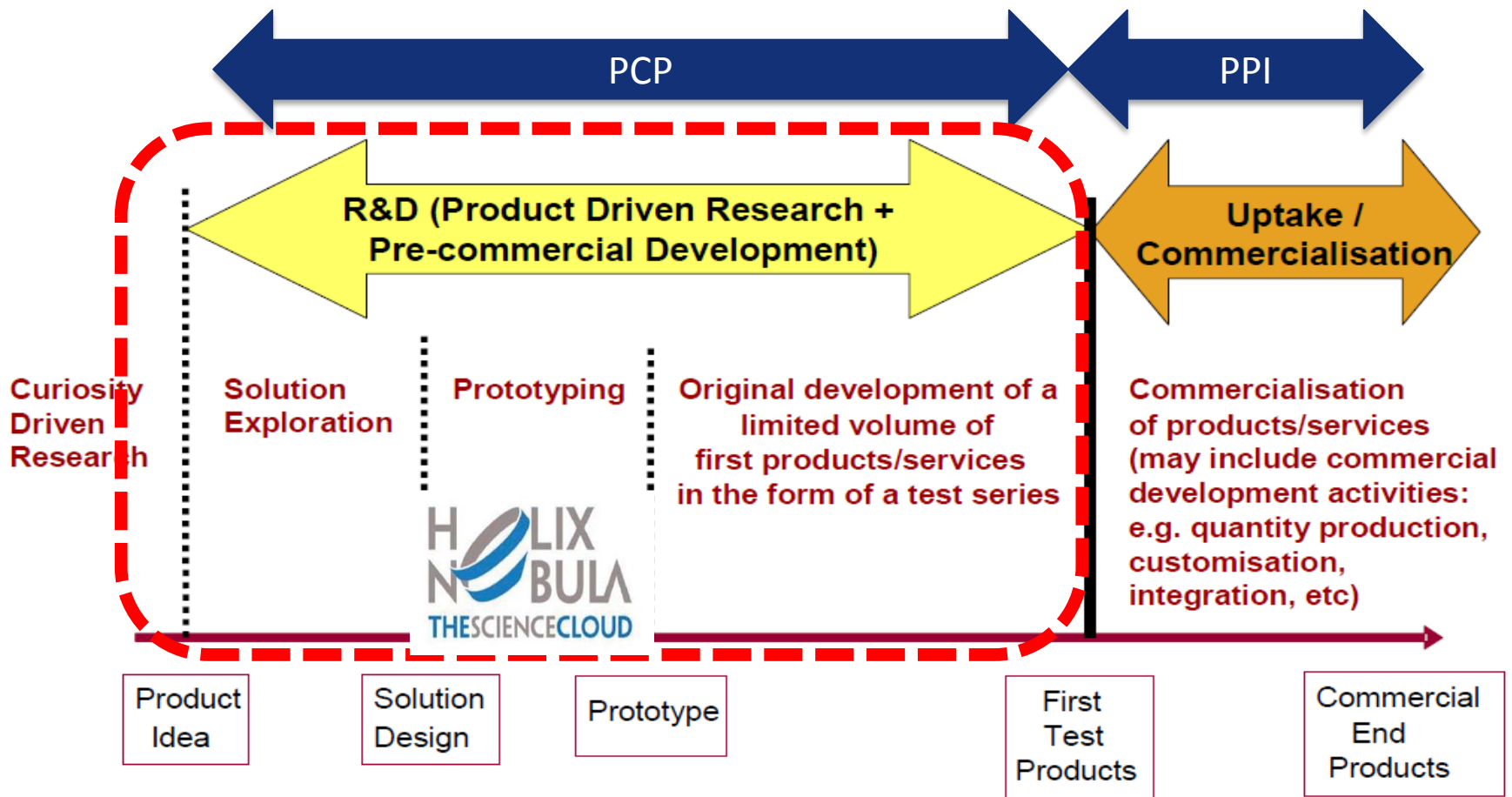




Pre-Commercial Procurement project - HNSciCloud

20 January 2015
Bob Jones, CERN



Typical Product Innovation Life Cycle

Why PCP?

