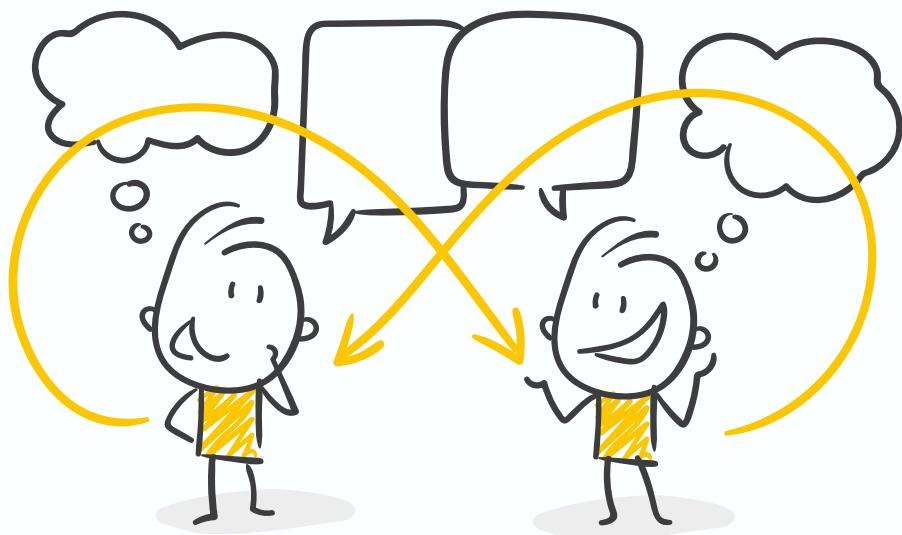


RESEARCHERS BEYOND ACADEMIA MENTORING PROGRAMME

BEYOND THE BENCH

MENTORING PROGRAMME



How to set up a mentoring programme for researchers in academia interested in non-academic jobs

September 2020

Most PhD candidates will pursue their careers outside academic research.

Is your institution willing to support them in their career path? How about offering a mentoring programme with professionals outside academia?

Authors:

Izaskun Lacunza

Spanish Foundation for Science and Technology

Xavier Eekhout

Spanish Foundation for Science and Technology

Cristina Gracia

Spanish Foundation for Science and Technology

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Context

During 2019, 5 partners of the project EURAXESS TOP IV "Open EURAXESS – To strengthen the effectiveness and optimize the services of all partners in an innovative and open EURAXESS network" (funded from the Research and Innovation framework Horizon 2020 of the European Union under grant agreement 786133) run a mentoring programme pilot that put in touch young researchers with highly skilled professionals somehow related to R&D&I but not doing research in academia. The aim of the programme

was to test whether such a mentoring programme could support young researchers have a better view of their career options inside and outside academia, as well as to provide recommendations for EURAXESS staff.

This document reflects on the reasons for such a programme and the lessons learnt during its design, implementation and evaluation. It intends to be a useful toolkit for those institutions wanting to deploy similar programmes for their early stage researchers.

WHY HAVE WE RUN AN ACADEMIA-INDUSTRY MENTORING PROGRAMME FOR YOUNG RESEARCHERS

Careers outside academia

There is wide consensus in that, for PhD graduates, jobs outside academia are not “alternative” careers anymore, but probably the norm. Broadly speaking, most of the PhDs will not have an academic career throughout their professional career^{1,2,3}. The same goes to postdocs, with as many as nine out of 10 postdocs thought to move out of academia eventually in the UK^{4,5}.

However, most doctoral training programmes are not acknowledging it and covering the issue during their trainings and many doctoral and post-doctoral researchers are still in the dark when it comes to other career options beyond academia and how to align their paths towards them⁶. This, among other things, may lead to misunderstandings among young

researchers about what non-academic employers expect from researchers⁷. Not only this, this lack of exchange of views and information impoverish both the academic and the non-academic world and hampers the so desired inter-sectoral mobility of highly skilled professionals and researchers, knowledge transfer and employability of researchers^{8,9}.

Recently, the Marie Curie Alumni Association and Eurodoc issued the joint declaration on sustainable careers¹⁰ where they claimed for researchers to be prepared for different professional environments and to be provided with a wide variety of networking options and services inside and outside of academia. This claim is understood as a growing expectation of young European researchers to get better training and connections to industry.

1 The Scientific Century-securing our future prosperity. The Royal Society, 2010.

2 Cyranoski, D., Gilbert, N., Ledford, H. et al. Education: The PhD factory. *Nature* 472, 276–279 (2011) doi:10.1038/472276a

3 <https://www.timeshighereducation.com/news/australian-phd-students-target-careers-outside-academia>

4 <https://www.timeshighereducation.com/news/careers-intelligence-how-postdocs-can-find-jobs-outside-academy>

5 <https://www.timeshighereducation.com/career/careers-intelligence-helping-postdocs-find-jobs>

6 Woolston, C. 2019. PhDs: the tortuous truth. <https://www.nature.com/articles/d41586-019-03459-7>

7 De Grande, H., De Boyser, K., Vandevelde, K. et al. *J Knowl Econ* (2014) 5: 538. <https://doi.org/10.1007/s13132-014-0192-9>

8 Communication from the European Commission on “A Reinforced European Research Area Partnership for Excellence and Growth”(2012)

9 Hristo Hristov, Milena Slavcheva, Koen Jonkers and Katarzyna Szkuta; Intersectoral mobility and knowledge transfer. Preliminary evidence of the impact of intersectoral mobility policy instruments; EUR 28027 EN; doi:10.2791/041776

10 Kismihók, G. et al. (2019) Declaration on Sustainable Researcher Careers. Brussels: Marie Curie Alumni Association and European Council of Doctoral Candidates and Junior Researchers. DOI: 10.5281/zenodo.3082245

Mentoring programmes in academic settings

Much has been written about mentoring researchers and about how supervisors could actually develop better mentoring skills^{11, 12}. However, even if attempted, it is unlikely that academic supervisors to these pre and post docs may become good mentors when it comes to career paths beyond academia, because most of them have pursued a very straight forward academic professional life. There is still much room to explore new ways to better connect researchers to the non-academic world and to make them more aware of their career options.

EURAXESS and the REsearchers BEyond aCAdemia mentoring programme (REBECA)

EURAXESS¹³ is a pan-European initiative delivering information and support services to professional researchers. Backed by the European Union, Member States and Associated Countries, it supports researcher mobility and career development, while enhancing scientific collaboration between Europe and the world.

Horizon2020 is funding EURAXESS TOP IV¹⁴ "Open EURAXESS – To strengthen the effectiveness and optimize the services of all partners in an innovative and open EURAXESS network". As part of its priorities, the project is exploring mechanisms for better engaging EURAXESS with industry and, eventually to facilitating researchers' mobility towards non-academic settings. Under this umbrella, 5 national EURAXESS national coordinators (from Denmark, Hungary, Italy, Israel and Spain), coordinated by the Spanish one, have lead a pilot mentoring programme for researchers wanting to explore career paths outside academia: Through this mentoring programme branded as "REBECA: REsearchers BEyond aCAdemia", early-stage researchers have been enrolled in a 6-month mentoring programme with highly skilled professionals somehow related to R&D&I, but not doing academic research.

