

### FRANCE - ROMANIA

## Scientific impact of the PHC BRANCUSI (2005-2019)

**MESR-DAEI / MEAE** 

2024

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



### GENERAL PRESENTATION OF THE PROGRAM

Creation: 2002

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

### Total budget (France + Romania): around 135 000 € / year

>> including budget from the French part : around 67 500 €/year

>> including budget from the Romanian part : around 67 500 €/year

Average budget per project Research Program (France) : around 2 500 €/year

Average budget per project Research Program (France + Romania) : around 5 000 €/year

Number of new funded projects per year : around 24

From 2005-2019 : 644 applications submitted 206 projects funded

2

### **DATA SOURCES**



### **Campus France (2005-2019)**

Information about the PHC BRANCUSI applications

### **Survey (2005-2019)**

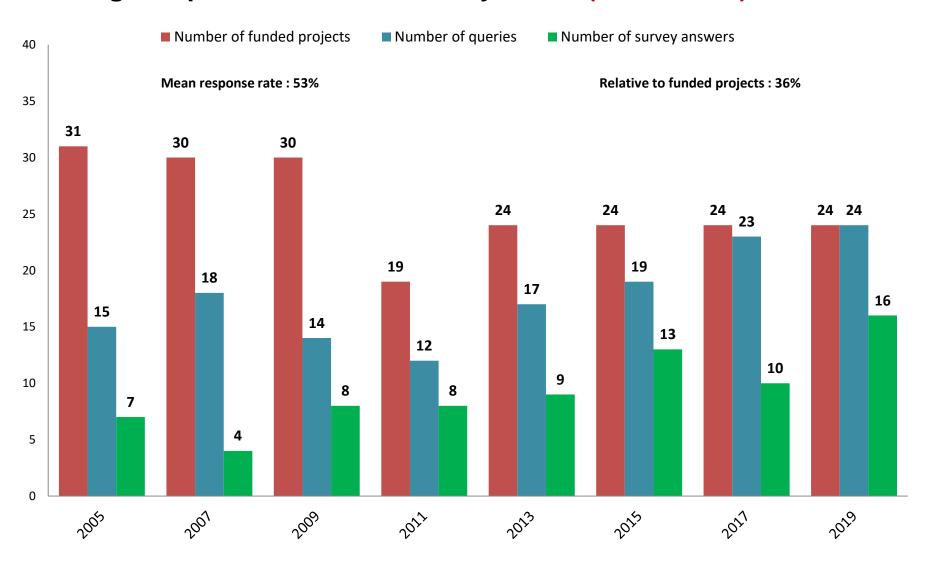
- Target: French Principal Investigators of selected projects between 2005 and 2019
- French survey duration: from October 9th to November 20th 2023
   53% response ratio (75 respondents for 142 queries)

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### **ANSWERS TO THE SURVEY**

Average response rate to the survey: 53 % (75 answers)



206 funded projects between 2005 and 2019, 142 valid email adresses



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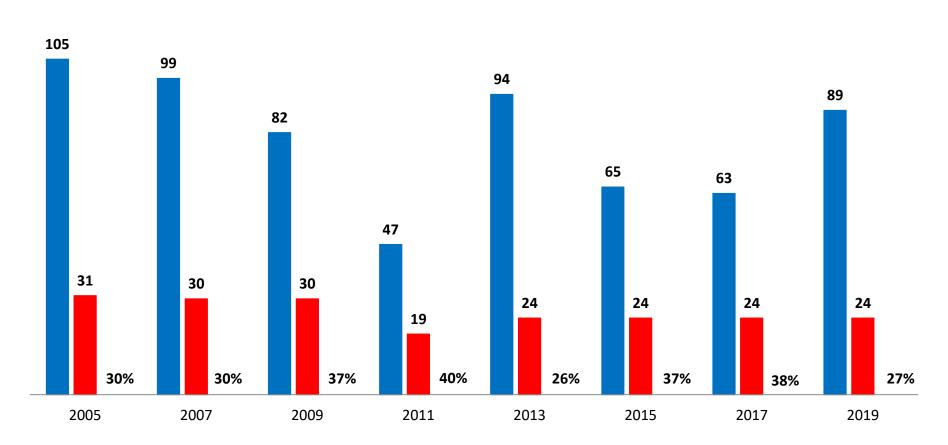
# **2005-2019 Key Points**



### **NUMBER OF APPLICATIONS AND SELECTION RATE**

Average selection rate from 2005-2019: 32%

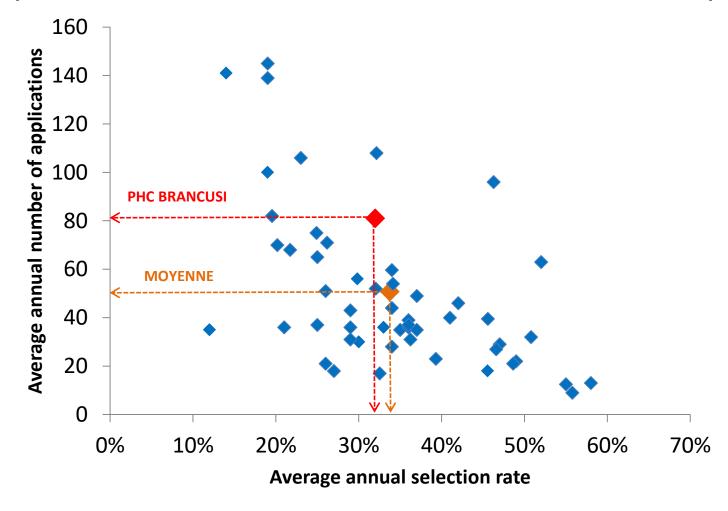






### **NUMBER OF APPLICATIONS VS SELECTION RATE**

(COMPARISON BETWEEN 53 DIFFERENT BILATERAL PROGRAMS)



Average annual selection rate for 2017-2023 : 32% vs 34% mean Average annual number of applications 2017-2023 : 81 vs 51 mean

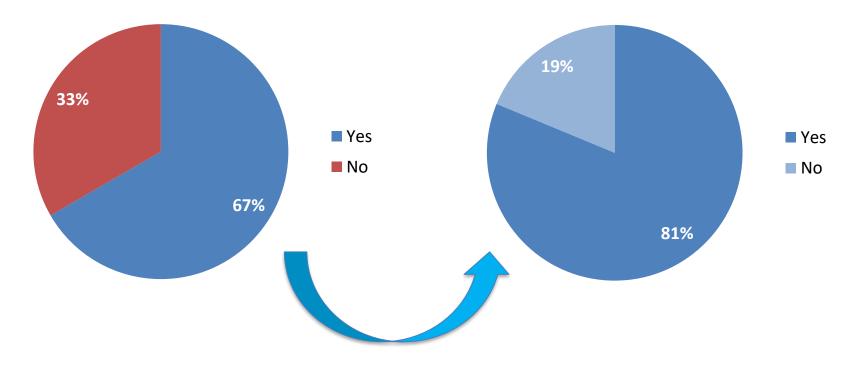
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### BEFORE THE BRANCUSI PROJECT (1/3)



If yes, was it with the same partner?



**Data from 75 responses** 

Data from 48 responses

8



### BEFORE THE BRANCUSI PROJECT (2/3)

With which scientific collaboration program ?		
PHC BRANCUSI	37%	
French Government Grant	6%	
Private sector funding	4%	
Co-funding with Romanian institutions	2%	
French National Resarch Agency (ANR)	2%	
Horizon 2020	2%	
CNRS International Emerging Action	2%	
Other	46%	

Other programs such as ECONET, ERASMUS, Pasteur Institute funding...

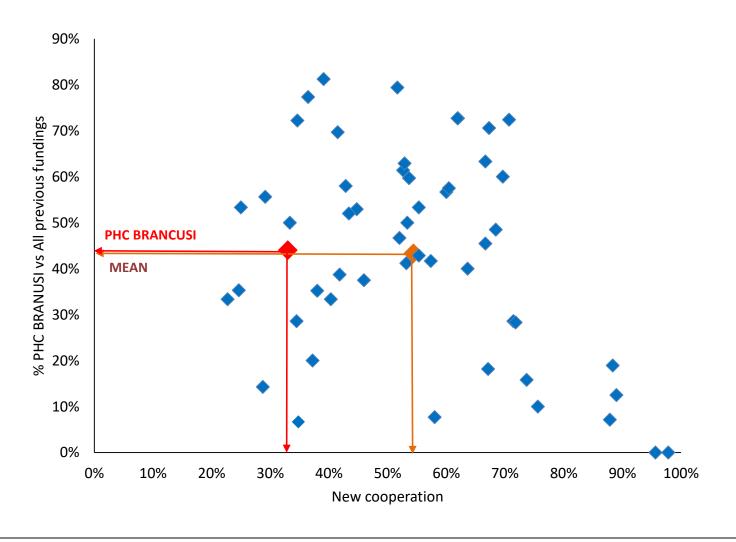
Plus 88 previous cooperations based on other exchanges (scientific coproduction, meetings, joint PhD...)

