



**Preparing the roadmap:
Prioritising cross-disciplinary
training needs with industry**

Industry Workshop

19 January 2023

Facilitated by:
Dr. Emily Woollen
Institute for Academic Development
University of Edinburgh





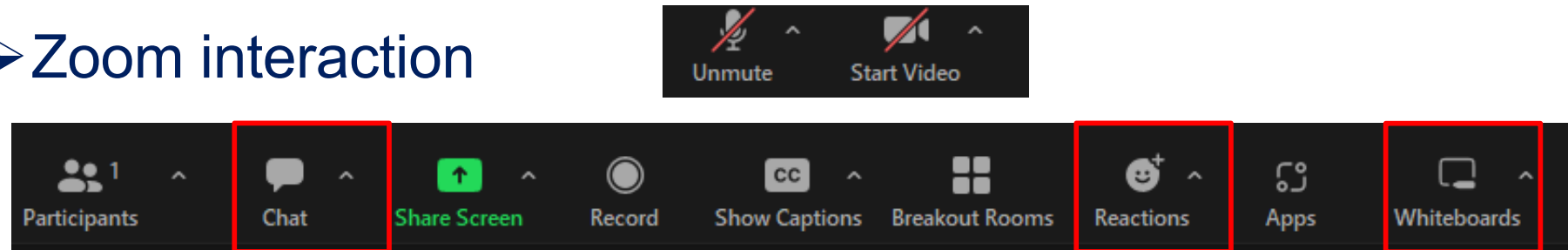
Programme

13:00	Welcome and introductions	(30 min)
13:30	Speaker - Prof Rory Duncan	(20 min)
13:50	Lowering barriers to collaborations	(30 min)
14:20	Break	(20 min)
14:40	Industry requirements & preferences	(30 min)
15:10	Understanding the skills gap	(70 min)
16:20	Wrap up	(10 min)



Workshop etiquette

➤ Zoom interaction



- We will be using Whiteboards and Padlet to capture group outputs
- Any contributions today will be quotable and will be revisable before publication
- We are recording the session for accuracy



Goal: remove barriers for
researchers crossing disciplines



www.ed.ac.uk/iad

<https://x-net.bio/>

Aims of X-Net:



Draw up a roadmap for interdisciplinary research careers by gathering data from the network on career success stories and pitfalls.
Consult and involve industry, patients and the public.



Establish training standards, curricula, required competencies and best practices for discipline hopping.

Aims of the online industry workshop (19 Jan 2023):



Explore how academia does, or does not, currently provide industry hires with sufficient interdisciplinary skills to perform roles in this sector.



Via X-Net's future Roadmap, influence UKRI's future training strategy.



UK Research and Innovation

“We will support and empower multi- and interdisciplinary networks that enable diverse research and innovation communities to exchange knowledge and ideas and build new collaborative partnerships”.

UKRI Strategy 2022–2027 (2022)

Introductions





Industry-academia interdisciplinary collaborations



Prof Rory Duncan FRSE



Sheffield Hallam University
Pro-Vice Chancellor (Research
and Innovation)

Previously the UK Research
and Innovation (UKRI) Director
of Talent and Skills

Lowering barriers to collaboration

In groups, discuss:

1. One key challenge or barrier (if any) to interdisciplinary industry-academia collaborations (10 min)
2. One change that would strengthen links between industry and academia, and/or enable collaborations (10 min)

Add ideas to this Padlet:

<https://padlet.com/ewoolen/kcsigm79safbtcdc>

Break!



20:00



www.ed.ac.uk/iad



Industry requirements & preferences



Industry requirements & preferences of new recruits



Whiteboard Activity:

- What key skills do you value the most in new recruits?
- Preferences for other key characteristics

Plenary discussion:

- Are these skills/ preferences similar across companies?
- What factors might influence any differences?
- What are the main skills missing in new recruits?

