R&D and Innovation in your Early-Stage Start-Up

As a founder of an early start-up, there are a number of big changes happening in your life. You are taking the leap into entrepreneurship, or perhaps taking the leap again from a prior journey. Your focus, creativity, and ambition become tied to a venture which is going to take up a big part of your life for the foreseeable future!

Among all of these changes, you now have control over the direction, velocity, and culture of your venture's team.

You'll need to develop and advance everything in your company, including building teams that can nail:

- Networking
- Negotiation
- Fundraising
- Marketing
- Sales
- Service & Revenue Generation
- Development
- Operations
- HR
- Logistics
- Finances

and everything in between!

One of the topics and areas that tends to get a bit lost or confused in all of the above, is**Innovation, R&D and IP.**

The fundamental reason for this, and why it might not feature as a clear standalone topic on your venture accelerator programmes today (aside from where and how to get grants and R&D tax credits), is because the profession or process of Innovation, R&D and IP management is not yet as mature as others.

This, however, is changing - there are plenty of people out there (including team ReaDI-Watch) who are trying to move the dial in this space and turn Innovation, R&D and IP into a well-understood, supported and communicated pillar of business strategy. ReaDI-Watch posits that **Innovation management** is currently on a steep path of professionalization, and that R&D management will follow suit in future years.

ReaDI-Watch Interpretation on the Professionalisation of Innovation and R&D Management
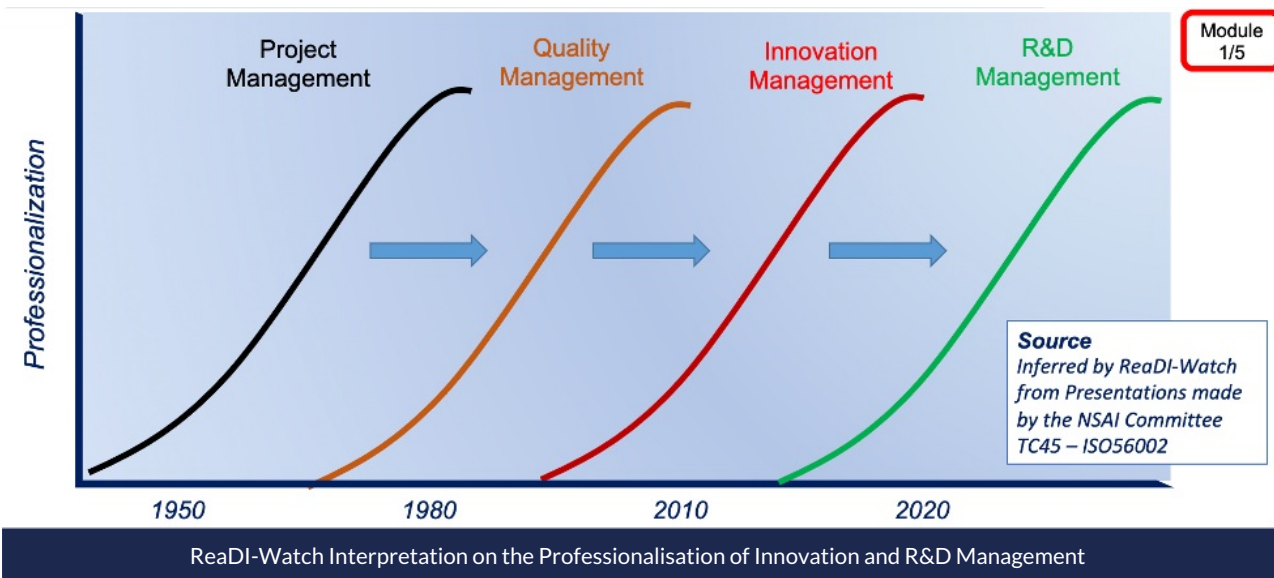
R&D and Innovation in your Business

A quick and useful way that ReaDI-Watch helps its customers to define what Innovation and R&D means, is by drawing on Porter's "Value chain" framework:
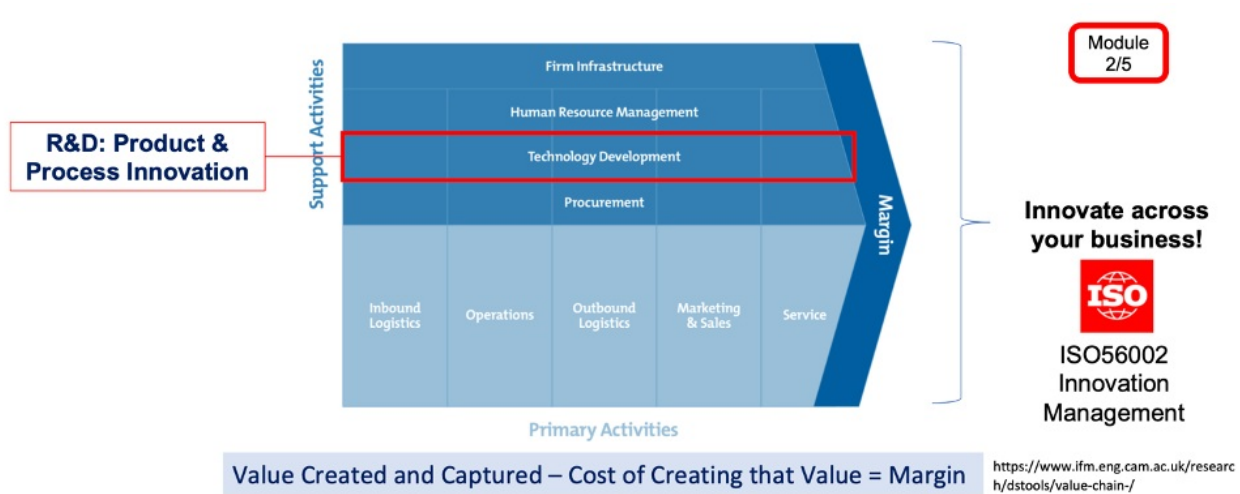
Porter's Value Chain Framework - Identifying R&D as "Technology Development" and Innovation across the entire business

