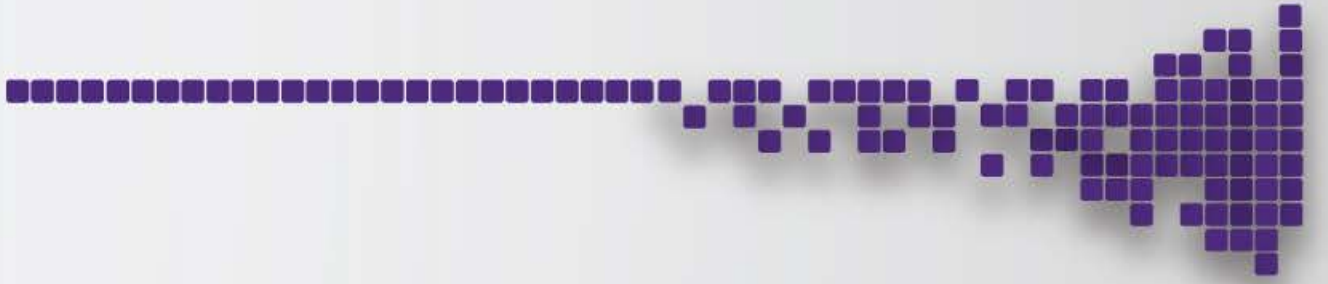
The INDIGO-DataCloud Project, an experience in H2020 E-INFRA-1 call



Luciano Gaido – INFN
gaido@to.infn.it

INDIGO - DataCloud

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INDIGO-DataCloud is co-founded by the Horizon 2020Framework Programme

The project

- **An H2020 project** approved in January 2015 in the EINFRA-1-2014 call
  - 11.1M€, 30 months (**from April 2015 to September 2017**)
- **Who**: **26 European partners** in 11 European countries
  - Including developers of distributed software, industrial partners, research institutes, universities, e-infrastructures
- **What**: **develop an open source Cloud platform** for computing and data ("DataCloud") tailored to science.
- **For**: **multi-disciplinary scientific communities**
  - E.g. structural biology, earth science, physics, bioinformatics, cultural heritage, astrophysics, life science, climatology
- **Where**: deployable on **hybrid (public or private) Cloud infrastructures**
  - INDIGO = **IN**tegrating **D**istributed data **I**nfrastructures for **G**lobal Expl**O**itation
- **Why**: answer to the technological **needs of scientists**

1. INDIGO for an open, interoperable e-infrastructure for open science

- **The foundation of the INDIGO-DataCloud project**:
  - **Exploit 15 years of experience in software development of production-quality distributed infrastructures for science** matured by the project participants
  - **Involve** researchers, big resource centers, industry, software developers
  - **Develop open source software** filling **technological gaps** that prevent the exploitation of current European e-infrastructures by many scientific communities
  - Define and validate software components to be developed through **concrete scientific use cases**
  - **Reuse and extend existing components** wherever possible, **develop missing pieces** whenever necessary
  - Be as **multidisciplinary** and as neutral as possible through the adoption of **standards**

INDIGO-DataCloud and the EU Open Science Initiative

- INDIGO answers to the **3 lines of action** described in the **H2020 consultation report on Open Infrastructures for Open Science**. The project:
  1. **Develops an open, interoperable e-infrastructure for scientific data**
  2. **Supports open science** organizing the European data space
  3. **Enables collaborations** across diverse scientific communities worldwide
- INDIGO also:
  4. **Contributes to economic growth** through **active engagement of industry** and through the creation of public / private partnership
  5. **Is complementary** to other EU H2020 projects and **collaborates to create a complete hardware/software platform for European Science**

More information: https://www.indigo-datacloud.eu

The key elements to build a proposal (our view)

When starting to build a proposal the key elements to take into consideration are:

- strong technical idea
- lead role
- duration and funding
- composition of the consortium
- governance
- external/expert advise
- innovation content

Key elements for a good proposal (1/5)

strong technical idea:

- initially details are not so important

BUT

- fundamental to have a clear idea of:
  - benefits and added value the project will bring WRT the status of the art
  - technology gaps the project is going to address
  - clear needs of well defined user communities

Do not underestimate the importance of realistic KPIs!

Key elements for a good proposal (2/5)

Lead role:

Several proposal attempts fail because it is not clear who will be taking the role:

- In addition, the leader should devote enough time (one or two full time people) for the duration of the project preparation phase
- To be defined as early as possible

Duration and funding:

- Duration should be appropriate for the goals of the project **AND** also for the time scope of the work programme → the appropriate timing for a possible follow-up proposal should also be considered
- Budget should be appropriate for the activities and for the number of partners

Key elements for a good proposal (3/5)

Composition of the Consortium:

- This depends on two (partially conflicting) elements:
  - a realistic assumption of the funding which can be requested
  - an appropriate coverage of all the relevant actors

This required many consultations and also an informal communication with the EC → it took a considerable amount of time but at the end we came out with a budget distribution proportional to the **real** contribution of each partner.

At the end it was quite clear that things were going quite well. However we received some last-minute requests for joining but we decided to not accept them.

Our opinion is that it was a wise decision.

Key elements for a good proposal (4/5)

Governance:

- Should be well defined, clear and effective in the proposal

In addition, in the proposal preparation phase:

- Identify ‘interim’ WP leaders and deputies as soon as possible
- Address cross-WP issues and activities since the beginning

Important to set up communication tools and start regular meetings to:

- support an effective collaborative effort
- discuss issues
- monitor the progress of the proposal preparation

Key elements for a good proposal (5/5)

External/expert advice:

- during the proposal preparation phase in order to have a critical evaluation
- within the proposal, for the whole project lifetime, to assess the adherence to the objectives and also to the changes in the external environment

Innovation content:

- It became soon quite clear that the proposal evaluation will have also been based on the innovation outcome of the proposal → therefore we have foreseen the Innovation Board as part of the governance structure

Conclusions

These ideas are based on our experience to prepare the INDIGO-DataCloud project proposal:

- it is for sure the partial view of the project coordinator (INFN)
- however we can say it has been successful ☺

Hope this is useful for future calls… despite the fact that the WP2016-2017 programme is quite different form the previous one → a lot of different calls with ‘small’ budget