

Reflections on Securing Interdisciplinary Funding as an ECR in Design / “Chatty Factories”

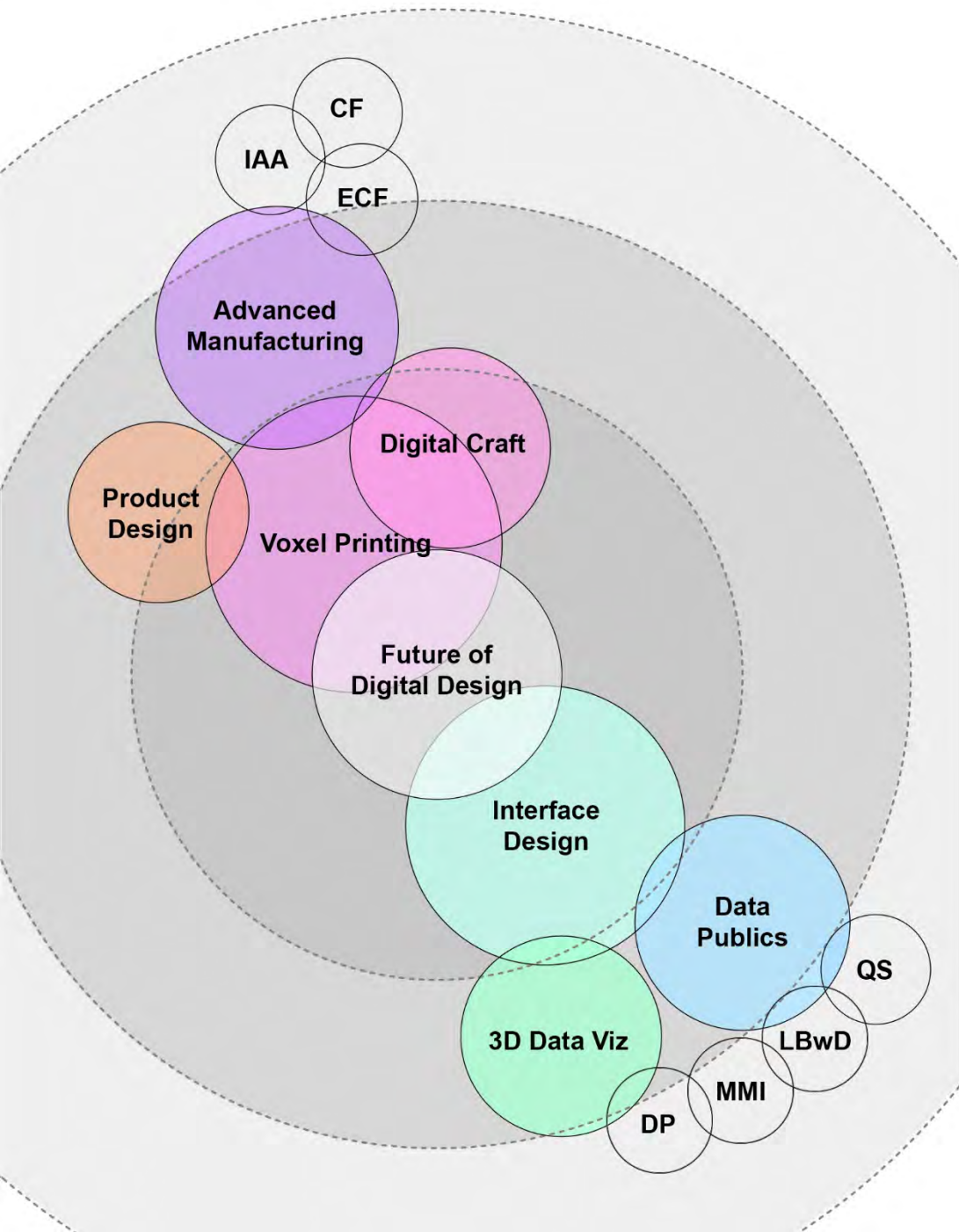
Dr. Dan Richards, Lancaster University

31st January 2018



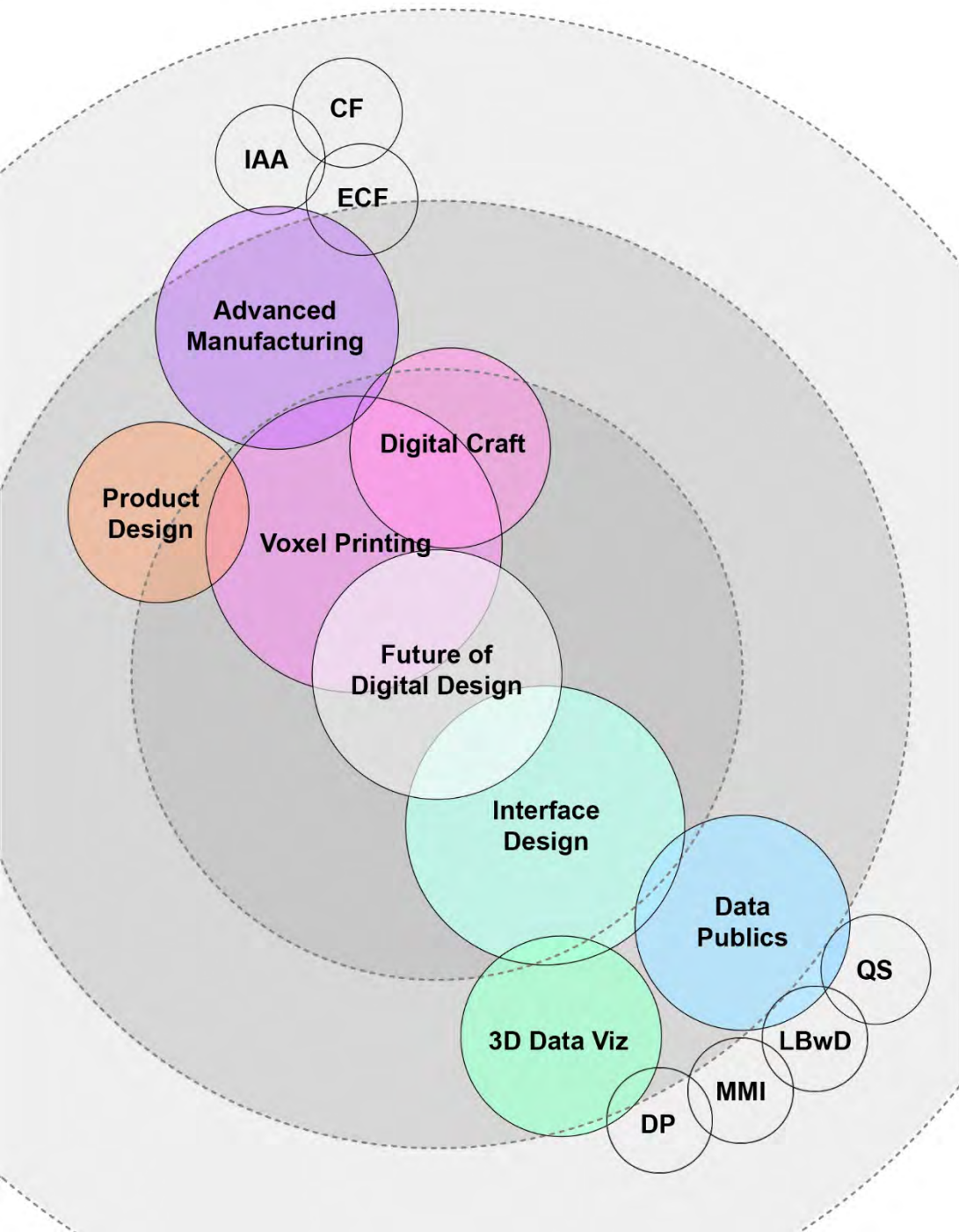
Data Science
Institute





Talk Overview:

1. Quick overview of my research activities (see left) and *approach* to bidding over the last two years. (10 funding applications)
2. Focus on one of these bidding processes, to give an overview of the process, and to reflect on my experiences and insights gained.
3. Provide a few takeaway thoughts to consider when developing bids (things I wish I knew two years ago!)



PhD. 2009 – 12.

