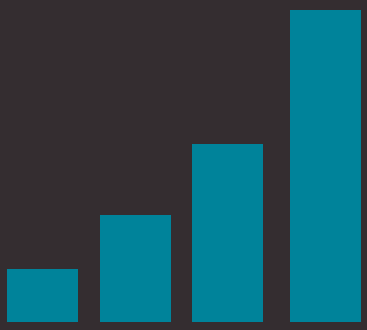

THE SCALE-UP REPORT
ON UK ECONOMIC GROWTH

Sherry Coutu CBE

An independent report to the government

NOVEMBER 2014

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ABOUT THE AUTHOR

Sherry Coutu

Sherry is an Entrepreneur, Non-Exec Director, Investor and Advisor to Companies, Universities and Charities

She possesses a deep understanding of the dynamics of both b2b and b2c businesses, portfolio management and macro-economics.

She currently chairs Founders4Schools and is a non-executive member of Zoopla plc, the London Stock Exchange Group plc, Cambridge University (Finance Board), Cambridge Assessment, Cambridge University Press, Raspberry Pi and Artfinder. She also serves as an advisor to LinkedIn, Harvard Business School European Council and is a former Trustee of Nesta.

As an angel investor, she works with entrepreneurs to solve problems that she feels matter and specialises in consumer internet, information services and education. She has made angel investments in more than 50 companies and holds investments in 5 venture capital firms. She was voted by TechCrunch as the best CEO mentor / advisor in Europe in Nov 2010. In May 2011, she was voted by Wired magazine as one the top 25 'most influential people in the wired world', and one of the top ten most influential investors and women.

As an entrepreneur, Sherry has founded a number of businesses and charities. The first business (acquired by Euromoney plc) has operations in more than 70 countries. The second, which she was CEO and chairman for was responsible for the first e-commerce transaction in the financial services industry in Oct 1995 and was the most over-subscribed IPO on the main market when it was floated in February 2000 (on London and Nasdaq).

Philanthropically, she supports the Prince's Trust, the Crick Institute SVC2UK. Sherry has an MBA from Harvard, an MSc Economics (with distinction) from the London School of Economics, and a BA (Hons with distinction) from the University of British Columbia, Canada. She was awarded Commander of the Order of the British Empire (CBE) for services to entrepreneurship in the New Year's Honours List 2013 by Her Majesty the Queen.

"We want nothing less than to make the UK the technology centre of Europe. This is the path we need to take to create new jobs, new growth and new prosperity in every corner of our country."[1]

George Osborne, Chancellor of the Exchequer

"First mover advantage doesn't go to the first company that launches, it goes to the first company that scales."

Reid Hoffman, co-founder of Linkedin

"Competitive advantage doesn't go to the nations that focus on creating companies, it goes to nations that focus on scaling companies."

Sherry Coutu CBE

Dear Chancellor,

I am pleased to share with you this report that shows if we take action now to focus on 'scale-ups', we will secure significant growth in jobs, taxes and wealth, and the competitive advantage of Britain for generations to come.

This report explains how a boost of just one per cent to our scale-up population should drive an additional 238,000 jobs and £38 billion to GVA within three years. In the medium-term, assuming we address the skills-gap, we stand to benefit by £96 billion per annum and in the long-run, if we close the scale-up gap, then we stand to gain 150,000 net jobs and £225 billion additional GVA by 2034. This report sets out a clear plan of action to close the scale-up gap. The plan centres on using data already collected by government to provide a platform that enables both public and private sector organisations to work together to improve the community of which they are a part.

Britain is a GREAT place to start a business.

With the supportive government policies, industry structure, geographic placement and talent supply we enjoy in the UK, we are in the position to create unrivalled national competitive advantage by increasing the proportion of companies that 'scale-up'.

> **A 'scale-up' is an enterprise with average annualised growth in employees or turnover greater than 20 per cent per annum over a three year period, and with more than 10 employees at the beginning of the observation period.**

This competitive advantage will be rewarded by economic growth per capita. The responsibility to become 'a scale-up nation' – to create an environment (ecosystem) where a greater number of companies reach global scale – rests with all of us who have an interest in supporting economic growth. Rather than look only to the US for inspiration, this report examines successful collaborations between business and government that have taken place over the past 20 years in 20 other countries and recommends actions that we can take now. Individually and collectively, businesses, educators and policymakers can co-create a future that is bright for our children and their children: a place where both scale-ups and start-ups flourish, with plenty of jobs and growing GVA per capita.

Commentators have observed that to nurture and raise a single child into a successful human being takes much longer and is a more complex and arduous process for society than to introduce an additional child into the world.[2] Similarly, Mariana Mazzucato of the University of Sussex argues:

"What I believe should be emphasised is not start-ups or entrepreneurs in and of themselves, but the innovation ecosystems within which they operate and which they depend on if they are to become what does matter: high-growth innovative firms (of any size) within that system."[3]

1 Osborne MP, G. (15 March 2012). Speech by the Chancellor of the Exchequer, Rt Hon George Osborne MP; Google Campus launch. Retrieved from: https://www.gov.uk/government/speeches/speech-by-the-chancellor-of-the-exchequer-rt-hon-george-osborne-mp-google-campus-launch

2 Isenberg, D. (2012). Focus Entrepreneurship Policy on Scale-Up, Not Start-Up. Harvard Business Review. Retrieved from http://blogs.hbr.org/2012/11/focus-entrepreneurship-policy/

3 Mazzucato, M. (2014). Startup myths and obsessions. Economist. Retrieved from: http://www.economist.com/blogs/schumpeter/2014/02/invitation-mariana-mazzucato

Getting our ecosystem to produce a greater number of scale-ups is more ambitious and challenging than producing a greater number of start-ups or celebrating entrepreneurs. Abundant evidence from countries around the world shows that collaborative initiatives can 'super-charge' an economy to increase the ability of companies to scale-up and to make superior contributions to the economy.

The UK economy may be growing faster than any other G8 nation, but recent data show that we lag behind the US and other leading economies in the extent to which our companies scale. This is the 'scale-up gap'. Our promising companies struggle to grow domestically and expand internationally and are taken over by larger – often foreign – firms at a significant discount to their potential. This is a major issue because scale-up companies are crucial to national competitive advantage in that they drive economic growth, job creation, and productivity in the longer term.

With the release of up-to-date data that the government already holds, some minor adjustments to policy, more training for key individuals and minimal adjustment in funding and resource levels, it is possible to close the scale-up gap and secure the competitive advantage of the UK for generations to come.

In growing from 10 to 100 employees, to 500, 1,000 and so on, companies have specific requirements for capital, management, skills and organisational processes. This can lead to 'growing pains' that can be easily and effectively addressed ('treated', to continue with the medical analogy). Government can help identify ('diagnose') those likely to be suffering from these 'growing pains', which can then be 'treated' by stakeholders in the ecosystem so that the company overcomes the 'growing pain' and system as a whole benefits.

The following factors, in order of importance, are the key reasons why companies are unable to scale in the UK. Companies have issues:

- Finding employees to hire who have the skills they need
- Building their leadership capability
- Accessing customers in other markets / home market
- Accessing the right combination of finance
- Navigating infrastructure

Our analysis of 20 other countries that have focused on developing their ecosystems to foster scale-ups shows these five barriers can only be overcome through coordinated efforts between stakeholders at a local level.[4]

Reaching a minimum standard of support across all five challenges is necessary for growth: in isolation, each is likely to be insufficient to generate additional growth. It is not feasible to ascribe specific economic benefits to each of the five, but there is some consensus that holistic co-ordination, talent and leadership capacity are the three most important drivers of success in the long term.

4 It is clear from international examples and case studies that 'local' is the correct 'body' to implement ecosystem economic development programmes. There is also some terrific recent reports issued by Lord Sainsbury and Jim O'Neill on clusters and cities. The point I make here is that the 'ecosystem' sometimes exists in a 'cluster' and sometimes in a 'city'. I am aware of the differences, but use the terms interchangeably in this report.

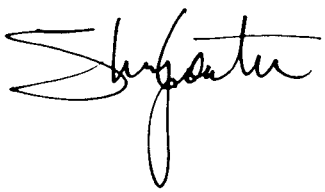
It is in our national economic interest to help local scale-up companies to overcome their challenges. This report investigates the potential boost to the UK economy if we could enable as many small companies to grow large by the implementation of support mechanisms as has been achieved in 20 other countries.

The UK needs a more evidence-based debate on where growth comes from and the impact that growth-enhancing investments can have over time. Like many other investors, I make sure that I have a portfolio of short-, medium- and long-term investments. Similarly, as a country we need to consider the impact of the UK's portfolio of growth-enhancing policies and initiatives — both public and private.

In bringing this publication together, I owe a real debt to Mark Hart, Dan Isenberg, Tamara Rajah, Alastair Reed, Janet Coyle, Antony Walker, Charlotte Holloway, Cat Townsend, Nick Harrison and Mark Fisher. In addition, it would not have been possible without the support of the Steering Committee, the Information Economy Council, techUK, BIS, the Cabinet Office, Deloitte, RBS, Nesta, YouGov, ERC, Babson College, London & Partners, Brunswick, McKinsey, Google, YouGov, and Korn Ferry for their enthusiasm and support for this project. I am grateful to many other people who have inspired my thinking and contributed to the ideas in this report, from business, academia, politics and beyond. This is a long list and it would be invidious to name some without naming all.

This report was commissioned by the Information Economy Council, a joint industry and Government body in March 2014.

I look forward to taking this agenda forward with colleagues and seeing what we achieve together.



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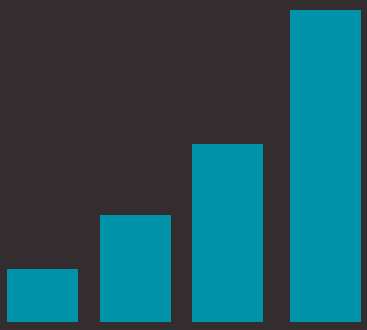


EXECUTIVE SUMMARY

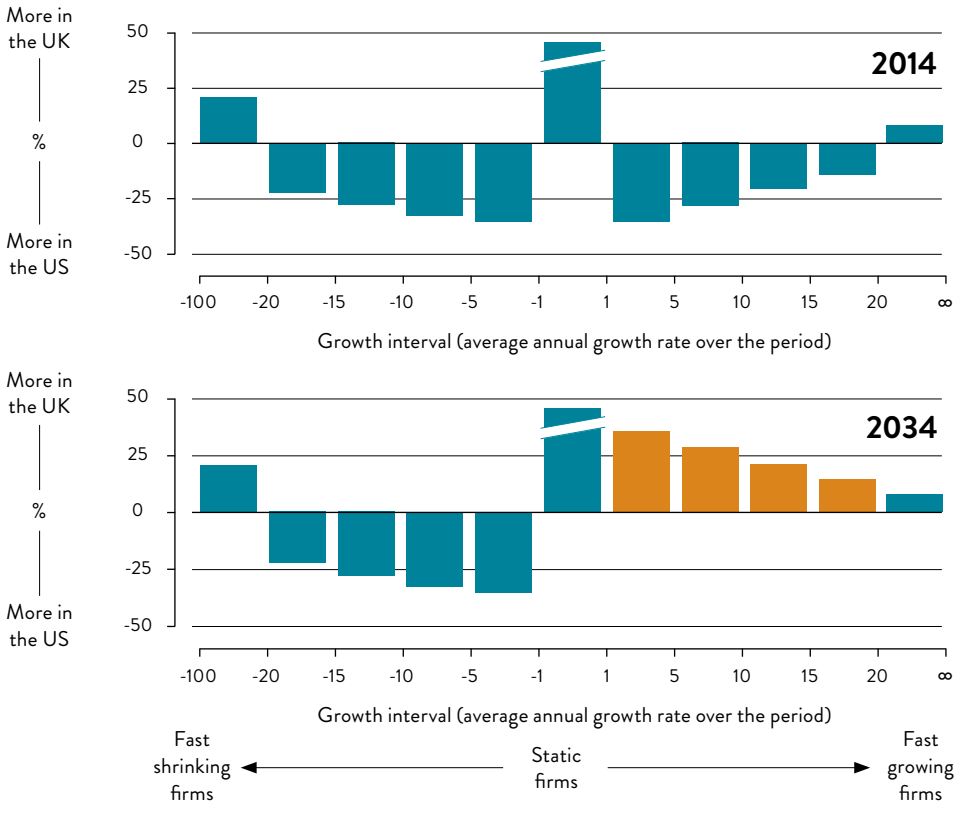
Executive summary

A small group of rapidly expanding 'scale-up' companies create a significant proportion of the UK's economic growth; however, we lag behind the US and other leading economies in the relative proportion of these vital scale-up companies. This is not because of a lack of ambition or ability in the leaders of these companies and we can reverse the trend.

If we manage to close the scale-up gap, we will secure significant economic value and the competitive advantage of Britain for generations to come:

- **In the short-term, RBS analysis suggests an additional 238,000 jobs and £38 billion additional turnover is possible within three years of reversing the scale-up gap.**
- **In the medium-term, Nesta research shows a possible boost of £96 billion per annum is possible.**
- **Long-term analysis by Deloitte shows a potential of £225 billion additional GVA and 150,000 net jobs by 2034.**

Figure E.1: Closing the gap between the UK and US average annual company growth rate



Working together, government, entrepreneurs, educators, investors, and large corporates have an opportunity to target support towards scale-up companies using company data already collected by government, so that companies have an equal, if not greater, chance of scaling because they are in the UK.

As in any investment portfolio targeted to 'growth', and given the impact scale-up companies have on economic growth and national competitive advantage, the UK's strategy should be adjusted toward increasing their proportion. Numerous examples from the UK and other countries highlight how an environment can be developed in which companies can successfully scale-up. Their success can also have a powerful effect on other entrepreneurs around them, helping to give them the confidence to scale. In essence, the aim should be to close the gap with the US in the medium- to long-term and then go on to become the best place in the world to scale a company.

The report makes recommendations for national and local government, universities, schools, colleges, large corporates and the media to improve the ecosystem for scale-up companies.

This plan focuses on six areas:

1. **Targeting, supporting, promoting and reporting on scale-up gap closure**

   Freeing data makes it possible for stakeholders in the economy to identify scale-ups. This is the most important thing government can do to help them grow. Collaborating with and promoting others who help scale-ups fulfil their potential is the second most important thing government can do.

2. **Accessing talent**

   For leaders of scale-ups, the number one problem that prevents them from being able to accept customer orders is access to talent[5], namely a skilled supply of people who they can hire. If they can't hire the staff, they can't accept the customer order. According to an interview with the CEO of job-tracking company, Adzuna, there were 990,000 open positions in the UK in July 2014[6] and the skills gap is forecast to deepen in the future.

3. **Developing scale-up leadership**

   The second most important factor cited by scale-up leaders as stopping them from growing their revenues faster (by accepting customer orders) is lack of capacity and experience in the senior leadership team. It is hard to grow a company hundreds of times faster than is 'normal' without the right training and support.

5 Boston Consulting Group (June 2014), Building a Digital City: Challenges, Opportunities and Lessons from London. Retrieved from http://mikebloomberg.com/files/Building-Digital-City-London.PDF

6 Adzuna accessed here: http://www.adzuna.co.uk/about-us.html

4. Increasing customer sales at home and abroad

Barriers exist that prevent companies creating new products and services for domestic markets, and selling successful products in other countries. A review of existing research and the survey of scale-up companies undertaken for this review found that eradicating barriers to this is third and fourth from top of the agenda for scale-ups, significantly ahead of finance.[7]

5. Financing scale-ups

Fast growing companies often turn to the US or Asia for their financing. The financiers there have developed mechanisms for assisting the companies they invest in to attract and retain talent and therefore to continue to be able to accept ever increasing customer orders. There is scope for improving financing so that entrepreneurs based in the UK have an easier time raising capital in the UK and do not need to go to the US or Asia.

Whilst it is helpful in the short-term that our fastest growing companies can access finance elsewhere, over a 20 year timeframe this will dampen UK economic growth. Although capital is available for entrepreneurs leading successful companies, if the company floats or is sold and the shareholders are not based in the UK, the gains do not flow into the economy. Additionally, the pressure on a company to re-domicile is greater if the majority of its funding is based abroad. This exacerbates the scale-up skills shortage.

6. Accessing infrastructure

Entrepreneurs say lack of access to infrastructure makes it more difficult to scale their companies in the UK than elsewhere. In the short-term, this should be addressed, but over the long-term, it is not of that great economic importance, but it is an irritant that can be removed. Examples of pain points cited by scale-ups range from planning laws that make it difficult to grow, to inflexible landlords that force them to enter into long leases, and broadband not being available on a timely or sufficient basis. Suggestions include sharing physical infrastructure with large established corporates.

The final chapters set out the impact analysis that demonstrates what kind of economic growth would result from our closing the scale-up gap between the UK and other leading economies.

The report is aimed at a wide-ranging audience with an interest in business and economic growth, including business leaders, investors, academics, educators, and local and national government. Every effort has been made to ensure the evidence contained here is transparent, verifiable and able to be peer-reviewed.[8]

7 Morris, R. (December 2013). What do the best Entrepreneurs want in a City? Lessons from the Founders of America's Fastest-Growing Companies. Retrieved from http://issuu.com/endeavorglobal1/docs/what_do_the_best_entrepreneurs_want

8 This is in line with guidance to evidence for policy as set out in: Intellectual Property Office (2013). Guide to Evidence for Policy Update 2013. Retrieved from http://www.ipo.gov.uk/consult-2011-copyright-evidence.pdf

METHODOLOGY

The findings are based on both primary and secondary research in the UK and other leading economies, including:

- A review of a wide range of academic research into the dynamics of business and economic growth. In particular, the report builds on research conducted into 'high impact' entrepreneurship by experts at the universities of Aston, Oxford, Cambridge, MIT and Harvard, as well as the Babson Entrepreneurship Ecosystem Project, Boston Consulting Group (BCG), Nesta, the OECD, Endeavor, Kauffman, the Enterprise Research Centre (ERC), Prelude, and McKinsey. The Enterprise For All report by Lord Young[9] and three recent reports focused on economic growth in the UK: the Adonis Review[10], the McKinsey/Centre for Cities report into economically significant clusters[11] and the Heseltine Report.[12]
- Workshops with practitioners, investors, business leaders and policymakers to understand current practice and future plans.
- Interviews with hundreds of scale-up policy-makers and practitioners from the UK and the world
- A survey of hundreds of UK scale-up leaders to understand from their point of view and in their voice what the main barriers were to their growth.[13]
- An evaluation of the most effective initiatives aimed at supporting scale-up companies, which are showcased throughout the report and at www.scaleupreport.org/casestudies (see Appendix 5 for further details).
- Commissioning Deloitte and Royal Bank of Scotland to support the analysis of the potential impact on the UK economy of closing the scale-up gap. Deloitte has published its analysis in full in a separate paper entitled *Scale-up Challenge: An Impact Report by Deloitte*. This includes a detailed methodology that sets out their approach and the assumptions underpinning the projections.[14]
- Peer-review by leading academic and policy experts whose research this report seeks to build upon and the review's Steering Committee (see Appendix 2 for the full membership).

9 Lord Young (June 2014). Enterprise for all: The relevance of enterprise in education. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/338749/Enterprise-forAll-lowres-200614.pdf

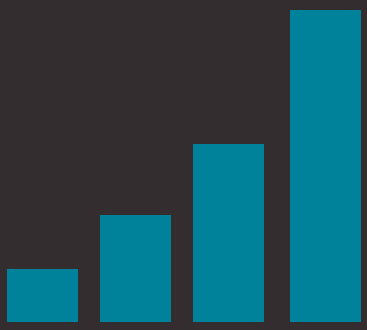
10 Adonis, A. (2014). Mending the Fractured Economy. Retrieved from http://www.policy-network.net/publications/4695/Mending-the-Fractured-Economy

11 Centre for Cities/McKinsey (2014), Industrial Revolutions: Capturing the Growth Potential. Retrieved from: http://www.centreforcities.org/assets/files/2014/14-06-26-Final-web-Industrial-Revolutions.pdf

12 Lord Heseltine (2012) No Stone Unturned; In Pursuit of Growth. Retrieved from https://www.gov.uk/government/uploads/system/uploads/

13 In association with YouGov recommendations.

14 In summary, Deloitte investigated a range of impact estimates for the UK economy for the period 2014-2034. These are based on a range of data sets, including the Office for National Statistics, the Department for Business, Innovation and Skills and Oxford Economics, as well as using Deloitte's Long-term Economic Growth Framework that sets out how levels of employment and productivity determine GVA. Deloitte controlled for the expected displacement of economic activity and deadweight to determine projections for the potential net impact of this report's



SUMMARY OF RECOMMENDATIONS

Summary of recommendations

Recommendation 1
National data sets should be made available so that local public and private sector organisations can identify, target and evaluate their support to scale-up companies, and evaluate their impact on UK economic growth.

Recommendation 2
Publicly funded organisations such as Local Enterprise Partnerships and cities seeking public funding should review and report on the extent to which the top 50 scale-ups in their areas are increasing their turnover and job growth from year to year with the objective of increasing the proportion of scale-ups with more than 250 employees by three per cent by 2025.

Recommendation 3
50 per cent of public funding and promotion currently reserved for 'entrepreneurship' should be directed towards collaborative initiatives based on evidence of these initiatives' track-record that demonstrates impact on employment and turnover growth of scale-up companies and the return on investment of their efforts.

Recommendation 4
A Minister should be made responsible for reversing the scale-up gap by 2025 with cross-departmental resources allocated, independent bodies named to monitor and a task-force appointed to deliver a scale-up report to the PM every November for the next five years.

Recommendation 5
The Department for Education and Local Enterprise Partnerships should ensure that Britain is in the top 5 of the OECD PISA rankings for numeracy and literacy by 2025 and use their convening and promotional power to ensure educational institutions guarantee that students at schools, colleges and universities come into contact with the top 50 scale-up business-leaders within 20 miles of their establishment.

Recommendation 6
Local Enterprise Partnerships and city / cluster/ ecosystem leaders should work with existing private collaborative initiatives to promote the top 50 scale-up companies in their jurisdiction to adults for the next phase of their careers.

Recommendation 7

A 'Scale-up Visa' should be made available from Local Enterprise Partnerships to the top local scale-up companies so they can recruit staff from overseas within two weeks of applying. These foreign workers help expand the distribution of local scale-up companies' existing products to foreign markets and help local scale-ups introduce new products and services.

Recommendation 8

Local Enterprise Partnerships, universities and the private sector should work together to ensure effective learning programmes are available in their areas aimed at leadership development of scale-ups.

Recommendation 9

The government should draw attention to scale-up companies and their leaders so that it is easier for them to act as role models to others and to find customers, partners and investors, both at home and overseas.

- UK Trade and Investment should ensure that scale-up companies are well represented on international trade missions, and publish details annually.

- Central and local government should publicly report on the level of procurement they source from scale-up companies and their funding should be reviewed in terms of the amount of procurement they do with scale-ups.

Recommendation 10

The impact of regulation 'cycle time' on rapidly growing companies should be a major consideration for regulators and agencies. Agencies that interact frequently with scale-ups, like the Border Authority, Listing Authority and HMRC should report on their efficiency in relation to regulatory peers in other countries.

Recommendation 11

Government and industry must ensure that progress in closing the finance-gap is maintained and review and report on the extent to which scale-ups, in particular, are supported.

Recommendation 12

Government and industry must ensure that progress in infrastructure areas is maintained and review and report on the extent to which scale-ups, in particular, are catered for.

SECTION 1

The UK's scale-up gap

Scale-up companies

UNDERSTANDING SCALE-UP COMPANIES

Defining scale-up companies

Scale-up companies achieve sustained periods of rapid growth. A number of measures are used to define scale-up companies. In this report, we use the following definition:

> **Scale-ups are enterprises with average annualised growth in employees (or in turnover) greater than 20 per cent a year over a three-year period, and with 10 or more employees at the beginning of the observation period.**

This is the same definition used by the Organisation for Economic Co-operation and Development (OECD),[15] Nesta[16] and Endeavor,[17] as well as many national and international statistics agencies. It has formed the basis of many academic studies on the impact of scale-ups on economies, some of which are detailed below.

The definition aims to identify companies which have experienced sustained company turnover (revenue) growth from customer orders, because this is the most reliable measure of whether customers are buying the company's products and services, and in turn this is a proxy for how innovative the company is. The definition also roots out micro enterprises with fewer than 10 employees at the beginning of the period because these companies can experience what appears to be rapid growth but is simply a function of their relatively small size.

Whilst there are more than two million businesses in the UK with more than one employee the Office for National Statistics data show that there are 8,923 scale-up firms in the UK, and Appendix 3 shows their distribution by Local Enterprise Partnership (LEP) area.

> **We know from our review of literature that cities are a very important 'unit of analysis'.**[18]

On that basis, on average a LEP will have approximately 228 scale-ups in their area. These in turn can be grouped into those scale-ups companies that have between 10 and 49 employees, between 50 and 250 employees and greater than 250 employees.

Scale-ups are innovative — as judged by their customers

Any company that is selling 20 per cent more each year to its customers over a period of three years is innovative.

15 See for example: OECD (2008). OECD Manual on Business Demography Statistics: High-Growth Enterprises. Retrieved from http://www.oecd.org/industry/business-stats/39974588.pdf

16 Nesta (2013). Exploring the Incidence and Spatial Distribution of High-growth Firms in the UK'. Retrieved from: Exploring the Incidence and Spatial Distribution of High-growth Firms in the UK'

17 See for example: Morris, R. (2011). High-Impact Entrepreneurship Global Report. Retrieved from http://www.gemconsortium.org/assets/uploads/1317315588GEM_Endeavor_2011_High_Impact_Report.pdf

18 Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates

19 Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates

20 Growth was defined in the study as more than five per cent in employment or turnover terms.

21 Royal Society (2014). Final Science 50 UK Map. Retrieved from: http://batchgeo.com/map/112dd4675c-0f085a83c87f398d112264

22 Royal Society (2014). Science 50 Index. Retrieved from: http://www.svc2uk.com/the-royal-society-science-50-index/

Scale-ups are not start-ups and we should drop the term 'SME'

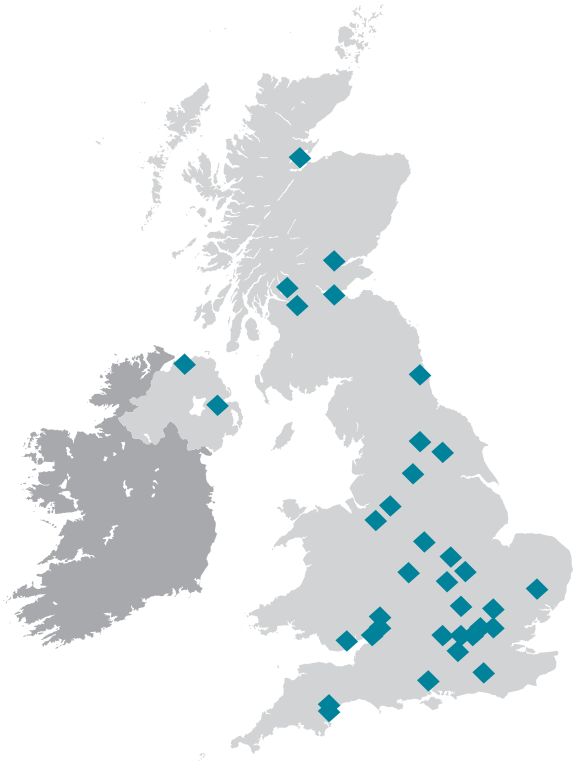
When we refer to scale-ups, this includes companies growing from 10 to 5,000 employees and beyond. Data suggest that most companies in the UK are not growing and many have no intention to grow significantly. The Department for Business, Innovation and Skills (BIS) estimates that, at the beginning of 2013, there were over 1.5 million small and medium enterprises (SMEs) in the UK that were not growing and had no wish to grow.[19] The same research, which was based on earlier research by Nesta from 2009 and the Enterprise Research Centre's (ERC) white papers (which are summarised later in this chapter), showed that almost 2.7 million SMEs in the UK wished to grow but were not doing so, and just 640,000 SMEs were growing based on this measure.[20]

Scale-ups are not a phenomenon only found in 'digital' or 'technology' or 'cities' or 'clusters'

Scale-ups are found throughout the UK and are prolific in the science and creative industries as well. The interactive map[21] below of the location of the UK's top 50 fastest growing science-based companies, according to the Royal Society's 'Science 50' list, illustrates the extent to which science-based scale-ups are a nationwide phenomenon. This shows that 36 (72 per cent) of the top 50 fastest growing science-based companies are located outside of London. These 50 science-based companies increased their revenues by an average of 92 per cent between 2012 and 2013, adding more than £600 million to national output last year and achieving a combined annual turnover of more than £1.3 billion.[22]

Appendix 3, which includes data on the total number of scale-up companies for each Local Enterprise Partnership (LEP) area, further illustrates this point. Scale-ups are found in each of the 39 LEP areas in England and 6,659 (75 per cent) of the total 8,923 scale-ups are located outside of London.

Figure 1.1: Map of the UK's top 50 fastest growing science-based companies



Scale-ups are also found in all sectors. As Table 1.1 shows, even the top 10 fastest science-based companies are spread across a wide range of industry sectors. These top 10 science-based companies increased their turnover by between 146 per cent and 452 per cent between 2012 and 2013. The list also shows how companies can scale-up a number of years after they were founded. The oldest science scale-up company was formed in 1961 and the youngest company was formed in 2011.

Table 1.1: Top 10 fastest growth science-based companies in the UK by percentage change in turnover 2012-2013[23]

	Company & Location	Turnover growth 2012-2013	2013 turnover	Sector	Year founded
1	Keyedin (UK) Ltd **Cleckheaton, West Yorkshire**	452%	£1.21m	Business & domestic software development	2011
2	Kirona Holdings Ltd **Cheshire**	308%	£6.04m	Business & domestic software development	2011
3	Maruho Europe Ltd **London**	288%	£4.51m	Research & experimental development on biotechnology	2011
4	Cizzle Biotechnology Ltd **Heslington, York**	255%	£0.40m	Research & experimental development on biotechnology	2004
5	Linkdex Ltd **Newton Abbott, Devon**	216%	£1.09m	Business & domestic software development	2008
6	IGas Energy Plc **London**	209%	£68.3m	Electric power generation	2003
7	Gardline Caledonia Ltd **Glasgow**	159%	£0.15m	Other research & experimental development on natural sciences and engineering	2011
8	Six Degrees Technology Group Ltd **London**	155%	£51.51m	Telecommunications	2010
9	Otas Technologies Ltd **London**	153%	£2.37m	Business & domestic software development	2011
10	Sertec Tube & Pressings Ltd **Birmingham**	146%	£29.66m	Forging/stamping	2011

Scale-ups have a dynamic effect on local ecosystems

Scale-up companies can be major contributors to local economies, especially with regards to acting as role models and inspiring others. Scale-up companies can have a particularly dynamic effect on local ecosystems when they are clustered together, buying goods and services from each other, attracting and developing

23 Royal Society (2014). Science 50 Index. Retrieved from: http://www.svc2uk.com/the-royal-society-science-50-index/

talented people and building networks with the local ecosystem. The top 50 fastest growing companies around Cambridge, for example, added more than 5,900 jobs between 2012 and 2013. As Table 1.2 shows, the top 10 fastest growing companies in Cambridge increased their turnover by 17 per cent and hired an additional 24 per cent to their workforces between 2012 and 2013.

Table 1.2: Top 10 fastest growth companies around Cambridge by increase in employment, 2012-2013[24]

	Company	Employees added 2012-2013	Total employed in 2012	Sector	Year founded
1	Dialight Plc	**487**	1,626	Physical Science and Engineering	1990
2	CSR Plc	**428**	2,474	Other	2001
3	ARM Holdings Plc	**265**	1,996	Information Technology and Telecoms	1990
4	PPD Global Ltd	**159**	1,123	Life Science and Healthcare	1981
5	Aveva Group Plc	**151**	1,053	Information Technology and Telecoms	1994
6	Brady Plc	**126**	269	Information Technology and Telecoms	1987
7	Blinkx Plc	**124**	234	Information Technology and Telecoms	2007
8	Elektron Technology	**112**	213	Physical Science and Engineering	2003
9	ABCAM Plc	**108**	405	Life Science and Healthcare	1998
10	Xaar plc	**84**	461	Physical Science and Engineering	1997

THE IMPACT OF SCALE-UPS ON THE UK ECONOMY

The Cambridge 50, the Science 50 and the Future 50 illustrate that in order to evaluate the aggregate impact that scale-up companies have on the UK economy, it is necessary to combine a number of trends from different data sets. The evidence on the impact of scale-up companies on job creation, the quality of jobs, national output, and productivity and company size is summarised below.

Job creation

Recent reports from the US, EU and other leading economies have demonstrated that in aggregate young companies have been responsible for 100 per cent of net

24 Cambridge 2 You (2014). Cambridge Cluster Map. Retrieved from: http://www.camclustermap.com/list/badge/top50emp

25 OECD (2014), The Dynamics of Employment Growth: New Evidence from 18 Countries. Retrieved from: http://www.oecd-ilibrary.org/docserver/download/5jz417hj6hg6.pdf?expires=1408440163&id=id&accname=guest&checksum=67DB405D7A298298BF7C62BD82982CCE

new job creation. The OECD has conducted a detailed study across 18 countries analysing the link between the dynamic of business growth (as measured by employment) and economic growth. This found that companies which have been in existence more than five years, in aggregate, reduced employment every year between 2001 and 2011; whereas, companies which were less than five years old were, in aggregate, net job creators in each of these years.[25]

According to the same OECD study, between 2001 and 2011 the share of net job creation by UK small- and medium-sized companies which were less than five years old was 2.6 times their share of total employment.[26] Within this group of new firms, a small proportion was driving growth. Only around 5 per cent of UK companies were growing three years later, just over a third were inactive, and the rest were stagnant.[27]

Similarly, Nesta's much cited 2009 report, The Vital Six Percent, reported that economic growth in the UK has primarily been driven by a small number of high-growth companies. This report was based on a longitudinal study conducted by Anyadike-Danes et al[28] of the growth rates of companies — using the OECD's high-growth firm definition — over two three year periods: 2002-05 and 2005-2008. This was not the same group of firms tracked over six years but two different panels each tracked over one of the three year periods. Nesta reported that Anyadike-Danes et al had found:

"Six per cent of UK businesses with the highest growth rates generated half of the new jobs created by existing businesses between 2002 and 2008."[29]

Subsequent work by the Enterprise Research Centre (ERC) has found that since the recession, between six and seven per cent of UK firms are high-growth, equating to around 10,000 firms in the period between 2010 and 2013.[30] These high-growth firms tend to be small. Around four fifths employ fewer than 50 people, 15 per cent are medium sized with between 49 and 249 employees, and only 5 per cent have more than 250 employees.[31]

The ERC, which adopted a different approach to the OECD definition of high-growth firms which was used in the original work published by Nesta, found that a subset of these high-growth businesses, comprising less than one per cent of the total business population, accounted for more than a third (36 per cent) of net job creation between 2008 and 2013.[32] The ERC has also highlighted the sustained impact of a small group of high-growth firms on job creation. Its 15 year study of start-up firms found that just 11 per cent of those born in 1998 survived until 2013.[33] Of those that survived 15 years, a small group of high-growth firms – around six per cent – yielded 40 per cent of all the jobs added by surviving firms by the end of the period.[34]

> **This all points to how difficult it is to have a policy that is focused on the 'size' or 'age' or 'geographic focus' of companies.**

26 OECD (2014), The Dynamics of Employment Growth: New Evidence from 18 Countries. Table 7, p.41.

27 OECD (2014), The Dynamics of Employment Growth: New Evidence from 18 Countries. Figure 10, p.33.

28 Anyadike-Danes, M., Bonner, K., Hart, M. & Mason, C. (2009) Measuring business growth: high-growth firms and their contribution to employment in the UK. NESTA. Retrieved from: http://www.nesta.org.uk/publications/measuring-business-growth

29 Nesta (January 2014). Increasing 'The Vital 6 Percent': Designing Effective Public Policy to Support High-growth Firms. Retrieved from http://www.nesta.org.uk/sites/default/files/working_paper_-_increasing_the_vital_6_percent.pdf

30 Anyadike-Danes, M. and Hart, M. (February 2014) Moving on from the 'Vital 6%'. Enterprise Research Centre (ERC). Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/02/ERC-Insight-No_3.pdf

31 Anyadike-Danes, M. and Hart, M. (February 2014) Moving on from the 'Vital 6%'. Enterprise Research Centre (ERC). Footnote 11, p.6. Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/02/ERC-Insight-No_3.pdf

32 Anyadike-Danes, M. and Hart, M. (February 2014) Moving on from the 'Vital 6%'. Enterprise Research Centre (ERC). Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/02/ERC-Insight-No_3.pdf. Based on data from the Office for National Statistics' Business Structure Database and the Inter-Departmental Business Register

33 Enterprise Anyadike-Danes, M. and Hart, M. (February 2014) Moving on from the 'Vital 6%'. Enterprise Research Centre (ERC). p.5. Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/02/ERC-Insight-No_3.pdf p.4.

