

# Citizen participation in science: scientists and third sector opinions

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# Studies Centre on Science, Communication and Society (SCS-UPF)

SCS-UPF is a studies centre of the Department of Experimental and Health Sciences of **Universitat Pompeu Fabra (UPF)**. It aims at bringing closer together society and science by fostering the scientific knowledge and culture, working for a better alignment between R+D+I and society's needs and values.

## Main actions:

- **Science communication and citizen participation**  
science communication activities, outreach and public engagement, science dissemination, institutional communication, crisis communication and science museology, among others
- **Analysis**  
study of science and society relationships, social perception of science, evaluation, impact assessment, indicator selection, etc.
- **Training**  
specialized formative programs in the field of science communication



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# Spanish scientists' opinions and attitudes

towards citizens' understanding of science and their role in  
public engagement activities



Knowing what researchers think about society's perception of science and technology and its own role in science communication is useful if we want to design effective strategies to promote public engagement and citizen science in the research process

Llorente C, Revuelta G, Carrió M, Porta M (2019) Scientists' opinions and attitudes towards citizens' understanding of science and their role in public engagement activities. PLoS ONE 14(11): e0224262.  
<https://doi.org/10.1371/journal.pone.0224262>

We address this issue by focusing on:

- **1022 responses** to an online survey
- Scientists working in Spain during 2014-2015

RQ1. What are the opinions and attitudes of Spanish scientists towards the public?

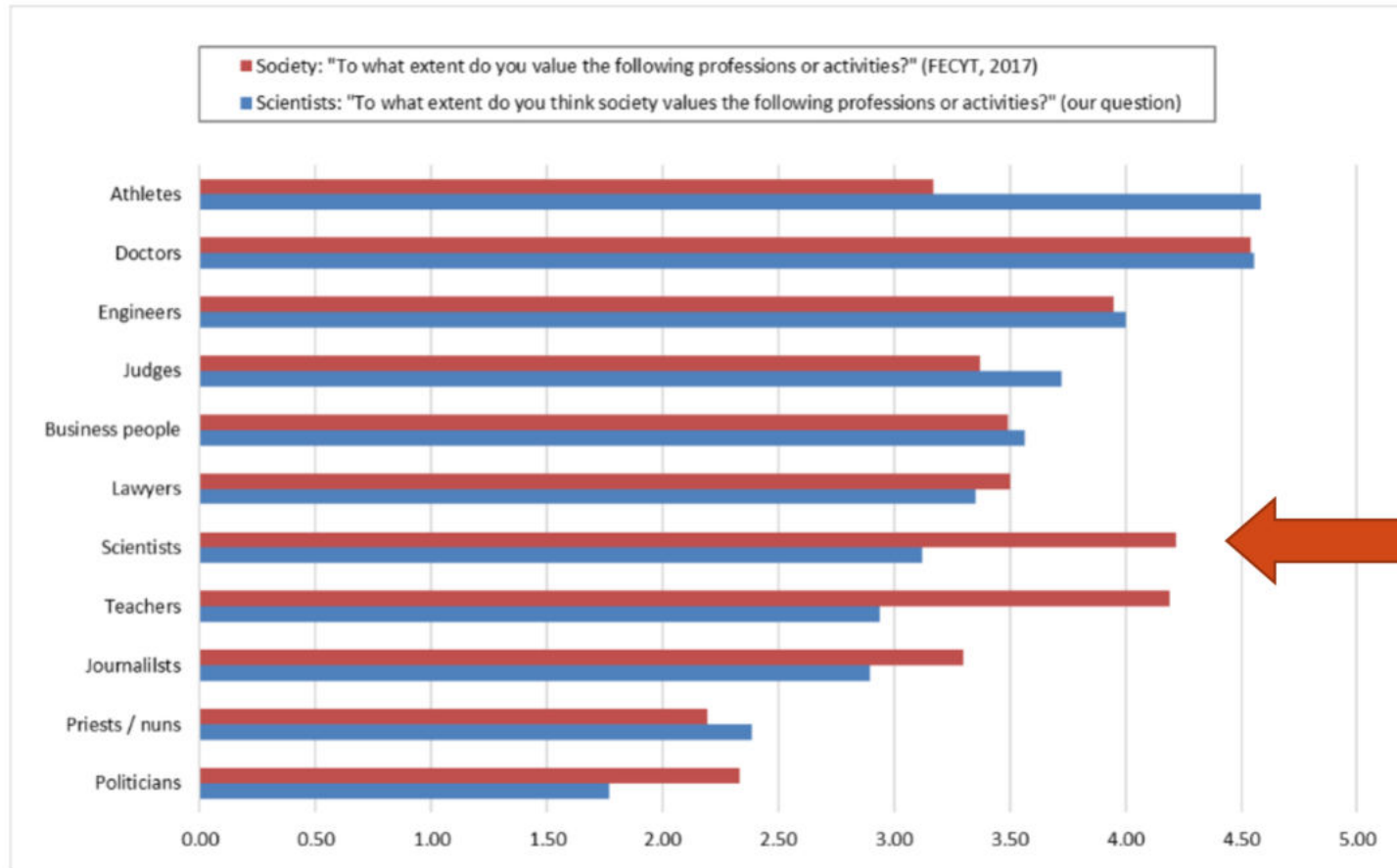
RQ2. What are the opinions and attitudes of Spanish scientists towards public engagement with science?

