhibited more advanced requirements, which may be outside of the scope of interventions considered as part of this research.

- **Refine interventions:** While some of the intervention ideas shown as part of this research were received well, overall SMEs required deeper explanations of the principles and benefits. These need to be communicated in a clear, jargon-free language that helps SMEs relate potential technology and management practice solutions to problems they face in the day-to-day running of their businesses.

- **Consider the execution of marketing:** The language used to describe interventions and the delivery channel played a significant role in levels of engagement with the interventions. Language needs to be clear, relatable and personalised for businesses to see the relevance to them. Initial feedback suggests that online materials should also be clearly structured around different technology and management practices in relation to different business needs, to ensure that solutions are appropriate for their existing level of innovation. The research suggests that marketing is likely to have impact online, as this was the primary point of reference for information across most of the SMEs, but offline channels should also be considered for other audience.

Introduction

Research background

Raising productivity is one of HM Government's key priorities – as outlined in the Government's Industrial Strategy (published in November 2017)[9].

The UK currently lags behind its international competitors in terms of productivity.[10] Whilst the UK hosts a large number of internationally leading firms, that have been willing and able to adopt innovative technologies and business practices, it also has a disproportionately large share of long tail firms compared with international competitors[11].

The UK lags behind the EU average for the adoption of many technologies. As an example of this "lag", in 2015, the proportion of UK firms adopting cloud computing was nearly 30 percentage points below the EU's best performers, and for Enterprise Resource Planning (ERP) systems was around 40 percentage points below. The UK also underperforms in relation to Customer Relations Management (CRM) software, Supply Chain Management (SCM) and Radio Frequency Identification (RFID) technologies. The UK performs better when we look at big data tools for example.[12]

A range of best-practice technologies and management practices have been reported to have a positive – and widely applicable – impact on the overall productivity of small and medium sized enterprises (SMEs). The CBI has identified five key technologies with wide applicability across businesses – including CRM, Human Resource (HR) and accountancy software, ISO certificate and payment technologies – and has estimated that if firms were to adopt these, the result could add £100 billion to UK GVA (Gross Value Added)[13]. Other technologies with the potential to boost productivity include cloud computing, e-commerce solutions and Robotics, Automation and Artificial Intelligence (RAAI).

The use of best practice technologies typically accompanies complementary improvements in management practices. In fact, Information Communication Technology (ICT) adopted with good management practices achieves a 20% productivity improvement, compared to just a 2% uplift when adopted with poor practices[14]. Several studies have found that better management practices (such as effective performance monitoring, target setting, incentives & talent management and operations management) are significantly correlated with higher productivity[15]. Many SMEs in the UK are adopting less of these practices relative to advanced economy competitors. Studies show UK managers are less proficient, less qualified and under-trained compared to international counterparts.[16] The

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[9] https://www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future
[10] ONS (2018), International Comparisons of UK Productivity (ICP), Final Estimates: 2016
[11] Andrew Haldane (Bank of England), The UK's Productivity Problem: Hub No Spokes (2018)
[12] OECD, Science, Innovation and Technology Scoreboard (2015)
[13] From Ostrich to Magpie: increasing business take-up of proven ideas and technologies, CBI, 2017. http://www.cbi.org.uk/index.cfm/_api/render/file/?method=inline&fileID=F840035B-0678-4A72-BAF8B7D170F47A07
[14] London School of Economics and Political Science (2016), The Power of Productivity
[15] Bloom et al (2014), Measuring and Explaining Management Practices Across Firms and Countries
[16] World Management Survey (2014), Manufacturing Report

issue is exacerbated by the concern that many SMEs are not aware of how they are performing in terms of management practices compared to other businesses, with many managers in the UK tending to be overoptimistic about their management skills[17]. A number of potential barriers to adoption of best practice technologies and management practices have been identified, including an ineffective and confused business support landscape, a lack of relevant case studies to prove benefits, a lack of knowledge of the benefits, concerns around cyber-security risks and the costs / challenges of introducing new systems[18].

To support increased SME productivity, BEIS is testing innovative approaches to driving up the adoption of best practice technologies and management practices as part of the **Business Basics Programme**. Findings from this research have informed the programme to date, and will be shared with delivery organisations, to enable the effective delivery and communication of interventions in this space.

Research aims

In April 2018, the Department for Business, Energy and Industrial Strategy (BEIS) commissioned Kantar Public to conduct qualitative research exploring SMEs attitudes towards innovation, exploring responses to a range of technologies and management practices that have been proven to boost productivity.

This research **aimed to understand the barriers and enablers to the adoption of innovative technology and management practices amongst SMEs**, and ultimately to provide recommendations on how to create targeted and effective interventions for providers working with SMEs in this space.

Specifically, the research aimed to:

- Understand SME attitudes towards the adoption of technology and management best practice and how these might differ across different kinds of businesses

- Explore the relative influence and importance of a range of potential barriers and enablers to the adoption of technology and management best practice

- Identify what moments, events or information sources might act as trigger points to the adoption of technology and management best practice

- Provide direction on potential interventions to help drive the adoption of technology and management best practice – including potentially motivating communications messages.

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[17] Bloom et al (2007), What Drives Good Management Around the World?
[18] Bloom (2014), Measuring and Explaining Management Practices across Firms and Countries; ONS (2018), Management practices and productivity in British production and services industries - initial results from the Management and Expectations Survey: 2016

Methodology

Overview

Given the complexity of this topic area, a broad-based sample of SMEs were selected. **40 in-depth interviews were conducted with SMEs, lasting 75 minutes.** It was agreed that 40 interviews would provide optimal breadth across variables that might influence take up of best practice technologies and management practices. These variables included:

- Size of business

- Attitudes towards technology and management practices

- Whether the SME was a "growth" business (e.g. focussed on growing the business in the future)

- Age of business

- Sector

- Region in UK

Recruitment was based on the assumption that the size of business and attitudes towards technology and management practices were the primary influencing factors and that any final sample frame should reflect this and govern recruitment.

Between May and June 2018, 22 face-to-face interviews took place in the business location of the SME and 18 were conducted on the telephone.

Sampling and recruitment

A "re-contact sample" from the Kantar Public BEIS Priorities Tracker was used to target recruitment. The re-contact sample was sourced from waves 1 (2017) and 3 (2018) of the survey sample, from a total of 1,052 SMEs. The contact within the business was described as 'a senior manager, with decision making responsibility for staffing, investment and growth'. The sample also included details of the business sector, attitudes to growth and for businesses focused on growth, whether they have considered adopting technological solutions to increase efficiency, which allowed targeted recruitment.

Recruitment was carried out in two stages:

- Prior to making telephone contact, survey participants were sent an invite letter explaining the research and offering them the opportunity to opt-out.

- If the participant did not opt-out, participants then completed a brief screening exercise by telephone, to confirm eligibility and ensure participants were recruited according to sample quotas. Eligible participants were then invited to take part in the 75-minute in-depth interview at a time and location of their convenience.

Given that the target population represented a broad and varied group, individuals were primarily chosen according to the size of their business, with a focus on SMEs of between 10 -250 employees[19], and attitude towards innovation. To sample for attitude to innovation, participants were asked to answer a range of questions about their level of comfort and general attitude towards technology and innovation. See the interview screener in the Annex for a full breakdown of attitudinal statements used during recruitment. From this, participants were coded as either early adopters, early mainstream adopters, late mainstream adopters or 'long tail' firms. See Table 1 for details of the achieved sample[20].

Table 1: Details of the target and achieved sample.

Sample variable (primary or secondary)	Sample sub-variable	Target of SMEs to recruit	Number of SMEs recruited
Number of employees (primary)	10-20 employees	15	14
	20-50 employees	15	12
	50-250 employees	10	14
Attitudes towards technology and management practice (primary)	Early adopters	5	9
	Early mainstream adopters	9	9
	Late mainstream adopters	16	9
	Long tail firms	10	9
	SMEs that fell in-between attitudes	No quota	4

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[19] It was decided in conjunction with BEIS that sole traders and micro businesses were outside of the scope of this study. Given the relatively small sample size, it was felt that we could not sample appropriately to account for the diversity of businesses within this group. Furthermore, the gains in productivity relative to the cost of uptake of new management practices or technology was seen to be negligible for smaller businesses, pushing them out of the scope of the study.
[20] Note that the sample was overrecruited originally to 43, meaning the sum of achieved target may exceed the original sample of 40.

Growth mindset of the business (secondary)	Growth mindset business	15	27
	Not a growth mindset business	15	13
Age of business (secondary)	Less than 2 years	5	0
	More than 2 years	35	40
Sector (secondary)	Automotive	No quota	2
	Construction	No quota	3
	Legal, financial and insurance	No quota	2
	Food	No quota	1
	Hospitality	No quota	2
	IT and telecoms	No quota	0
	Media	No quota	3
	Oil and gas	No quota	0
	Other[21]	No quota	27
Region	North East, North West	No quota	10
	East, Wales, Midlands	No quota	25
	London, South	No quota	8

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[21] Other includes health, childcare, cleaning, community organisation, design, printing, education, engineering, retail, farming, quarry/stone merchants.

Fieldwork

A team of experienced qualitative researchers carried out the face-to-face and telephone interviews across May-June 2018. They explored the following areas (see the detailed discussion guide Appendix 2 for further details):

- Attitudes towards business strategy and how this is implemented within the business

- Attitudes towards innovation, adoption of new technologies, management practices, digital capabilities

- Sources of information and the role of trusted advisors

- Drivers and barriers to the adoption of new technology or management practices

- Resonance of messages about productivity of UK businesses

- Reactions to potential ideas for interventions to facilitate uptake of best practice technologies and management practices

Analysis

Directly after each interview, all researchers completed short pro forma notes to assist with top level analysis. Once all fieldwork was completed, the project team held an analysis session with the full team of researchers to discuss findings and start to build key themes. During this session, different forms of influence were identified, and a process of mapping behaviours and attitudes assisted to underpin a schematic of SME typologies was conducted. A "journey mapping" exercise was also conducted to understand typical journey to adoption (or failure to do so) of best practice technologies or management practices for SME typologies, synthesising understanding of their most recent experiences. An analytical framework was then developed to distil the data, using excel pro-forma templates, which was influenced by key sections in the discussion guide (see Appendix 2).

To ensure the unconscious influences on participants' motivations and decisions were correctly identified and understood, and to guard against post rationalisation which would conceal the true nature of these influences, the Kantar Public behavioural model was used to frame the interviews and as a framework for subsequent analysis (see the appendices for further details).

Limitations of qualitative research

A sample of 40 SMEs across England were recruited for this research, with sample quotas used to gain a broad range of SME types. The insights from this research will provide a broad range of views from different types of SMEs, but findings cannot be considered as representative of the wider population of SMEs. See the appendices for further information regarding the limitations of qualitative research and researcher methods of dealing with these limitations.

Factors of influence in the adoption of new technology and management practices

There are many different types of SMEs – varying in size, scale of operations and sector. Their level of knowledge around innovative practices, ability and willingness to innovate presents a challenge for those providing interventions. This section explores some of the key factors distinguishing SMEs from each other and affecting attitudes towards the adoptions of new technologies or management practices.

Factors identified

Every business feels it is 'unique'

Despite sharing characteristics with other SMEs, participants frequently asserted the uniqueness of their business model and structure. Innovation was therefore seen to be highly specific to their business needs, influencing their attitudes to what technology they felt they needed and whether management practices were indeed appropriate.

The innovation mindset is cultural

A firm's propensity to innovate is shaped by, and dependent upon a range of underlying factors which provide either an openness, or aversion to, innovation. Whilst there were few discernible sector-specific attitudes to innovation, sector norms do in some way play a role in shaping the drive towards progression and improvement. This cultural attitude is influenced by the attitudes of the key decision makers within the business, and how externally focussed they are (e.g. awareness of the broader market, competitors), which can influence their internal focus regarding innovation.

Attitude towards innovation is closely linked to understanding

The degree to which an SME was innovation-focussed played a significant role in their fluency and understanding of the terminology around innovation. SMEs that valued efficiency, innovation and productivity tend to have a clearer understanding of terminology around innovation, and specifically around technologies and management practices. They were constantly looking for new ways of doing things, rather than maintaining the status quo. In contrast, some SMEs interviewed felt that their driving purpose was to maintain the status quo. This attitude reduces the priority afforded to innovation and efficiency, and therefore lead to lower levels of understanding about what innovation entails, and higher levels of defiance about the efficacy of current practices.

Exploring key factors

When understanding an SMEs likelihood of adopting new technology or management practices, various dimensions of influence emerge. These can either drive or impede a business in the adoption new technology or management practices and are a combination of structural and attitudinal influencers.

Figure 2: Factors of influence
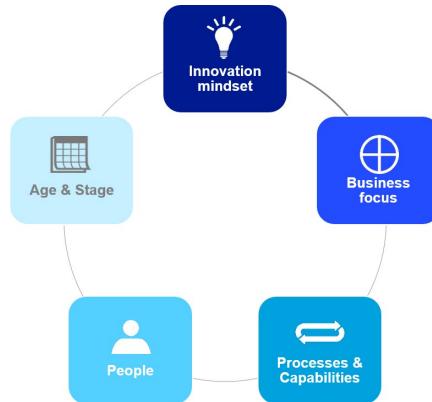
Figure 3: Innovation mindset

Businesses that are more proactive tend to view problems in efficiency and productivity as a challenge that needs solving – or as an ever-evolving process of improvement and progression that will help them grow. Those who are more reactionary however, tend to display more fatalistic views about challenges they face, and hold negative views on what is possible for them to achieve. This influences the likelihood of a business being open to new technologies and practices that may improve the efficiency and day-to-day running of their business.

Figure 4: Age & stage

The 'stage' a company is at, therefore, plays a significant role in their openness to new ways of working. Businesses tend to go through cycles of growth and consolidation as they expand and develop. Many of the SMEs reported specific moments in the lifecycle of their company where they had either been more open to new systems or ways of operating, than at other times, due to the fact that they may have had to innovate to

survive or felt they had enough money in order to innovate. Younger firms tended to go through these cycles at a much quicker rate than more firmly established businesses.

