

FRANCE – CZECH REPUBLIC 23th ANNIVERSARY OF THE BARRANDE PROGRAMME

Scientific impact of the program (2005-2017)

MESRI-DAEI / MEAE

2019

<http://www.enseignementsup-recherche.gouv.fr>

GENERAL PRESENTATION OF THE PROGRAMME

Creation: 1996

The purpose of this programme is to develop excellence scientific and technological exchanges between the French and Czech laboratories, by promoting new scientific collaborations and integrating in the projects young researchers and PhD students.

Total budget (France + Czech Republic) : around 180,000€ / year

>> including budget from the French part : 90,000 € / year

>> including budget from the Czech Republic part : 90,000 € / year

Average budget per project (France + Czech Republic) : 6,900 € / year

Number of new projects per year : around 17

From 2005 to 2017:

693 applications submitted

222 projects funded

DATA SOURCES

Campus France

- Information about the PHC Barrande applications
- List of mobilities (from France to Czech Republic and from Czech Republic to France)

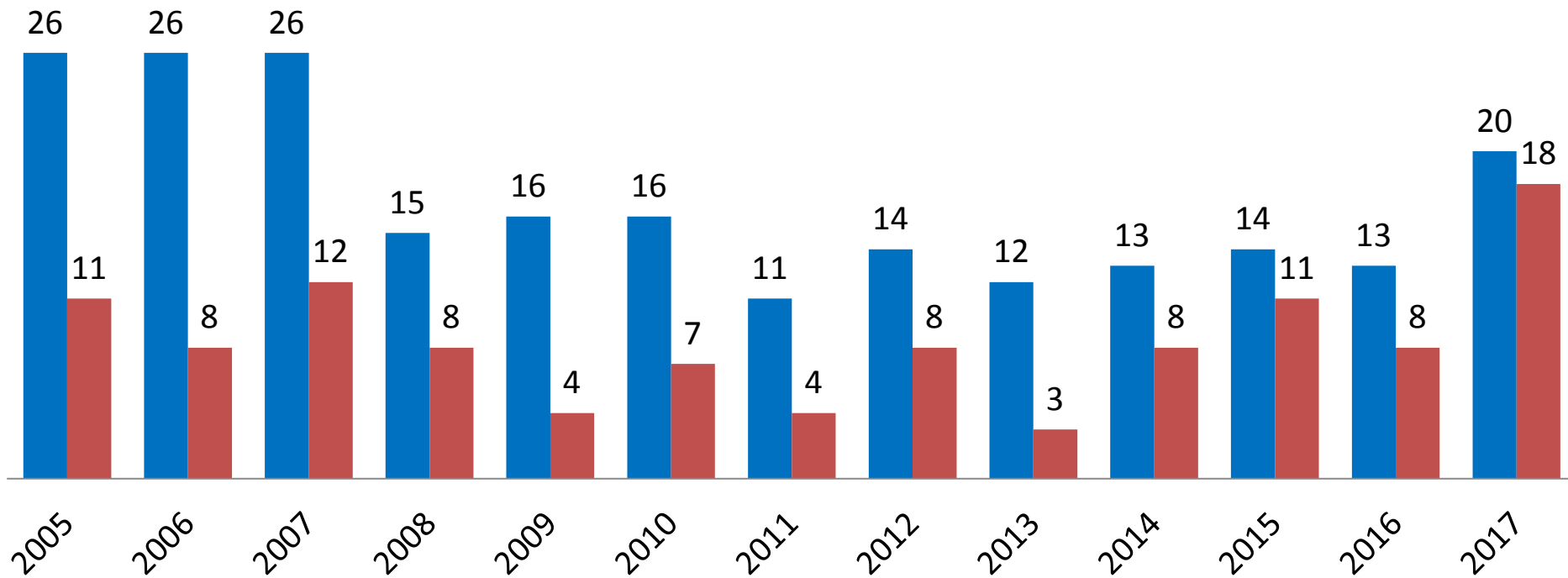
Survey

- Target: French principal Investigators of selected projects between 2005 and 2017
- Survey duration: 6 weeks between January and March 2019
- **50%** answer-ratio (*110 respondents for 222 funded projects*)

ANSWERS TO THE SURVEY

Average answer-rate to the survey : **50 % (110 answers)**

■ Number of funded projects ■ Number of survey answers

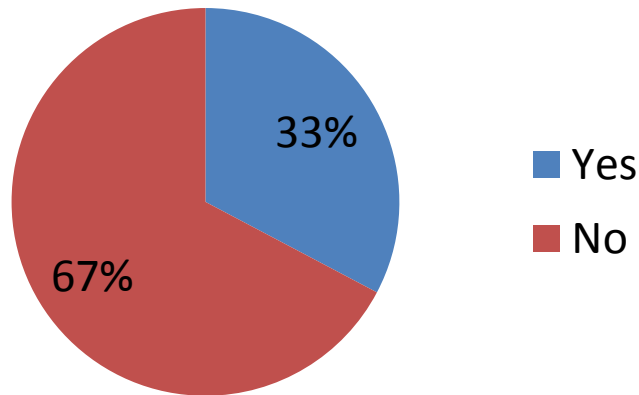


2005-2017

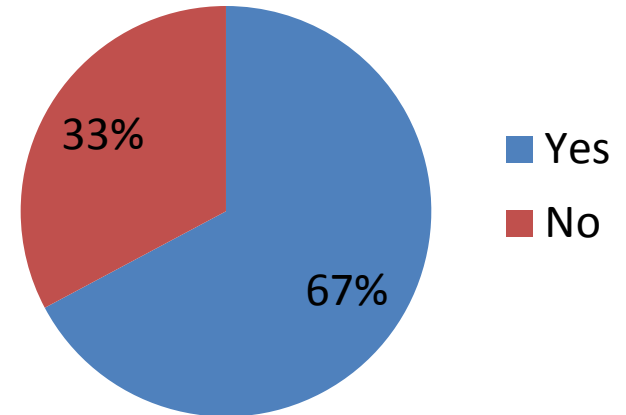
Key Points

BEFORE THE BARRANDE PROJECT (1/2)

Did you already cooperate with Czech Republic in the past ?



If yes, was it with the same partner?

