



National
Supercomputing
Centre

NSCC SUPERCOMPUTING DIGITAL SANDBOX

DEMOCRATISING HPC FOR ALL



NSCC.SG



NSCCSG

Strategic Vision

Democratising HPC for all levels of users for their digital transformation and to accelerate R&D and innovation

KEY VALUE PROPOSITION SUPERCOMPUTING DIGITAL SANDBOX

FRictionless



**EASE OF USE,
SIMPLICITY**

“Not forced to learn something else to get my job done !!”

AVAILABILITY



**“ALWAYS ON”
UNIVERSAL**

Reliable Platform

EFFICIENCY



**RESOURCE
SHARING**

Higher productivity yet cost effective.

Distributed Innovation leveraging on Centrally Managed Resources

KEY VALUE PROPOSITION FEATURES FOR A SEAMLESS EXPERIENCE



Data Explorer

1

Enables users to search, import and use data within the SDS



Pretrained AI Model Explorer

2

Enables users to search and use pretrained AI models within the SDS



Software Integrations

3

SDS integrated with modelling and simulation software for a seamless experience for job submission

Expert
Users and

Non Expert
Users

Consistent &
seamless
experience
across all
users' journey

Frictionless

Consistent
Architecture
Secure
Easy Access

Availability

“Always On”
Scalable
Precision
Persistence

Manageability

Efficient
Speed

Tech

- Single sign on authentication
- Familiar environment
- Multiple sources & apps
- Across core, cloud and edge

Tech

- Enable research/product development across the enterprise
- Secure remote collaboration

Tech

- Workflows and insights
- Data Fabric Metadata

SUPPORTS PROOF-OF-CONCEPT RESEARCH ACROSS THE PUBLIC SECTOR, IHLs AND INDUSTRIES

SDS is designed to support R&D, POC development, training across various domains through its user-friendly features and integrated HPC resource.