Figure 5: Business focus

Businesses that operated within highly competitive markets were much more likely to innovate in order to ensure that they turn a healthy profit. For "people-oriented" SMEs, (such as in education or care sectors) profit is not their primary focus, and therefore the concept of innovation tends to be focussed on how to improve their service offer for their end user and "staying afloat with the funding they have". For profit-focussed businesses, innovating their 'products/services' meant that their own internal processes also needed to facilitate this. Those working in competitive industries tended to be tied into industry networks to a greater degree, and therefore displayed greater awareness of industry best practice in terms of software/managerial processes and the confidence to action them.

Figure 6: People

Length of time key decision makers had held decision-making responsibility was more likely to impact on openness towards innovation than age of business. This is linked to the decision-maker's ability to view processes in a more objective, detached manner and whether bringing the experience of previous roles had allowed the implantation of new ways of thinking and doing things. In analysis, SMEs that were family owned and run tended to be more restrictive in terms of their likelihood to innovate, especially when coupled with an older business where the key decisionmakers had been in place for a long time. Participants discussed mobility of staff as having a positive impact on innovation - as when they are supported and developed, they tend to be more motivated and engaged to improve the business.

Figure 7: Processes and capabilities

	Formal management processes and procedures	⟷	Informal management processes and procedures
Processes & Capabilities	Existing tech / management capabilities within business	⟷	Lack of tech / management capabilities within business

Existing technological capabilities, and the extent to which managerial processes are formalised within a business shape the potential to incorporate new systems or procedures. This is because decision makers have already proved the value in having formalised processes or software for themselves, increasing acceptability of adopting new approaches. SMEs who may be more "risk averse" were tied to existing ways of doing things (e.g. without much use of technology or specific management practices) and fearful of what change may imply – more often a loss of revenue or a change to the culture of the organisation.

SME Typologies

Through the analysis process, five distinct typologies emerged, each having specific characteristics (see Figure 8). While the research demonstrated that there are a variety of factors of influence at play when shaping a businesses' propensity to take up new technological or management practices, two key variables emerged that served to pull apart the typologies: **innovation mind set** and **tenure of key decision maker in role**.

Figure 8: Five business typologies identified
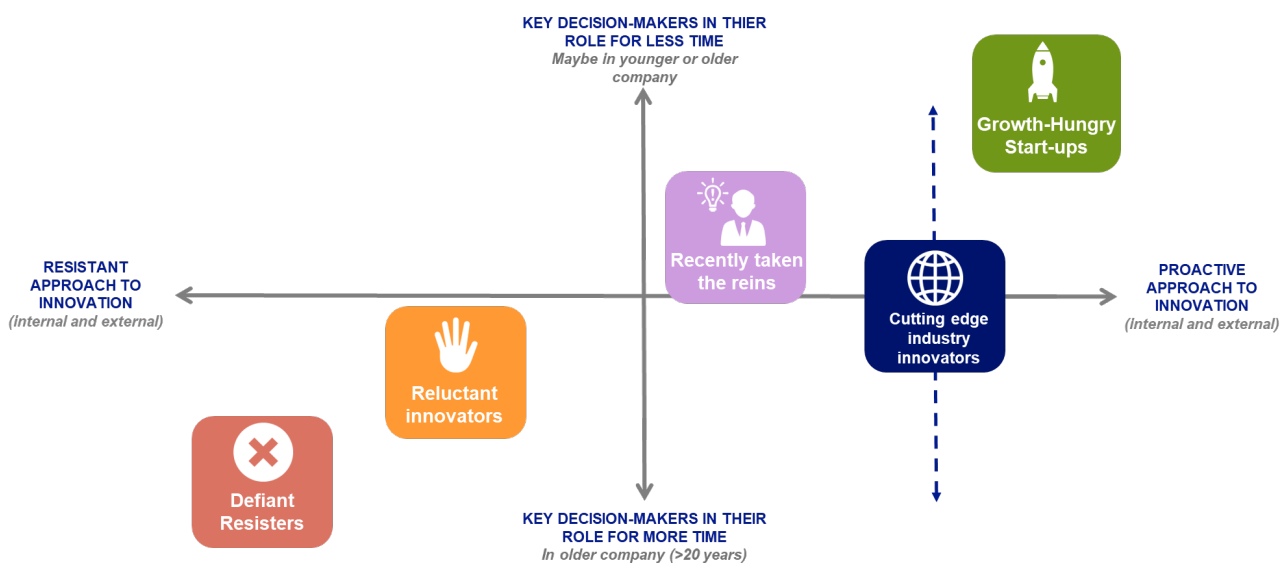
- **Defiant Resisters**: Are culturally resistant to notions of 'innovation' as they feel they are not relevant to them and could potentially threaten their tried and tested methods of working. Even when they are compelled to change practices, they do so begrudgingly. Ten participants were coded as Defiant Resisters in the sample.

- **Reluctant Innovators**: Take comfort in following tried and tested processes. Industry-wide changes or triggers (such as failing business) may cause them to reconsider their approach, but this doesn't come naturally to them – however they can see the benefit once implemented. Nine participants were coded as Reluctant Innovators in the sample.

- **Recently Taken the Reins**: Although bought in to the need to be proactive to compete in the market, this group takes a more cautionary approach to adopting new processes. They want to see that benefits outweigh the risk of innovation by researching and listening to advice from trusted sources. They tend to be aware of sector-standards and the need to adapt to these. Five participants coded as Recently Taken the Reins in the sample.

- **Cutting Edge industry Innovators and Growth-Hungry Start-Ups**: View running a business as a constant process of change, risk, growth, consolidation and progression. Their businesses are wired to take calculated risks and see the value in innovation - which puts them ahead of the curve in their business, and ensures it

is running to maximum efficiency in all areas. Age of business and sector focus tend to pull these typologies apart. Seven participants coded as Cutting Edge Industry Innovators, and five as Growth-Hungry Start-Ups in the sample.

Typology characteristics

The below descriptions describe the structural, attitudinal and personal characteristics of each typology. See Appendix 3 for more detailed case studies for each typology.

Defiant Resisters

This group tended to come from more traditional manufacturing or niche artisanal businesses, who saw less relevance in technology to improve their businesses. This group felt more strongly that 'tried and tested methods' were preferable to taking risks. More focussed on the day-to-day running of the business, they perceived a sense of "loss" if time were to be spent looking at new ways of working.

- Established business e.g. 15+ years old

- Likely to be focussed on a particular "trade" e.g. manufacturing, using machinery to create industrial/building supplies or more artisanal

- Can be family run, e.g. Managing Director, or still very hands-on

- Tend to be "small", less than 50 employees

- Key decision-makers tend to be older e.g. 40+ and in their job/company since their youth

- In a stable, niche market, largely unaffected by competitive headwinds

- Lack formal strategy, the informal aim is on maintaining product quality service to clients, turning a profit and pay staff on time

- Informal management structure

- Low staff mobility, pride themselves on longevity and staff "happy to be in their jobs"

- Staff-training is sporadic and trade-specific

- Basic adoption of technology e.g. accountancy software

- Little connection to trusted advisors beyond a small group of personal ties.

"Success is about survival and continuing to look after the staff that look after the business"

"We don't play at being a big business, we are small, family-owned place, we pride ourselves on keeping it that way"

"Innovation means new machinery I suppose, our people don't need to innovate!"

"Performance reviews? No, we wouldn't want our staff under pressure"

"We have titles but, are left to our own devices, we don't need to be told how to do our job"

Reluctant Innovators

This group tended to be from small-scale specialist services. Due to their small scale, those in this group reported only adopting new procedures or technologies when they felt it was fully necessary. However, they were much more willing than Defiant Resisters to accept their limitations and turn to their immediate social and professional realm when they had a problem.

"Success is managing to make a profit, plain and simple"

- Mix of established and newer businesses

- Sector stretch across specialist services (e.g. automotive), retail (e.g. florist), catering, hospitality

- Tend to be very small e.g. <15 employees

- "Mum & Dad" businesses, grown organically

- Likely to have been with the business for many years

- In a more volatile, competitive market which requires them to be mindful of competition and adapt the business to remain relevant. May not be profit-making

"Productivity - very difficult in a florist shop, when your product is dying as soon as it arrives, but it is vital"

"When you're this size of business, anything that adds to cost is problematical…The struggle is trying to keep our costs as low as possible against the pressure that's increasing"

- Tend to have more informal business plan with loose objectives vs. those typologies further up the innovation spectrum, but more fully formed than Defiant Resisters

- As so small, management is seen as personal and done on a "day-to-day" basis

- Low staff mobility, due to smaller nature of business, staff have defined roles, can be some staff churn

- Staff-training is on the job, manual and business-specific

- Adoption of technology is sector specific (e.g. point-of-sale technology for catering) but also make use generic software (e.g. accountancy software)

- May have some links to industry, but mostly relies on information and support from close personal networks

Recently Taken the Reins

A new lead decision-maker presents a fresh drive to improve processes and efficiency, keen to make a mark on the business and translate knowledge and skills from their previous role (which was either internal or external to the company) into the new one. This naturally leads to innovation as old and new processes blend together.

- Established businesses e.g. >20+ years old and typically older

- Established sectors e.g. professional services, engineering

- Tend to be medium-sized, typically a "larger" medium size e.g. 100+ employees

- Running of business devolved from owners, typically a team of partners

- Key decision-makers are long term employees but taken over day-to day running at some point in career

- In a stable, yet competitive market, with a focus on retaining clients by providing a quality service/product

- Formal strategy in place e.g. 5/10-year plan, devised by senior management and disseminated to teams

- Formal management procedures with performance reviews and HR feedback mechanisms

- Staff mobility supported by training programmes

- Tech adoption considered to be important - sector specific but with clear focus on improving efficiency

- Will seek to make a mark on the company, therefore keyed into topics, software, industry events of relevance.

Cutting Edge Industry Innovators

This group were defined by working in industries that demand innovation. They had proactive leaders, constantly seeking new technology or processes to minimise cost, maximise efficiency, and stay relevant in a constantly changing marketplace. They were less affected by the tenure of the key decision-maker – as this person had no choice but to keep up and continue to strive. Because much of the innovation in this group is sector-led, businesses in this group tend to regard advice from industry-outsiders as lacking relevance. However, industry networks are the key for this group to stay on top of and ahead of the curve, and a lot of effort is put into staying abreast of developments.

- Mix of newer and established businesses but focus on innovation due to structural mindset

- Sector stretch e.g. Architects/Designers, Hairdressers, digital services

- Size of business irrelevant, driven instead by need to innovate

- Key decision-makers are both short and long-term employees

- In unstable and highly competitive market – driven to stay ahead of the game to retain clients through innovation and quality

- Formal strategy in place e.g. yearly strategy events, with long term goals devised by senior management and disseminated to teams

- Range of informal and formal management procedures dependent on size and age of the business

- Staff mobility supported by training programmes

- Tech adoption considered to be vital to remaining competitive - typically sector specific, plus web-based

- Wide-ranging network of industry-insiders and trusted advisors – from industry magazines, events, social groups, email subscriptions etc.

"We've invested heavily in VR because we saw a real opportunity to be ahead of the game, and felt well positioned to do it well. Luckily there are government subsidies for this, as it's not turning a profit yet"

"We don't have formal management procedures because we're so small, but we have monthly objective meetings to ensure staff feel that they're progressing and have clear targets"

"I recognised that my skillset only goes so far, so we've brought in an external consultant to ensure that we're running as efficiently as possible. She has helped us restructure our practices"

Growth-Hungry Start-Ups

Much like the 'Recently Taken the Reins' group, this type were not necessarily affiliated by sector. Instead, it is their relative newness to the market that sets the group apart, as they continually grow, innovate and expand. As businesses, they go through short periods of growth and consolidation, and are generally keyed into a network of formal and informal trusted advisors as they seek to expand and grow. The growth-oriented nature means that change is a constant through the first 10 years of the business and plays a role in their openness to new ways of working. This group are particularly open to advice from businesses and industry-insiders they 'trust' or respect.

- New businesses e.g. <10 years old

- Tend to be in services sector e.g. digital, marketing

- Tend to be smaller sized businesses e.g. < 30 staff

- Running of business tied owners/founders wishes

- Key decision-makers tend to have been in role short-medium term, with experience outside of current role

"We are only as good as our staff. It's absolutely vital: the efficiency of the team is the entire profitability of the company. And how they work comes down to whether they are healthy and happy and feel that they can progress"

- Insecure market position – concurrent processes of consolidation of process and continual growth/change as they develop market offer

- Some short term and medium-term strategy in place e.g. have immediate goals but tend to have less sight of long-term strategy, particularly in initial stages

- Tendency to have informal management procedures based on management research by founding partners

- Staff mobility supported by being thrown into new and challenging circumstances and bought in to company culture

- Technology adoption seen as important, when viable

- Will have some established trusted industry insiders but tend to be a bit detached from them as have yet to become well known in industry. Tend to take a more eclectic approach to advice, listening to podcasts, reading books about management theory, and getting advice from friends.

"At the moment, we feel like we've kind of bumbled along with common sense, good attitude and hard work.. But with changes to the industry we want to focus on innovating and exciting our clients – not just being a do-er"

'It's changed immensely in a very short space of time, both technologically and creatively'

People, Not Profit

In contrast to these groups, there were some SMEs that did not fit into the typology of a 'typical' business. The attitudes towards the take up of new technology and management practices of these third sector, care-focussed or academic institutions. Four businesses were coded as "People, Not Profit" in the sample.

When "People, Not Profit" is the key focus of the business, innovation seems to be less of a priority when compared to managing the day to day needs of their end users, and 'having enough to continue to deliver the best service we can to people'.