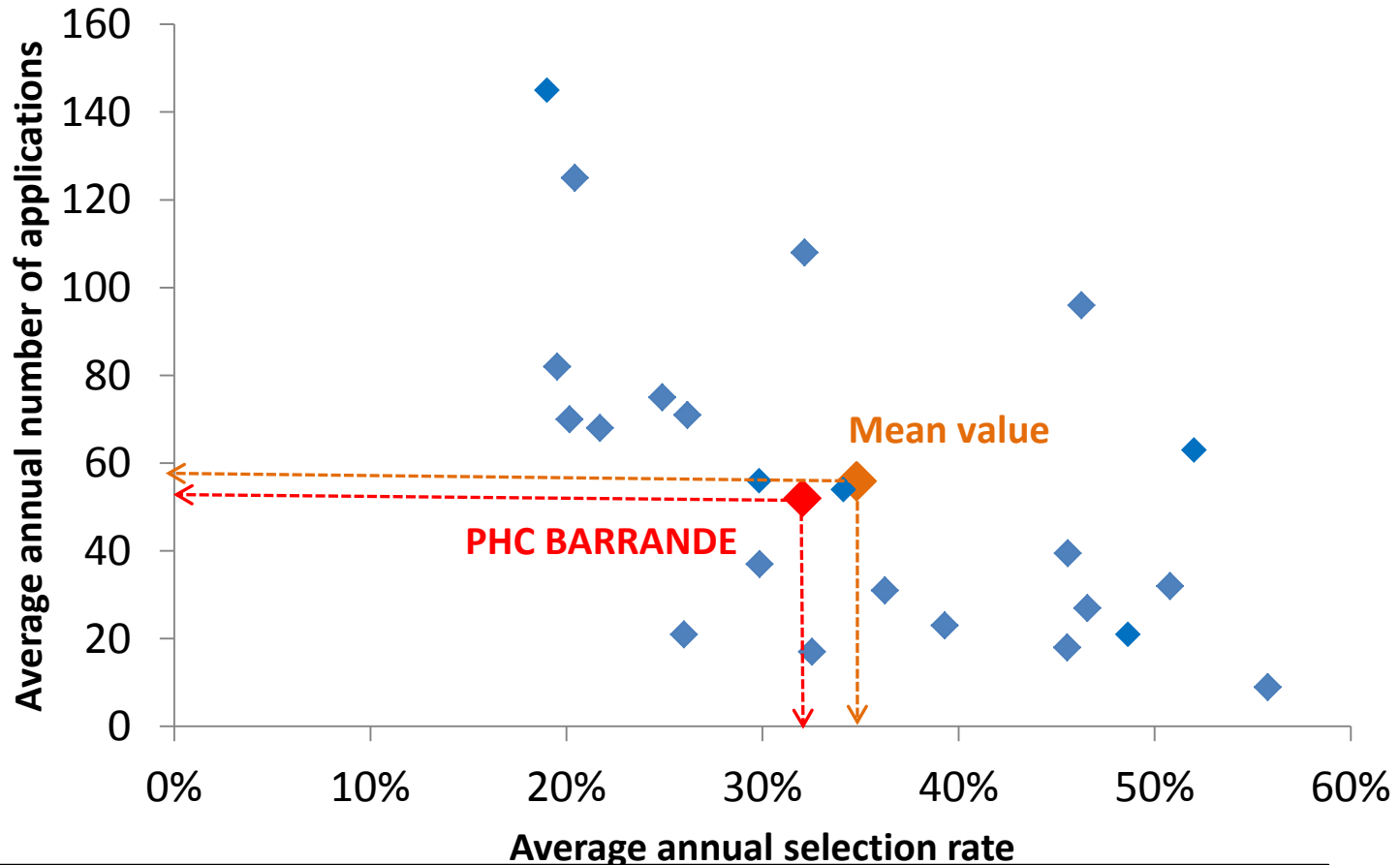


BEFORE THE BARRANDE PROJECT (2/2)

With which scientific collaboration program?

PHC Barrande	25
Other	8
FP5 and FP6	3
CNRS Joint research projects (PRC)	2
CNRS Associated International Laboratory (LIA)	2
COST	2
CNRS International Project of Scientific Cooperation (PICS)	1
French National Research Agency (ANR)	1

NUMBER OF APPLICATIONS VS SELECTION RATE (COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)

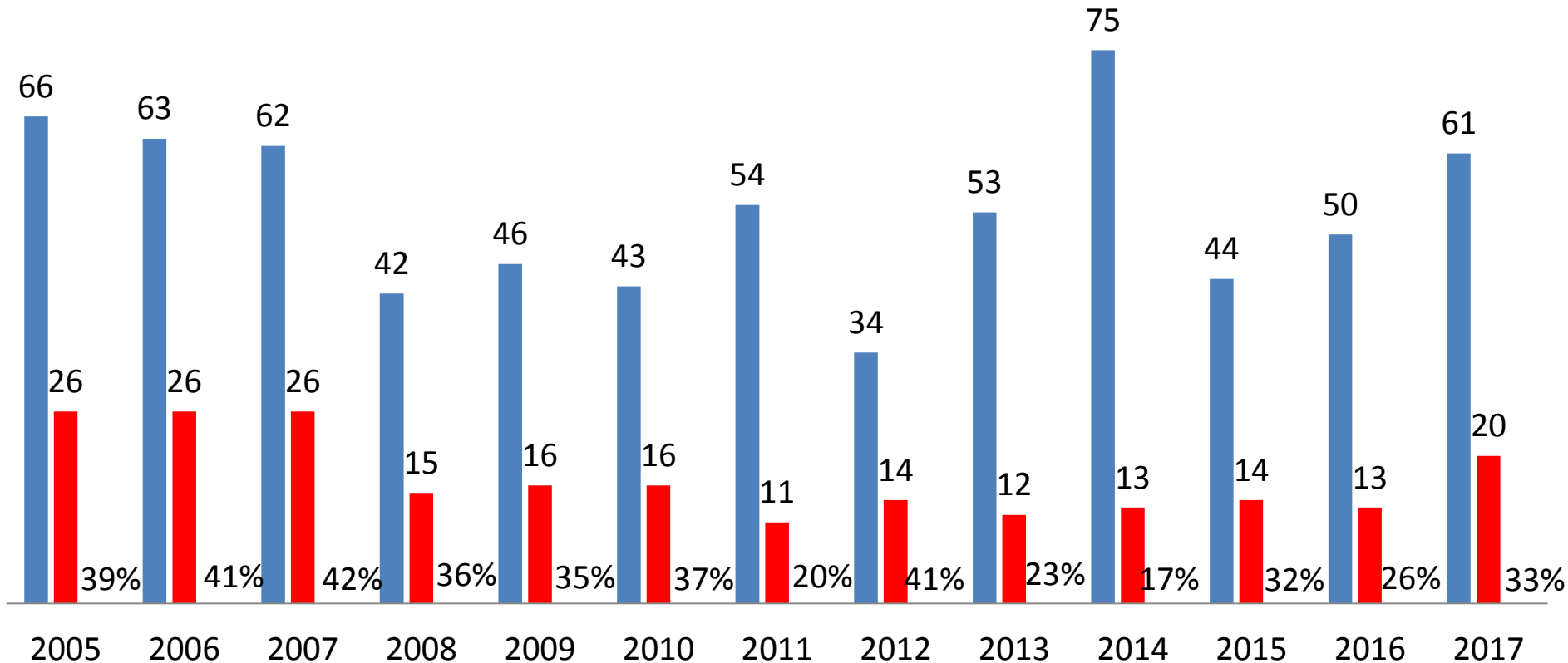


Average selection rate for 2005-2017: 32% vs 35% mean
Average number of applications 2005-2017: 52 vs 56 mean

NUMBER OF APPLICATIONS AND SELECTION RATE

Average selection rate 2005-2017: **32 %**

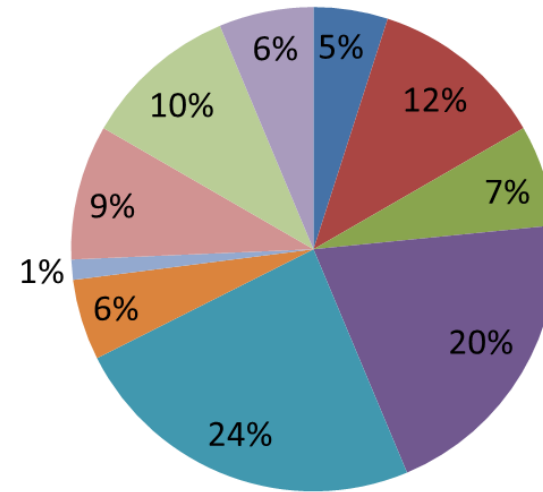
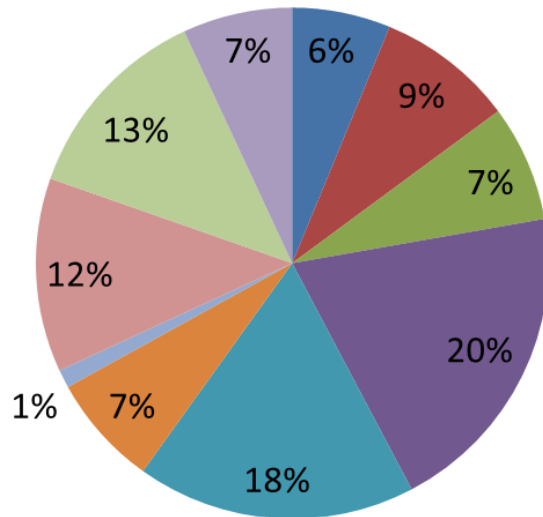
■ Number of applications ■ Number of funded projects Selection rate



