Theatrical Workshop: Are you ready to perform in the RRI ecosystem?

NUCLEUS is a four-year project that aims to develop a New Understanding of Communication, Learning and Engagement in Universities and Scientific Institutions. With a consortium of 24 international partners, €4 million of funding from the European Union's Horizon 2020 programme and a focus on practical implementation, its goal is to overcome institutional barriers to responsible research and innovation (RRI) and to embed it in the governance and culture of academic institutions in Europe, China, South Africa and Georgia. The project will deliver, due by 2020, a DNA (roadmap, indicators, case studies) that will guide interested parties in following such a philosophy for a future of science with and for the society.

This workshop, answering to the impact of open science/novel ways of disseminating science, introduces the quote:

"Open science should be inclusive"

Having in mind the aforementioned, we approached open science under the spectrum of our proposed NUCLEUS practice for bringing together stakeholders in Research and Innovation. Our approach aims to the forming of a community of practice that will foster the alignment of Research and Innovation with values, needs and expectations of society and also generate/regulate new ideas. Interdisciplinary will constitute the strong point of that organism of stakeholders and give new perspectives to facing the future challenges.

To show the capabilities of that, we encorporated techniques from the theatrical field and motivated the audience of the workshop to participate in relevant activities. Following pair to pair the proposed implementation roadmap we started by auctioning the participation in the designated cells (teams) that have been identified by the NUCLEUS project and correlated to the target audience of the OSF conference. Having assigned 2 persons in each one of the cells **Economy** (Content creators, Innovators), **Media** (Publishers, Content providers), **Public Engagement** (Publishers, Libraries), **Public Policy** (Funders & Policy makers), **Civil Society** (Communities) and 5 for **Governance** (Research infrastructures, Researchers, Institutions) introductions took place and the 15 participants told us in brief their name, expertise and 1 fact about their cell (team). Even in this early stage, signs of creativity were traced as participants came up with roles to fit in their cells in cases where their real-life expertise was different.

Following with the "play time", some exercises were used to get the participants feel more comfortable and relax on stage:

1) The **Friends and Enemies** was used to provide a slight glimpse on the complexity of the relationships during a possible cooperation: participants were asked to think of a cell that might prove an ally and one they may conflict with in their collaboration and they started moving trying to be always in between the bipolar.
2) The **Mirroring** was used to enable the participants engage their body and facial expressions in their interactions: in pairs of two one took the role of an actor and the other his reflections and vice versa.

Continuing, participants were assigned in their teams together with one participant from the Governance to answer how they perceive Open Science, what is one Possibility (**Something promising?**), one Worry (**A worrying fact?**), one Condition (**What must be considered?**), one Obstacle (**What can be an obstacle?**) and how can we face it. The answers given are summarized here:

HOW DO YOU DEFINE OPEN SCIENCE?

- A transparent process towards open results
- Free access to Research and improvement of products without spending too much money on Research & Development

*ONE POSSIBILITY? (**Something promising?**)*

- Accelerate science and provide more opportunities to collaborate
- Collaboration, engagement→ take part in research. Avoid rediscovering the wheel→ data we need is available already. Efficiency. Participation
- Return of Investment – Europe society/citizen science
- R&D is easily accessible/funded cost effective and have better investment return
- Don't care so long as I get my promotion. Science communication: I see a lot of possibilities since I will have access to the most important data. Media: I just want human-interest stories

*A WORRY? (**A worrying fact?**)*

- Quality and data, metadata and outputs to make useful. Open at any cost?
- Time consuming activity
- Afraid of scooping my data/research lack of acceptance
- My competitors have the same access. Not all academic ecosystems support open science and as a result access to research is limited
- Researcher: Lot of my time invested in additional task. Science Communication: It might be difficult to simplify the data I have access to. Media: too much technical stuff – no interest in that, need access to researchers

*ONE CONDITION? (**What must be considered?**)*

- Secure infrastructures
- Building bridges, learning to trust each other
- Infrastructure support. Human support
- The social impact and reactions of civil society
- Infrastructures easy to use

*AN OBSTACLE? (**What can be an obstacle?**)*

- Some data, etc cannot be opened. Attitudes
- Cultural barriers
- Evolution system / Open Science practices recognition legal framework, regulations
- Evaluation not aligned with open science agenda

- Lack of trust/ loss of money. Licenses (regulation) patents. Scientists are not aware of how to use open science efficiently. Lack of public policy. Criticism from Civil Society/

How can we overcome the obstacles?

- Discussion and collaborations. Recognize necessary exceptions
- Education
- Cooperation. Social corporate responsibility

After the presentation of the above points and a short discussion on them, 5 participants were chosen to highlight the issues that might come up during their collaboration. This led to a fiery debate that unraveled many issues that have to be cooperatively discussed upon for reaching to a collaborative environment where the organism of stakeholders will function.

During that time, the rest of the participants divided in two teams and prepared two short plays according to the guidelines:

1) State a problem regarding Open Science (write a story with characters facing it)
2) What can be a solution? (describe how this problem was solved)
3) What was the effect? (describe the new situation)

In the end, two performances were staged:

Researchers looking for H2020 funds

The Redriding hood, the wolf and the Metadata hunter.

Next Steps – Recommendations

The discussion between Open Science and Responsible Research and Innovation is a matter that will (in our opinion) rise in the future: do they differ or is it the same substance in different bottles?

Our recommendation, and since we are part of the H2020 NUCLEUS, is that we collaborate with OpenScienceFair for identifying the Opens Science elements in the implementation actions that Institutions will undertake in the next 2years of our project. That will give a good insight in processes and spark a discussion regarding OS & RRI.