Many have established and tightly controlled management structures, that may be to some extent directed by an outside authority e.g. Local Authority, Board of Trustees. There is also a rigorous focus on 'value for money' and creating efficiencies. Their alternative funding structures and focus on outcomes for the people they serve means that they do not talk about productivity, innovation and strategy in the same way as traditional businesses. In fact, these phrases can feel a little "cold", "impersonal" and "alien".

Typology implications

Amongst those SMEs interviewed, interventions aimed at driving innovation were more likely to appeal to Defiant Resister and Reluctant Innovator segments, than with the Cutting Edge Industry Innovators or the Growth-Hungry Start-Ups. This was because more resistant or long tail businesses tended to be more open to clear, simple sign-posting to support from third-party sources. Whereas those in more innovative segments could have

doubts about the credibility of organisations, other than similar businesses, to understand their needs or deliver credible advice.

Drivers and barriers to adoption

The feedback from research participants confirms the barriers to adoption of new technology and management practices identified in the wider evidence base (e.g. Business Productivity Review Call for Evidence[22], IoD[23] and Made Smarter Review[24]). SMEs tended to find it easier to engage with new technology than management practices, because the potential impact on their business was more tangibly understood.

To gauge responses to technology and management practices, research participants were presented with "adoption buckets" (see Appendix 2 for full details), which took the form of a document that outlined the following:

- The five different types of technology identified by the CBI to have a positive effect on business productivity, including: accountancy software, digital capabilities, payment technologies, Customer Relationship Management (CRM) and Human Resources (HR) software

- Examples of management practices (such as targeting setting, performance reviews, line management).

Technology

SME understanding of "new technology"

When asked spontaneously, SME perception of new technology was either serving the functional or the customer-facing element of their business. For example, new machinery, equipment or their digital capabilities e.g. website, digital marketing, or social media presence. Businesses felt they had 'specific' needs when adopting technology – due to their perception of being unique – often researching a range of software recommended primarily by trusted advisors or contacts within their sector, before settling on one which best suited their needs.

When shown examples of new technologies, they were generally much more inclined to view **accountancy software** and **digital capabilities** as more applicable to them, compared to HR or CRM Software, which was seen as being 'too big' for the size of their business.

The following section outlines the participants responses to **each technology area**, descending from the ones SMEs found most to least relevant.

Accountancy software

Perceived **by all typologies to be the most 'useful' of all technologies**, as it was felt to demonstrate a clear benefit on the time spent generating information for tax and

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[22] https://www.gov.uk/government/consultations/business-productivity-review-call-for-evidence
[23] Institute of Directors (IoD) Report (2018) - Lifting the Long Tail: The Productivity Challenge Through the Eyes of Small Business Leaders
[24] Made Smarter Review (2017), https://www.gov.uk/government/publications/made-smarter-review

accounting needs. However, many businesses still felt hesitant about buying software without being able to 'try' it out and check it works for the business. One business had, for example, bought one type of accountancy software, and found that the package made their accounting much more complex, so switched to an alternative which was much easier to use. Most of the SMEs would take advice from their accountants on which product to purchase.

Digital capabilities

The majority of businesses had some degree of presence on the internet – predominantly for marketing purposes, but also cloud storage for some. Using the internet was perceived to offer clear, tangible and immediate benefits to their company – even for those who were more avoidant of technology. However, there was a stark difference in fluency around what 'digital capabilities' meant across the groups.

- **Defiant Resisters/Reluctant Innovators:** Limited to a social media account, business listings, or a simple website. Often would get "someone they know" to help out with creating it.

- **Recently Taken the Reins:** As they tended to be more established, larger firms, where there might be an IT employee, this was delegated to those with the requisite skills.

- **Cutting Edge Industry Innovators and Growth-Hungry Start-Ups:** Had more sophisticated knowledge of digital capabilities and were able (generally) to speak fluently about cloud storage, internet presence and marketing tools.

Payment technologies

Automatic payments were seen to aid cash flow efficiency for those businesses taking a large volume of payments, which was not relevant to all SMEs interviewed. Many felt that adapting to changing payments procedures had made their lives considerably easier.

- **Defiant Resisters:** Unlikely to view payment technologies as necessary for their business, due to having a smaller client base. However, a clear lack of knowledge existed as to what benefits payment technologies could offer.

- **Reluctant Innovators:** Tended to work in client-facing businesses and were open to ways of making payments easier, particularly if this helped solve cash flow issues. However, often needed support or advice on what would be best suited to their needs.

- **Recently Taken the Reins:** This was perceived as a "cost of entry" technology, and necessary, in order to take payments from their larger customer base of clients.

- **Cutting Edge Industry Innovators and Growth-Hungry Start-Ups:** Both groups felt payment technologies were a 'game changer' and had made their lives considerably easier when dealing with clients. One Cutting Edge Industry Innovator had recently begun using a payment technology which allowed them to change the way they billed regular clients. Clients were able to pay for projects in monthly instalments rather than at set invoicing periods, which aided greatly with the cash flow of the company.

Customer Relationship Management (CRM) software

For many businesses, CRM was not felt to be appropriate even where they were a client services provider, with many across all groups reporting the belief that this type of technology was for 'bigger businesses'. They felt that the size of their organisation did not warrant the cost of such software. Either having a small handful of clients or using software like Windows Excel or older databases were felt to be 'good enough' to manage client interaction.

> *"Why would I get CRM, when I have to pay for it, and at the moment an excel spreadsheet is totally fine? It doesn't make sense to make the investment now…. But if we got bigger, sure… why not?" (Growth-Hungry Start-up)*

Human Resource (HR) software

The majority of businesses – regardless of typology – felt that HR software was inappropriate for the size of their business. Many SMEs stated that it was a "cold" and "detached" way of managing staff, which went against the ethos of their small and medium sized businesses.

Barriers to adoption of new technology

Our research findings mirror the barriers reported in the Business Productivity Review Call for Evidence and wider literature on technology adoption[25]. Namely, many **SMEs who were lower down the innovation spectrum**:

- displayed limited understanding of technologies that are aimed to improve productivity, and demonstrated lack of awareness about which technological solutions may benefit their specific circumstances

- perceived the relative cost of adopting technology (money/time) to be prohibitive, particularly where benefits of adoption were not clearly understood

- generally, lack confidence and capability to use new systems, or even how to choose appropriate systems for their business

- would need to undergo a cultural or attitudinal change to successfully adopt technology

Beyond these, there were a number of other **structural barriers** that were frequently cited during the course of the research:

- many of the SMEs felt either enabled or inhibited from innovating and improving processes based on material challenges, like access to funding

- for the majority of businesses, the need to turn a profit before implementing new changes acted as a significant barrier to adoption meaning that decisions regarding long-term investments are deferred to a later date

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[25] https://www.gov.uk/government/consultations/business-productivity-review-call-for-evidence

Barriers were also related to **business typology**, with those at the lower end of the innovation spectrum seeing barriers as immovable, rather than a practical challenge to be tackled.

- **Defiant Resisters and Reluctant Innovators:** were most likely to report multiple barriers, ranging from technical capacity, lack of understanding and awareness of how to choose the right package for them, or the benefit that specific software might have for their company.

- **Recently Taken the Reins:** were not necessarily the most cutting edge when it came to the uptake of new technology. They might rely on experts from within the business or advice from trusted external advisors to suggest new technologies or software rather than drive this forward themselves, which meant decision-making was slow and highly considered.

- **Cutting Edge Industry Innovators:** This group saw the fewest barriers to adoption of new technology because they work in industries where keeping abreast of new innovations in their sector is a "cost of entry". The main barrier that was mentioned was the cost of new software - they needed to know that the technology was worth the investment.

- **Growth-Hungry Start-Ups:** Had a similar lack of barriers to the Cutting Edge Industry Innovators. The degree to which the decision-maker engaged with technological innovations was largely based on personality, and so some owners were likely to have gaps in their knowledge, which they might fill by speaking to consultants or trusted advisors.

Facilitators to the uptake of new technology

In order to facilitate the uptake of new technology, SMEs talk about receiving advice, recommendations or even just information about what is out there from trusted sources. For many of the more innovative SMEs, advice from government about technology was not perceived to be credible, as this was not the traditional route they had received information on new technology. For those lower down the innovation spectrum, there is a space for government to provide simple advice.

Facilitators of adoption for technology varied across different business groups:

- **Defiant Resisters and Reluctant Innovators:** a trusted advisor for this group, tended to be in their personal or professional network, but could also come from signposting through government websites. SMEs needed clear guidance on what technology might be suitable for them, signposting to different 'lower cost' or user-friendly options, and clear articulation of the benefits that it would have to their business in terms of time/financial cost.

- **Recently Taken the Reins, Cutting Edge Industry Innovators, and Growth-Hungry Start-Ups:** were most likely to adopt new technology through a combination of advice from trusted networks, and due to their attitudinal desire to innovate and increase productivity. For these groups, trusted advisors came from a range sources, but were most closely tied to industry or sector-specific networks.

Management practices

SME understanding of management practices

Most businesses felt that they had 'management practices' in place, even if these were not formalised. For some businesses, these were linked to specific internal processes for target setting and formal review. But for many, building on specific processes and practices was felt to be teaching their staff to 'suck eggs', or even potentially detrimental to their established ways of doing things.

- **Management practices were largely dictated by sector norms**. For many of the newer companies, there was a desire to retain the 'friendly' atmosphere of when they first started and a concern about becoming a 'cold, corporate environment'. For those in more traditional sectors, management practice was seen as an informal practice of ensuring staff were "ok", rather than following a specific set of actions.

- **Very few businesses had a fluent language for management practices**, demonstrating the 'intangibility' of management to many SMEs. For many, there was also a blurred line between informal and formal processes. For example, one Growth-Hungry Start-Up held monthly 'catch-up' meetings with his team members to talk about their personal objectives and development, but he did not classify this as formal.

- **Some demonstrated a lack of awareness – and indeed suspicion – around a formal definition of 'management practices'** and were unable to see how they could benefit their business, expressing that,

  "There are too many managers who just know how to manage, rather than knowing the job". (Defiant Resister)

  "Management can be detrimental; people don't really want to be managed they want to get on with it" (Defiant Resister)

- **Size of the company was related to the likelihood of SMEs adopting formalised management practices**. The formalisation of management practices was seen as a way of consolidating practice and ensuring efficiency and productivity internally as a firm grew to a larger size.

- **Growth-Hungry Start-Ups and Cutting Edge industry Innovators were likely to have adopted 'management' fundamentals around target setting and personal development** – even if these were not necessarily formalised.

Barriers to the adoption of management practices

The businesses interviewed for this research displayed a number of barriers to the uptake of formalised management practices:

- The majority of businesses had a hard time defining what management practices were. The costs and benefits of adopting new management practices were felt to be 'intangible'

- Many businesses displayed an optimistic view of how they manage their businesses, believing an ad hoc approach to be as beneficial as a formalised process

- Some outright dismissed management practices as 'jargon' (mainly by those lower down the innovation spectrum)

- General view of formalisation of management practices as a 'cold' and 'corporate' approach to the management of staff and perceived this as the antithesis of their own values

- Businesses struggled to appraise the efficacy of their own procedures and processes. This lack of appraisal meant that they were also unable to see the potential benefits of a more formalised approach.

- Concern that staff would resent or react negatively to greater top-down control.

- Newer businesses felt that they did not have the cognitive capacity to review management practices due to other, more pressing, priorities. Although they did not reject them, it was felt they could be prioritised for a later stage of the business growth

- Those businesses that had been operating for a number of years stated the 'if it ain't broke, don't fix it' adage as a reason for maintaining the status quo.

Unlike adoption of new technology, the barriers to uptake of management practices were found across all groups.

Facilitators to the adoption of management practices

Given the general lack of understanding around management practices and a palpable disdain or suspicion towards 'management jargon' amongst many SMEs in the Defiant Resistor and Reluctant Innovator typologies, no genuine facilitators emerged for these groups. However, there was some acceptance that if the benefits were communicated in a clear and 'human' way, this could aid recognition and uptake.

For the remaining segments, it appears that the key driver for uptake is being apprised with information from trusted sources at a time when they feel they have bandwidth within the business to focus on them.

The journey to adoption

All businesses were able to discuss moments they had considered adopting new technology (less so management practices). However, businesses may fail to adopt new procedures for a variety of reasons. Key stages exist where a business may succeed or fail to adopt new practices. The three main stages identified during the course of this research were 'awareness', 'contemplation' and 'adoption'.

Awareness

During this phase, a situation or need may arise which encourages the SME to consider alternatives to the current running of their business. For most, this was tied to growth, timely advice from a trusted advisor, or in reaction to a negative pressure or event that required action. At this stage, the business is beginning to articulate the nature of the problem that needs solving.

Contemplation

During the contemplation stage, a business will begin to look for different options that might suit their needs and consider the cost/ benefit and practicalities of adopting new systems or processes.

Adoption

This is the stage at which the business makes the decision to take-up new processes and attempts to integrate a new technology or practice into the everyday running of the business. This might include training staff on new processes or software or communicating changes in practice to staff.

Example journeys to adoption

The following section highlights some case study **examples of the journey to adoption,** to demonstrate the different drivers and barriers facing uptake across the identified SME typologies[26].

Defiant Resisters

Defiant Resisters have to be pushed to consider adopting new practices or procedures, and even then, they may fail to properly integrate new software due to knowledge or capability gaps.

Bespoke Manufacturers:

Since the 1960's, this business was run by the founder and his son. Although the son professed a desire to make the company run more efficiently, he felt that it was important to retain the 'family-run' ethos of the company and adhere to his father's wishes. This

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[26] Please note that these cases do not represent actual companies but composite examples of businesses contacted as part of this research

impacted on the adoption of new technologies and management practices, and meant they were slow to adapt to market changes. Despite having over 30 employees, they had no formal management systems, and had only adopted ISO certifications due to a fear of being non-compliant with industry regulations. On their journey to adoption they reached the awareness stage but did not see through the "contemplation stage".

Awareness:

Had been using a predominantly paper-based invoicing system, with only a small element completed online. The software that they had been using was no longer supported, as the software company had stopped trading. They felt compelled by client requests to seek an alternative invoicing system and began to look for new options.

