

PLAN-E

- **Monday September 29**
- **10.00-10.30 Registration**
- **10.30-10.35 Opening, logistics and Introduction, Patrick Aerts**
- **10.35-10.50 Welcome address by Wilco Hazeleger, Director/CEO NLeSC**
- **10.50-11.10 Goals for a European Platform, intro Terms of Reference, Patrick Aerts**
- **11.10-11.30 A New Platform for escience and data research into the European Ecosystem, Wim Jansen, Scientific officer, EC**
- **11.30-12.30 4 15-minute pitches by participants**
- **12.30-14.00 Lunch**
- **14.00-15.00 4 15-minute pitches by participants**
- **15.00-15.45 Break and Collaboratorium demo's**
- **15.45-17.00 Discussion regarding the ToR and Action Plan**
- **17.00-19.00 No program**
- **19.00-21.30 Diner and key note**

Tuesday september 30

- **09.00-09.15** Opening
- **09.15-10.15** 4 15-minute pitches by participants
- **10.15-10.30** Break
- **10.30-11.30** 4 15-minute pitches by participants
- **11.30-12.30** Finalizing the ToR, prepare afternoon discussions
- **12.30-13.30** Lunch
- **13.30-15.00** Discussion on organizational matters
 - Format of the Platform
 - Formation of active/kernel group
 - Goals and Targets
 - Annual Plan
 - Reporting, communication and meeting frequency
- **15.00-16.00** Small break followed by Wrap up

Logistics

- **Keep it informal, enjoy coffee and tea as you like**
- **Today's meeting place Science Park 140**
- **Tomorrow's meeting place: CWI, Science Park 123, across the lane**
- **Tonight's diner: see your paper documentation**

Platform of eScience and Data Research Centers in Europe

Introduction to PLAN-E

Patrick J.C. Aerts

Scenery: eScience in The Netherlands

- **2011: NLeSC=Netherlands eScience Center**
- **2012-2014 Data Research/Data Science centers in the Netherlands:**
 - TU/e, Eindhoven
 - RUG/Target, Groningen
 - CIT, Twente
 - ADS, Amsterdam
 - LDSC, Leiden
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- **NLeSC has a national and coordinating role**
- **Further details on NLeSC tomorrow**

Co-ordination

- **NLeSC is also concerned with coordinating activities in its domain**
- **Initiatives in data stewardship, software sustainability**
- **Initiatives to bring people together and mobilize their common strength, by combining forces**

NL Platform for eScience

- A platform is formed by the Netherlands eScience/Data Research Centers at universities and research institutes
- The Platform:
 - Shares a common definition of escience
 - Defines common grounds for co-operations
 - Turns individual escience/data research groups and organizations into a strong collective and federated movement
 - Has an extensive to-do list

The Platform already proven versatile

- **ePLAN strongly involved in the National eScience symposium**
- **ePLAN involved in the science track for RDA's 4th Plenary**
- **ePLAN via NLeSC to give advise to SURF on e-infrastructure matters and master plan**

Next step: a European Platform

PLAN-E

- **Why?**
- **What?**
- **How?**
- **When?**

But first: anyone remembers ARCADE?

- ARCADE= Advanced Research Computing Academic Discussion group Europe
- It was the first (1995) in its kind of a community building effort for HPC, from an organizational, point of view
- Funding and policy agencies, HPC computing centers, etc.
- Many members from across Europe, sharing similar goals, with a sense of urgency
- Website, documents, database, “Overview of Academic Supercomputing in Europe”, annual report
- Database and annual report carried over to the e-IRG and forms now the heart of <http://knowledgebase.e-irg.eu/>
- Activities resolved into the e-IRG +Support Program

Why?

- **There are many reasons, but let's pick a few**
- **e-Infrastructures remain extremely important, but their complexity goes way beyond what scientists in application domains can really (or should be supposed to) oversee**
 - **Grids, a variety of clouds, HPC in many flavors, Clusters, GPU's**
 - **Mobile**
 - **Visualization**
- **ICT tooling from the domain of informatics and computer science continuously yield many new products**
 - **“Jungle computing”, data base technology for real time data,**
 - **analytics, pattern recognition**
- **Data come many new resources and in abundance:**
 - **Twitter resources, other social media**
 - **Sensors in a variety of domains, fixed and mobile**
 - **Scientific research equipment**
 - **Previously undisclosed or inaccessible resources**

More why

- **Attract attention:**
 - for the new dimension in science: **escience**, largely, but not exclusively driven by data
 - for innovative ways to do science where domains cross, using whatever is available in ICT tooling and software and in (national, European, Global) e-infrastructure
- To get support at large for the development of centers that develop the new skills required for bridging the gap between ICT/e-infrastructures and science at an academic level
- To form a community of entities that can bi- or multilaterally co-operate in future H2020 and other

More why

- High level support requires an academic skills level (PhD) by people that:
 - Understand the scientist's questions
 - Can help to articulate those questions
 - Can help to translate questions into the efficient use of available tools and hardware
 - Can help overarching disciplines (re-use of methods and tools)
- eScience/Data research Scientists should become *recognized* as academically skilled persons and their output recognized as important prove for further continued academic careers

What?

