

**Rapport n°2 :****Rapport d'évaluation de fin de phase probatoire du programme ISITE-BFC**

|   |                                      |
|---|--------------------------------------|
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| <b>Séance du Conseil d'administration</b> | 16 juillet 2020                      |

- Pour délibération
- Pour échange/débat, orientations, avis
- Pour information
- Autre

Le rapport d'évaluation de fin de phase probatoire du programme ISITE-BFC sera présenté et discuté en séance en présence de M. le Recteur de la région académique et des chefs d'établissements, membres fondateurs d'UBFC.



# End-of-Probationary-Period Evaluation Report

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## **Important**

The document uploaded to the submission site must follow the template provided herein, supplemented by the texts of the project principal investigator, in strict compliance with the document structure (parts, sections, paragraphs, titles, etc.).

## **Important**

This document will comprise **30 pages at the most**, excluding tables and indicators (12-point character font, single line spacing), divided into **25 pages for the summary and the first two chapters, and 5 pages at the most for the third chapter**. The structure of the evaluation report cannot be changed. The questions formulated within the different paragraphs belong to this structure and must remain apparent. The same goes for the proposed tables.

The evaluation report must be designed according to the key objective of the IDEX/ISITE action, namely to create in France research-intensive universities of international standing, each referred to subsequently in this document as "Target University", and therefore defined as a competitive establishment, whatever the chosen form of organization, to which the trajectory leads and which brings together, in an internationally visible manner, the research and course resources.

This report must be written in English.

|   |   |
|---|---|
| <b>Full title of the IDEX/ISITE</b>                     | <b>ISITE-BFC</b><br><b>Initiative for the SITE Bourgogne Franche-Comté</b>  |
| <b>Key words</b>  | <ul style="list-style-type: none"> <li>• <b>Advanced materials &amp; processes:</b> (nano)materials &amp; composites, durable chemistry, structured thin films, functional surfaces, micro/nano-material processing, nuclear component metals.</li> <li>• <b>Integrated smart systems &amp; underlying components:</b> micro/nano-techs/robotics, nonlinear (nano)photonics, new computing paradigms, phononics, time&amp;frequency components, sensors.</li> <li>• <b>Hydrogen energy, electric &amp; thermal energy cogeneration:</b> power generation materials &amp; systems (stationary, transportation, microgrids), electrical and thermal energy conversion systems.</li> <li>• <b>Sustainable territories: complexity &amp; transitions:</b> evolving territories; land use; peopling systems; long term changes; economical &amp; social cooperation.</li> <li>• <b>“Livelsystem” &amp; environmental change processes, agroecology:</b> ecosystem services; cropping systems; environmental policies; landscape dynamics ; social-ecological systems.</li> <li>• <b>Innovation in integrated food chains: production &amp; behaviours:</b> agrifood production; innovative food products; behaviours &amp; food; terroirs, quality &amp; know-how.</li> <li>• <b>Health:</b> pharmaco-imaging, theranostic, lipoprotein, immunology, inflammation, cancer, oncogenetic, lipids, genetic and developmental disorders.</li> <li>• <b>Innovative smart systems technologies:</b> drug delivery, lab-on-a-chip, new imaging probes.</li> <li>• <b>Cognitive sciences:</b> cognitive stimulation, rehabilitation, neural plasticity, ergonomics, virtual reality.</li> <li>• <b>Human &amp; Social sciences:</b> business &amp; economics, communication, medical ethics, sociology.</li> </ul> |
| <b>Start date</b><br><b>End date</b>                    | <b>23 April 2016</b><br><b>31 December 2020</b>   |
| <b>IDEX/ISITE website</b>                               | <a href="http://www.ubfc.fr/excellence/isite-bfc/">http://www.ubfc.fr/excellence/isite-bfc/</a>   |
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| <b>Institution leading the project (Project leader)</b> | Name: Université Bourgogne Franche-Comté (UBFC)<br>Type of institution: COMUE   |
| <b>Date of writing</b>                                  | <b>9 July 2020</b>  |

**IMPORTANT NOTICE : REFERENCING THROUGH PROJECT DOCUMENTS**

**AP = Amended Project.** Reference to section x.y of the Amended Project document appears as AP.x.y

**DD = Delta Document.** Reference to section x.y of the Delta Document appears as DD.x.y

**Tables** are mandatory inputs specified in the template instructions.

**Panels & Figures** added by the report edition team were not explicitly expected in the template instructions.

**Texts over a light orange background are mandatory milestones in the template instructions.**

| <b>ISITE-BFC CONSORTIUM</b>                     |   |  |                    |
|---|---|--|--------------------|
| <b>ACRONYME/<br/>ACRONYM</b>                    | <b>NOM DE L'ÉTABLISSEMENT D'ENSEIGNEMENT SUPÉRIEUR ET DE<br/>RECHERCHE / NAME OF ACADEMIC INSTITUTION</b>   | <b>STATUT / LEGAL STATUS</b>   |                    |
| UBFC  | UNIVERSITÉ BOURGOGNE FRANCHE-COMTÉ (TARGET UNIVERSITY)  | COMUE  |                    |
| <b>UBFC MEMBERS</b>                             | ASD   | AGROSUP DIJON - INSTITUT NATIONAL SUPÉRIEUR DES SCIENCES AGRONOMIQUES, DE L'ALIMENTATION ET DE L'ENVIRONNEMENT | ENGINEERING SCHOOL |
|   | BSB   | BURGUNDY SCHOOL OF BUSINESS  | BUSINESS SCHOOL    |
|   | ENSAM   | ECOLE NATIONALE SUPÉRIEURE DES ARTS ET MÉTIERS   | ENGINEERING SCHOOL |
|   | ENSMM   | ECOLE NATIONALE SUPÉRIEURE DE MÉCANIQUE ET DE MICROTECHNIQUES  | ENGINEERING SCHOOL |
|   | UB  | UNIVERSITÉ DE BOURGOGNE  | UNIVERSITY         |
|   | UFC   | UNIVERSITÉ DE FRANCHE-COMTÉ  | UNIVERSITY         |
|   | UTBM  | UNIVERSITÉ DE TECHNOLOGIE DE BELFORT MONTBÉLIARD   | ENGINEERING SCHOOL |
|   | <b>NOM DE L'ORGANISME DE RECHERCHE / NAME OF RESEARCH ORGANISATION</b>  | <b>STATUT / LEGAL STATUS</b>   |                    |
| CEA   | COMMISSARIAT À L'ÉNERGIE ATOMIQUE ET AUX ÉNERGIES ALTERNATIVES  | NATIONAL RESEARCH ORGANIZATION   |                    |
| CNRS  | CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE  | NATIONAL RESEARCH ORGANIZATION   |                    |
| INRAE<br>(INRA IN PREVIOUS ISITE-BFC DOCUMENTS) | INSTITUT NATIONAL DE RECHERCHE POUR L'AGRICULTURE, L'ALIMENTATION ET L'ENVIRONNEMENT. INRAE results of the merging on January 1 <sup>st</sup> , 2020 of the <i>Institut National de Recherche en Sciences et Technologies pour l'Environnement et l'Agriculture</i> (IRSTEA) with the <i>Institut National de la Recherche Agronomique</i> (INRA), the latter being among the founding members of the ISITE-BFC consortium. | NATIONAL RESEARCH ORGANIZATION   |                    |
| INSERM  | INSTITUT NATIONAL DE LA SANTÉ ET DE LA RECHERCHE MÉDICALE   | NATIONAL RESEARCH ORGANIZATION   |                    |
|   | <b>AUTRES PARTENAIRES / OTHER PARTNERS</b>  | <b>SECTEUR(S) D'ACTIVITÉ / FIELD OF ACTIVITY</b>   |                    |
| CHU BESANÇON                                    | CENTRE HOSPITALIER UNIVERSITAIRE DE BESANÇON  | HEALTH   |                    |
| CHU DIJON                                       | CENTRE HOSPITALIER UNIVERSITAIRE DE DIJON   | HEALTH   |                    |
| CGFL  | CENTRE DE LUTTE CONTRE LE CANCER GEORGES FRANÇOIS LECLERC   | HEALTH   |                    |
| EFS   | ÉTABLISSEMENT FRANÇAIS DU SANG  | HEALTH   |                    |

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|----------|--|---------------------------------|------------------------|---------------------------------------|---|
|          | <b>SUMMARY + SECTIONS 1 &amp; 2 INCLUDING MANDATORY TABLES</b>   | 13,6                            | 38                     | 24,4                                  | 25  |
|          | <b>SECTION 3</b>   | 0                               | 5                      | 5                                     | 5   |
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## SUMMARY

ISITE-BFC aims at boosting the target university Université Bourgogne Franche-Comté (UBFC) on the international scene by defining 3 priority areas capitalizing on scientific fields where UBFC matches international excellence standards, namely: (1) Advanced Materials, Waves & Smart Systems; (2) Territories, Environment, Food; (3). Comprehensive Individual Care. As a federation uniting the higher education & research organisations of Région Bourgogne Franche-Comté (BFC), the UBFC community counts 67000 students & 7200 employees, among which 2200 Faculty members active in 51 laboratories. UBFC has a long standing collaboration with 4 national research organisations & 4 health institutes. These natural partners are also participating to ISITE-BFC. Their employees involved in laboratories jointly operated with UBFC, bring the total ISITE-BFC consortium staff to 8800 employees.

ISITE-BFC impulsed strong transformations during 2016-2020 because the consortium successfully deployed all the instruments supporting excellence and internationalisation that were planned in 2015, some of them not previously existing in France, namely:

- Making UBFC appearing on the international market of job offers of tenure tracks and double appointed coaches of very high reputation.
- Talent management policy (junior & senior fellowships).
- Transformation of the language of 16 research master trainings and the consequences thereof: increased inward flow of international students; 54 international agreements bound to these masters; increased opportunities of international mobility for students.
- Using selection criterion matching international standards, triggering 79 research projects, incl. 16 projects orienting 30 companies (21 in BFC) along ISITE-BFC priorities. Until June 2019, these projects generated 149 papers recorded in Web of Science.
- To trigger the UBFC alumni network for PhD & UBFC Master students. The UBFC project successfully filed to the PIA IDEES call plans to extend this network to all BFC students.

The ISITE-BFC dynamics stimulated strong synergies as testified by the successes of UBFC at the PIA NCU (Innovative Training) and EUR (Graduate School) calls. The latter is amplified by the ambitious project that UBFC successfully filed to the PIA SFRI call. Aiming at the creation of a UBFC International Graduate School Institute (UBFC-InteGrate), this project pools PhD & Master programs into three Graduate Schools, one for each ISITE-BFC priority.

Demonstrating a pertinent strategy, 73% of PhD thesis sponsored by industries are related to ISITE-BFC priorities. The combined action of ISITE-BFC, academic staff, SATT & incubator is illustrated by the involvement of companies of all sizes in frontier of knowledge research such as programmable matter or innovative biotechnologies applied to food & medicine.

From the governance point of view, the commitments defined in 2015 have all been respected. Going beyond these commitments is illustrated by the UBFC Divisions piloting the HR policy tightly bound to the research strategy streamlined by the 3 ISITE-BFC priorities or by redirecting 54% of the published vacant positions to the ISITE-BFC priority areas. However, other steps that would have been necessary beyond the 2015 commitments, such as the double affiliation of both staff and students, have not been taken. To address these and other issues that need to be fixed in order to complete the realization of the target university, the UBFC members decided to transform the COMUE into an “Experimental COMUE” and, consistently, triggered a committee in charge of delivering the new UBFC statutes by June 2021. The latter date results from the covid-19 outbreak that delayed the UBFC Board election (initially planned in March 2020) to the end of 2020.

## 1. ACHIEVEMENTS

### 1.1. TAKING INTO ACCOUNT THE JURY'S RECOMMENDATIONS

| TABLE 1.1 : HOW JURY'S RECOMMENDATION HAVE BEEN TAKEN INTO ACCOUNT. |   |  |  |
|---|---|--|--|
| #   | Jury's recommendation   | Response given   | Any commitment(s) made accordingly   |
| 1   | “Although international joint degrees have recently been developed, international connections and PhD programs appear under-developed, overall; => Intensify international connections” | 54 agreements with international partners signed by UBFC during 2017-2020, most of them involving UBFC Masters funded by ISITE-BFC   | A UBFC Vice-President will be appointed to coordinate international relations by application of the procedure defined in June 2019 aiming at the coordination of UBFC member international relation services   |
| 2   | “Inadequately exploited technology transfer => Intensify technology transfer”   | <ul style="list-style-type: none"> <li>• New projects with 30 industry partners cofinanced by ISITE-BFC.</li> <li>• 2017 : Merging incubators of former Burgundy and Franche-Comté regions into the single incubator DECA-BFC (<a href="https://deca-bfc.com">https://deca-bfc.com</a>). UBFC is now member of DECA-BFC and 75% of the incubator projects are related to the 3 ISITE-BFC priority areas.</li> <li>• 73% of PhD Thesis sponsored by industries related to ISITE-BFC priorities</li> </ul> | <ul style="list-style-type: none"> <li>• Creating a committee in charge of coordinating the already existing various instruments dedicated to transfert &amp; exploitation of research results</li> <li>• Support actions to entrepreneurship detailed in section 3.3.</li> </ul>  |
| 3   | “Governance bodies are too large => Improve institutional governance with more effectively operating bodies”  | UBFC statute changes are currently worked out (see sec. 2) to set up a “COMUE expérimentale”.  | See commitments related to statute changes in Table 2.1 of sec. 2.   |
| 4   | “Allocation of positions to the I-SITE areas of research is limited (10%)”  | Since 2017, 54 % of the research profiles of the published vacant positions were related to the ISITE-BFC priority areas. See section 1.5.2 & Panel 1.4  | Research profiles of vacant position will be established at UBFC level, thereby providing another reason why the situation is now <i>beyond</i> the target set in 2015.  |
| 5   | “Implement publication strategy”  | UBFC scientific signature applied since 2016 in the “address” bibliometry field of scientific papers. In <i>Web of Science Core Collection</i> , the signature compliance rate reached 75% in 2019. However, UBFC does not yet appear in ARWU or Leiden rankings because the latter refuse to take any French COMUE into account so far (see indicators in sec. 4.1.5 ).   | The target consists in obtaining that UBFC appears in the <i>Web of Science</i> bibliometry field “Enhanced Organisation Name” (used by rankings rather than the “address” field) instead of any UBFC member while being certain that UBFC would then be taken into account by ARWU & Leiden rankings after the statute change expected in 2021. See details in lines 4 & 7 of Table 2.1 of section 2. |



## 1.2. PROJECT CHANGES AT THE TIME OF GRANT AGREEMENT PREPARATION

At the time of the contract preparation, the significant changes to the project are the reductions of each budget line because the total budget granted to ISITE-BFC was significantly lower than the one claimed in the project submission form.

## 1.3. STRUCTURING AND GOVERNANCE

### 1.3.1. CONSTITUTION AND STRUCTURING OF THE "TARGET UNIVERSITY"

**Has the "Target University" been created or is it in the process of being created?**

#### 1.3.1.1. UBFC CREATED IN 2016

Since its creation in 2016, the construction of the UBFC federation has progressed significantly. UBFC Steering Committee, Board and UBFC Academic Council are operational. Their minutes can be consulted on line: <https://www.ubfc.fr/ubfc/gouvernance/instances/>

**What institutional changes have taken place over the 4 years?**

#### 1.3.1.2. UBFC GOUVERNANCE

The UBFC Federation integrates 3 universities and 4 engineering & management schools. They all feature the same degree of integration. Most initiatives start from the **UBFC Steering Committee** gathering the heads of 7 the federation members & the UBFC President before being debated/ammended/approved by UBFC Board and Academic Council.

#### 1.3.1.3. UBFC DIVISIONS

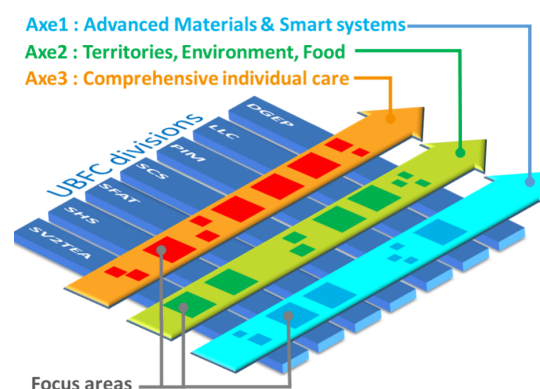
UBFC Divisions were set up in 2018 (French acronyms refer to Fig.1.1): 1. Natural Sci. & Tech. (SFAT); 2. Life, Earth, Environment & Food Sci. (SVTEA); 3. Health, Cognition & Sport SCS) ; 4. Engineering & Management (PIM); 5. Law, Economy & Politics (DGEP); 6. Literature, Languages & Communication (LLC); 7. Human & Social Sciences (SHS). Their positioning relatively to the ISITE-BFC priorities (Fig. 1.1) is inspired by the Utrecht University benchmark performed in 2015 (Panel 2.2). The intersections between priority axes and the discipline reflected in the UBFC divisions define « focused areas » developed dynamically both top-down wise and bottom-up wise (through calls internal to the ISITE-BFC consortium) with the support of ISITE-BFC funding. Until 2020, their main roles were: (a) the ranking of internal projects to be proposed for funding by local authorities; (b) establishing the profiles of tenure track positions hired by UBFC.

**What competences are already exercised jointly?**

#### 1.3.1.4. SUBSIDIARITY WITHIN UBFC FEDERATION

Within the UBFC federation, the subsidiarity is organised as follows:

Fig. 1.1: The research strategy features "focus areas" defined by the cross-fertilization of ISITE-BFC priority axes and UBFC divisions ("Pôles thématiques"). Using ISITE-BFC funding, focus areas popped up as bottom-up projects selected among the proposals submitted to the three calls internal to the ISITE-BFC consortium or as top-down infrastructure projects.



| PANEL 1.1: COMPETENCE CATEGORIES VS PERIMETER OF FEDERATION AND FEDERATION MEMBER BOARDS | COMPETENCE CATEGORIES |             |                     |
|--|-----------------------|-------------|---------------------|
|  | DISTRIBUTED           | COORDINATED | TRANSFERRED TO UBFC |
| PERIMETER OF UBFC BOARD  |                       | <b>X</b>    | <b>X</b>            |
| PERIMETER OF BOARD OF A UBFC MEMBER  | <b>X</b>              | <b>X</b>    |                     |

- UBFC fully operates the competences transferred by its members. For these competences, decision, budget allocation and task execution are endorsed by UBFC. Note that, as a result of the PIA1, some competences related to transfer & valorisation of research activities had already been transferred to the local SATT.
  - Via UBFC Steering Committee, UBFC Divisions & service coordination poles, UBFC coordinates service activities distributed among its members. The coordination objective is to reach consensual decisions to set up effective cooperation, homogenisation and synergies bringing added-values for UBFC and its members. The budget and the execution of a coordinated action is the responsibility of each UBFC member.
  - Distributed competences are fully endorsed by each UBFC member. Examples: campus/building (management, maintenance safety), training up to bachelor level.
- Formally, this subsidiarity principle is translated into the competence perimeters of the UBFC Board vs the ones of the Boards of each UBFC member as summarized in Panel 1.1.

***What competences are effectively transferred to the "Target University"?***

***Will these competences be enhanced in the future?***

Panel 1.2 explaining how main competences are endorsed within the UBFC federation also shows that all 2015 commitments have been respected by the UBFC members. Some major competences highlight the role of UBFC as the key actor for the site research strategy:

- UBFC is now a joint operator of the 51 research laboratories (June 2020: signature of the formal agreement still pending for 18 laboratories jointly operated by CNRS & INSERM). Consistently, UBFC pools the current State research fundings of all UBFC members into a single research budget distributed among laboratories using a common reference frame.
- A specific committee including all ISITE-BFC consortium members is dedicated to the strategic orientation of investments in the infrastructure of scientific & technical platforms.
- In 2017, the six doctoral schools were transferred to UBFC, thereby meaning an important effort, monitored by the UBFC Academic Council, to achieve standards that are homogeneous across UBFC members. **UBFC is the only organization in BFC delivering PhD.**
- In 2020, for testing purpose, UBFC Divisions (sec. 1.3.1.3 & Fig. 1.1) establish the research profiles of a reduced set of Faculty positions to be recruited by UBFC members. In 2021, they will define the research profiles of *all* UBFC member Faculty positions.

**1.3.2. HR POLICY OF THE "TARGET UNIVERSITY"**

***Which body decides on the creation and/or assignment of positions?***

A Faculty position is linked to an UBFC member organisation. The Board of the latter defines the broad teaching profile (such as "cell biology", "law", etc) when any of its positions is vacant. On this basis, the relevant UBFC Division proposes the research profile to the UBFC Steering Committee that is in charge to request the approval by the UBFC Board.

**PANEL 1.2: OVERVIEW OF MAIN COMPETENCES INSIDE THE UBFC FEDERATION VS 2015 COMMITMENT COMPLIANCE.**

| DISTRIBUTED  | COORDINATED                                     | TRANSFERRED TO UBFC OR TRANSFERRED TO SATT  | COMMITMENT COMPLIANCE |
|--|---|---|-----------------------|
| Budget of salaries of Faculty members & of most of support staff             | Recruitment of Faculty members (see sec. 1.3.2) | Budget and Recruitment of PhD students & non permanent research staff (post-docs, tenure tracks, coaches, see sec. 1.5.2)   | Yes                   |
| Campus maintenance   | Use of buildings                                | Running budgets of research laboratories  | Yes                   |
|  |   | Management of national (ANR) & European (H2020) research projects   | Yes                   |
|  |   | To SATT : Intellectual property rights  | Yes                   |
|  |   | To SATT : Partnerships with industry: <ul style="list-style-type: none"> <li>• ASD &amp; UB : fully transferred</li> <li>• Other UBFC members: transferred if bound to IPR</li> </ul> | Yes                   |
|  | International relations                         |   | Yes                   |
|  |   | Doctoral Schools: Registration, management & degrees of PhD students and habilitation.  | Yes                   |
| Registration, management & degrees of master students not registered by UBFC | Teaching in UBFC masters taught in English      | Registration, management & degrees of students in UBFC masters taught in English  | Yes                   |
| Registration, management & degrees of bachelor students                      |   |   | Yes                   |

**Who appoints the recruitment committee and how is it made up ?**

A recruitment committee is proposed by the relevant UBFC Division to the Board of the UBFC member that publishes the vacant position. The latter formally appoints the committee. Half of the committee are experts who are currently affiliated to laboratories outside of the ISITE-BFC perimeter. The other half are experts of ISITE-BFC member organisations.

