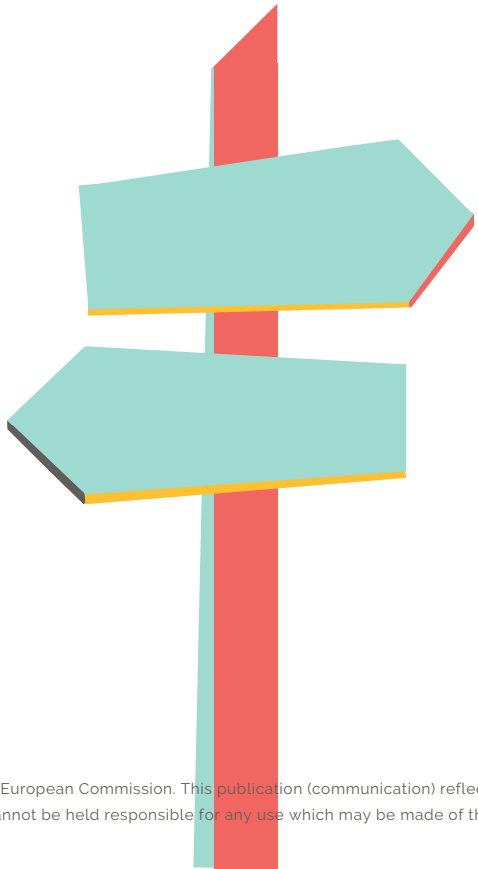
# PATHWAY PROJECT

## INTERNATIONAL CAREER PATHWAYS AND ONLINE CURRICULUM FOR TRANSLATIONAL SCIENTISTS

# PROFESSIONAL DEVELOPMENT PORTFOLIO



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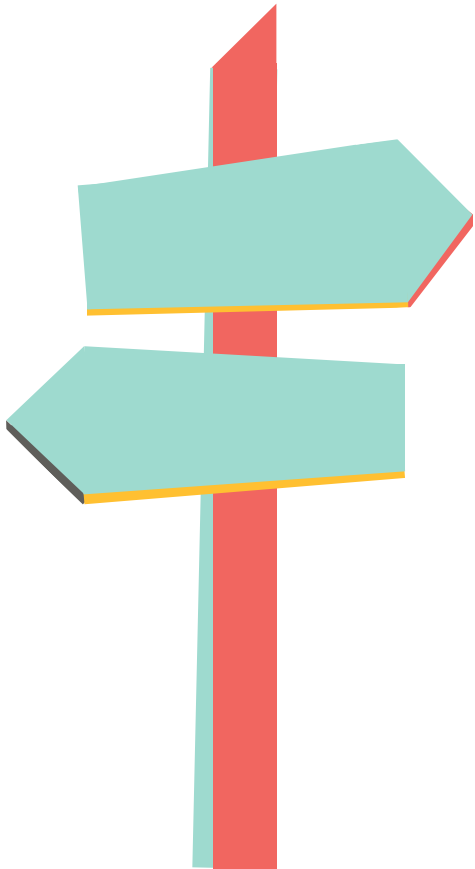


# Welcome to your personal Professional Development Portfolio!

Per definition, a portfolio is “a collection of samples of a person's work, typically intended to convey the quality and breadth of his or her achievement in a particular field”. In this case, the portfolio won't be used to persuade a possible employer, but to guide your professional development through a mentor-mentee relationship.

As no stipulated career pathway for translational scientists exists, this road is often full of uncertainties, failures, disappointments and unexpected turns. However, it is important to be able to see these aspects as inevitable steps on a road to success and as learning opportunities. This is easily said, tough not always easily done. Having a more senior scientist as a mentor could play an important role in this learning process, as he or she has undoubtedly experienced similar situations.

