

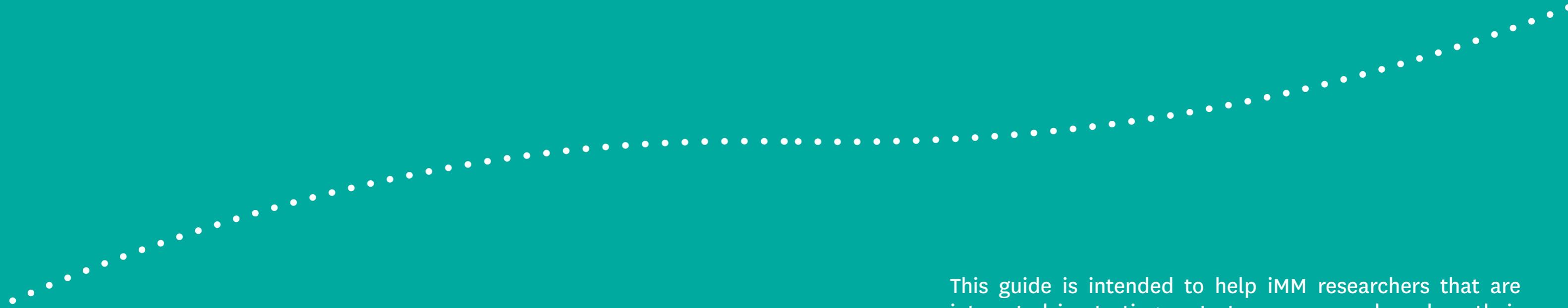
# START-UP GUIDE



Instituto  
de Medicina  
Molecular

João  
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# INTRODUCTION



This guide is intended to help IMM researchers that are interested in starting a start-up company based on their invention(s). The guide covers an overview of the process needed to launch a new company, with a detailed description of each phase. It also includes tips for a start-up to succeed and the typically pitfalls to avoid.

# WHAT IS AN ACADEMIC START-UP?

An academic start-up is a new business venture in its early stage of development that is created to exploit a specific technology developed in an institution.

The creation of a start-up is an important mechanism for the commercialization of research results with the long-term vision of bringing the technology to the market.



# CHARACTERISTICS OF A START-UP:



**FOCUSES ON  
GROWTH**



**INITIAL  
BUSINESS STAGE**



**ENTREPRENEURIAL  
TEAM**



**INNOVATIVE**



**DISRUPTIVE**

# WHY START A COMPANY?

Most of IMM inventions are at an early stage of development and very far from the market. When the invention is disruptive or can address a market need not yet explored, or even if it has the potential to become a platform technology, the creation of a start-up may be considered to secure the resources needed, accelerate the development of the invention and turn it into a commercial opportunity. If both TTO and inventor(s) believe in the potential of the technology, starting a start-up may be the most rapid, powerful and rewarding vehicle to effectively reach and impact the market, and might offer a unique opportunity to create more value.



# HOW CAN THE TTO HELP YOU?

iMM TTO will support you through the process of setting up a company including:



