



The HNSciCloud Project

8 May 2017

Bob Jones

CERN

Bob.Jones <at> cern.ch



Helix Nebula – The Science Cloud

Helix Nebula – The Science Cloud with Grant Agreement 687614 is a Pre-Commercial Procurement Action
funded by H2020 Framework Programme



HNSciCloud Joint Pre-Commercial Procurement

Procurers: CERN, CNRS, DESY, EMBL-EBI, ESRF, IFAE, INFN, KIT, STFC, SURFSara
Experts: Trust-IT & EGI.eu

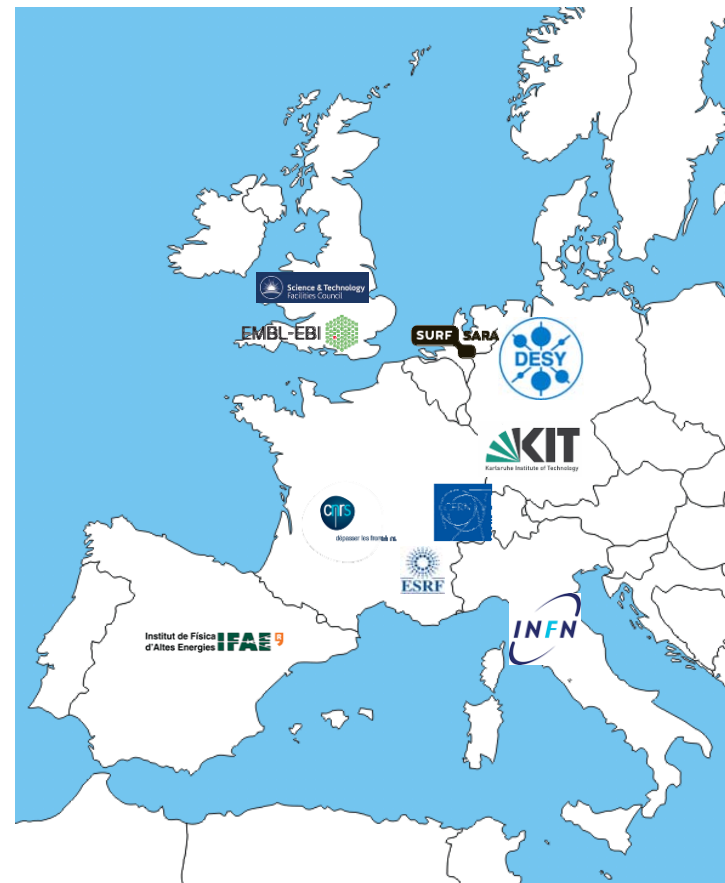
The group of procurers have committed

- Procurement funds
- Manpower for testing/evaluation
- Use-cases with applications & data
- In-house IT resources

Resulting services will be made available to end-users from many research communities