**What policy is this committee mandated to implement to select the person to recruit?**

Recruitment committees are mandated to provide a ranking of candidates to the Board of the UBFC member publishing the vacant position. The ranking must favor the candidate offering the best compromise between excellence in research, teaching & management experience. Preference must be given to candidates with proven international experience and, relatively to age & discipline, high publication/citation records in international journals. For associate professors, a special attention must be given to proven capacity to obtain research grants or support by sponsors. In case of deciding between candidates with equivalent merits, the female gender preference is applied before the national preference.

**Which procedure ensures compliance of recruitment with the HR policy of the Target university?**

The compliance to the HR policy is secured by the chain of decisions by assemblies that are as many checking opportunities: Board of the UBFC member that publishes the vacant position, UBFC Division, UBFC Steering Committee and UBFC Board & Academic Council.

**1.3.3. GOVERNANCE OF THE IDEX/ISITE PROJECT**

**What changes have taken place with regard to project governance?**

**1.3.3.1. ISITE-BFC STEERING COMMITTEE**

The main ISITE governance body is the **ISITE-BFC Steering Committee (SC)** gathering the representatives of the ISITE-BFC consortium members. Each of them has a single voting

capacity. The SC decides on the basis of single majority votes. At least once a year, the SC establishes the rolling budget breakdown of ISITE-BFC to be approved by the UBFC Board. Within the SC, the national research bodies CNRS, INRAE & INSERM are granted with a specific role in the governance scheme: when voting the budgets, the single majority must include them. They are therefore guarantors against any deviations of the project plan. A major recent evolution is that the SC is now in capacity to integrate the governance all PIA projects related Research and Training at master and PhD level (see details in section 3.1).

**What are the main decisions taken jointly by the governing bodies in place?**

**1.3.3.2. DECISIONS BY THE ISITE-BFC STEERING COMMITTEE**

- Allocation of budgets to actions supported by ISITE-BFC funds.
- Configuring the calls internal to the ISITE-BFC consortium: templates, selection criterions, time schedule, monitoring of execution, arbitration of ambiguous cases.
- International experts database to review subissions to the calls internal to the consortium.
- Nominating the 9 members of the International Advisory Board in charge of establishing the final rankings of when recruiting tenure tracke & coaches and when selecting projects on the basis of calls internal to the ISITE-BFC consortium.
- Coupling of ISITE-BFC funding to future or already running PIA projects (see example in UBFC application IDEES Call).

**1.4. TRAJECTORY**

The respect of the 2015 commitments is demonstrated by Panels 1.2 and Table 1.2 below.

| # | Operational commitment<br>(Reference: Table Q of Amended Project) |   | Achievement (%) | Planned date of achievement | Any difficulties  | Explanation for the level of achievement and for any divergences  |
|---|---|---|-----------------|-----------------------------|---|---|
|   | Indicator   | Target  |                 |                             |   |   |
| 1 | Definition of the target university                               | Federal Research University UBFC converging toward the Cambridge model                  | Reset necessary | 2016                        | Governance crisis culminated in 2018                    | A statute change appeared necessary in 2019. New statute work bound to 2020 UBFC elections were postponed by covid-19 outbreak. |
| 2 | Site specialisation strategy (Research & training)                | Rising up UBFC Divisions as tools of the specialisation strategy                        | 100 %           | 2016                        | Implementation delayed in 2018, now operational         | UBFC Divisions now in charge of editing research profiles of vacant positions, of ranking internal projects, etc.               |
| 3 | Single scientific signature                                       | UBFC visible in international rankings  | 50%             | 2016                        | “address field”: 75%:<br>“enhanced org.-name” field: 0% | See line 5 of Table 1.1 in Sec 1.1. and lines 4 & 7 in Table 2.1  |
| 4 | Redeployment of staff towards ISITE-BFC priorities                | Redirection of 10% of the yearly vacant Faculty positions to the three excellence areas | Beyond target   | 2017                        |   | See line 4 of Table 1.1 in Sec 1.1 and Panel 1.4 in Sec. 1.5.2.   |

**TABLE 1.2: ACHIEVEMENT OF 2015 OPERATIONAL COMMITMENTS**

| #  | Operational commitment<br>(Reference: Table Q of Amended Project) |  | Achievement (%) | Planned date of achievement | Any difficulties   | Explanation for the level of achievement and for any divergences  |
|----|---|--|-----------------|-----------------------------|--|---|
|    | Indicator   | Target   |                 |                             |  |   |
| 5  | Profiling of Faculty positions redirected to ISITE-BFC priorities | Relevant UBFC divisions coordinate the profiling of Faculty positions redirected to ISITE-BFC priority areas. Profiles proposed to the UBFC member publishing the vacancy.   | Beyond target   | 2017                        | Delayed to 2020, in progress.  | UBFC Divisions provide research profile of all Faculty positions (not limited to ISITE-BFC priority areas)                                    |
| 6  | Faculty position recruitment standards and committees             | Unified standards of recruitment of Faculty members are worked out by the UBFC divisions. Membership of recruitment committees proposed to relevant assemblies of the UBFC member publishing the position.   | 100%            | 2017                        | Delayed to 2018, now operational   | Operational Implementation had to wait the set up of UBFC Divisions   |
| 7  | State endowment related to research                               | State endowment related to research is transferred to UBFC which tunes the distribution among laboratories.  | 100%            | 2017                        | Delayed to 2018, now operational   | Underestimated difficulty of defining a UBFC wide rule for distributing laboratory budgets.   |
| 8  | Relations to national research bodies CNRS, INRAE, INSERM         | UBFC is the main contractor with national research bodies CNRS, INRAE, INSERM, the UBFC members being third parties with rights & duties. Except for projects managed by CNRS, INRAE, INSERM, research contracts are managed at UBFC level, employment of PhD & Post-Docs by UBFC. | 99%             | 2018                        | June 2020: signature of agreement pending for labs jointly operated by CNRS & INSERM | UBFC is operator of 51 laboratories. All PhD students and post-docs paid by Regional, ANR and H2020 funds managed by UBFC are UBFC employees. |
| 9  | Registration of students  | Registration of students via a single internet gateway completed by affiliation to the UBFC member organization relevant to the selected training program.   | 0%              | 2018                        | Delayed by governance 2018 crisis  | Task to be endorsed by new governance team to be elected in 2020.   |
| 10 | Single UBFC doctorate degree in BFC                               | UBFC is the only organization awarding PhD in BFC  | 100%            | 2018                        | Earlier on target : Realised in 2017   | Work was triggered in 2015.   |
| 11 | Seals on degrees  | All diplomas will bear a single seal displaying both references to UBFC and the UBFC member operating the training program leading to the degree.  | 100%            | 2019                        | Legal uncertainties clarified in French law in autumn 2019.                          | Will be first applied for students getting their degrees in 2020  |
| 12 | Masters in English language                                       | UBFC awards degrees of masters taught in English & related to the ISITE-BFC priority areas. 9 such masters by 2020.  | Beyond target   | 2020                        |  | 16 UBFC master taught in English. First degrees delivered in 2020.  |
| 13 | Training programs delivered by the federal UBFC                   | UBFC member organization committed to facilitate the deployment of federal training programs on their premises and to allow that their Faculty member be involved in these programs  | 100%            | 2017                        |  | No problem to include UBFC training programs in Faculty member teaching hour count.   |

**TABLE 1.2: ACHIEVEMENT OF 2015 OPERATIONAL COMMITMENTS**

| #  | Operational commitment<br>(Reference: Table Q of Amended Project)     |   | Achievement (%) | Planned date of achievement | Any difficulties  | Explanation for the level of achievement and for any divergences   |
|----|---|---|-----------------|-----------------------------|---|--|
|    | Indicator   | Target  |                 |                             |   |  |
| 14 | Resources made available to the federal level                         | Via UBFC Steering Committee, UBFC members grant access to their resources in order to implement UBFC actions of all kinds, e.g: lab infrastructures, rooms; access to human resources such as: accounting, communication, law or internat. relation support, etc. | 25%             | 2016                        | Divergences on how to reach this target were underlying the 2018 governance crisis.         | 2019: Corrective action plan requested by French Ministry. Parts currently worked out. Bulk of plan to be endorsed by new governance team to be elected in 2020. |
| 15 | Quality control of UBFC training programs                             | UBFC divisions set up the quality control UBFC training programs.   | 50%             | 2018                        |   | Realised for Doctoral Schools. UBFC masters: in progress.  |
| 16 | Interoperability of computer network across UBFC member organizations | See AP.3.2.1.WP6  | 10%             | 2020                        | 27 M€ plan written. Implementation waits for funding  | Task to be endorsed by new governance team to be elected in 2020. Subset of budget of UBFC IDEES project.  |
| 17 | Yearly full cost of ISITE-BFC project                                 | Full cost three times higher as the PIA budget share  | 100%            | 2020                        | Rate is based on intermediate budget execution  | Final figures will be available at the end of the cost eligibility period (2022)   |
| 18 | ISITE-BFC budget  | 75% of ISITE-BFC budget focused on priority areas   | 100%            | 2020                        |   |  |
| 19 | Efficient governance  | Giving free hands to the project Steering Committee.  | 100%            | 2016                        |   |  |
| 20 | Empowering of project coordinator                                     | Distinguished full professor as project coordinator with the rank of UBFC vice-president. Coordinator will be granted the right to directly request resources from UBFC member organizations for the sake of operating ISITE-BFC WP's.                            | 50%             | 2016                        | Resourcing resources of UBFC member organization faced same difficulty as in line 14 above. |  |
| 21 | Selection of projects according to international standard             | Strategic Advisory Board comprising external members only and submission to project internal calls evaluated by external reviewers only.  | 100%            | 2016                        |   |  |
| 22 | Monitoring and coaching of ongoing actions                            | Monthly slide reports from each action, go/no go reviews at their mid-terms.  | 50%             | 2016                        | PI sent monthly reports. Go/no go reviews could not be implemented                          | Budget execution of many actions delayed until 2018 => difficult to review actions at their mid-terms.   |

## 1.5. OTHER ACHIEVEMENTS

### 1.5.1. TRANSFORMATIONAL NATURE AND ADDED VALUE

***What are the major achievements of the IDEX/ISITE and in what respects could they not have been achieved without the support provided by the PIA programme?***



ISITE-BFC implemented instruments that did not previously exist in France, namely :

- (a) Making a French University appearing on the international market of job offers of tenure track and double appointed coaches of very high reputation.
- (b) Talent management policy (junior & senior fellowships) unusual in French universities.
- (c) In only 4 years: transformation of the language of 16 research masters training and the consequences thereof: increased flow of international students; 54 international agreements bound to these masters; increased opportunities of mobility for students.

***In what respect do the IDEX/ISITE actions stem from a strategy that goes beyond simply funding and coordinating the operations carried out by the members?***

Beside the above features (a-c) original in the French context, ISITE-BFC dynamics enabled:

- To set-up UBFC Divisions that will pilot HR policy tightly bound to the research strategy.
- To trigger joint projects with 30 companies;
- To stimulate strong synergies in the UBFC community as testified by the successes of UBFC at the PIA NCU (Innovative Training) and EUR (Graduate School) calls
- Creating a Graduate School Institute integrating PhD & Master programs related to the three ISITE-BFC priorities (project submitted to SFRI call).
- To trigger UBFC alumni network for PhD & UBFC Master students. The UBFC project laureate of PIA IDEES call plans to extend this network to the all UBFC member students.

### 1.5.2. HR POLICY AND MOBILISATION OF RESOURCES OF THE IDEX/ISITE PROJECT

***What are the mechanisms for allocating the human resources? How is recruitment carried out? Which body decides on the creation and/or assignment of positions coming under the IDEX/ISITE? Who appoints the recruitment committee and how is it made up?***

ISITE-BFC actions are of three types:

- (1) Projects selected upon competitive calls internal to the consortium, mainly instruments devoted to research projects. In these cases, the allocation of HR is decided by the PI in the limit its budget share. All positions (PhD students, Post-Docs, Engineers) were advertised at least on Nature Jobs, Research Gate & UBFC website. Candidates were selected by a committee of 3 researchers supervised by the head of laboratory of the PI.
- (2) Projects related to the recruitment of tenure tracks and coaches. Once recruited as described in tables 1.3 and 1.4 below, tenure track and coaches were considered as PI's. The procedure to recruit PhD students/post-docs for their projects was similar as in (1).
- (3) Support actions: project coordination, communication, international relations, support to training actions, international student management, in/out mobility of students, campus life, IT infrastructure, etc. In these cases, the HR allocation was decided by the ISITE-BFC SC and the positions advertised at national level & on UBFC website. Recruitment committees (at least 3 UBFC employees) were set up by UBFC HR department.

In all recruitment committees, gender diversity was taken into account.

***What policies are these committee mandated to implement in order to select the person to recruit?*** The policies are the same as already described in section 1.3.2.

***What is/are the institution(s) employing personnel recruited thanks to the ISITE funds?***

UBFC is the only institution employing all personnels paid using the ISITE-BFC grant. Exceptions are 8 clinical researchers employed by the Dijon University Hospital because French health regulations on clinical research imposed their affiliation to an hospital.

**How many positions have the IDEX/ISITE member institutions allocated to the project priorities?**

Panel 1.4 & 1.5 display the HR allocation to ISITE-BFC priorities.

In Panel 1.4, only tenure tracks were recruited using PIA funds. Ass./assoc. prof. were recruited using UBFC member budgets. Since 2017, the rate of redirection of vacant positions on research profiles related to ISITE-BFC priorities amounts to 54% (among which 12% as tenure tracks funded by ISITE-BFC) which is line with the 50 % rate observed in the 2015 Utrecht University benchmark (Panel 2.2). Panel 1.5 shows that 89 % of the staff recruited using ISITE-BFC funding concerned ISITE-BFC priorities.

**What instruments are used to serve the talent management policy?**

The talent management policy relies on the following instruments that all implement a commitment to apply for ERC grants:

- Tenure tracks arrangements for exo-recruitment purpose only (see Table 1.3);
- Double appointed international coaches (See Table 1.4);
- Fellowships supporting the highest internationally recognized UBFC scientists who are already employees of ISITE-BFC consortium members.

**How are these instruments used to serve the strategic orientations of the IDEX/ISITE?**

The recruitment of tenure tracks & coaches serve the orientations of ISITE-BFC by:

- Sustaining excellence by capitalizing on international experience of recruited researchers.
- Making UBFC appearing on the international market of tenure tracks & coaches, **thereby inaugurating this practice in the landscape of French universities.**
- Increasing the number of UBFC applications to ERC grants via: (1) tenure track contract including commitment of the selected candidates to apply to ERC; (2) coach contract including commitment to coach at least two UBFC junior researchers to apply to ERC.
- Internationalisation of the cultural & scientific environment on UBFC campuses.

**PANEL 1.4: OVER THE 2017-2020 PERIOD : RESEARCH PROFILES OF FACULTY AND PERMANENT RESEARCHER POSITIONS PUBLISHED BY ISITE-BFC CONSORTIUM MEMBERS.**

| DISCIPLINES                  | ASSISTANT PROF. | ASSOCIATE PROF. | TENURE TRACKS | TOTAL | %   | ALLOCATED TO PRIORITY AXES (TENURE TRACKS INCL.) | TENURE TRACKS FUNDED BY ISITE-BFC |
|------------------------------|-----------------|-----------------|---------------|-------|-----|--|-----------------------------------|
| ISITE-BFC PRIORITIES         | 45              | 40              | 25            | 110   | 54% | 54 %   | 12 %                              |
| OUTSIDE ISITE-BFC PRIORITIES | 67              | 21              | 6             | 94    | 46% |  |                                   |

**PANEL 1.5: PROFILES OF STAFF (OTHER THAN TENURE TRACK) FUNDED BY ISITE-BFC**

| DISCIPLINES                  | PHD STUDENTS | POST-DOCS | COACHES | OTHER | %     |
|------------------------------|--------------|-----------|---------|-------|-------|
| ISITE-BFC PRIORITIES         | 59           | 47.5      | 2       | 65    | 89 %  |
| OUTSIDE ISITE-BFC PRIORITIES | 3            | 3.5       |         | 2     | 4 %   |
| ISITE-BFC SUPPORT STAFF      |              |           |         | 12    | 6 %   |
| TOTAL                        | 62           | 51        | 2       | 79    | 100 % |



TABLE 1.3 : "TENURE TRACK" ACTIONS OR ARRANGEMENTS

|  |  |   |
|--|--|---|
| Recruitment procedure                            | <p><b>Methods implemented:</b><br/>Tenure tracks are supported by ISITE-BFC funding. They are endowed for a period of 3 years. They are granted to promote young researchers (typically within a period of 10 years after their PhD) who show the potential to reach <i>European Research Council</i> (ERC) recognition within the fellowship period. During the third year of the probation period :</p> <ul style="list-style-type: none"> <li>• The laureate is committed to apply to ERC ;</li> <li>• A permanent position relevant to the laureate discipline will be advertised by one of the ISITE-BFC partner on the basis of the profiling performed by the <i>ad hoc</i> UBFC division.</li> </ul> |   |
|  | <p><b>Developments envisaged:</b> In 2021, the ISITE-BFC Steering Committee plans to :</p> <ul style="list-style-type: none"> <li>• Increase the ISITE-BFC budget line to support tenure track recruitments ;</li> <li>• Couple tenure track recruitment profiles to infrastructure investments expected during the contracts of laureates.</li> </ul>   |   |
| Type of contract & employer name                 | <p><b>Methods implemented:</b><br/>The contract is fixed by French Law. During the probation period, UBFC is the employer. The ISITE-BFC partner that is committed to publish the relevant permanent assistant or associate professor position is the potential future employer.</p>   |   |
|  | <p><b>Developments envisaged:</b> No change</p>  |   |
| Duration of procedure                            | <p><b>Methods implemented:</b></p>   |   |
|  | March Year N-1   | UBFC members provide a list of positions to be managed using the tenure track scheme. Each position is flagged to an UBFC division discipline and a potential teaching profile.   |
|  | June Year N-1  | UBFC divisions have established the research profiles of the positions and the selection committees   |
|  | Sept. Year N-1   | Positions advertised during 2 months in Nature Jobs and Research Gate.  |
|  | Dec. Year N-1  | Selection committees have established a short list of candidates for each position.   |
|  | February Year N  | ISITE-BFC international advisory board eliminate candidates not demonstrating any ERC potential out of the short lists and/or review the ranking of each selection committee.   |
|  | March Year N   | Start of negotiations with ranked candidates (respecting ranking priority).   |
|  | June Year N  | End of negotiations.  |
|  | Sept. - Dec. Year N  | Laureate starts working as UBFC employee.   |
|  | Before July Year N+2   | The ISITE-BFC member committed to publish the Faculty position compatible with the aureate profile organizes the procedure respecting regulations about the recruitment for Faculty positions (UBFC member) or tenure researcher positions (CNRS, INRAE ,INSERM). |
|  | Year N+3   | Laureate may be confirmed as permanent Faculty member.  |
| <p><b>Developments envisaged:</b> No change.</p> |  |   |
| Remuneration policy                              | <p><b>Methods implemented:</b> Typically, the yearly full cost salaries of currently hired tenure tracks are between 50 and 66 k€, corresponding to the upper ladders of the French assistant professor pay scale. UBFC will deliver bonus to fellows gaining a major research budget (ERC, European project, contracts with industries,...) or achieving recognitions (medals, prizes,...).</p>   |   |
|  | <p><b>Developments envisaged:</b> Upgrading remuneration policy to the French associate professor pay scale (70 - 90 k€ /year).</p>  |   |
| Career management                                | <p><b>Methods implemented:</b> After obtaining the Research Director Habilitation degree, assistant professors usually apply on vacant associate professor positions inside or outside of their employing organisation. Heads of laboratories manage that assistant professors are involved in PhD student supervisions. Assistant/associate professors are coached to apply to national and European grants and/or to obtain support from industry in order</p>   |   |