**BUSINESS PLANNING**



**INTELLECTUAL PROPERTY (IP) MANAGEMENT**



**MARKET ANALYSIS**

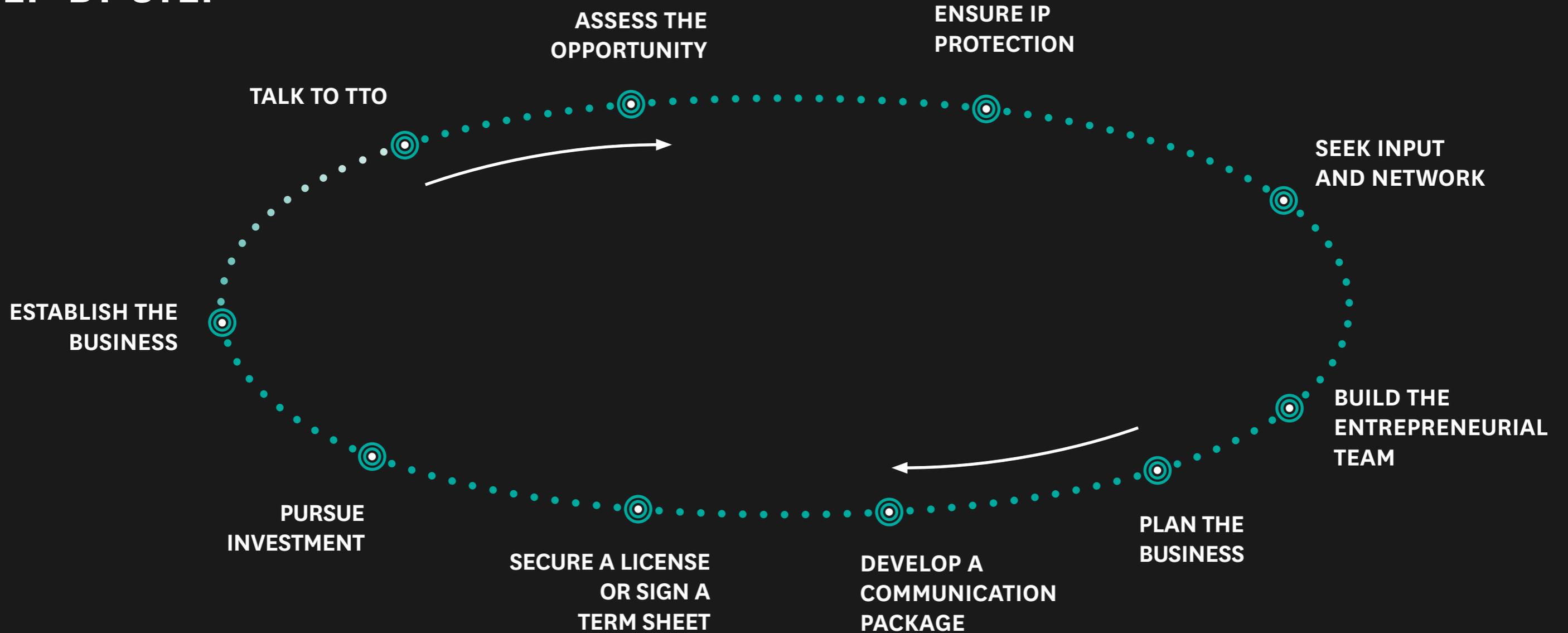


**TEAM BUILDING**



**FUNDRAISING**

# START-UP LAUNCH: STEP-BY-STEP



# TALK TO TTO

The technology transfer process always begins with a communication to the TTO of the invention, through the submission of a confidential Disclosure Form. The disclosure lists all sources of support and includes a description of the new aspects of the invention, including the solution it provides and its advantages and benefits over current technologies. Overall, the Disclosure Form covers all the information necessary to begin pursuing IP protection and commercialization activities. It is very important that you keep the results confidential until they are protected, so make sure no publication or presentation of valuable results and inventions have been disclosed.

# ASSESS THE OPPORTUNITY

The TTO reviews the invention disclosure to assess IP protectability, technical feasibility and market needs. Meetings with the inventors may be scheduled to gather additional information. This opportunity assessment is crucial to understand the commercial value of your invention and if its best path to market is the creation of a start-up company.

# HOW MUCH TIME AND MONEY IS REQUIRED FOR THE INVENTION TO REACH MARKET?

The time involved until a new technology reaches the market depends on the class of the invention, and it usually involves millions of euros. For example, drugs can take more than 10 years until they are approved for use, while medical devices such as in vitro diagnostic (IVD) products can take 3-7 years.

However, it is always important to notice that business ideas can only become business opportunities if they are timely, attractive and lasting. It is important to understand the right moment to launch, if the business idea is attractive for both customers and a team, and if it doesn't have a short and limited timespan.



# IS THERE A MARKET FOR YOUR INVENTION?

A market analysis will help you to understand if there is an existing gap in the market, and consequently an opportunity for your business, and how the market is evolving. It is important to think about the value proposition of your product, i.e., the uniqueness it presents, and how it will impact society.

# ARE THE INVENTORS COMMITTED?

Launching a start-up requires a lot of hard work and commitment. The dedication and responsibility of the team is crucial for the success of the new company. The entrepreneurial journey will not always be easy, so make sure you understand the level of involvement required.