The programme had a common target and structure, and the resources were developed collectively with the participation of all the partners from the different countries, although their different profiles and different environments allowed testing different approaches.

11 <https://www.vitae.ac.uk/doing-research/leadership-development-for-principal-investigators-pis/developing-individual-researchers/mentoring-and-coaching-researchers> Consulted on January 2020

12 Mehta, D., Vavitsas, K. PhD supervisors: be better mentors. *Nature* 545, 158 (2017) doi:10.1038/545158a

13 <https://euraxess.ec.europa.eu/>

14 <https://cordis.europa.eu/project/id/786133>

Common elements of REBECA	National approaches to REBECA
<ol style="list-style-type: none"> 1. Branding of the programme 2. EURAXESS portal content 3. Promotional leaflet 4. Handbook – general topics 5. Learning Agreements 6. Career Plan template 7. Post-meeting forms 8. Registration forms 9. Training webinars: Kick-off webinar 2x trainings for mentees 10. Anonymous satisfaction surveys 	<ol style="list-style-type: none"> 1. Promotion of the programme 2. Recruiting participants 3. Specific topics complementing Handbook 4. Follow-up of pairs 5. Additional “industry-academia” activities for national participants

Table 1. Review of the common elements and national level tailoring applied in REBECA.
Further details are given in the sections below

In the following sections, we try to extract the best practices of the programme so that it is useful to anyone willing to launch a programme with similar goals. Also, we present some of the main results of the pilot addressing the situations faced in the different countries, where relevant.

There is a special emphasis on the Spanish results as a reference due to the fact that it represents the maximum investment of resources on the implementation of the programme, which also translated into contributing with the highest number of participants, somehow representing the “ideal” situation for benchmarking.

WHY WE BELIEVE REBECA WAS A SUCCESS

The mentoring programme proposal within the framework of the EURAXESS TOP IV project had the aim of testing a career development intervention that, if successful, could be fostered among the EURAXESS network and beyond through this toolkit. The basic indicators set to measure the success of this activity were:

- Between 25 and 50 mentoring pairs established.
- 75% of the mentees in the pilot are satisfied with the mentoring programme.

In regards to the sample size, a total of **67 pairs** were established altogether for REBECA, fulfilling the first indicators.

In terms of overall satisfaction, a final anonymous satisfaction survey was sent to all participants once the mentoring period was finalized. Altogether we collected the feedbacks from 50 mentors and 53 mentees. Among the mentors **86%** of the respondents expressed being "very satisfied" or "extremely satisfied", while in the case of the mentees it was 74% of the respondents expressing they were "very

satisfied" or "extremely satisfied" and 90% including those "moderately satisfied" (see Figure 1).

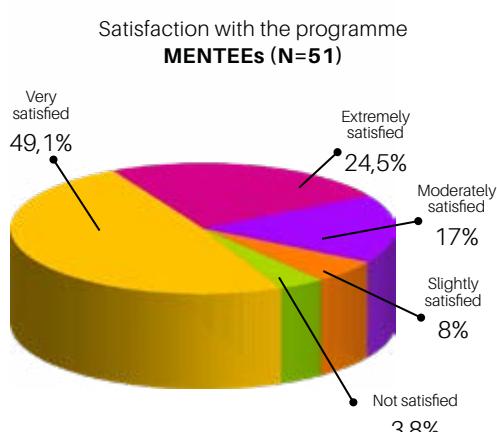
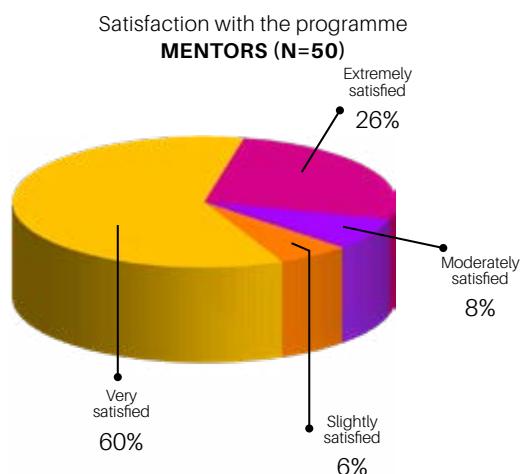
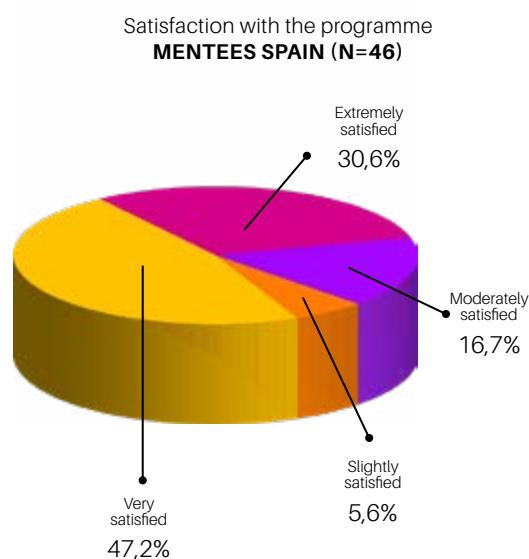
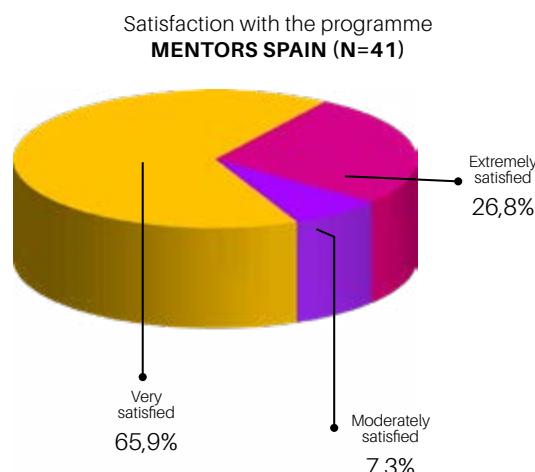


Figure 1. Overall satisfaction with the programme. REBECA Final Survey

With the approach applied in Spain, approximately 90% of the mentors and 80% of the mentees declared being "extremely satisfied" or "very satisfied" with the programme.



Based on these replies, more than 83% of the pairs completed at least 5 meetings (almost 62% met six or more times).

Feedback from mentors

- Around 53% of the mentors had previous experience in mentoring programmes.
- Only 24% of them thought that a different match would have been more efficient.
- More than 85% of them had plans to continue in contact with their mentees.
- More than 92% of the mentors were convinced that their mentee had a better knowledge about their professional options beyond academia after participating in REBECA.
- More than 85% of the mentors agreed that their mentees had a better understanding of their skills and capacities after participating in REBECA.
- More than 87% of the mentors thought that their participation in REBECA had actually contributed to their own professional development.

