MOBILISE ERA CHAIR

Deliverable D11 (D3.2) Self-assessment of INEB/i3S towards ERA priorities implementation



The project MOBILISE received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement no. 951723.



Project acronym	MOBILISE
Project name	Molecular Bioengineering in health ERA chair
Call	H2020-WIDESPREAD-2018-2020-6
Grant Agreement ID	951723
Project Duration	1 st January 2021 – 30 th June 2026 (66 months)
Coordinator	Cristina Martins INEB – Instituto Nacional de Engenharia Biomédica
Number of Deliverable	D11 (D3.2)
Title of Deliverable	Self-assessment of INEB-i3S towards ERA priorities implementation
Related WP	3
Author(s)	Mariana Bexiga, Cristina Ribeiro and Ana Paula Filipe
Contact e-mail(s)	<u>mariana.bexiga@i3s.up.pt;</u>
Dissemination level	Public
Due date	31 st December 2021
Date of Submission	22 nd December 2021
Version	1.0

Document History

Version	Date	Status
0.1	20211115	First draft by Mariana Bexiga with input from Ana Paula Filipe, Anabela Costa, Bárbara Macedo, Marta Lima and Virginia Fonseca.
0.2	20211123	Second draft by Mariana Bexiga after comments from Ana Paula Filipe and Cristina Ribeiro.
0.3	20211207	Third draft by Mariana Bexiga after comments from Cristina Martins.
1.0	20211220	Final version approved by the Management Committee.



GRANT AGREEMENT ID: 951723 H2020-EU.4.C. - ESTABLISHING ,ERA CHAIRS' WIDESPREAD-06-2020 - ERA CHAIRS

Index

Index	2
List of Abbreviations	3
Executive Summary	4
1. Introduction	5
1.1. ERA priorities	5
1.2. Indicators to assess progress towards the ERA priorities	6
1.3. Objective	6
2. Methodology	8
2.1. Web of Science	8
2.2. Internal Databases	9
2.3. Questionnaires	9
3. INEB/i3S' progress towards the ERA Priorities	10
3.1. Priority 1 – More effective national research systems	10
3.2. Priority 2 – Optimal transnational cooperation and competition, including 'jointly address grand challenges' and 'research infrastructures'	0
3.3. Priority 3 – An open labour market for researchers	12
3.4. Priority 4 - Gender equality and gender mainstreaming in research	13
3.5. Sub-priority 5a – Knowledge circulation	15
3.6. Sub-priority 5b – Open Access	15
3.7. Priority 6 – International cooperation	16
4. Conclusions	17
Appendix I – Web of Science results	18
Appendix II – Questionnaires	19



List of Abbreviations

AREI	Adjusted Research Excellence Indicator
ECCR	European Charter and Code for Researchers
EMM	ERA Monitoring Mechanism
ERA	European Research Area
ERAC	European Research Area and Innovation Committee
ERC	European Research Council
ESFRI	European Strategy Forum on Research Infrastructures
EU	European Union
FCT	Fundação para a Ciência e Tecnologia
MSCA	Marie Skłodowska-Curie Actions
OA	Open Access
OTM-R	Open, Transparent and Merit-based Recruitment
PCT	Patent Cooperation Treaty
PPBI	Portuguese Platform for Bioimaging



GRANT AGREEMENT ID: 951723 H2020-EU.4.C. - ESTABLISHING ,ERA CHAIRS' WIDESPREAD-06-2020 - ERA CHAIRS

Executive Summary

MOBILISE has conducted a thorough and transparent self-evaluation regarding the implementation of the ERA priorities at INEB/i3S in the period ranging from January 2018 to December 2020, with particular focus given to the implementation of the European Charter and Code for Researchers. For that, MOBILISE adapted the indicators used in the ERA Monitoring Handbook 2018 to the dimension of the institute and used a similar methodology to that mentioned in the Handbook to gather the results described in this report. The conclusions herein described will be the basis to elaborate D3.3 *Strategy and action plan for the implementation of the ERA priorities*, in which the measures that will guide the implementation of the structural changes towards the ERA priorities will be described.