Co-funded via H2020 Grant Agreement 687614

Total procurement budget >5M€

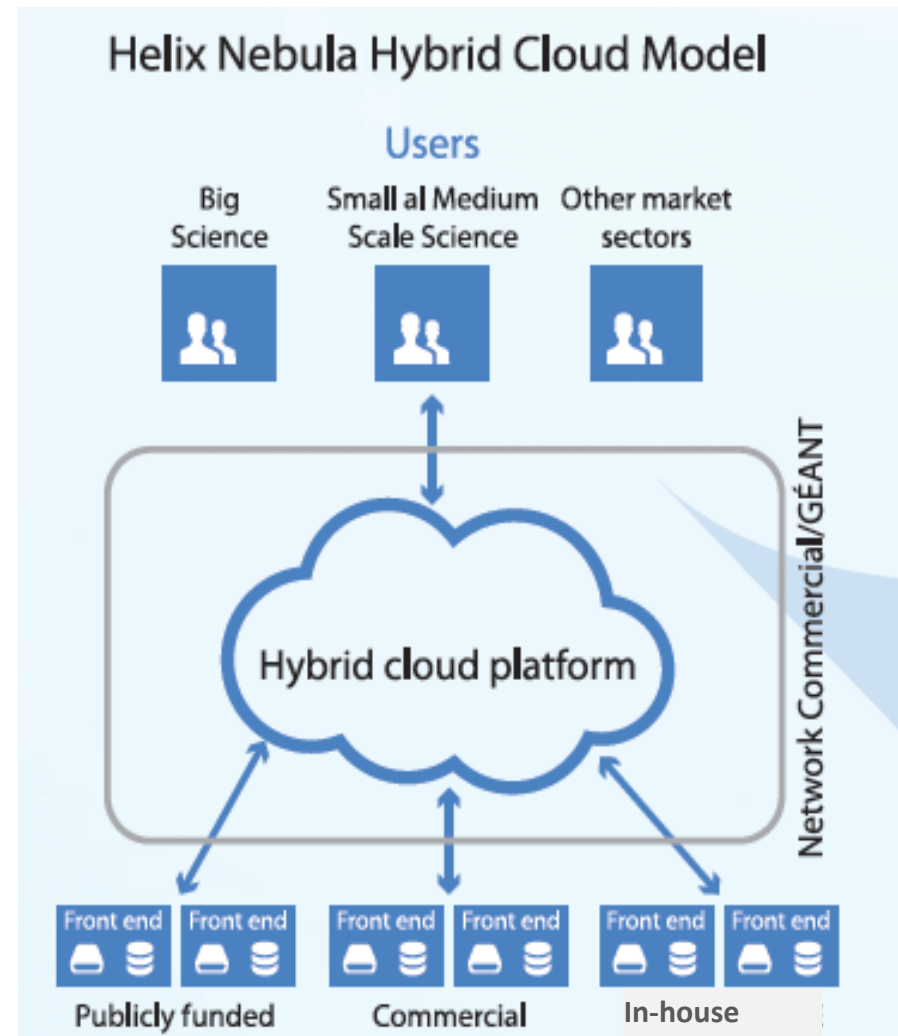


The Hybrid Cloud Model

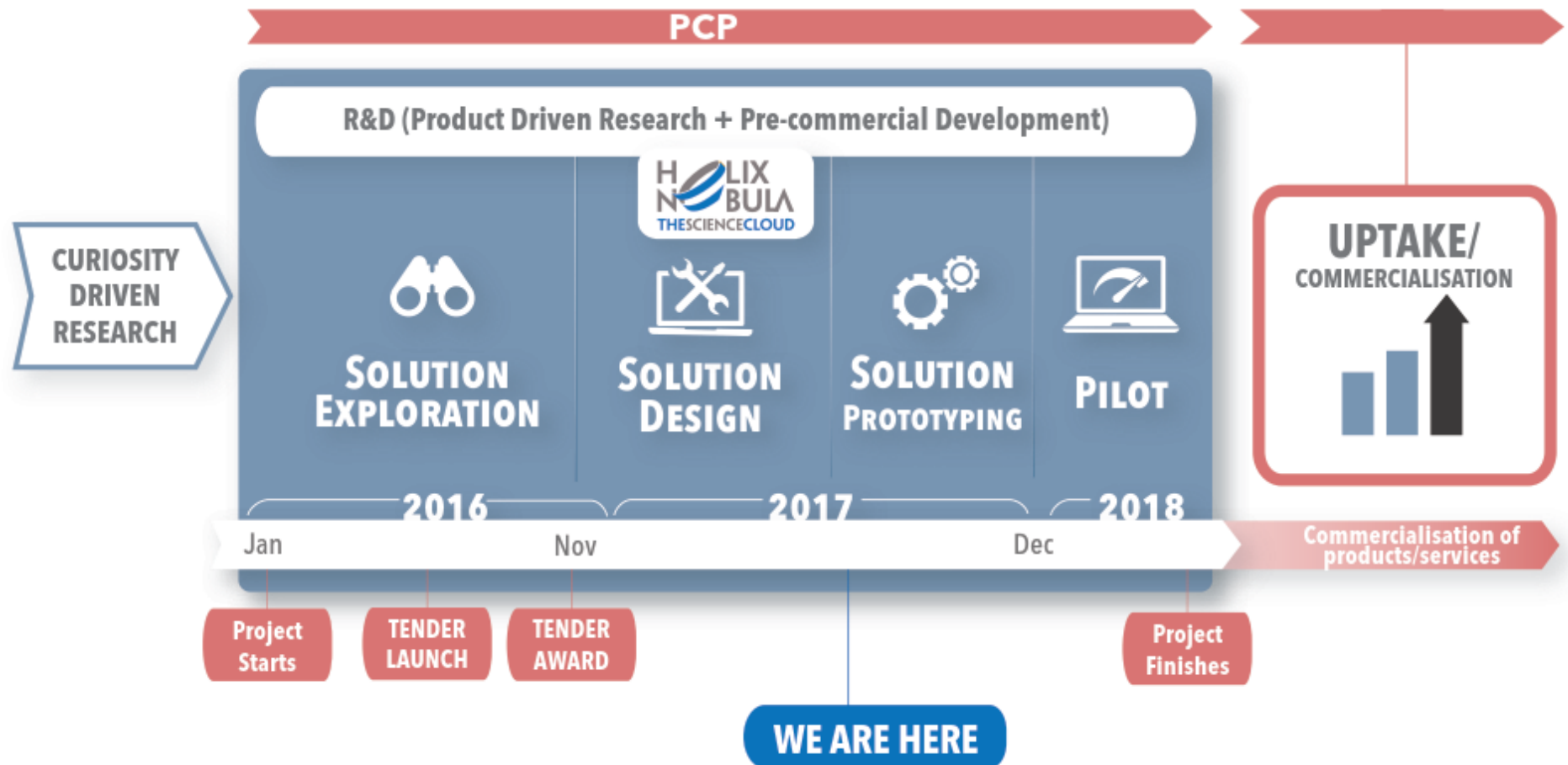
Brings together

- research organisations,
- data providers,
- publicly funded e-infrastructures,
- commercial cloud service providers

In a hybrid cloud with procurement and governance approaches suitable for the dynamic cloud market




The Pre-Commercial Procurement process



HNSciCloud use-cases

ESFRI PROJECTS				
	NAME	FULL NAME	ROADMAP ENTRY (YEAR)	OPERATION (YEAR)
ENERGY	ECCSEL	European Carbon Dioxide Capture and Storage Laboratory Infrastructure	2008	2016
	EU-SOLARIS	European SOLAR Research Infrastructure for Concentrated Solar Power	2010	2020*
	MYRRHA	Multi-purpose Hybrid Reactor for High-tech Applications	2010	2024*
	WindScanner	European WindScanner Facility	2010	2018*
ENVIRONMENT	ACTRIS	Aerosols, Clouds and Trace gases Research Infrastructure	2016	2025*
	DANUBIUS-RI	International Centre for Advanced Studies on River-Sea Systems	2016	2022*
	EISCAT_3D	Next generation European incoherent scatter radar system	2008	2021*