SCIENTIFIC FIELDS OF PROJECTS

Number of applications : **693**

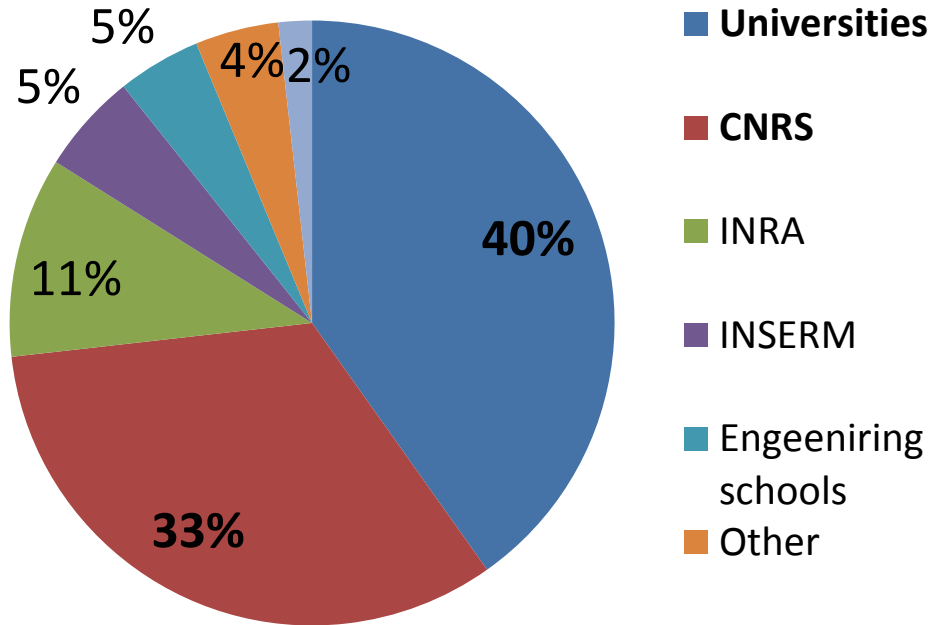
Number of funded projects : **222**



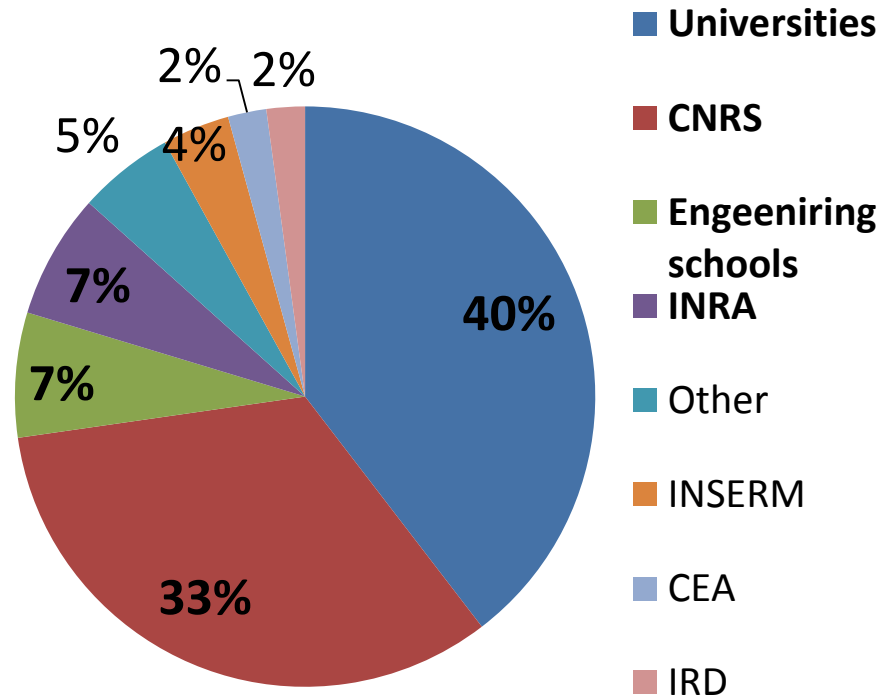
- Mathematics
- Physics
- Marine/Earth/Planet Sciences
- Chemistry
- Biology and Health
- Humanities
- Social Sciences
- Engineering Sciences
- Information Technology
- Agronomy/Ecology

FRENCH PARTICIPATING INSTITUTIONS

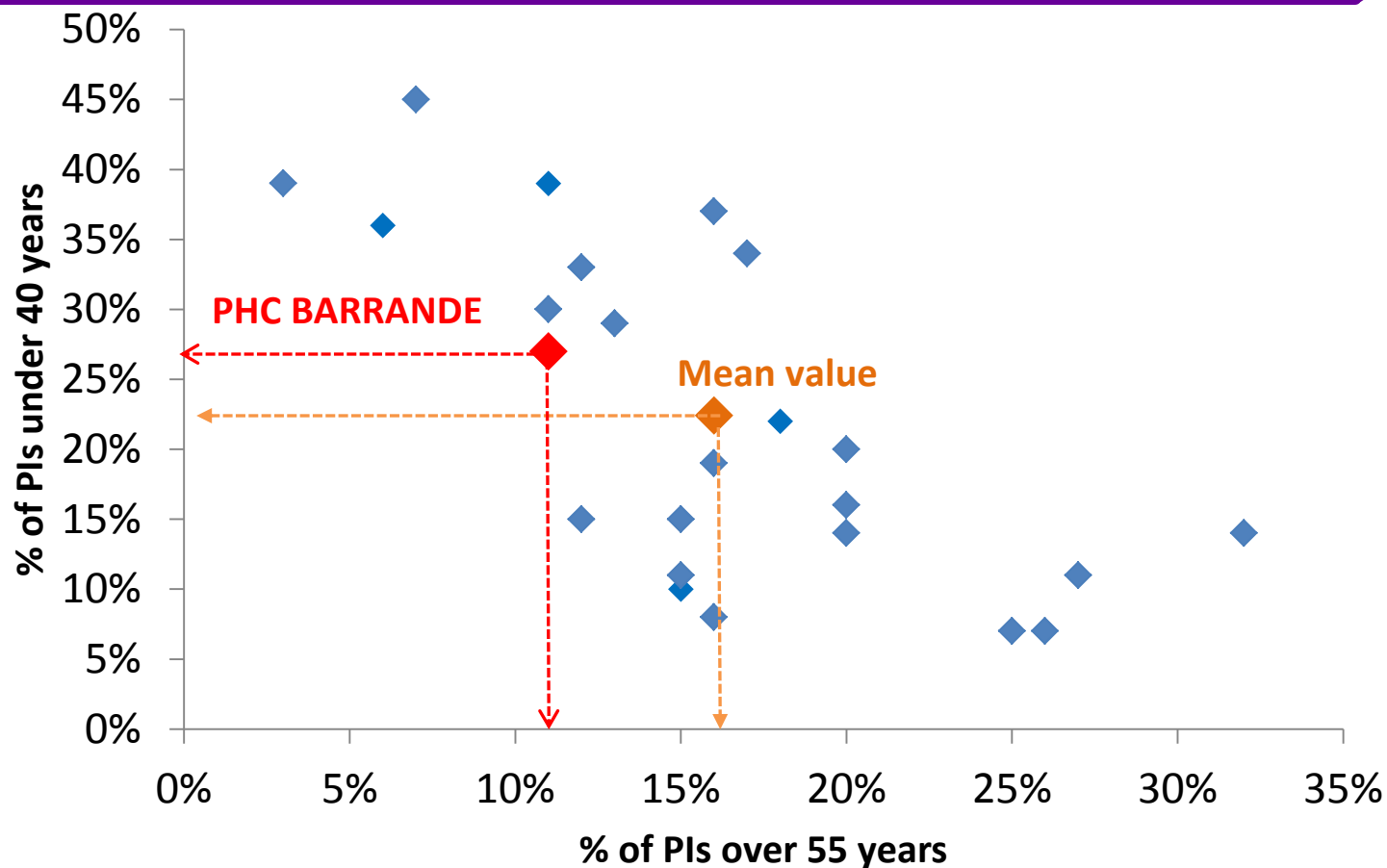
Principal Investigator's employers



Laboratories supervised by



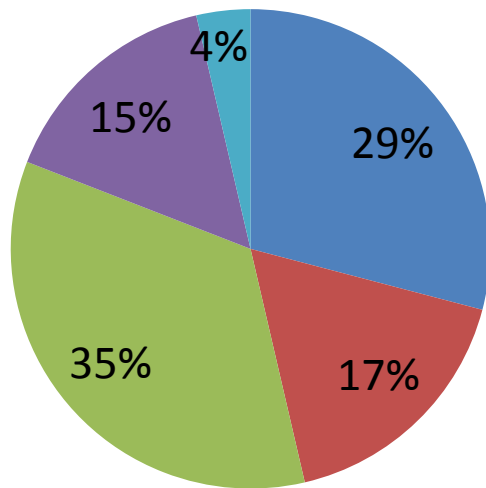
AGE OF PRINCIPAL INVESTIGATORS (PI) (COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)