# ENSURE IP PROTECTION

After the assessment of the new invention, the TTO will pursue IP protection. Intellectual property refers to inventions and/or materials that may be protected under patent, trademark, trade secret and/or copyright laws. Patent protection begins with the filing of a patent application with an IP Office. Once a patent application has been filed, it requires several years and tens of thousands of euros to obtain an issued patent (you can find more detailed information about the patenting process in IMM's Inventor Guide).



# CAN THE INVENTION BE PROTECTED?

For the invention to be protected it has to be innovative, novel, and non-obvious, i.e., the inventive step should not be easily made by someone skilled in the invention's field based on prior art. The IP protection of your invention will increase the value of your start-up since it gives you the right to exclude others from producing, using or selling any product based on the patent. For this reason, IP protection is also highly valued by pharma/

biotech companies that may be interested in licensing your IP in the future, and by investors. It is also important to guarantee you have Freedom to Operate (FTO), i.e., you have the ability to perform commercial activity without infringing existing third-party IP rights (e.g., other patent holders). The TTO is in contact with IP firms that besides supporting the patent application process also support the FTO analysis.

# WHO OWNS THE IP?

iMM is the owner of the IP and might consider the licensing of the IP to the start-up.



# IF MY START-UP IS BASED ON AN INVENTION JOINTLY OWNED BY IMM AND ANOTHER INSTITUTION, HOW DO I GET STARTED?

In this case, IP ownership will be shared between IMM and the institutions involved in the invention. Consequently, a license agreement between the co-owners of the IP and the start-up company will need to be formalized.



# SEEK INPUT AND NETWORK

Once IP protection is in place, it is essential as an entrepreneur to seek input from as many experts in the relevant business and specialty domains. You can also get in contact with medical doctors and patient's associations to better understand their needs. By receiving different opinions from specialists, you will better understand the strengths and weaknesses of your business, which allows you to make mid-course improvements or corrections.



# SEEK INPUT AND NETWORK

The TTO will help you cultivating your entrepreneurial spirit and has resources to help you with networking. Besides the already established contacts with many pharmaceutical and biotech companies from different fields and parts of the world, the TTO also participates in industry partnering events, such as Bio-Europe and BioFIT. Furthermore, the TTO is responsible for organizing the IMM Summit, a networking event attended by industry representatives. You can also benefit from the inputs of IMM's Industry Advisory Board, which is composed by experts from the biotech and pharma industry.

# BUILD THE ENTREPRENEURIAL TEAM

For the success of a start-up, it is crucial to have a cohesive entrepreneurial team constituted by people that share your passion for the technology. In some cases it may be even more important than the idea itself! The progress and milestones achievement of your start-up will depend on the quality of your team: their knowledge, skills, competence, attitude and aptitude. Make sure the team members complement each other and that they will bring synergies to your effort.

# PLAN THE BUSINESS

A formal and extensive business plan may not be essential at this stage, but you will need to develop an understanding of the market potential, competition, management team, and how you plan to develop the product and attain the required funds to do it. Your business plan should be clear and concise and will help you to foreseeing problems and opportunities likely to arise in the near future. This information will be useful when meeting with investors and pursuing funding.

## ADVANTAGES OF A BUSINESS PLAN

- + It structures ideas into a business opportunity
- + It anticipates potential difficulties
- + It provides direction and strategy for your business
- + It communicates to diferente stakeholders
- + It can help you managing your business

## ISSUES WITH A BUSINESS PLAN

- It won't be right at the first time
- It becomes obsolete shortly
- It involves a lot of time, so when ready you may have lost your window of opportunity
- A lot of investors won't read it
- It can distract you from other priorities



Several key factors should be taken into consideration, including:

### WHAT IS YOUR VALUE PROPOSITION?

You should think about the uniqueness of your product, which need are you solving and the impact your product will have on society.

### WHO ARE YOUR COMPETITORS?

It is crucial that you deeply analyze your competition, which will help you to position your business in the market. You should study your competitor's strategy and ask yourself what you are doing better than them and how you are going to take advantage of your distinctive differences.

### WHO ARE YOUR KEY PARTNERS?

There will be external partners that could be very useful to increase the value of your product and to help your business succeed. They could be for instance companies with capacities you don't have and that could help you in optimizing your product or technology, scale-up, regulatory issues or clinical trials.