Consideration:

Used internet to search for companies that provide bespoke solutions suitable for their business and struggled to understand which software packages would work for them.

Adoption:

Failed to adopt a new software package as they felt that the cost was prohibitive, and the packages were not 'suitable' for their needs.

> *"There is a lack of support and software tailored in the UK for manufacturing companies. And the software support that tends to be available doesn't give us the type of traceability we need for the markets we serve"*

Reluctant Innovators

Reluctant Innovators can be compelled by a need to look for solutions in response to problems that arise – such as declining sales. They need extensive support and encouragement through the contemplation phase, to reassure them a solution is right for them. They may fail to get into the adoption phase, as a capability and knowledge gap might mean that they are unable to properly implement the new practice or procedure. In this example, the journey to adoption was a success.

Florist:

In operation for 20 years, this business was struggling financially with declining sales as footfall coming into the shop had reduced significantly. As a traditional, specialist and mature family-owned business, the owners lacked the knowledge of how to stay up to date with innovation.

Awareness:

They have been using an online portal for a number of years which didn't appropriately market their services. The user-interface was poor, and they believed this was damaging sales.

Employed the daughter of an acquaintance to help design a new website for them. While this worked 'to some degree', it lacked the sophistication of their competition. In terms of

payment solutions, they had one online payment system for online orders, which they thought was putting customers off purchasing online.

In the context of declining revenue, they wanted to create a better presence on the web.

Contemplation:

Talked to a person dealing with their original online platform, who said their current website wasn't "strong enough", and suggested it would cost about £2.5K to improve the user interface. They then talked to a trusted industry colleague who recommended using a website provider specifically designed for their industry.

They decided to go with this website provider, because his source intimated that they were 'very honest'. This personal recommendation gave them the confidence they needed in order to invest.

Adoption:

Adopting the website provider's technology gave the business the opportunity to showcase their bouquets, by showing images online. It also offered the business owners advice on how to boost their web presence on google. They believe that adoption has increased sales by 20% since last year.

> "You hear how more and more of retail business is going on the web. Therefore people, younger people particularly, are more used to buying things on the web than my age group."

Recently Taken the Reins

Recently Taken the Reins were likely to need little support during the awareness phase of adoption – as they are already in the process of critically appraising company processes and practices. However, during the contemplation phase, they may experience some obstacles in trying to engage staff members in the benefits of new tech or management practices. They may also have to win overboard members to their new vision, before being able to implement their strategy and invest in innovations. Therefore, this group want proven methods. Though likely to get through to adoption phase, they may still face obstacles to successful integration.

Engineering group:

This business had been in operation for 30 years, but the managing director had been in his role for 2 years, since the company was bought out by another firm in 2016. The company employed 75 full-time staff, and 25 agency staff, and this was one of the larger businesses spoken to as part of the research. After experiencing declining sales, the managing director had focussed on improving internal efficiencies since taking over. He had invested heavily in new ways of working and rolled out a software programme that had proven to be beneficial. He had also just taken the decision to contract an external digital marketing agency to boost market presence and the digital face of the business. For the first time in years the company was making a profit.

Awareness:

Being new to the business, the managing director focussed on improving efficiency across the business. With high overheads, the company needed to drastically cut costs on processes and systems. Bringing with him experience from different firms, and some academic experience of learning about management practices, he exhibited a strong desire to make a 'stamp' on the business and sought to radically improve team structures.

Contemplation:

When trying to communicate the upcoming changes to management practice, the managing director experienced significant 'push-back' from the existing management team – particularly as a significant number of staff were made redundant in order to reduce costs. Adopting a participatory approach, he attempted to include the team in the process of shaping what new procedures would look like, drawing on their past experiences (both negative and positive) to create a theory of management that was felt to be relevant to them.

Adoption:

The business adopted an 'empowerment' approach to management, where mid-level managers were encouraged to take on more responsibility and given direct authority to make decisions.

Engagement ensured that all staff were on-board with decisions which facilitated positive change – both in terms of staff morale and overall productivity.

> *'The management team has never been stronger. Not much has changed other than that I've given them the power to make decisions…We have less people and are doing more work than before. We are so much more efficient now.'*

Cutting Edge Industry Innovators

Cutting Edge Industry Innovators tended to have new technologies and practices in their sights, driven by the need to stay competitive in their market. Willing to take calculated risks in order to achieve their strategy, this group tended to stride through the awareness and contemplation phase and were willing to try things out – with a view to accepting failure and not being undermined by it regarding future decisions.

Digital Marketing Agency

This business had been operating for 10 years and had recently undergone a radical structural shift. The founder felt that after years of him pushing the business forward, they were now at an appropriate moment to 'take stock' of processes and ensure maximum efficiency as they continued to grow. The company was also in the process of expanding to the US in search of wider opportunities for growth. In order to make the changes required to shift into a more 'formalised' (rather than start-up) business structure, they hired in an external consultant to review their practices. This resulted in significant changes in management structure, and the introduction of a new payment system designed to improve cash-flow within the company and invest in R&D.

Awareness:

Run by the CEO and his business partner since its inception, the business had expanded to a point where management had become quite chaotic. Staff were reporting feelings of stress due to capacity issues, and the CEO took the decision to review internal processes to understand what was causing 'crunch points'. The CEO sourced advice from a friend who also runs his own company on how they improved their management systems, and they recommended a consultant.

Contemplation:

The company had begun to lose out on projects because they did not have the internal capacity to do the work in the timeframes the client needed. The CEO and business partner looked at the costs of a consultant and decided that this was a 'necessary spend' in order to maintain growth and stay competitive within the field.

Adoption:

The Consultant was embedded within the company for four months to appraise systems and work closely with staff to understand their challenges and needs. They suggested adopting a different approach to hiring, bringing in people with more seniority rather than hiring in graduates with less experience. They also suggested a restructure to the management board, taking the CEO out of the daily working of the business and devolving responsibility to heads of department to create a more streamlined 'top-down' management structure.

As a result, new management systems were set up, helping to formalise target and objective setting, review periods and HR software was implemented to record timesheets against each client project.

> *'In reality, we haven't been a start-up for about three years. And the person that needed to get out of the start-up mentality wasn't the agency, it was me. And the moment the penny dropped on that, all of a sudden, operation was so much slicker.'*

Growth-Hungry Start-Ups

Growth-Hungry Start-Ups exhibit a slightly ad-hoc approach during the awareness phase, where new ideas for how to change and develop arise naturally through the constant process of growth and progression. They are willing to try things out and creatively blend practices, meanly that they are often successful in the journey to adoption. Key barriers are around cost due to issues of scale and cashflow.

Animation company:

Set up by a group of friends 5 years ago, the business had grown exponentially in a short period of time. Seeking alternatives to their offering, they had begun the process of investing in Virtual Reality (VR) technology.

Awareness:

Found that their growth was stalling as their traditional clients sought to minimise spend on traditional techniques. Began the process of looking for new opportunities to stay ahead of the game and offer clients new products. Went to a technology conference in the USA where VR and AR (Augmented Reality) were heavily featured and began to think about the relevance of this for their work.

Contemplation:

After the conference, they held an internal meeting with all staff to discuss the opportunities for VR/AR in their field. Management team began to look for opportunities to invest in VR and found tax-relief associated with adopting new technologies which significantly reduced the financial risk for investment. The company invested in some rudimentary VR software and cameras to 'test-out' what was possible and went through a process of re-shaping and defining their client offer.

Adoption:

Sold an initial VR project to a boutique retailer, filming in their production unit and marketing the films produced at international industry events. The success of this project enabled them to buy more sophisticated VR equipment to use on future projects. However, due to outlay requirements, the company is yet to realise any financial benefit.

> *"It's impossible not to innovate…we couldn't operate otherwise. We've changed immensely in a very short space of time, both technologically and creatively"*

> *"Virtual reality and augmented reality have become interesting territory. We now get a lot of VR jobs, but they are actually the least profitable because it's still in the 'proof of concept' phase. So, we've yet to see it prove it's return on investment – but it's important to stay ahead of the curve. Particularly as a new company."*

Building effective business support interventions

Testing messaging around the benefits of adoption

A number of **statements** were presented to SMEs, in order to understand if language around the benefits of adoption was engaging and motivating. This would help inform the most effective language to use when communicating with business (e.g. as part of the Business Basics Programme). The interventions presented were not fully formed propositions, but rather headline ideas designed to gauge initial appeal[27].

Statements on the adoption of new technologies included:

- The CBI has identified five key technologies with wide applicability across businesses – including Customer Relations Management, HR and accountancy software, ISO certificates and payment technologies.

- They have estimated that getting firms to adopt these could add £100 billion to UK Gross Value Added.

- The positive impact of faster innovation and adoption of Industrial Digital Technologies could be as much as £455 billion for UK manufacturing over the next 10 years.

Statements on the adoption of management practices included:

- In addition to poor labour productivity, ineffective management could be costing UK businesses over £19 billion per year lost in working hours.

- The UK lags in adopting strong management practices, with UK managers less qualified and under-trained compared to international counterparts.

- Globally, firms that apply accepted management practices well perform significantly better in productivity, profitability, and growth vs. those that do not apply them.

- Management skills are more important than Research & Development, skills and IT in driving productivity.

- Improving management can be relatively cheap compared to reallocating resources to traditional factors of production (capital, labour, R&D, innovation).

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[27] These statements were generated from a variety of research reports taken from BEIS existing evidence base. E.g. CBI: From Ostrich to Magpie – Increasing Business Take-up of Proven Ideas and Technologies (2017). https://www.cbi.org.uk/articles/from-ostrich-to-magpie-increasing-business-take-up-of-proven-ideas-and-technologies/ ; Made Smarter Review 2017. https://www.gov.uk/government/publications/made-smarter-review ; Leadership & Management in the UK – The Key to Sustainable Growth. A report by the Department for Business, Innovation and Skills Leadership and Management Network Group. July 2012. URN12/923

- You could gain up to a day a week of time to spend on income-generating activities, if you adopted new management practices or technologies that boost productivity.

Overview of responses

Statements alluding to the broader economy and SMEs as a single homogenous group were perceived by SMEs as being:

- Too general. Businesses want to feel they are being spoken to (individually), not as a homogeneous group.

- Distancing, with the use of large statistics and figures, e.g. like a media story 'that you hear and instantly forget'. People can't conceive of the relevance to their individual context.

- Negative, focussing on the scale of the problem rather than on the benefits to business of adopting new technology.

- Potentially untrue, regarding the value of management practices that are new and unproven to them.

- However, words like "performance" and "efficiency" have some resonance as well as "growth" for most.

Response by typology:

Defiant Resisters were the least likely typology to see any relevance in language around productivity. They wanted to know 'how the government had worked this out' and displayed considerable resistance about the impact that proposed changes would have on their business.

> *"It sounds to me, a bit pie in the skyish"*

> *"It's all macro-economics and percentages, but what does this mean for me? How can adopting new technology add £100 billion to UK growth? We don't have the privilege of cash reserves to pay for this sort of thing. How much of that is going to cost small businesses?"*

> *"You talk like this and it's like the soul goes out of the conversation…it's too big"*

Reluctant Innovators broadly agreed with the productivity statements but felt that the language was off-putting – making them feel as though they were not doing enough. That said, many felt that changes that they had made internally by adopting accountancy software had had a positive impact on their ability to run their business more efficiently. There was a general consensus that the UK did have arcane practices within business.

> *"This just feels like gobbledygook to me. It makes me feel pressured"*

> *"I would say we have proven that accountancy software makes a big difference. And there is no question about that"*

> *"We must realise that our industries in the United Kingdom are archaic, and that the practices have never altered for years"*

Recently Taken the Reins found that language around productivity, efficiency, and innovation resonated. However, they still felt that it was not necessarily motivating enough to change practices. Instead, they wanted more 'real-world' and relatable examples.

> *"You need to see a real-world case, where is the impact and where is the revenue coming from? The statement is just too ambiguous, and it does not take on board the importance of 'people'."*

Cutting Edge Industry Innovators and Growth-Hungry Start-Ups had more negative views on the productivity statements. They felt that they were far too 'broad-brush' and lacked the detail to make them applicable to their business context. Statements were perceived to lack credibility:

> *"I think that's rubbish - how have they got to that figure?"*

> *"This is all very broad-brush and no detail. I can see that it might be relevant for some companies but not for us"*

> *"I mean, digital payments are pretty well known about now… but I struggle to understand how ISO certificates could actually add money to the UK market"*

> *"I don't need to gain a day a week – my time is managed incredibly efficiently as it is"*

Responses to proposed areas of intervention

In order to understand how SMEs might respond to types of interventions offered by the Business Basics Programme, or business support more generally, participants were presented with some descriptions of a range of tools and support that could be available to them. Participants were asked to provide feedback on their likelihood of using the proposed interventions and whether they felt that these would be beneficial to their business. Figure 9 below highlights the range of interventions tested with participants. The full text of each intervention idea that was tested can be found in Appendix 2 under "Interventions".

When presented with the range of interventions, participants spontaneously segmented the ideas into three broad categories: Technologies, networking and management practice information (including benchmarking tools).

Figure 9: Interventions presented to SMEs.

NEW TECHNOLOGY

A **diagnostic tool** that shows how certain technologies can improve business across both financial and non-financial measures

A **Tech Adoption Portal** on gov.uk which provides information on Intellectual Property, managing risk with data, and the expected cost of tech and tech solutions

A series of **Technology case studies** describing how best practice technology has been adopted across different regions, industries and business sizes and proven to improve productivity.

NETWORKING

Regional networking events Learn in a peer to peer environment; frontier firms share best practice in management practice and adoption of new technologies; regional or sectoral focus where firms share relevant best practice

MANAGEMENT PRACTICES

Intensive management coaching for small & medium size businesses

Information provision and benchmarking tools for Management practice: with an online diagnostic tool, a measurement/reporting framework, and web based content

Leadership master classes which link up with business schools; creation of a management education course

Management Best Practice "Role Models": including Learning Journeys and access to "champions" of best practice

The research found that the **interventions are much more relatable and tangible to SMEs, when they can understand the intrinsic value of technology and networking to their business**. Due to a general lack of understanding (or negative perception) of the benefits of management practice, it became clear that there was a need to educate on the benefits of these.