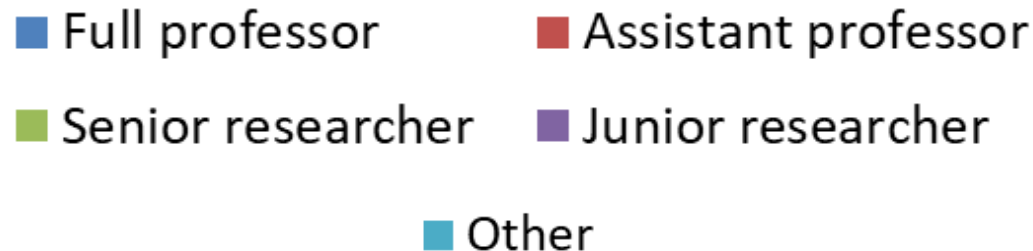
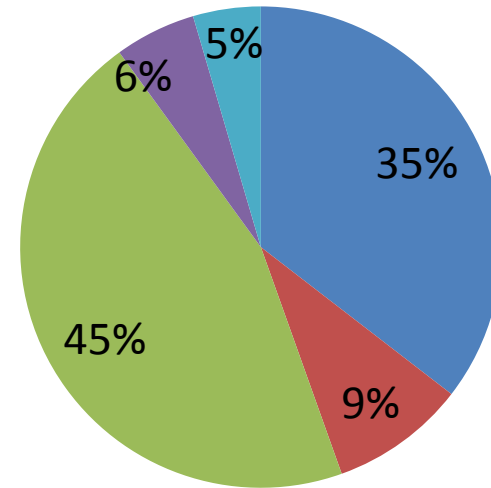
PIs under 40 years: 27% vs 22% mean
PIs over 55 years: 11% vs 16% mean
72% of the PIs are between 40 and 55 years

FRENCH PIS (PRINCIPAL INVESTIGATORS): STATUS

**Previous professional status
(at the beginning of the project)**

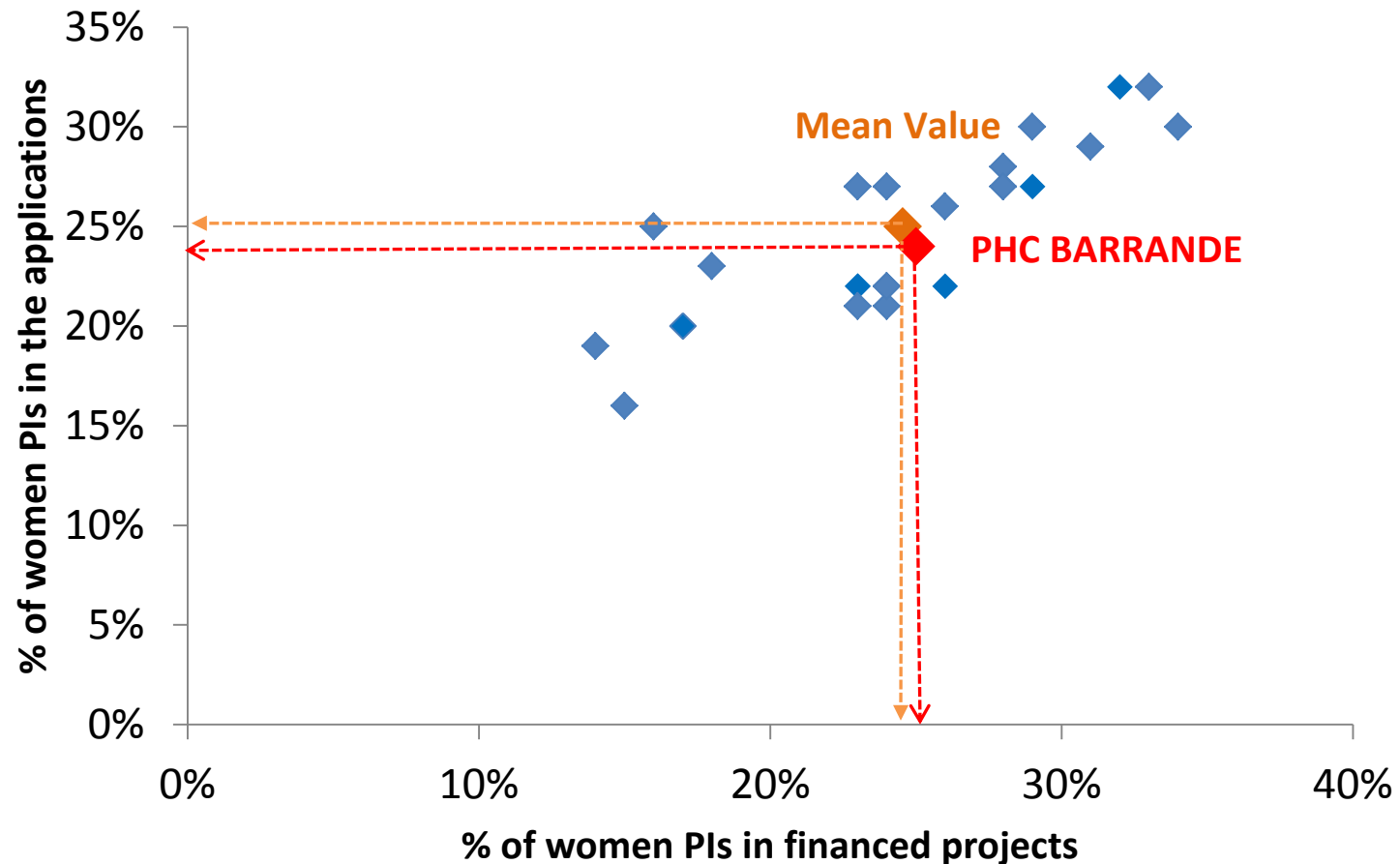


Current professional status



IMPLICATION OF WOMEN (FRANCE)

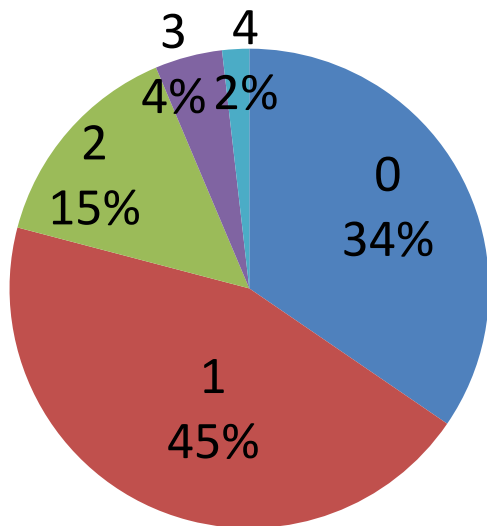
(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)



% of women PIs in the applications: 24% vs 25% mean
% of women PIs in the selected projects: 25% vs 25% mean

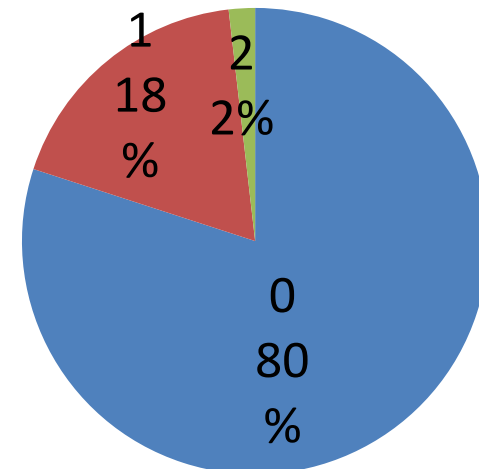
PARTICIPATION OF FRENCH YOUNG RESEARCHERS

