



How to use the Toolbox set for SMEs for close-to-market activities in H2020



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Executive Summary

Due to the increasing presence of innovation across H2020, the evaluation criteria are paying more and more attention to **how the research carried out by the project is expected to reach the market and find higher impact.**

Furthermore, as the instruments get closer to market, as it is the case of Innovation Actions (IA) with respect to the Research and Innovation Actions (RIA) or in programmes where reaching the market is the key, as the **“Fast Track to Innovation” programme (FTI) or the SME instrument, these market and exploitation elements** are not only evaluated within the impact criterion but, on the contrary, **are the driving force of the call overall evaluation rationale.**

Despite this importance, it is still very common to see companies and proposers approaching these types of project under a research-minded approach, paying little or no attention to the market and business dimension of their projects. This common mistake is particularly frequent in newcomers and SME, whose lack of expertise within the H2020 domains make them fill in the template without a clear knowledge on the level of detail expected.

To tackle this issue, this project has developed a toolbox that support proposers, especially SME, to adequately fill-in the market and business dimensions of their close to market proposals in H2020.

These tools are not rocket-science but business tools tailored to the H2020 “language” and expectations, **defining a reference frame that include the key markets and business models dimensions** worth to be included in their proposals.

This reference framework can be seen as the “expected information” on market and business elements that has to be described in each of the close to market actions in H2020: namely Innovation Actions, Fast Track to Innovation and SME instrument. As it can easily be understood, the closer the instrument is to market, the higher the level of details to be presented in the proposal.

This frame consists of three complementary approaches (and tools) to the exploitation elements of the project:

- The first one looks into **the operations of the business** in a sense of how the business itself is created, sustained and maintained in time. This is covered with two complementary tools: the “Revenue model financial tool” and “guiding revenue model selection tool”.
- The second one looks into **the value proposition of the business**, which is the heart of the developed product, service or process within the project. This is covered with the “Value proposition tool”.

- The third one looks around **the market and the competence for the business**, not only in the current situation but also into future scenarios. This is incorporated into the “market analysis & competitor tool”.

This document presents these tools, their rationale and their main features and inserts them into the wider context of business definition and planning.

This document not only aims to be a user friendly quick user manual of the tools but also aims to guide users to insert the outputs obtained with the tools in the right place of the different H2020 instruments templates (RIA, IA, FTI and SME instrument).

The “business side” of the H2020 proposals.

As the EU framework programmes has evolved edition after edition from research only to research and innovation, there is an increasing number of instruments where the business side of the projects is taking higher relevance. This can be clearly seen in H2020 with the “impact” criterion for collaborative projects. This criterion does no longer only focuses on the set of elements described as “expected impact” at topic level, but also, as mentioned in the Annex H: evaluation rules of H2020¹, look always in details two more key aspects:

- other impacts not mentioned in the work programme that would enhance innovation capacity, **create new market opportunities**, strengthen competitiveness and growth of companies, address issues related to climate change or the environment, or bring other important benefits for society;
- Quality of the proposed measures to **exploit and disseminate the project results** (including management of IPR), to manage research data where relevant and communicate the project activities to different target audiences.

Furthermore, in H2020, there are two programmes specifically focused in supporting companies to reach the market, namely, Fast track to Innovation, which expects that the funded project reach market in less than 36 months from the start of the projects, and the SME instrument, which expects that the product/service developed generate revenue and international growth to the SME beneficiaries. In these instruments, the business dimension is the driving force of the overall evaluation rationale.

In order to define properly a frame for defining the business side of the project in H2020, the following definitions have to be considered in a cascading order:



A business case. A business case captures the reasoning for initiating a project or task. The logic of the business case is that, whenever resources such as money or effort are consumed, they should be in support of a specific business need. A compelling business case adequately captures both the quantifiable and non-quantifiable characteristics of a proposed project and typically account for information on the background of the project, the expected business benefits, the options considered (with reasons for rejection or selection per option), the expected costs of the project, a gap analysis and

¹http://ec.europa.eu/research/participants/data/ref/h2020/other/wp/2018-2020/annexes/h2020-wp1820-annex-h-esacrit_en.pdf

the expected risks. From this information, the justification for the project is derived.

