STAGE: A Shared TTO to Accelerate the Growth of Self-Funded Spinouts

Gavin Clark

University of the Arts, London

Mark Mann

Mark Mann Limited

Julian Jantke

Kindling Ventures

Syahirah Abdul Rahman

Oxford Brookes University

Iva Sýkorová

Kindling Ventures

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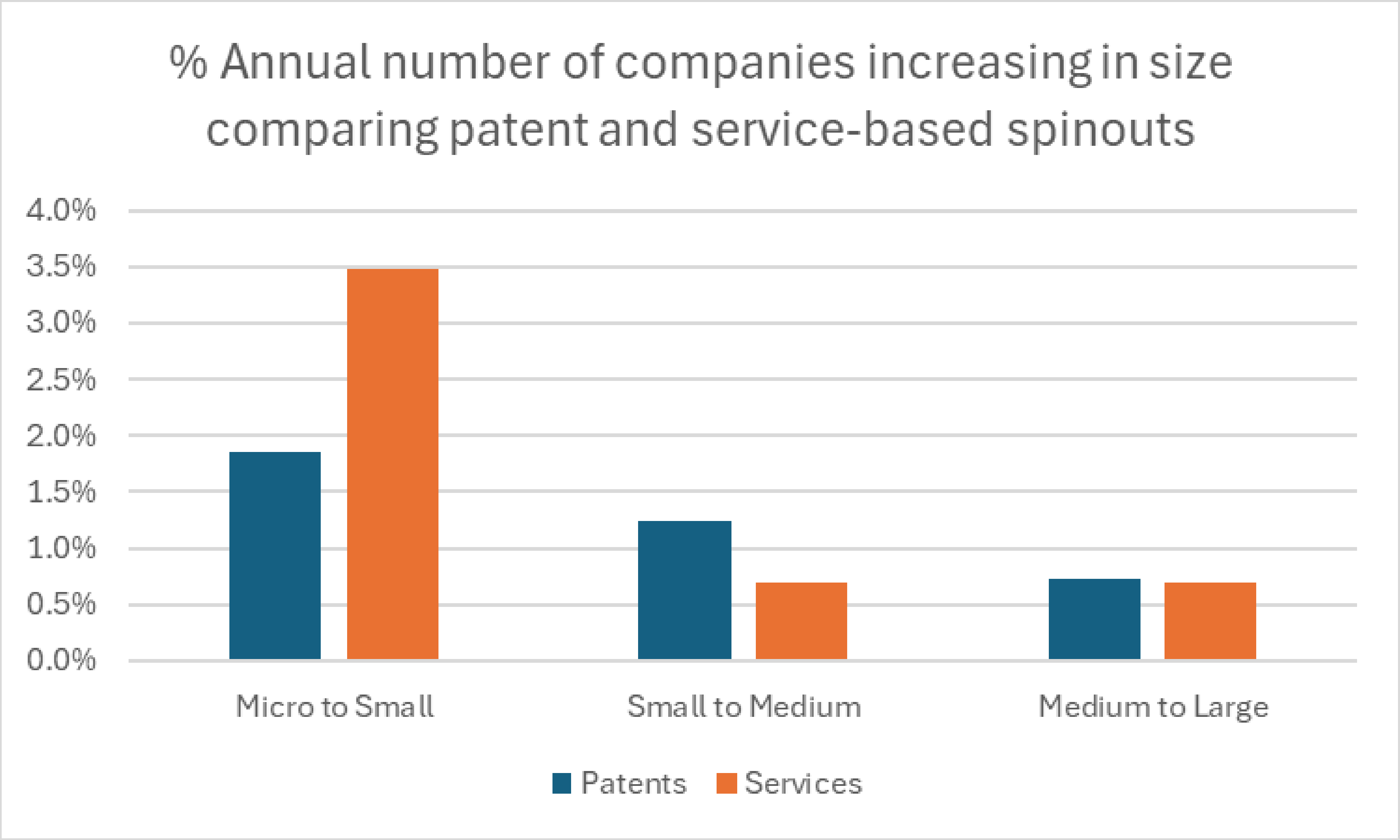
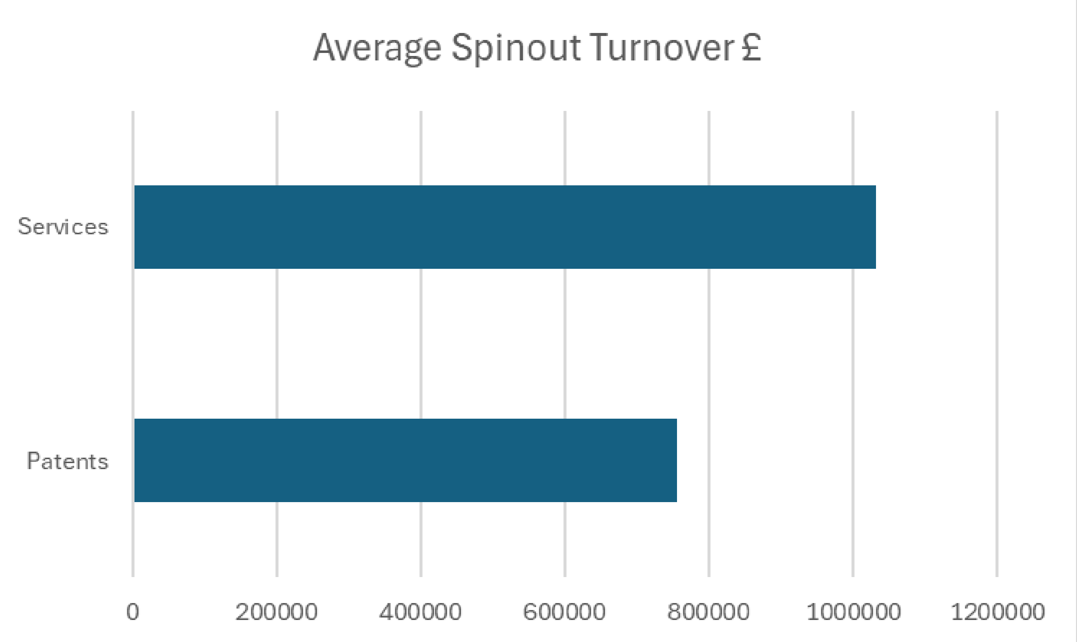
UK Service-based spinouts compared with patent-based spinouts – missing a trick?