	EPOS	European Plate Observing System	2008	2020*
	SIOS	Svalbard Integrated Arctic Earth Observing System	2008	2020*
HEALTH & FOOD	AnaEE	Infrastructure for Analysis and Experimentation on Ecosystems	2010	2018*
	EMBRIC	European Marine Biological Resource Centre	2008	2016
	EMPHASIS	European Infrastructure for multi-scale Plant Phenomics and Simulation for food security in a changing climate	2016	2020*
	ERINHA	European research infrastructure on highly pathogenic agents	2008	2018*
	EU-OPENSOURCE	European Infrastructure of Open Screening Platforms for Chemical Biology	2008	2018*
	Euro-Bioimaging	European Research Infrastructure for Imaging Technologies in Biological and Biomedical Sciences	2008	2017*
	ISBE	Infrastructure for Systems Biology Europe	2010	2018*
	MIRRI	Microbial Resource Research Infrastructure	2010	2019*
PHYSICAL SCIENCES & ENGINEERING	CTA	Cherenkov Telescope Array	2008	2023*
	EST	European Solar Telescope	2016	2026*
	KM3Net 2.0	KM3 Neutrino Telescope 2.0: Astroparticle & Oscillations Research with Cosmics in the Abyss	2016	2020*
SOCIAL & CULTURAL INNOVATION	E-RIHS	European Research Infrastructure for Heritage Science	2016	2022*



