



# 2<sup>nd</sup> Helix Nebula Workshop on Interoperability among e-Infrastructures and Commercial Clouds

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Helix Nebula – The Science Cloud  
Results and Engagement  
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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

Atos

CloudSigma

CSA security alliance™

DANTE  
www.dante.net

CECMWF

egi

Ifremer

interoute  
from the ground to the cloud

logica  
be brilliant together

OpenNebula.org  
The Open Source Toolkit for Cloud Computing

SAP

sixsq

..T..Systems

terradue 20

the SERVER LABS  
the IT architects

Adopters

AWST

Capgemini  
CONSULTING TECHNOLOGY OUTSOURCING

orange Business Services

Telefonica

THALES

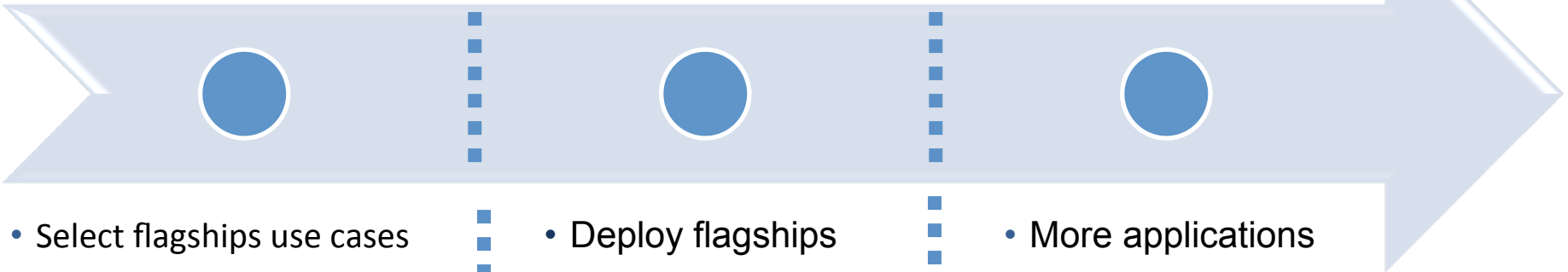
trust  
Communicating ICT to Markets  
www.trust-it-services.com

# Timeline

Set-up  
(2011)

Pilot phase  
(2012-2014)

Full-scale cloud  
service market  
(2014 ... )



- Select flagships use cases
- Identify service providers
- Define governance model

- Deploy flagships
- Analysis of functionality, performance & financial model
- Success Stories

