



ELIXIR

*Safeguarding the results of life
science research in Europe*

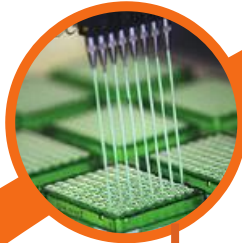


www.elixir-europe.org

*ELIXIR connects national
bioinformatics centres and
EMBL-EBI into a sustainable
European infrastructure for
biological research data*



environment



bioindustries



agriculture



medicine

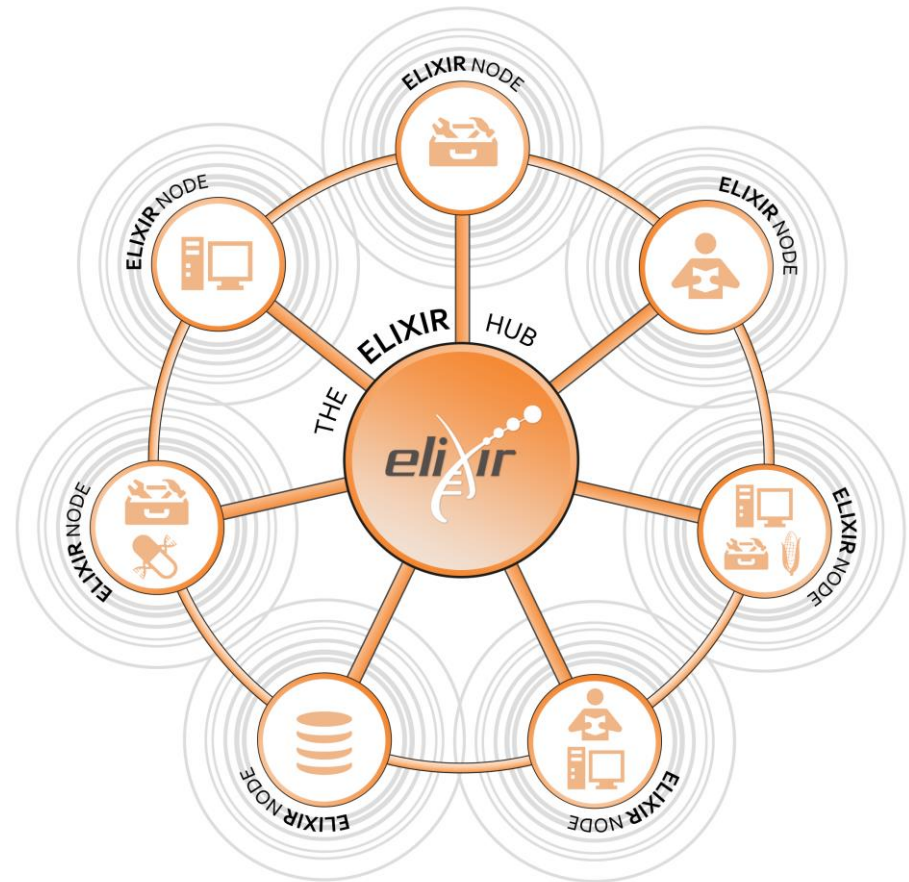
*ELIXIR underpins
life science research
– across academia
and industry*