In the public sector in general, and in H2020 in particular, the business case is argued in terms of Cost–benefit analysis, which may include both financial and non-financial cost and benefits. This allows the business to take also into account societal and environmental benefits, allowing a more comprehensive understanding of economic impacts. In terms of business, it is limited to a general view and understanding on the business operations and it is very common to be requested in Research and Innovation actions (RIA) and Innovation actions. (IA)

- **A business plan.** A business plan is a formal written document containing the statement of the goals of a business and the plans for reaching them under a variety of perspectives (finance, human resources, intellectual property management, supply chain management, marketing...).

Apart from raising funds, the primary purpose of a business plan is to define what the business is or what it intends to be over time. Clarifying the purpose and ultimate direction of the business allows you to understand what needs to be done for forward movement with the clear target in the horizon.

Under H2020, when a business plan is required within the project proposals or under the project execution it typically covers 7 key questions²: What does the business do? Which is your industry, market, and competitor landscape? How is the business organized? What is your offer? How are you selling your product/service? How much money you'll need for next 3 to 5 years? How the business will be profitable?

The depth of the answers to these questions is fully dependent on the H2020 instrument. While in RIA and IAs, it is covered within the impact section with higher details in IAs than in RIAs, in FTI and the SME instrument, these questions are the basis of the overall template.

- **A business model.** A business model describes the rationale of how an organization creates, delivers, and captures value. It aims to answer a key question: How do you plan to make money? Current literature on business models, especially in start-up environments, is overwhelmed by the business model canvas methodology from Alexander Osterwalder³.

The Business Model Canvas reflects systematically on any business from 9 blocks perspective, enabling both new and existing businesses to focus not only on the business operations but also in its management and marketing dimensions. The 9 blocks (with their corresponding basic questions) are as follows:

- Key partners: Who are your key partners/suppliers? What are the motivations for the partnerships?

² <https://www.entrepreneur.com/article/247575>

³ Business Model Generation, Alexander Osterwalder, Yves Pigneur, Alan Smith, and 470 practitioners from 45 countries, self-published, 2010.

- Key activities: What key activities does your value proposition require? What activities are important the most in distribution channels, customer relationships, revenue stream...?
- Value Proposition: What core value do you deliver to the customer? Which customer needs are you satisfying?
- Customer Relationship: What relationship that the target customer expects you to establish? How can you integrate that into your business in terms of cost and format?
- Customer Segment: Which classes are you creating values for? Who is your most important customer?
- Key Resources: What key resources does your value proposition require? What resources are important the most in distribution channels, customer relationships, revenue stream...?
- Distribution Channel: Through which channels that your customers want to be reached? Which channels work best? How much do they cost? How can they be integrated into your and your customers' routines?
- Cost Structure: What are the most cost in your business? Which key resources/activities are most expensive?
- Revenue Streams: For what value are your customers willing to pay? What and how do they pay? How would they prefer to pay? How much does every revenue stream contribute to the overall revenues?