TABLE 1.3 : "TENURE TRACK" ACTIONS OR ARRANGEMENTS

|                              | to develop a sharp CV that will allow them to demonstrate the management skills required to apply on vacant associate /full professor positions worldwide.  |   |   |               |                  |             |                                     |                             |
|------------------------------|---|---|---|---------------|------------------|-------------|-------------------------------------|-----------------------------|
|                              | <b>Developments envisaged:</b> Tenure track laureate, eventually confirmed as assistant or associate professors will be invited to design their research plans on the basis of planned or recently completed scientific infrastructure-equipments. They will be invited to be strongly involved in the UBFC master trainings taught in English. |   |   |               |                  |             |                                     |                             |
| Planned supporting resources | <b>Methods implemented:</b> The tenure track portfolio amounts to 450 k€. It includes relocation costs and the laureate's remuneration, therefore leaving a research budget between 250 and 300 k€ managed by the laureate.   |   |   |               |                  |             |                                     |                             |
|                              | <b>Developments envisaged:</b> The ISITE-BFC Steering Committee plans to upgrade the tenure track portfolio to 600 k€. Amplification of the tenure track portfolio budget by sponsor or local authorities will be explored.   |   |   |               |                  |             |                                     |                             |
| Principal recruitments       | <b>Significant recruitments made applying this system (maximum of 10)</b>   |   |   |               |                  |             |                                     |                             |
|                              | Year  | Profile published in Nature Jobs & Research Gate                    | Org. committed to publish tenure position | ISITE-BFC axe | Name             | Nationality | Former employer                     | University that granted PhD |
|                              | 2018  | Chemical physics, surfaces and interfaces, reactivity of solids     | UB  | 1             | KIMBER Simon     | UK          | Oak Ridge National Laboratory (USA) | Edinburgh                   |
|                              | 2018  | Cognitive psychology, learning, modeling                            | UB  | 3             | SCHMIDT James    | Canada      | U. Gent (B)                         | Waterloo (Canada)           |
|                              | 2019  | Mathematical physics  | UB  | 1             | KIMURA Taro      | Japan       | U. Keio (Kanagawa, Japan)           | Tokyo                       |
|                              | 2019  | Drug candidates targeting heat shock proteins                       | UB  | 3             | BURGY Olivier    | France      | U. Colorado (USA)                   | UBFC                        |
|                              | 2019  | Socio-Ecology   | INRAE                                     | 2             | YOUNG Juliette   | UK          | CEH, Edinburgh (UK)                 | East Anglia                 |
|                              | 2019  | Psychology or Biology of Behavior or Neurosciences                  | UB  | 2             | DAMON Fabrice    | France      | UBFC                                | Grenoble                    |
|                              | 2019  | Ecology and evolution of plant-microorganisms interactions          | UB  | 2             | JACQUIOD Samuel  | France      | INRAE                               | Lyon                        |
|                              | 2019  | Mathematics : numerical analysis, scientific computing and modeling | UFC/CNRS                                  | 1             | DUSSON Geneviève | France      | U. Warwick (UK)                     | Paris 6                     |

| TABLE 1.4: HIGH SCIENTIFIC AND TECHNICAL POTENTIAL - DOUBLE APPOINTED INTERNATIONAL COACHES |  |                     |                 |  |             |                         |                             |  |      |  |                     |      |  |             |                       |                             |      |   |    |                 |                                      |          |                |                |      |                        |     |            |  |        |                         |              |
|---|--|---------------------|-----------------|--|-------------|-------------------------|-----------------------------|--|------|--|---------------------|------|--|-------------|-----------------------|-----------------------------|------|---|----|-----------------|--------------------------------------|----------|----------------|----------------|------|------------------------|-----|------------|--|--------|-------------------------|--------------|
| Recruitment procedure, notably composition & method of appointing selection committee       | <p><b>Methods implemented:</b> A research team volunteers to be coached by a very high reputation foreign scientist. The coach is committed to a twofold objective: developing new research perspectives and coaching a minimum of two junior researchers of the host laboratory to apply to ERC grants. <b>Recruitment:</b> On the basis of preliminary contacts with high reputation potential candidates, proposals submitted by ISITE-BFC members are screened by the ISITE-BFC Steering Committee before being advertised in Nature Jobs &amp; Research Gate. UBFC divisions establish local selection committees. Selection committees establish short lists of candidates for each position. ISITE-BFC international advisory board eliminate candidates not demonstrating very high international reputation out of the short lists and review the ranking of each selection committee. Negotiations (respecting final ranking) with candidates are then undertaken.</p> <p><b>Developments envisaged:</b> No change</p>   |                     |                 |  |             |                         |                             |  |      |  |                     |      |  |             |                       |                             |      |   |    |                 |                                      |          |                |                |      |                        |     |            |  |        |                         |              |
| Type of contract (& employer)   | <p><b>Methods implemented:</b> Double appointment during 3 years : part-times by UBFC (min 2-3 months each year) and by current employer of the coach.</p> <p><b>Developments envisaged:</b> No change.</p>  |                     |                 |  |             |                         |                             |  |      |  |                     |      |  |             |                       |                             |      |   |    |                 |                                      |          |                |                |      |                        |     |            |  |        |                         |              |
| Remuneration policy   | <p><b>Methods implemented:</b> Coaches are remunerated at the highest level of the French university professor pay scale amounting to a full cost of 8,7 k€ / month to which is added a 2 k€/month lodging flat rate that allows to rent a very high quality furnished apartment in BFC.</p> <p><b>Developments envisaged:</b> Adding bonus to salary in order to match world standard of distinguished full professor salaries.</p>   |                     |                 |  |             |                         |                             |  |      |  |                     |      |  |             |                       |                             |      |   |    |                 |                                      |          |                |                |      |                        |     |            |  |        |                         |              |
| Career management   | <p><b>Methods implemented:</b> Coaches being inherently already well established high reputation scientists, specific provisions are not planned except being open to a coach that would accept a full time position within the ISITE-BFC consortium.</p> <p><b>Developments envisaged:</b> No change.</p>   |                     |                 |  |             |                         |                             |  |      |  |                     |      |  |             |                       |                             |      |   |    |                 |                                      |          |                |                |      |                        |     |            |  |        |                         |              |
| Planned supporting resources  | <p><b>Methods implemented:</b> The 3 year coach portfolio funded by ISITE-BFC amounts to 600 k€. It includes the coach salary (see above) as well as local accommodation and traveling costs, therefore leaving a typical research grant of 500 k€ to be managed by the coach in the host laboratory.</p> <p><b>Developments envisaged:</b> Increasing coach portfolio to the psychologically appealing 1 M€ threshold while extending contract duration to 4 years &amp; demanding coaching of at least 3 junior researchers applying to ERC.</p> <p><b>Significant recruitments made applying this system (maximum of 10)</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Year</th> <th>Profile published in Nature Jobs &amp; Research Gate</th> <th>Hosting UBFC member</th> <th>Name</th> <th>Publications (P)<br/>H-index (H) Citations (C)<br/>WoS= Web of Sciences<br/>GS = Google Scholar</th> <th>Nationality</th> <th>Current main employer</th> <th>University that granted PhD</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>Geomicro-biology of sedimentary systems</td> <td>UB</td> <td>VISSCHER Pieter</td> <td>WoS: P &gt; 100 ;<br/>H = 45 ; C &gt; 7 000</td> <td>USA + NL</td> <td>U. Connecticut</td> <td>Groningen (NL)</td> </tr> <tr> <td>2019</td> <td>Experimental Economics</td> <td>BSB</td> <td>GNEEZY Uri</td> <td>WoS: P= 95 ; H= 38,<br/>C &gt; 10 000<br/>GS: P = 229 ; H = 62 ;C &gt; 32 000 (GS)</td> <td>Israel</td> <td>U. California San Diego</td> <td>Tilburg (NL)</td> </tr> </tbody> </table> |                     |                 |  |             |                         |                             |  | Year | Profile published in Nature Jobs & Research Gate | Hosting UBFC member | Name | Publications (P)<br>H-index (H) Citations (C)<br>WoS= Web of Sciences<br>GS = Google Scholar | Nationality | Current main employer | University that granted PhD | 2018 | Geomicro-biology of sedimentary systems | UB | VISSCHER Pieter | WoS: P > 100 ;<br>H = 45 ; C > 7 000 | USA + NL | U. Connecticut | Groningen (NL) | 2019 | Experimental Economics | BSB | GNEEZY Uri | WoS: P= 95 ; H= 38,<br>C > 10 000<br>GS: P = 229 ; H = 62 ;C > 32 000 (GS) | Israel | U. California San Diego | Tilburg (NL) |
| Year  | Profile published in Nature Jobs & Research Gate   | Hosting UBFC member | Name            | Publications (P)<br>H-index (H) Citations (C)<br>WoS= Web of Sciences<br>GS = Google Scholar | Nationality | Current main employer   | University that granted PhD |  |      |  |                     |      |  |             |                       |                             |      |   |    |                 |                                      |          |                |                |      |                        |     |            |  |        |                         |              |
| 2018  | Geomicro-biology of sedimentary systems  | UB                  | VISSCHER Pieter | WoS: P > 100 ;<br>H = 45 ; C > 7 000   | USA + NL    | U. Connecticut          | Groningen (NL)              |  |      |  |                     |      |  |             |                       |                             |      |   |    |                 |                                      |          |                |                |      |                        |     |            |  |        |                         |              |
| 2019  | Experimental Economics   | BSB                 | GNEEZY Uri      | WoS: P= 95 ; H= 38,<br>C > 10 000<br>GS: P = 229 ; H = 62 ;C > 32 000 (GS)                   | Israel      | U. California San Diego | Tilburg (NL)                |  |      |  |                     |      |  |             |                       |                             |      |   |    |                 |                                      |          |                |                |      |                        |     |            |  |        |                         |              |

| TABLE 1.5: HUMAN RESOURCE NUMBERS AND FUNDS OVER THE PERIOD 2016-2020 ( RED= INCLUDED IN TENURE TRACK PORTFOLIO, BLUE = INCLUDED IN HIGH POTENTIAL PORTFOLIO) |                           |                         |               |                |
|---|---------------------------|-------------------------|---------------|----------------|
|   | Doctoral students         | Post-docs               | Tenure tracks | High potential |
| Number of recruitments made solely with ISITE-BFC funds   | 42 + 8 + 1 = 51           | 44 + 6 + 1= 51          | 8             | 2              |
| Funds devoted to these recruitments by ISITE-BFC  | 3.78+ 0.73 + 0,09 = 4.6M€ | 2.38+0.40 +0.12 = 2.9M€ | 3.6 M€        | 1.2 M€         |
| Recruitments made with joint ISITE-BFC/ partners' investments   | 11                        | 0                       | 0             | 0              |
| Funds devoted to these recruitments by ISITE-BFC  | 0.5 M€                    | 0                       | 0             | 0              |

**PANEL 1.6: RESEARCH PROJECTS (EXCLUDING PIA) FEATURING UBFC AS BENEFICIARY DURING THE 2017-2020 PERIOD (BENEFICIARIES CNRS, INRAE, INSERM NOT INCLUDED).**

|              | FRENCH ANR (EXCLUDING PIA) |                      | H2020     |                     |
|--------------|----------------------------|----------------------|-----------|---------------------|
|              | NUMBER                     | BUDGET FOR UBFC (κ€) | NUMBER    | BUDGET FOR UBFC(κ€) |
| 2017         | 25                         | 3 855                | 5         | 1 794               |
| 2018         | 28                         | 4 169                | 4         | 1 346               |
| 2019         | 35                         | 6 210                | 12        | 7 432               |
| <b>TOTAL</b> | <b>89</b>                  | <b>14 234</b>        | <b>21</b> | <b>10 572</b>       |

### 1.5.3. RESEARCH AND TRAINING

#### **What are the strategic lines with regard to research and training?**

##### **1.5.3.1. STRUCTURING THE GLOBAL DYNAMICS TOWARDS EXCELLENCE**

Since 2016, the research strategy remained focused on talent attractions, talent management based on application to ERC grants, competitive open projects for the UBFC community featuring international expert reviewing, platforms open to scientific & socio-economic partners, international partnerships. Care was given to make UBFC increasingly visible in both national ANR & European H2020 calls (Panel 1.6).

Panel 1.7 shows the main features of the budget of research activities allocated by the ISITE-BFC steering committee. The selection process relies on international reviewers and an international board establishing the final rankings (sec. 1.3.3.2). 282 projects have been submitted by the UBFC community to respond to the three calls internal to the consortium. An average of 10 Faculty members or researchers contributed to each submission so that approximately 1000 staff members have been involved in responding to each of these calls. On the basis of evaluations by international reviewers, a board of international experts selected a total of 80 projects, among which 18 projects involving 30 companies (21 in BFC). In June 2019, 149 papers acknowledging ISITE-BFC funding were recorded in Web of Science.

**Regarding the priority 1 “Advanced materials, waves, and smart systems”, ISITE-BFC enabled: (i) to promote excellence in science, selecting only highly relevant and promising scientific projects thanks to a peer-review process; (ii) to encourage collaborative projects**

**PANEL 1.7: ISITE-BFC BUDGETS ((κ€) ALLOCATED TO RESEARCH PROJECTS SELECTED BY CALLS INTERNAL TO THE CONSORTIUM AND TO GRANTS ASSOCIATED TO RECRUITMENTS OF TENURE TRACKS AND COACHES**

|   | 2017         | 2018         | 2019         | TOTAL         |
|---|--------------|--------------|--------------|---------------|
| Projects with 30 partner companies (21 in BFC).   | 1 209        | 1 901        | 2 317        | <b>5 427</b>  |
| Open projects   | 1 200        | 2 550        | 1 200        | <b>4 950</b>  |
| Integrated scientific & technical infrastructure projects   |              |              | 1 300        | <b>1 300</b>  |
| UBFC junior fellowship grants (laureates committed to apply to ERC)   | 900          | 720          |              | <b>1 620</b>  |
| UBFC senior fellowship grants (laureates committed to apply to ERC)   |              | 1 200        | 800          | <b>2 000</b>  |
| Tenure Track grants (see Table 1.3, laureates committed to apply to ERC)                                      |              | 900          | 2 700        | <b>3 600</b>  |
| International coaches (see Table 1.4, laureates committed to coach applications of junior scientists to ERC)) |              | 600          | 600          | <b>1 200</b>  |
| <b>TOTAL</b>  | <b>3 309</b> | <b>7 871</b> | <b>8 917</b> | <b>20 097</b> |

merging several scientific teams of UBFC in order to develop and/or reinforce collaborations between UBFC member research teams. Most striking examples are:

- In the field of green chemistry, an integrated project was launched on “Chemistry of Molecular interactions: Catalysis & sensors” involving 6 UBFC multidisciplinary teams working for the first time together on the control at the molecular level of chemical interactions and physicochemical effects at all scales of matter: molecular, supramolecular, nano- and microscopic.
- ISITE-BFC was also the opportunity to structure the activities in Mathematics in BFC. A federation joining both UB & UFC laboratories was created in 2018. Research in mathematics was reinforced by the recruitment of two tenure tracks funded by ISITE-BFC in 2019 (see Table 1.3).
- Research activities in Photonics (5 ERC grants since 2011) have been also supported with several projects by ISITE-BFC ranging from basic research to collaborations with industries. As an example, ISITE-BFC has supported the development of a mid-infrared set of equipment. This keen interest with the mid-infrared results in many applications, such as in the areas of healthcare, environment, and communications.
- In the last two years, the excellence of junior researchers has been also recognized among several highly selective projects and awards. A ERC consolidator grant on “Nanophononics for quantum information processing” has been funded. 2 CNRS Bronze medals (early career award – top 5%) have been delivered to BFC junior researchers respectively in the field of biomedical micro-nanorobotics and diagnostic of fuel cells.
- Regarding the interaction with industries, a CNRS innovation medal (4 best French academic innovations of the year) was awarded to D. Hissel for the creation of the start-up H2Sys in the field of Hydrogen-Energy (see table 1.8.2). ISITE-BFC supported also the interaction with industries in 10 collaborative projects related to priority 1 in interaction with SME and/or large companies. As examples, a collaboration with PSA Group on programmable matter (see table 1.8.1) and a collaboration with the SME NEOTISS on the reduction of corrosion on metals have been supported.

Furthermore, the Masters in English funded by ISITE-BFC related to priority 1 are already integrated or will be integrated in the EIPHI Graduate School (PIA EUR call laureate) launched in 2018. EIPHI Graduate School offers courses matching frontiers in research in: Physics, Mathematics, Smart system’s & structures, Energy, Material Science and Computer Science.

**Regarding the Priority 2 “Territories, Environment, Food”, ISITE-BFC strengthened excellence** in different scientific fields: microbiology (soil microbiology and geomicrobiology of sediments), behavioral and food science, environmental political science and experimental economics (see recruitment highlights funded by ISITE-BFC in Tables 1.3 & 1.4). Financial and HR supports were concentrated to promote leadership in several strategic areas: (1) biological, microbiological and agronomic bases of more environmentally friendly agricultural practices and systems, that are associated with systemic, sociological and economic approaches to favor agroecological transitions; (2) role of urban and rural land use planning and other public policies on changes in landscape organization and local biodiversity, taking into account the local effects of climate change; (3) biological and behavioral bases of sensory perception of food and eating behavior to improve food quality and to assess health consequences; (4) physiology of beneficial microorganisms to develop large-scale applications in food and health. Several topics of these domains are developed within joint

programs with Priority 1 (e.g. in agro-equipment or design of specific sensors) and Priority 3 (e.g. interactions between food and health).

In addition to the ERC starting grant already obtained, the ISITE BFC funding will result in submission of several ERC applications during the forthcoming campaign. These applications will concern scientific fields such as Environmental & Agricultural sciences, Earth sciences, Food science or Humanities & social sciences.

In the future, it would be interesting to better structure and support the research activity concerning the *dynamics and transfers of chemical or biological contaminants* in the Critical Zone, in particular within and between soils and aquatic environments in order to limit their environmental and health impacts and to remedy the damages caused by them.

Regarding socio-economic partnerships, different ways are being explored. Alongside traditional partnerships with food industries including digital services, new collaborations have been set up to develop technologies for the *industrial production of microorganisms for therapeutic purposes or sustainable food processes* (see Table 1.8.3). Partnerships with the agro-supply sectors or administration aim to develop *products and services needed for agro-ecology*: additives or microorganisms to reduce N<sub>2</sub>O emissions from soils; renovation of consulting for farmers and public policy to change agricultural systems and practices; diagnostic tests for the biological quality of soils, etc. Other partnerships aim to develop tests for the presence of environmental contaminants and remediation technologies.

Furthermore, ISITE-BFC strong investments in Masters taught in English allowed to set up the basis of the TRANSBIO Graduate School related to Priority 2 (see Panel 1.8). It is worth noting that through these six international masters the *TRANSBIO Graduate School can combine training in ecology, food sciences and economics*.

The leveraging effect driven by both ISITE-BFC and regional council funding led to a *progression in the world rankings subject categories related to priority 2* (see Table 4.14) and to the improvement of our international attractiveness.

**The priority 3 “Comprehensive individual care”** had already been deeply structured since 2015 by the Labex LIPSTIC and by Equipex IMAPPI. In line with the strategies deployed by LIPSTIC & IMAPPI, ISITE-BFC fostered a number of innovative research programs and strengthened emerging as well as longstanding research partnerships in BFC about: 1) The role of *lipids and lipoproteins in inflammatory diseases* and 2) *Theranostic, nanodiagnostic and cancer immunotherapies*. Highlights feature 2 ERC grants and 2 senior ISITE-BFC fellowships aiming at stimulating ERC applications. Emerging research areas, such as genomic and personalized medicine (Rare diseases and Cancer) or human performance sciences are also developed using ISITE-BFC funding. It is important to note that particular emphasis is placed on transdisciplinary programs with actors pertaining to priority 1 in application areas such as imaging tools, microtechnologies and innovative drugs as well as with actors pertaining to priority 2 in research topics dealing with nutrition and inflammatory diseases. Research activities related to priority 3 are involving competences found in humanities and social sciences areas.

Regarding industrial partnerships in the field of comprehensive individual care, ISITE-BFC invested in specific areas of excellence led by the Labex LipSTIC and the Equipex Imappi. This includes theranostic, nanodiagnostic and therapy, through programs aimed at developing innovative lipid biomarkers (hydroxylated fatty acids, exosomes), new immunological/imaging approaches for inflammatory diseases and cancer diagnosis, and new anti-cancer



formulations. Industrial partnerships have been set up at different levels, leading in particular to *the emergence of Business Units* (Endoqant), the *creation and incubation of Start-Up* (Nanodiag) as well as industrial partnerships involving regional companies and the main academic partners of BFC (Biocair and nanoTRAIL-Lighter). ISITE-BFC has also contributed to launch *new teaching programs* related to priority 3, including the master LipTherapl, an international second year-[M2] of Master's degree dedicated to innovative strategies for diagnostic and therapeutic applications. This international master is the basis for the Graduate School on Innovative Therapies (INTHERAPI, part of the SFRI Graduate School Institute) that will include four axis : Cancer / Immunotherapy, Targeted therapies in inflammation, Bioactive substance vectorization and pharmaco-imaging and multimodal imaging. Altogether the leveraging effect driven by ISITE-BFC in the scope of priority 3 is remarkable, as reflected by the adhesion of both industry and academic fellows to the excellence dynamics that also streamlined strong financial supports by the regional council.

**1.5.3.2. UBFC MASTERS TAUGHT IN ENGLISH DRIVING TRAINING & INTERNATIONALISATION STRATEGY**

Driven by ISITE-BFC funding, UBFC performed the crucial step of changing the teaching language of master trainings to English. By September 2019, 16 such masters taught in English were operational, well beyond the initial target of 9 expected over the 2016-2020 period, thereby not only demonstrating the adhesion of the Faculty member community to the internationalisation objective of UBFC but also **an unique example of massive transformation of the teaching language in research-oriented masters in France**. The percentage of foreign students coming from ~50 countries in these master programs now exceeds 60%. Each master benefits from ISITE-BFC funding as well as from specific support actions funded by ISITE-BFC: international promotion using a variety of channels, grants for

**PANEL 1.8: UBFC MASTER TRAINING TAUGHT IN ENGLISH STARTED BETWEEN 2017 AND 2019 USING ISITE-BFC FUNDING.**

| #  | START YEAR | UBFC MEMBERS INVOLVED | MASTER  | UBFC GRADUATE SCHOOL (SEC 3.2) |
|----|------------|-----------------------|---|--------------------------------|
| 1  | 2017       | UFC/ENSMM             | CONTROL FOR GREEN MECHATRONICS (GREEM)  | EIPHI                          |
| 2  | 2017       | ASD/uB                | PHYSIOLOGICAL AND PSYCHOLOGICAL FOOD CHOICES DETERMINANTS (P2FOOD)                    | TRANSBIO                       |
| 3  | 2018       | ASD/uB                | MICROBIOLOGY AND PHYSICOCHEMISTRY FOR FOOD AND WINE PROCESSES (MP2)                   | TRANSBIO                       |
| 4  | 2017       | UFC/UB                | ECOLOGY, MONITORING AND MANAGEMENT OF ECOSYSTEMS (EMME)                               | TRANSBIO                       |
| 5  | 2017       | UB/UFC                | BEHAVIORAL ECOLOGY AND WILDLIFE MANAGEMENT (BEWM)                                     | TRANSBIO                       |
| 6  | 2017       | UB/UFC/UTBM           | PHYSICS, PHOTONICS & NANOTECHNOLOGY (PPN)   | EIPHI                          |
| 7  | 2018       | UFC/UB/UTBM           | PHOTONICS, MICRO NANOTECHNOLOGY, TIME-FREQUENCY METROLOGY, AND COMPLEX SYSTEMS (PICS) | EIPHI                          |
| 8  | 2018       | UFC/UB                | COMPUTATIONAL PHYSICS (COMPUPhys)   | EIPHI                          |
| 9  | 2018       | UB/UFC/UTBM           | MASTER PROGRAM IN MATHEMATICAL PHYSICS (MATH4Phys)                                    | EIPHI                          |
| 10 | 2019       | UFC/UB                | BEHAVIORAL AND DIGITAL ECONOMICS FOR EFFECTIVE MANAGEMENT (BDEEM)                     | TRANSBIO                       |
| 11 | 2019       | UB/UFC                | TRANSITION METALS IN MOLECULAR CHEMISTRY (T2MC)                                       | EIPHI                          |
| 12 | 2019       | UFC/UTBM              | INTERNET OF THINGS (IoT)  | EIPHI                          |
| 13 | 2019       | ASD/UB                | DATA ANALYST FOR SPATIAL AND ENVIRONMENTAL ECONOMICS (DASEE)                          | TRANSBIO                       |
| 14 | 2019       | UB/UFC                | INNOVATING DRUGS  | INTHERAPI                      |
| 15 | 2019       | UFC/UB                | RARE BOOKS AND DIGITAL HUMANITIES (RAREBooks)   | -                              |
| 16 | 2019       | UB/UFC                | PROJECTS IN INTERNATIONAL AND EUROPEAN CULTURAL ENGINEERING (PIECE)                   | -                              |

talented international students, negotiations of 54 agreements with international partners to favor student exchanges and double degrees in the framework of these masters.