A distributed infrastructure to scale with the challenge

ELIXIR data infrastructure
for Europe's life science
research sector

ELIXIR Nodes build local
bioinformatics capacity
throughout Europe

ELIXIR Nodes build on
national strengths and
priorities



ELIXIR Membership

ELIXIR Members



Belgium

Czech Republic

Denmark

EMBL



Estonia

Finland

France

Germany



Ireland

Italy

Israel

Luxembourg



Netherlands

Norway

Portugal

Slovenia



Spain

Sweden

Switzerland

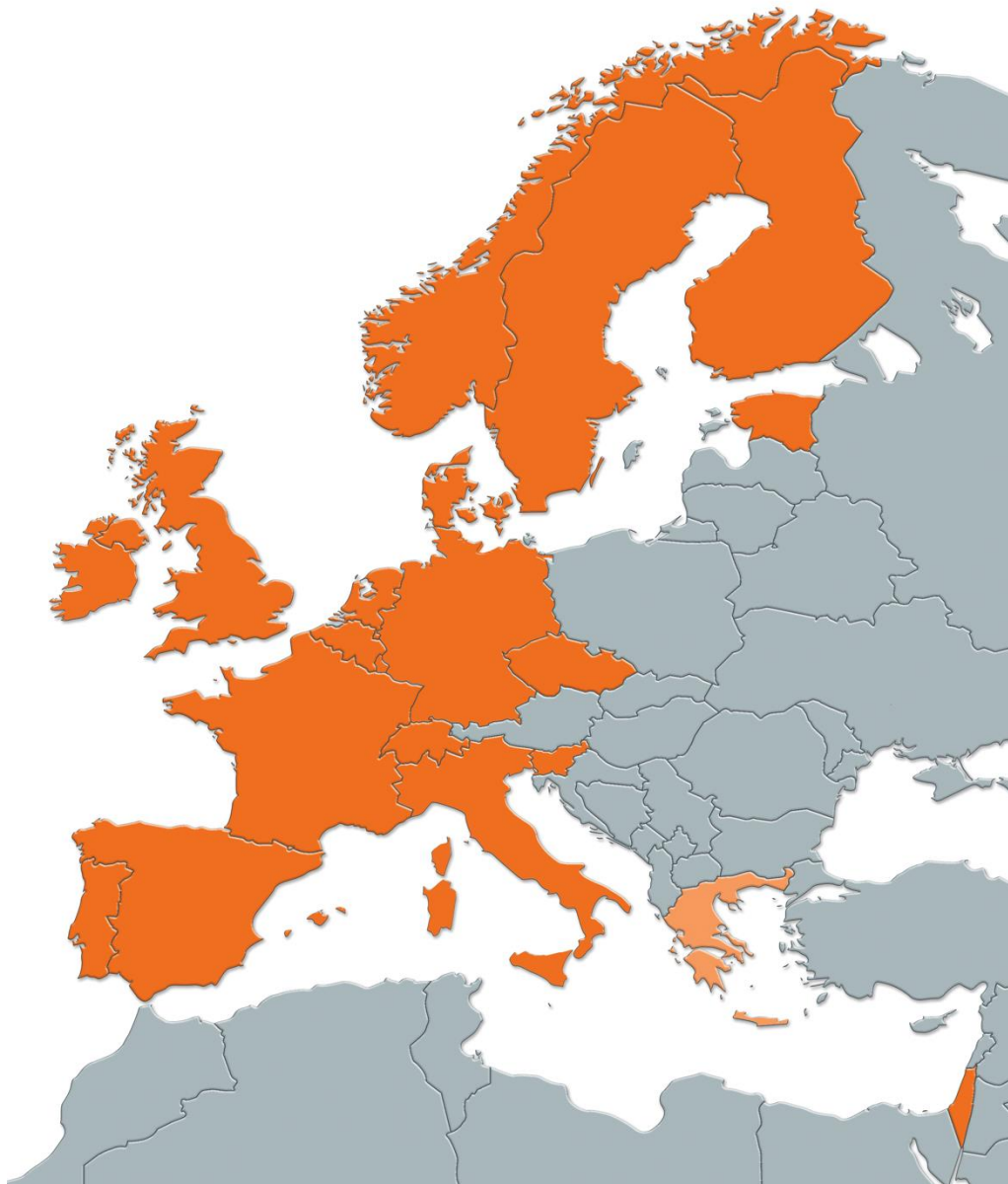
United Kingdom

ELIXIR Observers



Greece

Jan 2017
Hungary



ELIXIR: European infrastructure for biological information

Data infrastructure for Europe's life-science research:



Data



Interoperability



Tools



Compute



Training



Marine metagenomics



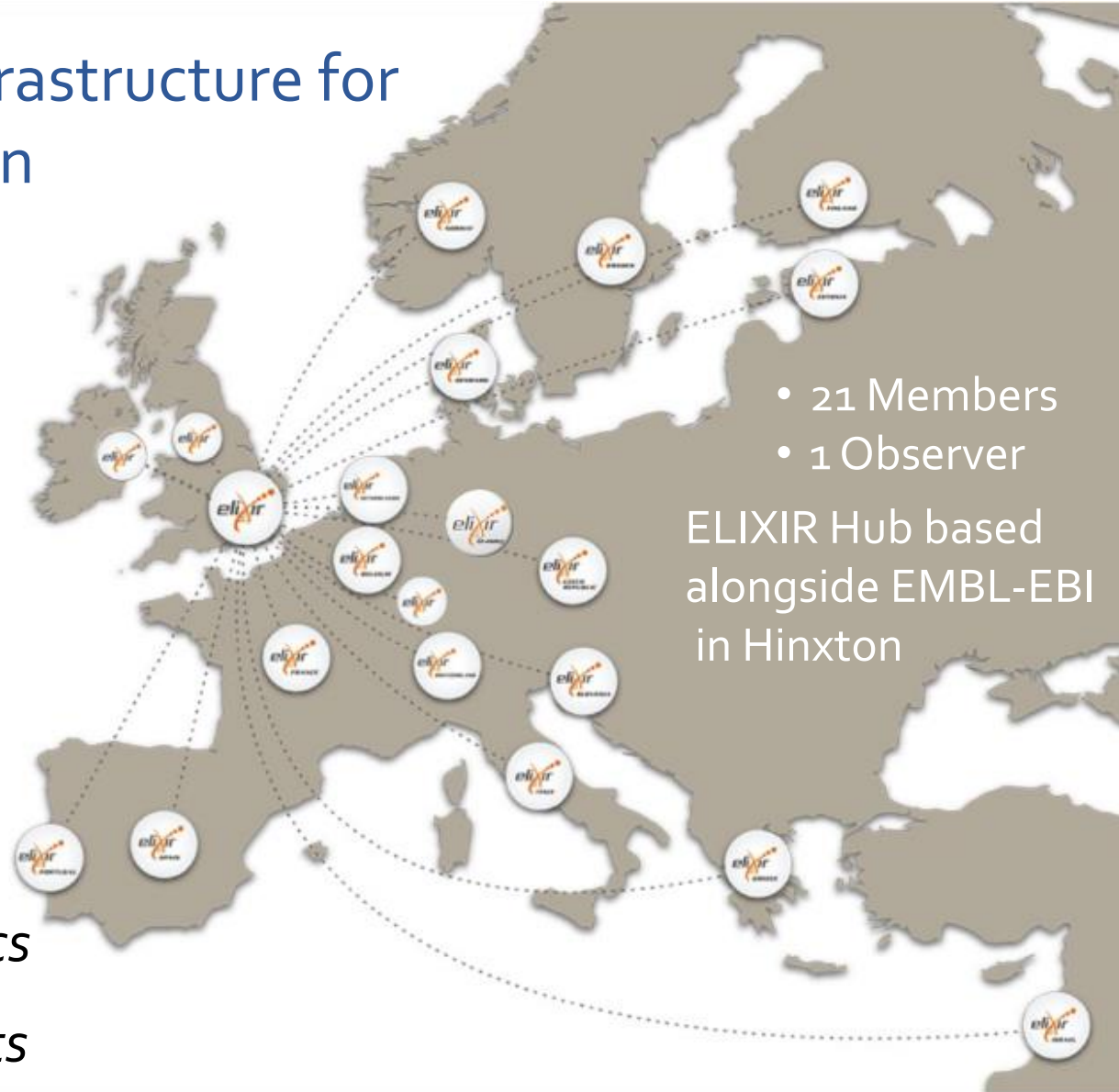
Crop and forest plants



Human data



Rare diseases



- 21 Members
- 1 Observer

ELIXIR Hub based alongside EMBL-EBI in Hinxton



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[@ELIXIREurope](https://twitter.com/ELIXIREurope)