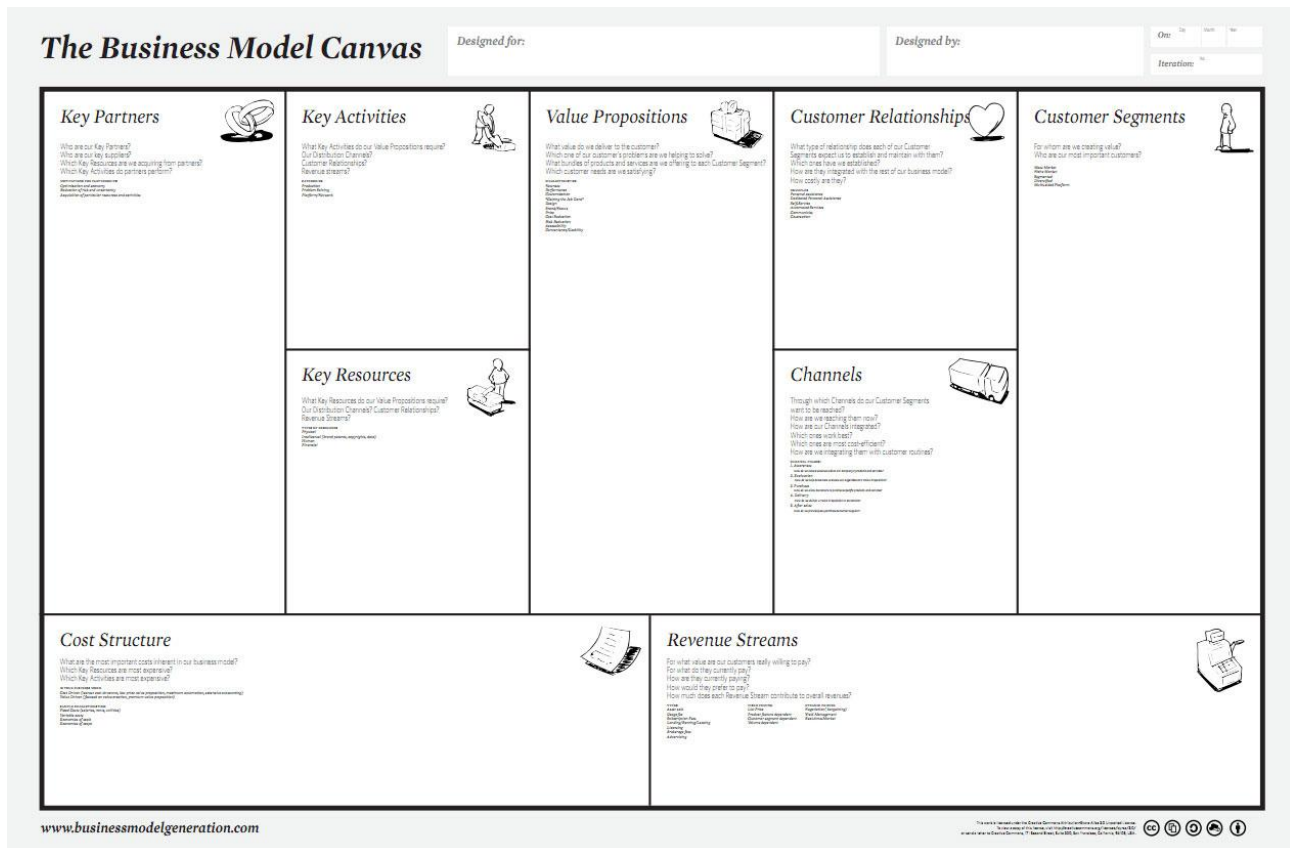


Figure 1: Business model canvas frame.

Under H2020, only the SME instrument explicitly asks for a business model description while in the Fast Track to Innovation, it is a good practice to describe it in general along the impact section. For actions not so close to market, as RIA or IA, only some elements of the business modelling tend to appear in the proposals.

These three definitions define the frame in which H2020 business elements integrate. The toolbox presented in this document works across them, using the business model canvas as starting point. It is composed of three tools.

- The first one looks into **the cash flow of the business** in a sense of how the business itself is sustained in time with two complementary elements: the “Revenue model financial tool” and the “decision tree for pricing strategies”. From a business model canvas perspective, this covers the two bottom modules of the canvas, the cost structure and the revenue streams
- The second one looks into **the value proposition of the business**, which is the heart of the developed product, service or process. This is covered with the “Value proposition tool” and corresponds with the central module of the business model canvas. However, the tool goes beyond the company canvas and look also to competitors under the same parameters for comparison.

- The third one looks around **the market and the competence for the business**, not only in the current situation but also into future scenarios. This tool is called “market analysis & competitor tool”. It basically looks to the business model canvas modules that correlate with market (customer relationship, channels and customer segments) but goes beyond the company canvas, analysing thoroughly its competitive environment.

The following chapters explain the details of these tools and how their outputs can be used, when make sense, to develop better the business dimension requested in most of the H2020 instrument.

1 Revenue model toolset.

1.1 What is a revenue-model?

A revenue model is a framework for generating revenues. It identifies which revenue source to pursue, what value to offer, how to price the value, and who pays for the value during the lifetime duration of the business⁴.