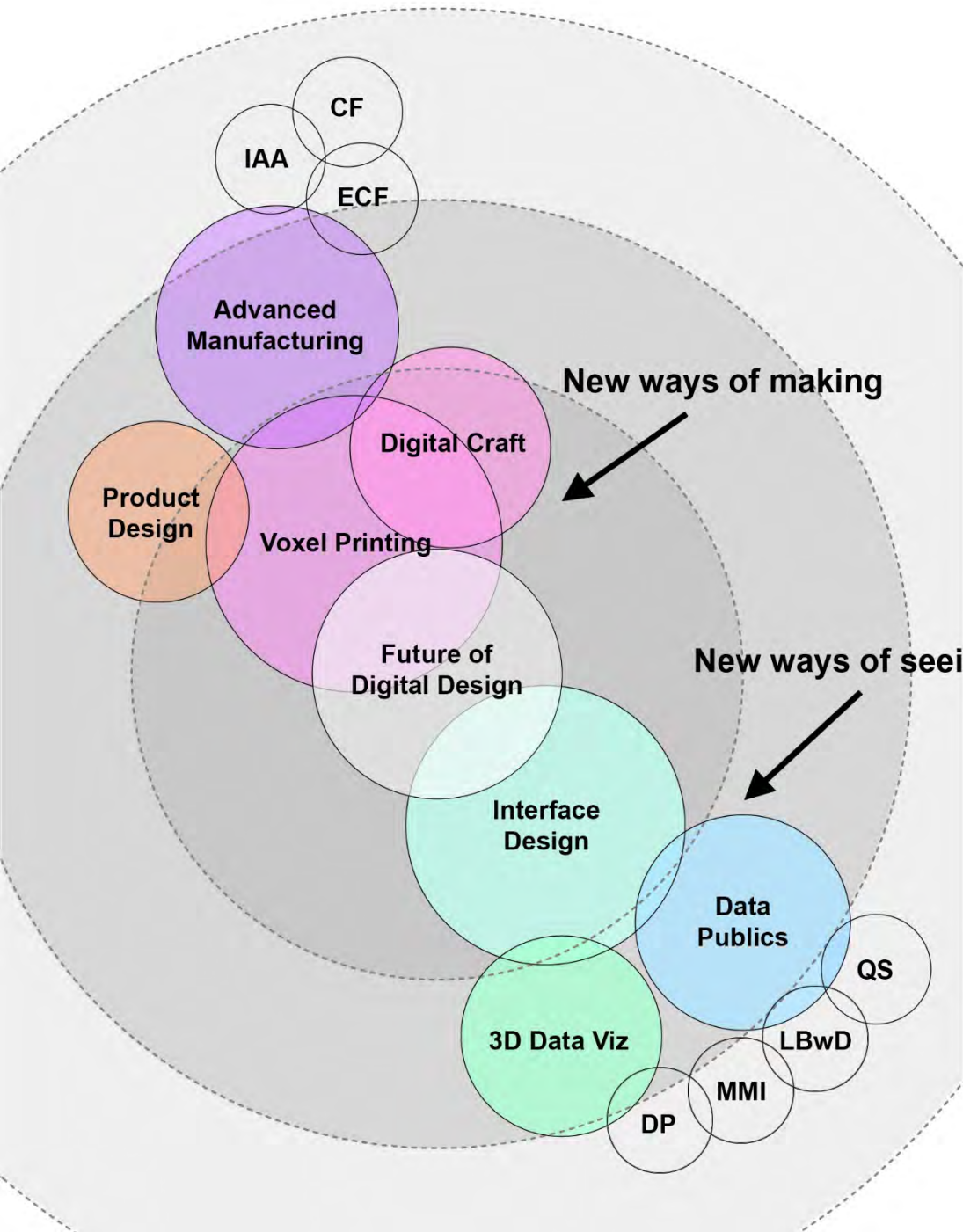
Manchester Institute for Research and Innovation in Art and Design (MIRIAD), Manchester Metropolitan University. Doctoral Thesis: *Automatic Synthesis of Architectural Structures using an Evo-Devo Approach to Design*. Thesis advisors: Dr. Nick Dunn (MSA), Prof. Martyn Amos (DRI) and Prof. Keith Brown (MIRIAD). Funded by a MIRIAD Doctoral Scholarship.

Postdoctoral Research Associate. 2013 – 15.

Manchester Metropolitan University, Department of Computer Science and Information Systems, Biological and Sensory Computation Group.

Lecturer in Data Prototyping and Visualisation. 2015 – Present.

Lancaster University, Lancaster Institute of the Contemporary Arts, Imagination Lab.

