

# Opening of the Doctoral Education and Level to the socio-economic world

*procedures and experiments at Université Paris-Est*

Laurent GAUTRON

Department of Doctoral Studies  
Université Paris-Est (UPE)

[Laurent.Gautron@univ-paris-est.fr](mailto:Laurent.Gautron@univ-paris-est.fr)

➔ *A Federal University between Higher education and research institutions, Research bodies, Agencies, Technical centers and Hospitals*

Higher education  
and research  
institutions



Research bodies



Agencies,  
Technical centres,  
Hospitals



■ **50 000** students

- **1 350 PhD students** including:
  - **about 210** joint supervisions (*cotutelle*)
  - **48 %** foreign doctoral candidates
- **8** doctoral schools, including **2** with Paris-Saclay
- **250** thesis/year

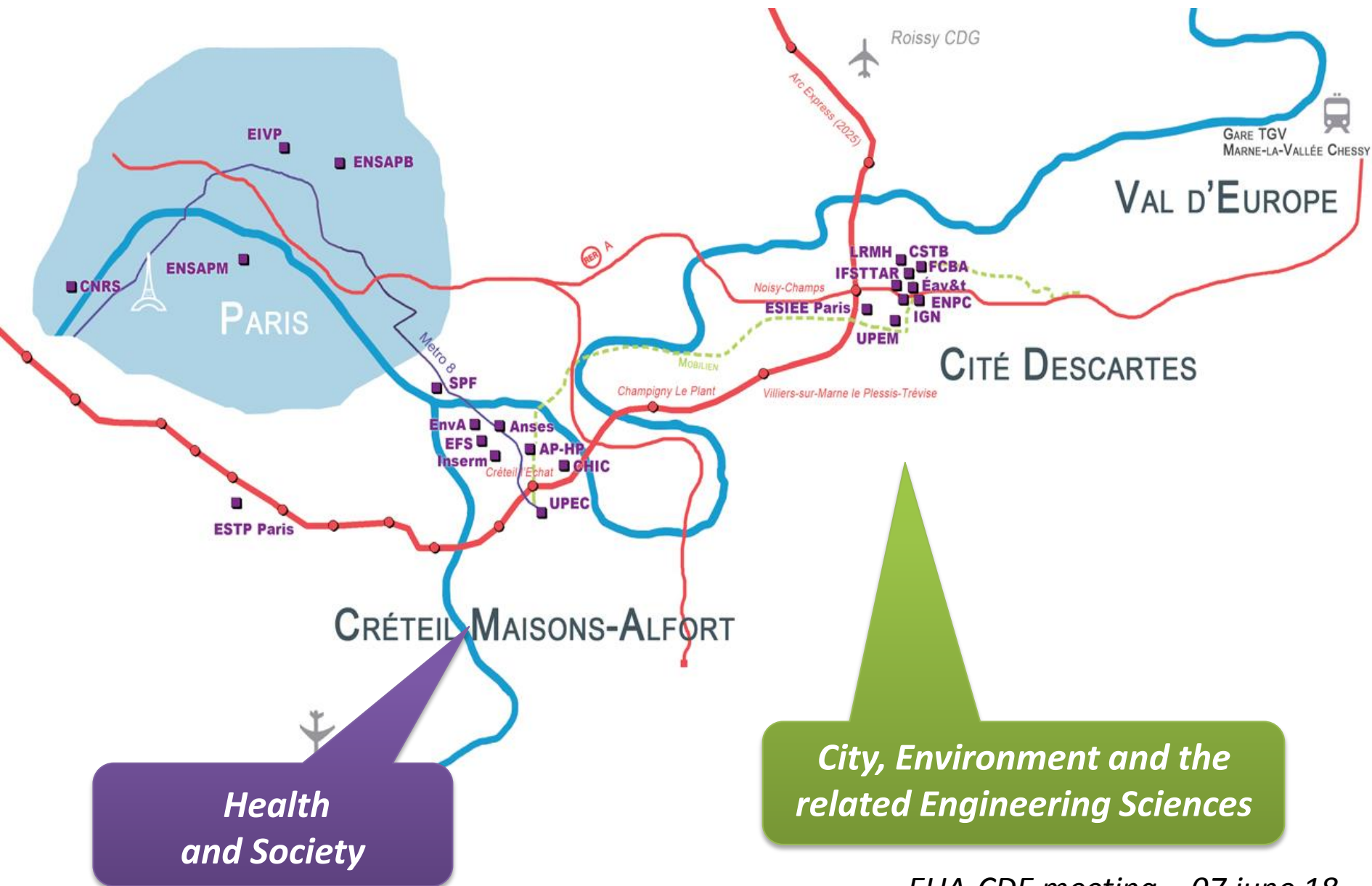
■ **70** research units

- **1 800** permanent **academics and researchers**
- **500** engineers and technicians

■ **50 HDR** (= professor equivalency)/year

■ **100** active **international partnership** agreements among members





February 2017

10-years initiative project awarded  
Financial support by the french  
government

Theme « The city of Tomorrow »

- Resource and energy efficient city
- Safe and resilient city
- Citizen centred smart city

Site of Cité Descartes

7 partners members of UPE

Specific human and financial means

Dedicated to this theme ...

... Especially for doctorate (calls for  
projects)



## Department of Doctoral Studies

- Organization and management of the doctoral education for the all 22 members at UPE ...
- Management of the professionnall transversal trainings/courses
- Organization of events to promote the doctorate
- Initiation and follow-up of transverse projects on the doctorate

## Department of Doctoral Studies

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- Management of the professionnall transversal trainings/courses
- Organization of events to promote the doctorate
- Initiation and follow-up of transverse projects on the doctorate
- Mutualization of the means, ressources and practices between the doctoral schools ...
- Harmonization of procedures and documents between the doctoral schools ...



## 8 Doctoral Schools

many  
various  
fields ...

### SPECIALITES DU DOCTORAT

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>▪ <i>Ecole doctorale "cultures et société" (CS)</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Arts</li> <li><input type="checkbox"/> Histoire</li> <li><input type="checkbox"/> Langue et littérature françaises</li> <li><input type="checkbox"/> Langues et littératures anciennes</li> <li><input type="checkbox"/> Langues et littératures étrangères</li> <li><input type="checkbox"/> Philosophie</li> <li><input type="checkbox"/> Sciences de l'information et de la communication</li> <li><input