

*Disclaimer: what it is not there is my fault*

# New from the Project

R. Graciani  
4<sup>th</sup> DIRAC User Workshop  
26-28 May, CERN



- ▶ Consortium Agreement
- ▶ Collaboration with EGI.eu
- ▶ Preparation of H2020 proposal
  - ▶ Participation in other funding proposals
- ▶ Technical News

**DIRAC Consortium Collaboration Agreement**

**for Development and Maintenance of the DIRAC Software for Distributed Computing**

**BETWEEN**

1. **Centre National de la Recherche Scientifique ("CNRS")**, public establishment for scientific and technological research, SIREN no. 180 089 013, APE/NAF code 7219Z, located at : 3 rue Michel Ange 75794 Paris Cedex 16, France, represented by Mr Alain FUCHS, its President who has delegated the *Délégué Régional* for délégation Provence and Corse, Mr. Younis HERMES, to act on his behalf for the purposes of this Agreement,

**Université D'Aix-Marseille**, public Establishment of a scientific, cultural and professional nature, SIREN 130 015 332, APE/NAF code 8542Z, located at Jardin du Pharo, 58 Bd Charles Yvon, 13284 MARSEILLE Cedex 07, France, represented by its president, Mr. Yvon BERLAND,

The Université d'Aix-Marseille having given a mandate to the CNRS, dated on January, 20<sup>th</sup>, 2012, for the signature of the present Agreement,

CNRS and Université d'Aix-Marseille, hereafter called the "ESTABLISHMENTS", acting jointly for and on behalf of the **Centre de Physique des Particules de Marseille ("CPPM"- UMR 7346)**, directed by Mr Eric KAJFASZ,

2. **Universitat de Barcelona, ("UB"), Spain**, public institution with the specific mission of providing the public service of higher education through research, teaching and study , NIF Q0818001J, located at Gran Via de les Corts Catalanes, 585, 08007 Barcelona, Spain, represented by its rector M. Dídac Ramírez Sarrió, in accordance with his appointment by Decree 160/2012, of December 11 (DOGC 6272, December 12), as representative of this institution and in virtue of the powers conferred on him by the Statute of the University of Barcelona approved by Decree 246/2003, October 8 (DOGC n° 3993, October 22),
3. **The European Organization for Nuclear Research, ("CERN")**, an Intergovernmental Organization having its seat at Geneva, Switzerland, duly represented by Livio Mapelli,

**Hereinafter referred to as "Parties" or individually as "Party".**

- ▶ After a lot of effort and negotiations the Consortium Agreement was signed early this year.
- ▶ **The Board of Representatives**
  - ▶ Met for the first time last Monday Feb. 24th in Geneva.
  - ▶ The representatives were:
    - ▶ P. Charpentier (CERN),
    - ▶ A. Tsaregorodtsev (CNRS)
    - ▶ R. Graciani (UB),
    - ▶ M. Cattaneo and L. Linsen (excused her presence) were invited to join.
  - ▶ By consensus, the board nominated
    - ▶ A. Tsaregorodtsev as **Technical Coordinator**
    - ▶ R. Graciani as **Coordinator** of the DIRAC Consortium.
    - ▶ A. Casajus will be the representative of UB in the Board.
  - ▶ Agreed to have a yearly User Workshop between mid May and Mid June
    - ▶ F. Stagni will coordinate the relation with user communities
  - ▶ Prepare the ground to add new partners

For CNRS

Signature:



Pour le Délégué Régional empêché  
l'Adjointe au Délégué Régional

Name of Signatory: BEURTON

Younis Hermes



For UB

Signature:



Name of Signatory:

Dídac Ramírez Sarrió



For CERN

Signature:



Name of Signatory:

Livio Mapelli



- ▶ The UB prepared a first draft
- ▶ It was reviewed by CNRS
- ▶ CERN has promised to provide an answer this week
  - ▶ Accession of a new member requires agreement (and signature) of all members.
- ▶ The Consortium Board will meet this afternoon to agree on the list of Institutions to invite
  - ▶ If you have not been contacted but are interested let me know

Accession of XXXX to the

**DIRAC Consortium Collaboration Agreement  
for Development and Maintenance of the DIRAC Software for Distributed  
Computing**