# DEVELOP A COMMUNICATION PACKAGE

To attract investors, you should prepare a solid package of communication material that explains the business opportunity and plan, the value of your start-up and the amount of funding you are raising, specifying how it is going to be spent. This package should include an executive summary and a pitch deck. The pitch deck typically consists of 15-20 slides in a PowerPoint presentation and should be straightforward, explaining very clearly your technology, presenting relevant data that support your work and the team, and highlighting the impact your invention may have on society. It is important that you study your audience beforehand, to decide what type of funding is required for your venture and to make sure you speak their language.

Raising capital from investors is difficult and time consuming. Therefore, it's crucial that a start-up creates a great investor pitch deck by articulating a compelling and interesting story.

## WHAT TO DO!

- ✓ Start the presentation with an Opportunity Overview slide where you should include company's goal, IP position, product(s) in development and the amount of funding you expect to raise
- ✓ Tell a compelling, memorable, and interesting story that shows your passion
- ✓ Convince the viewer of why the market opportunity is large
- ✓ Include visually interesting graphics and images showing preliminary results
- ✓ Show that you have more than just an idea, and that you know how to develop your product(s)
- ✓ Include this wording at the bottom left of the pitch deck cover page: "CONFIDENTIAL [Name of Company] [Year]"
- ✓ Use a consistent font size, color, and header title style throughout the slides
- ✓ Send the pitch deck in a PDF format to prospective investors in advance of a meeting. Don't force the investor to get it from Google Docs, Dropbox, or some other online service, as you are just putting up a barrier to the investor actually reading it

## DON'T DO THIS!



Don't make the pitch deck more than 15-20 slides long (investors have limited attention spans). If you feel you need to add more information, include it as an appendix



Don't have too many wordy slides



Don't provide excessive financial details, as that can be provided in a follow-up



Don't try to cover everything in the pitch deck. Your in-person presentation will give you an opportunity to add and highlight key information



Don't use a lot of jargon or acronyms that the investor may not immediately understand



Don't underestimate or belittle the competition



Don't have a poor layout, bad graphics, or a low-quality "look and feel"



Don't have your pitch deck look out of date. You don't want a date on the cover page that is several months old. And you don't want information or metrics in the deck about your business that look stale or outdated

# SECURE A LICENSE OR SIGN A TERM SHEET

The TTO will negotiate with a representative of the company to grant a license to the start-up. In some cases, a term sheet may precede a license so your company can demonstrate to potential investors that the main licensing terms have been agreed with the IP owner(s). The final negotiations for an option/license and investment agreement will often occur in parallel.

# HOW THE START-UP LICENSING PROCESS WORKS?

The terms of start-up licenses are flexible and will include negotiated financial terms, such as reimbursement of patent costs royalties on product net sales, milestones, and can also include shares of equity in the start-up.

The non-financial terms of the license are equally important and may include degree of exclusivity (nonexclusive, exclusive, or restricted by field of use or geography) and/or diligence requirements to assure that the company has the resources and is making the necessary efforts to develop the technology.



# PURSUE INVESTMENT

Commercializing your technology is typically a capital-intensive process.

Entrepreneurs, with the support of the TTO, need to present on a regular basis their opportunity to individuals or organizations with funds to help launch the start-up. Typically, these are venture capitalists and angel investors. In addition, the development of the technology may be further supported via public funding programs.



# TYPES OF EARLY-STAGE INVESTMENT

## BUSINESS ANGELS (BA):

High-net-worth individuals who invest in nascent opportunities (start-ups or early-stage) with smaller amounts of money when compared to Venture Capital firms, in exchange for equity.

They may also contribute with their experience and know-how and their business network, working as mentors for your start-up.

BA often form groups or networks that collaborate to examine opportunities and pool investments.

The advantage of pitching your company to such associations is that you can reach many angels at the same time.



## VENTURE CAPITAL (VC):

VC firms raise substantial funds from other investors and then invest these funds in high growth potential companies. In comparison to BA, venture capitalists provide higher amounts of capital in companies (usually millions of euros).

In exchange, they tend to receive more equity and have a more direct control over the development of the company. VC usually brings experienced management talent to help guide and expand your company, and they always look to cash out with a substantial return on investment.