The more innovative groups (Recently Taken the Reins, Cutting Edge Industry Innovators, and Growth-Hungry Start-Ups), were more negative towards the interventions. This was because many questioned the credibility of government to advise them on technology (and management practice). The majority also already have trusted and respected networks and sources of information they tap into – and therefore felt as though interventions are more appropriate for businesses further down the innovation spectrum.

On the other hand, Defiant Resisters and Reluctant Innovators received the interventions more positively. They felt that diagnostic tools that help lay out benefits of adoption were appealing and offered a clear explanation as to why they should be adopted – aiding that crucial first step of identifying a need for improvement that they wouldn't have previously been aware of.

Broadly, the majority of participants could relate to the value of **technology tools and case studies** and **networking events** – even if they did not see the benefit for their own business. This was because the interventions were more relatable and tangible – clearly offering value. However, there was considerably more resistance to management practice interventions.

Technology tools and case studies

Response to diagnostic tools

Participants were broadly positive about the idea of having a diagnostic tool that could help them understand how they could improve efficiency. This was more relevant to those with lower fluency in technology and management practices and perceived as too 'basic' for those who were more innovative. All however, expected the diagnostic tool to provide signposting to case studies and real-life examples to prove the benefit of new tech to them.

"I would look at this "without question" …Because we proved it with the accountancy software." (Reluctant Innovator)

"Show me what I need to do, to help improve the business." (Reluctant Innovator)

"You would need to be able to have it demonstrated to you, in a non-selling background, in a consultancy type way, how that system could help you with your business to increase your profitability." (Defiant Resister)

"It's not telling me anything new." (Cutting Edge Industry Innovator)

Response to the tech adoption portal

Although participants could see the benefit of having a tech adoption portal as a way of reducing the time spent on having to search for relevant technology, they questioned whether Government was the most appropriate source of advice – particularly given how difficult they generally found the gov.uk web portal to be.

"One of the things you have a problem with as a small business, you don't have the skill set - you worry about buying something, if it's not going to work. And anything that would help that, has to be a plus." (Defiant Resister)

"I mean, I'd have really low expectations for this if based on a government website. Gov.uk is not informative, too many pages, hard to get to the relevant documents." (Cutting Edge Industry Innovator)

Response to the technology case studies

Many of the participants felt that this would not be specific enough to be useful for them – influenced by their self-perception as a 'unique' business. However, those with more basic understanding of technology did see that this might help them understand how different technologies work in practice and imagine the benefit to their business.

"I'd definitely be interested in looking at it. I'd like to know what they've changed to increase sales or improve productivity of staff". (Reluctant Innovator)

"I like idea of this, but the alarm bell rings ring for me that it's from government. With tech, new technologies are coming out the whole time, and I would be cautious as to when a government considers something proven – is it five years out of date?" (Growth-Hungry Start-Up)

Below is a summary of what resonated with SMEs the most and least across the technology intervention ideas and provides considerations for future ideas.

What resonated with SMEs

- The diagnostic tool was most popular, as they felt more personalised and were seen to offer clear benefits to business. Businesses expected to be able to enter details of their business and for different tech options to appear.

- Talking to "financial" and "non-financial" measures – businesses want a clear indication of all the proof points of a new technology for profit, efficiency and staff before they consider adoption.

- The explanation of costs (found in tech adoption portal) is a key point of information required by SMEs.

- Case studies are key, offering real world examples of how opportunities to improve were identified, the technology solution decided upon and the outcome of implementation.

Ideas for improvement

- Perceived to be missing a crucial first step for those resister/reactive types who don't know where to start

- Businesses wanted more of the "what, how and why". They are keen to see detail and link this to case studies that drive relevance

- The more innovative businesses feel these ideas may be too basic for them, they know the solutions and may need more advanced assistance and tone

- Interventions need to avoid encouraging self-rejection by case studies being too specific to particular sectors

Suggestions for future ideas

- **Create a lower tier technological intervention** which focusses on basic technologies. For example, "did you know that there are various technological solutions that can help a business like yours?"

- **Diagnostic tool can be fused into the technology adoption portal,** with general costs as a key point of information when making suggestions for tech solutions in the diagnostic tool

- **Consider interventions that may be sophisticated enough for more innovative typologies** and ways to assure on government credibility to advise in the field

- **Case studies to lead with problem and examples of how technology has provided solutions**; brought to life with different sector examples

Networking events

Response to regional networking events

Networking events were the most popular interventions amongst participants. However, very few participants saw the relevance of these events being regional, and exhibited some scepticism about what these events might be like if organised by government. The more innovative SMEs felt that their existing industry networks were much more appropriate to their business and had more credibility, being tried and tested. For those smaller, family-run businesses there was the most appetite for regional networking events, as it would be a new opportunity to make connections and learn from others.

"This is actually really good, because more than anything, I do think that small businesses, sometimes feel like you're on your own. And even if we're just sounding off at other people within a network, sometimes when you can't see an answer to a solution, just talking it through with other people locally" (Defiant Resister)

"Because for me, the government, in the nicest possible way, they aren't really the experts, they're the people that are there to help the experts. So, the government can't possibly be up to date as people like Google or Apple, or Instagram. But they need to facilitate they expertise" (Growth-Hungry Start-Up)

"What the government really needs to do in my mind, is to facilitate industry communication and expansion, and encourage it" (Recently Taken the Reins)

What resonated with SMEs

- The majority of businesses believe in the power of networking, so can see the benefit of getting together with other businesses

- Networking helps those who may not be so tech-savvy to learn about new technologies and management practices in a face-to-face setting, which can be easier than looking at a website

- Frontier firms sharing best practice adds credibility (but would need to ensure some sector stretch to make relevant for the majority)

Ideas for improvement

- Instantly, businesses considered these should be sector-specific, rather than technology or management practice-focussed

- Some Defiant Resister types believe in informal networking with other local firms, in an informal setting (like the pub) compared to corporate-type networking, which can be off-putting

- Some concern that a government-organised event might not be as informative or effective as one organised by business/industry

Suggestions for future ideas

- **Consider teaming up with existing industry bodies** to deliver networking events on adoption of new technology and management practices

- **Communicate the outcomes of networking** e.g. learn how technology and management can help your business by learning from others who have faced similar challenges

- **Communicate the benefits of networking** to engage Resister types who do not believe in formal methods (lower priority)

Management practice information and benchmarking tools

Response to the management practice information (including masterclasses, leadership course, role models and coaching):

Participants exhibited an ambivalent response to the management practice leadership course, role models, and coaching. Many felt that they might do this at a push, if they had time, but that they were concerned they might have to pay for it – and were not prepared to do so if provided by the Government. Some suggested they would prefer these to be easily accessible online through webinars. Many of the participants in the Defiant Resister or Reluctant Innovator groups failed to see how this set of ideas would be relevant to them.

> *"It would be good, but not if we were paying for it. We could not justify sending any senior leader out to learn about management. We would have to do it via Webinars, and online things" (Growth-Hungry Start-Up)*

> *"I just don't think this is relevant. Our business has been running fine for years, and we only have a few staff, so I don't really think it's justified. I read management books throughout my career, I can't imagine it offers anything particularly new I don't already know" (Reluctant Innovator)*

Response to benchmarking:

Some slightly larger businesses felt that benchmarking and information would be helpful. They wanted it to be readily available online and easy to navigate. However, there were other businesses who failed to see the relevance, describing it as for 'other, bigger businesses', or being too time-consuming.

> *"This would be great – it's what we're working towards" (Recently Taken the Reins)*

> *"This doesn't fit with small manufacturing businesses like myself. It wouldn't be productive to sit down and spend my time on it" (Defiant Resister)*

> *"Self-assessment of management capability…Cringe!" (Cutting Edge Industry Innovator)*

> *"It's hard to know how to benchmark and what to benchmark against" (Reluctant Innovator)*

What resonated with SMEs

- Web-based content providing information could help businesses to understand the basic models and benefits of management practices

- Diagnostic tool and benchmarking – comparison with other businesses helps them relate and see value, although an explanation of metrics would be key

- Linking up with business schools provides credibility e.g. learning management practice from the experts

Ideas for improvement

- Scepticism around the 'proof points' of management practice, prohibiting strong engagement for many with ideas

- Interventions feel geared towards 'bigger businesses' who need management practices

- Some features seem superfluous e.g. there are existing management courses here in the UK and learning journeys to the US seems like an unnecessary expense for the Government to fund

- Questions around cost of personalised schemes like intensive management coaching and the government's ability to invest in this

Suggestions for future ideas

- **Communicate management practice 101** What is it? What practical things can businesses do to implement it? And what are the tangible benefits?

- **Communicate the proof points** with strong case studies, demonstrating the need, implementation and outcome of adopting management practices

- **Focus on the basics** rather than costly schemes or interventions that seem geared towards bigger businesses

Implications for business support policies

The interventions resonated with less innovative typologies, and more work needs to be done to define the target group for interventions. Through the course of this research, it became clear that most support options considered were most relevant for Defiant Resisters and Reluctant Innovators, as they were most likely to see government-funded third-party provider organisations as a credible and trusted source of information.

To effectively targets SMEs, organisations delivering interventions (e.g. those delivering through the Business Basics Programme) should consider the following principles**:**

- **SME typologies can be differentiated by propensity to innovate within their organisation and how long key decision-makers have been in situ.** Business support for technology and management practice adoption needs to be pitched at specific typologies, mindful of their specific needs and levels of understanding regarding technology and management practices.

- **Words such as "productivity", "success" and "innovation" are perceived differently by different typologies.** There needs to be caution around language and tone when creating interventions, to ensure they resonate sufficiently with the target audience.

- **SMEs engage with the adoption of new technology more readily than adoption of management practices.** Understanding and relevance of management practices is low and less 'tangible' to businesses. Interventions regarding management practices need to be grounded in clear, tangible benefits with relatable case studies.

- **Each business / organisation believes it is unique and wants to be able to identify itself in any marketing materials.** Business support interventions cannot speak to every SME individually, but should focus on the inclusive benefits of adoption and give sector-specific examples.

- **SME typologies which have a lower propensity to innovate within their organisation are unaware of what help they might need and what the benefits are.** There is an opportunity to first raise awareness on how these businesses might evaluate where they need to innovate and why this would be beneficial to them.

Considerations when designing interventions

- **Define the target audience:** Current intervention ideas used as part of this research appear to be pitched at a basic level and resonated more with the less innovative businesses with the greatest needs e.g. Defiant Resister and Reluctant Innovator typologies. Those typologies further up the innovation spectrum exhibited more advanced requirements, which may be outside of the scope of interventions considered as part of this research.

- **Refine interventions:** While some of the intervention ideas shown as part of this research were received well, overall SMEs required deeper explanations of the principles and benefits. These need to be communicated in a clear, jargon-free language that helps SMEs relate potential technology and management practice solutions to problems they face in the day-to-day running of their businesses.

- **Consider the execution of marketing:** The language used to describe interventions and the delivery channel played a significant role in levels of engagement with the interventions. Language needs to be clear, relatable and personalised for businesses to see the relevance to them. Initial feedback suggests that online materials should also be clearly structured around different technology and management practices in relation to different business needs to ensure that solutions are appropriate for their existing level of innovation. Marketing is likely to have most impact online as this was the primary point of reference for information across most of the SMEs, but offline channels should also be considered for the businesses at the lower end of the long tail distribution.

Technical Appendices

Appendix 1 - Methodology

Aims of the Research

As described in the main report, the research **aimed to understand the barriers and enablers to the adoption of innovative technology and management practices amongst SME's**, to empower key stakeholders to develop targeted and effective interventions aimed at driving take-up.

Specifically, the research aimed to:

- Understand SME attitudes towards the adoption of technology and management best practice, and how these might differ across different kinds of businesses

- Explore the relative influence and importance of a range of potential barriers and enablers to the adoption of technology and management best practice

- Identify what moments, events or information sources might act as trigger points to the adoption of technology and management best practice

- Provide direction on potential interventions to help drive the adoption of technology and management best practice – including potentially motivating communications messages

Methodology

A number of considerations influenced the approach to the research, in order to achieve the research objectives. The following section lays out the approach taken and the implications for the research methodology.

Methodological considerations

Consideration: The target population for this research represents a broad, varied and hard to reach audience. SMEs are a diverse group, covering the whole spectrum of businesses in the UK – from small service firms made up of just a few people, to manufacturers employing hundreds of people. Decision-makers within SMEs are often busy owner-managers and can be a challenge to recruit due to scheduling issues and concerns around business confidentiality.

Implication: *Face-to-face in-depth interviews were deemed to be most appropriate to ensure that we were able to capture the particularities of each individual business and how these may influence the take up of innovative business practices, whilst also ensuring that we could accommodate individual schedules and create a comfortable environment for participation.*

We offered to use a "re-contact sample" from the Kantar Public BEIS Priorities tracker to target recruitment and sent out an invite letter to each potential interviewee prior to telephone contact in order to increase buy-in to the research.

Consideration: The focus of this research is a complex and multi-faceted subject area, potentially encompassing a whole range of different information technologies, management practices and regulatory standards, which often overlap. Given the diversity of the audience, different technologies and practices were also likely to have different relevance for different businesses. For example, what is innovative for a medium size retail firm may look very different to what is innovative for a small IT services company. Businesses are also unlikely to share a common language or understanding of the subject.

Implication: We proposed that the research begin with an **extended kick-off meeting** to define the key technologies and practices of interest, align around key priorities for understanding, discuss the potential scope of interventions and generate hypotheses about some of the factors that may be driving or preventing take-up across the audience.

