

NBI Introduction

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**Biotechnology and
Biological Sciences
Research Council**



Norwich Bioscience Institutes (NBI)

4 research institutes based on the
Norwich Research Park adjacent to
UEA:

- John Innes Centre*
- Earlham Institute*
- Quadram Institute*
- The Sainsbury Laboratory

* Funded by BBSRC

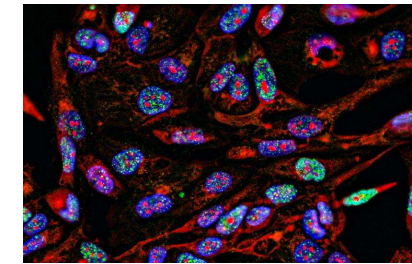
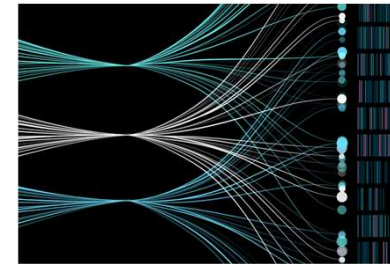
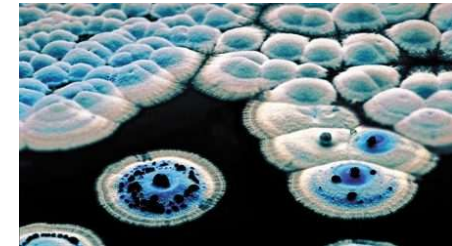
NBI Partnership provides services
to all 4 institutes, including
Research & Core Computing.



Core NBI Strategic Research Programmes

Addressing major challenges of food security, sustainability, biodiversity and human health.

- Delivering Sustainable Wheat
- Building Robustness in Crops
- Harnessing Biosynthesis for Sustainable Food and Health
- Advancing Plant Health
- Decoding Biodiversity
- Cellular Genomics
- Food, Microbiome and Health
- Microbes and Food Safety
- Molecular Plant-Microbe Interactions



Research Computing team



- 7 staff supporting ~1000 researchers and PhD students
- Manage the Research Computing infrastructure and services on behalf of all NBI institutes:
 - High Performance Computing (HPC) servers
 - Research data storage
 - Private cloud systems
 - HPC networks

Recruiting soon - Linux Sys Admin

NBI research compute and storage

Compute:

- ~13,000 core HPC cluster (Intel/AMD)
- >50 A100 GPUs
- 2 private clouds based on OpenNebula (Earlham CyVerse + Quadram CLIMB)



Storage:

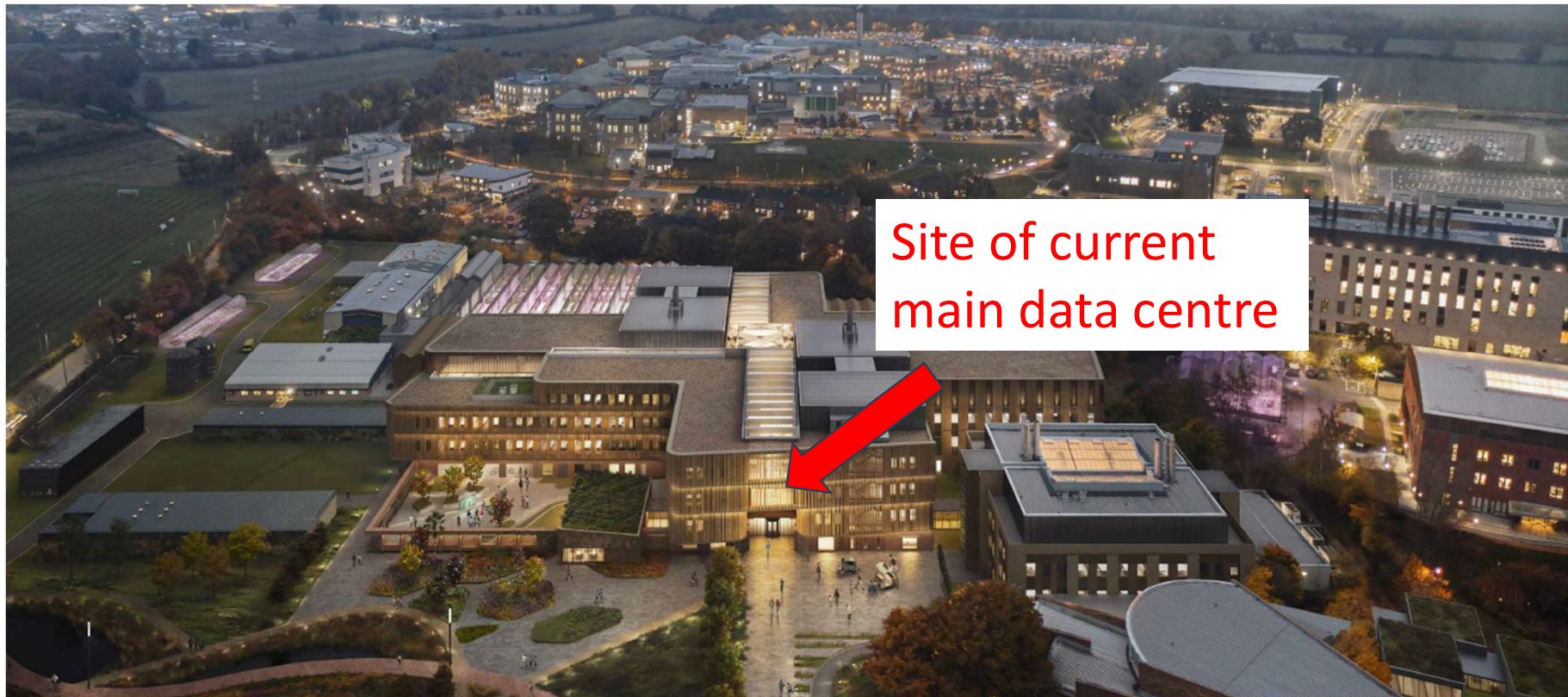
- 17 PB Dell Isilon/PowerScale (replicated)
- Ceph (SoftIron & Canonical)
- TrueNAS

Network: Mellanox/Nvidia 100 Gb/s Ethernet



JIC/TSL Next Generation Infrastructure

Healthy Plants, Healthy People, Healthy Planet: establishing a world-leading hub for UK plant and microbial research





We're gonna need a new data centre...

New NBI Data Centre

Funded by BBSRC to support future needs of NBI research:

- Highly efficient
- Up to 100 kW per rack
- Direct Liquid Cooling
- Re-use of waste heat via adjacent Energy Centre

Practical completion planned for May 2027



Thank you

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