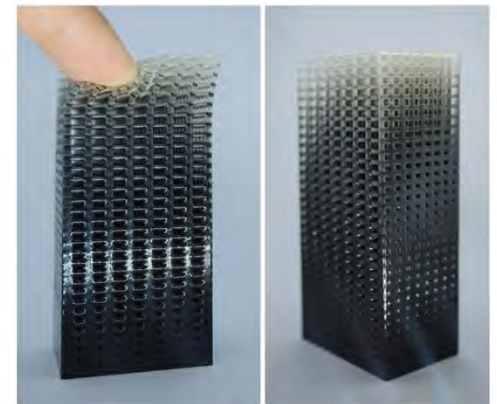
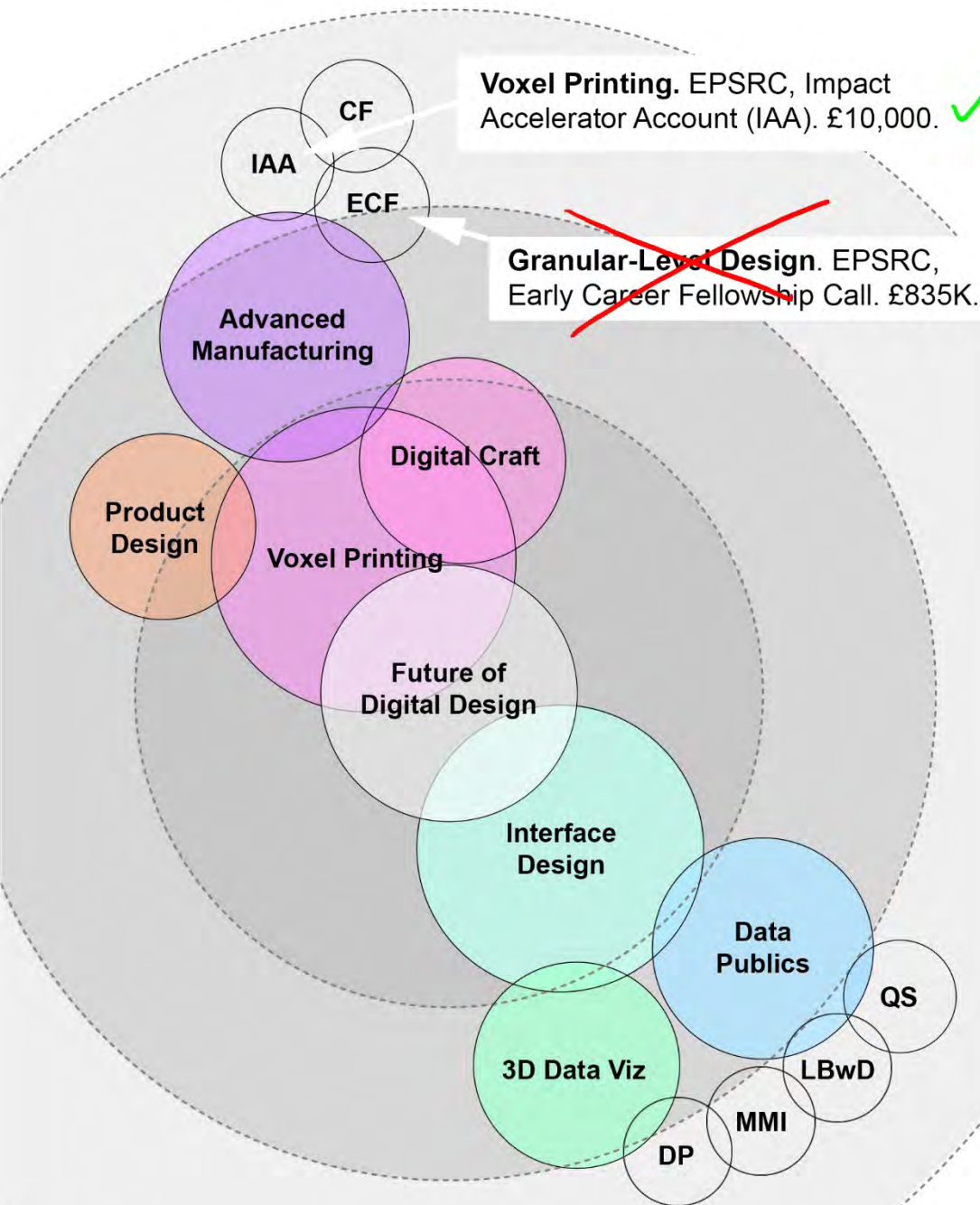