RQ3. Are Spanish scientists' views in line with data available in Spain on the public's understanding of science?

We compare these responses with data from national surveys on the public understanding of science



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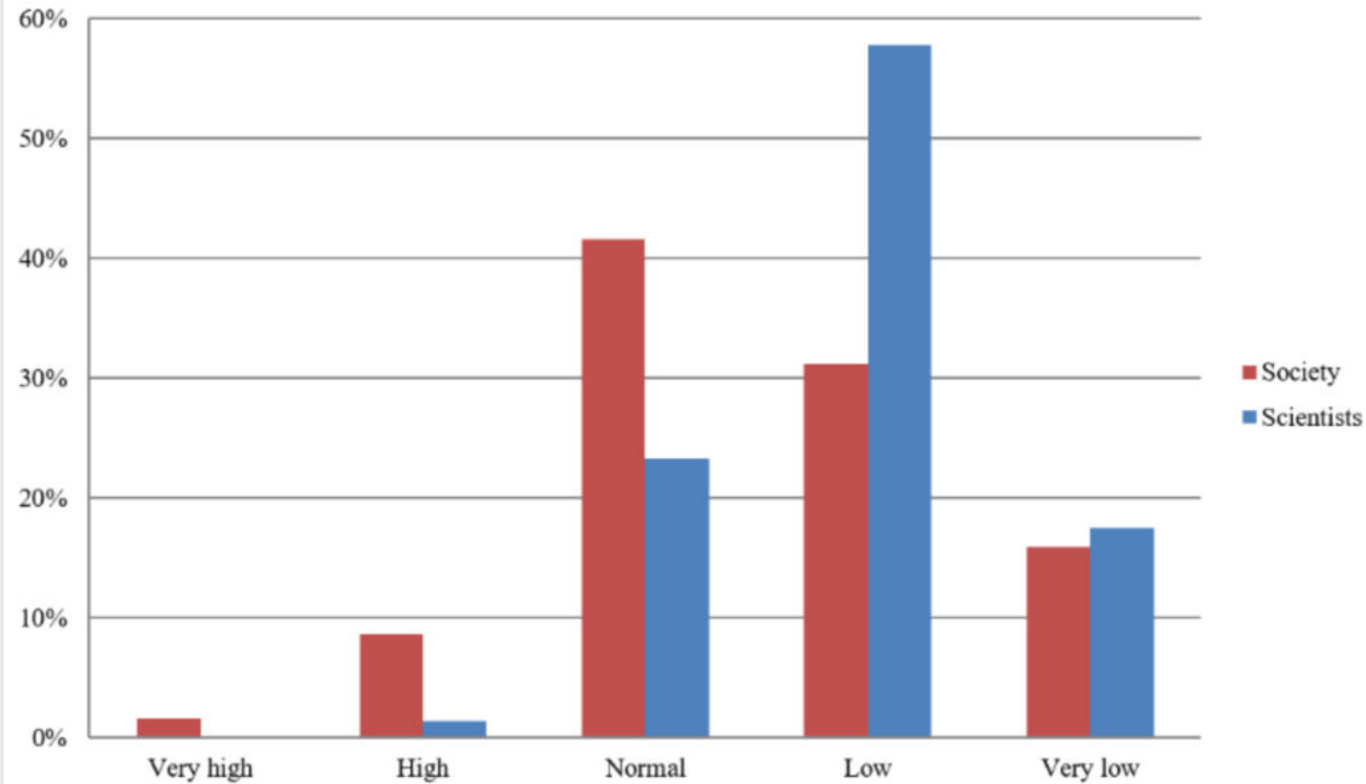