ESFRI LANDMARKS				
	NAME	FULL NAME	ROADMAP ENTRY (YEAR)	OPERATION (YEAR)
	JHR	Jules Horowitz Reactor	2006	2020*
	EMSO	European Multidisciplinary Seafloor and water-column Observatory	2006	2016
	EURO-ARGO ERIC	European contribution to the International Argo Programme	2006	2014
	IAGOS	In-service Aircraft for a Global Observing System	2006	2014
	ICOS ERIC	Integrated Carbon Observation System	2006	2016
	LifeWatch	e-infrastructure for Biodiversity and Ecosystem Research	2006	2016
	BBMRI ERIC	Biobanking and Biomolecular resources Research Infrastructure	2006	2014
	EATRIS ERIC	European Advanced Translational Research Infrastructure in Medicine	2006	2013
	ECRIN ERIC	European Clinical Research Infrastructure Network	2006	2014
	ELIXIR	A distributed infrastructure for life-science information	2006	2014
	INFRAFRONTIER	European Research Infrastructure for the generation, phenotyping, archiving and distribution of mouse disease models	2006	2013
	INSTRUCT	Integrated Structural Biology Infrastructure	2006	2012
	E-ELT	European Extremely Large Telescope	2006	2024*
	ELI	Extreme Light Infrastructure	2006	2018*
	EMFL	European Magnetic Field Laboratory	2008	2014
	ESRF UPGRADES	Phase I Phase II: Extremely Brilliant Source	2006 2016	2015 2022*
	European Spallation Source ERIC	European Spallation Source	2006	2025*
	European XFEL	European X-Ray Free-Electron Laser Facility	2006	2017*
	FAIR	Facility for Antiproton and Ion Research	2006	2022*
	HL-LHC	High-Luminosity Large Hadron Collider	2016	2026*
	ILL 20/20	Institut Max von Laue-Paul Langevin	2006	2020*
	SKA	Square Kilometre Array	2006	2020*
	SPIRAL2	Système de Production d'Ions Radioactifs en Ligne de 2e génération	2006	2016
	CESSDA	Consortium of European Social Science Data Archives	2006	2013
	CLARIN ERIC	Common Language Resources and Technology Infrastructure	2006	2012
	DARIAH ERIC	Digital Research Infrastructure for the Arts and Humanities	2006	2019*
	ESS ERIC	European Social Survey	2006	2013
	SHARE ERIC	Survey of Health, Ageing and Retirement in Europe	2006	2011

Research Infrastructures are facilities, resources or services of a unique nature identified by European research communities to conduct top-level research activities in all fields

Other interested Research Infrastructures will form an adopter group

The story so far

Solution Exploration

January 2016 – September 2016

- » **1 Open Market Consultation** attended by **over 70** representatives of European **public-private Cloud Service Providers**
- » **30 multinational companies, SMEs and public research organisations from 13 countries** submitted bids
- » **4 winning consortia** awarded in November 2016
- » **Over 200 relevant stakeholders** engaged
- » **Over 55 press clippings** published on **44 external websites**



Solution Design

October 2016 - March 2017

- » The 4 consortia contracted for the design phase **delivered their designs in February 2017**
- » The **eligible contractors** submitted their **prototype phase bids** in early March
- » The HNSciCloud evaluation committee assessed the bids and **selected the 3 most promising**
- » On the 3 April 2017, the **awards ceremony for the successful contractors moving to the Prototype Phase of the Helix Nebula Science Cloud Pre-Commercial Procurement** took place at CERN, in Geneva, Switzerland