Sometimes they invest in several rounds of funding and are part of a larger consortium of investors in the company. Before approaching a VC firm, you should understand that they specialize in high risk/high growth investments, and hence they can be very strict in selecting the ventures they want to invest in and in setting conditions. In order to prevent frustrations, you should investigate their field of interest, their conditions and their time sensitivities beforehand.

## OTHER SOURCES OF CAPITAL:

Start-ups may also investigate and pursue funding from non-traditional sources, which include public grants available through a vast array of programs, or crowdfunding by pooling small investments from a network of individuals.



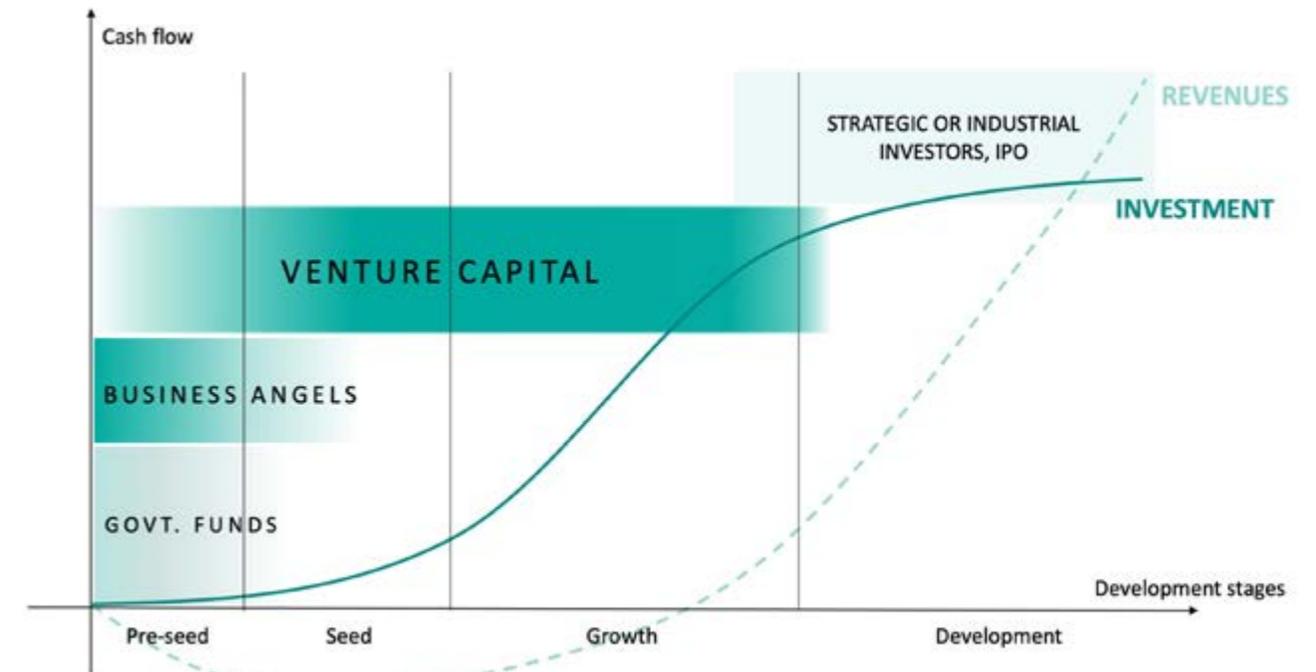


The size of investment needed during this period is an important driver in determining whether to go for BA, VC or combination of both sources.

Biomedical start-ups which have a sequential and long development period, tend to structure financing according to their key development phases and to raise money only when required.

This way, they reduce the financial risk associated to each phase and they gradually increase the venture attractiveness to investors as development advances. Both private investors have similar goals of high returns for the considerable financial risk that they are taking with their investment, so make sure you prepare an exit strategy for them.

Typically, a VC hopes to sell its equity in a portfolio company within 3-7 years, ideally through an initial public offering (IPO) or a merger and acquisition (M&A).



The start-up financing cycle, using traditional funding sources. BAs are more willing to invest in pre-seed rounds, with smaller amounts, while VCs usually invest in seed and growth stages, although they have been increasingly involved at earlier stages of investment.

iMM TTO can advise on the pros and cons of each source of financing and help you present your invention to potential investors. iMM TTO's network can also help you get a first important contact with investors and attract their attention to your idea.