## MEETING

On the one hand,

*XXXX, Details of the institution that is joining and its representative*

And on the other hand,

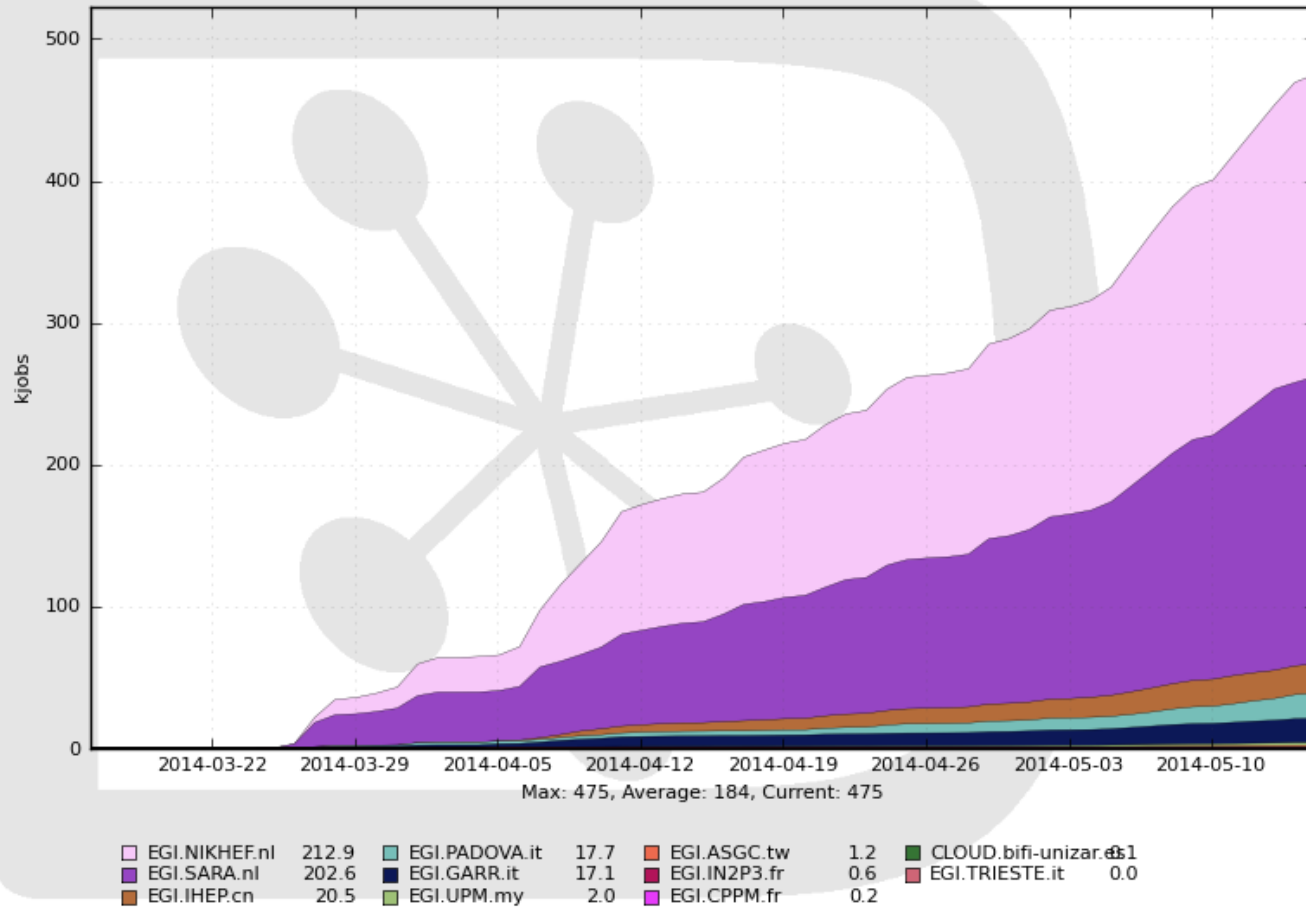
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- ▶ Nov. 2013
  - ▶ Invited to User Community Board
  - ▶ Presented DIRAC and example from FranceGrilles
- ▶ Dec. 2013
  - ▶ Agree to deploy DIRAC 4 EGI
  - ▶ Support from NGI: Poland, France, Greece (+ Spain, Italy, The Netherlands, ...)
- ▶ Jan. 2013
  - ▶ Collected interest from communities
- ▶ Feb. 2013
  - ▶ Launched the service