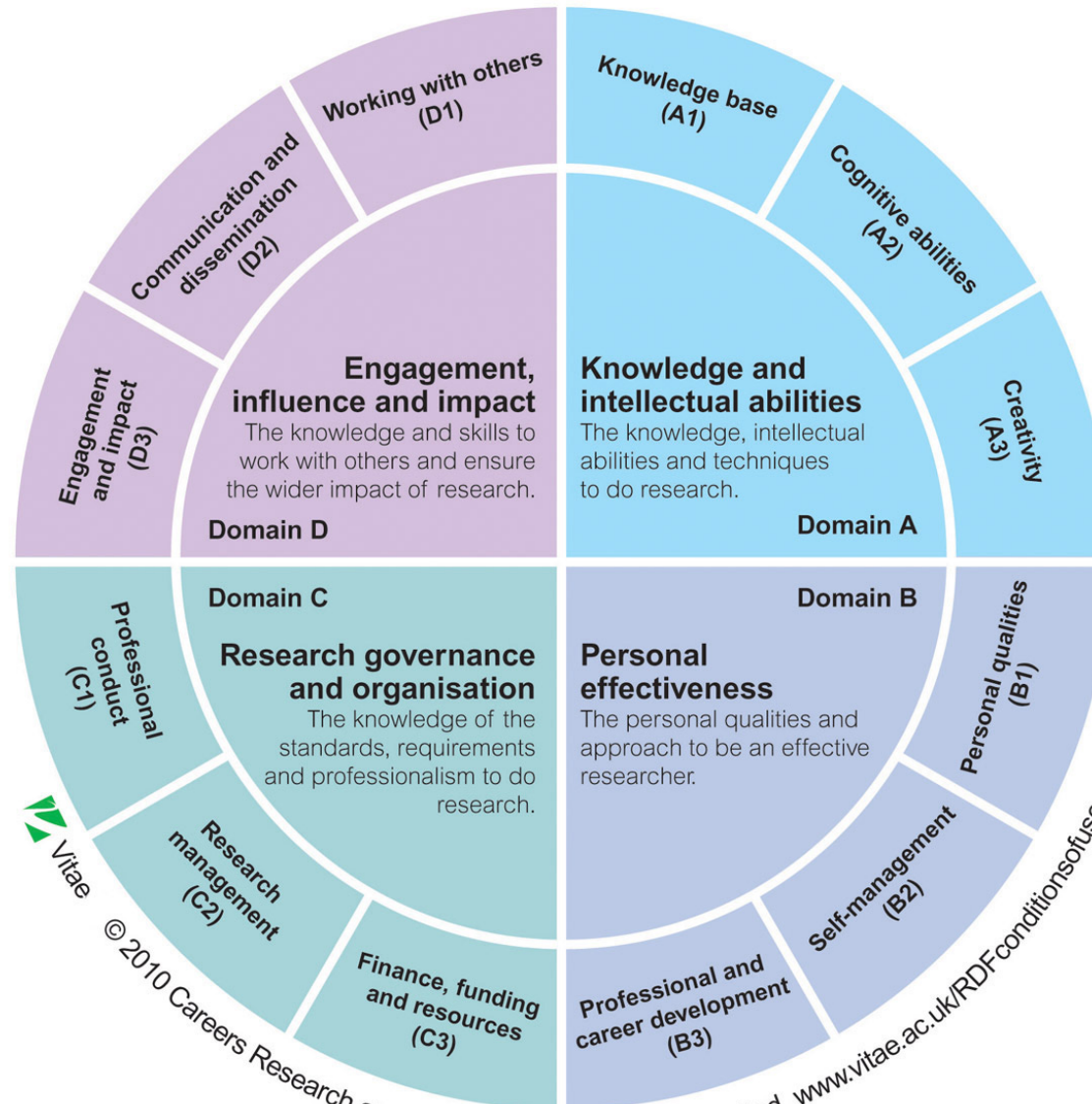




Understanding the skills gap



The Researcher Development Framework (RDF)