34 Anyadike-Danes, M. and Hart, M. (February 2014) Moving on from the 'Vital 6%'. Enterprise Research Centre (ERC). p.5. Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/02/ERC-Insight-No_3.pdf

The ERC view is that policy based on size is less likely to be effective than age, which is a key factor in growth. This report emphasises that policy should be focused on consistent growth over successive periods because such growth (scaling up) is associated with management issues that are known and solvable.

The quality of jobs

There is evidence to show that scale-up companies help create high quality jobs with more satisfied employees. The Endeavor Programme, which assists companies around the world to grow, has helped companies to achieve 5.4 times the rate of growth in employment of comparable firms in their own countries. Of the employees surveyed in these high-growth companies who had joined the company from another employer, 80 per cent stated that they were 'satisfied' or 'very satisfied' with their current job compared to 46 per cent when asked about their previous job.[35]

National output

As with employment growth, a small group of scale-up companies account for a significant proportion of growth in national output, whereas most start-up companies have very little impact on it. Research by the academic David Storey has found that the median annual sales of a six-year-old firm in the UK are less than £23,000.[36] This research also found that only a small group of start-ups achieve significant growth in revenues – just one per cent have sales of more than £1 million six years after they start.[37]

Productivity and company size

Evidence shows that higher (turnover) growth firms are responsible for generating faster productivity growth and ultimately higher levels of productivity – although it should be noted that scale-up companies tend to start from a low-productivity base and that those with employment growth (and not turnover growth) do not generate faster productivity growth.

Cross-country research by Bravo-Biosca indicates that economies with five per cent more firms in the static class of zero growth are associated with a one percentage point reduction in annual total factor productivity growth. This is a marked effect and suggests that higher growth firms drive productivity growth, a finding echoed by other research.[38]

Related to this is the fact that larger businesses tend to be more productive than smaller businesses. BIS data show that in the UK average turnover per employee is:

- £170,000 for firms with 250 plus employees
- £164,000 for firms with 50 to 249 employees
- £134,000 for firms with between 10 and 49 employees[39]

35 Lunani, H. (2012) Endeavor: Multiplying Impact through High Quality Jobs. Retrieved from http://share.endeavor.org/pdf/GlobalEmployeeSurveys.pdf

36 Storey, D. (2008). Evaluating SME Policies and Programmes: Technical and Political Dimensions. The Oxford Handbook of Entrepreneurship. Retrieved from: http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199546992.001.0001/oxfordhb-9780199546992-e-10

37 Storey, D. (2008). Evaluating SME Policies and Programmes: Technical and Political Dimensions. The Oxford Handbook of Entrepreneurship. Retrieved from: http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199546992.001.0001/oxfordhb-9780199546992-e-10

38 Nesta (2013). High-growth Firms and Productivity – Evidence from the United Kingdom. http://www.nesta.org.uk/publications/high-growth-firms-and-productivity-evidence-united-kingdom

39 Based on: Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates

Clusters also have a significant impact on productivity. The top 50 fastest growing companies in Cambridge, for example, have average revenues per employee of £229,000, and have also created 6,000 additional jobs in the past year. One of these companies is ARM, the world leading semiconductor intellectual property supplier, which had revenue per employee of £288,577 in 2012.[40]

THE UK'S SCALE-UP GAP

The international evidence is clear that a small number of high-growth firms are vital to driving job growth and overall economic growth.

As a result, it is critical to the health and future prospects of the UK economy that we maximise the potential of our firms to create a healthy pipeline of high-growth firms – termed 'scale-ups' throughout this report — that drive growth and prosperity. However, evidence points to a UK 'scale-up gap' both with some international comparators and with previous business growth performance seen in the UK.

International comparisons clearly demonstrate that European countries have a larger share of stable, low-growth firms relative to the US where firms that grow more than five per cent or shrink more than five per cent a year are more prevalent. This is taken to highlight the strong dynamism of the US economy relative to European countries.[41] This is also true of the UK. As charts 1.1 and 1.2 show, the UK has a far higher proportion of static firms than the US, and although the UK has a slightly higher proportion of firms growing at more than 20 per cent per annum, it has a significantly lower proportion growing at between one and 20 per cent. UK firms are also on average significantly smaller than US firms. Furthermore, as cited earlier, recent BIS analysis also showed that almost 2.7 million SMEs in the UK wished to grow but were not growing (growth defined as more than five per cent in employment or turnover terms), and just 640,000 SME firms were growing on this measure.[42]

The gap in performance is not only with the US but with the fairly recent performance of high-growth firms in the UK. A recent study by Mark Hart of the ERC and Aston Business School has shown that the contribution of high-growth firms (HGF) to the UK economy has fallen in recent years, both absolutely and in relative terms. This research suggests there has been a reduction in the level of employment generation by each firm on a per firm basis. The 2002 to 2005 cohort of HGFs produced an average of 167 net jobs per HGF in the UK[43] which compares with 83 net jobs per HGF in the UK between 2010 and 2013. Some of this reduction in job generation could be due to the recession, although the downward trend seems to have been well underway prior to 2009 when the recession really took hold in the UK. Given the average impact is roughly half what is was less than a decade earlier, it is clearly important to understand the reasons behind this trend and attempt to reverse this decline.

In addition to lower economic impact of high-growth firms in the UK in recent years, there has also been a shift towards smaller, often less productive, businesses.

40 Cambridge Cluster Map (2014). Retrieved from: http://www.camclustermap.com/list/badge/top50rev (accessed 9 Oct 2014)

41 Nesta (2011). A Look at Business Growth and Contraction in Europe

42 Department for Business, Innovation and Skills (BIS) (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates; BIS (2013) Small Business Survey, 2013. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/204183/bis-13-88. Other BIS research in the UK on growth ambition shows that when looking at substantive growth ambition – i.e. those who are really committed to growth – ambition is much more closely aligned to actual growth.

43 Anyadike-Danes, M., Bonner, K., Hart, M. & Mason, C. (2009) Measuring business growth: high-growth firms and their contribution to employment in the UK. Nesta. Retrieved from: http://www.nesta.org.uk/publications/measuring-business-growth

Since 2000, there has been an increase in the overall business population. This has been caused by a 41 per cent increase in the total number of SMEs between the start of 2000 and the start of 2013. However, these changes were driven by the increase in the number of businesses without employees which have less of an impact on economic growth. This underlines the point that scale-ups rather than start-ups should be the focus. The quality of entrepreneurs matters more than the quantity. Fewer than four per cent of all UK start-ups have 10 or more employees 10 years later.

There has also been a drop in the number of large firms in the UK, both absolutely and in relative terms. The number of businesses employing 250 or more employees in the UK is eight per cent lower [44] than it was in 2000[45], with business numbers falling from 7,200 at the start of 2000 to 6,600 at the start of 2013. The UK has a lower share of large businesses than many international peers including the US. Large firms with more than 250 employees account for 0.4 per cent of firms in the UK but 0.7 per cent in the US.[46] Closing the scale-up gap could help address this trend and in doing so raise productivity.

Related to this shift towards smaller companies, allocative efficiency has also fallen significantly in the UK. Allocative efficiency refers to the extent to which resources such as labour and capital are skewed towards more productive companies. An economy in which highly productive businesses scale-up and less productive ones shrink is one in which allocative efficiency is increasing, and when allocative efficiency increases so does productivity. Nesta recently showed that allocative efficiency fell significantly in Britain between 1998 and 2007. If Britain's productive resources were as efficiently allocated in the later part of the period (2004 to 2007) as they had been in the earlier part (1998 to 2000), aggregate productivity in Britain would have been 7.4 per cent higher. This represents around £96 billion of foregone GDP. [47]

There are a number of interrelated factors at work in the UK economy, including a trend towards smaller businesses and a productivity gap with our international peers. These issues underline the importance of focusing on increasing the number of scale-ups rather than start-ups. The quality of entrepreneurs matters more than the quantity, especially given that fewer than four per cent of all UK start-ups have 10 or more employees 10 years later.

This 'scale-up gap' reduces the UK's long-term competitive advantage because it is linked to productivity.[48] It follows that closing that gap will increase productivity and long-term competitive advantage.

Closing the scale-up gap can play an important role in driving productivity growth and subsequently raising the overall performance of the UK economy. More high-growth firms developing into businesses of scale can rebalance the business base back towards larger firms and away from a trend to smaller, low productivity firms. The scale-up gap reduces the UK's long-term competitive advantage because it is linked to productivity.[49] It follows that closing that gap will increase productivity and long-term competitive advantage.

44 Links into idea of holding back aggregate productivity growth outlined in the following recent paper: Bravo–Biosca, A. and S. Westlake (2014). The Other Productivity Puzzle: Business Dynamism and Productivity Growth Before the Crisis. Nesta. Retrieved from: http://www.nesta.org.uk/publications/other-productivity-puzzle-business-dynamism-and-productivity-growth-crisis http://www.nesta.org.uk/sites/default/files/the_other_productivity_puzzle.pdf

45 Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates

46 Criscuolo, Gal and Menon (2014), The Dynamics of Employment Growth: New Evidence from 18 Countries. OECD Science, Technology and Industry Policy Papers No. 14

47 Bravo–Biosca, A. and S. Westlake (2014). The Other Productivity Puzzle: Business Dynamism and Productivity Growth Before the Crisis. Nesta. Retrieved from: http://www.nesta.org.uk/publications/other-productivity-puzzle-business-dynamism-and-productivity-growth-crisis

48 http://www.nesta.org.uk/sites/default/files/a_look_at_business_growth_and_contraction_in_europe.pdf

49 Nesta (2011). A Look at Business Growth and Contraction in Europe http://www.nesta.org.uk/sites/default/files/a_look_at_business_growth_and_contraction_in_europe.pdf

Chart 1.1: The difference in average annual company growth rate between Europe and US

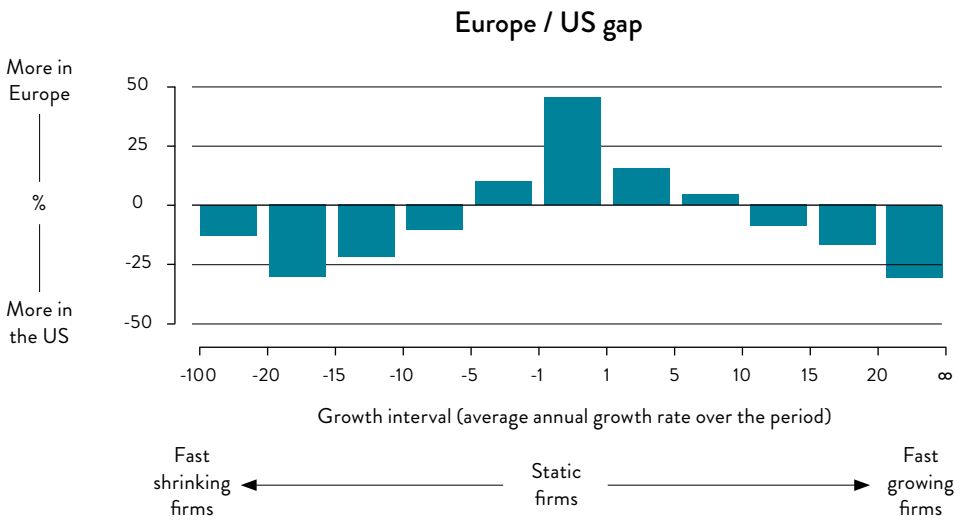


Chart 1.2: The difference in average annual company growth rate between the UK and US

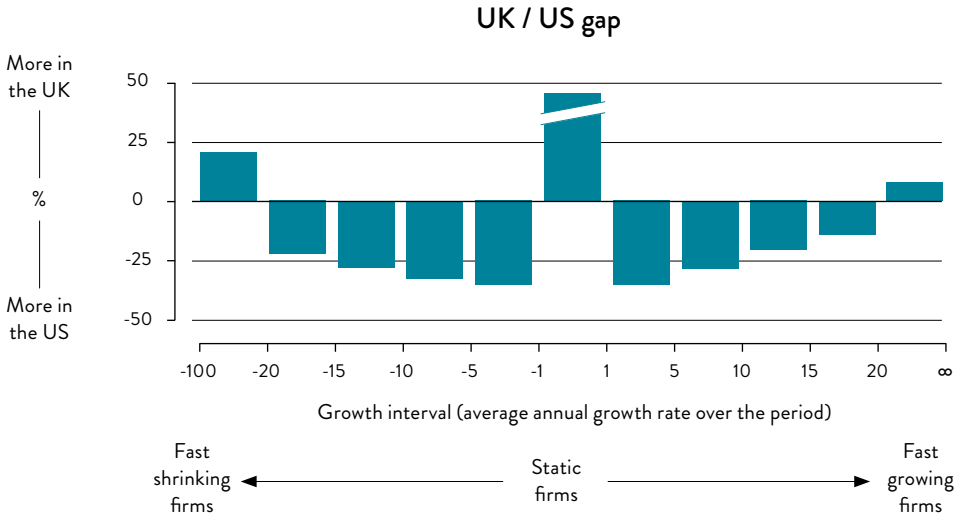
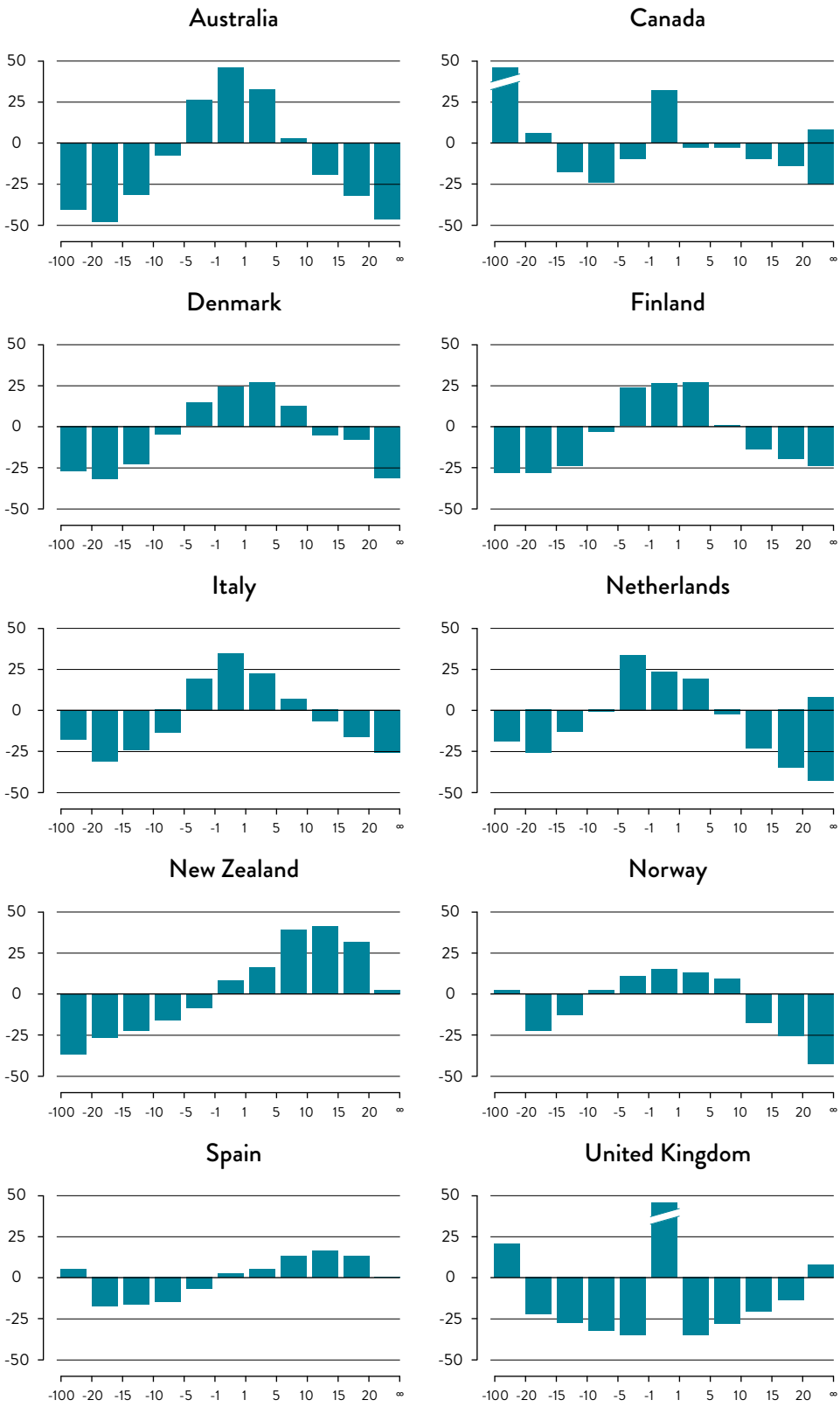


Chart 1.3: The scale-up gap around the world



Business growth differences robust across most countries (exc. bubbles), sectors and sizes.

The challenges of scaling

THE CHALLENGES ASSOCIATED WITH SCALING A COMPANY

It is not too hard to understand why scaling up a company is difficult. Scale-ups grow dozens if not hundreds of times faster than most companies or other organisations such as the government or a university.

Imagine that in January there are 10 employees, in March there are 30, in July there are 50 and so on. Who do you report to? Who reports to you? Which customers are buying what?

In growing from 10 to 100 employees, to 500, 1,000 and so on, companies change beyond all recognition, going through different requirements for capital, management, skills and organisational structure. The people who work within these scale-up companies can experience 'growing pains' due to shifting demands. as detailed in Table 2.1. This can derail companies from their rapid growth trajectories.

Tables 2.1 and 2.2 demonstrate the transformation that businesses experience during a period of high-growth. Over a three year period an average firm in the 50 to 249 employment band, with 98 employees and a turnover of £16 million, will create an additional 141 jobs and £23 million in turnover.

Table 2.1: High-growth dynamics by employment bracket[49]

Employment band	Average employment at start of period	Average turnover at start of period (£m)	Jobs created	Additional turnover (£m)	Average employment at end of period	Average turnover at end of period (£m)
10-49	20	2.6	28	3.8	48	6.4
50-249	98	16.0	141	23.1	239	39.1
250+	1,502	258.1	2,160	371.7	3,662	629.8

Note: Based on business growth of 35 per cent per year over three years or 244 per cent in total.

KEY CHALLENGES FOR LEADERS OF UK SCALE-UP COMPANIES

When asked what prevents them from growing faster, leaders of scale-up companies are remarkably consistent, as shown in a significant amount of international research. The bibliography at the end of this report showcases some of the key academic studies.

50 Source: RBS analysis based on: Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates; Nesta (2010). Growth Dynamics Research Report. Retrieved from; http://www.nesta.org.uk/publications/growth-dynamics

51 Endeavor (2014). What do the Best Entrepreneurs Want in a City? Retrieved from; http://issuu.com/endeavorglobal1/docs/what_do_the_best_entrepreneurs_want

Table 2.2: Common 'growing pains' experienced by scale-up companies

Phase	Number of employees	Key challenges
Finding product-market fit	10 to 50	• As companies expand their employees from 10 to 50, it becomes harder for everyone to be a generalist and necessary to recruit people from other companies or from universities. • Leaders struggle with moving from 'knowing everyone' to having a limited number of people reporting to them.
Product-market fit	50 to 100	• As companies grow rapidly from 50 to 100 employees, they typically need to introduce formal processes and staff with managerial and administrative experience in implementing these. This can bring about a 'culture clash' with 'veteran' employees who have been used to more informal modes of working, and it can be uncomfortable for many who are unaccustomed to so much change. • Companies will often have to re-locate premises at least once during this phase. New systems will have to be adopted and the company will have to learn to train people as it takes on greater numbers.
Product or geographic extension	100 to 500	• This phase often requires numerous changes of premises and locations to meet the requirements for new domestic and international markets. It can be unsettling for employees more accustomed to a stable business. • The company will need to introduce new systems and experienced leaders who have worked in larger companies. Employees and advisors who have worked in a scale-up during this growth stage know what to do. For everyone else, this can be particularly difficult.
Product and geographic extension	500 to 2,000	• This phase often involves relocating several times and increased specialisation across geographies and product lines. Once a company has 'product-market fit', it needs to do one or both of these to get to the scale achieved in other countries. • This is why helping companies with trade missions is so critical and is especially important to the UK because our market of 64 million consumers is smaller than others. UK scale-ups have to export more if they are to scale at the rate of similar companies in the US, for instance.

A particularly rich source of data is the Endeavor survey *What do the best entrepreneurs want?*, which studied a major sample of successful scale-up entrepreneurs.[51]

Based on a survey of 362 CEOs for this review conducted by YouGov, interviews carried out with scale-up companies and a review of other research, the five most critical challenges which need to be addressed are identified below, in order of importance:

1. Recruiting people with the skills and ambition required for technical and business roles

The scale-up companies interviewed for this review were clear that they struggle most to access people with technical and business skills, including young and more experienced candidates.

> **61 per cent of the scale-up leaders in our survey said they would grow faster if they could hire from established businesses more easily.**[52]

These skills are vital for rapidly scaling businesses to develop products and services, navigate new markets and develop their business structures. Many scale-ups said that they often have difficulties finding competent talent and often have to recruit overseas.

Skills shortages are identified in numerous other major pieces of research. The Department for Business, Innovation and Skills' survey of 5,700 UK businesses, for example, found that almost half of high-growth firms cited skills shortages as an obstacle to growth, compared to a quarter of businesses which were not growing.[53] Research by the Prince's Trust found that almost three-quarters (73 per cent) of employers believe that skills shortages will lead to a significant skills crisis across the UK in the next three years, which would hit the economy and damage the UK's ability to compete internationally. Worryingly, two-fifths (43 per cent) predict this will happen within the next 12 months.[54]

Similarly, the Growth Accelerator's survey of 'hyper-growth businesses' — which either achieved at least a 65 per cent increase in GVA in 2012/13 or GVA growth of £500,000, and had more than 10 people — found that 56 per cent of these businesses said that attracting and retaining talent was a challenge. In comparison, only 16 per cent said that their biggest challenge was resourcing growth, 12 per cent said sales and marketing, and 12 per cent said cash flow. 60 per cent of hyper-growth business leaders also said that they were worried about losing good people. This is compared to eight per cent who worry about losing customers, 20 per cent who are concerned about competition and 24 per cent who are anxious about cash flow.

2. Developing business leaders with the ability to manage rapid growth

87 per cent of the scale-up companies surveyed for this review reported that they would grow faster if it were easier to develop their leaders.[55]

> **80 per cent said they would grow faster if they could find mentoring or coaching schemes that were effective.**[56]

Companies experiencing rapid growth need to learn to cope quickly with changing demands, but many find it hard to develop their managerial and leadership talent

52 Question 2 of YouGov Survey compiled 19 Sept 2014.

53 BIS (2013). Small Business Survey 2012: Growth Special Report. Table 8.1, p.32. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/204183/bis-13-88

54 Prince;s Trust (2014). The Skills Crunch: Upskilling the Workforce of the Future http://www.princes-trust.org.uk/pdf/SkillsCrunch.pdf?utm_source=CFE+Primary+Newsletter+List&utm_campaign=79514592b2-CFE_Newsletter_10th_Aug&utm_medium=email&utm_term=0_fea9965e1f-79514592b2-77565333

55 YouGov Scale-up Survey question 6. Sept 2014

56 YouGov Scale-up Survey question 7. Sept 2014

57 YouGov Scale-up Survey question 3. Sept 2014

while their organisations are growing so fast. Some experts in implementing new processes and delivering organisational change can be recruited, and some of these may have experience with rapidly growing companies, however a scale-up will generally need to develop talent in-house to meet their own specific needs.

This requires taking the time to learn from other companies and entrepreneurs who have scaled businesses successfully, and being open to the latest, cutting-edge ideas. For a rapidly growing business this can be difficult to organise and deliver, especially when such activities are set against other competing demands. There is a need for the stakeholders in the ecosystem to connect scale-up leaders with people experienced in scaling-up businesses. The government and the media can help by promoting initiatives which do this effectively.

3. Selling to large companies and government, entering new markets and gaining regulatory approval for new products

Scale-up companies, by their very nature, are driven to develop new products and services and to increase demand for these domestically and internationally as quickly as possible. Once they have discovered that there is demand for what they are doing, they need to be able to diversify their products and services or their geographic reach in order to expand. The former usually requires investment in innovation, while the latter tends to need investment in new people. Both necessitate investment prior to these new revenue sources coming in, and there can be a significant time lag. The fact that the UK is a relatively small market outlines how critical exports are in order to stimulate economic growth. Additionally, the job displacement is less if sales are exports, rather than domestic.

A single contract from a large corporate or government department or agency — given the sheer size of some of these contracts — can have a major impact on company growth rates.

> **However, in the UK 55 per cent of scale-ups surveyed for this review said they that find it difficult to supply to large corporates and the public sector.**[57]

These companies cite the lack of transparency, transaction costs and complexity. Scale-ups also find it difficult to make the leap into overseas markets, given the many challenges and risks which this entails. In addition, the UK often lags behind other countries in the time taken to give regulatory approval to new products.

A large proportion of the scale-up leaders that have chosen to re-locate their headquarters from the UK to the US cite the time taken for decisions by governments, regulators and banks — or the 'cycle time'. A recent study by the Financial Conduct Authority, for example, highlighted the challenges for innovative companies in the highly regulated financial services sector. Entrepreneurs cited challenges of having to "educate the regulator" about their innovation and many

"felt that more can be done to adapt to market developments and changing times more quickly, with examples given of digital signatures and crypto-currencies."[58]

Giving scale-up companies access to the huge buying power of large companies and government, as well as helping them to forge links and overcome hurdles in new markets, could have a major impact on their ability to reach a globally competitive scale.

4. Attracting appropriate growth capital

The key issue is not necessarily a lack of financial capital in the economy but that this is not invested in the companies which are growing the fastest. As Clayton Christensen and Derek van Bever have argued:

"The crux of the problem is that investments in different types of innovation affect economies (and companies) in very different ways—but are evaluated using the same (flawed) metrics. Specifically, financial markets—and companies themselves—use assessment metrics that make innovations that eliminate jobs more attractive than those that create jobs." [59]

As a result, many scale-up companies are confronted with an insufficient pool of follow-on capital to match their needs. Investors often have short-term goals which do not match the long-term aims of the company, while banks are considered to be uninterested in financing expansion. The Big Innovation Centre's research has also shown that banks are 70 per cent more likely to reject innovative companies – defined as those which have introduced a new product or service in the past 12 months – for finance than non-innovative companies.[60]

This can mean that some UK scale-up companies are forced to raise capital in the US or Asia. Although this still means that they gain finance, some of the returns from a sale or a flotation could inevitably flow out of the UK economy. If the majority of funding is from overseas, there can also be pressures from investors for companies to re-domicile.

"There is a lack of follow-on capital in the UK, compounded by short-term investor mind-sets"

In different ways BGF (Business Growth Fund) and BBB (the new British Business Bank) should go some way to addressing these issues. Since its launch in 2011, BGF has directly invested over £400m of growth capital in more than 70 British scale-ups, with more than £200m deployed in the past 15 months. The British Business Bank has invested almost £150 million in a number of growth finance funds and lenders in the UK scale-up sector: European Capital, Praesidium, BMS Finance, BOOST&Co and Beechbrook. It is hoped that in the next few years both organisations will be able to report on the enterprises they have directly and indirectly supported and the impact that their investments have made in terms of jobs and wealth creation.[61]

58 Financial Conduct Authority (2014), Project Innovate: Feedback from Roundtables, p.3 and p.6. Retrieved from http://www.fca.org.uk/your-fca/documents/project-innovate-feedback-from-roundtables

59 Christensen, C. & Bever, D van (June 2014). The Capitalist's Dilemma. Retrieved from http://hbr.org/2014/06/the-capitalists-dilemma/ar/1

60 Big Innovation Centre (2013), Credit and the Crisis: Access to finance for innovative small firms since the recession, p.3

61 Further details of these funds can be found on the following websites: www.europeancapital.com; http://praesidian.com/PCE.php

5. Accessing research and development facilities and finding suitable premises

Entrepreneurs cite a range of issues arising from the UK's infrastructure. These include problems with planning laws which restrict their ability to expand their premises, inflexible landlords forcing companies to enter into onerously long leases, and difficulties in accessing essential services such as high-speed broadband. Scale-up companies also highlight their difficulties in accessing facilities and equipment for carrying out research and development for new products and services. Investing in this infrastructure is seen to be too costly and there are too few opportunities to partner with universities or large corporates.

"Planning laws are a major obstacle to growth for most serious companies that want to grow their premises...there is a need to identify the appropriate spaces in each city or region to house growing firms."

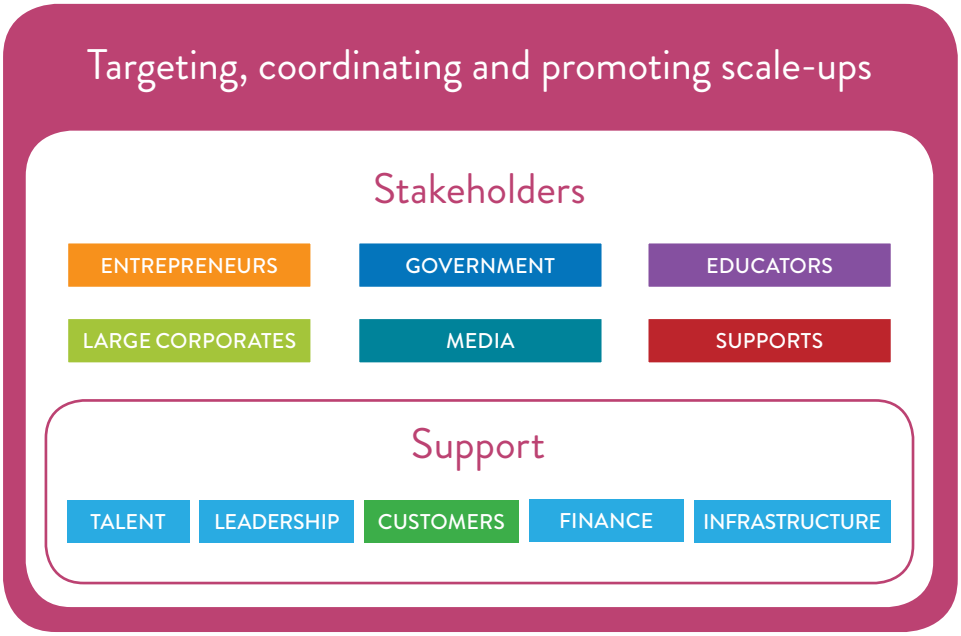
CHAPTER 3

Is it possible to close the gap?

Despite the importance of scale-up companies, we seem to hear and read more about large and small companies. This is wrong because it masks the incredible dynamism in our economy: with 100 per cent of net new jobs from companies less than five years old and 40 per cent of GDP comprised of companies less than 15 years old, we cannot pretend that companies are 'static'. In addition to the release of critical information on scale-ups, there is an opportunity to use the 'promotional power' of government to draw attention to scale-ups so that it is easier for them to attract the talent they need to serve the customers that are buying their innovative goods and services. This will help re-allocate scarce resources to where they are needed most.

Acting together, an ecosystem can be developed that assists scale-up leaders to overcome scale-up challenges and lessons from the most effective policies and practices from around the globe provide the basis for a set of interventions that work.

Figure 3.1: Key factors for a successful scale-up ecosystem



ADJUSTING THE UK'S GROWTH STRATEGY TOWARDS SCALE-UPS

The UK's competitive strategy should aim to have the same proportion of scale-up companies in our business population as the US, if not more, within the next 20 years.

There are three key reasons why the UK can improve its competitive advantage by focusing on scale-ups:

1. Scale-ups can be identified and targeted

The UK government has released data on these companies in a useable format via Companies House for years, but there is a significant delay of 12 to 18 months. Releasing information to the ecosystem earlier, as occurs in Denmark, would allow for accurate and timely targeting. To revisit our medical analogy, much can be gained by offering interventions once you have a 'diagnosis'.

This data-driven evidence-based approach avoids 'picking winners' or supporting companies with particular characteristics which are not relevant to their growth rates, such as being 'small' or 'young' or 'large' companies.

2. We can treat them — successful 'interventions' have emerged from both the UK and elsewhere

Scale-ups often face the same sort of addressable problems. The case studies detailed throughout this report and in the appendices show that scale-up success rates have been improved by scale-up programmes in as many as 20 countries. This suggests that it is more about the nature of the intervention (treatment) than something unique to the US economy or UK entrepreneurs (patient). Our survey results support this as well.

The case studies illustrate that successful ecosystems require the collaboration of different groups such as entrepreneurs, investors, universities, research organisations, science parks, businesses and local government. It is by working together towards a common vision that these groups make it easier to start and grow a business and resolve the challenges common to the cluster. The highest impact examples of scale-up initiatives are 'ecosystem plays' which involve each of the key members of the ecosystem, namely: entrepreneurs, government, large corporates, investors and educators. These programmes often include joint initiatives, which are co-financed by different groups and have shared ownership and accountability. This helps strengthen the entrepreneurial ecosystem, with the combined efforts of the actors significantly boosting outcomes in terms of job creation and turnover growth.

The role of large corporates is particularly worth highlighting as they play a crucial role in the most successful innovation ecosystems, both directly through their involvement in initiatives aimed at supporting scale-ups, and indirectly by purchasing their products and services. Large corporates (whether growing or shrinking) are also a source of leadership talent for scale-up companies.

A strategy focused on achieving economic growth via supporting scale-up companies is not 'anti-corporate' – this is a vital message for all concerned. The success of scale-ups relies heavily on the coexistence of large domestic and foreign owned companies, as well as smaller companies. The needs of an international corporate and a scaling firm are markedly different. However, exploring and capitalising on the benefits that each could bring to the other, while working to ensure that the conditions are in place for businesses of different types, sizes and ambitions to thrive, is what will serve to develop a vibrant ecosystem.

3: We can afford it — if we act in collaboration with other stakeholders in the community the businesses are a part of

Targeting scale-ups can have a dramatic impact on economic growth. The US, for example, invests around 0.2 per cent of national output annually in high-growth companies which, in turn, now have revenues that account for some 21 per cent of US national output.[62]

The benefits of achieving the additional economic growth by providing targeted interventions on scale-up firms should not require significant additional funds from central government, especially if their simplification efforts continue and it is done in collaboration with business and universities.[63] The Endeavor programme has cost an average of £405 for every job created in emerging economies, and this has been financed largely without public funding (see case study below). Furthermore, the Endeavor programme is financed in most cases without any public support, relying on private sector donations of funding and time, with a volunteer network of more than 1,000 global and local business leaders.

Similarly, Mass Challenge and VentureFest have created more than 4,000 jobs between April 2010 and September 2013 at a cost of £1,285 per job, with just four per cent of funding coming from the public sector. In stark contrast, the National Audit Office has shown that the UK government's Regional Growth Fund has cost an average of £37,400 per job created.

To make the UK the best place in the world for scaling up a company, and to maintain our national competitive advantage, we need to identify scale-ups and help the existing effective initiatives expand further. Assuming that scale-ups can be identified, a number of tried and tested techniques have been developed which allow them to overcome the barriers they commonly face. The case studies throughout this report bring to life what has been done by others and emphasise why further support is needed.

The recommendations in this report are geared to this end. Based on the framework set out in Figure 3.1, recommendations involve collaboration from a range of actors in the scale-up ecosystem, including entrepreneurs, large corporates, educators, investors and government, with a call to action for these actors to work together to improve outcomes.

