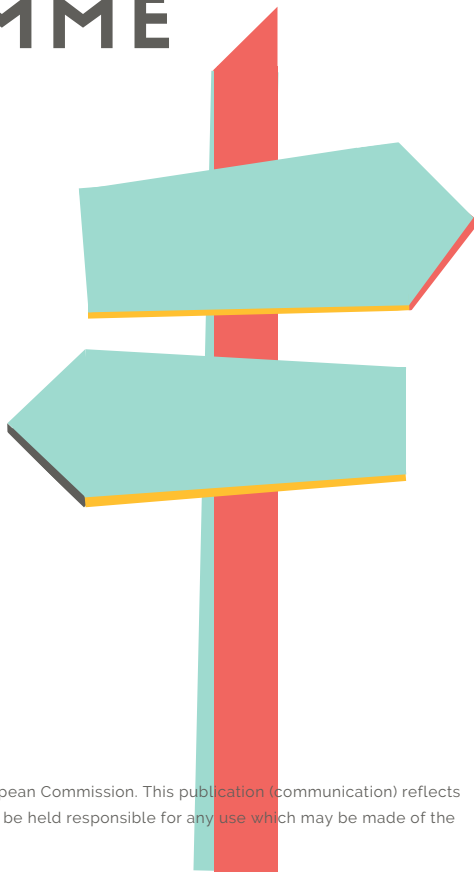


PATHWAY PROJECT

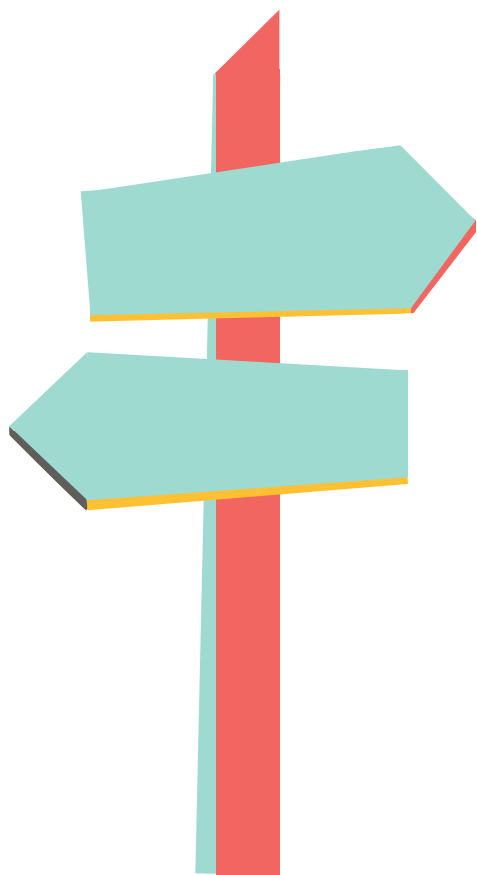
INTERNATIONAL CAREER PATHWAYS AND ONLINE
CURRICULUM FOR TRANSLATIONAL SCIENTISTS

IMPLEMENTATION HANDBOOK MENTORSHIP PROGRAMME



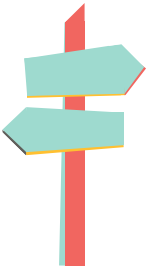
Erasmus+

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CHAPTER 1: INTRODUCTION

A. BACKGROUND INFORMATION ON THE PATHWAY PROGRAMME

It is broadly agreed that current translational medicine fails to sufficiently bridge the gap between bench and bedside. This results in tremendous waste in research investments and numerous biomedical innovations that never reach patients.

There is general consensus that clinician-scientists hold the key to bridge this gap. However, their numbers seem to be declining due to failure to attract and retain them in the academic workforce. To this end the PATHWAY project was started (www.pathwayproject.eu).