Public sector



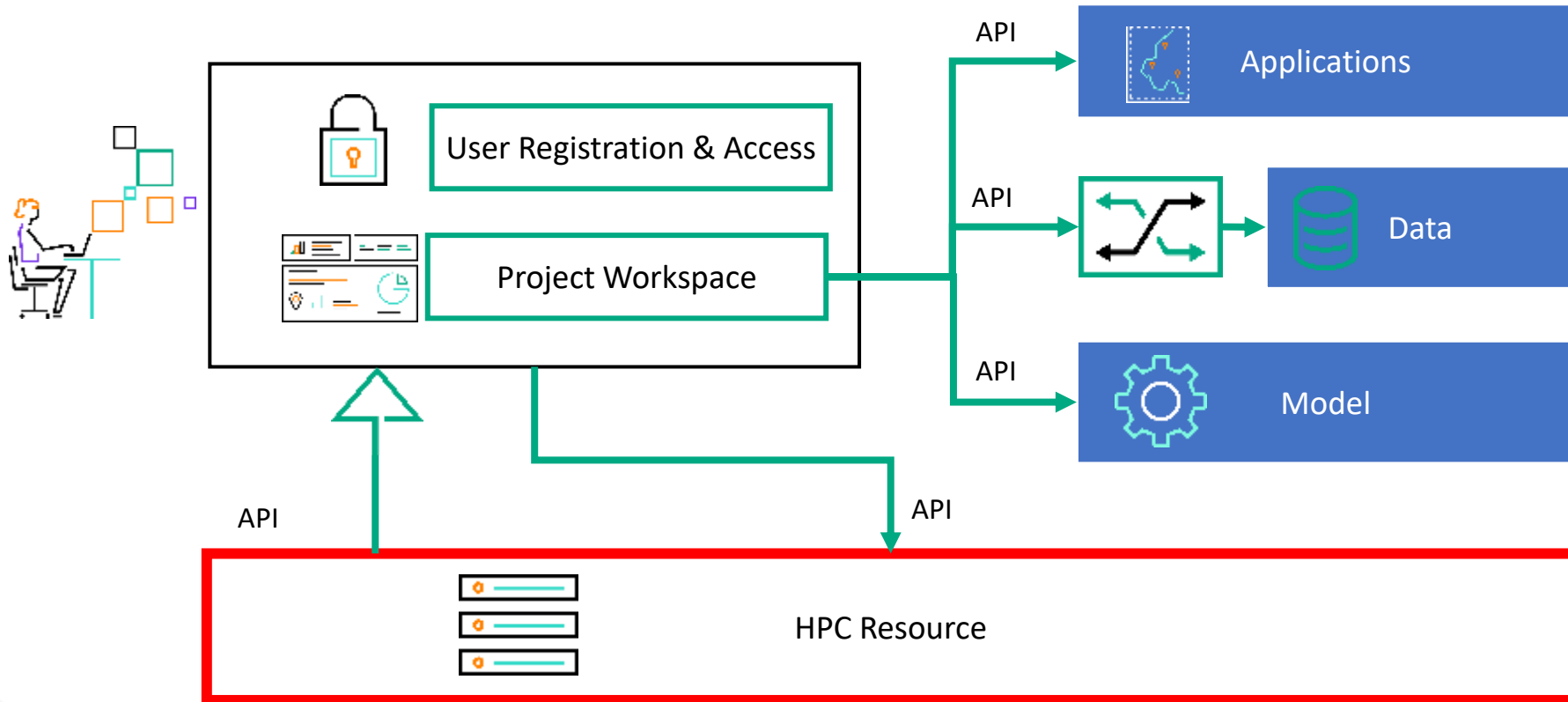
Institutes of Higher Learning



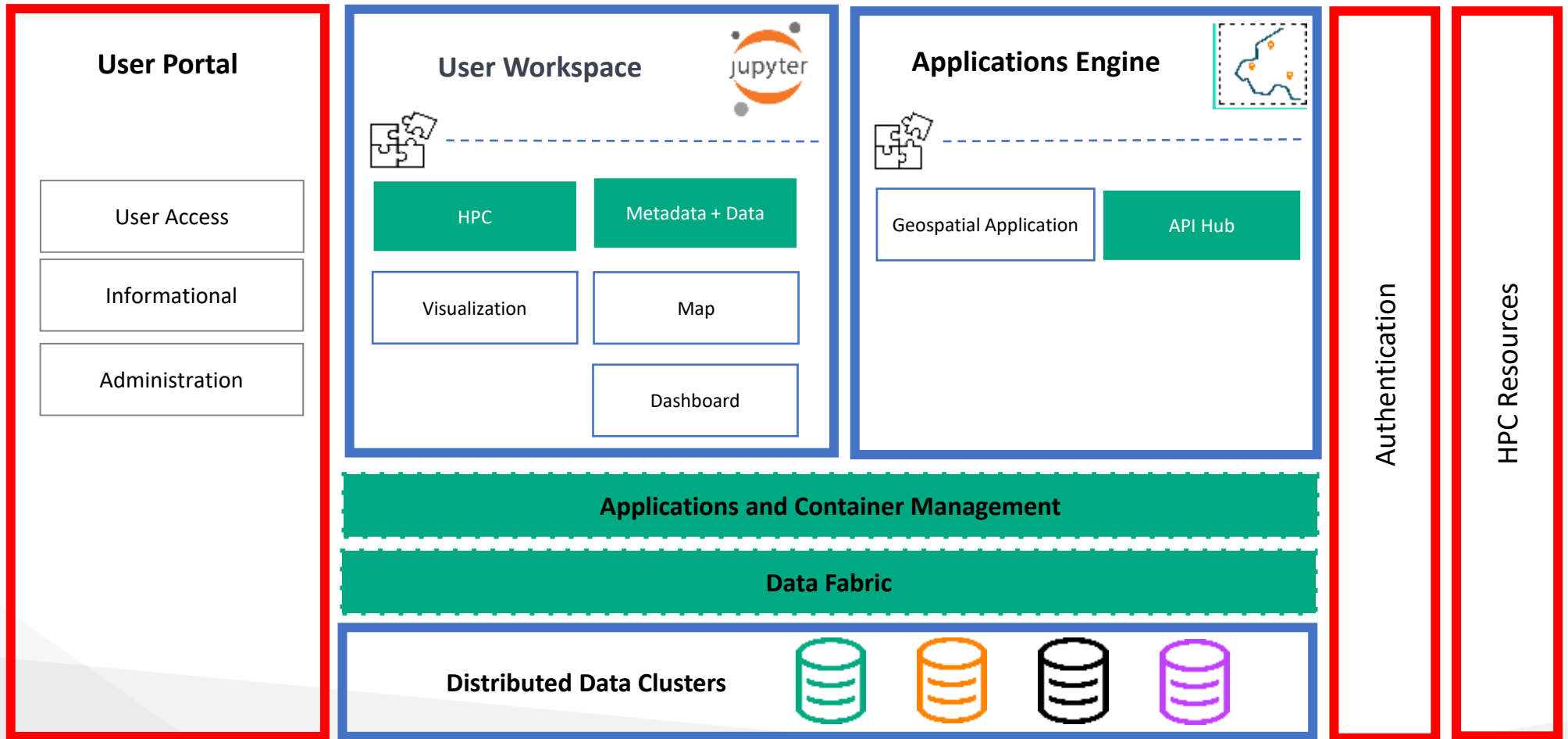
Industries



ARCHITECTURE OF THE SUPERCOMPUTING DIGITAL SANDBOX (SDS)

