

# PUTTING THE UNI IN UNICORN

The role of universities in supporting  
high-growth graduate startups

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Centre for  
Entrepreneurs

**CFE**

## ABOUT THE CENTRE

**Launched in 2013, the Centre for Entrepreneurs think tank promotes the role of entrepreneurs in creating economic growth and social well-being. It is home to national enterprise campaign, StartUp Britain.**

The Centre is an independent non-profit think tank founded and chaired by Sunday Times columnist and serial entrepreneur Luke Johnson, and housed in the Legatum Institute.

It is supported by a prominent advisory board including serial entrepreneur and investor Brent Hoberman, angel investor Dale Murray, Supper Club founder Duncan Cheatle, Betfair founder Ed Wray, and finnCap founder Sam Smith.

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# EXECUTIVE SUMMARY

## THE PROBLEM: ASPIRATION NOT ACTION

**Young people's entrepreneurial potential remains underdeveloped:** Young people aspire to be entrepreneurs more than any other age group, but are unlikely to act on their intentions. According to the Global Entrepreneurship Monitor (GEM), the gap between intention and action averages 6.1% for 18-24 year olds, versus just 1.6% for 25-34 year olds.

**Young entrepreneurs do not have the support they need:** According to the GEM, 18-24 year olds are almost 20% less likely to report they have the skills, knowledge and experience to start a business, compared to the general average. This suggests that young entrepreneurs require tailored support in order to overcome their inexperience and act upon their ideas.

**Universities have a role to play:** With close to 50% of people aged 17-30 now attending a higher education institution – compared to 12% in 1979 – universities have unparalleled access to what is essentially a captive audience. Universities have expertise, infrastructure, resources, and links to the wider community that are key to providing effective business support.

**Universities are not doing enough to support graduates in entrepreneurship:** Universities are not supporting graduates as effectively as they could. Only a third (34%) of recent graduates felt university prepared them well for entrepreneurship, and only around 1% of graduates are starting their own business six months and even three years after university. Existing support focuses on students at the “pre-startup” phase, rather than graduates actually launching companies.

**A missed opportunity:** University graduates are at an ideal time in their

lives to become entrepreneurs, and have the knowledge to develop innovative business ideas. Studies have found them to be more inclined than non-graduates towards entrepreneurship, and – when they do start up – more likely to be running high-value companies. That relatively few graduates become entrepreneurs is a missed opportunity.

## THE SOLUTION: UNIVERSITY INCUBATION FOR GRADUATES

**Why incubation?** Graduate entrepreneurs need full-time, intensive programmes tailored to their requirements. These should offer mentoring, monitoring and training as well as practical necessities such as office space, low-cost business services, funding and networking opportunities. Incubation is able to offer all of these concurrently, and is identified by existing research as a highly effective support mechanism for early-stage businesses.

**Less than half of UK universities currently offer incubation to graduates:** According to the Centre's analysis, less than half (47%) of the 130 UK universities offering incubation report this being available to graduates. Taken as a percentage of all 163 UK higher education institutions, this means that only around a third (37%) of universities clearly offer incubation to graduates. Many university incubators focus exclusively on spin-outs and/or external SMEs.

**What about students?** The Centre's interviews with university incubator managers and users suggest that students tend to be at an earlier stage of their journey as entrepreneurs, and find it difficult to incubate a business alongside their degrees. Despite this, entrepreneurial students should be prepared for incubation through existing forms of curricular and extracurricular support.

## KEY RECOMMENDATIONS

To improve the rate and sustainability of graduate entrepreneurship, more universities should consider setting up graduate incubator programmes, building on existing ones, or adding a graduate track to incubators currently only available to spin-outs or external SMEs. This could be done alone, or in partnership with other universities, the private sector (banks and coworking spaces) or local government (local authorities and local enterprise partnerships).

The government should recognise the importance of graduate startups (and not just that of university spin-outs) in realising its policy objectives. Graduate startups are greater in volume and more diverse (sectorally and geographically) than spin-outs, and therefore more likely to drive growth across the whole country. University-managed graduate incubators should be the anchor institutions for this growth.

Existing metrics tracking graduate entrepreneurship (primarily the Higher Education Business and Community Interaction survey and the Destination of Leavers from Higher Education survey) should be made more robust by: tracking outcomes over greater periods of time; distinguishing more effectively between (a) freelancers and high-growth businesses and (b) student and graduate entrepreneurs; and introducing stricter guidance to the individuals and institutions completing them.

An umbrella body encompassing graduate-focused university incubators in the UK should be established, to enable collaboration, best practice sharing and standardised data collection/performance benchmarking.



# UNIVERSITIES AND GRADUATE ENTREPRENEURSHIP: PLAYING THEIR PART IN THE REVOLUTION

**By playing a larger role in supporting graduate entrepreneurs, universities can drive economic growth and innovation, boost local graduate retention, contribute to the government’s policy agenda in higher education and industrial strategy, bolster student recruitment and, most importantly, help more young people fulfil their aspirations. This report explores how universities might do so.**

Research shows that while many young people aspire to be entrepreneurs, they are also the least likely of all age groups to act on their intentions. While a certain drop-off between intention and action is to be expected, the size of that gap strongly suggests that young people face significant barriers to becoming entrepreneurs.

The myth of the “lone wolf” entrepreneur is above all just that – a myth. Aspiring founders benefit from training and support as much as anyone else on a new career path. A small minority may persevere through a combination of luck and sheer determination. But for most young entrepreneurs success hinges on access to the right kinds of mentoring, training, networks and funding – particularly when disadvantageous circumstances are at work.

Which is where universities come in. University graduates are at an ideal time in their lives to start businesses. Through their exposure to a range of ideas and activities they are particularly disposed towards developing innovative business ideas and meeting potential co-founders.

Yet start-up rates among graduates remain low – at least compared to the potential. And one reason for this may be the lack of support from their universities. For many graduates, starting a business simply feels too risky compared to a stable job in the corporate world.

This suggests universities can play a bigger role in helping graduates with good business ideas and the right motivation turn their aspirations into reality. Not only would this enable more graduates to pursue their ideal vocation, it would also bolster universities’ reputations as well as contribute to regional economic development, productivity growth and innovation.

The good news is that many universities already do a lot to support entrepreneurship. Over the past several decades entrepreneurship and enterprise education has become increasingly recognised as a core component of what universities do. The bad news – at least from the perspective of stimulating venture creation – is that much of the support is focused on engaging large numbers of

students in “enterprising thinking” and pre-startup activities (predominantly awareness raising and idea generation), rather than helping ambitious graduates actually start companies.

Often, all that is available to a graduate entrepreneur is periodic access to some desk space, a part-time mentor and one-off workshops and events – support more suited to active students – rather than a full-time, intensive business support programme. We believe more universities should offer graduates tailored incubation support, which is why later in this report we provide a best-practice guide based on in-depth interviews with managers at existing graduate-focused incubators.

But universities will have to overcome key challenges in order to improve their support for graduate entrepreneurs. These include uncertainty around future funding, a flawed set of metrics and subpar alumni engagement. Address these issues however, and significant opportunities will be unlocked.

# THE NEED FOR INCUBATION

## Graduates' unquenched thirst for entrepreneurship – and why universities should play a bigger role

### HOW ENTREPRENEURIAL ARE YOUNG PEOPLE?

Is there support for the common claim that today's young people are more entrepreneurial than ever? Yes and no. On the one hand, polling data on the entrepreneurial aspirations of different age groups suggests this to be the case, at least when it comes to mindset. According to the NatWest Entrepreneurship Monitor, on average around 55-60% of those aged 18-30 would like to start their own business, compared to around 35-40% of the general population.<sup>1</sup> Similar surveys have consistently found that the so-called "millennial" generation is particularly interested in entrepreneurship.

Data from the Global Entrepreneurship Monitor (GEM)— a global dataset measuring people's entrepreneurial attitudes— aspirations and activities, also shows that young adults (age groups 18-24 and 25-34) in the UK rank highly in terms of practical business ambition. When it comes to intention to start a business within three years (a more concrete and short-term measure than the NatWest survey), both age groups are top performers, as can be seen in figure 1.<sup>2</sup>

Yet when it comes to translating their aspirations into action, these two age groups diverge greatly. With respect to entrepreneurial intentions the 18-24 group are among the worst performing age categories, compared to 25-34 year olds who perform much closer to their entrepreneurial convictions. In the UK, only 3.9% of 18-24 year olds are engaged in Total early-stage Entrepreneurial Activity (TEA) at any one time, compared to 8% of 25-34 year olds and 9% of 35-44 year olds. Since 2008, the gap between intention and action has averaged 6.1% for 18-24 year olds, next to just 1.6% for 25-34 year olds.<sup>3</sup>

While it should come as no surprise that not every young person is acting on their aspirations – many may defer their intentions for more immediate opportunities – the intention/activity gap among 18-24 year olds seems unnecessarily large. And even among 25-34 year olds, who perform relatively well compared to 18-24 year olds, the potential to increase entrepreneurial activity is clear. In the US, 25-34 year olds report a TEA of 14%, six percentage points higher than their UK counterparts.<sup>4</sup>

While perhaps partly compensated by their enthusiasm and imagination, young founders lack experience, knowledge, skills and contacts (see figure 3) and are therefore more likely to find unforeseen obstacles challenging. This may explain why, again according to the GEM, young people – when they do manage to start up – are more likely than older entrepreneurs to close their businesses within the first 12 months.<sup>5</sup>

**While succeeding as an entrepreneur does and should require a certain degree of resilience, this does not mean we should be allowing entrepreneurs to fail because of setbacks that could have been avoided with a little support.**

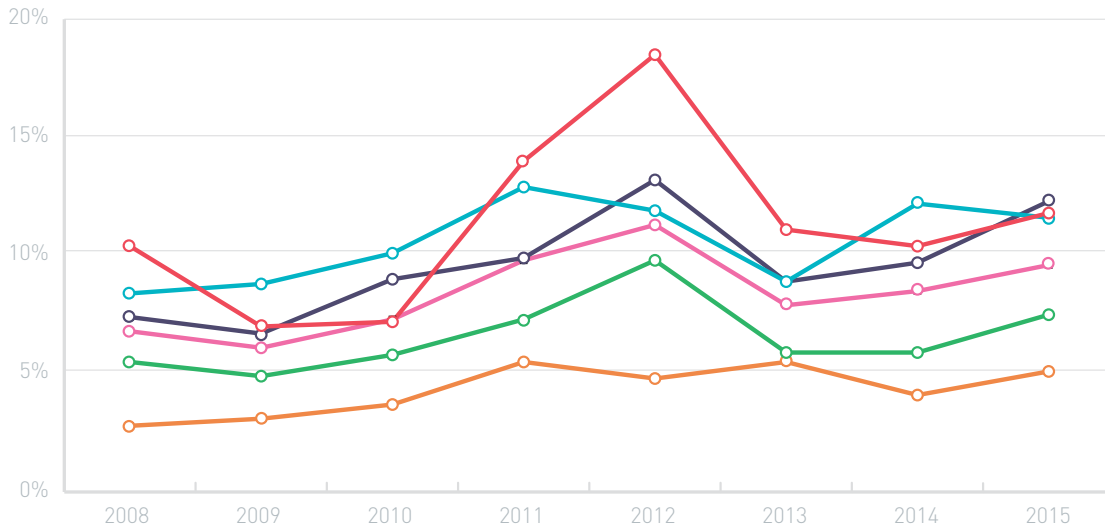


Figure 1. Intention to start a business within three years (% of population). Source: GEM UK

- 18-24yrs
- 25-34yrs
- 35-44yrs
- 45-54yrs
- 55-64yrs
- All

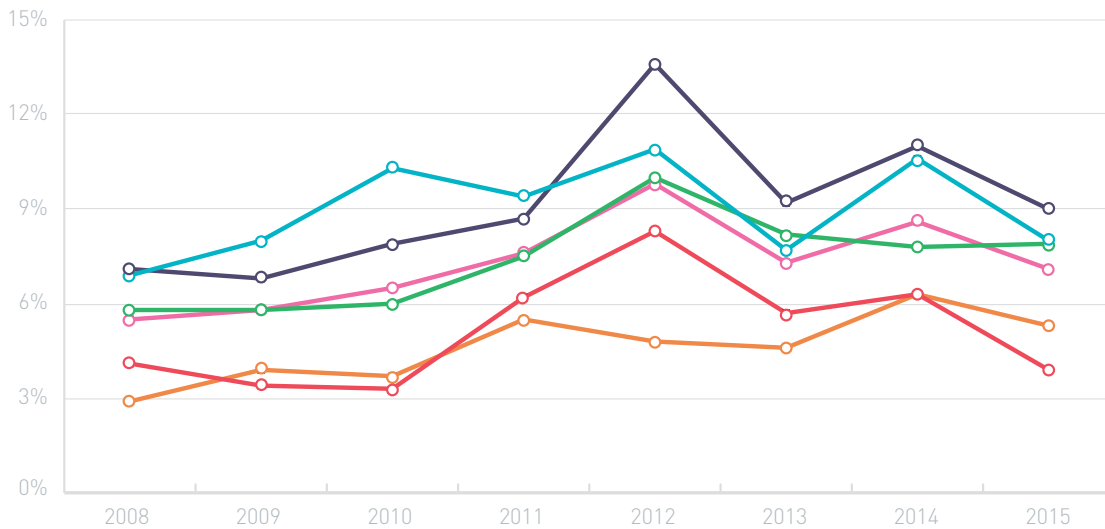


Figure 2. Total Early Stage Entrepreneurial Activity (TEA) (% of population). Source: GEM UK

- 18-24yrs
- 25-34yrs
- 35-44yrs
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- All

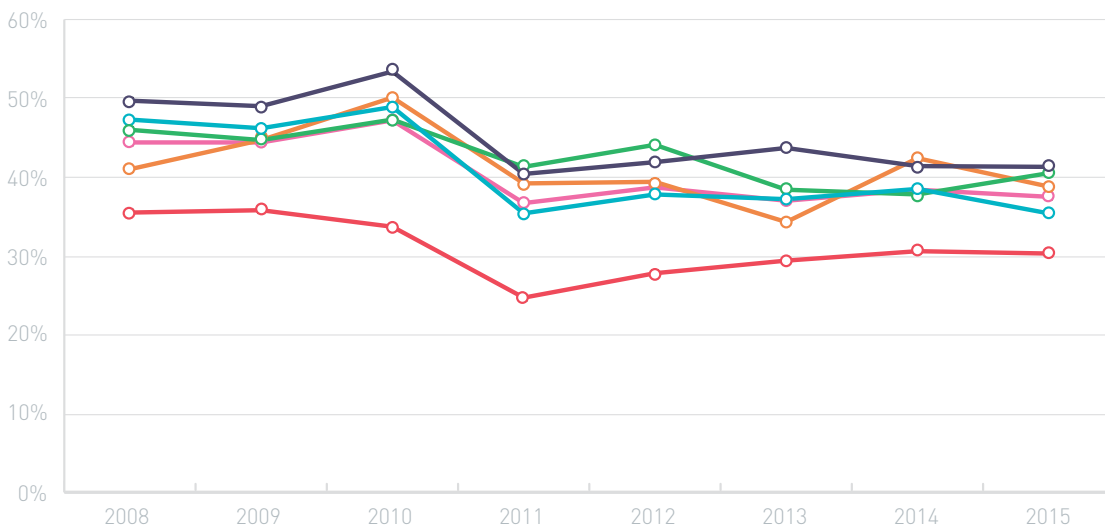


Figure 3. I have the skills, knowledge and experience to start a business (% of non-entrepreneurial population). Source: GEM UK

- 18-24yrs
- 25-34yrs
- 35-44yrs
- 45-54yrs
- 55-64yrs
- All

## THE ROLE OF UNIVERSITIES

With close to 50% of people aged 17-30 now attending a higher education institution – compared to 40% in 2000 and 12% in 1979<sup>6,7</sup> – and with numbers set to rise even further after the removal of student caps, universities appear to be the ideal environment in which to provide this support. Beyond their unparalleled access to what is essentially a captive audience, universities have the expertise, infrastructure, resources, credibility and links to the business community that are key to providing effective business support.