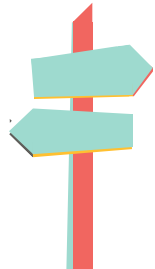
To maximize your chances to build a fruitful mentor-mentee interaction, there are some important things to keep in mind. First, as in any collaboration, it is important to clearly state the boundaries of the relationship and manage expectations. In this way, you create a safe environment in which both parties feel respected. On the other hand, it is important to prepare mentor-mentee meetings and to think about your expectations of the sessions. Which experiences would you like to share? Do you have specific questions you would like to receive advise on? If you have a clear view on this, the outcome of a session will likely improve and will leave both mentor and mentee more satisfied.

This portfolio offers you the required tools to achieve these goals. The assignments in part one will make you think about topics related to mentorship and personal development. The second part is focused on possible career pathways. We encourage you to use these reflections as topics for your future mentoring sessions and as such, to get the most out of your mentor–mentee relationship.

The third part of this portfolio provides the opportunity to write a short reflection on the contact moments with your mentor. Obviously, this is not mandatory, however we do encourage you to do so. Certain ideas or topics might be interesting for next sessions: maybe you received some very good advice or felt encouraged by the conversation? A written reflection can always be read again, as with thoughts they are often difficult to recall.

This portfolio is strictly personal and designed to help you reflect on topics related to mentoring and the professional roadway of translational scientists. You are free to share this document with others if you think it could be interesting or beneficial, but this is not obligatory. We encourage you to use this portfolio as a working instrument for mentoring sessions, but it is up to you to decide how you want to do this.

## We wish you a very fruitful collaboration!



**Further information regarding this project can be found on the website:**
**www. pathwayproject.eu**

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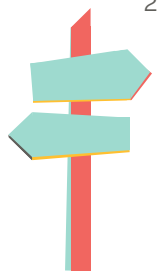
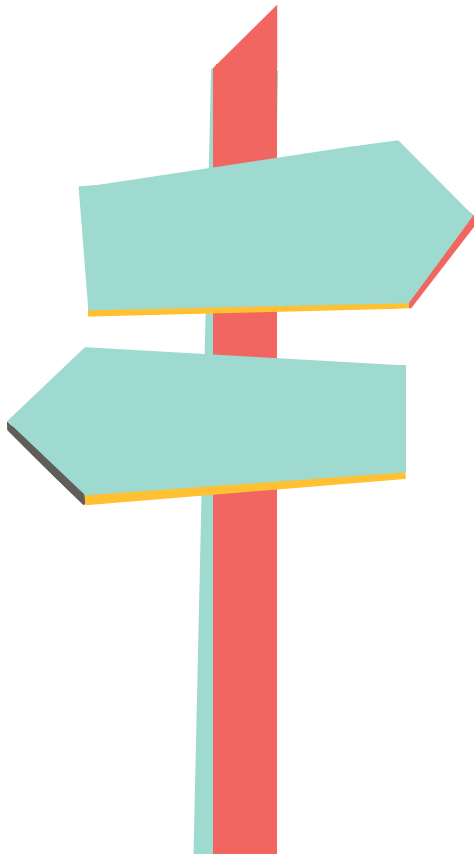


# PART 1

# PERSONAL DEVELOPMENT



# 1.1 WHAT ARE YOU LOOKING FOR?

As mentioned in the introduction, it is crucial to think about your **expectations** of a mentorship program before you start. Reflect shortly on this important question. Why do you want a mentor? How do you think a mentor could boost your career?

This portfolio is designed to guide you to and through your mentoring relationship. Many assignments will follow to help you define where you want your sessions to go. However, you probably already have some **first questions** regarding your career path and related topics, which you would like to discuss with your mentor. Write them down shortly as a reminder.

As in any relationship, it is important to define **boundaries**. Ask your mentor whether he or she feels comfortable to talk about certain topics or to give you certain advice. Equally important, indicate when you would feel uncomfortable. Which topics could make your mentor feel at unease and vice versa?

Obviously, your expectations of the programme will determine how you envision **your ideal mentor**. Take some time to think about this. What traits and expertise are you looking for? Do you look for a mentor in the same field or do you think a mentor with a different background could have certain advantages? Why?