Prototype Phase

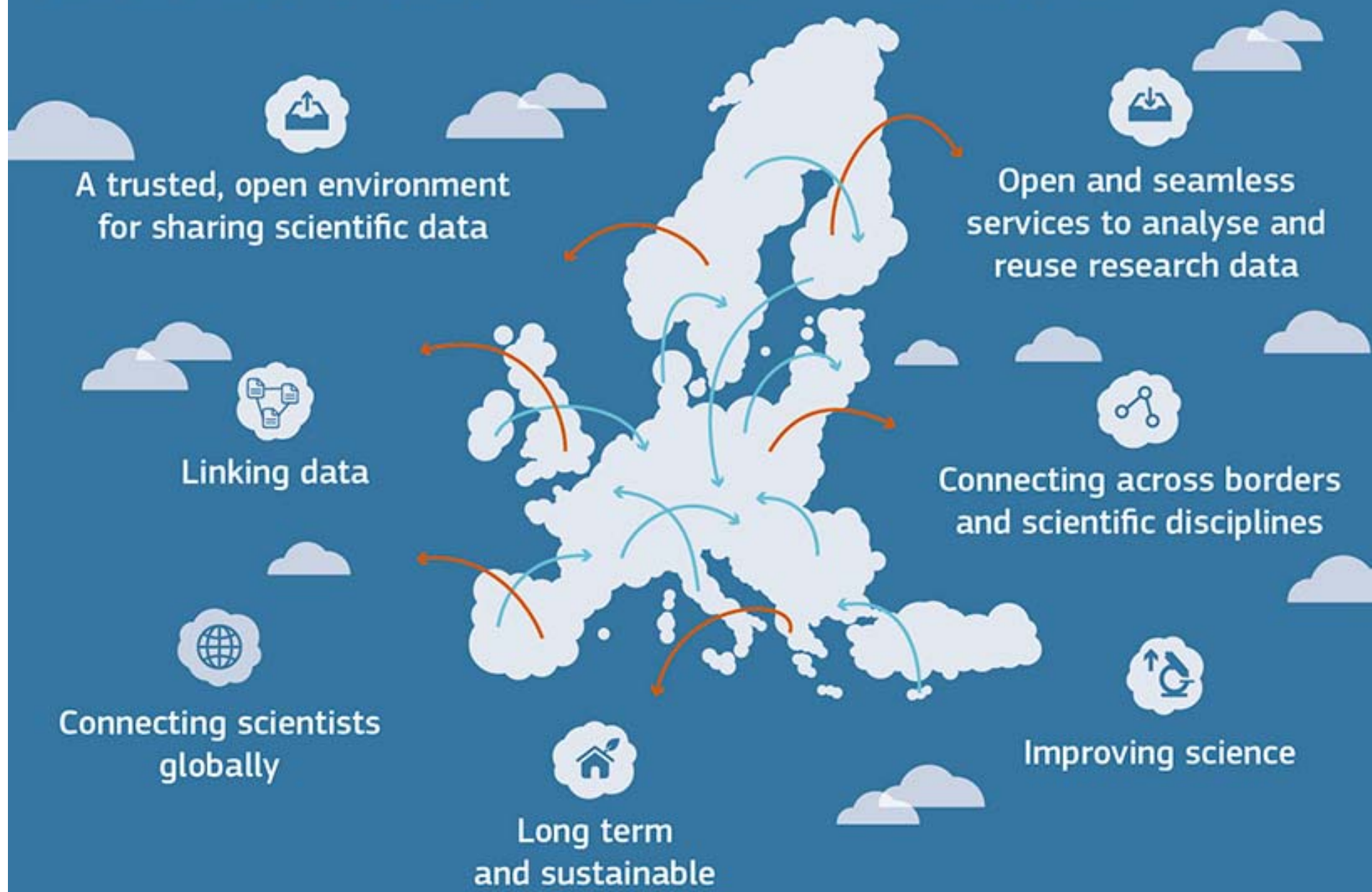
e-IRG highlights Helix Nebula as a Cloud Service Provider for ESFRI communities