Number of PhD students



66% of projects involve at least one PhD student

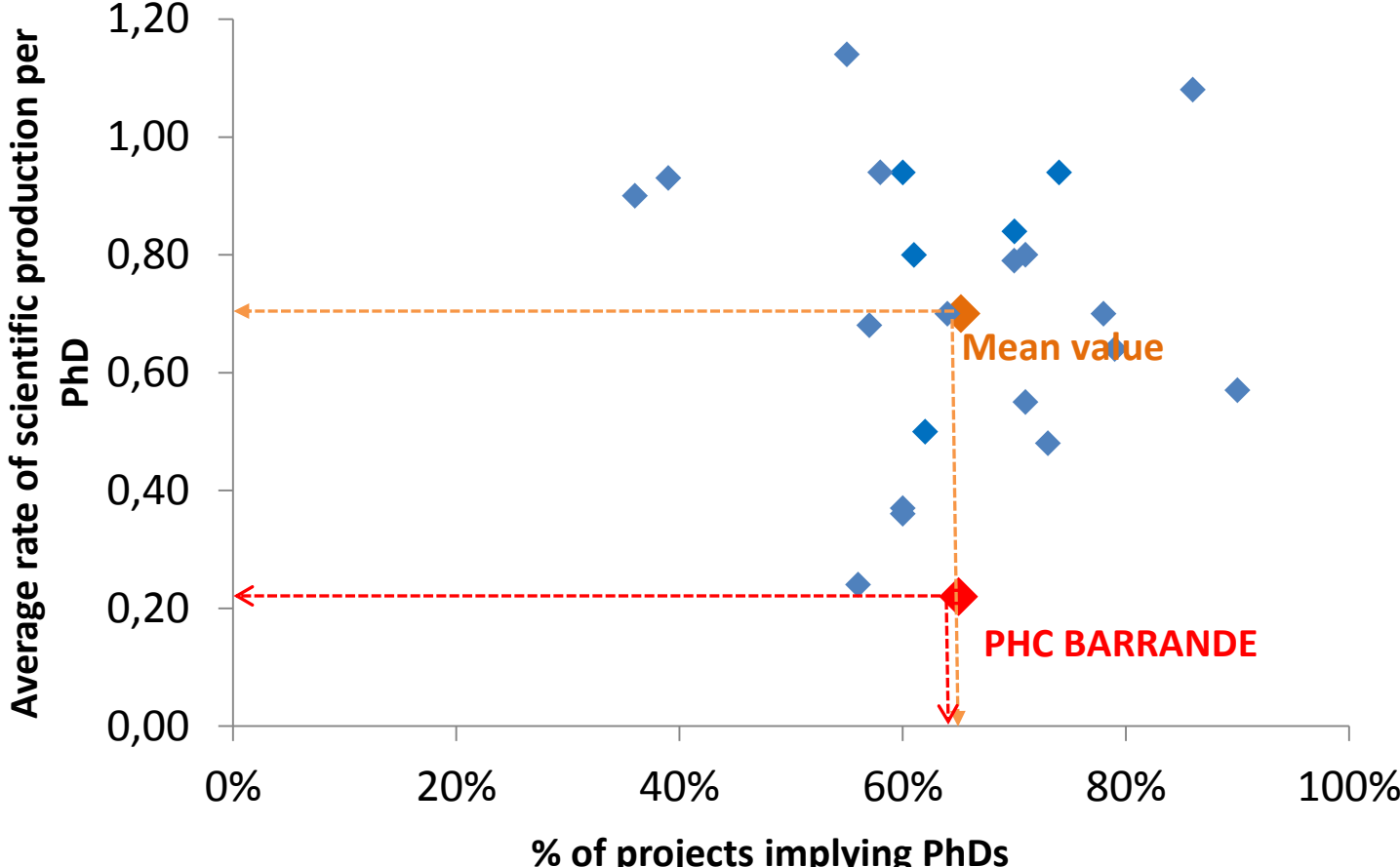
Number of post-doctoral researchers



20% of projects involve at least one post-doctoral researcher

IMPLICATION OF PhDs

(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)

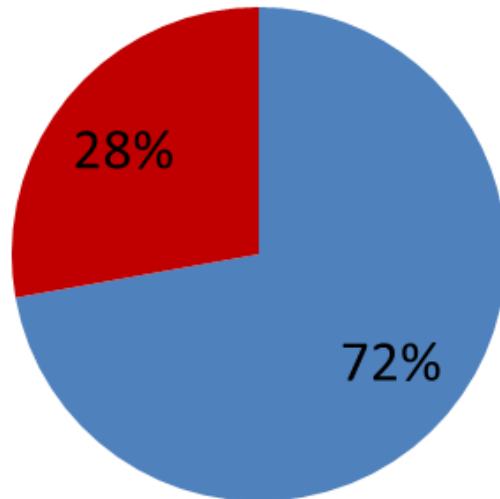


% of projects implying PhDs : 65% vs 65% mean
Average rate of scientific production per PhD : 0.22 vs 0.7 mean

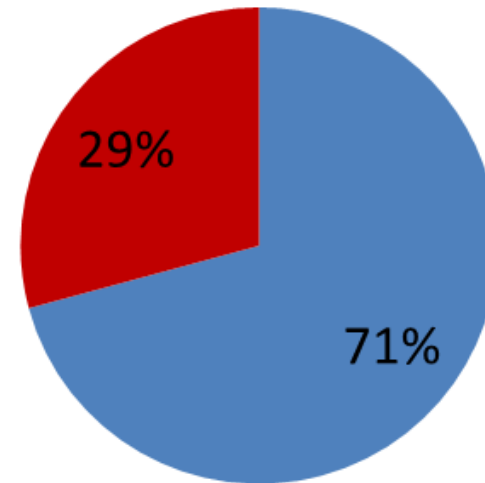
MOBILITY

MOBILITY: GENDER DISTRIBUTION

France → Czech Republic



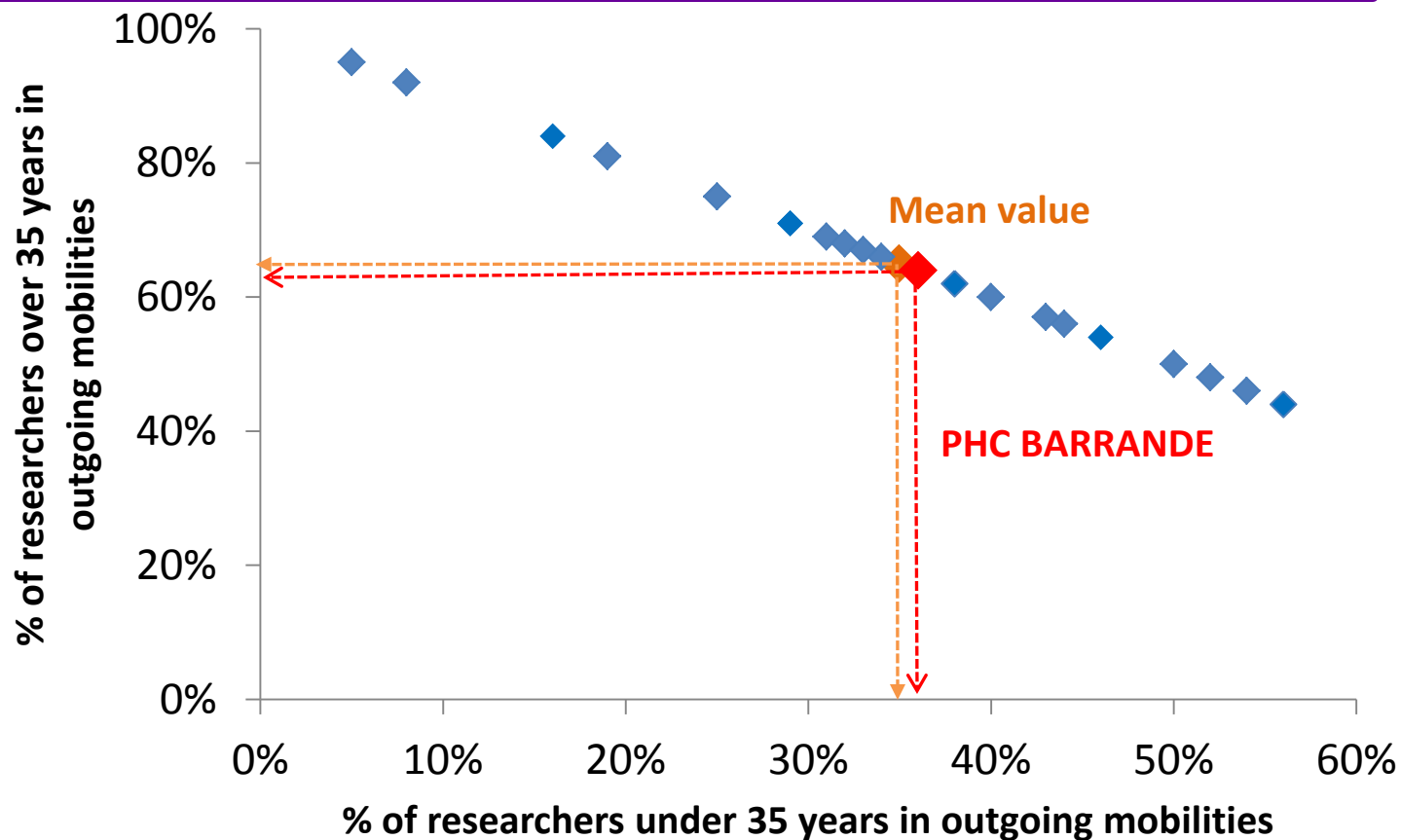
Czech Republic → France



■ Men ■ Women

MOBILITY FRANCE – CZECH REPUBLIC

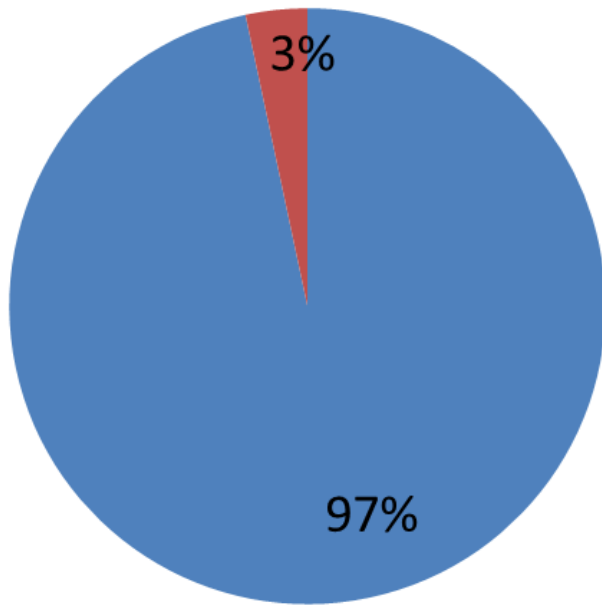
(COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)



