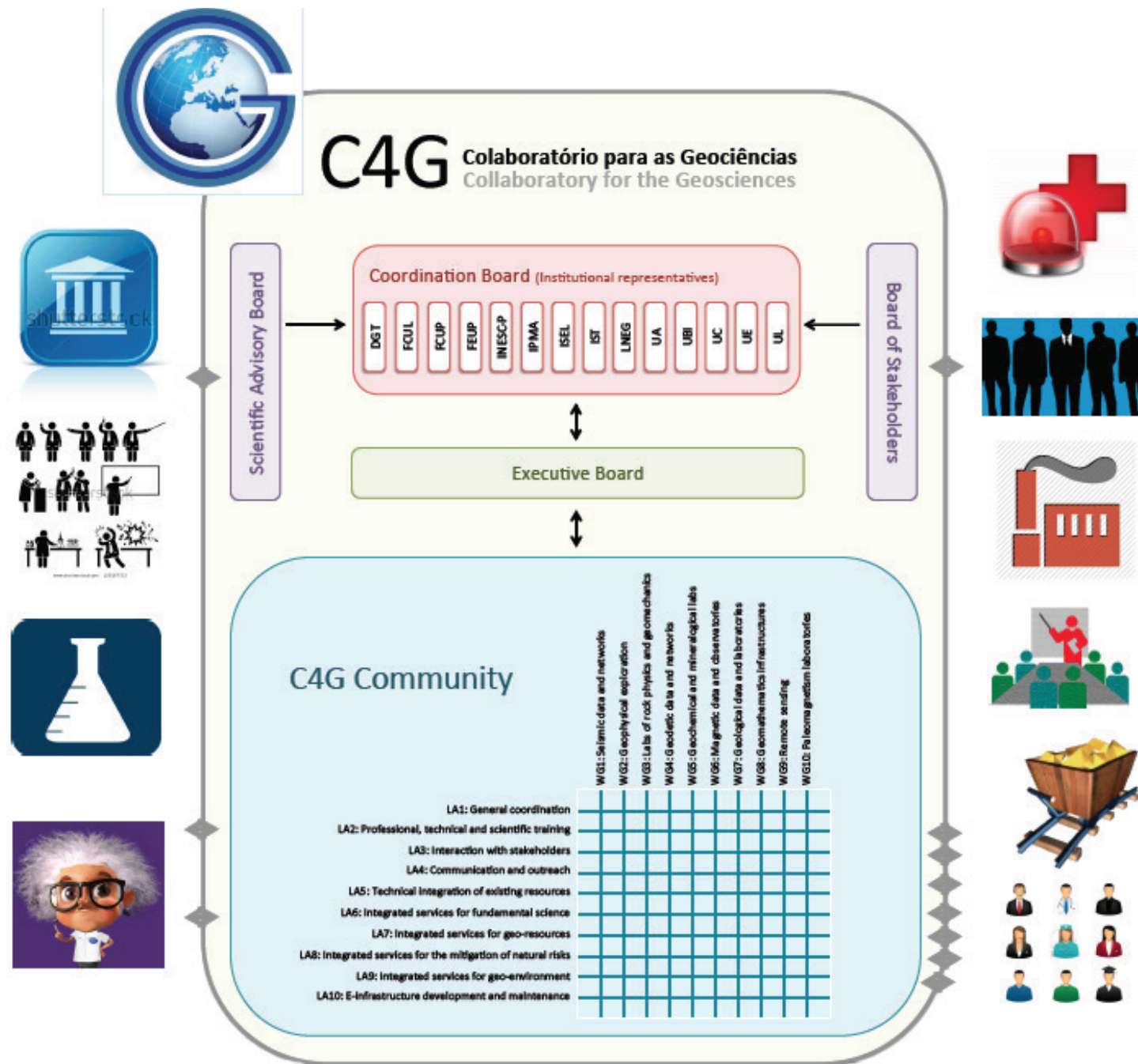


Collaboratory for Geosciences C4GNEWSletter

C4G community and governance

C4G includes all the relevant SES players in Portugal: LNEG is the national geological survey, with competences in natural resources, geologic hazards and geo-environment; IPMA is the national authority for earthquake monitoring, geomagnetism and marine geology; DGT maintains the national geodetic network. C4G includes also six universities and a private institution.



The integrating mission of C4G relies on a structure (depicted) with thematic working groups (WG) and transversal lines of action (LA). WG's aim at networking and integrating RI's inside the scientific disciplines of C4G. LA's promote a healthy interaction of C4G with society, addressing themes of scientific and societal relevance that crosscut all C4G disciplines.

graphic design: behance.net/mariana_fernandes



Collaboratory for Geosciences C4GNEWSletter

Editorial

Writing a Zero newsletter editorial is like informing your friends of the arrival of a new family member. Only in this case the gestation did not take nine months but several years of effort, and instead of just two partners it involved a whole community who realized that the whole is much greater than the sum of the parts. To take part in the conception and development of C4G has been particularly rewarding, as we observed how so many worked hard and in cooperation for a common goal: supporting and maintaining the Portuguese research on Solid Earth Science at the highest international levels. In this regard, the direct link between C4G and EPOS is both a challenge and a unique opportunity!