The revenue model is a key component of a company's business model. It primarily identifies what product or service will be created in order to generate revenues and the ways in which the product or service will be sold. **A revenue model can include one or more revenue streams**, that is, the amount of money coming into a business or organisation from a particular source⁵. The revenue model is easier to define than the entire business model and for that, partial information about revenue models can be found not only in the SME instrument proposals but also in Fast Track to Innovation and Innovation Actions proposals within H2020.

There are many ways to classify the revenue models, but within this document, we have opted to **classify revenue model depending on how the cash enters into the business**; that is:

- One-off revenue models, where the business generates a cash entry every time it generates a sale.
- Double one-off revenue models, where the business generates a cash entry every time it generates a sale in any of the two complementary products/ services it commercialises. This is the typical case of products that needs a consumable. Sales are separate in time and logic, but are coupled somehow.
- Recurrent revenue models, where the business generates a cash entry periodically per client until the period expires or the client decides not to continue. This is the typical case of any periodic subscription fee.
- Combined revenue models, where the business generates a cash entry periodically per client and every time a sale is produced. As businesses get more elaborated, different revenue streams coexist. This option allows modelling most of these combinations.

Seeing the business as a black box, the revenue model allows calculating the financial projection of the business by looking at the inputs and the outputs to the “box” to see if/when it is profitable or not along the time. However, **the goal of such an early financial projection is not to demonstrate how great the opportunity is, but, on the other hand, show investors that you truly understand what drives the growth of your business.**⁶

⁴ Afuah, A. 2004. Business Models: A Strategic Management Approach. New York: McGraw-Hill/Irwin, pp. 67-69

⁵ Collins. 2014. Definition of Revenue Stream [online].

⁶ <https://medium.com/the-mission/simple-saas-financial-model-for-early-stage-startups-13895d07b2be>

One of the key parameters for that is the **price you set for your product and/or services**. As there are innumerable ways to set the price, we have made a selection of the **24 of them most commonly found in literature** and within H2020 project proposals and consider them for the tool.^{7,8,9}.

1.2 How can you create your revenue model?

Creating your revenue model has two main tasks: **the first one is to select which model fits better the way you intend to capture value from the market and the second one is to forecast its evolution with time.**

For the former, the proposed frame of 4 types of revenue models can set the basis for a preliminary selection. For the latter, there are two general approaches to financial forecasting: **top-down and bottom-up forecasting**. With top-down forecasting, you start with the overall market size and use this to identify your particular segment. You extrapolate from total market to predict how much you can hope to capture (addressable market); you then use this to calculate your total potential revenue.

On the other hand, with a bottom-up financial projection, you identify a set of key variables to project your revenue over the time. You calculate the spending necessary to achieve your revenue and development goals and identify what's driving your revenue. From here you can predict how quickly you can scale based on headcount and milestone projections.¹⁰

