

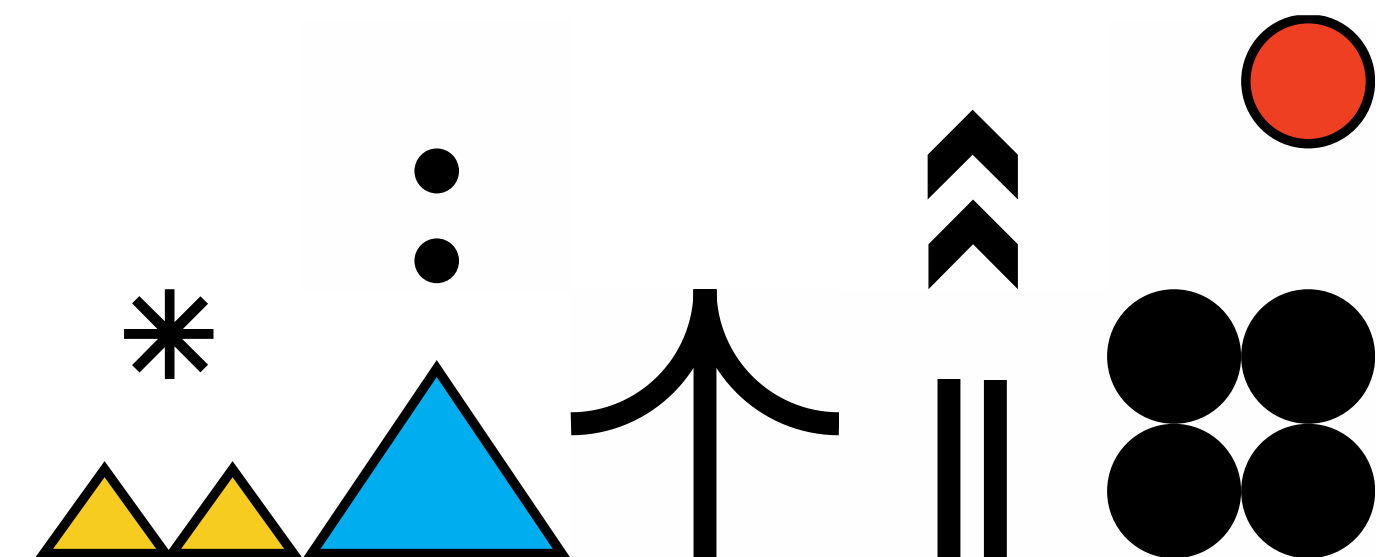
Skills inventory

Prosper.

Unlocking postdoc
career potential



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Section outcomes

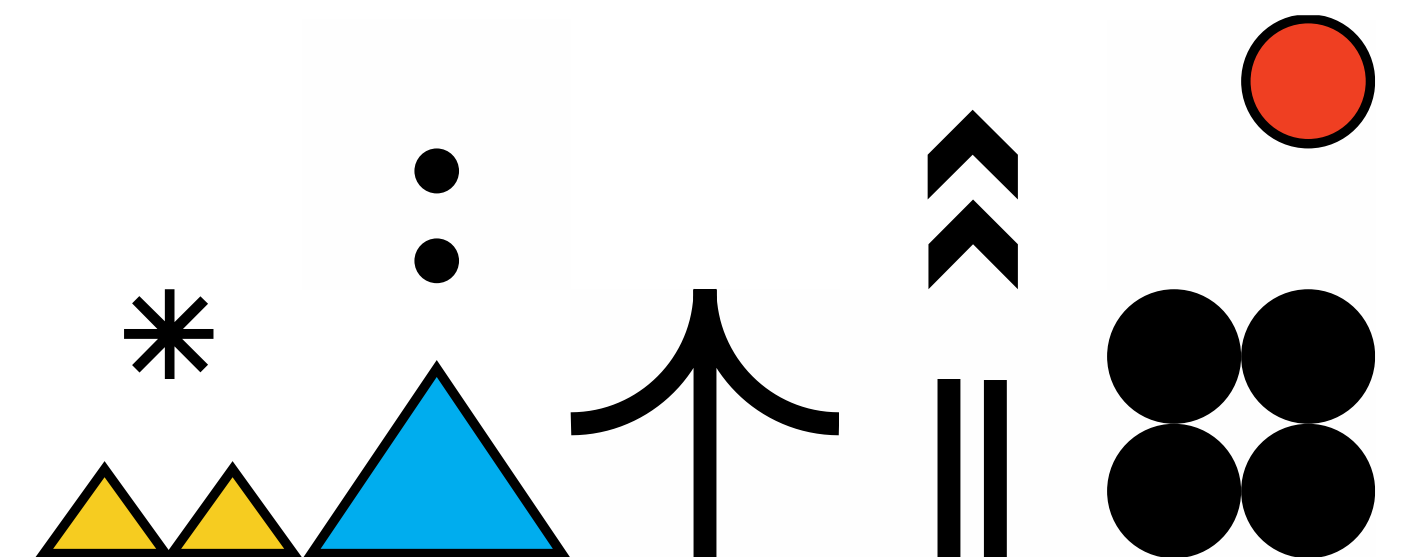
- Understand what a skills inventory is and its importance
- Be able to sign-post your postdoc to practical ways to unpack their skills
- Prompt questions for you to consider