Commercial IaaS exists but not certified, integrated with public e-infrastructures, offering std interfaces with suitable SLA and contractual terms & conditions.

PPI

Potential follow-on project if this PCP project is successful

HNSciCloud Joint Pre-Commercial Procurement

Procurers: CERN, CNRS, DESY, EMBL-EBI, ESRF, IFAE, INFN, KIT, SURFSara, STFC

Experts: Trust-IT & EGI.eu

The group of procurers have committed

- >1.6M€ of procurement funds
- Manpower for testing/evaluation
- Use-cases with applications & data
- In-house IT resources

To procure innovative IaaS level cloud services integrated into a hybrid cloud model

- Commercial cloud services
- European e-Infrastructures

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

Co-funded via H2020 (Jan'16-Jun'18)

- Grant Agreement 687614

Total procurement commitment >5M€



What will be procured

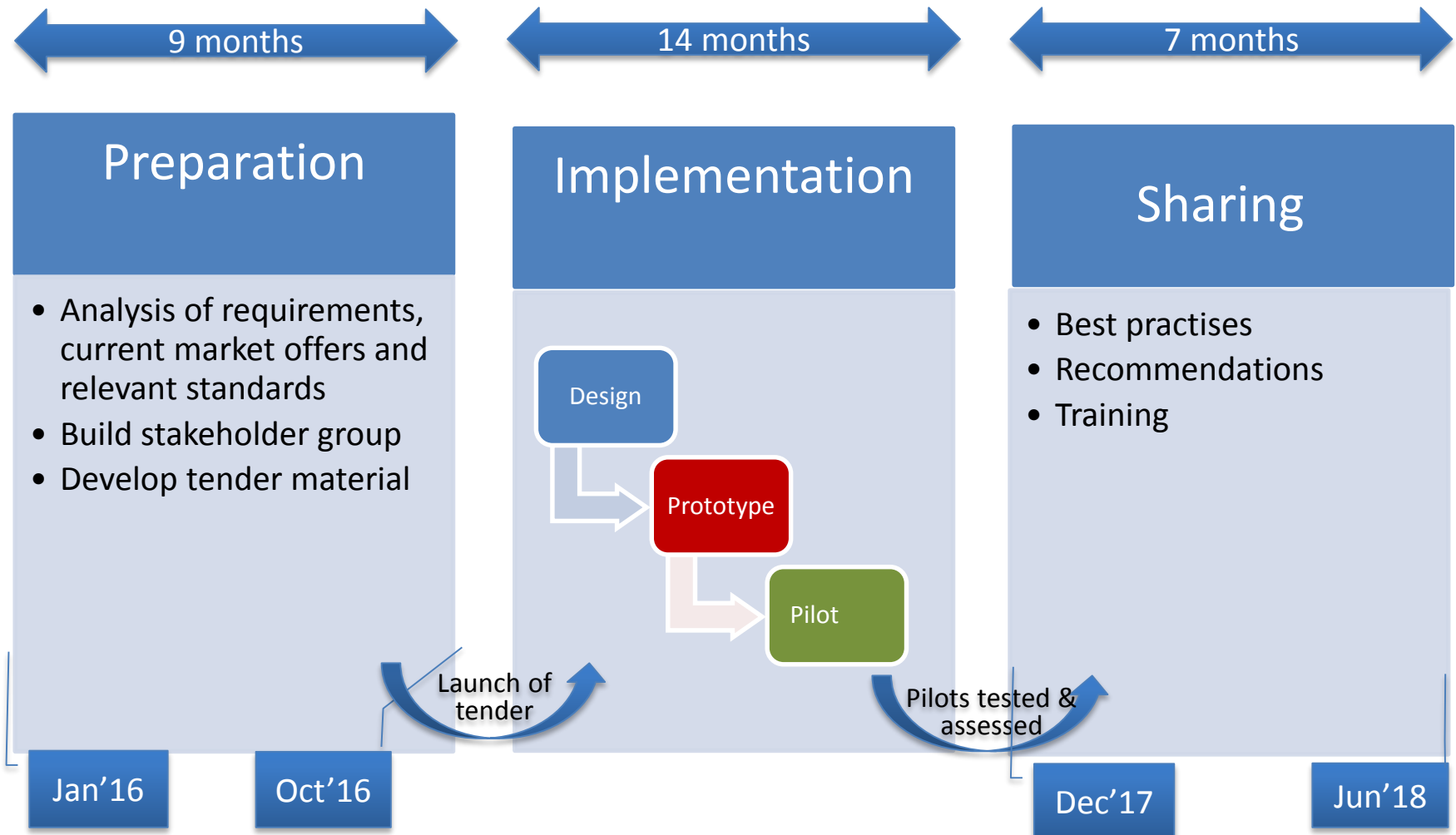
- A joint science cloud platform for the European research community
- Combining several sub-challenges requiring a combination of services at the IaaS level integrated into an environment supporting the full lifecycle of science workflows
- The R&D services to be developed will need to be integrated with
 - Resources in data centres operated by the buyers group
 - European-scale publicly funded e-Infrastructures