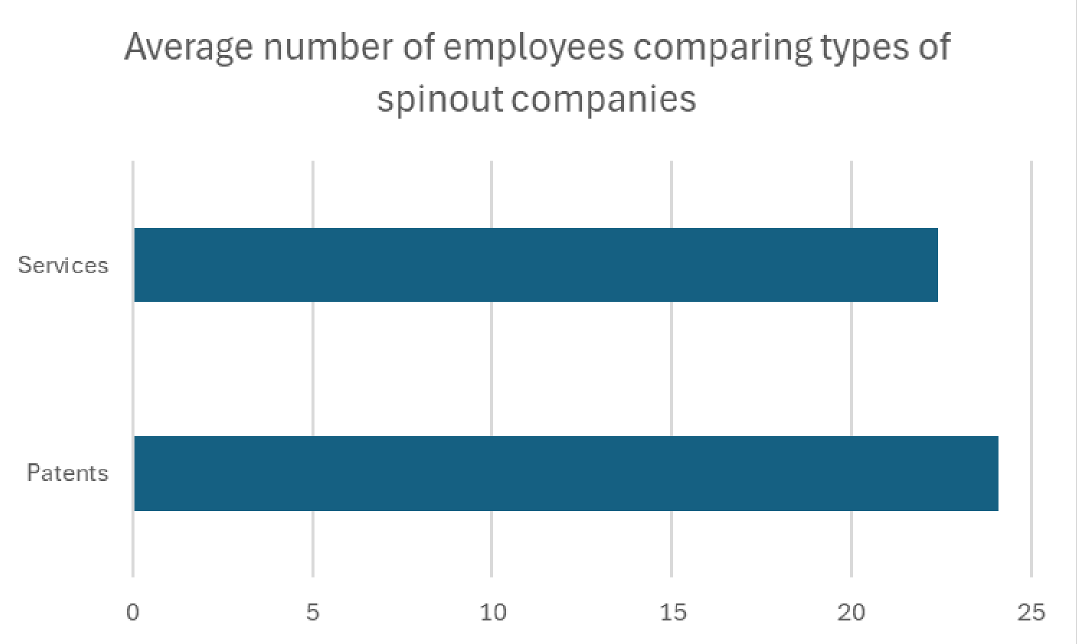
Services-based spinouts are twice as likely to grow from micro to small companies, but half as likely to grow from small to medium companies when compared with patent-based spinouts. Overall, these effects balance out and both are just as likely to convert from medium to large companies.
The average turnover a services-based spinout produces is actually higher than the average a patent-based spinout produces.
Service-based spinouts generate virtually the same number of jobs as patent-based spinouts (22 jobs generated compared with 24 jobs respectively). Overall, this means the metrics of service-based spinouts are broadly comparable with patent-based spinouts.

*133 service-based spinouts compared with 401 patent-based spinouts of equivalent age.

UK data







Data sourced from https://datagardener.com/ and the HESA spin-out register

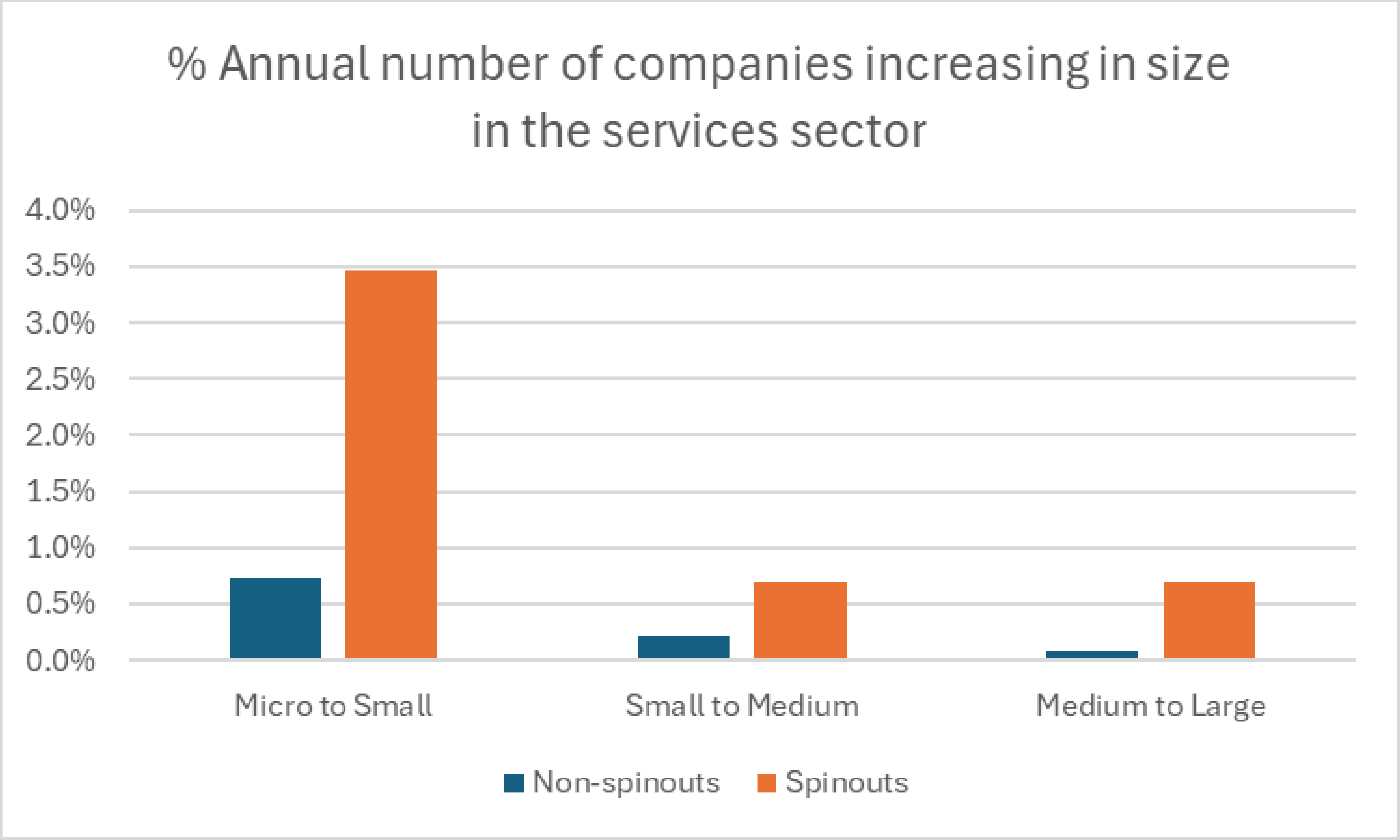
Service-based spinouts compared with the wider UK economy

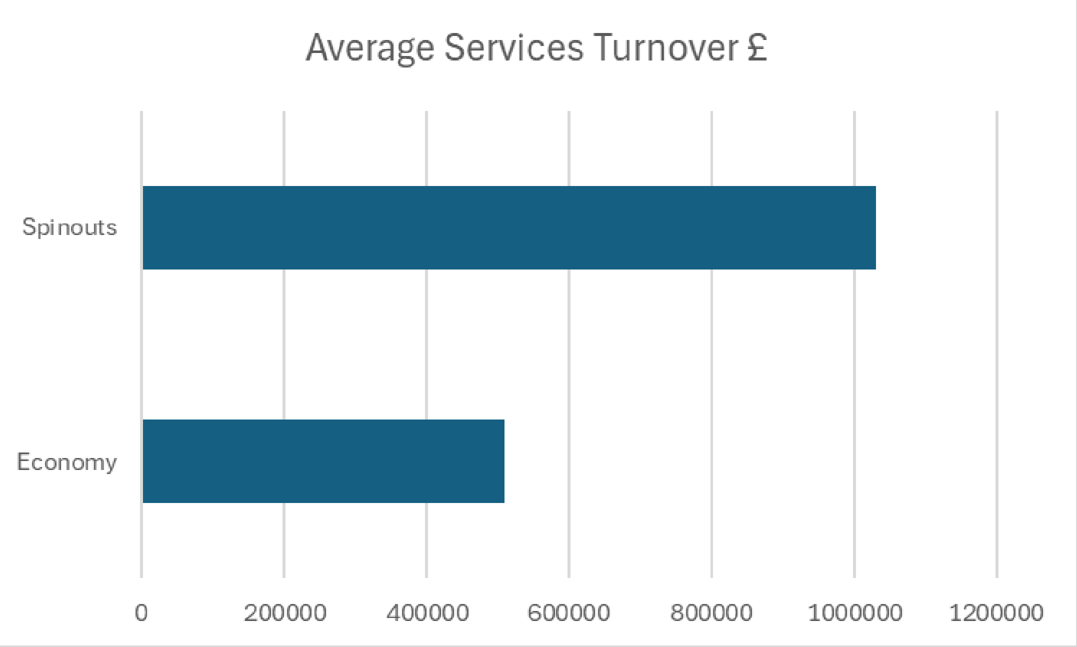
Services-based spinouts are on average 5x more likely to grow at every stage than comparable companies in the economy at large.
The average turnover a services-based spinout produces is double that of equivalent companies in the economy at large.
An average services-based spinout generates 22 jobs whereas only 5 are generated in the economy at large.