62 IHS Global Insight and National Venture Capital Association (2012). Venture Impact: The Economic Importance of Venture Capital-Backed Companies to the U.S. Economy. Retrieved from http://www.nvca.org/index.php?option=com_docman&task=doc_download&gid=786

63 This assumes that training on eco-system economics can be made available from existing training budgets.

Case study: Endeavor (emerging economies)

Endeavor is a not-for-profit organisation dedicated to high-impact entrepreneurship in emerging economies. Endeavor entrepreneurs are provided with customised services from a volunteer network of more than 1,000 global and local business leaders who serve as mentors, advisors, connectors, investors, and role models. They advise on challenges including corporate governance, structures and going global.

The scale-ups selected by Endeavor grow an average of 68 per cent each year in the two years immediately after completing the programme and create jobs 5.4 times faster than peer companies. These scale-ups have created a total of 400,000 jobs and now have annual revenues of $6.5 billion.

Endeavor has rigorously measured outcomes and evaluated the impact on company growth, helping it continuously improve its offering. Furthermore, the Endeavor programme is financed in most cases without any public support, relying on private sector donations of funding and time, with a volunteer network of more than 1,000 global and local business leaders.

A key strand which underpins all the recommendations and which all members of the ecosystem need to work together on is for there to be greater targeting, supporting, promoting and reporting on closing the scale-up gap using data already collected by government. This is set out in more detail in Chapter 4. This is one of the key lessons from approaches to support scale-ups which have been undertaken in other countries.

The recommendations address each of the key barriers to scaling a company identified in Section 1 of this report: attracting talent (Chapter 5), developing scale-up leadership (Chapter 6), attracting customers (Chapter 7), financing scale-ups (Chapter 8) and accessing infrastructure (Chapter 9).

SECTION 2

Closing the UK's scale-up gap

CHAPTER 4

Targeting, supporting, promoting and reporting on scale-up gap closure

CHALLENGE: IDENTIFYING SCALE-UPS IN ORDER TO SUPPORT THEM

The UK is already significantly advanced in the degree to which it makes business data openly available. However, in order for the UK to out-compete other economies, data needs to be made available on a real-time, or only slightly delayed, basis. This will enable us to filter out low-impact initiatives, report on outcomes and promote scale-ups so that they can be identified by the media, schools and universities as role models, and for the scale-ups to hire staff and serve customers more easily.

WHAT NEEDS TO CHANGE?

1. Data on scale-up companies should be made available without delay

The UK has a significant advantage over many other economies in that the government already collects (in machine-readable format) all the necessary data to enable the ecosystem to identify scale-up companies. Companies in the UK are required to:

- Submit turnover and employee data annually to Companies House — although there is a significant time lag with these submissions and companies with fewer than 50 employees are not required to report this data.
- Report on PAYE in real-time. Each month they pay an employee, companies must submit details about pay and deductions to HMRC using payroll software.
- File VAT returns quarterly online which record the number of customer orders they have in the UK and EU.
- Report on the amount they spend on research and development (R&D) if they claim R&D Tax Credits.

However, whilst this information on scale-up companies is collected, more could be made publicly available, on a national level, by region or locality, or by sector. Great benefit would be derived should this be achieved.

The government has committed to making more information available on UK exporters. The Small Business, Enterprise and Employment Bill will make it possible for enquirers to request details of UK exporters and the products they export via a stand-alone website provided free of charge by HM Revenue and Customs.

Select parts of other 'big data' sets should be made available on a real-time basis openly or to a cross-departmental scale-up support unit within government. This would allow both public and private sector organisations to target scale-ups accurately to make sure support is offered at right time to the right leaders.

All that is required is access to the unique company number and the information the company already files with the government on the number of pay slips it is issuing to employees, the amount of turnover it has that month, and the amount of R&D tax credit it has claimed in any given period. This will make it possible to identify which companies had 10 employees at the beginning of the period (along with their starting turnover) and two subsequent years where they were growing at 20 per cent or more.

Being able to target scale-ups is similar to diagnosing patients from symptoms they are displaying. It means that you can understand far better what intervention will be effective. Diagnosis also helps the rest of the ecosystem – whether universities, large corporates, potential employees or customers – to operate more efficiently so that they know the best time to act, thus removing common barriers that scale-ups have with regards to finding talent and additional customers, partners or finance.

Some may argue that scale-ups may not wish data to be published about their companies. But this is not the experience reported from Denmark[64] or the UK's oldest cluster, Cambridge, which has been providing detailed employment and turnover data by sector on 1,500 of its companies since November 2011 to allow them to find potential employees and customers more easily (see case study below). Not one company has asked to be removed from the Cambridge Cluster Map. In fact, 59 companies have asked to be included in it since its initial launch. Most scale-up companies welcome the exposure that this brings and are proud to make their results public. It is the case that some very small micro-businesses may object, but they don't face the issues companies growing fast face, nor do they contribute in the same way to economic growth and data on these companies would not be made available as our definition only applies to businesses with more than 10 employees.

> **87% of scale-ups said that they would be able to grow their company faster if they could be identified as a scale-up.[65]**

> **83% of scale-ups were in favour of the government sharing information on their company growth with other government departments or agencies, and 72% were in favour of government sharing this externally.**

64 Reported by Anders Hoffman at 'Scale-up Course' Babson (2014) https://blackboard.babson.edu/bbcswebdav/pid-465093-dt-content-rid-1464804_1/courses/EXEC-EntrepreneushipEcosystem-2014/Anders%20PPT%20Babson.pdf

65 YouGov Scale-up Survey. Sept 2014 Q 15

66 This can be viewed at: www.camclustermap.com

67 Cited from Cambridge 2 You (2012) video retrieved from: https://www.youtube.com/watch?v=hS-Rq44bHGkk

68 Cambridge Network (November 2011). Unique insights revealed with new Cambridge Cluster Map. Retrieved from https://www.cambridgenetwork.co.uk/news/unique-insights-revealed-with-new-cambridge-cluster-map/

Recommendation 1

National data sets should be made available so that local public and private sector organisations can identify, target and evaluate their support to scale-up companies, and evaluate their impact on UK economic growth.

This should include:

- Company registration number
- Revenue (UK and export)
- Location of headquarters and plant
- R&D tax credit (recipients and amount)
- Employment data (number of pay slips issued in any given month)

2. Business support should be targeted on scale-ups and initiatives should report on outcomes

Given the higher economic growth that results from initiatives that support scale-up companies and the fact that these companies can be identified using data collected by government, public funds should be more focused on increasing the relative

Case study: Cambridge Cluster Map[66] (UK)

The Cambridge 'Cluster Map' is a free online service that draws upon a large number of data sources to showcase the scale-ups around Cambridge, which together contribute £13 billion to the UK economy each year and employ 57,600 people. It publishes detailed revenue and employment data for each company.

Megan Smith, the Chief Technology Officer for the US government and former Vice President of Google's Research Lab, said:

"I think Cambridge Cluster Map is incredibly useful for people who don't live in the area as well as people who do live in the area. For those of us who are not from Cambridge, we love Cambridge and we want to know more about it. This is a way to quickly surf and see the different companies that are here."[67]

The map was developed philanthropically by leaders from the cluster's ecosystem to support the fastest growing companies so it was easier for them to attract talent, customers and investors. This initiative was supported financially by the University of Cambridge, scale-up businesses, large corporates and UKTI.[68]

proportion of scale-up companies. Collaboration between business and government delivers increased value for money (up to 90 times cheaper as seen in Chapter 3), so consideration should be given to expanding the initiatives that provide strong evidence that they help scale-up companies to grow.[69]

Making the most of existing business support schemes on offer also requires simplifying and reducing what is available. A recent report by the Federation of Small Businesses found that there were 891 different sources of support available to small businesses in the UK. Removing the least effective schemes will make it easier for businesses to understand what is available. And making the data public on how well they support scale-up companies would empower scale-ups, as the customers of these schemes. It is therefore encouraging that the government recently announced that all advisor support would be delivered under the GREAT Business branding and available on one website.[70]

Initiatives are fragmented and there is a lack of coordination

Recommendation 2

Publicly funded organisations such as Local Enterprise Partnerships and cities seeking public funding should review and report on the extent to which the top 50 scale-ups in their areas are increasing their turnover and job growth from year to year with the objective of increasing the proportion of scale-ups with more than 250 employees by three per cent by 2025. This would close the US-UK scale-up gap.

In particular:

- Each Local Enterprise Partnership (LEP) Strategic Economic Plan should include a plan to increase the proportion of scale-up companies by one per cent by 2020 and another two per cent by 2025 (see Appendix 3 for suggested targets by LEP).
- LEPs should be assisted to monitor the revenue growth of the top 50 scale-up companies in their area (and compare this to other LEP areas).
- Follow-on funding for LEPs should be linked to their ability to achieve or exceed their plan to increase the proportion of scale-ups.

  The monitoring platform could be provided by the GDS or the ODI. The reporting could done by any number of organisations like ERC, Nesta, NIESR, DueDil or Experian. The cost of producing a scale-up job should be reported by LEP.

69 LEPs in particular should be supported to identify the best models of intervention. SVC2UK, Future Fifty, The Science Fifty and VentureFest, for example, are well-evidenced, high-impact public-private collaborations targeted at scale-ups, and more are showcased at www.scaleupreport.org to help make this information easily available.

70 Matthew Hancock MP (2014), Speech to Federation of Small Businesses, 4 July 2014. Retrieved from: http://www.matthewhancock.co.uk/campaign/federation-small-businesses-fsb-speech

The promotion of scale-ups will create a virtuous circle or 'role model effect', which is especially powerful, if not slightly counter-cultural for the British who are unaccustomed to 'tooting their own horn'.

Moreover, given that collaboration between business and government seems to deliver extra-ordinary value for money (up to 90 times cheaper as seen in chapter 3), consideration should be given to expanding the initiatives that provide evidence that they are extremely effective in helping scale-up companies thrive.

To help LEPs understand the best models of intervention, they can start with the following programmes that have created well-evidenced, very high impact public-private collaborations targeted at scale-ups. Details can be found on the website http://www.scaleupreport.org:

- SVC2UK
- The Future Fifty
- The Science Fifty (Royal Society and Science Museum)
- VentureFest

Recommendation 3

50 per cent of public funding and promotion currently reserved for 'entrepreneurship' should be directed towards collaborative initiatives based on evidence of these initiatives' track-record that demonstrates impact on employment and turnover growth of scale-up companies and the return on investment of their efforts.

3. The existing support on offer to scale-up companies should be promoted and monitored

There are a significant number of initiatives for scale-up companies, many of which are provided by not-for-profit business organisations or universities. However, many scale-up companies are unaware of the support on offer and only a small proportion are assisted.

The UK government has a key role to play in promoting and sign-posting the support available for scale-up companies, and increasing awareness. Making the most of the government's ability to promote support and convene different groups requires a culture change towards focusing on scale-up companies. This could be facilitated by giving a government minister clear responsibility for closing the scale-up gap between the UK and other economies and having a dedicated team with expertise to monitor and coordinate the implementation of policies and initiatives across government.

Recommendation 4

A Minister should be made responsible for reversing the scale-up gap by 2025 with cross-departmental resources allocated, independent bodies named to monitor and a task-force appointed to deliver a scale-up report to the PM every November for the next five years.

- **Cross-departmental resources for implementation:** this should draw upon individuals from BIS, the Department of Health, the Department of Education and the Government Digital Services to coordinate the way that government supports, procures from and interacts with scale-up companies.
- **Independent bodies to assist in monitoring:** the Open Data Institute, Government Digital Services, ERC and Nesta have been instrumental in the creation of this report and would be well-placed to support this with minimal incremental resources.
    - Reporting on scale-ups: the prime output would be providing a platform for allowing public and private stakeholders to identify (for free) scale-ups in their jurisdiction. The ideal units for 'serving' the 'scale-up data' would be the ODI or GDS. The source of the data is Companies House in the first instance and HMRC in the second (once cleared to do so).
    - Reporting of initiatives: the secondary output would be monitoring both public and private initiatives on the extent to which they support scale-ups. This would best fall to the ERC and Nesta as experts in this field.
    - Monitoring of scale-ups: recommending that the scale-up survey that was conducted in September of 2014 is repeated annually each September to monitor progress being made by scale-ups.
- **The Task Force would write the annual scale-up report and assist the Minister responsible for scale-ups in the collation of a scale-up report to be delivered to the Prime Minister in advance of Global Entrepreneurship Week for the next five years. The Task-Force would best be comprised of people from academia, major political parties, universities, learned societies, advisors, schools and financiers and scale-ups themselves.**

4. National and local government departments and agencies involved with business support should train their officials in supporting growth companies

As many of the case studies in this report highlight, there is a significant body of information from around the world regarding the most effective ways to create a

supportive scale-up ecosystem that stimulates economic growth. It is crucial that policymakers in the UK are familiar with the international lessons of what works so that they can help make the environment here as supportive as elsewhere.

The examples presented throughout this report from more than 20 countries illustrate the positive impact that can be achieved if the right framework is used. Policymakers may want to consider collaborating with other non-governmental initiatives to achieve results liked those gained overseas, which have been accomplished largely through collaboration.

CHAPTER 5

Accessing talent

CHALLENGE: SCALE-UPS REPORT PROBLEMS RECRUITING PEOPLE WITH APPROPRIATE SKILLS

The UK has a major skills crisis that is holding back scale-up companies. Adzuna reported that there were 990,000 open positions at the end of July 2014.[71] Scale-up leaders report being unable to take on new customer orders because they are unable to hire the staff to fulfil them. Skills shortages were cited as the most significant issue for the scale-up companies that we interviewed and surveyed for this review. These companies particularly had issues recruiting people with technical and business skills, whether taking on young people straight from education or those with more experience. These skills are particularly important for rapidly scaling businesses to enable them to develop new products and services, navigate new markets and develop their business structures.

The demand for technical skills is set to increase:

- The Royal Society has predicted that the UK will need one million new science, engineering and technical professionals by 2020.[72]
- The OECD has estimated that 1.8 million people are currently employed in the Europe's 'app economy' – creating and selling applications for mobile phones – and this is set to almost double to 5.8 million by 2018. The UK's app development market alone is predicted to add £4 billion to the economy during 2014, and as much as £31 billion by 2025.[73]
- Workplace projections [74] for 2018 by the US Labor Department [75] show that nine of the 10 fastest-growing occupations that require at least a bachelor's degree will require significant scientific or mathematical training.

The fact that scale-up companies are impacted more significantly by skills shortages is not surprising. A single high-growth UK SME creates around 83 jobs (and US SMEs create around 200 jobs) which is significantly more than 100 new micro-businesses.[76] Such scale-ups and high-growth firms are responsible for generating 100 per cent of all new jobs in the Europe in the last five years. [77]

"The numbers are frightening. When you start having a skills gap measured in the millions by 2020 then you see that there's a problem." [78]
Professor Brian Cox

71 http://www.adzuna.co.uk/about-us.html

72 Royal Society (2014), Vision for Science and Mathematics Education. Retrieved from: https://royalsociety.org/~/media/education/policy/vision/reports/vision-full-report-20140625.pdf

73 The Guardian (2014), UK app developers predicted to add £4bn to economy this year. Retrieved from: http://www.theguardian.com/technology/2014/jun/26/uk-apps-economy-worth-four-billion-pounds

74 http://humanresources.about.com/od/worklifebalance/a/business_women.htm

75 http://www.bls.gov/opub/ted/2014/ted_20140814.htm

76 Endeavor Insight (2013)., One High-Growth SME Creates as Many Jobs as 100 New Micro-Businesses. Retrieved from: http://www.ecosysteminsights.org/one-high-growth-sme-creates-as-many-jobs-as-100-new-micro-businesses/

77 OECD (2014). Young SMEs, growth and job creation. Retrieved from http://www.oecd.org/sti/young-SME-growth-and-job-creation.pdf

78 Evans, J. (2014), Brian Cox: Millions heading for skills black hole' Tech City News. Retrieved from http://tech-citynews.com/2014/08/28/brian-cox-skills-gap-can-only-get-better/?utm_source=Website+and+Print+Subscribers&utm_campaign=cdd72e77cd-TWiT_AUGUST_29&utm_medium=email&utm_term=0_23276d50d0-cdd72e77cd-66761849#.VAAs0u29LCQ

87 per cent of scale-ups said that they would be able to grow faster if university graduates had the skills needed to meet customer demand.[79]

"Currently ranking at 22nd in a list of 24 OECD countries for literacy and 21st for numeracy is not a position that reflects well on the education outcomes".[80]
Charlotte Bosworth, Director of Skills and Employment at exam board OCR

"I think the private informal programmes are often far more effective than the publicly funded ones."
Anya Hindmarch

WHAT NEEDS TO CHANGE?

The UK needs sufficient numbers of people who have the right skills. Given the size of the skills gap, this requires action by both business and government. There are some short-term 'fixes' required and some long-term 'fixes' which fall primarily to the government to address.

1. Young people should be made aware of the skills they need for the jobs that will be available to them when they are finished with full-time formal education

Young people need to develop skills for the jobs of the future, not the jobs of the past. The most effective way of preparing young people for these jobs is to allow them to engage with the creators of those jobs. Careers information and guidance in schools, colleges and universities tends to focus on opportunities at large incumbent firms, and these companies are well-represented at careers fairs. While this may be expected, given their scale and level of investment in developing recruitment capacity and networks, scale-up companies also need to be invited and supported to showcase their career opportunities.

In his *Enterprise for All* report, Lord Young called for enterprise modules for all students. His report also cited a number of outstanding independent initiatives that offer high-quality and high-impact enterprise and careers inspiration.[81] Such initiatives go a long way towards helping students and teachers understand how classroom subjects relate to the jobs that will be available by the time students leave formal education.

Moreover, with the amount of free tools now available from companies like Adzuna and Linkedin,[82] it is now possible for any child in the UK to explore (with or without the assistance of their parent, teacher or careers advisor) what career path is right for them and the best educational establishment to help them get there. These free, nationwide services give access to reliable and relevant information about the jobs market, which is undergoing rapid, dynamic change. They also boost the ability of teachers and careers advisors to prepare students for the challenges and opportunities of the modern labour market.[83]

79 YouGov Scale-up Survey. Sept 2014. Q 13

80 Bosworth, C. (2014). It All Adds Up. FE News. Retrieved from: http://www.fenews.co.uk/featured-article/it-all-adds-up

81 Lord Young (June 2014). Enterprise for all: The relevance of enterprise in education. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/338749/EnterpriseforAll-lowres-200614.pdf

82 Kapur, N. (2014). Ranking Universities Based on Career Outcomes. Retrieved from: http://blog.linkedin.com/2014/10/01/ranking-universities-based-on-career-outcomes/

83 National Careers Council (2013). An Aspirational Nation: Creating a culture Change in Careers Provision, p.2. Retrieved from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/354644/bis-13-919-national-careers-council-report-an-aspirational-nation-creating-a-culture-change-in-careers-provison.pdf

How LinkedIn found the top universities for software developers

In order to help budding software developers to find the best place to study, LinkedIn analysed their network of professionals to see which universities had been most successful in securing top jobs for their alumni:

> **First, LinkedIn identified the top companies where software developers have chosen to work.**
>
> **Next, they found people on LinkedIn who work as software developers and saw where they went to university.**
>
> **Finally, for each university, they found the percentage of alumni with software development jobs at top companies, and then compared the percentages to come up with the list.**

The government can use its convening power incredibly effectively to highlight the plethora of excellent services provided by the third sector to help address the skills crisis. The following programmes are focused on raising aspirations and awareness regarding skills needed for the roles most difficult for scale-up companies to fill. Founders4schools reports a trebling of children who state they will study STEM after just one 1-hour (free session). These programmes seem to be able to bring to life what otherwise might appear to be 'dry' academic subjects.

- **Founders4Schools | Code Club | Decoded | Apps4Good | Telefonica's Think Big School**
- **NACUE | British Computing Society computing curriculum | The YourLife Campaign**

An excellent example of the government using its promotional and convening power in the skills area is the Your Life campaign that was launched earlier this year which will help address this issue as well.

Given the plethora of programmes and the need for evidence to support decisions, all programmes targeting schools on the skills-gap agenda should be monitored using the national pupil database. This would empower schools, colleges and universities to make evidenced-based decisions on which programmes are the most effective at helping them achieve their goals.

It is also important to evaluate and celebrate the educational institutions which are effective. The Small Business Charter (SBC) is an example which seeks to do this. This is an award scheme for business schools which are supporting small businesses and promoting entrepreneurship among students, with the aim of making business schools easily identified as places where students and staff are keen and able to

work effectively with small firms on the specialist areas that drive their growth. The initiative was recommended by Lord Young in his second report *Growing Your Business*.[84] The Association of Business Schools was tasked with devising the accredited award which rates business schools against 30 key performance indicators, with awards from 'entry level' to bronze, silver and gold. 20 business schools have been accredited since it was launched in 2013.

84 Lord Young (2013), Growing Your Business: A Report on Growing Micro Businesses. Retrieved from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198165/growing-your-business-lord-young.pdf

Recommendation 5

The Department for Education and Local Enterprise Partnerships should ensure that Britain is in the top 5 of the OECD PISA rankings for numeracy and literacy by 2025 and use their convening and promotional power to ensure educational institutions guarantee that students at schools, colleges and universities come into contact with the top 50 scale-up business-leaders within 20 miles of their establishment.

2. Promote career opportunities at scale-up companies to adults who are unemployed and employed.

Scale-up companies need to hire people from industry as well as from schools, colleges and universities. But it can be difficult for scale-ups to attract new employees from larger companies or micro-businesses. Our economy would be more productive if people were moving more efficiently from shrinking entities to growing ones, as this would help to address the recent fall in 'allocative efficiency' in the UK which, as discussed in Chapter 1, has reduced productivity. If more people were leaving jobs at companies that are shrinking or stagnant to go to jobs that are (unfilled) at companies that are growing, these companies could grow even faster. This would also help close the scale-up gap which means that the UK has a larger number of static firms and a smaller number of growing or shrinking firms. This would also help to fill more of the 990,000 jobs that are currently being advertised for in the economy, boosting economic growth considerably as set out in the impact analysis in the final chapter.

There are a number of effective private sector initiatives that have been piloted and that should be expanded throughout the UK to help scale-ups, as these can significantly impact labour market productivity.

Silicon Milk-roundabout, the Startup Institute, Level 39, General Assembly and the Digital Business Academy are examples of initiatives that are part-funded by government which deliver significant outcomes, as evidence by independently reviewed impact analyses (see case studies below).

61% of scale-ups said that they would be able to grow faster if it were easier to attract people from industry.

"With over 20 million jobs in the sectors covered by Mason et al's research, labour market productivity gap implies a single year GDP 'loss' of £96 billion in 2013 – over 5 per cent of total UK GDP in today's prices."[85]
Deloitte scale-up impact analysis

Recommendation 6

Local Enterprise Partnerships and city / cluster / ecosystem leaders should work with existing private collaborative initiatives to promote the top 50 scale-up companies in their jurisdiction to adults for the next phase of their careers.

Examples of initiatives with significant evidence-based outcomes

Silicon Milkroundabout developed as a not-for-profit voluntary solution from the ecosystem to help scale-ups attract talented adults to work for them. They run bi-annual events designed to match talented people with the thousands of jobs on offer at UK tech start-ups. Launched in 2011, it aims to establish 'working for a start-up' alongside other popular career paths such as 'working for a bank', 'working for a creative agency' or 'working for a tech giant' in the minds of the UK's most talented people. Each event has more than 160 start-ups showcasing their career opportunities and 3,000 attending candidates across the roles of engineering, product management, design and marketing.

The Start-up Institute helps to give people who are unemployed the right skills for working in a start-up. Established in Boston two years ago, in response to complaints from company founders that they didn't know where to find the right people to grow their companies, the Start-up Institute aims to prepare young people for jobs in start-ups or early stage companies. Students pay for the course but are able to defer tuition fees by paying a deposit and then working off the rest in small instalments. If they find a job with one of the institute's hiring partners, that employer will pay the balance. Nine out of 10 participants on the programme find a job with an early stage company within three months of completion.

General Assembly offers full-time programmes, long-form courses, and classes and workshops on the most relevant skills for the 21st century – from web development and user experience design, to business fundamentals, data science, product management and digital marketing.

For full case studies visit **www.scaleupreport.org/casestudies**

85 This simple extrapolation does not factor in any jobs displaced due to greater allocative efficiency. Mason et al excludes agriculture, financial services and the Government sector.

3. Barriers to recruiting talent from overseas should be removed

A prudent leader will not seek to hire a new staff member until they have received sufficient customer orders, but they can then be at risk of losing customer orders if it takes too long to recruit. A business operating in a country without a skills gap can be more confident in accepting customer orders and hiring staff to fulfil these orders, which creates a virtuous circle. However, in a country with major skills gaps — as the UK has — companies may be forced to delay the acceptance of customer orders until they have hired sufficient recruits. Recruiting in the UK could take months to find appropriate people, negotiate terms and then gain internal approval. But if companies are unable to recruit in the UK and are then forced to look overseas this process becomes far more complicated and drawn out, often requiring immigration lawyers to navigate the approval process for visas. Throughout this process, there is a risk that the candidate will accept another more straightforward job offer. If the company is unable to meet the customer order then this damages its reputation and created a vicious cycle, as the box below highlights.

Options for a company requiring more staff to fulfil a customer order

Option A — for business leaders operating in countries without a skills gap

Accept the order and hire staff to fulfil it. If the customer likes it and orders more, it may become an ambassador for the company and refer more customers to them. **This creates a virtuous circle.**

Option B — for business leaders operating in countries with a skills gap

Delay acceptance of the customer order in order to hire the staff required to fulfil the order first. After advertising in the UK, it could take months to find a suitable leader with appropriate skills, negotiate a salary and gain necessary internal approvals (such as board of director approval for the salary and shareholder approval for the share option package). This leader then needs to start the process with the immigration lawyers to get the visa for the person they have persuaded to join. Meanwhile, the person they wanted to hire may choose to accept an offer with a different company in their own country to avoid the insecurity of knowing whether a visa could be obtained. Without a candidate to hire, the company could then lose the customer order if the customer was under pressure to meet their own deadline for their customers. The potential customer could then become a negative reference for the scale-up leader. **This creates a non-virtuous circle.**

The Entrepreneurs Visa was very good progress, however, it does not help our 'home grown' companies that are scaling up. Current immigration restrictions make it difficult for scale-ups to recruit non-EU nationals. This is despite evidence that public attitudes to high-skilled migration is positive, according to recently published research.[86] Companies seeking to hire a skilled migrant with a Tier Two General Visa are required to obtain a 'sponsor licence', which registers their business as an eligible sponsor organisation, and a 'certificate of sponsorship', which the business assigns to a specific migrant worker to hire them in qualifying employment. The Home Office aims to process the former within eight weeks and the latter typically requires that the position has been advertised in the UK for at least 28 days.[87] Only 11,790 Tier 2 General Visas were granted by the Home Office in 2013, despite there being a cap for 20,700 of these visas.[88]

In December 2013, the UK government announced the introduction of a new visa route for IT workers. This involved amending the Tier One visa stream to allow some IT workers to qualify if they are deemed to be of 'exceptional talent'. However, the number of visas has been capped at 200 and even this number may not be reached as very few workers meet the criteria – only 79 workers qualified for the existing exceptional talent visas in 2011, although the figures for IT workers are not disclosed. The 'IT visa' does not get anywhere near describing the skill-set that is possessed by someone who has scaled-up a company.

A recent Policy Exchange report on Silicon Cities recommended that venture capitalists should be allowed to become sponsors for visas.[89] This could be helpful to companies who have chosen to accept financing from venture capitalists. However, it does not provide a solution to the 99 per cent of fast-growing companies that do not choose venture capital.[90] There must be an option for companies that are fast-growing but financed in other ways, whether from crowd-funding or customer revenues, and for those companies which may be entirely family owned. In addition to venture capitalists being allowed to become a sponsor for a visa, LEPs, trade associations, Royal Societies and potentially other local bodies which are familiar with the company in question be granted a sponsor license. These bodies should be able to verify information and grant the visa without delay that unduly impedes the company's ability to contribute to the long-term economic growth of the region.

> **80% of the scale-up companies surveyed said that they would be able to grow their company faster if they could more easily hire talented people from overseas who had scaled up a company before.[91]**

86 The Migration observatory (2014). UK Public Opinion toward Immigration: Overall Attitudes and Level of Concern. Retrieved from: http://www.migrationobservatory.ox.ac.uk/sites/files/migobs/Public%20Opinion-Overall%20Attitudes%20and%20Level%20of%20Concern.pdf

87 See the appendix on p.60 of the following report for a summary of this process: Copeland, E. and Scott, C., (2014): Silicon Cities: Supporting the Development of Tech Clusters Outside London and the South East of England. Retrieved from: http://www.policyexchange.org.uk/images/publications/silicon%20cities.pdf

88 Home Office (2014), Tables for Immigration Statistics: January to March 2014,Volume 1 & 2. Retrieved from: https://www.gov.uk/government/statistics/tables-for-immigration-statistics-january-to-march-2014

89 Silicon Cities: Supporting the development of tech clusters outside London and the south east retrieved from http://www.policyexchange.org.uk/images/publications/silicon%20cities.pdf

90 Mulcahy, D. Six Myths About Venture Capital. Retrieved from: http://hbr.org/2013/05/six-myths-about-venture-capitalists/ar/1

91 YouGov Scale-up Survey. Sept 2014. Q 10

92 Two weeks is one-day 'better' than the comparable visa available to scale-ups in Canada. http://www.cic.gc.ca/english/work/new_measures_work.asp

93 It is appropriate that the company has tried to source locally first and failed.

Recommendation 7

A 'Scale-up Visa' should be made available from Local Enterprise Partnerships to the top local scale-up companies so they can recruit staff from overseas within two weeks[92] of applying.

These foreign workers help expand the distribution of their existing products to foreign markets and help introduce new products and services.

- The evidence to verify that the company is a scale-up will have already been collected by the company and filed electronically with HMRC (because the company will have filed VAT receipts for the past 3 years showing that its revenues are growing at 20 per cent per annum and it will have been electronically filing NI information as well, verification that the company has > 10 employees is possible. In this case, the company's customers are the 'arbiter'.

- The company could be asked to submit minutes from board meetings showing that it has gone through the appropriate[93] corporate governance procedures to appoint a foreigner worker Presumably one could stipulate that false statements constitute a criminal offence.

- If a case-worker were deemed necessary to verify the information, it should be possible to grant them data access to verify the information previously given by the company to the government to bring an essential resource on-board.

  If each LEP (or city / local ecosystem) were permitted to grant 50 'scale-up visas' per annum, the total number of scale-up visas granted in the UK per annum would not exceed 2000. 2000 businesses would be growing faster as a result and the LEPs can contribute to and chart their accelerated growth with exact precision. As you can see from Appendix 4, 2000 scale-up visas would benefit only 20% of the scale-up population, so 80 per cent of the others would have to either appeal to their local MP, their mayor or the minister responsible for scale-ups or go through the current process which they professed to be unhappy with at present. You will recall that the average UK scale-up employs 83 people at the moment, against the average US scale-up employing 200. These are not 'micro-businesses' and they are innovating rapidly. These foreign workers help expand their distribution to foreign markets and help introduce new products and services.

  Please refer to Appendix 4 for details on the number of scale-up visas per LEP in the UK.

CHAPTER 6

Developing scale-up leadership

CHALLENGE: DEVELOPING SCALE-UP COMPANIES WITH THE ABILITY TO MANAGE RAPID GROWTH

Leaders in companies scaling rapidly need to learn to cope quickly with changing demands, but many struggle to develop their managerial and leadership talent. This is because there is a severe skills gap in the UK compared to the US in 'scale-up leadership talent'. That is, people who have previously scaled up companies to significant revenues and employees.

Some experts in implementing new processes and delivering organisational change can be recruited, and some of these may have experience with a rapidly growing company, but a scale-up has to be able to develop talent in-house. This requires taking the time to learn from other companies and entrepreneurs who have scaled businesses successfully, and being open to external ideas. For a rapidly growing business this can be difficult to organise and deliver, especially when set against other competing demands.

There is also a shortage of role models who have 'made it big' to provide vital mentoring and advice to 'first-timers'. The shortage of scale-up leaders can be addressed in the short-term by providing visas to people from other countries, but in the long-term we need more people who have 'made it big' in the UK.

"Poor mentoring from well-meaning people who don't have experience can significantly handicap a scale-ups development."
David Gammon, Rockspring

"Due to the rapid turn-around of companies in Silicon Valley, they have a wealth of 2nd generation entrepreneurs willing to inspire the community to 'think big'. In the UK, there is a critical mass of entrepreneurs who sell out their companies prior to the point of being inspirational. In fact, that lack of 2nd generation entrepreneur is being filled by 2nd generation 'wantrepreneurs' who are fuelling a system of false-inspiration."
Chris Howard, Managing Director, MassChallenge UK

WHAT NEEDS TO CHANGE?

1. Provide managerial and leadership training for more rapidly growing companies

There is limited support for rapid growth companies to help them learn what works (and what doesn't work) from leaders or advisors who have scaled up companies before. Many UK companies consequently make poor decisions, particularly

regarding their capital requirements, management team, organisational structure, market access and supply chains.

While some support programmes are available, many have not been running long and have limited reach compared to longstanding schemes in other countries, which have helped a number of successful companies at key points in their development. The recently launched UK 'ELITE' programme, which is being led by the London Stock Exchange in partnership with Imperial College London, offers training and mentoring to high-growth companies. It is modelled on a similar scheme in Italy, which has helped more companies to float (see case study below). This new scheme currently supports just 20 UK companies but could be expanded, as could other similar programmes. One of the best things that programmes like this do is efficiently create a 'mentor exchange' whereby the scale-up company is linked to a mentor by stage or specialism, expertise, track-record and location.

There is a lack of hard skill-building programmes for firms in periods of rapid growth, when so much changes – strategically, operationally and organisationally.

Case study: ELITE programme (Italy and UK)

ELITE is coordinated by the Academy of Borsa Italiana and Boconi University in Italy and in the UK it is delivered by London Stock Exchange in partnership with Imperial College Business School. The programme supports high-growth companies in Italy and the UK to enable cultural and organisational change, introduce companies to capital markets and build relations with banking and enterprise systems. The programme, which is focused on the challenges of international markets, provides educational courses, bespoke advice from a group of professionals tailored to the needs of the business, and links to private equity and institutional investors. Of the companies in Italy which have completed the programme, eight have received private equity investment, there have been 25 mergers or joint ventures, and 15 of the companies are now publicly listed.

Recommendation 8

Local Enterprise Partnerships, universities and the private sector should work together to ensure effective learning programmes are available in their areas aimed at leadership development of scale-ups.

They should measure and report on:

- the proportion of scale-ups in the business population; and
- the number of directors who have experience at scaling a company living in the LEP area.

Example: GrowthAccelerator (UK)

GrowthAccelerator is a government-backed service that provides a comprehensive package of business support to Small and Medium Enterprises (SMEs) with the potential for achieving high-growth. It is delivered by a consortium of private sector companies led by Grant Thornton, and provides expert business coaching which is tailored to addressing each business's needs.

The coaching offer is split into three main strands: access to finance, growth through innovation and business development. Assisted companies can also access up to £2,000 of matched funding for leadership and management training for each senior manager.

14,000 businesses have been supported by the service since it was launched in 2012. These businesses have added 36,000 and £1.5 billion of GVA growth. This is an average annual increase of 36 per cent in employment and 32 per cent in GVA. Businesses have also been successful in raising finance, with £103 million raised in total. 97 per cent of the businesses which have been on the scheme would recommend the service to their peers.

2. Target existing mentoring schemes on scale-up companies

Mentoring from business leaders who have scaled companies before can have a major impact on a scale-up company lacking in experience. Research has found that companies which were being mentored produced 23 per cent more employment growth than other similar companies. It is the case that leaders who choose to accept VC financing usually get mentoring and corporate governance too. However, only one per cent of the fastest growing companies in the UK are VC backed, so that leaves a huge gap for the remaining 99 per cent.

Our research revealed that there are lots of start-up mentoring programmes, but few are focused on scale-ups, mentors are of variable quality – 'pretend mentors' albeit well intentioned – and matching between mentors and firms is erratic. To address this, we should track mentors who have been a director or employee at a company during its scale-up period using data which is already collected.