using open source solutions to build a hybrid platform on which a competitive marketplace of European cloud players can develop their own services for a wider range of users beyond research and science

Innovation through Federation

- The buyers group need a means to increase analysis capability & capacity offered to their users to keep pace with growth in scientific data that needs to be analysed
- The cloud platform must be available to end-users distributed around the world in an on-demand & elastic manner with Reliability, Availability and Security
- Provide cost-effective services exploiting capacity-style CPU cycles & online storage connected via high-speed networks that can execute a range of scientific workloads
- Federate with publicly funded e-Infrastructures based on open source solutions to build a hybrid platform on top of which a range of higher-level user specific services can be deployed
- Emphasis will be given to trusted cloud services supporting internationally recognised security standards capable of supporting an open ecosystem federating multiple suppliers

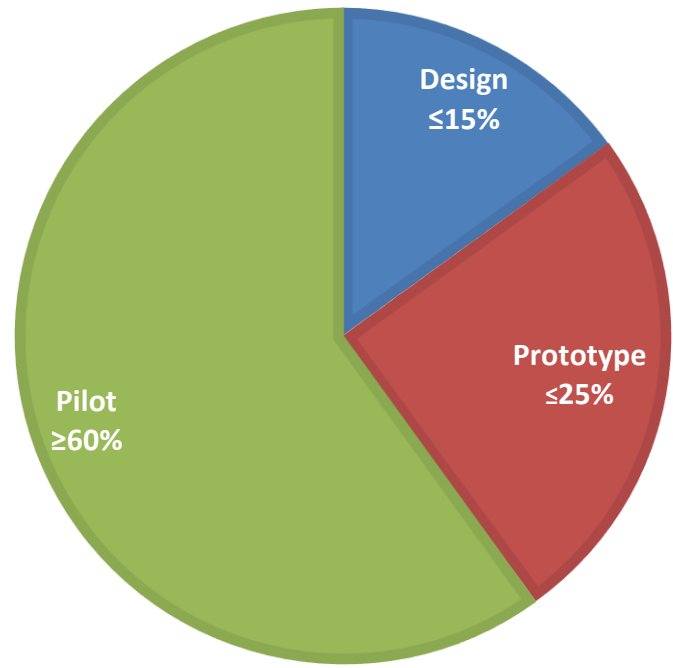
HNSciCloud PCP project phases



PCP project implementation phase

3 phases:

- ☛ Solution design
 - ☛ ≥ 4 designs
 - ☛ 3 months
 - ☛ $\leq 15\%$ tender budget
- ☛ Prototype development
 - ☛ ≥ 3 prototypes
 - ☛ 6 months
 - ☛ $\leq 25\%$ tender budget
- ☛ Deployment of limited scale pilots
 - ☛ ≥ 2 pilot deployments
 - ☛ 5 months
 - ☛ $\geq 60\%$ tender budget



Foreseen allocation of PCP funds to each phase of implementation

Each phase is competitive.

Bids evaluated/tested against criteria published with tender.

Only contractors that successfully complete the previous phase can bid in the next phase.