Source: Survey on Public Perception of Science and Technology 2016 (FECYT, 2017) and our study

Scientists' believe that research is an unknown profession and that society does not have a true sense of the activity researchers do

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**What would you say is the level of scientific culture in Spain compared to other countries in the European Union?**

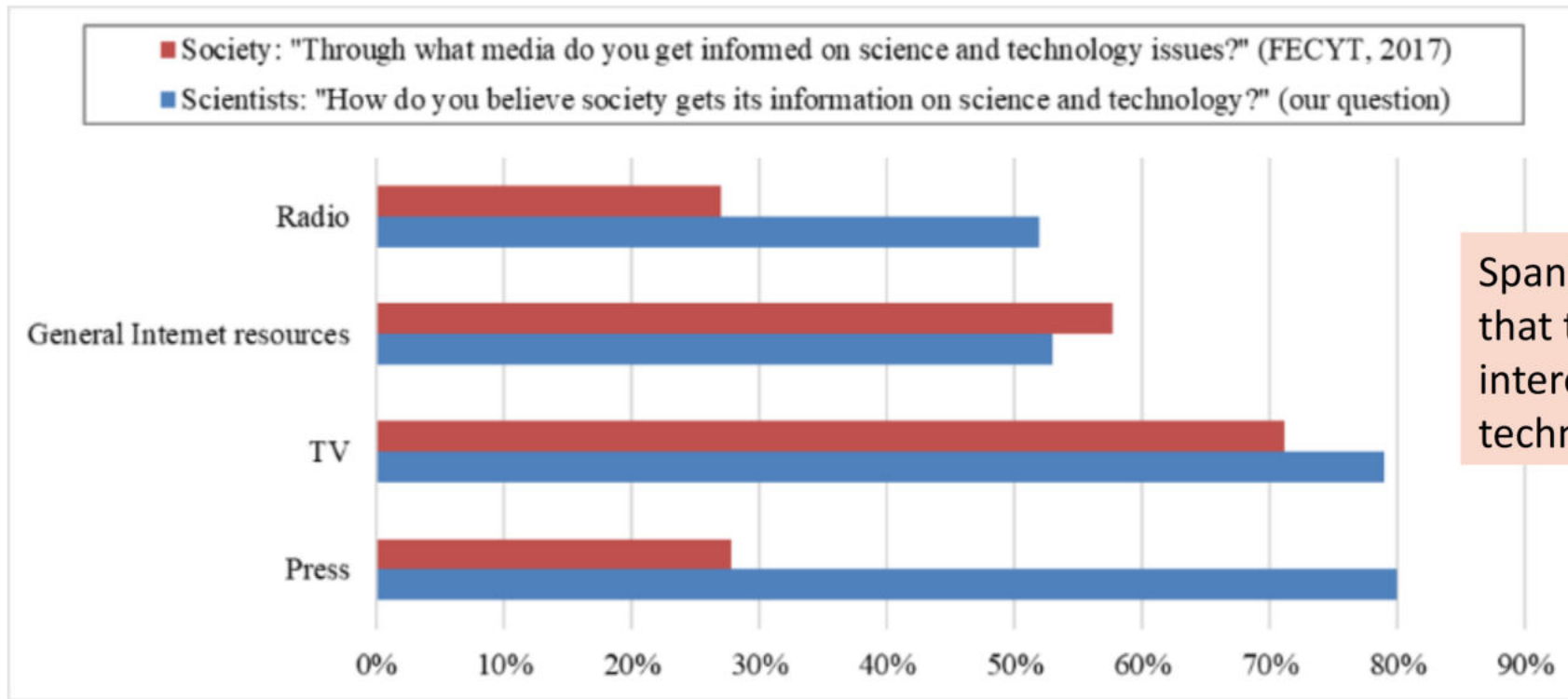


Source: Survey on Public Perception of Science and Technology 2016 (FECYT, 2017) and our study

Spanish researchers have a more negative perception