1. Introduction

The European Research Area (ERA) has its roots in 2000 on the Lisbon strategy and arose to address the observed fragmentation of the European Union's (EU) Research and Innovation system¹. It also aims to address the so-called brain drain in Europe, in particular from the weaker regions such as Portugal, as well as to reduce the wide regional variation in research and innovation performance, aiming at excellence across the EU².

Therefore, the ERA aims at building a "unified research area open to the world based on the Internal Market, in which researchers, scientific knowledge and innovation circulate freely and through which the Union and its Member States strengthen their scientific and technological bases, their competitiveness and their capacity to collectively address grand challenges"². In a way, the ERA is reinforced by the Open Innovation, Open Science and Open to World vision for Europe³ issued by the Directorate-General for Research and Innovation of the European Commission in 2016.

In order to achieve this, six priorities were defined based on the analysis of the strengths and weaknesses of Europe's research systems and the overall objective of inducing long-lasting changes in Europe's research performance and effectiveness – the ERA priorities.

1.1. ERA priorities

ERA implementation focusses on six priorities:

- 1. More effective national research systems;
- 2. Optimal transnational cooperation and competition, including 'jointly addressing grand challenges' and 'research infrastructures';
- 3. An open labour market for researchers;
- 4. Gender equality and gender mainstreaming in research;
- 5. Optimal circulation, access to and transfer of scientific knowledge, including 'knowledge circulation' and 'open access';
- 6. International cooperation.

¹ European, C. (2000). *Towards a European research area*. <u>https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52000DC0006&from=EN</u>

² European, C. (2012). A reinforced European research area partnership for excellence and growth: communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. <u>https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012DC0392&from=EN</u>

³ European Commission, D.-G. f. R., & Innovation. (2016). *Open innovation, open science, open to the world : a vision for Europe*. <u>https://op.europa.eu/en/publication-detail/-/publication/3213b335-1cbc-11e6-ba9a-01aa75ed71a1</u>



1.2. Indicators to assess progress towards the ERA priorities

Progress towards the implementation of the ERA priorities is monitored across the whole ERA region and since 2016 it has been made also at a country-level for each priority, on the basis of the ERA Monitoring Mechanism (EMM), a set of 24 EMM indicators selected by the European Research Area and Innovation Committee (ERAC)⁴. There are eight core high level indicators (one per priority or sub-priority) that are regarded as the most relevant to monitor progress in achieving the ERA. In addition to these headline indicators, two complementary EMM indicators were chosen for each priority.

The result of this monitoring exercise, the ERA Progress Report, is published every two years with the latest publication being from 2018. Accompanying the report, two other documents are issued: the ERA Monitoring Handbook⁴, in which the methodologies used to assess progress towards achieving the ERA priorities are described, and the Technical report⁵, in which all the results are presented and thoroughly analysed.

In this document we have used the information present in the ERA Monitoring Handbook 2018⁴ to perform the self-assessment of INEB/i3S regarding the implementation of the ERA priorities. The ERA Monitoring Handbook describes the indicators used to monitor progress across ERA priorities in the ERA countries, but since some of the indicators are not relevant to the dimension of INEB/i3S, they were adapted to better reflect the reality of the institute and are described in Table 1.

1.3. Objective

The overall goal of this document is to perform a self-evaluation of INEB/i3S regarding the progress made towards the implementation of the ERA Priorities for the period of January 2018 to December 2020. It will be mainly focussed on the priorities more closely related to the European Charter and Code for Researchers (ECCR)⁶, i.e. priorities 3, 4, and 5, as the other priorities are more applicable and relevant to National Research Systems. Nonetheless, MOBILISE has made an effort to also evaluate priorities 1, 2 and 6, albeit in a manner that is adequate to the reality of the research institute. For that reason, several indicators could not be used and are represented in Table 1as N/A.

This analysis will be focussed on INEB, although during the period under analysis it operated in a consortium of three research institutes in one single location, i3S, which is the largest health research institute in Portugal. i3S has its own institutional framework that provides an umbrella structure for the three institutes and has recently gained its own legal personality (December

⁴ Archambault, E. et al. (2019). ERA monitoring handbook: 2018. <u>https://doi.org/10.2777/764148</u>

⁵ European Commission, D.-G. f. R., & Innovation, P. S.-M. (2019). *ERA progress report 2018 : data gathering and information for the 2018 ERA monitoring : technical report*. <u>https://doi.org/10.2777/103628</u>

⁶ Directorate-General for Research Human, R., & Mobility. (2005). *The European charter for researchers : the code of conduct for the recruitment of researchers*. <u>https://euraxess.ec.europa.eu/sites/default/files/am509774cee_en_e4.pdf</u>



2019). That is why in this document, although we focus our analysis on INEB, we will refer to the institute as INEB/i3S.