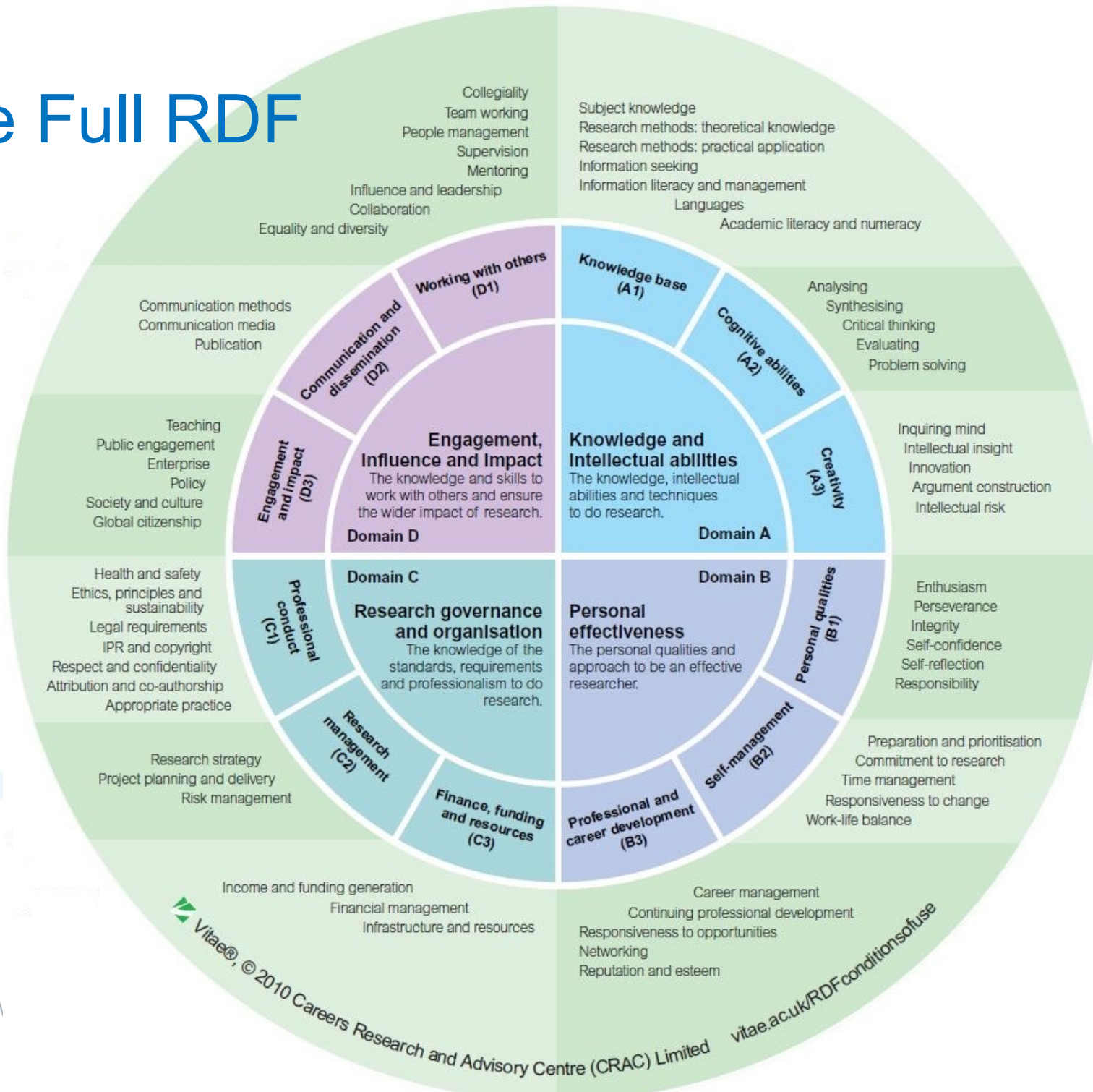
© 2010 Careers Research and Advisory Centre (CRAC) Limited. www.vitae.ac.uk/RDFconditionsOfUse



www.ed.ac.uk

The Full RDF

FOR
MIC
PONENT



<https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework-rdf-full-content-graphic-2011.jpg>