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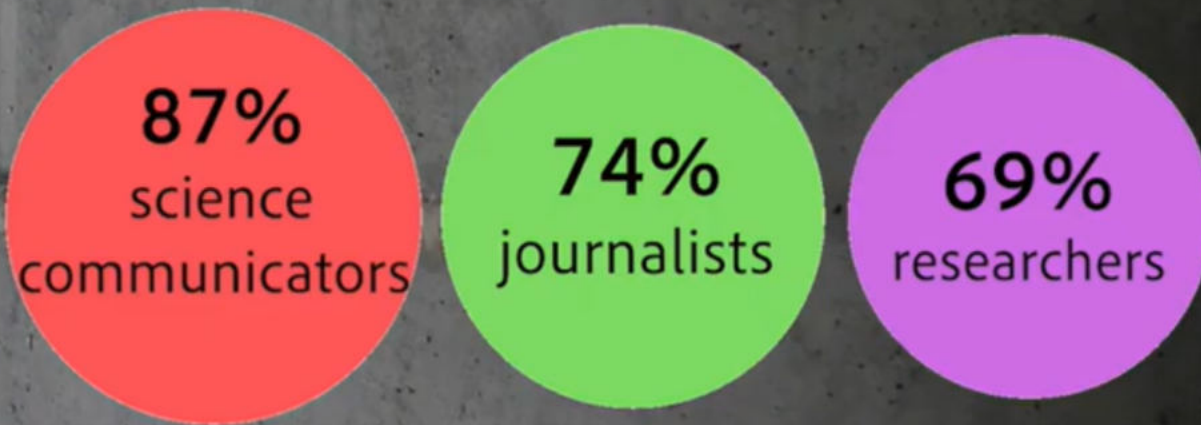
Spanish researchers consider that there is a high social interest in science and technology

Source: Survey on Public Perception of Science and Technology 2016 (FECYT, 2017) and our study

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Surveyed scientists believe that communicating science and technology is a **shared responsibility** between:



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Scientists' perception about citizens' understanding scientific and technological issues decreases as the age of researchers increases