# ESTABLISH THE BUSINESS

After the validation of all steps described before, you are ready to launch your start-up. For that, you need to formally register your company and select an appropriate business entity.

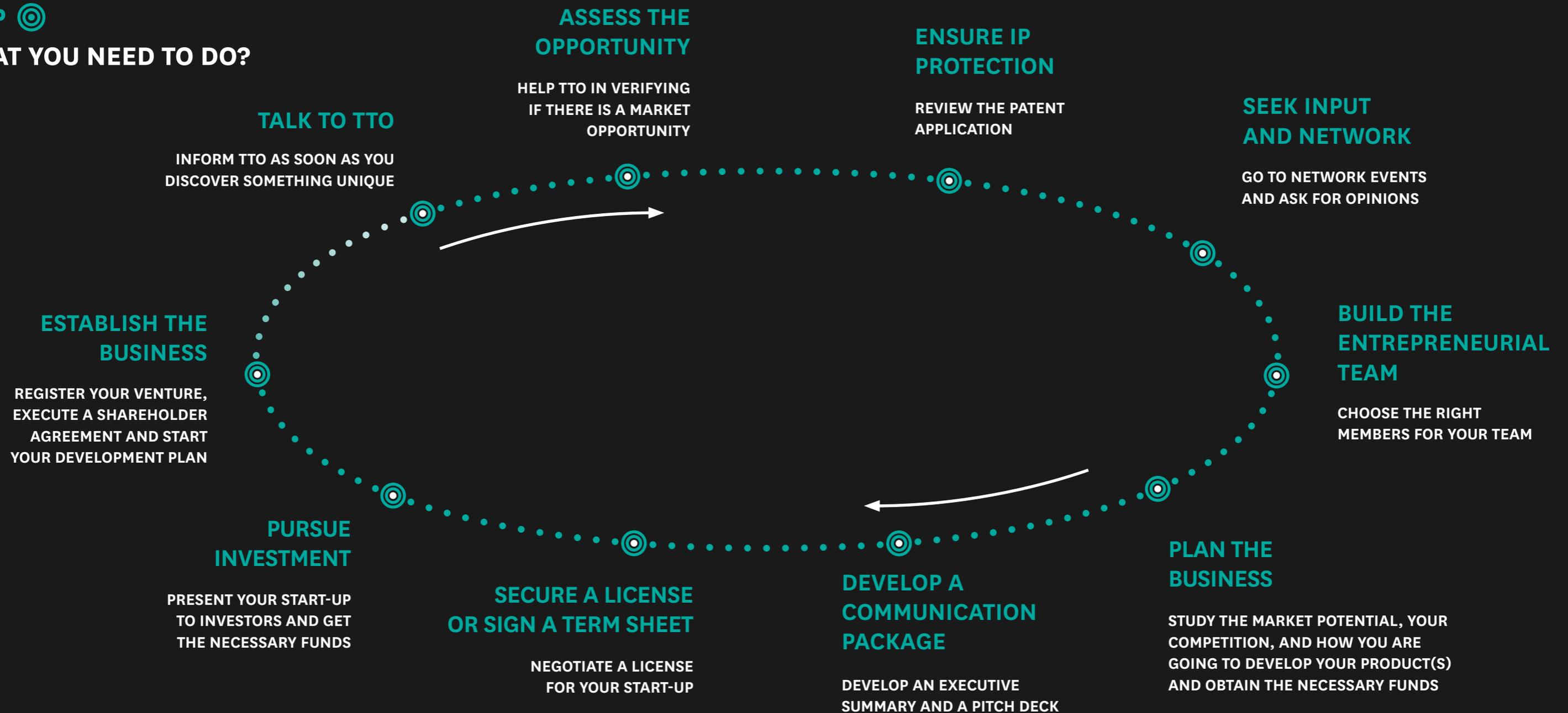
The company founders will then create a capitalization table to understand the equity distribution amongst the founders, and execute a shareholder agreement, which ensures each shareholder has rights and mechanisms to make decisions and provides protection if company founders leave or new shareholders become part of the company.

