

2025-07-09 Bristol - Accelerators



Resource management
(Funding models) | Horizon
Scanning | Quantum |
Background differences,
Jargon Busting, GPU Primer |
Seeking Breadth

Don't want a
platform centric
approach

How to communicate what you do and offer |
Competitors to Nvidia | licencing conditions |
Containers for GPUs | Subdivision | MIG |
security of subdivision | interaction with the
scheduler | vendor specific training for tech |
RISC5 FPGAs ASICs TPUs Graphcore etc | how
stuff is structured

RSE vs RIE who does what | Co-design between users and RIE's | need to put in a lot of effort |
Use cases – how are they being used | Superchips (e.g GH200 or BH200) vs regular graphics
cards | cost implications of tech choices | initial demonstrators, diversity of platforms –
perspectives | learn concepts and approaches not 'just' platform – portability | recognising
hardware failure and degradation | Profiling tools | Monitoring/observability | RDMA | Cube Flow
– How platforms interact with GPU's etc | difference between CPU/GPU – best workloads for
different systems, Group to group differences | what makes the tooling special? Why does it
work? | differences and use cases of technologies | Validation (relevant across the board) |
Trouble shooting and benchmarking

Let researchers into
the datacentres –
political power

2025-07-09 Bristol – Datacentres & Networking



How to make the business case

| CoLo – choosing good bed
buddies | IPV6 (don't do it yet!) |
tenders | how to train if it's all
outsourced | how to move from
AC -> DLC | Troubleshooting
InfiniBand N/W | Buzzwords

Naming systems

How to automate the datacentre so you don't have to go! |
Power - to the room – to the rack | rack dimensions |
observability/monitoring issues | network configuration |
diagnostics – networking – cooling | cost implications of new
tech/change | cable lengths & fragility, bend radii | Active vs
passive cables | Learning vendor/Ops separation knowledge |
network configuration | heat reuse

Training HPC cluster for RIE's | Customer Client management of outsourcing | external and mobile
networks cf IOT | S.E.P Addressing learned/taught helplessness when it's all external | weight of
systems & water | network topologies e.g spine and leaf | DLC headaches | plug the holes in the racks |
Highspeed interconnects e.g InfiniBand/slingshot | understand limits of your remote fingers/ smart
hands | Hands-on need to experience it | longevity planning | maintain involvement in system design |
infrastructure and network mapping is sub-optimal at most levels (on-site, contractors) | DC's and Nets
– differences between enterprise and @ the limits | being decoupled from hardware | security | DC
technologies – cooling | security | Old kit immediately removed -> no learning

2025-07-09 Bristol – Orchestration & Cloud



Setting up Private clouds for users or
“Cloud-Like” services | Being Cloud
agnostic (ability) offering cloud options/a
requirements analysis | Distinguish
between user interface solutions and
research Infra solutions | Clarity on Service
offering for users

Understanding and clarity on different roles within Research IT/More appreciation for
specialisations | Not GGE or anything specific – Batch Scheduling core and principles |
opportunity to build resilience | collaborate with internal teams | Kubernetes/openstack |
Cloud bursting (Hybrid cloud) Support | Struggling with “Right sizing resources”/MIG’s more
RSE collaboration | GitOps / CI-CD -> Argo-CD (Kubernetes) training | Cloud Cost analysis and
budgeting mechanism | Ansible and Git – (more than basics) -> learn about best practices |
Prometheus, Ansible more DevOPS Training | more clarity and understanding around cost of
cloud bursting and hybrid cloud options – Pricing | Monitoring and logging of sensitive data
processes (TRE + Implementation and process) | Bare-metal orchestration

**More sharing of best-practice – Repository of tooling options available | Lack of team
structure – better onboarding | Monitoring xdmod, Grafana, [web dev] WEB |
Networking 101 | Onboarding – 1 Big tool at a time | Onboarding with “inclusivity”
Junior feeling safe to ask questions | mandatory training for ppl with no HPC b/g | core
concepts training | UX Dev, user interfaces | HPC -> Lack of certs, certs pathway –
structured development**

2025-07-09 Bristol – Storage & Data

Meta Data Training | University Processes



Post project data storage – archiving
10yrs+ process & funding
managing data corruption incidents
Data stewards Disciplinary Data
Services (External Institutions)
Siloing HPC data & research Storage

Supporting OCI containers on networked Filesystems | Security of
archived & live data | Starfish – data intelligence | Benchmarking
data and storage | Scratch deletion – timed? notifications? docs? |
Sharing between Institutions. | Publishing, DOI, Figshare etc.| Secure
Access | Standards/best practices of types of storage for types of
institutions | differences NFS: Luster, ceph, GPFS OS: PVC, s3

Treat Data as Sensitive | users understanding sensitivity | easy UI | understanding
research data lifecycle | notifications of storage limits and usage | Big/Large dataset
differences | Disparate (idiosyncratic) API Technologies e.g FTP, Filezilla, S3 |
Understand Characteristics of data | Ethical reuse | what is JBOD | Signposting | lack
of training on storage hardware.