Table 1. Indicators used to assess the progress towards implementation of ERA priorities at INEB/i3S (adapted from the ERA Monitoring Handbook: 2018)

Priority	Input indicator	Output Indicator	Outcome/Impact Indicator
Priority 1: More effective national research systems	Public funding as percentage of total INEB/i3S' funding	 Share of highly cited publications per total publications PCT patent applications ERC grants Participation on MSCA fellowships 	N/A
Sub-priority 2a: Optimal transnational cooperation	N/A	N/A	International co- publications with ERA partners as percentage of total publications
Sub-priority 2b: European Strategy Forum on Research Infrastructures (ESFRI)	N/A	N/A	N/A
Priority 3: Open Labour Market for Researchers	Share of doctoral candidates with a citizenship of another EU Member State	Researcher's posts advertised through the EURAXESS job portal per total number of researchers	Share of researchers expressing satisfaction that the hiring procedures in their institution are open, transparent and merit- based
Priority 4: Gender equality and gender mainstreaming in research	Share of female PhD graduates	Gender dimension in research content	Share of women in grade A positions
Sub-priority 5a: Knowledge circulation	Share of product and/or process innovative firms cooperating with INEB/i3S	Share of public research financed by the private sector	Number of public- private co-publications as percentage of total publications
Sub-priority 5b: Open access (OA)	RFO's providing funds to cover costs of OA publishing and share	Share of publications available in OA (Green and Gold)	N/A



	of RFOs' publications available in OA. Share of papers that have at least one open dataset published		
Priority 6: International cooperation	International co- publications with non- ERA partners as percentage of total publications	Non-EU doctorate students as a share of all doctorate students	Number of licenced patents

In bold are the priorities directly related to the ECCR and which will be the main focus of this document. N/A – Not applicable

...

2. Methodology

In order to collect all the relevant information to produce this report, different strategies were used: search in internal and external databases, and questionnaires to the researchers of INEB/i3S. Altogether, these tools enabled the collection, organisation and assessment of both qualitative and quantitative data. Graphical analysis was performed using Excel. The period selected for this self-evaluation ranged from January 2018 to December 2020.

2.1. Web of Science

The publication records of INEB/i3S were collected from the Web of Science. In order to find all of the institute's publications, the word "INEB" was searched in the address of the affiliations of the authors. Following that, the results were restricted to the years 2018, 2019 and 2020. The Web of science database also allowed to identify which articles were in OA, both gold and green, as well as the number of articles that were in the top 10% of the most cited papers. Publications with ERA collaborators and with the private sector were identified using the InCites Benchmarking & Analytics database adopting the same universe of publications. These results are given as a percentage of total published articles. All results are compiled in Appendix I.

Furthermore, to identify the articles considering a gender dimension, the search was refined using the following keywords: "women", "men", "female", "male", "mother", "father", "girl", "boy", "testosterone", "oestrogene", "progesterone", "menopause", "paternal", "maternal", "pregnancy", "gender", "sex", "disparity", "labor", "policy", "society", "age", and "parenting". These results were presented as percentage of the total number of articles.



2.2. Internal Databases

The internal databases of INEB/i3S were queried in order to collect information regarding Human Resources, Funding, and Technology Transfer activities, in particular related to patents.

2.2.1. Human Resources

The total number of researchers and doctoral candidates was collected from the Human Resources database of INEB/i3S. From these, refined information regarding the number of Doctoral candidates who are from EU and non-EU countries was gathered. The information is presented as percentage of total number of Doctoral candidates. The number of female PhD graduates was also computed as a percentage of the total number of PhD graduates. The numbers of Grade A (highest-level research positions) female employees and female Principal Investigators was collected and is presented as the percentage of total Grade A and Principal Investigators, respectively.

Finally, the use of the EURAXESS platform to advertise Researcher job posts was analysed by counting the number of Researcher job posts advertised on EURAXESS as a percentage of the total number of job posts advertised by the institute.

