# THE NUCLEUS PROJECT

Bringing RRI to Life



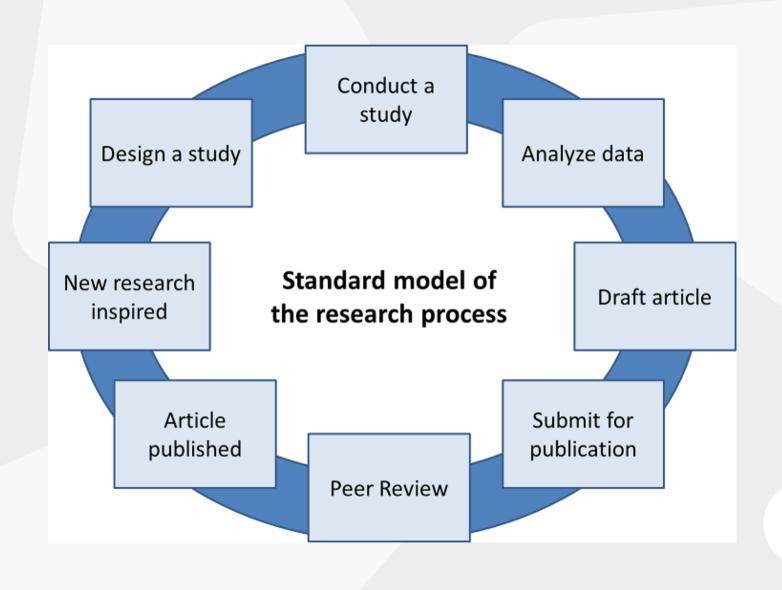


# Excellence today is about more than ground-breaking discoveries – it includes openness, responsibility and the co-production of knowledge.

EC, Rome Declaration on RRI, December 2014



# **OPENNESS? CO-RESPONSIBILITY?**





# **NEW DEFINITION OF EXCELLENCE?**





# **RRI: DEFINITION**

RRI implies that societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) work together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of society.



# MORE STAKEHOLDERS = BETTER SCIENCE?





# "THE" SOCIETY









# **POLICY MAKERS**









# THIRD SECTOR ORGANISATIONS





# **ECONOMY**









# MEDIA: STAKEHOLDER OR OBSERVER?







# THE ISSUE IS SERIOUS!

WHAT KIND OF RESEARCH
DO WE WANT IN THE FUTURE?



# **DEMAND-DRIVEN RESEARCH?**

Should research follow social, economical or political demands?

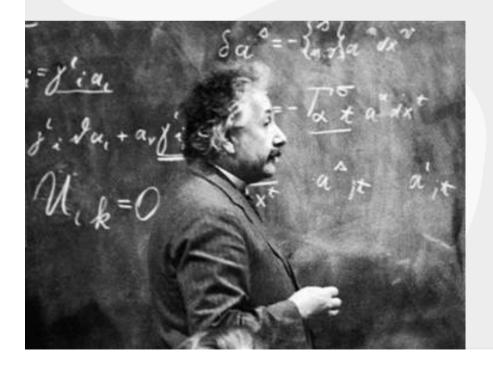






# **KNOWLEDGE-DRIVEN RESEARCH?**

Should research only follow interest? Should the generation of knowledge come first – and the practical adaptations follow?







### **RRI: Cross Cutting Topic with Increasing Relevance**

**HORIZON 2020 Research Framework** 

# 1. Excellent Science

European Research Council

Future and Emerging Technologies

Marie Curie Actions

Research Infrastructures

### 2. Industrial Leadership

### Leadership in Enabling & Industrial Technologies

- information and communication technologies
- nanotechnologies
- advanced materials
- biotechnology
- advanced manufacturing and processing
- space

Access to Risk Finance

Innovation in SME

# 3. Societal Challenges

### 7 Challenges

- Health, Demographic Change and Wellbeing
- Food security, sustainable agriculture, marine and maritime research and the bio- economy
- Secure, Clean and Efficient Energy
- Smart, Green and Integrated Transport
- Climate Action, Resource
   Efficiency and Raw Materials
- Europe in a changing world: Inclusive, Innovative and Reflective Societies
- Secure Societies Protecting Freedom and Security of Europe and its Citizens