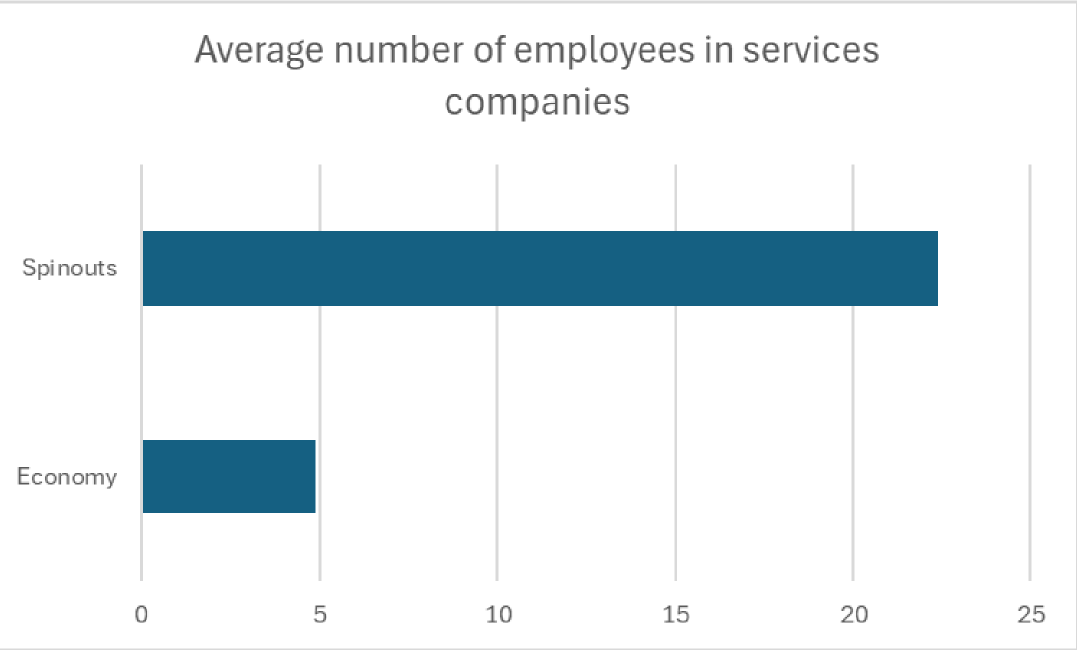
Services-based spinouts are dynamos for job creation and economic growth.

*133 spinouts compared with 289,000 companies with equivalent company descriptions

UK data







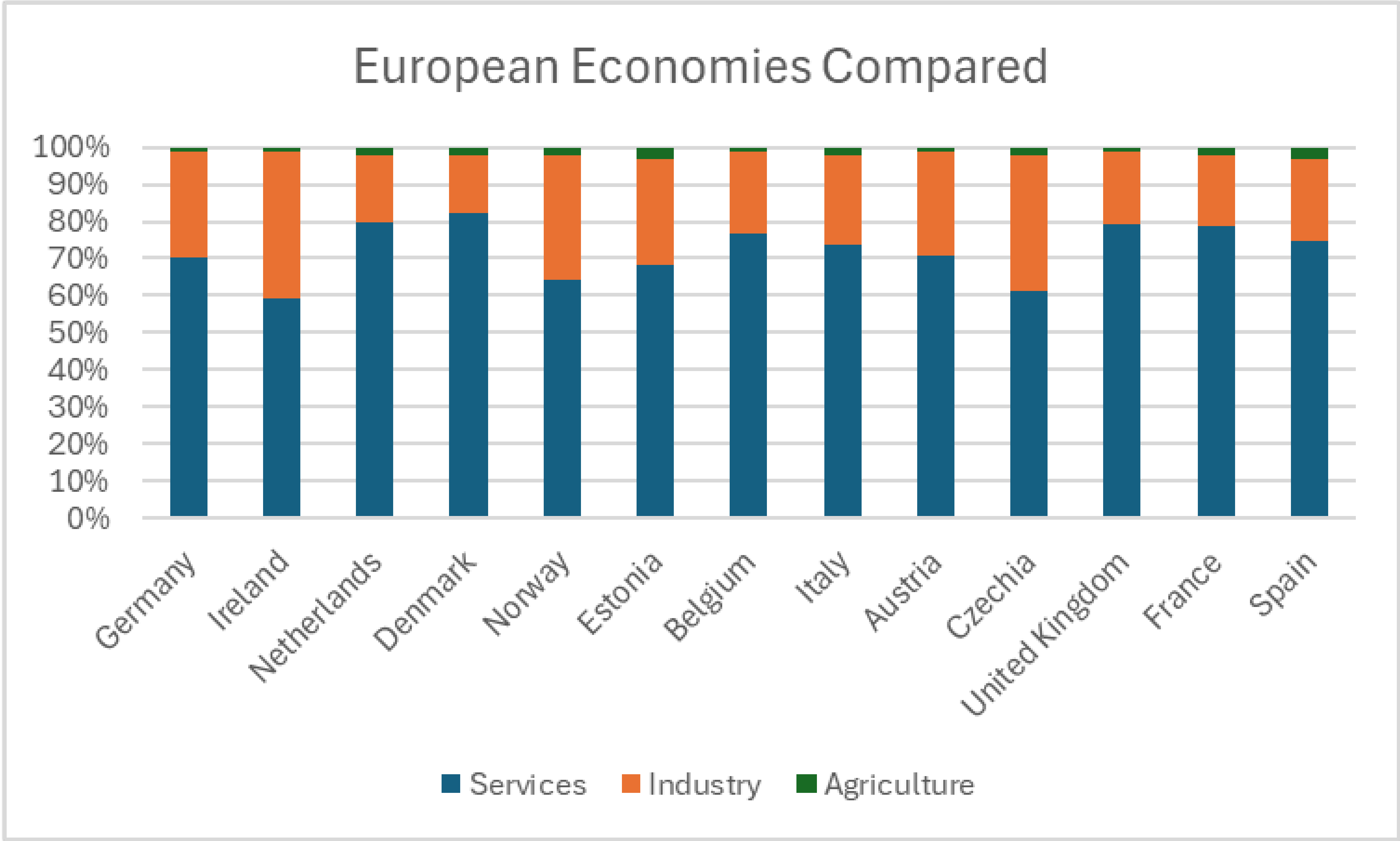
Data sourced from https://datagardener.com/ and the HESA spin-out register

UK economy compared with EU economies

The companies universities produce are dominated by high-tech industry companies. Yet all European economies are dominated by services.

The composition of all economies are broadly similar. In the UK the key agenda is jobs and growth. The first two slides show in the UK university-sourced growth is most likely to come from services. Maybe this is the case in the EU too?