After being granted an Erasmus+ fund, its initial **objectives** included:

- Creating efficient, sustainable and attractive career pathways for the advancement of translational medicine;
- Innovating extracurricular education to provide tools to successfully transverse the complicated (bio)medical landscape;
- Generating impact by raising awareness amongst all stakeholders throughout Europe about the added value of this project.

When designing deliverables to achieve these objectives, the PATHWAY project team quickly discovered that the key to this complex problem is not to focus on clinician-scientists solely, but to appreciate the interdisciplinary environment they work in and include life-scientists in some of the building blocks as well.

A major international problem PATHWAY wants to tackle, is the difficulty to attract and retain clinician-scientists in academia. In the experience of the different Pathway partners, a lot of young medical students and doctors are enthusiastic about research and translational medicine. However, several factors make it difficult for them to perform it in practice. High clinical demands and limited time, poor training on research during MD grades, legal and administrative difficulties, difficult relationships between hospitals and universities and lower salary expectancies and labor uncertainty in research than in clinical practice are just some factors that are drawing away MDs from research. Policy changes should be made to structurally tackle these issues.

In the meantime, good guidance of enthusiastic students, PhD candidates and early career clinician-scientists is primordial and could contribute to the solution. A more experienced scientist, assigned as a personal mentor, is well equipped to perform this function. Keeping this in mind, a mentorship programme for translational scientists was developed as part of the PATHWAY project.

Keeping this in mind, a mentorship programme for translational scientists was developed as part of the PATHWAY project. The goal of this programme was not solely to bring mentor and mentee together, but also to create an environment that augments chances of successful partnership. To do so, the matching of mentors and mentees was preceded by an online course to prepare both mentor and mentee. All information about the set-up of this mentorship programme, including the online preparatory course, can be found in the online course implementation handbook and the mentorship handbook (www.pathwayproject.eu/intellectual-outputs/).

B. INTRODUCTION ON THE IMPLEMENTATION HANDBOOK

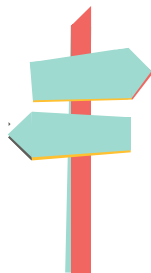
This implementation handbook aims to guide institutions that want to offer an adapted version of the PATHWAY mentorship programme to their students. As every context is different, it is not always possible or desirable to make an exact copy. The following chapters will discuss every part of the development of the PATHWAY mentorship programme, and will provide you with handholds for the development of your own project. The primary aim of this handbook is to serve as a guide for the development of new mentorship programmes in other institutions, but it could also be used to evaluate existing programmes.

In this handbook, different stages of the development process are passed through. The same scheme will be used throughout this handbook. First, every chapter starts with an introduction on the development phase. The development of the PATHWAY mentorship programme will then be used as an example. Finally, each chapter concludes with an implementation checklist.



Further information regarding this project can be found on the website:

www.pathwayproject.eu



CHAPTER 2: SETTING THE CONTEXT

To be relevant and durable, your mentorship programme must fit its specific context. Whether the mentoring is part of a formal academic programme, a summer school or is a voluntary stand-alone programme, might influence the set-up of the programme. Several aspects must be thought through in this first design phase.

First of all, the goals of your programme must be determined. What do you want to achieve for the participants? When will you consider your programme to be successful? Whether you want to make young students curious about translational research or you want to support PhD applicants during their PhD track, will influence all following steps of the design process. It is important to clarify this completely before going further. Keep this goal in mind throughout the entire development process and make sure it is clear for the whole development team.

When you have set your goals, your target audience should be determined. Who will be eligible to enrol as a mentee in the mentorship programme? In some settings, this question will be very easily answered, in others it might require some debate. In case the target audience is predefined due to the specific context, the programme goals will be defined accordingly.

Guiding questions to help determine your target audience:

- Which profile does your programme target? (e.g. first year medical students, students interested in research, high achieving students, PhD students, postdocs, ...)
- Is a prior knowledge/educational level required?
- Are there certain limitations for enrolment (age, geographical area, participants not affiliated to your institution, etc.)?
- Is participation in this programme obligatory or voluntary?
- How does a mentee benefit from participation in this programme?