Joint Research Centre (JRC)

Widening Participation

Science with & for Society

European Institute of Innovation and Technology (EIT)

Joint Programming P2P

Joint Technology Initiatives (JTIs)



New Understanding of,
Communication, Learning and
Engagement in Universities and
Scientific institutions



**NUCLEUS** 



THE NUCLEUS 2015 **PROJECT IN NUMBERS** SEPTEMBER UNTIL AUGUST **MILLION EURO FUNDED BY HORIZON 2020** CONSORTIUM FROM **COUNTRIES IN EUROPE** MEMBERS **SOUTH AFRICA** AND CHINA STRONG NETWORK OF INTERDISCIPLINARY PARTNERS: ..... MUNICIPALITIES UNIVERSITIES RESEARCH NATIONAL SCIENCE **EUROPEAN** SCIENCE INSTITUTES AND TECHNOLOGY PUBLIC COMMUNICATION ASSOCIATIONS ENGAGEMENT/SCIENCE **NGOs JOURNALIST ASSOCIATIONS** 



### The NUCLEUS Consortium

- Beijing Association for Science and Technology (BAST), China
- Bielefeld University, Germany
- China Research Institute for Science
  Popularization (CRISP), China
- City of Bochum/UniverCity Network Bochum, Germany
- Delft University of Technology, the Netherlands
- Dublin City University, Republic of Ireland
- European Science Events Association (EUSEA), Sweden
- European Union of Science Journalists' Association (EUSJA), France
- # Ilia State University Tbilisi, Georgia
- Mathematical Institute of the Serbian Academy of Sciences and Arts, Serbia

- Nottingham City Council, UK, England
- Nottingham Trent University, UK, England
- Psiquadro, Italy
- Rhine-Waal University of Applied Sciences (Coordinator), Germany
- Ruhr University Bochum, Germany
- Science City Hannover, Germany
- Science View, Greece
- South African Agency for Science and Technology Advancement, South Africa
- Université de Lyon, France
- University of Aberdeen, UK, Scotland
- University of Edinburgh, UK, Scotland
- University of Malta, Malta
- University of Twente, the Netherlands
- Wissenschaft im Dialog, Germany



**Project Lead**: Prof. Alexander Gerber [a.gerber@nucleus-project.eu]

**Content Manager**: Dr. Peter Broks [p.broks@nucleus-project.eu]

**Project Coordinator**: Dr. Annette Klinkert [a.klinkert@nucleus-project.eu]

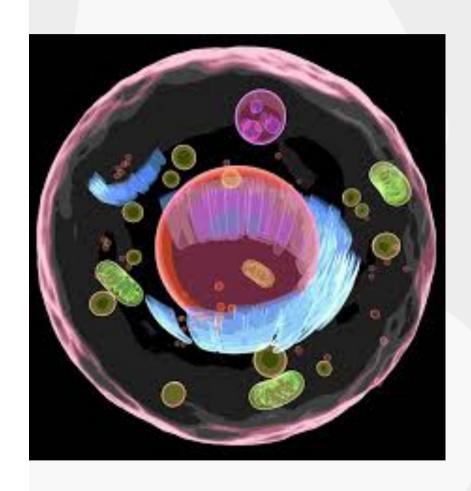
**Financial Project Officer**: Linda van Dijk [l.vandijk@nucleus-project.eu]

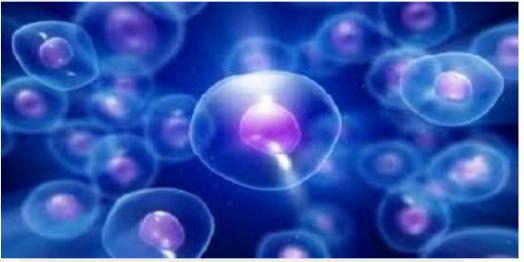
**Dissemination Officer**: Robin Yee [r.yee@nucleus-project.eu]