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### BEFORE THE BRANCUSI PROJECT (3/3)

### (COMPARISON BETWEEN 53 DIFFERENT BILATERAL PROGRAMS)



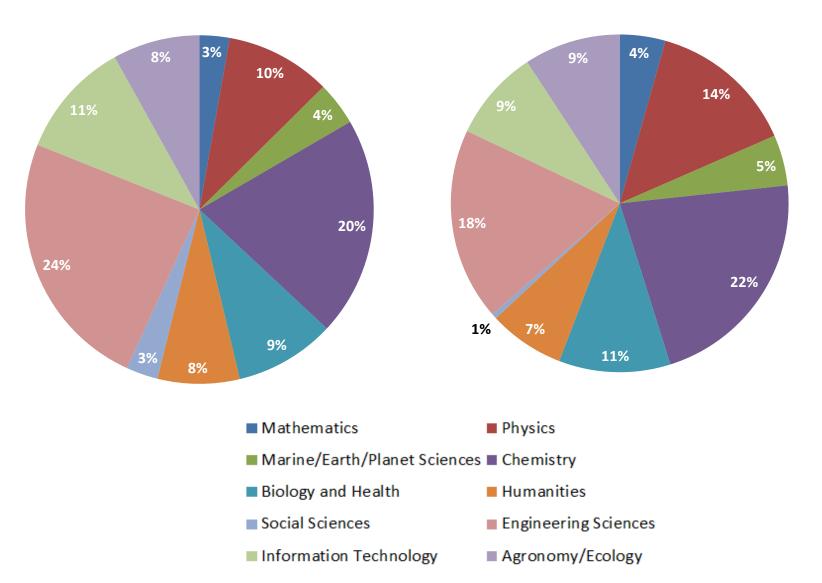
This project is a new cooperation for 33% of laureates

For 44% of laureates with previous cooperation with Romanie (67% of laureates), the previous funding comes from PHC BRANCUSI



### **SCIENTIFIC DOMAINS OF PROJECTS (2005-2019)**

Number of applications: 644 Number of funded projects: 206





### **SCIENTIFIC DOMAINS: EVOLUTION 2005-2019**

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DS1: Mathematics

DS2: Physics

DS3: Marine, Earth, Planet sciences

DS4 : Chemistry

DS5: Biology and Health

DS6: Humanities

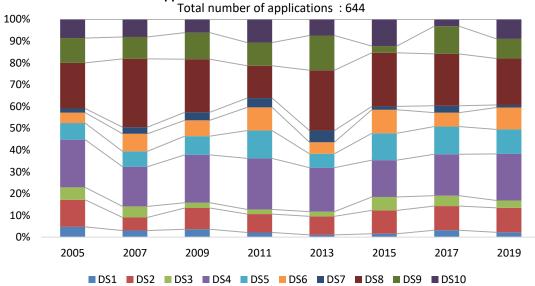
DS7: Social sciences

DS8: Engeneering sciences

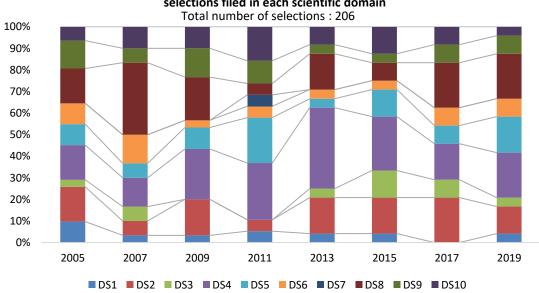
DS9: Information technology

DS10: Agronomy/Ecology

### Percentage of applications filed by scientific domain each year compared to all applications filed in each scientific domain



### Percentage of selections filed by scientific domain each year compared to all selections filed in each scientific domain

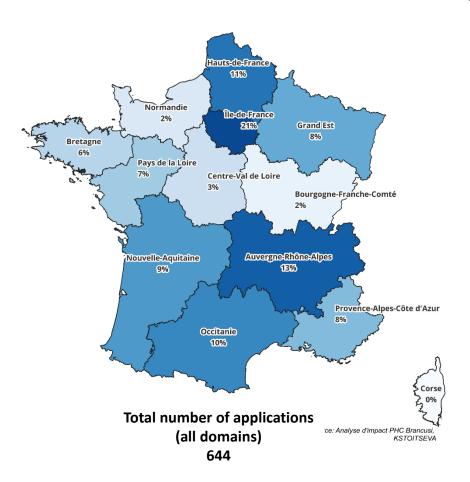


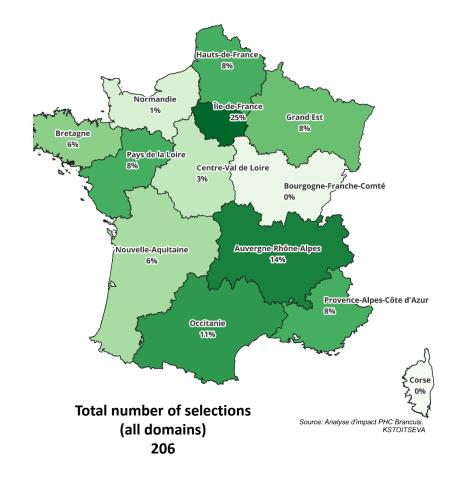


### **REGIONAL DISTRIBUTION OF SELECTED PROJECTS 2005-2019**

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### PHC BRANCUSI Regional percentages of applications and selections 2005-2019





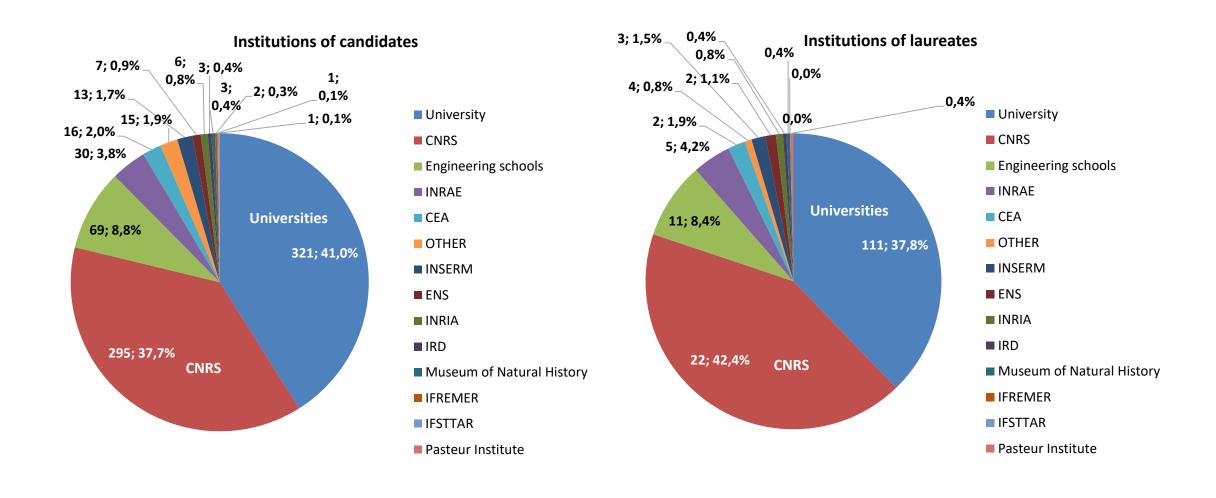
The region Ile de France is the main contributor both for applications and selections followed by Auvergne-Rhône-Alpes



### FRENCH PARTICIPATING INSTITUTIONS

(SOURCE : DATA FROM CAMPUS FRANCE)





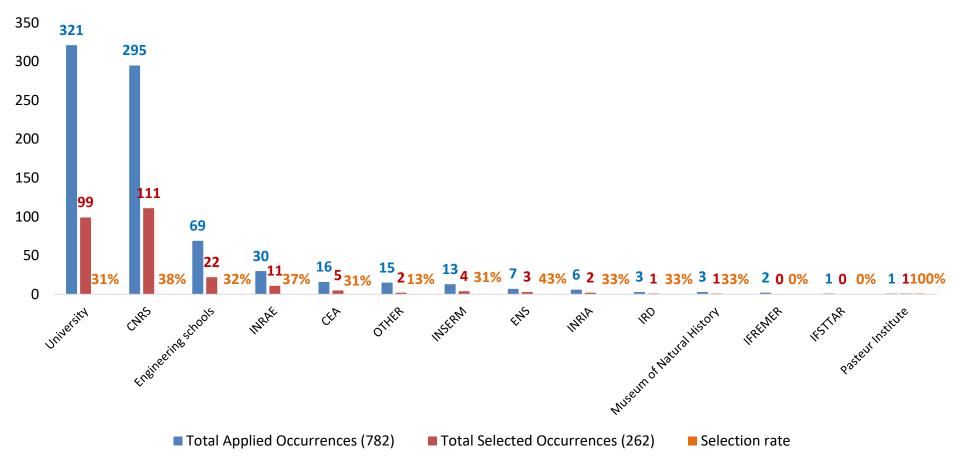


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### FRENCH PARTICIPATING INSTITUTIONS

