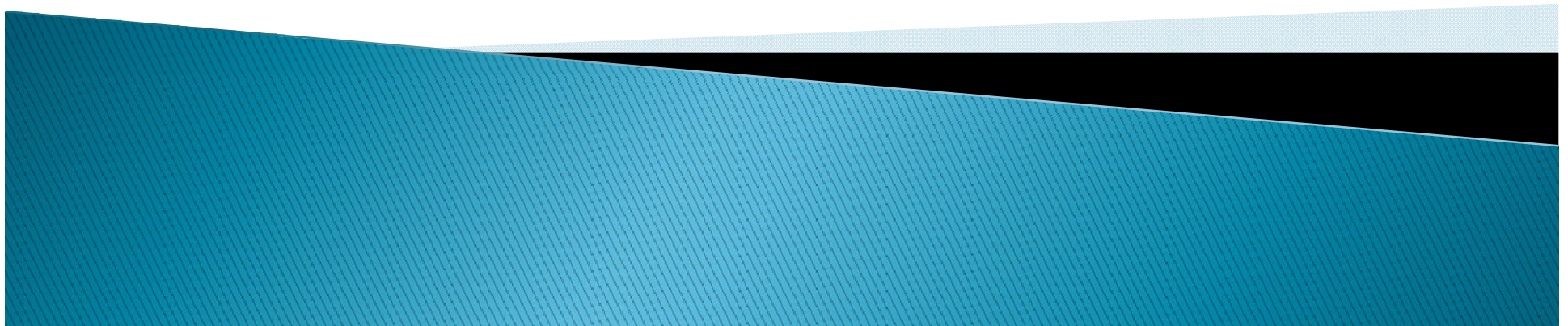# Integrated e-infrastructure oriented DASHBOARD to support research projects

Proposed activity for INTEREST project by JRU-LW-ES
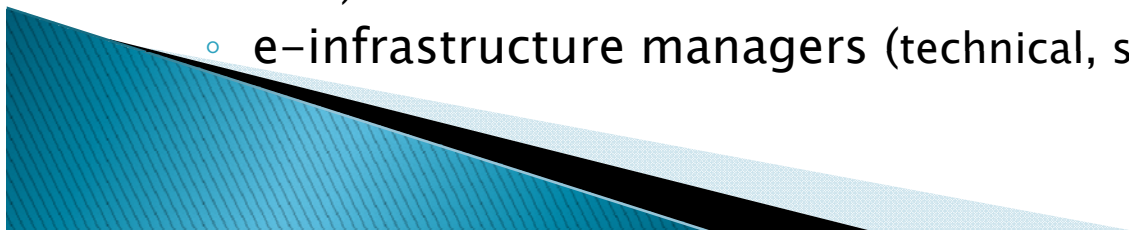
# MOTIVATION

- **Research Infrastructures (RI) handle projects** from
  - many different teams
  - <span style="color:red">with different background and experience</span>

  interaction and support is a daily challenge!
- Example from LifeWatch:
  - individual researchers: executing open-modeller for a given set of species
  - medium team: the evolution of the conus species analyzing genomic data
  - large international team: exploring carbon sequestration in the biosphere.

    All will use a wide spectra of e-infrastructure resources

    Grid/Cloud, Supercomputers and Large Databases and Datasets
- Tool(s) should support different point of view of :
  - the final users (researchers)
  - the research infrastructure management (technical with skills on an area)
  - e-infrastructure managers (technical, supporting all research areas)

# CHALLENGE/SOLUTION

**CHALLENGE:** Provide a tool focused on the support to projects providing <span style="color:red">different and integrated views</span> to the different roles (researchers, RI managers, e-Infrastructure managers)

For example, if a researcher in a research community I involved in 5 different projects, he/she should get an integrated view of them accessing a single dashboard.

The RI manager will confirm the register and track the projects, advice on the resources and follow their use and availability to the research communities.

And the e-Infrastructure manager will get the information of those projects and know in advance what plans and resources are expected.