In practice this means having the physical space to deliver support, providing the technology and equipment budding entrepreneurs need, connecting them with expertise in their sector, offering or signposting towards funding, and inviting in mentors, investors and relevant professionals (e.g. accountants and lawyers). By bringing ambitious and talented young aspiring entrepreneurs together, universities also create opportunities for peer-to-peer learning and even meeting potential co-founders and teams.

While we should ensure that all young people, and not only university graduates, get access to entrepreneurship training, the evidence suggests that focusing on graduates is likely to be particularly effective in increasing the startup rate and boosting innovation and productivity.

Polling consistently demonstrates high levels of interest in entrepreneurship as a career path among students<sup>8</sup>, while various studies have found graduates to be more likely than non-graduates to be involved in early-stage entrepreneurial activity<sup>9</sup>, and more likely to be owners or founders of high-value companies (in terms of turnover, staff employed and innovation).<sup>10</sup>

A survey of recent graduate entrepreneurs in the UK found that over four in ten of their businesses had introduced new or significantly improved products, services or processes. This compares with two in ten product innovators and one in ten process innovators among UK SMEs as a whole.<sup>11</sup> And research by Universities UK found that graduate startup numbers recovered faster from the 2008 recession than UK startup numbers as a whole.<sup>12</sup>

Original analysis by the Centre for Entrepreneurs of the Labour Force Survey (LFS), a large-scale government study of the employment circumstances of the UK population, confirms the entrepreneurial nature of many university graduates. Some 13.6% of the university educated are self-employed, compared to 10.9% of the non-university educated.

What's more, among self-employed university graduates a majority own or run a business (53%), as opposed to economically lower-value activities such as freelancing or subcontracting (47%). Among non-graduates the distribution is rather different, with just 38% running their own business and 62% in lower-value forms of self-employment.<sup>13</sup>

Nonetheless, a 2014 report by the Social Market Foundation observed that while those educated to degree level or above are twice as likely to become high-value entrepreneurs – defined as entrepreneurship that has the widest positive effect on the UK economy – few actually choose to start businesses relative to their "high-value" equivalents in other developed economies.<sup>14</sup>

According to the Destinations of Leavers from Higher Education (DLHE), an annual survey of university leavers, just 0.7% of graduates are starting their own business six months after graduating, compared to 4.5% that are freelancing. Three years later, 1.2% are setting up their own businesses, while 4.8% are freelancers.<sup>15</sup> This implies that freelancing is a more popular and more accessible (lower barriers to entry) option immediately upon graduation, whereas many graduates planning to start a business prefer to wait several years before doing so (see figure 5).

While universities may be well equipped to offer support to early-stage entrepreneurs, currently they appear to be falling short. Given the substantial gap between young graduates' start-up intentions and activity, despite graduates' suitability towards founding and running high-value companies, universities could and should be doing more to realise graduates' obvious entrepreneurial potential.

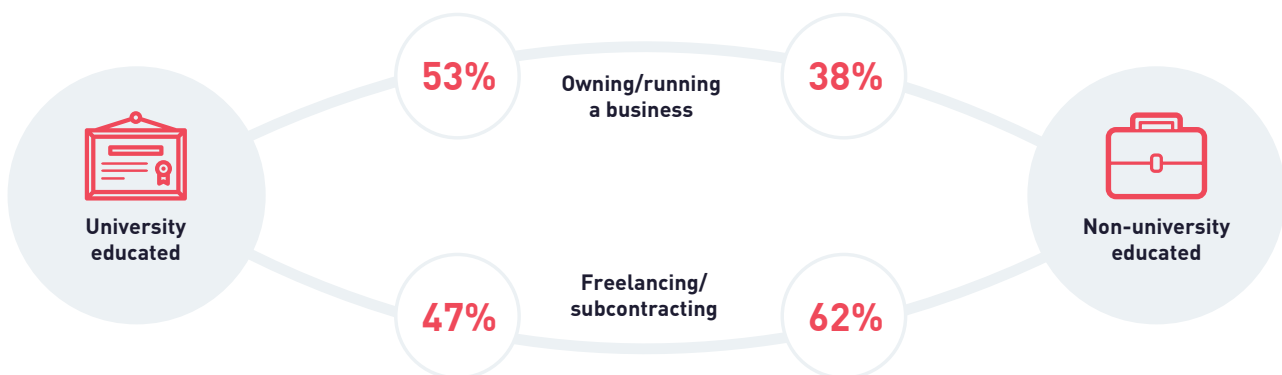


Figure 4. Distribution of business owners and freelancers among self-employed graduates and non-graduates. Source: CFE analysis of the Labour Force Survey (LFS)





Figure 5. Percentage of graduates freelancing and starting up a business six months and three years after graduation. Source: CFE analysis of the DLHE

## IN CASE YOU WERE WONDERING...

### *Why is venture creation important?*

We believe in getting more graduates – and young people in general – to act on their entrepreneurial intentions, not just because this is good in itself, but for the many other benefits entrepreneurship has on the economy and wider society.

In an era of low growth and stagnant productivity, university graduates are more likely than others to come up with the innovative new processes and ideas that will reverse these trends and make the UK a world leader in the industries of the future. As has been proven many times over by the OECD<sup>16</sup>, Nesta<sup>17</sup> and the Kauffman Foundation<sup>18</sup> among others, a minority of mostly young, high-growth firms or “gazelles” are responsible for the majority of job creation in the UK, the U.S. and other advanced economies.

Last but not least, like university itself, entrepreneurship is an engine of social mobility that is less determined by a person’s socioeconomic, cultural or ethnic origins than the labour market. Today’s young people – motivated as they are by flexibility, self-fulfilment and demonstrable impact – do not need much convincing that entrepreneurship is a path worth pursuing. They just need a helping hand in doing so.

### *Why graduates and not students?*

Our focus is boosting graduate rather than student entrepreneurship. While students are certainly not lacking when it comes to entrepreneurial aspiration and innovative business ideas, most are (or should be) too busy with their degrees to truly commit to launching and running a successful startup.

As any entrepreneur will testify, starting a business is a huge commitment that requires enormous investments in time and energy. Encouraging students to start-up during their studies is likely to negatively impact academic performance, and create unnecessary conflict between a university’s joint commitments to educating its students and preparing them for professional life.

Of course, a focus on one by no means excludes the other – after all, most students will one day be graduates. In fact, we propose a model in which interested students are first introduced to entrepreneurship through comparatively light-touch activities such as workshops, talks and student societies (something most universities already do well), before the most promising candidates are offered spaces on intensive university incubator or accelerator programmes upon graduation.

## Current support from universities

### CURRICULAR SUPPORT

UK universities currently offer a mixture of curricular and extracurricular entrepreneurship training for students and graduates. Curricular support – consisting of dedicated degrees, modules or components of modules – focuses either on learning “about” entrepreneurship as a subject or teaching “enterprising” thinking and behaviour to students.

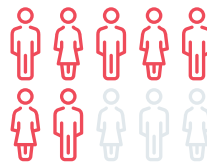
While some degrees and modules do also include a practical component such as working for a startup or even running a “pop-up” or practice business, they do not generally attempt to help students set up long-term, sustainable companies. The primary purpose of curricular entrepreneurship education is to inform students about entrepreneurship and to encourage entrepreneurial thinking and actions in different areas of their lives. Practical assistance in starting a business is not the goal.

This is less applicable to a very small number of learning “for” entrepreneurship degrees, which offer the opportunity to start a genuine business through an experiential learning approach combining curricular and extracurricular activities. The most notable example is the BSc Business Enterprise programme at the University of Buckingham, “the first undergraduate venture creation programme at a university anywhere in the world”<sup>19</sup>, as well as similar degrees at Worcester<sup>20</sup> and Coventry<sup>21</sup>. However, such programmes cater to those with their minds set on entrepreneurship from a young age, excluding prospective

Examples of curricular support include the Enterprise MSc at the University of Leeds, which gives students “insight” into how they can “create economic and social value through entrepreneurial activity” and provides them with the “knowledge to develop and manage your own business”.<sup>24</sup> Another is “Making Ideas Happen”, a module at the University of Sheffield that provides an “introduction to the world of enterprise, entrepreneurship and innovation” and assesses students on their “sustainable social enterprise solutions to ‘real-world’ problems”.<sup>25</sup> While both examples do involve some degree of practical thought and activity around venture creation, assessment is based on coursework rather than the creation and survival of a sustainable company.

students who may wish to learn a subject first or who have yet to consider entrepreneurship as a career.

Curriculum-based entrepreneurship education is widespread in UK universities. In the last edition of the National Centre for Entrepreneurship in Education (NCEE) sector-wide mapping survey carried out in 2012, 85% of responding universities said they offered credit-bearing awards and modules in enterprise or entrepreneurship leading to academic qualifications.<sup>22</sup> In a separate survey run by the Higher Education Funding Council for England (HEFCE), over 60% of alumni surveyed that had received entrepreneurship support said they got this through the curriculum, the second highest category after “workshops on business issues”.<sup>23</sup>



**Seven out of ten alumni were influenced to start a business by the subjects they studied**

This is not to say that curricular learning is ineffective. The HEFCE alumni survey revealed a high level of satisfaction with enterprise-related curriculum and course content. And although not officially entrepreneurship education, the subjects students studied were shown to have a significant impact on the types of businesses started, with medicine graduates more likely to start businesses in health and social care and engineering graduates more likely to start manufacturing companies, to cite just two examples. On the whole, the survey found that seven out of ten alumni had been influenced to start a business by the subjects they studied.<sup>26</sup>

According to a recent Department for Business, Innovation and Skills (BIS, now renamed BEIS) study of the impact of enterprise and entrepreneurship education in higher education, curricular education improves students’ perception of entrepreneurship, equips them with business-related knowledge, skills and competences, and increases startup intentions. Yet that same BIS study also concluded that the evidence linking enterprise and entrepreneurship education to actual business startup is inconclusive.<sup>27</sup>

Why is this the case? While curricular education is good at equipping students with knowledge of entrepreneurship and increasing its attractiveness as a career path, it is not able to provide support during the actual startup process. A recent



international review of enterprise education noted that “over 50% of entrepreneurship education sampled here is, therefore, focused on helping students understand the phenomenon rather than preparing them for genuine entrepreneurial activity, the majority of learning outcomes aim to enable students to acquire knowledge ‘about’ the subject”.<sup>28</sup>

This is not necessarily a flaw in curricular entrepreneurship education, but rather a reflection of the fact that, by definition, it is only available to current students. Once a person has graduated and finally has the time to start a business, it is too late. While degrees or modules might be effective at planting the idea of starting a business in students’ heads, they cannot help as graduates begin to do so. If we want to help more graduates establish successful businesses, we need to look beyond the curriculum.

## EXTRACURRICULAR SUPPORT

Unlike curricular education, extracurricular support is generally accessible to students and graduates from all disciplines, rather than those on a specific degree or course. While often extremely competitive and challenging, extracurricular activities are less restricted by standardised requirements and narrow outputs such as grades and exam performance. And most importantly from

our perspective, extracurricular support is in theory accessible to graduates as well as students – i.e. those most able and likely to be involved in the act of founding a business.

The challenges involved in launching a business, while partly motivation and knowledge-based, have much more to do with practical constraints around access to finance, affordable workspace and equipment, mentoring, professional advice and networks. Extracurricular activities and programmes are better equipped to address these constraints by providing entrepreneurs with hands-on support and training alongside – rather than prior to – the establishment of a venture.

According to the 2012 NCEE mapping survey, extracurricular provision is even more widespread than curricular provision. Some 96% of responding English universities said they offered non-formal provision, with around nine-tenths of these claiming to support students and graduates in new venture creation.<sup>29</sup> Extracurricular provision is more varied than its curricular cousin, including everything from student-led entrepreneurship societies and clubs to careers advice, workshops, guest talks, festivals, bootcamps, mentoring, business plan competitions and events run by external organisations (such as corporates and non-profits).

Typical examples of extracurricular support include UCLU Entrepreneurs, a student society which aims to “introduce, support, and guide UCL students through the world of business, entrepreneurship and start-ups”<sup>30</sup>; the LAUNCH.ed bootcamp at Edinburgh University, which over a single day encourages participants to develop and pitch a business idea<sup>31</sup>; and the Business Clinic at Durham University’s Careers Centre, where students and graduates interested in entrepreneurship can meet with a business advisor and receive “initial feedback and guidance to inform your plans and help shape your thinking”.<sup>32</sup>

Table 1. Response to the question “How well did this higher education experience prepare you for being self-employed or setting up your own business?” from graduates six months after leaving university. Source: HESA

<b>QUESTION</b>	<b>Very well</b>	<b>9%</b>
<b>How well did this higher education experience prepare you for being self-employed or setting up your own business?</b>	<b>Quite well</b>	<b>25%</b>
	<b>Not very well</b>	<b>27%</b>
	<b>Not at all</b>	<b>39%</b>

### WHY EXISTING EXTRACURRICULAR SUPPORT ISN'T SUITED TO GRADUATE ENTREPRENEURS

Despite the prevalence of extracurricular entrepreneurship activities, when it comes to helping graduates launch ventures existing support is inadequate. As with curricular activity, extracurricular support is tailored towards current students that have an interest in entrepreneurship and perhaps a vague business idea, rather than towards graduates able to commit all their time and energy to launching and running a startup.

While graduates are more often than not able to access extracurricular support, existing provision – be it workshops, student societies, meetings with business advisors or multi-day bootcamps – is largely designed for students that already have a reason to be on campus. It consists of either intensive one-off or regular but non-intensive interventions, so that students can fit activities alongside their degrees.