We also proposed that recruitment should be targeted primarily on an attitudinal basis, to ensure that we are recruiting a spread of businesses whilst allowing for differences in what may be considered innovative across segments. During interviews, we proposed allowing participants to lead conversations in their own language in order to capture organic understandings.

Consideration: The uptake of new business practices and technologies was likely to be influenced by a wide range of behavioural influencers, likely to be more than simply attitudes and capabilities around IT and cost/benefit considerations, but also include an emotional aspect. The factors influencing adoption were also likely to differ across different practices and business types, and it was important for the research to identify both general lessons and particularities in order to feed into the development of targeted interventions.

Implication: Our interview and analytical approach was framed by the **Kantar Public behavioural model** (see Figure 10 below), to ensure coverage of a whole spectrum of conscious and unconscious influencers. Journey mapping across the drivers and barriers to adoption were used to drill down into the granular details of what drives adoption in specific cases. Outputs were agreed to include a typology of SME business types, which would draw on visual media from the interview sessions to help bring the audience to life for any stakeholders developing interventions.

Figure 10: Kantar Public behavioural model
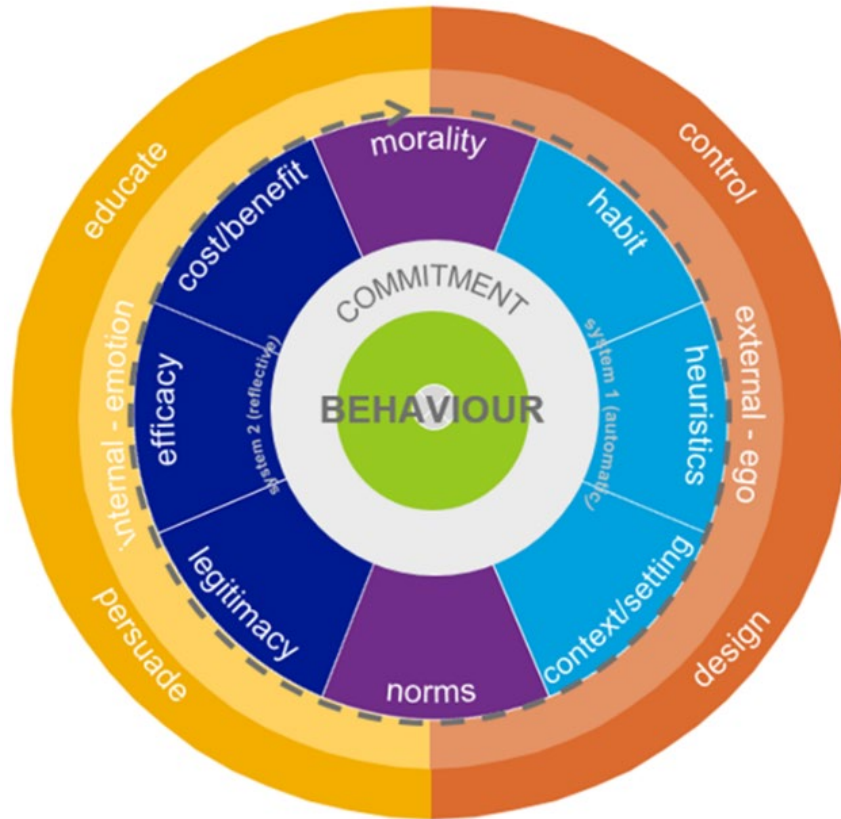
This model was used in two ways – to identify likely influences on behaviours in advance and explore these directly; and to map findings onto the model to see which factors are influential, how they manifest, and what can be done to affect change.

Qualitative interviews

Given the complexity of this topic area, we proposed conducting a broad-based sample of **40 face-to-face, 75 minute in-depth interviews** with small and medium-size businesses. It was agreed that 40 interviews provided optimal breadth across variables that might influence the take up of best practice technologies and management practices e.g.:

- Size of business

- Attitudes towards technology and management practices

- Whether a "growth" business (e.g. focussed on growing the business in the future)

- Age of business

- Sector

- Region in UK

It was also agreed in consultation with BEIS that the size of the business and attitudes towards technology and management practices were most likely to be the primary

influencing factors. Therefore, the final sample frame reflected this. Further details to our approach to sampling, recruitment, fieldwork and research approach can be found below.

Sampling

A "re-contact sample" from the Kantar Public BEIS Priorities Tracker was used to target recruitment. The re-contact sample was sourced from the waves 1 and 3 of the BEIS Priorities survey sample and included contact details from a total of 1,052 small and medium businesses. The sample also included details of the business sector, attitudes to growth and – for businesses focused on growth – whether they have considered adopting technological solutions to increase efficiency, which was used for recruitment.

The BEIS Priorities Tracker is a quarterly survey. It comprises two streams: a survey among the general population and one among SMEs. For the SME component, a commercial database of businesses is sourced from Dun & Bradstreet (www.dnb.co.uk) to acquire business details. Dun & Bradstreet holds numerous details on businesses, so research sample is purchased according to quota requirements for a representative sample of micro, small and medium sized businesses, with quotas for industry sector and region (quotas for this project have been agreed with BEIS).

On contacting the business, we ask to speak to 'a senior manager with decision-making responsibility for staffing, investment and growth'. Businesses are contacted up to 6 times before being replaced to ensure that the sample is not influenced by decision-makers' availability. The "decision-makers" interviewed as part of this research would have been those agreed to be re-contacted for further work at the end of the BEIS Priorities Tracker survey.

The final sample composition included a number of variables:

- The need to include a wide range of possible views and experiences in relation to the adoption of best practice business technologies, whilst also achieving a sample that is sufficiently robust to provide insight on specific sub-groups were required. For this reason, minimum quotas were set for primary variables – the relatively broad characteristics that are most likely to directly affect people's experiences. Secondary variables would be recruited according to more flexible targets, which would be monitored and reviewed as recruitment progresses.

- Business size and attitudes towards innovation were agreed as primary variables. For business size, we ruled out micro-businesses and **focused primarily on small and medium businesses (10-200 employees)**, both of whom are known to exhibit wide dispersion in levels of productivity and are of a size where they could stand to make gains by adopting best practice technologies.

- To ensure a spread of businesses in terms of their attitudes and behaviour around innovative business practices and technologies, **the sample was split attitudinally**. We originally considered recruiting according to the number of technologies that a company had operationalised, with thresholds for high and low adopters. However, this approach presented a number of difficulties. First, it failed to account for how the absolute level of adoption may vary across business sizes and sectors, so that a small business may actually be more active at bringing on-board new practices but have comparatively less need for different technologies

than a larger business in a different sector. Second, it creates challenges with definition – for example, the way that one company defines 'agile' working in the IT sector may differ significantly from another company in the service industries and more generally businesses may have different ways of referring to both business practices and technologies. Third, it fails to take account for how businesses might be using the technologies in different ways, so that adoption in one business may not represent the same level of productivity gains in another depending on how focused on innovation they are.

- A series of statements were used to define **early adopter, majority, late majority** and **'long-tail'** businesses, (please refer to the interview screener for exact statements used). This ensured that we were able to capture a spread of different businesses, whilst accounting for the fact that innovation may look different in absolute terms in different businesses depending on their size and sector. This also enabled us to explore, during analysis, how attitudes towards innovation relate to actual levels of adoption within businesses.

Table 2 below describes the primary and secondary variables taken into account in recruitment, the minimum quotas set and the actual numbers recruited against the targets.

Table 2: Details of the target and final sample achieved

Sample variable (primary or secondary)	Sample sub-variable	Target of SMEs to recruit	Number of SMEs recruited
Number of employees (primary)	10-20 employees	15	14
	20-50 employees	15	12
	50-250 employees	10	14
Attitudes towards technology and management practice (primary)	Early adopters	5	9
	Early mainstream adopters	9	9
	Late mainstream adopters	16	9
	Long Tail firms	10	9

Sample variable (primary or secondary)	Sample sub-variable	Target of SMEs to recruit	Number of SMEs recruited
	SMEs that fell in-between attitudes	No quota	4
Growth mindset of the business (secondary)	Growth mindset business	15	27
	Not a growth mindset business	15	13
Age of business (secondary)	Less than 2 years	5	0
	More than 2 years	35	40
Sector (secondary)	Automotive	No quota	2
	Construction	No quota	3
	Legal, financial and insurance	No quota	2
	Food	No quota	1
	Hospitality	No quota	2
	IT and telecoms	No quota	0
	Media	No quota	3
	Oil and Gas	No quota	0
	Other[28]	No quota	27
Region	North East, North West	No quota	10

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[28] Other includes health, childcare, cleaning, community organisation, design, printing, education, engineering, retail, farming, quarry/stone merchants.

Sample variable (primary or secondary)	Sample sub-variable	Target of SMEs to recruit	Number of SMEs recruited
	East, Wales, Midlands	No quota	25
	London, South	No quota	8

Recruitment

Using the BEIS Priorities Tracker survey sample as our sample source, potential participants in the research were contacted via letter and telephone to be recruited for the project.

Recruitment was managed by Kantar's in-house qualitative recruitment team who have successfully recruited complex samples for numerous studies. Participants were called and recruiters conducted a brief screening exercise to confirm eligibility and ensure participants are recruited according to sample quotas. Eligible participants will then be invited to take part in the 75-minute in-depth interview at a time and location of their convenience. See appendix 2 for details of communications and screening surveys used.

Prior to making telephone contact, we sent out an invite letter to participants, explaining the research and offering them the opportunity to contact us to opt-out if they wish. We have found that approaching potential participants in this way before making telephone contact significantly improves buy-in to and take-up of the research. See 'invitation letter' below in the materials section, for the letter that was sent to potential participants.

Fieldwork approach

This research required us to understand business attitudes and behaviours to a range of different technologies and business practices, as well as the underlying features of a business that may affect its overall approach to adoption. Behaviours and attitudes are likely to differ according to the business size and sector, which is likely to affect what technologies are seen as most relevant or beneficial, as well as a range of underlying characteristics of the business, such as attitudes to risk and long-term views on the growth of the company. Kantar Public's previous research in this area[29] suggests that emotional factors are likely to play a central role in decision-making. In addition, the idea of changing established processes by introducing new technology can be perceived as burdensome and act as a barrier, even when there is an acknowledgment that adoption may have long-term benefits.

An **interview approach** allows us to achieve the depth of response necessary to identify the specific factors and characteristics driving technology adoption across a broad range of businesses, and feed into the development of a typology, highlighting the key barriers and enablers for each, to guide the targeting of future interventions. Whilst focus groups

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[29] Unpublished.

could be useful to explore reactions to interventions, our experience leads us to conclude that resources were better focused on developing an in-depth understanding of the potential audience for Business Basics. Face-to-face and telephone in depth interviews were deemed to be the most appropriate for the SME audience.

Interviews were timed at 75 minutes and took place, at the participants' place of work, allowing researchers to develop a full understanding of the business setting and enabling natural conversations in a grounded setting. However, some businesses preferred to conduct interviews over the telephone due to constraints on their time and so we retained the flexibility to conduct some interviews in this way, to secure participation (n=18 interviews took place on the telephone).

Interviewees were offered an incentive of £80 as a thank you for their time, in line with industry norms. All interviews were digitally recorded to provide an accurate record for analysis purposes.

A **discussion guide** was developed with BEIS and was used a flexible tool to steer the discussion through the following key areas:

- Introduction to the research

- Business context

- Business strategy, management and decision-making

- Attitudes to innovation, new technology, and management practices

- Journey mapping of adoption

- Potential interventions

- See interview guide in Appendix 2.

Analysis of qualitative findings

Directly after an interview, all researchers completed short pro forma notes to assist with top level analysis. After roughly two thirds of the interviews had been completed, feedback on emerging themes was provided to BEIS in an interim presentation (with a caveat that all findings were subject to change on completion of fieldwork).

Once all fieldwork was completed, the project team held an analysis session with the full team of researchers to discuss findings and start to build key themes. The session was used to discuss different forms of influence and a process of mapping of behaviours and attitudes assisted to underpin a schematic of typologies, which is described in the main report.

After the above content analysis, we constructed an analytical framework to distil the data, using excel pro-forma templates, which were influenced by key sections in the discussion guide.

As noted in the methods section, these interviews presented numerous challenges. To ensure we identified and understood the unconscious influences on participants' motivations and decisions, and to guard against post rationalisation which would conceal

the true nature of these influences, we used the Kantar Public behavioural model to frame the interviews (see Figure 10) and as a lens for subsequent analysis.

Our model summarises what we know (from a combination of academic work and practical research experience) are the key generic influences on people's behaviours. It also indicates the most effective methods for leveraging or addressing different kinds of influence, so as to achieve behaviour change. Unlike many other models which seek to be an all-encompassing explanation of behaviour, we have developed our model specifically to assist us in designing and analysing research into people's behaviours: it is a practical tool as well as a theoretical construct.

The way we use the model is premised on the following:

- First, most influences on decisions and behaviours are non-conscious, so if people are asked open questions about why they do what they do, they are likely to give surface level or post-rationalised responses rather than articulating the real reasons for their behaviours.

- Second, good qualitative research unearths a wealth of information, and we need some way to understand and interpret all this if we are to derive insights that lead to conclusions about how to influence behaviour.

Our solution to the first of these challenges – getting beyond surface-level responses to open questions – is to identify the likely influences on people's decisions and behaviours in advance and explore these directly. Our solution to the second challenge is to map what we find in the research onto the model, in order to see which factors are influential and which are not, and how those that are influential manifest themselves, and therefore what can be done to affect change. In short, therefore, we use the model to help us anticipate what to look for, and then to understand what we find.

Customer journey mapping was also used to unpick participants' particular adoption journeys for specific practices or technologies. This is an enabling technique which aided us in identifying the drivers and obstacles to uptake, as well as highlight the particular events, moments or information sources that acted as a trigger to prompt action. We focussed on the most recent adoption experiences and used guided recall to aid the recollection of specific details of the experience. Guided recall and journey mapping worked effectively to take participants back to the situation in which decisions were made to enter a scheme, so that they could remember not only what they did, but also the surrounding context and influences on their decisions. Qualitative data from detailed questions about the participant's circumstances and experiences at the time in question, helped us to understand the context of the adoption scenario. Overlaying these journeys on to the SME typology model helped us draw more general conclusions about the types of factors that enabled or disabled the take-up of best practice technologies or management practices

All of the analysis was quality assured internally, before agreeing a report structure and delivering the findings.