*taken from the latest published economic data



The key problem statement

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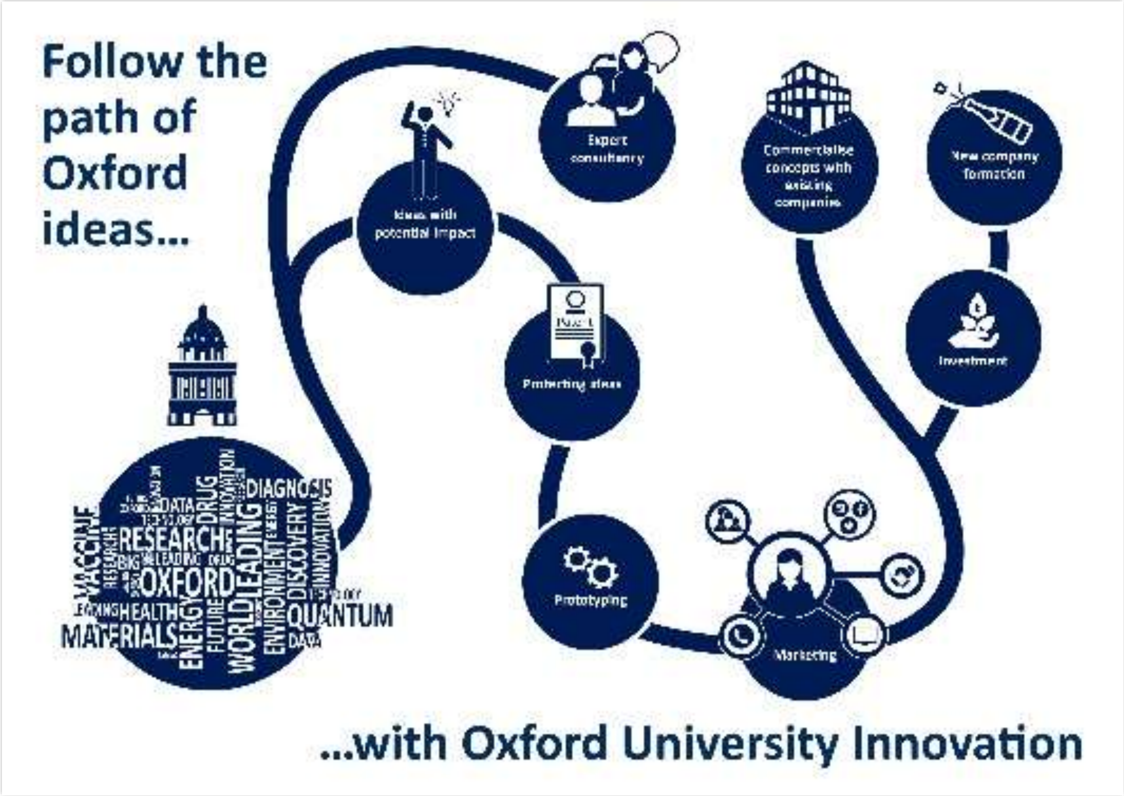
Spinouts with hard IP – patents, licences, silicon, drugs, stuff…



This is the route to creating something that goes to the industry sector

Spinouts with soft IP – guides, methodologies, services

No patents or IP protection first

Need to develop a service or product & expertise & network to do it

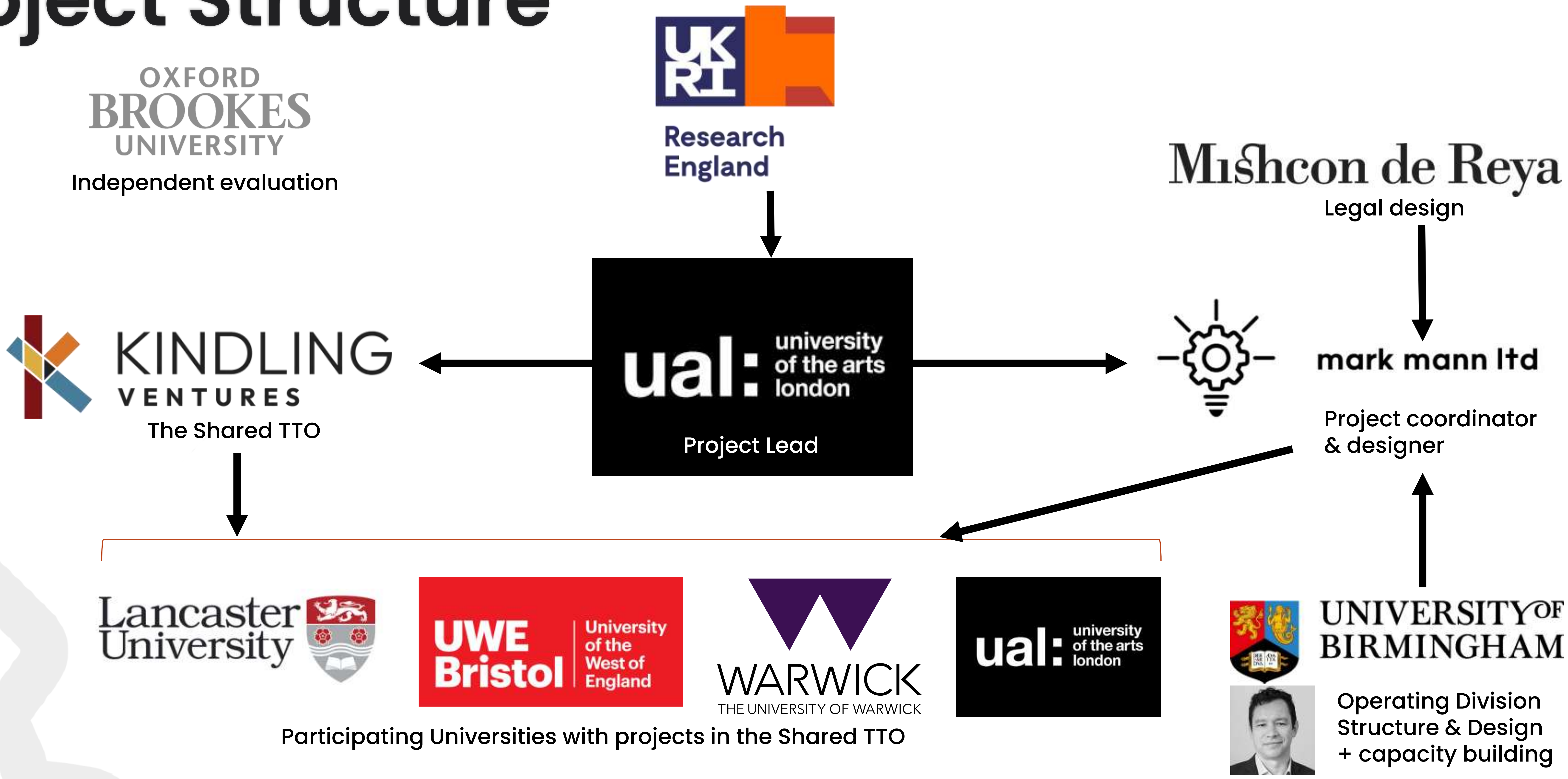
Then need to pilot it in the market

Universities are not set up to do short-term quick contracting in multiple markets and domains

Aims of the project

1. A virtual business unit for pre-incorporated trading
2. Providing business mentoring and support for the ventures
3. Insight and intervention cost data for projects in the unit at all stages

Project Structure



How does it work?

Master Services Agreement

KINDLING VENTURES

- Project Development
- Qualitative & Quantitative Research
- Market Insights
- Training of Academics
- Enables pilot trading with projects supported through agreement
- Covers warranties & liabilities
- Covers all options on what to do once a project finishes
- Signed by University
- Enables university project managers to sign individual schedules of work

Customer

How does it work?

Master Services Agreement →

Schedule of Work →

IP (licensed for duration of SoW) →

Consultancy Agreement →

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Contract → Customer

↑ Consultant & Project Managers

↑ Services & Materials

How does it work?

Master Services Agreement →

Schedule of Work →

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Contract → Customer

£(payment) ←

↑ Consultant & Project Managers

↑ Services & Materials

What happens next?

Either Kindling keeps the profits to reinvest for another iteration through a new Schedule of Work, or…

Everything goes back to the University

How does it work?

