

CERN ATLAS and CMS experiments – Helix Nebula User Perspective

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A European cloud computing partnership: big science teams up with big business



Strategic Plan

- ▶ Establish multi-tenant, multi-provider cloud infrastructure
- ▶ Identify and adopt policies for trust, security and privacy
- ▶ Create governance structure
- ▶ Define funding schemes



To support the computing capacity needs for the ATLAS experiment

EMBL



Setting up a new service to simplify analysis of large genomes, for a deeper insight into evolution and biodiversity



To create an Earth Observation platform, focusing on earthquake and volcano research



To improve the speed and quality of research for finding surrogate biomarkers based on brain images

Suppliers



Adopters



Helix Nebula Marketplace (HNX)



- Builds upon the work of the Helix Nebula Initiative and EC support action
- Supported by European cloud providers
- Integrates with existing e-Infrastructures to form a hybrid cloud Market Place and reach out to Europe's research communities
- Trusted cloud services through compliance with EU regulations and legislation
- Simplifies procurement process across multiple services providers



Atos

CloudSigma



..T..Systems..



CGI



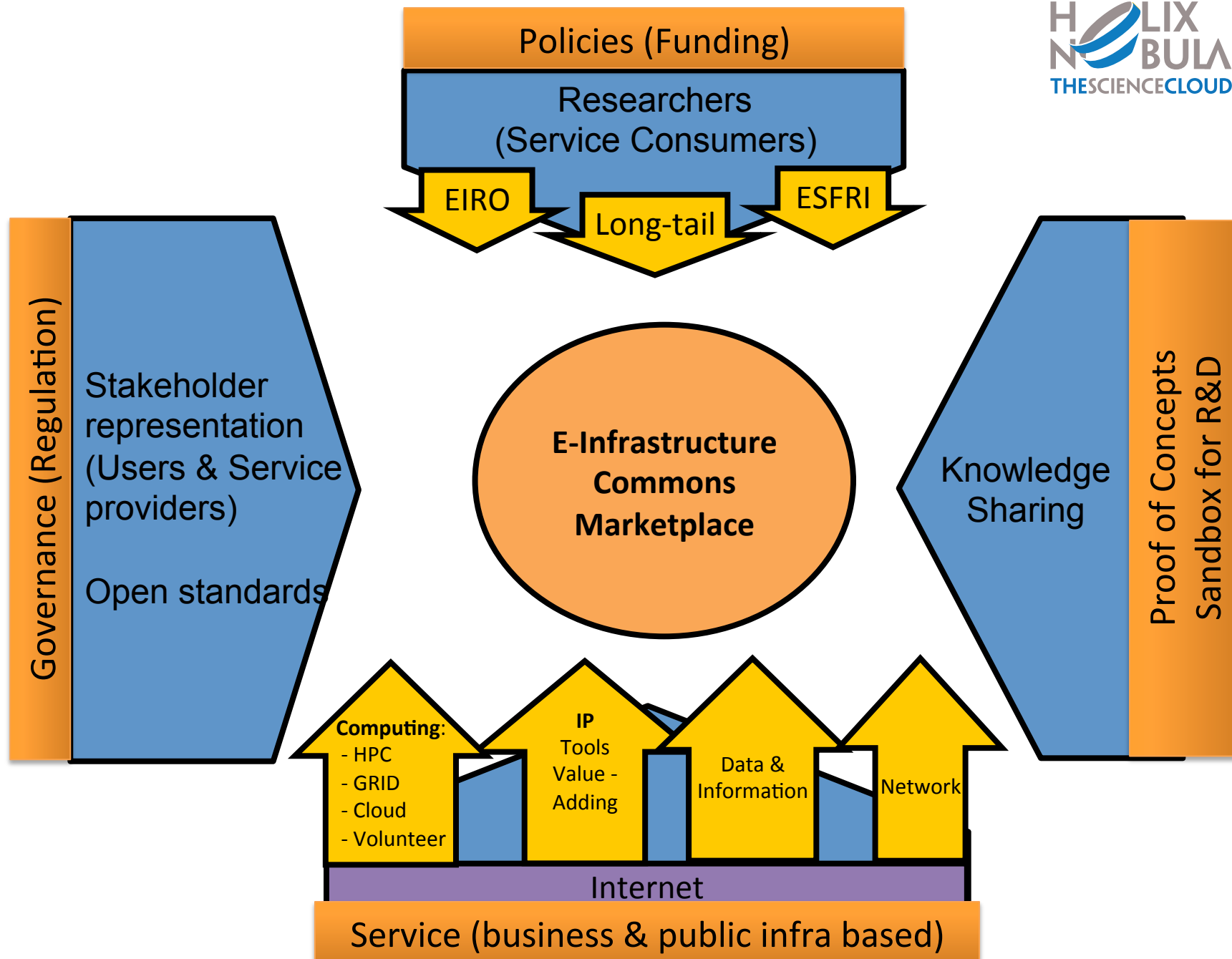
The e-Infrastructure commons marketplace will

- Provide access to world class resources through a **dynamic and sustainable marketplace**
- Take a hybrid approach building on public and commercial assets to cover the **entire scientific workflow**
- Offer a broad range of services that are free at the point of use
- Use **open standards** to ensure **interoperability** of service providers and adhere to **European policies, norms and requirements**

To get there, we need to

Driving convergence between existing e-Infrastructure service providers

Use market mechanisms to attract new service providers & consumers to the Marketplace



Helix Nebula *Cloud Productive* event **CERN, Geneva, 14 May 2014**

http://indico.cern.ch/e/Helix_Nebula_Cloud_Productive