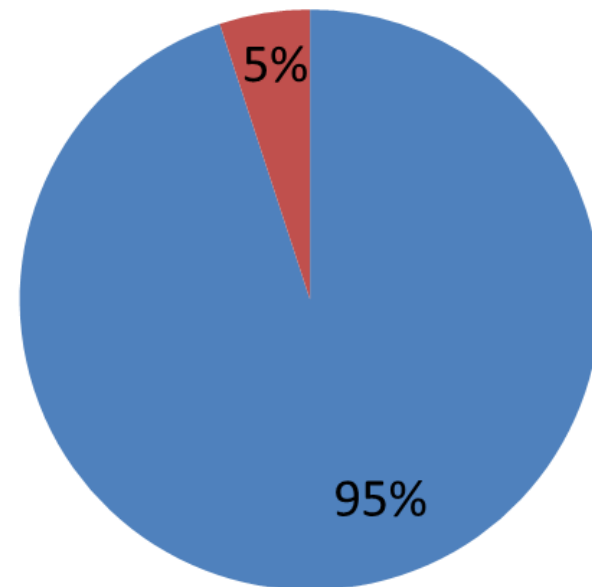
% of French young researchers in outgoing mobilities: 36% vs 35% mean

MOBILITY: DURATION

France → Czech Republic



Czech Republic → France



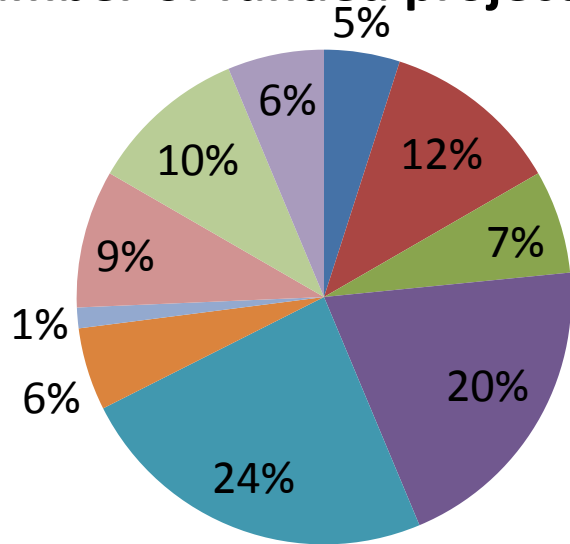
■ < 15 days

■ between 15 days and 3 months

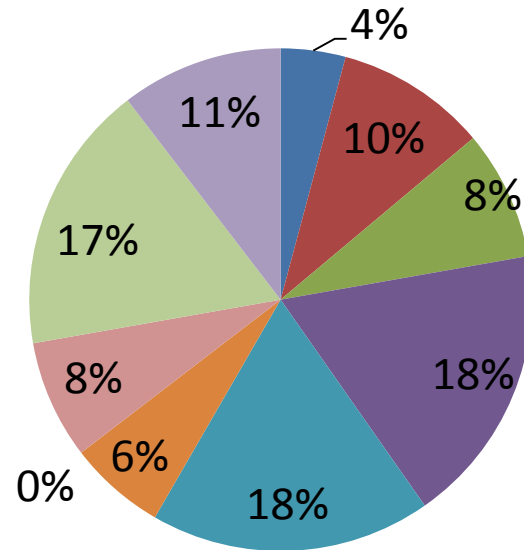
SCIENTIFIC PRODUCTION

SCIENTIFIC OUTPUT (1/2)

Number of funded projects : **222**



Percentage of copublications



- | | |
|--------------------------------|------------------------|
| ■ Mathematics | ■ Physics |
| ■ Marine/Earth/Planet Sciences | ■ Chemistry |
| ■ Biology and Health | ■ Humanities |
| ■ Social Sciences | ■ Engineering Sciences |
| ■ Information Technology | ■ Agronomy/Ecology |

SCIENTIFIC OUTPUT (2/2)

Data from 82 funded projects

	Number of financed projects in the survey	Average number of co-publications per project
Mathematics	6	1.0
Physics	8	1.8
Marine/Earth/Planet Sciences	4	3.0
Chemistry	20	1.3
Biology and Health	17	1.5
Humanities	4	2.3
Social Sciences	3	0.0
Engineering Sciences	13	0.8
Information Technology	6	4.2
Agronomy / Ecology	11	1.4
TOTAL	92	1.6

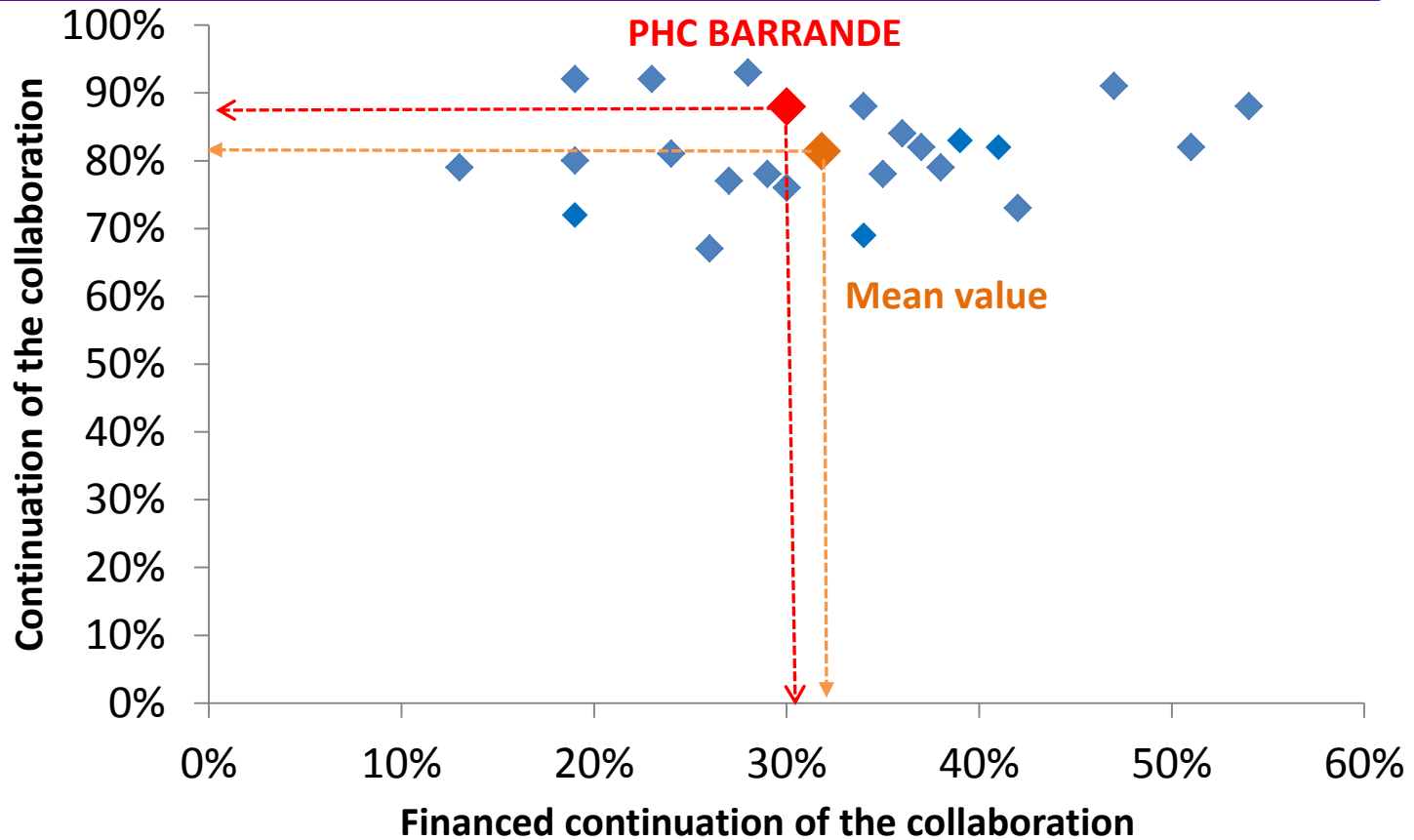
Overall average annual number of copublications per project : 0.8 vs 0.9 mean

67% of funded projects led to one co-publication at least

15% of copublications include at least 1 PhD or PostDoc

WHAT HAPPENS AFTER A BARRANDE PROJECT ?