- **PLAN-E is a new European Platform (a network) of organizations responsible for/strongly involved in eScience/Data Research**
- **It 's goals are**
 - **To strengthen the position of data research and escience as a community of practice (growing towards a discipline)**
 - **To bring forward the importance of re-use and the re-usability of software, tools and methodologies across disciplines**
 - **To focus attention on the importance of layer between ICT and e-Infrastructures on the one hand and the science domain on the other, closely together with the scientists**
 - **To aid discovery in science that without innovative use of software and tools would not have been possible**

Before we dive into details: What PLAN-E is not to be:

- PLAN-E as such does not service/host e-infrastructures
- PLAN-E adds value to the existing scene but is not led, governed or dominated by any specific e-infrastructure (provider)
- PLAN-E is not as such concerned with computer science (informatics) or ICT development (except perhaps where nothing exists that is yet required)
- PLAN-E is not concerned with services close to the e-infrastructure
- PLAN-E is not even closely similar to the e-IRG, etc.

How?

- Basically by bundling all forces across Europe that share these goals;
- By forming a platform at the organizational level
- For exchanging knowledge and expertise in the field in order to strengthen the European position in the escience domain;
- With a solid, yet light weight organization
- Based on Terms of Reference
 - Based on voluntarity
 - With a kernel group of active/leading members prepared to engage in the activities
 - With goals, targets and clear communicatio
 - Work with annual plans and targets
 - Open to European organizations that share the goals

When?

- **Here and during this symposium**

How, in practice

- **Agree on Terms of Reference**
 - **Defining escience/data research domain**
 - **Defining the scope of activities, based on shared common interests**
 - **Form a kernel group of active/leading members prepared to engage in the activities**
 - **Work with annual plans and targets**

End of introduction

- **Next: Wim Jansen, EC**
- **Start of 15 minute pitches**

Start of discussion regarding the ToR

eScience is a community of practice developing into a scientific discipline per se, characterized -but not exclusively or limitedly- by the following: (1)

- **It is concerned with innovative ways in which ICT can *be applied* to complex scientific or industrial problems;**
- **It is concerned with the support of multi-disciplinary research, for example through but not limited to cross-type data integration, the managing of structured and unstructured data sets, data-driven research (“Big Data” research) and data analysis;**
- **It is the application of computer technology to the undertaking of modern scientific investigation, including the preparation, experimentation, data collection, results dissemination, and long-term storage and accessibility of all materials generated through the scientific process;**
- **It applies computer algorithms and tools for the interactive specification and maintenance of models and their analysis, visualization and simulation, in order to support scientific *in silico* experiments;**
- **Bohle, S. "What is E-science and How Should it Be Managed?" Nature.com, Spektrum der Wissenschaft (Scientific American), http://www.scilogis.com/scientific_and_medical_libraries/what-is-e-science-and-how-should-it-be-managed/.**

eScience is a community of practice developing into a new form of scientific disciplines, characterized -but not exclusively or limitedly- by the following: (2)

- **It is concerned with the optimal use and/or optimization of the use of larger parts of an e-infrastructure for scientific applications for complex scientific problems and/or**
- **It is concerned with the optimal use and/or optimization of the use of (high-end) computers in scientific applications for complex scientific problems and/or**
- **It is concerned with addressing scientific usage of computers and/or e-infrastructures in cases where the problems may for example be on the following or a combination of these**
 - **Compute bound**
 - **Data size bound**
 - **Data streaming bound**
 - **Data complexity bound**
 - **Latency bound**
- **In general it is concerned with the *application*, *re-use* and *re-usability* rather than the (from scratch) *development* of ICT methods, methodologies and tools to support solving complex scientific and/or industrial problems;**
- **It encompasses and advocates strongly advanced visualization and pattern recognition in support of its goals.**

Goals and Action lines

- **Federates the European efforts of escience groups in order to strengthen the European position in the escience domain;**
- **Forms a platform for exchanging knowledge and expertise in the field;**
- **Addresses communication about escience and the way it is showing results in all domains;**
- **Represents the European escience scene externally and internationally in addition to the individual representations from the participating members where applicable. In particular towards the EC in relation to future funding schemes;**
- **Defines evaluation criteria for the quality of escience research;**
- **Supports actions towards data stewardship and software sustainability;**
- **Will take endeavors to stimulate quality and quality ranking of escience publishing means;**
- **Smoothes the interaction between its members;**
- **Will coordinate actions towards improved e-infrastructure provisioning;**
- **Will improve the skills-level of students and researchers in escience techniques and stimulate the upgrading of the status of escience technologists.**

Organizationally

- The PLAN-E platform is based on voluntary participation of organizations that share the goals of the platform. In a later stage, if the organization has proven robust, it might be considered to base the organization on formal Letters of Intent. The PLAN-E will consider working with a chosen board with a secretary responsible for the communication. The board will consider drafting a white paper on escience and its present and future impact on science and the way it is conducted.
- In principle the documents produced by PLAN-E are public.

Cooperationally

- **PLAN-E is to be a neutral and e-infra independent supporter and advisor to:**
 - PRACE
 - EGI
 - EUdat
 - RDA
 - OpenAir
 - e-IRG
 - ESFRI/Projects
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Schedule

- **Constituting meeting September 29, 30**
- **Agree on terms, goals and actions**
- **Agree on kernel group**
- **Agree on organizational format**
- **Agree on meeting frequency**