UBFC master trainings are the main pivots of the internationalization strategy. Except for master trainings devoted to languages, they are the necessary condition to enroll students coming from the five continents. They allow that teaching charges to be allocated to freshly recruited international staff independent of their ability to speak French at their arrival, thereby making credible the publication of tenure track positions (see table 1.3 & section 1.5.2 on human resource strategy). Panel 1.8 shows that, inside UBFC, setting up each masters involved the teaching staff affiliated to two of three UBFC members, thereby contributing to develop the UBFC corporate spirit. Moreover, section 3.2 details how UBFC capitalized on the masters funded by ISITE-BFC to forge the ambitious Graduate School institute (UBFC-InteGrate) project that is listed among the laureates of the 2020 SFRI PIA call.

**Are these strategic lines embodied by a specific structure (e.g. collegium, departments, institutes, schools, etc.)?** In 2020 in BFC, the net result of the PIA multiple bounce pool game is the fully integrated governance & management scheme explained in sec. 3.1 & Fig. 3.1 showing that the ISITE-BFC Steering Committee will configure the global budget resulting from the sum of the PIA contracts ISITE-BFC, EUR EIPHI, LABEX LIPSTIC and of the PIA contracts that will result from the recent successes of UBFC applications to IDEES & SFRI calls.

**What competences are exercised by these new entities?**

See section 1.3.3.2 detailing the competences of the SITE-BFC Steering Committee.

| TABLE 1.6:<br>GLOBAL FEATURES OF THE RESEARCH<br>AND TRAINING STRATEGIC LINES   |              | Themes | Number of<br>researchers<br>concerned | Number of<br>students<br>concerned | Funds allocated<br>(k€) |        |
|---|--------------|--------|---------------------------------------|------------------------------------|-------------------------|--------|
| Specific investment of the<br>IDEX/ISITE in research  | Axe 1        | 296    | 960                                   | 30                                 | 9 117                   | 24 768 |
|   | Axe 2        | 249    |                                       | 18                                 | 6 511                   |        |
|   | Axe 3        | 362    |                                       | 97                                 | 8 360                   |        |
|   | Outside Axes | 53     |                                       | 3                                  | 780                     |        |
| Specific investment of the<br>IDEX/ISITE in training<br>*including 10 141 MOOC<br>participants and 2400 IDEFI<br>Talent Campus participants | Axe 1        | 214    | 643                                   | 727                                | 2 228                   | 5 733  |
|   | Axe 2        | 200    |                                       | 10 528*                            | 1 839                   |        |
|   | Axe 3        | 199    |                                       | 61                                 | 577                     |        |
|   | Outside Axes | 30     |                                       | 2 553                              | 1,089                   |        |
| Joint IDEX(ISITE)/IDEX partner<br>investments   | Axe 1        | 61     | 182                                   | 136                                | 4 673                   | 8 770  |
|   | Axe 2        | 68     |                                       | 49                                 | 2 013                   |        |
|   | Axe 3        | 45     |                                       | 1                                  | 1 679                   |        |
|   | Outside Axes | 8      |                                       | 1                                  | 62                      |        |
| Joint IDEX(ISITE)/other PIA<br>project investments  | Axe 1        | 175    | 189                                   | 583                                | 483                     | 490    |
|   | Axe 3        | 14     |                                       | 24                                 | 7                       |        |



| <b>TABLE 1.7:<br/>PIA1/2/3<br/>PROJECTS</b>      | Key structural impacts   | Synergies with the partners external to the Initiative  | Other contributions of the project to the Initiative  | Any enhancement of the project potential by the Initiative   |
|--|--|---|---|--|
| LABEX ACTION (ISITE-BFC Priority 1)              | Labex ACTION dedicated to intelligent systems integrated in matter inspired many projects relevant to priority 1 funded by ISITE-BFC in the framework of calls internal to consortium.   | The LABEX ACTION community configured 8 joint projects with 13 industries (projects funded by ISITE-BFC)  | Labex ACTION configured the EUR EIPHI application (see next line) and prototyped tenure track recruitment scheme (5 tenures).   | ISITE-BFC funded 21 research projects capitalizing on LABEX ACTION research  |
| EUR EIPHI (ISITE-BFC Priority 1)                 | 13 M€ budget embedding the validation & continuation of the Labex ACTION research themes. Selected among the first list of EUR laureates.  | 15 international agreements related to MA and PhD programs  | Relatively to LABEX ACTION, EIPHI synergy allowed to increase the number of involved BFC laboratories from 2 to 4. Capitalizing on the EUR EIPHI allowed to set up the succesfull UBFC application to the SFRI call (see below in this table) | EUR EIPHI capitalizes on 5 UBFC masters funded by ISITE-BFC (# 1,6,7, 9, 11 in Panel 1.8).   |
| LABEX LIPSTIC (ISITE-BFC Priority 3)             | Labex LIPSTIC is dedicated to fighting against cancer and developing knowledge relevant to transplantation and inflammation. It inspired many projects relevant to axe 3 funded by ISITE-BFC in the framework of calls internal to the consortium. | The LABEX LIPSTIC communiity configured 1 project funded by ISITE-BFC involving 2 industries  | Labex LIPSTIC actors configured one of the graduate schools included in the UBFC application to SFRI call.  | Labex LIPSTIC actors set up a master funded by ISITE-BFC (#14 in Panel 1.8) that the UBFC SFRI project (see sec. 3.2) plans to be integrated in the Graduate School associated to priority 3 |
| SFRI UBFC-InteGrate (All 3 ISITE-BFC Priorities) | The ambitious SFRI project (see details and figure in section 3.2) aims at creating the UBFC International Graduate Institute (UBFC-InteGrate) offering a set of MA & PhD programs structured in 3 Graduate Schools (EIPHI, TRANSBIO               | 54 international already existing agreements related to MA and PhD programs. Expected growths of the number of partnerships duringthe course of the SFRI project. | SFRI UBFC-InteGrate will endorse the ISITE-BFC actions related to MA and PhD trainings  | ISITE-BFC funding dedicated to MA and Ph D training will support the deployment of SFRI.<br><br>IDEES IDISITE-BFC fund will support international promotion of SFRI                          |

| TABLE 1.7:<br>PIA1/2/3<br>PROJECTS                                | Key structural impacts  | Synergies with the partners external to the Initiative  | Other contributions of the project to the Initiative   | Any enhancement of the project potential by the Initiative  |
|---|---|---|--|---|
|   | and INTHERAPI) related to the 3 ISITE-BFC priorities.   |   |  | UBFC-InteGrate teaching programs and provide budgets to support alumni network of Graduate School students.   |
| <p>IDEES<br/>IDISITE-BFC<br/>(All 3 ISITE-BFC<br/>Priorities)</p> | <p>IDEES IDISITE-BFC budget will mainly support the following ISITE-BFC actions:<br/>(1) International promotion of teaching programs;<br/>(2) Welcome desk for international students;<br/>(3) Alumni network;<br/>(4) Computer infrastructure.</p>              | <p>4 international already existing agreements related to MA and PhD programs. Expected growths of the number of partnerships during the course of the IDEES project.</p>   | <p>IDISITE-BFC actions are also supporting the deployment of SFRI UBFC-InteGrate (sees above line)</p> | <p>Management team of ISITE-BFC is the same as the management team of IDISITE-BFC</p>   |
| <p>IDEFI<br/>TALENT<br/>CAMPUS<br/>(Innovative<br/>Training)</p>  | <p>Tranverse training modules devoted to soft skills and personal development.</p>  | <p>Training sessions disseminated in France (&gt; 20 000 participants) and abroad (Finland, Poland, Bulgaria and Shanghai)</p>  | <p>Actors of IDEFI Talent Campus contributed to the configuration of NCU RITM-BFC (see next line)</p>  | <p>Not relevant because IDEFI Talent Campus aimed at self sustainability.</p>   |
| <p>NCU-RITM BFC<br/>(Innovative<br/>Training)</p>                 | <p>In 2016, coordinating all UBFC members, the UBFC application was laureate of a national call dedicated to life long training. Capitalizing on this success and on IDEFI Talent Campus, the UBFC project RITM-BFC was laureate of the PIA NCU call in 2017.</p> | <ol style="list-style-type: none"> <li>1. Instruments to better guide first year students in their curriculum choices.</li> <li>2. Training modules offered across all Faculties addressing: citizenship, soft skills, entrepreneurship.</li> <li>3. Training &amp; research link: open-labs, internships featuring master students as tutors.</li> <li>4. Support to teaching staff: workshops &amp; trainings dedicated to new didactical practices.</li> <li>5. Acculturation of long life training practices: accompanying recently graduated students during their first job to take advantage immediately of long life training.</li> <li>6. Innovative didactical practices including socio-economical &amp; international paradigms.</li> </ol> |  | <p>Over 10 years, all ISITE-BFC actions planned in 2015 that were related to improving the success &amp; job insertion students or to develop life long training are transferred to RITM-BFC.</p> |

#### 1.5.4. POLICY FOR TRANSFER TO INDUSTRY

***What are the main successes of the IDEX/ISITE policy for transfer to industry?***

Demonstrating the pertinence of the ISITE-BFC strategy, Panel 1.9 shows that more 70% of PhD thesis sponsored by industries are related to ISITE-BFC priorities . The combined action of ISITE-BFC, academic staff, SATT and incubator are illustrated by the successes summarized in Tables 1.8.i (i=1,4), thereby demonstrating the capacity of the ISITE-BFC consortium to involve companies of all sizes in frontier of knowledge research such as programmable matter or innovative biotechnologies applied to food and/or medicine.

***What kind of organization has been put in place and why?***

The SATT project initiated in 2011 (earlier than UBFC creation) encompasses the former French regions Bourgogne, Franche-Comté & Lorraine. The SATT is thus at odds with the 2016 restructuring of the French regions that resulted in merging Bourgogne & Franche-Comté while Lorraine merged with Alsace & Champagne-Ardenne. This status combined with UBFC governance difficulties (sec. 2) made that the UBFC position in the SATT was not addressed. The aspect calling for a corrective action is that the aforementioned historical reasons led to a situation where UBFC is not directly represented among the stock owners of the local SATT. This issue is addressed in the trajectory exposed in section 2 Table 2.1, line 6) by the pooling of the votes associated to the stocks owned by UBFC member organisations in order to provide UBFC with an indirect representation in the SATT.

The 2016 more favourable initial conditions featuring an incubator in each ex-region Bourgogne & Franche-Comté evolved to merging both incubators as DECA-BFC (<https://deca-bfc.com>) involving UBFC as partner. 75% of the incubator projects are related to the 3 ISITE-BFC priority areas.

In BFC, student entrepreneurship (Panel 3.1 in sec. 3) is successfully (average: 25 companies created/year) coordinated at UBFC federal level and aims at 4 main objectives: (1) Developing entrepreneur skills of recently graduated students; (2) Disseminating the entrepreneur spirit based on technical innovations, incl. deep tech, related to ISITE-BFC priority areas using immersive didactical tools (learning by doing; concept design participative workshops, etc); (4) Supporting the creations of innovative business projects.

| PANEL 1.9: BFC SITE STATISTICS OF PHD THESIS FUNDED BY INDUSTRIES (INCLUDING NATIONAL CIFRE SCHEME). |            |                                   |                              |                              |                              |
|--|------------|-----------------------------------|------------------------------|------------------------------|------------------------------|
|  | TOTAL UBFC | % related to all 3 ISITE-BFC axes | % related to ISITE-BFC axe 1 | % related to ISITE-BFC axe 2 | % related to ISITE-BFC axe 3 |
| 2017-2019  | 105        | 73%                               | 53%                          | 10%                          | 10%                          |

|  |   |         |         |         |
|--|---|---------|---------|---------|
| Designation  | <b>BUILDING A SUSTAINABLE PARTNERSHIP WITH PSA GROUP ON PROGRAMMABLE MATTER</b>   |         |         |         |
| Socio-economic sector  | Car industry  |         |         |         |
| Research themes involved   | Priority axis 1: Design and prototyping programmable matter   |         |         |         |
| Names of the partners within this sector   | PSA Groupe, Carnegie Mellon Univ., Cornell Univ., Univ. of Liverpool, Univ. of Tokyo, Univ. of Michigan, Polish Acad. of Sci., CubeWorks, Scénocosme, TechPower Electronics.  |         |         |         |
| Form and nature of the contribution obtained *   | <p>The <b>ISITE industry project</b> “Building the Basic Blocks for Programmable Matter” greatly strengthened the collaboration with PSA Group and created two international collaborations with Cornell Univ. &amp; Univ. of Liverpool. It allowed to bring UBFC among world leaders in programmable matter fresearch.</p> <p><b>The development of programmable matter in UBFC is cofounded by other agencies</b> and industrial partnerships: 439k€ (ANR-16-CE33-0022), 681k € (Territoire d’Innovation), 242k€ (CPER) and a 240 k€ CIFRE contract with Faurecia. UBFC international partners increased in this field: co-supervision one Ph.D student with Cornell Univ., Royal Society mobility grant (IES\R3\183052, £10,554), support of Univ. of Michigan (senior engineer position \$200,000), 2PhD grant of Univ. of Tokyo, and access to Univ. Tokyo clean room.</p> |         |         |         |
| Flagship result or achievement obtained thanks to the IDEX/ISITE   | <p><b>Construction of a joint lab called “Mattern Lab”</b> (Montbéliard) together with PSA Group, Delfingen, Faurecia, GE and Alstom., funded by “Territoire d’Innovation” project for 10 years ( approx. 15 M€). <b>Scientific result:</b> VisibleSim, simulator developed in the project, has <b>the world record</b> in the number simulated moving and communicating robots with 30 millions of simulated robots and the algorithm for constructed the scaffold of a cube, assembles 1,200 robots in 6s compared to 1,000 robots in 11h from Harvard Univ. (Rubenstein, Science, 2014). <b>Patent filed</b> with PSA Group (N° 2019FAM01914).</p>   |         |         |         |
| Funding under these collaborations (k€)  | 2016  | 2017    | 2018    | 2019    |
| Received from companies  | 38 k €  | 38 k €  | 38 k €  | 118 k € |
| Other funding from external partners (ANR, Europe, etc.)   | 190 k €   | 190 k € | 221 k € | 340 k € |
| *Form: framework agreement, contract, etc. Nature of the contribution obtained: payments in €, provision of human resources, equipment sharing, sponsorship, skills-based sponsorships, etc. |   |         |         |         |

|   |   |  |  |  |
|---|---|--|--|--|
| Designation   | <b>H2SYS START-UP CREATION: CLEAN AND EFFICIENT HYDROGEN SOLUTIONS</b>  |  |  |  |
| Socio-economic sector                                 | Green Energy – Clean Tech   |  |  |  |
| Research themes involved                              | Priority axis 1: Modeling, Diagnostic and Prototyping Hydrogen Fuel cells   |  |  |  |
| Names of the partners within this sector              | H2SYS, FEMTO-ST, FCLAB, CNRS, UBFC (UFC, UTBM, ENSMM )<br>CHEREAU, MAHYTEC, ROUGEOT, GAUSSIN, FAURECIA  |  |  |  |
| Form and nature of the contribution obtained *        | <p>UBFC (FEMTO-ST/FCLAB) is recognized among world leading research institutes in real-time diagnostic of fuel cell systems. The H2SYS start-up creation in this field relies on <b>a coordination of the transfer ecosystem in BFC region</b>. Initially, LABEX Action supported a Chair position in diagnostic and fault tolerant control of fuel cell systems (2014-19) and a pre-maturation project was funded by the BFC region (2014-15, 180k€). Then, supported by SATT Sayens and FC’Innov foundation, a maturation project was launched (2016-17, 478k€). This maturation enabled to patent hydrogen-based power gensets, presenting very high efficiency and durability, and reduced footprint.</p> |  |  |  |
| Flagship result or achievement obtained thanks to the | <b>In 2017, H2SYS was launched to sell highly efficient and sustainable open-cathode fuel cell systems.</b> The first year, H2SYS reached a turnover of about 500k€ (40%  |  |  |  |

|  |   |       |       |       |
|--|---|-------|-------|-------|
| IDEX/ISITE   | exportation). In 2019, H2SYS was laureate of the I-Lab competition (org. French Public Bank of Investments). The same year, H2SYS and CHEREAU Company presented the <b>world's first hydrogen refrigerated semi-trailer</b> . In 2020, <b>the cofounder D. Hissel received the highly selective CNRS Innovation Medal</b> . H2SYS has currently 10 employees & 5 scientific advisors. |       |       |       |
| Funding under these collaborations (k€)  | 2016  | 2017  | 2018  | 2019  |
| Received from companies  |   | 120k€ | 350k€ | 235k€ |
| Other funding from external partners (ANR, Europe, etc.)   |   |       | 96k€  | 493k€ |
| *Form: framework agreement, contract, etc. Nature of the contribution obtained: payments in €, provision of human resources, equipment sharing, sponsorship, skills-based sponsorships, etc. |   |       |       |       |

**TABLE 1.8.3: EXAMPLE RELATED TO ISITE-BFC PRIORITY 2 : TERRITORIES, ENVIRONMENT, FOOD**

|  |  |                   |               |                          |
|--|--|-------------------|---------------|--------------------------|
| Designation  | <b>EXPLORING THE UNKNOWN PHYSIOLOGY OF BENEFICIAL MICROORGANISMS TO DEVELOP THEIR LARGE-SCALE APPLICATION IN FOOD AND HEALTH</b>   |                   |               |                          |
| Socio-economic sector  | BIOTECHNOLOGY, BIOPROCESSES, HEALTH, FOOD  |                   |               |                          |
| Research themes involved   | <ul style="list-style-type: none"> <li>• Microbial adaptation mechanisms in new ecological habitats of interest.</li> <li>• Structural and metabolic basis of microorganism's survival to technological and extreme environments.</li> <li>• Cell death mechanisms in microorganisms.</li> </ul>   |                   |               |                          |
| Names of the partners within this sector   | <b>Companies:</b> Greentech (Clermont-Ferrand), Global Process Concept (La Rochelle), Lesaffre Int. (Marc-en-Baroeul), Lallemand Oenologie (Blanc), Centre Œnologique de Bourgogne (Beaune), AEB France (Sigolsheim) .<br><b>Start-up Companies:</b> Exeliome Bioscience (Dijon), Lab to Field (Dijon), Indigo Therapeutics (Paris).   |                   |               |                          |
| Form and nature of the contribution obtained *   | <ul style="list-style-type: none"> <li>• Contracts with payments and provision of human resources</li> <li>• Investment of funds in maturation for intellectual property (SATT GE)</li> <li>• Investment of funds in research and development programs</li> </ul>  |                   |               |                          |
| Flagship result or achievement obtained thanks to the IDEX/ISITE   | <ul style="list-style-type: none"> <li>• First production in the world of a GUT commensal anaerobic bacterium in pharma grade conditions + industrial implementation in Greentech + conception of a specific bio-reactor (pilot prototype).</li> <li>• 2 secret know-how agreements (via SATT) related to the biomass production and the freeze-drying of <i>Faecalibacterium prausnitzii</i>, already licensed.</li> <li>• Development of a wine microbial metabolomic expertise.</li> <li>• Patented yeast strains to replace sulfites in wine.</li> <li>• Pat. process to increase resistance &amp; boost efficiency of lactic acid bacteria .</li> </ul> |                   |               |                          |
| Funding under these collaborations (k€)  | 2016   | 2017              | 2018          | 2019                     |
| Received from companies  | 440  | 509               | 382           | 494                      |
| Intellectual Property revenues   | 10   | 8                 | 85            | 56                       |
| Other funding from external partners (ANR, Europe, etc.)   | 225  | 805               | 608           | 778                      |
|  | FUI + Carnot   | FUI+Carnot+DOPEOS | Carnot+DOPEOS | Region BFC+Carnot+DOPEOS |
| *Form: framework agreement, contract, etc. Nature of the contribution obtained: payments in €, provision of human resources, equipment sharing, sponsorship, skills-based sponsorships, etc. |  |                   |               |                          |

|  |   |                                      |  |   |
|--|---|--------------------------------------|--|---|
| Designation  | <b>DEVELOPMENT OF LIPID BIOMARKERS AND IMMUNOLOGICAL TOOLS FOR DIAGNOSIS, IMAGING AND THERAPY IN CANCER AND INFLAMMATORY DISEASES</b>   |                                      |  |   |
| Socio-economic sector  | Biotechnology, Comprehensive individual cares   |                                      |  |   |
| Research themes involved   | <ol style="list-style-type: none"> <li>1. Cancer,</li> <li>2. Inflammatory diseases</li> <li>3. Pharmaco-imaging, nanodiagnostics, theranostics</li> <li>4. Lipids and nanovectors</li> </ol>   |                                      |  |   |
| Names of the partners within this sector   | Existing companies: <b>Diaclone</b> (Besançon) partner in the <b>MiMéDi</b> project; <b>Covalab</b> (Dijon) Economic Interest Group <b>Pharmimage</b> (Dijon)<br>Start-up: <b>Nanodiag</b> (Dijon), Business Unit : <b>Endoquant</b> (Dijon)<br>CIC-1432, CGFL (Cancer Research hospital center), CHU besançon, EFS, UBFC   |                                      |  |   |
| Form and nature of the contribution obtained *   | Collaborative research contracts with payments and provision of human resources by ISITE BFC ( <b>Biocair 400 K€</b> and <b>nanoTRAIL_Lighter 206 K€</b> ). Investment in research and development programs. <b>Nanodiag</b> : 150 K€ AAP2 ISITE-BFC Labex Lipstic 110 K€ in human resources and operating costs; <b>Endoquant</b> : Labex Lipstic : 256 K€ in investment+ 100 K€ in human resources  |                                      |  |   |
| Flagship result or achievement obtained thanks to the IDEX/ISITE   | 2016 : Commercialization of the first quantitative assay for endotoxins in biological fluids ( <b>Endoquant</b> ).<br>2018 : Matwin award ( <b>Nanodiag</b> ) ; <b>coordination of clinical trial</b> : ExoDiag (Breast, lung, ovarian cancer, NCT02662621), Exosarc (sarcoma, NCT03800121), Exomel (Melanoma, AC-2015-2496/DC-2014-2086), ExoPD-L1 (all cancers treated by immunotherapy: anti-PD-1/PD-L1). ( <b>CGFL</b> )<br>Production of ScFv antibody fragments targeting the human CD8 receptor, bioconjugation with chelating agents NODAGA or BINODAGA, and radiolabelling with Gallium-68 and in vivo validation ( <b>Biocair</b> ); CD226 antibody synthesis ( <b>Biocair</b> ). Humanization of anti-DR4 antibody ( <b>nanoTRAIL_Lighter</b> ). |                                      |  |   |
| Funding under these collaborations (k€)  | 2016  | 2017                                 | 2018   | 2019  |
| Received from companies  | Endoquant: 25K€   | Endoquant: 41K€<br>2Diaclone: 214 K€ | Endoquant: 76K€  | Endoquant: 48K€<br>Diaclone: 94K€<br>Covalab: 67K€              |
| Other funding from external partners (ANR, Europe, etc.)   | Nanodiag : AAP<br>Cancéropôle GE  | Nanodiag : AAPInfo<br>sarcoma: 15 K€ | Nanodiag : AAP<br>Cancéropôle GE,<br>316 K€, Matwin<br>Award 5K€ | AAP Silab,<br>Fondation J.<br>Paufique (40K€),<br>INCa : 594 K€ |
|  | BIOCAIR FRI : 98 k€ HT FEDER Bourgogne, 335.6 k€ HT . FEDER Franche-Comté 281.9 K€ HT + 643 K€ FEDER FC (Diaclone MiMedi). Marie Skłodowska-Curie Research and Innovation Staff exchange 162 k€ HT (nanoTRAIL_Lighter).   |                                      |  |   |
| *Form: framework agreement, contract, etc. Nature of the contribution obtained: payments in €, provision of human resources, equipment sharing, sponsorship, skills-based sponsorships, etc. |   |                                      |  |   |

|   |     |
|---|-----|
| <b>TABLE 1.9:</b><br>SHARE OF THESE FOUR PARTNERSHIPS IN THE FUNDING RECEIVED FROM COMPANIES OUT OF ALL THE IDEX/ISITE PROJECT ACTIONS (AS A %) | 30% |
|---|-----|



### 1.5.5. STUDENT LIFE AND LIFE ON THE CAMPUS

UBFC federal level is in charge to coordinate student life among UBFC members. For this purpose, UBFC relies on local authorities (3.2 M€ Region BFC grant, cities hosting campuses) & CROUS (providing social support to students such as accommodations & restaurants). The CROUS partnership allowed a student life action plan at BFC scale also based on a national tax (yearly budget 4 M€) distributed to UBFC member campuses to deploy this plan.