Limitations of the research

Throughout this presentation, we refer to "SME's" as the qualitative sample of n=40 who were selected to take part in the research. While this group were recruited across England, and in a representative manner, the limitations of qualitative research imply that the insights in to this group can only be considered as indicative of the wider population of SME's.

The aim of qualitative research is to provide a rich, detailed description of respondent views and attitudes. Ambiguities, assumptions, and some generalisation can be recognised in the analysis and are unavoidable in this type of research. Findings cannot be extended to wider populations with the same degree of certainty that quantitative analyses can. This is because the findings of the research are not tested to discover whether they are statistically significant or due to chance.

It is also accepted that there are many forms of bias which are inherent to conducting qualitative research. One can argue that the researcher is a unique individual and that all research is essentially biased by each researcher's individual perceptions, **'moderator bias'**. In order to counter moderator bias, we use a varied, experienced qualitative team, and holistic research tool (discussion guide, pro forma analysis templates). When used flexibly, these are designed to provide some consistency of data output. All questions in the discussion guide are framed to eliminate bias, prompting open answers and allowing the discussion to flow naturally (unlike the structured nature of a quantitative survey).

A number of types of **'respondent bias'** can also influence the data that is collected, which is why a team of highly experienced researchers – who can sense any potential bias that may influence a conversation – is necessary to probe past these to a respondent's underlying drivers, attitudes and beliefs.

Appendix 2 - Research materials

Invitation letter

Dear "X",

This is an invitation to take part in research being conducted by the Department of Business, Energy and Industrial Strategy (BEIS) to help inform the design of support aimed at small and medium sized businesses.

We would like to ask for your help with an important piece of research to understand how you approach adopting technology and growing your business. Your participation could contribute to helping shape future approaches to business support.

This research is being carried out on behalf of BEIS by the independent research company Kantar Public. Your participation is completely voluntary, anonymous and confidential - and we hope that you, like others, will help us. At no point will you be personally identified and nothing you say will be shared with BEIS in a way that will identify you. Taking part would involve a discussion between you and an independent researcher.

Kantar Public may contact you by phone in the next few weeks to request an interview at a time and place that suits you. They want to talk about your experiences of managing your business. The researcher will take no more than 75 minutes of your time, and as a thank you for your contribution, you will receive a monetary token of appreciation.

Interested in taking part or have questions?

If you're interested in sharing your views or if you have any questions about what is involved, please contact [name] (project manager) at Kantar Public, on [email]. Alternatively, if you have any queries for BEIS about the research or wish to verify that this letter is genuine, please contact [name] on [email].

Don't want to take part?

If you don't want Kantar Public please contact [email] stating 'opt out' as your subject and provide your name and reference number shown at the top of this letter in the body of your email. Once Kantar Public receives your email they will not contact you again about this.

We would be grateful if you could take part in this important research. However, your relationship with BEIS will not be affected by your decision to participate or not participate in this research.

Yours sincerely, [Name], Project Manager.

Interview screener

Introduction

Good morning / afternoon, my name is X and I am calling from KANTAR PUBLIC, an independent research organisation. We have been asked to carry out research on behalf of the Department for Business, Energy and Industrial Strategy to further understand why small and medium sized enterprises do or do not adopt new technologies and best practice methodologies.

- The research is completely voluntary, anonymous and confidential.

- KANTAR PUBLIC is completely independent

- KANTAR PUBLIC will not be giving the client any details of respondents that could be traced back to them.

We were wondering if you would be interested in taking part? (Yes/No).

Details of our privacy policy can be found here: https://uk.kantar.com/surveys

Eligibility

Are you or any of your immediate family working for or involved in any of the following? (DO NOT RECRUIT IF ANY OF THESE ARE MENTIONED).

- Advertising

- Market research

- Marketing

- Journalism

- Public relations

- Media or communications

- Lobby or campaign group

- Local, regional or national politics

- Employees of Local Authorities or government departments

Have you ever taken part in a questionnaire, survey, interview or discussion group before? (Yes/No). (IF PARTICIPANT HAS ATTENDED A GROUP FOR BEIS, DO NOT RECRUIT).

How many group discussions or interviews have you attended in the last 6 months? (IF 1 OR MORE DO NOT RECRUIT).

Demographics

Gender:

- Male

- Female

- Other (please specify)

- Prefer not to answer

What age were you on your last birthday?

- Under 18 (DO NOT RECRUIT)

- 18-29

- 30-50

- 50+

How would you describe your ethnicity?

- White - British

- White - Irish

- Any other white background

- Mixed - White & Black Caribbean

- Mixed - White & Black African

- Mixed - White & Asian

- Any other mixed background

- Chinese or other Ethnic group - Chinese

- Chinese or other Ethnic group - Any other

- Black or Black British - Caribbean

- Black or Black British - African

- Any other Black background

- Asian or Asian British - Indian

- Asian or Asian British - Pakistani

- Asian or Asian British - Bangladeshi

- Any other Asian background

- Refused

Business Characteristics

Which of the following best describes your business?

- I am sole trader (there is no one else in my company except me) (DO NOT RECRUIT)

- I work in a micro business (e.g. between 1 and 9 people) (DO NOT RECRUIT)

- I work in small business (e.g. between 10 and 20 people)

- I work in a small business (e.g. between 21 and 50 people)

- I work in a medium sized business (e.g. between 51 and 250 people)

- I work in a large business (e.g. 251 + people) (DO NOT RECRUIT)

Which of the following statements best describes how you, as an employer, consider introducing a new technology or new management practice to your business?

- I am always looking out for ways to make my business run more efficiently, including the use of new formal systems or technological solutions. I know what my competitors are doing and have a general sense of new industry-wide systems. I like to be the first to try new approaches to managing my business as this gives us an edge over our competition. (EARLY ADOPTER)

- I am interested in changing the way that my business runs to make it more efficient but prefer for new approaches to be proven before I give them a go. I want to stay ahead of the competition but don't want to risk adopting new practices or technologies until I'm sure they're going to work. (EARLY MAINSTREAM)

- I am open to changing the way that I manage my business to make it more efficient but only if I feel it is necessary. I want to stay up-to-date with modern practices and am open to technology but it is not a priority and it is far more important to focus on the day-to-day running of my business. (LATE MAINSTREAM)

- I am not really interested in changing the way that I manage my business or in introducing new technologies. The approach that I have works for me and introducing new ways of doing things usually causes more hassle than it is worth. (LONG-TAIL)

Over the last 12 months, has your business increased its turnover? (Yes/No).

Over the last 12 months, has your business increased in terms of number of employees? (Yes/No).

(CODE AS GROWTH BUSINESS IF YES TO EITHER, OR NOT A GROWTH BUSINESS IF NO TO BOTH).

How long has your business been operating?

- Less than two years

- More than two years

- Twenty years or more

In which industry sector does your business operate?

- Automotive

- Construction

- Finance & Insurance

- Food

- Hospitality

- IT and Telecommunications

- Media

- Oil & Gas Industries

- Other (please specify)

Can you confirm in which of these locations you are currently based or is your primary location if you work in multiple offices?

- Northeast/Northwest

- Midlands

- London or South

- Wales

- Scotland

- Northern Ireland

To help illustrate the research and bring the insight to life, we would like to take some photos at the end of the interview. Would you consent to us doing this? (Yes/No).

Decision to recruit

IF NOT RECRUITING - I am sorry to say that you actually fall outside of the range of people that we need to recruit as part of this research. Apologise for taking up respondent's time.

IF RECRUITING - We would like to invite you to take part in a face to face interview. The interview will be looking at your attitudes as an employer towards implementing new technologies and or new management practices in your business. Ideally we would like this to take place at your place of work.

The discussion will last 75 minutes.

The discussion will take place: date tbc

Venue: place of work or telephone

We will be audio/video recording the discussions. The discussions will be confidential and anonymous. As a thank you for taking part we will offer a £70 transfer into PayPal account of your choice or £70 in online vouchers (PERKS vouchers)

You do not need to have any prior knowledge to take part in this research.

We will not be testing people's knowledge, but simply asking for people's views and opinions.

Would you be interested in participating in this research? (Yes/No). IF NO RECORD REASON.

Discussion guide

Below is the discussion guide that was provided to interviewers, including background to the project, research aims and questions used to guide discussions.

Information for Interviewers: Background

The UK currently lags behind its international competitors in terms of productivity. The diffusion of innovation – the spread of innovations through the population – has been identified as a particular problem.

A range of tried and tested technologies and management practices have been identified as having the potential to add £100 billion to UK Gross Value Added[30], if adopted.

To increase the diffusion of best practice so that small and medium-size enterprises (SMEs) have the tools to become more productive, BEIS therefore plans to trial innovative approaches to driving up the adoption of best practice technologies as part of their new Business Basics Programme.

Research Aims

Research is required to understand the barriers and enablers to the adoption of innovative technology and management procedures amongst SMEs, to help BEIS develop targeted and effective interventions aimed at driving take-up.

Specifically, the research will need to:

- Understand and illuminate SME attitudes towards the adoption of technology and management best practice and how these might differ across different types of businesses, with a view to developing various Business Typologies / Personas

- Explore the relative influence and importance of a range of potential barriers and enablers to the adoption of technology and management best practice

- This should build upon the existing knowledge base that BEIS has developed on the barriers to adoption, identifying the enablers and barriers relevant to different Business Typologies / Personas, specifically couched in their own terminology

- Identify what moments, events or information sources might act as trigger points to the adoption of technology and management best practice

- Provide direction on potential interventions to help drive the adoption of technology and management best practice – including potentially motivating communications messages

Researcher notes:

It is important to let the respondent use their own language to frame business priorities – including their own understanding of innovation, efficiency, and productivity.

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[30] http://www.cbi.org.uk/insight-and-analysis/from-ostrich-to-magpie/

Throughout the discussion please keep the Kantar Behaviour web in mind and stay aware for signs of unconscious influencers on behaviour (habit, heuristics, context, social norms) as well as conscious influencers (cost/benefits, efficacy, legitimacy, morality).

Key principles for researchers to follow

This guide is intended to be used with a variety of individuals with varying characteristics and backgrounds. As such, it does not contain pre-set questions, but rather lists the key themes and sub-themes to be explored with participants in each interview. Words or short phrases are instead used to indicate the study issues, and allows the researcher to determine the formulation of questions and how to follow up. This encourages the researcher to be responsive to the situation and most crucially to the terms, concepts, language and behaviours used by the participants.

It does not include follow-up questions like 'why', 'when', 'how', etc. as participants' contributions will be fully explored in response to what they tell us throughout in order to understand how and why views and experiences have arisen. The key areas for discussion are the same; the order in which issues are addressed and the amount of time spent on different themes may vary between interviews.

Questioning and probing will be framed to ensure we understand participants' situations as they view them. Researchers will adapt the approach, as much as possible, to suit the needs of each participant. Prompts are not exhaustive, but rather indicate the types of content we would expect to be covered – this may vary across participant groups.

There may also be elements of observation of interaction within the interview – researchers will make notes of observations straight after the interview, capturing any key themes related to the research aims and objectives.

Interview checklist

- Discussion guide

- Stimulus: Adoption buckets; Productivity statements; Interventions

- Media consent form

- Voice recorder

- Pen and paper

Discussion guide questions

Please note, this guide is not a script and is intended to be used flexibly, with participant responses guiding the flow of the conversation, topics covered in the order that they naturally arise, and probes used only when needed

1. Introduction (2 minutes)

- Warm up and introduction

- Introduce yourself and Kantar Public – an independent research agency

- Conducting this research on behalf of BEIS

- The aim of the interview is to explore small and medium sized businesses' perceptions of innovation and productivity, looking at the benefits of, and challenges around, adopting new management practices or technologies

- Give broad overview of the themes of discussion throughout the interview

- Interview length – 75 minutes

- Research is completely voluntary, confidential, and anonymous. The information you provide will be used for research purposes only. Kantar Public is completely independent from BEIS. We will not give BEIS any details that could be traced back to you. None of the questions will ask for details of your personal or organisational finances.

- Introduce the idea of taking photographs of them, and their workplace both during and at the end of the interview

- Any questions?

Recording: Ask participant for permission to record, then start recording and confirm consent

2. Business context (8 minutes)

2.1 Respondent background (3)

- Explore participant's current role and responsibilities

- Title of role

- Role in the company

- Length of time in role, age of participant

- Current responsibilities in brief

- Professional and education background

2.2 Business background (5 minutes)

- Explore background information about the business

- Description of the business

- Sector, legal status, age of business, number of employees, and their product(s) / service(s)

- Company ownership, Management structure

- Brief history of the business, why/when it was established, and how it has changed over time

- How is the business performing? In terms of profit, competitive context

- What is driving this performance?

3. Business strategy, management & decision-making (15 minutes)

3.1 Attitudes towards business strategy and growth (5 minutes)

- Exploration of company's business priorities (if any)

- When thinking about the future of the business what does "success" mean to them?

- What are the things that will help create this success?

- *(Note language used, priorities for the business, and any spontaneous mention of potential adoption of tech / management practices to help efficiency / achieve growth)*

- Describe any strategy / growth plan that the company may have

- Why is this a strategy important / not important to their Business?

- How do they identify opportunities for development within the Business?

- Who is involved in developing opportunities?

- Benefits vs challenges of this structure

- How is strategy / a growth plan implemented within the Business?

- *Probe on whether formal processes are in place*

- Challenges/barriers to implementing strategy/growth plan

3.2 Exploration of decision making (10 minutes)

- Explore how decisions are made within their organisation

(Note any spontaneous mention of technology or management practices)

- Describe how the company makes decisions about how they run and manage the business, INTERNALLY?