**(SOURCE: DATA FROM CAMPUS FRANCE)** 

Number of occurences for each institution



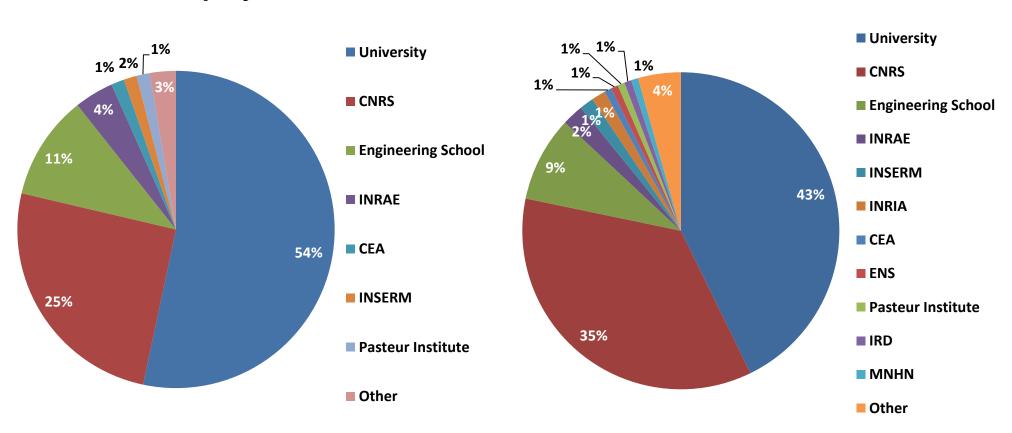


### FRENCH PARTICIPATING INSTITUTIONS

(SOURCE : DATA FROM THE SURVEY)

### PI's employers

#### **Laboratories authorities**



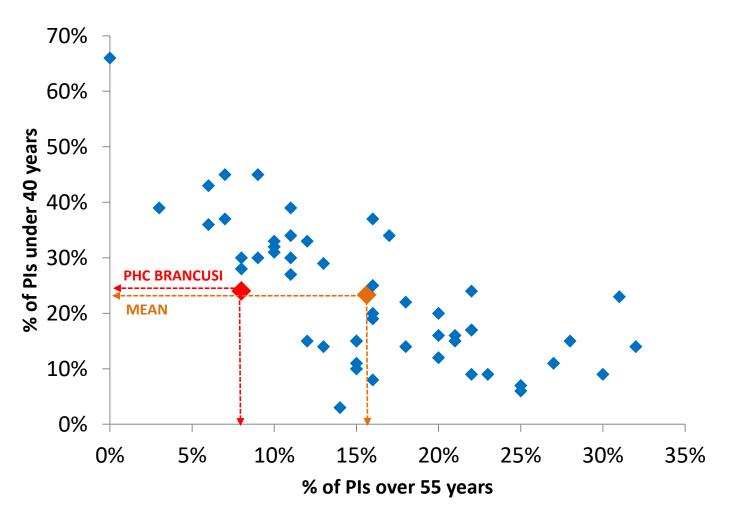
Data from 75 responses



### AGE OF FRENCH PRINCIPAL INVESTIGATORS (PI) 2005-2019

(COMPARISON BETWEEN 53 DIFFERENT BILATERAL PROGRAMS)





Laureates under 40 years : 24% vs 23% mean

Laureates over 55 years : 8% vs 16% mean

Laureates between 40 et 55 years : 68%

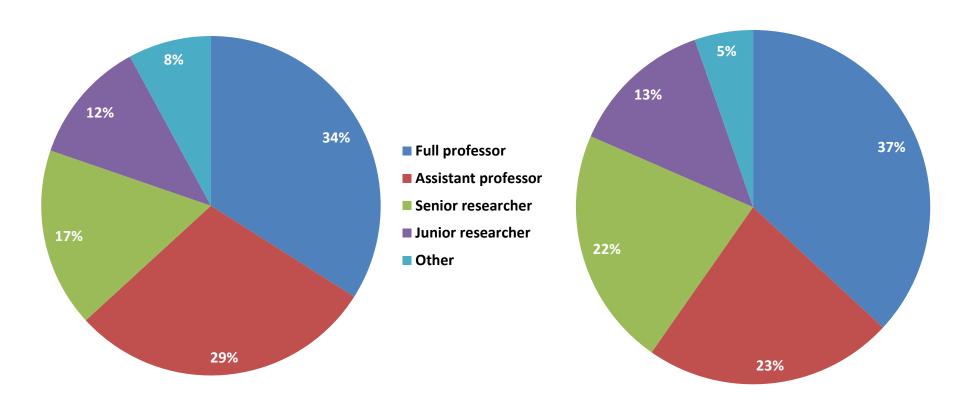


### FRENCH PIS (PRINCIPAL INVESTIGATORS) : STATUS 2005-2019

(SOURCE : DATA FROM CAMPUS FRANCE)

### **Applicants professional status**

### Laureates professional status



Data from 644 french applicants and 206 french laureates

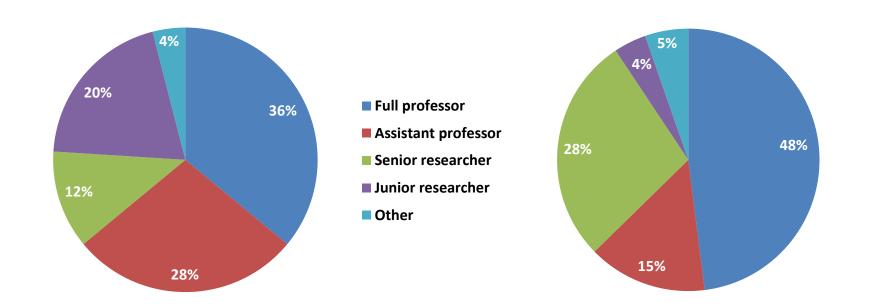


### FRENCH PIS (PRINCIPAL INVESTIGATORS): STATUS 2005-2019

(SOURCE: DATA FROM THE SURVEY)

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

### **Current professional status**

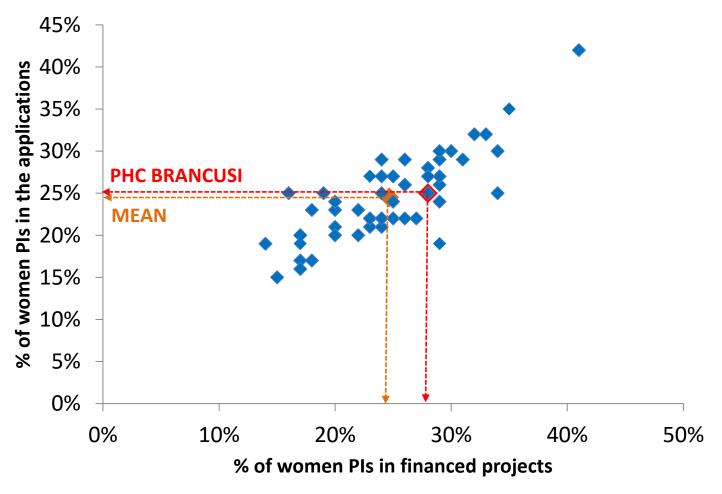


Data from 75 responses

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### **IMPLICATION OF WOMEN (FRANCE) 2005-2019**

(COMPARISON BETWEEN 53 DIFFERENT BILATERAL PROGRAMS)



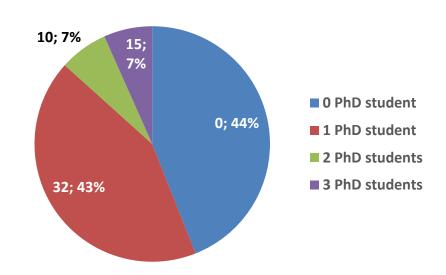
% of women PIs candidates : 25% vs 24% mean % of women PIs laureates : 28% vs 25% mean



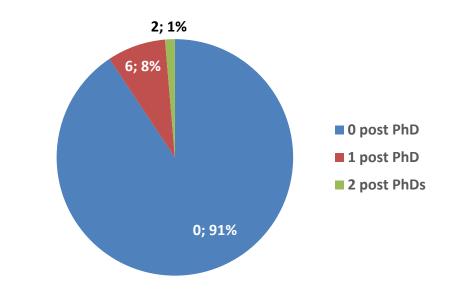
### PARTICIPATION OF FRENCH YOUNG RESEARCHERS 2005-2019

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#### Number of French postdoctoral researchers



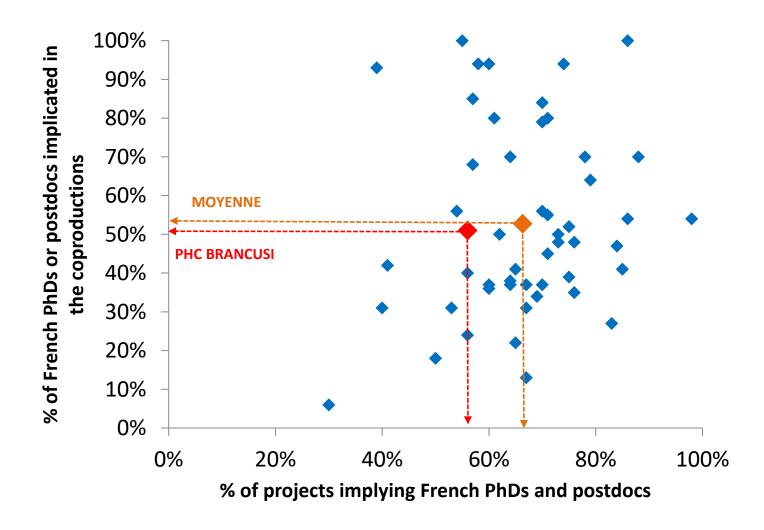
56% of projects involve at least one French PhD student