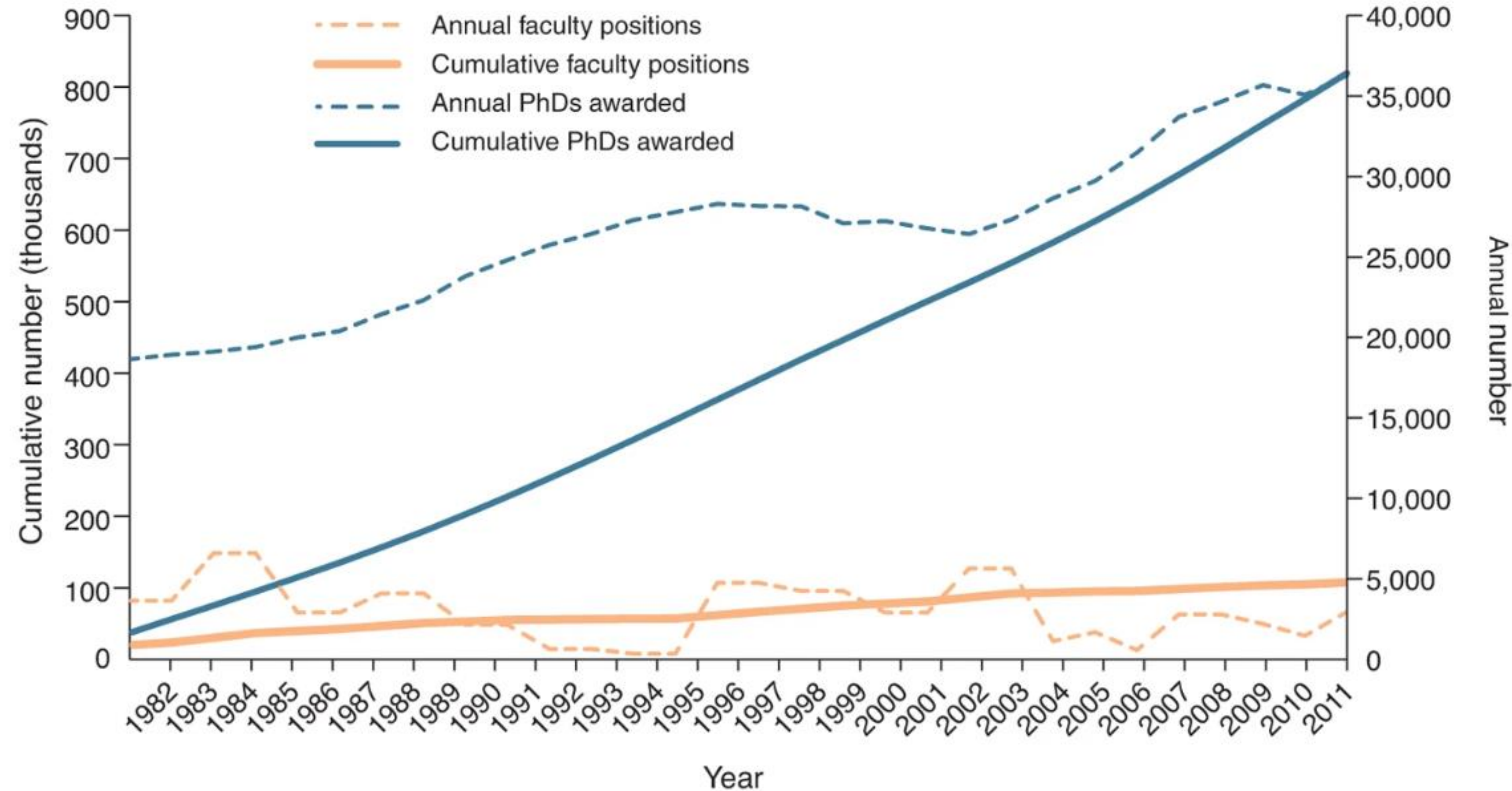
Why unpack a 'researcher' into skills?

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Setting the scene –postdocs need to consider all their career options



‘Since 1982, almost 800,000 PhDs were awarded in science and engineering (S&E) fields, whereas only about 100,000 academic faculty positions were created in those fields within the same time frame. The number of S&E PhDs awarded annually has also increased over this time frames, from ~ 19,000 in 1982 to ~36,000 in 2011. The number of faculty positions created each year, however, has not changed, with roughly 3,000 new positions created annually’

What is a skills inventory?

A comprehensive document (or list) containing all of an individual's educational qualifications and professional skills. This should also capture professional abilities and attributes.

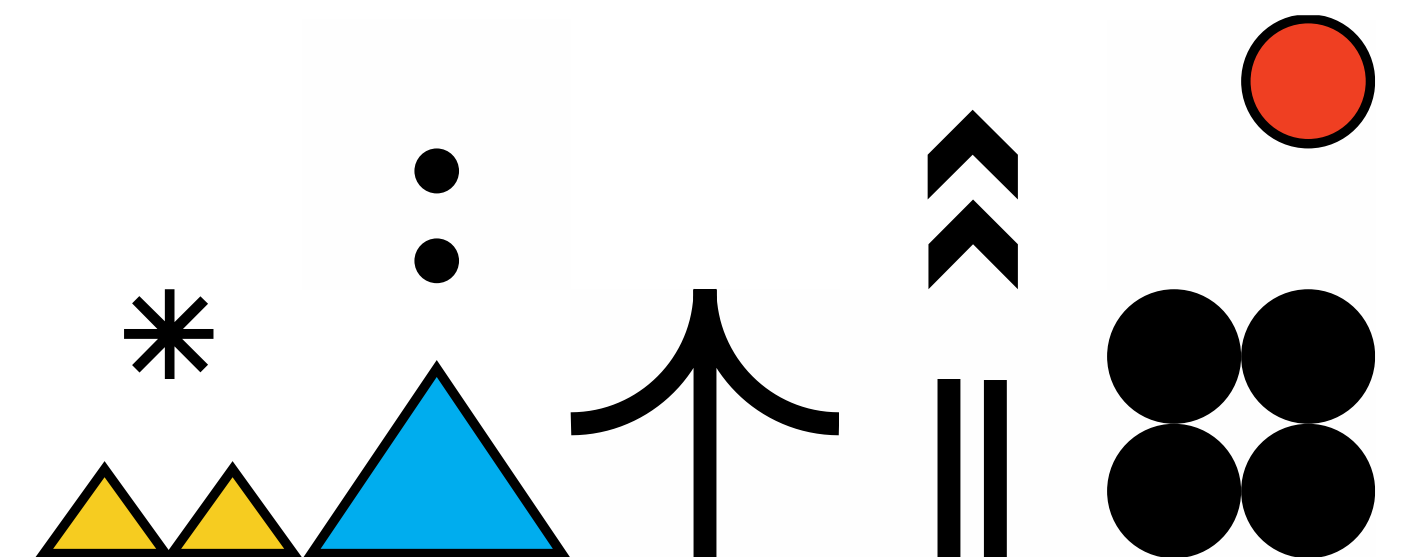
Also referred to as a 'personal skills audit'



How to unpack a 'researcher' into skills?

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How to unpack a 'researcher' into skills?