As a recent HEFCE report on university startups explains:

*“The support available to students is customised to their needs at a time while they are still studying and may not have made up their minds about their destinations after graduating. Hence much of it focuses on general business issues, business ideas, the practicalities of setting up a business, business models, products/services, and marketing and sales. Yet once leavers or graduates have set up in business, and while the businesses are relatively young, the profile of constraints and barriers tends to change and focus more on access to finance, recruitment and skills issues, and the cost of staff*

*and premises. [While] some universities recognise this by providing relatively low-cost workspace and incubation units with flexible terms...the profile of university support could address further the constraints that the businesses face in their early stages.”<sup>33</sup>*

This may partly be why (see table 1) graduates do not currently see the university experience as enough preparation for starting a business, with only a third (34%) saying they were well prepared for entrepreneurship. It might also explain why graduate startups seem to have trouble growing; according to analysis of the Higher Education Business and Community Interaction survey (HE-BCI) by Nesta, while graduate startups more than doubled their reported turnover and employment between 2008 and 2014, this was largely the result of an increase in the number of firms, rather than an increase in existing firms’ size.<sup>34</sup>

Graduate entrepreneurs have different needs. Unlike students, they no longer have the competing demands of a degree to contend with, and can focus exclusively on the process of launching and running a business. They are unlikely to find their ambitions matched by the scale or frequency of existing extracurricular support, and without classes to attend on campus or residency nearby, most will not be motivated to visit their university solely for talks or sessions of mentoring or workshops. Furthermore, graduate entrepreneurs are likely to feel frustrated at being mixed with students at an earlier stage of their entrepreneurial journey and with less time to commit to their ventures.

## How should universities support graduate entrepreneurs?

As we saw in the first section of this report, recent university graduates are less entrepreneurial than their interest levels would suggest. While some might prefer working before starting a business, the sheer size of the aspiration-activity gap suggests that many are not starting up because they lack the confidence, skills, knowledge or resources required. Even when they do start a business, graduate entrepreneurs (like young entrepreneurs in general) are more likely than other founders to close shop and return to paid employment before fully establishing their businesses.<sup>35</sup>

### WHEN THE TIME IS RIGHT

While our main goal is to increase the startup rate among recent graduates, we also accept that some may wish to acquire professional experience before starting a business. Our analysis of the Labour Force Survey (see table 2) reveals that graduates transition into entrepreneurship at a similar rate over almost two decades, compared to freelancing which is more popular as an immediate option.

Universities should not assume that a low startup rate among recent graduates means they are not planning to start businesses in the future. Instead, they should ensure that their entrepreneurship support is accessible and helpful to both recent graduates and those returning after an extended period of time.

<b>TIME GAP BETWEEN GRADUATION AND ACTIVITY</b>	<b>FREELANCERS</b>	<b>BUSINESS OWNERS</b>
0-3 years	25.9%	16.6%
4-7 years	16.7%	15.6%
8-11 years	14.7%	16.5%
12-15 years	11.2%	14.8%
16-19 years	8.0%	12.3%
20-23 years	7.3%	7.7%
24 years +	16.3%	16.5%

Table 2. Distribution of graduate freelancers and business founders by number of years after graduation that entrepreneurial activity began. Source: CFE analysis of the Labour Force Survey (LFS)



## INCUBATION TO THE RESCUE

If – as we have argued – existing university entrepreneurship support is currently geared towards current students, what might real support for graduate entrepreneurs look like? How can universities address the constraints identified by HEFCE as barriers to graduate entrepreneurship, including premises and staff costs, skills deficits and access to finance?<sup>36</sup>

While universities could develop standalone solutions to each of these constraints, such as seed funding or introductions to investors to address the finance gap, free or cheap workspace to reduce costs, and workshops to improve skills, it would make

more sense to combine all of these into a single programme.

In our view, what graduate entrepreneurs need are full-time, intensive programmes tailored to their requirements that offer mentoring, monitoring and training as well as practical necessities such as office space, low-cost business services, funding and networking. In other words, they need incubation – with universities acting as the primary incubators for graduate startups.

### **Benefits for graduates**

There are good reasons to believe that graduate entrepreneurs are particularly suited to receiving incubation, particularly from their own alma maters. While incubators offer more than just physical

space, the benefits to cash-strapped graduates of free or subsidised office space, particularly when combined with contractual flexibility, should not be understated. The money graduate entrepreneurs save can instead be invested in their businesses, strengthening the prospects of the venture, and if things do not work out they are not bound to the space.

Guaranteed a permanent place to work and host meetings and housed alongside experts and other entrepreneurs, incubatees are less likely to fall into the loneliness, discouragement and distraction that can result from working alone at home. For example, they can socialise with and learn from fellow incubatees who are at a

## WHAT ABOUT SPIN-OUTS?

Universities that do not offer specialised graduate startup incubation (as well as many that do) still nonetheless frequently incubate spin-outs. “Spin-outs” are businesses based on university-owned intellectual property that the institution hopes to profit from (usually by taking equity), and are commonly hosted in a university’s “technology transfer” or “commercialisation” office.

Although supporting spin-outs is certainly an important way that universities contribute to economic growth and maximise the societal impact of groundbreaking discoveries, by its nature this will only ever be relevant to a minute fraction of the university population. Focusing on science, technology, engineering and maths (STEM) researchers and academics capable of producing marketable innovations excludes the majority of potential university entrepreneurs without STEM backgrounds and as well as STEM graduates whose business ideas are not directly based on university intellectual property (IP).

In fact, recent academic research demonstrates that high-growth firms emerge in great variety of sectors, challenging the myth that they are all high-tech companies and/or university spin-outs.<sup>40</sup> Other studies have questioned the intense focus of policymakers in the UK on creating spin-outs, in light of the relatively low number of successful ventures and their underwhelming performance in terms of growth and job creation.<sup>41 42</sup>

This restriction to commercialisable university IP explains why, among UK universities, spin-out numbers are low and limited to a minority of universities with strong reputations

for research. In 2014/15, universities reported supporting 142 spin-outs, compared to 4,160 graduate startups. Just six institutions (Imperial, UCL, Cambridge, Oxford, Warwick and Manchester) were responsible for 32% of spin-outs, whereas the same six only accounted for 4% of graduate startups. And while only 34% of universities reported supporting at least one spin-out in 2014/15, 64% of universities had supported at least one graduate startup in that period.<sup>43</sup>

Of course, supporting spin-outs need not imply neglecting graduate startups; our research shows that many universities do both. In practice however, many universities appear to devote greater resources to supporting spin-outs, including incubation. Despite the fact that universities support many more graduate startups than spin-outs each year, a survey of university alumni revealed that only 29% of graduate startups had received entrepreneurship support from their university, compared to 72% of spin-outs.<sup>44</sup> This might explain why although the ratio of graduate startups to spin-outs supported was 30 to one in 2014/15, when it comes to companies that have survived three years the ratio is a mere four to one.<sup>45</sup>

This imbalance is reflected in the responses given by universities to the HE-BCI when asked to list the top three areas in which they make the greatest contribution to economic development. While 43% mention knowledge exchange/spin-outs, only 9% cite “helping student and graduate enterprises”.<sup>46</sup>

Particularly at research intensive institutions, but also more generally within the higher education sector, government and the media, spin-outs receive a disproportionate amount of coverage and support.

## INCUBATING EXTERNAL SMEs

The other type of non-graduate university incubator provides support to external companies. According to the HE-BCI, 31% of universities mention supporting small and medium enterprises (SMEs) as one of their key economic contributions.<sup>47</sup> These programmes – often known as science parks or innovation hubs – support local startups and SMEs and share knowledge with them in order to foster regional economic growth and encourage collaboration between universities and the private sector. Despite offering just the kind of support that

many recent graduates could use in launching new ventures, these programmes usually make no reference to graduates in their promotional materials.

While in theory university entrepreneurs are able to apply in just the same way as external entrepreneurs, the marketing of these external-facing incubator programmes is unlikely to either reach or appeal to them, while the staff running them will not have knowledge or experience of working with graduates. While incubating local SMEs has its own rationale, doubts have been raised regarding the relevance of university expertise to the majority of local businesses.

similar stage with their businesses, and build strong relationships with managers and mentors based on constant interaction. Given that incubators usually operate a selection process, incubatees and their businesses also acquire the added credibility of being vetted by the university or institution hosting the incubator.

### Benefits for universities

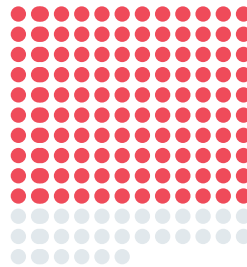
The benefits to universities of hosting and supporting graduate entrepreneurs in an incubator are also numerous. From a practical perspective, having a single physical location from which to administer different types of business support is more efficient than having this spread out across (and even beyond) campus. By bringing a number of ventures together and placing them on structured programmes with predetermined checkpoints, incubators are able to provide more holistic and rigorous support than a loose combination of standalone activities.

With graduate entrepreneurs present on-site, it is easier to connect them with mentors, investors, service providers and university expertise, and the support can be continuous and responsive to their evolving needs. This also improves the university's ability to monitor and evaluate the performance of the businesses, facilitating intervention when a venture is underperforming or failing,

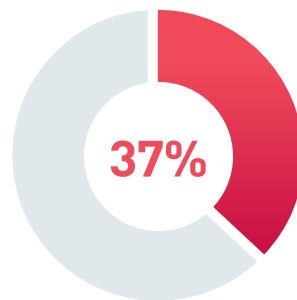
and underpinning the collection of data that can be used to demonstrate impact.

With the current definition of "supporting a graduate venture" being rather vague in the higher education sector – creating the incentive to inflate figures by counting freelancers or exaggerating what counts as "support" – formal incubation gives universities more concrete grounds on which to claim responsibility for supporting a new business.

And by incubating graduate startups, universities contribute to important institutional goals such as improving graduate employment outcomes, boosting local graduate retention and stimulating regional economic growth. Having a high-profile, graduate-focused incubator is also likely to facilitate recruitment by attracting prospective students considering starting a company upon graduating.



**130 out of 163**  
universities (78%) say they offer some kind of incubator programme for startups either on or off-campus



However, **only a third (37%)** of universities offer incubation programmes targeted at graduates



## AREN'T UNIVERSITIES ALREADY INCUBATING?

Indeed, many universities are already supporting startups through incubator programmes. According to the Higher Education Business and Community Interaction (HE-BCI) survey, only 33 out of 163 UK universities (20%) say they do not offer any kind of incubator programme for startups either on or off-campus. While this does include cases where an external partner is running the programme, the figures suggest that universities are already highly active in this space.<sup>37</sup>

However, there is a problem. While the survey does not specify who the recipients of support are, it appears that the majority of university incubators do not target graduates. According to the Centre's analysis of publicly available information<sup>38</sup>, less than half (47%) of the 130 UK universities offering incubation for startups mention this being available to graduates. Of the remainder, 32% do not refer to graduates or students, 5% refer only to students, and 14% do not have any web presence whatsoever. Taken as a percentage of all 163 UK higher education institutions, this means that only around a third (37%) of universities clearly offer incubation to graduates.

Even when it comes to university incubators that do target graduates, the overwhelming majority of these (88%) accept both students and graduates, with only 12% specifically targeting graduates. While we see the value of students receiving entrepreneurship support, it is important to distinguish between the different needs and priorities of students and graduates. Incubation programmes that accept both – without at least separating the two groups – risk either overworking the former or underworking the latter, and failing to satisfy either.

Another issue is that, while many programmes describe themselves as

offering “incubation”, the actual services offered vary dramatically, ranging from easily accessible but restrictively allocated hot-desking and “light-touch” support on the one hand, to permanent office space and an intensive, selective programme of support on the other.

As a recent investigation into university extra-curricular enterprise support noted: *“Data found significant disparities from institution to institution to what actually constituted “incubation space”. For one institution, this was a designated centre with 25 rentable rooms, for another it was a suite of eight hot desks based within a department. This highlighted again the difficulty with comparing enterprise support activities across institutions as terminology is subject to interpretation and highly contextual.”*<sup>39</sup>

In other words, the type of assistance graduates can expect to receive from their university incubator – if indeed there is one – is something of a lottery.

## WHAT SHOULD A GRADUATE INCUBATOR LOOK LIKE?

To improve the level of business support available to entrepreneurial graduates, we believe more universities should run incubator programmes targeted specifically (if not exclusively) at graduates. For the minority of universities without any sort of incubator, this will mean starting from scratch. For the rest, while creating an entirely new programme is an option, an alternative is to add a graduate track to incubators that currently only cater to students, spin-outs or external SMEs.

The next section of this report is dedicated to profiling a selection of the small number of university incubators that are already working with graduates. By interviewing both managers and incubatees, we draw on their combined experience to formulate a guide for those looking to establish similar initiatives, and point out where current practice could be improved.

# WHAT WORKS IN GRADUATE INCUBATION?

## What we already know

### THE ORIGINS OF INCUBATION

Business incubation might sound like just the kind of service to come out of the digital economy of the past quarter century. In reality however, incubators have been around a lot longer; the first arose in Batavia, Western New York in 1959. When the owners of a 260,000 square metre agricultural machinery building were unable to find a single tenant, they decided to offer it on the cheap to the Mancuso family. Joseph Mancuso then had the brilliant idea of renting portions of the extensive space to smaller companies.<sup>48</sup>

The emergence of a more organised form of incubation took at least another decade, with a number of programmes springing up in the US during the late 1970s. In this early phase, hosting young businesses in incubators was combined with efforts to reinvigorate declining manufacturing areas and breathe life back into unused spaces. Companies of all kinds were welcome, whether they came from the technology, manufacturing or service sectors. At the same time, similar organisations were taking their first steps in Europe. In 1975, British Steel launched an incubation programme called the British Steel Industry, which aimed to create new jobs in areas where steel mills had closed.<sup>49</sup>

The concept continued to evolve in terms of the services offered and companies targeted. During the early 1980s and the beginning of the technology boom, incubation became seen as a means to improve regional competitiveness by facilitating the growth of high-tech businesses. This approach motivated incubators to establish closer links with universities and eventually led to the proliferation of academic spin-outs on both sides of the Atlantic.<sup>50</sup>

As time passed incubation grew in both popularity and sophistication, in a process that most research splits into three waves.<sup>51</sup> During the first, lasting roughly until 1990, incubation consisted mainly of affordable office space and shared facilities. Yet while space remained the cornerstone of incubation, the support component became more elaborate in the 1990s, incorporating business advice and networking (second wave). Third wave incubation (from 2000 to the present) offers even more specialised interventions, focusing on “intangible and high-value services” such as mentoring and coaching, network development and various forms of funding.<sup>52</sup>

Since their inception, global incubator numbers have undergone a dramatic increase, from 12 incubators in the US in 1980 to about 7,000 globally in 2012.<sup>53</sup> A 2017 study conducted by Nesta for the Department of Business, Energy and Industrial Strategy (BEIS) found that over 200 existed in the UK alone (from just 94 in 2012), supporting roughly 6,900 businesses at any one time.<sup>54</sup>

### DEFINING AND CATEGORISING INCUBATION

According to one study, “the term business incubator embraces a wide range of institutions, all of which aim to foster the creation and development of enterprises, SMEs or corporate ventures”.<sup>55</sup> They offer an array of business assistance services that are tailored to individual client companies and feature a management team that coordinates staff and external partners. Most studies add that incubation serves as “an entrepreneurship...tool for broader economic and social development”.<sup>56</sup> In this sense, incubation can simultaneously support business formation as well as broader causes such as innovation, job creation and social well-being.