As the new venture progresses, responsibilities often expand beyond the abilities of the founders, and many companies establish an advisory board composed of seasoned experts. A Board of Directors should also be eventually established to provide strategic company direction and bring credibility to the company.

# TO SUMMARIZE...

## STEP ①

### WHAT YOU NEED TO DO?



# TIPS FOR A SUCCESSFUL START-UP

Launching a start-up is a risky endeavor, with a significant percentage of failures. To help you mitigate the inherent risks, here are some tips you should keep in mind:

## INVEST IN YOUR NETWORK AS SOON AS POSSIBLE

Building your network is a key component to the success of your start-up and will help you to find new business and referrals that could accelerate the growth of your start-up. Your network connections can increase the opportunity for partnership, mentorship and support, and gives you more leverage with Investors. Map the entrepreneurial ecosystem of interest and commit yourself to attending networking events regularly.

## ESTABLISH A RELATIONSHIP WITH TTO AT THE ONSET

Your IP will probably be the most valuable asset of your start-up. Reassure investors that IP rights are being properly managed by the company.

## DO NOT IDEALIZE ENTREPRENEURSHIP

Be aware of what an entrepreneur career might bring to your life and ask yourself if you are prepared for that. Entrepreneurship may be an opportune career choice, but it should not be treated with idealism. Ask yourself why you are starting this project and take actions.

## PUT THE RIGHT TEAM IN PLACE

Make sure you have a winning team. Start by evaluating your skills. Then find people that shares the same passion for the technology and that have a background that you need, with the types of skills necessary for your start-up and that you don't have. Make sure the role of each element is well defined, as well as equity and responsibilities.

## EVALUATE THE OPPORTUNITY FIRST AND THEN PLAN IT THOROUGHLY

By doing this, you will avoid many potential errors. Besides having a great technology and business idea, you should have your opportunity validated and make sure nothing is wrong. Then you are ready to move forward with the strategy for your business that suits the opportunity most.

## COMMIT TO YOUR COMPANY

Dedicate and commit to the purpose of your start-up. The success of your business depends on your ability to dedicate all your efforts to the growth and success of your company. Ask yourself if you are ready to truly commit in the long path involved in the launch of a start-up, which needs a lot of time and dedication. If you cannot be involved, then get professional business help early.

## CALCULATE YOUR COSTS

Make a concerted effort to predict the cash your start-up will need in each phase and try to be realistic. Understanding your expenses will help you to request funding and attract investors. You should be able to manage your money and try to have a good understanding of basic operating, accounting and corporate finance concepts.

# TYPICAL START-UP PITFALLS

## NO COMPELLING NEED

Besides creating an innovative and exciting technology, it is of utmost importance that there is a compelling need. You should ask yourself how many people will benefit from your technology/product and see its value, how big is your market, and the benefits over existing solutions.

## LACK OF FOCUS

Don't try to prove that your technology is the solution for all the problems. Instead, try to focus on a specific goal and get the relevant data, especially *in vivo*, that demonstrate the potential of the technology.

## BAD TIMING

Make sure your business opportunity is timely. Sometimes, even when a strong market need exists, the company misses the window of opportunity. If you launch too early the market might not be ready, but if you launch too late the need might already been filled by another technology.

## INEXPERIENCED MANAGEMENT

All start-ups need a strong, experienced, and cohesive team, with multi-sectorial expertise and a consistent strategic vision. Be aware that the quality and composition of a team is one of the first things investors consider. You can have the best technology in your hands but if you don't have the right people to push it forward and to put it in the market, your start-up won't succeed. For inexperienced founders, in particular, it is crucial to build a strong initial advisory board and to be prepared to delegate control as the company grows.

## LACK OF FUNDING

For your start-up to succeed, you need to have the sufficient capital to overcome technical challenges and to develop your product. To attract investors, the company should have a solid business proposition and a strong management team. Make sure you have a strong and persuasive pitch.

## BAD LUCK

Even with everything carefully planned, start-ups can fail due to unexpected events. Resilient entrepreneurs should take failures as opportunities to learn from their mistakes, recognize their strengths and to create a plan to improve and move forward.

# GOOD LUCK!

The TTO is eager to support  
your business ideas!

# TECHNOLOGY TRANSFER OFFICE

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**Ribomed**



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