## Cumulate Number of Jobs (DIRAC 4 EGI)

8 Weeks from Week 11 of 2014 to Week 19 of 2014



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wE-nmr

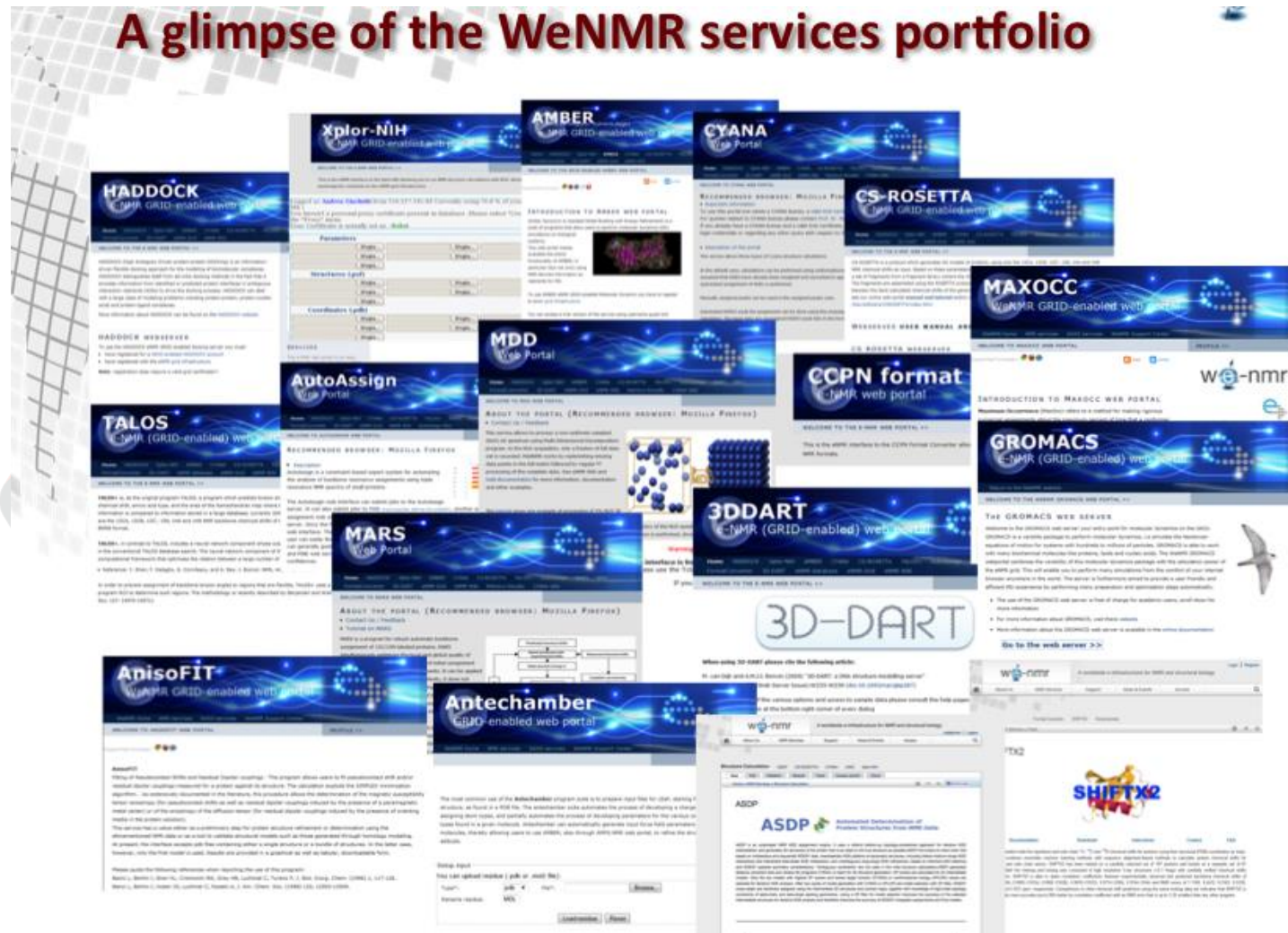
## **The HADDOCK WeNMR portal: From gLite to DIRAC submission in three hours**