2.2.2. Funding

Information about INEB/i3S's funding was collected from the internal databases of the Finance Department. Data were collected regarding the total funding, the public funding and funding from private sources, and are presented as percentage of total funding. Information about the number of European Research Council (ERC) grants and Marie Skłodowska-Curie actions (MSCA) was also collected from this database and is presented in absolute numbers.

2.2.3. Technology Transfer

The internal database of the Research and Innovation Unit was queried to collect the number of patent applications submitted and licenced by INEB/i3S in the period under evaluation. These data are presented in absolute numbers.

2.3. Questionnaires

Two questionnaires were prepared and provided to the researchers of INEB/i3S in order to understand the publication of research data practices and also to understand how satisfied were

the researchers with the recruitment process at the institute. Both questionnaires were open for two weeks for replying and are present in Appendix II of this document.

In order to map the publication of research data, the questionnaire was submitted to the group leaders of INEB/i3S (13) requesting the identification of their research data publication practices, including the characterisation of where they normally publish and requesting the links to the published data.

For assessing the satisfaction of the researchers with the recruitment process, the questions present in the MORE3 survey⁷ regarding Open, Transparent and Merit-based recruitment (OTM-R) were asked, to which the respondents had to answer with either "I agree", "I don't agree" or "No opinion":

- 1. Research job vacancies are sufficiently externally and publicly advertised and made known by the institution.
- 2. The recruitment process is sufficiently transparent.
- 3. Recruitment is sufficiently merit-based.

The indicator is presented as the percentage of the respondents who answered positively to all three questions. This questionnaire was sent to all researchers, also including PhD students, Research Assistants and Research Technicians (279 people in total).

3. INEB/i3S' progress towards the ERA Priorities

3.1. Priority 1 – More effective national research systems

Although analysing the Portuguese research system is out of scope of this document, MOBILISE has made an effort to apply two of the indicators (Public funding as percentage of total INEB/i3S' funding and the Adjusted Research Excellence Indicator (AREI)) in this self-assessment exercise.

As can be seen in Figure 1 the majority of the funding of INEB/i3S has a public source (around 95%), in particular from Portuguese and European Sources, such as Fundação para a Ciência e Tecnologia (FCT) and the European Commission, respectively. In absolute terms, the total amount of funding attracted in 2019 decreased from 6.7 M€ to 4.6 M€, a decrease which was mainly motivated by a decrease in funding from the European Commission, which was, nonetheless, recovered by 2020 (6.4 M€).

⁷ Technopolis, I. C. et al. (2017). MORE3 study support data collection and analysis concerning mobility patterns and career paths of researchers. https://doi.org/10.2777/710643



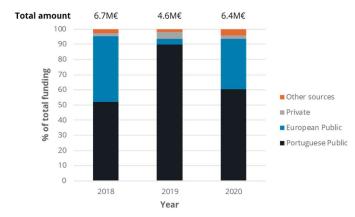


Figure 1. Funding distribution of INEB/i3S according to the source.

In the ERA Monitoring Handbook, the AREI is a composite indicator integrating four components, so for the purpose of this self-evaluation exercise, it was decided to use the individual factors instead of the AREI itself. Thus, in the period covering 2018 to 2020, INEB/i3S has 3.2% (14 out of 437) articles classified as highly cited in the field and 7 Patent Cooperation Treaty (PCT) patent applications. Regarding ERC grants, INEB/i3S has still to secure one such grant, while participation in MSCA is more expressive, especially in Innovative Training Networks. In particular, during this period, the institute participated in 5 of these actions, having recruited 6 researchers in the remit of these projects.

3.2. Priority 2 – Optimal transnational cooperation and competition, including 'jointly addressing grand challenges' and 'research infrastructures'

For the purpose of monitoring the implementation of Priority 2 it was sub-divided into two subpriorities (Sub-priority 2a – Optimal transnational cooperation and Sub-priority 2b – European Strategy Forum on Research Infrastructures (ESFRI)). Of all the indicators mentioned in the ERA Monitoring Handbook to evaluate this priority, only one could be applied to INEB/i3S (International co-publications with ERA partners as percentage of total publications) as all the others had more of an ERA country-focus. Nonetheless, MOBILISE was able to analyse the amount of publications with researchers from other ERA countries as a measure of transnational cooperation. Out of a total number of publications of 437, 154 include collaborators from the ERA (35%).