Dedicated measures all along the student stay within the campus read:

- **Attractive welcome for all:**

- Welcome event: including campus exploration, socialization opp. (4500 students/year).
- Multiservice welcome package involving 15 service partners (banks, insurances, etc).
- Accompanying students in administrative steps or in finding accommodations.
- Specific support to international students: translator to update visa and filing forms of all kinds (accommodation contract, banking, etc). Welcoming foreign UBFC students at their first arrival at train station to guide them to their accommodation.
- Tutorial support of newly enrolled students by elder students (ex: 63 tutors taking care of 160 student groups in Dijon). Program "Hive" capitalizing on IDEFI Talent Campus.

- **Maximizing student interactions:**

- Socialization events co-organized with cultural/sport stakeholders (3000 students/year).
- Tools to organise student life. About 250 student associations are registered in BFC. To help their management, summer school trainings are offered to student association leaders (60 participants/year) in accounting, event organisation, communication, etc. UBFC grants at label to student associations complying to a common Chart and makes available campus communication means (Radio) or a directory of service partners.

- **Favouring interactions with socio-economical environment**

- Internship and student part time jobs stock exchange.

### 1.5.6. CULTURE, SCIENCE AND SOCIETY

Several flagship projects have been carried out by UBFC with the support of its members (cultural services of uB and UFC) and its local and national partners:

- **Access to culture**

- Culture training modules offered to all students: general culture & scientific culture.
- Stimulating artistic activities by yearly 7-10 specific calls supported by external funding.
- Culture Pass: smartphone app offering 500 € of cultural expenses to 18 year old students: more than 10000 participants in 2019.
- Workshops of art activities: music, theater, danse, song, drawing, poetry.
- Open creation spaces favoring projects involving artists, students & staff: exhibition spaces (Dijon, Besançon), Café-concert (Besançon), theaters (Dijon, Besançon).
- Coordination of the regional event "VIVO! Get into nature" (2018): Supported by Region BFC & local authorities (500k€), VIVO set out to explore Mankind-Nature interaction, based on topics pertaining to ISITE-BFC axes. In 2018 VIVO Gathered 22000 people throughout BFC cities and mobilized 80 cultural, scientific & educational partners.

- **Dissemination of science in the socio-cultural environment**

- Coordination of the national event "European Research Night" since 2018. Coordinator of two H2020- MSCA "NIGHT" projects (741 k€), UBFC co-organises the "European Research Night ». In 12 cities, 76000 people (5000 in BFC) attended the Night in 2019.

- Organisation of « Three minute thesis » contest in BFC since 2017. Open to French-speaking PhD students from around the world, this popular competition mobilizes CSTI skills. Supported by local authorities & sponsors, UBFC has coordinated 2 editions where PhD students presented their research to a 250 people audience.
- Participation in the 1st regional forum on CSTI (november 2019). Central event of the regional policy on CSTI, the forum organised by the BFC regional council was a privileged moment for networking the various actors (incl. science museums, culture centers, botanical gardens, learned societies, universities and research organizations, etc).

### 1.5.7. CONSTRUCTION OF THE IDENTITY

The emergence of the UBFC corporate spirit since 2016 could be monitored by the following indicators that are as many 2015 commitments respected by the UBFC members:

- UBFC is now contractor of 89 ANR research projects and of 21 European projects. The UBFC scientific signature is applied.
- The newly aggregated UBFC community learned to work together on emblematic projects. At the national level, under the UBFC banner, the community was laureate of EUR and NCU PIA3 calls as well as laureate of a call dedicated to lifelong learning.
- All employees of UBFC members and of national research organizations working in BFC can be contacted via an e-mail address of the type [first\\_name.name@ubfc.fr](mailto:first_name.name@ubfc.fr)
- All UBFC member employees & students have a “UBFC-Pass” professional/student card.

Other specific actions supporting the construction of the identity read:

- (1) Establishing a **UBFC wide Student Congress** that configured two BFC wide projects:
  - (a) **“Student Wellness & Health”** featuring a “UBFC Student Life Quality Label”.
  - (b) **“UBFC Sustainable Development Olympiade”** aiming at expanding at UBFC scale selected student initiatives related to sustainable development or sport practice.
- (2) **Starting the UBFC Alumni network in May 2020.**
- (3) **PhD and UBFC Masters degree ceremony:** Degrees delivered by UBFC President.
- (4) **Forums, workshop, seminars to inform about doctorate** programs, promoting competences brought by PhD students to companies, doctors' career development, etc.
- (5) Tightening of the corporate spirit is a **priority of the project submitted to IDEES PIA call.**

#### ***For students enrolled in courses developed or promoted thanks to the IDEX/ISITE funding,***

- ***does or will (specify time frame) enrolment take place in the "Target University"?*** All PhD students and students of UBFC master taught in English are enrolled in the Target University UBFC since project start.
- ***does or will enrolment take place jointly in one of the member establishments of the "Target University"?*** To prepare bachelor students enrolled by UBFC member (situation complying with 2015 commitments), the bachelor trainings leading to these masters are reinforced using ISITE-BFC funding.
- ***how is the feeling of belonging to the "Target University" developed?*** All PhD and UBFC master students get a welcome kit with goodies featuring UBFC brand. Welcome days, degree ceremony and other events are organised.
- ***Indicate how, thanks to this identity, the "Target University" does or will (specify the time frame) simplify interfacing with the socio-economic world and become its point of contact.*** All PhD students and students of UBFC master taught in English can immediately connect to the UBFC alumni network to benefit of the job/internship offer service. The project submitted to PIA IDEES call plans to extend this network to the whole UBFC member student community.



### 1.5.8. INTERNATIONAL VISIBILITY

The UBFC scientific signature is applied since 2016 in the “address” field of scientific papers. In the *Web of Science Core*, the rate of application of this signature read 47% in 2016 and 75% in 2019. Despite this evolution, UBFC does not yet appear in ARWU/Leiden rankings because they refuse to take any COMUE into account. However, giving room for negotiating with these rankings requires that UBFC members be consistent when managing the “enhanced organisation name” field in the Web of Science database, a point explicitly addressed in the trajectory milestones remaining to be crossed (Table 2.1).

Masters taught in English are the key asset for international visibility among students. They benefit of international promotion using a variety of channels, grants for talented international students funded by ISITE-BFC. In the framework of these masters (see section 1.5.3.2 for more details), UBFC has within 4 years negotiated 54 agreements with international partners to favour student exchanges, double degrees and Erasmus programs. These agreements were as many opportunities of student outward mobility: **65 such mobilities over 3 years supported by a 300 k€ budget from ISITE-BFC fund.**

***Has it been checked that the “Target University” is eligible to become member of the European University Association (EUA)?***

UBFC fullfills the EUA full membership criterions because:

- At MA & Doctorate levels, UBFC provides degree programmes that meet the national quality insurance within the framework of European quality insurance standards;
- UBFC is sustainable in its receipt of direct public funding;
- UBFC possesses and exercises the right to award doctoral degree in its own right;
- UBFC participates to peer reviewed European/national research programs (Panel 1.6).

UBFC application to EUA is currently prepared (July 2020).

### 1.5.9. FOCUS: REMARKABLE ACHIEVEMENTS

ISITE-BFC deployed all the instruments supporting excellence and internationalisation that were planned in 2015, some of them not previously existing in France, namely:

- Making UBFC appearing on the international market of job offers of tenure tracks and double appointed coaches of very high reputation.
- Talent management policy (junior & senior fellowships).
- Transformation of the language of 16 research master trainings and the consequences thereof: increased inward flow of international students; 54 international agreements bound to these masters; increased opportunities of international mobility for students.
- Using selection criterion matching international standards, triggering 80 research projects, incl. 18 projects orienting 30 companies (21 in BFC) along ISITE-BFC priorities.
- To trigger the UBFC alumni network for PhD & UBFC Master students. The UBFC project laureate of the PIA IDEES call plans to extend this network to all BFC students.

The ISITE-BFC dynamics stimulated strong synergies as testified by the successes of UBFC at the PIA NCU & EUR calls. The latter is amplified by the ambitious project that UBFC succesfully filed to the PIA SFRI call (sec; 3.2). Demonstrating the pertinence of the strategy, more than 70% of PhD thesis sponsored by industries are related to ISITE-BFC priorities. The combined action of ISITE-BFC, academic staff, SATT and incubator are illustrated by the successes demonstrating the capacity of the ISITE-BFC consortium to involve companies of all sizes in frontier of knowledge research such as programmable matter or innovative biotechnologies applied to food and/or medicine.

## 2. PROJECTION INTO THE FUTURE

***With respect to the "Target University" and the major objectives that have not yet been achieved (see table in 1.4), what - if applicable - are the main milestones remaining to be crossed?***

Checking the 2020 situation against the 2015 commitments (Table 1.2 in sec 1.4) but also against the 2015 Cambridge Univ. benchmark (Panel 2.1) leads to the following assessment:

- A) Strategic commitments have been respected, albeit with some delay for some of them. However, steps that would have been necessary beyond the 2015 commitments, such as the double affiliation of both staff and students (or any variant thereof), are still pending.
- B) Difficulties occurred to match commitments of technical/administrative nature, namely :
  - (a) Human resources of UBFC members endorsing UBFC federal functions;
  - (b) Pooling of human resources for executing strategic functions, among which the management of international relations that is critical for the visibility of UBFC;
  - (c) Convergence of databases and management software of UBFC members;
  - (d) Registration of students via a single internet gateway.

Thus, in the above points A & B, the issue of the double affiliation of staff/students is underlying the difficulties experienced in the UBFC construction so far. This issue brought the UBFC Steering Council during March 2019 to decide to set-up a committee in charge of changing the UBFC statutes in order to transform the COMUE into an "Experimental COMUE" that would allow to match the target lines 1-5 listed in Table 2.1, among which the said double affiliations. This committee was triggered in July 2020. Note that the new statutes shall accommodate the same specific provisions read in the current statutes applying to the national engineering institutes ENSAM & AgroSup Dijon as well as to BSB which, as private institution, is also bound to specific legal constraints.

Among the main expected statute changes, one reads (line 1 in Table 2.1), a modification of the election mode. The current statutes foresee a single electoral college mixing the employees of all UBFC member organizations. Experimenting this scheme revealed several drawbacks such as a sub-critical representation of engineering schools in both UBFC Board and UBFC Academic Council as well as loss of effective representation of the point of views of the UBFC member organizations in the said assemblies. Inspired by the scheme applied to the election to the European Parliament, the revised statutes shall cast that the electoral colleges are based on the affiliation to the UBFC members, thereby meaning that employees/students of each UBFC member shall directly elect their representatives pertaining to their own institution to UBFC Board and Academic Council. This revision implies the following corollary: in election matters, each UBFC employee (incl. admin staff, PhD, post-docs, tenure tracks) shall be also related to a UBFC member organisation (including elections within UBFC member organisations), thereby correcting the current odd situation featuring a lack of vote right equity because UBFC employees vote only for UBFC assemblies while UBFC member employees vote for UBFC assemblies and their own employer assemblies.

Another main expected statute change (also line 1 in Table 2.1) modifies the mode of nomination of both UBFC President and Vice-President. The current practice is that the President nomination depends on the UBFC board and that the Vice-President are nominated by the Board upon proposition by the UBFC President. Experimenting this practice revealed the drawback of a downgraded and inefficient link between the UBFC

President and Vice-President and the UBFC member organizations. The revised statute shall cast that the UBFC President will be nominated by the UBFC Board upon proposition by the heads of the UBFC member organizations. The UBFC Vice-Presidents will then be nominated by the UBFC Board upon a concerted proposition by the UBFC President and the heads of the UBFC member organizations.

Progressing towards the double affiliation of staff and students as well as to the other items of Table 2.1 was delayed due to the following main impediments:

- During 2016-2018, political divergences arose between the UBFC president and the UBFC member presidents. They appeared unsolvable in the framework of the UBFC statutes. Culminating in 2018 as a governance crisis, they led the HER Minister to commission an investigation that resulted in the UBFC president resigning in Nov. 2018. The HER Minister then nominated Prof. L. Johann (U. Lorraine) as UBFC provisional administrator.
- The implementation of the deal exposed in Table 2.1 had to wait for the elections of the UBFC, UB & UFC presidents planned during the February-March 2020 period (Indeed, within the UBFC federation, both UB & UFC represent by large the majority of Faculty members and students). The UB president was elected just before the covid-19 outbreak. However, due to the pandemic, at the time of writing this report, both UBFC and UFC undergo a 6-9 month governance gap delaying the finalization of the items exposed in Table 2.1 before the evaluation by the international IDEX/I-SITE jury. Nevertheless, triggering the work for revising the UBFC statutes is launched.

**What are the main difficulties to overcome in order to achieve this agenda?**

- (1) Complications intrinsic to the French regulations applying to Faculty staff & students. Indeed double affiliation is not a commonly applied concept in the French HER system. The statute change committee will have to cope carefully with all possible consequences of the regulations applying to staff and students. The support of the French HER Ministry might be expected in this context.
- (2) The elements of Table 2.1 were *not* listed among the 2015 commitments, thereby showing obvious symptoms of an initially weak UBFC corporate spirit. Table 2.1 now defines a consistent and clear political will to achieve a higher integration level. Strengthening the UBFC corporate spirit is specifically addressed by several work packages of the UBFC project listed among the laureates of PIA IDEES, namely: (i) Alumni network integrated at UBFC scale; (ii) Unified dissemination of the scientific excellence image integrated at the UBFC level to tighten the corporate spirit.
- (3) The geographical dispersion over distances that may exceed 400 km combined with a single head office in Besançon raised a number of logistical issues including: available building size; costs of the numerous travels to the head office; due to point B)(b) above, low efficiency of the administrative & financial support chain linking the head office to the UBFC members; null visibility of UBFC on the 11 other campuses. In turn, these issues penalize the development of the UBFC corporate spirit. To bring the UBFC governance closer to the field, Table 2.1 (line 1) foresees a double UBFC head office in Besançon and Dijon to capitalize on the existing administrative chain already established by UB in Dijon to manage 6 campuses. However, doubling the head office may expose the package presented in Table 2.1 to political interferences that should be avoided by a consistent position of the members of the UBFC Steering Committee expressing their mutual confidence.

**TABLE 2.1 : UBFC TRAJECTORY MILESTONES REMAINING TO BE CROSSED**

| # | Commitment  | Description of the indicator   | Targets  | Date of achievement  |
|---|---|--|--|--|
| 1 | Improved UBFC governance  | <p>Revised UBFC statutes shall cast:</p> <ul style="list-style-type: none"> <li>• Redefinition of electoral colleges: employees/students of each UBFC member shall elect their representatives pertaining to their own institution to UBFC Board and Academic Council. Corollary: Each UBFC employee/student (incl. admin staff, PhD, post-docs, tenure tracks) shall be also related to a UBFC member organisation.</li> <li>• The UBFC President is nominated by the UBFC Board upon proposition by the heads of the UBFC member organizations. The UBFC Vice-Presidents are nominated by the UBFC Board upon a concerted proposition by the UBFC President and the heads of the UBFC member organizations.</li> <li>• Prohibition of cumulating several UBFC Vice-President empowerments.</li> <li>• Prohibition of cumulating UBFC President and any UBFC Vice-President empowerment.</li> </ul>   | <ul style="list-style-type: none"> <li>• Ensuring that the convergence of interests/actions of both UBFC federal level and the UBFC members.</li> <li>• Elective colleges are defined on the basis of the affiliation to each UBFC member.</li> <li>• Each UBFC member is represented in the UBFC executive office.</li> <li>• Governance &amp; admin. support closer to the field.</li> </ul>     | Revised statute draft sent for approval by HER Ministry by June 2021 |
| 2 | Concept of double affiliation of staff to UBFC and one UBFC member organization | <p>Revised UBFC statutes shall cast a staff double affiliation concept that matches at least the following operational features:</p> <ul style="list-style-type: none"> <li>• The President of UBFC can delegate the execution of her/his signature to any employee of any UBFC member organisation.</li> <li>• Upon instruction precisng scope and duration by the President of a UBFC member organization, an employee of the said UBFC member organization is deemed to endorse tasks on behalf of UBFC.</li> <li>• Corollary 1: In any circumstance where affiliation matters, each employee of a UBFC member organization is deemed to claim twofold affiliation to UBFC &amp; said UBFC member.</li> <li>• Corollary 2: Tuning/monitoring of the distribution of coordinated task load between UBFC and UBFC members.</li> <li>• Corollary 3: Each UBFC member organization manages its own staff budget.</li> <li>• Double UBFC head office (“siège social”) in Besançon and Dijon (e.g.: alternating the location of assembly meetings, UBFC staff on both sites, etc).</li> </ul> | <p>Improving the fluidity of all activities and the adhesion of the all staff categories to the UBFC construction.</p> <p>Achieve the same level of fluidity currently observed in research laboratories jointly operated by a National Research Organisation (NRO) and an university. The challenge is to achieve this fluidity in all fields of activities: research, training, admin., etc.</p> | Revised statute draft sent for approval by HER Ministry by June 2021 |
| 3 | Concept of double affiliation of students to UBFC and one UBFC                  | <p>Revised UBFC statutes shall cast a student double affiliation concept that matches at least the following operational features:</p> <ul style="list-style-type: none"> <li>• Each student is affiliated to both UBFC and one UBFC member organization while registering (and paying fee) only once. Corollary: Tuning/monitoring of the distribution of tasks related to student management between UBFC and the UBFC members.</li> </ul>   | <p>Improving the UBFC visibility and the UBFC corporate spirit:</p> <ul style="list-style-type: none"> <li>• UBFC affiliation of the whole 67000 BFC student community</li> <li>• Single UBFC alumni network</li> </ul>  | Revised statute draft sent for approval by HER Ministry by June 2021 |

**TABLE 2.1 : UBFC TRAJECTORY MILESTONES REMAINING TO BE CROSSED**

| # | Commitment                         | Description of the indicator  | Targets   | Date of achievement  |
|---|------------------------------------|---|---|--|
|   | member organization                | <ul style="list-style-type: none"> <li>All degrees bear the president signatures of UBFC and of one UBFC member.</li> <li>The UBFC logo appears on all degrees of trainings operated by each UBFC member. UBFC President attend all degree ceremonies.</li> </ul>   |   |  |
| 4 | Improved scientific signature      | <p>Revised UBFC statutes shall cast that, to be a regular member of UBFC, a HER organization :</p> <ul style="list-style-type: none"> <li>Has to fulfill the condition to request from Web of Science (WoS) to make UBFC appearing in the “enhanced organization name” bibliometry field instead of the said HER organization name with the reservation that ARWU or Leiden ranking would agree consider COMUE UBFC (see # 7 below).</li> <li>Has to instruct its staff to use the UBFC scientific signature only (not the UBFC member scientific signature);</li> <li>Has to instruct its staff to use make UBFC appearing among the beneficiaries of national (including PIA) , European or international grant applications, thereby making the said UBFC member appearing as linked third party or as other beneficiary.</li> </ul> | <p>Improving the UBFC visibility and the UBFC corporate spirit:</p> <ul style="list-style-type: none"> <li>UBFC appears in “enhanced organization name” bibliometry field of WoS Core Collection instead of any other UBFC member.</li> <li>UBFC appears as beneficiary of national (including PIA), European or international grant applications.</li> </ul> | <ul style="list-style-type: none"> <li>Revised statute draft sent for approval by HER Ministry by June 2021</li> <li>UBFC &amp; UBFC member requests sent to WoS by June 2021</li> </ul> |
| 5 | Coordinated international strategy | <p>Revised UBFC statutes shall cast that:</p> <ul style="list-style-type: none"> <li>The nomination of a UBFC Vice-President in charge of international relations is mandatory during the term of office of each UBFC Board. This Vice-President will be empowered by each UBFC member president to implement the procedures defined in June 2019 aiming at coordinating the international offices of all UBFC members.</li> <li>All UBFC members bound to propose international agreements on behalf of UBFC.</li> </ul>   | <ul style="list-style-type: none"> <li>Improving the UBFC visibility and the UBFC corporate spirit.</li> <li>UBFC banner is brought to the fore in all new international contracts involving any UBFC member.</li> </ul>  | Revised statute draft sent for approval by HER Ministry by June 2021   |
| 6 | Transfert & exploitation           | <p>At UBFC scale:</p> <ul style="list-style-type: none"> <li>Defining common objectives such as a common strategy for each IISTE-BFC priority.</li> <li>Creating a committee in charge of coordinating the already existing various instruments dedicated to transfert &amp; exploitation of research results;</li> <li>Pooling vote rights related of the SATT stocks owned by UBFC members (see details in sec. 1.5.4).</li> </ul>  | Coordinated transfert & exploitation strategy   | 2021   |
| 7 | International rankings             | As soon as target 4 and EUA affiliation are effective (see sec. 1.5.8 ), requiring the lobbying help of the French government to support consideration of UBFC by ARWU/Leiden rankings.   | Improving the UBFC visibility and the UBFC corporate spirit: UBFC in ARWU and/or Leiden ranking(s)  | 2022   |