Many commentators have raised the point that incubators often adopt different names, despite offering the same basic services. Examples include “research park”, “enterprise centre”, “technopole”, “knowledge park”, “hatchery”, “hive”, and “ideas lab”.<sup>57</sup>



While occasionally these terms denote slight differences in approach, many argue that the diversity of nomenclature should not divert attention from the fact that all belong under the incubator umbrella.<sup>58</sup>

Some experts categorise incubators according to the types of businesses they target.<sup>59</sup> The first of these is the “mixed incubator”, the name reflecting the fact that these organisations target companies in all sectors. Much like the earliest incubators, their aim is to create startups and close the “business gap” in a given locality or region, a goal arguably best served by recruiting companies from a wide range of sectors.

Technology incubators form a second category. Their appearance on the scene corresponds with the high-tech economy that took off in the early 1980s, and their immediate objective is to boost the formation of technology startups. The third category is the “basic research incubator”: these incubators are founded by or partnered with research centres and universities. While they too focus on technology, their activities are informed by the dual aim of facilitating technical advancement and creating profitable spin-outs for universities or research institutions.

According to a competing perspective, incubators are best categorised based on who owns and operates them.<sup>60</sup> One influential study lists the categories as:

- Business Innovation Centres (BICs)
- Corporate Business Incubators (CBIs)
- Independent Business Incubators (IBIs)
- University Business Incubators (UBIs)

BICs came about in 1984 as an initiative of the European Commission. Their main objective is to reduce the costs of doing business for local startups, and their income tends to be secured through service fees or public funding (local, national or international).

At the privately owned end of the spectrum are CBIs and IBIs. CBIs are corporate incubators founded by large companies with the aim of supporting the emergence of new business units, where the parent-company controls the incubated ventures through direct equity stakes. IBIs meanwhile are commercial incubators set up by private investors, that provide their own funds to their client companies and also usually take equity.

The remaining category in this framework, University Business Incubators find themselves in the middle of the private/public spectrum. UBIs are set up by universities looking to adopt an entrepreneurial role and commercialise scientific or technological research, and therefore mainly provide support to new knowledge-based ventures. Like BICs they are owned by public bodies, but their emphasis on the transfer of intellectual property from universities to private companies means they also commonly take equity.

It is worth noting that this definition of a UBI makes no reference to graduate-focused incubators, which as we will see in the next section operate rather differently.

## HOW EFFECTIVE IS INCUBATION?

When evaluating the effectiveness of incubation, it is important to point out that a variety of metrics and criteria can be employed, often resulting in different conclusions. Since share-value or gross profit metrics rarely apply to incubatee startups, there is little consensus about how to measure their progress.<sup>61</sup> Much is subjective about assessing incubation, particularly when it comes to measuring “soft benefits” such as “a productive business network” or strong relationships. That being said, the literature contains ample evidence that incubation is an effective means of supporting businesses.

In a 2012 study assessing both “hard” and “soft” benefits arising from incubation, 43 users of an Irish incubator were surveyed on their experience. Some 79% of surveyed incubatees reported that they had achieved “growth of their enterprise” through incubation, while 35% saw improved sales turnover and 70% achieved cost savings. Evidence of the “soft” benefits was also convincing: 79% of incubatees said they felt more confident in themselves as entrepreneurs, while 51% added that incubation had succeeded in making them more self-reliant.<sup>62</sup>

Safraz Mian focused on university-affiliated incubators in an influential 1996 study, finding them successful in providing a “nurturing environment to [new businesses]” and that the vast majority of surveyed users believed incubation was adding value to their firms.<sup>63</sup> A study of 80 Spanish incubators concluded that “incubation plays an important role in innovation”, with different incubator “archetypes” effective in promoting different “types of innovation” (product, technological and organisational innovation).<sup>64</sup>

Finally, some research has assessed how successful different incubator types are in accomplishing highly specific goals. As noted by Linda Knopp, director of knowledge services at the National Business Incubator Association (US), this is important because not all incubators prepare companies for a stock market offering — “many have as their goal job creation” — for example.<sup>65</sup>

“Incubating Success”, a 2011 report by the US Department of Commerce’s Economic Development Administration found that among the incubators it studied, non-profit programmes were the best performing, concluding that “the most important goals of top-performing incubation programs are creating jobs and fostering the entrepreneurial climate in the community”.<sup>66</sup>

## CONCLUSION

While business incubation has received much attention from academics and policymakers, university incubators – particularly graduate-focused ones – have received less. Only a small minority of the studies we reviewed focus on universities, with almost all of these equating it with either tech-transfer or incubation of local SMEs.

It’s this gap in the literature that the Centre for Entrepreneurs aims to bridge below. We interviewed managers and incubatees at several graduate-focused UK university incubators, from which we source the key insights outlined next.

## Interviews with university incubator managers

Not only do the following interviews fill a gap in research on graduate incubators, they also form something of a good practice guide to universities considering building on or setting up a new graduate-focused incubator.

There is an impressive diversity in approaches to university incubation. That said, the inconsistency in what is offered and the lack of best-practice sharing suggests there is room for greater collaboration and consolidation in this area.

The follow incubator managers were interviewed for this guide:

### **Toby Kress**

Accelerator, London Metropolitan University

### **Carolyn Keenan**

BSEEN, Aston University

### **Dewi Gray**

The Centre for Entrepreneurship, Cardiff Metropolitan University

### **Sara Pates and Samantha Deakin**

Evolve, University of Sheffield

### **Eleanor Browne**

Formation Zone, University of Plymouth

### **Lillian Shapiro**

The Hatchery, University College London

### **Chris Hall**

The Hive, Nottingham Trent University

### **Julie Devonshire**

King's Venture Accelerator, King's College London

### **Steven Dougan**

Launchpad, Teesside University

### **Ali Hadavizadeh**

SETsquared, University of Bath

### **Roy Azoulay**

Startup Incubator, University of Oxford

### **Megan Powell Vreeswijk**

The Studio, Loughborough University

### **Bruce Wood**

UHatch, Glasgow Caledonian University

## 1. WHO USES UNIVERSITY INCUBATORS?

### *Graduates, students, and everyone else*

University incubator managers overwhelmingly agreed that incubation is best suited to recent graduates rather than current students. Students tend to be at an earlier stage of their journey as entrepreneurs, and find it difficult to manage a fully fledged business alongside their degrees. This is reflected in the makeup of the incubators' cohorts; while most accepted applications from students, managers stressed that they tend to progress at a slower pace than graduate entrepreneurs.

However, some managers however felt it was crucial to distinguish between postgraduates and undergraduates, as the former have less structured schedules that can make it easier to juggle a business alongside their studies. Only 10% of the King's **Venture Accelerator's** current cohort are undergraduates, but almost half are postgraduates.

## “Students need careful advice about joining incubators”

While 90% of the incubators were open to applications from students, students only made up 35% of their cohorts on average, compared to graduates that made up close to 60%. Eleanor Browne, manager at University of Plymouth's **Formation Zone**, suggests “students need careful advice about joining incubators”. One potential solution is to house entrepreneurial students in an incubator without requiring them to take part in the main programme, thereby allowing them to balance their business and degree without slowing down graduate ventures.

Several programmes also accept external businesses or “community entrepreneurs” and, according to Bath **SETsquared** manager Ali Hadavizadeh (where external businesses are 40% of the cohort), hosting both groups in the same space offers “significant benefits, particularly to the graduates”.

When it comes to supporting university graduates, an important decision any incubator has to make is when to cut off support: that is, how many years after leaving university are graduates allowed to apply? In our sample of university incubators **45% did not have any cut-off, while for those that did the average was three and a half years, with a maximum of seven and a minimum of one.**

A lack of resources rather than an explicit choice was what explained any imposed cut-offs, as all the managers agreed that support should remain open to graduates for as long as possible. Asked when graduates were most likely to return, most of the managers said this was immediately after graduation (with ideas they developed as students), while a minority said it was after a gap of several years during which graduates had gained professional experience. Some programmes that did not have a general cut-off chose to have one for specific things, such as funding.

## 2. WHAT DO INCUBATEES STUDY AND WHAT SORT OF BUSINESSES DO THEY START?

### “Those who choose to attend business school want to be captains of industry, not founders”

In terms of the academic backgrounds of the cohorts, there did not appear to be any general trend, with incubatees coming from across each university's academic disciplines. At Nottingham Trent's **Hive** incubator, a large number of incubatees specialise in the creative industries, given the prominence of the university's art and design courses. Oxford's **Startup Incubator** meanwhile attracts more graduates from the social sciences and humanities by positioning itself as an alternative to the university's support for spin-out businesses.

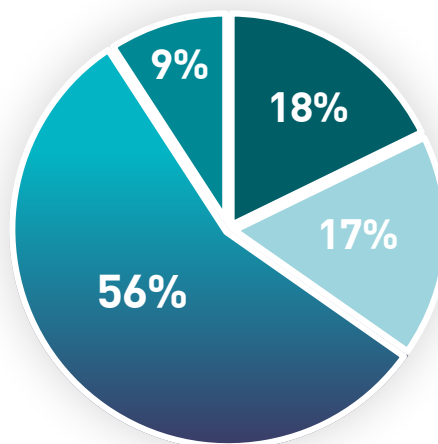


Figure 6. University affiliation of incubatees: Source: CFE survey of incubator managers

■ Undergraduates ■ Alumni  
■ Postgraduates ■ External Entrepreneurs

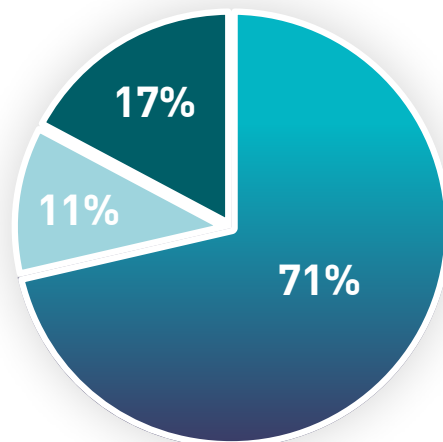


Figure 7. Nationality of incubatees: Source: CFE survey of incubator managers

■ Home ■ EU ■ Non-EU International

**Formation Zone** was unique among our sample in limiting applications to a priority group of sectors, aligned to the city's economic development agenda (these being the creative industries, hi-tech, marine, environmental, advanced engineering, and health). Several managers brought up the benefits of incubatees with different academic backgrounds working alongside each other and balancing each other's strengths and weaknesses.

Despite business degrees and entrepreneurship often being spoken about in a single breath, several incubator managers noted that business school students and graduates were minorities on their programmes, despite their universities having large business schools. Sara Pates of the **Evolve** programme at Sheffield University suggests that "those who choose to attend business school want to be captains of industry, not founders" and that "motivations for starting a business usually come from a specific sector or background".

The types of businesses graduates start also vary widely, although as expected technology and digital businesses predominate regardless of academic specialism. At Bath's **SETsquared**, notable trends of the past few years have included a mushrooming in app development, the

**“While a software company can generate revenue quickly, hardware startups need a lot more work before they are ready”**

digitalisation of an increasing number of processes and the rise of artificial intelligence and robotics.

Oxford's **Startup Incubator** used to be called the "Software Incubator" and still specialises in digital businesses, which manager Roy Azoulay puts down to the difficulty in bootstrapping businesses that do not fit into that category. Sheffield **Evolve's** Samantha Deakin stresses the different needs of companies: "while a software company can generate revenue quickly, hardware startups need a lot more work before they are ready."



**Two-thirds of incubatees were male, one-third were female**

### 3. HOW DO INCUBATORS RAISE AWARENESS?

University incubators' awareness raising and recruitment strategies depended on whether they were standalone entities or housed within a larger enterprise department. In the former case, the incubators were solely responsible for attracting and recruiting users, whereas in the latter case much of this was undertaken by the department itself. At London Metropolitan's **Accelerator**, student enterprise support is actually run from the incubator, rather than the other way around.

When embedded within a broader extracurricular package, incubators tend to be seen as the final or highest step of support, with aspiring entrepreneurs that have excelled in other activities referred upwards. According to the incubator managers at Cardiff Metropolitan and the University of Bath, most graduates who join the programmes have already heard about them as students.

Regardless of where they were situated (standalone or embedded), all of the incubators participated in marketing activities such as lecture shout-outs, stands/stalls on campus, mass emails, social media campaigning, engagement with alumni, presence at careers fairs, and distributing posters/leaflets. Yet Steve Dougan, manager of Teesside's **Launchpad**, thinks that such activities have a relatively low payoff for the amount of effort involved, and believes that incubators should be promoted more centrally by universities themselves as an integral part of what they offer.

### 4. HOW DO INCUBATORS SELECT INCUBATEES?

While some graduate entrepreneurs enter university incubators directly by winning competitions (this is the case at

Cardiff Met, London Met and University of Plymouth, though all of these programmes also accept rolling applications) or excelling in other extracurricular activities, most go through a formal selection process.

Most programmes require applicants to pitch or submit their business ideas, with shortlisted applications reviewed in some cases by experts and independent judges, and in other cases by the incubator managers and staff directly. Applications usually depend on a viable business idea rather than a pre-existing business; university incubators tend to provide earlier-stage support than commercial incubators.

Some university incubators take a completely different approach. For London Met **Accelerator** manager Toby Kress, selection is "more about attitude than academic background", with incubatees expected to "go and talk to customers from week one". **Accelerator** (which primarily houses non-university startups) is also unique in selecting its graduate participants through a prior accelerator programme, **Launchpad**, at the end of which graduates have to successfully pitch to a panel of entrepreneurs before being offered free incubator space and funding.

Teesside's **Launchpad** has no formal pitching process, as according to manager Steve Dougan, pitching results in a selection bias towards people who excel at selling their ideas (and not necessarily at running a business). Instead, anyone can initially test out their ideas in a downstairs coworking/ideas space. Then, "if they are adapting and iterating on their business plan well and able to prove customer validation, they get to go upstairs" to the incubator space. This allows for a more dynamic selection process in which aspiring entrepreneurs get to prove themselves beyond the confines of a formal application.

University incubators vary greatly both in terms of selection criteria and regularity of intake. Sheffield's **Evolve** programme – whose manager was reluctant to even call it an incubator programme, despite the combination of business support and space – does not exclude anyone at all, as staff do not see it as their role to judge entrepreneurs' ideas. **Evolve** also doesn't have a fixed programme, so as to be able to accept people whenever they get an idea.

UCL's **Hatchery**, while selective in terms of business plan, also allows entrepreneurs to join at any time, although it is considering set intake times to improve bonding between cohorts. Cardiff Metropolitan's **Entrepreneurship Centre** takes an interesting middle option by hosting separate incubator and accelerator programmes; while the incubator space is non-selective and available to both students and graduates (and to freelancers as well as registered businesses), the more intensive accelerator has a fixed schedule and is for graduate businesses only.

A handful of university incubators also accepted freelancers into their spaces. These programmes tended to be less structured and less intensive than others, suggesting that incorporating freelancers inevitably dilutes the support available to businesses with high-growth potential. One incubator manager was unhappy about their programme being incorporated into the university's employability agenda, putting pressure on the incubator to help people become self-employed as well as start businesses.