The UK has a number of highly effective intensive support programmes which include mentoring alongside peer support, such as the British Banking Association's Mentorsme programme, Goldman Sachs 10,000 Small Businesses programme (see box below), Endeavor (see box below), Future Fifty (Tech City UK), ELITE, Santander's Breakthrough programme, the Growth Partner Programme and Cranfield's Business Growth and Development programme. There are also peer learning networks, such as SVC2UK's 100 Club Workshops, the Founders Forum, the CBI's M Clubs, The Supper Club, YPO and ACE, which help scale-up business leaders to share experiences and learn from each other.

Overall though, the UK lacks a brokerage system to link successful entrepreneurs with companies experiencing rapid growth. The system for finding mentors is fragmented, which makes it difficult for companies to get what they need. Furthermore, there are too few high quality mentors. Many lack credible business experience and few have had 'skin in the game' of a rapidly growing company which has reached globally competitive scale, including to an IPO. We should all consider how programmes effectively target businesses that qualify for mentoring support programmes. The availability of timely data from government would fundamentally lower the cost of targeting and improve outcomes.

"The BBA will work to ensure mentorsme (which we manage) clearly identifies programmes for businesses seeking to scale and we will have a dedicated area within mentorsme for this."
Irene Graham, British Bankers' Association (BBA)

"It is the peer-learning environment which makes business support programmes work – building communities of growth-oriented owners and business leaders."
Mark Hart, Programme Director, Goldman Sachs 10,000 Small Businesses programme

Case study: Goldman Sachs 10,000 Small Businesses programme (UK)[94]

The 10,000 Small Businesses programme is targeted on high-growth small businesses in the UK, providing education and training delivered by six universities. The programme is free of charge and is financed by the Goldman Sachs Foundation. Each year 250 small businesses are competitively selected to take part. Participants report an average annual increase of 23 per cent in their net employment compared to one per cent for UK small businesses; and an increase in turnover of 16 per cent compared to a fall of nine per cent for other small businesses, adding £266 million in total revenues.

94 Goldman Sachs (2013). Stimulating Small Business Growth - Progress Report on the Goldman Sachs 10,000 Small Businesses UK Programme. 10,000 Small Businesses UK. Retrieved from http://www.goldmansachs.com/citizenship/10000-small-businesses/UK/news-and-events/10ksb-uk-progress-report.html

CHAPTER 7

Increasing customer sales at home and abroad

CHALLENGE: SELLING TO LARGE COMPANIES AND GOVERNMENT, ENTERING NEW MARKETS AND GAINING REGULATORY APPROVAL FOR NEW PRODUCTS ALL LEAD TO INCREASING CUSTOMER REVENUES

Scale-up companies, by their very nature, are driven to develop new products and services and to increase demand for these domestically and internationally as quickly as possible. A single contract from a large corporate or government department or agency – given the sheer size of some of these contracts – can have a major impact on growth. However, in the UK, in a study of 800 scale-ups,[95] many of them reported finding it difficult to supply to large corporates and the public sector, due to the lack of transparency, transaction costs and complexity involved.[96] Scale-ups also find it difficult to make the leap into overseas markets, given the many challenges and risks this entails. And scale-ups also have difficulties gaining regulatory approval for innovative new products in the UK, putting them at a disadvantage to their international competitors which operate in markets where approval processes are quicker.

Public procurement can have a major impact on the growth rates of scale-ups. Whilst its primary purpose is to enable public sector organisations to perform their functions and deliver key services effectively, a growing body of scholars and policymakers throughout the OECD have made the case for how it can be utilised to boost economic growth by purchasing innovative products and solutions.[97] In their survey of firms that supplied the public sector, Uyarra et al found that smaller firms and not-for-profit organisations encountered greater difficulties from the procurement process than larger firms. They concluded that the public sector is missing out on capturing innovation through procurement and that this may be preventing firms from increasing their commitment to R&D and innovation. There is also an interesting body of academic work that looks at procurement policies that seek to support the triggering of new innovation.[98] These studies highlight how the 'communication of needs' or 'outcomes' to suppliers can be critical and how cascading this beyond central government creates more impact.

Exports are also crucially important, particularly in economic terms. Whilst the success of a scale-up will invariably lead to jobs being lost in another part of the global economy — something which is factored into the impact analysis conducted by Deloitte for this report — the chances of jobs being lost by a rival UK firm are minimal as a result of a UK scale-up exporting. Targeting (saturated) domestic markets alone is likely to generate reduced economic benefits in aggregate than if UK scale-ups target export markets. A boost in exports would therefore significantly increase the economic outcomes which Deloitte has projected.

95 90 per cent of the businesses in the sample were scale-up companies.

96 Ibid page 8 figure 2.

97 Uyarra E. et al (2014). Barriers to innovation through public procurement: A supplier perspective. Technovation (34), p.632. Retrieved from: http://www.sciencedirect.com/science/article/pii/S0166497214000388

98 Georghiou, L. et al (2014). Policy instruments for public procurement of innovation: Choice, design and assessment. Technological Forecasting & Social Change (86), pp.1-12. Retrieved from: http://dx.doi.org/10.1016/j.techfore.2013.09.018

WHAT NEEDS TO CHANGE?

1. Greater interaction between large companies and scale-ups

Large companies are vital for the success of scale-ups. Through buying their products and services, large companies help give scale-ups the foothold they need to reach the next stage in their development and the credibility which comes with a contract with a major corporate.

Some high-impact, independent initiatives have been created by the private sector that facilitate 'matchmaking' between large companies — as buyers — and scale-up companies — as sellers. This helps decrease the 'cycle time' it takes to make a sale to large corporates which improves the ability of both the buyer and seller to innovate.

> **ELITE, Tech London Advocates, SVC2UK, VentureScout, Waitrose/ John-Lewis, Mentorsme, Coca-Cola and the Microsoft Partner Program are initiatives that have operated for a number of years and that have provided empirical evidence of their impact which can be found in detail on the web-site.**

These initiatives should be invited to operate in all the Local Enterprise Partnership (LEP) areas.

Example: Sharing in Growth (UK)

Sharing in Growth[99] is an ambitious £110 million programme which was set up in 2012 to scale-up the capability of UK aerospace suppliers that have at least £10 million in turnover. It is supported with £50 million from the Regional Growth Fund, leveraging an additional £70 million from industry. The scheme provides concentrated and intensive training and development over four years tailored to the assessed needs of each large supplier, targeted at the world class standards of performance required by customers. **Data are not yet available on jobs and turnover outcomes but around 35 companies are involved and results have exceeded expectations.** Jobs and turnover need to be monitored for efficacy of schemes like this to be judged.

2. Trade missions to other countries should include more scale-up companies

Analysis provided by RBS indicates that only around 10 per cent of high-growth firms export. This is broadly the level of exporting amongst the wider business population. The SME Finance Monitor, for example, found that nine per cent of SMEs export. Exporting is one of the main enablers which helps a company to scale-up, including by helping lead companies to innovate, access niche markets and develop new management models.

99 Further details can be found at: http://sig-uk.org/

Trade missions to other countries are a valuable way for scale-up companies to build networks in new markets and meet potential customers, suppliers and investors.

> **75 per cent of the scale-up CEOs surveyed for this report said that they would be able to grow their company faster if they were invited to participate on a trade mission.[100]**

100 YouGov Scale-up Survey, Sept 2014. Q 1 & 11

UKTI should redouble its efforts to ensure scale-ups participate in trade missions and other trade support services. UKTI supports around 50,000 companies each year, of which 80 to 90 per cent are SMEs. A welcome step would be for UKTI to report on the extent to which the top 50 scale-up companies in each LEP are supported by their efforts, as reporting on 'SME's' ignores how dynamic our economy is, is subject to 'capital bias' and will mute efforts to close the scale-up gap.

3. A higher proportion of public procurement should be with scale-up companies

A far higher proportion of UK government procurement should be with scale-up firms, in terms of both the number and value of contracts, given that these companies have the greatest potential to deliver economic outcomes. Most micro-businesses lack the potential to achieve significant scale, so targeting is especially important if one is to achieve value for taxpayers' money.

In the US, government departments are required to report on the growth rate of the companies from which they procure services. This has helped incentivise departments and agencies to buy more from innovative, scale-up companies rather than from the large incumbent firms with which governments typically do business. However, the UK has predominantly focused on increasing the proportion of procurement with SMEs regardless of their growth rates. It is unclear what proportion of these contracts are with scale-up companies as data are not monitored or made available. It is possible to monitor and report on and this should be done so in an open and transparent fashion.

4. Government departments should use their R&D budgets to drive innovation in procurement

As well as buying more products and services from scale-up companies and tracking the impact this has, the government should do more to help potential suppliers 'upstream' by funding R&D for new products and services which could help drive public sector effectiveness and productivity. This should include expanding the Technology Strategy Board's existing Small Business Research Initiative (SBRI) (see box below).

The US government has pioneered a number of programmes to fund R&D by potential private sector suppliers, including the Central Intelligence Agency's 'In-Q-Tel' programme and the US Defense department's DARPA programme (see boxes below). This funding and joint working has helped finance companies such as Intel in their early stages.

Example: Central Intelligence Agency's 'In-Q-Tel' programme (US)

In-Q-Tel was set up by the US Central Intelligence Agency (CIA) to access private sector innovation by investing in venture-backed start-ups which are developing technologies that will provide 'ready-soon innovation' (within 36 months) to support the Agency's work.

More than 70 per cent of the companies that In-Q-Tel invests in have never before done business with the US government. Companies from this collaboration have amassed more than $3.2 billion in venture funding, employ more than 7,000 people and, on average, for each dollar that In-Q-Tel invests in a company, the venture capital community invests more than nine dollars. Following this success, In-Q-Tel now supports other agencies, including the National Geospatial-Intelligence Agency, Defense Intelligence Agency, and the Department of Homeland Security Science and Technology Directorate.[101]

Example: US Defense Department's DARPA programme (US)

The US Defense department's DARPA programme funds projects bringing together industry, academia, government and the military to help make sure the US stays at the forefront of defence technology. The Defense department publicly advertises funding opportunities online. The programme has helped develop stealth technologies, unmanned aerial vehicles and ARPANET – the precursor to the internet.[102]

Example: San Francisco's Entrepreneurship-in-Residence programme (US)

San Francisco's Entrepreneurship-in-Residence programme is a 16-week collaboration to bring together the private sector and San Francisco City departments to explore innovative solutions to civic challenges that can lower costs, increase revenue and enhance productivity. The current cohort of growth firms working with the city includes Birdi, Buildingeye.com, Indoors, MobilePD, Regroup and Synthicity.[103]

Example: Small Business Research Initiative (SBRI) (UK)

The UK's SBRI programme runs competitions for businesses to develop innovative solutions to challenges in the public sector. SBRI is particularly beneficial to early stage companies looking for a major customer for their new products and services, and in need of funding for R&D. More than 1,300 SBRI contracts have been awarded since April 2009, with a value of £130 million. These have benefitted more than 40 public sector bodies. In its March 2013 Budget, the government signalled its intention to increase the value of SBRI to £200 million in 2014-15.

SBRI should monitor and report on the proportion of scale-up companies that use its services, as statistically speaking there is a far higher likelihood of successful procurement from a scale-up than a start-up.

101 In-Q-Tel (Accessed June 2014). In-Q-Tel Website. Retrieved from https://www.iqt.org/

102 DARPA (Accessed June 2014). Doing business with DARPA. Retrieved from www.darpa.mil/WorkArea/DownloadAsset.aspx-?id=2147485494

103 The Mayor's Office of Civic Innovation (Accessed June 2014). San Francisco Entrepreneurship in Residence Programme. Retrieved from http://entrepreneur.sfgov.org/

Recommendation 9

The government should draw attention to scale-up companies and scale-up leaders so that it is easier for them to act as role models and find customers, partners and investors, both at home and overseas.

- UK Trade and Investment (UKTI) and UK Export Finance should make sure that scale-up companies are well represented on international trade missions and publish details annually. This would contribute to increasing the proportion of export trade done by scale-ups to those enjoyed in other countries like Germany that have a similarly small home market. This annual 'scale-up report' should detail:
    - the scale-up companies (by LEP) UKTI takes on each trade mission, by employment growth and turnover, for each of the markets they operate in;
    - the proportion of the UKTI's budget invested in supporting scale-up companies; and
    - whether or not companies supported by UKTI subsequently obtained customers, investors or partners as a result of the interaction.
- Central and local government departments should monitor and report on their procurement with scale-ups. Each should publish a 'scale-up report' that includes the value of their top 50 contracts with details of which were awarded to scale-up companies. In the short-run, this can be based on existing Companies House data, but more up-to-date information should be used when it becomes available. The report should:
    - be published in descending order based on revenue growth;
    - detail employee growth; and
    - indicate whether or not they have contracted with these companies direct or via a tier-one prime-contractor.

5. Global companies that operate across several different borders have the ability to choose which jurisdictions they choose to operate in

Choosing to locate business operations elsewhere is a gain for 'elsewhere' and a loss for 'team GB'. The impact of regulation 'cycle time' on rapidly growing companies should be a major consideration for regulators and agencies.

Scale-up companies rely on being able to introduce innovative products and services as quickly as possible and we heard from those who left the UK that 'decision-lags' were the reason for their having chosen to leave. Cycle time in the UK puts UK scale-ups at a disadvantage to their international competitors.

"All UK regulatory bodies should report on their cycle time with regards to scale-up companies and benchmark their performance against their peers in other jurisdictions. This is particularly important because it is cited as one of the reasons UK companies relocate to the US."[104]

An interesting derivation of an international focus on 'regulatory impact' on economic growth comes from the US where the US Chamber of Commerce Foundation has created basic measures of the regulatory environment for 10 cities. The Foundation's approach follows that of the World Bank's Doing Business report. The idea was based on asking local lawyers how many steps and how much money it would take to undertake a simple, standardised task like building a warehouse or starting a new business. This is the reason they cited for doing so:

"One can sensibly argue, however, that the first job of government is to do no harm. In the area of entrepreneurship, doing no harm means imposing only those regulations where benefits clearly exceed costs. In an era of fiscal restraint, it makes sense to reassess rules that could restrict new firms before writing another taxpayer-funded check to support an unproven public venture capital program."

If a UK regulatory body is delaying the uptake and adoption of innovations, this puts UK companies at a disadvantage to their competitors in other leading economies, where regulators are more willing to work with companies to understand innovations and overcome potential risks. Currently, only two of the UK's nine economic regulators (Ofcom and the Financial Conduct Authority) are required to consider innovation as part of their duties. Regulators rightly focus on competition and consumer issues, but they should also where possible take into account the impact of their decisions on the growth rates of scale-up companies.[105]

"Productive, innovative, and competitive economies require smart and simple regulations to prosper." [106]

> **73% of scale-ups said that they would be able to grow faster if dealing with regulators was easier.** [107]

"Products are becoming the standard of care in the UK 10 years after the US!"
Medical devices manufacturer, UK

"The labour laws make it difficult for rapidly growing companies to adjust their work-forces as necessary. The current laws are counter-productive"
Anya Hindmarch

104 Interview with Lesa Mitchell, Marion Ventures (11 Sept 2014)

105 Cleevely, D. (2014), 'The Power of Technology Clusters', in Chuka Umunna MP (ed.) (2014) Owning the Future: How Britain can Make it in a Fast Changing World, p.122. Retrieved from http://www.policy-network.net/publications/4712/Owning-the-Future

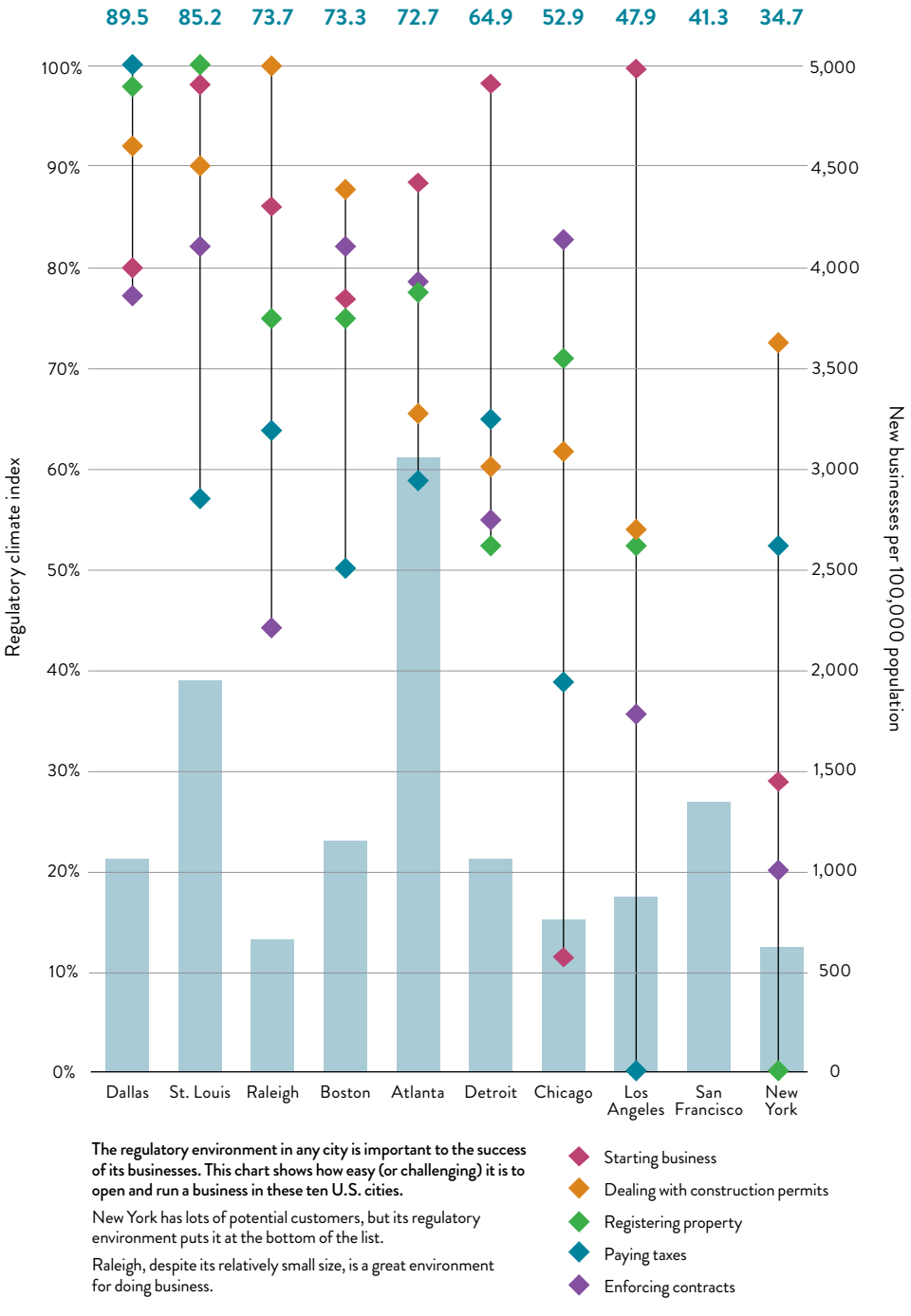
106 The U.S. Chamber of Commerce Foundation developed the Enterprising Cities: 2014 Regulatory Climate Index that compares and ranks the efficiency of local regulations that apply to small businesses in 10 cities across America.

107 YouGov Scale-up Survey Sept 2014 Q 4

Recommendation 10

The impact of regulation 'cycle time' on rapidly growing companies should be a major consideration for regulators and agencies. Agencies that interact frequently with scale-ups, like the Border Authority, Listing Authority and HMRC should report on their efficiency in relation to regulatory peers in other countries.

Chart 7.1: US Chamber Foundation's 2014 Regulatory climate index



The regulatory environment in any city is important to the success of its businesses. This chart shows how easy (or challenging) it is to open and run a business in these ten U.S. cities.

New York has lots of potential customers, but its regulatory environment puts it at the bottom of the list.

Raleigh, despite its relatively small size, is a great environment for doing business.

CHAPTER 8

Financing scale-ups

CHALLENGE: ATTRACTING APPROPRIATE GROWTH CAPITAL

The shortage of capital available in the UK is well-documented[108] and many initiatives have been put in place to address this. These initiatives should be applauded, given time to take effect and understood in the context of scale-ups.

In relative terms, however, addressing issues with finance is less of a priority. Whilst finance is important, if we address skills shortages, help develop scale-up leadership and increase access to customers via exports and government procurement, this will do more to secure the UK's long-term competitive advantage.

> **74% of scale-up CEOs ranked access to talent as one of their top three issues compared to 22% who cited access to venture capital.[109]**

WHAT NEEDS TO CHANGE?

1. Financial institutions need to provide finance for the long-term

UK financial institutions are often driven by short-term incentives, hampering investments in innovations that will bear fruit only in the long-run. This can cause companies to sell out too early, exacerbating the lack of employees available in the UK who have worked at a company that has scaled significantly. This prevents the virtuous circle that is particularly evident in the US, which helps fuel the growth of significant numbers of companies to tens of billions of dollars in revenues.

As a result, many scale-up companies find an insufficient pool of follow-on capital in the UK to match their needs, so entrepreneurs based in the UK often raise capital in the US or Asia. Although this gives them access to capital, if the company floats or is sold and the shareholders are not based in the UK, the gains do not flow into the UK economy. Additionally, the pressure for companies to re-domicile is typically greater if most of their funding is based abroad.

"The UK capital markets are failing scale-up companies, very few of them list in London and even fewer become large businesses."

2. Venture capital funds need to be properly funded to support scale-ups

Underfunded and under-skilled venture capital firms (VCs), cause ambitious and able entrepreneurs to sell out early. This is can occur because VC funds do not have people with 'big ideas', or they have failed to raise their second fund and therefore have to exit, or they have not allocated sufficient funds to follow-on their investments.

108 Boston Consulting Group (June 2014). Building a Digital City: Challenges, Opportunities and Lessons from London. Retrieved from http://mikebloomberg.com/files/Building-Digital-City-London.PDF

109 Scale-up Survey (2014), raw data of which can be accessed at http://www.scaleupreport.org

The US has much larger VC funds which are more successful than their UK equivalents in terms of the internal rate of return they have provided to their limited partners. Many US VCs also provide extensive 'talent services'. For instance, Greylock — which funded Facebook, Twitter and Linkedin — makes an entire team available to their portfolio companies. The sole focus of that team is to supporting scale-ups to develop talent and providing mentoring to help manage the challenges associated with hyper-growth. This advice is timely, expert and effective, and many of those providing it used to run leading head-hunting agencies. Companies funded by top-tier VCs can therefore have access to enormous amounts of leadership development. But 99 per cent of the fastest growing 500 businesses do not choose VC funding.

When venture capitalists sell out early or companies re-domicile overseas, this breaks the virtuous circle of scale-up success, affecting investment appetite for the next generation of promising scale-ups and reducing the talent pool of successful scale-up entrepreneurs who are able to start, join or mentor scale-ups, let alone act as role-models for others.

It is hoped that the Business Growth Fund and British Business Bank will go some way to addressing these issues and that they will report on the enterprises it invests in so that we can see the impact of its efforts and the closing of the funding-gap. The British Business Bank has already set a strategic objective to help growing businesses and has recently invested almost £150 million in a number of growth finance funds and lenders active in the UK scale-up sector.

> **151 of the 203 scale-Up CEOs ranked access to talent you can hire as the 1st,2nd or 3rd most important issue, against 44 of the 203 who ranked access to VC as the 1st, 2nd or 3rd most important issue.**[110]

"There is a deep mismatch in what VCs, company management and angel investors are looking for. The VC model is dependent on the VC's own management, with a carried interest as their main source of return/income, making a return within the life of the fund. The fund life is typically five to seven years. It takes two to four years to invest the fund then by logic they have to divest within two to five years. VCs press for exit regardless of whether it is in the interests of the company management or not."
David Gammon, Rockspring

"The current state of the system creates incentives for the venture capitalist to sell out early. Having too few companies that make it to any appreciable scale (say in FTSE 250), greatly affects the virtuous circle."
Mike Lynch

> **63% of scale-ups said that they would be able to grow faster if shares of their company were made available for purchase through ISAs.**[111]

> **72% of scale-ups said they would be able to grow faster if the current limit for investments via Venture Capital Trusts was increased.**[112]

110 Scale-up Survey (2014). The raw data of can be accessed at http://www.scaleupreport.org

111 YouGov Scale-up Survey Sept 2014 Q 8

112 YouGov Scale-up Survey Sept 2014 Q 9

Recommendation 11

Government and industry must ensure that progress in closing the finance-gap is maintained and review and report on the extent to which scale-ups, in particular, are supported.

This report does not attempt to reinvent the wheel by re-recommending initiatives that are already underway. Key areas where progress has already been made to address longstanding issues include:

- The Business Growth Fund
- Crowd-funding
- The expansion of ISAs and Pensions and Corporates being able to invest in private companies.
- The British Business Bank, which has developed and promoted a range of financing solutions, including the Enterprise finance Guarantee.
- Intellectual Property Office is working with partners to develop financing routes for intellectual property-rich firms.
- The Big Innovation Centre's entrepreneurial finance hub will build solutions to finance high-growth firms through the critical phases of growth.
- UKTI should also their financing initiatives, particularly in China and the US, to include introductions to investors when they are organizing trade missions — although in time it may become less of a priority to access capital outside of the UK.

CHAPTER 9

Accessing infrastructure

CHALLENGE: ACCESSING RESEARCH AND DEVELOPMENT FACILITIES AND FINDING SUITABLE PREMISES

Accessing infrastructure includes issues with planning laws restricting their ability to expand their premises, inflexible landlords forcing companies to enter into onerously long leases, and difficulties accessing high-speed broadband. Scale-up companies also particularly highlighted issues around accessing facilities and equipment to carry out research and development (R&D) for new products and services; investing in this infrastructure was too costly and there were too few opportunities to partner with universities or large corporates. Scale-up leaders cited a range of issues regarding infrastructure; however, only 34 of the 203 (17 per cent) surveyed reported it as the first, second or third most important issue for them.

"After staff costs, accommodation is the next largest fixed overhead and a lot of our investors' cash goes into paying landlords and local authorities."

"Lease commitments for a rapidly growing (or shrinking) company are a huge burden."

> **80% of scale-ups said they would able to grow company faster if local and sub-national government made available publicly-owned offices and buildings on flexible, short-term contracts.**[113]

113 YouGov Scale-up Survey. Sept 2014 Q 14

WHAT NEEDS TO CHANGE?

1. Scale-up companies need access to cutting edge research facilities

The UK has some of the world's leading R&D facilities, but the scale-up companies which could benefit the economy most are often unable to access these, as they are owned by universities and large corporates. These institutions could be encouraged to make their facilities available, particularly in periods of the day or year when they are unused, to help scale-up companies turn their innovations into viable products and services.

The Catapult Centres (see box below), which were recently established in the UK by the Technology Strategy Board (now Innovate UK), are helping to fill the gap for R&D facilities for many cutting edge technologies, and Innovate UK's longstanding Knowledge Transfer Networks (see box below) helps build links between scale-up companies and universities and other innovation experts. London and Partners also has an initiative to help companies investing in London from overseas to find premises and other physical infrastructure.

Universities are crucial to the success of scale-up companies. As Sir Andrew Witty concluded in his review of universities and growth:

"The UK's research strength is a great national asset which we should work hard to maintain and develop. It can be the foundation for building a lead in the critical research-led technologies and sectors of the future." [114]

Large corporates have a key role to play. Microsoft has shown how large companies can lead the way with its Microsoft Technology Centres, which provide scale-ups with access to innovative technologies and world class expertise.[115]

> **78% of scale-up leaders said they would be able to grow faster if universities and large corporates opened up their R&D facilities to them.**[116]

In his Nov 2014 review of the Catapult Centres [117], Dr Hauser documents the impressive impact that they have had. Each £1 of public investment in collaborative R&D is estimated to offer a GVA return of £6.71 before taking spillover effects into account.

Example: Catapult Centres (UK)

A Catapult Centre is a technology and innovation centre where UK businesses, scientists and engineers work together on R&D, transforming ideas into new products and services to generate economic growth.

These centres, which were set up by the Technology Strategy Board from 2011 onwards, also focus on developing manufacturing capabilities to permit the scaling up of commercial production. Catapults are expected to generate their funding broadly equally from three sources: business-funded R&D contracts won competitively; collaborative applied R&D projects funded jointly by the public and private sectors, also won competitively; and core public funding for long-term investments.

Seven Catapult Centres have been opened: cell therapy in Guys Hospital, London; offshore renewable energy in Glasgow; satellite applications in Oxfordshire; connected digital economy in London; future cities in London; transport systems in Milton Keynes; and high value manufacturing which spans six different locations across the UK.

In its first full financial year, the High Value Manufacturing Catapult attracted 35 per cent of its total £134 million funding from industry. The centre also has 571 businesses directly involved in programmes and participated in 830 projects with private sector clients.[118]

114 Witty, Sir Andrew (2013), Encouraging a British Invention Revolution: Sir Andrew Witty's Review of Universities and Growth. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/249720/bis-13-1241-encouraging-a-british-invention-revolution-andrew-witty-review-R1.pdf

115 Microsoft (Accessed June 2014) Microsoft Technology Centres. Retrieved from http://www.microsoft.com/en-us/mtc/default.aspx

116 YouGov Scale-up Survey Sept 2014. Q 12

117 Hauser Review of the Catapult network Nov 2014 Recommendations on the future shape, scope and ambition of the programme

118 Technology Strategy Board (2013). Catapult Programme: Progress Update 2012-13. Retrieved from https://www.catapult.org.uk/documents/2155693/2268412/Catapult+Programme+Progress+update+2012-13/abc371ce-bbab-4ba6-86a2-af3c0b561290

Example: Knowledge Transfer Networks (UK)

Knowledge Transfer Networks, which are led by the Technology Strategy Board, connect business to academia and other partners to access knowledge and expertise on innovation. The network serves communities with different interests, from biosciences to transport, and from creative industries to electronics, sensors and photonics.

The communities' online activities are hosted on a virtual network platform. There are more than 90,000 members in specialist communities and more than 2,000 business people and innovators attend the annual InnovateUK event, which helps them to find new ideas, partners and inspiration.[119]

Example: Boston's Worcester Polytechnic Institute BioProcess Centre (US)

Worcester Polytechnic Institute's (WPI) Bio Process Centre offers contract bioprocess services for companies looking to outsource research and development projects. It is equipped with state-of-the-art facilities and skilled scientists leading customised, small-scale bioprocess services.

PwC's report on the Massachusetts Life Sciences Super Cluster concluded that WPI was an anchor of one of the largest and most innovative concentrations of life sciences companies and institutions in the world. [120]

2. Additional public buildings should be opened up to provide flexible office space for scale-up companies.

Some of the most successful initiatives around the world for supporting early stage, scale-up companies simply provide free office space, often with connections to high speed broadband. In Boston, for example, the Mayor called on the major real estate developers to set aside a percentage of their developments for entrepreneurship and innovation. This led to the attraction of MassChallenge, the world's largest start-up competition and accelerator, which received a free floor in a new office building, and enabled the 12,000 square foot Boston Innovation Center.[121] Similarly the success of Google Campus London (see example below) has been built around offering free working space, helping to act as a hub for entrepreneurs.

Recommendation 12

Government and industry must ensure that progress in infrastructure areas is maintained and review and report on the extent to which scale-ups, in particular, are catered for.

119 Technology Strategy Board (2014). Delivery Plan Financial Year 2014-15: Accelerating Economic Growth. Retrieved from https://www.innovateuk.org/documents/1524978/2138994/Delivery%20Plan%202014-15

120 WPI Life Sciences and Bioengineering Centre (Accessed June 2014). Bio-Process Centre. Retrieved from https://www.wpi.edu/Admin/LSBC/bp-center.html

121 Isenberg, D. (2012), Planting Entrepreneurial Innovation in Inner Cities, Harvard Business Review Blog Network. Retrieved from http://blogs.hbr.org/2012/06/planting-entrepreneurial-innov/

In 2012, the UK government launched 'Government Space for Growth' (see example below). There is a solid case for adjusting Space for Growth and Google Campus as they are both more oriented towards start-ups than scale-ups, especially when you consider the aspiration of this report to create 2,240 more scale-ups nationwide in the next five years and that each of these on average employs 83 people.[122]

122 Hart, M. (2014). Firm Dynamics and Job creation in the UK: 1998-2013. International Small Business Journal (publication Pending)

Example: Space for Growth (UK)

The UK government's Space for Growth programme opens up surplus or under-utilised government buildings on a temporary basis for organisations most in need, including start-ups, small businesses, charities, voluntary groups and social enterprises.

Individual workstations or meeting rooms can be booked for a day, week or month at a time. Organisations just have to pay a one-off fee of £25 to undergo a security check. Where there are vacant government buildings which are on the open market and proving difficult to let or sell on a permanent basis, these are being offered to third party providers to run for the benefit of. These buildings include offices, court buildings and retail premises. There are also three pilot business incubation projects.

Over 75 spaces are available in 59 geographical locations around England, including central London. These spaces can accommodate over 1,000 workstations.

Example: Google Campus London (UK)

In 2012, Google designed Campus to create an environment that encourages innovation through collaboration, mentorship, and networking. The seven-floor building provides entrepreneurs with high-speed wifi, a café, frequent networking and speaking events, co-working space and operates a jobs board. Campus membership has grown almost 300 per cent since January 2013, from 8,000 to 32,000. It is estimated that at least 576 jobs have been created within the Campus community in the past 18 months.

SECTION 3

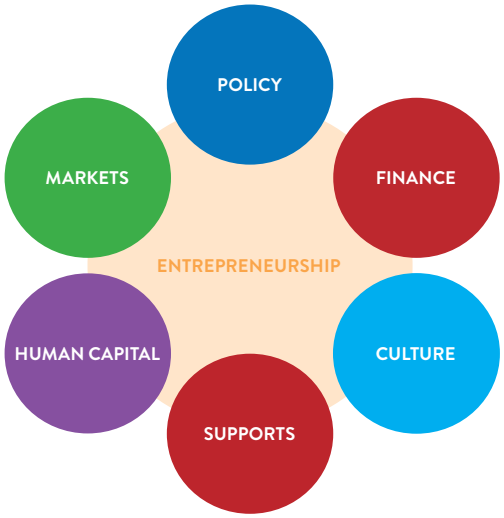
Making it happen

CHAPTER 10

Setting out a roadmap

The plan set out in this report requires actions from a wide range of stakeholders working in collaborative partnership to close the scale-up gap. The intention is to improve the UK's long-term competitive advantage by ensuring we are the best place for companies to start-up and scale-up. We know from the lessons learned in other countries that the coordination effort needs to be led on a local level, so these recommendations are cast in such a way that leaders of LEPs, city mayors or leaders of local universities and schools can embark on this journey. Any effort is good, but a coordinated collaboration at a local level is by far the best.

Figure 10.1: Domains of the entrepreneurship ecosystem



EARLY CUSTOMERS
- Early adopters for proof-of-concept
- Expertise in productising
- Reference customer
- First reviews
- Distribution channels

LABOUR
- Skilled and unskilled
- Serial entrepreneurs
- Later generation family

EDUCATIONAL INSTITUTIONS
- General degrees (professional and academic)
- Specific entrepreneurship training
- Technical experts, advisors

NETWORKS
- Entrepreneur's networks
- Diaspora networks
- Multinational corporations

INFRASTRUCTURE
- Telecommunications
- Transportation & logistics
- Energy
- Zones, incubators, co-working, clusters

SUPPORT PROFESSIONS
- Legal
- Accounting
- Investment bankers

LEADERSHIP
- Unequivocal support
- Social legitimacy
- Open door for advocate
- Entrepreneurship strategy
- Urgency, crisis and challenge

NON-GOVERNMENTAL INSTITUTIONS
- Entrepreneurship promotion in non-profits
- Business plan contests
- Conferences
- Entrepreneur-friendly associations

GOVERNMENT
- Institutions eg. investment, support
- Financial support eg. for R&D, jump start funds
- Regulatory framework incentives eg. tax benefits
- Research institutes
- Venture-friendly legislation eg. bankruptcy, contract enforcement, property rights and labour

FINANCIAL CAPITAL
- Micro-loans
- Angel investors, friends and family
- Zero-stage venture capital
- Venture capital funds
- Private equity
- Public capital markets
- Debt

SUCCESS STORIES
- Visible successes
- Wealth generation for founders
- International reputation

SOCIETAL NORMS
- Tolerance of risk, mistakes, failure
- Innovation, creativity, experimentation
- Social status of entrepreneur
- Wealth creation
- Ambition, drive, hunger

Each chapter addressed important barriers to scaling companies. Figure 10.1 sets out a 'checklist' that each of the main stakeholders of the ecosystem might consider in light of the recommendations.