**PANEL 2.1:** UBFC CONVERGENCE INDICATORS TOWARDS THE SUBSET OF FEATURES OF THE BENCHMARK USED IN ISITE-BFC 2015 DOCUMENTS TO ILLUSTRATE THE UBFC TRAJECTORY. SITUATIONS OF NON-CONVERGENCE (IN RED) DO NOT NECESSARILY IMPLY THAT SOME 2015 COMMITMENTS (TABLE Q IN ISITE-BFC PROJECT DOCUMENT) WERE NOT RESPECTED BECAUSE SOME BENCHMARK FEATURES WERE NOT PLANNED TO BE REPRODUCED. ITEMS IN RED ARE WAITING FOR COMPLETION.

|    | BENCHMARK UNIV. CAMBRIDGE  | UBFC TRAJECTORY   | CONVERGENCE INDICATORS (JUNE 2020)   |
|----|--|---|--|
| 1  | Autonomy of Colleges that founded the University   | UBFC members were independent of each other   | <b>Convergence.</b><br><b>Commitment respected.</b>  |
| 2  | Colleges are self-governing institutions with their endowment & property. Research budgets (incl. socio-economical partners) are managed by the University.                  | Self-governing members with their own endowment and property <u>but</u> they transfer their research endowment to UBFC.                         | <b>Partial convergence but respecting the commitment.</b><br>UBFC manages research budgets of PIA, ANR and H2020 types but not the budgets of projects with socio-economical partners.   |
| 3  | Each college appoints its own teaching staff; permanent & non permanent research staff appointed by Univ. A double affiliation to both University and a College is possible. | Each member appoints its own permanent teaching staff; non permanent research staff (e.g. post-docs, PhD 's) appointed at UBFC level            | <b>Non convergence but respecting the commitment.</b><br>Although UBFC defines the research profile of Faculty members of all UBFC members, <b>legally, the Faculty members are only affiliated to one UBFC member.</b>  |
| 4  | Recruitment committees at Univ. level  | Recruitment committees at UBFC level.   | <b>Convergence.</b><br><b>Commitment respected.</b>  |
| 5  | Scientific signature: Univ. Cambridge  | Single scientific signature: Univ. Bourgogne Franche-Comté in the "address" bibliometry field of scientific papers                              | <b>Convergence respecting the commitment.</b><br><b>To date, no impact of UBFC signature on ARWU and Leiden rankings because lack of consistency in the "enhanced organisation name" bibliometry field and because ARWU/Leiden opposition to recognize a French COMUE in their rankings.</b> |
| 6  | Each staff member belongs to laboratory at the university level  | Each staff member belongs to a UBFC laboratory.   | <b>Convergence</b><br>Moreover, several laboratories already gather Faculty staff of several UBFC members  |
| 7  | Research facilities managed at the University level  | Laboratories operated by UBFC or jointly operated with CNRS, INRAE or INSERM  | <b>Convergence.</b> However, in June 2020, the CNRS & INSERM signatures about jointly operated laboratories are still pending.   |
| 8  | Registration of students at university level completed by affiliation to a college   | Student registration at UBFC level completed by affiliation to a UBFC member  | <b>Delayed convergence</b><br><b>Formally, students are not yet granted with a double affiliation UBFC/Member. The planned Central registration managed by UBFC through unique internet gateway is delayed.</b>  |
| 9  | Colleges provide undergraduate teaching, housing, welfare & social functions.  | UBFC members operate teaching & social functions coordinated by UBFC divisions  | <b>Criterion not applicable</b><br>In France, housing & welfare of students is managed by a regional service (CROUS), working closely with HER organisations.  |
| 10 | Degree levels awarded by Cambridge University: Bachelor, Master, PhD   | Degree levels awarded by UBFC: Bachelor, Master, PhD, HDR<br>All trainings related to the 3 ISITE-BFC priority areas are managed at UBFC level. | <b>Convergence.</b><br><b>Commitment partially respected.</b><br>Degree levels awarded by UBFC: PhD, HDR, 16 masters funded by ISITE-BFC.<br>For all other degrees: UBFC signature is planned beside the UBFC member signature.  |

**With which university (or universities) does the IDEX/ISITE intend comparing itself to adjust its strategy and pursue its development trajectory?**

The convergence of UBFC towards selected features of the Cambridge U. benchmark that inspired the definition of the UBFC trajectory in 2015 is checked in Panel 2.1, confirming that the features that would facilitate a higher integration of the UBFC federation read: (1) Affiliating the Faculty staff of all UBFC members to the UBFC federation (line 2 in Table 2.1) ; (2) Affiliating the students of all UBFC members to the UBFC federation (line 3 in Table 2.1). The ISITE-BFC instruments supporting excellence & internationalisation were inspired by the Utrecht University benchmark. Except for opening the recently created alumni network to all students of all UBFC members, the consortium successfully deployed all the instruments supporting excellence & internationalisation inspired by this benchmark (Panel 2.2).

**PANEL 2.2: INSTRUMENTS SUPPORTING EXCELLENCE & INTERNATIONALIZATION: COMPARISONS OF 2015 AND 2019 UBFC STATUS AGAINST THE UTRECHT UNIVERSITY BENCHMARK PERFORMED IN THE 2015 ISITE-BFC PROJECT. ITEMS IN RED ARE WAITING FOR COMPLETION.**

|    | UBFC STATUS IN 2015   | UBFC Status in 2020   | UTRECHT UNIVERSITY BENCHMARK  |
|----|---|---|---|
| 1  | No definition of BFC scientific ambition  | 3 priority multidisciplinary areas :<br>1) Advanced Materials & Smart Systems<br>2) Territories, Environment, Food<br>3) Comprehensive Individual Care  | 4 priority areas:<br>Sustainability,<br>Institutions, Life Sciences,<br>Dynamics of Youth |
| 2  | No shared strategy across UBFC members  | Common strategy implemented through ISITE-BFC project.  | Alliance with TU Eindhoven (Engineering)  |
| 3  | Lack of visibility and efficiency of each UBFC member alumni network                                      | Embryo of alumni network based on UBFC masters, masters integrated in Graduate Schools and Ph D started in May 2020. <b>Alumni network for all types of students planned in UBFC application to IDEES call.</b> | 125 000 member Alumni network   |
| 4  | Masters taught in English < 5   | 16 masters research masters taught in English (50 % of research masters)  | >50% of masters taught in English   |
| 5  | Lack of resources to support international alliances  | Bound to the UBFC masters, 26 International alliances developed using ISITE funding   | 40 international partnership/alliances worldwide  |
| 6  | Nearly zero inward flow of EU and North American students in the fields of the 3 ISITE-BFC priority areas | Graduate Schools aiming at a offering compatibility with north American system (see BFC project submitted to SFRI PIA Call)   | Inward flow of EU and North American students   |
| 7  | Human resources management loosely bound to the scientific ambition                                       | 57 % of Faculty member recruitment directed to 3 priority axes.   | 50% of international Faculty Members in Excellence core                                   |
| 8  | Absence of Fellowship policy  | ISITE-BFC initiated manifold Fellowship policy: UBFC juniors/seniors, Tenure Tracks, Coaches  | Manifold Fellowship policy  |
| 9  | Absence of portfolios allocated to full professors  | Portfolios allocated to 5 emblematic full professor or director of research   | Portfolios allocated to emblematic full professors  |
| 10 | Absence of scholarships for talented students   | Scholarships for talented students funded by ISITE-BFC  | Scholarships for talented students  |

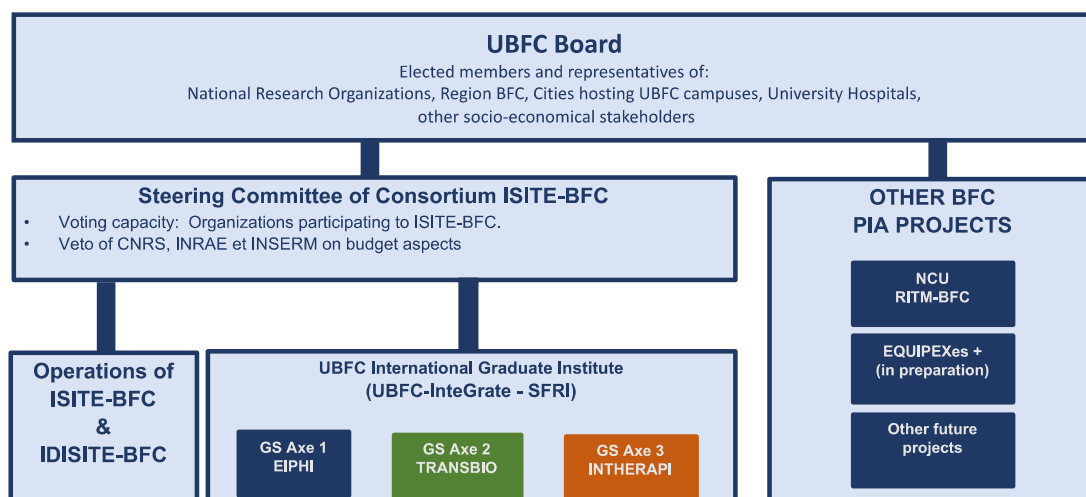
### 3. OPTIONAL ASSESSMENT AND ANALYSIS

#### 3.1. HIGHER INTEGRATED GOVERNANCE OF PIA OPERATIONS IN BFC

The opportunity of the IDEES & SFRI calls led to review the governance of PIA projects in BFC. The result is the unified governance framework of PIA operations in BFC (Fig. 3.1). Specifically, the execution of ISITE-BFC as well as of both projects submitted to the IDEES & SFRI calls will be supervised by the Steering Committee of the ISITE-BFC Consortium that has deployed the ISITE-BFC project so far. The main features of this governance structure are:

- The ISITE-BFC **Steering Committee (SC)** gathers the representatives of the organisations that are members of the ISITE-BFC consortium, each of them with a single voting capacity. The SC decides on the basis of single majority votes, allows granting proxies and participating via audio/video-conferences. At least once a year, the Steering Committee (SC) establishes the rolling budget breakdown by action type of each PIA project cited in this section, thereby providing a comprehensive budget for the resource allocation of all these projects for approval by the UBFC Board hosting the PIA funds. The coordinators of the PIA projects cited in this section prepare the respective budgets and related action plans to be assessed by the SC. Within the SC, the national research bodies CNRS, INRAE & INSERM are granted with a specific role in the governance scheme: when voting the budgets of the PIA projects cited in this section, the single majority must include them. They are therefore guarantors against any deviations of the various project plans.
- On the basis of their respective rolling budgets approved by the UBFC Board, the implementation of ISITE-BFC & IDISITE-BFC (laureate of IDEES call) will be fully operated by the SC while SFRI project UBFC-InteGrate will be deployed by a governance body accommodating the constraints of a training institute (details in SFRI submission form).
- A single coordinator assisted by the same management team will be in charge of both ISITE-BFC and IDISITE-BFC. SC meetings are chaired by the ISITE-BFC/IDISITE-BFC coordinator. The coordinator of BFC SFRI UBFC-InteGrate will be a different person assisted by a specific management team described in the BFC SFRI submission form. Both coordinators of ISITE-BFC/ IDISITE-BFC and of SFRI project UBFC-InteGrate are members of the SC with no voting capacity. They will be affiliated to a UBFC member institution and have the rank of UBFC Vice-President. They will report about the deployment of the above mentioned projects to both SC and UBFC Board.
- The SFRI project UBFC-InteGrate is an Institute grouping the Graduate Schools (GS) related to the 3 priority axes of ISITE-BFC: EIPHI (Axe 1), TRANSBIO (Axe 2) & INTHERAPI (Axe 3), the latter being coupled to the LABEX LIPSTIC. GS EIPHI (laureate in 2018), following up LABEX ACTION, and the extension of LABEX LIPSTIC (laureate in 2019) are already in operation while GS TRANSBIO & INTHERAPI are the main deliverables of the SFRI project. Each GS features “close to the field” governance body & management team.
- Executing the budget of both ISITE-BFC and IDISITE-BFC, the *Management & Monitoring Team* (MMT) includes the Project Coordination Office (PCO) comprising: project coordinator, deputy coordinator, project manager, finance manager and assistant to the coordinator. Operationally speaking and budget-wise, the MMT is one of the ISITE-BFC workpackage. The PCO is in charge of the project daily management and coaching.





*Fig. 3.1: Governance diagram of all PIA operations in BFC. In the SFRI box, GS stands for “Graduate School” (EUR project). After the first PIA EUR call, LABEX ACTION is continued as GS EIPHI. After the 2019 LABEX call, LIPSTIC (related to the ISITE-BFC axe 3) continues over five more years. The BFC SFRI UBFC-InteGrate envisions the coupling of LABEX LIPSTIC to the GS INTHERAPI.*

### 3.2. TOWARDS THE UBFC INTERNATIONAL GRADUATE INSTITUTE

Capitalizing on masters listed in Panel 1.8, the BFC project laureate of the PIA SFRI call aims at creating a set of Graduate Programs (GP) integrating the master's and doctorate degrees, structured into three thematic Graduate Schools (GS), and grouped together within an international institute of graduate studies - the UBFC International Graduate Institute (UBFC-InteGrate). These GS will promote international relations and cross-disciplinarity through a broad scientific spectrum organized into pillars corresponding to the three ISITE-BFC priorities. The aim is to build, as an extension of EIPHI GS (axe1) a Master's and Doctorate training offer backed by the most emblematic BFC research laboratories. Two new GS corresponding to axis 2 (TRANSBIO) and 3 (INTHERAPI) will be developed in order to create GPs matching international standards. Each axis is organized in 3 or 4 sub-topics, all dealing with major research and socio-economical priorities at European and international levels. Each GP aspires to develop strong interactions with socio-economic partners by focusing on contemporary challenges in terms of industrial and societal innovation, entrepreneurship, start-up creations, and aiming to guarantee the employability of students.

The 3 GSs will be streamlined by with sub-topics and by cross-disciplinary actions featuring transversal GPs. We also anticipate that another cross-disciplinary level will emerge in terms of transversal GPs between the 3 GSs, combining for example health & High-Tech, food & health, or datascience & environment. The three GSs will keep wthe objective to attract additional graduate education programs and labs. Therefore, the student flows in master and PhD announced in Fig. 3.2 concerns the initial targeted programs taught in English. Other education programs and labs involved in the ISITE-BFC 3 (undergoing strict regulations about medicine training) priority axes may develop the currently identified INTHERAPI GS embryo by sharing teaching units, or in transversal GPs. The extension of the domains to the Human and Social Sciences will be carried out in particular by the Federation of Human Sciences labs in Dijon and Besançon. The attractiveness of the GS's is expected to significantly increase the number of UBFC graduate students originating from national and international universities.



Fig.3.2 : UBFC International Graduate Institute project (UBFC InteGrate) in a nutshell.

The added value of the UBFC Integrate program is characterized by stimulating customized training programs based on: (a) Internationally recognized research with strong involvement of laboratories and researchers in training; (b) The use of the site's instrumental platforms; (c) Fellowships for talented students and immersion of students from the first year in the laboratories, with support from a research and training mentor, access to internships and preparation of the PhD; (d) Development of an active learning approach by project, based on the network of openlabs and encouraging innovation, creativity and cross-disciplinarity. The ambition is to **change the paradym of a knowledge transfer approach to the knowledge sharing one.**

UBFC Integrate Institute will structure the UBFC site in synergy with the many PIA instruments and initiatives obtained by UBFC and partners since 2012 such as ISITE BFC, EUR EIPHI, RITM-NCU, but also LABEX, EQUIPEX, and IDEFIs projects - TalentCampus and CMI-FIGURE. The UBFC-InteGrate institute will give the opportunity to organize research and education within the 3 ISITE-BFC priority axes, by capitalizing on the valuable experience gained through these different instruments.

**Targeted impact:** UBFC-InteGrate Institute will host 3 GS corresponding to the 3 ISITE BFC priority axes, in order to guarantee excellence and internationalization of Graduate Programs (GPs) from master-to-doctorate levels, supported by research labs. Thereby, 30 UBFC existing master oriented research degrees and 5 doctoral schools will be fully aligned with 25 research labs in the framework of 3 GSs, gathered in an international graduate Institute – UBFC InteGrate. UBFC strategies in terms of HER will follow a new scheme guaranteeing the continuum of research-master-doctorate, including platforms and implementing GSs as a new tool to increase the federal UBFC university attractiveness towards undergraduate students originating both from BFC sites and international universities. For the first time at BFC site level, recruitments, the international development strategy, the investments to be made within the framework of 3 GSs, the link with all ISITE-

BFC partners including engineering schools, national research laboratories and health organization will enable a global vision of education and research needs.

The strategy focuses activities on highly differentiating ones in order to keep a **worldwide top-level scientific positioning in “niche” domains** we are already recognized for. Combining them with **cross-disciplinary projects**, we aim for an **academic smart specialization strategy** on the basis of the well-known economic theory about smart specialization of regional economies.

**Career development:** UBFC-Integrate will make the training from bachelor to doctorate level more relevant and professional, including research and/or industrial careers. The Graduate Institute offers new horizons to socio-economic partners, via openlabs, entrepreneurship, work-study and lifelong learning. Coherently, our strategy is promoting a strong **experimental know-how based on top-level research involving technology platforms**, to be shared among researchers, students, and socio-economic partners. The culture of technological know-how combined to a top level scientific expertise will provide a fertile ground for innovation, for fruitful interactions and cooperation with both SMEs and large companies, and expectedly for start-up creation by the UBFC-InteGrate graduated students.

**Attractiveness:** UBFC-InteGrate offers internationalized master and doctoral programs (GPs) compatible with those of major international research universities. GPs are supported by the internationally recognized UBFC research groups. Paying attention to the link to bachelor levels both locally and internationally, GPs will guarantee “à la carte” training with personalized follow-up of students thanks to mentoring and tutoring (also at bachelor level). A network of learning spaces will be developed in each UBFC sites such as lab projects, openlabs, platforms, fablabs, hackerspace and/or livinglabs to encourage new practices and cross-disciplinary skills from master to doctorate level.

**Graduate school quality assurance procedure:** A quality assurance procedure will be implemented in order to guarantee a continuous improvement of the trainings. The principles, rules & standards of the training quality evaluation are contained in the European Standards & Guidelines for quality assurance (ESG). According to the first principle of the ESG, the institutions are responsible of the quality of the programs they organize. Among the existing master programs in the 3 proposed GSs, 7 curricula already feature a quality assurance based on a benchmark guiding the self-evaluation process and by an evaluation involving external experts. This institution-led approach aims to highlight the strong features to be preserved and to points out areas of improvement by updating an action plan.

### 3.3. ACTION PLAN TO REINFORCE TRANSFER, VALORISATION, ENTREPRENEURSHIP

UBFC strategy aims to appear as an actor for the development of the regional innovation strategy towards smart specialization. A position within the European framework (PCRI) shall improve the effectiveness of UBFC action. Combined with the national initiative “Esprit d’Entreprendre 2019-2022”, ISITE-BFC will pursue the following objectives:

- 1) Definition of a UBFC-wide exploitation/transfer policy.
- 2) Implementation of a strategy and an operational management of transfer/exploitation tools organized on the basis of ISITE-BFC priorities and/or societal challenges
- 3) Coordination of PEPITE-BFC (student entrepreneurship), SATT, DECA-BFC (incubator).
- 4) A UBFC application to PIA SIA is prepared to improve the exploitation of deep tech: early detection of concept developed in ISITE-BFC research projects & constitution of an expert group focused on deep tech innovation marketing.

| <b>PANEL 3.1: KEY FIGURES OF PEPITE-BFC : UBFC ACTIONS SUPPORTING STUDENT ENTREPRENEURSHIP BY ACADEMIC YEAR.</b> |               |               |                |                |                |
|--|---------------|---------------|----------------|----------------|----------------|
|  | 2014-2015     | 2015-2016     | 2016-2017      | 2017-2018      | 2018-2019      |
| Students made aware of entrepreneurship (among which in transdisciplinary actions)                               | 2165<br>(470) | 2921<br>(301) | 5007<br>(2009) | 5500<br>(2040) | 5650<br>(2310) |
| Student graduating in entrepreneurship trainings   | 70            | 71            | 109            | 114            | 118            |
| Officially registered entrepreneur students (SNEE)   | 4             | 16            | 51             | 66             | 83             |
| Laureates in national entrepreneurship challenges  | 9             | 6             | 7              | 9              | 8              |
| Created companies via PEPITE BFC & Incubator   | 31            | 30            | 15             | 25             | 21             |

- 5) Reinforcing actions raising awareness about entrepreneurship skills in the training offer (BA/MA/PhD) related to the 3 ISITE-BFC priorities. Features: progressive didactical approach: technology watch; innovative business concept; business planning. Conversely, raising awareness about ISITE-BFC priorities in the other training offers.
- 6) Specific actions towards PhD students involving PEPITE-BFC, SATT, DECA-BFC, doctoral schools, sponsoring by Region BFC (1M€/year). Deploying double degrees MBA/PhD.
- 7) Recruitment of two managers to reinforce the enrollment of entrepreneur students (national SNEE framework) to reach 150 such students whose 50 should pertain to ISITE-BFC priorities. Recruitment of mentors with a focus on recent successful star-up creators.
- 8) Various support events: OECD HEInnovate workshop, raising an entrepreneurship community pertaining to the ISITE-BFC priorities.