ELIXIR-EXCELERATE

EU funded project to:

- Accelerate the implementation of ELIXIR across Nodes
- Develop and connect resources and services (from Nodes)
- Build bioinformatics capacity across Europe (Capacity Building and Training)



Basic facts:

- €19 million,
- 4-year project
- 41 partners across 17 countries
- Kick-off meeting: December 2015



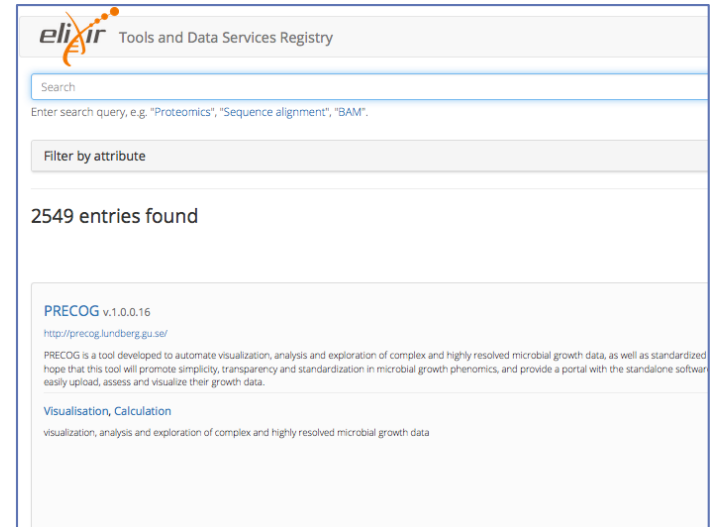
ELIXIR's tools will...

- Harmonise the staggering number of **analytical software tools**
- Support typical analyses using multiple tools **linked together** into data processing 'pipelines'
- Be developed, based on the following principles:
 - discoverability
 - ease of use
 - benchmarking
 - Interoperability



bio.tools: ELIXIR tools and data registry

- **Discovery portal** for life science tools and data resources
- Easy to browse, search and update
- Based on **EDAM ontology**
- Over 2,500 entries and growing
 - Community-driven curation through **hackathons and workshops**
- Run by ELIXIR Denmark



<http://bio.tools>



ELIXIR's training will...

- Be adequate to accommodate the increase in demand for training
- Seek to complement, and build on, user training programmes in the Member States
- Coordinate training capacity throughout Member Countries
- Enable the development of new training programmes, including 'training the trainer', especially in new accession states
- Be tailored in accordance with the development and diversification of data resources and tools
- Optimise a range of training methods including using online resources





Galaxy Working Group



www.elixir-europe.org



Mar Apr May June July Aug Sep Oct Nov Dec

Breakout session

ELIXIR all hands
March 30

Survey

Birds of a Feather

GCC 2015
July 7

**Classified
recommendations**

**First results
survey presented**

HoN meeting
September 4

Report

**Proposal to
TeGC, TrGC, BoF**

October 12

**Final report
to HoN**

November 20

**Presentation
Final report**

SAB meeting
December 8



Conclusions Survey

- Broad usage of Galaxy in the ELIXIR community
- Many small local instances
- Few resources for maintenance
- Main goal: Enable biologists to perform data intensive (NGS) analyses

Building a European / ELIXIR Galaxy community


- Galaxy Working Group: TeCG, TrCG, node representatives
 - Strategic technical discussions
 - Coordination of effort
- A single voice to the Core Galaxy Team: end-users, developers, administrators
- Events to build community: workshops, hackathon,...