As we have suggested for student entrepreneurs, the solution may be to offer freelancers space while maintaining a separate programme for incorporated businesses with high-growth potential. For example, although it does not offer them permanent space, London Met's **Accelerator** runs regular "freelance bootcamps" for freelancers. Ultimately, university incubators need to decide how they balance the competing goals of inclusivity and intensity.

**On average, the university incubators surveyed accepted slightly over 50% of the applications they received, ranging from a 90% acceptance rate at Formation Zone to a 10% rate at Oxford's Startup Incubator.**

These figures should not be taken at face value however, as they depend heavily on how much interaction applicants have with incubator staff before applying (i.e. pre-vetting) which varied significantly.

Several of the managers emphasised the importance of giving constructive feedback to those not accepted onto their programmes so as not to discourage them from pursuing their entrepreneurial ambitions. These students and graduates should be told why they are not currently ready for the incubator, signposted towards other forms of support and encouraged to apply at a later date.

## 5. HOW SHOULD YOU SUPPORT GRADUATE ENTREPRENEURS, AND FOR HOW LONG?

### Space

The majority of university incubators offered a set of services closely in line with what one would expect from incubators more generally. In terms of physical resources, incubatees get access to office and meeting space, equipment (IT, and more sophisticated equipment in some cases) and a professional address.

While the quality and size of the spaces varied, an important observation was that only two of the incubators were hosted in academic buildings, with nine hosted in larger centres for technology transfer, business support and scientific/technical innovation, and two located in their own dedicated buildings (**Launchpad** and **Evolve**). This confirms the conclusions reached in a recent study of graduate entrepreneurship incubation environments, according to which an enterprise centre "needs to be differentiated from the university in its branding and be seen to have a business rather than a university location".

Bruce Wood, manager of **UHatch** at Glasgow Caledonian University, believes that "space is essential" and that "it's far better for businesses to use our space than mum and dad's place for meetings." Incubator space generally offers greater value and contractual flexibility than regular office space, and allows for the possibility of fruitful interactions between founders, mentors and other experts.

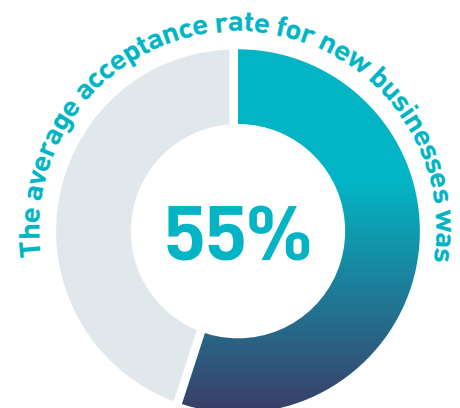
## "Space is essential; it's far better for businesses to use our space than mum and dad's place"

**On average the incubators surveyed had capacity for 36 businesses at any one time, though this varied from a low of 15 (Oxford) to a high of 90 (Sheffield).** Offering a larger number of businesses space usually also involved operating some sort of hot-desking system, which could be seen as a downgrade from offering dedicated space to each venture. **Only a third or so of incubators were not already at full capacity.**

### Business support

Space naturally facilitates the provision of effective business support. One of the most important components of this is mentoring or coaching. While some programmes assigned each venture an individual mentor, others had free floating mentors (also known as coaches, experts, or "entrepreneurs in residence") that incubatees could approach when needed. And while some incubators relied on volunteers to provide mentoring, others paid for these services. One would naturally expect such differences to have an impact on effectiveness of support, although in reality such choices were often driven by financial necessity as much as preference.

All of the managers agreed on the importance of using mentors with real-world business experience; "They should be experienced but relatable", says Bruce Wood of **UHatch**, "because student and graduate entrepreneurs can't relate to a Richard Branson or an Alan Sugar".





## “Fees primarily exist to make people appreciate the programme, rather than to actually fund it”

Alongside general business mentoring, almost all of the incubators ran regular workshops in which incubatees learn about different aspects of starting and running a business, and “surgeries” or “clinics” in which they receive advice from professional lawyers, accountants, bankers and salespeople.

Besides the mentors and professional advisors, all of the incubators were run by a combination of full-time staff, part-time staff and student interns, **with an average of four members of staff (excluding interns) per incubator**. As with everything else, the distribution varied greatly from incubator to incubator, with seven full-time and one part-time member of staff running **King’s Venture Accelerator** (as well as the rest of King’s Entrepreneurship Institute), compared to five part-time and one full-time member of staff running Oxford’s **Startup Incubator**.

Sometimes, university staff running the incubator were completely separate from mentors, while in other cases they were one and the same. The latter is the case at UCL’s **Hatchery**, which is run by two-part time advisors. “This can make it difficult to develop broader incubator strategy,” says **Hatchery** advisor Lillian Shapiro, “as the advisors spend almost all of their time in meetings with the entrepreneurs.”

Innovative forms of business support unique to particular programmes were common. For example, Bath’s **SETsquared** hosts regular “business review panels” where companies present before a panel of experts with diverse sectoral expertise, while Teesside’s **Launchpad** hosts a venture capital firm as well as several training providers within the incubator building and allocates each business a “mentoring pot” to spend.

**BSEEN** kicks off with a fast-paced boot camp where participants receive hands-on training for five days from independent practitioners before moving into office space, and during which participants must either register as self-employed or incorporate as a limited company. Oxford’s **Startup Incubator** runs an optional four

week accelerator for incubatees twice a year in which they receive specialised training and are able to unlock additional funding.

### Funding

**Most of the programmes (90%) also had some sort of seed funding for incubatees**, usually in the form of grants allocated by managers or money won by taking part in competitions. **The maximum amount of funding available differed dramatically, ranging from £500–£1000, £20,000, £30,000 and even £50,000**. The funding may come from the university itself, but it can also come from other sources, such as the business grants distributed by **UHatch** but financed by Santander, or the public funding Cardiff Metropolitan’s **Entrepreneurship Centre** encourages its businesses to apply for (alongside other sources).

Apart from exceptions – including Teesside’s **Launchpad** and King’s **Venture Accelerator** – most of the incubators did not host formal events with investors. Instead, they introduce incubatees to angel investors and venture capitalists on an ad-hoc basis. According to London Met **Accelerator** manager Toby Kress, “graduate startups are generally too early-stage for investment compared to the other [non-graduate] startups on our programme”. He is intrigued by the idea of setting up a dedicated fund for graduate startups, as “many London Met students are not particularly well-off, and working part-time while launching a business is very difficult”.

### Duration

The majority of incubators supported their businesses for a maximum of 12 months, a shorter period of time than most commercial incubators. The explanation usually given by managers was that this was enough time to tell if a business was either ready to survive outside of the incubator or unlikely to progress at all, although sometimes resource limitations were also at play.

Not all followed this model; at Bath’s **SETsquared**, while businesses have to move on if they are stagnating, there is no set time limit as long as progression is happening, while at **Formation Zone** and **Accelerator** businesses can stay put for two years or more.

Several managers said they did not have any sort of time limit or mechanism for removing people from their incubators; interestingly, these tended to be the same programmes that had larger numbers of students and freelancers as well as graduate businesses. Again, this suggests that inclusivity and flexibility may come at the cost of intensity of support.

28

5  64

**The average number of businesses supported annually was 28, ranging from five to 64**

“Universities exist above all to produce good citizens and members of society. As long as graduates feel that being in the Hatchery has contributed to their success, we can consider ourselves successful”



The average number of incubator staff was four

## 6. HOW ARE UNIVERSITY INCUBATORS FUNDED?

The university incubators interviewed were funded in a number of ways, from university core funding to Higher Education Innovation Fund (HEIF) grants, European Union funding and income from incubatees. University incubators' greater reliance on external (usually public) finance means they are under less pressure to become economically self-sustaining, and are thus more able to shield users from the actual costs of the services they provide. Our discussions with incubator managers showed that university incubators – unlike technology transfer offices – rarely take equity (with just one exception) in the businesses they support, with even user fees only infrequently charged.

Most of the incubators surveyed were funded either by HEIF or by core university funding, with only one programme funded primarily by the EU. Core funding was seen as preferable to the uncertainty of HEIF, given that the latter needs to be reapplied for every few years and is not guaranteed in the long-term. Nonetheless, one manager described how switching to core funding had led to increased pressure to contribute to the university's broader employability agenda, which clashed with the incubator's goal of aiding high-growth businesses.

Many incubators supplemented public funding with other sources of income. The most straightforward of these is user fees. Bath's **SETsquared** charges businesses an annual fee of £2,100 if they are generating revenue, or £1,400 if they are pre-revenue – a discount that in practice mostly benefits earlier-stage graduate businesses. According to manager Ali Hadavizadeh however, “fees primarily exist to make people appreciate the programme, rather than to actually fund it”.

University of Plymouth's **Formation Zone** also has separate “pre-start” and “regular” rates, but manager Eleanor Browne stresses the importance of not treating university businesses differently by giving them a special “university” or “graduate” rate.

Teesside's **Launchpad** doesn't charge its incubatees but rents out space to external companies and training providers, while Cardiff Metropolitan's **Entrepreneurship Centre** is core funded but raises external funding to put on special events.

A few incubators took a more ambitious approach to raising income from the businesses they support. Oxford's **Startup Incubator** was the only programme that took an equity stake in its businesses (although another was considering it). While several managers of other programmes felt that this was not an appropriate thing for universities to do, manager Roy Azoulay saw it as a way of making the incubator sustainable in the long term.

“By helping graduates to stay local while starting their businesses, we are contributing to graduate retention”

At both King's and Oxford, incubatees sign a pledge to support the incubator financially if they are highly successful themselves. At the **Startup Incubator**, ventures that raise over £500,000 in investment agree to repay the cost of third party services they received, while at the **Venture Accelerator** the most successful companies are asked to fund a grant for a future incubatee.

## 7. HOW DO INCUBATORS DEFINE SUCCESS?

While all of the incubators tracked quantitative factors such as number of companies and jobs created, business survival rate and amount of investment raised, the majority felt that these took second place to more qualitative, non-economic factors. For example, Teesside's **Launchpad** places great importance on improving the diversity of incubator users. Manager Steve Dougan is keen to improve the presence of female and ethnic minority entrepreneurs, as well as that of underrepresented sectors beyond technology and digital (such as social enterprise).



Funding available to incubated businesses ranged from £500 to £50,000



**NO VACANCY**

# 75%

## of incubators were at or close to full capacity

Julie Devonshire of King's **Venture Accelerator** believes the entrepreneurs themselves should be the overriding metric of any university incubator, with the key goal being to develop them as leaders. She links this to King's mission of being "in service to society", and stresses the importance of looking beyond "hard" outcomes, despite also stressing that the **Venture Accelerator** will be "just as intense as Techstars and Y-Combinator." UCL Hatchery's Lillian Shapiro concurs: "Universities exist above all to produce good citizens and members of society. As long as graduates feel that being in the Hatchery has contributed to their success, we can consider ourselves successful".

For London Met **Accelerator** manager Toby Kress, when it comes to graduate startups success comes in two forms. The first is a "lifestyle" business that is sustainable and pays its founder a decent income, whereas the second is a "scalable" business that tends to be tech based. Even when businesses fail, the founders usually "learn a lot through the experience and either improve their employability or start another company".

Carolyn Keenan of **BSEEN** at Aston University agrees that the experience of launching a startup often helps incubatees land a job, making measuring this important. Keenan also sees **BSEEN** as contributing significantly to broader university goals such as student recruitment, student experience, and positive public relations for the university.

For University of Plymouth's **Formation Zone** and its manager Eleanor Browne, the number one measure of success is a positive, dynamic and collaborative atmosphere in the incubator, "from which success in quantitative outcomes is derived". She feels that being largely publicly funded allows for a less cut-throat environment, and reduces the pressure to "bring in the wrong people to fill up spaces".

An interesting contrast of views arose when it came to company survival. While some managers felt that allowing businesses to fail was "a good thing" that prevents effort being wasted and the perpetuation of "zombie companies", others saw increasing the survival rate as a priority, reflecting a broader debate about the underlying purpose and impact of incubation. For London Met **Accelerator** manager Toby Kress, "accelerating failure is part of what an incubator does", requiring "regular deadlines and pitching to test a venture's viability, and time limits on access to space".

As for tracking hard data once businesses are no longer physically present and easily monitored, most of the incubators relied on regular surveys distributed via email to measure how previously supported ventures were performing. Most of the time incubator alumni were happy to provide this data voluntarily, but some programmes preferred to gather data via membership schemes (Bath **SETsquared**) or a formal pledge (Venture Accelerator).

## 8. WHAT ARE AN INCUBATOR'S KEY RELATIONSHIPS?

### *With alumni*

Incubators have good reasons to remain engaged with ventures once they have left. Firstly, as businesses transition out of the incubator, additional support and signposting can improve their chances of prospering outside. Secondly, alumni can return to mentor and inspire future generations of incubatees. Most of the incubators interviewed had schemes to re-engage with their alumni and get them involved in supporting current cohorts, though for universities in cities and areas with low graduate retention rates (such as Teesside and Nottingham Trent) this can be something of a challenge. Yet as Chris Hall of Nottingham Trent's **Hive** incubator points out, "by helping graduates to stay local while starting their businesses, we are contributing to graduate retention".

Most programmes also channelled alumni into other support structures, such as publicly funded regional business schemes or commercial incubators and accelerators. As described in the previous section, many universities have established programmes for supporting local SMEs, so some incubators refer their alumni to these.

At Teesside's **Launchpad** for example, recent alumni are signposted towards Fusion Hive and other university-managed buildings, while at **BSEEN**, alumni often rent separate office space in Innovation Birmingham Campus (the building in which **BSEEN** is based) or move into

Entrepreneurial Spark programme (a free nationwide commercial accelerator powered by NatWest).

Most of the managers interviewed said they encouraged their alumni to drop in to discuss specific problems they were facing, while one mentioned the possibility of businesses “boomeranging” back into the incubator if they start another business or significantly change their business idea.

#### ***With the rest of the university***

Being physically based on (or nearby) a university campus opens up a plethora of possibilities not available to conventional incubators. University incubators can connect their incubatees with academics possessing relevant sectoral expertise and vice-versa allow academic departments – such as business schools – to learn from and work with startups on the programme. King’s **Venture Accelerator** is getting student societies to train its incubatees in digital and coding skills, cooperating with academics to build product prototypes, and even working with the psychiatry department to provide support on mindset and creativity. At Aston University the microbiology department has supported some of **BSEEN’s** food businesses.

While in most cases students won’t have the time to incubate their own startups, many incubators encourage current students to work with incubator businesses. For example, at Glasgow Caledonian graphic design students

help **UHatch** ventures develop their marketing materials, while at London Metropolitan students help with branding, are invited to pitch their ideas to **Accelerator** startups, and are even graded (and in some cases paid) for these activities. Not only does this help the businesses, but students gain valuable professional skills and experience in the process.