- Time
- Research output
- Real-time skill spotting



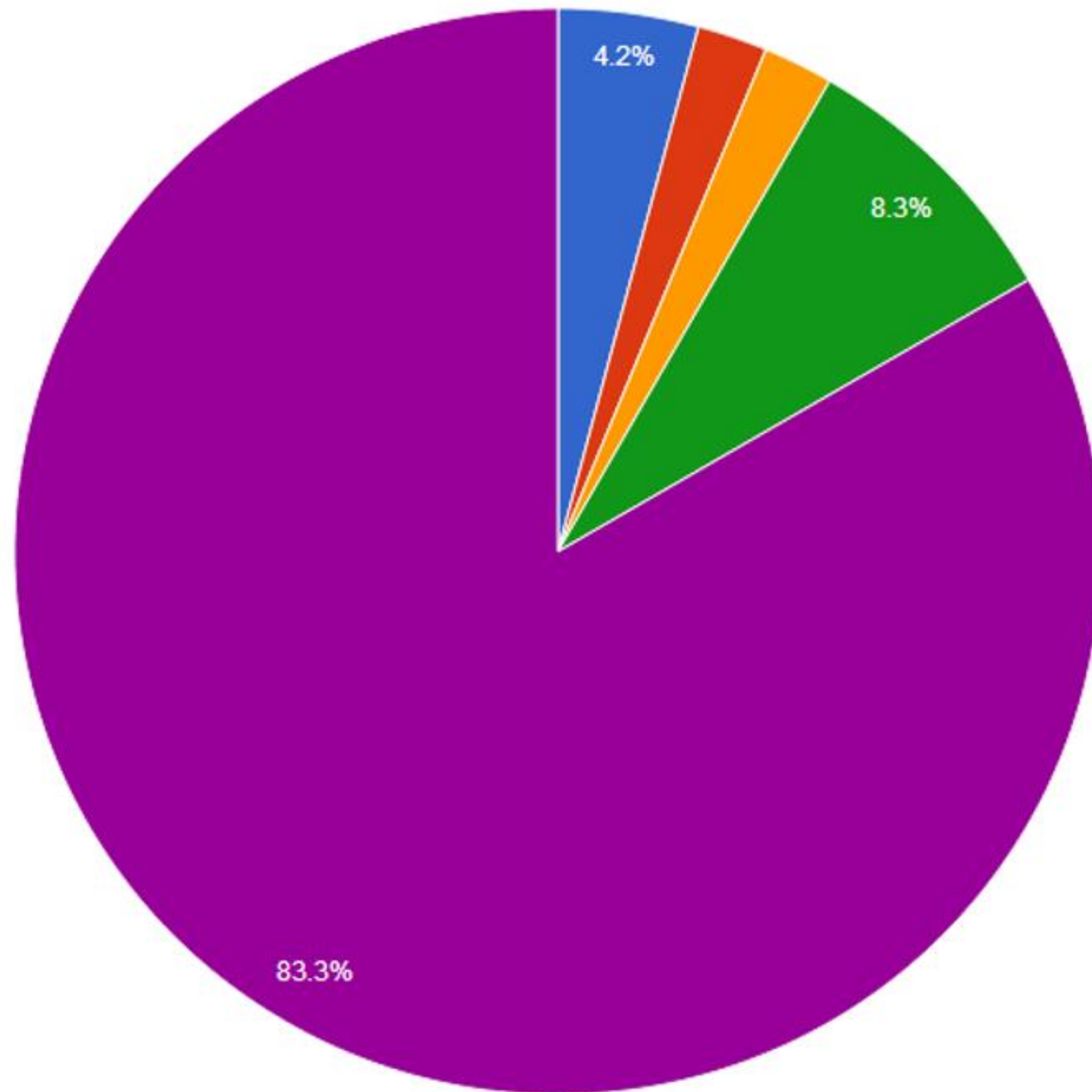
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- **Time**
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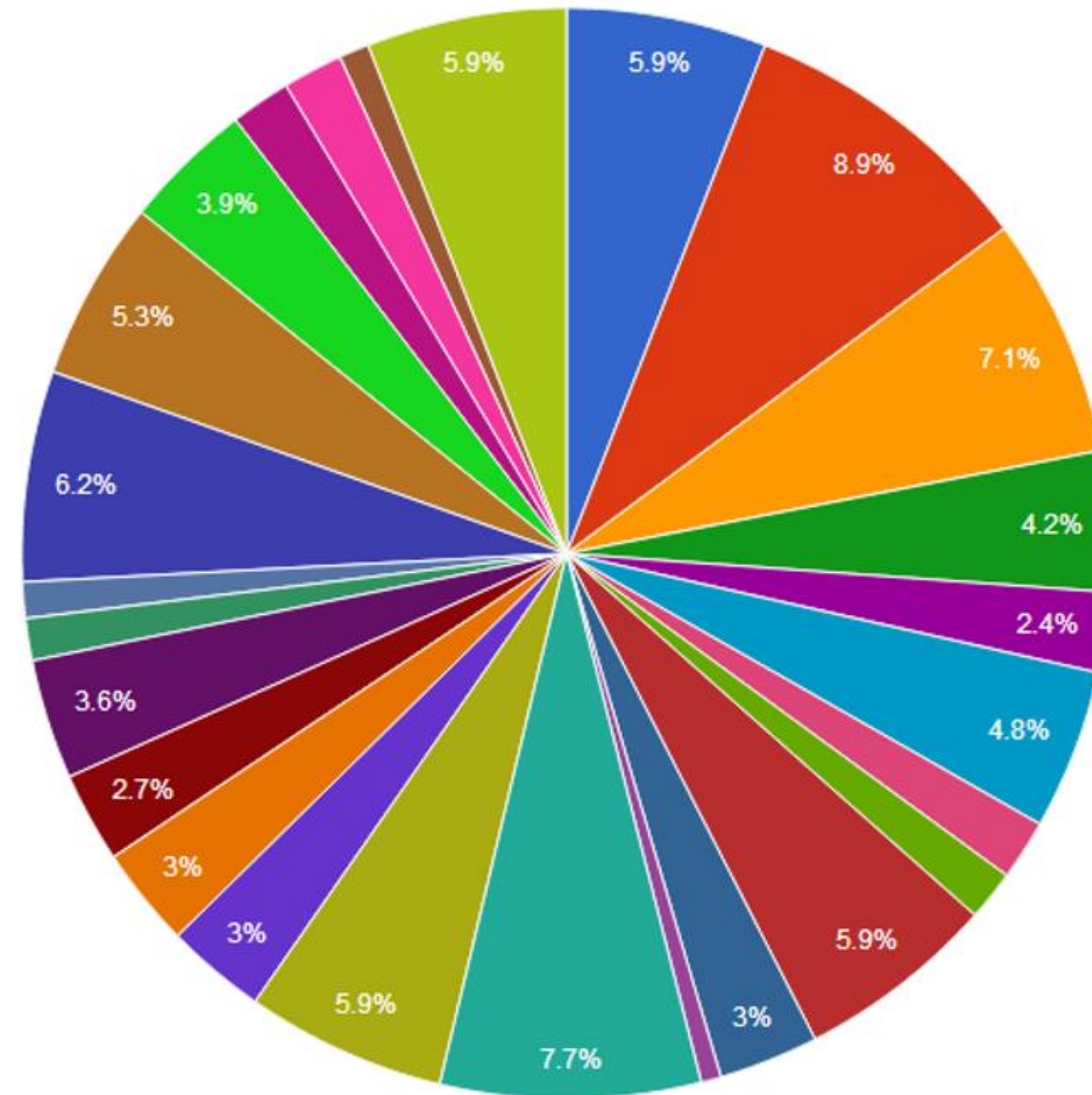
What do you spend your time doing?