Integrate Galaxy in the ELIXIR platforms

- Sensitive data
- Sharing data, analyses, workflows
- Access to ELIXIR resources & infrastructure
- Training using Galaxy

Training for users, developers & administrators

- Most requested topic
- Galaxy Training Network (GTN)
- Part of GOBLET
- Already planned in  *excelerate*
- Documentation!

Development of Galaxy platform

- Coordinate contribution to the Galaxy platform
- Sustainability through diversification of developers
- Europe specific issues: authentication, cookie handling
- Integration ELIXIR core resources
- ELIXIR Galaxy VMs for use cases



ELIXIR Galaxy Developer Workshop

January 16-19th 2017



Organizing Committee

- **ELIXIR France**

Christophe Caron, Victoria Dominquez del Angel,
Jean-François Dufayard, Jean-François Gibrat,
Gildas Le Corguillé, Stéphanie Le Gras, Julien Seiler

- **ELIXIR Galaxy Working Group**

Frederik Coppens, Celia van Gelder

- **ELIXIR Excelerate WP11 task Train the Developer**

Hedi Peterson

- **ELIXIR Germany**

Björn Grüning



Trainers

- **ELIXIR France**

Anthony Betaudeau, Victoria Dominquez del Ange, Olivia Doppelt,
Gildas Le Corguillé, Stéphanie Le Gras, Fabien Mareuil, Julien Seiler