CONTINUATION OF THE COLLABORATION (1/5) (COMPARISON BETWEEN 24 DIFFERENT BILATERAL PROGRAMMES)



Continuation of the collaboration : **88% vs 81% mean**

Continuation of the collaboration with other sources of subvention : **30% vs 32% mean**

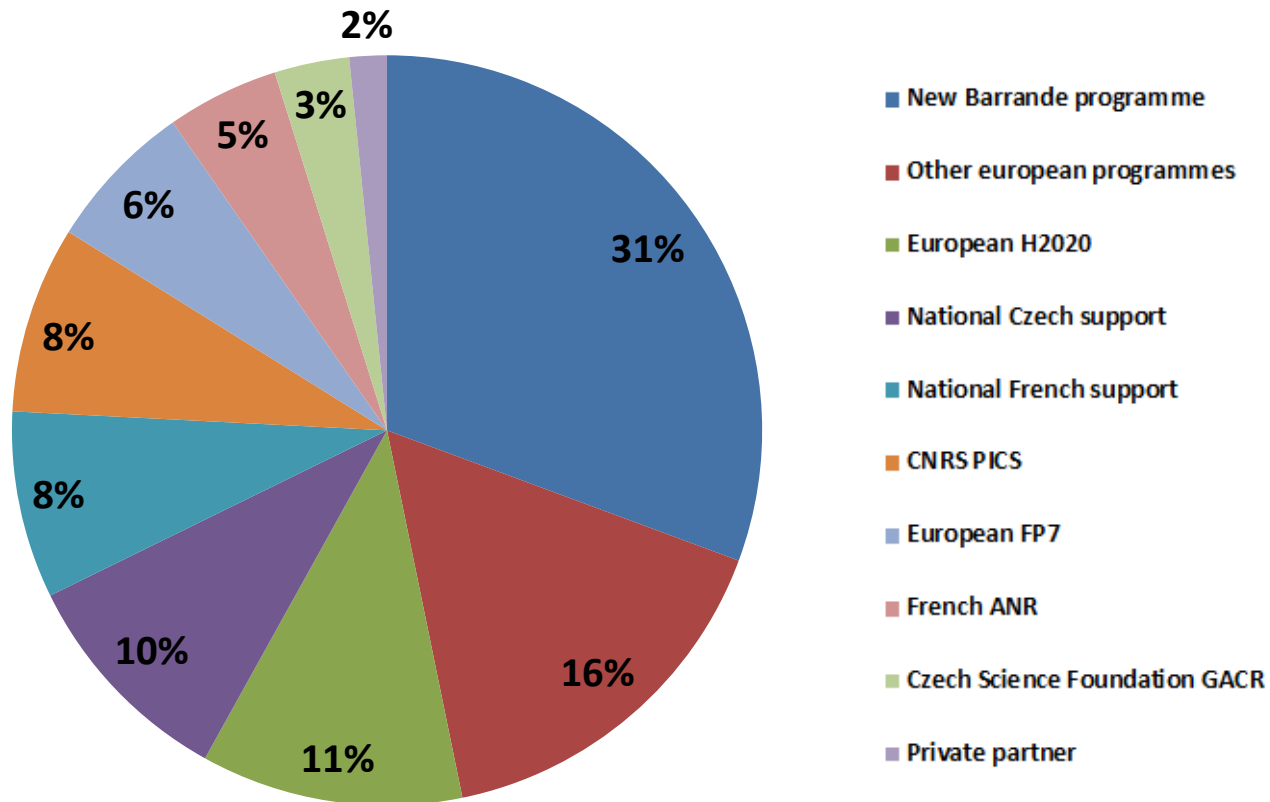
CONTINUATION OF THE COLLABORATION (2/5)

88% of the collaborations continued after the Barrande project

Which activities?	
Collaborative research	73%
Co-publications	62%
Researchers mobility	46%
Joint participation to conferences	36%
PhD mobility	28%
Co-organisation of scientific events	20%
Joint participation to PhD thesis jury	15%
Master students mobility	13%
Others	4%

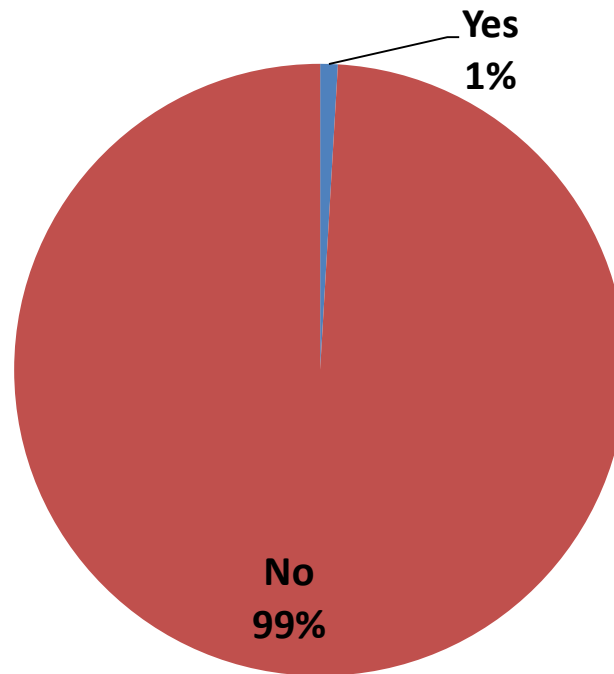
CONTINUATION OF THE COLLABORATION (3/5)

What kind of funded collaborations after the Barrande project ?



CONTINUATION OF THE COLLABORATION (4/5)

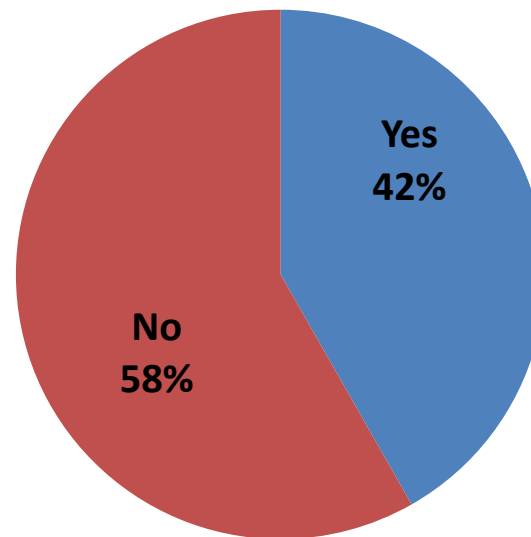
Has the Barrande project led to the set-up of joint structures?



1 CNRS LIA (Associated International Laboratory)

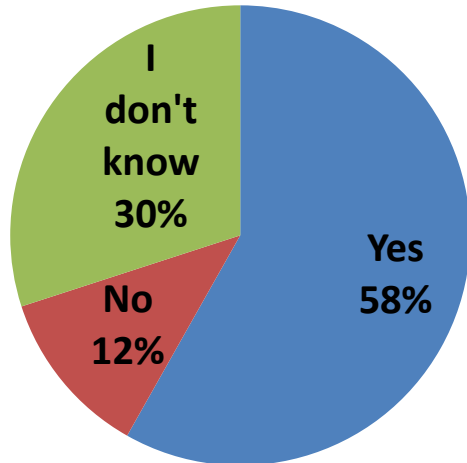
CONTINUATION OF THE COLLABORATION (5/5)

Has the French-Czech collaboration involved new partners?

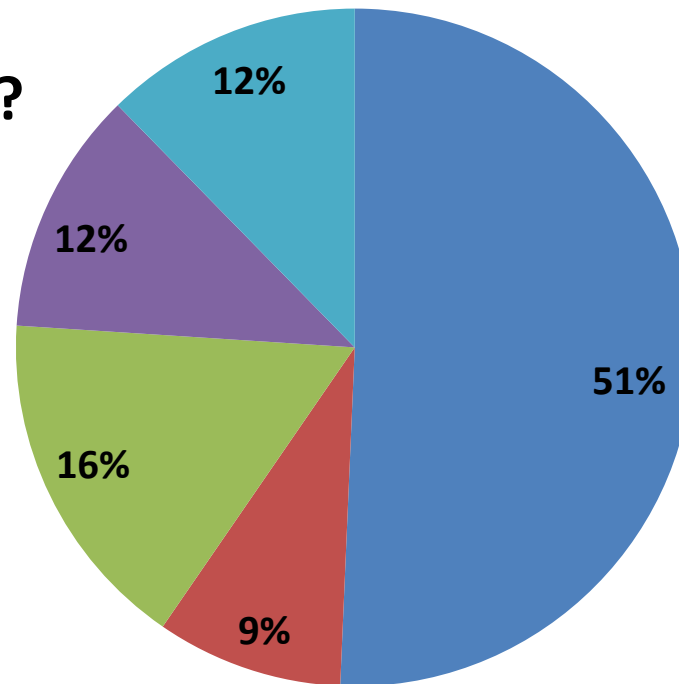


IMPACT ON YOUNG RESEARCHERS' CAREER (1/2)

Was young researchers career impacted by the Barrande programme ?