**SOLUTION:** integrate a tool oriented to register, track and manage projects in an open source framework

**CLEAR CANDIDATE:** <span style="color:red">OpenProject</span>

The tool will be under the control of the Research Infrastructure (for example, in our case LifeWatch core-ICT RI).
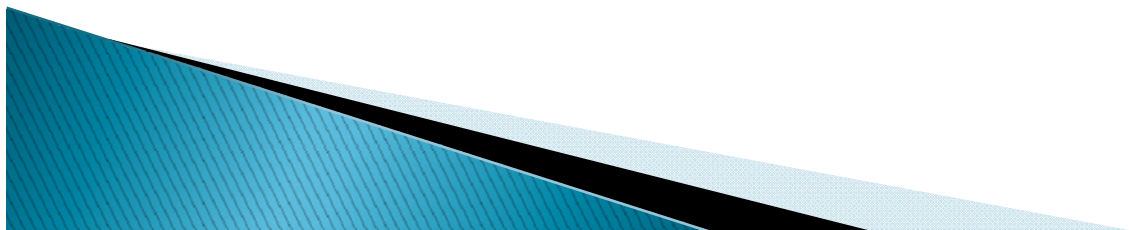
# IMPLEMENTING THE SOLUTION

▶ TECHNICAL DETAILS:
  ◦ Incorporate a user(Client) Relation Management application like sugarcrm
  ◦ And an incident ticketing system (multi-e-Infra: EGI, EUDAT, PRACE…)
  ◦ Support reports and accounting information on the use of resources
  ◦ Integrate using BPM over the hooks
  ◦ Use Single Sign On for access.
▶ PARTNERS REQUIRED/EFFORT:
  ◦ At least a RI (LifeWatch would be one we would participate as JRU-LW-ES, better at least two or three from different areas: BIO, ENV, ENER, etc.)
  ◦ an e-Infrastructure center (preferably linked to EGI)
  ◦ two-three "technical partners" (we have such a partner within the JRU-LW-ES, IAT, so it is not an additional partner).
  ◦ Total effort could be around 3-4 FTE for at least 2 years.
  ◦ ITIL integration (from the start) could mean 1FTE more or so (or going to 3 years).
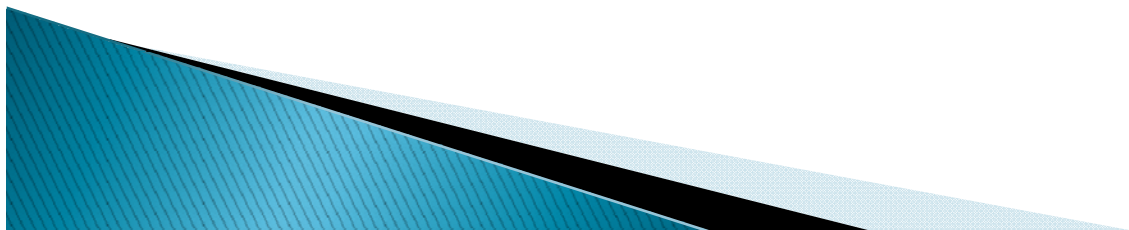
# Tentative WBS

- TASK N.1: Definition of complete use cases integrating the different perspectives (Mo1-Mo6)
- TASK N.2: Analysis of potential dashboard platforms and complementary tools (Mo3-Mo9)
- TASK N.3: Integration and deployment for pilot installation(s) (Mo6-Mo12)
- TASK N.4: Feedback from RI, researchers & e-Infrastructure, improved version (Mo9-Mo24)
- TASK N.5: Provisioning and optimization of resources for workflows through dashboard (Mo6-Mo24)
- TASK N.6: ITIL assurance (or integrate it in N.1, N.2, N.3) (Mo1-Mo24)

# Deliverables

▸ DN.1 (Report, Mo 6) Complete use case for two (or three) RI. Model Abstraction. Requirements on tools.

▸ DN.2 (Report, Mo 9) Analysis and selection of open platforms for dashboard and complementary tools

▸ DN.3 (Prototype, Mo12) First dashboard prototype supporting one RI.

▸ DN.4 (Report, Mo15) Feedback from RI

▸ DN.5 (Prototype, Mo18) Refined prototype, deployed in at least two RI

▸ DN.6 (Report,Mo24) ITIL documentation

▸ DN.7 (Report, Mo24) Support to optimization and provisioning of resources for workflows

▸ DN.8 (Prototype, Mo24) Final prototype with support for workflows deployed in at least two RI

▸ *DN.9 (Prototype, Mo30) Deployment on several production RI (optional)*

# Milestones

- MiN.1 (Mo 9) Selection of an open platform and complementary tools
- MiN.2 (Mo12) First dashboard prototype deployed
- MiN.3 (Mo18) Refined prototype deployed and running for at least 2 RI
- MiN.4 (Mo21) Architecture including optimization and provisioning of resources for workflows defined.