type="checkbox"/> Sciences de l'éducation</li> <li><input type="checkbox"/> Sciences du langage</li> <li><input type="checkbox"/> Sciences sociales</li> <li><input type="checkbox"/> STAPS</li> </ul> </li> <li>▪ <i>Ecole doctorale "ville, transports et territoires" (VTT)</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Aménagement de l'espace, Urbanisme</li> <li><input type="checkbox"/> Architecture</li> <li><input type="checkbox"/> Génie urbain</li> <li><input type="checkbox"/> Géographie</li> <li><input type="checkbox"/> Transport</li> <li><input type="checkbox"/> Histoire</li> <li><input type="checkbox"/> Sciences économiques</li> <li><input type="checkbox"/> Sociologie</li> </ul> </li> <li>▪ <i>Ecole doctorale "mathématiques et STIC" (MSTIC)</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Electronique, optronique et systèmes</li> <li><input type="checkbox"/> Informatique</li> <li><input type="checkbox"/> Mathématiques</li> <li><input type="checkbox"/> Sciences de l'information géographique</li> <li><input type="checkbox"/> Traitement du signal et des images</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▪ <i>Ecole doctorale "sciences, ingénierie, environnement" (SIE)</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Chimie</li> <li><input type="checkbox"/> Génie civil</li> <li><input type="checkbox"/> Génie des procédés</li> <li><input type="checkbox"/> Géotechnique</li> <li><input type="checkbox"/> Mécanique</li> <li><input type="checkbox"/> Physique</li> <li><input type="checkbox"/> Sciences de l'ingénieur</li> <li><input type="checkbox"/> Sciences de l'univers et environnement</li> <li><input type="checkbox"/> Sciences des matériaux</li> <li><input type="checkbox"/> Sciences et techniques de l'environnement</li> </ul> </li> <li>▪ <i>Ecole doctorale "organisations, marchés, institutions" (OMI)</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Droit</li> <li><input type="checkbox"/> Philosophie pratique</li> <li><input type="checkbox"/> Sciences de gestion</li> <li><input type="checkbox"/> Sciences économiques</li> <li><input type="checkbox"/> Sciences politiques</li> <li><input type="checkbox"/> Sociologie</li> </ul> </li> <li>▪ <i>Ecoles doctorales "agriculture alimentation biologie environnement santé" (ABIES) et "sciences de la vie et de la santé" (SVS)</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Sciences du vivant</li> </ul> </li> <li>▪ <i>Ecole doctorale "santé publique" (SP)</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Biostatistiques</li> <li><input type="checkbox"/> Épidémiologie</li> <li><input type="checkbox"/> Génétique statistique</li> <li><input type="checkbox"/> Recherche clinique</li> <li><input type="checkbox"/> Sciences économiques</li> <li><input type="checkbox"/> Sociologie</li> </ul> </li> </ul> |
|--|---|