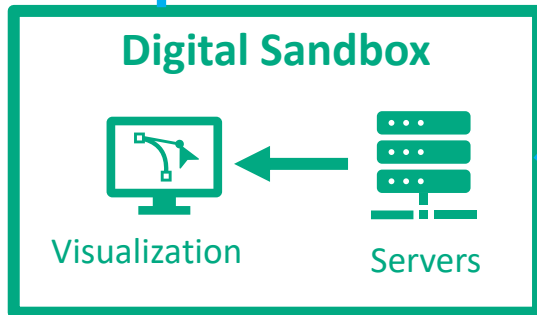


FRAMEWORK OF THE SUPERCOMPUTING DIGITAL SANDBOX (SDS)



DATA FLOW: HIGH LEVEL DESIGN

Data Consumer

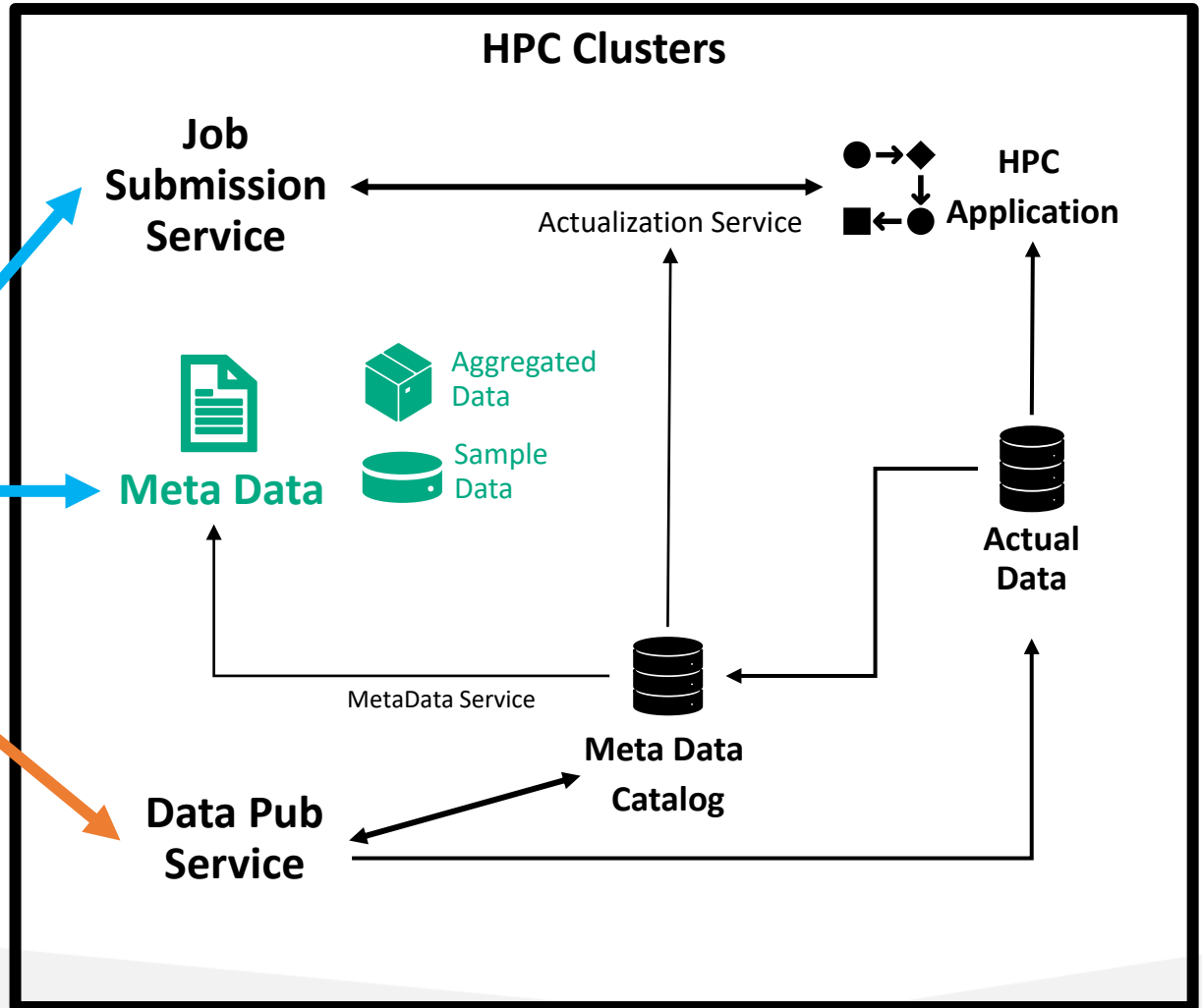


Data Producer



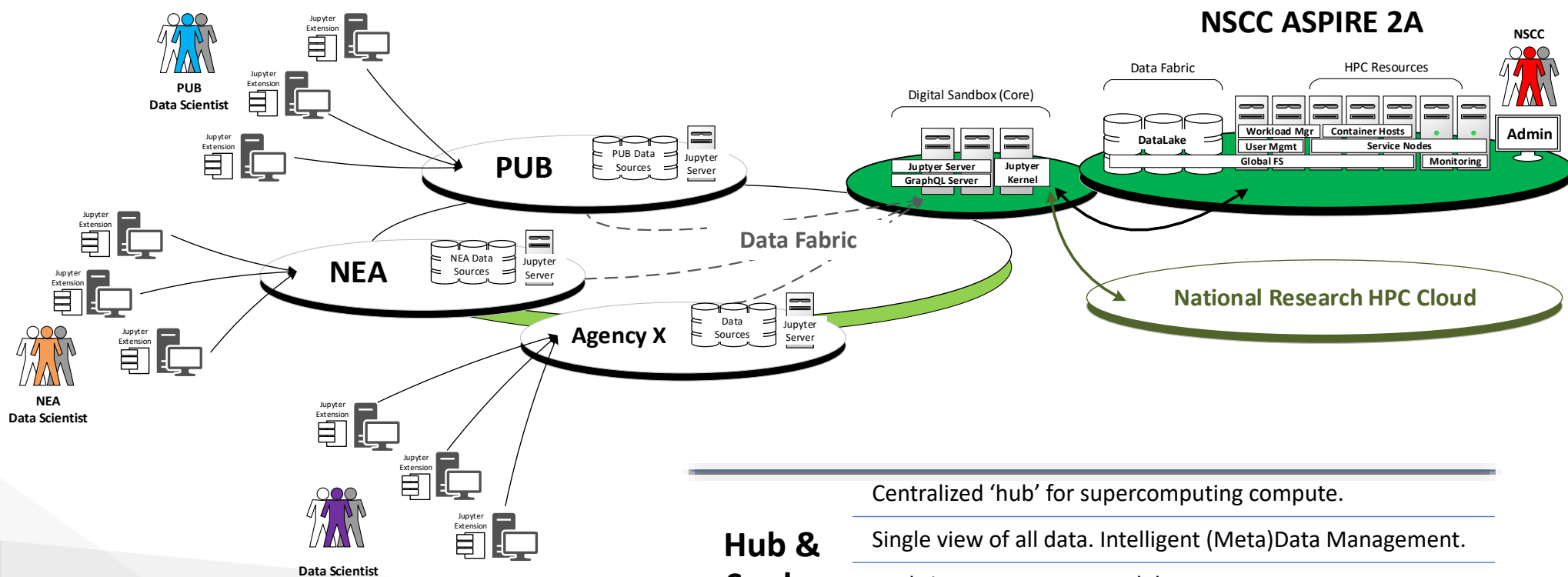
Consume
Data

Publish
Data



PILOT PROJECT - ENVIRONMENTAL DIGITAL SANDBOX

A COLLABORATION BETWEEN NSCC, NEA AND PUB



Hub & Spoke Model

- Centralized 'hub' for supercomputing compute.
- Single view of all data. Intelligent (Meta)Data Management.
- Real-time access to trusted data.
- Integrated dashboard, advanced analytics & actionable insights.
- Practical security controls.