Regarding sub-priority 2b, INEB participates in one Research Infrastructure recognised on the Portuguese Roadmap of Research Infrastructures⁸, which is in alignment with the priorities defined by the ESFRI Roadmap. INEB/i3S participates in the Portuguese Platform for Bioimaging

⁸ https://www.fct.pt/media/docs/Portuguese_Roadmap_Infrastructures2020.pdf

D11 – SELF-ASSESSMENT OF INEB-I3S TOWARDS ERA PRIORITIES IMPLEMENTATION (D3.2) PAGE 11 OF 22



(PPBI)⁹ with the imaging platform b.Image (BioImaging Center for Biomaterials and Regenerative Medicine)¹⁰. PPBI is a member of the Euro-BioImaging ERIC, the European landmark research infrastructure for biological and biomedical imaging as recognised by ESFRI.

3.3. Priority 3 – An open labour market for researchers

An Open Labour Market for Researchers implies cross-country mobility within the EU, something that is promoted through the publication of job vacancies in the EURAXESS job portal. From January 2018 to December 2020, INEB/i3S published a total of 8 job posts on this portal, which represents 6% of the total amount of Researcher job posts advertised by INEB/i3S (136). This highlights the standard protocol at the institute of advertising job posts which is to do it on the institute's webpage and on the national scientific job portal Eracareers.

Another indicator of an Open Labour Market represents the share of doctoral candidates from a different EU Member State at the institute. In the period under study, INEB/i3S had 4 students from another EU member state, representing around 5% of the total number of PhD students. As can be observed in Figure 2, in the period under evaluation, this value has remained constant, with the vast majority of PhD students of INEB/i3S being Portuguese. Although this value is higher than what is reported in the ERA Progress Report 2018 for Portugal (3.1%), it is lower than the value for EU-28 (7.1%). Nonetheless, every year INEB/i3S hosts many visiting foreign PhD students for more than 3 months during their PhDs. In fact, many of these visiting PhD students are co-supervised by researchers of INEB/i3S, even though they are not enrolled in any of the PhD Programmes with which INEB/i3S collaborates and are therefore not accounted for in the PhD students of INEB/i3S. In the period under evaluation, 10 visiting PhD students from other ERA countries were hosted by INEB/i3S.

In order to understand how researchers of INEB/i3S perceive the recruitment process at the institute regarding OMT-R processes, we applied a questionnaire containing the three MORE3

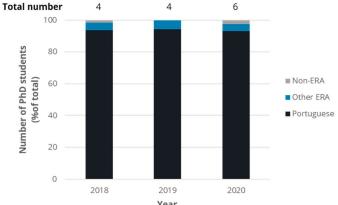


Figure 2. Distribution of the PhD students of INEB/i3S by nationality.

⁹ <u>https://www.ppbi.pt/joomla30/</u>

¹⁰ http://www.bimage.ineb.up.pt/

D11 – SELF-ASSESSMENT OF INEB-I3S TOWARDS ERA PRIORITIES IMPLEMENTATION (D3.2) PAGE 12 OF 22



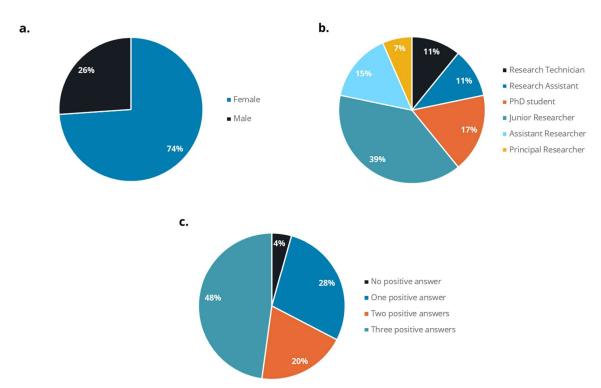


Figure 3. Results of the questionnaire with the MORE3 survey questions pertaining to OTM-R made to INEB/i3S researchers. a. Gender of the respondents. b. Characterisation of the respondents regarding their type of contract. c. Distribution of the answers to the MORE3 questions.

study questions regarding this subject (Figure 3). 46 researchers replied to this questionnaire, with the great majority being females (73%). Researchers from all contract levels contributed to this questionnaire. Around 48% of the respondents, answered positively to all three questions, a value that is close to the reported in the ERA Progress Report for Portugal (51%), but further below that of the EU-28 (61%), which could, nonetheless, be biased due to the low number of respondents (16.5% of those contacted, or 46 out of 179).