- A 100% of the replies received would recommend participating in a mentoring programme like REBECA.

Finally, a selection of concluding remarks from mentors after their experience in REBECA:

"It has been a very beautiful experience and I have seen my self-reflected in my mentee. I wish I would have been able to have this support when I was at university."

"My feeling is that a mentoring program in earlier phases of the research career is needed -and not only at the end of the road trip."

"The times change, but the focal points are the same. I was really interesting to share the point of view of my mentee, the new generation. I learnt a lot about this point of view."

"I believe is a very good opportunity for young investigators to learn about science/research outside academia."

"We learn from experience, so I think it would be helpful for me to be able to repeat as mentor (I was kind of mentor

within academia, but it is my first time outside)."

"In a sense, it's been like coming back to my own situation many years ago, but now with much more experience to share."

Feedback from mentees

- 22% of the respondents confirmed that they have had the chance of properly discussing professional alternatives beyond academia to date.
- Similarly to the mentors, only 22,2% of the mentees thought that a different matching would have been better for them.
- More than 86% of the mentees planned on maintaining the contact with their mentors beyond REBECA.
- More than 80% of the mentees thought they had a better knowledge about their professional alternatives beyond academia after participating in REBECA.
- In comparison, only 66% of them expressed more interest in actually moving away from academia after participating in REBECA.

- Also in line with the perception of the mentors, around 86% of the mentees admitted having a better knowledge about their skills and capacities after participating in REBECA.
- 100% of the mentees estimated that REBECA had allowed them to address with their mentors the topics of their interest totally (83,3%) or partially (16,7%).
- 100% of the respondents would recommend REBECA to colleagues and agreed that similar programmes should be regular services offered by doctorate schools.

When questioned about the resources offered to facilitate the meetings with their mentors:

- Almost 78% of the mentees thought that the webinars offered were "useful" or "very useful" for them
- Almost 67% thought the REBECA handbook was "useful" or "very useful". As a matter of fact, several comments received actually recommended providing more content.

Finally, a selection of concluding remarks from mentees after their experience in REBECA:

"I think the problem during the PhD is you have no time to think in the next step. With this kind of programmes you force yourself to think and to do the next step, like improve the CV or start to look for new jobs or companies."

"During this programme, I have mainly learned about myself, my stronger skills and the ones that I have to improve, the kind of positions that can fit me better, etc. Also, my mentor has taught me some key points about the live in the company, such as how to interact with the different workers, what is the hierarchy in the company, etc."

"I have understood the term networking and moreover, I have been aware of my soft skills and the importance of them in research beyond academia."

"I learned how to prepare myself for an interview, how to prepare my LinkedIn and a good CV (thanks to the webinars and the support and supervision of my mentor)."

"I learned how to prepare a CV for a job outside the academia and most importantly how to transfer my skills and competences from PhD program to "real life"."

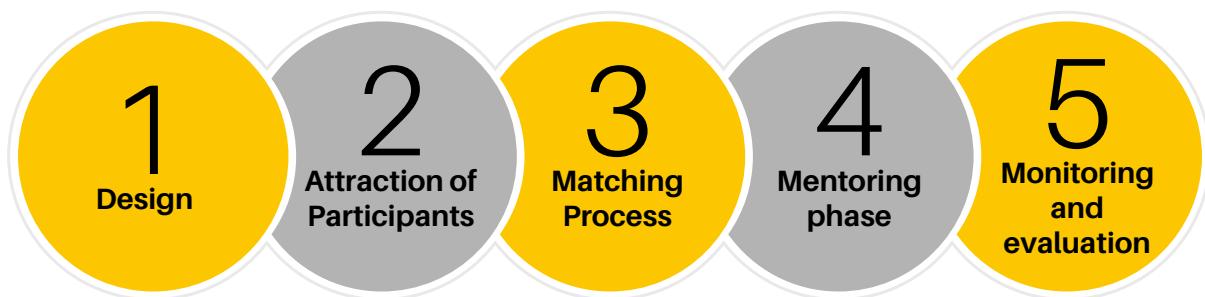
"I have explored work opportunities for PhDs. I have taken notice of the importance of the skills developed throughout the thesis. And most important, I am aware of the importance of career planning in order to be successful after finishing the PhD studies."

"The handbook is very useful as an initial guide, but the most interesting thing is that each couple adapts the topics according to the specific needs of the mentee. The most interesting part of the whole program for me is the knowledge of the soft skills, and how it changes the perspective from the academic world to the business world.

Thus, apart from fulfilling the general indicators established when proposing the pilot, we believe that the detailed replies acknowledge the benefits of establishing these kind of intersectoral mentoring programmes, which is the reason for sharing with a wider audience our experience in REBECA through this toolkit.

HOW TO GET STARTED? MAIN PHASES FOR AN ACADEMIA-INDUSTRY PROGRAMME INSPIRED BY REBECA

In this section, we will try to highlight the key phases in the design and implementation of a mentoring programme involving young researchers and professionals outside academia. General considerations are offered first, complemented by country experiences where relevant.



1. DESIGN PHASE

Researchers may benefit from many different types of mentoring; this is why it is so important to demarcate well the scope and goals of your programme so that you can stick to them. You will need to define the objectives of the mentoring, the profile of mentors and mentees, the length of the programme, whether meetings between mentors and mentees will be virtual and/or physical, and how you will facilitate the necessary training to mentors before they get started (bear in mind that mentoring is a

skill that is trained and developed). Also, you will need to design, and probably create, specific content for the programme to run smoothly and define how many pairs you can actually be responsible for according to your managing resources.

How did we design REBECA?

Goals. These were the goals we agreed upon:

- i) Supporting young researchers in their reflection about their career goals by putting

them in touch with profiles they usually don't have access to;

ii) Facilitating intergenerational and intersectoral networking of science professionals (which is much wider than research professionals);

iii) Self-reflection about skills already acquired their applicability beyond research and those needed to be developed.

Calendar. We proposed to run a 6 months programme along which the pairs were prompted to meet at least six times. Many mentoring programmes run for 12 months, but considering that this was a pilot we decided to keep it shorter and more intense. The launching of the programme was just before summer period in Europe (June 2019), a situation that initially was worrying due to the usual summer holidays, but this turned out to be also positive for some pairs that benefited from a lower level of activity in their jobs to at least launch the first meetings and plan the following ones.

Virtual. Having five European countries involved and wanting to have the best matching possible regardless of the location, we decided that the programme would run virtually with no obligation to meet in person. Nevertheless, the general

experience of mentoring programmes is that meeting in person -like any kind of networking opportunity- can favour successful mentoring relationships, so from REBECA we invited to do it, if this was feasible.

Mentees profiles. Our target were PhD candidates or researchers having recently received a PhD (they may be early post docs or be in between jobs at the moment of application) that somehow felt they did not have enough knowledge about their career options beyond academia. Candidates from any discipline were welcome and women were especially encouraged to apply.