9% of projects involve at least one French post-doctoral researcher

Overall, 59% of projects involve at least one French young researcher



### IMPLICATION OF FRENCH YOUNG RESEARCHERS IN THE PUBLICATIONS 2005-2019



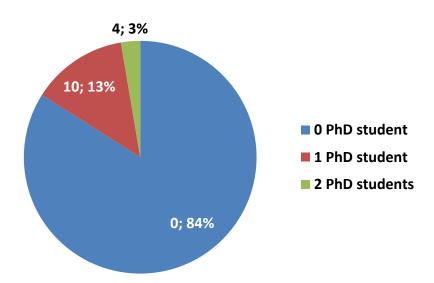
% of projects involving french young researchers : 56% vs 66% mean % of french PhDs or postdocs involved in the coproductions : 51% vs 53% mean



### PARTICIPATION OF ROMANIAN YOUNG RESEARCHERS 2005-2019

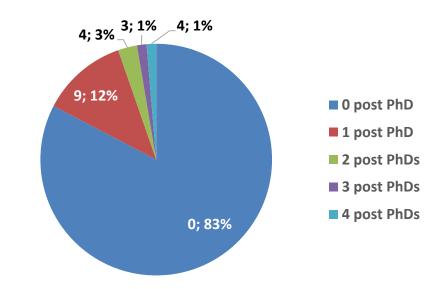
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### Number of Romanian PhD students



16% of projects involve at least one Romanian PhD student

Number of Romanian post-doctoral researchers



17% of projects involve at least one Romanian post-doctoral researcher

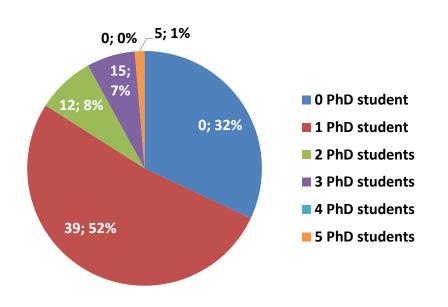
Overall, 32% of projects involve at least one Romanian young researcher

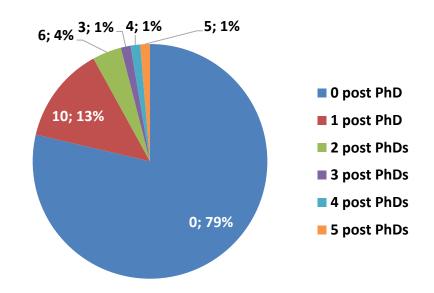


### PARTICIPATION OF BOTH FRENCH AND ROMANIAN YOUNG RESEARCHERS

Number of PhD students

Number of post-doctoral researchers





68% of projects involve at least one PhD student

**21%** of projects involve at least one post-doctoral researcher

Overall, 88% of projects involve at least one French or Romanian young researcher



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### **MOBILITY**



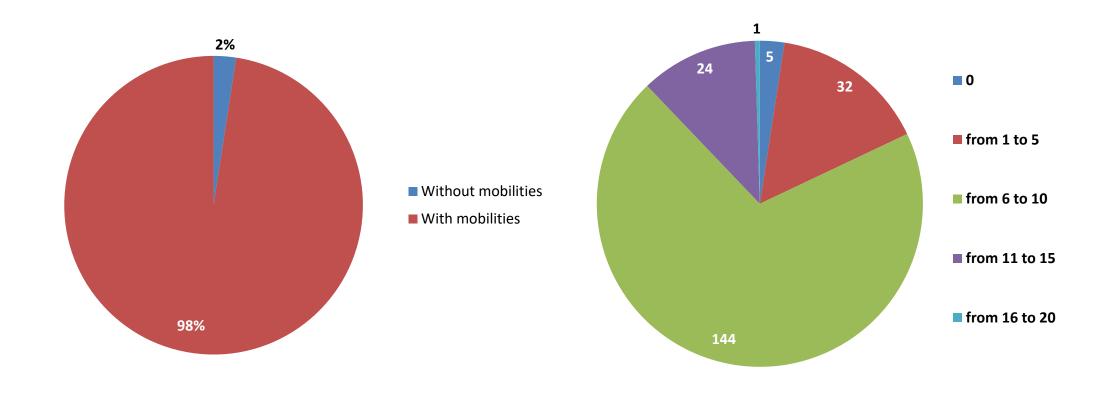
### **MOBILITIES 2005-2019**

**(SOURCE: DATA FROM CAMPUS FRANCE)** 

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#### **Projects with/without mobilities**

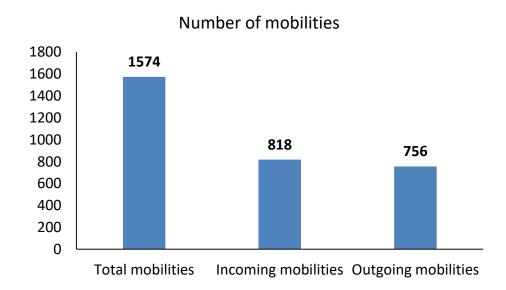
#### Number of mobilities per project

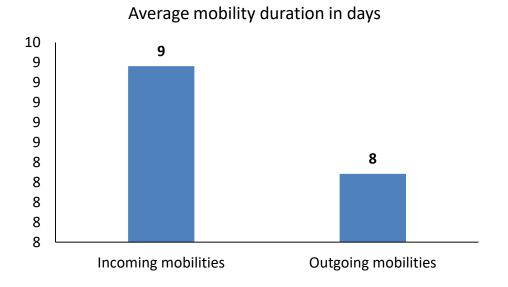


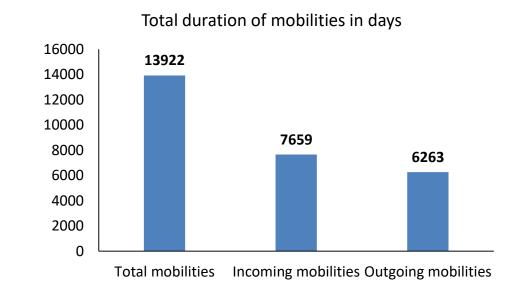


### **MOBILITIES 2005-2019**

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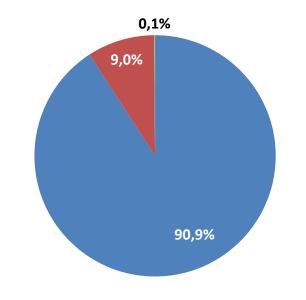


### **MOBILITY: DURATION (2005-2019)**

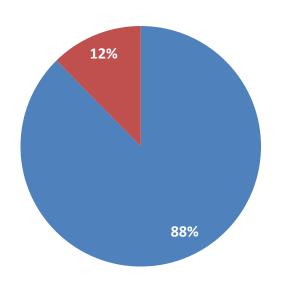
**(SOURCE: DATA FROM CAMPUS FRANCE)** 







#### Romania→ France



- < 15 days</p>
- between 15 days and 3 months
- > 3 months

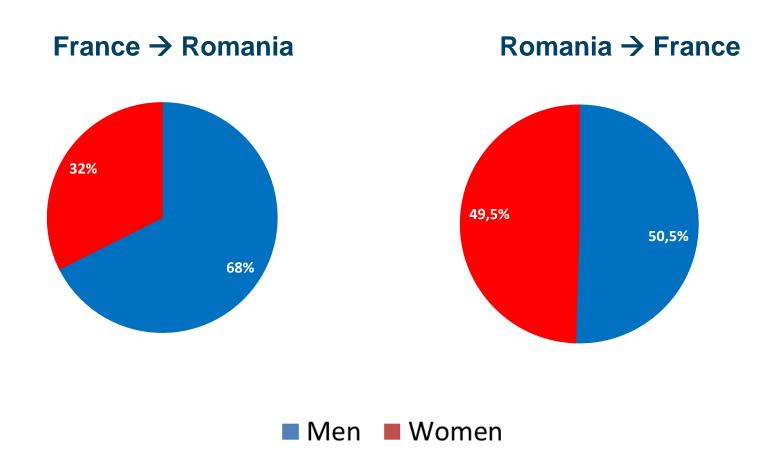
Data from 756 outgoing mobilities and 818 incoming mobilities



### **MOBILITY: GENDER DISTRIBUTION (2005-2019)**

(DATA FROM CAMPUS FRANCE)

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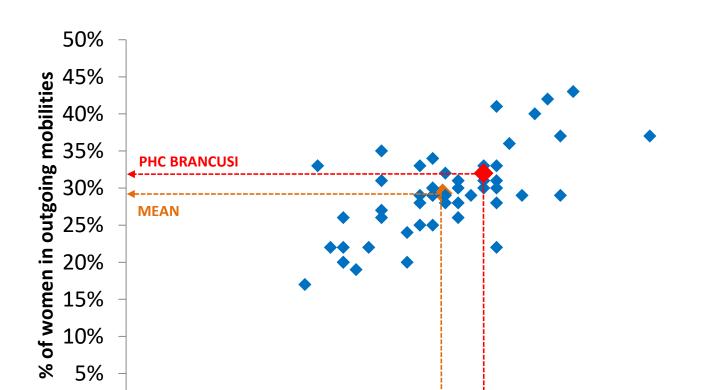
Data from 756 outgoing mobilities and 818 incoming mobilities



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### **WOMEN MOBILITY FRANCE – ROMANIA**

(COMPARISON BETWEEN 53 DIFFERENT BILATERAL PROGRAMS)