# 1.2 BEING THE BEST TRANSLATIONAL SCIENTIST YOU CAN BE

The career of a translational scientist holds many specific hurdles. Being 'the best' translational scientist doesn't mean you can avoid these hurdles, but merely that you can overcome them and use them to do even better in the future. How do you define a good translational scientist? Which characteristics do you think are important to define one? Think of a role model in your specific working environment.

In relation to this definition, point out three of your own personal strengths and aspects you would like to improve. These strengths and aspects to be improved, could be the starting point of an interesting conversation with your mentor in which he or she will get to know you much better.

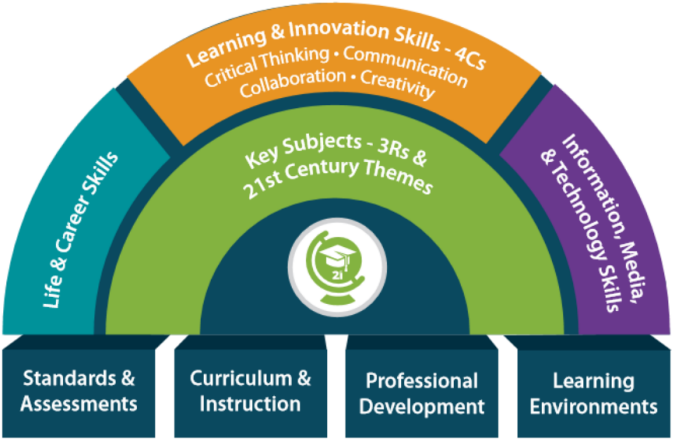
| **Personal strengths** | **Aspects to be improved** |
| --- | --- |
| • | • |
| • | • |
| • | • |

# 1.3 21ST CENTURY SKILLS

21st Century skills are competences and qualities that are widely considered as important tools to become successful in the modern society and professional world. These skills are usually divided in three groups: learning and innovation skills, digital literacy skills and career and life skills.

In this portfolio, we dive a little deeper in some learning and innovation skills and career and life skills as these are specifically related to personal development and could be interesting to discuss with a mentor.

You can go through all the skills and accompanying assignments, or select those that could be of added value for your personal career development.



# 1.3.1 CREATIVITY & INNOVATION

Do you perceive yourself as creative? We suggest you to take this **online creativity test** and to read the four recommendations to enhance your creativity in this article.

Reflect on the following questions. Do the results of the creativity test surprise you? Do you (dis)agree with the conclusion on the four recommendations (capturing, challenging, broadening and surrounding) for creative expression? Which would you like to train?

In which way do you think **creativity** is important for a **clinician-scientist**? Can you give an example of a professional issue for which you delivered a creative solution? Which competency area did you apply in this situation?

# 1.3.2 COMMUNICATION

Good communication is primordial in every part of your research and in every step of your carreer. What starts as an interesting discussion with your principal investigator, could end as a talk on a conference and maybe even as an article in a popular magazine. Although the story you want to tell might be similar on both occasions, you will probably need to adapt your communication style according to the type of audience.

This list suggests some **theory** on **communication techniques**. Read or watch the one(s) that seem interesting or relevant in your work.

- Oral presentation for peers: Blome C, Sondermann H, Augustin M. Accepted standards on how to give a Medical Research Presentation: a systematic review of expert opinion papers. GMS J Med Educ. 2017; 34(1):
- Sharing science through story: Fergus McAuliffe at TEDxDublin
- How to give a scientific flash talk
- How to create a better research poster in less time

Now reflect on the following questions: can you remember a situation in which your communication technique didn't get your message across properly? Do you think some of the tips above could help you to avoid similar situations in the future?

# 1.3.3 COLLABORATION

Translational science is not a "one-man show"; it's a matter of teamwork. Working as a team allows the accomplishment of larger, more complex goals than would be possible when working independently.
It may sound counterintuitive, but a group of kindred colleagues does not make up the best team. Due to personal characteristics, some people perform certain teamroles better than others. However, in smaller teams, a good coverage of the spectrum can be obtained when each member takes more than one role. Studies show that individuals who are aware of team roles perform better than individuals who are not.
A thorough literature review on team roles conducted by Mumford et al., resulted in the identification of 120 different team roles. Grouping of similar roles resulted in ten key roles that can be divided in three groups: task, boundary-spanning and social roles.