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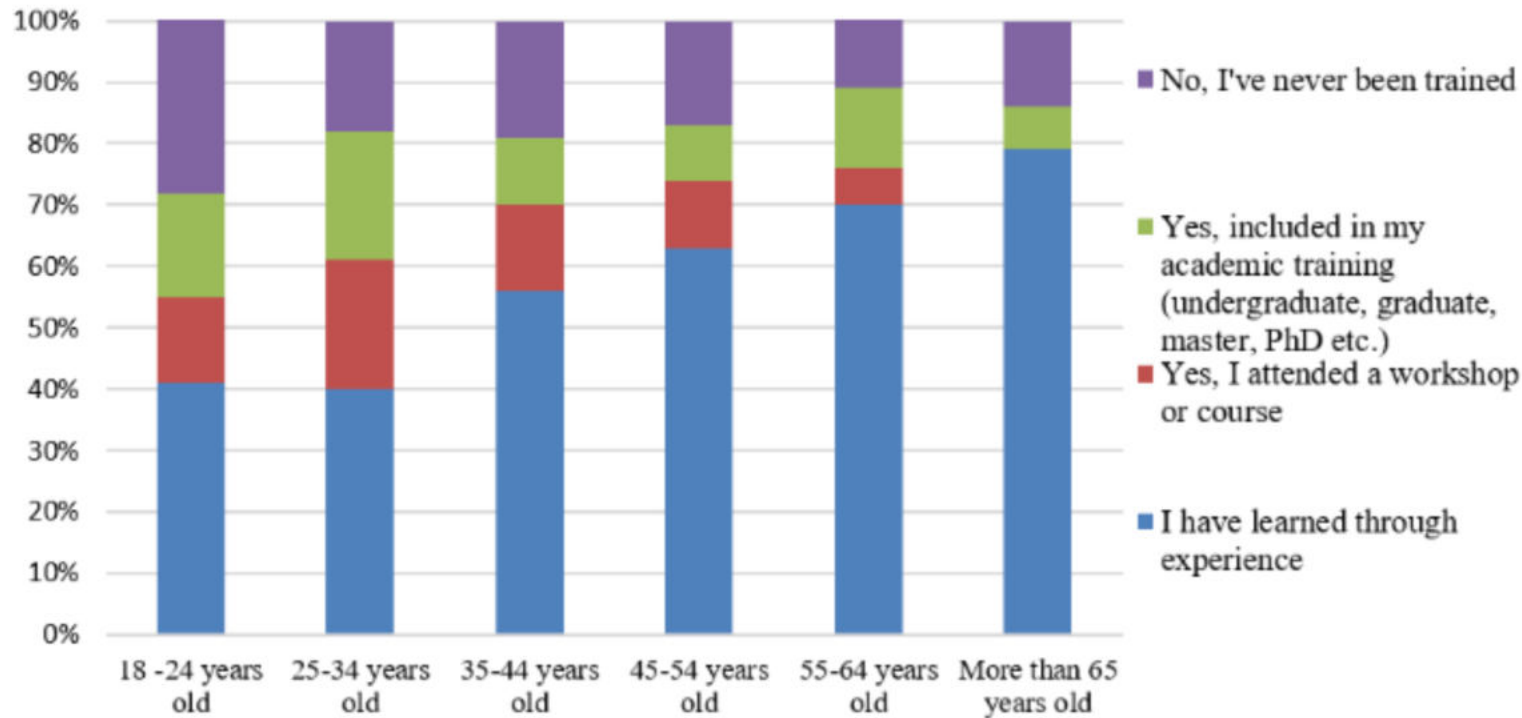
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### Have you received training in science communication?



There is a tendency to receive specific training in scientific communication between young researchers

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The challenge for the future is to narrow this gap in order to help scientists gain a better understanding of the public and their interests and to make public engagement activities more effective.

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# Social participation in science:

the perception of third sector organizations



If the inclusion of Civil Society Organizations during the research process is going to be promoted, it is necessary to know the potential stakeholders of our surroundings and their willingness to participate, or not, in this type of initiatives.

Llorente C, Revuelta G, Carrió M (2017) La participación social en la ciencia: la perspectiva de las organizaciones del tercer sector Descripción de la publicación. VI Congreso de Comunicación Social de la Ciencia. UCO Press. Editorial Universidad de Córdoba.



We address this issue by focusing on:

- 31 semi-structured interviews with CSOs managers and representatives based in Spain



RQ 1. What is the current state of CSOs participation throughout the R&D&I process?  
RQ 2. Are there any barriers or limitations to enhance such participation?  
RQ 3. What kind of relationship do CSOs want to have with the science and technology system (if they want to have any)?

### CSOs included

- First level entities (19)
- Second level entities (7)
- Third level entities (3)
- Singular entities (2)



They represent the majority of Third Sector volunteers in Spain  
(Ramírez, A. et al. 2015)

- Diversity of CSOs: animalists, environmentalists, patients, parents, consumers, LGBTI+ ...