Mentors. We decided to be very open when it comes to mentors profiles. We basically wanted to create a diverse network of professionals somehow related to research, development and innovation. We targeted STEM, social sciences or humanities professionals working in industry, government, third sector and even academia, but not in research positions or having some kind link with the private sector (e.g., start-ups). Some background knowledge on academic research was acknowledged but not compulsory for the mentors.



MENTORS

Are you a STEM (science, technology, engineering, mathematics), social science or humanities professional? Do you have a science or technology related job outside academic research?

The area you are working on is not determining. The important thing is to put researchers in contact with other professionals working in non-academic positions. The more diverse the connections we achieve, the better.

Some background knowledge on research academic careers is not essential, but would be welcomed.

SOME GOOD REASONS TO PARTICIPATE IN THE PROGRAMME

- Support young professionals in their career path.
- Share your professional experience, including previous advice received from mentors yourself.
- Network with early stage research professionals with different views and knowledge.

MENTEES

Are you a PhD candidate, or have recently received your PhD, and you are thinking about your next career step beyond academia?

Do you want to broaden your knowledge about your career options beyond academia?

SOME GOOD REASONS TO PARTICIPATE IN THE PROGRAMME

- Meet highly skilled professionals beyond your actual working environment.
- Share and reflect about your professional aspirations.
- Empower yourself for your next career move.

Figure 3. Profiles addressed in REBECA

Size of the programme. Each country decided their figures according to their available resources. Being a pilot programme, and assuming that generally speaking, the EURAXESS initiative tends to lack awareness among sectors beyond academia, our initial target was humble (an average of 5 to 10 pairs per partner). Nevertheless, in the case of Spain due the success in the number of applications received through the open call approach that was applied, the final number of pairs arranged was 46 based on good matches identified. Bulgaria contributed with 4 pairs, Denmark with 5 pairs, Israel with 3 pairs and Italy with 9 pairs, for a total of 67. As a reference, we estimate that for the 6-month programme, the team in Spain invested approximately 3 person months of management efforts for their 46 pairs. We expect this toolkit will reduce the management of similar programmes significantly.

Content creation. It is not easy to start a mentoring programme from the scratch. We decided we would create material to support the engagement of participants

and material to support the implementation of the mentoring programme. Regarding the later, the key documents were an easy-to-use handbook addressing 6 topics related to the concept of the programme, including with suggested readings and questions to help the pairs get started. We made it clear that it was voluntary for pairs to use it. Also, we facilitated a “personal career plan” template so that mentees could somehow record their progress (reflections, achievements, goals or even contacts made) during the programme. Both documents have been released under CC-by licence¹⁵ (more to be explained in the mentoring phase below).

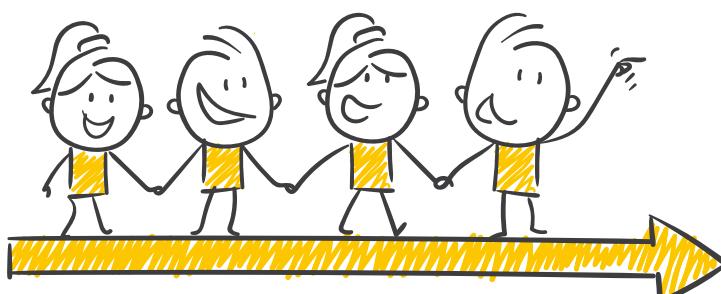
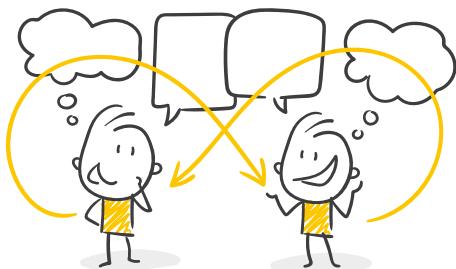
Think on a catchy name! Our experience is that naming our programme helped us a lot in the communication and dissemination phase, especially as we had to address professionals in sectors which traditionally have not been too aware of EURAXESS. You should also bear in mind that this specific activity can be the cornerstone of future collaborations that will provide the opportunity to showcase other elements of the EURAXESS initiative.

¹⁵ <https://creativecommons.org/licenses/by/4.0/>

RESEARCHERS BEYOND ACADEMIA MENTORING PROGRAMME

Beyond the Bench

MENTORING PROGRAMME



CALENDAR

APPLICATION PHASE (April 2019)

- Identification and selection of mentors
- Public call for researchers (mentees) interested in the programme.

LAUNCHING PHASE (May-June 2019)

- Matching of mentors and mentees according to their particular interests in the programme.
- Kick off phase: includes online training sessions for mentors and mentees to facilitate mentorship process.

MENTORING PHASE (July-December 2019)

- Mentors and mentees to meet virtually on average once a month
- Mentees to take specific online trainings (max 4-6 hours).

EVALUATION PHASE (January-February 2020)

- Mentors and mentees to give feedback to EURAXESS in order to measure the impact of the programme.

6 MONTHS PROGRAMME

- Mentors will have a 2 hours virtual training (in English) at the beginning of the programme (before starting bilateral mentoring sessions).
- Mentors and mentees are expected to meet at least 6 times in 6 months.

Topics recommended to address include:

- Professional career aspirations
- Management of career development
- Key soft skills
- How to network
- Gender perspective in career development
- Mentees will also be offered with several online trainings related to alternative careers for researchers beyond academia.

KEY ELEMENTS



GOALS

- Support young researchers in their reflection about their career goals.
- Facilitate intergenerational and intersectoral networking of science professionals.

VIRTUAL

The training and the mentor/mentee meetings will be organized virtually.

VOLUNTARY

We aim at creating altruistic personal connections.

EURAXESS is an European initiative to support researchers in their professional development.

EURAXESS Spain is launching REBECA, a mentoring programme for researchers willing to explore professional alternatives with mentors working beyond academia. Researchers' professional career path is versatile and diverse.

Their competences and skills are extremely valuable in many different jobs and sectors.

REBECA wants to facilitate young researchers reflect about their options beyond academia.

¹⁶ <https://www.euraxess.es/spain/spain-network/euraxess-top-iv/rebeca-mentoring-programme> (consulted in January 2020)

RECOMMENDATIONS FROM REBECA FOR DESIGNING A MENTORING PROGRAMME

- Be as specific as possible in the definition of your targets.
- Create material to support your pairs towards achieving that target. See Annex 1 REBECA Handbook for inspiration.
- Consider creating a catchy brand / name for the programme, especially if addressing target groups that are not your usual customers.

2. ATTRACTION OF PARTICIPANTS

How you are going to attract participants to your programme is essential. If you come from an academic setting, like it is the case of most EURAXESS members, candidates to mentees will be probably easy for you, whereas mentors coming from non-academic settings are probably more challenging, and thus, the main bottleneck for a successful mentoring programme.

Our recommendation is that you secure some mentors before defining the size of the programme, even of planning a public call, so you can make sure that the programme will actually happen with reasonable figures of participation. As for this first "door to door" recruitment, promotional material such as a programme leaflet will be most useful. You may want to contact with local and regional companies, public administrations and third sector.