KEY BENEFIT

One contract per University to cover ALL project development

Once signed, SoW easy to complete

Master Services Agreement

~~Schedule of Work~~

~~IP (licensed for duration of SoW)~~

~~Consultancy Agreement~~

New IP (assigned to University)

£(profits to University)

Documents & Deliverables

KINDLING VENTURES

- Project Development
- Qualitative & Quantitative Research
- Market Insights
- Training of Academics
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Consultant & Project Managers

Services & Materials

Contract

Customer

£(payment)

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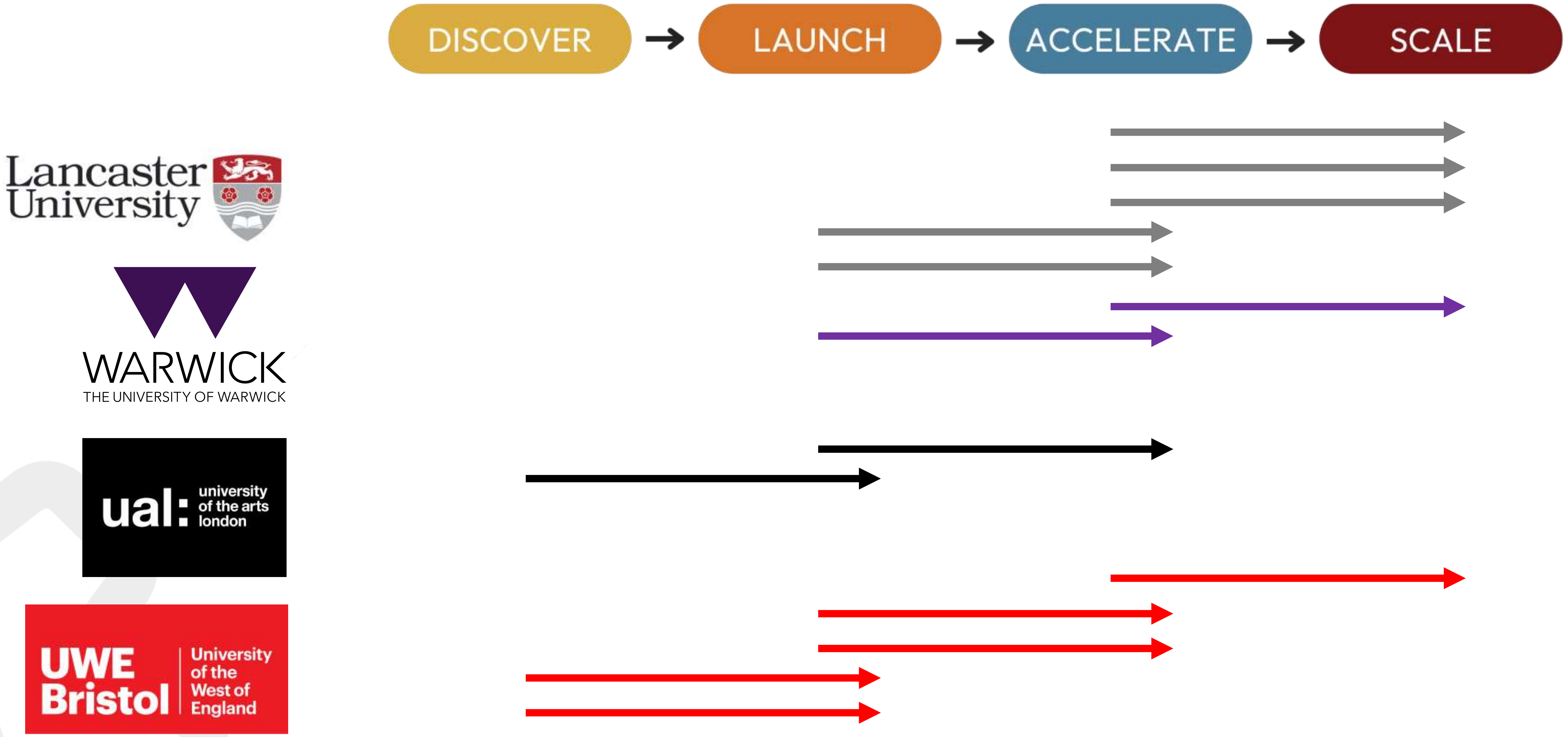
Standardisation of services: structure

DISCOVER → LAUNCH → ACCELERATE → SCALE

DISCOVER	LAUNCH	ACCELERATE	SCALE
Audiences Map	Value Proposition Canvas	Value Proposition Validation	Spinout docs
Identify and validate potential users and beneficiaries	Idea Canvas	Business Model Canvas	Deal flow, trading, and, where applicable, fundraising Potential spinout creation
	Validate proposition with potential customers	Develop and validate sustainable business model	

One to many – economies of scale → Targeted, precise, one to one support with domain expertise

Standardisation of services: projects



14 STAGE Projects

Lancaster University

Beebox – Philip Donkersley & Jenny Roberts

Giving HOPE – Claire Mason

EVid Tool – Elisavet Christou & Pinar Ceyhan

Anti-Slavery Intelligence – Mahmoud Gad

Social Prescribing Platform – Mahsa Honary

University of the Arts London

Circular Capital – David Leigh

Volumetric Capture – Moin Roberts-Islam, Costas Kazantzis & Matthew Drinkwater

University of the West of England

Community Health Platform – Ilhem Berrou

Deaf Legal Theory Foundation – Rob Wilks

Ruby Gemstone Growing – Sofie Boons

Novel Methods for Extrusion Dice – Tavs Jorgensen

Ambient Literature – Tom Abba

University of Warwick

EAL AI Tool – Isabel Fischer

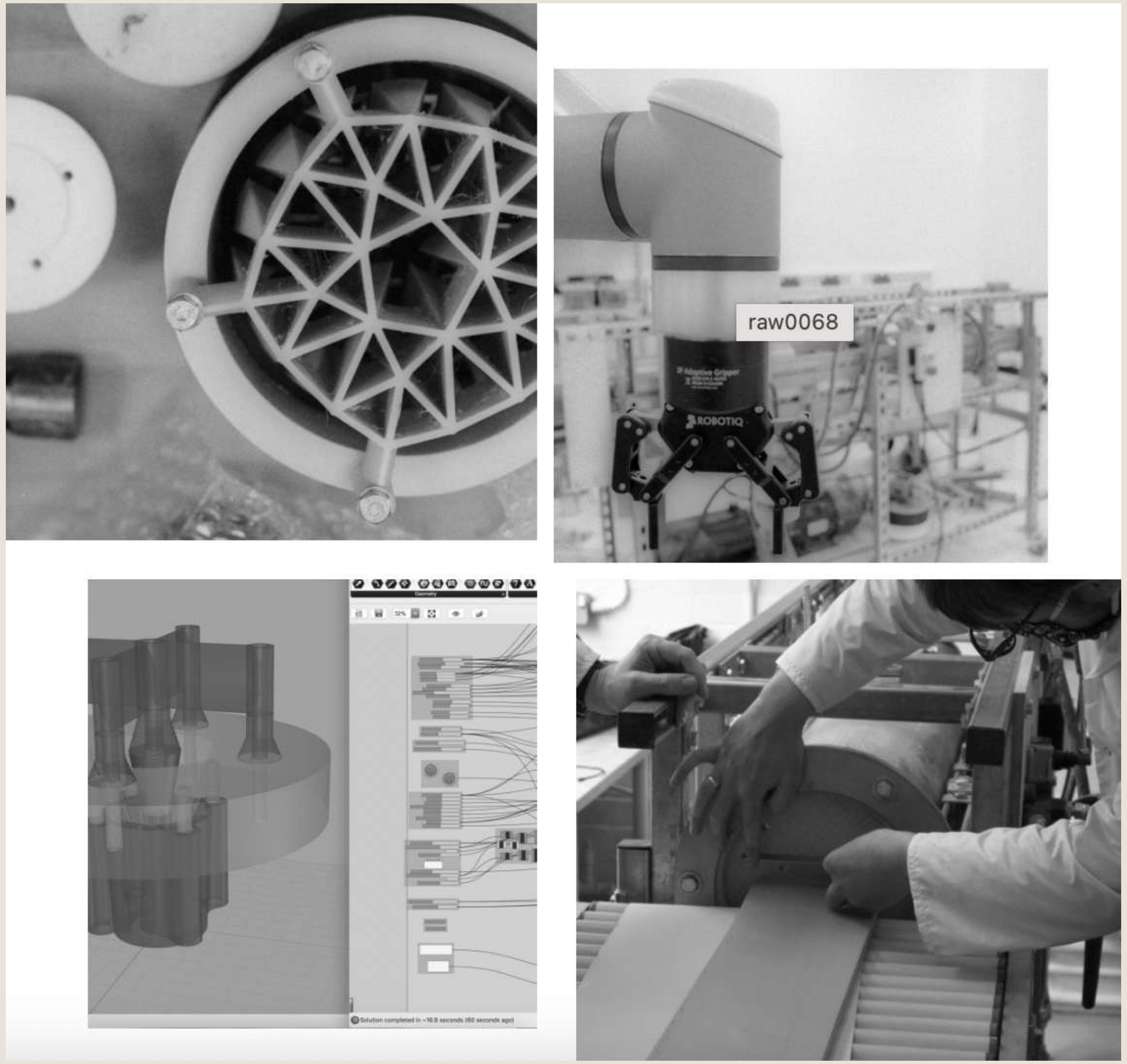
Environmental Impact Tool – Nikoleta Jones