# The « fundamentals » of the Doctorate

## Doctoral education ...

*... is a training in and through research*

*... is a professional research experience*

*... includes a personal research work carried out by the PhD student*

*... concerns work of scientific, economic, social, technological  
or cultural interest*

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## Doctoral degree ...

*... issued by a public institution of accredited higher education*

*... possibly obtained through initial formation or by training throughout the life*

*... acknowledges specific skills making it possible to exercise a professional activity, in all fields, in public or private domains*

## **National Directory of Professionnal Certifications**

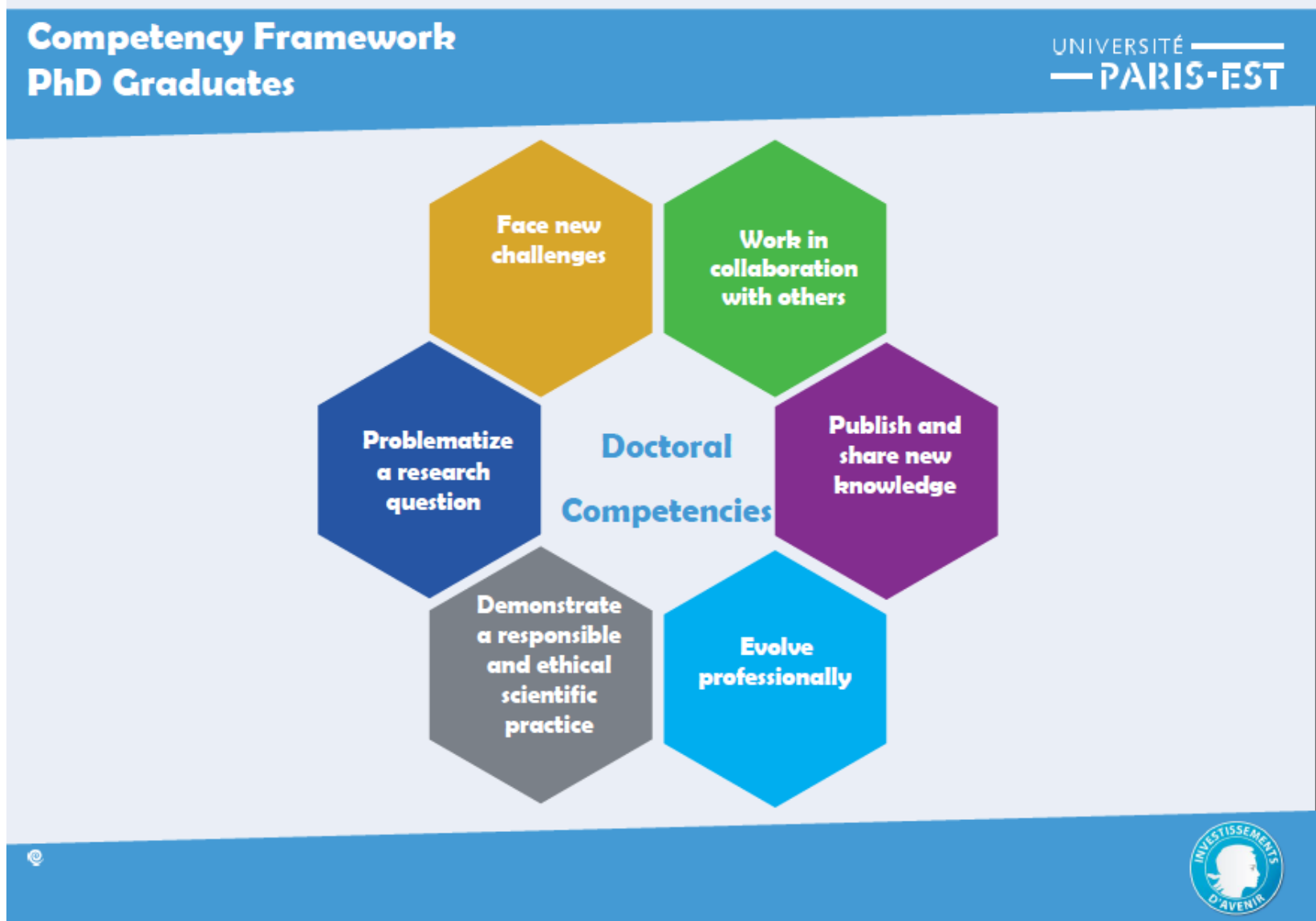
- enrollment of the PhD for the first time, before summer 2018
- real recruitment tool for business leaders and actors in the socio-economic world

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## List of 6 skills groups

- conception and development of a scientific approach in research
- implementation of this scientific approach in research
- valorization and transfer of the results obtained by this approach
- scientific and technological watch, state of the art
- diffusion of scientific and technical culture, training
- management of teams dedicated to the research project





## Two specific paths to obtain the PhD degree at UPE

- Specific expertise before the registration
- Registration any time during the year
- 1 year process before the defense



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**Thesis on Works**      *(Thèse sur Travaux, TST)*



**Doctorate by Validation of Acquired Experience**

*(Doctorat par Validation des Acquis de l'Expérience, DVAE)*

## ***Presentation fo the two specific paths TST and DVAE***

- Specific/Targeted candidates
- Objectives and motivations of the candidates
- UPE procedure and steps
- Feedback on experiences
- Experimentation(s)

## Thesis on Works

- ✓ preparing a PhD when research work has already been done by the candidate
- ✓ different from the doctoral procedure by "Validation of Acquired Experience"
- ✓ taking into account the work and studies written by the candidate at the time of submission of his application
- ✓ not requiring a priori any new research

## Thesis on Works

### ***Different candidates with different background***

Research engineer

Engineer with research activities and productions

Expert or consultant in a specific field

Researcher in Research Department in private companies

Teacher in secondary or higher education

Doctor of medicine

Architecte

etc ...

