



IRIS Digital Research Infrastructure

J. Hays

IRIS Collaboration Meeting

December 2021



iris eInfrastructure for Research and Innovation for STFC

IRIS is a cooperative community bringing together STFC computing interests

Formed bottom up by science communities and compute providers

Works closely with STFC but run by the community





iris eInfrastructure for Research and Innovation for STFC



Particle Physics: GridPP: LHC + other large HEP
Astro: LOFAR, LSST, EUCLID, SKA, GAIA,
Astro-particle: LZ, Advanced-LIGO, CTA
Nuclear Physics
DiRAC HPC Facility

STFC Scientific Computing Dept (SCD)
Diamond Light Source
ISIS Neutron Source
Central Laser Facility
Hartree HPC Centre
CCFE (Culham Fusion Centre)
.... Others...



iris IRIS Activities

Coordinate

Build infrastructure

Build community



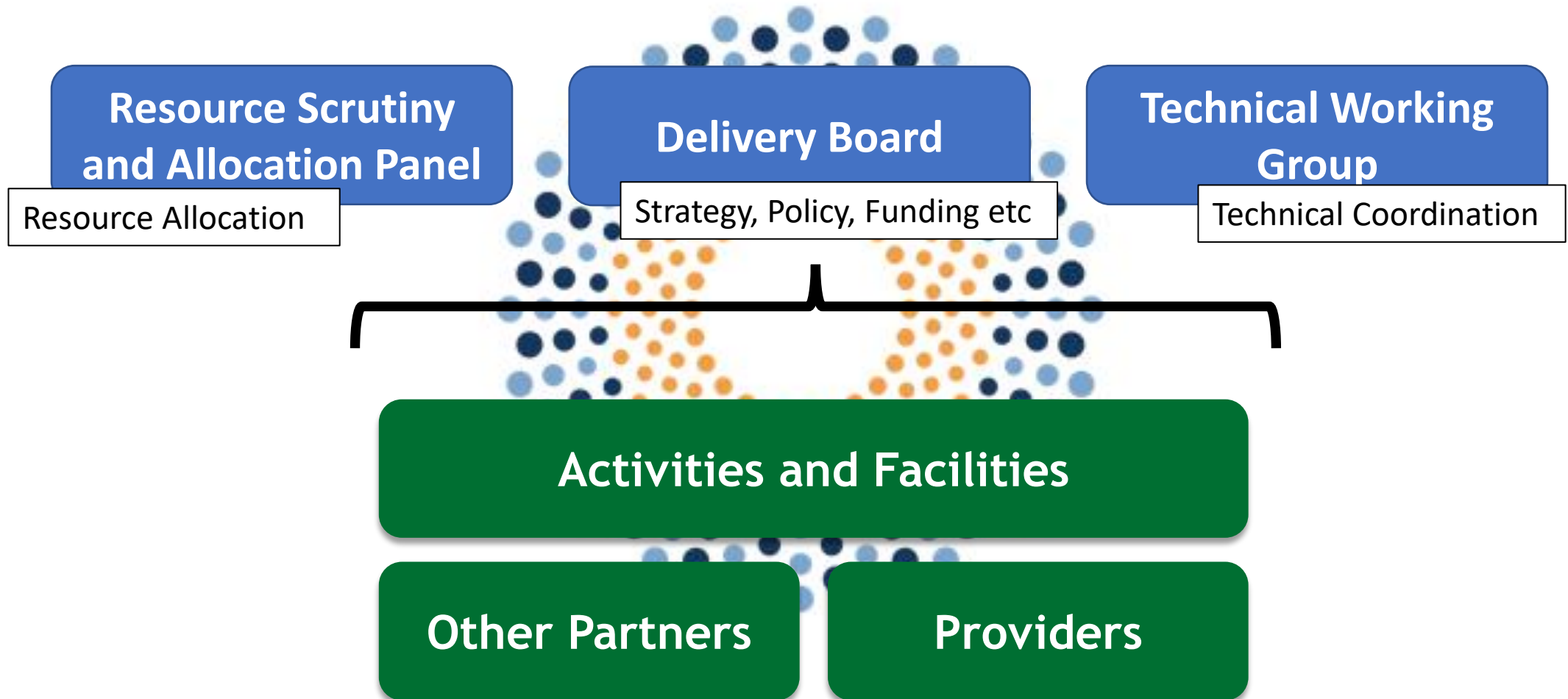
Support digital
asset creation

Invest in
computing
hardware

Making the case for investment



iris IRIS Structure





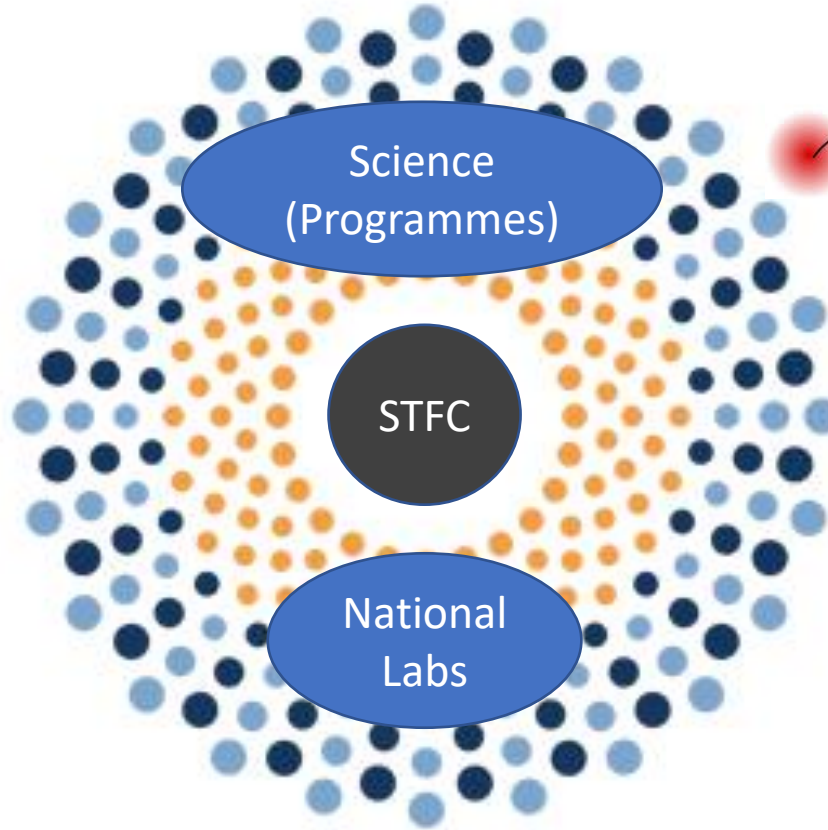
iris Invest in computing hardware



HTC Computing for
Experimental PP (and others)



>20k cores
> 15PB Disk
~150 GPU compute
~50 GPU visualisation



DiRAC

HPC Computing for
Theory PP, Astro Cosmology,
Solar Nuclear



Computing for
National Facilities, NERC



iris

Digital Asset Creation

Digital Assets

Essentially software (or similar) products (capitalizable) – with a defined end point or delivery of the asset



Funded through ALC for national facilities

Scientific Openstack development with StackHPC

Additional track of funding “Other DA” programme available to full IRIS Community

