

# Creating an Entrepreneurial Culture in Scottish HEIs

Monday 18<sup>th</sup> January 2016

Organized by the Universities Scotland Researcher Training Sub-Committee

## Introduction

This meeting brought together representatives of universities, research pools and Scotland-wide research and enterprise initiatives (see appendix for the delegate list) to discuss developing an entrepreneurial culture in Scottish HEIs for researchers of all career stages. Our focus was on identifying actions at institutional level and key points to put to the Innovation Scotland Forum for consideration. The talks were interesting and diverse, stimulating a wide-ranging discussion.

A few key issues chimed with all delegates at the Forum:

- Teaching of enterprise and entrepreneurship at undergraduate level is a route to driving this culture change throughout very large and diverse institutions, particularly by enabling staff to teach, and then utilise, such skills.
- There is increasing recognition of the value of investing time in developing strong relationships between academics and potential external partners. This recognition enables a focus on encouraging all academics to be outward-facing.
- Not all academics can be experts across all areas that universities are expert. There is a need to allow individuals to excel in their chosen specialism while ensuring this is connected to the broader picture.
- Enterprise and entrepreneurship have to be made relevant to different disciplines, and this includes using accessible language.
- It is important to be mindful that success in terms of culture change, and what that culture brings about, will look different in different contexts.
- Promoting an entrepreneurial mind-set is critical for all researchers.
- Culture change takes a long time and while many universities have started on this, and have examples of good practice, there is a need to allow the culture to develop to suit the unique environment of each institution.

These points have important implications for how we train researchers and how, as institutions, universities enable culture change. Reflecting on a question from one of our speakers – is your *whole* institution ready for the challenge of becoming an entrepreneurial university? I am confident that this is a challenge Scottish HEIs are ready to accept. I was struck by the energy and enthusiasm expressed at the meeting, the Principal-level

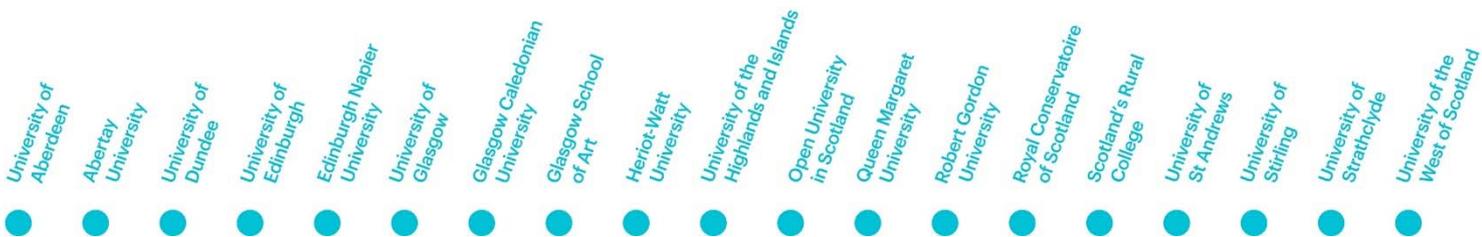
commitment, the support of the Innovation Scotland Forum and Scottish Funding Council, as well as the priority of this issue with Scottish Government.

The following report contains a summary of actions and next steps, a list of questions for the Innovation Scotland Forum and a full set of notes of the talks and discussion sessions.

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Head of Graduate School, Glasgow Caledonian University

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The event was supported by the Innovation Scotland Forum