User Groups



The procured cloud services will be made available to multiple user groups including:

- ☞ LHC experiments via WLCG
- ☞ CTA – Cherenkov Telescope Array
- ☞ ELIXIR – distributed infrastructure for life-science information
- ☞ *Long tail of science*
- ☞ Local users at each procurers site including ESRF, EU XFEL, EUCLID ESA Space Mission, ISIS, WeNMR etc.



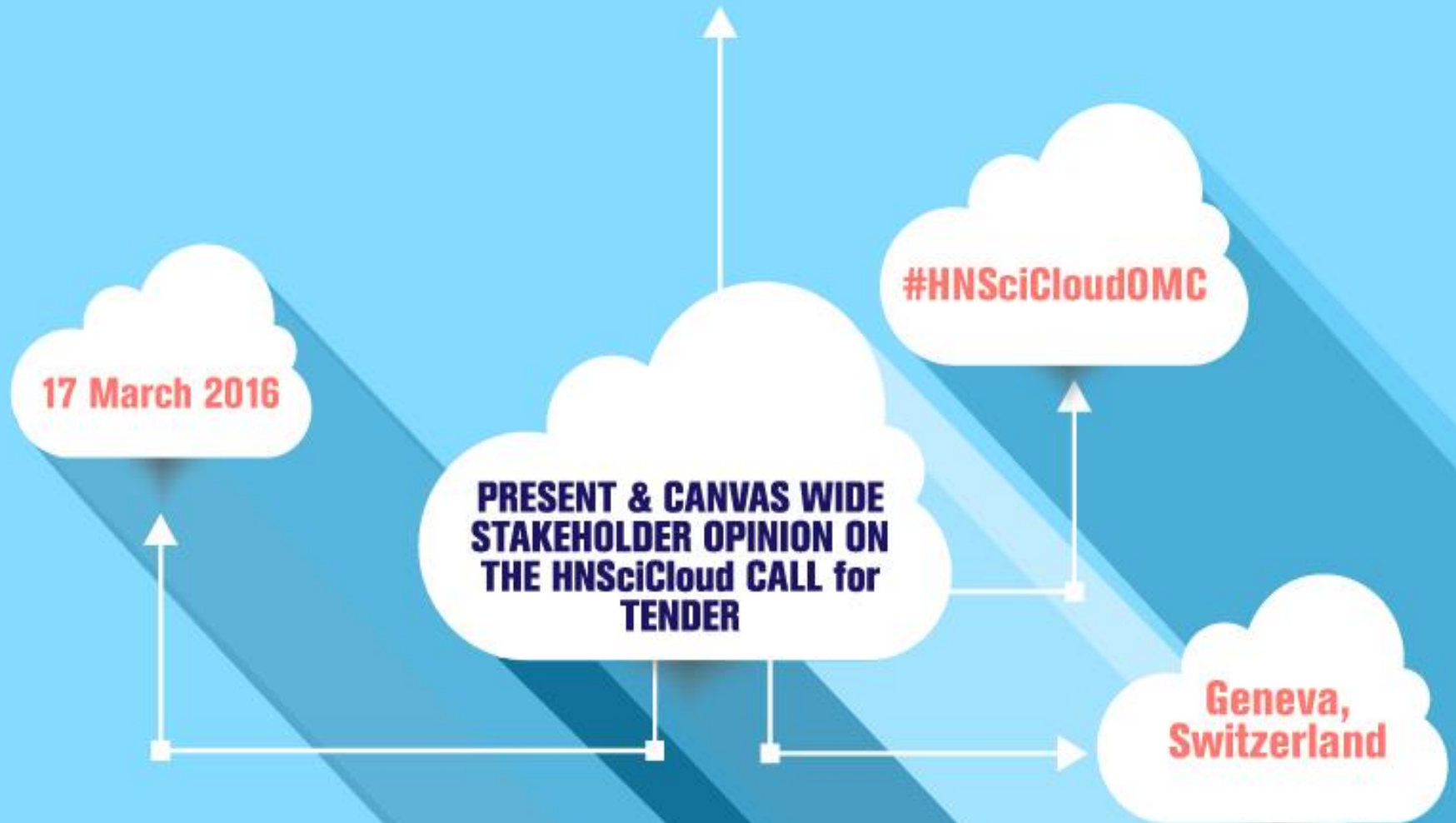
Definition of use-case is now starting . . .