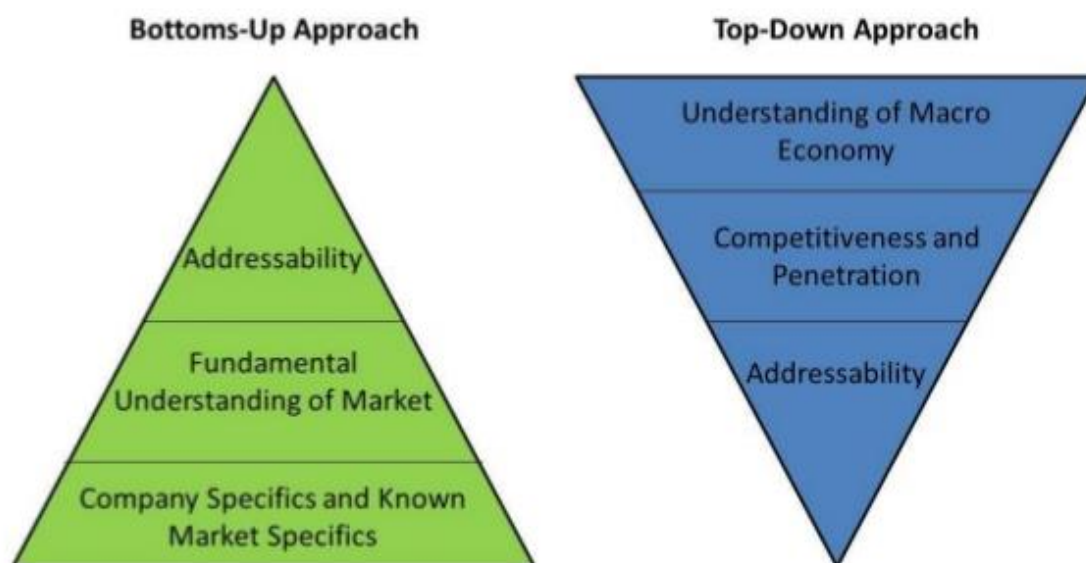


Figure 2: Bottom-up vs top-down approach for forecasting.

⁷ <https://www.boardofinnovation.com/tools/>

⁸ <https://www.entrepreneurs-journey.com/8127/what-is-b2b/>

⁹ <https://www.entrepreneurs-journey.com/8101/what-is-b2c/>

¹⁰ <https://earlygrowthfinancialservices.com/developing-your-startup-revenue-model-in-7-steps/>

In any case, as the business evolves, you will have to refine continually your model and the forecasting. Moreover, especially within the start-up world, it could be the case that you may need to pivot your revenue model at some point if it's not working to support your business.

In these early-stage cases, it is of key importance to identify those variables that have the most impact on revenue, figure out what they are most sensitive to and define actions and activities you could put in motion to drive its growth.

1.3 How does the “revenue model toolset” work?

This tool is composed of two interconnected elements: A decision tree **to guide companies to select their revenue and pricing models** and a Microsoft Excel® file that **allow a suitable financial projection of the selected models**.

1.3.1 Inputs for the decision tree

The decision tree is an easy-to-follow tool that gives users as output revenue and pricing model (RPM) recommendations in seven questions as maximum. The decision tree is built following the next table logic.

Question	If yes	If no	Output
Will the user pay for your product?	Is the user owner of the product once they pay for it?	Will others be interested in your user base?	
Is the user owner of the product once they pay for it?	Does it need consumables?	Is it a recurrent income?	
Does it need consumables?	Output to RPM 1,2	Do you foresee any extra revenue?	If yes, model 1, 2.
Do you foresee any extra revenue?	Is it a recurring income?	Do you expect high margins?	
Is it a recurring income?	Do you want users pay every time they use it?	Is there any cost sensitive item?	
Is there any cost sensitive item?	Output to RPM 7 plus additional question: Is there fluctuating demand?	Output to RPM 3, 5 and 8 plus additional question: Is there fluctuating demand?	If yes, output model 7. If no, output model 3, 5 and 8.
Is there fluctuating demand?	Output to RPM 12.	No way out.	If yes, model 12.

Do you expect high margins?	Do you have any unfair competition?	Output to RPM 4.	If no, model 4.
Do you have any unfair competition?	Output to RPM 11	Output to RPM 13, 14 and 15.	If yes, model 11. If no, model 13, 14 and 15.
Do you want users pay every time they use it?	Can they use it in exclusivity?	Output to RPM 6	If no, model 6.
Can they use it in exclusivity?	Output to RPM 16 plus additional question: Is your client segmentation relevant?	Output to RPM 9 and 10 plus additional question: Is your client segmentation relevant?	If yes, model 16. If no, model 9 and 10.
Is your client segmentation relevant?	Output to RPM 17 plus additional question: Is there any feature part of your clients will pay for?	Output to RPM 19 plus additional question: Is there any feature part of your clients will pay for?	If yes, model 17. If no, model 19.
Is there any feature part of your clients will pay for?	Output to revenue model 18.	No way out	If yes, model 18.
Will others be interested in your user base?	Output to RPM 20 plus additional question: Is there any complement your client need or welcome?	Do you bring two parties together?	If yes, model 20
Is there any complement your client need or welcome?	Do you offer it?	No way out	
Do you offer it?	Output to RPM 21 plus additional question: Is the price defined by the client?	Output to RPM 24 plus additional question: Is the price defined by the client?	If yes, model 21. If no, model 24.
Is the price defined by the client?	Output to RPM 22.	No way out	If yes, model 22.
Do you bring two	Output to RPM 23 plus	Are you sure that you	

parties together?	additional questions: Is there any complement your client need or welcome?	are creating a business?	
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Table 1: Decision tree questions and paths.