## Thesis on Works

### ***Different candidates with quite similar motivations***

- Validation or recognition of achieved research works
- PhD thesis started years before but never achieved
- Need of a PhD diploma for an international career
- Need of a PhD diploma in a perspective of a promotion
- Acquisition of a legitimacy to supervise doctoral or master students

## Thesis on Works

### UPE procedure in 3 steps

1. Admissibility of the application file
2. Writing the manuscript
3. Defense of the thesis.

#### Step 1

- to verify that the candidate demonstrates a professional activity in relation to the level required by a doctoral training
- to check the quality of the candidate's file in order to reduce the risk of non-authorization to defend the thesis

#### Steps 2 and 3

Taking place over one single year with one-time registration

## Thesis on Works

28 candidates since 2013

only 2 notices of non-admissibility

increasing number of applications

Increasing number of requests for informations  
about this process



## Doctorate by Validation of Acquired Experience

### **French law of social modernization (January 17, 2002)**

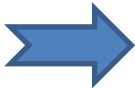
*“ any person engaged in the professional life for at least three years can request and obtain all or part of a diploma by validating the gains of his professional and personal experience through the validation of the acquired experience ”*

## Doctorate by Validation of Acquired Experience

### French law of social modernization (January 17, 2002)

*“ any person engaged in the professional life for at least three years can request and obtain all or part of a diploma by validating the gains of his professional and personal experience through the validation of the acquired experience ”*

The doctorate degree obtained by Validation of Acquired Experience sanctions:

- 
- the recognition of the **original character of a research approach** in a scientific or technological field
  - the **mastery** of a research subject
  - the capacity to **build a scientific research strategy**, to implement it. and to exploit the results

## Doctorate by Validation of Acquired Experience

### ***Opposition to this type of doctorate***

- Misunderstanding of the VAE approach by the academic colleagues
- Difficulty to convince the academic colleagues of the importance of the opening of the doctorate to other candidates from the socio-economic world
- Difficulty to implement the skills approach for the doctorate

## Doctorate by Validation of Acquired Experience

### ***Opposition to this type of doctorate***

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*Need to define and to display  
a fair, rigorous and transparent procedure*

## UPE procedure in 4 steps

1. Advice and guidance
2. Admissibility
3. Administrative procedure and support
4. Defense of the VAE manuscript  
and full or partial validation of the doctorate degree

## UPE Doctorate by VAE ... ... with 3 main challenges !

- ✓ To fairly **evaluate the admissibility** of a candidate file  
by evaluating the adequacy between the professional skills and experience,  
and the targeted certification level of doctorate
- ✓ To provide a **quality support** by two experts (VAE and academic)  
two experts familiar with both the VAE and academic approaches of the doctorate
- ✓ To evaluate the **full or partial validation** of the doctorate degree  
by making reachable recommendations within a reasonable time

## Doctorate by Validation of Acquired Experience

- ❑ DVAE Candidates with **backgrounds** and **careers** ...  
... much more **diverse** than for TST

- ❑ But with **similar motivations**

- recognition of activity, production and expertise through the highest education level
- need to get the doctorate degree for a promotion or for an international career
- willingness to confront the academic university world



## Doctorate by Validation of Acquired Experience

### Feedback of the UPE doctorate by VAE

- Procedure reviewed and validated in 2016  
with the setting of a VAE commission
- 59 candidates since 2013 (increasing number each year)
  - 25 candidates non-admissible
  - 6 candidates quit
  - 3 candidates redirected  
(other Doctoral school or institution, TST)
  - 20 candidates in progress
  - 5 defenses with full validation
- 2 experimentations
  - Architecture (10 candidates, 5 defenses to date)
  - Management sciences (7 candidates, 3 quit)

## Doctorate by Validation of Acquired Experience

### Experimentation in Architecture (2014-2018)

- ✓ Financial support from the UPE Innovative Education Programme
- ✓ Work on the definition of a scientific production in architecture
- ✓ Theory courses and training on the writing of the VAE dissertation
- ✓ 5 defenses achieved and 5 defenses to come