0%

0%

5%

10%

15%

% of women in funded projects

25%

30%

35%

40%

45%

% of women PIs in the funded projects: 28% vs 25% mean % of women PIs in outgoing mobilities: 32% vs 29% mean

20%



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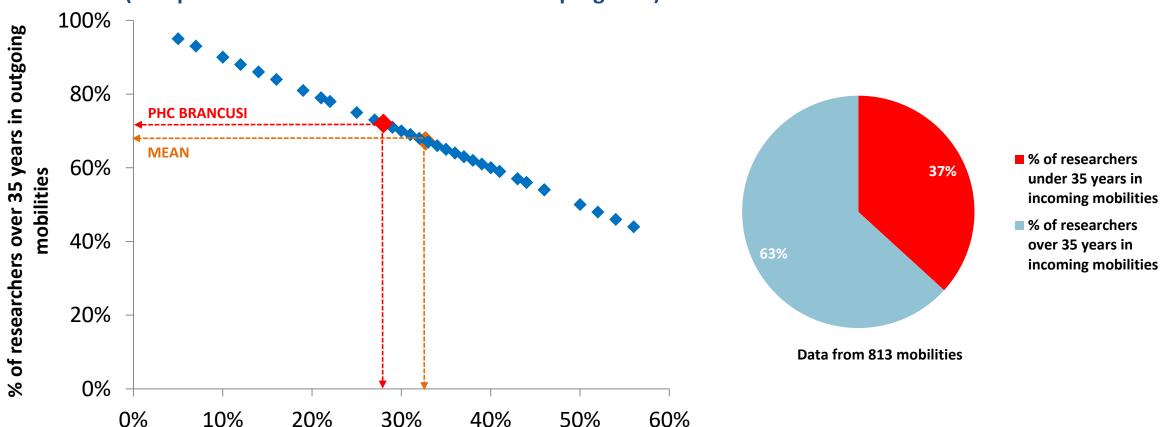
### **YOUNG RESEARCHERS MOBILITY (2005-2019)**

(DATA FROM CAMPUS FRANCE)



Romania → France

(Comparison between 53 different bilateral programs)



Data from 751 mobilities % of researchers under 35 years in outgoing mobilities

% of young french researchers in outgoing mobilities: 28% vs 33% mean % of young romanian researchers in incoming mobilities: 37% (mean non available)



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SCIENTIFIC PRODUCTION (2005-2019)



### SCIENTIFIC PRODUCTION 2005-2019 (1/2)

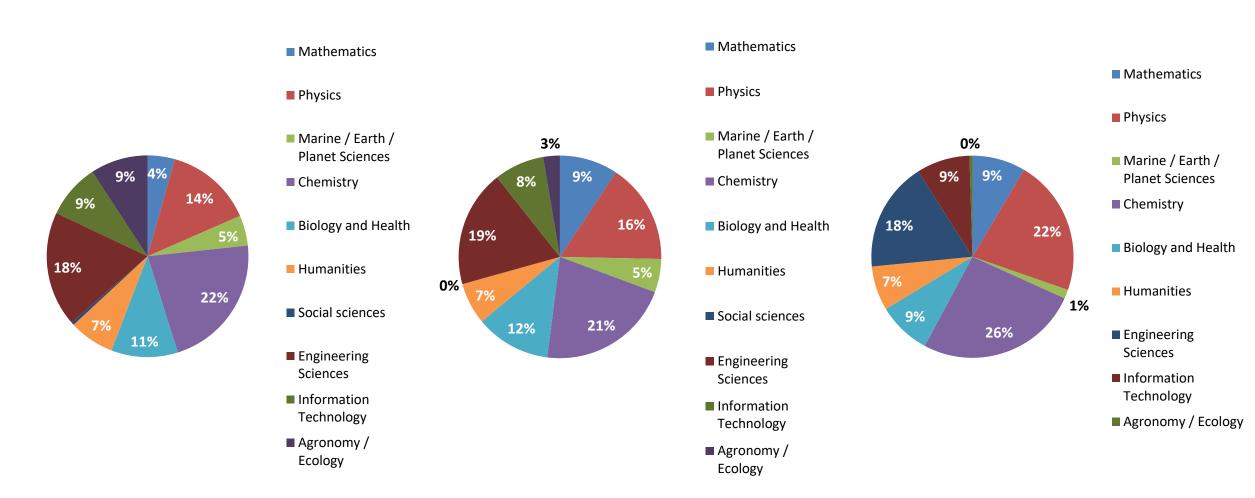
(SOURCE: DATA FROM CAMPUS FRANCE AND SURVEY)

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#### Funded projects 2005-2019

#### Responses to the survey 2005-2019

#### **Coproductions 2005-2019**



206 funded projects

75 responses No responses for DS7

**Analysis of 211 coproductions** 



### **SCIENTIFIC OUTPUT 2005-2019 (2/2)**

(DATA FROM THE SURVEY)

	Number of financed projects in the survey	Average annual number of scientific co-productions per project
Mathematics	7	1,3
Physics	12	1,9
Marine/Earth/Planet Sciences	4	0,4
Chemistry	16	1,7
Biology and Health	9	1,0
Humanities	5	1,5
Social Sciences	No responses	
Engineering Sciences	14	1,3
Information Technology	6	1,5
Agronomy / Ecology	2	0,3
TOTAL	75	1,4

Overall average annual number of scientific coproductions per project: 1,4 vs 0,96 mean

81% of funded projects led to one scientific coproduction at least 21% of coproductions include at least 1 French PhD or PostDoc and 28% 1 Romanian PhD or PostDoc

The average annual rate of publication for French young researchers involved in the projects is 0,35 and 1,74 for Romanian young researchers

Each young French researcher involved in the publications has published 0,68 publication per year Each young Quebec researcher involved in the publications has published 1,34 publication per year



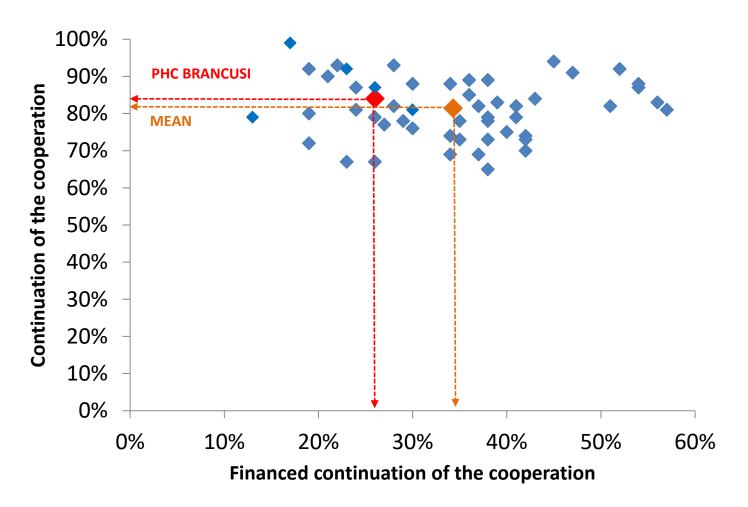
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# WHAT HAPPENS AFTER A PHC BRANCUSI PROJECT?



### CONTINUATION OF THE COOPERATION 2005-2019 (1/6)

(COMPARISON BETWEEN 53 DIFFERENT BILATERAL PROGRAMS)
(DATA FROM THE SURVEY)



Continuation of the cooperation: 84% vs 81% mean
Financed continuation of the cooperation: 26% vs 34% mean



#### CONTINUATION OF THE COOPERATION 2005-2019 (2/6)

(DATA FROM THE SURVEY)

#### **84%** of the cooperations continued after the PHC BRANCUSI project

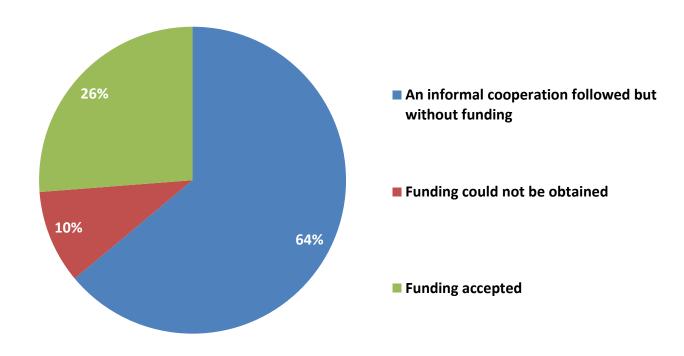
Which activities?	
Cooperative research	71%
Researchers mobilities	57%
Scientific co-productions	56%
Joint participation to conferences	40%
PhD mobilities	25%
Co-organisation of scientific events	19%
Joint participation to PhD thesis	14%
Joint diplomas (Master, PhD)	2%
Other	8%



#### CONTINUATION OF THE COOPERATION 2005-2019 (3/6)

(DATA FROM THE SURVEY)

#### **26%** of cooperations have been funded following the project

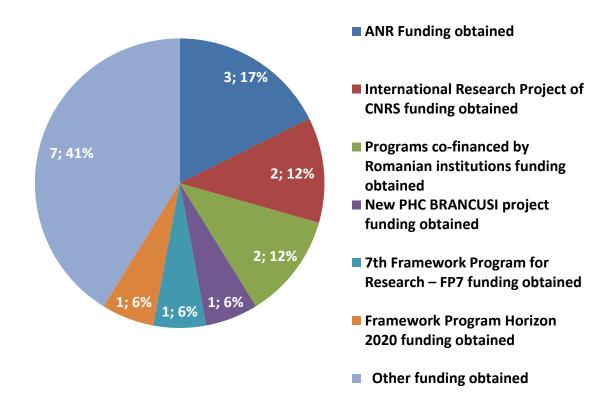




#### CONTINUATION OF THE COOPERATION 2017-2023 (4/6)

(DATA FROM THE SURVEY)