Guiding questions about potential mentors:

- Who is eligible to act as a mentor in this programme?
- Amongst who could you recruit mentors?
- Is mentoring obligatory or voluntary?
- Do mentors need a certain background or training?

To conclude this phase, the rough outlines of your programme must be defined. The setting in which it will exist is primordial to do this. Consider at least the following questions:

- Need for preparation of mentors and/or mentees?
- One-on-one mentoring or meetings in (fixed) groups?
- Are mentees assigned a mentor or do they get to choose?
- Planning of meetings fixed moment/ free to choose/ ... ?
- Set end date or duration for the programme?
- Possibility to change mentor when there is no good understanding?

The **PATHWAY project** was initiated to attract and retain clinician-scientists in translational science. The mentorship programme takes an important role in this and aims to support early career translational scientists. Mentees are voluntarily recruited amongst participants of the EUREKA summer school 'Translational medicine: doing the right research right' as it targets the same audience as the PATHWAY project. The EUREKA institute is a non-profit organisation, its mission is to develop a community of translational medicine professionals equipped to inspire and catalyse the application of discoveries for the benefit of human health.

Mentors are recruited on voluntary base amongst EUREKA alumni. We considered this a great source of mentors as they are all interested and experienced in translational science.

The programme exists from a preparatory online course, both for mentors and mentees, and one-on-one mentoring sessions organized on own initiative. The programme ends when mentor or mentee indicate that the relationship has no further advantage for them.

Implementation checklist



Overarching goal of the mentorship programme?

☐ How will possible mentees be recruited?

☐ How will possible mentors be recruited?

☐ Determine rough outline of the programme.



CHAPTER 3: DESIGN PHASE

This phase will probably take the most time. You will determine every aspect of the mentorship programme, but always within the outlines you previously defined. In the following paragraphs we will highlight some important aspects to consider while doing so. However, as the aims and the context of your programme might differ, possibly not all relevant topics will be handled and some topics could be less interesting for you.

Preparation before start of mentorschip programme?

To start with, you must decide whether you want to prepare your mentors and/or mentees for a mentorship relation or if you will just match them and let them go. Preparation could take various forms and intensities (e.g. online course, introduction video, talk with a coordinator, ...). Before you start filling in your preparatory activities, it is important to define their goals based on the needs. The content will follow from this. In this handbook, we will not go deeper into the content development of the preparatory materials.

In case you choose not to prepare your participants, think about other ways to ascertain the quality of your programme. There are many options to do so, use your creativity (e.g. more strict selection of mentors, materials to guide them through the mentoring, strict follow-up of the programme,...)!

Organisation of meetings

How will the meetings take place (F2F, videocall, mail, ...)? Does this format require preparation? Online meeting for example require a communication medium, do participants choose this themselves? Do specific rules on this matter apply at your institute? If so, make sure to inform the participants. Face-to-face meetings in group might require a meeting room, who is responsible for the reservation?

Discussion topics

Are discussion topics for the mentor-mentee meetings predetermined or freely chosen by mentor or mentee. Make sure this is clearly communicated to the participants. If you chose to have set topics during the meetings, this is the moment to work them out. We will not go into detail about the choice of possible topics, but remember to always keep the goal of your programme in the back of your head when working on this.

Mentor - mentee matching

A good mentor-mentee match is primordial for the success of a mentoring relationship. For this reason, it is important to think about how you will couple mentees to their mentor. Are mentees able to give preferences? Do mentors choose their own mentees? Are mentors and mentees coupled with similar or rather complementary backgrounds?

Back-office

There will always be questions or problems while the programme is running. Make sure you have a (team of) dedicated people to solve these issues. Make sure all participants know where they can ask for help. A well-working back-office is key to keep your programme going.