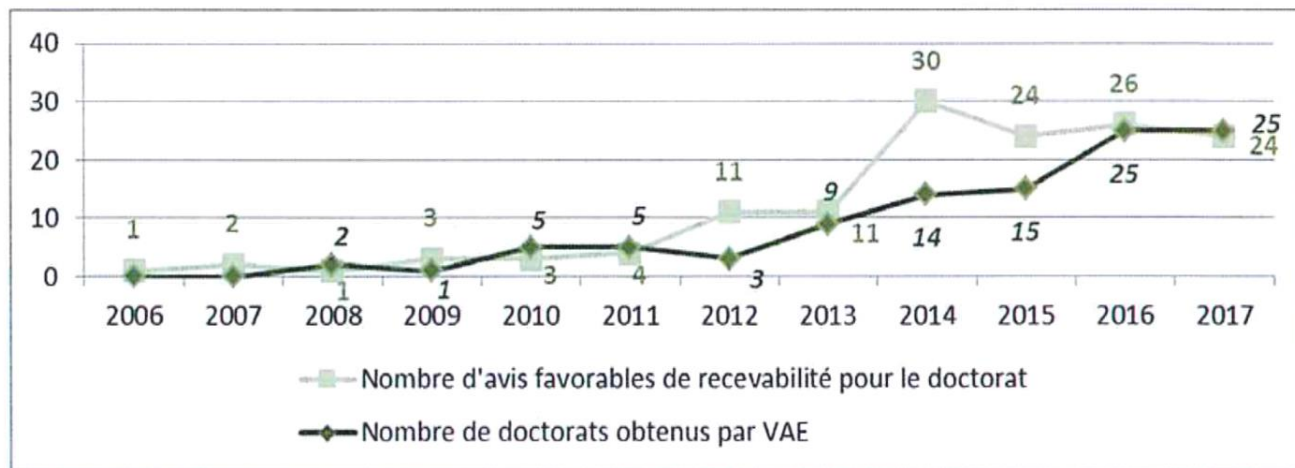
## Experimentation in Management Sciences (2016-2019)

- ✓ Deficit in teachers-researchers in the field of Management Sciences
- ✓ Willingness to diversify the profile of the doctors in the field of Management Sciences
- ✓ 4 candidates enrolled in 2016 in this two-year program
  - courses proposed by the National Federation for the teaching of business management
  - academic and VAE support provided for the candidates
- ✓ Call for new applications started during spring 2018

## Doctorate by Validation of Acquired Experience

- Between 2008 and 2017, 23 french institutions awarded **104 doctoral degree by Validation of Acquired Experience** (VAE) (25 for each year 2016 and 2017)  
*92 in Sciences, Health and Technology, 12 in Humanities and Social Sciences*
- Since 2006, **140** VAE applications for the doctorate have been evaluated as **admissible** (increasing number)

Graphique 1. Évolution du doctorat par VAE entre 2006 et 2017.



## CONCLUSION

- ✓ New environment around the doctorate
- ✓ More bridges between the socio-economic and academic university worlds
- ✓ Growing recognition of the specific skills of the doctors in the business world and industry
- ✓ The two specific paths to doctorate (TST and DVAE) participate to these exchanges between these two worlds
- ✓ Mutual enrichment of people working in worlds who know each other little or badly and who share little



*11<sup>th</sup> EUA-CDE annual meeting  
Ljubljana, june 2018*

Thanks for your attention !

Laurent GAUTRON

Department of Doctoral Studies  
Université Paris-Est (UPE)

[Laurent.Gautron@univ-paris-est.fr](mailto:Laurent.Gautron@univ-paris-est.fr)







## Personalized VAE and Academic Accompaniments

As part of the support, the preparation of the VAE file is framed by a pair of two specialists:

- **a VAE guide** proposed by the VAE committee; he/she provides support by ensuring that the candidate can meet the requirements of the validation process of the acquired experience;
- **an academic supervisor**, teacher-researcher referent, holder of an HDR\*, close to the subject of the candidate, proposed by the director of the doctoral school and appointed by the president of UPE. He/She supports more particularly on the elements of specialty.

*\*HDR = Habilitation à Diriger des Recherches (ability to conduct research)*

## The VAE file

The VAE file aims to provide proof that the candidate possesses the **doctoral skills** explained in the UPE framework that the candidate can consult on the UPE website.

It integrates two complementary analytical perspectives which are found in the two distinct parts of the manuscript.