Postdoc



- Manuscripts - Writing
- Manuscripts - Reviewing
- Professional development
- Research - Keeping up with the literature
- Research - Working on your project

Year 2 as assistant professor



- Teaching - Class Meetings
- Teaching - Preparation
- Teaching - Marking, Admin
- Teaching - Q&A
- Teaching - Guest appearances, outreach
- Advising - Project meetings
- Advising - Skills mentoring
- Advising - Letters of recommendation
- Grants - Writing
- Grants - Coordinating and merging collaborations
- Grants - Panels, Reviewing
- Manuscripts - Writing
- Manuscripts - Reviewing
- Service - Thesis Committees
- Service - Reports/Theses marking
- Service - Department committees, meetings
- Service - University committees
- Service - Organize and host seminar series
- Service - Organize national/international events
- Research - Lab management
- Research - Protocols, approvals, compliance
- Research - Supply levels, shipping, repairs
- Research - Invited talks, conferences, workshops
- Research - Short and long term planning
- Research - Keeping up with the literature
- Research - Working with trainees on projects

Main tasks

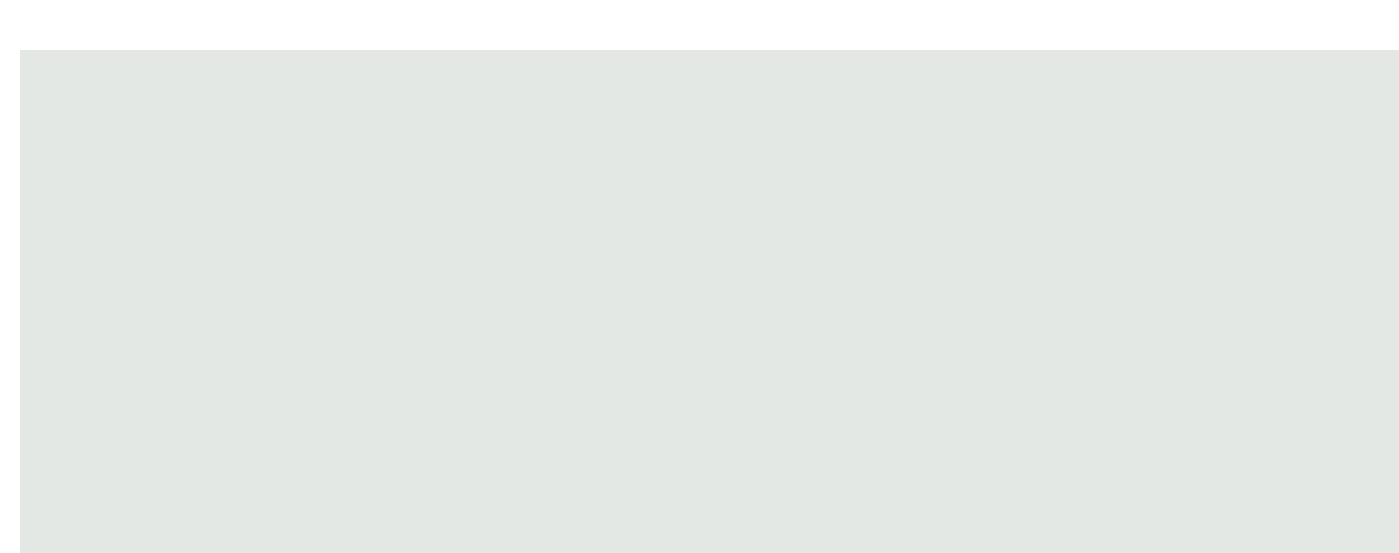
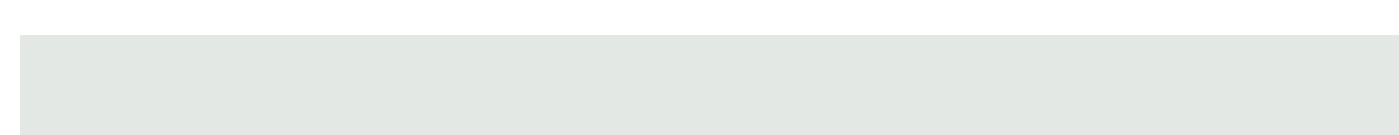
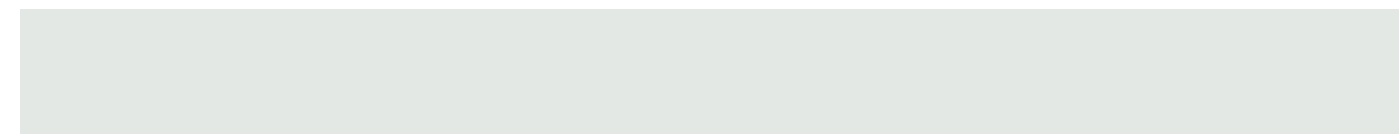
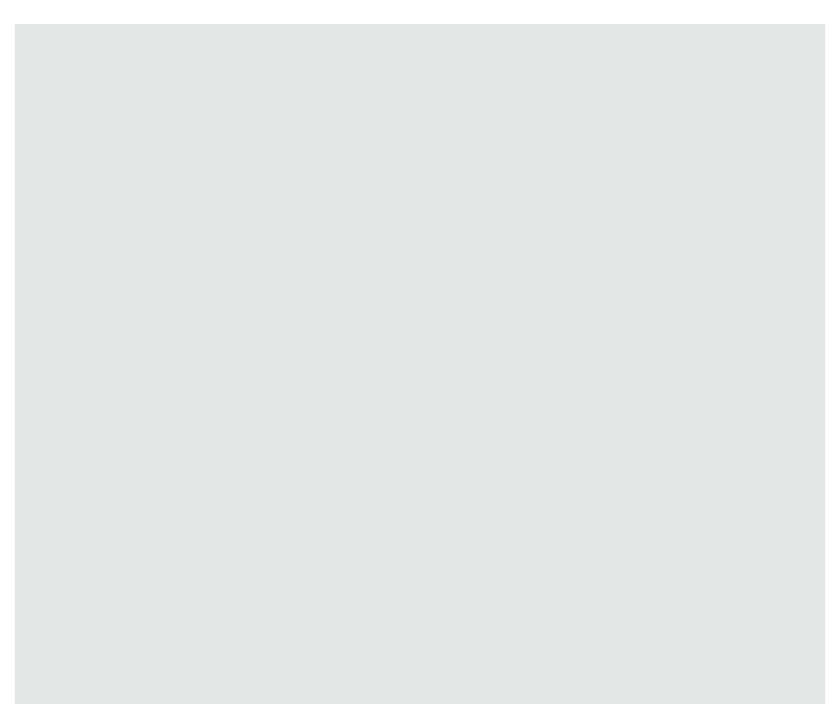
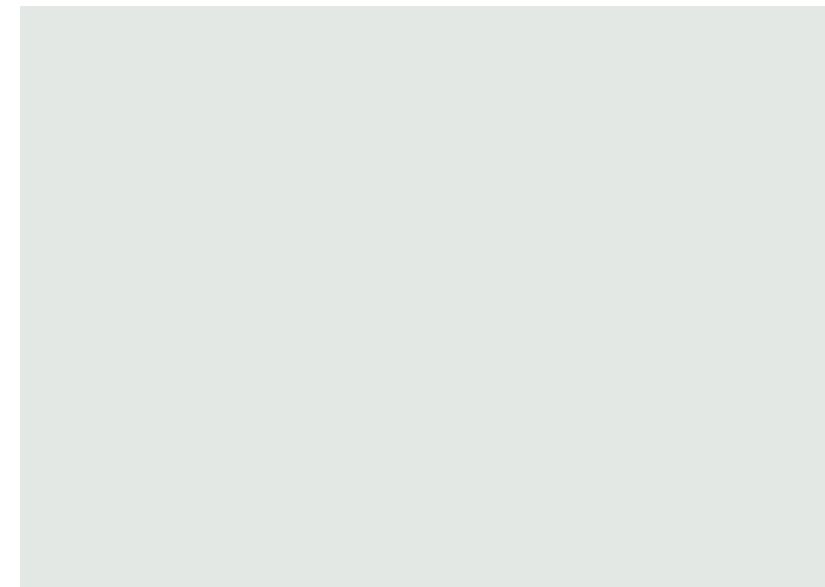
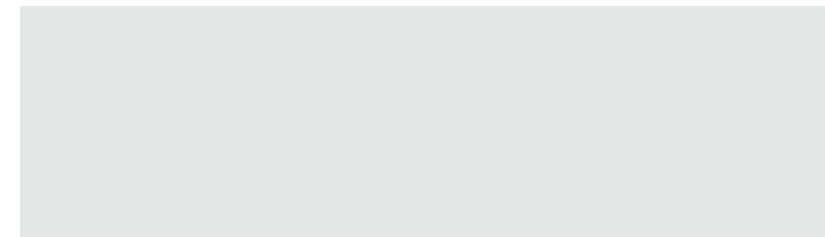
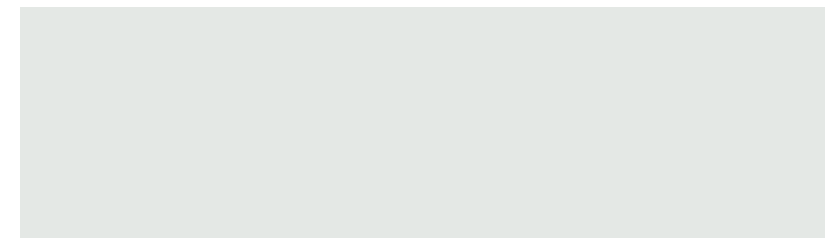
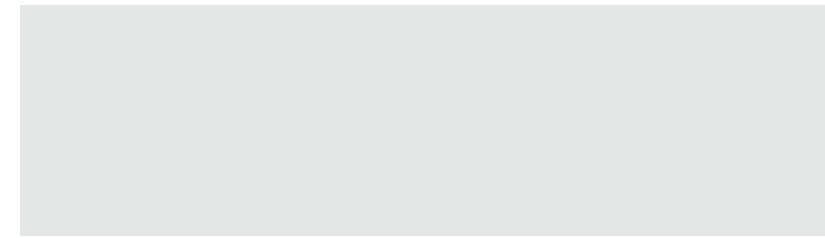
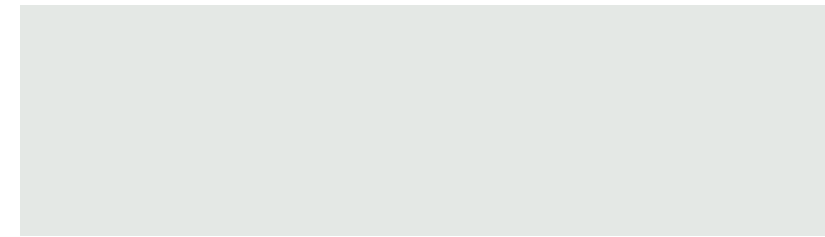
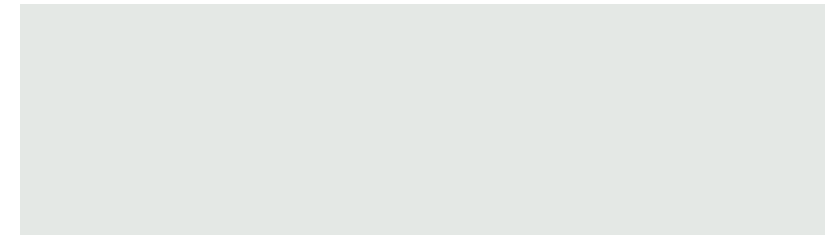
Sub tasks