The aspects mentioned above should be thought out during the development of every mentorship programme. However, many other aspects should be considered depending on the specific design of your programme. The more a programme is regulated by the organisers, the more preparation will be needed.



For the **PATHWAY mentorship programme**, we chose to let all mentees and preferably all mentors follow a preparatory online course. Its main goal is to maximise chances for fruitful mentoring. The online course is run on the Elevate platform, a private platform that develops e-learning solutions for Health and Life Sciences. The preparatory online course guides the candidate mentors and mentees through the theory of good mentoring and provides opportunities for personal reflection and group discussion on a broad array of topics related to translational research and their career pathways. The content of the preparatory course was determined by a team of clinician-scientists and experts in education and mentoring. As such we tried to touch on topics relevant for the translational scientist and to fill an unmet need. Mentees are also encouraged to point out topics they would like to discuss with their mentors, why do they want a mentor and what do they want to get out of this relationship? On the other hand, the preparatory course is meant to facilitate mentor-mentee coupling. Both parties get the opportunity to indicate topics they would like to discuss and topics they feel uncomfortable talking about/giving advice on.

We decided to exceptionally allow mentors who didn't follow the preparatory course. As the mentors are recruited from EUREKA alumni, we suppose they have background knowledge and capacities to ascertain high quality mentoring.

In the Pathway mentorship programme the matching is done by the back-office personnel based on preferences of the mentee, after reading mentor biographies, and on the topics mentors and mentees indicated. The matching procedure is part of the preparatory online course.

Because the participants of our mentorship programme come from around the world, we chose to give free choice for the meeting medium. We observed that some decided to meet face-to-face, while others organised Zoom or Skype meetings. Topics, nor frequency of the meetings are predefined. Although mentees are encouraged to raise topics that came up during the online course, this is not mandatory nor controlled.

Implementation checklist

- ☐ Preparation for candidate mentees?
- ☐ Preparation for candidate mentors?
- ☐ Quality Assurance?
- ☐ Technical support for meetings?
- ☐ Content of the meetings?
- ☐ Matching procedure?



CHAPTER 4: START OF THE MENTORSHIP PROGRAMME

Before the kick-off, go through the whole programme yourself to detect possible issues and last mistakes. Have you thought about potential problems? Are all (technical) issues solved?

A couple of weeks before the start of the programme, inform your participants about what they can expect of the programme. Most importantly, which workload does it imply? Clearly communicate this to the participants so they can plan. Before the start of the programme, when you are sure it will start as planned, update the participants with more specific information about any preparations that must be made.. Preferably you always use the same e-mail address for programme related communication. When different people take care of these back-office tasks, it is best to create a dedicated, shared address for them.

The back-office stays very important during the programme, make sure there is always a dedicated person available for questions or problems from mentors or mentees. Make sure contact information is easily accessible for participants.

Depending on the format of your programme, mentor-mentee matching will either be done before or after kick-off. When done during the programme itself, make sure you have a plan on how to do the matching and communicate when the participants may expect the result. Inform the participants on how they will be brought in touch with their mentor/ mentee and what is expected of them afterwards.

For the PATHWAY mentorship programme, we communicated workload and general information a couple of weeks before the start of the preparatory online course and sent specific information on the course some days before the start. During the online course, the moderator was responsible for problems and questions. Matching was done by the moderator and other members of the Pathway team, two weeks after the course opened. The moderator sent an e-mail to all

mentors with their new mentee in copy. In this mail, a short introduction movie of the mentee was attached, which they made during the preparatory course.

After this introduction, it was up to the mentors and mentees to arrange meetings and fix topics. However, as mentioned before, we did encourage them to use the assignments of the online course as starting point for the meetings. If they chose to do so, they could use their professional development portfolio (free to download from the pathway website: <https://pathwayproject.eu/intellectual-outputs/>) which holds an overview of all reflections made during the course. The portfolio also offers the possibility to write a summary or reflection after each mentoring session.