## Actions

Action	Next steps/updates
<p>To encourage all staff and students to engage with this culture change there is a need to reconsider the language used in enterprise and entrepreneurship. This must be appropriate at a discipline level. There should be work to ensure the language is accessible and relevant (i.e. applying entrepreneurial thinking rather than being an entrepreneur in the traditional sense) to engage across the institution.</p>	<p>This will be an item for discussion, and identifying next steps, at the next RTSC meeting</p>
<p>All HEIs should share best practice in incentivisation of entrepreneurial academics to inform developments in other institutions.</p>	<p>Universities Scotland are currently working on collecting this information and will share this via existing structures.</p>
<p>Delegates were enthusiastic about the potential of utilising the <a href="#">HEInnovate</a> tool and using this to monitor change over time.</p>	<p>Individual institutions will take this forward where appropriate. Individuals are encouraged to contact <a href="#">Fiona Godzman</a> (CEO, Scottish Institute of Enterprise) as SIE is able to facilitate workshops on using HEInnovate.</p>
<p>The potential to share learning and expertise with Further Education (FE) was highlighted as a useful way of understanding good practice.</p>	<p>A recent development of the Innovation Scotland Forum is the agreement to engage with, and include, colleges in this agenda. This is an opportunity for sharing of best practice between HEIs and FE. This will be disseminated via existing Universities Scotland channels and for discussion at the relevant committees to link up this work.</p>
<p>Increasingly academics are embedding enterprise and entrepreneurship skills in their teaching, or working with external partners/specialists within institutions on delivery. These individuals may be appropriate ‘champions’ who can translate this teaching into their research (if not already the case) and influence their colleagues and therefore broaden</p>	<p>This will be an item for discussion, and identifying next steps, at the next RTSC meeting</p>

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-  Heriot-Watt University
-  University of the Highlands and Islands
-  Open University in Scotland
-  Queen Margaret University
-  Robert Gordon University
-  Royal Conservatoire of Scotland
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-  University of Stirling
-  University of Strathclyde
-  University of the West of Scotland

uptake and demonstrate relevance. The potential for a 'champions' model, building upward and outwards from undergraduate education, should be scoped out.	
All attendees should share the outcomes and actions with other staff in their institution (e.g. commercialisation offices) and to discuss how the teams within a university can contribute to bringing about culture change.	This will be done at institution level and via the Universities Scotland mechanisms (including to the Research and Knowledge Exchange Committee).
Where relevant, researcher development teams should investigate collaboration with HEI business schools to develop training.	This will be an item for discussion, and identifying next steps, at the next RTSC meeting.
RTSC will further review implications for training, particularly in terms of 'soft' skills e.g. -the need for 'busting' perceptions of business/industry, -how to support individuals to develop the ability to identify and act on opportunities (e.g. where there is scope for collaboration with industry, where there is scope for trying a new teaching method) and - exploring what does managing a fear of failure/risk-aversion, mean in the context of highly competitive research environments.	This will be an item for discussion, and identifying next steps, at the next RTSC meeting.

This report, and action list, will be shared via Universities Scotland's committees including Research and Knowledge Exchange Committee (RKEC) to help to progress actions arising.

The discussions also touched on areas for further discussion at Innovation Scotland Forum including:

Area for discussion	Recommendation from the Forum
The need to emphasise the importance of long-term policy commitment to enterprise and entrepreneurship; as well	ISF are asked to note this, particularly around the need for flexibility, in future

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as a flexible approach to both implementation of activities to bring about change and measuring success was noted as a critical issue to create a stable foundation from which a long-term approach to culture change could be taken.

discussion and as the action plan is progressed.

It was noted that not all academics will necessarily be entrepreneurs (in the traditional sense) and that not all individuals with entrepreneurial capacity will have the technology or perfect idea, but working together these types of people could be very successful. Working with public sector partners, Is there scope for connecting public sector partners and academics who have entrepreneurial characteristics, and giving them the space to decide if working together is possible?

ISF, with representatives of the various relevant stakeholders such as universities and enterprise agencies, are asked to consider if this could be a valuable/feasible route to progress.