New ways of making

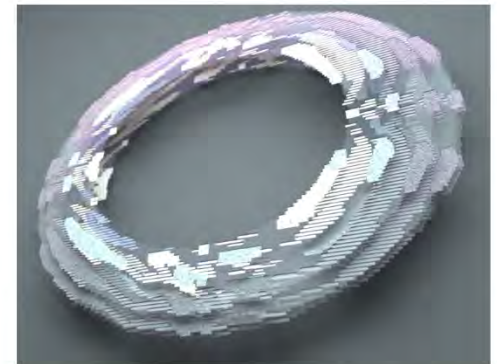


New ways of seeing / thinking

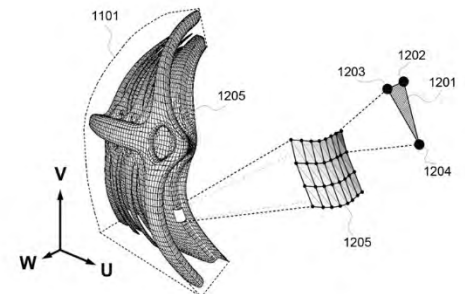




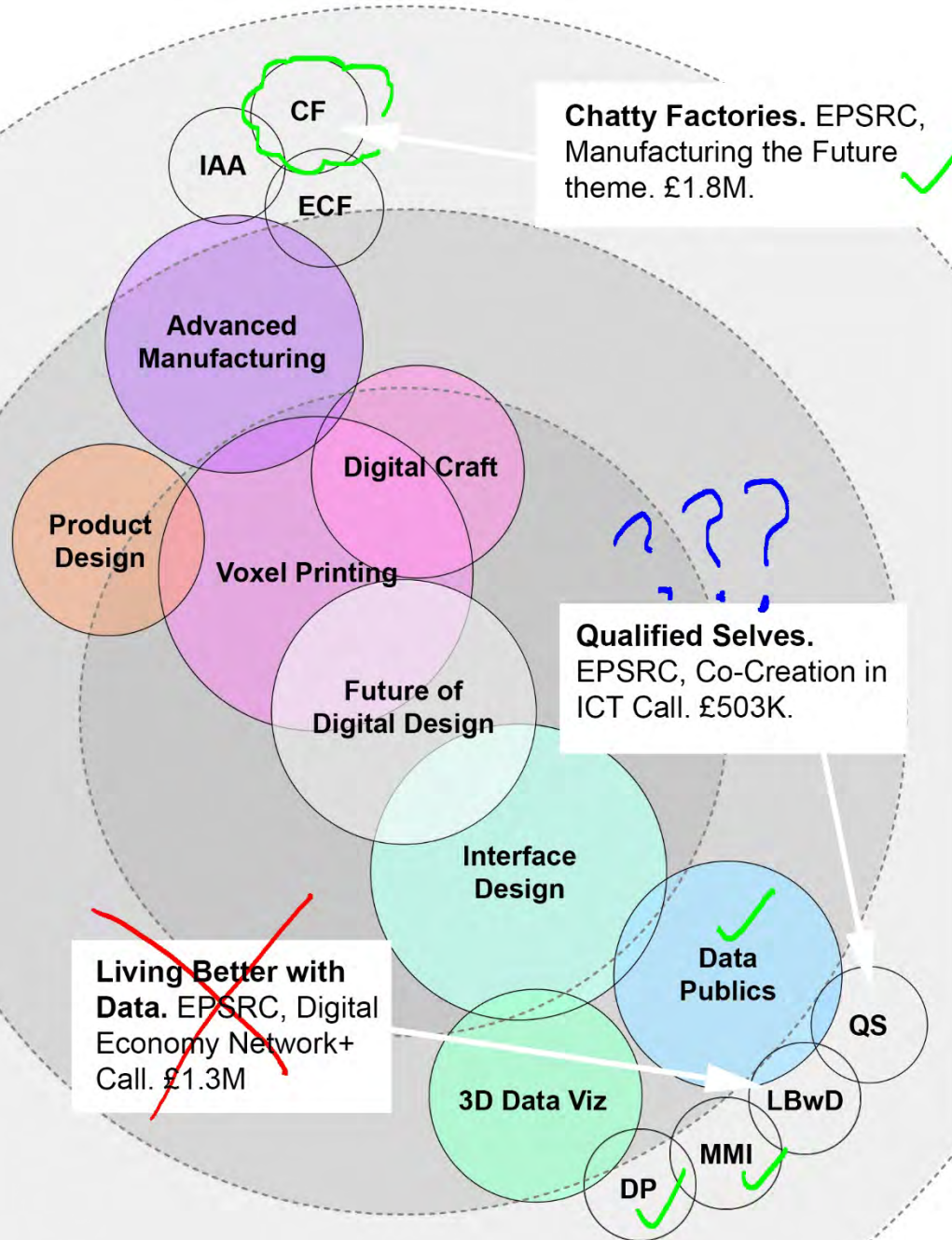
Richards, D. Abram, T. Rennie, A. (In Press). Designing Digital Materials with Volumetric Gradients. In Proceedings of RDPM '17, April 27-28, 2017, Northumbria University.



Richards, D. 2017. Voxel Print Research at Lancaster University, FormNext, Stratasys Press Conference, Frankfurt, November 15, 2017.



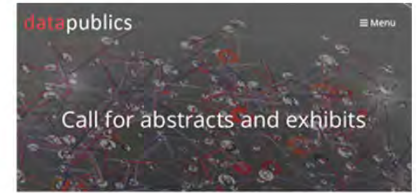
International Patent Application. Publication No: WO 2017153769 A1. Inventor: Richards, D. Applicant: Lancaster University Business Enterprises Limited. Patent Pending.



Chatty Factories. EPSRC, Manufacturing the Future theme. £1.8M.

Qualified Selves. EPSRC, Co-Creation in ICT Call. £503K.

~~**Living Better with Data.** EPSRC, Digital Economy Network+ Call. £1.3M~~



Data Publics — Investigating the formation and representation of crowds, groups and clusters in digital economies

Lancaster University, March 31 / April 1 & 2, 2017

Keynote speakers: *John Bowers* (Newcastle University), *Helen Kennedy* (The University of Sheffield), *Michiel de Lange* (Utrecht University), *Anders Koed Madsen* (Aalborg University), *Noortje Marres* (University of Warwick), *Alex Taylor* (Microsoft Research)

Data Publics. EPSRC, Digital Economy Network. £12,700.



