

Burning in inclusive change

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Alces Software: Sustainable Futures 2023

Disclaimer

ChatGPT did not write (all of) this talk.

I asked ChatGPT:

What is the best way to undertake inclusive change?

And

How would this be applied within the context of research computing?

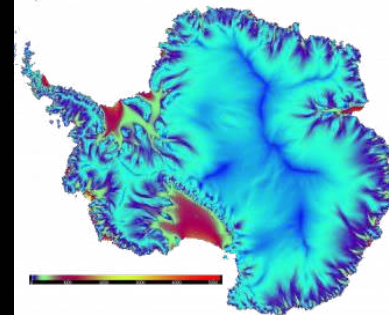
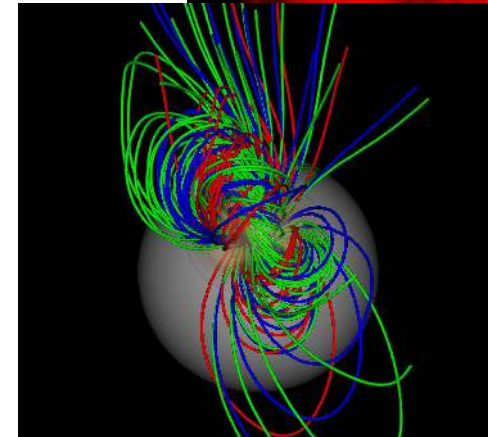
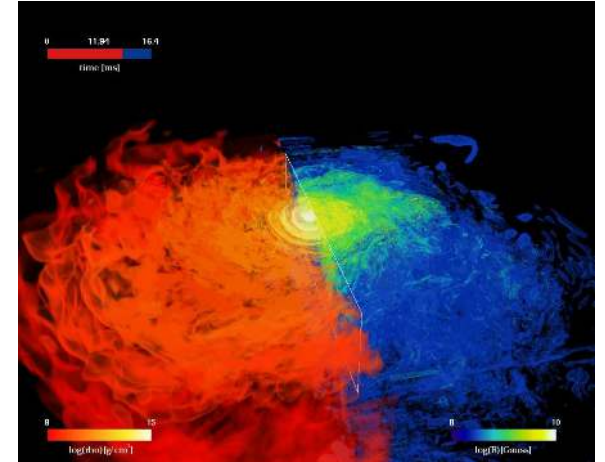
I would describe the output as "an unsettling blend of definitions, motivations and change management process"

We'll focus on the things that worked for us and keep the dream of a **sustainable reality** of a career in research computing alive!

The opportunity

Create a dedicated research computing support function.

- Context is everything!
- So let me explain...



My background

- The ‘traditional’ DRI professional trajectory:
 - Physics Grad, PhD, ran the HPC system, user support focus, secured sustained funding commitment, built a team.
- Built trust from the ground up.
- Considerable political capital.
- Inclusivity??

Evolution of mindset...

- HPC is complicated
- Its for people like me that know what they are doing.
- Serving a broader agenda?
- An ‘Epiphany’
- The brutal reality.