### 3.4. FEEDBACK ON IMPACT & FUTURE USE OF ISITE-BFC FUNDS

To date, most activities funded by ISITE-BFC are still ongoing. The evaluation of the impact of its instruments is planned through various by workshops & seminars aiming at getting feedback from principal investigators, managers of companies involved in joint projects, directors of laboratories, deans of faculties, students, as well as from open meetings. Collecting these feedbacks was delayed by the covid-19 outbreak. Nevertheless, the impact assesment already mobilized the attention of the ISITE-BFC Steering Committee that came to the following provisional conclusions for the future use of PIA funds:

- The most transforming ISITE-BFC instruments are: Masters taught in English, tenure track portfolios, coach portfolios, supporting talents by grants bound to applying to ERC. Small size projects featuring less than 200 k€ have limited impact.
- International masters should be developed further and coupled to tenure track policy.
- Specific attention should be given to involve the whole of the human & social science community in the ISITE-BFC dynamics.
- The number of tenure tracks & coaches as well as their portfolios should be amplified by searching sponsors of all kinds (not only local authorities).
- Joint projects with industries remain a priority but their format should be reviewed . Their prospection and configuration should be more professionalized by involving high level consultant profiles.
- Top down scientific infrastructure projects (> 1 M€) should be amplified in synergy with local authorities and should be coupled to the tenure track recruitment strategy with the objective of gaining national or European leadership in niche areas.

## 4. INDICATORS

### 4.1. INDICATORS COMMON TO ALL THE IDEX/ISITE

In the following indicators: The "perimeter of the IDEX/ISITE" means all the partner organisations;  
The "IDEX/ISITE funds" correspond to the allocation dedicated to the IDEX/ISITE, including the Labex and IDEFI.

#### 4.1.1. HUMAN RESOURCES

##### **Post-doctoral researchers**

| <b>TABLE 4.1:<br/>NUMBER OF RECRUITED<br/>POST-DOCTORAL<br/>RESEARCHERS FUNDED OR<br/>CO-FUNDED ON<br/>IDEX/ISITE FUNDS</b> | 2015 | 2016 | 2017 | 2018 | 2019 | Total |
|---|------|------|------|------|------|-------|
|   | 15   | 16   | 24   | 39   | 27   | 121   |

Was there a call for applications: YES

If YES, average selection rate: 2.7%

##### **Attractiveness: recruitment (statutory headcount)**

| <b>TABLE 4.2:<br/>NUMBER OF LECTURER-<br/>RESEARCHERS AND<br/>RESEARCHERS RECRUITED<br/>OUTSIDE THE IDEX/ISITE<br/>PERIMETER WITH IDEX/ISITE<br/>FUNDING</b> | Junior* (a) | of which foreign juniors | Senior* (b) | of which foreign seniors | Total (a)+(b) | % ** | Budget devoted by the IDEX/ISITE | % employed by "Target University" |
|--|-------------|--------------------------|-------------|--------------------------|---------------|------|----------------------------------|-----------------------------------|
| 2015   | 0           | 0                        | 1           | 1                        | 1             | NP   | 124 k€                           | NA                                |
| 2016   | 0           | 0                        | 0           | 0                        | 0             | NP   | 0                                | NA                                |
| 2017   | 0           | 0                        | 0           | 0                        | 0             | NP   | 0                                | NA                                |
| 2018   | 0           | 0                        | 3           | 3                        | 3             | NP   | 1 500 k€                         | 100%                              |
| 2019   | 3           | 0                        | 4           | 3                        | 7             | NP   | 3 300 k€                         | 100%                              |
| Total  | 3           | 0                        | 7           | 6                        | 10            | NP   | 4 924 k€                         | 100%                              |

\* Junior =Ph.D. + n where n<=5, senior = Ph.D. + n where n>5. Senior or junior coming from establishments situated outside the IDEX/ISITE perimeter.

\*\*Percentage with respect to the overall recruitment headcount of permanent staff of the partner establishments in the year.

#### 4.1.2. RESEARCH

##### **Scientific recognition**

| <b>TABLE 4.3:<br/>NUMBER OF<br/>DISTINCTIONS*<br/>FOR THE YEARS</b> | ERC | IUF | Award | Budget devoted by<br>the IDEX/ISITE |
|---|-----|-----|-------|-------------------------------------|
| 2015  | 2   | 0   | 1     | 282 k€                              |
| 2016  | 0   | 0   | 0     | 0                                   |
| 2017  | 0   | 2   | 0     | 167 k€                              |
| 2018  | 0   | 0   | 1     | 288 k€                              |
| 2019  | 1   | 1   | 1     | 138 k€                              |
| Total   | 3   | 3   | 3     | 875 k€                              |

\*Distinctions awarded to lecturer-researchers and researchers within the IDEX/ISITE perimeter, compiling the following:

- i. for the ERC, the starting grants, consolidator grants and advanced grants,
- ii. for the IUF (University Institute of France) the juniors and the seniors,
- iii. the distinctions figuring in the list of the order of 20th January 2010.

<http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000021751714&dateTexte=&categorieLien=i>

##### **Research projects funded**

| <b>TABLE 4.4:<br/>RESEARCH PROJECTS<br/>FUNDED OR CO-FUNDED<br/>ON IDEX/ISITE FUNDS</b> | Number | Average funding* | Average duration |
|---|--------|------------------|------------------|
| 2015  | 22     | 83 k€            | 1,7 years        |
| 2016  | 20     | 87 k€            | 1,8 years        |
| 2017  | 39     | 134 k€           | 2,3 years        |
| 2018  | 66     | 156 k€           | 2,4 years        |
| 2019  | 58     | 216 k€           | 3,1 years        |
| Total   | 205    | 154 k€           | 2,4 years        |

\* Average funding awarded from IDEX/ISITE funds for carrying out projects



### 4.1.3. COURSES

#### **Courses funded**

Note that IDEFI Talent Campus inherently deals with *optional* transverse training modules addressing soft skills that are currently not bound to any degree certification in the French HER system. Consequently, including IDEFI data (Table 4.5.2) therefore downgrades the % figures relatively to the data of Table 4.5.1 strictly encompassing modules bound to degree certification.

| <b>TABLE 4.5.1:<br/>NUMBER OF COURSES<br/>FUNDED OR CO-FUNDED<br/>ON IDEX/ISITE FUNDS</b> | Number | Average funding* | % of these courses<br>leading to a diploma from<br>the "Target University" |
|---|--------|------------------|--|
| 2015  | 7      | 6 k€             | 0%   |
| 2016  | 7      | 9 k€             | 0%   |
| 2017  | 10     | 38 k€            | 50%  |
| 2018  | 19     | 48 k€            | 42%  |
| 2019  | 26     | 68 k€            | 62%  |
| Total   | 69     | 46 k€            | 42%  |

\* Average funding awarded from IDEX/ISITE funds for the courses

| <b>TABLE 4.5.2:<br/>NUMBER OF COURSES<br/>FUNDED OR CO-FUNDED<br/>ON IDEX/ISITE FUNDS<br/>(IDEFI INCLUDED)</b> | Number | Average funding* | % of these courses<br>leading to a diploma from<br>the "Target University" |
|--|--------|------------------|--|
| 2015   | 29     | 3 k€             | 0%   |
| 2016   | 79     | 2 k€             | 0%   |
| 2017   | 49     | 9 k€             | 10%  |
| 2018   | 59     | 16 k€            | 14%  |
| 2019   | 53     | 34 k€            | 30%  |
| Total  | 269    | 13 k€            | 11%  |

\* Average funding awarded from IDEX/ISITE funds for the courses

**Students accepted on master's degree course**

**TABLE 4.6: STUDENTS ACCEPTED ON MASTER'S DEGREE COURSE (FOR THE COURSES FUNDED FROM IDEX/ISITE FUNDS)**

| Year         | Total number of Master's degree candidates (a) | Number of candidates accepted on Master's degree* (b) | Selection rate % (b/a) | % of students enrolled at "Target University" | Budget devoted by the IDEX/ISITE |
|--------------|--|---|------------------------|---|----------------------------------|
| 2015         | 547  | 71  | 13%                    | 0%  | 41 k€                            |
| 2016         | 523  | 67  | 13%                    | 0%  | 61 k€                            |
| 2017         | 1 196  | 146   | 12%                    | 43%   | 375 k€                           |
| 2018         | 1 238  | 199   | 16%                    | 55%   | 875 k€                           |
| 2019         | 1 903  | 302   | 16%                    | 59%   | 1 470 k€                         |
| 2020         |  |   |                        |   | 1200 k€                          |
| 2021         |  |   |                        |   | 1200 k€                          |
| <b>Total</b> | <b>5 407</b>                                   | <b>785</b>  | <b>15%</b>             | <b>45%</b>                                    | <b>5 222 k€</b>                  |

\* Number of candidates accepted in M1 to follow a Master's degree course

**Doctoral students**

**TABLE 4.7: NUMBER OF DOCTORAL STUDENTS FUNDED OR CO-FUNDED**

|              | 100% IDEX/ISITE funding (a) | IDEX/ISITE co-funding with external partner (b) | (a)+(b)   | % of doctoral students enrolled by the "Target University" |
|--------------|-----------------------------|---|-----------|--|
| 2015         | 0                           | 4   | 4         | NA   |
| 2016         | 1                           | 8   | 9         | NA   |
| 2017         | 3                           | 3   | 6         | 100%   |
| 2018         | 13                          | 8   | 21        | 100%   |
| 2019         | 38                          | 16  | 54        | 100%   |
| <b>Total</b> | <b>55</b>                   | <b>39</b>                                       | <b>94</b> | <b>100%</b>  |

#### 4.1.4. SOCIO ECONOMIC IMPACT

**New partners** Source Rapports annuels ISITE. A voir / données communiquées par la SATT

| Year  | Number of new economic partners* | Number | Type (SME, intermediate-sized enterprise, large enterprise, etc.) |
|-------|----------------------------------|--------|---|
| 2015  | 0                                | 0      | 0   |
| 2016  | 0                                | 0      | 0   |
| 2017  | 5                                | 4      | SME   |
|       |                                  | 1      | Large enterprise  |
| 2018  | 11                               | 10     | SME   |
|       |                                  | 1      | Intermediate-sized enterprise                                     |
| 2019  | 14                               | 11     | SME   |
|       |                                  | 3      | Large enterprise  |
| Total | 30                               | 25     | SME   |
|       |                                  | 1      | Intermediate-sized enterprise                                     |
|       |                                  | 4      | Large enterprise  |

\*Economic players with which a partnership agreement coming under the IDEX/ISITE perimeter has been signed in the year.

**Results exploitation and own resources** Source Rapports annuels ISITE. A voir / données communiquées par la SATT

| Year  | Number of patents filed in the year* | Amount of the resources resulting from the Intellectual Property (IP) (in k€) | Amount of the other own resources of the IDEX/ISITE other than IP (examples of research contracts) (in k€)** | Number of start-ups created in the year by persons within the IDEX/ISITE perimeter |
|-------|--------------------------------------|---|--|--|
| 2015  | 0                                    | 0   | 0  | 0  |
| 2016  | 0                                    | 0   | 0  | 0  |
| 2017  | 22                                   | 141   | 49,208   | 3  |
| 2018  | 28                                   | 213   | 52,860   | 7  |
| 2019  | 52                                   | 363   | 109,662  | 30   |
| Total | 102                                  | 717   | 211,730  | 40   |

\* Patents (or Plant Variety Rights - PVR) filed within the framework of the IDEX/ISITE perimeter

\*\* Including funds raised by foundations

#### 4.1.5. INTERNATIONAL REACH

##### **International partnerships**

**TABLE 4.10: INTERNATIONAL PARTNERSHIPS *ATTENTE EIPHI/ACTION***

| Year  | Number of international projects co-funded from IDEX/ISITE funds* | Average funding from the IDEX/ISITE | Number of new partnership agreements in the IDEX/ISITE perimeter** | % of agreements in which the "Target University" is the sole signatory for all the IDEX/ISITE partners | Induced number of students recruited | IDEX/ISITE funds for joint projects (sum) |
|-------|---|-------------------------------------|--|--|--------------------------------------|---|
| 2015  | 1   |                                     |  | NA   | 1                                    | 20 k€                                     |
| 2016  |   |                                     |  | NA   |                                      |   |
| 2017  | 0   | 0                                   | 2  | 100%   | 6                                    | 0   |
| 2018  | 7   | 100 k€                              | 15   | 73%  | 40                                   | 700 k€                                    |
| 2019  | 13  | 43 k€                               | 37   | 49%  | 38                                   | 546 k€                                    |
| Total | 21  | 64 k€                               | 54   | 58%  | 85                                   | 1 266 k€                                  |

\* Any research project, university course or other co-funded by at least one foreign partner.

\*\* New agreements signed as part of the priority targets of the international policy of the IDEX/ISITE

##### **Foreign students on master's or Ph.D. degree course**

**TABLE 4.11: FOREIGN STUDENTS ON MASTER OR PHD DEGREE COURSE *attente EIPHI/Action***

| Year  | Number of foreign student candidates for Master's degree* (a) | Number of foreign students enrolled in Master's degree* (b) | b/a | Number of foreign student candidates for Ph.D. degree* (c) | Number of foreign students enrolled in Ph.D. degree* (d) | d/c | Budget devoted by the IDEX/ISITE (k€) |
|-------|---|---|-----|--|--|-----|---------------------------------------|
| 2015  | **  | **  | **  | **   | **   | **  | 5                                     |
| 2016  | **  | **  | **  | **   | **   | **  | 12                                    |
| 2017  | **  | 687   | **  | 509  | 262  | 51% | 83                                    |
| 2018  | 5 801   | 506   | 9%  | 774  | 404  | 52% | 1 220                                 |
| 2019  | 4 821   | 745   | 15% | 702  | 340  | 48% | 1 559                                 |
| Total | 10 622  | 1 938   | 18% | 1 985  | 1 006  | 51% | 2 863                                 |

\* Number of foreign students enrolled in the year in all the establishments within the IDEX/ISITE perimeter, holding a diploma from a foreign university

\*\* Data related to LABEX operations are unavailable because the number of foreign candidates was not an indicator in LABEX activity report templates. Moreover, until 2017, this indicator was collected by UBFC members as the cumulated number of foreign students applying to any training program (not counting foreign student applications to master & PhD programs separately), thereby explaining the fields left blank. Full sets of data were collected since 2018 when these indicators appeared as requested in the ANR yearly report template.

### Mobility grants

| Year  | Number of students receiving incoming mobility grants from IDEX/ISITE funds | Number of students receiving outgoing mobility grants from IDEX/ISITE funds |
|-------|---|---|
| 2015  | 0   | 0   |
| 2016  | 0   | 0   |
| 2017  | 16  | 14  |
| 2018  | 54  | 52  |
| 2019  | 78  | 50  |
| Total | 148   | 116   |

### Diplomas delivered under international partnership \*

| Year   | Number of Master's degree subjects organized under international partnership ** (a) | Total number of Master's degree subjects (b) | Number of Ph.D. diplomas delivered as joint diplomas*** (c) | Total number of Ph.D. diplomas delivered (d) |
|--------|---|--|---|--|
| 2015   | 7   | 74   | 35  | 344  |
| 2016   | 7   | 74   |   |  |
| 2017   | 7   | 74   | 30  | 338  |
| 2018   | 11  | 66   | 38  | 346  |
| 2019   | 15  | 84   | 47  | 315  |
| Total  | 47  | 372  | 150   | 1343   |
| Ratios | 12,6 % (a/b)  |  | 11,2% (c/d)   |  |

\* Diplomas delivered within the IDEX/ISITE perimeter

\*\* These are true joint diplomas within the meaning of circular 2011-009 of 11th May 2011 relative to the conditions of preparation and delivery of diplomas with the framework of an international partnership.

**International rankings**

Two rankings must be indicated: Shanghai and Leiden.  
One ranking shall be indicated if it is available: Multi-Rank.  
One ranking can be chosen freely by the IDEX/ISITE.

| <b>TABLE 4.14:<br/>SHANGHAI RANKING</b>                               | Overall                                     | Thematic<br>(indicate the subjects)  |
|---|---|--|
| 2015: List of the 6 top rankings and the IDEX/ISITE members concerned | No ranking                                  | No ranking   |
| 2019: Rank of the "Target University"                                 | No ranking                                  | No ranking   |
| 2019: List of the ranked IDEX/ISITE members with their rankings       | <b>Université de Bourgogne</b><br>(601-700) | <p><b>1) Université de Bourgogne</b></p> <ul style="list-style-type: none"> <li>- Food Science &amp; Tech (76-100)</li> <li>- Agricultural Sciences (151-200)</li> <li>- Atmospheric Sciences (301-400)</li> <li>- Mathematics (201-300)</li> <li>- Chemistry (401-500)</li> <li>- Earth Sciences (401-500)</li> <li>- Ecology (401-500)</li> <li>- Clinical Medicine (401-500)</li> <li>- Public Health (401-500)</li> <li>- Human Biological Sci. (401-500)</li> </ul> <p><b>2) Université de Franche-Comté</b></p> <ul style="list-style-type: none"> <li>- Earth sciences (301-400)</li> <li>- Ecology (301-400)</li> <li>- Mathematics (401-500)</li> </ul> <p><b>3) AgroSup Dijon:</b></p> <ul style="list-style-type: none"> <li>Food Science &amp; Tech (76-100)</li> </ul> <p><b>4) Arts et Métiers (ENSAM):</b></p> <ul style="list-style-type: none"> <li>Mechanical Engineering (151-200)</li> </ul> |



| <b>TABLE 4.15:<br/>LEIDEN RANKING</b>  | (list of subjects for which a distinction is obtained)  |
|--|---|
| 2015: List of the establishments concerned and the subjects in which they have achieved distinction                      | <p><b>1) Université de Bourgogne</b><br/>All Sciences : Rank = 352 (PP top 10 %) ; Rank = 602 (P).<br/>Biomedical &amp; Health Sciences : Rank = 220 (PP top 10 %) ; Rank = 492 (P).<br/>Life &amp; Earth Sciences: Rank = 255 (PP top 10 %) ; Rank = 408 (P).<br/>Math &amp; Computer Sciences: Rank = 477 (PP top 10 %) ; Rank = 534 (P).<br/>Physical Sciences &amp; Engineering : Rank = 395 (PP top 10 %) ; Rank = 529 (P).</p> <p><b>2) Université de Franche-Comté</b><br/>All Sciences : Rank = 525 (PP top 10 %) ; Rank = 687 (P).<br/>Biomedical &amp; Health Sciences : Rank = 496 (PP top 10 %) ; Rank = 614 (P).<br/>Life &amp; Earth Sciences: Rank = 317 (PP top 10 %) ; Rank = 615 (P).<br/>Math &amp; Computer Sciences: Rank = 413 (PP top 10 %) ; Rank = 368 (P).<br/>Physical Sciences &amp; Engineering : Rank = 522 (PP top 10 %) ; Rank = 476 (P).<br/>Social Sciences &amp; Humanities : Rank = 695 (PP top 10 %) ; Rank = 664 (P).</p>   |
| 2020: Subjects in which the educational institution to which all the researchers are affiliated has achieved distinction | No ranking  |
| 2020: List of the IDEX/ISITE members that have achieved distinction, indicating their subjects                           | <p><b>Université de Bourgogne</b><br/>(rankings using fractional counting / no Min. publication output)<br/>All Sciences: Rank = 786 (PP top 10 %); Rank = 1135 (P).<br/>Biomedical &amp; Health Sciences: Rank = 588 (PP top 10 %); Rank = 801 (P).<br/>Life &amp; Earth Sciences: Rank = 443 (PP top 10 %); Rank = 978 (P).<br/>Math &amp; Computer Sciences: Rank = 1037 (PP top 10 %); Rank = 854 (P).<br/>Physical Sciences &amp; Engineering: Rank = 837 (PP top 10 %); Rank = 942 (P).<br/>Social Sciences &amp; Humanities: Rank = 802 (PP top 10 %); Rank = 976 (P).</p> <p><u>Explanation of the downgrading of the Université de Bourgogne (UB) in the Leiden ranking.</u><br/>During 2016-20120, French government decisions of both direct and indirect nature resulted in effective cuts of the UB budget. To preserve its financial balance, UB had to reduce its staff so that about 100 Faculty positions that became vacant (due to retirement) have been cancelled during this period. The 2020 Leiden ranking integrating scientific publication data on the 2016-2019 period precisely reflects this dramatic effect featuring an order of magnitude that can not be counterbalanced by the PIA ISITE-BFC funding.</p> |

| <b>TABLE 4.16:</b><br><b>TIMES HIGHER EDUCATION RANKING</b>  | (list of subjects for which a distinction is obtained)  |
|--|---|
| 2015: List of the IDEX/ISITE members concerned and the subjects in which they have achieved distinction                  | <b>Université de Bourgogne:</b> World University Rankings (501-600)   |
| 2019: Subjects in which the educational institution to which all the researchers are affiliated has achieved distinction | <b>Université Bourgogne Franche-Comté (UBFC):</b> World University Rankings <b>(501-600)</b><br>- Young University Rankings (101-150)<br>- Clinical, pre-clinical & Health (176-200)<br>- Social sciences (251-300)<br>- Life sciences (401-500)<br>- Physical sciences (501-600)<br>- Computer Science (501-600)<br>- Engineering & technology (601-800) |
| 2019: List of the IDEX/ISITE members that have achieved distinction, indicating their subjects                           | No ranking  |