Using your ex alumnae network may also be a good option. As for the public, open recruitment campaign, social media are of essence to spread the word about your programme. Also using the members of your national EURAXESSS network can be very useful.

How we attracted REBECA participants

Spain was the only country in which we decided to organize a public call for participants after securing a minimal number of mentors. Before going public with the programme and the application, we wanted to make sure that we had a minimum

number of professionals interested to be mentors. For this, we used our personal and institutional connections in industry, public administration, and third sector to make sure we had the interest of at least 15 mentors before launching the public call. We used email, phone and site visits to present the programme using the promotional material (website and leaflet) as support.

Once this was secured, we launched the public campaign though our institution's (the Spanish Foundation for Science and Technology¹⁷⁾ contacts and social media channels. We also asked our national EURAXESS network members to

distribute the information among their own stakeholders. We strongly emphasized the message that the selection of candidates (both mentors and mentees) would be according to profiles that matched, also attempting to have a good geographic, gender and discipline distribution (see matching process for more details).

The call was open for 15 days and we received 255 applications to be mentees and 115 to be mentors (including the ones we had previously secured). As shown in Figure 3, we had very good representation from the private sector, academia, public administration and third sector.

¹⁷ <https://www.fecyt.es/en>

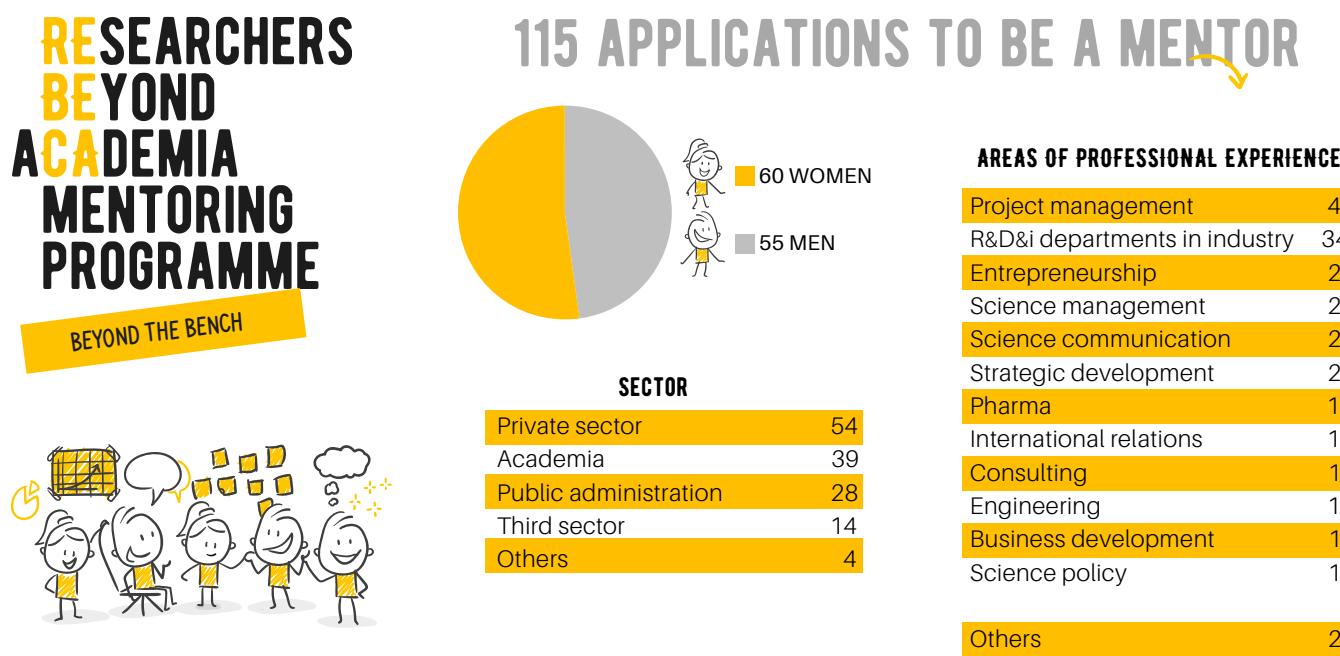


Figure 5. Gender distribution, sector and areas of professional experience of applicants to be mentors in REBECA in Spain

In **Bulgaria** (University of Sofia), we looked for mentees among the PhD students. We made announcements through the EURAXESS network in Bulgaria, used publications in social networks (Facebook groups for PhD students¹⁸), and we sent direct invitations to PhD candidates that could be interested in the program within the organization.

For the mentors, we asked directly some professionals and partners from business companies to join our program. Before starting the program, we made phone calls, explaining all elements of the program.

In **Denmark** (University of Copenhagen) there are already many different mentoring programmes organised by universities, job centres or municipalities. The advantage of this is that both mentors and mentees are familiar with the concept of mentoring. This means that the participants don't need a lot of information or guidance, since they either already have taken part in a mentorship or know friends or colleagues who did so. On the other hand, the challenge is that it is relatively hard to find mentors, since many people already are taking part in

several mentoring schemes. Fortunately experience shows us that many people have good experiences with being a mentor or mentee, and therefore are often interested in participating again in a mentoring programme.

We used our personal network to contact the mentors and they all agreed in taking part in this programme. The mentees we found through our daily work at the university where we for example organize courses for PhDs and Postdocs. These courses are about finding a job outside academia, so a lot of people were interested to participate.

Hungary (Bay Zoltan Ltd.) unfortunately had very limited success in securing participants mainly due to lacking suitable contacts for potential mentors with experience in non-academic sectors.

Potential mentees were addressed using our EURAXESS channels plus directly targeting our contacts accumulated via other EURAXESS related events along a short but intensive dissemination period, which unfortunately failed to generate sufficient interest. Although we received a

¹⁸ <https://www.facebook.com/700326713401559/posts/rebeca-mentoring-programmehttps://www.euraxessspain.es/network/euraxess-top-ivreb/1761177570649796/>

number of queries from potential mentees, finally only one applied.

To recruit mentors we liaised with the Association of Women in Science (NaTE)¹⁹ to recruit mentors. NaTE has for years been participating in mentoring programmes aimed at young people (mainly at girls interested in science) and therefore knows a number of companies who have solidly established programmes, among which the REBECA promotion material was distributed. Unfortunately we believe that these contacts actually perceived REBECA as competitor, so no mentors could finally be secured and thus, no pairs could be established.

In Israel (IP&D Ltd.) we reached out to mentors using personal connections, while we reached out to potential mentees using our EURAXESS centres in Universities of Israel, plus directly targeting our contacts through Facebook. Our short but intensive campaign generated a limited amount of interest that allowed us to enlist 5 mentors, but only 3 mentees.

In the case of **Italy** (Area Science Park), we advertised REBECA on the web at

¹⁹ <http://nokatud.hu/>

²⁰ <http://www.welcomeoffice.fvg.it/>

local, national and international level using the EURAXESS Italy portal and the Welcome Office FVG²⁰ website. We also used promotional e-mails through our local and regional network, as well as to the EURAXESS Italy network and during events and meetings. Nevertheless, what worked best were the "personal contact", particularly for the potential mentees.