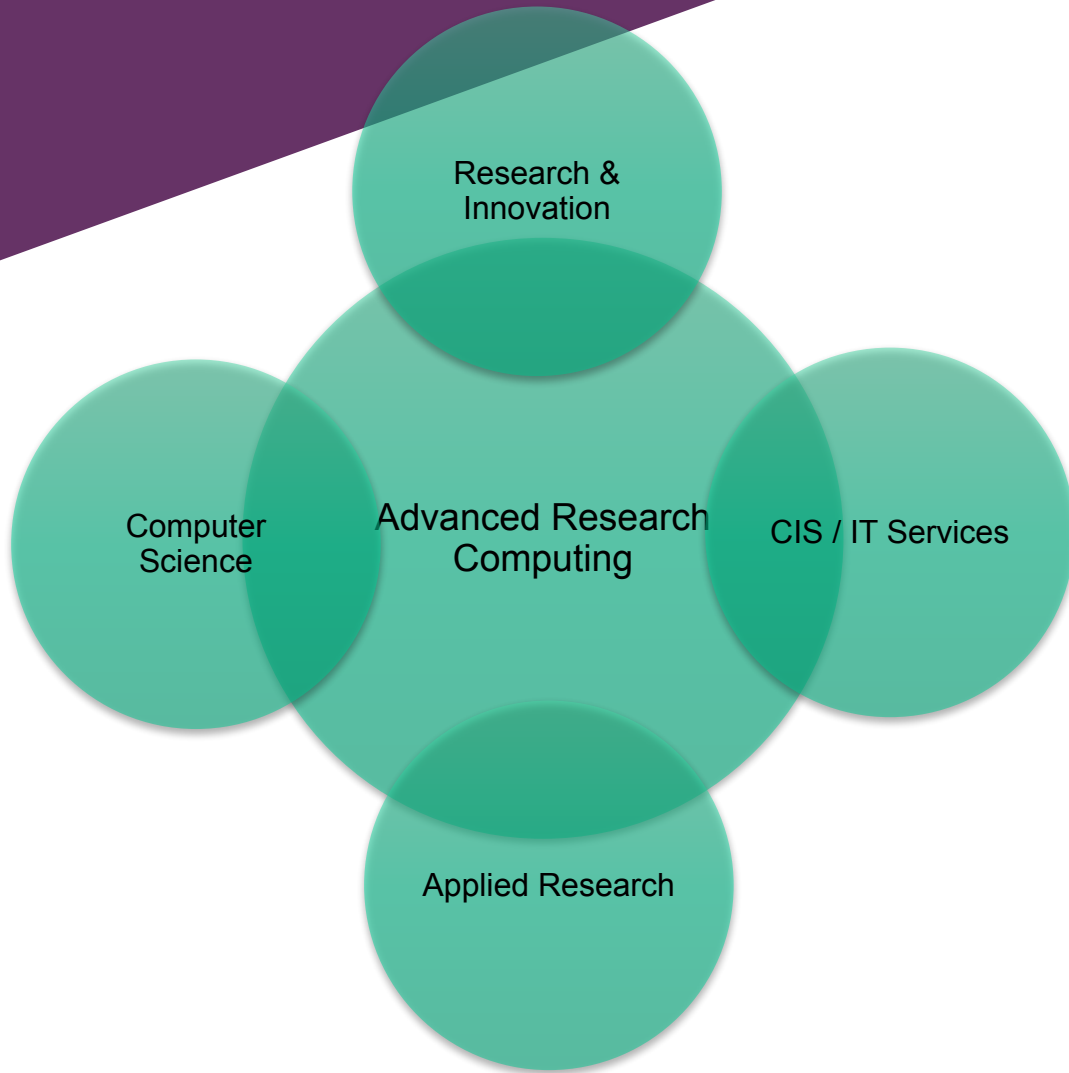
The opportunity

Create a dedicated research computing support function.

- Context is everything!
- Little things are **really important**.
- Wide consultation.
- You've been brought in to do a job:
 - Something needs fixing
 - Everyone is protective of their position.



The ARC proposition



Enabling research to be at the forefront of computational and data-intensive practice.

Key components

- People & Skills
- Research Aspirations
- Infrastructure: Hardware & Software

Interdisciplinarity

- Collaborative culture
- Bridge between Academic Practice & operational services
- Networks of cross-cutting methods

Future proof

- Research Software Engineering
 - Technical Research & Development.
 - Industrial links & co-design
- Values criticality and contribution of technical expertise.

Why is Helping Researchers Hard?

Ubiquity: Within any discipline, a greater proportion of researchers do computing-intensive and/or data-intensive research now than ever before.

Applicability: More disciplines do computing-intensive and/or data-intensive research now than ever before.

System Complexity: The storage hierarchy is getting deeper (flash, non-volatile RAM etc), and parallelism is getting more hybrid (GPUs etc).