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## Notes of the Policy Forum

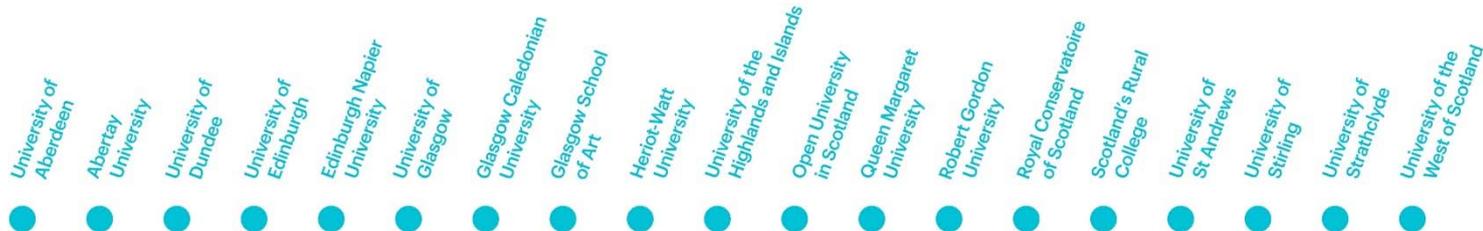
The day featured six talks from expert speakers and two discussion sessions. Below is a brief summary of the key points raised.

### **Enterprise, Knowledge and Universities – *Professor Mike Danson, Herriot-Watt University***

- Knowledge exchange is receiving increasing emphasis as a critical means of growing the national economy, and this was a policy direction seen across many countries.
- The REF (Research Excellence Framework) challenged universities by valuing ‘impact’ at 20% and creating new incentives in the university system.
- The metrics to measure impact must be carefully considered because REF drives behaviour.
- There is a need to understand if enterprise and entrepreneurship is valued university-wide, and valued in the same way across different parts of the university. Having this baseline will enable a better understanding of what the current culture is like.
- The relationship between elements of the university and the marketplace are important to achieve the ambitions of knowledge exchange. This will be partially realised through the commercialisation department so strength in this team is important. Equally the internal reach and visibility of the commercialisation team is important in enabling culture change.
- Researchers are expected to have expertise across a wide-range of skills, including teaching of enterprise skills. Is there a risk of asking too much of each individual? Is there a risk of actually reducing creativity by becoming too prescriptive in each area?
- The students receiving the most enterprise teaching are likely to be in STEM subjects, but these students are likely to apply those skills in industry or require time in industry to gain accreditation. This may reflect STEM academics having more experience of enterprise. However, these efforts may not reach those students most likely to set up their own businesses soon after graduation, or to begin on a less clear career path. There is a need to ensure such skills are delivered to all students.

### **Building an Enterprise Culture, and Delivering Results – *Grant Wheeler, University of Edinburgh***

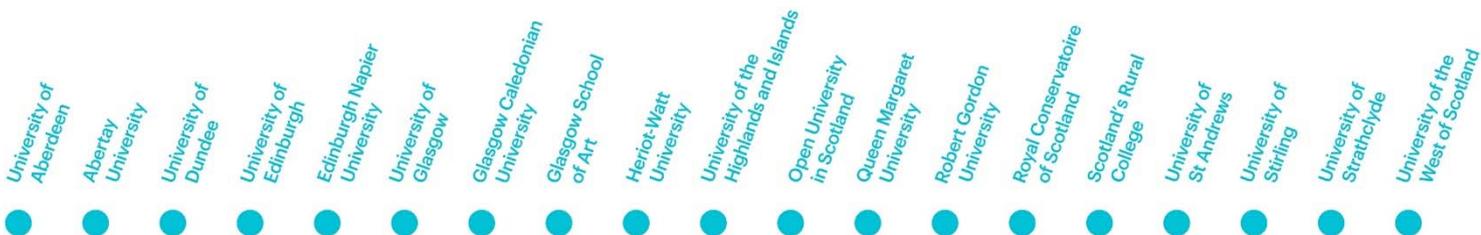
- There is a need to recognise the organic nature of culture. This can be supported and enabled but there is not a simple directive to drive culture change or development.
- The University of Edinburgh began at the level of student enterprise and this grew upward to postgraduates and through these peer networks to early career researchers/postdocs too.
- Interestingly many of the best ideas come from ‘side projects’ where postdocs have a by-product idea rather than an idea generated from the main focus of their research.
- There is a lot of enterprise activity across the city of Edinburgh – including professional networks and private sector contributors. This is a strength but necessitates good management to ensure individuals can access the right support, at the right point with ease.