Often infrastructure related but can also be closer to science

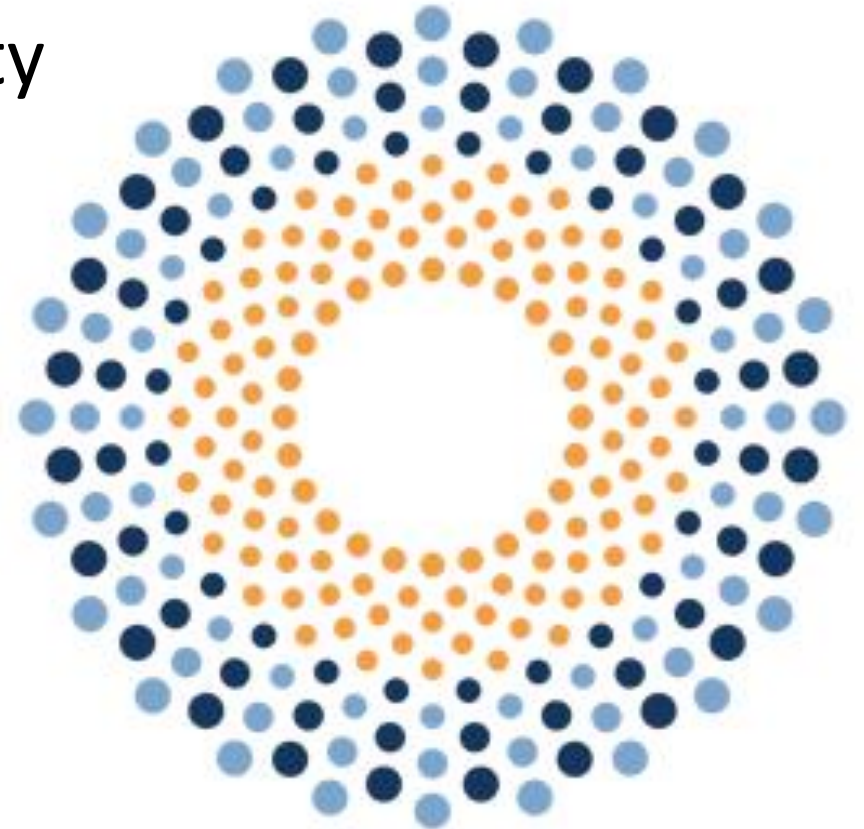


Build Infrastructure



Building capability

Examples include:
Identity management, access methods, data management, workflow management, Policy (security for example)



Welcome to **IRIS IAM**

Sign in with your IRIS IAM credentials

[Forgot your password?](#)

Or sign in with

[Not a member?](#)

[About Us](#), [Contact information](#) and [Privacy Policy](#)

Community building, coordination, digital asset funding



iris

Funding

2017:

£1.5m Capital : £1m hardware, 0.5m digital assets

2018:

£16m (4M / year over 4 years)

11M Hardware

5M Digital Assets for National Facilities

2020:

Capital injections ~ £6m

3M capital for IRIS, 2M for LSST (Rubin Observatory), 1M for SKA

2021:

Digital Research Infrastructure funding ~ £2m

2021:

???





External Engagement

UKRI:

Digital Research Infrastructure Committee

Tom Griffin member representing STFC

Jon Hays as external advisor

STFC:

STFC E-Infrastructure Advisory Group

Several members of IRIS are member of SEAG

Briefing to PPRP on role of IRIS



Strategy and Roadmap

As we reach the end of the 4x4 funding timely to revisit the IRIS strategy to look forward to the next 4 years (or so...)

Three levels of document:

High-level strategy and mission statement

What is our vision and what are our top-level aims and objectives

Useful for external communication – IRIS in one/two pages

Detailed Strategy

Delivery Plan



Strategy and Roadmap

As we reach the end of the 4x4 funding timely to revisit the IRIS strategy to look forward to the next 4 years (or so...)

Three levels of document:

High-level strategy and mission statement

Detailed Strategy

Breakdown into strategic themes and give a detailed list of objectives and accompanying narrative

Most useful internally – its how we explain to each other what we are trying to achieve

Supports generation of other external facing documentation: proposals, business cases, etc

Used to provide structure to the delivery plan

Delivery Plan



Strategy and Roadmap

As we reach the end of the 4x4 funding timely to revisit the IRIS strategy to look forward to the next 4 years (or so...)

Three levels of document:

High-level strategy and mission statement

Detailed Strategy

Delivery Plan

A prioritised list of the things that we want to do with clear alignment with the strategic aims and objectives – could also be called a detailed roadmap



iris

Strategic Themes

IRIS

Enable world class science and facilities with joined-up digital research infrastructure

Build Community

Develop Skills

Innovate

Join-up infrastructure

Secure

Community Lead

Accessible

Innovative

Flexible

Sustainable



iris

During the strategy sessions in this meeting we will explore these 6 themes

Strategic Themes

IRIS

Enable world class science and facilities with joined-up digital research infrastructure

Build Community

Develop Skills

Innovate

Join-up infrastructure

- Secure
- Community Lead
- Accessible
- Innovative
- Flexible
- Sustainable





iris

Strategic Themes

IRIS

Enable world class science and facilities with joined-up digital research infrastructure

Build Community

Develop Skills

Innovate

Join-up infrastructure

Secure

Community Lead

Accessible

Innovative

Flexible

Sustainable

Workshops / discussion sessions this week

Written community consultation

Additional workshops / working groups as needed to develop detailed strategy and delivery plan

Community consultation

Documents complete...

Annual review



iris

Summary

- IRIS 4x4 has been successful
- But plenty of work to be done
 - We're still a way from being a joined-up harmonised infrastructure – but these things take time – **IRIS 4x4 was a massive step forward**
- IRIS has a role in UKRI DRI and joining things up
 - But what should that role be?
- Security of future (multi-year) funding
 - Essential to forward planning
- What type of funding
 - Continue to press the message that we need to be able to fund people as well as hardware!
- STFC and UKRI/DRI Policy
 - How does IRIS tie into facilities and project funding in the future and how should the various panels understand IRIS and its role?