3.4. Priority 4 - Gender equality and gender mainstreaming in research

A balanced gender representation in all aspects of research contributes to excellence, positively influences research outcomes and impact, and promotes de acceptance of scientific insights¹¹. It is therefore important to understand how INEB/i3S is performing in this arena. The main indicator to evaluate the progress in this priority evaluates the percentage of women in Grade A (the highest career level in research) positions as a measure of gender balance in career progression. In

¹¹ EIGE (2016) *Promoting gender equality in academia and research institutions main findings*. https://doi.org/10.2839/384762

D11 – SELF-ASSESSMENT OF INEB-I3S TOWARDS ERA PRIORITIES IMPLEMENTATION (D3.2) PAGE 13 OF 22



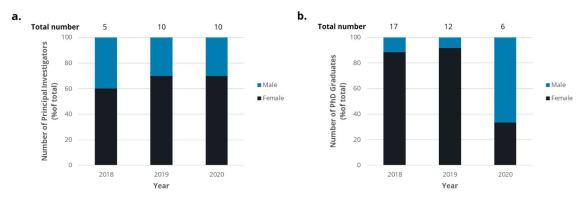


Figure 4. Gender equality indicators at INEB/i3S in the period of 2018 to 2020. a. Number of female and male Principal Investigators. b. Number of female and male PhD graduates.

INEB/i3S there is no researcher as Research Coordinator, the highest possible level in the Research Career in Portugal and which is equivalent to the position of Full Professor in academic careers. This is far from the value reported on the ERA Progress Report for Portugal (26%) and is something that should be improved. Nevertheless, some of the Group Leaders if INEB/i3S are Full Professors at the University of Porto (3 out of 13, or 23%), although none are women. Nonetheless, currently at the institute there are 7 women as Principal Investigator, the second highest level in the Research Career in Portugal, and this amounts to 70% of all researchers in this category (Figure 4a). This value is stable since 2019, but increased from 60% in 2018, indicating that we are moving away from the 40-60% interval that represents gender parity¹².

Another indicator to monitor progress towards reducing vertical segregation is the amount of female PhD graduates. Vertical segregation is defined as the under- or over-representation of a clearly identifiable group of workers in occupations or sectors at the top of an ordering based on 'desirable' attributes¹². Shares of 40-60% represent gender parity. At INEB/i3S, the share of female PhD researchers for the period of 2018 to 2020 is 80%, which is well above what is reported for Portugal in the ERA Progress Report (55%) and is far from what is considered to represent gender parity. A reason for this could be that the majority of the PhD students of INEB/i3S come from areas which typically already have a high proportion of female students, such as Health and Life Sciences. Furthermore, it can be seen that in 2018 and 2019 there were 88% and 92% of female graduates, respectively, while this number decreased to 33% in 2020 (Figure 4b). This might be due to a decrease in the total number of PhD graduates in this year from 12 in 2019 to 6 in 2020.

The third indicator to monitor the implementation of Priority 4 is the Gender Dimension in the research context, as the implementation of the gender dimension in Research and Development policies, programmes and projects is one of the core actions under this priority. Out of 437 articles INEB/i3S has published in the period under consideration, 61 (14%) address gender issues as defined on Section 2.1.

¹² EGGE (2009). *Gender segregation in the labour market: root causes, implications and policy responses in the EU: Final report.* https://doi.org/10.2767/1063



3.5. Sub-priority 5a – Knowledge circulation

Knowledge circulation between public research organisations and the public sector is a key factor for increasing growth and competitiveness and was analysed taking into account the collaboration between the researchers of INEB/i3S and the private sector (both in terms of joint publications and in absolute numbers of cooperating firms), as well as the amount of funding received from the private sector.