Since the end of the trial projects have already secured a total of £460,000 in follow on funding

«Giving HOPE»

- Claire Mason, Research Fellow, Lancaster University
- Reducing trauma experienced by mothers and babies separated at birth due to safeguarding concerns
- Underpinned by the Born into Care research findings
- Developed with those with lived experience and informed by user groups (midwives, foster carers, social workers)
- **2022:** First prototype of the HOPE Box
- **2024:** Incorporation of Community Interest Company
- **2025:** Launched additional digital training for practitioners
- Work with 50+ Health Trusts and Local Authorities across England
- Expanding into new areas, including women‘s prisons and adoption agencies

Project Outcomes	Growth of a mentor and expert network with relevant expertise on self-funded growth companies Targeted interventions with an increased likelihood of success with focused expertise.



Project Outcomes	A model for a business unit for pre-incorporated trading and brand building developed and tested.

«Novel Methods for Extrusion Dice»

- Dr Tavs Jorgensen, Associate Professor, Centre for Fine Print Research, University of the West of England
- Advanced Clay Tooling offers innovative tool development services for the ceramics and construction industries
- Uses expertise developed through research to build 3D-printed tools
- USP: more cost-effective, shorter lead times (1-2 weeks compared to months with the steel tooling method), and greater flexibility for companies with new products
- Now working with Ipstock, a large company that wants to place orders

Were outcomes of the project met? Independent evaluation

OXFORD BROOKES UNIVERSITY

- 10 projects significantly advanced along the commercialisation pathway (did 14).
- A model for a business unit for pre-incorporated trading and brand building developed and tested.
- Developing a quality-assured support mechanism and insights on how to progress projects within a fixed framework of interventions.
- Growth of a mentor and expert network with relevant expertise on self-funded growth companies
- Targeted interventions with an increased likelihood of success with focused expertise.
- Detailed costings for interventions and what they achieve.
- Demonstration of a scalable and replicable model and what it would cost with economies of scale included.

Benefits of a Shared TTO: A STAGE Perspective

1. Unlocking Capacity and Expertise in SHAPE Commercialisation

"I think having met other people in similar organisations with cross institutional support and validation that they're doing similar things really helped. And ***STAGE gave that external perspective from people who are not ground down in university structures****, someone who's independent and can just think about that commercialisation project and that academic without all the baggage." (TT Officer 4)*

2. Clarity and Confidence in Commercialisation Projects

*"****I secured grant funding to develop the product****, a hundred twenty-three [thousand pounds], something like that? […] I applied [the funding] during STAGE. [My mentor] assisted with the articulation of the business model and the reassurance that it is okay to not know yet, and that helped me when I was developing the application for the grant, to communicate that uncertainty and mitigate, so put plans forward to how I'm going to manage that uncertainty. And that definitely happened through conversations with [my mentor]." (Academic Entrepreneur 13)*

Benefits of a Shared TTO: A STAGE Perspective

3. Upskilling Academic Entrepreneurs and Technology Transfer Officers

"I've been really impressed with it. It has been the five of us working together. ***We've been able to come together regularly, so we all bring our own expertise and knowledge, which is good****. But that's then sort of complemented by the work and support that STAGE brings to it, and the other mentors that were there. We met fortnightly and we'd be saying, Well, I've encountered this with this client and then somebody would say, Oh, why not think about doing this or that? So, there's that sort of mutual support, with the broad level of expertise available." (TT Officer 7)*

4. Agility in Commercialisation Progress

Interviewer*: Give me a realistic idea. When you wanted to go to the event, how much time was required […]*

Academic Entrepreneur 11*: The event is scheduled for September. [My mentor and I] agreed at the end of STAGE programme and it got paid [by STAGE] immediately.* ***That means I am now going to the event in September, which is three months from now. At the university, if you want to do anything within three months, you've got to submit an application like a year before. So, the difference is astronomical.*** *It all happened really quickly, and you don't have to stress about all the extra stuff. Once we knew that there is an event, that was it, and you could carry on with attending the event, start preparing for it, asking the right questions you want to focus on at the event. That almost weirdly frees up space for you to do your other academic duties, of course.*

Benefits of a Shared TTO: A STAGE Perspective

5. Risk Management Through an External Entity

- Participating universities reduce the risk of overcommitting their TTOs’ time and resources to projects outside their core expertise
- STAGE’s pre-incorporation trading function helps manage risk by enabling academics to test the market for their ideas before investing in full spinout development
- The shared model offered by STAGE provides a practical, pooled solution that supports effective risk management for universities with limited capacity.

Challenges of a Shared TTO: A STAGE Perspective

1. Limited Time

"I think everybody mentions that the timeline is so, so short. ***You blink and it was over.*** *And I wasn't entirely sure what this thing was. I was confused about the Shared TTO and the nature of Kindling. [...] I mean, I can see absolutely why now, and they have a good reason for the structure, which is innovative. And we can benefit from its innovations through, you know, agreements with the University, which is fine, but it took me a while to kind of get my head around that." (Academic Entrepreneur 1)*

2. Initial Distrust on the Private Entity

"I think the Birmingham event really built confidence in me about the Shared TTO. [...] Because you know, you have all these online meetings and you kind of was like, whoa, what is this company? Who are these people? ***I think an introduction event could have really built up the confidence, because until then, I had to do a bit of due diligence****." (Academic Entrepreneur 1)*

Challenges of a Shared TTO: A STAGE Perspective

3. Communication Challenges

- Time constraints contributed to communication barriers throughout the pilot
- Communication challenges also arose between individual TTOs and their academic entrepreneurs
- Communication gap was evident with leadership level of one partner university

4. Lack of Diversity

*"I think [STAGE] needs to work much harder to proactively bring on board in their networks, female mentors and programme managers. […] I am keenly aware of the fact that there are women lacking generally in this space. […] **[Our academics] had expressly come over to me and said, we really want a female mentor please.** I do think we need to work much harder on this." (TT Officer 11)*

Challenges of a Shared TTO: A STAGE Perspective

5. Short Funding Period and Resulting Bureaucratic Challenges

- Coordinating a coalition of six universities and two private entities is inherently complex and requires significant time and effort – especially when you are involving under-resourced universities!
- The founding members of STAGE had to consider trade-offs between operating the TTO in expense of relationship-building with leadership teams at partner universities.
- Because the funding period was so short, some resources that were secured could not be used as delays meant funding came to partners sometimes *after* the funding period is over.