### **1. An analysis of the conditions of evolution of the professional and personal career**

The candidate determines the meaning of his/her practice with regard to non-scientific conditions in order to highlight the main elements of his professional and social trajectory:

- by relying on knowledge production situations, in professional or extra-professional contexts, the candidate must demonstrate his **ability to analyze the elements of his experience** that contribute to the acquisition of his knowledge and skills, even methods that can **meet the level of requirement that the doctorate requires**;
- in this perspective, the questions must be related to the political, economic and social conditions and contexts of the scientific productions associated with the candidate's field of action or professional and social activity.

## 2. An analysis of the work and methods of one or more researches already carried out

The candidate determines his/her **ability to conceive, conduct and manage a research project** while guaranteeing the quality of his/her **methods of investigation and the scientific character of the results** obtained by means of a collaborative work (networked or in partnership with others). other institutions):

- the candidate must rely on **proven skills** that he/she has been able to mobilize both to **carry out research work** and to develop it; thus it is necessary to **define the disciplinary or interdisciplinary field** in which it is situated, as much as it must be able **to translate the currents of thought** that cross it;
- he/she defines his/her scientific posture to demonstrate the heuristic or social value of his/her research based on methodological care and rigor;
- he/she demonstrates his/her **ability to create and adapt instruments or procedures** developed by other researchers, or even other areas, which can be elements of comparison and enhancement of his/her research.

The candidate must explain his/her **most significant results** leading him/her to define the theoretical and critical references of his/her own scientific production.

## Composition of the validation jury

The defense order is signed by the UPE President, on the proposal of the director of the doctoral school concerned. The jury consists of at least six members, the majority of whom are HDR-educated professors and with the following characteristics:

- three members belonging to the establishment:
  - the presidency of the jury is ensured by the management of the doctoral school concerned or by a university professor or equivalent designated by it,
  - the supervising teacher-researcher, holder of an HDR,
  - the VAE coach, who brought the candidate to write his/her manuscript
- three reviewers, members external to UPE:
  - two external teacher-researchers, holders of an HDR
  - a competent professional to assess the nature of the achievements, in the field of professional expertise of the candidate

## Audition by the validation jury

The interview lasts between two and three hours and takes place in two stages:

- a presentation of the candidate to highlight the correspondence between the experience and the doctoral degree, based on the competency framework of a doctor established by UPE, and a reminder of the career path and the candidate's professional projects (minimum 30 minutes)
- an exchange with the members of the jury.

At the end of the interview, the jury deliberates and decides on the validation (total, partial or null).

a. In the case of partial validation, the jury recognizes the nature of the achievements and determines those for which a complementary prescription is proposed in order to acquire them within a given period. Training costs as well as organizational costs of the second jury of VAE are added. They are subjected to a precise evaluation sent by the BREVA. The president of the jury signs the report of interview which is countersigned by all the members of the jury.

The doctorate can only be issued when the president of the jury has been able to verify that the candidate has satisfied the jury's requirements (work requested, respect of deadlines).

b. In case of full validation, after deliberation, the jury transmits the report of defense countersigned by all the members of the jury with the report to the BREVA who prepares the attestation of diploma and publishes the final diploma for signature of the UPE President.

## PRICING

Amount and Pricing terms for the doctorate by the Validation of Acquired Experience

Successive Benefits	Internal Application	External Application
Registration fees (price 2015-2016)	396,10 €	396,10 €
Advice and Guidance	200 €	400 €
Admissibility	200 €	400 €
VAE Support	600 €	1 400 €
Academic Support	600 €	1 400 €
<b>TOTAL (rounded)</b>	<b>2 000 €</b>	<b>4 000 €</b>

Amount and Pricing terms for the Thesis on Works

Successive Benefits	External Application
Registration fees (Price 2015-2016)	396,10 €
Advice and Support	1 100 €
<b>TOTAL (rounded)</b>	<b>1 500 €</b>