- All universities are different in terms of scale and available funding for enterprise activities. Collaborating to provide Enterprise Campus has arisen from identifying an opportunity where partnerships would be valuable. Enterprise Campus is available to post-graduate students only. A benefit of this career stage focus is that it presents less of an IP challenge.
- There is a need to rethink enterprise and understand that this does not necessarily arise purely from translational projects. Enterprise is pervasive – there is no one-size fits all approach. Universities should work as a major part of the local economy to develop these ecosystems.

**Universities are from Venus, Industry is from Mars... How do we meet together on Earth?  
– Roger Kilburn, Industrial Biotech Innovation Centre**

- Innovation Centres are led by industry and look to create a conducive environment for transforming university research to economic impact.
- Companies are hugely varied with their own markets and technologies but are broadly divided based on size.
- Large, multinational companies tend to be able to look longer term with shareholders investing over at least a 5 year timeframe. They are more risk-averse, value stability and have their own drivers to demonstrate ethical behaviours (eg corporate social responsibility).
- SMEs need a quick turnaround, with seed investments usually only covering up to 3 years, creating a pressure to deliver results over a short timescale. Cash flow is central so the need to hit milestones and demonstrate rapid growth drives behaviour.
- A number of key uncharitable myths held by the two communities were explored – ranging from the high-pay, unlimited resource, total freedom of activity, unethical perceptions of industry to the precious about position, publication driven, insulated from reality academic. He advocated the need to be aware of this, in order to be able to drive culture change. The groups work together, and effectively; however, this is not system-wide. There is a need to acknowledge the perception barrier in order to widen the pool of contributors to enterprise activities in universities.
- Taking a look at a simple linear model of innovation shows that companies are interested in the beginning and the end (i.e. the problem, and implementing a solution that creates value), whereas many academics are more interested in the challenge, ideas and process of solving a problem. Similar to perceptions, an understanding of what is valued is key to helping different groups work together.
- Given these differences, a few key tips were noted for making this relationship work:
  - regular communication
  - being explicit and open about drivers and time frames
  - agreeing cost, IP and publication rules at the beginning of a project.
- Universities should also consider the ‘sales’ aspect. As a ‘seller of ideas’ how should the service user be treated? How does this relate to the bigger picture? There is value in starting small, ensuring a good experience and growing a relationship in order to capitalise on bigger opportunities.



## Discussion session

The delegates broke into groups with the aim of discussion being the broad drivers of culture change and looking to better understand barriers and enablers, and potential actions to lead to culture change.

### External-facing

- There is a need to bring together the different groups (academic groups, enterprise support and companies) that could work together more systematically, in order to create the environment for conversations that build trust and create the foundations for long-term collaboration.
- There was a discussion about being outward looking – both in terms of Scottish businesses and universities. Is there a risk of driving too much of a local focus and not encouraging companies to aim to grow outside of Scotland, or to create an environment where universities focus too strongly on businesses in Scotland?
- How does the wider environment impact on university research culture? The fear of failing and reluctance to self-publicise need to be redressed.
- How can universities and colleges share best practice? There was a perception that business school curricula focus on corporate not SME management. Therefore this informs the expertise/experience in universities. Further Education Colleges link with local businesses and produce new business owners (particularly at the SME level) and while there may be different approaches/foci, this expertise is something that universities could learn from.
- Enterprise Campus was noted as having achieved wide-support and was demonstrating early signs of impact. There was some discussion about broadening this model to reach more individuals in universities.

### Internal culture

- ‘Entrepreneurial’ or ‘enterprise’ may not be the best banner as this may be isolating language for staff and students, particularly in those non-traditional subject areas.
- Enterprise/entrepreneurship must be pervasive and there is a need to link up with schools/Curriculum for Excellence.
- Academics need freedom to pursue their ideas – be it engaging with external groups, other researchers or trying something new with their teaching.
- There is a need to better understand conversations with industry and to measure and track progress with industrial partners (e.g. could use Content Records Management systems better), as well as having a mechanism to share relevant information across the sector.
- There is a need to accept that not all academics can be experts across all fields and therefore it would be beneficial to maximise the ‘human resource’ of different academics working together.
- The short-term nature of academic contracts was noted. At the level of having a 12-18 month contract, is it possible to commit to culture change? How are early career



researchers engaged with this change in the context of these time pressures and lack of security?