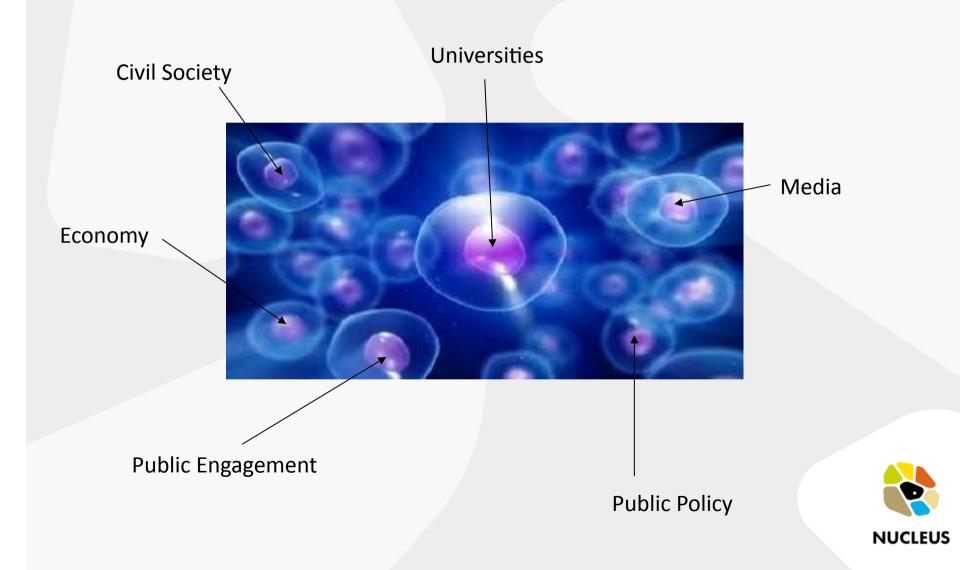
# THE NUCLEUS APPROACH







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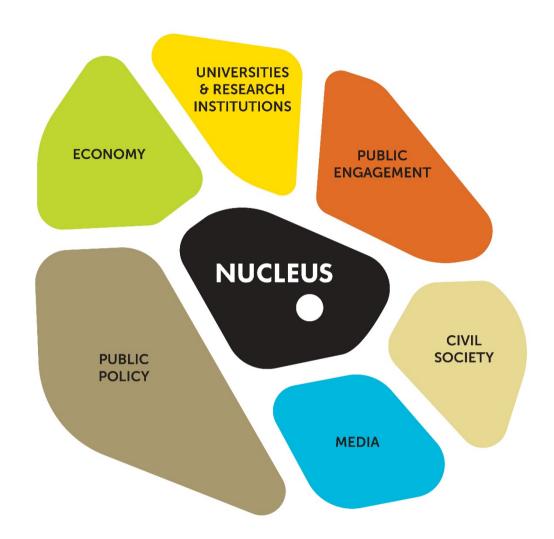
EACH ACADEMIC INSTITUTION IS LIKE A "CELL" - A DISTINCT INDIVIDUAL ORGANISM

.....

THE NUCLEUS IS RESPONSIBLE FOR THE CELL'S DEVELOPMENT AND GROWTH

.....

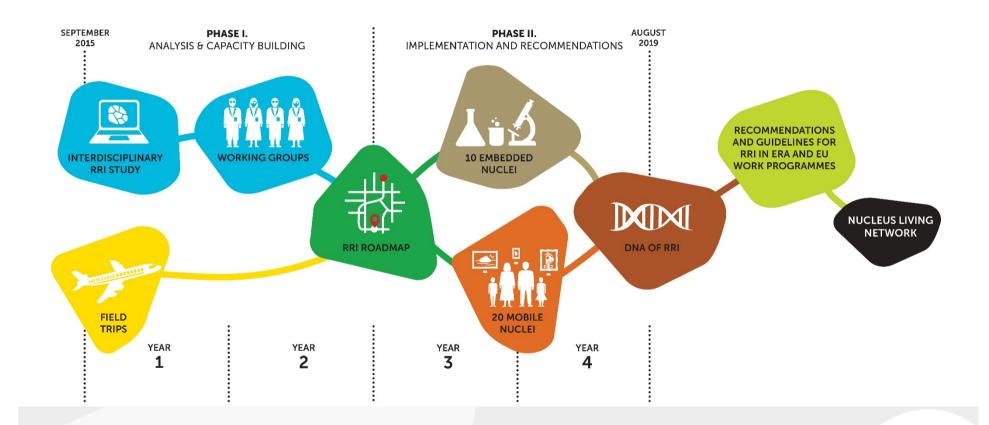
A CELL CAN PERFORM LARGER AND MORE COMPLEX TASKS IN A CLUSTER WITH OTHER CELLS.