Take a look at the different team roles defined by Mumford et al. here (p. 254 - 255). Which team roles fit your personality best? Reflecting on this, what could be your main personal strengths (opportunities) and/or weaknesses (gaps) in relation to teamwork?

**Team roles**

- 
- 
- 

**Strengths and weaknesses**

Reflect on a team in which you currently work or used to work. Do you recognize different team roles in yourself and other team members during collaboration? If there are struggles in teamwork, can you trace this to the diversity or lack of diversity in team roles?

## 1.3.4 CRITICAL THINKING AND PROBLEM SOLVING

Critical thinking and problem solving are crucial 21st century skills. However, it is important to realize that everybody gets familiarized with a specific type of problem solving during his or her education. In this blog, Dan Buckland gives his view on the style of problem solving of engineers, physicians and scientists.

Have you already encountered difficulties while working with colleagues with different perspectives in your own (work)life? Provide one or two examples.

Thinking about your own research project, could an approach from a different angle (e.g. clinician-scientist instead of informatician, engineer instead of physician,…) result in additional solutions?

## 1.3.5 TIME MANAGEMENT

A lot of translational scientists experience the feeling of not having enough hours in a day to finish everything they want. There is always more work to be done. However, even scientists often have plans and obligations besides their professional lives. Nowadays you are expected to combine work and private life effortlessly in order to be seen as 'successful'. Unfortunately, a day only counts 24 hours for all of us.

Time cannot be managed, but you can determine how to spend your available time. A lot is written about time-management, several people have documented their views on **efficient time use**.

Do you think you spend your time efficiently? Why (not)? Which aspects could still be improved?

Not only a good planning, but also the ability to **work focused** is needed to be efficient. In this modern world where continuous (online) availability is the standard, it can be difficult to completely focus on work. Deep work is the ability to focus on a cognitively demanding task without distraction, an indispensable skill for every researcher.

Do you sometimes experience difficulties to stay focused on your work? What are your pitfalls? And on the contrary, do you have personal tricks to get in a good workflow?

However, it is important to keep in mind that as a clinician scientist, you do not always fully control your agenda. Equally important as efficiency, is **daring to say 'no'** to certain tasks. Although it may seem not-done, saying no is often possible and worth the effort. In this blogpost, Megan Duffy, an ecologist at the University of Michigan, talks about the moment she realized that there was not enough time to do 'everything', that choices had to be made and priorities had to be set.

Do you sometimes say 'yes' to tasks that seem not really for you? Dare you say 'no' to this? Do you think you could do this? Why (not)?

## 1.3.6 PERSONAL EFFECTIVENESS

As the career pathway of a clinician scientist is not perfectly paved, it is impossible to take it without falling. More importantly, this falling shouldn't be perceived as failure, but merely as a learning opportunity.

Reflect on a moment in your professional life that felt as a failure (e.g. failed to get the funding you applied for, article didn't get published, didn't get the job you wanted, etc.)

How did you feel initially? How did you cope with this disappointment?

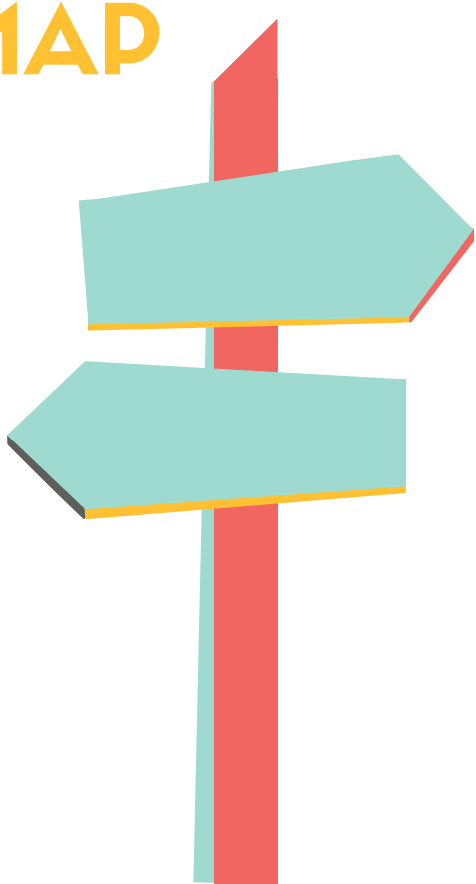
Did you learn anything from this experience? Have you changed your behavior somehow afterwards? Could you turn this experience into something positive?