- *Allow participant to frame own description and then prompt as necessary:*

- Management of staff (e.g. monitoring performance, targets, incentivisation)

- Importance /time given to training

- Ways to improve efficiency

- Ways to manage growth

- Development of service/product offering relevant to business

- Describe how the company makes decisions about how they run and manage the business, EXTERNALLY?

Allow participant to frame own decisions and then prompt as necessary:

Customer / Client management / interaction/ marketing

Supplier management / interaction

For each prompt, probe on:

Formal / informal processes (How the decisions are made)

Influencers/facilitators of decision making (Who makes the decisions)

Challenges/barriers they face when making decisions/implementing changes

Communication of decisions/changes across the business

Reaction of staff to changes and management of that

4. Attitudes to innovation, new technology, and management practices (15 minutes)

4.1 Attitudes towards innovation & improvement of business practices (2)

- Explore views on the importance of innovation in management practices and technologies

- Explore participant understanding of what innovation means to their business

- Probe: efficiency, freeing up resource, concept of improving

- Is innovation important to their business?

- *IF INNOVATION IS NOT IMPORTANT / UNDERSTOOD – Understand how do they ensure they are running their business in the best way they can?*

- How does this play out across the operation of the Business?

- Probe adoption of new technology, management practices, digital capabilities

4.2 Attitudes towards new technology and management practices (10minutes)

- Understanding of adoption of new technologies and management practices to improve Business productivity

- Explain that there are various established ways in which a Business can improve its productivity, facilitate performance and growth. Explore spontaneous participant understanding of the following:

  Adoption of new technologies
  Adoption of management practices
  Implementation of digital capabilities

Moderator use STIMULUS - "Adoption Buckets" **(please see stimulus here)**

- Explore reaction to stimulus explanation of the above areas

- Understand level of awareness across explanation of new technologies / management practices / digital capabilities – what is new to them?

- What is relevant to their Business?

- What is currently in use?

- Why these?

- What problem did it solve?

- What has been the benefit to the business?

- If not in use, is there anything there they would consider in the future?

- Explore whether any new technologies / management practices / digital capabilities have been considered but not implemented

- Explore any negative experiences across attempted /failed implementation

- How does this impact likelihood to adopt new technologies / management practices / digital capabilities in the future?

4.3 Sources of information (3 minutes)

Explore the following in turn for adoption of new technologies / management practices / digital capabilities:

- Where do they go for information / advice?

- If NOT CURRENTLY USING where would they go?

- What / Who are their influencers/trusted advisors? Probe:

- Awareness and engagement with competitor's adoption

- Relevance of industry standards

- Industry networks (for e.g. trade associations, local business groups, Confederation of British Industry, Federation of small businesses)

- Key advisors to business e.g. Accountants, Lawyers etc.

5. Journey mapping of adoption (20 minutes)

5.1 The journey to successful adoption (10 minutes)

- Detail trigger points facilitating uptake of new technology / management practice mentioned in Section 4.2

- Explore context for adoption – who/what prompted the need to adopt a new practice / procedure?

- How did the business decide what type of practice to use (i.e. particular system/programme, model of thinking)?

- *Probe: Specific source of information / advice*

- Who made the key decisions?

- Understand key points in journey from identification of need to change to actual implementation and drivers for this and establish timeline

- Drivers: What worked well across the process of adoption?

- Barriers: What did not work across the process of adoption?

- What impact did the change make on the Business?

- *Probe:*

- *INTERNAL: Staff, efficiency, growth, profitability, product/service improvement:*

- EXTERNAL: Client / Supplier relationships, marketing

- What could have been optimised to make the process of adoption smoother?

5.2 The Journey of failed adoption (10 minutes)

- Detail trigger points leading to failure to uptake new technology / management practice mentioned in Section 4.2

- Explore context for adoption – who/what prompted the need to adopt a new practice / procedure?

- How did the business decide what type of practice to try to implement (i.e. particular system/programme, model of thinking)?

- *Probe: Specific source of information / advice*

- Who made the key decisions?

- Understand key points in journey from identification of need to failure to implement new change and establish timeline

- Barriers: What did not work across the process of adoption? Unpack drivers of failure

- What was the impact of not adopting the new practice on the Business?

- What could help the business to reconsider making the change?

- *Probe on types of help / information that would be useful and where this should come from*

6. Potential interventions (15 minutes)

6.1 Key messages on adoption of new technologies and management practices

- Understand their reaction to key messages designed to help raise awareness around the impact of adopting of new technology and management practices

- *Moderator use STIMULUS - "Productivity statements"* **(please see stimulus here)***, read out A4 slide each in turn and ask the following:*

- Spontaneous reaction

- Understand message power across key metrics: cut-through, relevance, motivation, call-to-action (e.g. consider / re-consider adoption of new technology / management practice)

6.2 Spontaneous Business-generated interventions

- Understand their own potential ideas

- What kind of help do they think the Government could/should provide to businesses like theirs to advise on and facilitate uptake of new technologies or management practices?

- What would be the benefit of this idea to their business? What impact would it have?

- How should the Government talk to the Business about it?

- Message: What type of information would you like to hear about?

- Channel: Where is the best place to talk to you about it?

6.2 Evaluation of BEIS interventions **(please see stimulus here)**

- Understand reactions and optimisation of potential ideas

- Moderator use STIMULUS - "Interventions", read out A4 slide (7) each in turn and ask the following:

- Spontaneous reactions to intervention

- How relevant is the idea to their Business?

- What would be the benefit of this idea to their business? What impact would it have?

- Would they use it?

- At what point in the journey to adoption would this idea fit / be of most use? (Reference journeys in 5.1 and 5.2)

- How could this idea be improved?

- How should the Government talk to the Business about this idea?

- Message: What type of information would you like to hear about?

- Channel: Where is the best place to talk to you about it?

7. Thank & close

If adopting different management processes or technology freed up 0.5-1 day of time a week, what would you do with this time?

Stimulus documents

Table 3: Adoption Buckets

Adoption of new technologies	Adoption of management practices	Implementation of digital capabilities
Examples of new technologies that an organisation may invest in: • **Customer relations software:** suitable for businesses with sales and customer service teams that interact with large numbers of clients • **Human Resource (HR) software:** suitable for businesses who need dedicated HR teams or departments to support and monitor staff. • **Accountancy software:** Useful for all sizes of business, helps streamline accounting activities and also makes tax compliance easier. • **Payment technologies:** innovations in payment technologies benefit customer-facing businesses in retail and hospitality. E-commerce enables businesses to expand commercial operations.	Examples of management practices that an organisation may invest in: • People / talent managements • Operations management • Performance and target management • Adoption of relevant systems to implement and facilitate these practices	Examples of digital capabilities that an organisation may invest in: • Website • Digital marketing to customers • Social media presence / marketing • Cloud storage

Statements

Adoption of new technologies

- The CBI has identified five key technologies with wide applicability across businesses – including Customer Relations Management, HR and accountancy software, ISO certificates and payment technologies.

- They have estimated that getting firms to adopt these could add £100 billion to UK Gross Value Added

- The positive impact of faster innovation and adoption of Industrial Digital Technologies could be as much as £455 billion for UK manufacturing over the next 10 years.

Adoption of management practices

- In addition to poor labour productivity, ineffective management could be costing UK businesses over £19bn per year lost in working hours

- The UK lags in adopting strong management practices, with UK managers less qualified and under-trained compared to international counterparts.

- Globally, firms that apply accepted management practices well perform significantly better in productivity, profitability and growth vs. those that do not apply them

- Management skills are more important than Research & Development, skills and IT in driving productivity

- Improving management can be relatively cheap compared to reallocating resources to traditional factors of production (capital, labour, R&D, innovation)

- You could gain up to a day a week of time to spend on income-generating activities, if you adopted new management practices or technologies that boost productivity.

Interventions

BEIS proposed a series of embryonic ideas that could be incorporated into more fully-fledged interventions as part of the Business Basics programme:

- A **diagnostic tool** that shows how certain technologies (e.g. CRM, HR Software, Accountancy software, ISO Certificates, Payment technologies) can improve business across both financial and non-financial measures

Regional networking events

- Designed to provide an opportunity to network with other firms and learn in a peer to peer environment.

- Frontier firms share best practice in management practice and adoption of new technologies.

- Regional or sectoral focus where firms share relevant best practice and what is effective in best management practice to improve performance (on growth, market share or sales growth)

- A **Tech Adoption Portal** on gov.uk which provides information on Intellectual Property, managing risk with data, and the expected cost of tech and tech solutions

- **A series of technology case studies** describing how best practice technology has been adopted across different regions, industries and business sizes and proven to improve productivity.

Intensive management coaching for small & medium size businesses

- Evidence suggests that intensive coaching on management can raise productivity. This coaching would be rolled out across UK regions, focussing on innovation diffusion and the adoption of new technologies

Information provision and benchmarking tools for Management practice

- Enabling companies and leaders to compare and measure themselves against peers and top performers, including:

- An online diagnostic tool that benchmarks and indicates how well managers are performing, allowing managers to self-assess their management capability

- A measurement or reporting framework, allowing practices to be benchmarked and progress monitored

- Web based content providing information on accepted management practices or signposting to accredited management courses or tools

Leadership master classes

- Support and promote performance-enhancing skills

- Linking up with business schools to teach entrepreneurship and work to boost skills of managers

- Creation of a management education course and facilities to increase the supply of capable managers in the UK

Appendix 3 - SME case studies

These case studies are designed to bring the SME typologies to life. They are paraphrased accounts of key elements of the conversations had with specific participants in the research – they are not verbatim accounts.

Defiant Resistors: Stone Supplier

I've been the Credit Controller and "jack of all trades" here for 27 years…I guess my role has just evolved over the years! Most of our 47 people have been around for a while, even the MD is still out on the machines!

We are mainly B2B (business to business). B2C (business to customer) isn't worth it for the hassle even with the higher margins. We are affected about what happens in the building industry, and we've been maintaining stable profit since the recession. We only have one competitor, the quarry up the road – and they are also one of our clients! We are working at 90% capacity, we aren't looking for more.

We keep abreast of the new innovations in machinery – although most haven't changed in 60 years! Within the admin-side, I'd say we're fine. Maybe it would be good to start saving our data in the cloud for security and move to electronic invoicing – connected to our accounting software – but there's no rush right now. I'm not sure how else we can improve things – and we don't want to spend a lot of time and money on something that we don't know will work!

We did look into ISO accreditation, but it seemed like a waste of time and a lot of jargon, what does it really give you?

Reluctant Innovators: Florist

"My wife's been in the florist game for 27 years, but I left my import-export business about 15 years ago to help her on the business-side. The florists on the shop floor are quite young though, the oldest one has been with us for 5 years.

Last year we made a loss – the shop trade is dying due to low foot traffic and competition from supermarkets. We knew we had to focus on online sales – and differentiating on quality – so we had to get our heads round that- tough! Luckily, we have a young computer whizz who helps with the website and online platform that we pay to sell flowers on (florists pay a monthly subscription) – as well as all the social media stuff.

Each change we make has to be seriously considered as we can't afford to take another hit to our profit margin - we have to know it will work. We have a large database of customers connected to our invoicing software – we know we need to market to them more to boost sales. We'd like a system that is automatically sets up an invoice for an account customer – it's currently all done on paper – and not waterproof!

This type of business is so personal. Yes, we have an informal performance review once a year – but if they have a problem they just say, and that's how we like it."

Recently Taken the Reins: Law Firm

"I've been at the firm for 24 years and became a managing partner 10 years ago, when the founding partner stood down. Things really changed then, they had to as the sector as a whole was changing – the management of the firm became streamlined and much less hierarchical. The four managing partners have different and defined responsibilities, but any decision is cascaded down to team heads for discussion with staff and feedback.

In our industry, innovation is tricky because it is so heavily regulated. But there was a move to modernise in the last two decades where processes and procedures became standard to ensure a quality service. Those firms who didn't adopt are no longer around. We keep abreast of what's happening across journals and a number of established networks e.g. the Law Society, other firms, Practice Organisations. Industry standards e.g. ISO are expected to be adhered to as a matter of course.

This is a people industry, people like to deal with people over legal matters, so technical innovation is more about improving internal processes e.g. employing digital dictation and voice recognition dictation to use staff time more efficiently"

Cutting-Edge Industry Innovators: Architects' practice

"I was brought into the firm because it wasn't doing so well. But in our industry, you have to be focussed on staying ahead of the game – otherwise you just can't compete. I've always been concerned with ensuring that we run things as efficiently as possible and in order to do that, you have to know what your competitors are doing. I see it as a two-way thing: looking internally to how you can run things better and looking externally to see how you can stay ahead of the game.

In our industry, you have to keep adapting to changes otherwise you become redundant. There is always a new piece of software or programme that is available. Sometimes it can be a bit of a risk trying out new things, but if you don't take a stab at it, you'll never find out if there is a better way of operating. We keep up to date of what's happening by attending industry events and expos, I'm also signed up to newsletters and architecture journals. I also listen to a number of podcasts or read books about how to improve management. I think it's important to keep up to date.

This is essentially an innovative industry, you're forced by virtue of circumstance to keep your eye out for new tech and design procedures."

Growth-Hungry Start-up: Digital marketing agency

"We all had experience in different sectors and recognised a gap in the market where our experiences converged. We started out running the business from our living room and have continued to grow since then. Because of our strategic alliance between creative, financial services and technology, we are well placed to compete in this market, and have been consolidating our client base by producing high quality work that is driven by client needs

We see our business as a family and work hard to keep that characteristic, but we also recognise that people work best when they are pushed and enjoy what they do, so we always set stretch goals for ourselves to ensure that everyone has a shared idea of

forward progression. By nature, we want to do the best job that we possibly can, and most of how we operate has been facilitated by trial and error, and by our own personal research into how we can do things differently. We're open to new ideas and new tech but always give things a test run before committing so that we can ensure that it solves an actual problem rather than creating more work and frustration."