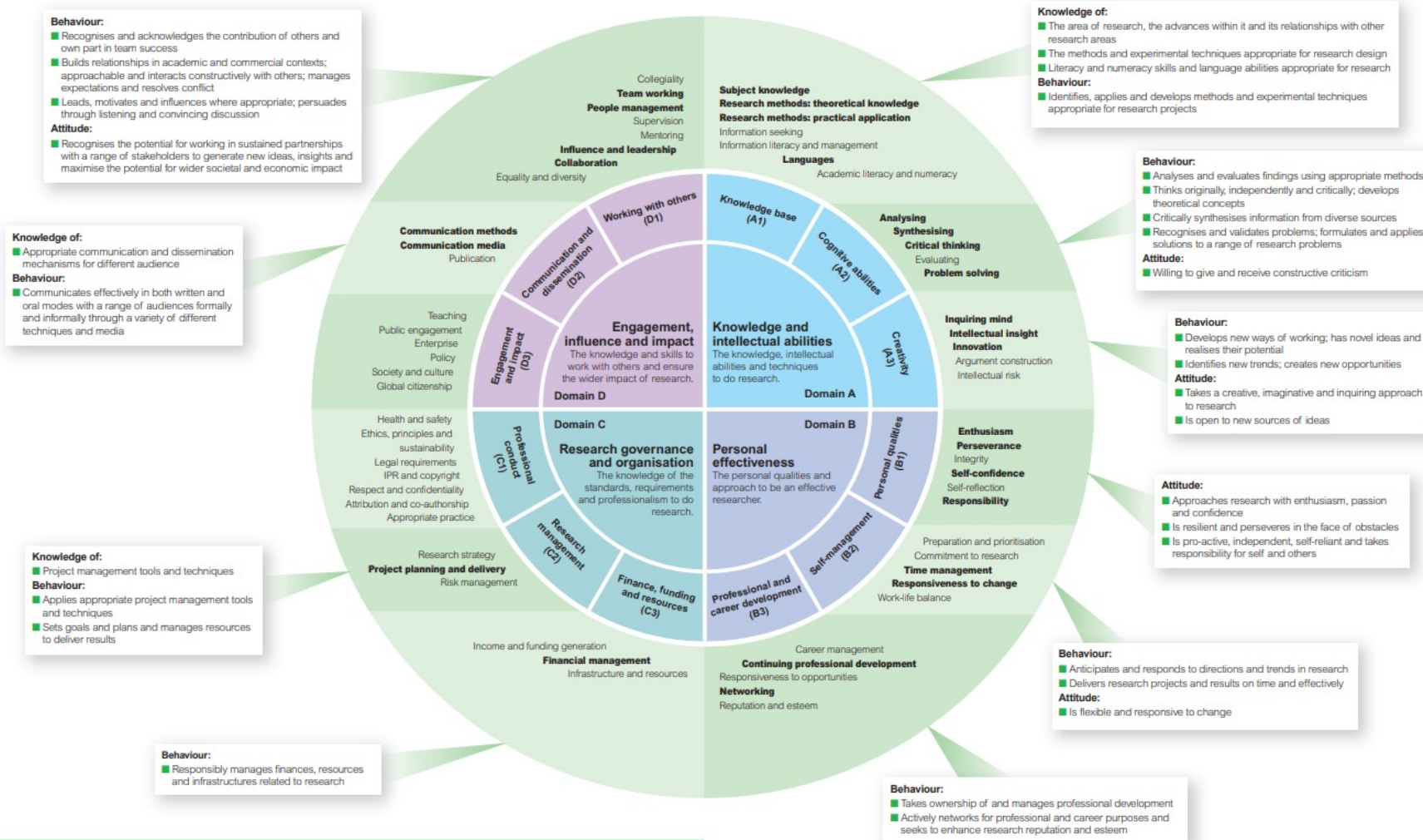
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Example lens on the RDF