# 1.4 INTRODUCE YOURSELF TO YOUR FUTURE MENTOR

We ask you to make a short (±2 minutes) video in which you introduce yourself to your future mentor or to write a short text about yourself. This video or text is meant to facilitate the first meeting with your mentor.

# PART 2

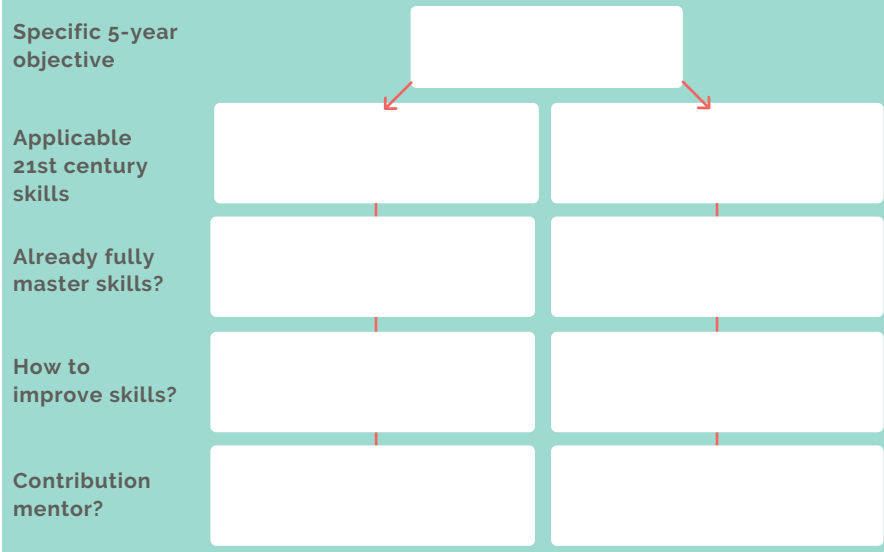
# INDIVIDUAL CAREER ROADMAP



# 2.1 PROFESSIONAL BUCKET LIST

As a clinician scientist, it is important to know where you want to go and to have professional goals. However, these goals often seem very far away and out of reach. If this is the case, it is important to split them up in SMART goals, these are smaller objectives that conform to the following criteria: Specific, Measurable, Attainable, Relevant and Timely. This way of working will keep you focused on the long-term goal, but will also give you a regular feeling of success when you have achieved a smaller objective.

Do you have long-term professional goals? Try to split them up in different smaller, more manageable objectives. Which **5-year objectives** could contribute to your long-term goal (e.g. publishing an article, research stay abroad, etc.)? How could you attain these objectives? Which 21st century skills could help you to achieve this? Do you feel like you fully master these skills? If not, what actions could you take to further improve them? Do you think your mentor could contribute to this? Remember to keep it SMART!