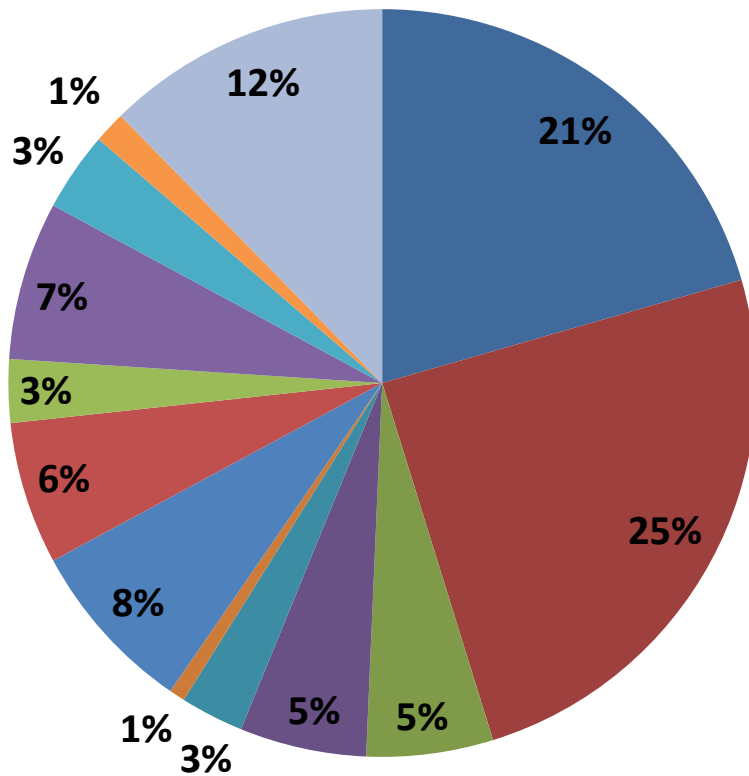
Type of impacts



- Postdoc/Teacher/Researcher (temporary position)
- Teacher/Researcher (permanent position)
- Researcher in a public research institution (permanent position)
- Employed in a private company in link with the field of Higher Education-Research
- Other

IMPACT ON YOUNG RESEARCHERS' CAREER (2/2)

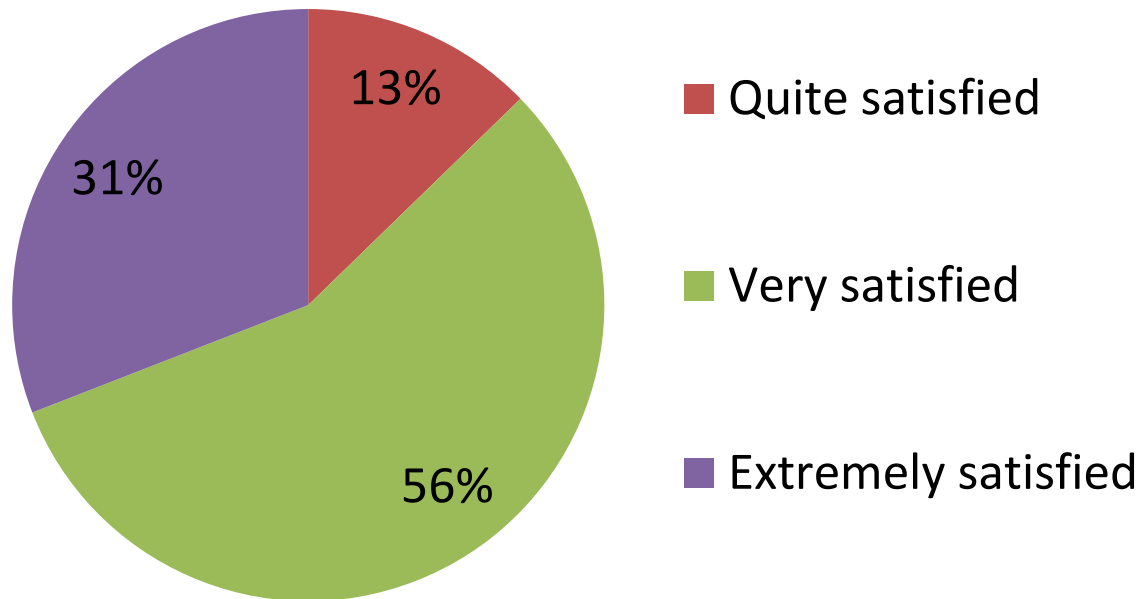
Type of impacts



- Post PhD in France
- Post PhD in Czech Republic
- Post PhD in another country
- Teacher-researcher in France
- Teacher-researcher in Czech Republic
- Teacher-researcher in another country
- Researcher in a public research institution in France
- Researcher in a public research institution in Czech Republic
- Researcher in a public research institution in another country
- Employed in a private company in link with the field of Higher Education-Research in France
- Employed in a private company in link with the field of Higher Education-Research in Czech Republic
- Employed in a private company in link with the field of Higher Education-Research in another country
- Other

GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME

100% of French principal investigators are satisfied



GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME (2/3) POSITIVE COMMENTS

SURVEY OF 110 RESPONSES

Strengths of this program	Number of occurrences (out of 110)	% (out of 110)
Simplicity of the application process	84	76%
Allows an international scientific collaboration	64	58%
Allows the mobility of the researchers	59	54%
Allows the training of the young researchers	54	49%
Allows exchanges which allow a scientific production	47	43%
Financial means sufficient for the expenditure of mobility	43	39%
Good scientific appreciation compared to the financial investment	39	35%
Easy implementation (administrative flexibility)	37	34%
Is used as starting for raising other funds	23	21%
Allows a knowledge of the country partner	20	18%
Duration of mobilities adapted to the needs	20	18%
Sufficiently long duration of the projects	13	12%
Transparency of the methods for selecting the projects	12	11%
Others	1	1%
<i>Nombre total d'occurrences</i>	<i>516</i>	

GENERAL OPINION OF FRENCH PIS ON THE PROGRAMME (3/3) NEGATIVE COMMENTS

SURVEY OF 109 RESPONSES

Weaknesses of this program	Number of occurrences (out of 109)	% (out of 109)
No funding of the operation and capital expenditures	57	52%
Too short duration of the projects	33	30%
Lack of transparency on the methods of projects selection	28	25%
Too short duration of mobilities	21	19%
Insufficient communication on the evaluation's results	21	19%
Difficult perpetuation of collaboration	18	16%
Too low number of mobilities	18	16%
Financial means insufficient for the expenditure of mobility (transport)	12	11%
Financial means insufficient for the expenditure of mobility (per diem)	11	10%
Other	10	10%
Administrative heaviness of the missions management	8	7%
Heaviness of the process of applications	5	5%
Too long duration of mobilities	2	2%
<i>Number of occurrences</i>	<i>244</i>	

PRELIMINARY CONCLUSIONS

Preliminary conclusions suggest that the funding scheme has efficiently contributed to create (or to maintain) fruitful and long-term cooperation, despite the relatively low financial support, which is to be considered as “seed money”.

- + **Barrande programme is an opportunity to initiate new collaborations (67%)**
- + **Many French PIs are young researchers (27 %)**
- **Too many applications to Barrande programme after a Barrande funding (31%)**
- **Average co-publications rate by PhDs is too low (0.22).**
- **Average co-publications rate including at least 1 PhD or PostDoc is too low (15%).**

PRELIMINARY RECOMMENDATIONS

RECOMMENDATIONS

- Explore new financial supports after the Barrande funding
- Encourage PIs to associate young researchers to co-publications
- Promote co-publications (33% of projects with no co-publications)
- Promote number of co-publications per project
- Open a third year of financing ?

French national ministries (MESRI / MEAE) will provide a comprehensive analysis of the survey. It will be sent to the recipients of the funding and participants in this symposium.

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Thank you for your attention