#### What kind of funded collaborations after the PHC BRANCUSI project?

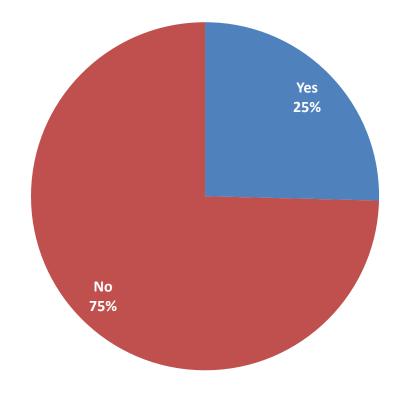




#### CONTINUATION OF THE COOPERATION 2017-2023 (5/6)

(DATA FROM THE SURVEY)

#### Has the French-Romanian cooperation involved new partners?



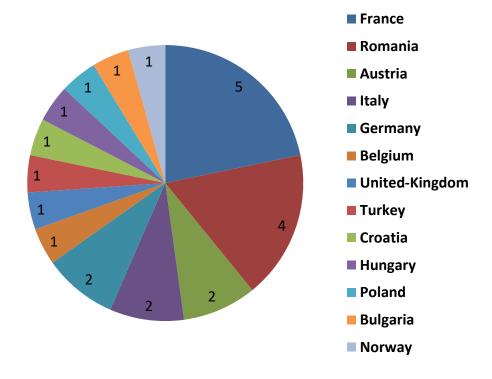
Data from 63 responses



#### CONTINUATION OF THE COOPERATION 2017-2023 (6/6)

(DATA FROM THE SURVEY)

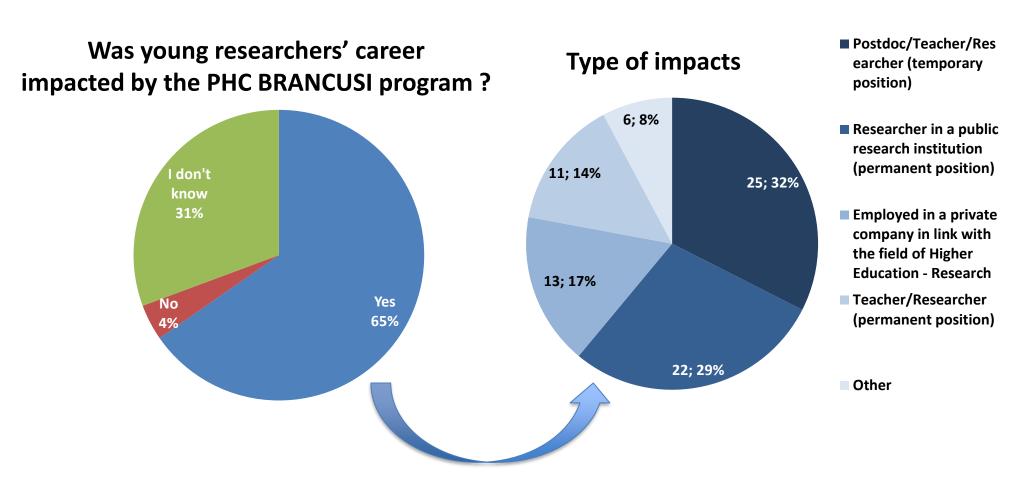
If the French-Romanian cooperation involves new partners, list with which countries





# IMPACT ON YOUNG RESEARCHERS' CAREER (2005-2019) (1/2)

(DATA FROM THE SURVEY)



Data from 75 responses

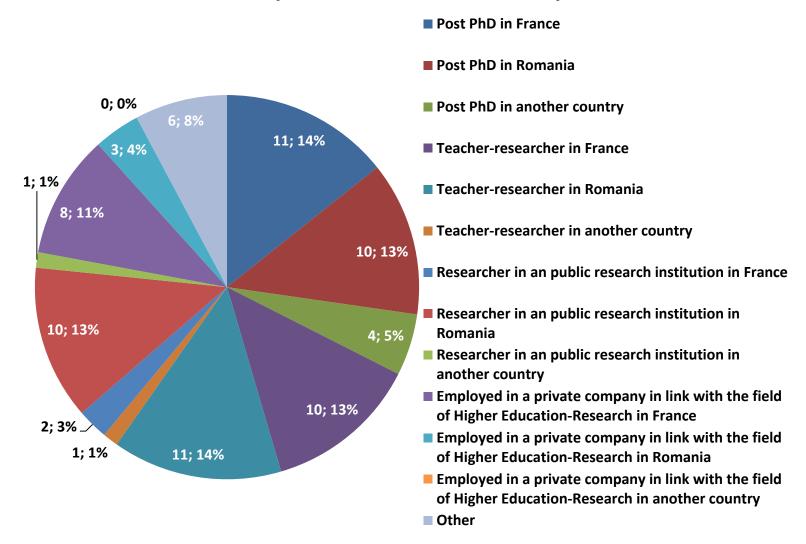
Data from 51 positive responses for a total of 77 young researchers



### IMPACT ON YOUNG RESEARCHERS' CAREER

2005-2019 (2/2)

(DATA FROM THE SURVEY)

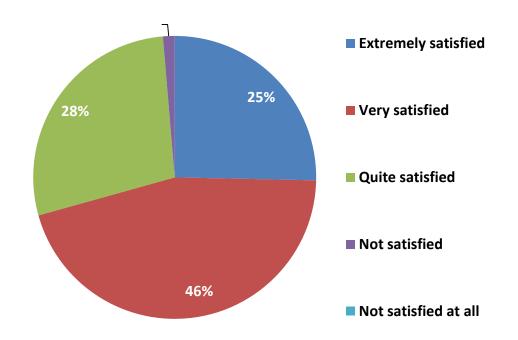




# GENERAL OPINION OF FRENCH PIS ON THE PROGRAM 2005-2019

(DATA FROM THE SURVEY)

#### 99% of French principal investigators are satisfied

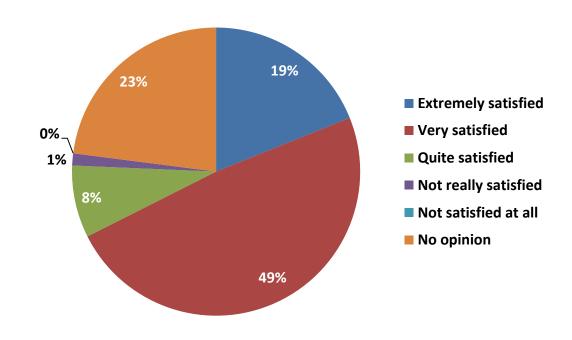




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# OPINION OF FRENCH PIS ABOUT FRENCH EMBASSY HELP 2005-2019

(DATA FROM THE SURVEY)

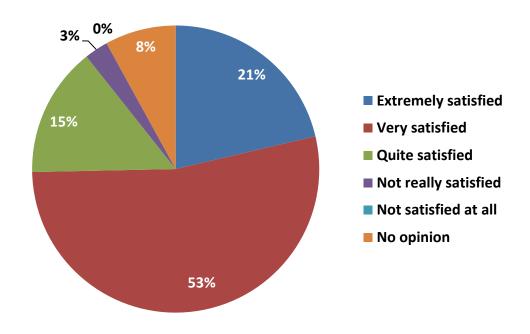




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# OPINION OF FRENCH PIS ABOUT ADMINISTRATIVE MANAGEMENT 2005-2019

(DATA FROM THE SURVEY)





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#### **GENERAL OPINION OF FRENCH PIS ON THE PROGRAM**

#### 2005-2019

#### **POSITIVE COMMENTS**



Strengths of this program	Number of occurencies (out of 401)	% of funded projects
Simplicity of the project application process	57	76%
Fostering researchers' mobility	57	76%
Fostering an international research cooperation	49	65%
Fostering exchanges enabling scientific production	39	52%
Fostering the training of the young researchers	34	45%
Helping to know the partner country	30	40%
Easy implementation (administrative flexibility)	29	39%
Financial autonomy towards your institution	21	28%
Sufficient financial means for the mobility costs	17	23%
Good scientific-added value on financial investment	15	20%
Sufficient amount of mobility time given to collaborate	14	19%
Helpful to initiate other fundraising	12	16%
Sufficiently long duration of the projects	11	15%
Transparency of the selection process	5	7%
Flexibility of the program for actions co-financed with the Romanian partner	5	7%
Timetable for implementation	5	7%
Other	1	1%
Total number of occurencies	401	



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# GENERAL OPINION OF FRENCH PIS ON THE PROGRAM 2005-2019 NEGATIVE COMMENTS



Weaknesses of this program	Number of occurencies (out of xx)	% of funded projects
Insufficient financial means to cover a project	54	72%
Length of support too short	28	37%
Difficult to continue the cooperation	26	35%
Lack of transparency in the selection process	23	31%
Too short duration of mobilities	16	21%
Financial means insufficient for the expenditure of mobility (transport)	15	20%
Financial means insufficient for the expenditure of mobility (per diem)	15	20%
Insufficient communication on the evaluation's results	11	15%
Too low number of mobilities	11	15%
Heaviness of the process of applications	9	12%
Administrative heaviness of the missions management	7	9%
Flexibility of the program for actions co-financed with the partner	2	3%
Timetable for implementation	2	3%
Financial autonomy towards your institution	1	1%
Too long duration of mobilities	0	0%
Other	4	5%
Total number of occurencies	224	



#### PRELIMINARY CONCLUSIONS

Preliminary conclusions suggest that the funding scheme has efficiently contributed to create (or to maintain) fruitful and long-term cooperation.