Sub sub tasks

Research

Teaching

Training/
supervision



Main tasks

Sub tasks

Sub sub tasks

Research

Communication

Attending conferences

Leadership

Teaching

Administration

People management

Training/
supervision

Lesson planning
Procurement of materials
Risk/safety assessments
Evaluation
Reflection on practice

Technical skills/knowledge
(disciplinary niche specific)
Data collection/acquisition
Data processing
Analytica skills
Problem solving
Establish and maintain
collaboration/s

Main tasks

Sub tasks

Sub sub tasks

Research

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Conflict resolution

Outreach/public engagement

Writing –papers/reviews/book chapters

Keeping up with the literature

Social media

Stakeholder engagement

Narrative creation

Financial management/budgeting

Time management

Negotiation

Networking

Setting, preparing for and attending project meetings
Reviewing students project progress
Reviewing students presentations/teaching
presentation style
Reviewing students data analysis/acquisition of area
specific technical skills and/or jargon
Reviewing students written work/written output

Main tasks

Sub tasks

Sub sub tasks

Research

Teaching

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Managing communications and interpersonal
colleague relationships – above, below and
peer

Public speaking- style and info
tailored to specific audience

Copy editing

Proof reading

Diplomacy and negotiation (where is your name
on the author list?)

Social media account management

Content production

Archival/organisation skills

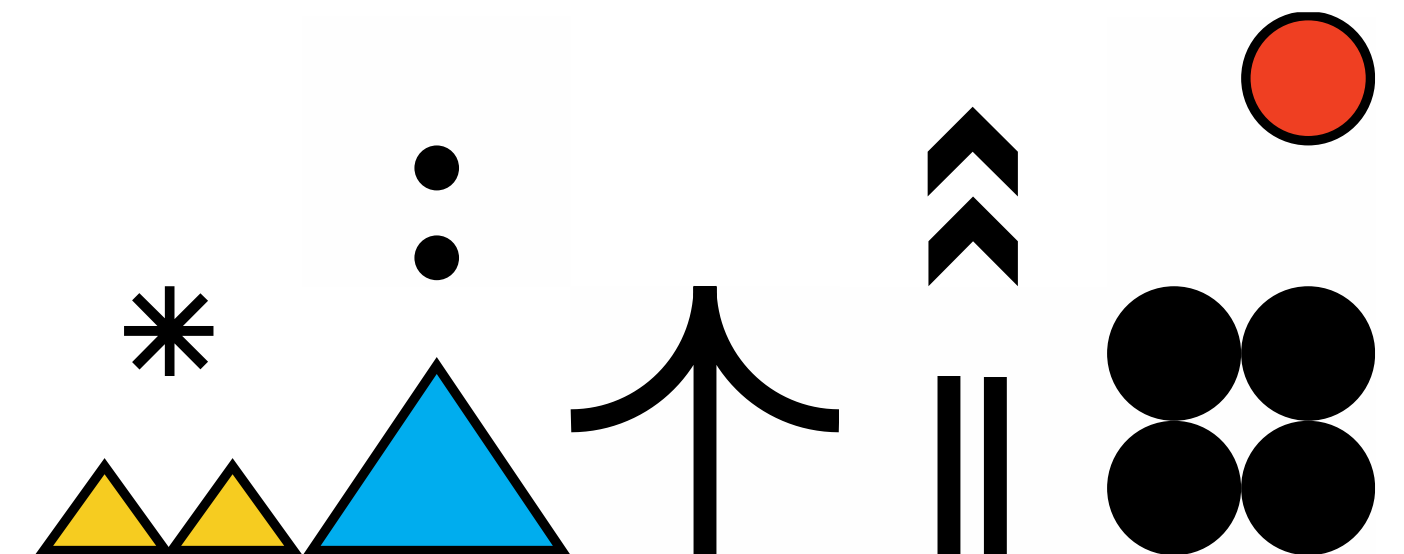
Horizon scanning/search skills

Rapid assimilation of knowledge

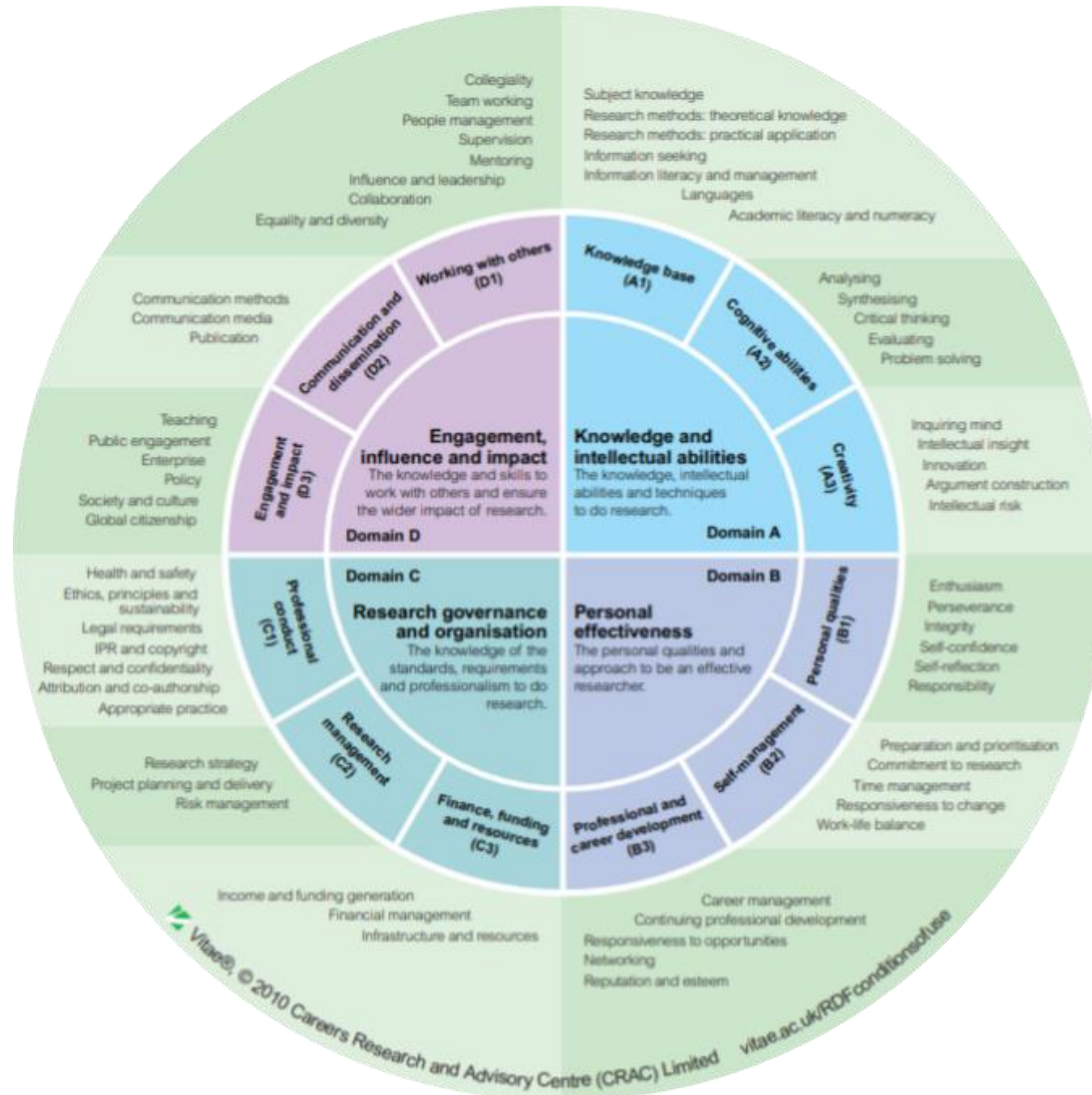
dissemination of knowledge

Consider findings, process relevance to
own research, review own research
plan/strategy in light of new info

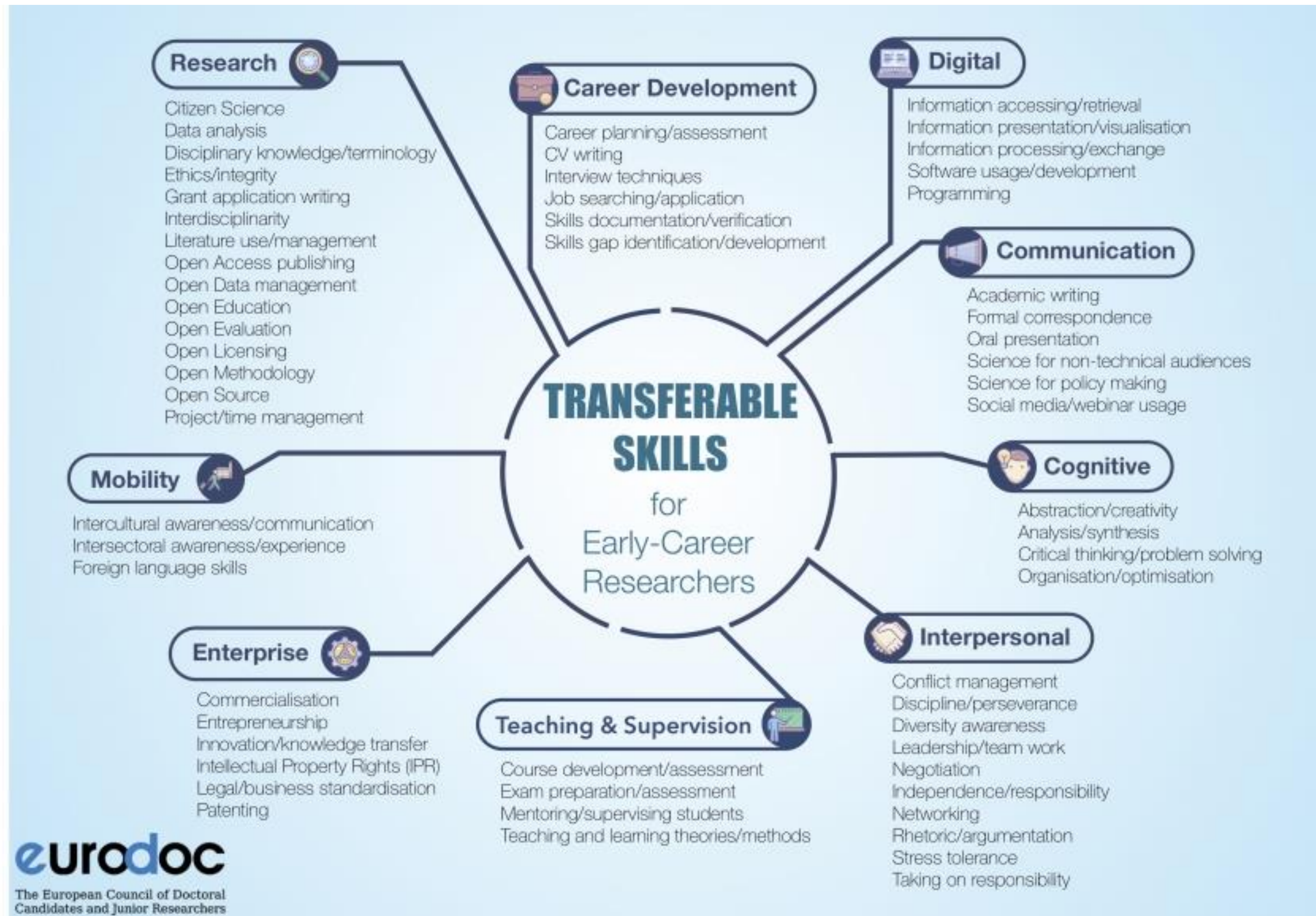
What skills should researchers be looking out for?
What skills do employers want?