For the later, another activity, a focus group on scientific entrepreneurship dedicated to young researchers was key as 5 of the mentees finally enrolled came from there. In the case of the mentors we decided to leverage upon the presence of 60 companies (start-ups, SMEs and large) in our campuses and to open the selection process for mentors among the park's companies.

RECOMMENDATIONS FROM REBECA FOR ATTRACTING PARTICIPANTS

- Even if your intention is to open a public call to recruit participants, secure first a minimum number of mentors willing to participate. For this, use your professional and personal network .

- Prepare a leaflet and website with the key points of the programme. Something that is easy to distribute through your networks. See Annex 2 the REBECA leaflet as an example, or visit the REBECA site in the EURAXESS Spain portal.
- Be as clear as possible about the number and selection of participants to manage the candidate's expectations.
- Benefit from other activities related to the aims of your programme to look for participants. Nevertheless, be wary about bumping into possible "competitors".

these criteria before the application phase so you gather all the necessary information from both mentors and mentees as they register for participation.

If you are going to launch a public call for mentors and mentees, it is possible that you end up having more candidates than the envisioned target. Thus, previous to the matching, you will need to decide the evaluation criteria. A good approach may be to select mentees and leave room to manoeuvre with mentors, so you can choose the right one according to the mentees profiles.

3. MATCHING PROCESS

This is also a key phase in which the programme organizers need to actually decide how to pair applicants among the available mentors and mentees. For this phase to make sense, you will need to decide what information you will ask to applicants.

The "matching success" depends on many aspects (it is impossible to guess the feeling between two people) but the more you think on the matching criteria you will use, the better the odds. Make sure you think about

There are some ready-to-use software programmes that can help you do the matching in an automatic way (you need to feed the software with the matching criteria you will use). This can be a good investment if you are running a big programme, but it is not of essence to start with. Also, a "human matching", although slower, may take into consideration some intangibles and intuitions that could work.

How we did the matching in REBECA

In REBECA we prepared a simple, yet detailed registration form for mentors and

mentees which we asked all our candidates to fill in during the application in order to help us do the selection and matching (see Annex III Registration form for mentees and Annex IV Registration form for mentors).

Since only Spain had a public call through which we received more applications from both for mentors and mentees than the 40 pairs initially targeted, this was the only occasion in which we had to do an evaluation of the candidates. Through this evaluation we prepared a preselection of 50 candidate mentors and 50 candidate mentees. The final selection of participants was then based on the best matches possible, a process that ultimately led to establishing 46 pairs.

- Evaluation of mentees candidates

As shown in the registration form (Annex III), we foresaw this selection phase in advance, so we evaluated candidates according to their CV giving more weight to those that were submitted having in consideration the "beyond academia" element of the programme -i.e., going beyond traditional scientific CVs listing publications- (20 points), their ability to explain their research

in plain words (20 points), their motivation to apply (20 points), their opinion about the barriers to move to industry (20 points) and the skills they thought they could bring to the programme (20 points). Within the same range of scores, a gender, geographical and discipline balance in regards to the applications received was applied. For this, several evaluations were done collectively by the REBECA team in Spain as a reference for homogeneity. Next, each person in the team reviewed a share of the applications to obtain a ranked list.

- **Evaluation of mentors candidates**

The evaluation of mentors was more open since we wanted to have a good number of fine mentors in order to do the best matching available. Thus, during the evaluation we basically discarded ineligible applicants, very unexperienced professionals and those not showing a clear commitment to the programme in their answers. But like in the case of the mentees preselected, the key factor for discarding some mentors was the limitation to do a good matching.

• Matching phase

Once we had the preselection of mentees and a good source of mentors, we decided to go for a one by one matching so, basically, the REBECA team in Spain gathered one morning and evaluated the CV and interests of each of the preselected mentee. We read each full application and, in particular, we tried to find the best match by identifying the convergence in the two matching criteria we chose:

- i) Topics to be tackled in the programme, and
- ii) Professional interests.

On top of these matching criteria, we also tried to match mentors and mentees by discipline or any other hint we thought it would improve the match like, for example, the applicability of the research activity of the mentee with the area of expertise of the mentor. Some of the pairs were “perfect matches” on paper, while some others had a bit more diverse interests. Nevertheless, a message we stressed among our candidates from the very beginning was that the mentoring was meant to open horizons and get to know different professionals, in order to manage their expectations as best as possible.

Professional alternatives to academia for researchers
Networking
Team management
Decision making
Developing career strategies
Communication and motivation
International careers
Achieving a good work-life balance
Inter-sectoral mobility
Science communication
Science policy
Science management
Science diplomacy
Pharma
R+D+I departments in industry
International relations
Consulting
Entrepreneurship
Business development
Project management
International relations
Strategic planning
Engineering
Others

Table 3. Second matching criteria: Choice of professional interests (max of 2) that better describe your professional interests beyond academic research (mentees) /choice of topics (max of 2) that describe better your professional expertise (mentors)

Once we had the 46 pairs established, we emailed each of them informing them of the match and briefly explaining next steps, which included a virtual kick off of the programme and the introduction to their other half of the pair.

In the case of the rest of countries, matching was done ad hoc, mostly based on professional interests:

- In **Bulgaria** we tried matching the topics of the research of the PhD with the mentors' skills. In addition, due to the small number of candidate we also accepted recommendations and advice.
- A similar approach was used in Israel where we tried to use the field of knowledge as the main guiding criteria for the matches. Unfortunately the small amount of candidates made this difficult since mentors were primarily from the field of computers, while mentees were primarily from the field of biotech.
- In the case of Denmark, the definition of a Learning Agreement in each pair, proved to be very useful for strengthening the mentor-mentee match proposed. By working together on setting the expectations and

agreeing on the main issues to discuss, the matches are less likely to fail.

• Finally, in Italy we collected expression of interest from mentors and mentees that helped us chose the pairs based on the professional profiles (including some specific requests) and experience expressed. We also took into consideration specific requests. This approach was possible due to the reduced number of pairs (9 in total) and also by having a direct contact with mentors and mentees.

RECOMMENDATIONS FROM REBECA FOR MATCHING MENTORING PAIRS

- Think about the matching process when designing the registration process. See Annex III and Annex IV for the registration forms used in REBECA.
- Be careful in managing the expectations of the people applying to the programme at the point of the selection, but also at the point of the matching.
- Use resources such as a Learning Agreement to be filled in by mentor and mentee to strengthen the match done. See Annex V REBECA Learning Agreement as an example.