What's Working?

Experience programme, realising past mistakes | PhD student placements | UG internships and placements | growing your own | RSE's are starting to gain traction | Market supplement pay (grade stays the same but there's a pay boost to account for the market) | secondments from other IT depts

What could work better?

IT is more than computers | Research contracts | Education of Exec | promotion from within – training for it | Actual signed career paths | No clear promotion process (re-application to jobs) | COO @ Showcase | job security – restructures | Have to 'do the job' before you get the promotion | levels of seniority | Job adverts | how to get #'s for research value | service culture | needing a "Qualification" specifically a PhD | linking grade to specialism responsibility

What Opportunities?

Non-graduates | overseas staff | hybrid working | apprenticeships – existing and new | non-uni people | Show case events RCS/Researchers | Humanisation (making people see through the req system) | Link RCS to uni strategy | technical flexibility | links to ITS | acknowledgements on papers = Funding

What are the barriers?

Think service desk might be off-putting (it is but still good experience) | HR not effective | capacity in teams for CPD | Visa costs | HR processes – have to offer bottom of salary range and negotiate, people without PhD's removed before shortlisting | on site requirements | fixed pay scales | no low-level/help desk position to start at | Silos = disrespect (tie research papers to journals) | Dead man's shoes | slow descent to management | Why is management valued more than tech? | The attitude to "Dr"/post nominative letters



Barriers

Secondments

Pay/missing grade scale step | opportunity cost
| why (motivation) | no opportunities | diff between internship and secondment | resource constraints | risk losing job/employee | legal barriers/wait times | no point inside same institution but different team | Tension Changes

Aspirations

Helps against siloing | character building | translational skills | training new technical skills | experience different work environment / culture | opportunity for career change | granular admin privileges | speed dating | knowledge transfer

Mentoring

Finding contacts | never had a mentor | lack of opportunities | no training | difficult matching | informal | resourcing | WFH | extra meeting | difficult to set a goal | imposter syndrome | no culture of care in general | uncompensated | Emotional burden | unbalanced relationships either way

Outside of work

Candid questions | HPC-Sig mentor program | peer-mentoring | career development | driven by mentee (structure) | emotionally fulfilling | can be both a mentee and a mentor | Be like C & S (a mentor/mentee who were at the event)
– Role models/examples



I Want

Project management training | people management training (early – before management) | People skills | Train in a co-design day type format | Influencing and persuasion skills | how to manage work-life balance and Mental health while WFH | basic project management training | maintaining and writing good documentation | How to build and maintain team dynamic in a hybrid context | Be able to give more user training – user training is under estimated | neurodiversity training | more awareness of upwards communication (management transparency) | cross-cultural training | Research concordat equivalent for RIE's | how to run effective meetings | time management training | coaching skills | interview practices (for internal interviews of course!) | Outreach capability/skills | training on presenting for courses | exposure to cross-functional cross disciplinary to broaden horizons | general “soft skills” training

I valued

Teaching skills | Data ethics club | horizon scanning | community | IAPP course (Privacy Tech – TRE) | conferences and external meetings | Blocking out time for personal development | rotating meeting chair | mental health and worklife balance programs | put aside time for personal projects (~20%) | “Women in Tech” | “Neurodiversity”

Please no

**Duplicating existing external content
Mandatory training**



What learning formats work well?

“See one, Do one, Teach one” | modularity | reusable, flexible, multi-modal materials | In person | In person intensive boot camps | classroom / teaching lab | self-paced/guided | youtube | protected time | development portfolio, evidence bank | self service learning environments | formal training with a live system to learn on | clear (knowledge) pre-requisites | book reference | contextualising why | hands on – needs exercises | relatable examples | scenario based training | in the server room plugging cables | cluster training lab (physical) | cluster training lab (software) | telling what level down to stop learning.

How have you learnt your skills?

Bit by bit, case by base | read docs | uni training programs (CPD) | osmosis | at home | on the job | you tube | conferences | user groups meet-up | self driven direction

Structured technical mentoring (inc reverse mentoring) | one on one mentoring | peer conversations | mooc | online training resources |

RIE Roadmap – learning discoverability