

# Developing a Business Case for Space

A basic introduction and practical guide for start-ups and SMEs

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## OVERVIEW

- Content overview
- Target audience & objectives

## INTRODUCTION

- Space market
- Tech push vs. Market pull

## CREATE VALUE

- Value proposition
- Products / Services
- Gains & Pains

## COMPETITION

- Value chain
- Alternatives & competitors
- TAM, SAM, SOM

## PLANNING

- Revenue v. costs
- Cash flow analysis
- ROI

## CONCLUSION

- Are you ready?
- ESA's role
- Q&A



# What is this training and who is it for?

- Highlight the importance of a Business Case in the **development plan** of a product/service,
- Shed light on the trajectory **from idea to project to product**, and ESA's involvement in all of them,
- Provide tools to guide you in your planning and forecast (defining **what comes next**).



## OBJECTIVES

- **High-level** overview of the development of a Business Case – introducing concepts, but not comprehensively detailing on them
- Therefore, the course is not very suitable for/not sufficient for those with a strong business background. Instead, the target audience is:
  - ↳ **SMEs/Startups**, companies establishing their **first product** or expanding/spinning off to the Space market



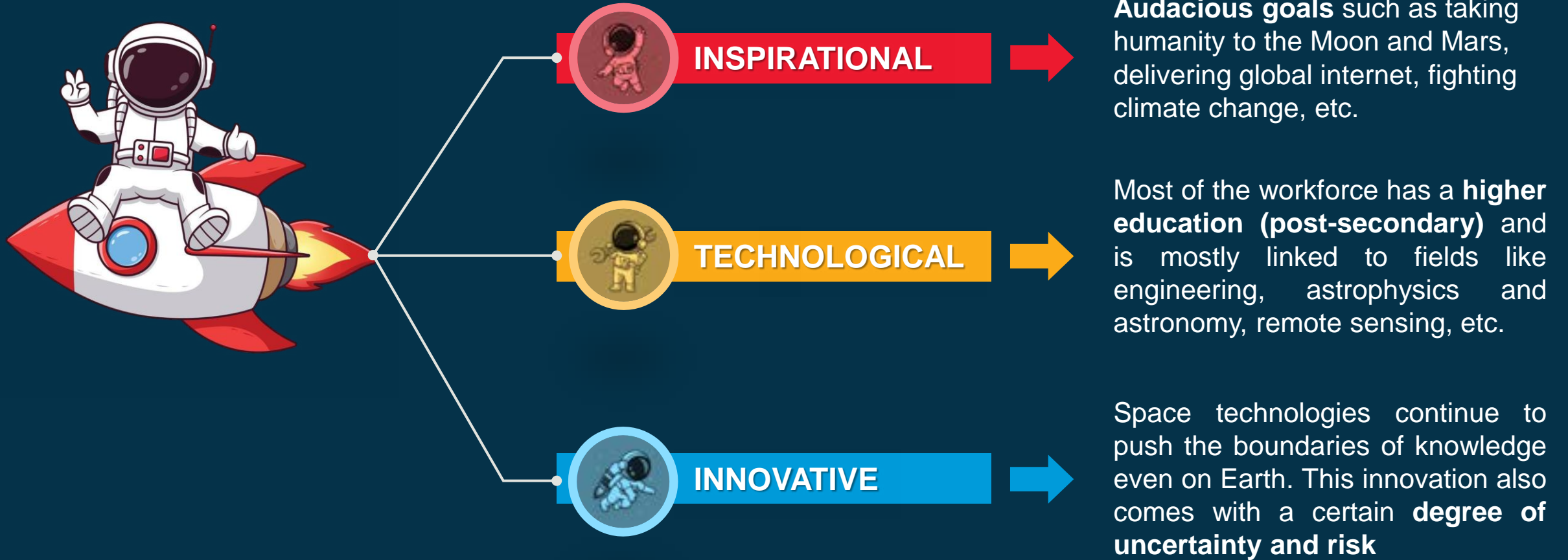
## TARGET AUDIENCE

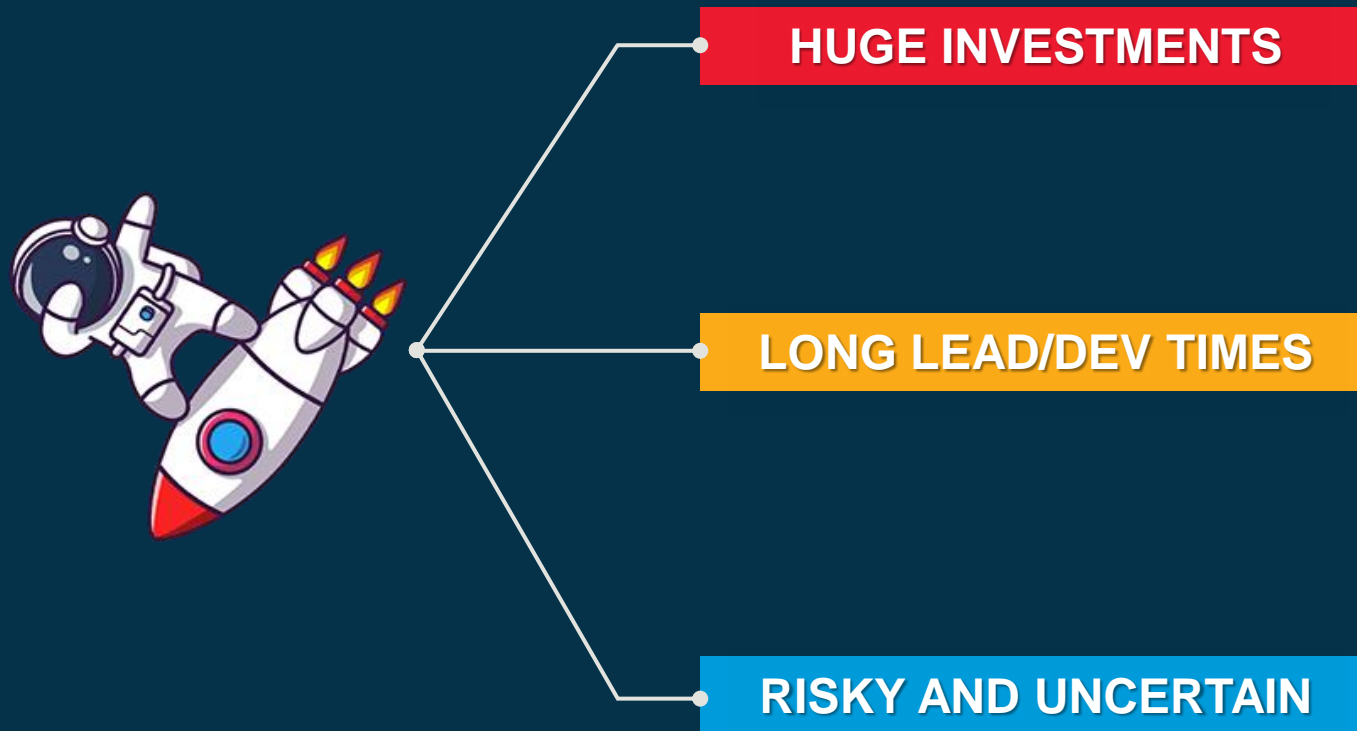


It will also help you to consolidate your business case (and get higher marks on Criterion 2)



# FROM IDEA TO VALUE





- Can be a **high-risk/high-reward** market
- High quality (rigorous testing) leads to long lead and development times resulting in a **long time to market**.
- **Government/Institutional funding** to overcome the risk.
- ESA prefers **recurring IOD products** (lower cost/risk) for our missions
- Focus on **developing (and qualifying) products and services** instead of funding research/one-offs.