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Category	Findings	Frequency
Own research activity	Research carried out directly by the CSO	9/31
Advisory	The representative, the CSO or some of its members have been consulted or are part of groups of people who advise in some way researchers or research projects related to the area of interest of the organization	7/31
Research funding	The CSO funds research related to its area of interest by seeking funds, awarding prizes or subcontracting other institutions to conduct research.	7/31
Subject of study	The representative, the members of the CSO or of the CSO itself participate as subjects of research studies (interviews, clinical trials etc.).	11/31
Field work / data collection	The CSO or its members participate in the process of field work or data collection of an investigation carried out by an external institution	9/31
Training	The representative, the CSO or its members participate in training activities at the university or in the research environment (conferences, master classes, mentoring, courses etc.)	7/31
Unspecific collaborations	It refers to different types of collaborations with universities, companies or other entities linked to R&D&I (agreements, internships, etc.).	13/31
Useful for CSOs	It is considered that the investigation, generally in a field related to the activity of the CSO, is useful for their interests.	4/31
Does not participate in research	The representative of the CSO considers that the organization does not participate in any way in the research system	10/31

*Qualitative results of the "Current participation in R&D&I" dimension of study, analyzed through categorization system*

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## Current participation in R & D & I

- Many of the CSO representatives consider that their organizations **do not participate in research**. However, during the interview they have referred to some kind of collaboration with the R&D&I system.
- CSOs especially contribute as **subjects of study, funders, providing data or in field work**.
- But several organizations carry out their **own research**, usually social research on the activity of the organization itself.
- The participation of CSOs in **training activities** (conferences, master classes, mentoring, courses ...) at the university or research level is quite frequent.

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Category	Findings	Frequency
Ignorance / lack of communication	It refers to the ignorance of the activity of the CSO by the research entities or the lack of knowledge of the CSO about the possibility of participating in R&D&I issues and / or the lack of communication between the two actors.	10/31
Lack of resources	It refers to the limited resources of the CSO (financial, personnel, time...) as a major constraint for not participating in R&D&I.	11/31
Lack of capabilities	It refers to the lack of knowledge (of the representative or members of the CSO) to conduct research.	2/31

*Qualitative results of the "Limitations to participate in R&D&I" dimension of study, analyzed through categorization system*

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## Limitations to participate in R&D&I

- The main limitations that prevent CSOs from participating in the R&D&I system is the lack of knowledge or **lack of communication** between the Third Sector and the research entities and the **lack of resources** (financial, personnel, time ...)

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Category	Findings	Frequency
Advisory	It refers to the need for CSOs to be consulted on research topics related to their area of interest. Either forming part of a formalized advisory committee or through more informal consultations.	4/31
Request for more research	There is a need for more research carried out by agents external to the CSO either at a generic level or in the specific field in which their CSO works.	5/31
Identification of needs	It refers to different needs that should be solved to strengthen the links between CSOs and the R&D&I system: lack of communication, formalized relationships, different objectives between the research and the CSO...	11/31
Active participation in R&D&I	It refers to the willingness of the CSO to participate in the R&D&I process by getting involved in the research, whether by carrying out field work, collecting data or as a "guinea pig" or subject of study.	3/31
Willingness to develop their own research	It refers to the willingness to carry out research activity within the CSO itself, including becoming a research centre	1/31

*Qualitative results of the "Ideal relationship between the CSO and the R&D&I system" dimension of study, analyzed through categorization system*

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## Ideal relationship with R & D & I system

- CSOs representatives **do not want research's main tasks to be done inside their organization.**
- Instead, they prefer to **associate** with universities or research centres in some way:
  - Through **agreements** to develop **doctoral or master's theses** in the framework of their activity, or as part of **advisory boards**...
- **Different needs** should be solved to strengthen the links between CSOs and the R&D&I system:
  - Improve communication, establish formalized relationships, unify objectives between researchers and the CSOs, establish greater continuity of research projects...

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