STAKEHOLDER ACTIONS

Public Policy: [promote and convene]

- Lead
- City Leaders to meet with and take scale-up leaders needs into consideration (3 hours / month)
- Monitor (ERC / NESTA)
- On a macro level, free up data on a more timely basis such that the UK is the best place on the planet for scale-ups to flourish.
- Encourage experiments and help the successful ones roll-out to other cities

Culture: [promote]

- Invite international role models to your ecosystem to share their experience and be role models
- Celebrate the entrepreneur growth events in your (country / city / university / school) in the media
- Invite scale-up leaders to share their experience with students, media and other entrepreneurs
- Celebrate new customer wins and set up others (not valuations)

Human Capital: [long-term]

- Universities to include entrepreneurship in curriculum, entrepreneurs on board of governors
- Business Schools to write cases on issues faced by entrepreneurs
- Universities to offer local courses to scale-up leaders
- Universities and schools to feature local scale-up leaders as role-models in classrooms and their companies in career's fairs and work experience offerings
- Train ecosystem coordinators in what works /what doesn't (recommend Babson College)

Support:

- Identify mentors / directors with experience in scale-ups and try to find effective ways to capture / share their knowledge.
- Infrastructure / co-working spaces

Market:

- [short-term lever] Peer to Peer relationships / networking between scale-up leaders
- Networking between large corporates and scale-ups and 'first time' entrepreneurs.

Finance: [short-term lever]

- Foster relationships between entrepreneurs and suppliers of finance
- Finance follows talent
- No major new tax incentives needed

Figure 10.1: Check-list for key stakeholders in the ecosystem

Principles	Activities that arise from the Recommendations
Local and national government and corporates	
Invest time, not money – convene and facilitate where possible **Measure, track and evaluate impact** **Talent is the top priority, not finance** **Focus on scale-ups** as well as other SMEs and corporates **Be broad in outlook** – don't prioritise specific sectors, but favour the highest growth scale-ups **Learn** what it takes to scale-up companies	**Short-term** • Set up the data infrastructure to support "business support initiatives" so they can measure, track and evaluate on scale-up progress. • Mayors and city leaders to devote an hour a month to meet with a selection of the top 50 scale-up company leaders in their areas. Find out how you can help. • Encourage formal and informal learning programmes that support leadership talent development in scale-up firms. • Train key officials in international best practice and appoint a Scale-up Officer to every Local Enterprise Partnership. • Increase reach of initiatives that offer work experience and from scale-up companies. • Increase initiatives that offer mentoring to scale-up companies. **Medium-term** • Increase physical infrastructure to house fast growth scale-ups. • Increase initiatives to include scale-up leaders as role-models in classes in universities. **Long-term** • Increase reach of initiatives to include successful entrepreneurs in classes in schools to inspire students.
Universities	
Invest time, not money – convene, facilitate and partner **Prioritise supporting local scale-ups** with talent and innovation programmes **Expose students to entrepreneurship and scale-up firms**	**Short-term** • Design and run executive education programme for leaders from local scale-ups. • Encourage participation from scale-ups in careers fairs, work-placements, internship programmes and apprenticeships. **Medium-term** • Increase the presence of successful entrepreneurs on campus to inspire students. • Encourage student extra-curricular activities with top 50 local scale-up companies. **Long-term** • Support existing local scale-up initiatives by letting them use your facilities to convene eco-system wide exchanges and matching events.

Figure 10.1: Check-list for key stakeholders in the ecosystem (continued)

Schools	
Invest time, not money – convene **Expose students to entrepreneurship and scale-up firms**	**Medium- to long-term** • Encourage initiatives that boost the presence of successful entrepreneurs in schools to inspire students about future careers. • Adopt complementary programmes to help boost digital skills amongst students, and celebrate, promote and report digital skills being acquired. • Build links with scale-up companies to help them offer work experience placements • Encourage student extracurricular entrepreneurship activities.
Media	
Celebrate successful scale-up companies and initiatives **Hold government to account**	**Promotional activities directed at the press should:** • Identify and monitor scale-ups. • Promote UK scale-ups internationally to help them attract capital and talent to the UK. • Monitor the progression of STEM and digital skills curricula and programmes in schools. • Profile successful UK entrepreneurs to inspire others.

CHAPTER 11

The potential impact

In any investment portfolio, one must have some activities for the current period that generate immediate improvements, another set of activities that will bear fruit in five years and another set of activities that will bear fruit in more than 10 years. This is the approach taken for the recommendations in this report.

Teams at Deloitte, Royal Bank of Scotland (RBS) and Nesta have worked tirelessly for the past four months, building on the first draft of this report, to develop reasoned estimates of the impact of the report's recommendations over time. As key stakeholders in the industry with a passion for supporting economic growth, these organisations will also be helping to take forward the important work of scaling up our start-ups.

As a business leader who has always been data-driven it is extremely important to have a feel for 'the size of the prize' one is aiming for. Based on the analyses conducted for this report, it is clear that if the report's recommendations are put into practice effectively this will secure the competitive advantage of Britain and add significantly to economic growth. Figure 11.1 sets out the headline findings from RBS', Nesta's and Deloitte's impact studies, and the next few pages summarise the findings from these analyses in more detail. For the full details of their findings and methodologies, please refer to their publications which are documented in the footnotes and bibliography.

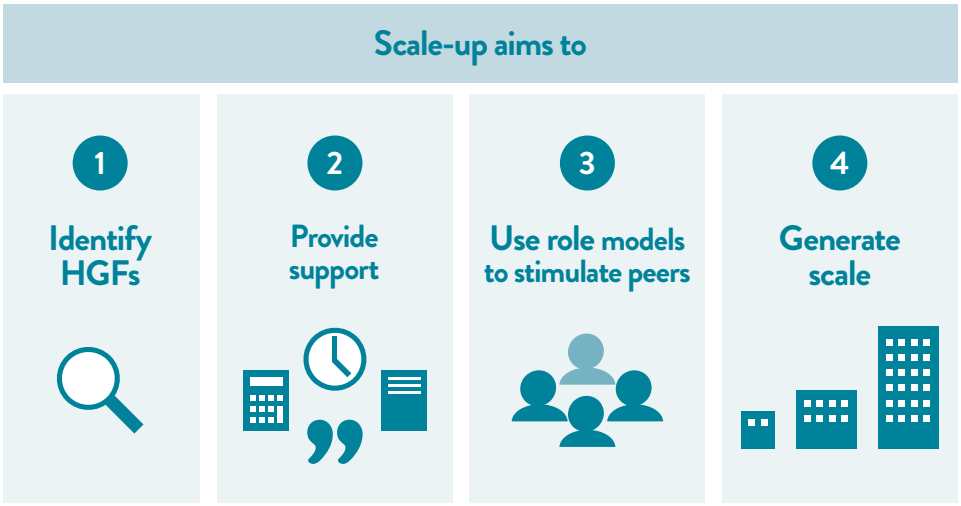


Figure 11.1: Headline findings from RBS', Nesta's and Deloitte's impact studies

RBS' analysis of short-term impact – getting one per cent of all businesses with more than 10 employees into high-growth, 'scale-up' mode

As a simple illustration of the potential impact of high-growth firms, RBS[123] undertook an analysis to determine the economy wide impact of one per cent of all businesses with over 10 employees shifting from a stable growth state into high-growth mode. This would see the total population of high-growth firms (HGFs) in the UK increase from 10,200[124] (4.6 per cent of total business population with 10 or more employees) to 12,440 (5.6 per cent of total business population with 10 or more employees). At the end of year three this would result in 2,240 businesses making this shift and the creation of 238,000 jobs and almost £39 billion in additional turnover.

Nesta's analysis of medium-term impact – increasing allocative efficiency

Scale-ups play an important role in increasing allocative efficiency. Research by Nesta estimates that inefficiencies in the way that resources are allocated 'muted' the UK economy by £96 billion in 2013 – over five per cent of total UK GDP in today's prices.[125]

Deloitte's analysis of long-term impact – adding between £70 billion and £225 billion to UK GDP by 2034

Assuming we address the UK's skills-gap, the impact analysis conducted by Deloitte estimates that if the recommendations in this report were implemented in full this has the potential to generate between £70 billion and £225 billion of GDP for the UK economy (in 2014 prices) over the period between 2015 and 2034. This is consistent with an additional 45,000 to 150,000 net jobs above baseline in the UK in 2034.

123 RBS Working Paper (2014). High-growth Firms and the Economy

124 Anyadike-Danes, M. and Hart, M. (February 2014) Moving on from the 'Vital 6%'. Enterprise Research Centre (ERC). Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/02/ERC-Insight-No_3.pdf

125 This simple extrapolation does not factor in any jobs displaced due to greater allocative efficiency. Mason et al excludes agriculture, financial services and the government sector.

Short-term analysis

International comparisons tell us that the UK has a large 'stable' population of businesses that grow or shrink by less than five per cent each year. Recent BIS analysis showed that almost 2.7 million SMEs in the UK wished to grow but were not growing (growth defined as more than five per cent in employment or turnover terms), and just 640,000 SME firms were growing on this measure.[126] If a small proportion of these businesses could find a way to overcome the barriers that are holding them back and 'flip' into high-growth mode the economic impact could be substantial.

As a simple illustration of the potential impact of high-growth firms we undertook an analysis to determine the economy wide impact of one per cent of all businesses with over 10 employees shifting from a stable growth state into high-growth mode. That is the total population of HGFs in the UK increases from 10,200 (4.6 per cent of total business population with 10+ employees) to 12,440 (5.6 per cent of total business population with 10+ employees).

At the end of year three this would result in 2,240 businesses making this shift and the creation of 238,000 jobs and almost £39 billion in additional turnover. This should be seen as a direct and gross impact (i.e. it does not take account secondary and tertiary multiplier effects which would create additional employment and does not account for negative impacts such as displacement from other businesses). The analysis reflected the current structure of the business population with more than 10 employees as shown in Table 11.1. Across the 2,240 businesses that moved into high-growth mode, the average firm created 106 additional jobs and £17.3 million in additional turnover.

Shifting 2,240 businesses into high-growth mode may appear to be an ambitious scenario. However, it is clear there are far more SME businesses with the potential to become HGFs in the UK, but these businesses never go on to achieve that status. Identifying potential growth firms ahead of time means that they can be targeted with the right support and helped to drive the economy. Research by Experian[127] between 2003 and 2006 showed that 10 per cent of HGFs created 1.6 million jobs. However, a retrospective model developed to identify firms that had the highest potential to be HGFs found 34,000 businesses had the highest potential to become HGFs but only 20 per cent actually achieved it. These 20 per cent or 6,500 successful firms identified in the model created 260,000 jobs in the UK economy. But what about the other 80 per cent or 27,500 potential HGFs that never achieved their potential? In that context our simple illustration of potential seems far less ambitious.

The substantial economic impact of HGFs becomes clear when we begin to examine the aggregated effects of HGFs. RBS' analysis shows that the combined effect of helping one per cent more of them into HGF mode could be the creation of 243,000 jobs and almost £39 billion in additional turnover over three years.

126 Department for Business, Innovation and Skills (BIS) (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates and Small Business Survey, 2013. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/204183/bis-13-88

127 Experian (2010). The Insight Report: Tomorrow's champions: finding the small business engines for economic growth. Retrieved from: http://www.experian.co.uk/assets/insight-reports/brochures/experian-insight-report-q4-2010.pdf

- There are 186,745 businesses in the UK with 10-49 employees. If just one per cent of these (1,867 firms) could become HGFs it would create 52,276 jobs and £7.1 billion in additional turnover over a three year period.
- There are 30,685 businesses in the UK with 50-249 employees. If just one per cent of these or 307 firms could become HGFs it would create 42,287 jobs and £7.1 billion in additional turnover over three years.
- Equally there are 6,595 businesses in the UK with 250 employees or more. If just one per cent of these (66 firms) could become HGFs it would create 142,560 jobs and £24.5 billion in additional turnover over three years.

Table 11.1: The year three gross impact of moving one per cent of businesses to high-growth firm mode (244 per cent over three years)[127]

Number of employees	Total business population	High-growth population estimate	1% of all businesses into HGF mode (additional)	Aggregated additional employment impact	Aggregated additional turnover impact (£bn)
10-49	186,745	8,490	1,867	52,276	7.1
50-249	30,685	1,410	307	43,287	7.1
250+	6,595	300	66	142,560	24.5
Total	**224,025**	**10,200**	**2,240**	**238,123**	**38.72**

All the evidence indicates the potential economic impact of successfully raising the number of HGFs is likely to be substantial. Evidence suggests that there are a significant number of SME businesses with the potential to become HGFs in the UK which do not go on to achieve that status. Identifying potential growth firms ahead of time means that they can be targeted with the right support and helped to drive the economy.

More recent data from RBS similarly illustrates the potential aggregate impact of successfully raising the population of HGFs. Data from between 2010 and 2013 indicates that each HGF created an average of 83 net jobs in the UK.[128] The 2013 population of HGFs was 10,200. Over a three year period these firms would create 846,600 jobs. If the population of HGFs could be raised by 10 per cent (1,200 firms) it would create an additional 85,000 jobs in the economy over three years (assuming these were manufacturing type HGFs).

A higher level of HGFs in the UK could subsequently increase the number of large businesses and thereby boost productivity and economic growth. Data on HGFs indicates that relatively few are large scale, with a fraction having turnover in excess of £100 million after the three year period of high-growth. Large businesses tend to be more productive than smaller businesses. On average, large businesses have a turnover

128 Source: Based on: Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates; and Nesta research.

129 Anyadike-Danes, M. and Hart, M. (February 2014) Moving on from the 'Vital 6%'. Enterprise Research Centre (ERC). Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/02/ERC-Insight-No_3.pdf

per employee of £170,000 compared to £134,000 for firms with between 10 and 49 employees, and £164,000 for firms with between 50 and 249 employees.

Since 2000, there has been an increase in the overall business population. This has been largely driven by SMEs – an increase of 41 per cent between the start of 2000 and the start of 2013. However, these changes were driven by the increase in the number of businesses without employees. This trend may be related to the tough labour market conditions, which may have encouraged people to set up in business in response to being made redundant. At the same time, the number of businesses employing more than 250 employees in the UK is eight per cent lower than it was in 2000, falling from 7,200 at the start of 2000 to 6,600 at the start of 2013.[130] An increase of eight per cent (600 firms) from current levels back to 2000 levels would create almost 800,000 jobs and add £136 billion in turnover, as well as providing a major boost to UK productivity.

The UK also has a lower share of large businesses than many international peers, including the US. Large firms with more than 250 employees account for 0.5 per cent of firms in the UK but 0.7 per cent in the US. If the number of large firms with more than 250 employees in the UK increased to the same proportion as in the US this would add 2,000 large businesses, creating three million jobs and adding £516 billion in turnover.[131]

BIS data show large firms account for just 0.1 per cent of businesses but 40.7 per cent of employment and 51.9 per cent of turnover. International comparisons from NESTA indicate the UK has large numbers of employees working in large businesses versus international comparisons but still less than the US.

Research by RBS shows that at a firm level, the impact of entering high-growth mode depends on the firm's starting point: a large firm entering a period of high-growth will clearly have a larger economic impact than a smaller firm. For example, if a firm with 20 employees and turnover of £2.6 million[132] experienced three years of average high-growth, this would create 29 additional jobs and an additional £6.9 million in revenue over the three years. However if a large firm with 1,500 employees and turnover of £260 million[133] experienced the same rate of growth, this would create 2,200 jobs and an additional £680 million in revenue over the same three year period. This is a fairly obvious point but guides potential policy interventions as to where resources could be targeted to achieve maximum benefit.

Deloitte's impact analysis

The impact analysis conducted by Deloitte estimates that if the recommendations in this report were implemented in full this might generate between £70 billion and £225 billion of GDP for the UK economy (in 2014 prices) over the period between 2015 and 2034. This is consistent with an additional 45,000 to 150,000 net jobs above baseline in the UK in 2034.[134]

130 Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates

131 Assuming 2,000 fewer 1-9 employees firms and 2,000 more 250+ employee firms

132 Average characteristics for a firm in the 10 to 49 employees bracket. Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates

133 Average characteristics for a firm in the 250 plus employees bracket, Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates

134 See the full analysis in Deloitte (2014). Scale-up Challenge: An Impact Report by Deloitte

Scale-up has the potential to deliver

Between 45,000 and 150,000 additional jobs by 2034

Between £70bn and £225bn towards UK GDP, 2015 to 2034

Faster growth in UK productivity through competition

Knock-on opportunities for firms in the UK supply chain

Impact across all areas of the UK, not just in London

Impact across all sectors of the UK economy, not just tech firms

The range of projections reflects the different levels of impact which have been achieved by programmes supporting scale-up companies in the UK and countries around the world. These projections are based on the following two scenarios:

1. A UK-style intervention scenario — an uplift broadly in line with the outcomes achieved by the Goldman Sachs 10,000 Small Businesses programme in the UK.

> **This would add £110 billion to GDP over the period from 2015 to 2034 and create an additional 76,000 jobs in 2034.**

In 2034, the increase in GDP would be £6.4 billion above baseline. This is the most conservative estimate which is based upon a 6.25 per cent growth premium for turnover in firms benefiting from scale-up support.

2. An emerging economy-style intervention scenario — an uplift broadly in line with that achieved by the Endeavor programme in emerging economies.

> **This would add £530 billion to GDP over the period from 2015 to 2034 and create an additional 367,000 jobs in 2034.**

In 2034, this would add £31 billion to GDP. This projection is based upon a 37.5 per cent growth premium for turnover in firms benefiting from scale-up support.

Each scenario is based on creating an additional 3,200 scale-up companies in the UK by 2034. This represents an increase of around 25 per cent above the baseline in 2034, or an average annual growth rate of 2.1 per cent rather than 1.0 per cent over the period.

Deloitte has also made a projection for an 'aspirational scenario', which is based on a return to the average level of employment per high-growth firm seen in the UK in the mid-2000s, which is roughly double the current levels. Whilst this projection is not based on the evidence of the impact of existing scale-up support programmes, which is why it is not used for the headline impact measure in this report, it does provide a useful projection. If the UK could generate 167 net employees within each scale-up company - which is based on estimates from the UK in the period from 2002 to 2005, rather than the 83 net employees generated between 2010 and 2013 - then this would add £70 billion to GDP in 2034 and 824,000 net additional jobs.

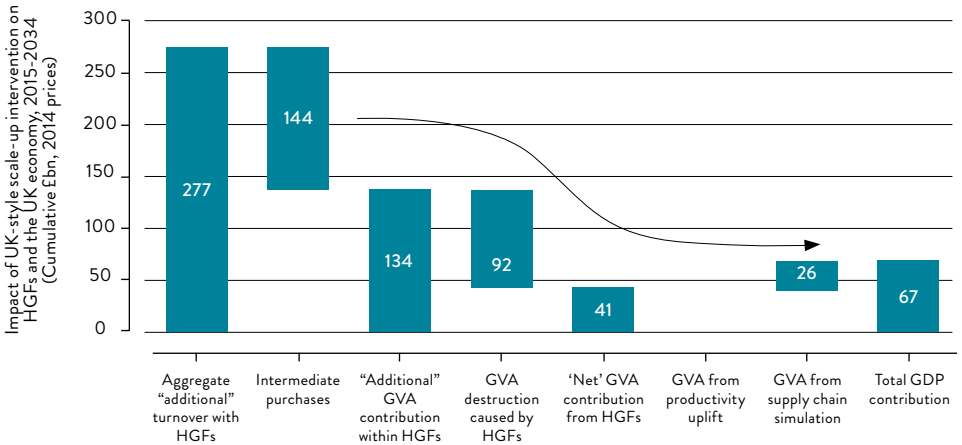
For all of these projections, Deloitte's impact analysis makes it clear that the extent of the impact is dependent on a range of factors, including the health of the global economy, the capacity of firms and individuals in the UK to leverage the support offered, and the effectiveness of the interventions themselves.

Deloitte's analysis also highlights that the wider ecosystem needs to be in place to support scale-up companies and that skills shortages could particularly hold back the potential of scale-ups. The projections assume that there are no supply-side issues constraining company growth beyond what can be addressed by the support programmes. That is why this report also addresses some of the wider supply-side issues, including issues with careers advice, the subjects chosen by young people to study, and links between educators and scale-up companies.

UK-style scale-up intervention scenario

Under the assumptions of a UK-style scale-up intervention, the total GDP contribution between 2015 and 2034 is estimated to be £67 billion (2014 prices).[135] The waterfall below in chart 11.1 shows the constituent components of this impact, starting with the level of additional turnover within firms and ending with the total GDP contribution – the net economic impact.

Chart 11.1: UK-style scale-up intervention scenario impact waterfall, 2015-2034[136]



135 Though we do not present the results in discounted form in the main text, discounting the GVA benefits using 3.5 per cent to reflect the time-value-of-money (per HMT guidance), the overall cumulative benefit is on the order of £48billion – 70 per cent of the undiscounted total.

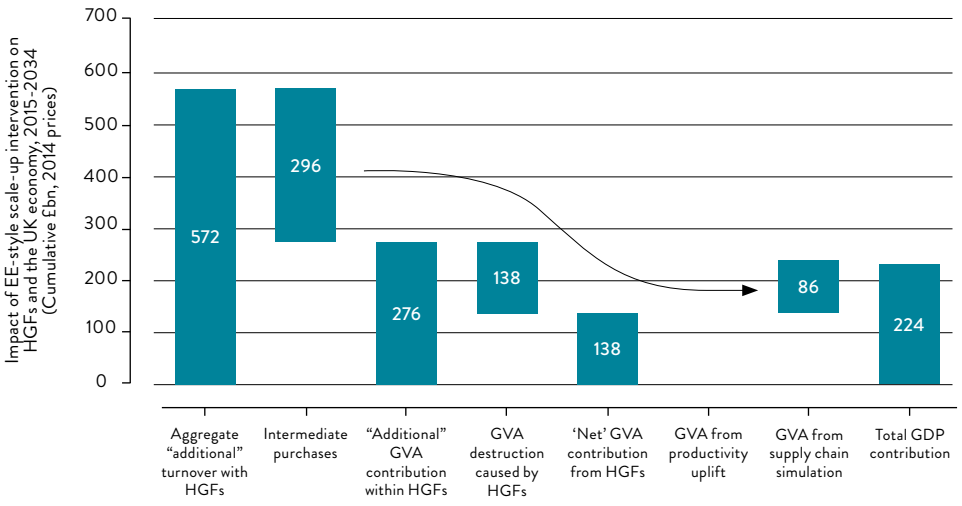
136 Deloitte (2014). Scale-up Challenge: An Impact Report by Deloitte

137 Deloitte (2014). Scale-up Challenge: An Impact Report by Deloitte

The 6.25 per cent intervention turnover growth premium creates aggregate additional turnover of around £280 billion over the next two decades as a result of scale-up interventions. Of this, around £145 billion occurs outside of HGFs, as intermediate inputs to production. This means that approximately £135 billion of the £280 billion in turnover represents additional value added contribution within HGFs.

Emerging economy-style scale-up intervention scenario

Chart 11.2: Emerging economy-style intervention scenario impact waterfall, 2015-2034[137]



Using a similar methodology to the UK-style scale-up intervention scenario, the results for an emerging-economy-style intervention scenario give an indication of the level of benefits accruing when the turnover growth premium increases to 14 per cent and the destruction ratio is reduced to 50 per cent. This on the basis of the level of additionality seen within Endeavor's programme for HGFs in emerging economies.

The overall contribution to GDP in this scenario is around £225 billion over the next 20 years, stemming from aggregate additional turnover of £570 billion. In this scenario the level of destruction of activity in other firms is around £140 billion.

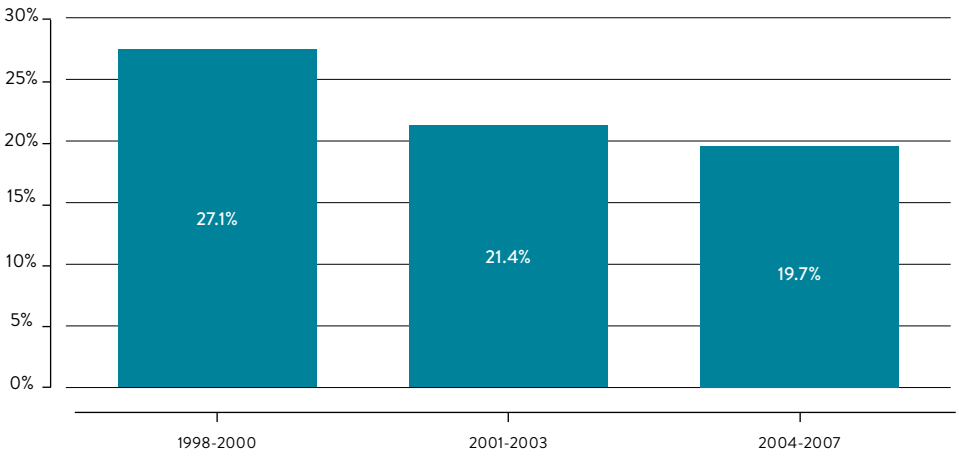
In terms of job creation, the scenario suggests that around 150,000 additional jobs will be in place in the UK economy by 2034. Of these jobs, around 60 per cent would be within HGFs and 40 per cent outside HGFs in other organisations benefitting from supply chain spending. Chart 11.2 shows how the benefits are profiled over time, which is much the same as the profile seen for the UK-style scenario.

The level of employment within HGFs will be significantly higher than the 150,000 additional jobs implied, the difference from the gross estimate of jobs being the number of jobs displaced elsewhere in the economy through the process of creative destruction.

Nesta's analysis

As discussed in Chapter 2, the nature of the evidence regarding the productivity effects of HGFs does not yet allow us to include productivity uplift in the core estimates presented above. Recent research by Mason et al on behalf of NESTA suggests that in the UK, the aggregate allocation of resources has been worsening over time.[138]

Chart 11.3: Allocative efficiency in Britain, 1998-2007



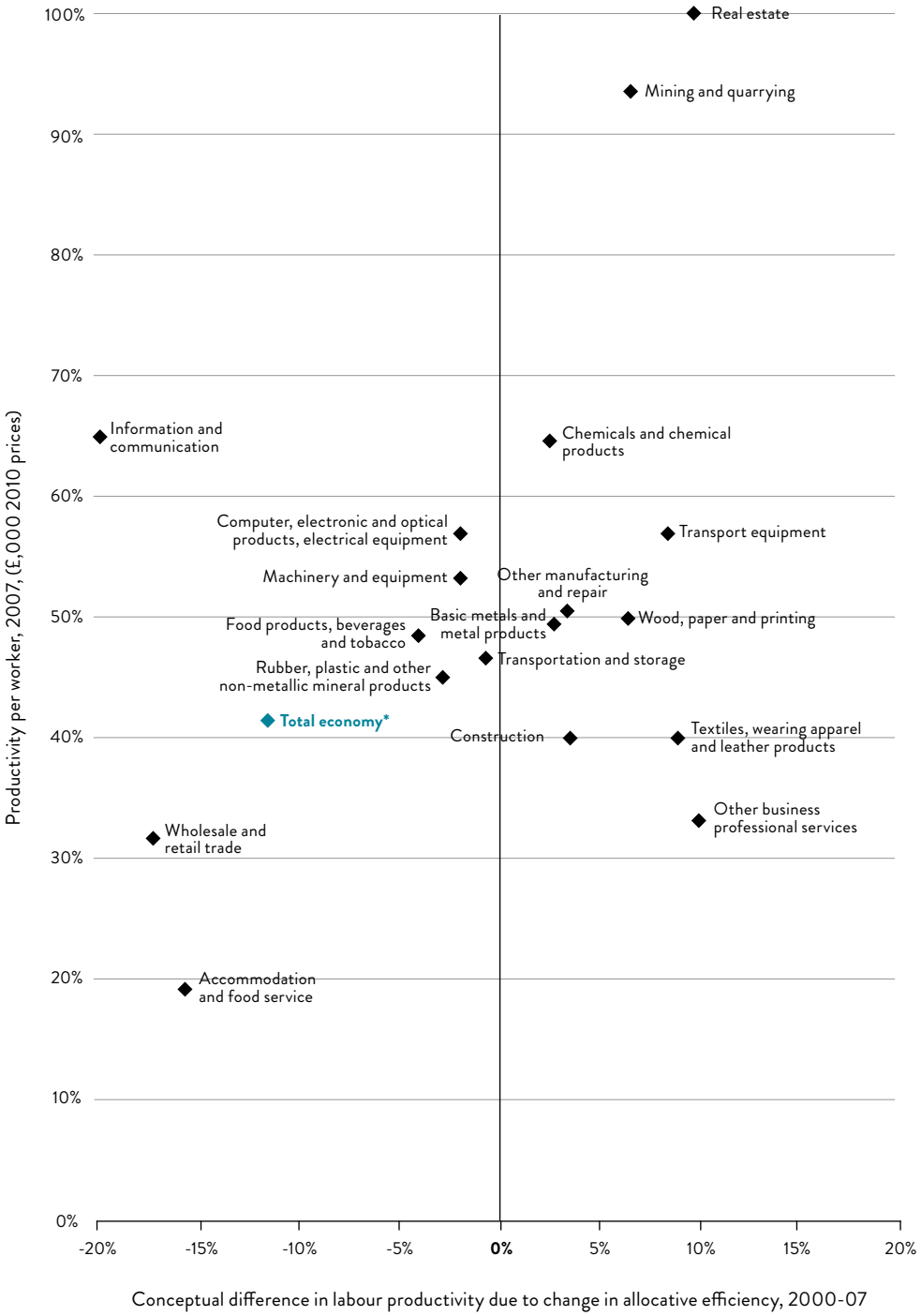
In the UK, resources are typically allocated towards the most productive companies, and as a result UK productivity over the full period was 10 per cent higher than it would have been if all UK firms had the same size. However, allocative efficiency has been falling over time in the UK. If resources were as efficiently allocated in the latest period where data are available (2004-07), as they had been in the earliest one (1998-2000), UK aggregate productivity would have been 11 per cent higher than it was in 2007.[139]

This happened against a backdrop of steady productivity growth and benign economic conditions between 1998 and 2007. Since then, the UK's productivity performance has worsened. It is not clear whether the competitive dynamic in the UK was influenced by the recessionary shock to such an extent that allocative efficiency might have improved in the interim against a backdrop of contraction/stagnation in absolute productivity levels, but wider research indicates that the problem persists in the form of the much documented 'productivity puzzle'. Examining the data, there is a reasonable degree of positive correlation between absolute levels of productivity in a sector and the difference in allocative efficiency observed over the period in the same sector.

138 Mason, G., C. Robinson and C. Bondibene (2014). Sources of labour productivity at sector level in Britain,1998-2007: a firm-level analysis, A report to NESTA. Retrieved from: http://www.nesta.org.uk/publications/sources-labour-productivity-growth-sector-level-britain-1998-2007-firm-level-analysis

139 Allocative efficiency is defined by Investopedia as "A characteristic of an efficient market in which capital is allocated in a way that benefits all participants." Technically, maximum efficiency occurs when no entity is made worse off by a change.

Chart 11.4: Changes in allocative efficiency and absolute productivity in the UK by sector, 2000-2007 [140]



140 Deloitte (2014). Scale-up Challenge: An Impact Report by Deloitte; Anyadike-Danes, M., Bonner, K., Hart, M. & Mason, C. (2009) Measuring business growth: high-growth firms and their contribution to employment in the UK. NESTA. Retrieved from: http://www.nesta.org.uk/publications/measuring-business-growth; Oxford Economics

In simple terms, allocative efficiency has tended to worsen in low-productivity sectors such as retail, hotels and catering. Two specific outliers are Information and Communication, which has relatively high productivity and saw a marked decline in allocative efficiency, and Other Business and Professional Services, which has below average productivity but has seen significant increases in allocative efficiency over the period.

Mason et al find, therefore, that in aggregate allocative efficiency has increased in manufacturing and worsened in services. And because the sectors responsible for reductions in allocative efficiency accounted for more than half of all activity in the UK economy (55 per cent of employment across all the sectors covered in 2007), and the UK continued to restructure as a service-sector economy between 2000 and 2007, this explains why the aggregate effect across the economy is skewed so heavily to the negative – an 11 per cent hypothetical reduction in productivity due to a worsening in allocative efficiency over the period.

Accordingly, the research also controls for this 'structural shift' effect to give a lower bound estimate within sectors acknowledging the move to service sectors where productivity and efficiency is, on average, lower. The associated reduction in productivity, due to a worsening in allocative efficiency over the period, is seven per cent, giving a range of seven to eleven per cent.

> **Presuming that the 11 per cent gap in labour productivity persists today, this leaves a significant prize available for the UK if policy measures can be introduced to improve allocative efficiency. Scale-ups and HGFs could be one pillar amongst many to increase the UK's allocative efficiency and productivity.**
>
> **Based on the gap persisting (rather than worsening) over the intervening period, the lower bound estimate of seven per cent implies that UK productivity might have been £54,600 per worker rather than the £51,000 observed in 2013.[141] With over 20 million jobs in the sectors covered by Mason et al's research, this implies that UK GVA might have been £96 billion higher than observed in 2014 – over five per cent of total UK GDP in today's prices.[142]**

The future test is whether more and better equipped HGFs can, and will, improve productivity outcomes for the UK, by enabling a more efficient and timely allocation of resources, as highlighted by Mason et al in their paper. More widely, other related business support interventions might seek to do the same, for example by decreasing barriers to growth.

141 Source: Oxford Economics.

142 This simple extrapolation does not factor in any jobs displaced due to greater allocative efficiency. Mason et al excludes agriculture, financial services and the Government sector.

Mason et al also find:

"In line with a number of the plant level studies for the UK and other countries, we find that much of the reallocation [of resources] takes place within and between the continuing firms rather than as a result of entry and exit of firms in the Schumpeterian spirit. However, estimates of the net effects of entry and exit are found to conceal sizeable positive contributions to productivity made by some new entrants and sizeable negative contributions made by some exiting firms."[143]

This means that new fast growing firms can make large positive contributions to productivity, but more worryingly that a number of firms with below-average productivity did continue to operate, dragging down aggregate productivity over the period. The extent to which some of these were swallowed up in mergers and acquisitions is, admittedly, unclear.

Deloitte did not factor such productivity effects into the main estimates presented earlier given the inherent difficulty, but the size of the productivity prize for the UK, through HGFs or otherwise, is clear from Mason et al's research.

143 Mason, Robinson, and Bondibene, Sources of labour productivity at sector level in Britain, 1998-2007: a firm-level analysis, A report to NESTA.

SECTION 4
Concluding remarks

SECTION 4

Concluding remarks

The impact of the Scale-up Report recommendations over time

Some of the recommendations in this report will not have an impact for years to come. If the young people in secondary school do not choose to study the right subjects now, for example, they will be unemployable by the scale-up companies when they complete their formal education (let's say by 2025). That will have implications then, just as it has implications now, with 990,000 open jobs and 87 per cent of companies saying they cannot find staff with the right qualifications. **Recommendation 5** (on formal education in schools, colleges, universities) is the most important in this respect, but it also the most difficult to successfully implement, partly because it relies on the collaboration between industry, educationalists and the media.

Recommendation 8 (informal education programmes) could have impact in two to three years' time, but this won't be immediate because the effective programmes need to be offered across the country and their success is dependent on accurate identification of programme participants. At the moment, the programme delivery partners are reliant on out-of-date information from Companies House which can lead to selection bias. Although out-of-date is better than nothing as many countries do not have the benefit of our equivalent of Companies House.

Some of the Recommendations in this report can have immediate impact. We can do things right now to increase the informal educational programmes and increase the allocative efficiency of our economy. **Recommendations, 2, 3, 4, 6, 7, 9, 10, 11 and 12** will all help in this respect.