Recommendations for future funding of Shared TTOs

For Policy Actors:

- Leverage Shared TTOs for Inclusive Research Commercialisation Across Disciplines with a Focus on Soft IP
- Extend Funding Periods to Support Sustained Innovation
- Develop Pump-Priming Funds for Relationship Development

For STAGE Leaders and Other Shared TTO Leaders/Operators:

- Prioritise dedicated relationship-building activities
- Organise more face-to-face events and structured networking opportunities
- Create and share practical case studies that clearly demonstrate the range of expertise and support available

For Universities and TTOs:

- Foster a culture that embraces calculated risk in SHAPE commercialisation, moving beyond traditional concerns about IP control and focusing on mission-driven projects with clear societal or environmental impact
- Build coalitions based on shared missions or regional priorities, rather than convenience

NEXT STEPS
Shared TTO

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The bigger picture

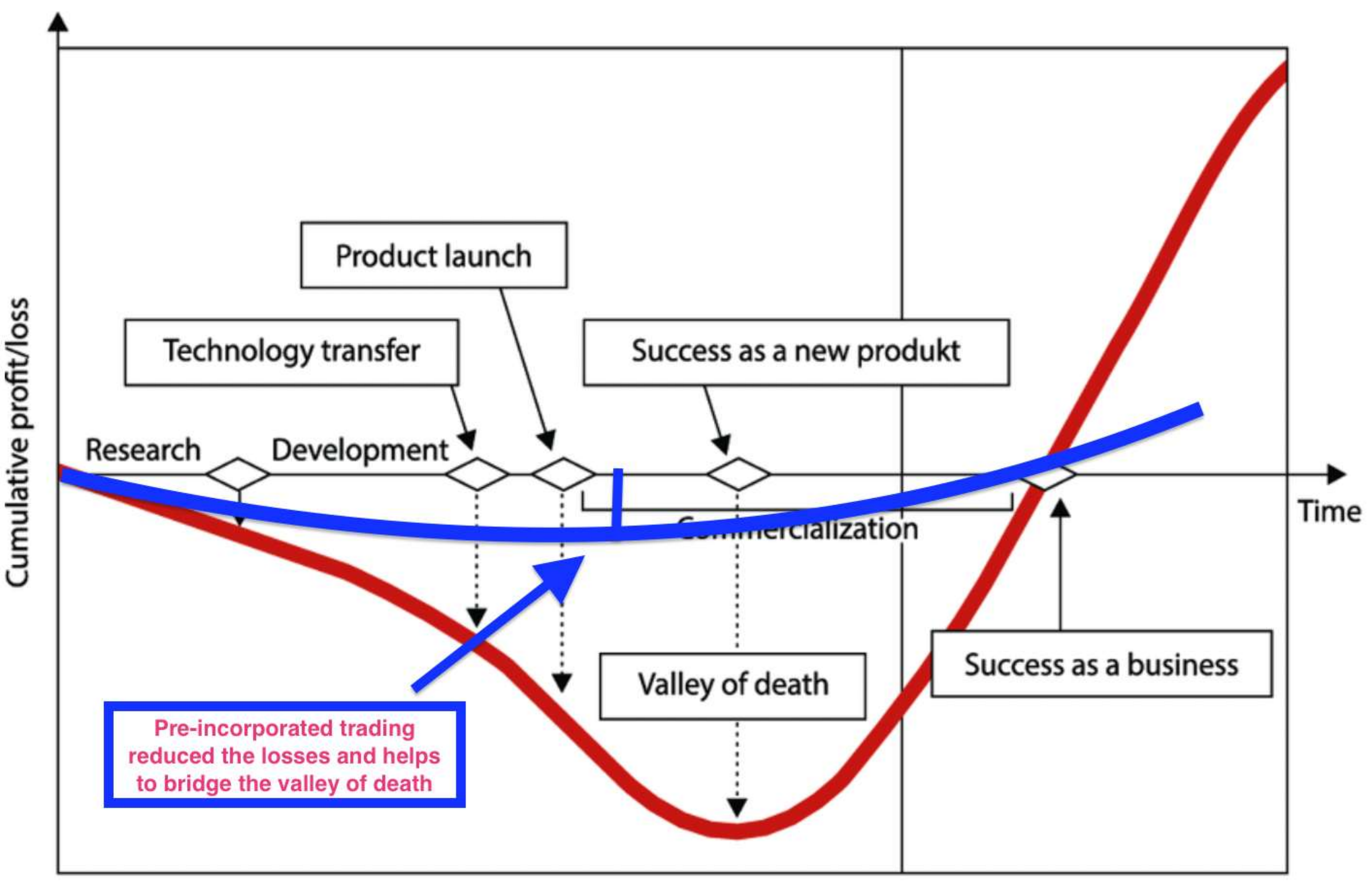
Where could service-based spinouts fit into UKRI's portfolio and meet the government's strategic aims?

Cost-benefit for UK plc

- Average “additional grant” (post research) award is £297k per project*. 34% of this allocation goes to forming spinout companies and includes multiple awards and is almost exclusively technology-based.
- The estimated level of translational funding needed to create a service-based spinout is half that of a technology-based spinout at every stage**.
- This means only an average of £150k is required per project to accelerate a service-based spinout to the equivalent stage.
- Service-based spinouts create as many jobs as tech-based spinouts and produce a higher average turnover.
- **Service-based spinouts can create the same number of jobs with an average of 36% higher turnover at half the cost compared with tech-based spinouts.**

*Spinout review: Understanding the impacts of spin-out companies from UKRI investments, Beauhurst 2023
**ESRC IAA maximum of £25k per award, University of Oxford. EPSRC IAA typical award £50k-75k at University of Oxford

Pre incorporated trading as way to bridge the Valley of Death for IP-lite, service-based ventures that cannot or do not want to raise early VC angel investment



Valley of death. Source: Osawa, Miyazaki, 2006.

The bigger picture

Scenario 1

- We assume that it is possible to set up a shared TTO for a group of unis around sectors or regions (SSQ, London, Northern powerhouse,etc)

- 5-10 Unis per shared TTO

- Create a combined pipeline of around 60-80 new disclosures

- Training to progress disclosures - about 15% of disclosures turn into pre incorporated trading units (Shared TTO needs to take 30-35% of all revenues generated by each trading unit)

- Upfront investment for 3 years of about £700k-£1mil to get it to evergreen model where training and support is being funded out of a share of the revenues that each viable pre incorporated trading unit generates

The bigger picture

Scenario 2

- Could be used by funders to sustain impact from research funded projects
- Funding and training plus model (15k–20k per project) build into research grants
- Get projects fast to trading point to sustain and scale the impact
- Should provide 10-15 grants a year. Overheads 150k-200k per year total = 300k-500k per year per funder or area

What to know more?
Get in touch

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Appendix

Shared TTO Project list

1. **Beebox (Philip Donkersley & Jenny Roberts, Lancaster University)**
   A durable, plastic-free, 3D-printed artificial nestbox designed to support bumblebee populations in household gardens, promoting pollinator conservation.
2. **Giving Hope (Claire Mason, Lancaster University)**
   Hope Boxes and training programs designed to assist mothers coping with the grief of having their children placed in foster care, offering emotional support and guidance through the process.
3. **EVid Tool (Elisavet Christou & Pinar Ceyhan, Lancaster University)**
   A comprehensive project evaluation tool aimed at improving the effectiveness and impact of various initiatives.
4. **Anti-Slavery Intelligence (Mahmoud Gad, Lancaster University)**
   An AI-powered tool that assesses modern slavery compliance, providing rapid policy insights to help companies navigate regulatory and reputational challenges while supporting sustainable business practices.
5. **Social Prescribing Platform (Mahsa Honary, Lancaster University)**
   An online crowdfunding platform that enables organizations to raise funds for social prescribing initiatives, promoting well-being and community health.
6. **Circular Capital (David Leigh, University of the Arts London)**
   Circular Capital is a digital tool that empowers small fashion brands by supporting circular design, ensuring compliance with EU legislation, and providing a sustainability score to integrate eco-conscious practices.
7. **Volumetric Capture (Moin Roberts-Islam, Costas Kazantzis, Matthew Drinkwater, UAL)**
   A tool that combines CLO 3D fashion designs with volumetric capture footage to create realistic, animated 3D garments that fit seamlessly over recorded models, offering lifelike simulations for fashion designers.