4. MENTORING PHASE

Once the pairs have been established, it is time to officially start the mentoring programme. It is essential that all participants are correctly briefed about the scope of the programme, about what mentoring is and is not, and about the goals they should work for. It is also of key importance to be very clear about the protocols to stay in touch with the organizers, who to inform when something goes wrong, and what content can be used. For all this to happen, we identify these key elements during the mentoring phase:

- **Kick off meeting.** Virtual or physical, joint or separate with mentors and mentees, this meeting is important so that coordinators of the programme can explain the basics of mentoring, the goals of the programme, resources available and, of most importance, what are the responsibilities of participants. For instance, it is crucial that mentees understand that it is their responsibility to lead the contacts and arrangement of the meetings with their mentors, etc. This kick-off is important for you to motivate participants and make sure everyone is on the same page. The kick-off also allows all participants to get to know the organizers

of the programme to build trust and ensure as much as possible that if something is not working properly in the relationship, they can reach out for support. Last but not least, this launching meeting is also key to address any queries from the participants, especially due to the fact that you need to balance the aims of the programme with some flexibility to allow each pair to focus on the specific topics and elements that are more relevant for them.

- **Resources.** Ideally, you should create a handbook of the programme that participants can refer to which proposes specific aims and topics within the scope of the programme. You can also propose games and reflexion methodologies to apply during the meetings of the pairs that contribute to fuelling the discussion. In addition, it is also a good practice to provide mentees with some sort of document that allows them keep record of their progress, conclusions, contacts, etc., obtained from their discussions with their mentor.

- **Additional training.** It is always a good idea to complement the mentor-mentee meetings with some extra training for mentees. This way, you contribute to build a community and you make sure that all

the mentees get some common training and insights during their participation in the programme. Since the mentoring is about professional options outside academia you can offer some virtual workshops on how to face a job interview, how to write a non-academic CV or you can invite some keynote speakers to share with mentees their professional experiences.

How we did the mentoring phase in REBECA

- **Kick off meeting.** We decided to do it through 2 separate meetings: one for mentors and one for mentees. We hired the services of a mentoring expert that helped us run both and especially focused on the general elements of any mentoring programme, highlighting do's and don'ts. This was completed with a review of the communication protocols established particularly highlighting that it was the mentees' obligation to lead all communications with the mentors. Finally, we provided an introduction to the REBECA Handbook recommending how to make use of it, and reminding them that there was some flexibility on what to focus their discussions as long as it was within the scope of REBECA. We offered two

different days and two different time slots for each of the meetings (4 webinars in total) to maximize attendance. We strongly emphasized the importance of participating live to allow participants to share their questions and ensure that we were all on the same page at the beginning of the mentoring period. In addition, a recording of all webinars was made available to the programme participants either for those few who could not make it in any slot, or for future consultations. You can see the presentations used in Annex VI.

- **Resources.** We facilitated participants with the presentation thrown by the organizers and the mentoring experts, the handbook and the personal career plan template (see relevant annex). We emphasized our availability for any query along the whole duration of the programme.

- **Training webinars.** Based on the experience of other mentoring programmes, the design of REBECA included two compulsory online workshops for mentees with a career adviser: i) Doctoral careers beyond academia and ii) Creating a competitive resume from an academic CV. The level of satisfaction with both seminars was measured through a quick survey

automatically launched by the webinar platform upon finalising the session. These two REBECA online workshops got an average score of 4'31 (Doctoral careers beyond academia) and 4'42 (Creating a competitive resume from an academic CV) over 5.

Additional activities implemented by each country:

For the mentoring pairs established in Spain, an ad hoc networking meeting for mentors was also arranged. This was requested by several of them and although only 18 of the 46 mentors participated, their discussions led to organizing yet another training for the mentees in Spain focused on the preparation of job interviews. Several mentors in this meeting mentioned that they felt they could not provide sufficient support to their mentee on the topic of facing job interviews so another mentor in the meeting working as head of HHRR in a biotech company offered to prepare a webinar for all mentees. This webinar was highly valued by the participants (4,90 score over 5). Furthermore, thanks to the support of FECYT, we also had the opportunity of organizing a final event in Madrid to which

all REBECA participants were invited to meet personally. The event took place in Madrid in December 19 2020, and although this was organized in relatively short notice and very close to Christmas holidays, 60 participants from the 92 made the effort to join this celebration²¹.

Furthermore, mentees from Italy also had the chance to participate in a workshop organized by the Italian management team with the title "From a researcher to an entrepreneur: Patent, IPR, Business/Start up development and some tips for your career development". In this workshop, two researchers were invited to tell their story (The point of view from a Start upper-to-be and from an experienced entrepreneur).

These are additional examples of ways you can keep the participants engaged along the duration of the mentoring programme.

RECOMMENDATIONS FROM REBECA FOR STARTING THE MENTORING

- A launching meeting is essential to manage the expectations of the participants.

²¹ <https://www.fecyt.es/en/news/fecyt-organizes-closing-event-first-edition-rebeca-mentoring-programme>

- Plan additional training activities for the mentees along the mentoring period.
- Do not forget about the mentors, they might also want to exchange views with their peers to improve their mentoring skills.
- Prepare resources to facilitate the discussions of the pairs. See Annex I REBECA Handbook and Annex VII REBECA Career Plan Template as examples

5. MONITORING AND EVALUATION PHASE

Mentoring programmes usually have a 6 to 12 duration and it is sometimes challenging for pairs that don't know each other to agree on meeting dates or even to break the ice. The management team should make all possible efforts to keep participants engaged while respecting the safe space that a mentor-mentee relationship should offer. In order to do this, there are several actions that can be done:

• Communication with participants

One of the risks of a mentoring programme is not to follow it closely. Bear in mind that you

are asking two people that don't know each other to meet regularly, with a somehow structured approach to the topic to be tackled. It is important that organizers don't "disappear" after the kick off assuming that every pair will run smoothly. Periodic emails with important information, reminders or even personal emails to pairs that are not meeting will minimize pairs that abandon the programme.

• Monitoring progress

It is important that you know almost real time which pairs met and which not. Of course, this does not mean you are not flexible with each pairs timing, but this information will allow you to detect any potential issue pairs are having. Be wary about the fact that monitoring the occurrence of meetings is completely independent of the contents addressed during the meetings. Privacy is a major issue in any programme as the mentoring pairs should offer safe spaces for open and transparent discussions.

• Evaluating impact

Did the programme actually have an impact on mentees? What about mentors? Literature concludes that mentoring is really a two way relationship that will definitively

have an impact on mentors as well. A final survey is recommended to try to understand and assess how the programme impacted on participants. Ideally, a follow up survey after some time would also offer very relevant information on long-term impact of the experience.

How we monitored and evaluated REBECA

- Communication with participants:** For communicating with the participants, since the beginning of the mentoring period we programmed in our calendars to write a "REBECA email" to mentors on one hand and to mentees on the other. These emails were sent approximately every 3 weeks and included relevant information for the scope of the programme such as funding programmes, external events or publications. We also tried to the best of our possibilities to use these regular communications to inform about the REBECA training activities and any relevant resources of the programme (e.g., videos from the webinars for future consultations) to avoid overwhelming the participants. These emails were always sent hiding the recipients to avoid sharing contacts.