In the period of 2018 to 2020 INEB/i3S collaborated with 13 product and/or process innovative firms. The amount of funding from the private sector obtained for research purposes was very low compared to the total amount of funding the institute received for the same period (2.9%, Figure 1). Nevertheless, it is very similar to that reported on the ERA Monitoring Report 2018 (2.2%).

Collaboration with the private sector resulted in 18 (4%) articles published in which at least one of the authors was from the private sector.

3.6. Sub-priority 5b – Open Access

Open Access to scientific publications and data promotes wider and faster circulation of scientific ideas, increasing the benefits to both science itself and to society as a whole. Open Access and Open Data are part of the wider move towards Open Science. Currently INEB/i3S does not have a policy on Open Science, nonetheless, it follows the guidelines of the main national funding agency, FCT. In 2014 FCT issued guidelines on Open Access recommending that publications funded by public funds should be in an OA format and, more recently, it has announced that it will implement Plan S which promotes the transition to full OA¹³.

In order to monitor the performance of INEB/i3S regarding OA, the number of articles published in OA, Gold OA (i.e. papers made available for free by the publishers) and Green OA (i.e. papers made available for free normally through archiving in institutional or subject repositories) was computed. In the period under study, researchers from INEB/i3S published 218 articles in OA, which represents around 50% of the total number of publications by the Institute on that period, and is higher than what is reported for Portugal in the ERA Progress report (43%). Of these papers, the majority (~46%) is available in Green OA, while a proportion (~26%) of the articles are available as Gold OA. Both these numbers are higher than what is reported for Green and Gold OA (30% and 23%, respectively) in the ERA Progress report. As can be seen in Figure 5, when looking at the individual years, in 2020 the number of articles published in OA increased (from 46% to 61%), with the publication of Green OA papers following the same trend as the OA papers, while the Gold OA route has been steadily increasing over time.

¹³ <u>https://www.fct.pt/acessoaberto/index.phtml.en</u>



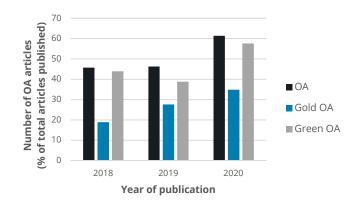


Figure 5. Publication of Open Access papers by researchers of INEB/i3S in the period covering 2018-2020. Values presented as percentage of total number of articles published in the corresponding year.

Regarding the funding of OA papers, since the vast majority of the institute's funding is public and the main funder's (FCT) policy demands an acknowledgement of the funding source, all papers published by INEB/i3S display this information, whether or not they are OA.

The publication of Open Datasets is still very incipient at the institute. In particular, in the survey MOBILISE conducted with the group leaders of INEB/i3S, out of the 12 groups that responded to the questionnaire (92% of all groups), only 4 (33%) had ever published datasets in either data repositories (50%) such as Zenodo or in peer-reviewed scientific journals (50%). In fact, only 5 published datasets were reported by the group leaders of INEB, 2 in 2019 and 3 in 2020. Therefore, publication of datasets associated to the publication of research articles accounts to only 1% of the total articles published by INEB/i3S.

3.7. Priority 6 – International cooperation

Originally, this priority aimed to ensure that Europe as a whole was able to take maximum advantage of the best research and innovation opportunities in a global setting. MOBILISE adapted this goal to understand how efficiently INEB/i3S is cooperating with countries outside the ERA and for that the indicators in Table 1 were used.

Out of the 437 articles published by INEB/i3S in the period of 2018 to 2020, 138 (32%) included collaborators that were outside the ERA, which is in alignment with what was reported for Portugal in the ERA Progress Report. Of all the non-ERA countries, the institute collaborates with, the greatest collaborators come from the USA and Brazil (data not shown).

Furthermore, analysing International cooperation from the Human Resources point of view, it can be observed that for the period under study, there were only 3 doctoral candidates from non-ERA countries, one (2%) in 2018 and two (2%) in 2020. Similar to what was described in section 3.3, INEB/i3S hosted 6 visiting PhD students from non-ERA countries in the same period.

In this period, 3 patents were licenced to national and international companies.