#### ***With the community***

In general most incubators did not have a set way of building relationships beyond the university, but instead pursued this on a case-by-case basis. For example, Nottingham Trent’s **Hive** introduces its businesses to the local business community, getting them involved in organisations such as the Institute of Directors, Chambers of Commerce and the Federation of Small Businesses as well as linking them to angel investors, venture capital networks and – more recently – crowdfunding platforms.

At Teesside – which has a large health school – the university has an established relationship with the local NHS trust, which **Launchpad** recently took advantage of by running a hackathon with the trust. **BSEEN** works with the local growth hub as well as the chamber of commerce to support its businesses, while Oxford’s **Startup Incubator** collaborates with Wayra to enable its ventures to use the company’s acceleration services and workspace.



**The average incubator age was seven years. The oldest was set up 16 years ago, the newest just over a year ago**



**Only one incubator was predominantly EU-funded**

# Interviews with university incubatees

To provide further perspective on university incubation, we conducted interviews with 12 recent incubatees. These included students and recent graduates from a variety of degree subjects and levels, and from seven different universities: Aston University, The University of Bath, King’s College London, The University of Oxford, Sheffield Hallam University, University College London and the University of Sheffield.

## 1. PRE-INCUBATION: WHAT INSPIRES STUDENTS AND GRADUATES TO START A BUSINESS?

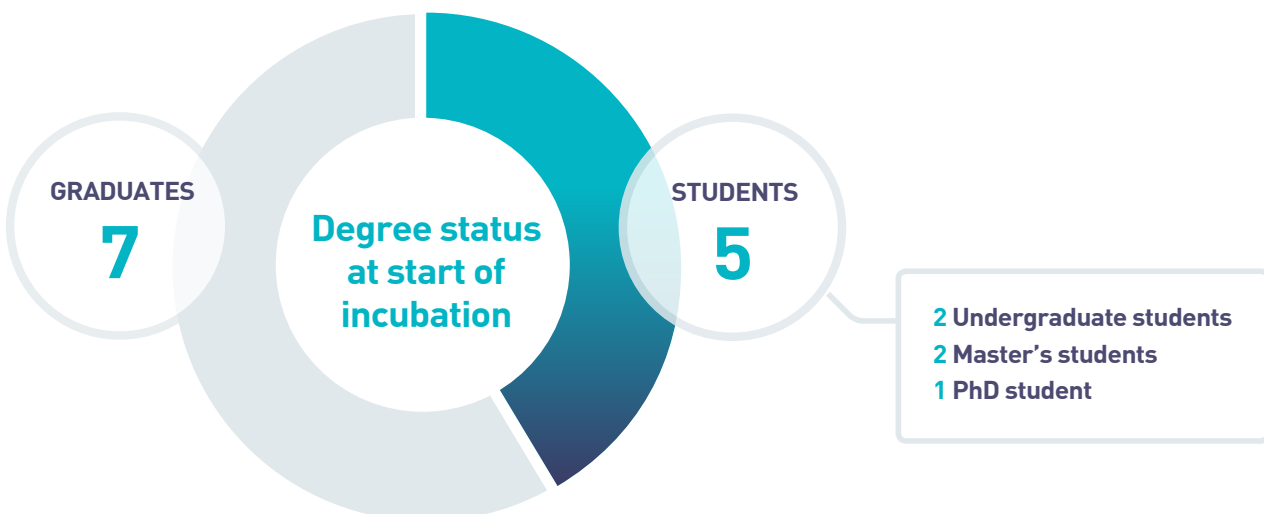
While conventional wisdom suggests that young entrepreneurs are likely to come from a business-related academic background, our interviews revealed that a variety of disciplines lead students down an entrepreneurial path. While a third of interviewees did indeed have a business background, the remainder had studied subjects including chemical engineering, politics, and migration studies. This supports our view that incubation is effective in recruiting talented entrepreneurs from across the academic spectrum.

In terms of core inspiration, three incubator users found it in their studies, eight identified extracurricular activities and one claimed both were equally important. **Chris Lowe**, who completed a bachelor’s in Film and Media Studies at Sheffield Hallam University, took a “professional context in media” module for which he interviewed business professionals in his industry. This later encouraged him to start his own video production company, Blueshift Video, upon graduating.

Yet according to **Robin Hartley**, a University of Sheffield Enterprise (USE) incubatee who is developing TASK, a programmable USB keypad, academic efforts to teach entrepreneurship are “not the right approach”. He and seven other respondents were motivated to start their companies by practical extracurricular activities such as startup weekends, tech societies, or business competitions such as the Hult Prize.

**“Academic efforts to teach entrepreneurship are not the right approach”**

Nonetheless, a third of the interviewees that cited extracurricular activities as their core inspiration were still in some way influenced by their studies. **Mihaela Gruia**, who launched ‘Research Retold’, a research communications startup at USE, found that conducting research for her Politics and International Relations degree gave her ideas for her company. With seven out of twelve incubatees attributing some influence to the curriculum, it’s safe to say that degrees play a role in decisions to start a company.





## 2. GRADUATE INCUBATION VERSUS STUDENT INCUBATION

Throughout this report we make the case that university incubation is better suited to recent graduates than to students, and to a large extent our conversations with incubatees corroborate this. From a total of 12, only five entered the incubator as students, and of these four were in the final months of their undergraduate or postgraduate degrees. Only one interviewee started incubation earlier than this.

**“As a final year student, I was just too busy to devote time to my business”**

The main reason for this is workload. University students of all degree-levels have demanding schedules, meaning that entrepreneurial students usually wait until graduation to launch. As **Mihaela Gruia** notes, despite developing her idea at least a year before graduating, she was too busy to devote time to her business plans during the final year of her BA.

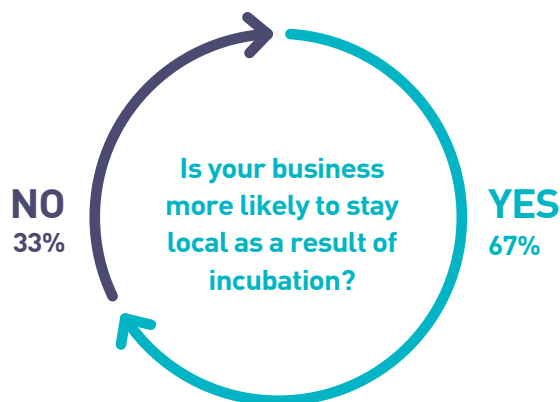
University itself often serves best as a time for experimentation; for example, **Fares Alaboud** participated in the “Lion’s Den” business competition during his final year at King’s College London. This enabled him to develop the idea for an app that could simplify the scheduling and tracking of medications, which he turned into a company (the Medic App) after graduation.

**“For a startup, it is useful to associate with strong brands and universities are good examples of that. They are also excellent places to trial products”**

Nevertheless, running a business while pursuing a degree can work under certain circumstances, particularly in the case of postgraduates. Oxford PhD student **Kyle Turner**, a researcher in obesity prevention, started work on **Fungry**, his healthy-eating business, to gain some applied experience alongside his degree. And according to **Robin Hartley**, a few student entrepreneurs may even be able to devote some time to their company close to graduation if they have performed exceptionally well during the rest of their degree. That being said, the fact that most incubatees were either graduates or postgraduate students suggests that incubation requires a certain level of maturity.

## 3. THE UNIQUE APPEAL OF UNIVERSITY INCUBATION

When asked how they compared university incubation to commercial incubation, all of the interviewees said they found the prospect of university incubation more appealing. For **Jose Mora**, the co-founder of **Roomor**, a property-management app incubated at King’s **Venture Accelerator**, university and commercial incubation need to be understood as serving distinct purposes. Companies at the idea phase, or just beyond it, are in his view best served by



university incubation, while startups at the traction stage have more to gain from a commercial incubator.

As for what makes university incubation unique, familiarity with the community and physical proximity to campus were cited as highly important. It is easier to form connections with managers or co-incubatees with a university background, and university incubation can also provide a smooth transition from academia to business. Retaining full ownership of ideas and using the university’s brand were also cited as key advantages. **Jacob Wedderburn-Dey**, founder of **CityStasher**, a left luggage company based in UCL’s **Hatchery**, said that not having to give up equity (which most university incubators do not take) and not having to pay for services made all the difference.

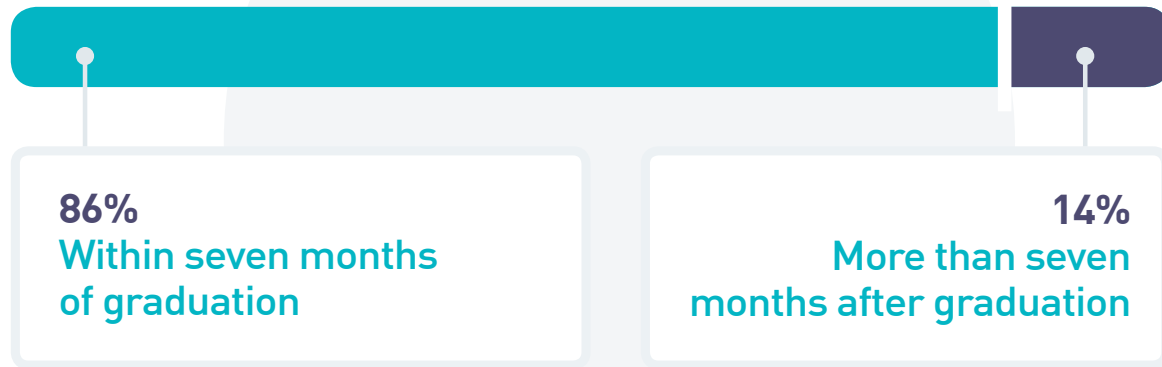
As for brand recognition, several interviewees noted that university affiliation creates unique opportunities. One said it helped them secure funding, reporting that “the university’s badge” had “opened doors to finance”. Others pointed to better exposure to customers; Oxford graduate **Agne Milukaite**, founder of **Cycle.land**, a social marketplace for bike-sharing, says that many universities boost their incubatees’ profiles. “For a startup, it is useful to associate with strong brands and universities are good examples of that. They are also excellent places to trial products”.

**“The network of incubator managers, incubatees and those beyond the incubator is key to initial confidence and customers - the hardest step when starting a business”**

## 4. WHAT KIND OF SUPPORT DO INCUBATEES FIND MOST USEFUL?

Most incubatees agreed that mentoring from managers or mentors was the most effective form of support. For many this was because of the personal touch; **Ahmed Aden** of Aston University’s **BSEEN**, founder of **Lazy Panda**, a video production company, said that the encouragement of mentors who “cared for your progress” and wanted to “see you grow” was “the best part” of incubation,

## When did graduates begin incubation?



while PhD student and Oxford **Startup Incubator** user **Kyle Turner** referred to his incubator manager as “invaluable”.

Others made the point that continuously working alongside mentors was more effective than individual seminars when it came to acquiring skills, knowledge and investment. **Chris Lowe** said that mentors can “teach you how to succeed quicker”, while Geri Cupi stated that his mentors at Bath **SETsquared** helped him attract investors for Jook, his online fashion venture: “It’s all about helping you define the proposition as well as you can; they make sure you have a very good case when pitching to other investors, which is integral in securing further finance”.

The second most mentioned factor was the community and connections fostered by the incubator. **Jose Mora** believes that a network of incubator managers, incubatees and organisations and individuals beyond the incubator is key to “initial confidence and customers” – “the hardest step”

when starting a business. **Fares Alaboud** adds that making use of the university’s reputation and existing network is particularly useful in this regard. Finally, **Tom Dewhurst**, a University of Bath graduate and **SETsquared** user, whose app Ordoo allows users to take-away food without queuing, emphasised the positive effects of a network of tenants who have gone through similar experiences.

Lastly, the incubatees were in agreement on the importance of high-quality space, and the value of a pleasant office in impressing potential investors and partners.

### 5. ARE UNIVERSITY INCUBATORS VISIBLE ENOUGH?

Out of the 12 entrepreneurs we interviewed, despite having by definition used their university’s incubator, only three said it was sufficiently visible. When

asked how they became aware of it, four said it was via events, societies or business competitions, three via word of mouth and another three after consulting the careers office. The final two responses were “via promotional email” and “through an academic project”.

Many respondents claimed that the incubator was virtually unknown among students. This led some to say that they wouldn’t have found out about it if it wasn’t for chance events – e.g. a discussion with a friend – and many weren’t even previously familiar with the concept of an incubator. Others added that the incubation space was not a well known part of campus, and that even as members of entrepreneurship societies they weren’t aware of a “formal path” towards incubation.

On the other hand, some university entrepreneurs suggested that once an incubator has established an adequate presence,

## Was incubation integral to the success of your business?



a careful promotional and selection strategy is needed to prevent “anyone with a vague idea walking in and getting space”. This highlights the importance of defining who an incubator’s target audience should be.

Interviewees on both sides of the debate agreed that the best strategy would be to increase the profile of support targeted at aspiring entrepreneurs (such as talks, hackathons and competitions) and provide information and encouragement to those attending. In this way the risk of overexposure could be avoided, while ensuring the most interested participants are engaged. In addition, many respondents felt careers services should improve the recruitment of students from non-business backgrounds.

### **6. WHAT ARE THE DRAWBACKS OF UNIVERSITY INCUBATION, AND WHAT WOULD INCUBATEES LIKE TO SEE IMPROVED?**

All 12 student and graduate incubatees viewed their incubation experience positively. Nine saw incubation as an “integral” component of their current success. Nonetheless, most of the entrepreneurs were able to suggest possible improvement, with several others bringing up drawbacks to university incubation per se.

Some respondents believed university incubation could prove counterproductive under certain circumstances. For example, several felt joining a university incubator could be a mistake if a startup is too advanced; in such cases a commercial incubator might be more suitable. One interviewee believed that finding the right type of support is paramount; entrepreneurs should weigh the strengths and weaknesses of their particular university incubator such as geographical location, funding and brand name. Finally, one interviewee cautioned that university incubation could become a “bubble” if users become over-reliant on its services.

What did incubatees feel could be improved? Several believed that improving the size and/or quality of their incubation space would be beneficial. Having a large enough incubator could allow the most successful businesses to stay on instead of making way for new entrants; this could improve overall performance by giving new businesses experienced peers to learn from.

Others were unhappy with their incubator’s time limit for tenants, but suggested that a modest rent (for incubators that do not charge) could ensure the financial viability of extended incubation periods. Some incubators could also do with aesthetic upgrades, with one being described as “dark and gloomy”.

**British and American universities have proven themselves leaders in the academic world, taking up 16 of the top 20 spots in the 2016–2017 QS World University Rankings.<sup>67</sup> Similarly, when it comes to entrepreneurship, the two countries have succeeded in creating vibrant startup ecosystems, though the U.S. has traditionally been slightly ahead of the curve.**

Indeed, just as American companies are known for their innovative business practices, American universities have established themselves as pioneers in providing graduates with business incubation.

Most American university incubators provide their graduates with ample and well-equipped space and resources. Although more of an accelerator (running three ten-week cohorts a year), **StartX** at Stanford University<sup>68</sup> gives graduates access to more than US\$600,000 worth of free resources, including drop-in space, while Columbia University's **Startup Lab**<sup>69</sup> houses up to 71 graduate entrepreneurs in WeWork Soho West, a commercial coworking space.