These recommendations are all important. But even the short-term recommendations will have a muted impact until Recommendation 1 (on data) is implemented. **Recommendation 1** allows the identification of the scale-ups to take place based on VAT and National Insurance records, which decreases the current delay from 12 to 18 months to one to three months. Given how dynamic our economy is, delay in identifying is critical if we wish to ensure we get the right help to the right leaders at the right time. If Denmark can release their tax data, why can't we? If 87 per cent of our scale-up companies say they would happily be identified as a scale-up company, why can't we?

This will not be a short-term effort. Some initiatives are quick to implement and the effects will be felt immediately. The impact of other initiatives will be spread over the next 10 to 20 years.

Crucially, it will be a team effort, and I look forward to working with colleagues to take this agenda forward.

APPENDICES

APPENDIX 1

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APPENDIX 2

Bibliography

Evidence tying high-growth firms to economic growth

Anyadike-Danes, M., Hart, M. and Du, J. (2013) From Firm Dynamics and Job Creation in the UK. Enterprise Research Centre (ERC). Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2013/12/ERC-White-Paper-No_6-Firm-Dynamics-final.pdf

Anyadike-Danes, M. and Hart, M. (February 2014) Moving on from the 'Vital 6%'. Enterprise Research Centre (ERC). Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/02/ERC-Insight-No_3.pdf

Anyadike-Danes, M., Bonner, K., Hart, M. & Mason, C. (2009) Measuring business growth: high-growth firms and their contribution to employment in the UK. NESTA. Retrieved from: http://www.nesta.org.uk/publications/measuring-business-growth

Bravo–Biosca, A. and S. Westlake (2014). The Other Productivity Puzzle: Business Dynamism and Productivity Growth Before the Crisis. Nesta. Retrieved from: http://www.nesta.org.uk/publications/other-productivity-puzzle-business-dynamism-and-productivity-growth-crisis

Cambridge 2 You (2014), Cambridge Cluster Map. Retrieved from: http://www.camclustermap.com/list/badge/top50emp

Cambridge 2 You (2014). Cambridge Cluster Map Top 50 by Employment. Retrieved from http://www.camclustermap.com/list/badge/top50emp

Cambridge 2 You (2014). Cambridge Cluster Map Top 50 by Revenue. Retrieved from http://www.camclustermap.com/list/badge/top50rev

Centre for Cities/McKinsey (2014). Industrial Revolutions: Capturing the Growth Potential. Retrieved from http://www.centreforcities.org/assets/files/2014/14-06-26-Final-web-Industrial-Revolutions.pdf

Criscuolo, C., Gal, P. & Menon, H. (2014), 'The Dynamics of Employment Growth: New Evidence from 18 Countries', OECD Science, Technology and Industry Policy Papers, No. 14, OECD Publishing. Retrieved from http://dx.doi.org/10.1787/5jz417hj6hg6-en

Clayton, T. and Van Welsum, D. (March 2014) Closing the Digital Entrepreneurship Gap in Europe: Enabling Businesses to Spur Growth. The Conference Board. Retrieved from https://www.conference-board.org/publications/publicationdetail.cfm?publicationid=2704

Deloitte (2014). Scale-up Challenge: An Impact Report by Deloitte

Department of Business, Innovation and Skills (December 2013) SMEs: The Key Enablers of Business Success and the Economic Rationale for Government Intervention. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/266304/bis-13-1320-smes-key-enablers-of-business-success.pdf

Endeavor, (December 2013) 'One High-Growth SME Creates as Many Jobs as 100 New Micro-Businesses'. Retrieved from http://www.ecosysteminsights.org/one-high-growth-sme-creates-as-many-jobs-as-100-new-micro-businesses/

Experian (2010). The Insight Report: Tomorrow's champions: finding the small business engines for economic growth. Retrieved from: http://www.experian.co.uk/assets/insight-reports/brochures/experian-insight-report-q4-2010.pdf

Hart, M. (2014). Firm Dynamics and Job Creation in the UK. Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2013/12/ERC-White-Paper-No_6-Firm-Dynamics-final.pdf

HM Treasury (March 2012). Speech by the Chancellor of the Exchequer, Rt Hon George Osborne MP; Google Campus launch. Retrieved from https://www.gov.uk/government/speeches/speech-by-the-chancellor-of-the-exchequer-rt-hon-george-osborne-mp-google-campus-launch

Kane, T. (September 2010). The Importance of Startups in Job Creation and Job Destruction Kauffman. Retrieved from http://www.kauffman.org/what-we-do/research/firm-formation-and-growth-series/the-importance-of-startups-in-job-creation-and-job-destruction

Lee, N. (November 2011) Free to Grow? Assessing the Barriers Faced by Actual and Potential High-growth Firms. Retrieved from http://www.nesta.org.uk/sites/default/files/freetogrow.pdf

Lerner, J (2009) The Boulevard of Broken Dreams. Retrieved from http://www.lse.ac.uk/researchAndExpertise/units/growthCommission/documents/pdf/contributions/lseGC_lerner_boulevard.pdf

Lunani, H. (2012) Endeavor Multiplying Impact through High Quality Jobs. Retrieved from http://share.endeavor.org/pdf/GlobalEmployeeSurveys.pdf

McKinsey & Company (October 2011) The Power of Many: Realizing the socioeconomic potential of entrepreneurs in the 21st century. Retrieved from http://www.g20yea.com/en/wp-content/uploads/The_Power_of_Many-_McKinsey_Report.pdf

Mazzucato, M. (February 2014) Startup myths and obsessions. The Economist www.economist.com/blogs/schumpeter/2014/02/invitation-mariana-mazzucato

Morris, R. (2011) 2011 High-Impact Entrepreneurship Global Report. Retrieved from http://www.gemconsortium.org/assets/uploads/1317315588GEM_Endeavor_2011_High_Impact_Report.pdf

Nesta (2010). Growth Dynamics Research Report. Retrieved from; http://www.nesta.org.uk/publications/growth-dynamics

Nesta (January 2014) Increasing 'The Vital 6 Percent': Designing Effective Public Policy to Support High-growth Firms. Working Paper. Retrieved from http://www.nesta.org.uk/sites/default/files/working_paper_-_increasing_the_vital_6_percent.pdf

Nesta (March 2011) Vital Growth: The Importance of High-Growth Business to the Recovery. Retrieved from http://www.nesta.org.uk/publications/vital-growth

Nesta (2013). High-growth Firms and Productivity – Evidence from the United Kingdom. Retrieved from: http://www.nesta.org.uk/publications/high-growth-firms-and-productivity-evidence-united-kingdom

Nesta (December 2009) The Vital 6%: How High-Growth Innovative Businesses Generate Prosperity and Jobs. Retrieved from http://www.nesta.org.uk/publications/vital-6

Nesta, (March 2013) 'Exploring the incidence and spatial distribution of high-growth firms in the UK and their contribution to job creation'. Retrieved from http://www.nesta.org.uk/sites/default/files/exploring_the_incidence_and_spatial_distribution_of_high_growth_firms_in_the_uk_and_their_contribution_to_job_creation.pdf

OECD (2014). The Dynamics of Employment Growth: New Evidence from 18 Countries. Retrieved from http://www.oecd-ilibrary.org/docserver/download/5jz417hj6hg6.pdf?expires=1408440163&id=id&accname=guest&checksum=67DB405D7A298298BF7C62BD82982CCE

OECD (2014) Young SMEs, growth and job creation. Retrieved from http://www.oecd.org/sti/young-SME-growth-and-job-creation.pdf

Prelude Group (November 2012) The unsung heroes of business: Entrepreneurs and their total tax contribution. Retrieved from http://www.preludegroup.co.uk/resources/Unsung-heroes-of-business1.pdf

Roper, S. (November 2013) The UK mid-market – 'Overlooked Middle' or lair of the Hidden Champions? Enterprise Research Centre (ERC). Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2014/01/Insight-Paper-No-2-Mid-Market-Report-SR-FINAL.docx

Royal Society (2014). Final Science 50 UK Map. Retrieved from: http://batchgeo.com/map/112dd4675c-0f085a83c87f398d112264

Royal Society (2014), Science 50 Index. Retrieved from: http://www.svc2uk.com/the-royal-society-science-50-index/

Startup Intelligence (2011). Cambridge: From the Lab to the Limelight. Retrieved from http://startupintelligence.net/Startup%20Intelligence%20Cambridge%20Report.pdf

Role of universities and schools

Bosworth, C. (2014). It All Adds Up. FE News. Retrieved from: http://www.fenews.co.uk/featured-article/it-all-adds-up

Evans, J. (2014). Brian Cox: Millions heading for skills black hole. Retrieved from http://techcitynews.com/2014/08/28/brian-cox-skills-gap-can-only-get-better/?utm_source=Website+and+Print+-Subscribers&utm_campaign=cdd72e77cd-TWiT_AUGUST_29&utm_medium=email&utm_term=0_23276d50d0-cdd72e77cd-66761849#.VAAs0u29LCQ

Ewing Marion Kauffman Foundation (2009) Entrepreneurial Impact: The Role of MIT. Retrieved from http://www.kauffman.org/research-and-policy/mit-entrepreneurs.aspx#sthash.zofR0mRX.dpuf

FE news (September 2014). It all adds up. Retrieved from http://www.fenews.co.uk/featured-article/it-all-adds-up

LinkedIn (October 2014). Ranking Universities Based on Career Outcomes.
Retrieved from http://blog.linkedin.com/2014/10/01/ranking-universities-based-on-career-outcomes/

Miller, W. and Eesley, C. (October 2012) Impact: Stanford University's Economic Impact via Innovation and Entrepreneurship. Stanford University. Retrieved from http://engineering.stanford.edu/sites/default/files/Stanford_Alumni_Innovation_Survey_Report_102412_1.pdf

National Careers Council (June 2013). An Aspirational Nation: Creating a culture change in careers provision. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/354644/bis-13-919-national-careers-council-report-an-aspirational-nation-creating-a-culture-change-in-careers-provison.pdf

Prince's Trust and HSBC (August 2014) The Skills Crunch: Upskilling the workforce of the future. Retrieved from http://www.princes-trust.org.uk/pdf/SkillsCrunch.pdf

Roberts, E. and Eesley, C. (February 2009) Entrepreneurial Impact: The Role of MIT. Retrieved from https://entrepreneurship.mit.edu/uploads/ExecSummary_Entrepreneurial_Impact_The_Role_of_MIT.pdf

Royal Society (2014). Vision for Science and Mathematics Education. Retrieved from https://royalsociety.org/~/media/education/policy/vision/reports/vision-full-report-20140625.pdf

Times Higher Education (2014). World University Rankings 2013-2014. Retrieved from http://www.timeshighereducation.co.uk/world-university-rankings/2013-14/world-ranking

Witty, Sir Andrew (October 2013). 'Encouraging a British Invention Revolution: Sir Andrew Witty's Review of Universities and Growth'. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/249720/bis-13-1241-encouraging-a-british-invention-revolution-andrew-witty-review-R1.pdf

WPI Life Sciences and Bioengineering Centre (Accessed June 2014). Bio-Process Centre. Retrieved from https://www.wpi.edu/Admin/LSBC/bp-center.html

Lord Young (June 2014). Enterprise for all: The relevance of enterprise in education. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/338749/Enterprise-forAll-lowres-200614.pdf

Lord Young (2013). Growing Your Business: A Report on Growing Micro Businesses. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198165/growing-your-business-lord-young.pdf

Role of corporates in economic growth via scale-up support

Butler, D. (August 2013) From Startup to Scaleup: The Next Wave of Innovation. Coca Cola. Retrieved

from http://www.coca-colacompany.com/coca-cola-unbottled/from-startup-to-scaleup-the-next-wave-of-innovation

Endeavor (2013) Endeavor Impact Report 2012-2013. Retrieved from http://endeavor.uberflip.com/i/210522

Goldman Sachs (April 2013) Stimulating Small Business Growth - Progress Report on the Goldman Sachs 10,000 Small Businesses UK Programme. 10,000 Small Businesses UK. Retrieved from http://www.goldmansachs.com/citizenship/10000-small-businesses/UK/news-and-events/10ksb-uk-progress-report.html

Isenberg, D. and Brown, R. (February 2014) For a Booming Economy, Bet on High-growth Firms, Not Small Businesses. Babson Entrepreneurship Ecosystem Project. Retrieved from http://blogs.hbr.org/2014/02/for-a-booming-economy-bet-on-high-growth-firms-not-small-businesses/

Knife Capital website (accessed 2014) The Grindstone Accelerator. Retrieved from http://www.knifecap.com/grindstone.php

Microsoft (Accessed October 2014). Microsoft Technology Centres. Retrieved from http://www.microsoft.com/en-us/mtc/default.aspx

Scale Up Milwaukee (accessed June 2014) Case Study of Milwaukee: A US case of a concentrated and well-publicised effort (in conjunction with Babson Entrepreneurship Ecosystem Project). Retrieved from http://scaleupmilwaukee.org/

Research focusing on public policy geared towards scale-ups

Autio, E. et al (January 2007) High-Growth SME Support Initiatives in Nine Countries: Analysis, Categorization, and Recommendations. Retrieved from http://www3.imperial.ac.uk/pls/portallive/docs/1/52835696.PDF

Babson Entrepreneurship Ecosystem Project (May 2014) What an Entrepreneurship Ecosystem Actually Is. Retrieved from http://entrepreneurial-revolution.com/2014/05/12/what-an-entrepreneurship-ecosystem-actually-is/

The Brazil Business (Accessed June 2014). Simples Nacional. Retrieved from http://thebrazilbusiness.com/article/brazilian-tax-simples-nacional

Cleevely, D. (2014). The Power of Technology Clusters. Chuka Umunna MP (ed.) Owning the Future: How Britain can Make it in a Fast Changing World. Retrieved from http://www.policy-network.net/publications/4712/Owning-the-Future

Copeland, E. and Scott, C., (2014). Silicon Cities: Supporting the Development of Tech Clusters Outside London and the South East of England. Retrieved from http://www.policyexchange.org.uk/images/publications/silicon%20cities.pdf

DARPA. Doing business with DARPA. Retrieved from http://www.darpa.mil/WorkArea/DownloadAsset.aspx?id=2147485494

DARPA (Accessed October 2014). Doing business with DARPA. Retrieved from http://www.darpa.mil/WorkArea/DownloadAsset.aspx?id=2147485494

Delgado, Porter and Stern (July 2012). Clusters, Convergence, and Economic Performance. Retrieved from http://www.nber.org/papers/w18250

Department for Business, Innovation and Skills (June 2013). Information Economy Strategy. Retrieved from https://www.gov.uk/government/publications/information-economy-strategy

Financial Conduct Authority (2014). Project Innovate: Feedback from Roundtables. Retrieved from http://www.fca.org.uk/your-fca/documents/project-innovate-feedback-from-roundtables

Georghiou, Edler, Uyarra, Yeow (2014). Policy instruments for public procurement of innovation: Choice, design and assessment. Retrieved from http://www.sciencedirect.com/science/article/pii/S0040162513002552

Grech, G. (June 2014) Britain is leading the way in attracting overseas specialist tech talent. Tech City News. Retrieved from http://techcitynews.com/2014/06/12/britain-leads-the-way-in-attracting-overseas-specialist-it-skills-with-the-exceptional-talent-visa/

Greenberg, A. and Mac, R. (14 August 2013) How A 'Deviant' Philosopher Built Palantir, A CIA-Funded Data-Mining Juggernaut. Forbes. Retrieved from http://www.forbes.com/sites/andygreenberg/2013/08/14/agent-of-intelligence-how-a-deviant-philosopher-built-palantir-a-cia-funded-data-mining-juggernaut/

Hauser Review of the Catapult network: Nov 2014 Recommendations on the future shape, scope and ambition of the programme

Iamthewitness.com (date unknown) Israel has more startups than anywhere outside of Silicon Valley. What's fuelling the Internet boom? Soldiers, officers, code-breakers, and spies. Retrieved from http://iamthewitness.com/Israeli.Tech.Warfare.htm

In-Q-Tel (Accessed October 2014). In-Q-Tel Website. Retrieved from https://www.iqt.org/

Isenberg, D. (January 2014) A critical comment on The Economist's special report on tech startups. The Economist. Retrieved from http://www.economist.com/blogs/schumpeter/2014/01/invitation-daniel-isenberg

Isenberg, D. (2012) Focus Entrepreneurship Policy on Scale-Up, Not Start-Up. Babson Entrepreneurship Ecosystem Project. Harvard Business Review. Retrieved from http://blogs.hbr.org/2012/11/focus-entrepreneurship-policy/

Isenberg, D. (June 2012) Planting Entrepreneurial Innovation in Inner Cities. Harvard Business Review. Retrieved from http://blogs.hbr.org/2012/06/planting-entrepreneurial-innov/

Isenberg, D. (2013) Can Growth Entrepreneurship Take Root in Denmark's Central Region? Retrieved from https://cb.hbsp.harvard.edu/cbmp/product/BAB707-PDF-ENG

Kalman, M. (12 August 2013) Israeli military intelligence unit drives country's hi-tech boom. The Guardian. Retrieved from http://www.theguardian.com/world/2013/aug/12/israel-military-intelligence-unit-tech-boom

Kerbs, G. (7 February 2007) The Unit. Forbes Israel. Retrieved from http://www.forbes.com/2007/02/07/israel-military-unit-ventures-biz-cx_gk_0208israel.html

Leichman, A. (September 2012) The IDF Incubator for Israel's Future CEOs. Retrieved from http://israel21c.org/technology/the-idf-incubator-for-israels-future-ceos/

The Mayor's Office of Civic Innovation (Accessed June 2014). San Francisco Entrepreneurship in Residence Programme. Retrieved from http://entrepreneur.sfgov.org/

Miller, Z. (2013) From Start-Up Nation To Scale-Up Nation: Israel Circa 2014. Retrieved from http://www.forbes.com/sites/zackmiller/2013/12/17/from-start-up-nation-to-scale-up-nation-israel-circa-2014/

Morrill, D. (September 2013) 106 Startups Who Received Investment from the C.I.A. + Most Frequent In-Q-Tel Co-Investors. Retrieved from http://mattermark.com/106-startups-who-received-investment-from-the-c-i-a-most-frequent-in-q-tel-co-investors/

Morris, R. (December 2013) What do the best Entrepreneurs want in a City? Lessons from the Founders of America's Fastest-Growing Companies. Retrieved from http://issuu.com/endeavorglobal1/docs/what_do_the_best_entrepreneurs_want

Mulligan, C. (January 2013) Is 49 a Magic Number? Retrieved from http://caseymulligan.blogspot.com.br/2013/01/is-49-magic-number.html

OECD and Statistical Office of the European Communities (2008) High-Growth Enterprises: What Governments Can Do to Make a Difference. Retrieved from http://www.oecd.org/industry/business-stats/39974588.pdf

Prabhakar, A. (12 June 2013) Video of DARPA Director Arati Prabhakar: Long-term view should guide public sector investments. Retrieved from https://www.youtube.com/watch?v=2IDBtUQ_3IE

Reynolds, E. and Samel, H. (November 2013) Invented in America, Scaled Up Overseas. ASME. Retrieved from https://www.asme.org/engineering-topics/articles/manufacturing-processing/invented-america-scaled-up-overseas

Roper, S. and Hart, M. (2013) Supporting Sustained Growth among SMEs – Policy Models and Guidelines. Enterprise Research Centre (ERC). Retrieved from http://enterpriseresearch.ac.uk/wp-content/uploads/2013/12/ERC-White-Paper-No-7-Roper-Hart-Supporting-sustained-growth-2.pdf

Shane, S. (2008). Why encouraging more people to become entrepreneurs is bad public policy' Retrieved from http://www.world-entrepreneurship-forum.com/content/download/1695/39634/version/3/file/Shane_Entrepreneurship%2520and%2520bad%2520public%2520policy.pdf

Stangler, D. (March 2010) High-growth Firms and the Future of the American Economy. Retrieved from http://www.kauffman.org/~/media/kauffman_org/research%20reports%20and%20covers/2010/04/high-growthfirmsstudy.pdf

Storey, D. (2008) "Evaluating SME Policies and Programmes: Technical and Political Dimensions". Oxford Handbook of Entrepreneurship, Oxford University Press, New York. Retrieved from: http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199546992.001.0001/oxfordhb-9780199546992-e-10

Technology Strategy Board (2013). Catapult Programme: Progress Update 2012-13. Retrieved from https://www.catapult.org.uk/documents/2155693/2268412/Catapult+Programme+Progress+update+2012-13/abc371ce-bbab-4ba6-86a2-af3c0b561290

Uyarra, Edler, Garcia-Estevez, Georghiou, Yeow (April 2014). Barriers to innovation through public procurement: A supplier perspective. Retrieved from https://www.escholar.manchester.ac.uk/uk-ac-man-scw:223100

Entrepreneurs and start-ups

Autio, E. (2007) 2007 Global Report on High-Growth Entrepreneurship. Retrieved from http://www.gemconsortium.org/docs/download/269

Babson (Accessed June 2014) Driving Economic Growth Through Entrepreneurship Ecosystems: A Program for Public and Private Sector Leaders. Retrieved from http://www.babson.edu/executive-education/open-enrollment-programs/pages/driving-economic-growth-through-entrepreneurship-ecosystems.aspx

Boston Consulting Group (June 2014) Building a Digital City: Challenges, Opportunities and Lessons from London. Retrieved from http://mikebloomberg.com/files/Building-Digital-City-London.PDF

Isenberg, D. (April 2013) Enabling the Natural Act of Entrepreneurship. Retrieved from http://blogs.hbr.org/2013/04/enabling-the-natural-act-of-en/

Mandel, M. & Liebenau, J. (June 2014) London: Digital City on the Rise. Retrieved from http://mikebloomberg.com/files/London-Digital-City-On-The-Rise.PDF

McKinsey & Company (March 2011) East London: World Class Centre for Digital Enterprise. Retrieved from https://www.McKinsey.com/global_locations/europe_and_middleeast/united_kingdom/en/latest_thinking/~/media/F1F804CC9A9D4937A5691D4C2DE8B5E5.ashx

Nesta (2012) Video of Parliamentary discussion by Silicon Valley Comes to the UK. Retrieved from http://vimeo.com/32313017

Schurenberg, E (January 2012). What's an Entrepreneur? The Best Answer Ever. Retrieved from http://www.inc.com/eric-schurenberg/the-best-definition-of-entepreneurship.html

SQW (March 2011) Cambridge Cluster and 50: The Cambridge Economy: Retrospect and Prospect. Retrieved from https://www.cambridge.gov.uk/sites/www.cambridge.gov.uk/files/docs/Cambridge_cluster_at_50_report_06042011.pdf

SVC2UK (2012). Startups that scale - Why it matters and how to do it: Lessons from Silicon Valley Comes to the UK 2012. Retrieved from http://www.svc2uk.com/docs/SV_report.pdf

Telefonica (2011) The Accelerator and Incubator ecosystem in Europe. Retrieved from http://www.publicpolicy.telefonica.com/blogs/wp-content/uploads/2011/01/The_Accelerator_and_Incubator_Ecosystem_in_Europe.pdf

Texas CEO Magazine (March 2013) Funding Startups or Scale Ups? What's the best strategy for developing business in Texas? Retrieved from https://texasceomagazine.com/features/funding-startups-or-scale-ups/

Wadhwa, V. et al (July 2009) The Anatomy of an Entrepreneur Family Background and Motivation. Retrieved from http://www.kauffman.org/~/media/kauffman_org/research%20reports%20and%20covers/2009/07/anatomy_of_entre_071309_final.pdf

World Economic Forum (February 2014) Fostering Innovation driven: Entrepreneurship in Europe. Retrieved from http://www3.weforum.org/docs/AM14/WEF_AM14_FosteringInnovationDrivenEntrepreneurshipEurope_SessionSummary.pdf

Wyne, J. (March 2014) The Next Step: Breaking Barriers to Scale for MENA's Entrepreneurs. Wamda Research Lab. Retrieved from http://c.ymcdn.com/sites/www.gbsnonline.org/resource/resmgr/Blog/WRL_-_Next_Step_to_Scale.pdf

Finance recommendations focused on scale-up support

Big Innovation Centre (2013). Credit and the Crisis: Access to finance for innovative small firms since the recession. Retreived from http://www.biginnovationcentre.com/Assets/Docs/Reports/SME%20Finance%20BIC%20version%20FINAL.pdf

Chng, G. in The Straits Times (25 April 2014) $120m fund to help hi-tech start-ups scale up businesses. Retrieved from http://business.asiaone.com/news/120m-fund-help-hi-tech-start-ups-scale-businesses

Christensen, C. (October 2013) The Wrong Kind of Innovation. Retrieved from http://www.inc.com/christine-lagorio/clayton-christensen-capitalist-dilemma.html

Christensen, C. & van Bever, D. (June 2014) The Capitalist's Dilemma. Retrieved from http://hbr.org/2014/06/the-capitalists-dilemma/ar/1

Department of Business, Innovation and Skills (January 2012)SME Access to External Finance. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32263/12-539-sme-access-external-finance.pdf

IHS Global Insight and National Venture Capital Association (2012), Venture Impact, The Economic Importance of Venture Capital-Backed Companies to the U.S. Economy. Retrieved from http://www.nvca.org/index.php?option=com_docman&task=doc_download&gid=786

Mulcahy, D. Six Myths About Venture Capital. Retrieved from: http://hbr.org/2013/05/six-myths-about-venture-capitalists/ar/1

Wiltbank, R. (May 2009) Siding with the Angels: Business Angel Investing - promising outcomes and effective strategies. Retrieved from http://www.crowdcube.com/ed_files/file/NESTA-BBA-Siding%20With%20The%20Angels.pdf

Additional reading

Lord Adonis (2014). Mending the Fractured Economy. Retrieved from http://www.policy-network.net/publications/4695/Mending-the-Fractured-Economy

Adzuna (Accessed October 2014). What is Adzuna? Retrieved from http://www.adzuna.co.uk/about-us.html

Boston Consulting Group (March 2012) The Connected World: The Internet Economy in the G-20. Retrieved from https://www.bcg.com/documents/file100409.pdf

Cambridge Network (November 2011). Unique insights revealed with new Cambridge Cluster Map. Retrieved from https://www.cambridgenetwork.co.uk/news/unique-insights-revealed-with-new-cambridge-cluster-map/

Centre for Cities/McKinsey (2014), Industrial Revolutions: Capturing the Growth Potential. Retrieved from: http://www.centreforcities.org/assets/files/2014/14-06-26-Final-web-Industrial-Revolutions.pdf

City Growth Commission (2014), Unleashing Metro Growth: Final Report of the City Growth Commission. Retrieved from: http://www.citygrowthcommission.com/wp-content/uploads/2014/10/City-Growth-Commission-Final-Report.pdf

Copeland, E. and Scott, C., Silicon Cities (2014): Supporting the Development of Tech Clusters Outside London and the South East of England. Retrieved from: http://www.policyexchange.org.uk/images/publications/silicon%20cities.pdf

The Conference Board, Inc. (June 2014). Digital Entrepreneurship in Europe. Retrieved from, https://www.conference-board.org/webcasts/webcastdetail.cfm?webcastid=3277

Department for Business, Innovation and Skills (2013). Business Population Estimates. Retrieved from: https://www.gov.uk/government/collections/business-population-estimates

Department for Business, Innovation and Skills (2014), Growth Accelerator: Commentary on the Finding from the Year 1 Monitoring Surveys. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/298002/bis-14-687-growthaccelerator-commentary-on-the-year-1-monitoring-surveys.pdf

Department of Business, Innovation and Skills (2012) Small Business Survey 2012: Growth Special Report. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/204183/bis-13-88

Department for Business, Innovation and Skills (October 2013). Business population estimates 2013. Retrieved from https://www.gov.uk/government/statistics/business-population-estimates-2013

Federation of Small Business (2014) Voice of Small Business Index, Quarter 1 2014. Retrieved from http://www.fsb.org.uk/frontpage/assets/q1%202014_cebr%20index%20_final.pdf

The Guardian, (June 2014) 'UK app developers predicted to add £4bn to economy this year'. Retrieved from http://www.theguardian.com/technology/2014/jun/26/uk-apps-economy-worth-four-billion-pounds

Lord Heseltine (2012) No Stone Unturned; In Pursuit of Growth. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34648/12-1213-no-stone-unturned-in-pursuit-of-growth.pdf

Intellectual Property Office (2013) Guide to Evidence for Policy Update 2013. Retrieved from http://www.ipo.gov.uk/consult-2011-copyright-evidence.pdf

GPBullhound, (June 2014). 'Can Europe Create Billion Dollar Tech Companies'. Retrieved from http://www.gpbullhound.com/researchpdf/Can_Europe_Create_Billion_Dollar_Tech_Companies_-_THE_FACTS_.pdf

Hancock MP, Matthew (2014). Speech to Federation of Small Businesses, 4 July 2014. Retrieved from: http://www.matthewhancock.co.uk/campaign/federation-small-businesses-fsb-speech

Home Office (May 2014). Tables for Immigration Statistics: January to March 2014 Volume 1 & 2. Retrieved from https://www.gov.uk/government/statistics/tables-for-immigration-statistics-january-to-march-2014

Marmer, M. et al (2011) Start-up Genome Report 01. Retrieved from https://s3.amazonaws.com/startup-compass-public/StartupGenomeReport1_Why_Startups_Succeed_v2.pdf

Mason, G., C. Robinson and C. Bondibene (2014). Sources of labour productivity at sector level in Britain,1998-2007: a firm-level analysis, A report to NESTA. Retrived from: http://www.nesta.org.uk/publications/sources-labour-productivity-growth-sector-level-britain-1998-2007-firm-level-analysis

The Migration Observatory (2014). UK Public Opinion toward Immigration: Overall Attitudes and Level of Concern. Retrieved from: http://www.migrationobservatory.ox.ac.uk/sites/files/migobs/Public%20Opinion-

National Audit Office (2012) The Regional Growth Fund; report by the Comptroller and Auditor General. Retrieved from http://www.nao.org.uk/wp-content/uploads/2012/05/121317.pdf

OECD (2008). OECD Manual on Business Demography Statistics: High-Growth Enterprises. Retrieved from http://www.oecd.org/industry/business-stats/39974588.pdf

OECD (May 2014) The Dynamics of Employment Growth, New Evidence from 18 Countries. Retrieved from http://www.oecd-ilibrary.org/science-and-technology/the-dynamics-of-employment-growth_5jz417hj6hg6-en

Shakespeare, Stephan (2013) Shakespeare Review; An Independent Review of Public Sector Information. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198752/13-744-shakespeare-review-of-public-sector-information.pdf

Technology Strategy Board (2014), Delivery Plan Financial Year 2014-15: Accelerating Economic Growth. Retrieved from https://www.innovateuk.org/documents/1524978/2138994/Delivery%20Plan%202014-15

Umunna MP, C. (ed.) (2014) Owning the Future: How Britain can Make it in a Fast Changing World. Retrieved from http://www.policy-network.net/publications/4712/Owning-the-Future

Uyarra E. et al (2014). Barriers to innovation through public procurement: A supplier perspective. Technovation (34). Retrieved from: http://www.sciencedirect.com/science/article/pii/S0166497214000388

WPI Life Sciences and Bioengineering Centre (Accessed June 2014). Bio-Process Centre. Retrieved from https://www.wpi.edu/Admin/LSBC/bp-center.html

APPENDIX 3

Scale-up distribution by Local Enterprise Partnership area

The table below shows the number of scale-up firms by Local Enterprise Partnership areas and what targets could be set for the LEPs to achieve to increase the number of scale-ups.

The column labelled Additional scale-ups per year shows the number of additional scale-ups which each LEP area should be aiming for each year. This target is based upon a target of one scale-up per 100,000 residents, which is what a leading academic who specialises in 'scale-up economics', Dan Isenberg, recommends. The column labelled 2014 is the current Office for National Statistics count of high growth firms in each LEP area, as measured by Mark Hart's research.

The columns labelled 2019 and 2024 forecast the total number of high-growth businesses for each LEP area if they could achieve the one per 100,000 residents target set for them each year for the next 10 years.

See **www.scaleupreport.org/appendix3** for the full excel spreadsheet.

Figure A3.1: High growth firms by Local Enterprise Partnership area

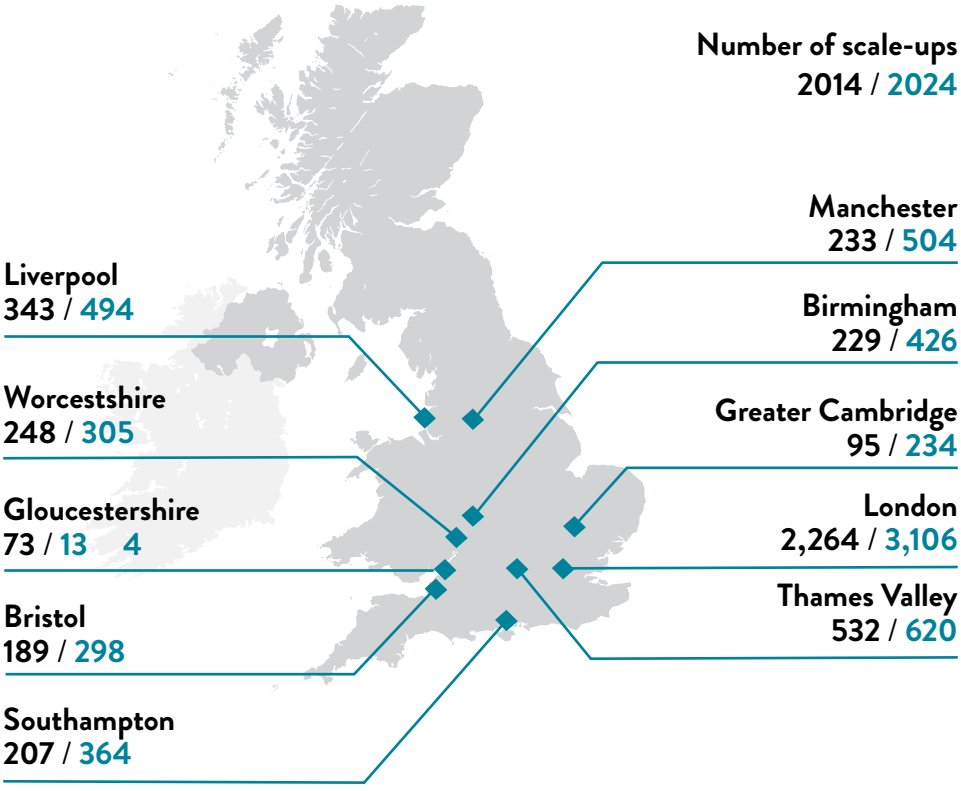


Table A3.1: Scale-up distribution by Local Enterprise Partnership area

Local Enterprise Partnership	Population	Additional scale-ups per year	Total scale-ups		
			2014	2019	2024
Black Country	1,152,500	12	140	198	255
Cheshire and Warrington	908,800	9	67	112	158
Coast to Capital	1,960,800	20	139	237	335
Cornwall and Isles of Scilly	543,600	5	176	203	230
Coventry and Warwickshire	878,500	9	262	306	350
Cumbria	498,100	5	80	105	130
Derby, Derbyshire, Nottingham and Nottinghamshire	2,134,600	21	158	265	371
Enterprise M3	1,654,300	17	71	154	236
Greater Birmingham and Solihull	1,970,800	20	229	328	426
Greater Cambridge & Greater Peterborough	1,393,400	14	95	165	234
Greater Manchester	2,714,900	27	233	369	504
Heart of the South West	1,687,400	17	170	254	339
Hertfordshire	1,140,700	11	109	166	223
South East	4,052,100	41	214	417	619
Leeds City Region	2,988,900	30	211	360	510
Leicester and Leicestershire	995,400	10	60	110	160
Greater Lincolnshire	1,053,000	11	201	254	306
Liverpool City Region	1,512,600	15	343	419	494
New Anglia	1,606,000	16	178	258	339
North Eastern	1,945,300	19	123	220	318
Oxfordshire	666,100	7	177	210	244
London	8,416,500	84	2,264	2,685	3,106
Sheffield City Region	1,751,800	18	420	508	595
Solent	1,566,200	16	207	285	364
South East Midlands	1,757,000	18	223	311	399
Stoke-on-Trent and Staffordshire	1,107,200	11	18	73	129
Tees Valley	665,100	7	111	144	178
Thames Valley Berkshire	878,400	9	532	576	620
The Marches	663,100	7	254	287	320
West of England	1,092,800	11	189	244	298
Worcestershire	572,200	6	248	277	305
York, North Yorkshire and East Riding	1,141,200	11	145	202	259
Lancashire	1,468,800	15	99	172	246
Gloucestershire	605,700	6	73	103	134
Humber	922,200	9	93	139	185
Dorset	754,500	8	217	255	292
Swindon and Wiltshire	693,700	7	187	222	256
Northamptonshire	706,600	7	91	126	162
Buckinghamshire Thames Valley	516,100	5	116	142	168
TOTAL	**58,737,300**	**587**	**8,923**	**11,860**	**14,797**

APPENDIX 4

Visas by LEP

Table A4.1 shows a worksheet that can help us think about the number of visas that might theoretically be made available for scale-ups per annum.

