TOWARDS A FRENCH e-SCIENCE?

Results of the e-Biogenouest project (2012-2014)

- Coordination: Olivier Collin – Yvan Le Bras (IRISA)

Goals

- Test an e-Science approach in Life Sciences
- Propose an e-Science structuration in Western France
MY PROFILE

Translation
Integration
Systemic scale
BREAK SILOS

Challenge: - each domain is specific! but digital...

Solution: - have a digital point of view of the data!

OPTIMIZE / STANDARDIZE

Challenge: -computing, storage, network optimisation

Solution: -focus on interoperability, use ontologies
-focus on code / algorithms enhancement
PEOPLE PARADOX

More automation → More needs for human, for expertise

Challenge: -lacks human resources, change the uses

Solutions: -mutualization, collaboration
-citizen science approach

Using Clouds for Metagenomics: A Case Study Wilkening et al.
IEEE cluster 2009
A SYSTEM OF SYSTEM

An e-Science « tool »: the Virtual Research Environment
FROM REGIONAL TO NATIONAL

An oriented VRE e-Science approach
-a software connection
-an infrastructure connection
Thank you for your attention

GenOuest Bioinformatics core facility

Symbiose IRISA/INRIA group
GenOuest-Dyliss-Genscale

Cyril Monjeaud

eBGO HUB (collaboration)  http://www.e-biogenouest.org/

EMME portal (data management)  http://emme.genouest.org/

Galaxy instance (data analysis)  http://galaxy.genouest.org/

Oliver Collin
1. $ for infrastructure
2. Human Resource
3. Tools / Virtual laboratories

New developments lack optimization
Proprietary software Silos

Well done!

Waste management?

UK National eScience Center
NSF office of cyberinfrastructure
Washington e-Science Institute

Australian National eResearch Collaboration Tools & Resources (NeCTAR)

Nordic eScience Globalisation Initiative (NeGI)
Nordic e-Infrastructure Collaboration (NeIC)

Swedish Research Centre (SERC)
Denmark eScience Center
Finland, Iceland, Norway

Netherlands eScience Center (NLeSC)

e-SCIENCE OVER THE WORLD