# THE NUCLEUS PROJECT

# **TIMELINE**





# NUCLEUS FIELD TRIPS RRI IN PRACTICE

Budapest - Media



South Africa – Civil Society







Nottingham - Policy

**Dublin - Economy** 

Beijing – Public Engagement







# **NUCLEUS STUDY ON RRI BARRIERS**

Qualitative Interviews with more than 100 academic leaders in Europe

Cross-cultural analysis in Europe, South Africa and China



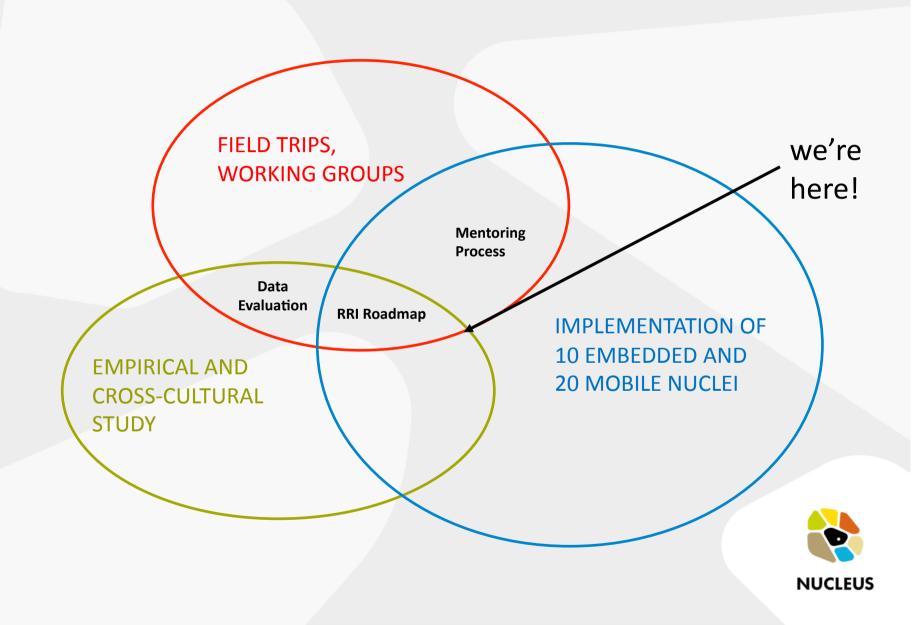


# **QUESTIONS**

• What are barriers and successes to the implementation of RRI?

• What can be recommended for the future implementation of RRI in Universities?





# 30 NUCLEI: RRI "PETRI DISHES"





### 10 Embedded NUCLEI

2 Years, test beds for RRI

### 20 Mobile NUCLEI

Modular approaches like workshops, trainings, exhibitions, science cafes



**N**ETWORKS OF STAKEHOLDERS

UNDERSTANDING OF MULTIPLE PUBLICS

CO-CREATION

**LEARNING FOR CHANGE** 

ENGAGEMENT WITH THE PUBLIC

**NSTITUTIONAL STRUCTURES** 



## **OUR GOAL AFTER 4 YEARS**

Practical recommendations for leaders of research institutions on how to implement RRI...

...developed with an understanding of academic culture and perspectives...

...tested in real academic environments!



# **RESULT: A "DNA" FOR RRI**









# You can follow the project online at:



nucleus-project.eu

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facebook.com/NucleusRRI



twitter.com/NucleusRRI