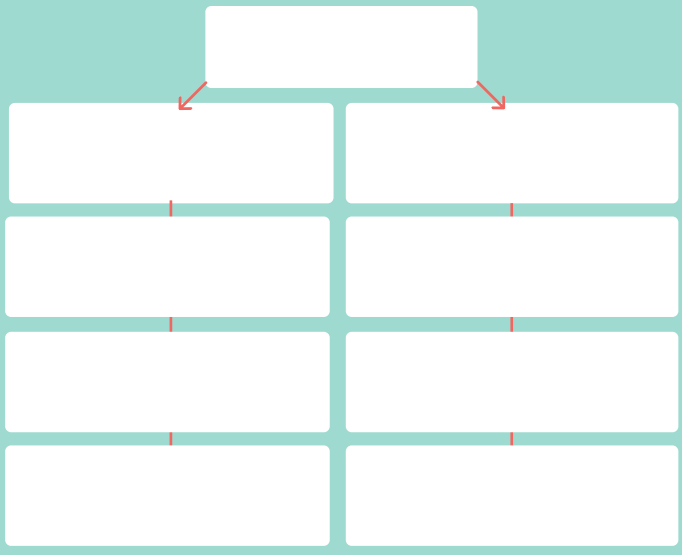
Speciifc 5-year objective

Applicable 21st century skills

Already fully master skills?

How to improve skills?

Contribution mentor?



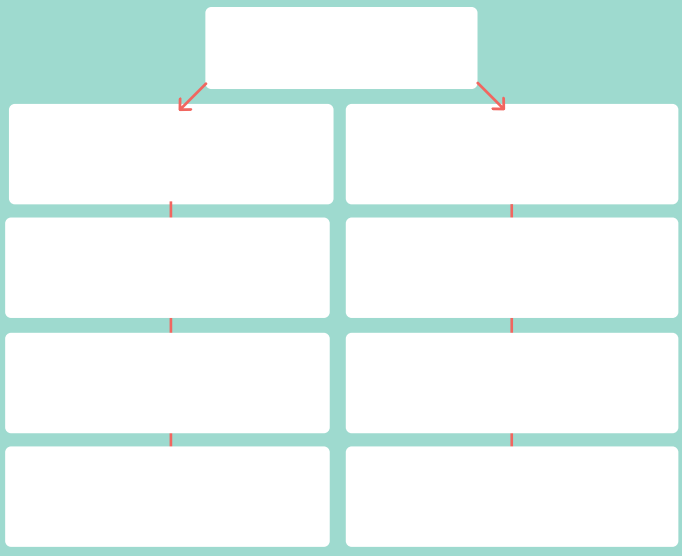
Speciifc 5-year objective

Applicable 21st century skills

Already fully master skills?

How to improve skills?

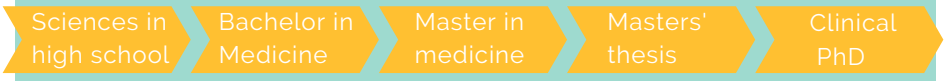
Contribution mentor?