DIRAC workshop@EGI-CF 2014, Helsinki, May 21<sup>th</sup>, 2014



**Alexandre M.J.J. Bonvin**  
Project coordinator  
Bijvoet Center for Biomolecular Research  
Faculty of Science, Utrecht University  
the Netherlands  
[a.m.j.j.bonvin@uu.nl](mailto:a.m.j.j.bonvin@uu.nl)

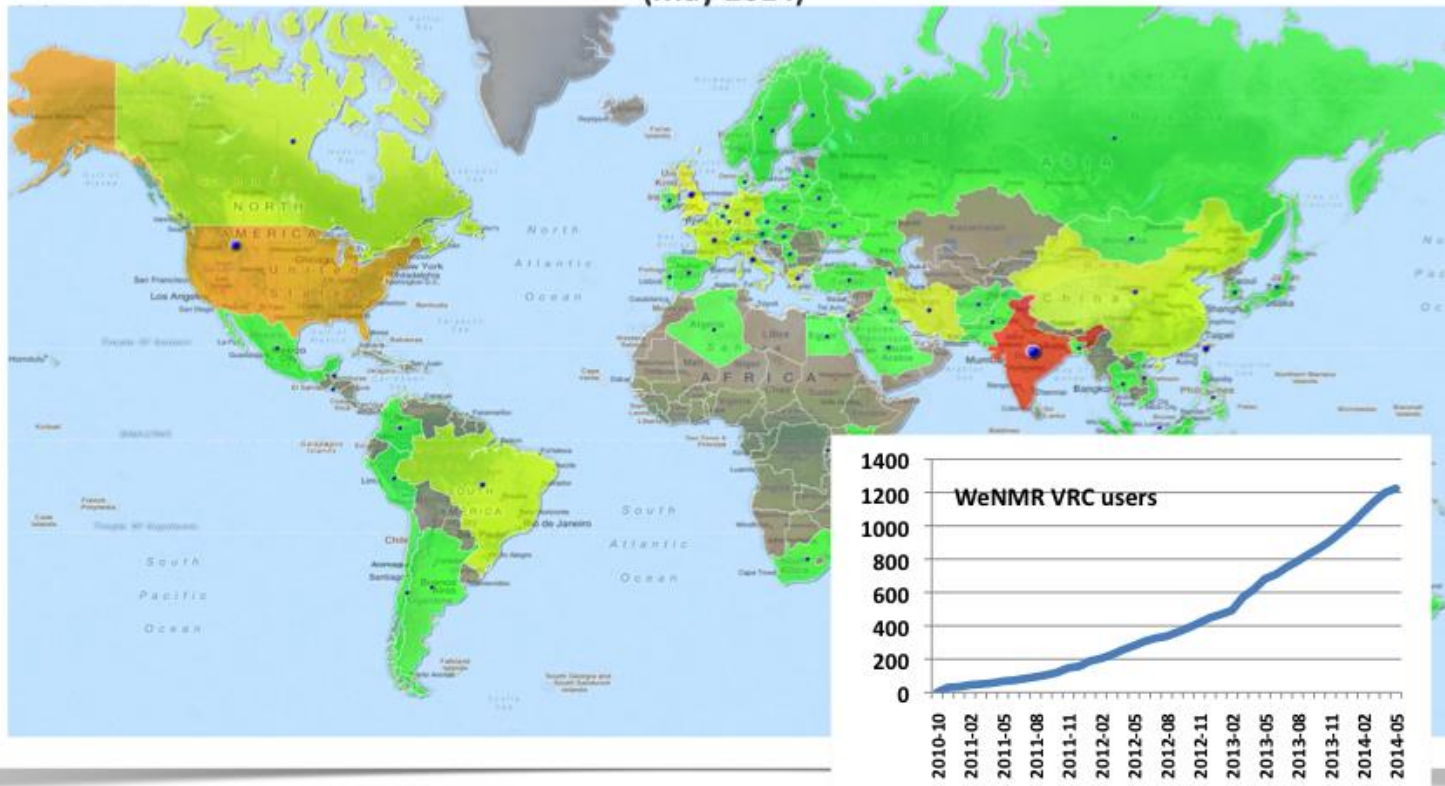
## A glimpse of the WeNMR services portfolio