## “Game-changing” new products and services

- **Innovation** at the forefront, forward-thinking
- The goal is to **pioneer** changes that redefine market standards and consumer expectations
- By introducing new products and services that were previously unimaginable, has the risk of being deemed “**ahead of its time**”



## TECHNOLOGY PUSH

## Solving known customers’ problems

- Priority is the identification and satisfaction of existing **consumer needs and desires**
- Consumer-centric viewpoint, reactive approach
- Higher likelihood of **market acceptance**
- Tends to be improvements on the same solution (e.g. lower cost, higher performance, smaller)



## MARKET PULL



In space, it usually tends to need more in-flight demos before the solution is accepted and taken up by the market.



It’s crucial to define “improvement” in a metric that is relevant to the customer. This is why it is so important for us to have a customer involved in your ESA projects.

# Technology Push vs. Market Pull



TECHNOLOGY PUSH



MARKET PULL



No approach is better than the other. Finding a balance between these is crucial for a business's success





By stating the **RELEVANCE** and identifying your users/customers in Section 1.6 and the **UNIQUENESS** of the solution vs. the state-of-the-art in 1.4.1, it should become clear to any ESA reviewer what is its **VALUE**.

# Mission Statement vs. Value Proposition

SpaceX **aims** to revolutionise space technology to enable people to live on other planets.

- Goal-oriented
- What is your objective as an organization

Mission Statement



Value Proposition



- Product/Service-oriented
- What you offer customers and why they should choose you

SpaceX's Falcon **offers** cost-effective, flexible and reliable access to space





You own a coffee shop.  
What is the value proposition of your products?

- What makes your product **relevant** to your customers?
- What makes it **better** than what already exists?