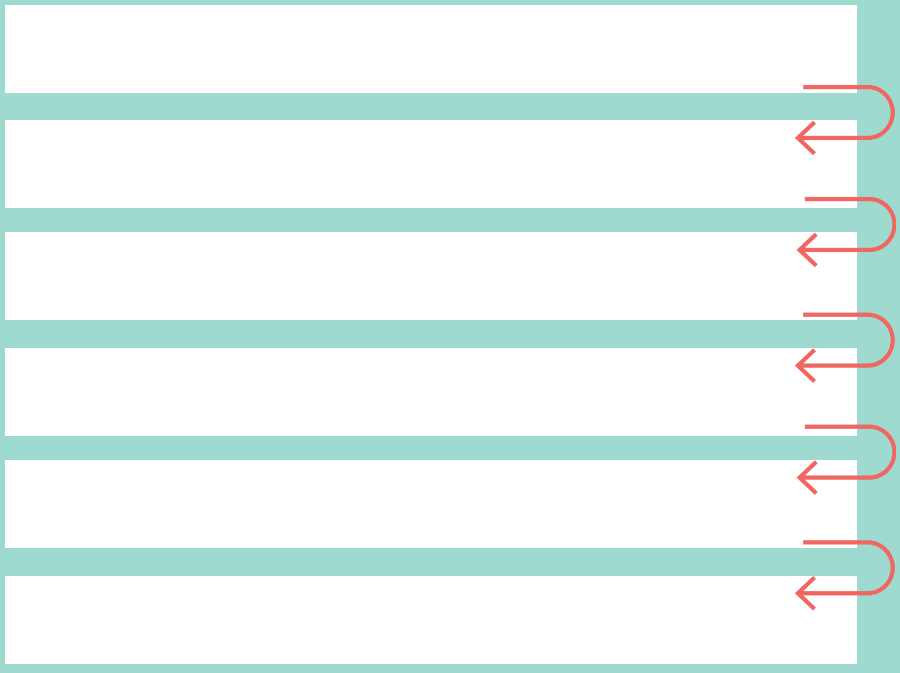
# 2.2 YOUR INDIVIDUAL CAREER PATHWAY

Reflect on your professional path until now. How did you get to this point in your career? You can use following figures to rebuild your own career path until now. Think out of the box, not only education and jobs can attribute to this path.

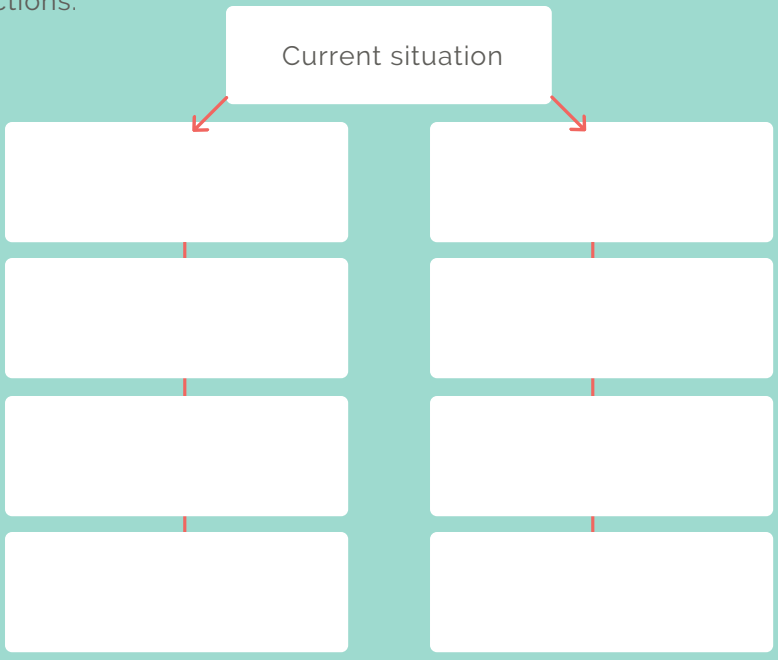
Example career path:




Your career path:



We would also like you to think about possible paths that could still lay ahead of you. Where do you see yourself in the long run and which crossroads do you think you will have to take to get there? As the future is not fixed, think of at least two possible directions.




Where do you see potential hurdles? Which aspects would you like to discuss with a mentor?

# 2.3 ENTRUSTABLE PROFESSIONAL ACTIVITIES

An **Entrustable Professional Activity** (EPA) is a key task of a discipline that an individual can be trusted to perform in a given (healthcare) context once sufficient competence has been demonstrated. Take a look at the list of EPA's (in attachment) specifically relevant for translational sciences. Each EPA has a title, a specification, limitations and a description of risks in case of failure.

Reflect on the following question for each EPA. Do you feel you have mastered this EPA to a level that supervision would not be necessary for you? When would you like to have mastered it and what will be your pathway to mastery?