American universities also offer their students and graduates a variety of incubation options. A range of programmes target ventures from different types of founders (i.e. student or graduate entrepreneurs), different stages and/or different sectors.

Clearly distinguishing between students and graduates is essential: Columbia, Stanford, Drexel University, the University of Southern California (USC) and Harvard all offer different services to each. Drexel's **Baiaida Institute for Entrepreneurship**<sup>70</sup> applies the same logic to its entrepreneurship clubs and communities, running separate networks for undergraduates, postgraduates and alumni.

USC, alongside its graduate-focused "**USC Incubator**" programme, offers another 11 incubation or pre-incubation programmes targeted at students, members of staff, alumni, and external entrepreneurs.<sup>71</sup> Many of these universities have sought a balance between their own graduates and external entrepreneurs by requiring that each startup have at least one alumni among its founders or shareholders, without demanding that the entire team be university-affiliated.

American university incubators also place strong emphasis on the stage of the startups they target. Stanford's **StartX** for example offers graduate entrepreneurs three different support options: one tailored for first-time founders – prioritising one-on-one mentorship

and fundraising support – one for serial entrepreneurs – offering specialised networking opportunities – and one for growth stage companies – emphasising business development and specialised mentorship in A/B+ series funding.

Harvard's **Launch Lab**<sup>72</sup> is meanwhile aimed at companies with serious growth potential, only accepting companies with demonstrable revenue or institutional funding as well as proven traction.

That said, American university incubators still stress that it is the traits of the entrepreneurs themselves that are, above all, important. USC, Stanford and Columbia emphasise qualities such as coachability, passion and entrepreneurial mindset, rather than the ideal product. Focusing above all on founders' capabilities means that most university incubators are "industry agnostic" – recruiting graduate companies from diverse sectors.

This is presented as a deliberate policy with many benefits, including broadening the incubator's economic and social impact. USC's **Incubator** explicitly declares that "entrepreneurship is broader than tech", while Harvard's **Launch Lab** "strongly encourages" applications from companies with a multi-disciplinary approach, founded by alumni from different schools.

Of course, some incubators do have a clear sectoral focus, such as several of USC's 12 programmes, which focus on distinct industries such as healthcare, emerging technologies, design, gaming and biomedical science. One particularly unusual example is Seattle University's **Low Bono Incubator**<sup>73</sup>, which supports graduate-founded law firms that specialise in helping low-income clients.

Perhaps the most powerful feature of American university incubators (and American universities in general) are their relationships with alumni. The country's higher educational institutions have a longstanding tradition of closely knit alumni networks, and these communities are put into excellent use when it comes to promoting graduate entrepreneurship. Many incubators owe their very existence to entrepreneurial graduates: Drexel and Chicago's (**Polsky Incubator**<sup>74</sup>) incubators bear the name of alumni donors, Harvard's **Launch Lab** was established by six alumni "founding donors" and rather impressively, Stanford's **StartX** was set up by a recent graduate from the class of 2011.

Many incubators also use successful alumni entrepreneurs as a form of support. USC's **Incubator** "favors selective connections to exchange specific domain expertise" with "successful and helpful" alumni entrepreneurs, while StartX lists connections to 900+ Stanford entrepreneurs. Leveraging the philanthropic capacity of graduates can also help pay for incubation itself, which is crucial given that none of the aforementioned institutions take equity in incubated companies.

# University incubators – what have we learned?

While research tends to associate university incubation exclusively with spin-outs and external SMEs, some universities are already incubating graduate startups effectively.

Despite offering similar services, there is a lot of variety in how university incubators are named, ranging from “launchpad” and “hatchery” to “hive” and “accelerator”.<sup>28</sup> Greater consistency in terminology could be helpful to graduates seeking incubation support.

Most university incubators are not located in academic buildings, but either in dedicated buildings or in hubs dedicated to practical business support and/or technical/scientific innovation more broadly. This implies that having a non-academic identity is important in recruiting incubatees.

Our interviews confirmed that graduates need different support to students; most incubators have no or very few students, with both managers and students emphasising the difficulty of combining incubation with a degree. This is less true of master’s and PhD students however.

Most incubators are at or near full capacity, suggesting there is no shortage of demand for incubation on the part of graduates and students.

Selectivity and intensity varied greatly; while some incubators accepted most if not all applicants (including students and freelancers as well as graduate businesses with high-growth potential), others had a rigorous selection process targeting a smaller number of companies with high-growth potential.

Unlike spin-outs, graduate incubatees come from all manner of academic backgrounds, not just science and technology. Similarly, graduates start businesses in a variety of sectors, though most have a substantial digital component.

While extracurricular entrepreneurship activities (competitions, societies, bootcamps) tend to be the primary source of university incubator recruitment, many incubatees are at least partly inspired by the content of their degrees.

University incubators tend to be highly active in promoting themselves, while programmes embedded within a broader set of enterprise activities win additional referrals this way. Nonetheless, the graduates and students interviewed felt that visibility could still be greatly improved.

Incubatees particularly value the smooth transition between academia and the business world that university incubators are able to provide, as well as the familiarity and “brand recognition” a university incubator offers.

Most university incubators did not have a cut-off (number of years) for graduates returning to use their services. Managers agreed that support should remain accessible as long as possible, and when cut-offs did exist these were explained with reference to resource constraints.

University incubators set themselves apart through their aims. While all programmes track “hard” measures of business success, “softer” goals such as promoting diversity and collaboration, producing good leaders and citizens, and helping incubatees achieve fulfilment in their lives were deemed even more important by many managers.

When it comes to gathering data on the performance of startups (in terms of “hard” measures such as turnover, employment and survival as well as softer measures) there is no agreed methodology and therefore no way of objectively comparing programmes.

Given their access to external funding, university incubators are under less pressure than commercial programmes to generate income from incubatees. Most programmes were either free or charged affordable fees. Still, several managers were interested in making their programmes more self-sustaining.

Over three quarters of the incubator managers interviewed were against taking equity in incubator businesses, despite the revenue this could raise. For incubatees, not having to give up equity was also a major attraction of university incubation versus other forms of incubation.



# THE FUTURE

**The higher education sector as a whole, and university entrepreneurship support in particular, face challenges and constraints – some new, some old – that need to be tackled intelligently if progress is to be made in boosting graduate entrepreneurship. Nonetheless, universities should also be attuned to new opportunities. An evolving policy context – including a new industrial strategy and the reform of higher education – offers universities an excellent chance to build on the support available to graduate entrepreneurs.**

## Challenges

### UNCERTAIN FUNDING

Beyond university core funding, the main sources of funding for incubators are the Higher Education Innovation Fund (HEIF) and the European Union (ERDF and ESIF). According to our analysis, universities receiving higher levels of either HEIF or EU funding are much more likely to run incubator programmes than those receiving little or no funding. In England, almost 90% of universities that receive HEIF funding report offering incubation, compared to just 50% of non HEIF funded universities. Similarly, British universities that offer incubation receive an average of £650,000 in ERDF funding per year, compared to just

£7,600 for universities without incubator programmes.<sup>75</sup> Yet both of these sources of funding are unlikely to exist – at least in their current state – for much longer.

The United Kingdom's impending exit from the European Union makes the continuation of ERDF and ESIF funding highly improbable, barring the scenario that some kind of special arrangement is agreed. Meanwhile, the future of HEIF is uncertain in view of the government's proposed abolition of the Higher Education Funding Council for England (HEFCE, the body that distributes HEIF) as part of its plans for higher education reform.<sup>76</sup> Though HEIF funding may be transposed in some form or another as part of HEFCE's replacement, UK Research and Innovation (UKRI), the total amount of HEIF funding has remained unchanged since 2014, making future increases far from guaranteed.

While an in-depth exploration of the different ways universities can fund graduate incubator programmes (beyond public funding) is beyond the scope of this report, some possibilities can be hinted at. These include: taking equity in graduate businesses (though only one programme we interviewed did this, and both managers and incubatees were skeptical overall); getting alumni to fund programmes; user fees (unlikely to cover all costs); and raising corporate and philanthropic donations.

While funding the delivery costs of graduate incubation will require some creative thinking, paying for the buildings to host them (assuming universities do not already have suitable space) should be more straightforward. Between 2015 and 2016 British universities increased their spending on new buildings by 43%, while HEFCE expects capital spending between 2014 and 2018 to exceed £17 billion – 60% higher than in the preceding four year period.<sup>77</sup>

## FLAWED METRICS

One of the noticeable problems with both graduate entrepreneurship support in general and incubation more specifically is the lack of depth and robustness of existing metrics. Robust and detailed metrics are essential to understanding existing trends in graduate entrepreneurship and evaluating the impact of university support.

While it is positive that sector wide measures of graduate entrepreneurial activity and university support for graduate entrepreneurs already exist – the main two being the Destination of Leavers from Higher Education survey (DLHE) and the Higher Education Business and Community Interaction survey (HE-BCI) – these will need to be improved if universities are to support graduate entrepreneurs effectively and truly understand the impact of their support.

The DLHE – which we analyse in Chapter One of this report – is certainly impressive in its ability to survey hundreds of thousands of university leavers every year on a detailed set of measures. Yet when it comes to tracking entrepreneurship, it leaves a lot to be desired. Although the DLHE measures both self-employment and business startup and separates them into two categories, it does not provide guidance to respondents on how to objectively assign themselves to either category, e.g. HMRC registration for self-employment or Companies House registration for starting a business.

The DLHE also fails to track leavers beyond three years after graduation, which makes it unable to provide any information on the long term graduate entrepreneurship rate. While we were able to partly address this with a one-time analysis of the Labour Force Survey (LFS), extending the longitudinal aspect of the DLHE would enable this analysis on a regular basis, for specific graduating cohorts, and with a much larger sample size.

The HE-BCI on the other hand surveys universities rather than recent graduates, providing a useful alternative source of data on graduate entrepreneurship and entrepreneurship support. It asks individual universities to report how many graduate startups, spin-outs, staff startups and social enterprises they have supported in a given year, as well as whether they offer incubator programmes, seed funding, entrepreneurship training and other forms of assistance.

Yet the guidance on what counts as a “graduate startup” is very relaxed. Both student businesses and freelancers can be included in the figures, which limits the data’s comparability as some universities will choose to count these while others will not. This aggregation also makes it impossible to tell which types of businesses individual universities are prioritising with their support.

Similarly, the data does not indicate whether the startup support universities say they offer, such as incubators and seed funding, is accessible to students and graduates or only to spin-outs and/or external SMEs. Finally, several university entrepreneurship

experts we spoke to questioned the reliability of the HE-BCI survey, raising concerns about the lack of consistency in how universities complete it.

Finally, when it comes to university incubators there is an issue with comparability of data between programmes. While most of the incubators we surveyed had developed advanced metrics for measuring performance, all had done so independently rather than in consultation with each other. This makes robust comparisons of different incubator programmes practically impossible, as despite most of them tracking the same key variables, their methods differ widely.

## SUBPAR ALUMNI ENGAGEMENT

British universities are not known to be particularly effective at engaging alumni – at least in comparison with their American counterparts (see case study on page 32) – a fact that almost certainly weakens their ability to lure graduates back to start companies. Poor engagement with alumni came up frequently in our conversations with experts and recent graduates, but the evidence goes beyond the anecdotal.

According to a 2016 study carried out by Red Brick Research comparing UK and U.S. university alumni, UK alumni were significantly less likely to have received an email from their university within the past year (38% versus 62%) and less likely to feel valued as an alumnus (17% versus 33%) than their U.S. counterparts. Less than a third (30%) said they had donated or would consider donating to their university, compared to more than half (54%) of U.S. respondents, which goes some way towards explaining American universities’ far greater success rate in raising philanthropic funds.<sup>78</sup>

If graduates feel undervalued by their universities and are not contacted enough, they will also be less likely to return for – or even enquire about – university business support when they decide to start up. While this may pose less of a problem when it comes to supporting fresh graduates – who can be engaged with while still students – it is an issue when a university wants to convince a graduate who has been away for three, four, five or even ten years to start their business at their alma mater.

If alumni are not receiving regular communications from their university, it is more difficult to make them aware of support programmes such as incubators, and without a strong emotional connection to their universities they are less likely to use them even if aware. In a similar vein, a recent study of UK graduate incubation environments critiqued “communication infrastructures that were insufficiently developed in all the participating universities” when it came to promoting events and activities.<sup>79</sup>

## LACK OF COLLABORATION

While sector-wide organisations such as Enterprise Educators UK (EEUK) and the National Centre for Entrepreneurship in Education (NCEE) play an important role in bringing together universities, practical business support is only one part of what they focus on,



Figure 8. Survey of UK and US university graduates on alumni relations. Source: Red Brick Research

alongside curricular education and making universities themselves more entrepreneurial. Given the theoretical framework set out in this report, which strictly distinguishes between curricular and extracurricular support and between student and graduate entrepreneurs, we believe there should be greater formal collaboration between university programmes focused on graduate entrepreneurs.

One conclusion from our interviews with university incubator managers is that there is a noticeable lack of collaboration between programmes. Incubator managers did not appear to have a means of sharing data, experiences and good-practices with each other – a problem related to the lack of standardised metrics discussed above. This is despite many managers’ desire to learn from other programmes, and interest from universities without incubators for guidance on setting up and running them.

We note with disappointment that the NCEE mapping survey of 2008, 2010 and 2012 – which identified both curricular and extracurricular entrepreneurship support across the majority of universities – has not run in over four years. The mapping survey was a highly valuable source of information for individual universities and policy makers to find out exactly what kind of support was being offered across the sector. Without an up to date survey, the sector and the government will struggle to understand the breadth and depth of university entrepreneurship support, and to develop proposals to fill the gaps.

## RISING STUDENT DEBT

In view of the continued increase in student debt levels over recent decades (estimated average debt for new graduates has risen from £15,000 to over £40,000 in the past decade) concerns around the impact of debt on graduates’ choices – including but not limited to starting businesses – have become more prominent.<sup>80</sup>

Circumstances in the U.S. set a worrying precedent; there, similarly high levels of student debt have been linked to a fall in business ownership among young people, with one survey finding that half of millennials see their student debt as a barrier to entrepreneurship.<sup>81</sup> If debt is causing graduates to defer or even abandon their plans to go into business, then any form of university entrepreneurship support that fails to take this into account is unlikely to achieve much.

There are numerous ways in which high levels of student debt might affect graduates’ decisions to go into business. First and foremost, an entrepreneurial final year student or recent graduate with a substantial loan to pay off may consider a regular job a safer option when it comes to level and stability of income. Secondly, even if a graduate does choose to start a business, loan repayments will divert scarce capital away from their business once they cross the earnings threshold, or incentivise them to stay below it in order to avoid repayment. Thirdly, the accrued debt is likely to negatively influence decisions to lend to graduate entrepreneurs, further restricting access to funding.