# Value Proposition – Our answers





# Value Proposition – Our real answers



## FAST & CHEAPER



Our staff has a proven background in handling our coffee machines. By lowering the need for maintenance, we can reduce costs and thus the price by 10%, and our delivery time is 20% better than competitors.

## UNIQUE LOCATION



Our coffee shop is located near the beach, offering a beautiful view of the ocean. It is also the only coffee shop in this area, and thus the alternative for coffee lovers is driving 5km into town, making it very inconvenient.

## PRODUCTS

*“Selling coffee and baked goods in our coffee shop”*

- Generally tangible items (something that customers can physically hold in their hands)
- Frequently one-off purchase
- Usually it can be returned (warranty)

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Products are **not** only one-off procurements – depending on the business, usually, the customers buy many times, but for different missions

## SERVICES

*“Providing coffee catering service for companies”*

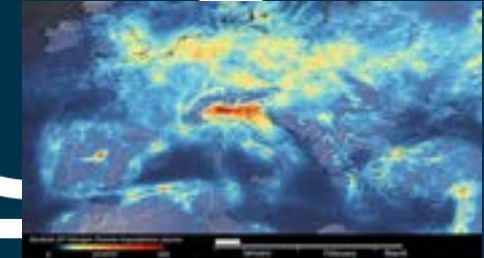
- Typically intangible (something that the business provides or performs for its customers)
- Frequently a recurring purchase (subscription)
- Usually it can be cancelled (notice period)

Services can be about providing **information** (e.g., downstream apps)

**Same technology can be a service or a product**



The objective of your proposal should have a clear link to the product/service you're trying to achieve.



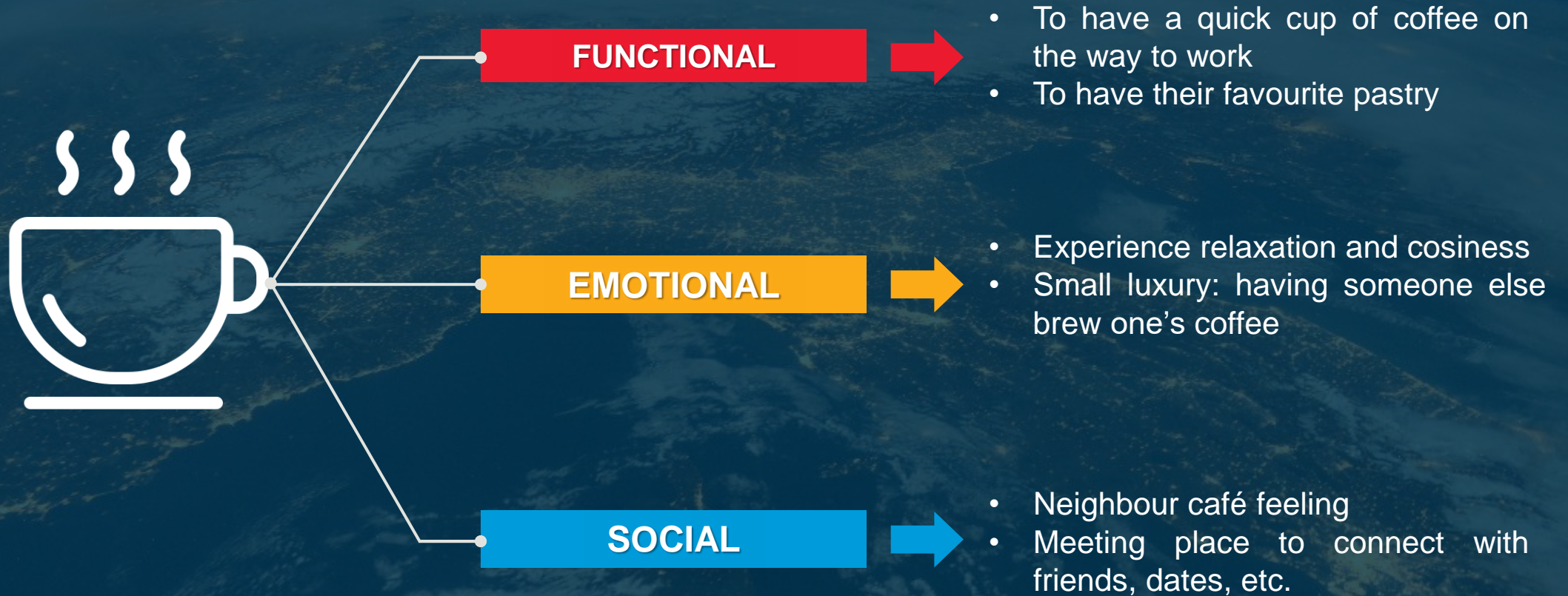




Let's go back to our coffee shop. Why are our clients there? What are they attempting to **get done**?