While of course there are limitations to this example, we believe it brings to light an important set of points:

- Innovating in your business includes doing R&D - but R&D will never be the only innovation that you invest in.
- Technological Development and Advancement (i.e. R&D in this example) might be carried out in relation to your logistics, operations, marketing, sales, service or your product. People typically think about R&D prior to launching a product - this doesn't have to be the case - more on this later.
- The value created from Innovation and R&D might manifest in increased turnover and profit - which of course is a strong commercial goal. However, it might also reduce costs, improve your environmental sustainability impact, or result in stronger customer retention, or improve the quality of life of people in the world.

What about Intellectual Property (IP)?

*IP is becoming increasingly important on a global scale in today's knowledge-based economy. IP is no longer important just for large organizations, it is also important for smaller organizations because it allows allows organizations to **capture the benefits of innovation**. - **ISO56002: Innovation Management Standards***

Interpreting the above quote, IP allows organisations to capture the benefits of innovation. As you lift your knowledge & capability in your industry / market / field of science and technology, your IP can be managed, tracked and protected / exploited for your benefit.   The ISO standards associated with Innovation management also state: *an organization should manage IP based on a systems approach (instead of on an ad-hoc basis) with a view to reducing organizational risks and enhancing value creation potential for the organization.*

Protecting and exploiting IP can be done in a myriad of ways, depending on your business context:
  - Informally / internally: for example, tracking your knowledge gained to share with your internal employees and retain as an internally kept trade secret.
  - Formally / externally: for example, licensing IP rights to competitors/collaborators.

The take-away? IP is already an integral part of your venture, and you should treat it as such.

Thinking about Innovation, R&D, and IP as a Process

Embracing continuous change and development becomes a critical cornerstone as you develop your start-up. However, sometimes this feels like you are either "laying the tracks as you move forward", or like you are "breaking processes once you implement them". These challenges are part and parcel of designing and understanding your business' value proposition, and product/service market fit.
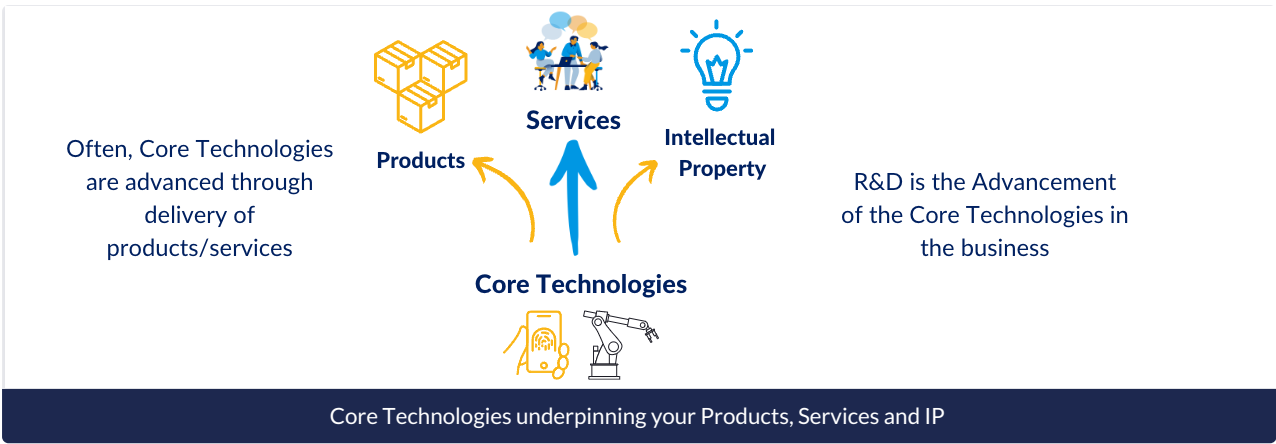
Quality and throughput are absolutely essential when it comes to creating happy customers - however breaking the mold and innovating is a different mindset altogether, which can sometimes come as a paradox or contradiction to this quality mindset.