HNSciCloud PCP Open Market Consultation

- ☞ ***Why?*** To present the HNSciCloud **tender for procuring innovative cloud services**
- ☞ ***Who?*** European **public-private cloud service providers** are invited to join the event
- ☞ ***Where?*** **CERN, Geneva, Switzerland**
- ☞ ***When?*** **17 March 2016**

More info #HNSciCloudOMC
Complete the application form at
www.helix-nebula.eu

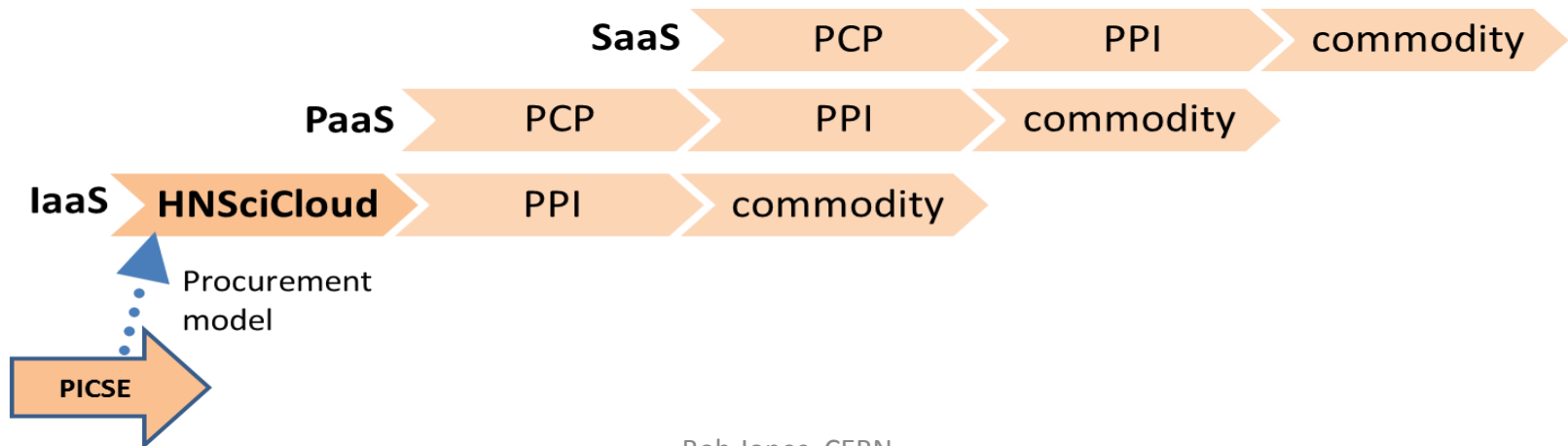
SAVE the DATE



HNSciCloud PCP Open Market Consultation

What can HNSciCloud bring to the table?

- Deployment of a hybrid cloud implementation that can build on the investments made in the public and private sectors
- Engagement of the publicly funded research organisations in the uptake of cloud services
- The PCP/PPI approach contributes to the cost of developing and deploying innovative services
 - PCP/PPI may be combined with other funding streams, such as regional investments including European Structural and Investment Funds (ESIF), to build capacity in member states



Summary

- ☞ HNSciCloud is the first European-level pre-commercial procurement joint undertaking for cloud services to support the public research community
- ☞ The focus is on IaaS services that can be integrated into a hybrid model with the buyers' in-house resources and publicly funded e-Infrastructures
- ☞ The procured resources will be made available to a wide range of research communities
- ☞ More than 5M€ of procurement funds have been committed over a 2 year period
- ☞ More details at the Open Market Consultation on 17 March 2016 at CERN see <http://www.helix-nebula.eu>
- ☞ The PCP/PPI funding approach can be a means of developing and deploying innovative cloud services for the European Open Science Cloud