Applications of Data Physicalization. LU DSI Funded Workshop. £4,600.

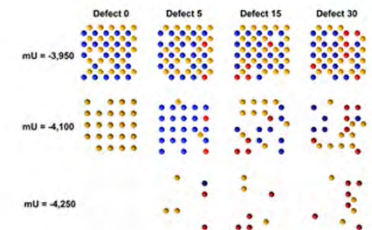
Making Memories Intelligible: Digital tools for cognitive enhancement



20 December 2017

As part of DSI's Society Theme, we held a two-day workshop on Making Memories Intelligible: Digital tools for cognitive enhancement.

Making Memories Intelligible. LU DSI Funded Workshop. £4,900.



Sandpit: New Industrial Systems

- Issue date:** 15 December 2016
- Opening date:** 06 January 2017
- Closing date:** 02 March 2017 at 16:00
- Status:** Closed
- Tag:** Expression of interest
- Related themes:**

In response to future manufacturing challenges EPSRC is running a sandpit with a focus on New Industrial Systems to engender a radical change in the research undertaken in this field in the UK. We hope that this sandpit will enable UK researchers to identify and undertake research with the potential to have a transformative impact on our manufacturing industries.

It is expected that up to £5 million of EPSRC funding will be made available to fund research projects arising from this sandpit.

Key dates

ACTIVITY	DATE
Call launched	05 January 2017
Call closes	02 March 2017 at 16:00
Participant selection panel	Expected end of March 2017
Sandpit	15-19 May 2017
Full application deadline	Mid-July 2017
Funding announcement	Expected October 2017

- Funding >
- Calls >

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Part 1
 Part 2
 Part 3.

It is expected that up to £5 million of EPSRC funding will be made available to fund research projects arising from this sandpit.

The Research Challenge

The challenge identified for this sandpit is to understand how advances in engineering, ICT, mathematical and physical sciences research could transform the future of manufacturing. It will look at the interdependencies between resources, products and services, new enabling technologies, and digital capabilities and consider how these factors could lead to new industrial systems, creating opportunities for the UK manufacturing sector.

New science-led approaches to manufacturing, for example redistributed manufacturing, additive manufacturing, circular economy approaches and advances in digital technology, have transformed manufacturing in recent years. Although these approaches will influence discussions at the sandpit, new, innovative and creative ideas will be encouraged and explored.

They are willing
to gamble on radical
projects

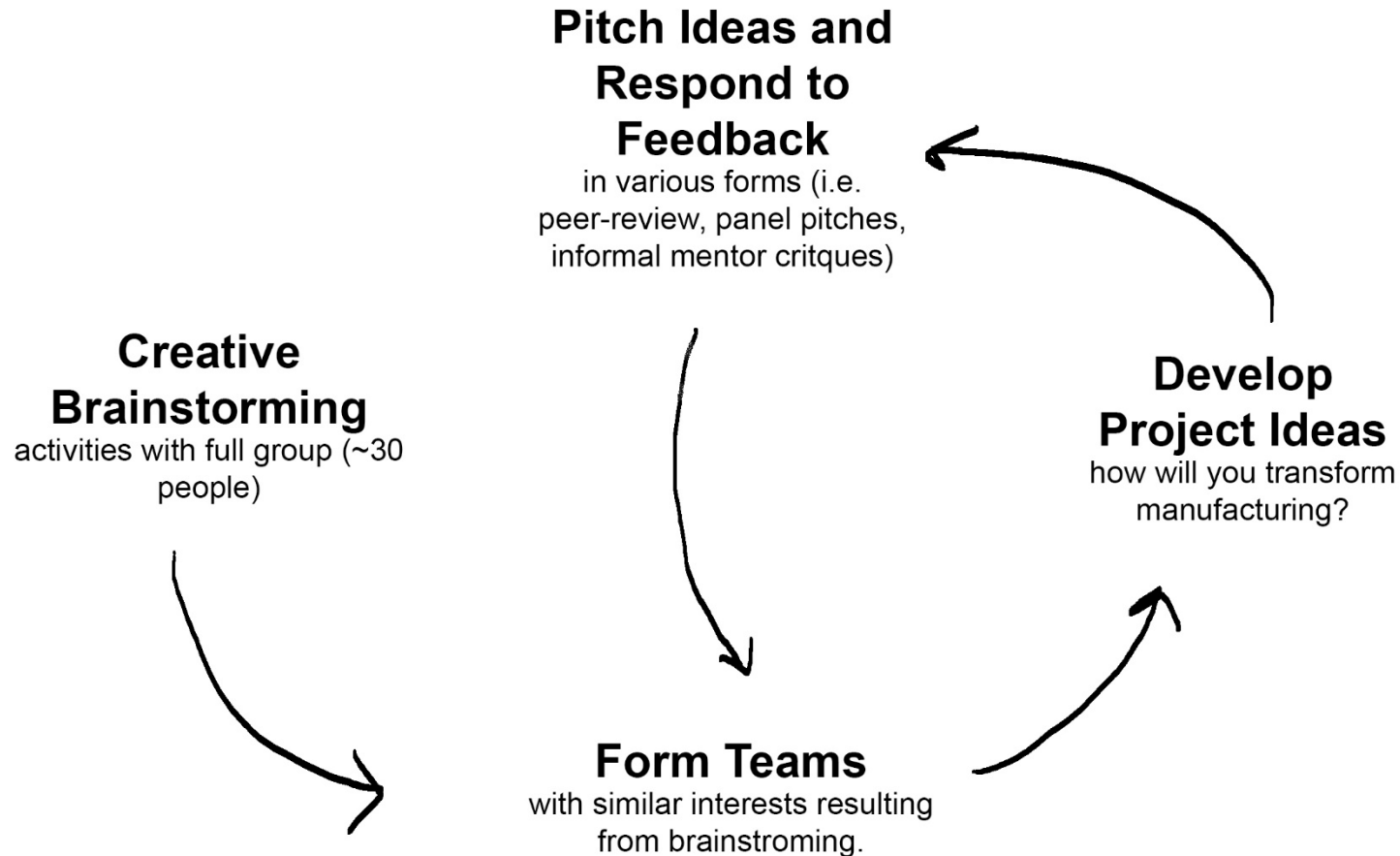
high risk/
high
reward.