<http://snurl.eu/1CTuJT>

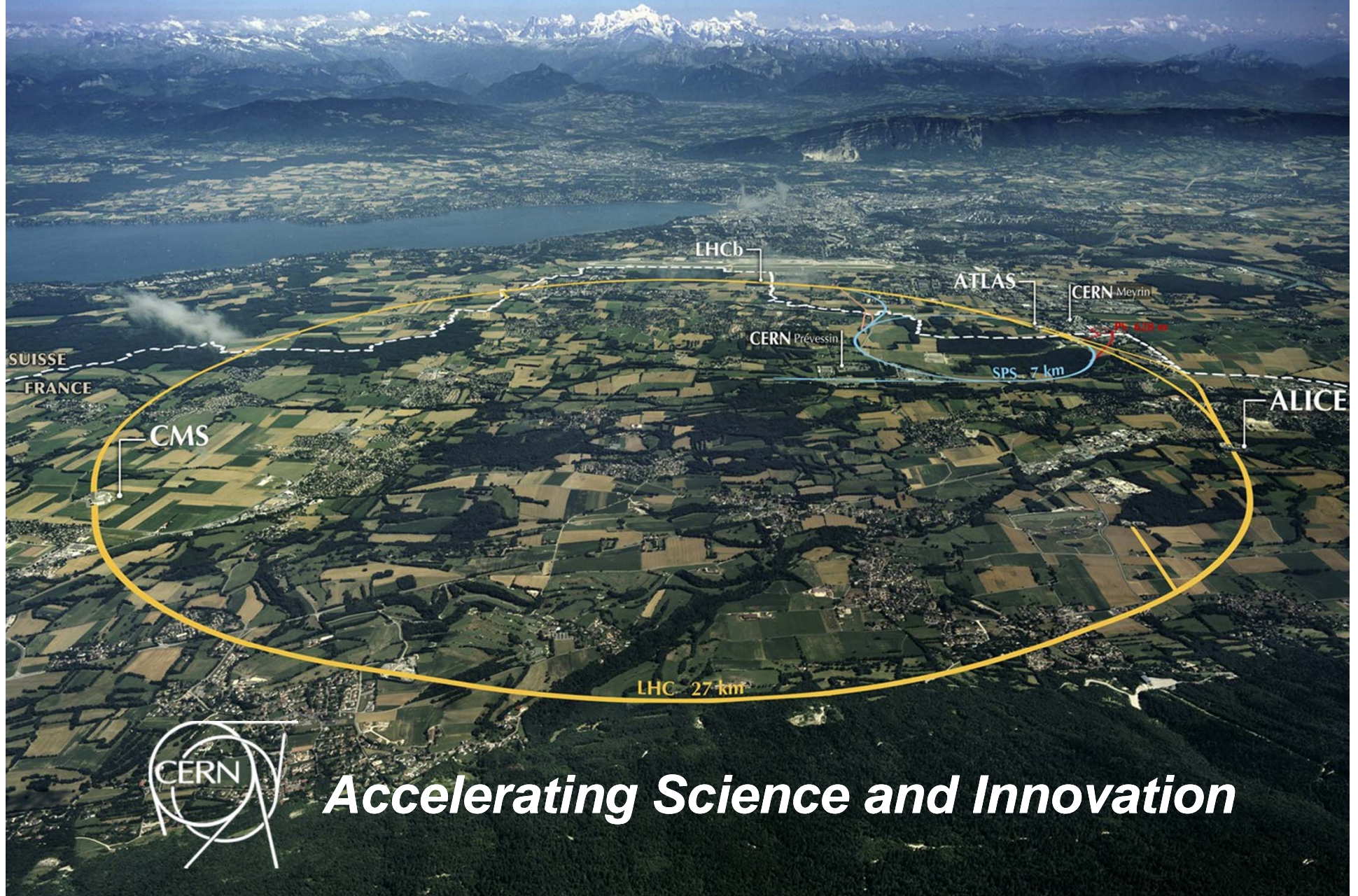


EUROPEAN OPEN SCIENCE CLOUD

BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES



Thank you for your attention



Accelerating Science and Innovation