All of this needs to be taken into account by universities actively assisting graduates in new venture creation. On the one hand, the issue of student debt strengthens rather than weakens the case for graduate incubation programmes. Incubation – by providing direct funding, connecting incubatees with investment and opening doors to finance by boosting credibility – can do a lot to overcome the funding gap.

On the other hand, given the nationwide scale of the challenge, part of the solution may have to come from government. This might include deferral or even forgiveness of student debt for graduate founders, perhaps restricted to businesses that meet fixed targets in terms of job creation and/or revenue growth.

# Opportunities

## INDUSTRIAL STRATEGY AND INCLUSIVE ECONOMIC GROWTH

The current government has committed itself to an Industrial Strategy that aims to “improve living standards and economic growth by increasing productivity and driving growth across the whole country”. Yet while the government has made numerous references to the role of universities in realising the strategy, it does so almost entirely in the context of supporting spin-outs and knowledge transfer. Despite being far more diverse and numerous, graduate startups do not receive a mention. Nonetheless, universities and other higher education organisations should use this opportunity to hammer home the importance of graduate businesses more widely.<sup>82</sup>

Several of the Industrial Strategy’s “pillars” point to a significant role for graduate entrepreneurs and the universities supporting them, such as “supporting businesses to start and grow” “creating the right local institutions” and “driving growth across the whole country”. Given the strong association between being a graduate and starting a high-value business, and the considerable room to increase the graduate startup rate, the government should prioritise boosting universities’ ability to support graduate entrepreneurs.

While we acknowledge the importance of spin-outs in commercialising university research and generating high-growth businesses, spin-out numbers are minute compared to graduate startup numbers and restricted to companies with a scientific or technological basis. Only one-third of universities report supporting spin-outs, compared to two-thirds that support graduate startups. If growth across the whole country is desired, then supporting graduates to start up businesses in a wide range of sectors – from food & drink and fitness to social enterprise and the creative arts – could reap immeasurable benefits.

Related to growth across the country is having local institutions that can drive that growth, and by supporting graduates to start businesses through incubation universities can play that role. Universities are already spread out across the country, in cities as well as in coastal and rural areas, and by taking into account all of them – as opposed to the minority with a reputation for commercialisable research – the total impact of university entrepreneurship support could be substantial.

## BOOSTING LOCAL GRADUATE RETENTION

Related to the Industrial Strategy and inclusive economic growth is the issue of local graduate retention. If local growth is to be stimulated and the UK’s regional economic imbalances addressed, then universities – particularly those in less prosperous areas – need to hold on to talented graduates.

Rural and coastal areas particularly struggle to do this, but so do most other cities, including Nottingham, Birmingham, Leeds, Southampton and Bristol.<sup>31</sup> London on the other hand not only has the highest graduate retention rate (77% stay compared to second place Manchester’s 52%) but also attracts almost a quarter of all moving graduates (see table 5).<sup>83</sup>

Helping more graduates start businesses, particularly via incubation programmes, could be a way for universities to address this problem. By offering aspiring graduate entrepreneurs free or low-cost workspace and high-quality business support, university incubators immediately increase the attractiveness of staying in the local area, at least for the initial incubation period.

By pointing incubatees towards local support programmes, investors and business networks once their time in the incubator is up, universities can also increase the likelihood that graduate entrepreneurs stay put in the longer run.

As the Centre for Entrepreneurs’ report on entrepreneurship in seaside towns found, the shallower markets and relative isolation of non-urban areas can be compensated for by the lower cost of doing business and higher quality of life, particularly in an increasingly digital (and hence networked) economy where location is increasingly irrelevant for many businesses.<sup>84</sup>

## PARTNERSHIPS BETWEEN UNIVERSITIES, THE PRIVATE SECTOR AND LOCAL GOVERNMENT

While almost every single university has graduate entrepreneurs who would benefit from incubation, not all universities have the necessary resources to provide it. Fortunately, there are various ways in which universities can work with others to leverage funding and other resources to offer their graduates high-quality business incubation. Our research hints at a plethora of possibilities, including partnering with private sector schemes (such as commercial incubators and coworking spaces), local government (including local authorities and local enterprise partnerships) and other universities (by setting up multi-institution programmes).

For example, Oxford’s **Startup Incubator** partners with Wayra to offer incubatees access to acceleration and additional workspace, while Columbia University’s graduate entrepreneur scheme (see page 32) is based in one of [coworking company] WeWork’s Manhattan buildings. **BSEEN** works with the Greater Birmingham & Solihull Local Enterprise Partnership to give its ventures added support (though it is funded by the EU rather than the LEP) while both the **BSEEN** and **SETsquared** programmes are delivered by several universities in partnership.

Such collaboration should be replicated and deepened in order to maximise the number of universities that are able to run graduate incubators. For example, more universities should consider partnering with private sector incubator and accelerator programmes such as Entrepreneurial Spark<sup>85</sup>, and encourage graduates to apply. Several British universities have partnered with coworking companies to offer local businesses space and support. Cambridge’s Trinity College<sup>86</sup> and Imperial College<sup>87</sup> for example

have both partnered with Central Working to build new shared workspaces on campus.

As well as providing space for existing businesses, both spaces will nurture and support graduate businesses. Following these examples, universities could make provision of space for graduate startups a condition of any such deals they strike.

There is also substantial room for innovation in university/local authority joint incubation of graduate startups. Given the boost to regional growth that a greater number of locally based graduate startups could generate, local authorities and local enterprise partnerships (LEPs) should consider partnering with university incubators themselves, or targeting graduates for business support programmes they already run. As Nesta's recent study of incubation and acceleration highlights, while only five out of England's 39 LEPs do not contain an incubator, the distribution of incubators among existing LEPs is highly skewed, with 29 in London and 13 in Oxfordshire but only two or less in 15 LEPs.<sup>88</sup>

Last but not least, universities located in reasonable proximity to each other could consider joining forces to offer a single incubator scheme. While resources are always at a premium (and while unique programmes might often be preferable), there are plenty of ways for universities to offer graduates incubation without establishing their own incubators.

## HIGHER EDUCATION REFORM

Another area where the government is pursuing major policy reform is the higher education sector itself. As with the Industrial Strategy, while posing challenges this will also create opportunities to improve how the sector interacts with graduate entrepreneurs.

To start with, the government wants to improve the quality of information available to prospective students, reduce poor employment outcomes and skills mismatches, and boost social mobility. One measure it proposes involves linking "higher education and tax data together to chart the transition of graduates from higher education into the workplace better" to give students "information about the rewards that could be available at the end of their learning".<sup>89</sup>

While this type of analysis was recently conducted by the Institute of Fiscal Studies to examine graduate earnings over time, their study did not cover freelancers or business founders.<sup>90</sup> The government should ensure that its version includes these as well as traditional employment, as existing data on the long term prospects of graduate entrepreneurs (such as the DLHE) is not sufficient.

As for poor employment outcomes and skills mismatches, raising the standard of university support for graduate entrepreneurs would help address both issues. Unemployed graduates willing but

EMPLOYMENT STATUS	AVERAGE SALARY (£)		% OVER £100,000		% UNDER £10,000	
	6 months	3 years	6 months	3 years	6 months	3 years
Self-employed	26,897	29,549	1.2%	1.5%	13.9%	17.5%
Own business	27,242	31,229	1.4%	3.8%	9.5%	17.6%
Employed	24,056	28,463	0.2%	1.3%	6.7%	3.9%

Table 3. Graduate salaries broken down by employment status. Source: DLHE

GENDER	EMPLOYMENT CONTRACT		SELF-EMPLOYED/FREELANCE		STARTING UP OWN BUSINESS	
	6 months	3 years	6 months	3 years	6 months	3 years
Female	75.7%	90.0%	3.9%	4.5%	0.5%	1.0%
Male	72.0%	87.8%	5.4%	5.4%	0.9%	1.5%

Table 4. Graduate employment status broken down by gender. Source: DLHE



unsure of how to start their own businesses would have a better chance of success in a university incubator, and this also applies to aspiring entrepreneurs stuck in jobs they are unsuited or overqualified for.

As our analysis of the DLHE reveals (see table 3), business founders earn more on average than employees, so by increasing the graduate entrepreneurship rate universities could also boost graduate earnings. For graduate entrepreneurs stuck on low earnings (another trend visible in the table) an incubator programme could help them escape this rut or transition out of entrepreneurship if running a business is not for them. Incubation could also play a part in remedying the gender imbalance in graduate entrepreneurship, as seen in table 4.

Entrepreneurship also has a major role to play in boosting social mobility. While a graduate's ability to find a job is heavily dependent on the university they attended, their subject area, grades, previous work experience and – despite attempts to limit discrimination – their ethnicity, gender and connections – this is less true of starting a business. If a graduate has a promising idea and the right level of motivation, then with the appropriate support from their university, he or she may do far better than they would have done in the job market.

Finally, the government's higher education reform plans also involve large changes to the sector's "regulatory architecture".<sup>91</sup> HEFCE will be abolished along with various other public bodies, to make way for the Office for Students (OfS) and UKRI. UKRI is of particular interest, because in taking over HEFCE's research functions it is likely to be the future distributor of HEIF funding (or whatever replaces HEIF) and the administrator of the HE-BCI survey (or whatever replaces it).

While uncertainty around HEIF funding was mentioned as a challenge earlier in this section, its potential renewal or even transformation under UKRI offers the chance to make it much more rewarding to universities supporting graduate entrepreneurs (and not just those supporting spin-outs and/or external SMEs). Similarly, the HE-BCI could be refined to be much more nuanced and robust in how it measures university support for graduate entrepreneurs.

TOP 10	CITY	RETENTION RATE 2013/14-2014/15
1	London	76.9%
2	Manchester	51.5%
3	Belfast	50.4%
4	Birmingham	49.4%
5	Glasgow	46.1%
6	Aberdeen	43.1%
7	Edinburgh	42.2%
8	Middlesbrough	38.4%
9	Newcastle	36.1%
10	Swansea	33.3%

Table 5. Local graduate retention by city. Source: The Centre for Cities

# RECOMMENDATIONS



## UNIVERSITIES

To improve the rate and quality of graduate entrepreneurship, more universities should consider setting up graduate incubator programmes, building on existing ones, or adding a graduate track to incubators currently only serving spin-outs and/or external SMEs. This could be done alone, or in partnership with other universities, the private sector (banks and coworking spaces) or local government (local authorities and local enterprise partnerships).

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Universities not already doing so should consider allocating core funding to graduate incubators. Greater success in supporting graduate entrepreneurs is likely to boost a university's employment outcomes, reputation, attractiveness to future applicants and alumni fundraising.

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Universities should acknowledge the potential role of graduate incubators in boosting local graduate retention. By offering aspiring graduate entrepreneurs free or low-cost space and high-quality business support along with connections to local business networks, graduate incubators can convince more graduates to stay local and boost regional economic growth and job creation.

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An umbrella body encompassing graduate-focused university incubators in the UK should be established, to enable collaboration, good-practice sharing and standardised data collection/performance benchmarking.

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Universities should improve the quality and frequency of their engagement with alumni, as this will increase graduates' willingness to start a business at their alma mater (particularly those away for some time). As our research revealed, many graduates wait several years before deciding to start companies.



## GOVERNMENT

The government should recognise the importance of graduate startups (and not just that of university spin-outs) in realising its policy objectives. Graduate startups are greater in volume and more diverse (sectorally and geographically) than spin-outs, and therefore more likely to drive growth across the whole country. University-managed graduate incubators should be the anchor institutions for this growth.

The government should recognise and embrace the potential of graduate entrepreneurship to contribute to the increased choice, greater social mobility and improved graduate outcomes that are at the heart of its higher education reform strategy. Its plans to update the regulatory architecture of the sector should also reflect this.

Future rounds of Higher Education Innovation Fund (HEIF) funding, or whatever replaces it, should make greater resources available to graduate incubators both new and existing. This may be facilitated by developing an allocation formula that rewards effective graduate entrepreneurship support as well as support for spin-outs and knowledge exchange.

In a context of increased fees, more young people being encouraged to attend university, and the resultant rise in student debt, the government should consider taking action to ensure that this does not suppress graduate entrepreneurship. This might include deferral or forgiveness of debt for graduate entrepreneurs, perhaps restricted to businesses that meet fixed targets in terms of job creation and/or revenue growth.



## METRICS

Existing metrics tracking graduate entrepreneurship (primarily the Higher Education Business and Community Interaction survey and the Destination of Leavers from Higher Education survey) should be made more robust by: tracking outcomes over greater periods of time; distinguishing more effectively between (a) freelancers and registered businesses and (b) student and graduate entrepreneurs; and introducing stricter guidance to the individuals and institutions completing them.

The HE-BCI (or its future replacement) should record who is targeted by university-provided startup support (such as incubation, seed funding and entrepreneurship training), i.e. graduates, students, spin-outs and/or external businesses.

Any future initiatives to link taxation and higher education data (in order to track graduate employment outcomes) should take into account business ownership and freelancing, as well as regular employment.

The Destination of Leavers from Higher Education survey (DLHE) should be upgraded to track graduates beyond the current six month and three year periods. Particularly when it comes to entrepreneurship, many trends in graduate employment take longer to unfold.

The Survey of Enterprise and Entrepreneurship in Higher Education (last run by NCEE in 2012) should be revived and run on a regular basis as a crucial source of information for universities, government and interested observers alike. Future iterations of the survey should establish a much greater distinction between student and graduate support.



# CONCLUSION

**The expansion of enterprise and entrepreneurship education in higher education over the past several decades is a great achievement. We should congratulate universities for acknowledging the value of entrepreneurial students and graduates, not just in terms of starting companies but also for the benefits of enterprising behaviour in their lives and their careers.**

Yet our research shows that while universities are good at training students in enterprising behaviour and engaging them in pre-startup activities, they fall short when it comes to providing graduates with practical business support. The constraints graduate entrepreneurs face are different to those faced by students still nursing ideas, and distinguishing between the two groups is essential to providing effective assistance.

This would not be a problem if graduate entrepreneurs got on fine by themselves. But in reality the gap between entrepreneurial aspiration and activity among graduates is stark. This is a concern because university graduates are better equipped than most to start high-growth companies, and it is startups – rather than market incumbents – that are most likely to take risks and innovate. This in turn drives economic growth, productivity and employment, all of which are key to ensuring the UK's future competitiveness.

To bridge the gap, we believe that more universities should offer incubation to graduate entrepreneurs. The options available to

universities willing to do so are numerous, from setting up new incubators or converting existing non-graduate incubators, to working with the private sector and local authorities to channel graduates towards external incubators, accelerators and coworking spaces.

Not only do we believe that more university incubators should be set up, we also think that programmes should be collaborating far more in establishing common metrics, benchmarking standards and channels for best-practice sharing. There is an opportunity for an umbrella organisation to step-in and coordinate this, and the Centre for Entrepreneurs is keen to explore how this might be done.

While achieving these goals will not be easy, a changing policy landscape – including far-reaching higher education reform and an emphasis on industrial strategy and inclusive growth – offers significant opportunities to place graduate startups high up on the agenda. Above all, we believe that every young graduate with a promising business idea should win the support they need to put it into practice – and who better to play this role than their very own universities?

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