**Table of co-funding operations attente EIPHI/Action et TalentCampus**

| TABLE 4.17: CO-FUNDED OPERATIONS |  | Amount received (k€) |      |      |       |                  |       |
|----------------------------------|--|----------------------|------|------|-------|------------------|-------|
| IDEX/ISITE member                |  | 2015                 | 2016 | 2017 | 2018  | 2019             | Total |
| Name of the IDEX/ISITE member    | UBFC   | 0                    | 0    | 34   | 71    | 34               | 139   |
| Co-funder legal form             | PUBLIC-COLLECTIVITES                         |                      |      |      |       |                  |       |
| Co-funder name                   | Région BFC                                   |                      |      |      |       |                  |       |
| Funding nature / object          | Monétaire / Deux « UBFC Junior Fellowships » |                      |      |      |       |                  |       |
| Name of the IDEX/ISITE member    | UBFC   | 0                    | 0    | 0    | 1 004 | 1 004            | 2 008 |
| Co-funder legal form             | PUBLIC-ANR                                   |                      |      |      |       |                  |       |
| Co-funder name                   | ANR / PIA3                                   |                      |      |      |       |                  |       |
| Funding nature / object          | Monétaire /NCU RITM-BFC                      |                      |      |      |       |                  |       |
| Name of the IDEX/ISITE member    | UBFC   | 0                    | 0    | 60   | 60    | 60               | 181   |
| Co-funder legal form             | PUBLIC-ADMINISTRATION                        |                      |      |      |       |                  |       |
| Co-funder name                   | MENRT  |                      |      |      |       |                  |       |
| Funding nature / object          | Personnel pour FTLV                          |                      |      |      |       |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                         | 0                    | 0    | 6    | 29    | waiting for data | 35    |
| Co-funder legal form             | PRIVE-ENTREPRISE                             |                      |      |      |       |                  |       |
| Co-funder name                   | PSA PEUGEOT                                  |                      |      |      |       |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC     |                      |      |      |       |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                         | 0                    | 0    | 12   | 39    | waiting for data | 51    |
| Co-funder legal form             | PRIVE-ENTREPRISE                             |                      |      |      |       |                  |       |
| Co-funder name                   | TECH POWER ELECTRONICS                       |                      |      |      |       |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC     |                      |      |      |       |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                         | 0                    | 0    | 0    | 1     | 16               | 17    |
| Co-funder legal form             | PRIVE-AUTRE                                  |                      |      |      |       |                  |       |
| Co-funder name                   | Instituts de recherche agricole              |                      |      |      |       |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC     |                      |      |      |       |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                         | 0                    | 0    | 0    | 1     | 1                | 2     |
| Co-funder legal form             | PUBLIC-AUTRES-ORGANISMES                     |                      |      |      |       |                  |       |

| TABLE 4.17: CO-FUNDED OPERATIONS |  | Amount received (k€) |      |      |      |                  |       |
|----------------------------------|--|----------------------|------|------|------|------------------|-------|
| IDEX/ISITE member                |  | 2015                 | 2016 | 2017 | 2018 | 2019             | Total |
| Co-funder name                   | Chambres d'agriculture + DRAAF           |                      |      |      |      |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form             | PUBLIC-AUTRES-ORGANISMES                 | 0                    | 0    | 0    | 4    | 4                | 8     |
| Co-funder name                   | Lycées agricoles BFC                     |                      |      |      |      |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form             | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 3    | 9                | 12    |
| Co-funder name                   | Agriculteurs, coopératives en BFC        |                      |      |      |      |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form             | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 25   | 25               | 50    |
| Co-funder name                   | Dijon céréales                           |                      |      |      |      |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form             | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 135  | 4                | 139   |
| Co-funder name                   | Artémis                                  |                      |      |      |      |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form             | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 2    | 83               | 85    |
| Co-funder name                   | CASIS                                    |                      |      |      |      |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form             | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 0    | waiting for data | 0     |
| Co-funder name                   | NVIDIA                                   |                      |      |      |      |                  |       |
| Funding nature / object          | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member    | Consortium ISITE-BFC                     | 0                    | 0    | 0    | 8    | 76               | 85    |

| <b>TABLE 4.17: CO-FUNDED OPERATIONS</b> |  | Amount received (k€) |      |      |      |      |       |
|---|--|----------------------|------|------|------|------|-------|
| IDEX/ISITE member                       |  | 2015                 | 2016 | 2017 | 2018 | 2019 | Total |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |      |       |
| Co-funder name                          | NEOTISS                                  |                      |      |      |      |      |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     | 0                    | 0    | 0    | 34   | 23   | 57    |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |      |       |
| Co-funder name                          | Parkeon (FLOWBIRD)                       |                      |      |      |      |      |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC | 0                    | 0    | 0    | 24   | 28   | 52    |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |      |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |      |       |
| Co-funder name                          | Smartesting                              | 0                    | 0    | 0    | 18   | 28   | 46    |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |      |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 190  | 82   | 272   |
| Co-funder name                          | DELFINGEN                                |                      |      |      |      |      |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     | 0                    | 0    | 0    | 61   | 33   | 94    |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |      |       |
| Co-funder name                          | Nextpac                                  |                      |      |      |      |      |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC | 0                    | 0    | 0    | 7    | 3    | 10    |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |      |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |      |       |
| Co-funder name                          | Pharmimage                               | 0                    | 0    | 0    | 7    | 22   | 29    |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |      |       |

| <b>TABLE 4.17: CO-FUNDED OPERATIONS</b> |  | Amount received (k€) |      |      |      |               |       |
|---|--|----------------------|------|------|------|---------------|-------|
| IDEX/ISITE member                       |  | 2015                 | 2016 | 2017 | 2018 | 2019          | Total |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |               |       |
| Co-funder name                          | Diaclone                                 |                      |      |      |      |               |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |               |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |               |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 11   | 12            | 23    |
| Co-funder name                          | EPHE                                     |                      |      |      |      |               |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |               |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |               |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 0    | 80            | 80    |
| Co-funder name                          | Atol CD                                  |                      |      |      |      |               |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |               |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |               |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 0    | 108           | 108   |
| Co-funder name                          | WEDDRONE                                 |                      |      |      |      |               |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |               |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |               |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 0    | start in 2020 | 0     |
| Co-funder name                          | SAFRAN AE                                |                      |      |      |      |               |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |               |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |               |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 0    | 40            | 40    |
| Co-funder name                          | QUALCOMM                                 |                      |      |      |      |               |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |               |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |               |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 0    | 78            | 78    |
| Co-funder name                          | ANNEALSYS                                |                      |      |      |      |               |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |               |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     | 0                    | 0    | 0    | 0    | 4             | 4     |



| <b>TABLE 4.17: CO-FUNDED OPERATIONS</b> |  | Amount received (k€) |      |      |      |                  |       |
|---|--|----------------------|------|------|------|------------------|-------|
| IDEX/ISITE member                       |  | 2015                 | 2016 | 2017 | 2018 | 2019             | Total |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |                  |       |
| Co-funder name                          | PSA GROUP                                |                      |      |      |      |                  |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     | 0                    | 0    | 0    | 0    | 6                | 6     |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |                  |       |
| Co-funder name                          | ETHERA                                   |                      |      |      |      |                  |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |                  |       |
| Co-funder name                          | FREC N SYS                               | 0                    | 0    | 0    | 0    | 8                | 8     |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 0    | waiting for data | 0     |
| Co-funder name                          | SERPOL                                   |                      |      |      |      |                  |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     | 0                    | 0    | 0    | 0    | waiting for data | 0     |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |                  |       |
| Co-funder name                          | INOVYN                                   |                      |      |      |      |                  |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         |                      |      |      |      |                  |       |
| Co-funder name                          | INTERA                                   | 0                    | 0    | 0    | 0    | waiting for data | 0     |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     |                      |      |      |      |                  |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE                         | 0                    | 0    | 0    | 0    | waiting for data | 0     |
| Co-funder name                          | GENDRY SERVICE LOCATION                  |                      |      |      |      |                  |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC                     | 0                    | 0    | 0    | 0    | 0                | 0     |

| <b>TABLE 4.17: CO-FUNDED OPERATIONS</b> |  | Amount received (k€) |      |      |      |                  |       |
|---|--|----------------------|------|------|------|------------------|-------|
| IDEX/ISITE member                       |  | 2015                 | 2016 | 2017 | 2018 | 2019             | Total |
| Co-funder legal form                    | PRIVE-ENTREPRISE   |                      |      |      |      |                  |       |
| Co-funder name                          | AGRO INNOVATION INTERNATIONAL                                    |                      |      |      |      |                  |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC                         |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC   | 0                    | 0    | 0    | 0    | 0                | 0     |
| Co-funder legal form                    | PRIVE-ENTREPRISE   |                      |      |      |      |                  |       |
| Co-funder name                          | IAD TERRITOIRE DIGITAL   |                      |      |      |      |                  |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC                         | 0                    | 0    | 0    | 0    | waiting for data | 0     |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC   |                      |      |      |      |                  |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE   |                      |      |      |      |                  |       |
| Co-funder name                          | ADEME  | 0                    | 0    | 0    | 0    | 20               | 20    |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC                         |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | Consortium ISITE-BFC   |                      |      |      |      |                  |       |
| Co-funder legal form                    | PRIVE-ENTREPRISE   | 0                    | 0    | 0    | 0    | 2 463            | 3 440 |
| Co-funder name                          | COVALAB  |                      |      |      |      |                  |       |
| Funding nature / object                 | Personnels et coûts indirects /ISITE-BFC                         |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | UBFC   | 0                    | 0    | 0    | 977  | 2 463            | 3 440 |
| Co-funder legal form                    | PUBLIC-COLLECTIVITES   |                      |      |      |      |                  |       |
| Co-funder name                          | Région BFC   |                      |      |      |      |                  |       |
| Funding nature / object                 | Monétaire / projets ISITE-BFC intégrés                           | 0                    | 0    |      |      | 67               | 67    |
| Name of the IDEX/ISITE member           | UBFC   |                      |      |      |      |                  |       |
| Co-funder legal form                    | INTERNATIONAL-COMMISSION-EUROP                                   |                      |      |      |      |                  |       |
| Co-funder name                          | EU Erasmus+  | 0                    | 50   | 50   | 50   | 50               | 200   |
| Funding nature / object                 | Monétaire / Outgoing mobilities                                  |                      |      |      |      |                  |       |
| Name of the IDEX/ISITE member           | LabEx LipSTIC  |                      |      |      |      |                  |       |
| Co-funder legal form                    | PUBLIC-COLLECTIVITES   | 0                    | 50   | 50   | 50   | 50               | 200   |
| Co-funder name                          | Centre Hospitalier universitaire de DIJON                        |                      |      |      |      |                  |       |
| Funding nature / object                 | Monétaire/Soutien de programme de recherche (Recherche clinique) |                      |      |      |      |                  |       |

| <b>TABLE 4.17: CO-FUNDED OPERATIONS</b> |   | Amount received (k€) |      |      |      |      |       |
|---|---|----------------------|------|------|------|------|-------|
| IDEX/ISITE member                       |   | 2015                 | 2016 | 2017 | 2018 | 2019 | Total |
| Name of the IDEX/ISITE member           | LabEx LipSTIC   | 386                  | 581  | 541  | 643  | 452  | 2 603 |
| Co-funder legal form                    | PUBLIC-COLLECTIVITES  |                      |      |      |      |      |       |
| Co-funder name                          | Conseil régional de Bourgogne                                 |                      |      |      |      |      |       |
| Funding nature / object                 | Monétaire/équipement/bourse de thèse/post-doctorant           |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | LabEx LipSTIC   | 103                  | 40   | 143  | 0    | 0    | 286   |
| Co-funder legal form                    | PUBLIC-COLLECTIVITES  |                      |      |      |      |      |       |
| Co-funder name                          | Fonds européen de développement économique régional           |                      |      |      |      |      |       |
| Funding nature / object                 | Monétaire/équipement/bourse de thèse/post-doctorant           |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | LabEx LipSTIC   | 0                    | 900  | 150  | 0    | 0    | 1 050 |
| Co-funder legal form                    | PUBLIC-COLLECTIVITES  |                      |      |      |      |      |       |
| Co-funder name                          | Contrat de pla état-région                                    |                      |      |      |      |      |       |
| Funding nature / object                 | équipements   |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | LabEx LipSTIC   | 40                   | 0    |      |      |      | 40    |
| Co-funder legal form                    | PRIVE-ENTREPRISES   |                      |      |      |      |      |       |
| Co-funder name                          | Biotechnology Research and Information Network                |                      |      |      |      |      |       |
| Funding nature / object                 | Monétaire/Bourse de thèse                                     |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | LabEx LipSTIC   | 0                    | 166  |      |      |      | 166   |
| Co-funder legal form                    | PRIVE-ENTREPRISES   |                      |      |      |      |      |       |
| Co-funder name                          | SATT Grand Est  |                      |      |      |      |      |       |
| Funding nature / object                 | Monétaire/soutien mise en place HuMoSC et SILEX               |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | LabEx LipSTIC   | 0                    | 0    | 66   |      |      | 66    |
| Co-funder legal form                    | INTERNATIONAL-COMMISSION-EUROP                                |                      |      |      |      |      |       |
| Co-funder name                          | PRESTIGE  |                      |      |      |      |      |       |
| Funding nature / object                 | Monétaire/bourse pour les salaires pour 2 post-docs sur 2 ans |                      |      |      |      |      |       |
| Name of the IDEX/ISITE member           | LabEx LipSTIC   | 0                    | 0    |      | 200  |      | 200   |

| TABLE 4.17: CO-FUNDED OPERATIONS |   | Amount received (k€) |              |              |              |              |               |
|----------------------------------|---|----------------------|--------------|--------------|--------------|--------------|---------------|
| IDEX/ISITE member                |   | 2015                 | 2016         | 2017         | 2018         | 2019         | Total         |
| Co-funder legal form             | PRIVE-ENTREPRISES   |                      |              |              |              |              |               |
| Co-funder name                   | SAYENS  |                      |              |              |              |              |               |
| Funding nature / object          | Monétaire/bourse pour les salaires pour 2 post-docs sur 2 ans |                      |              |              |              |              |               |
| Name of the IDEX/ISITE member    | LabEx LipSTIC   | 0                    | 0            |              |              | 55           | 55            |
| Co-funder legal form             | PRIVE-AUTRE   |                      |              |              |              |              |               |
| Co-funder name                   | FONDATION VISIO   |                      |              |              |              |              |               |
| Funding nature / object          | Monétaire/soutien de programme de recherche                   |                      |              |              |              |              |               |
| Name of the IDEX/ISITE member    | LabEx LipSTIC   | 0                    | 0            |              |              | 96           | 96            |
| Co-funder legal form             | PUBLIC-COLLECTIVITES  |                      |              |              |              |              |               |
| Co-funder name                   | Région Occitanie  |                      |              |              |              |              |               |
| Funding nature / object          | Monétaire/soutien de programme de recherche                   |                      |              |              |              |              |               |
| Name of the IDEX/ISITE member    | LabEx LipSTIC   | 0                    | 0            |              |              | 150          | 150           |
| Co-funder legal form             | PUBLIC-COLLECTIVITES  |                      |              |              |              |              |               |
| Co-funder name                   | ISITE MUSE  |                      |              |              |              |              |               |
| Funding nature / object          | Monétaire/soutien de programme de recherche                   |                      |              |              |              |              |               |
| Total                            |   | <b>529</b>           | <b>1 737</b> | <b>1 063</b> | <b>3 605</b> | <b>5 223</b> | <b>12 157</b> |

## 4.2. SPECIFIC INDICATORS TO ISITE-BFC

To be filled in using tables available on the submission website.

| <b>TABLE 4.18: ISITE-BFC SPECIFIC INDICATORS</b>                   | 2012      | 2013      | 2014      | 2015      | 2016      | 2017      | 2018      | 2019      |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|  | -<br>2013 | -<br>2014 | -<br>2015 | -<br>2016 | -<br>2017 | -<br>2018 | -<br>2019 | -<br>2020 |
| Participations of UBFC as legal beneficiary of European projects   | 0         | 0         | 0         | 0         | 4         | 9         | 14        | 21        |
| Participations of UBFC as legal beneficiary of French ANR projects | 0         | 0         | 0         | 0         | 20        | 53        | 67        | 89        |
| UBFC masters taught in English language                            | 7         | 7         | 8         | 8         | 12        | 17        | 17        | 17        |

### INTERNATIONAL PARTNERSHIPS NOT RELATED TO H2020 PROJECTS SINCE UBFC CREATION

MoU = Memorandum of Understanding

CA = Cooperation Agreement

FA = Framework Agreement

SEA = Student Exchange Agreement

#### 2017

1. Memorandum of Understanding (MoU) between UBFC and Tomsk Polytechnic University TPU, Russia).
2. SEA between UBFC and Tomsk Polytechnic University TPU, Russia).

#### 2018

3. CA on organization of Joint Master's Degree Programs between UBFC & Tomsk Polytechnic University (TPU, Russia).
4. MoU for international collaboration between UBFC and National Academy of Sciences of the Republic of Armenia (NASA RA, Armenia).
5. CA (PhD level) between UBFC & Institut de Recherche Agronomique du Liban (IRAL, Lebanon).
6. CA on a Dual Master Degree between UBFC, UFC & Dedan Kimathi University of Technology (DEKUT, Kenya).
7. MoU for international collaboration between UBFC & Russian-Armenian University (RAU, Armenia).
8. SEA between UBFC and Russian-Armenian University (RAU, Armenia).
9. FA for Cultural & Scientific Cooperation between UBFC, UFC & the Dpt of Physics of Universita di Padova (Italy).
10. CA on PhD Double Degree Programmes between UBFC & Prague University of Chemistry and Technology (Czech Republic).
11. CA for international collaboration between UBFC and Yerevan State University (YSU, Armenia).
12. SEAbetween UBFC and Yerevan State University (YSU, Armenia).
13. MoU for international collaboration between UBFC and Wuhan University of Technology (WHUT, China).
14. MoU for international collaboration between UBFC and Armenian National Agrarian University (ANAU, Armenia).
15. SEAt between UBFC and Armenian National Agrarian University (ANAU, Armenia).
16. MoU between UBFC, UFC a Dedan Kimathi University of Technology (Kenya).
17. CA on the Implementation of a Double-Degree related to UBFC Master Degree "Control for Green Mechatronics" (between UBFC, UFC & the Centro de Investigaciones en óptica, A. C. (México).

#### 2019

18. CA on the implementation of a Double Degree Master's Programme in the framework of UBFC Master Degree Physics, Photonics an Nanotechnology (PPN) between UBFC, uB and Tomsk Polytechnic University (TPU, Russia).
19. CA on the implementation of a Double Degree Master's Programme in the framework of UBFC Master Degree Physics, Photonics an Nanotechnology (PPN) between UBFC, uB and Yerevan State University (YSU, Armenia).
20. CA on the implementation of a Double Degree Master's Programme in the framework of UBFC Master Degree Physics, Photonics an Nanotechnology (PPN) between UBFC, uB and Russian Armenian University (RAU, Armenia).
21. MoU between UBFC, uB and Shanghai University (SHU, China).
22. FA the implementation of Cooperation in the field of Mathematics & Physics between UBFC, uB a Shanghai University (SHU, China).

23. MoU between UBFC, uB and Technische Universität Kaiserslautern (TUK, Germany).
24. SEA and CA related to UBFC Master's degrees in Physics and Mathematics between UBFC, uB and Technische Universität Kaiserslautern (TUK, Germany).
25. MoU between UBFC, uB and Novosibirsk State University, (NSU, Russian Federation).
26. CA & SEA between UBFC, uB and Novosibirsk State University, (NSU, Russian Federation) in the framework of the UBFC Master's Degrees : Physics, Photonics & Nanotechnology (PPN), Mathematical Physics (Math4Phys) , Projects in International and European Cultural Engineering (PIECE).
27. MoU between UBFC, uB and Moscow Institute of Physics and Technology (national research university)" (MIPT, Russian Federation).
28. CA on a Student and Faculty exchange Program between UBFC, uB and Moscow Institute of Physics and Technology (national research university)" (MIPT, Russian Federation).
29. MoU between UBFC, uB and ITMO University (Russian Federation).
30. CA on a Student and Faculty exchange Program between UBFC, uB and ITMO University (Russian Federation).
31. CA on the implementation of a Double Degree Program related to UBFC Master Degree "Microbiology and Physicochemistry for food and wine Processes" between UBFC, ASD and Yerevan State University (YSU, Armenia).
32. MoU between UBFC and l'université Saint-Joseph De Beyrouth (USJ, Lebanon).
33. FA on Joint Doctoral Degree Program in Clinical Medicine and Health Sciences (Master and PhD level) between UBFC and Ningbo University (NBU, China). Approved by the Chinese Government.
34. CA between UBFC, uB AND the Federal State Autonomous Educational Institution of Higher Training I.M. Sechenov First Moscow State Medical University under the Ministry of Health of the Russian Federation (Sechenov University, Russian Federation).
35. CA on the implementation of a Double Degree Master's Programme in the framework of UBFC Master Degree Innovative Drugs between UBFC, uB and Sechenov University, Russian Federation).
36. MoU between UBFC, uB and University of Chemistry and Technology Prague (UCT Prague).
37. MoU between UBFC, uB and Bauman Moscow State Technical University (National Research University BMSTU, Russian Federation).
38. CA on a Student and Faculty exchange Program in the framework of UBFC Master's Degree "Data Analyst for Spatial and Environmental Economics (DASEE)" between UBFC, uB and Bauman Moscow State Technical University (National Research University BMSTU, Russian Federation).
39. Erasmus + Cooperation Agreement between UBFC and Technische Universität Kaiserslautern (TUK, Germany) . Disciplines : Information and Communication, Electronics and automation, Mathematics, Physics.
40. Erasmus + Cooperation Agreement (PhD level), between UBFC and University of Economics (Prague, Czech Republic), Disciplines : Social and behavioural sciences
41. Erasmus + Cooperation Agreement between UBFC and Chalmers University of Technology (Sweden), Disciplines : Food processing/Chemistry
42. Erasmus + Cooperation Agreement between UBFC and Hohenheim University (Germany), Disciplines : Food processing
43. Erasmus + Cooperation Agreement between UBFC and Zagreb University (Croatia), Disciplines : Food processing
44. Erasmus + Cooperation Agreement between UBFC and Szent Istvan University (Hungary), Disciplines : Food processing
45. Erasmus + Cooperation Agreement between UBFC and Technical University of Cluj-Napoca (Romania). Disciplines : Food processing
46. Erasmus + Cooperation Agreement between UBFC and Università degli studi di Salerno, Disciplines : Biochemistry/Chemistry/Food processing
47. Erasmus + Cooperation Agreement between UBFC and Università degli studi di Teramo, Disciplines : Food processing/Agriculture + oenology
48. Erasmus + Cooperation Agreement between UBFC and with Università Cattolica del Sacro Cuore (Milan, Italy), Disciplines : Humanities
49. Erasmus + Cooperation Agreement between UBFC and Université de Liège (Belgium) , Disciplines : Media
50. Erasmus + Cooperation Agreement between UBFC and Opole University, Disciplines : Cultural studies
51. Erasmus + Cooperation Agreement between UBFC and Bucharest University (Romania), Disciplines : Sociology and cultural studies
52. Erasmus + Cooperation Agreement between UBFC and University of Latvia (Riga, Latvia), Disciplines : Cultural studies
53. Erasmus + Cooperation Agreement between UBFC and University of Chemistry and Technology (UCT Prague, Czech Republic), Disciplines : Natural sciences, mathematics and statistics/Engineering, manufacturing and construction
54. Erasmus + Cooperation Agreement between UBFC and Liège University Gembloux Agro-Bio Tech, Disciplines : Chemical engineering and processes/Food processing.