Rather than shying away from this contradiction, we suggest thinking about Innovation, R&D and IP as a process, a function or management framework in your business.

Innovation and R&D as an Integrated Strategic Pillar of your Business - with Initiatives, Actions & Team Members

Your RD&I Process can be started in a fairly simple way:

1. Add "Innovation, R&D and IP" as one or more agenda items for your Board of Directors / investor meetings, and report on the Innovations, Technology Developments and IP gained, that have contributed to your commercial, product performance or customer success.

2. As well as building a capture/tracking and management system for your product (e.g. with Jira for software), build an approach for your team to capture your technology and IP developments outside of this lens - e.g. through the "progress update" tools available on ReaDI-Watch.

3. Draw a diagram / visual of your "Core Technologies" - instead of your products/services today, what are your business' core technologies. More on how to think about this in this article.

4. Create a mechanism for recognising (and rewarding!) your own R&D and Innovation efforts and that of your team. This can also be highlighted at Board meetings.

Often, Core Technologies are advanced through delivery of products/services

Products

Services

Intellectual Property

Core Technologies

R&D is the Advancement of the Core Technologies in the business

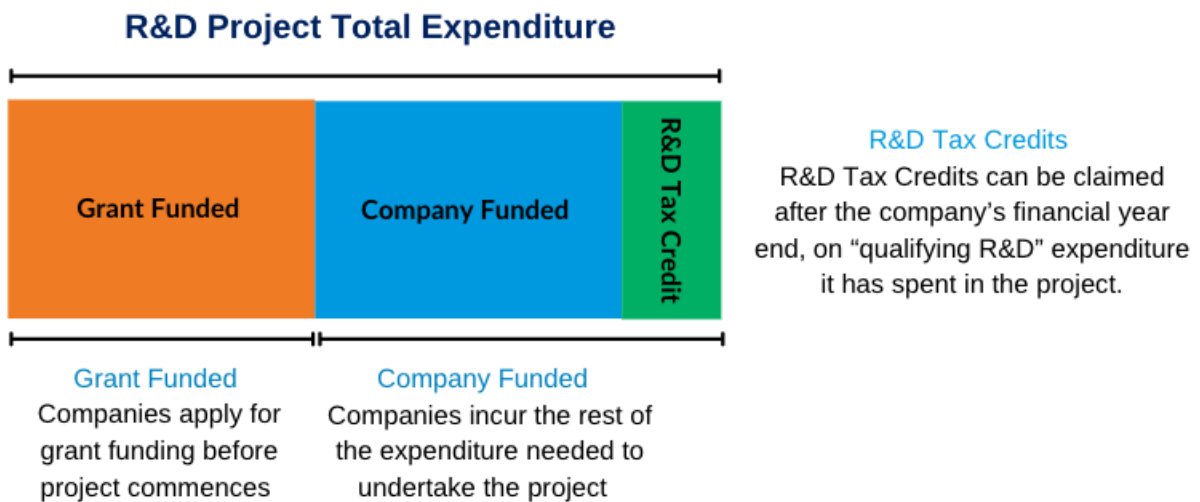Core Technologies underpinning your Products, Services and IP

Coming to Terms with Finances and RD&I

When you start your business, a proportion of your time will be spent on your R&D and Innovation. As you build a team, this will apply to them too! If you incur hardware or software costs, engage sub-contractors or work with partners to advance your technology, you will start to be able to create a spend profile on your business' investment into R&D and Innovation at any given point.

Understanding what you are spending on RD&I becomes important and urgent when:

1. You are preparing your company's management accounts and want to provide a clear Profit & Loss which factors in R&D (More details on accounting for R&D investment in your business can be found in this article.)

2. You are claiming R&D Tax Credits.

3. You are applying for an Innovation or R&D Grant (or already have won one!)

R&D Project Total Expenditure

Grant Funded

Company Funded

R&D Tax Credit

R&D Tax Credits
R&D Tax Credits can be claimed after the company's financial year end, on "qualifying R&D" expenditure it has spent in the project.

Grant Funded
Companies apply for grant funding before project commences

Company Funded
Companies incur the rest of the expenditure needed to undertake the project

Example of a Project which has received R&D Tax Credit support and Grant Funding support

In order to start understanding your expenditure on R&D and Innovation, you may consider:

1. Classifying your R&D and Innovation initiatives into "Projects" associated with Core Technologies and tracking time against them (like in ReaDI-Watch Platform)

2. Preparing and exploring R&D Tax Credit and Grant claims available to your business

Examples of SMEs with Innovation and R&D in their DNA

Equal1 Laboratories Ireland - Quantum Deep-Tech Start-Up

Grant Engineering - Heating & Boiler Engineering SME

Everyangle - Vision Systems AI Start-Up

Hibra Design - Automotive Design Engineering Start-Up

Conclusions & Simple Actions to Start Today

R&D and Innovation are crucial for the success of any start-up. By understanding and effectively managing these areas, you can develop unique products/services, improve your existing offerings, and drive growth into your venture. To summarise the key actions in this article again:

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