- **ELIXIR Germany**

Bérénice Batut, Björn Grüning

- **ELIXIR Belgium**

Frederik Coppens

- **ELIXIR The Netherlands**

Saskia Hiltemann, Youri Hoogstrate

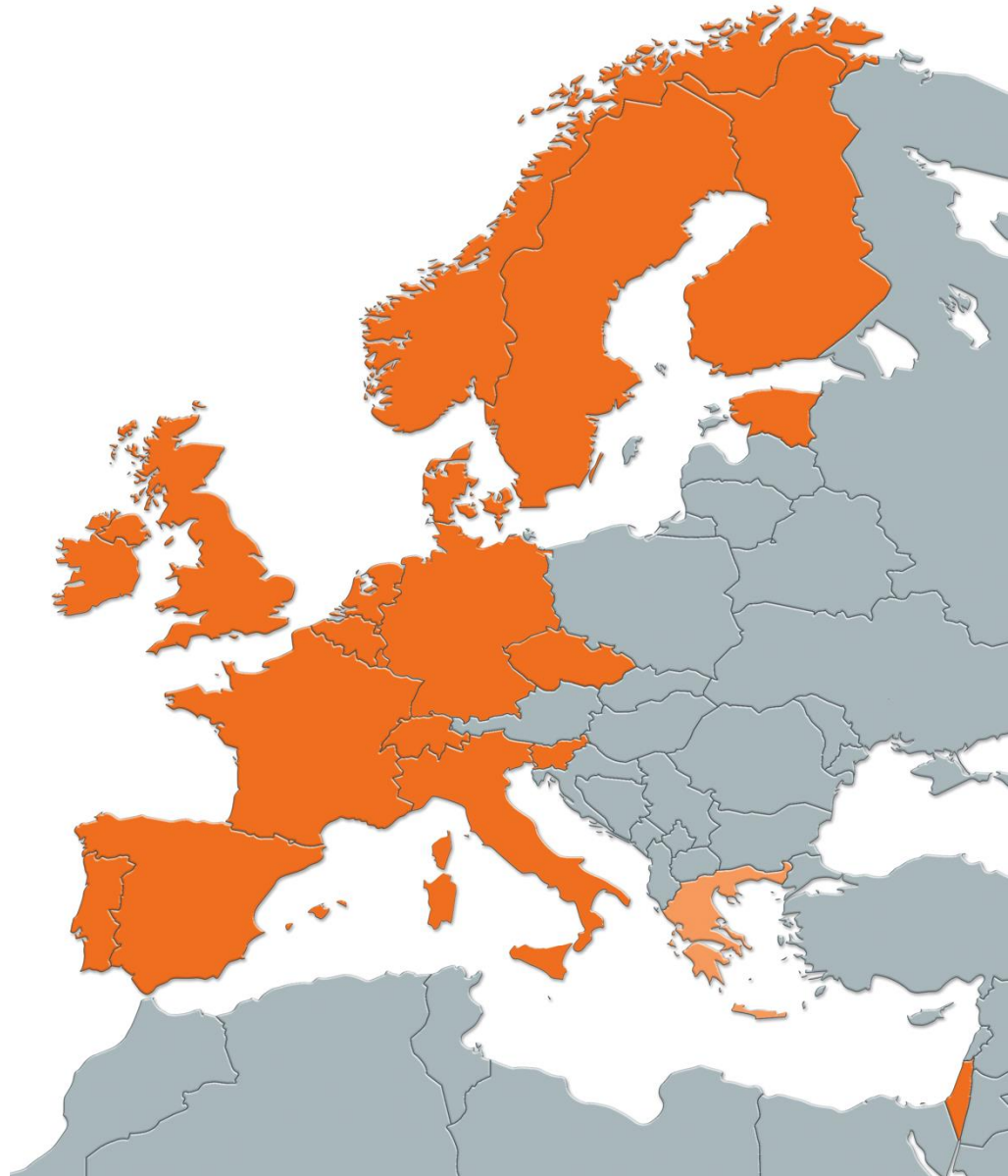
- **ELIXIR Norway**

Abdulrahman Azab



Participants

- Belgium
- Czech Republic
- Estonia
- France
- Germany
- Ireland
- Italy
- The Netherlands
- Norway
- Portugal
- Slovenia
- Spain
- UK



Galaxy training history in France

- Federate and promote platform/labs skills
 - Tools Integration
 - API
 - Tuning
 - etc.
- Communities
 - (Bio)-informatician
 - Biologist



Galaxy4Bioinformatics

- The French Galaxy4Bioinformatics

- V1: Roscoff / IFB-CNRS funding / Nov. 2014
- V2: Nantes / IFB-INRA funding / March 2015
- V3: Toulouse / Nov. 2015
- V4: Gif-sur-Yvette / March 2016
- V5: Lyon / Oct. 2016

- Program

- Architecture
- Tools Integration
- API
- Toolshed

- ~150 students / 12 teachers (French Galaxy Working Group)



Towards a European session

- More modules
 - Visualization
 - docker
- More communities !
- More trainers
- More federation !?





Practical



Practical

- Tools integration, API, Admin... sessions use Virtual Machine
- Docker : on the Cloud
- **Check** the VM to be sure !
 - Login : galaxy
 - password : 12345
- VM runs for everybody ?