Implication of young researchers candidates (24%) close to the general mean (23%) Implication of women laureates (28%) better than the general mean (25%) 88% of funded projects with the participation of at least one french or romanian young researcher



81% of the projects with at least one scientific coproduction Average annual scientific coproductions per project better than the average of the other programs (1,4 vs 0,96)

Correct rate of annual average publications for young researchers involved in the scientific coproductions (French young researchers: 0,68; Romanian young researchers: 1,34) Continuation of the cooperation (84%) close to the general mean (81%) (but only 26% with new fundings versus 34% for the general mean)



Only 33% of new cooperations

81% of the cooperations with the same previous romanian partner
Only 56% of french and romanian young researchers involved in the scientific coproductions
Rather low implication of young researchers in the mobilities



#### PRELIMINARY RECOMMANDATIONS

- Encourage new cooperations (only 33% of new cooperations)
- ➤ Increase the association of young researchers to the scientific coproductions (only 56% of the young researchers participating to the projects are also implicated in the coproductions)
- ➤ Promote outgoing mobilities of french young researchers (only 28% of the outgoing mobilities) and incoming mobilities for romanian young researchers (only 37% of the incoming mobilities



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French national ministries (MESR / MEAE) will provide a complete analysis of the survey. It will be sent to the recipients of the funding who participated in this survey and attendants to this symposium.

#### **CONTACTS**

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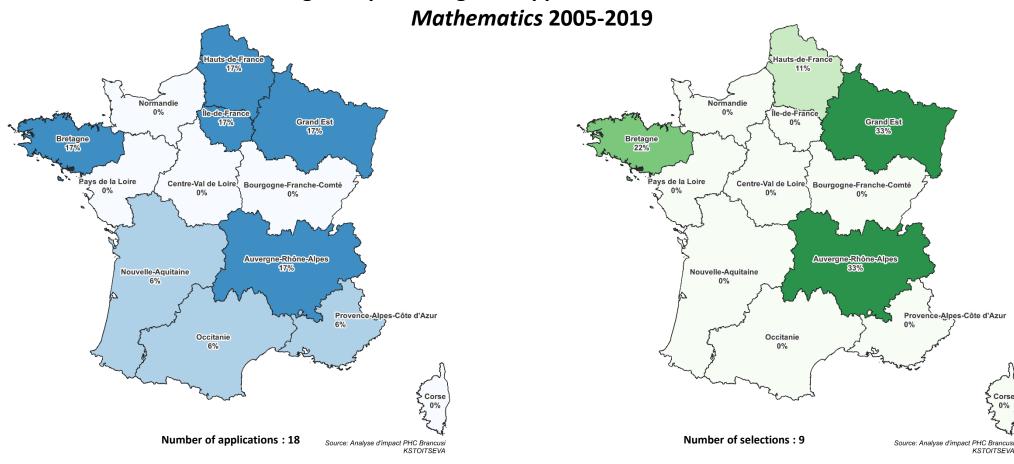
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# ANNEX REGIONALISATION AND SCIENTIFIC DOMAINS (CARTOGRAPHIES)



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### PHC BRANCUSI Regional percentages of applications and selections

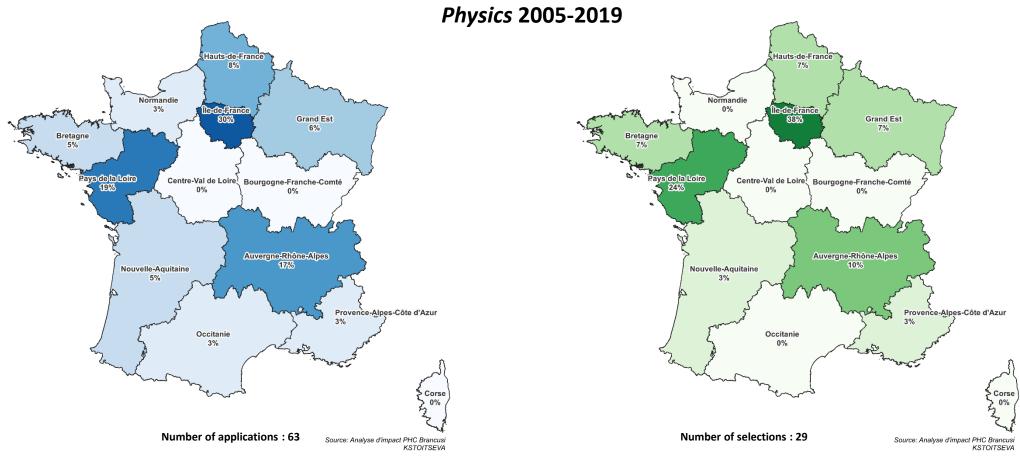


Eight regions are concerned for applications but only four for selections



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### PHC BRANCUSI Regional percentages of applications and selections



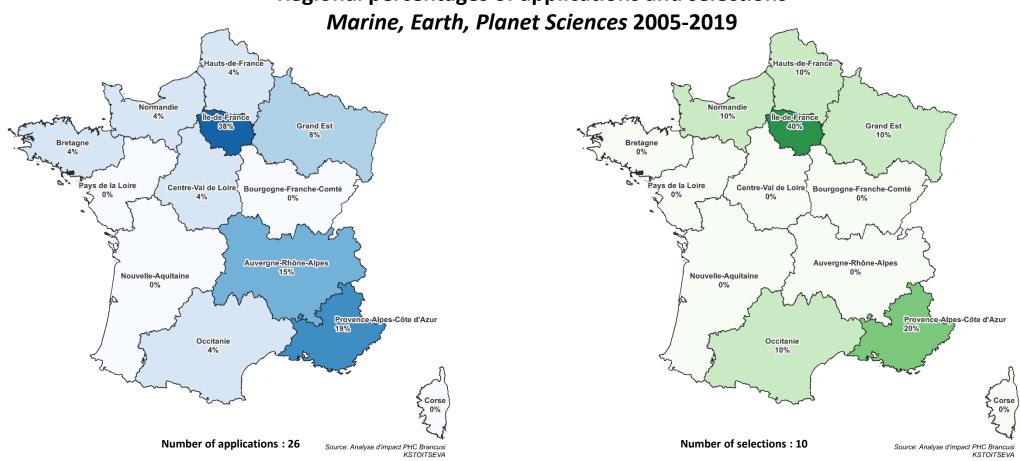
Ten regions are concerned for applications with Ile-de-France ahead but only eight benefit selections (with Ile-de-France still ahead)



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#### **PHC BRANCUSI**

Regional percentages of applications and selections

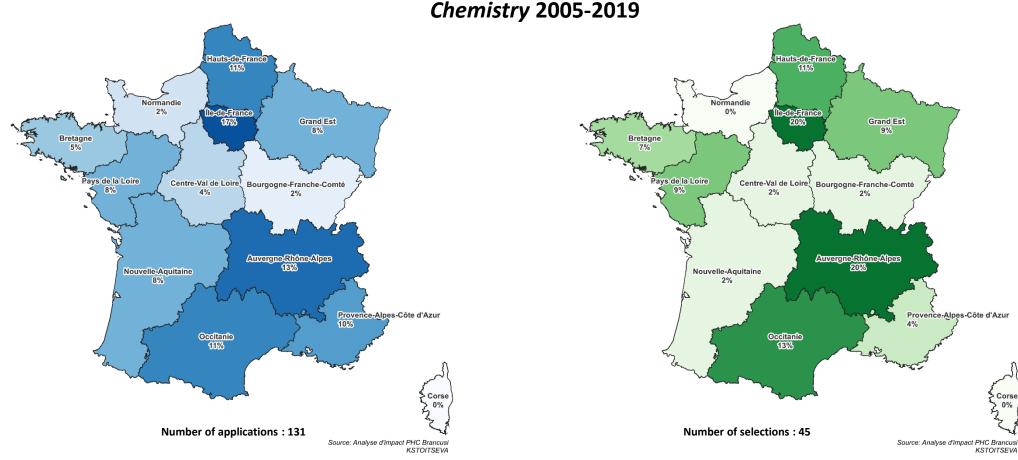


Nine regions are concerned for applications with Ile-de-France ahead but only six benefit selections (with Ile-de-France still ahead)



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## PHC BRANCUSI Regional percentages of applications and selections Chemistry 2005-2019