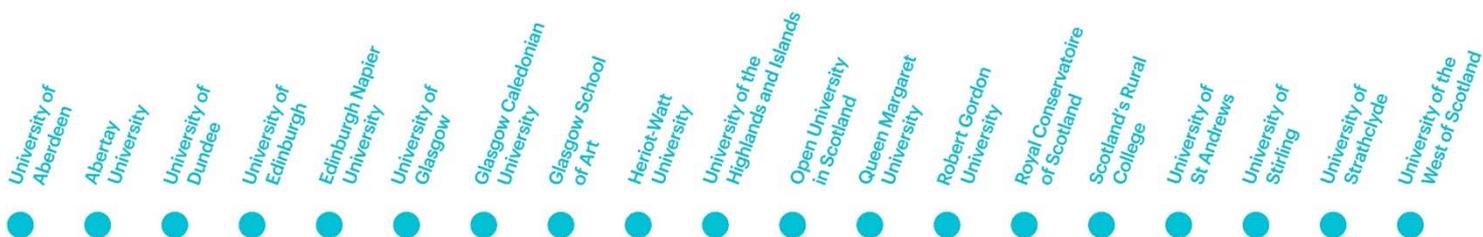
### **The Scottish policy environment – *Dr. Stuart Fancey, Scottish Funding Council***

This is a highly topical area and Dr. Fancey flagged some key recent developments:

- The UK Government has recently released a Green Paper (Fulfilling our potential: teaching excellence, social mobility and student choice) which sought changes across many aspects of higher education, primarily in England but with impact on the Scottish system.
- The Nurse Review has reported and Innovate UK will be formally joined with the UK level research governance structures.
- Scottish Government was clear on the centrality of innovation to inclusive economic growth as indicated in Scotland’s Economic Strategy, and the CAN DO innovation and entrepreneurship strategy. Furthermore, 2016 is the Scottish Government’s Year of Innovation, Architecture and Design which is an additional area which demonstrates the priority afforded to this topic.
- In the recent budget announcement the Deputy First Minister was clear in the need for innovation reform and this was therefore an opportunity for HEIs, with partners, to make an impact on the future of innovation in Scotland
- A recent development was the change of the Scottish Funding Council Knowledge Transfer Grant (KTG) to the Universities Innovation Fund (UIF) which would encourage universities to work together to deliver improvements to the innovation system and move away from the competitive, metric-driven nature of the KTG.
- Education of students is critical – to prepare them for the modern world of work where they will have many employers, or indeed careers. To achieve this effective education, it is vital that academic staff value enterprise and that this is demonstrated through their research and teaching.

### **Designing Enterprise & Entrepreneurship at the University of Dundee – *Alasdair McGill, University of Dundee***

- The University of Dundee have embarked on a journey to raise enterprise and entrepreneurship throughout the institution, with a senior strategic post created and buy-in from the Principal and his team.
- The initial development of the strategy focussed on listening – understanding what students, staff, and businesses want; and what works in this particular institution. There were pockets of good practice but not a system-wide approach.
- There is a need to have clear language and to explain what enterprise and entrepreneurship are. These words can be difficult, inaccessible words for staff and they may struggle to see the relationships with both enterprise and entrepreneurship and their research and teaching activities
- A critical issue is keeping graduates in touch with Dundee and making sure they know they can come back for support, and that they can return and contribute. Returning



alumni could potentially realise a huge value for both their own careers, and for staff and students.

- There are plans to build from the undergraduate experience up to researchers, and to develop this culture throughout the city. Changes in Dundee with the V&A Museum of Design and the prominence of design inside the city, presented a real opportunity for a city-wide change. The approach taken within the university has been to promote design-led thinking as part of enterprise/entrepreneurship education, and rolling this out across the schools to make the relevance of these skills clear to all participants.