Planning



Program

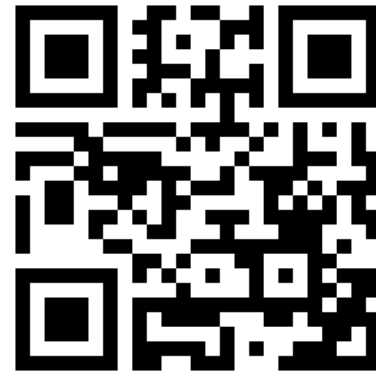
| | Monday January, 16 | Tuesday January, 17 | Wednesday January, 18 | Thursday January, 19 |
|-------------|--|---|---|--|
| Themes | Tools & Workflows I | Tools & Workflows II | BioBlend, Visualisation and Interactive Tour | Installation and configuration Elixir |
| Coordinator | Gildas Le Corguillé | Björn Gruening | Olivia Doppelt | Julien Seiler |
| Trainers | Björn Gruening Gildas Le Corguillé Anthony Bretaudeau Saskia Hiltermann Youri Hoogstrate | Gildas Le Corguillé Björn Gruening Anthony Bretaudeau Bérénice Batut | Bérénice Batut Björn Gruening Fabien Mareuil Julien Seiler Saskia Hiltermann Stéphanie Le Gras Youri Hoogstrate | Björn Gruening Frederik Coppens Julien Seiler Stéphanie Le Gras |
| 09:00 | Introductory talk | Wrap session | BioBlend API (Olivia, Fabien, Julien) | Install and config best practices (Björn, Julien, Stéphanie) |
| 09:30 | | | | |
| 10:00 | Break | Break | Break | Break |
| 10:30 | Galaxy Tool Integration Best Practices (Anthony, Björn, Gildas, Saskia, Youri) | Wrap session | BioBlend API (Olivia, Fabien, Julien) | Install and config best practices (Björn, Julien, Stéphanie) |
| 11:00 | | | Galaxy Visualisation (Saskia, Youri) | |
| 11:30 | Planemo Tool Wrapping (Anthony, Björn, Gildas, Saskia, Youri) | | | |
| 12:00 | | | | |
| 12:30 | Lunch | Lunch | Lunch | Lunch |
| 13:00 | | | | |
| 13:30 | Planemo Tool Wrapping (Anthony, Björn, Gildas, Saskia, Youri) | Wrap session | Galaxy Visualisation (Saskia, Youri) | Docker |
| 14:00 | | | | |
| 14:30 | | | | |
| 15:00 | | | | |
| 15:30 | Break | Break | Break | |
| 16:00 | Writing dependencies : Conda recipes (Bérénice, Björn, Gildas) | ToolShed upload and tool-iuc PR (Bérénice, Björn, Gildas) | Galaxy Interactive Tour (Bérénice, Björn, Stéphanie) | |
| 16:30 | | | | |
| 17:00 | | | | |
| 17:30 | | | | |
| | | | | |
| 20:00 | | | Working Dinner | |

- All courses and coffee breaks will be held in the Vegas 2 and 3 private rooms
- Lunches will take place in the 7 hotel's restaurant (ground floor)
 - Let us know if you have particular dietary requirements

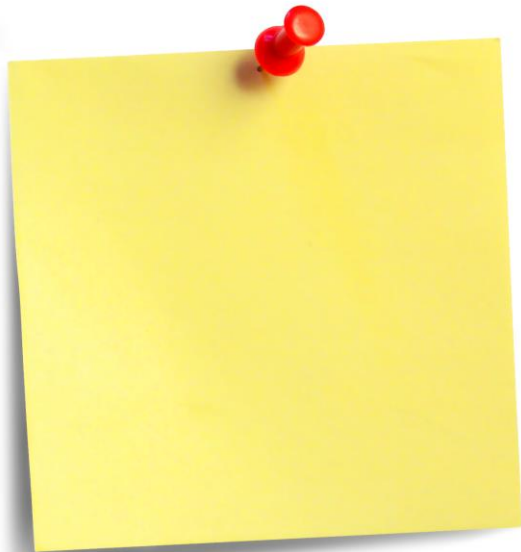
Training material

- Available at: <https://github.com/igbmc/egdw2017>

Check out your badge!



During hands-on



=





Social Event: Gala Dinner



Gala dinner

- On Wednesday, the Gala dinner will take place in the restaurant ***Maison Kammerzell*** in Strasbourg city center at 8pm
 - We will go to the restaurant by tram from the 7 hotel





Dining in Illkirch



Dining in Illkirch

Where to dine

-  Le Foyer Des Pêcheurs
-  7Hotel&Fitness
-  Campus d'Illkirch
-  Estaminet à l'Agneau
-  La Table de l'Ill





Quick Round table





THANK YOU!

egd2017.oc@groupes.france-bioinformatique.fr



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