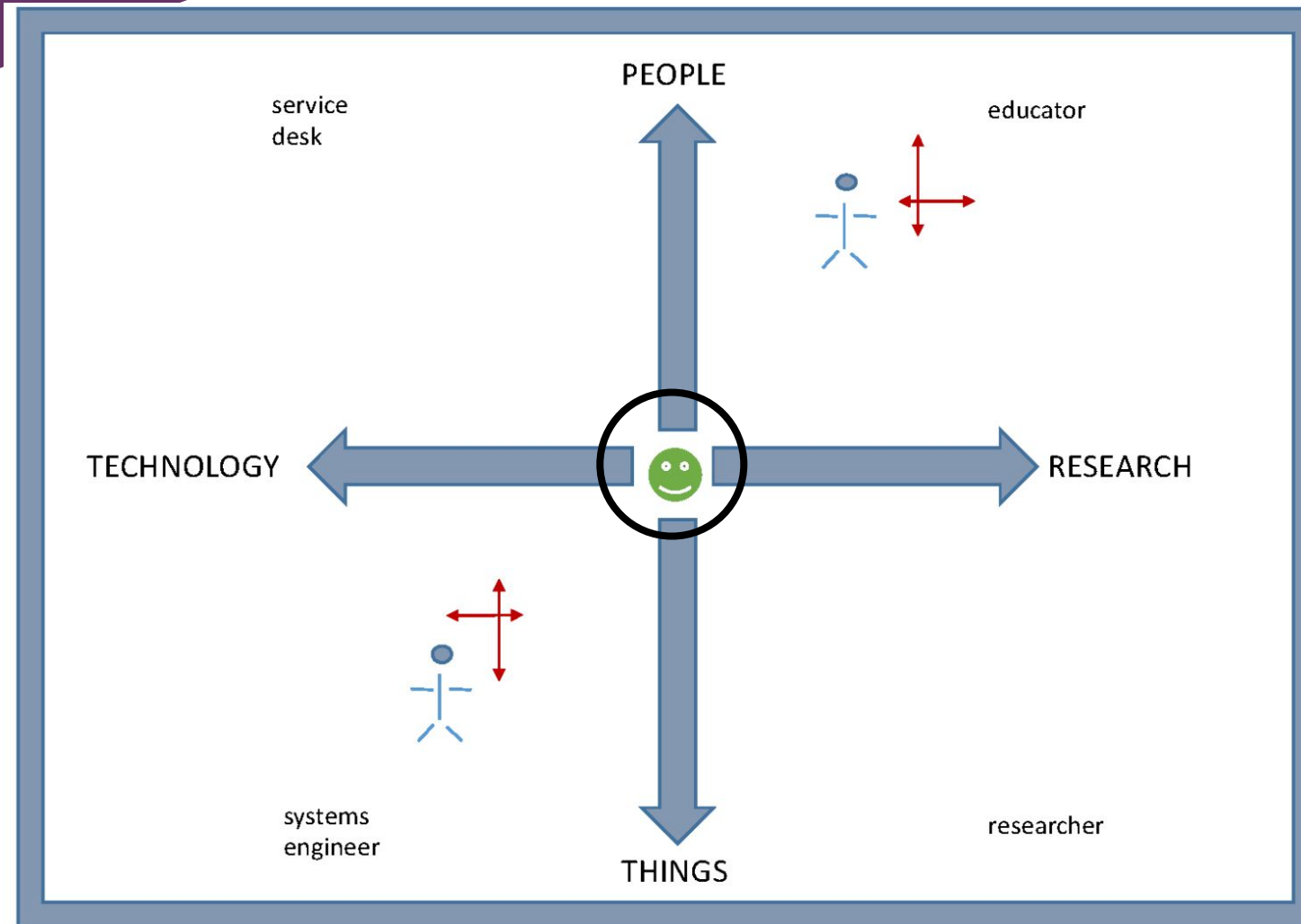
Conceptual Distance: The mental gap from handheld computing to command line/Linux/batch/remote/shared.

But we still only have one hour to help them before they lose interest!

Across the 5 facings:

- Researcher facing
 - Facilitators, business development, user support
 - Systems facing
 - Systems administrators
 - Data facing
 - Research data librarian.
 - Software facing
 - RSE
 - Stakeholder facing
 - Director, administrator
- Focused on core common attributes
 - Challenged the common experience pathway.
 - Key relationships.
 - Looked for 'startup' mentality
 - Desire to collaborate

Our happy place



Neeman/Cuff 2016



Example activities

Broadening participation

- Lowering barriers for adoption
 - Make it correct, make it easy, make it fast.
- Meet people where they are.
- Who's not here? Interventions?

Recruitment

- EDI checklist
- Feedback on process
- Measure & propose interventions

WHPC

Training & education

- Ally skills
- Female-led technical training.

Outreach / publicity

- Identify & promote role models
- trailblazing WHPC
- Non-traditional use

It takes a village

It really does!

And you're never done!

Everyone in the team invests:

They practice care, lead by example, uphold a safe environment

People bring their whole selves & we're better for it.

Walking the walk is a precursor to talking the talk

Departmental strategy (2022 revision)

In departmental vision:

*Advanced Research Computing's (ARC) vision is to provide an **inclusive environment** for Durham University researchers to leverage the cutting-edge of computational- and data-intensive practice within their respective fields and collaborate with researchers as part of interdisciplinary computational projects.*

Through its activities that include:

Embedding and inspiring inclusion and a collaborative culture through its workforce and Knowledge Exchange activities.

Strategic priorities that include:

Culture and workforce development

- *Fostering a culture of collaboration & an **inclusive approach** to the contribution of ideas.*
- ***Embedding EDI principles into all activities, to broaden the impacts of DRI investments and advocate for increased diversity in its supporting workforce.***
- *Providing soft-skills support towards building trust and effective leadership attributes for DRI professionals.*
- *Establishing suitable entry points and clear career pathways that support the development of DRI professionals.*

Why This is the Best Job Ever

No matter what role you have in research computing:

Every day, you get to see how the work you do helps other people to be successful.

Thank you!

And in the words of ChatGPT:

Inclusive change in research computing requires a commitment from institutions, funding agencies, research communities, and individual researchers. It involves creating an environment where everyone feels valued, supported, and empowered to contribute to the advancement of science and technology. It's an ongoing effort that should be integrated into the culture of research computing organizations and institutions.

Discuss!?

Thank You!

Durham University Advanced Research Computing

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