- Monitoring progress:** As for monitoring tools, we created 6 very simple online forms

that we asked mentees to complete after each meeting they had with their mentors. You can find the structure of the forms in Annex VII REBECA Post-meeting form. We just asked very brief information about the meeting, avoiding any details about the content of their discussions, in order to help us monitor how pairs were doing. At the end of the programme more than 60% of the mentees reported having met 6 or more than 6 times during the mentoring period, whole 80% completed 5 meetings. These forms allowed us identifying pairs that were not running smoothly and could need some additional support to implement the programme. They also provided us information about the main topics addressed during the meetings in order to include additional activities during the programme or identify areas of improvement in the support material offered. You can find the structure of these forms in Annex VIII REBECA post meeting online form.

- Evaluating impact:** For REBECA we prepared a final anonymous survey to which all participants from all countries had to reply. The survey was anonymous although some data about the respondents' profiles was requested for statistical purposes, particularly the country of their REBECA management team to asses to some extent the different approaches used. In addition

questions about the satisfaction with the programme, including several specific to the resources offered (handbook, webinars, etc.). Finally a set of questions addressed their level of awareness about their professional options beyond academia after participating in REBECA and some questions about future improvements.

The surveys remained open from February 3rd 2020 to February 12th 2020 and the feedback provided remained anonymous. In total 50 replies from mentors and 53 from mentees were compiled.

Ideally these results should serve as a benchmark for another survey to the same people in the future in order to evaluate any long-term impact of the mentoring.

You can find the templates used for mentors and mentees in Annex IX REBECA Final survey.

RECOMMENDATIONS FROM REBECA FOR MONITORING AND EVALUATION

- Find a way to show the participants that you are there. Be careful with not overwhelming the participants with emails, but be regular in your communication. Setting a reminder in your calendar helps!
- Try to the best of your possibilities to set up a “live” monitoring system to try to identify as soon as possible. You can find in example in Annex VII REBECA Post-meeting form.
- Privacy matters. Send mass emails with the recipients hidden and avoid asking detailed questions about the mentoring relationship.

KEY TIPS FROM THE REBECA MENTORING PROGRAMME MANAGEMENT TEAM

Finally, we would like to share the key tips we believe you should keep in mind to implement a successful inter-sectoral mentoring programme.

1. Devote enough resources

The programme does not run on its own. You need to make sure you have someone constantly checking the meetings between pairs are taking place, keeping in touch with the programme participants through periodic emails including reminders, interesting activities or simply saying hello if there. Find a balance between being more or less regular, but not overwhelming the participants.

2. Get people excited and proud

Mentoring programmes are based on the willingness of sharing fears, doubts and dreams of all participants and on

the altruism of mentors aiming at sharing their experiences and knowledge so they can help others grow and get to know themselves better.

We tried to embed this energy in all our communications to participants so we all felt that we were doing something useful and generous.

3. Try to get as much real time information as you can

There are always things you haven't foreseen in the design of the programme that can be included relatively easy if you know them in real time.

We have had informal conversations with a number of participants and we have included their suggestions (such as a mid-term evaluation to mentees to identify their degree of satisfaction with mentors, a joint

virtual meeting of mentors, or the webinar about how to face a job interview).

4. Try to enrich the mentoring programme with side activities

Each pair is going to have its own sensitivity and it's going to focus on certain aspects of the suggested topics. By offering common activities to all the mentors and the mentees of the programme, you make sure there is a common goal for everybody. Virtual workshops about career options, personal testimonials about senior professionals with a research background now working elsewhere, getting ready for an interview, etc., worked really well for our mentees. Also, we run a mentors virtual joint meeting in the middle of the programme so they could exchange impressions, knowledge and perceptions about the programme. It was helpful as for many of them it was their first experience as mentors.

5. Be realistic

A mentoring programme is almost craftwork. Make sure the size of the programme is manageable for the staff working on it. You do not want to waste the effort of designing a mentoring programme because you failed to answer an email.

6. Make sure you curb everyone's expectations

According to our experience, a mentoring programme for early stage researchers wanting to reflect about their career options and to know better different career paths for researchers can be very exciting. Make sure mentors and mentees understand the goals of the programme so they can seize their expectations accordingly.

For example, we have tried to make it very clear that mentors were not supposed to find mentees a job but to help them get to know themselves better, identify career options for them, etc.

7. Move fast with unsuccessful pairs... and have a plan B

Make sure participants understand that sometimes pairs don't click for different reasons. Maybe one of both suddenly get busier and it is impossible to for them to meet or there is simply no feeling.

Probably the best way to go is not to commit to reallocate a mentor or mentee that lost their pair but to do your best effort to do it. Ideally, you may want to have a list of mentors and mentees ready to jump in if necessary.

8. If budget allows it, try to gather all participants at least once

It will be common that the programme runs mostly virtual so that you can match mentors and mentees from different cities or regions. This is good because you widen the outreach of the programme.

However, there is nothing like getting to know each other in real life and network with the rest of participants. Consider, if possible, to run at least one physical event.

9. Evaluate impact!

It is of essence to evaluate the impact the programme had in both the mentor and the mentee. Make sure you have a complete survey that participants fill at the end of the programme. It will help you fine tune the next edition of the programme and, if results are good, spread the word among other departments or institutions.

10. Create a post programme community!

If things went ok, you will probably have a group of participants that had a good time during the programme and that somehow want to stay in touch.

You may want to create an online community in Facebook, LinkedIn or alike. Members will be able to exchange job offers and interesting information and, also, it will be good for you as organizer to try to enrol new mentors for future editions.

11. Offer two dates for all the virtual meetings and record them

It is almost impossible that all participants in the programme will be available at a certain time and date. By offering two options (one of them out of business hours, not everyone can join a meeting during work) you show consideration and maximize attendance. If possible, record the meetings and share them with the community after the sessions.

A N N E X E S - R E B E C A R E S O U R C E S

This toolkit is complemented by the following resources:

- Annex I REBECA handbook
- Annex II REBECA leaflet
- Annex III REBECA's mentees application form
- Annex IV REBECA's mentor application form
- Annex V REBECA Learning agreement
- Annex VI REBECA Kick-off presentations (mentors and mentees)
- Annex VII REBECA Career Plan Template
- Annex VIII REBECA post meeting online form
- Annex IX Evaluation surveys

A C K N O W L E D G M E N T S

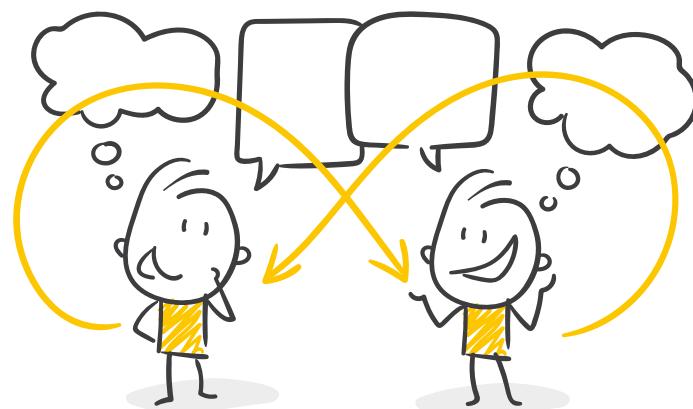
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CONTACT

You can contact us at Euraxess-spain@fecyt.es



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