If a cap were placed on the number of scale-ups per LEP, one could limit it so one per each scale-up, in which case, the maximum number of visas per annum that could be granted would be around 9,000. A limit could also be placed on the number of visas in each LEP area, with one each for the top 50 scale-ups in each LEP area, for example. This would cap the number of visas at approximately 2,000. The down-side of limiting visas to 50 is that this could be said to be creating a disadvantage for 80 per cent of scale-up firms.

See **www.scaleupreport.org/appendix4** for the full excel spreadsheet.

Table A4.1: Scale-up visa worksheet (by LEP)

Local Enterprise Partnership	Total scale-ups					
	2014	2015	2016	2017	2018	2019
Black Country	140	152	163	175	186	198
Cheshire and Warrington	67	76	85	94	103	112
Coast to Capital	139	159	178	198	217	237
Cornwall and Isles of Scilly	176	181	187	192	198	203
Coventry and Warwickshire	262	271	280	288	297	306
Cumbria	80	85	90	95	100	105
Derby, Derbyshire, Nottingham and Nottinghamshire	158	179	201	222	243	265
Enterprise M3	71	88	104	121	137	154
Greater Birmingham and Solihull	229	249	268	288	308	328
Greater Cambridge & Greater Peterborough	95	109	123	137	151	165
Greater Manchester	233	260	287	314	342	369
Heart of the South West	170	187	204	221	237	254
Hertfordshire	109	120	132	143	155	166
South East	214	255	295	336	376	417
Leeds City Region	211	241	271	301	331	360
Leicester and Leicestershire	60	70	80	90	100	110
Greater Lincolnshire	201	212	222	233	243	254
Liverpool City Region	343	358	373	388	404	419
New Anglia	178	194	210	226	242	258
North Eastern	123	142	162	181	201	220
Oxfordshire	177	184	190	197	204	210
London	2,264	2,348	2,432	2,516	2,601	2,685
Sheffield City Region	420	438	455	473	490	508
Solent	207	223	238	254	270	285
South East Midlands	223	241	258	276	293	311
Stoke-on-Trent and Staffordshire	18	29	40	51	62	73
Tees Valley	111	118	124	131	138	144
Thames Valley Berkshire	532	541	550	558	567	576
The Marches	254	261	267	274	281	287
West of England	189	200	211	222	233	244
Worcestershire	248	254	259	265	271	277
York, North Yorkshire and East Riding	145	156	168	179	191	202
Lancashire	99	114	128	143	158	172
Gloucestershire	73	79	85	91	97	103
Humber	93	102	111	121	130	139
Dorset	217	225	232	240	247	255
Swindon and Wiltshire	187	194	201	208	215	222
Northamptonshire	91	98	105	112	119	126
Buckinghamshire Thames Valley	116	121	126	131	137	142
TOTAL	**8,923**	**9,510**	**10,098**	**10,685**	**11,272**	**11,860**
		6.6%	**21.0%**	**19.8%**	**18.7%**	**17.7%**	**16.9%**

APPENDIX 5

Scale-up case studies

The following ecosystems and initiatives were analysed as part of this review to consider their impact on scale-up companies. Click on each of these examples in bold to read detailed case studies at **www.scaleupreport.org/casestudies**

Recommendation 1 (detecting scale-ups)
- Cambridge Cluster map

Recommendation 2 (business support should be collaborative and targeted on scale-ups)•
- Future Fifty (Tech City UK)
- National Cluster Alliance Programme

Recommendation 3 (collaborative initiatives that demonstrate impact nation-wide)
- Venturefest Network
- SVC2UK

Recommendation 4 (ecosystem approach guided by task-force)
- Manziales-Mas, Colombia
- Scale Up Milwaukee
- Endeavor Programme
- Singapore

Recommendation 5 (closing skills-gap by focusing on schools, colleges and universities)
- BCS computing curriculum
- Estonia
- Founders4Schools
- NACUE
- Telefonica's Think Big

Recommendation 6 (career opportunities at scale-up companies for adults)
- Digital Business Academy
- General Assembly
- Silicon Milkroundabout
- Start-up Institute

Recommendation 8 (leadership capacity development for scale-ups)
- ELITE Programme
- Goldman Sachs 10,000 Small Businesses
- Santander Breakthrough Programme
- The Supper Club

- Manchester Business Growth Hub
- Mentorsme
- Mass Challenge

Recommendation 9 (increasing domestic and export sales of scale-ups)

- ELITE
- Mentorsme
- VentureFest
- SVC2UK

Recommendation 10 (removal of regulatory barriers faced by scale-ups)

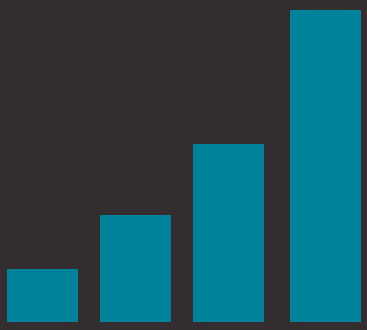
- 2014 Regulatory Climate Index

Recommendation 11 (finance focused on scale-ups)

- Business Growth Fund

Recommendation 12 (infrastructure focused on scale-ups)

- E-spark powered by Natwest
- Google Campus London



CASE STUDIES

Case-study: The Cambridge 50

1) Description of initiative(s)

- The Cambridge 50 supports the scaling up of Cambridge companies by making it easy and transparent to do business with them. Whoever and wherever you are for free. Alternatives are all very costly, if not impossible, because most of the companies driving the Cambridge cluster are private.
- Specifically, through league tables and company profile pages, users of Cambridge 50 will be able to see the companies that are growing the fastest. This will allow the leaders of these companies to locate staff, partners, investors and customers more easily.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Visitors to the website can more easily find contact details of the fastest growing companies in Cambridge than through other means.	Being listed as a scale up on Cambridge 50 helps companies to attract and retain the best talent.	The map raises the profile of the companies.	Access to league tables helps to draw attention to scale ups in the market, helping them to gain attention from investors, partners and customers.	The map allows the fastest growing companies to be found by leading investors from around the world more easily.	The Cambridge 50 project is a part of the digital infrastructure necessary to support a healthy scale up ecosystem.

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
The website was developed by entrepreneurs, partly funded by entrepreneurs, and is managed by entrepreneurs	Silicon Valley Comes 2 the UK	UKT&I	Many private companies are involved in the project, both as founding partners and data providers	Abcam, ARM, Cambridge Heathcare, Marshall, Nesta, SVC2UK	University of Cambridge

4) What does success look like? What impact/outcomes are expected?

Success for the Cambridge 50 Website will be judged by traffic metrics. In particular:

- A significant number of people are visiting the website
- Companies continue to ask to be included in the service because it helps them to scale.
- Articles are written by the media who use the website as it allows them to keep on top of the dynamic Cambridge Scene
- The Service is used by the University and Government to prepare briefings for visitors to Cambridge.
- Visitors are interacting with the website, indicating that they are getting value from the information provided
- Users are returning to Cambridge 50 on multiple occasions, showing that it is bringing ongoing value to visitors.

Case-study: BCS, The Chartered Institute for IT

1) Description of initiative(s)

- Linking Technical Talent to Future Growth Needs. BCS, the Chartered Institute for IT supports the professional development of 70,00+ technology professionals through best practice sharing, technical accreditation and professional recognition. BCS specifically addresses the skills-alignment needs between corporates, education providers and future entrepreneurs by:
- 1. Sharing entrepreneurial content with schools, aligned to the BCS-curated school Computing curriculum.
- 2. Brokering members' skills into the innovation market as role models and expert mentors
- 3. Facilitating pre-acceleration training with industry partners through our 'Technology Startup Schools'
- 4. Seeding emergent best practice by accrediting new digital business disciplines like Agile.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
BCS Entrepreneurs SG is a 400-strong non-member inclusive, expert group identifying and addressing business technology skills needs for entrepreneurs. The group is building a dedicated profiled resource-pool of expert mentors with associated recommendations and skills profiles.	Initiatives like the 'Countdown to Computing' programme leverage BCS's Network of Excellence backed by 70 universities and 400 Master teachers, creating a waterfall of development for 11,000+ teachers. New certifications like Agile or Information Assurance modernise and digitise the IT talent pool.	BCS facilitates: soft mentoring skills to IT professionals; speed mentoring to entrepreneur members; 200+ strategy consultants to the BIS growth vouchers programme; expert clinics to accelerators like FFWDLondon; a CTO in residence to UCL; and entrepreneurial technologists as role models to UK schools.		Tech Startup Schools include Raising Finance, delivered as a key module. Experienced commercial IT pros help businesses with late stage growth through our MoU with the 1,000 strong livery company.	

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
400+ as members, plus ecosystem-wide engagement through collaborative work groups.	Capital Enterprise, Tech UK, TechCity UK, TechLondon Advocates, Capital Enterprise, Enterprise Nation.	BIS (Growth Vouchers), DfE (Computing Curriculum), CDE Catapult.	Microsoft, Google, BT, Deloitte, IBM, HP.	Whitehorse Capital, Ariadne Capital, Angels e.g. Anil Hansjee.	UKCRC – research CPHC – Universities Computing at School.

Example activities

4) What does success look like? What impact/outcomes are expected?

Aspirations

- Every school leaver should be computationally literate
- Technology Entrepreneurs will become e-leaders – adept in both technology and management
- IT professional should be continually reskilled for the cross-disciplinary working of the digital age

Goals

- The BT-sponsored Barefoot computing content will be delivered in 800 workshops to 12,000 teachers by May 2015
- The Microsoft-sponsored Countdown programme will deliver training to 1 in 5 computing teachers
- BCS Entrepreneurs aims to create 10+ talent partnerships with entrepreneur growth-supporters in 2014/15

Work in Progress

- Case CAS pool of teachers wanting training is growing by 500 per month (at June 2014)
- BCS Professional Mentoring platform will launch July 2014; 2 entrepreneur-facing mentor recruitment events will run in parallel
- Talent supply discussions currently in train with CDE Catapult, Apps4Good, GrowthAccelerator, Bathtub2Boardroom

Achieved

- 100% satisfaction with Technology Startup School mentor delivery
- 100 best-practice-sharing hubs within CAS
- 1,000 schools part of the Network of Excellence

Resources/ROI

- A team of 3 growing to 4 works on education. A part-time resource <0.5 people works on entrepreneur market engagement and productisation.

Case-study: BGF (Business Growth Fund)

1) Description of initiative(s)

BGF has moved from start up in 2011 to become the UK's largest provider of growth capital to small and medium sized businesses. Backed by five of the UK's main banking groups – Barclays, HSBC, Lloyds, RBS and Standard Chartered, BGF is fully independent and has invested over £400m in 70+ UK businesses to date and £250m in the last 15 months showing significant momentum. BGF was set up to get critical funding to growing smaller and medium sized companies in the face of reduced lending activity and an economy that was flagging. BGF, as a new, well-capitalised and ambitious equity focused investor, was one answer.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
BGF is building a unique national community of entrepreneurs and business owners who are regularly brought together to share experiences and further their business interests.	A stronger balance sheet allows portfolio companies to invest and recruit the best talent. More specifically BGF can help find and recruit new non-execs and strengthen the board.	BGF provides active support at board level, and with access to a growing network of senior business leaders, including placing Chairman and NXDs on investee boards.	BGF's growth capital helps companies to invest further in sales and marketing to build deeper customer relationships, giving them the ability to take on and fund new contracts. Increasing access to overseas markets via a network of suitably experienced non-execs, as well as the expertise within BGF and its portfolio companies, is helping to build export sales.	A flexible £2.5bn evergreen balance sheet. BGF provides funding for growth and equity release, investment of £2-10m for a minority stake, long term & patient capital and no forced exit.	Portfolio companies benefit from the support of BGF's in-house IT, HR, marketing, legal and compliance specialists, who are on hand to provide high-level strategic advice that might not otherwise be available to them.

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
BGF meets hundreds of companies every year run by ambitious entrepreneurs. As minority equity investors in their businesses, BGF's interests are directly aligned with theirs.	Broad interaction with industry bodies involved in SMEs.	Regular dialogue with Government as a source of relevant information on the SME universe.	BGF is backed by Barclays, HSBC, Lloyds Banking Group, RBS and Standard Chartered.		Support of Inspiring the Future initiative. Looking to do more in the field of education generally.

4) What does success look like? What impact/outcomes are expected?

Appetite for BGF capital is clear and awareness of its unique offering of finance and support is growing amongst entrepreneurs and ambitious owners of UK businesses. Momentum is building month by month. 2014 has been BGF's busiest to date. In the last 15 months BGF has deployed circa £250m in growth capital.

Not only is BGF's portfolio of companies growing in number, so are the businesses themselves expanding.

BGF money is being put to work buying new machinery, making new hires, undertaking more R&D to develop products, helping companies expand into new markets, funding strategic acquisitions and retail roll-outs, and much more.

Another mark of progress is the number of companies that have sought further funding from BGF. BGF has provided over £25m in follow-on funding so far. This is critical to building larger companies over the longer term.

BGF has introduced more than 50 Chairmen and Non-Executive Directors to its portfolio companies to date, and this number is growing rapidly. BGF recognises the need for the right balance of investment experience with wider business expertise, working effectively in partnership with the management teams it backs.

Partnership also has a wider application. BGF has made several co-investments with other capital providers and is now actively looking at ways in which it can bring its successful approach, and use its established network and infrastructure, to reach more growing companies in the UK, particularly those at an earlier stage in their development, or those listed on AIM where BGF can complement existing quoted fund managers in specific situations.

Case-study: Digital Business Academy – Tech City UK

1) Description of initiative(s)

A national programme of online learning that gives people the commercial know-how to start, run or join a digital business.

Course content provided by leading universities and more grass roots digital skills schools, covering a mix of entrepreneurship and digital skills relevant for all start-ups or scale-ups, and those who want to join these businesses. Topics will cover digital marketing, digital product development, how to create marketing plans, how to set up a business and how to raise finance.

Programme will be supported by a host of industry partners who will endorse it, drive registrations for it, or reward students of the programme with work experience/internships/training.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
DBA is a partner-led programme with content providers, platform provider, and a host of partners to endorse it and reward students who complete courses, giving them support to start their own digital business, or opportunities to join on.	Growing digital businesses lack talent with the right commercial skills for digital business; people with ideas for digital business lack the commercial know-how to start one; DBA addresses both of these issues.	Partnerships with organisations such as Smarta, Launchpadlabs, and accelerators will ensure that some students completing the programme would be able to access mentors for starting businesses.	Programme addresses lack of digital skills gap from the commercial aspect, and tries to upskill the workforce to help them join digital businesses, or start or grow their own.	Partnerships with Start-Up loan providers (Smarta, Princes Trust) and with angel networks & accelerators will give some students the opportunity to apply for finance if they have a strong business plan.	Partnerships with LaunchpadLabs, Microsoft Ventures, etc, are in progress to give some of the students co-working space if they want to start a business and build a team.

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Lead members among content providers are entrepreneurs themselves.	Tech City UK (Owner)	BIS Cabinet Office	FounderCentric Twitter, Google, Amazon Web Services, Unruly Media, Ogilvy and many others	Smarta & Business Accelerators, including Microsoft Ventures, Wayra, Tech Stars, Level 39 and others.	Cambridge University UCL

Example activities

Developing course content	Tech City UK develops and runs programme BBC is a partner; providing supporting content;	Provides funding and support	Provides course content or supporting content, internships, free training to students completing courses, or start-up support	Start-up loans Financing new business ideas	Provides course content; UCL provides platform

4) What does success look like? What impact/outcomes are expected?

- 20,000 registrations within first year of launch and 1,000 course completions
- Successful application for rewards by students who complete the programme – such as free training days at Decoded, work placements in start-ups, or start-up loans for the students who are ready to start their own digital businesses
- Net Promoter Score showing satisfaction with courses.

Case-study: London Stock Exchange's ELITE Programme (Italy and the UK)

1) Description of initiative(s)

- Elite is a unique platform to facilitate long-term structured engagement between private high growth businesses, industry experts and the corporate advisory and investor communities, helping these businesses prepare and structure for further growth and for external investment
- Delivered through a three-phase package to stimulate organisational review and change; plan for change with the support of advisory network; and capitalise on the benefits of such change to access new business opportunities and in particular funding options.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
The ELITE website guarantees maximum visibility with each company's most strategic targets. ELITE companies have further visibility in the national and local press.	Programme designed to enhance entrepreneurial management teams' knowledge and insight to help them drive business growth for the longer term. Talent management and retention is a key topic discussed and addressed throughout the programme.	'Get Fit phase' of ELITE puts learnings into practise with help of corporate advisors to support and help on company specific matters	A unique platform for revenue generating, fast growing businesses that helps create aspiration for further growth (through innovation and internationalisation). Long term structured engagement to stimulate organisational review, change and access to funding options	'Get Value phase' – access to venture, private equity and institutional investors, banks, entrepreneurs and managers of listed companies.	The ELITE community of advisors, investors and other companies provides a network to access and learn from throughout a company's time on the programme and thereafter.

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Over 200 entrepreneurial companies on the Italian and UK programmes, represented by their CEO/CFO	Italy: Confindustria, ABI UK: ABI, BBAA, BVCA, CBI	Italy: Ministry of Finance, SIMEST, SACE, Fondo Italiano d'investimento, Fondo strategico, UKTI UK: Government, Treasury, BIS	Over 120 advisors (banks, brokers, lawyers, accountants, PR firms, rating agencies) supporting and contributing to the programme	Strong support from debt and equity providers across the financing chain – venture capital, private equity, debt investors and institutional investors	Bocconi University, Milan Imperial College Business School; Academy, London Stock Exchange Group

4) What does success look like? What impact/outcomes are expected?

Success and impact are measured by the:

- The quality and ambition of the businesses that join the programme
- The quality and size of the advisory and investor community and the level of support they provide to companies on the programme
- The ease of recruiting future cohorts into the programme – as a consequence of successful delivery to earlier cohorts
- Companies' ability to access further financing over the medium to longer term
- Commercial opportunities for the companies as a result of increrased profile and interaction with the ELITE community.

Case-study: Endeavor.org

1) Description of initiative(s)

Established in 1997, Endeavor's mission is to lead the global movement to catalyze long-term economic growth by selecting, mentoring, and accelerating the best High-Impact Entrepreneurs around the world. Endeavor helps entrepreneurs overcome barriers to growth by providing the key ingredients to success: mentorship; networks; strategic advice; talent; skills; access to smart capital; and inspiration. Guided by Endeavor, these entrepreneurs generate sustainable economic growth and jobs, become self-made role models, and help nurture a culture of entrepreneurship which spurs investment and encourages people to think big. Endeavor has its global HQ in New York City, with hubs hubs in San Francisco, Dubai and Singapore. As of June 2014, it has 20 affiliates in countries that include Chile, Jordan and South Africa. Endeavor recently added an affilate in Miami, the first time it has extended its model to a non developing world region. Each affiliate is an independently operated franchise overseen by board members with financial and start-up success stories in their countries. Having screened over 37,000 candidates over a 25 year period, Endeavor currently serves 900+ Endeavor Entrepreneurs (or "High-Impact Entrepreneurs") representing 580+ companies. Endeavor Entrepreneurs have created 225,000+ high-quality jobs, and generated $6.0B in revenues. Various business school´s use the Endeavor model as a case study, please see this link for Stanford´s version: https://gsbapps.stanford.edu/cases/documents/E308.pdf

2) How does this supports scale-ups (vs. start-ups)?

(1) Coordination, connectivity and promotion | **(2) Access to Skills** | **(3) Leadership Capacity Building** | **(4) Customers (Domestic & Export)** | **(5) Financing** | **(6) Infrastructure**

Endeavor´s model begins by searching out high growth potential start ups and it is at this point that it begins to look for entrepreneurs who have the ability to think big, scale without limits and form part of a global, like minded community. Endeavor identifies companies which already have significant revenues (generally over US$1M) and have a proven business model. Endeavor uses a complex and long (up to 6 months) selection process which has been perfected and packaged over the last 15 years. The culmination of this is an International Selection Panel (ISP) where the "Finalists" from each Endeavor affiliate are brought together to be interviewed by 3 pairs of judges. These typically include people like Adam Dell (Michael Dell´s brother) who is a well known tech VC in Silicon Valley. It is their job to ultimately decide which entrepreneur has the most potential to scale and which one provides the best "fit" with Endeavor.

3) Who owns this, and who contributes?

Government/mayors/ corporates/investors/ universities, etc.)

Entrepreneurs | **Ecosystem umbrella organisations** | **Government (national/ local)** | **Private sector** | **Investors/financers** | **Education providers**

Endeavor is a global nonprofit (501(c)3) organisation. Headquartered in New York City, with 20 offices across Latin America, the Middle East, Africa, Europe, and South East Asia. It was founded 1997 by Linda Rottenberg (current CEO) and Peter Kellner (current Board Member). Global HQ in New York City with Hubs in in San Francisco, Dubai, and Singapore. Country offices in Argentina, Brazil, Chile, Colombia, Egypt, Greece, Indonesia, Jordan, Lebanon, Malaysia, Mexico, Miami, Morocco, Peru, Kingdom of Saudi Arabia, South Africa, Spain, Turkey, Uruguay, United Arab Emirates. Primary expansion targets are currently Southeast Asia, Middle. Global Endeavor Board Members are Edgar Bronfman, Jr. (Chairman), Linda Rottenberg, Michael Ahearn, Emilio Azcárraga Jean, Matt Bannick, Nick Beim, Matthew Brown, Wences Casares, J. Michael Cline, Paul Fribourg, Jason Green, Fadi Ghandour, Reid Hoffman, Peter Kellner, William McGlashan, Arif Naqvi, Joanna Rees, Nicolas Szekasy, Elliot Weissbluth and James Wolfensohn (emeritus).Endeavor and has an annual budget of US$28 million. Much of that is covered by seven-figure donations from the likes of Edgar Bronfman Jr. and Reid Hoffman, as well as Ebay founder Pierre Omidyar's Omidyar Network and Dubai-based private equity fund. When Endeavor opens a new affiliate country it always partners with local private sector leaders who pledge their time and money. It has traditionally refused to partner formally with local governments or receive public sector funding, prefering always to focus on private sector entrepreneurs who support the model through philantrophy and what Endeavor calls "Mentor" Capital.

4) What did it take to put this in place successfully? What does it take to maintain/run it over the long-term?

Endeavor was initially "tested" in Chile and Argentina, before its model was replicated and rolled out first in in Latin America and then across Africa, the Middle East and Asia. It recently created regional Hubs in San Francisco, Dubai and Singapore, maintaining its global HQ in New York City. Endeavor´s local Directors have been critically important in allowing the organisation to set up in each country it has entered, both in terms of financial support and also providing the local credibility and networks required to expand what is essentially a North American NGO into countries like South Africa, Indonedia and Jordan. Endeavor has scaled by managing to package and replicate its model over time, including its selection process and theservices it provides to selected Endeavor companies. It also uses tools such as salesforce.com and SAP to manage its global footprint and to collect and track data. Endeavor has partnered with global organisations such as Deloitte Ernst and Young and Boston Consulting Group.

5) What does success look like, and how is it being measured?

Endeavor measures everything it does and produces enormous amounts of data and metrics. It has its own research arm - Endeavor Insight which studies high-impact entrepreneurs and their contribution to job creation and economic growth. Its research educates policy makers and practitioners and helps them to accelerate entrepreneurs' success and the development of entrepreneurship ecosystems around the world. In 2013, Endeavor Insight joined with the Kauffman Foundation and the World Bank, to co-found the Global Entrepreneurship Research Network. Endeavor has mapped how it has helped to create entreuprenerial ecosystems in places like Chile and Colombia by carrying out in depth surveys in-country, interviewing key players in these ecosystems and seeing how they connect to Endeavor. See: http://www.endeavor.org/blog/wpcontent/uploads/2012/10/Network-Map-Jpeg1.png

Case-study: Entrepreneurial Spark powered by NatWest – UK

1) Description of initiative(s)

National roll-out of free business acceleration programme in partnership with Entrepreneurial Spark

Builds on success of programme in Scotland (Glasgow, Edinburgh, Ayrshire)

Thousands of entrepreneurs and high growth businesses will benefit from eight new business accelerator hubs in Birmingham, Manchester, Cardiff, Bristol, Belfast, Leeds that will offer free workplace, hands on mentoring, a start-up 'bootcamp' and a free programme of up to 18 months of advice, support and funding clinics

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Builds a unique national community of entrepreneurs	Entrepreneurs will follow an 18 month programme getting business advice and support, networking opportunites and pitch practice	Entrepreneurs have access to a pool of up to 50 specialised mentors	Up to 80 entrepreneurs will 'graduate' from the programme from each hub year with a viable, business	All participating businesses eligible for 'growth awards' of up to £50K.	Physical office spaces will be provided for up to 80 start-up businesses per hub at any one time

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Individual business owners			Entrepreneurial Spark NatWest RBS Ulster bank		

4) What does success look like? What impact/outcomes are expected?

100% take up of Entrepreneurial Spark powered by NatWest

We would like all available places at each of the business accelerator hubs to be filled with competition for places leading to great businesses being supported to grow, create jobs and feed revenue into the economy

Corporate reputation

The more support we can give entrepreneurs starting their business, the better our corporate reputation and the great possibility of attracting these entrepreneurs as future customers

Create an entrepreneurial revival across the UK

This is a step-change in how NatWest supports entrepreneurial talent in the UK. By opening up our premises and providing them with support and a far reaching network of contacts, we are backing the businesses of tomorrow and helping ambitious entrepreneurs take their businesses to the next level.

Upsurge in new business incorporations and reduced business failure rates

Case-study: Founders4Schools

1) Description of initiative(s)

- Founders4Schools programme helps avert the talent shortage crisis by putting founders of businesses into classroom to speak about why they chose to be an entrepreneur as their top career choice. At these high-impact events, business founders speak about what they studied when they were in school, what motivated them to set up their business and why they recommend entrepreneurship as a leading career choice for any person keen to have a positive impact on the world.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
F4S embed the volunteers further into the communities of which they are a part and promotes them with our social media campaigns around every event they volunteer in.	The founders going into the schools draw attention to the jobs that these children can create which addresses the talent gap at the moment which we anticipate widening.	The founders who volunteer for F4S qualify for membership of our 'scale-up' club and benefit from partners.	Our social media campaign around very event draws attention to the fastest growing companies within 20 miles of each school, thereby increasing demand for them.	Our Founder volunteers are the fastest growing companies in every locale. We make it easy for financiers to identify who these unsung heroes are.	F4S connects our volunteers with our network of partners who can help them find flexible real-estate when they outgrow their current offices.

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
The Founder and Chair is a serial entrepreneur and angel investor. Other tech founders and investors act as advisors to F4S.	LinkedIn, Duedil, Datasift make it possible to build and run the technology for F4S.	e-skills, CAS, Number 10, BIS and the DfE and others are helping with outreach to schools for F4S.	LinkedIn, Nominet, Google, Wayra, Telefonica are among the many who support. They like the low-cost data rich approach.	A number of finance organisations are partners for us. This fits in with their CRM programmes addressing financial literacy.	100% of teachers recommend our services to other teachers.

Example activities

8,500 scale-up entrepreneurs covering every part of the UK at present.	LinkedIn, Duedil, e-skills, SVC2UK, Datasift are all partners.	The Create (your own future campaign), various conferences.	We have three partnership programmes for corporates: Financial, Technical and Marketing.	Investors and financiers offer us their convening power and are on our advisory board.	Teachers rate our speakers, arrange events and promote activities 'powered' by F4S to their networks.

4) What does success look like? What impact/outcomes are expected?

Outcomes from one one-hour session: 96% are inspired by the speakers, 87% wish to go into business (against 60% average), 54% are keen to go on to study STEM subjects (2-3x the national average). Cost of delivery approximately 1/1000 of traditional and we already have national coverage. If all teachers used F4S, this would imply that the number of kids interested in STEM alone by next year would increase by 1,332,000 and the percentage of children interested in business would increase by 1 million.

Case-study: Future Fifty (Tech City UK)

1) Description of initiative(s)

- Selected from an open competition by an independent panel of experts, 50 of the most promising growth-stage digital firms based in the UK are provided with up 24 months of comprehensive, bespoke support designed to foster their continued growth. This support is delivered by a dedicated team of specialists, leveraging a wide range of expertise from across government as well as within 19 private sector partner organisations.
- Driven fully by the needs of the companies, the programme facilitates access to government, for example support on immigration, taxation, or policy issues and combines this with private sector advice and support, for example on access to talent, access to finance and accessing London's capital markets.
- The programme framework is ready to scale, with larger cohort sizes possible in future.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Continuous promotion of cohort via press outlets, as phalanx of UK-based digital businesses. Raising awareness of cohort amongst institutional investor base. Enabling cross-cohort information sharing.	Provides targeted skills/ capability training depending on need. Delivers practical training and support for talent sourcing and retention. Helps navigate immigration system and informs immigrations policy as needed.	Future Fifty Advisory Panel: experts from across the private sector– venture and growth capital investors, specialists from leading law and accounting firms, analysts from leading banks, management teams from recently listed UK companies and more.	Working closely with government, identifies specific areas where policy can help open markets for growth-stage companies and/or wider areas in the UK's digital ecosystem.	Provides introductions and coordinates access to financing, as well as independent perspectives and support through the financing options (venture, debt, growth, institutional).	Facilitating access to suitable office spaces. Working with property developers to adapt offer for high growth tech sector tenants,

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Current cohort management. Successful digital entrepreneurs, including some from recently listed companies.	TechCity UK.	Multiple departments / functions across BIS, UKTI, HMRC, UKVI, Cabinet Office.	Numis, Ernst & Young, Egon Zehnder, Grant Thornton, Up Group, Reed Smith, Kilburn & Strode, Fried Frank, FTI, KPMG, Korn, Ferry H2 Glenfern, Investis and more.	Numerous venture, growth, institutional investors.	

Example activities

Target audience. Strategic direction. Mentorship.	Future Fifty programme team sits within TechCity UK.	Provide resources to directly support cohort. Facilitate access to programmes. Assist in reviewing hurdles, with view to informing policy.	Business development support, including accountancy and legal advice, corporate governance, marketing and PR, and support on approaching public listing.	Partners supporting programme with advice/ insights on access to finance and business development, including approaching a public listing.	

4) What does success look like? What impact/outcomes are expected?

- As a bespoke programme, the value delivered by participation differs for each cohort company. A net promoter score measuring satisfaction with the programme accompanies continuous qualitative feedback by the companies. Cohort revenue and growth metrics are aggregated alongside internal programme performance metrics such as volume of direct company support rendered, number of independent events delivered and depth of press coverage. Halo effects to inspire future growth entrepreneurs arise from cohort 'success stories', e.g. to date 4 IPOs in London and 13 funding rounds totalling over £260m in the last 10 months alone (since the programme began in December 2013)
- To Note: Number of people employed by Future Fifty companies in Oct 2014: 15,091 (increase of 2,131 jobs in 10 months from when the programme started in Dec 2013) and estimated net revenue generated in Oct 2014: £2.1bn (increase of £870m in 10 months from when the programme began)

Case-study: General Assembly – Global

1) Description of initiative(s)

- General Assembly is a global community of individuals empowered to pursue the work they love. The company's mission is to build this community by:
  - Delivering best in class, practical education in technology, business, and design
  - Providing access to opportunities that build skills, confidence, and freedom in one's career
  - Building a global network of entrepreneurs, practitioners, and participants invested in each other's success.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Builds a unique global network of alumni with skills in business, design and technology.	GA's courses provide prfessionals with the business, tech and design skills they need to pursue the work they love.	Short-evening classes and part-time courses help professionals level-up in their careers.	Entrepreneurs take GA courses to gain the skills needed to launch new companies. GA also hosts regular meetups and events.		

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
GA's model is built on the idea of instructor-practitioners. The company's instructors come from the local tech and entrepreneurial community.			The company works with over 2,000 global hiring partners who both shape the company's curricula and hire its graduates.		

4) What does success look like? What impact/outcomes are expected?

Students/Professionals

Success is empowering General Assembly's students to pursue the work they love:

- Since its founding in 2011, General Assembly has placed over 90% of its job-seeking graduates in full-time roles within ninety days of graduation from its full-time immersive programming in web development, user experience design and product management.
- In addition to the company's full-time, immersive courses, the company offers part-time courses in business, design and tech for individuals looking to level-up in their current job or gain the skills necessary to pursue a new career.
- GA's global alumni network connects professionals across industries and locations.

Employers

Success is solving employer talent needs through creating new streams of talent, and through providing training opportunities for current employees that allow them to level-up in their careers:

- General Assembly has a global network of over 2,000 hiring partners. The company builds its curricula in conjunction with these companies.
- General Assembly creates a stream of talent looking for jobs in the most in-demand industries of the 21st century. GA does not charge a recruiting fee to employers looking to hire its graduates.
- Current employees also benefit from General Assembly's offerings. Many companies send their employees through General Assembly's part-time night and weekend programming.

Case-study: Goldman Sachs *10,000 Small Businesses* Programme

1) Description of initiative(s)

- Regional programme to accelerate the growth of high potential small businesses to create jobs and grow economies, through (i) focusing on the development of entrepreneurial and managerial capabilities, (ii) facilitating the development of peer-to-peer support networks of small businesses with high growth potential; and (iii) developing a partnership model of small business support provision between the corporate and higher education sector that also draws on and complements existing local assets, infrastructures and networks
- 250 competitively selected new participants per year, forming cohorts of 25-30 entrepreneurs.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Builds a unique national community of entrepreneurs.	Curriculum of 12 modules focused on business growth through a model of facilitated peer learning, as well as development of a Business Growth Plan.	Supplemental legal clinics, one-to-one mentoring and other needs-based support.			

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
			Goldman Sachs, Goldman Sachs Foundation.		Said Business School, Aston Business School, Leeds University Business School, Manchester Metropolitan University Business School, UCL.

Example activities

Owner/funder	Content and delivery

4) What does success look like? What impact/outcomes are expected?

Economic benefits

- 77% participants increased the number of people they employed in the previous 12 months
- On average participants reported an annual increase of 23% in their net employment over the baseline position (vs. 1% for UK small businesses)
- 66% indicated their turnover had increased compared to the same period in the previous 12 months (vs. 35% of UK small businesses)
- Participants reported an annual increase of 16% in annual turnover over the baseline positons (vs. -9% for UK small businesses) – which totalled £266m

New knowledge and best practices

- 83% introduced new internal processes
- 81% using financial data more to drive business decisions
- 43% found new suppliers through the programme
- 52% increased training opportunities for staff
- 64% have improved the quality of an existing product/service

Business confidence and networks

- 92% report they are now more confident in their ability to successfully grow their business than before participating in the initiative

Strategic change

- 64% reported they had improved the quality of an existing product or service
- 53% had researched or developed a new product or service

Access to finance

- 84% agreed that the programme had enhanced their understanding of finance options and 71% reported that they had better ability to win finance. 20% reported that they had been introduced to new capital providers. 67% reported that they will seek finance to grow their business in the next 12 months.