- *What are they doing with our products/services?*
- *What kind of **tasks** are they trying to complete?*
- *What **wants/needs** are they trying to satisfy?*









From our clients' point of view, what are their associated **pains** and **gains** when buying coffee?

- *What kind of **pains** can happen while there?*
- *What potential **gains** can our clients have?*









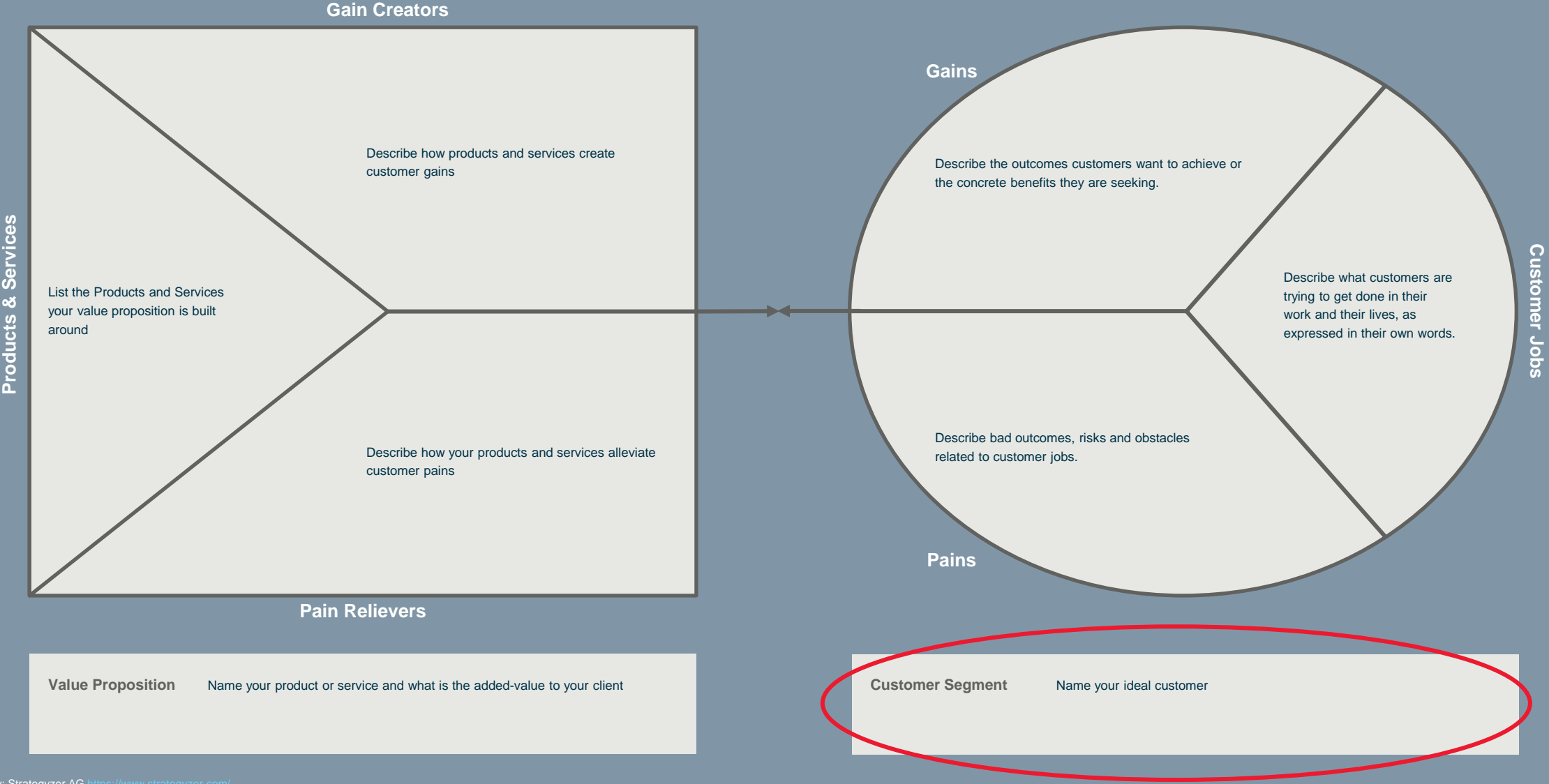




It's time for a **real** cup of coffee!



# Value Proposition Canvas – Template



- Up until now, we have defined our value, products and services mostly as if we operated **in a vacuum**
- To show the unique value a business offers, one must understand **their customers** and **competitors/alternatives**
- To do so, we need to define our “**neighbours**” in the value chain



This information is crucial for a good mark in the State-of-the-Art section (Criterion 1) of ESA proposals!

# Value Chain and Key Partners – Coffee Shop





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