### **Creating an entrepreneurial university: integration across research, teaching, engagement and impact - *Professor Eleanor Shaw, University of Strathclyde***

- Universities are large and diverse institutions. So it is a challenge that all parts have to be ready for, to create an entrepreneurial university.
- The academic profession is rigorously assessed, creating competing drivers in the system – but all academics are entrepreneurial by default. Every academic balances demands on their time, needing to build expertise across a range of areas and working, inevitably with constrained resource.
- There are therefore a lot of opportunities and the need for staff to think like an entrepreneur is important. This includes open doors to listen to external partners and flatter structures to create space for creativity.
- There are key ingredients for an entrepreneurial university but each institution will have a very different combination and emphasis:
  - Leadership – there must be a top level commitment to give permission for staff to be entrepreneurial, otherwise the outcome will be isolated pockets of good practice.
  - Creativity and acceptance of failure – there is a need to allow everyone involved in universities to feel they can try new things and that failures are learning opportunities.
  - Incentives – there are a lot of drivers within universities, and a lot of potential focuses and measurements for individuals to match up to. This means that knowledge exchange must have benefit to the academics but this does not necessarily have to be income-based. Benefits such as boosting research capacity or as a source of ideas can motivate academic staff.
  - Structure – there is a need to create the structures to nurture talent (e.g. incubators, enterprise pathways for post-graduates) and to express the benefit of entrepreneurial activities. Similarly to a desire to have beneficial impact, staff and students can be motivated not just by social enterprise but also by the social and cultural benefits of their economic impact. Visibility of role models, awards, and celebrating success (by different measures) is an important structural mechanism of reaching out across an institution.
  - Outward – the university funding system creates drivers and this can be a barrier to a long-term approach. However, as the external environment changes, the value



of relationships is becoming clearer and this should enable academics to invest effort in such activities.

- Accreditations – there is a value to working towards accreditation/kite marks to demonstrate legitimacy and credibility on a world stage.
- There is value to learning from international examples but this must be used to inform developments in Scotland – allowing HEIs and public agencies to pick the best and bring it back, remodelling as required for the Scottish context.

## Discussion session

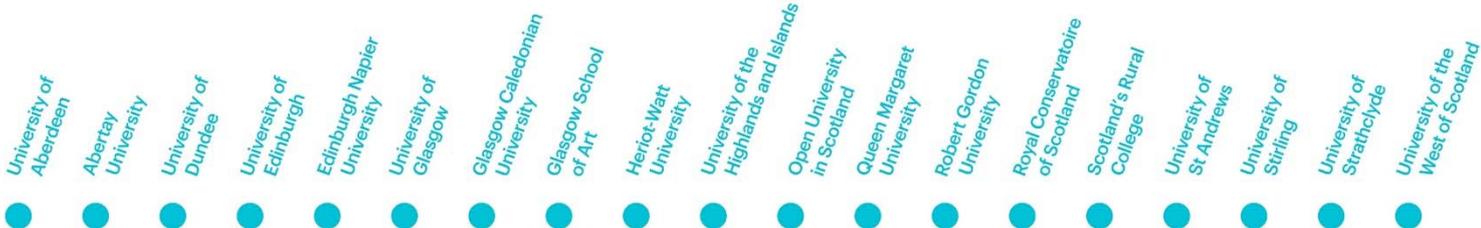
Delegates broke out into groups to discuss the previous two, more institutionally-focused talks and to think about what could be taken forward at an institutional level.

### *Cross-sector and national*

- A key issue from the discussion of national level recommendations was the crucial importance of stability – both in terms of funding to enable planning and commitment to a long-term change, and a commitment to enterprise and entrepreneurship as a long-term national priority.
- It was felt there was possibly more work to be done on incentivisation, be it through REF/assessment structures directly to academics, or for universities and external partners at an institutional level.
- The importance of investment in research was highlighted, and the risk of diverting support from research to application was flagged as concerning.
- The national versus institutional approach was discussed, and generally it was felt that national structures worked best when ideas were generated by the sector and that the diverse nature of institutions, and the cities/regions these operate within, did not lend themselves to a one-size fits all approach.
- Critically, it was noted that support is required to increase activity and that resource constraints could limit progress.