Vitae's Researcher Development Framework (RDF)



Eurodoc's transferable skills for early career researchers



transferable skills

communication

willingness to learn

initiative

passion
drive

dedication

30/09/2020

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02/10/2020



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06/10/2020



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World Economic Forum (WEF) top 10 skills of 2025



Top 10 skills of 2025

-  Analytical thinking and innovation
-  Active learning and learning strategies
-  Complex problem-solving
-  Critical thinking and analysis
-  Creativity, originality and initiative
-  Leadership and social influence
-  Technology use, monitoring and control
-  Technology design and programming
-  Resilience, stress tolerance and flexibility
-  Reasoning, problem-solving and ideation

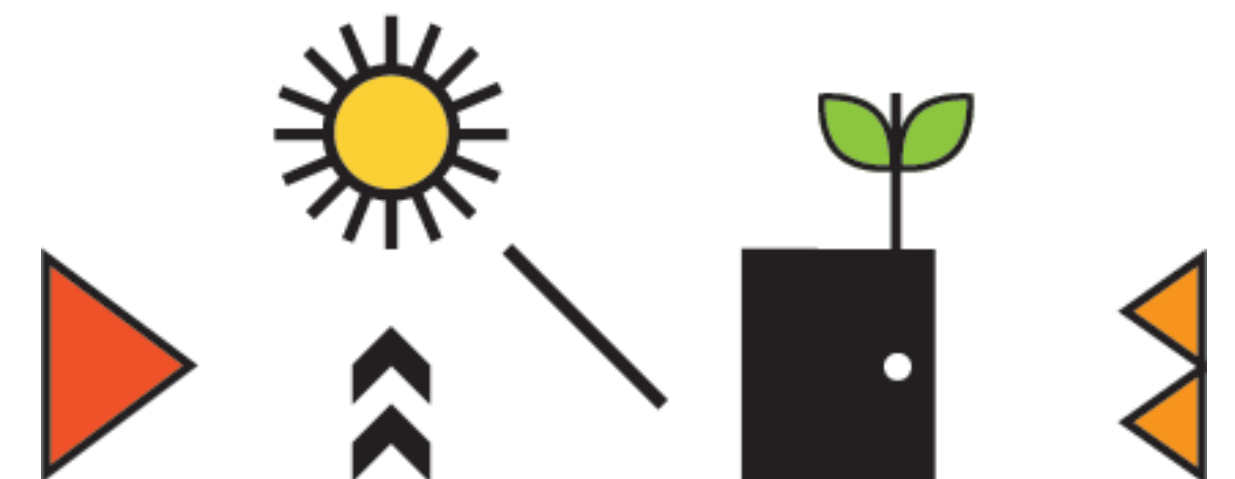
Type of skill

-  Problem-solving
-  Self-management
-  Working with people
-  Technology use and development

Source: Future of Jobs Report 2020, World Economic Forum.

<https://www.weforum.org/agenda/2020/10/top-10-work-skills-of-tomorrow-how-long-it-takes-to-learn-them/>

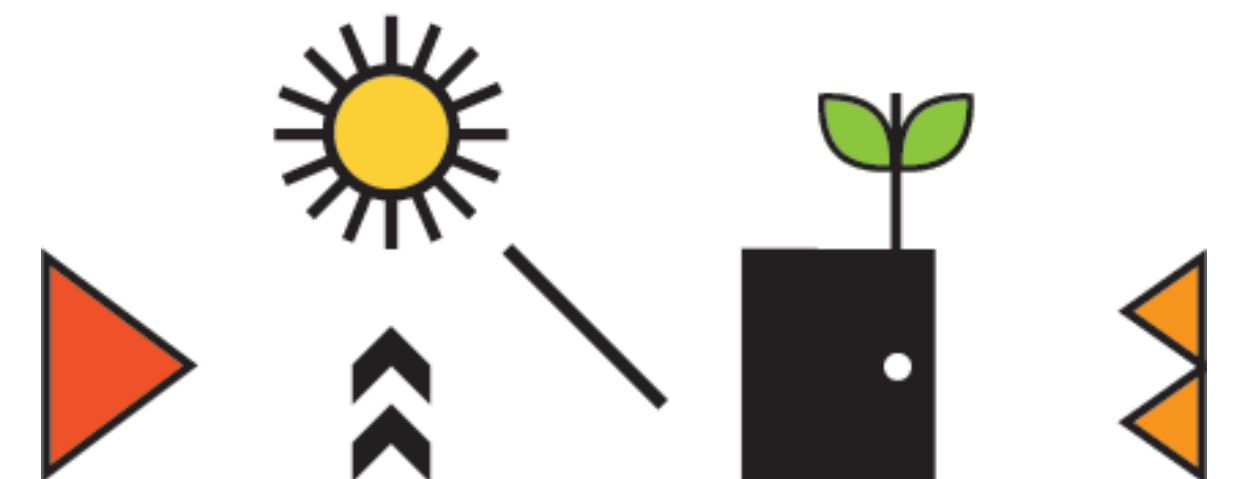
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What makes an application stand out to you?

‘Not simply listing all of your publications or conference papers. If you’ve been invited to give a keynote at a conference, or something – that’s clearly a big achievement. It’s about being judicious with your academic-specific information.’

Programme Director, IBM Research UK



How to unpack me as a 'researcher' into skills?

- Time
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Thinking about your research output/s in a different way

Example: [Insert title of one of your research outputs here]

- List the technical skills this research required
- List the 'other' skills you used
collaboration, working to deadlines, communication skills, budget management
- List any attributes you developed or showed
problem-solving, fast learner, happy working with a level of ambiguity



How to unpack me as a 'researcher' into skills?

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- Research output
- **Real-time skill spotting**



Skill spotting guide

Skill	S	M	T	W	T	F	S	Notes
Reflection								
Action								

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Skill spotting guide

Skill	Cognitive	S	M	T	W	T	F	S	Notes
Abstraction/creativity			*						Designed new presentation with engaging interactive task tailored to audience
Analysis/Synthesis			*						Analysed feedback data to design new presentation
Critical thinking									
Problem solving					*				Identified limit with online platform, found suitable alternative
Organisation/optimisation							*		Suggested alternative agenda and way to run team meetings
Reflection		<p>Didn't identify any examples of using 'critical thinking' this week.</p> <p>Surprised how having this list of skills focussed my attention on things that I would have overlooked otherwise.</p>							
Action		<p>Focus next week on 'critical thinking' skill.</p> <p>I will find an example of critical thinking and see how I can translate it to my work. I will record one example of using critical thinking by the end of next week.</p>							



Some questions to ponder

- What skills do your postdocs have?
- How do you help them realise their skills?
- Do you explicitly discuss professional skills aside from technical/research skills with your postdoc?
- Any tried and tested approaches to helping your postdoc recognise their skills?