- More applications
- More services
- More users
- More service providers

**Helix Nebula EC Project**

**Helix Nebula Consortium**

<http://www.helix-nebula.eu/index.php/home/become-a-new-member.html>

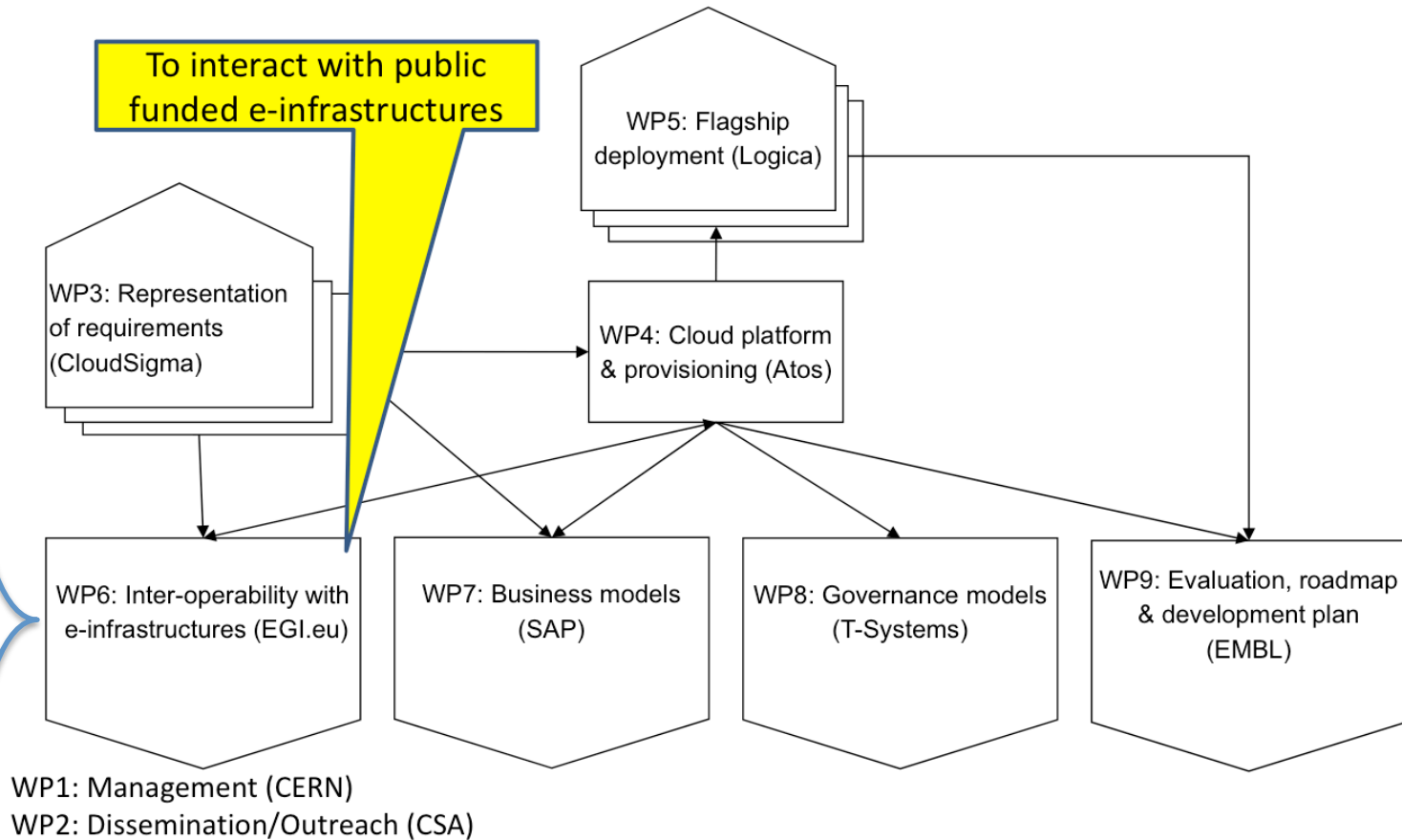
# Helix Nebula EC Project

Coordination action under call INFRA-2012-3.3

- Start-date 1st June 2012, duration 24 months – Total budget ~3M€ (1.8M€ EC funding)

Organisation name	Short name
European Organization for Nuclear Research	CERN
STICHTING EUROPEAN GRID INITIATIVE	EGI.eu
European Molecular Biology Laboratory	EMBL
ATOS	Atos
T-Systems International GMBH	T-Systems
CLOUDSIGMA AG	CloudSigma
SAP AG	SAP
Logica Deutschland GmbH & Co KG	Logica
CONSIGLIO NAZIONALE DELLE RICERCHE	CNR
Cloud Security Alliance Europe	CSA

# Helix Nebula EC Project



# WP6 – Final Goals (spring 2014)

- Define a roadmap for the integration and interoperation of commercial clouds with e-Infrastructures addressing operational, technical, legal, organisational aspects
- Through three workshops and ad hoc task forces
- Expected Outputs:
  - Interoperability Requirements Report (May 2013)
  - Roadmap for integration/interoperability (Mar 2014)

# 1<sup>st</sup> Workshop – Sep 2012

- Co-located with the EGI Technical Forum, Prague
  - <http://go.egi.eu/hnws1-brochure>
- Around 70 participants from commercial providers, e-infrastructures, user communities and funding agencies

# 1<sup>st</sup> Workshop – Sep 2012

- Technical Interoperability
  - Familiarise with the Blue Box Architecture from Helix Nebula TechArch team
  - Familiarise with the EGI Federated Cloud Initiative
- Network connectivity
  - DANTE defined business model and clarify policy to provide IP connectivity to GÉANT for HN commercial providers
  - Commercial providers interest identified to connect with local NRENs
- Business Models
  - Discussed relationships and contribution between WP6 and WP7 (Business Models)
  - Report on cost model and analysis of computing resources in e-Infrastructures from the e-FISCAL project
- Legal Aspects
  - Privacy and data protection, principles, EC regulation

# Achievements so far

- DANTE become member of Helix Nebula Consortium and is offering free IP connectivity for the duration of the HN EC project, only research traffic is allowed (either from private or public sector)
  - CloudSigma/CH already connected through SWITCH NREN
  - Atos/NL discussing with SurfNet NREN
  - T-Systems already connected with DFN/NREN, working on contract updates
  - Note: connectivity via NREN is a paid service
- TechArch Team and EGI Federated Cloud task force met twice (telecon + F2F) – see presentation in session 1
- EGI.eu
  - Participated to the WP7 survey on business models
  - Facilitated discussion between ServArch and FedSM project (see session 2)
  - Prepared an interoperability requirements framework and process (see presentation C. Asero)
- SAP released a mature draft of D7.1 in advance as agreed during WS1

# 2<sup>nd</sup> Workshop Goals by Session

- Session 1: Introduction and Technical Interoperability
  - Present and agree on the Requirements Interoperability Framework, Process and Task Forces
  - Present updates on technical requirements for the Blue Box
  - Discuss integration scenarios between EGI and Helix Nebula
- Session 2: Service Management
  - Present the Helix Nebula Service Architecture (ServArch)
  - Present the work on requirements for ITSM for federated infrastructures from FedSM project
  - Discuss what should be the scope for the interoperability requirements and roadmap

# Q&A and Feedback



<http://go.egi.eu/hnws2-feedback>