We seek to support those that show:

- Novel, highly multidisciplinary research projects, clearly reflecting the distinctive opportunity for creating such projects that the sandpit provides.
- Clear evidence that the team have the capability to deliver their project as a high quality multidisciplinary activity, provided both through the presentation and their activity during the sandpit.
- Clear relevance to and the potential to make a distinctive and novel contribution to addressing the research challenges in this area.

DESIGN IDENTIFIED AS IMPORTANT (elsewhere)

Part 2: The sandpit



* Asking good questions!

Produce Outline CoS and Final Pitch to Panel

3-hours to write CoS, evening
and morning to prepare
pitches.

Pitch Ideas and Respond to Feedback

in various forms (i.e.
peer-review, panel pitches,
informal mentor critiques)

Develop Project Ideas

how will you transform
manufacturing?

* SIMPLE

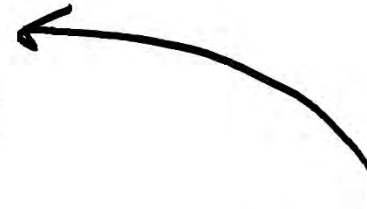
- CHATTY.
- BODY
- IMMORTAL

Creative Brainstorming

activities with full group (~30
people)

Form Teams

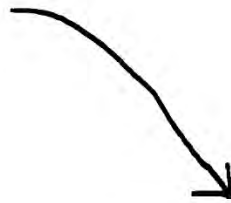
with similar interests resulting
from brainstorming.



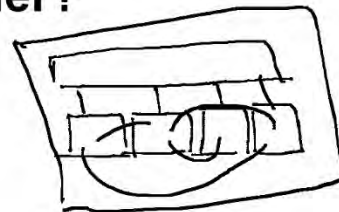
Google Docs!



Started with
Workplan and
worked backwards



What are the broad
WPs and how do they
work together?

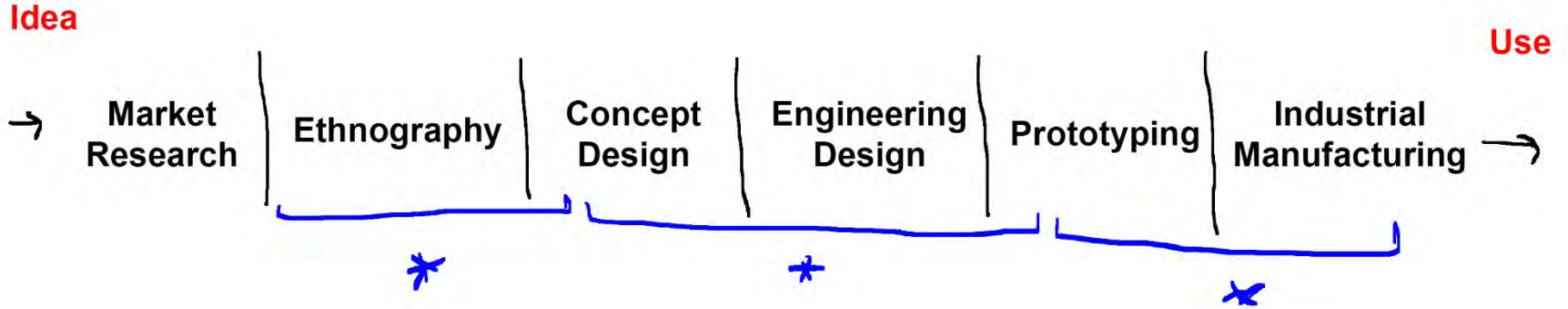


Where is the novelty
and the exciting
potential for real
impact?