## WeNMR VRC users distribution

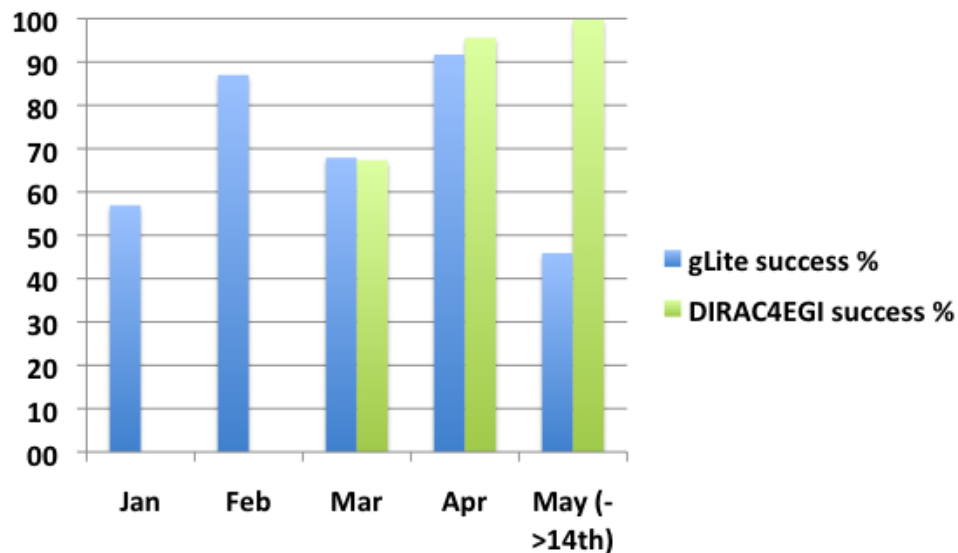
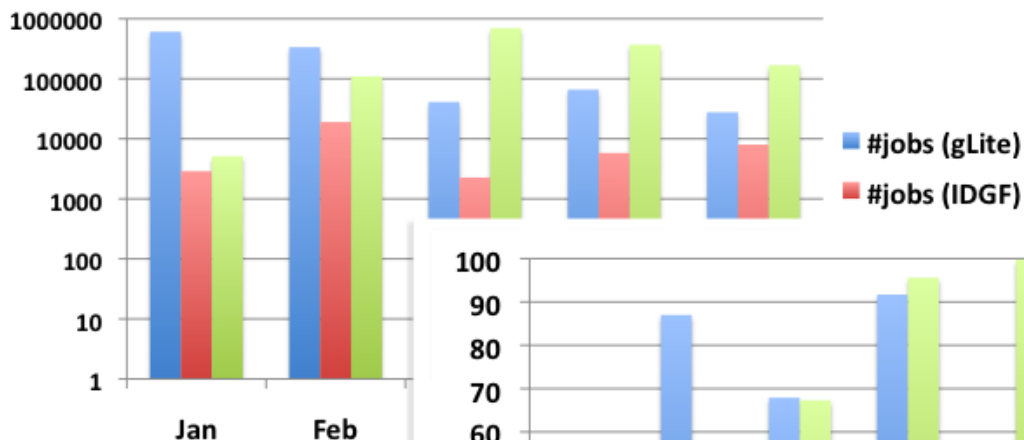
Over 1200 VRC and 620 VO members (64% / 36% outside Europe)!

(May 2014)



## Some statistics

HADDOCK server grid jobs (total 2014 ~2.5M / DIRAC~1.35M)



- ▶ Biomedical community:
  - ▶ VLEMED
    - ▶ Academic Medical Center (AMC) , UvA, Amsterdam
  - ▶ BIOMED
    - ▶ Already in FranceGrilles
  - ▶ MOSGRID
- ▶ Environmental
  - ▶ EISCAT\_3D (**E**uropean **I**ncoherent **S**catter)
- ▶ Astrophysics
  - ▶ Pierre Auger Observatory
- ▶ Engineering
  - ▶ CAVIGRID
- ▶ Integration with portals and workflow engines