Rui Fernandes, Susana Custódio and João Fonseca, for the C4G Consortium

What is C4G?

The Collaboratory for Geosciences (C4G) is a distributed research infrastructure that promotes networking of researchers and sharing of equipment, data, collections and tools in Solid Earth Sciences (SES).

C4G comprises the disciplines of geology, hydrogeology, geochemistry, geodesy, geophysics, geomechanics and geomathematics, and will provide services in the transversal areas of georesources, natural hazards and the environment.

C4G is led by UBI, and includes all the relevant SES players in Portugal. It was recently included in the national roadmap.

In short:

C4G = EPOS/PT!

Upcoming events

October 22-24, 2014, INGV, Rome: EPOS-PP final meeting (preparation of the EPOS-IP proposal)

January 15, 2015, EC, Brussels: Deadline for submission of the H2020 EPOS-IP (Implementation Phase) proposal – call now open!

Potential contribution of C4G to EPOS-PP

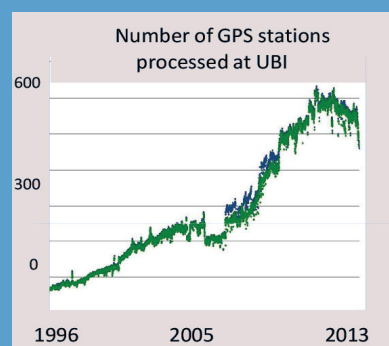
João Fonseca, EPOS-PP IAPC member (PT)

From its onset in January 2010, C4G was tailored around the expectations of the Portuguese SES community concerning the national contribution to EPOS. Through a participative process, three anchors were identified:

- 1) GNSS/Geodesy; 2) Facilities for geo-resources; 3) Seismology/subsurface data**

GNSS/Geodesy

The provision of GNSS/Geodesy services at European level was the cornerstone of the C4G application to the national RI Roadmap. UBI, through Rui Fernandes, led EPOS-PP WG4, and the preparation of the GNSS INFRAIA topic proposal.



Currently, UBI stores and processes data from more than 600 GNSS stations

C4G, through UBI, is a natural candidate to the leadership of the **GNSS/GeodesyWP /TCS**.

Multiscale laboratory facilities

Several C4G members host important laboratorial equipment, with emphasis on **Mineral and fluid inclusion μ -analysis lab**



Microprobe for fluid inclusion analysis (left) and drill core lab (right), LNEG (PT Geol. Survey)

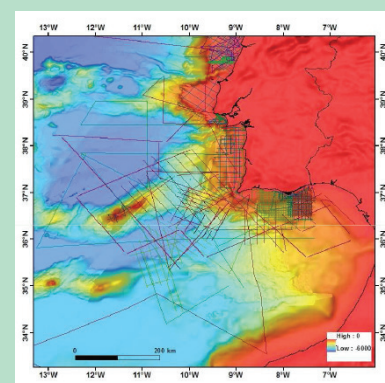
- **Rock sample & drill core lab**
- **Geomechanical lab**



Hgh-pressure triaxial cell, CERENA

Seismology/subsurface data

Portugal joined ORFEUS in 2004, and free real time distribution of waveform data has been on the increase since then. Besides operating the **Portuguese Seismographic Network**, IPMA, a member of C4G, hosts also SEISLAB, a facility for the acquisition, processing and analysis of seismic reflection data.



SEISLAB specialises on the investigation of the offshore of SW Iberia

C4G, through IST, has played an active role in seismic hazard assessment of Europe, and expects to contribute to the EFEHR pillar.

A word from UBI



Although relatively young, UBI from its inception has embraced a strong contribution towards satellite science and technology, mapping and remote sensing. Now we are together at the project C4G. As before, UBI provides all means, all resources and all assistance it can to a project in Solid Earth Sciences. We believe that by assisting C4G's application we are also fulfilling our institution's strategic plan: in brief, the growth and consolidation of UBI in the national and European stage is intertwined with the development of C4G's objectives. We are all together on this track, not because it is smooth but because we know it is technologically demanding, providing UBI the means to further assert itself. The evolution of UBI and C4G are tied together, thus we are so strongly involved and immensely supportive of this mission.

Prof. Paulo Moniz, Vice-Rector / Research, UBI

A word from FCT

There is convincing evidence of the need to build a pan-European observation system for geosciences. From an EU perspective, the challenges are recognised and strategies are already in place and being further developed to achieve this aim. This is also the case in Portugal, where 17 research laboratories and units got together to form C4G - Collaboratorium for Geosciences, receiving in 2013 both an excellent scientific and strategic evaluation, from a panel of top international scientists as well as from the regional and national governments where these laboratories and research units are located. In this way, we are convinced that C4G gathers the needed knowledge and material capacity to become a key international service provider in EU Geosciences.



Dr Ricardo Miguéis, EPOS BGR member, PT