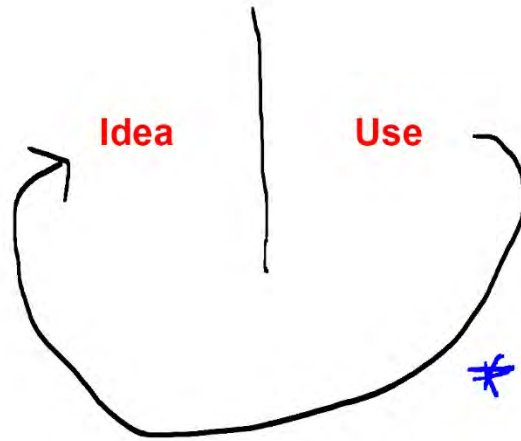
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"CHATTY"
→ everything talks to everything!

"BABELFISH"



"New theory"



"DATA-DRIVEN
FATALISTS OF
THE FUTURE"

Document Menu (Hide) Home: Documents: Document List: With Council (read-only)

Document Actions Prev Next

Scheme: Standard

Project Title: New Industrial Systems: Chatty Factories

Organisation: Cardiff University **Department:** Computer Science

Submitting Organisation
 (note: searches will appear in a new window)
 Organisation: Cardiff University
 Department: Computer Science
 Your reference: Chatty Factories

Project Title
 New Industrial Systems: Chatty Factories
 110 character(s) remaining (maximum 150), including spaces
 To check character counts, or edit longer text to the character limit, use

Proposal Call
 Proposal call: New Industrial Systems Sandpit - Full Proposal

Start Date and Duration
 Start date: 01/02/2017
 Duration: 36 months

- Instructions
- Project Details
- Disciplines
- Investigators
 - Principal Investigator
 - Co-Investigator
 - Researcher Co-Investigator
- Joint Proposals
- Objectives
- Summary
- Academic Beneficiaries
- Impact Summary
- Resource summary
- Other Support
- Related Proposals
 - Related Proposals
- Staff
 - Researcher
 - Technician
 - Other Staff
- Visiting Researcher
- Resources
 - Travel and Subsistence
 - Equipment
 - Other Directly Incurred Costs
 - Other Directly Allocated Costs
 - Research Facilities/Existing Equipment
 - Animal Costs
 - PCTF
 - Research Council Facilities
- Estates and Indirect Costs
 - Estates Costs
 - Indirect Costs
- Ethical Information
 - Human Participation
 - Animal Research
 - Animal Species
 - Genetic and Biological Risk
 - Approvals
 - Other Issues
- Project Partners
- Attachments
- Notes and Comments

Part 3: Post-sandpit

Post sandpit process:

- 1. Submit full proposal draft taking into account feedback from panel (i.e. add project manager and dont increase cost!) ~2 months after sandpit**
- 2. Await response from sandpit panel ~2-3 weeks**
- 3. Take feedback into account and resubmit full proposal ~2-3 weeks**
- 4. Await response from sandpit panel ~2-3 weeks**
- 5. Write PI response ~1 week**
- 6. Finally get confirmation of award! ~2 weeks**

Chatty Factories

£1.8M

Funder: EPSRC, New Industrial Systems Sandpit,
Manufacturing the Future Theme

Team: Cardiff (PI), Lancaster, Edinburgh, Nottingham, Essex

Start Date: February – March 2018

36 months, 5 institutions, 5 investigators, 1 project
manager, 5 postdocs + several PhDs

Summary and Key Insights:

1. **Really take time to understand the call** – what do they want to fund?
2. **Make your message and value proposition clear** – simple and snappy may help here!
3. **Start with the Workplan!** – clearly communicate what you want to do and how you will approach it.
4. **Ask the hard questions early on** – my favourite is: *“what is the worst thing about this idea?”*
5. ***“Make the proposal so compelling they have to shortlist it!”*** (Gordon Blair, Lancaster Uni.)
6. As an ECR either go for **“a big bit of a small pie, or a small bit of a big pie”** to build your track record and experience.
7. **Small grants are great for building networks!** Networks are really important for larger grants.
8. **Look at other proposals**, and become part of the AHRC (or other) peer-review college if you can.
9. You will get proposals rejected. You will think that those proposals were brilliant and definitely should have been funded. You will get frustrated with the process! **Keep going.**