4. Conclusions

MOBILISE has conducted a thorough evaluation of INEB/i3S regarding the progress of the institute towards the implementation of the ERA priorities. This evaluation has focussed mainly on priorities 3, 4 and 5 which are related to the ECCR, but has also addressed priorities 1, 2 and 6. From this exercise, we can conclude that although regarding certain indicators the institute is performing similarly (or better) to what was reported in the ERA Monitoring Report 2018 for Portugal (e.g. OA and satisfaction with OTM-R practices), in others INEB/i3S is lagging behind (e.g. Gender Equality, Open Data, use of the EURAXESS platform). Nonetheless, several aspects can be improved and an action plan detailing the measures to address these issues will be prepared and submitted as deliverable D3.3 Strategy and action plan for the implementation of the ERA priorities.



Appendix I – Web of Science results

Table A1. Characterisation of the publication landscape of INEB/i3S for the period from January 2018 to December 2020

ERA priority	Type of article	Percent of total (%)	Number
N/A	All papers	100	437
1	Highly cited publications	3.2	14
2a	Publications with ERA partners	35	154
6	Publications with non-ERA partners	32	138
4	Articles addressing gender dimension	14	61
5a	Public-Private co-publications	4	18
5b	Open Access	50	218
5b	Gold Open Access	26	114
5b	Green Open Access	46	200

D11 – SELF-ASSESSMENT OF INEB-I3S TOWARDS ERA PRIORITIES IMPLEMENTATION (D3.2) PAGE 18 OF 22



GRANT AGREEMENT ID: 951723 H2020-EU.4.C. - ESTABLISHING ,ERA CHAIRS' WIDESPREAD-06-2020 - ERA CHAIRS

Appendix II – Questionnaires

D11 – SELF-ASSESSMENT OF INEB-I3S TOWARDS ERA PRIORITIES IMPLEMENTATION (D3.2) PAGE 19 OF 22

	Survey regarding satisfaction with recruitment process at INEB MOBILISE, the ERA Chair at INEB, is conducting a self-assessment regarding the implementation of the ERA priorities (<u>https://eur-lex.europa.eu/legal-</u> content/EN/TXT/PDF/?uri=CELEX:52012DC0392&from=EN). In particular we would like to hear your opinion regarding the recruitment process at INEB in terms of
	merit, transparency and openness. We would therefore invite you to answer the following questions. It should take you no longer than two minutes to complete it. Thank you for your cooperation.
*	Required
1	
1.	Gender *
	Mark only one oval.
	Female
	Male
	Prefer not to say
	Other:
2.	Year of recruitment *
۷.	
3.	Type of contract *
	Mark only one oval.
	🔵 Bolsa de Investigação (BI)
	Bolsa de Doutoramento (BD)
	Bolsa de Técnico de Investigação (BTI)
	Bolsa de Pós-Doutoramento (BPD)
	Junior Researcher contract
	Assistant Researcher contract
	Principal Researcher contract
	Research Technician contract
4	
4.	Type of recruitment *
	Mark only one oval.
	Directly hired and funded by INEB and subject to an open call (eg. project associated contracts/fellowships, DL57)
	Hired by INEB but externally funded with no open call by INEB (eg. FCT funded BD, CEEC, IF) Other:
	Intitled section
	initiaed section
5.	Research job vacancies are sufficiently externally and publicly advertised and made known by the institution. \star
	Mark only one oval.
	I agree
	I don't agree
	No opinion
6.	The recruitment process is sufficiently transparent. *
	Mark only one oval.
	I agree
	I don't agree
	No opinion

7. Recruitment is sufficiently merit-based. *

Mark only one oval.

I agree

O No opinion

This content is neither created nor endorsed by Google.

Google Forms

Mapeamento da publicação de Dados de Investigação científica no INEB

*	Required
1.	Qual o seu grupo de Investigação? *
2.	Alguma vez publicou ou depositou dados associados à sua investigação? *
	Mark only one oval.
	Sim Skip to question 3
	─ Não
С	Caracterização da publicação
3.	Os dados que publicou foram associados à publicação de um artigo científico? *
	Mark only one oval.
	Sim
	Não Skip to question 3
4.	Onde publicou os dados? *
	Mark only one oval.
	Repositório de Dados
	Revista científica com arbitragem de pares Other:
5.	Por favor indique qual o Repositório e/ou Revista em que publicou os dados. *
6.	Por favor indique os links para os seus datasets publicados. *
	This content is neither created nor endorsed by Google.
	Google Forms