At an institutional level the following key items were raised:

- Scottish HEIs are excellent at research so the raw materials are there.
- The value of enterprise needs to be emphasised to all staff and students, but this needs to be tailored at discipline, not just at institutional level.
- There is a need for space – both time and investment in the physical structure – to bring together diverse groups.
- There is scope to consider the development of ‘champions’ within institutions.
- There is a need to consider ‘what does success look like’ and to see this differently across an institution, not just across the sector. Measures of success therefore need to capture, and celebrate, this diversity.



- Removing the fear of failure for students and staff is important, and this also has to track into institutions having the freedom to try (and evaluate) new ideas/programmes.
- Could there be a mechanism for matching entrepreneurs (or those with the skills) with researchers with the ideas? An issue is expecting academics to excel in each function of a university. Perhaps bringing together skill sets would be a better way forward.
- HEInnovate was noted as a resource to assess the level of enterprise and entrepreneurship in an institution and many attendees expressed an interest in testing this within their institution.

*Thanks to our speakers and delegates for their contributions to the day*



## Delegate List

Name	Institution
Elizabeth Adams	University of Glasgow
Stuart Anderson	University of Edinburgh
Dr Lisa Anderson	University of Dundee
Libby Anson	Glasgow School of Art
Heather Asiala	University of Strathclyde
Prof William Austin	University of St Andrews
Grainne Barkess	Edinburgh Napier University
Prof Steve Beaumont	University of Glasgow
Neil Bowie	University of Dundee
Anna Bradshaw	Universities Scotland
Prof Verity Brown	University of St Andrews
Prof Ian Bryden	University of the Highlands and Islands
Prof Simon Burnett	Robert Gordon University
Inga Burton	Highlands and Islands Enterprise
Ewan Chirnside	University of St Andrews
Catie Craig	University of Aberdeen
Dr Rob Daley	Heriot-Watt University
Prof Mike Danson	Heriot-Watt University
Dr Stuart Fancey	Scottish Funding Council
Veronica Ferguson	Converge Challenge
Carolyn Fishman	Scottish Government
Dr Alicia Greated	Heriot-Watt University
Dr Ed Hall	University of Dundee
Prof Dee Heddon	University of Glasgow
Jude Henderson	Scottish Graduate School for Arts & Humanities
Dr Joe Irvine	University of the Highlands and Islands
Claire Jackson	University of Strathclyde
Dr Siobhán Jordan	Interface

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Dr Roger Killburn	Industrial Biotechnology Innovation Centre
Christian Killow	University of Glasgow
Mary Beth Kneafsey	University of Glasgow
Carol Langston	University of the Highlands and Islands
Prof Alex Law	Abertay University
Lucy Leiper	University of Aberdeen
Ann Lewendon	University of Aberdeen
Natasha Lobley	University of Edinburgh
Sophie Lowry	Scottish Funding Council
Alasdair McGill	University of Dundee
Ruth Meyer	Universities Scotland
Dr Eleanor Mitchell	Scottish Enterprise
Alyson Murray	University of Stirling
Prof Tim Newman	University of Dundee
Prof Iadh Ounis	University of Glasgow
Dr Sandra Oza	University of Dundee
Michelle Paterson	University of St Andrews
Prof David M. Paterson	University of St Andrews
Prof Neville Richardson	University of St Andrews
Prof Philippa Saunders	University of Edinburgh
Josh Sauter	University of Strathclyde
Prof Eleanor Shaw	University of Strathclyde
Prof Bonnie Steves	University of Glasgow Caledonian
Diane Taylor	University of Dundee
Prof Catriona Tedford	University of West of Scotland
Grant Wheeler	University of Edinburgh
Dr Nia White	Abertay University
Stephen-Mark Williams	University of Strathclyde
Dr Nik Willoughby	Heriot-Watt University
Andrew Youngson	Scottish Funding Council
Dr Craig Young	University of Strathclyde

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