- ▶ An information mailing list
  - ▶ [dirac-info@mailman.egi.eu](mailto:dirac-info@mailman.egi.eu)
- ▶ An operator team is being defined
  - ▶ [dirac-admins@mailman.egi.eu](mailto:dirac-admins@mailman.egi.eu)
  - ▶ [dirac-support@mailman.egi.eu](mailto:dirac-support@mailman.egi.eu)
  - ▶ Initially led by Gilles Mathieu (France)
  - ▶ Being handed over to Marcin Radecki (Poland)
- ▶ Many Communities requesting support
- ▶ Many NGIs interested in getting expertise on DIRAC

- ▶ In collaboration with:
  - ▶ Technology providers:
    - ▶ dCache, InSilicoLab, SCI-BUS, ...
  - ▶ Resource Aggregators:
    - ▶ EGI.eu, OSG, Nordugrid, NeCTAR,...
  - ▶ **Communities:**
    - ▶ Research Infrastructures with large data samples
    - ▶ Other communities
  - ▶ Providing a **generic platform for distributed computing**, evolving from current solution and improving on scalability and quality (security, documentation, tools,...)
- ▶ Prepare funding request:
  - ▶ Europe: H2020
  - ▶ Collaboration with France, Canada, SEA,...
- ▶ This is how DIRAC, inside LHCb, was developed



# Common solution for the (very-)large data challenge

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- ▶ VLDATA H2020: EINFRA-1 (concentrate on topics 4 & 5)

“The mission of this project is to **produce and validate** a common solution for Research Infrastructures, RI, requiring the **processing, curation, analysis and publication of very large amounts of primary and scientific data** on existing infrastructure. The number of RIs in Europe and beyond expected to collect yearly multiPetabyte data samples increases exponentially and they will soon be reaching the Exa scale. Existing solutions will be evolved into a **generic VLDATA platform for largescale distributed data processing**. Transparent integration of all types of available resources: Grid, Cloud, Volunteer, HPC, etc., funded with different models: capex or opex, and coming from the public or private sector, is mandatory. Various RIs **from different scientific domains**, from **physics to life sciences or chemistry** will be validating the VLDATA platform for their concrete use case, achieving at the same time a significant **optimization in the cost** and ensuring that no aspect of the challenge will be ignored. **The complete lifecycle of the data will be addressed, as well as interoperability between different scientific domains.**”

# Common solution for the (very-)large data challenge

▶ Main Technology partners:

- ▶ UB & CPPM (DIRAC)
- ▶ Cardiff University (General Design & Architecture)
- ▶ CYFRONET (Portals)
- ▶ MTA SZTAKI (Workflow Engines)
- ▶ UAB (Quality and Security)

▶ Main Communities:

- ▶ LHCb
- ▶ Belle II
- ▶ BES III
- ▶ Pierre Auger Observatory
- ▶ EISCAT\_3D

- ▶ Proteomics
- ▶ Mosgrid / CMMST
- ▶ Seismology
- ▶ AMC
- ▶ Astrophysics (INAF)
- ▶ Heliophysics
- ▶ Verce
- ▶ DRIHM
- ▶ SMEs (U. Zaragoza, Spain)

- ▶ DIRAC 4 EGI, multi-community solution EGI ( EGI.eu, the Netherlands)

Communication:

- ▶ CNRS
- ▶ ASCAMM
- ▶ UvA
- ▶ Bull, ETL

- ▶ **DIRAC 4 EGI Pilot**
  - ▶ Some travel money from EGI.eu
    - ▶ to contact communities
  - ▶ **Distribute Competence Center**
    - ▶ to collaborate with them
  - ▶ **Virtual Team**
    - ▶ to define the offer to new communities
- ▶ **EGI Engage**
  - ▶ Competence Centers
- ▶ **VRE H2020 proposal (EINFRA-9-2015)**

- ▶ REST Interface
  - ▶ WMS, Accounting DFC
- ▶ Web portal framework
- ▶ COMDIRAC
- ▶ Executor/Mind framework
  - ▶ Optimizers
- ▶ Resource Status System
- ▶ ReplicaManager -> DataManager

- ▶ Support for:
  - ▶ python 2.7
  - ▶ ARC Computing Element
  - ▶ FTS3
  - ▶ BOINC
  - ▶ Clouds
- ▶ Important updates on:
  - ▶ Request Management
  - ▶ MySQL usage (reuse connections)



**▶ Thank you**