Employability lens on the Vitae Researcher Development Framework for careers outside academia



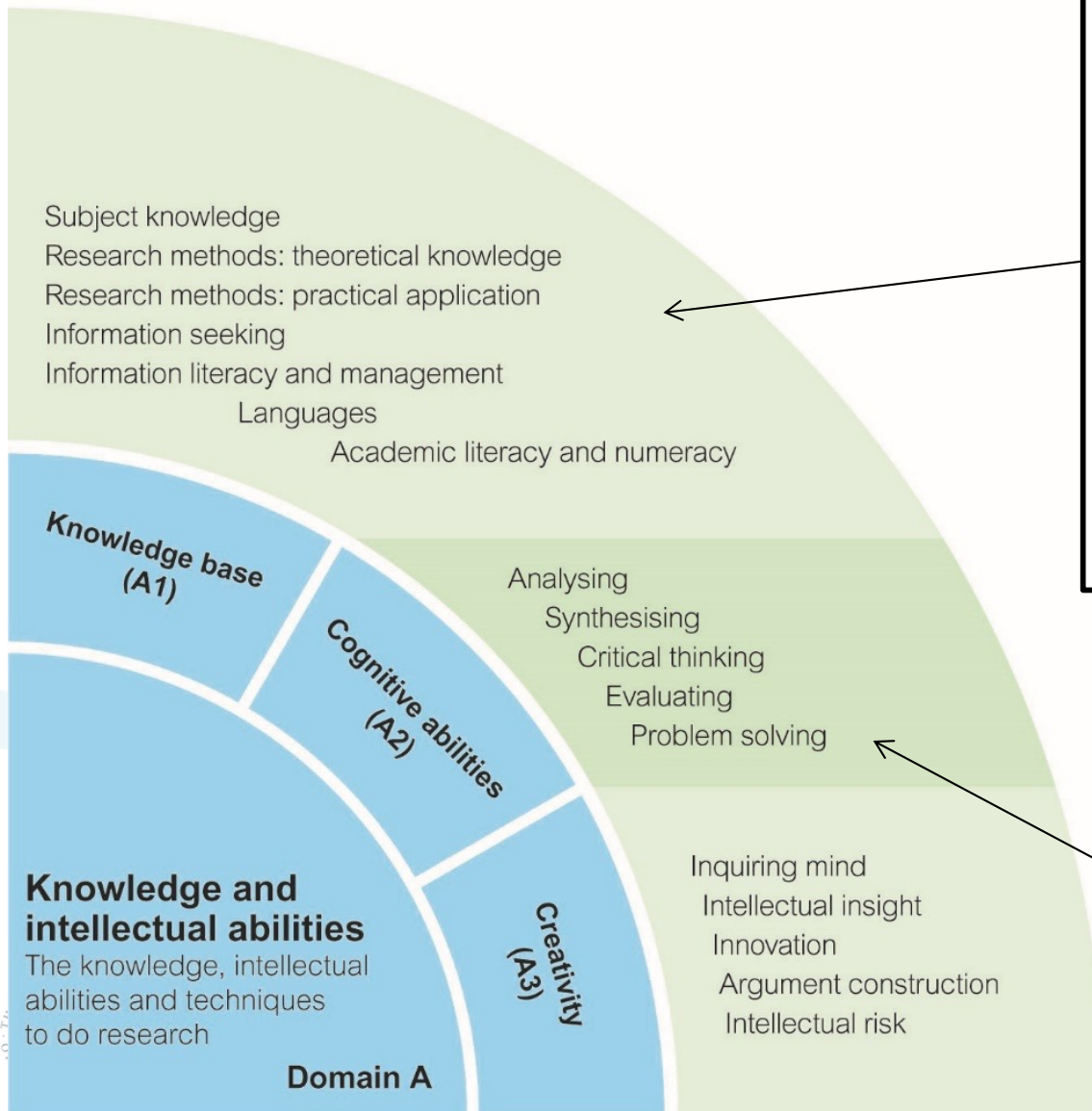
**Researcher
Development
Framework**



Bold text in outer circle – key RDF descriptors that relate to employability and vice versa
Boxed text – summary statements from the Vitae Researcher Development Statement that relate to employability for careers outside academia. www.vitae.ac.uk/rds

<https://www.vitae.ac.uk/vitae-publications/rdf-related/employability-lens-vitae-researcher-development-framework-rdf-may-2012.pdf>

Mapping skills and competencies



Key skills:

- Research methods: practical application
- Information literacy and management

Key competencies:

- Can use a centrifuge and pipette correctly
- Can manage large data sets and perform appropriate statistical analyses

Key skills:

- Problem solving

Key competencies:

- Uses multiple methods and approaches to solve complex problems

Group activity – part 1

In your groups:

- For your domain, specify which key skills and competencies are required in the biomedical industry

- Write these into the Padlet

<https://padlet.com/ewoollen/quyuvd6gs90q601j>

Group activity – part 2

Looking at the full RDF, in your groups discuss:

- Do new recruits have these skills?
 - If no, give it a thumbs down, if yes give it a thumbs up
 - Provide comments to clarify your choices if needed

Padlet is here:

<https://padlet.com/ewoollen/quyuvd6gs90q601j>

Outcomes of the workshop

- Contributions and outputs will be collated into a report
- All participants will be given the opportunity to review their contributions before it is disseminated