SUPERCOMPUTING DIGITAL SANDBOX DEMO

LIANG SENG QUEE

APAC INNOVATION CENTER MANAGER, HEWLETT PACKARD ENTERPRISE



Hewlett Packard Enterprise

THE EDGE-TO-CLOUD COMPANY

Powering data-first modernization to leap across the transformation divide

FIRST WAVE:

INFRASTRUCTURE FIRST

Infrastructure-centric modernization, Managing silos of multi-gen IT, Migrate processes to digital, Development velocity, Cloud-first mandate.



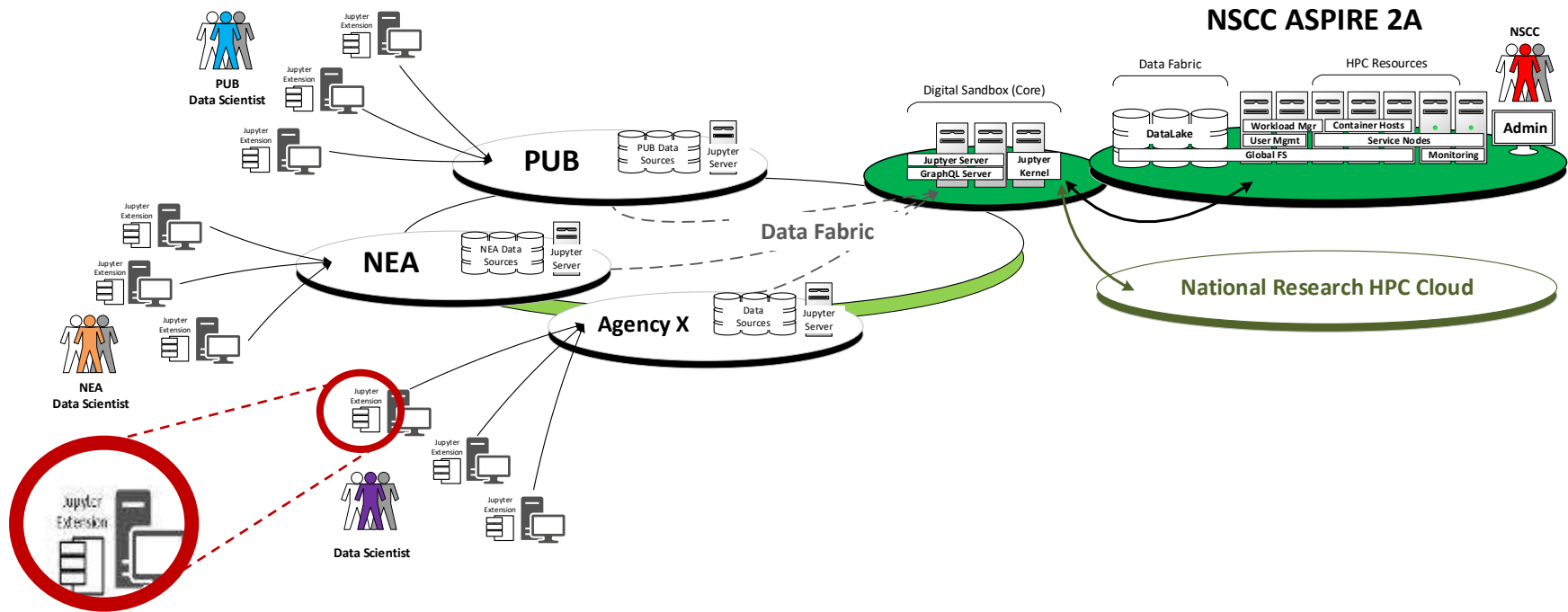
SECOND WAVE:

DATA FIRST

Data-centric modernization, Unified insight across multi-cloud, Delivering differentiated experiences, Decision velocity, Choice, flexibility, and control

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LET'S COLLABORATE



Supercomputing Digital Sandbox

Making Distributed Collaboration Simple

Invite collaborators and early access users to collaborate with us for future developments, improvements and enhancements on the Supercomputing Digital Sandbox



Public sector

- Use case development
- Proofs of Concepts
- Cross agencies & industries collaboration
- National Initiatives and Projects



Institutes of Higher Learning

- Customised SDS to support schools' curriculum with hands-on teaching
- Infused HPC concepts and industry applications
- Curriculum development (PET & CET pathways)
- School competitions and hackathons



Industries

- Proofs of Concepts
- Promote Industry adoption with integrated HPC and user friendly UI
- Cross agencies & industries collaboration
- Access to A*STAR R&D ecosystem



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Thank You

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