Implementation checklist

- ☐ No more technical problems?
- ☐ Back-office
- ☐ How / When to contact participants?
- ☐ Communication after mentor-mentee matching



CHAPTER 5: EVALUATION

In order to keep an eye on your mentors and mentees, but equally important to keep improving the programme, it is important to perform evaluations. Depending on the goal of the evaluation this can be done in a personalised or anonymous way. Inform all participants beforehand that they are expected to fill out evaluation forms at a regular basis. Clearly state the aim of the evaluations and clarify how the results will be used.

In the mentorship programme of the **PATHWAY project** all participants, both mentor and mentee, are asked to fill out an evaluation form one week after the end of the online course, which is also the moment of mentor-mentee matching. This evaluation focusses on the experiences during the online course and the satisfaction about the matching (procedure) and communication afterwards. Another questionnaire is sent three months after the matching procedure to see whether mentor and mentee have already been in touch, whether they were satisfied about the contact, etc.

These evaluations are filled out on the same platform as the online course. As this works with personal credentials, all results are coupled to the respondent.

Implementation checklist

- ☐ Evaluation survey?
- ☐ Platform for evaluation?
- ☐ Communication about evaluation



CHAPTER 6: SUSTAINABILITY

Right from the start it is important to think about a long-term plan to guarantee a long life for your mentorship programme. In some settings, for example if mentorship is part of an educational programme, this can be very straightforward. In other situations, however, it might take some more brainstorming and planning to create a sustainable business model. If needed, also think about ways to finance your programme now and in the future.

We decided to attach the **PATHWAY project**, with the mentorship programme, to the EUREKA institute. The mission of this organisation is closely related to ours. Linking this project to an existing organisation with a dedicated staff guarantees continuation of several of the programmes after the end of the ERASMUS+ funding.

For more information on this, take a look at our sustainability plan.

Implementation checklist

- ☐ Responsible for the programme on long term?
- ☐ Financing?



CHAPTER 7: IMPLEMENTATION IN OWN SETTING

Running a mentoring programme is never completely straightforward. There are always issues that need to be resolved by the programme managers that may be difficult to predict. It is important for programme managers to brainstorm what those issues might be before the programme begins and to decide what should be done to resolve those issues.

Below we have listed some examples of situations to consider and discuss before the start of the programme. These are all common issues that will need action from a programme manager to help smooth things over.

What if...

- ... a mentee wants a second mentor or wants to change their mentor?
- ... one of your mentees has trouble contacting their mentor?
- ... too much mentees subscribed compared the number of available mentors?
- ... students subscribe to the programme outside the suggested time frame?
- ... expectations are not met during the mentoring sessions?

One of the situations we thought we might encounter during the mentorship programme of the **PATHWAY project** was a mentee or mentor who did not participate in the preparatory online course due to e.g. time constraints? Would we let them start in the mentorship programme or not?

We decided to keep the course available longer if participants would ask and to encourage them to follow and finish the online course. As we were unsure about the number of dedicated candidate mentors, we decided to make an exception and to allow mentoring by mentors who didn't follow the online course. We know they are all EUREKA alumni and thus expect a certain background in mentoring. However, we would encourage them to take the course the year afterwards.

The aspects mentioned above should be thought out during the development of every mentorship programme. However, many other aspects should be considered depending on the specific design of your programme. The more a programme is regulated by the organisers, the more preparation will be needed.



COLOPHON

This Mentorship Programme Implementation Handbook has been compiled in accordance with PATHWAY Project approved Intellectual Output 6 and was written for the kick-off of the online PATHWAY Mentorship Programme.

The information gathered in this Mentorship Programme Implementation Handbook is to be disseminated for use by other (online) mentorship programmes after the lifetime of this project. We welcome any feedback and suggestions to improve the content or the structure of this portfolio via the e-mailadress below.

E-mail: info@pathwayproject.eu

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