- X-Net will take these forward to inform the Roadmap for interdisciplinary careers to influence UKRI future training strategy

Further resources

Experiences from biomedicine

- Gilliland, D.G., Regev, A., Schadt, E.E. *et al.* (2022) Traversing industry and academia in biomedicine: the best of both worlds?. *Nat Rev Genet* **23**, 461–466 (2022). <https://doi.org/10.1038/s41576-022-00486-5>
- Knapp B, Bardenet R, Bernabeu MO, Bordas R, Bruna M, Calderhead B, et al. (2015) Ten Simple Rules for a Successful Cross-Disciplinary Collaboration. *PLoS Comput Biol*, 11(4): e1004214. <https://doi.org/10.1371/journal.pcbi.1004214>
- Ponting C. P. (2020) Genetics Needs Non-geneticists. *Trends in genetics*, 36(9), 629–630. <https://doi.org/10.1016/j.tig.2020.06.015>

For collaborations

- Bennett et al. (2018) Collaboration and Team Science: A Field Guide (2nd ed). *National Cancer Institute, US Department of Health & Human Services*. Available at <https://www.cancer.gov/about-nci/organization/crs/research-initiatives/team-science-field-guide/collaboration-team-science-guide.pdf>
- Gadlin, H. & Jessar, K., Pre-empting Discord: Prenuptial Agreements for Scientists, *NIH Ombudsman*. Available at <https://ori.hhs.gov/preempting-discord-prenuptial-agreements-scientists>

X-Net Contact

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Website: <https://x-net.bio>

Twitter @AnonSciCar

X-Net slack Channel to keep in touch with other interdisciplinary researchers

https://join.slack.com/t/x-net-workspace/shared_invite/zt-1c2eg08pw-adsu5TzP2o~d7miZ20zUXw



Thank you!



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[@EmilyWoollen](https://twitter.com/@EmilyWoollen)



www.ed.ac.uk/iad/researchers



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