8. **Community Health Platform (Ilhem Berrou, University of West England)**
   An online platform that helps residents discover free healthcare providers in their local area while generating income for private providers through advertising.
9. **Deaf Legal Theory Foundation (DLTI) (Rob Wilks, University of West England)**
   DLTI works to remove systemic barriers faced by deaf individuals in accessing justice by incorporating deaf cultural and linguistic rights into mainstream legal systems. The initiative provides research, training, consultancy, and an online resource hub to empower deaf individuals and advocates in shaping policy and legal practices.
10. **Ruby Gemstone Growing (Sofie Boons, University of West England)**
    A process for cultivating gemstones from "waste gemstones" (seeds), allowing these newly grown gems to be used in the creation of jewelry and other applications, reducing waste in the process.
11. **Novel Methods for Extrusion Dice (Tavs Jorgensen, University of West England)**
    A new method for efficiently producing building bricks of various shapes and sizes using extrusion technology, providing faster, more cost-effective solutions for the construction industry.
12. **Ambient Literature (Tom Abba, University of West England)**
    A platform offering immersive audio experiences that enhance storytelling and engage audiences in innovative ways.
13. **EAL AI Tool (Isabel Fischer, University of Warwick)**
    A tool that uses large language models like BERT (not GPT) to provide formative feedback on students' written and oral communication, supporting their learning journey.
14. **Environmental Impact Tool (Nikoleta Jones, University of Warwick)**
    A tool that helps conservation practitioners assess the social impacts of biodiversity policies using methods like questionnaires and participatory mapping. It aims to make these methodologies more accessible through a training program, consultancy, and a mobile app.

Shared TTO Project list

Standardisation of services: cost (top level)

DISCOVER → LAUNCH → ACCELERATE → SCALE

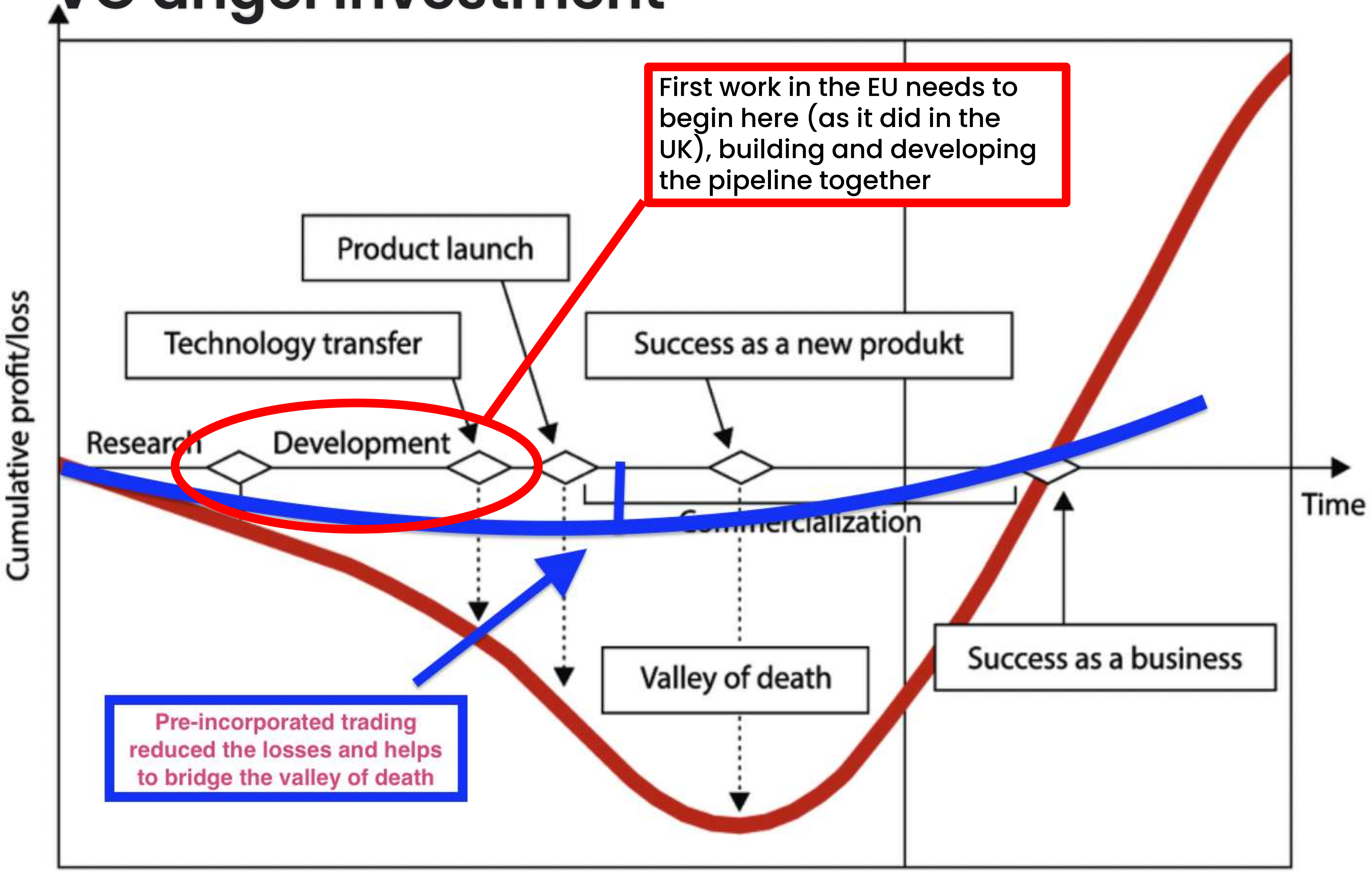
Cost range of interventions	£2,000-4000	£1,500-3,500	£3,000-5,500
Overheads	£5,000 per project (of which half fixed, half variable)		
Events	£5,000 per event		

NOTE: These are the costs in this pilot project. This is not a price list for a fully-fledged service. For a 4-month project overheads will be high and interventions low. For a 12-month project it would be the other way around.

Also, setting up a new university takes time. Once done and working practices are established, the overheads will come down.

Pre incorporated trading as way to bridge the Valley of Death for IP-lite, service-based ventures that cannot or do not want to raise early VC angel investment

- Universities are not set up to process small, risky short-term contracts with stakeholders to pilot new products and services.
- A Shared TTO allow unis to access a pre-incorporated trading function for free to test those new products and services.
- Standardising the process makes it far easier for all stakeholders to use, it tests if a venture is viable, whether an academic wants to go forward to a full spinout and bridges the Valley of Death in doing so.



Valley of death. Source: Osawa, Miyazaki, 2006.