Case-study: Greater Manchester: Business Growth Hub

1) Description of initiative(s)

- The Business Growth Hub is a private/public partnership service stimulating business growth and employment creation. Targeting services using data identifying growth businesses it acts as a focal point for businesses seeking growth support. The Hub cross refers across a range of over 130 private and public, national and local partners as well as directly delivering a range of growth services for scale-ups including: practical business advice, master-classes, networking, conferences, meet the buyer events and more specialist services including growth mentoring, executive development, access to finance, sector specific support (e.g. manufacturing, textiles, low-carbon & environmental) exporting, resource efficiency, digital growth and innovation.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Co-ordination and promotion of local and national and public and private support.	Leadership, management and executive development.	Bespoke 1-2-1 mentoring utilising a bank of 188 experienced mentors.	Growth start-ups and businesses with focus on exporters	Access to finance advice and direct provision of and facilitated access to alternative debt, angel and equity finance.	Referral network connects to specialist support as well as there being direct access to the Hub's staff and programmes

3) Which stakeholders in the ecosystem are involved with running this?

For a full list of stakeholders see our website – http://www.businessgrowthhub.com/partners

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Angels, business mentors and leading, high profile entrepreneurs.	Sector organisations, e.g. Bionow Membership organisations, e.g. GM Chamber of Commerce Incubators, e.g. Manchester Science Partnerships	GM Combined Authority Local authorities Innovate UK DCLG BIS UKTI HMRC	GM LEP Accountancy firms Law firms Business mentors	Banks Business Finance Solutions NW Fund GM Investment Fund	Universities Work Based Learning providers

4) What does success look like? What impact/outcomes are expected?

To be achieved by September 2015

- 1,132 existing businesses supported to grow and improve performance (currently at 105% of forecasted delivery)
- 930 entrepreneurs assisted to develop their business skills (currently at 118% of forecasted delivery)
- 288 entrepreneurs assisted to start growth businesses (currently at 136% of forecasted delivery)
- 375 jobs created and 1,067 jobs safeguarded (currently at 154% of forecasted delivery)

Other achievements

- 10,182 enquiries
- 184 mentors
- £36m raised in finance

Case Study – Spirit Medical Communications

- Design and deliver integrated communication systems for the pharma, medical, biotech and diagnostics industries
- Support received; 3 year strategic plan for growth, 12 month planning process focusing on immediate growth objectives, measures and timescales and identification of cash/finance requirements and specific support on accessing finance
- Turnover; £1.5 million expected to rise to £5 million in 3 years
- Employment; 15 staff expected to rise to 43 in 3 years
- They are accessing Swiss and other European markets with their clinical and regulatory products and services

Case-study: Greater Manchester: Business Finance Solutions (BFS)

1) Description of initiative(s)

Business Finance Solutions (BFS) operates as a Government-backed, Community Development Finance Institution and is a leading alternative enterprise lending institution in the UK. BFS provides finance to entrepreneurs who are unable to secure mainstream finance. Business Finance Solutions objectives are to address three key areas: (i) appropriate initial finance; (ii) growth finance in the form of debt, equity and angel and (iii) a range of wrap-around, complementary business growth services. In order to stimulate growth, BFS aims to consolidate mechanisms currently employed to bridge these finance gaps, identify new product needs and coordinate new development and scale delivery. BFS disburses in the region of £30m per annum to businesses in Greater Manchester and elsewhere in England, as well as managing the funds of other institutions.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Central player in the delivery of local and national, public/ privately funded SME finance initiatives.		Provides mentoring support linking with the Business Growth Hub and other experienced mentors.	Finance for SMEs not funded by mainstream sources of finance	Access to alternative debt, angel and equity finance, either directly or by facilitating access alternative products	

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
BFS Board made up of representatives from both the GM Business Community and Banks. Angels, and other high-profile inspirational entrepreneurs.	Community Development Finance Association European Micro Finance Association UK Business Angels Association Manchester Science Partnerships.	GM Combined Authority Local Authorities DCLG BIS UKTI and UKEF HM Treasury British Business Bank	GM LEP Manchester Science Partnerships The Landing Trustech Chambers of Commerce Pro Manchester UKBAA	Start Up Loan Co NW Fund GM Investment Fund EIB/EIF ERDF Angels (Co-Angel/NWBA) RBS/Nat West Barclays Bank	Universities Work Solutions NEA LABs

4) What does success look like? What impact/outcomes are expected?

To be achieved between April 2014 and March 2015

- 4665 Businesses supported with finance
- £173m Sales Growth generated by Loan activity
- 5127 Jobs created and safeguarded
- 6720 Enquiries
- £27m Lending in financial year March 2014 – March 2015

BFS continues to develop a suite of products to provide flexibility to deal with 'gaps' in the SME market, develop a scaled approach to capital and improve access to a range of finance for SME's and increase business activity. A number of initiatives and high-level relationships are pivotal to on-going development:

Business Co – Angel Service – new initiative , launch to market in November 2014

Trade Finance product – BFS engaged with BIS and UK Export Finance on the development of a Trade Finance product.

Case-study: Manziales

1) Description of initiative(s)

- A four year initiative to dramatically increase the concentration of high growth entrpreneurship in the city, in partnership with the Babson Entrpreneurial Ecosystem Project.
- Initially a collaboration of 11 stakeholder groups from the municipal government to private business leaders, from NGOs to universities, that are working to improve the societal factors that impact entrpreneurship. These groups set policy for the intervention and fund it. Interventions include government policy, the labor force, the marketplace, financing, infrastructure, networking, education, and the city's culture.
- A Scalerator programme for growth firms focused heavily on boosting sales, along with networking between entrpreneurs and mentoring opportunities, access to markets, export, access to appropriate finance etc.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Caldas Entrpreneurs Network, local industrial corporations	MANIZALES-MAS and Babson Entrepreneurship Ecosystem Project	City of Manizales and public recognition from the President of Columbia	Manizales Chamber of Commerce, Parquesoft, Incubar, Luker Foundation	11 private, municipal and education organisations growing into almost two dozen at present	Babson College and five SUMA universities representing 25,000 students: University of Caldas, the Automonous University of Manizales, the Catholic University, the National University of Columbia and the University of Manizales. 25,000 students.

4) What does success look like? What impact/outcomes are expected?

- 22 of the 24 Scalerator companies had new hires, and the average headcount was up 10 percent.
- Half of the companies had obtained additional financing or were close to scoring some.
- All but one of the company reported sales growth, with median 24 percent sales growth over the same period the previous year.
- All of the companies with business-to-business products had signed new marketing partnerships.
- The region saw the largest year on year increase achieved in the 15 year history of the Global Entrpreneurshiop Monitor study, based on the total entrpreneurial activity measure.
- 24 ventures are part of the Scalerator programme: all are experiencing growth; many are exporting for the first time, including to the USA; they have 230 new corporate clients and/or channel partners; and the fastest growing venture has tripled its revenue.
- 24 ventures have hired over 200 new employees over the past one and a half years.
- Banks are continually incrasing their debt financing and venture capital funds fro Medellin and Bogota are conducting due diligence.

Case-study: MassChallenge

1) Description of initiative(s)

- UK wide programme based in London and designed to accelerate the early-stage growth of over 100 high potential and high impact businesses per year, from any industry and business model, fostering the rapid creation of net-new jobs and regional economies, through (i) using a competition format to filter and fund the top 1% of talented high-impact entrepreneurs, (ii) facilitating the development of peer-to-peer support networks of those entrepreneurs; and (ii) providing a unification point for the supporting ecosystem to interact and further support those entrepreneurs – including the corporate, government, and higher education sectors that also draws on and complements existing, local assets, infrastructures and networks as a non-profit, collaborative, community-driven initiative.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Focal point for the ecosystem; global connectivity allows inbound investment to UK of mentor capital as well as access to new markets.	Competition identifies talent; training & global mentoring educates and inspires startups; events are relevant for all and build sense of community.	Intensive, personal mentoring provided by vetted pool of mentors; $15m in-kind support; free office space, PR, software, and more.	By taking zero equity, programme removes cost for startups to be accelerated, boosting engagement and improving outcomes.	$2 million in cash grants distributed to top teams. Actively coordinate additional investments & grants from the community.	

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
The Lord Verjee of PortobelloGerard GrechDesh DeshpandeDr. Andy Richards	Tech London AdvocatesEntrepreneurial Spark	UK CatapultsTechCity UK	RBS, Unilever, Taylor Wessing, EMC, The BIG Partnership, Media City UK		Hult International Business School, Cambridge University

4) What does success look like? What impact/outcomes are expected?

Economic benefits (based on metrics achieved in Boston since 2010)

- 89% of the 489 companies accelerated since 2010 are still active (correct as of October 2013)
- 4000+ jobs created
- $350m+ revenue generated
- Cost per net-new job circa $2,000
- Combined valuations exceeding $2bn

Engagement with startup ecosystem (based on metrics achieved in Boston since 2010)

- 526 expert judges (all industries)
- 351 active mentors
- 69 sponsoring corporations and organizations

Active Programing (2013 event statistics in Boston)

- 759 office hours meetings
- 124 accelerator workshops
- 283 events
- 12,732 event attendees

Access to finance

- $550m+ funding raised by graduates of the Boston based accelerator since 2010

Case-study: Mentorsme

1) Description of initiative(s)

Mentorsme is the first UK wide portal for enterprise mentoring created by the banking industry in 2011 to enable businesses to connect with mentoring organisations local to them, and to take forward a mentoring relationship suitably matched to their needs. Mentorsme now has over 120 Mentoring Organisations that house around 27,000 enterprise mentors. Another key component to the Mentorsme initiative is a commitment the banking industry has made to place 1000 bank mentors into mentoring organisations across the UK in order to help small and medium sized businesses grow and expand.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
It plays a pivotal role in ongoing quality assurance of enterprise mentoring with the oversight provided by its Enterprise Mentoring Advisory Council co-chaired by the BBA and having representatives from a range of private sector entrepreneurs, bank entities, the national Chambers and ICAEW.	By its nature, the mentoring relationship identifies and helps to develop existing and future skills needed to sustain growth and develop retain and recruit employees. Evidence reflects Mentorsme enterprise mentors have enabled the scaled creation of new jobs in over 38% of businesses mentored.	Business growth is a key determinant and impact of successful mentoring. Mentoring can be engaged through the life cycle of a business – at its various stages of growth – it provides a key enabler to unlock potential and scale impacting :sales growth, increased productivity, expansion overseas; business development, turnover and profit.	Mentorisme assists market stimulation through experienced individuals providing mentoiring support, guidance and a sounding board to business owners, thereby facilitating businesses ability to grow develop and scale. Mentorsme provides the platform to help businesses find a mentoring option to suit their needs in a fast and easy way.	Mentoring facilitates businesses to develop sound financial skills. Mentors can help guide a business in understanding its finance options and the finance sources most suited. It helps businesses become more investment ready increasing their chances of getting finance. The Mentorsme 1000 bank mentors play an important role here, with over 75 per cent of businesses mentored reporting an increase in finance acumen and ability to source finance.	The infrastructure is online and national but crucially embedded locally with consistent standards and approach albeit tailored to the local/ regional eco-system with local access and delivery.

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
120 Enterprise Mentoring Organisations 27,000 Enterprise Mentors Leading entrepreneurial ambassadors such as Bev Hurley; MT Rainey; Emma Jones; Doug Richard	BBA Business Finance Roundtable made up of leading Business, professional and sector Groups such as. CBI;Chambers of Commerce; Federation of Small Business (FSB) ; the ACCA, ICAEW, ICAS; SMMT Enterprise Diversity Alliance	Department for Business Innovation and Skills Government Equalities Office Innovate UK Department for Culture Media and Sport DCLG MAS Start Up Loans UKTI/UKEF	Barclays; BT; Co-op; EY;Hewlett Packard;HSBC Lloyds Banking group; RBS Banking group; Santander; Waitrose; Banks in Northern Ireland; SMMT; Automotive Manufacturers Creative England; Enterprising Nation; SFEDI; Start Up Britain	BBA Banks Business Growth Fund UK Business Angels Community Development Finance Institutions (CDFIs) Specialist financiers	SFEDI who provide all quality assuarance and bank mentor training The Enterprise Research Centre (a partnership between Warwick Business School, Aston Business School, Imperial College, Strathclyde University and Birmingham University)

4) What does success look like? What impact/outcomes are expected?

In terms of impact of Mentorsme and enterprise mentoring on businesses 'scaling up', from research conducted with those operating within Mentorsme, already tens of thousands of businesses have used Mentorsme with the BBA finding the following trends that enterprise mentoring from organisations within Mentorsme (such as the Scottish Chamber of Commerce) have delivered:

- 65 % of business experiencing a positive effect on international expansion
- 62 % of businesses having had a positive effect on turnover
- 55 % of businesses with a positive effect on profit
- 62% of businesses having seen a positive impact on increasing product, markets and business services
- 67 % increase in productivity

Alongside this is a strong recognition of the power of mentoring in helping investment readiness, with specifically the BBA mentoring programme reflecting from over 75 per cent of all businesses a strong increase in business planning and financial planning with the banks mentoring programme sitting within Mentorsme already creating over 500 new jobs in growth companies.

Mentorsme continues to also develop a sector specific focus and act as a catalyst for new mentoring programmes within corporate supply chains

Case studies of just some of the businesses scaling- up from the benefit of Mentoring and the Mentorsme organisations are overleaf.

Case-study: Scale Up Milwaukee – USA

1) Description of initiative(s)

- An action project focused on developing the entrepreneurial capacity in Milwaukee by impacting and aligning policies, structures, programs and climate towards growth entrepreneurship
- An integrated effort to simultaneously impact six domains of the entrepreneurship ecosystem in Milwaukee: Culture, Policy and Leadership, Finance, Human Capital, Markets, and Supports
- Align all ecosystem stakeholders to focus on high growth companies, foster a growth-obsessed and growth-enabled region.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Politicians support scale-ups through 'listening, visiting & celebrating'. Culture influencers encouraged to promote growth stories; Task forces and steering council.	Case-study workshop for 25 universities; involved in vision and policies of new university entrepreneurship center.	"Scalerator" 6 month training program for 26 scale up who receive training and mentoring from world class faculty and other stakeholders.	Convene over 200 firms & entrepreneurs to boost entrepreneurial partnering. Meetings among corporate CEOs to discuss how entrepreneurship enhances their competitiviess.	Workshop for improving understanding between entrepreneurs & investors, and the different finance providers; loan officer training.	Work with developers to coordinate development projects with growth vision of Scale Up Milwaukee.

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Post-revenue scale ups is the immediate emphasis in order to inculcate growth mindset in all stages of entrepreneurs	Greater Milwaukee Committee, MiKE (Innovation in Milwaukee), M7 (Milwaukee 7), Babson Entrepreneurship Ecosystem project, Commons	Wisconsin Economic Development Corporation (WEDC), City of Milwaukee, Wisconsin Housing and Economic Development Administration (WHEDA)	AMEX, IBM, Manpower Group, Badger Meter, Briggs-Stratton, Mandel Group, Lubar Group, AO Smith, Strattec, and many others	Bankers; angel investors; fund managers; corporate investors, lenders and strategic investors; leasing & factoring companies	University of Wisconsin – Milwaukee (UWM), Marquette University, consortium of universities

4) What does success look like? What impact/outcomes are expected?

Economic benefits

- Scalerator's first class 2014 revenues have increased an average of 25 percent above initial projections
- 60 high growth companies in the region by 2020, with commensurate regional increase in jobs, wealth, tax base and quality of life (23 in process achieved)

Business confidence and networks

- Over 170 million people reached through 190+ national and international media mentions; impacting the global entrepreneurship conversation by shining a light on growth, interest of national foundations, federal government in supporting Scale Up Milwaukee and using it as a model

Strategic change

- Local and international recognition of Milwaukee as a center of growth-oriented entrepreneurship
- Inculcate growth-oriented entrepreneurship in the region's DNA so that the ecosystem is self-sustaining.

Case-study: NACUE – National Association of College and University Entrepreneurs

1) Description of initiative(s)

NACUE with a network of organisations of over 210 entrepreneurial societies helping thousands of students by supporting, connecting and advocating. Activities include:

- Startup Career Launch Pad – an event which exposes students to startups from across the country which showcase how they scaled up their businesses
- Innovation fund – a government match-funded pot of money that societies would apply for to enable them to fund a business or project on campus

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Bring together students and startups from across the country	Help to encourage students in entrepreneurial activity and business operations such as budget management			Innovation Fund provides a match-funded pot of money available to all Entrepreneurial Student societies	

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Startups from across the country & entrepreneurial students	NACUE	Department for business, Innovation and Skills		Innovation Fund	Universities with Student Enterprise Societies

4) What does success look like? What impact/outcomes are expected?

Success:

1. **Student engagement:** Both society & HEI benefit from peer to peer learning
2. **Exposure to entrepreneurship & enterprise:** Engage students from multiple faculties in enterprise opportunities
3. **Student satisfaction survey:** Students recognise the impact of their environment promoting better connections with institution in the future, potential case studies and alumni
4. **Improvement in employability skills:** Exposure to a variety of responsibility for committee and members exposed to challenging extra curricular activity outside of expecting learning
5. **Exposure of students to multiple networks:** Potential employment, investment, experience
6. **Society succession & reputation:** Member base growth, annual stakeholders, responsibility to maintain levels of engagement and activity

Case-study: Tech City UK Cluster Alliance

1) Description of initiative(s)

- Accelerates ecosystem development across 13 of the UK's leading tech clusters, to share expertise, knowledge, insights and drive opportunities
- Provides a national platform for the regions and clusters to gain access to talent, markets, partnerships, capital and to showcase their respective tech communities whilst adding their voice to Government
- A network through which interested parties (investors, corporates) can reach start-ups on a national level

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Provides a platform for the clusters to promote their regions, connect and share best practises and coordinate on policy issues	Expands the potential talent pool from which to fill gaps – previously local, now a national pool	Builds awareness among start-ups of the support systems that exist	Builds awareness of new and active sales/customer/ supply opportunities in other markets across the country, and fosters the connections that make these actually happen	Connects investors/financers/ corporates with potential targets for financing	Is a voice to national government on the biggest infrastructural barriers limiting growth for scale

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Entrepreneurs	Tech City UK	BIS, UKTI, Cabinet Office	Various Digital business from each regions		

4) What does success look like? What impact/outcomes are expected?

- Targeting support to each cluster across the country based on specific needs
- Mapping and identifying capabilities, weaknesses and strengths of each cluster and then addressing them through knowledge transfer and connectivity
- Facilitating connections between start-ups and interested third parties to enable growth
- Example of success to-date is the piping of CodeClub into Newcastle because of an opportunity identified in a National Cluster Alliance event: there are now 50+ clubs in Newcastle, and greater coverage of activities within the regions via national media
- A strengthened international position through the evolution of a unified national voice, representing all 13 Clusters and regions across the UK
- Examples include events like the Cluster Showcase, the first nationwide OpenCo festival (6 cities participated across the country), and greater collaboration between cities

Case-study: Santander Breakthrough Programme

1) Description of initiative(s)

- Financing and support programme for selected fast-growth companies – £500k-£25m turnover, growing at 20% per year for past three years in either profit, turnover or employees, not based in any sector/cluster/supply chain/geography
- £200m available mezzanine fund.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
	Works with university partners to fund graduate interns from local universities with Breakthrough customers (target is 1,500 interns placed 2013/14).	Fill gaps in support functions e.g. HR and marketing. Also supports with 'masterclasses' from market-leading companies e.g. Google.	Trade missions to Brazil, UAE etc. to stimulate sales/ relationships in other markets.	Provides a form of mezzanine financing that seeks not only a much lower rate of return than a private equity investment (10%) but also repayment terms that won't impinge on cashflow (money is advanced solely in the form of debt, repayable at an agreed point in the future. In other words, the bank receives its return solely through interest repayments, with the rate set at 5% over LIBOR paid quarterly and a further 5% rolling up).	

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Later-stage, scale-ups Various entrepreneurs engage with the programme as speakers and mentors	London Chamber of Commerce (involvement with trade missions)	BIS, UKTI	Google, LoveFilm, McLaren, Saatchi Masius	Santander	Santander works with its 72 university partners in the UK

Example activities

		£50m government funding, close ties with UKTI for trade missions	Google, LoveFilm, McLaren, Saatchi Masius		

4) What does success look like? What impact/outcomes are expected?

- 1,153 new jobs created specifically out of these deals. Creating one new job for every £21k of investment (vs. 1:£50k in other programmes).

Case-study: Silicon Milkroundabout – Jobs fair for Tech Startups

1) Description of initiative(s)

Silicon Milkroundabout was created as a solution to help scale-ups attract and hire engineering, design, marketing and product management talent.

It aims to establish 'working for start-up' alongside other popular career paths such as 'working for a bank', creative agency or tech giant' in the minds of the UK's most talented people. In it's third year, the bi-annual event now has 3000 candidates attend with 160 scale-ups exhibiting, from bootstrapped to pre-IPO. The event also run 'The Bootstrapped Initiative' where small, pre-invested scale-ups can attend at a highly subsidised cost. 50% of these places are awarded to scale-ups with a female on their founding team or with a founder under 25 years of age.

The Silicon Milkroundabout 'Start-up Selfie Video's which are broadcast across social media channels allow each scale-up to film a 90 second video on an iphone showcasing their product, team, company culture and the career opportunities they have available. The Startups page on www.siliconmilkroundabout.com is the one-stop-shop for candidates researching the thousands of roles available at scale-ups

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Brings together founding teams, investors, talented candidates, university heads, tech hubs and accelerators in one weekend bi-annually. Draws press attention to the vibrancy of the scale-up ecosystem.	Allows scale-ups to showcase their job roles and company culture. Helps scale-ups attract talent Nationally and Internationally and from other sectors i.e. banking, agencies and tech giants.	The event brings together hundreds of founding teams and connections for professional support.	Marketing to 3000 potential new customers at each event. Examples include: Moo, YPlan, Graze, Stack Overflow all have provided offers for attendees. Mind Candy sponsored the creche in 2012 to draw attention to their moshi monsters brand.	The event attracts private investors and VC's to meet face to face with new pre-invested and growing companies.	

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Silicon Milkroundabout founders Pete Smith, Cristiana Camisotti, Ian Hogarth and their team. 500 scale-ups from bootstrapped to pre-IPO attended across the last 7 events.		TechCity UK Hackney Council	Talent working in UK based and International business; tech giants, banks and agencies. Tech hubs and campuses.	VC's and private investors. Code Advisors, Index Ventures, Silicon Valley Bank.	Promotion to alumni groups; Central St Martins, Kings, Ravensbourne Art College, Imperial, Oxford, Cambridge.

Example activities	Content and delivery	Connections	Connections	Talent pool	Connections	Talent pool

4) What does success look like? What impact/outcomes are expected?

Success:

Since the inaugural event in May 2011:

(a) the number of candidates attending each event has grown 1000% – May 2011: 300 candidates, May 2014 3000 candidates

(b) the number of scale-ups attending each event has grown from 45 to 160 with 500 scale-ups attending at least on of our 7 events

(c) the seniority of candidates has increased. May 2011: predominantly graduate level attendees. May 2014: Intern – 15.31%, junior – 18.53%, Mid-level – 32.33%, Senior – 27.32%, C–level – 6.51%

May 2011, all attendees were engineers. The event now covers product management, design, marketing and engineering functions due to the significant demand for talent in these areas from the attending scale-ups

(e) the number of jobs on offer at the event has grown from 100 to 1400

(f) Data from the event has been used to inform the candidates of the types of roles and technologies used by the scale-ups, and to inform scale-ups of the technologies used and favoured by the attending talent pool

(g) 50 startups have benefited from 'The Bootstrapped Scheme' including CityMapper and Osper who have since received significant investment

(h) Multiple hiring success stories include Ravn, Foodity, Graze, Editd, King and Visual DNA

(i) The Silicon Milkroundabout 'Startup Selfie Videos' have had 1000's of views

Case-study: The Supper Club

1) Description of initiative(s)

- The Supper Club (TSC) supports high growth amongst CEO/founders of businesses above £1m turnover
- TSC delivers this through a series of carefully designed peer-to-peer learning events, including around 15-20 chaired roundtables per month
- TSC is growing but is currently over 300 members and has been going for over 10 years
- As well as face to face learning through roundtables and forums, also provide an online and offline concierge/support service for urgent matters

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
TSC is for businesses beyond micro. Most members in £1m to £100m sales range. National coverage.	Peer group learning – match people appropriately at events/in forums to ensure maximum value.	Involve advisers and experts as well as more seasoned entrepreneurs to mentor and augment our peer-to-peer events.		Run an early stage investor group in which members invest and mentor start-ups.	

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Value is created by ability to curate the experiences of members, making it easy for the sharing of often confidential learnings. Members also contribute to a range of other programmes, developed from the best practice seen from over 1,500 roundtables.		Regularly host roundtables with minsters and government departments.	TSC is part of the Prelude Group (owned by founder/ CEO Duncan Cheatle). A team manage events, communications, member management and deliver services.	Partner with firms like Octopus Ventures, Dunedin Private Equity, banks and corporate financiers to help deliver programmes.	

Example activities

Funded through subscription

Owner/delivery/content

4) What does success look like? What impact/outcomes are expected?

- Success of the Club is measured primarily in retention rates (as members can leave with one month's notice) currently >90%
- Average year on year sales growth of members consistently over 25% per annum
- Focus on growth rates by sales which are consistently over 25% per annum.

Case-study: Silicon Valley comes to the UK (SVC2UK)

1) Description of initiative(s)

Established in 2006, SVC2UK brings together early stage investors, successful serial entrepreneurs, students and alumni with leading iconic entrepreneurs from around the world. It acts as a hub for CEOs who are scaling up by curating and aggregate available online and offline content, guidance, and capital sources, tailoring individual solutions to CEOs and focusing on relationship building.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
	Promotion of the Cambridge 50, Science 50, Female Founders, 100 club, talent is drawn to these high growth companies. Workshops are held to help CEOs understand the most ways of recruiting talent.	CEO2CEO workshops and online Forums and publications support CEOs of fast growth firms. Targeted groups of CEOs receive mentoring in Silicon Valley. Mentoring workshops held throughout the year.	SVC2UK promotes high growth companies and supports them in winning new business. It has profiled and promoted the Science 50, Cambridge 50, Women CEOs group and the 100 club (companies with potential to reach £100m in 3 years.)	SVC2UK Dinners and CEO Workshops provide Scale-up leaders with relationships and 'best practice' mentoring and coaching from industry veterans and introductions to investors.	SVC2UK Dinners and matchmaking services help leaders of scale-up firms with infrastructure services and advice as to how to get best value from them.

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Successful serial entrepreneurs act as advisors to the programme and mentors to the CEOs who are wishing to scale up their businesses.	Advisors help to fund and act as filters to help identify the fastest growing companies for the mentoring at the CEO summits.	Multiple Departments, functions across BIS, UKTI, HMRC, Cabinet Office.	Corporate Partners help with funding, mentoring, venue provision and promoting the scale-up companies to media.	Numerous venture, growth and institutional investors support financially and with mentoring / advice.	Universities support SVC2U events by providing venues and comms help. They believe this activity supplements classroom learning with essential skills.

Example activities

Target audience, strategic direction, themes, mentorship, speaker recruitment.	Identify high growth companies, support with coaching CEOs.	Host events, provide speakers, provide funding.	Business Development support, co-development opportunities and scale-up advice.	Offer advice to CEOs, invest in high growth CEOs on programme.	Universities host and co-create events. Students volunteer to run the programme.

4) What does success look like? What impact/outcomes are expected?

Success:

- CEOs change behaviour following high impact SVC2UK events. 81% of attendees at the 2013 CEO summit stated that they would do something different as a result of their learnings. 97.5 % stated that they wanted to attend future events.
- Feedback from CEOs and other attendees:
  "Many tiny pearls of wisdom that I put into action immediately. Truly feel my business is better just days after." **Stephen Piron, Bright Sun**
- New networks and connections. Since 2009 SVC2UK has made connections for over 11,000 members of the eco-system for entrepreneurs (CEOs, investors, students, corporates). This includes 890 CEOs who have received high impact mentoring and coaching from successful US and UK serial entrepreneurs and investors. This data is currently being analysed further to identify the impact SVC2UK has had on these companies with regard to growth.

Case-study: Telefonica's Think Big

1) Description of initiative(s)

- Think big is aims to build a more entrepreneurial and digital future for Europe. It gives young people the training, support and money they need to get creative: the space to turn their ideas into actions, learn new skills and create projects – and even to fail. It is based upon the fundamental insight that young people will flourish but need help in the transition to adulthood and economic independence. Think Big splits into Think Big Schools and Think Big youth Programmes.
- Think Big School is a 1 day event aimed at encouraging students to think about their digital aptitudes, and potential career in the ICT sector. Learning activities are designed to inspire young people to realise the benefits of key skills directly relevant to the ICT sector and employers' expectations. The overarching objective is to inspire young people to push their knowledge boundaries, be better equipped and integrate ICT tools towards personal and professional ends.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Connect the different ecosystems. Entrepreneurs, teachers, corporation and other stakeholders.	Long term development of digital skills. Easier access to labor market Increase the competitiveness of firms	It provides mentorship at very early stages of project development, so young entrepreneurs can learn how to use external advice for self-projects early	Long term increase of the production function through better labor supply and there fore more output.		

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Wayra	Mozilla foundation Young Enterprise NYA Appshed UK Youth	Private andpublic schools all across the UK	Technology Will Save Us Bauer	Telefonica Foundation UK Govt Social Action Telefonica business	

4) What does success look like? What impact/outcomes are expected?

Network Effects

- An active network of 85 alumni in the UK providing mentoring, and a broader development of the program.

Access to Finance and mentoring – 2013 aggregate data

- 1627 funded projects out of 2809 (received ones). 58% of participants already involved in finance challenges for ealy stage projects
- 46 trained employees

Win-win cases. Think big projects in Telefónica business environment

- Hannah Catmur – Wayra UnLtd; Sophie Mai Lan – Veritas magazine; Anne-Marie Immafidon – Stemmettes

Improving competencies

- Students were asked to rate their skills across a series of skills specific statements pre-and post-programme on a rating scale of 0 – 6 (0 = definitely not – 6 = definitely applies to me) and the results were the following (ex ante – ex post results):
- Self-confidence: 4.35 – 4.88
- Project management: 4.36 – 4.69
- Communication: 4.45 – 4.80
- Creativity: 4.36 – 4.63
- Digital literacy: 3.62 – 3.91

Case-study: Google Campus London

1) Description of initiative(s)

Campus's mission is to create an environment that encourages innovation through collaboration, mentorship, and networking. With speedy wifi, a café, frequent networking, educational and speaking events (on average 100 a month), and coworking space, Campus is seven floors dedicated to startup success.

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Brings together the community through the public spaces that Campus provides	Co-working/networking space for talented individuals. Operates a jobs board to help startups recruit talent	Google office hours and additional programming provide free technical, marketing and PR support.	It increases the visibility of entrepreneurship and provides access to a variety of support mechanisms for earlier stage businesses	Campus provides a focal point for the venture capital community including pitch and demo events, investor office hours	The seven story building provides free event space to the community, free wi-fi in the public cafe and home for partners to run additional programs.

3) What public stakeholders are engaged in the project?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Campus members cover a wide range of London's ecosystem	Seedcamp TechHub TechCity Startup Weekend Coadec	Central Government London Local councils	Google	Google Ventures Additional VC firms, angel investors engaged through community activities	

4) What does success look like? What impact/outcomes are expected?

- **Job Creation:** It is estimated that at least 576 jobs have been created within the Campus community in the past 18 months.
- **Fundraising:** Campus members have raised at least £34m in the 12 months to October 2013. The median amount raised from formal sources (VC funds, accelerator programmes, government grants and angel investors) is approximately £75,000
- **Gender Equality:** Campus is helping to address the gender imbalance in the tech startup industry. The presence of women at Campus continues to grow, now at 22% of residents and 20% of the overall member base - compared to the 9% industry average. There's a lot more to do, but Campus's programmes, including Campus for Mums and Women at Campus are moving the needle.
- **Exponential Growth:** Campus is increasingly popular as a place to interact with the local startup community. 78% of survey respondents have been working at Campus for less than 6 months. Campus membership has grown almost 300% since January 2013 (8,000 to 32,000).
- **Positive Outlook:** The outlook of startups at Campus remains very positive with 84% reporting a positive outlook.

Case-study: Venturefest Network

1) Description of initiative(s)

Venturefest Network brings together a dozen innovation ecosystems and their Venturefest events across the UK to:

- Strengthen links between local and national innovators, investors and entrepreneurs across a range of sectors
- Celebrate success and strengthen connections to funding, ideas and support
- Share best practise about innovation and driving growth from start-up to scale-up

2) What need does this solve for scale-ups?

(1) Coordination, connectivity and promotion	(2) Access to Skills	(3) Leadership Capacity Building	(4) Customers (Domestic & Export)	(5) Financing	(6) Infrastructure
Brings together key local leaders from universities, LEP(s), investors and business to co-create the local Venturefest	Show case for scale-ups to seek the staff they need from the local area. Aggregate evidence of talent need across the UK	Local events provide efficient access to national mentors and professional support	Increasing the visibility of the scale-up narratives to stimulate the ambition of the earlier stage businesses	Aggregation of investment opportunities to attract more investors to a given location. Platform for celebrating success of previous investments	

3) Which stakeholders in the ecosystem are involved with running this?

Entrepreneurs	Ecosystem umbrella organisations	Government (national/ local)	Private sector	Investors/financers	Education providers
Scale-up entrepreneurs from member Venturefests	Venturefest Network Advisory Board, Local Venturefest boards, LEP(s) and LEP Network, Science Cities	Innovate UK and KTN, STFC, Catapults, EEN, Local Councils	National organisations needing local presence across the UK	Innovate UK, European and Local Growth Funding, further public and private sponsors TBC	Universities on board of local Venturefest and help co-create the events as part of tech transfer operations

Example activities

Ideas and talent pool	Connections	Links to Government and grants	Talent pool	Funding and support	Content and delivery

4) What does success look like? What impact/outcomes are expected?

Success:

1. **Funding and growth**

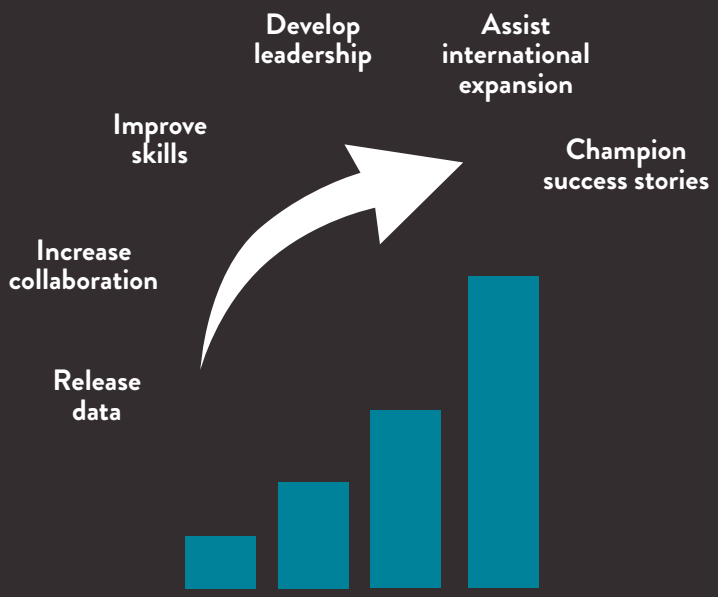
Evidence from first two Venturefests in Oxford and Yorkshire: 260 jobs created due to funding element of Venturefest Oxford over ten years of focus on start-ups at maximum cost of 3,850 per job.

Venturefest Yorkshire in 2010, Ekogen calculated that between 245 ad 445 jobs would be created and a further 150-277 jobs safeguarded at cost if the jobs were created of £410 per job.

2. **New ideas and strategies:** 90% of surveyed delegates to Venturefest Oxford in 2011 had found out about new technologies and innovations from attending Venturefest with 50% intending to changer their strategy as a result.
3. **Stronger connectivity:** 81% of delegates surveyed at Venturefest Oxford reported at least one contact that they had followed up with the average being 2.5 per delegate. 73% of the delegates at Venturefest Yorkshire reported success in contacting new clients and customers, and 64% with new business partners.

Venturefest Network to add to this with:

a) Standardised measurement systems across all events and ecosystems
b) Improved events and ecosystem support through sharing best practise
c) Aggregation of lessons to inform national policy debates on supporting local ecosystems


Develop leadership
Assist international expansion
Improve skills
Champion success stories
Increase collaboration
Release data