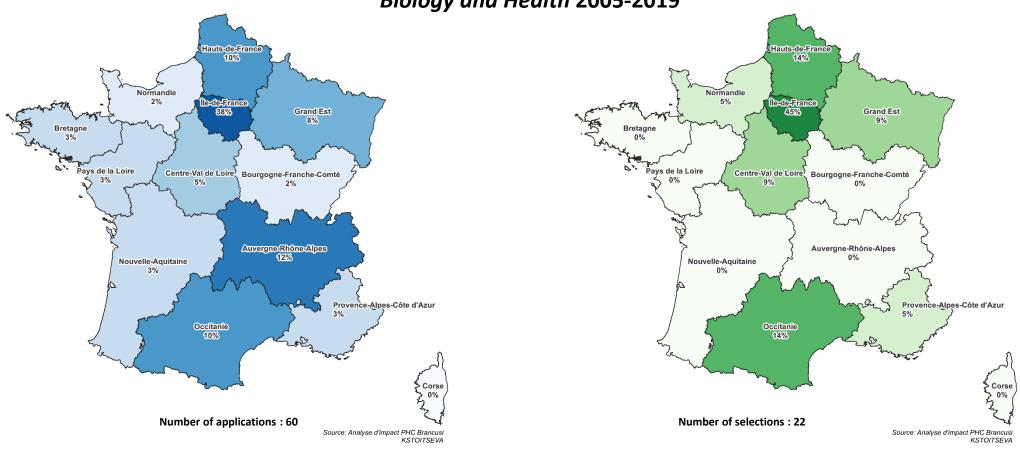


Twelve regions are concerned for applications with Hauts de France ahead. Ile-de-France and Auvergne-Rhône-Alpes are equally ahead for selections



Liberté Égalité Fraternité

# PHC BRANCUSI Regional percentages of applications and selections Biology and Health 2005-2019

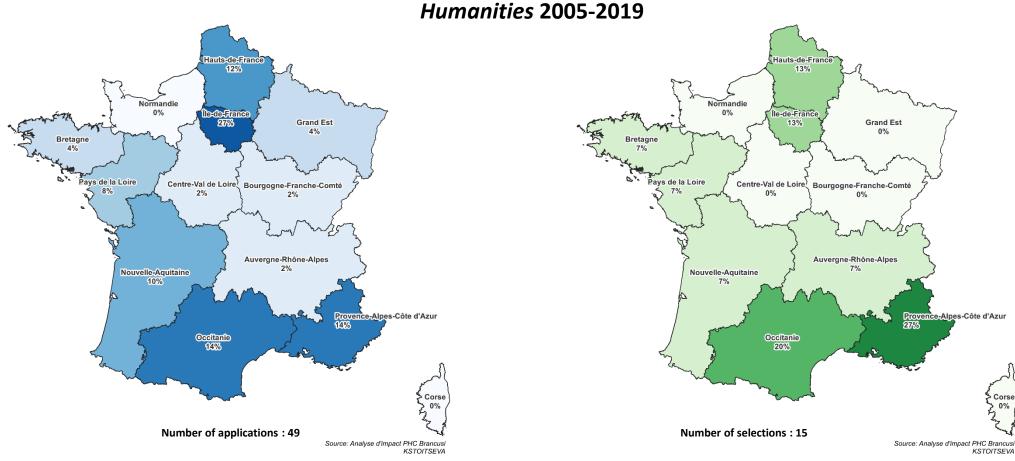


Eleven regions are concerned for applications with Ile-de-France ahead but only seven benefit selections (with Ile-de-France still ahead)



Liberté Égalité Fraternité

## PHC BRANCUSI Regional percentages of applications and selections

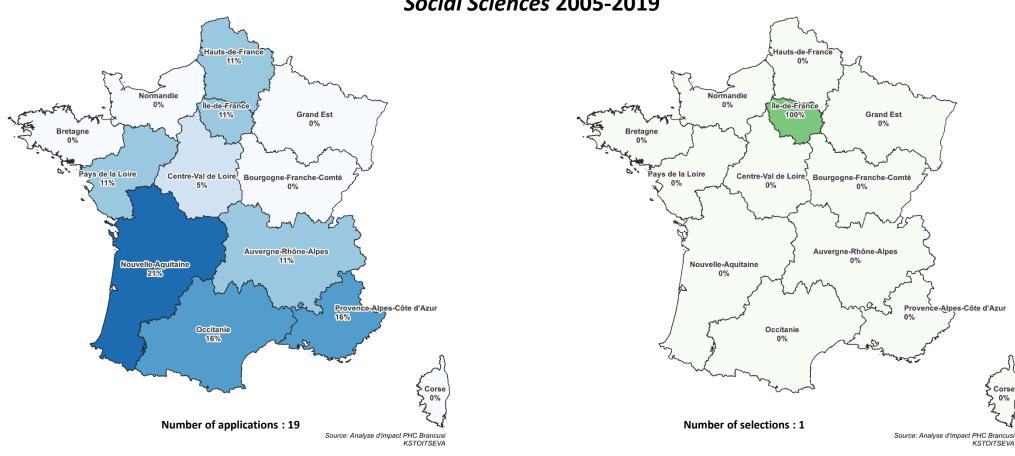


Eleven regions are concerned for applications with Ile-de-France ahead but only eight benefit selections (with Provence-Alpes-Côte d'Azur ahead)



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# PHC BRANCUSI Regional percentages of applications and selections Social Sciences 2005-2019

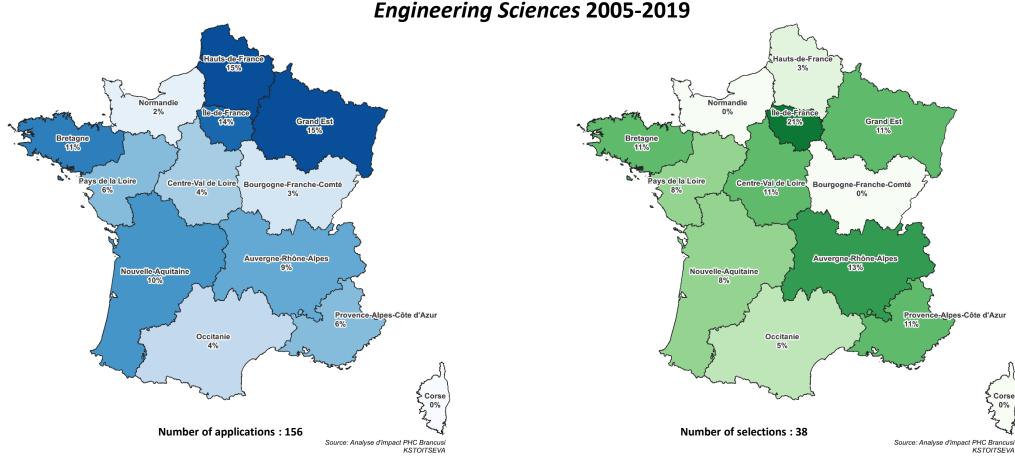


Eight regions are concerned for applications with Nouvelle-Aquitaine ahead but only Ile-de-France benefits 1 selection



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### PHC BRANCUSI Regional percentages of applications and selections



Twelve regions are concerned for applications with Grand Est and Hauts de France ahead. 10 regions benefit selections (with Ile-de-France ahead)

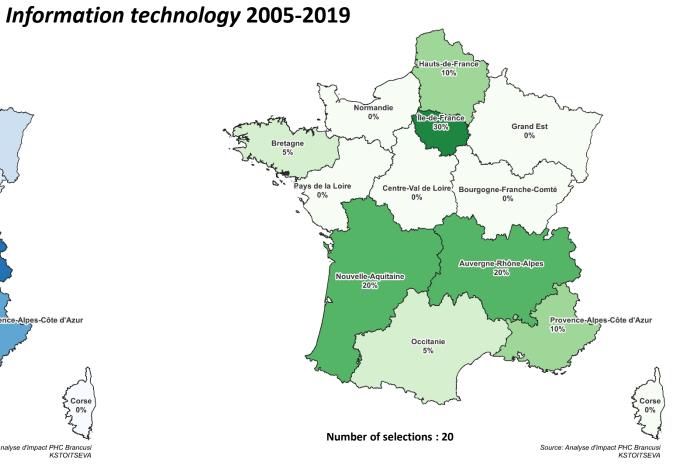


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#### PHC BRANCUSI

Regional percentages of applications and selections

Hauts-de-Francê **Grand Est** Bretagne Pays de la Loire Centre-Val de Loire Bourgogne-Franche-Comté Auvergne-Rhône-Alpes Nouvelle-Aquitaine Provence-Alpes-Côte d'Azur Occitanie Number of applications: 70 Source: Analyse d'impact PHC Brancusi



Eleven regions are concerned for applications with Ile-de-France ahead. Only seven benefit selections (with Ile-de-France still ahead)



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#### PHC BRANCUSI

Regional percentages of applications and selections

Agronomy/Ecology 2005-2019 Hauts-de-France Hauts-de-Francັ Île-de-Frânce Île-de-France **Grand Est** 10% **Grand Est** Pays de la Loire Centre-Val de Loire Centre-Val de Loire Bourgogne-Franche-Comté Bourgogne-Franche-Comté Auvergne-Rhône-Alpes Auvergne-Rhône-Alpes Nouvelle-Aquitaine Nouvelle-Aquitaine 12% Provence-Alpes-Côte d'Azur Provence-Alpes-Côte d'Azur Occitanie 33% Occitante 41% Corse Number of applications: 52 Number of selections: 17 Source: Analyse d'impact PHC Brancusi Source: Analyse d'impact PHC Brancusi

Eight regions are concerned for selections with Occitanie ahead. Only six benefit selections (with Occitanie largely ahead)