## A. Identifying and translating unmet clinical needs to research

**1. Translating clinical needs into a research question**

**2. Performing literature reviews**

## B. Preparing for studies

**3. Designing a study**

**4. Obtaining ethical approval**

**5. Obtaining research finances**

## C. Conducting studies

**6. Conducting laboratory or animal experiments**

**7. Data collection and storage**

## D. Data management and analysis

**8. Data management**

**9. Analysing research data**

## E. Dissemination

**10. Writing and publishing scientific reports**

**11. Communicating research to the scientific and general public**

## F. Academic collaboration

**12. Peer reviewing**

13. Managing research teams

14. Mentoring, teaching and supervising trainees

## G. Translating outcomes to care

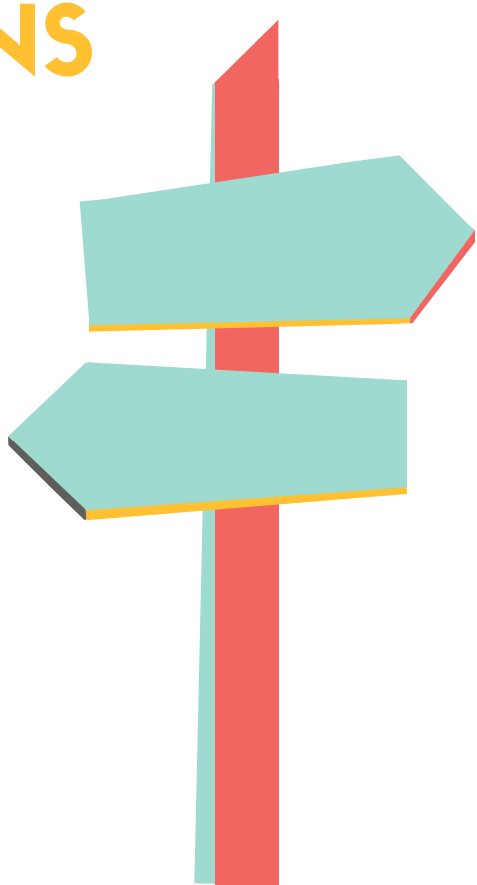
15. Managing intellectual property

16. Negotiating with industry, funding agencies and other parties

17. Translating research outcomes into clinical practice

# PART 3

# REFLECTIONS ON MENTORING SESSIONS



You can use this part of the portfolio to keep track of your mentoring meetings. There is room to write a short summary after each one to remind you of what was discussed, advices you received, topics you want to take to another session or anything else that you would like to remember. This could just be a few key words or a paragraph, whichever you see fit. Use this moment to reflect on what the meeting meant for you and which aspects you could potentially implement in your life.

# MENTORING SESSION 1

**Date:**

**Keywords:**

**Reflection:**

# MENTORING SESSION 2

Date:

Keywords:

Reflection:

# MENTORING SESSION 3

Date:

Keywords:

Reflection:

# MENTORING SESSION 4

Date:

Keywords:

Reflection:

# MENTORING SESSION 5

Date:

Keywords:

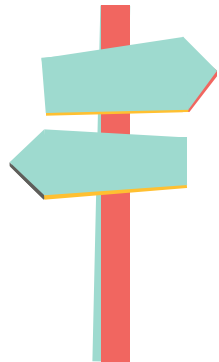
Reflection:

# Final remarks

This portfolio is meant to capture your professional development as a translational scientist. We recommend you not to consider this portfolio as a goal in itself, but rather as a working instrument and guide for your mentoring sessions. Don't hesitate to update some of your initial views and answers as you grow in your professional career. Ideally, this portfolio combines your past and upcoming career path at every point in time, now and in the future.

One of the ultimate goals of a successful mentoring relationship is to come to a level where you feel experienced and mature enough to be a mentor yourself. There is no pre-defined timeframe to achieve this goal, so you may use the portfolio as long as needed.

Finally, every once in a while, take your time to see the bigger picture of your professional development towards a successful translational scientist. Ultimately, your career path may inspire other young clinicians and scientists to pursue a career in translational medicine. This portfolio will not only assist you in in doing so, but may also be an example for the future generation.



# COLOPHON

This Mentorship Portfolio 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 Portfolio 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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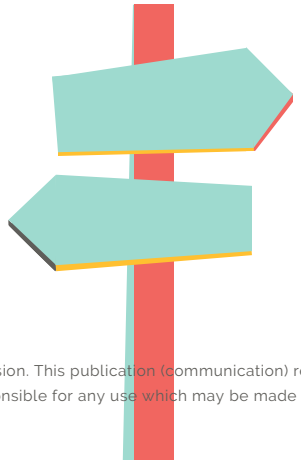

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