1.3.2 Outputs for the decision tree

Replying to the set of questions from the decision tree, the user can reach to one or more recommended pricing model (RPM) out of the 24 included in the tool, which are:

- 1) Razor-blade: The client purchases a low-margin item and then the necessary consumable as replacement with high margin. Therefore, it is a revenue model with a double one-off cash entry. Examples of this model are Gillette or Nespresso.
- 2) Inverted razor-blade: The client makes an initial purchase with a high margin, but consumables are sold at low margin for brand loyalty. Therefore, it is also a revenue model with a double one-off cash entry. A typical example for it is the Apple Ipad + Apple Itunes. More info from these two models can be found in: <https://www.reasonstreet.co/business-model-razorblade/>
- 3) Upselling: This strategy search that a high percentage of buyers ultimately purchases more than they expected in extra features or finishing. This is a double on-off revenue model, separating the baseline and the extra features in two separate one-off transactions. More info for this model can be found in: <https://en.wikipedia.org/wiki/Upselling>
- 4) High volume-low margin: Selling low margin items at large quantities benefitting from scale economies. i.e. Gas Stations. This one-off revenue model prioritizes the number of transaction vs the average transaction cost, but can be very interesting in some sectors where acquisition cost are very low. A good food for thought for this model can be found in: <https://blog.asmartbear.com/price-vs-quantity.html>
- 5) Bundling pricing model: Sell together, as a combined product, several products and/or services, as happens i.e. with the Mc Menu. This is a one-off revenue model that uses this pricing tactic to increase the number of transaction per period. More information on this pricing model can be found in https://en.wikipedia.org/wiki/Product_bundling
- 6) Pay per use: Clients are charged as the usage of the product/service at a given cost/unit of consumption. (i.e. Electricity providers). Although it could be the case that one-off revenue model opts for this pricing, it is a typical revenue model under a

recurrent cash flow entry. <https://www.reasonstreet.co/business-model-pay-per-use/>

- 7) Nick and dime: The company price the most cost-sensitive item as low as possible and then charge for every little extra. As in the case of upselling, this can be modelled as a double on-off revenue model, separating the baseline and the extras in two separate one-off transactions. I.e. RyanAir uses this approach. More info on this model can be found in <https://goo.gl/6hyLKe>
- 8) Service-as-a product: Standardizing a predetermined set of services typically bought together and selling for a fixed price similar to a product. This pricing is typically using to converting services into a product (one-off revenue model), taken benefit of the inherent advantage of selling product. More information on this model can be found in: <https://www.reasonstreet.co/business-model-professional-services/>
- 9) Franchise (royalty based) model: Sell the right to use the business model in exchange for a given fee. This is a recurrent revenue model with many extra implications. A good summary of them can be found in <https://goo.gl/4K32d3>
- 10) Subscription model: Clients are charged for the usage/access of the product/service a subscription fee under periodic recurrence. This is the most simple recurrent revenue model. More information for this can be found in: <https://www.reasonstreet.co/business-model-subscriptions/>
- 11) Unfair advantage: This pricing model is based on an “unfair advantage” that allow setting higher margins in your sales. This “unfair advantage” can be based on location (i.e. souvenir shops in Disneyland), dependence (i.e. previous versions bought) or respond to a monopolistic situation in the market. (i.e. Google Adwords). In some sense, this is the final goal that any business aims to achieve. Some further explanation on this model can be found in <https://goo.gl/s1Xc4X>. Although it is possible as a recurrent model, it is quite more often as a one-off revenue model format.
- 12) Demand driven pricing: This strategy is based on a quick adaptation of pricing of the offer tot the demand. (i.e. hotel rooms in different seasons, as it can be seen in the following link: <https://www.xotels.com/en/glossary/demand-based-pricing>
- 13) Premium pricing: This way of setting prices offer high-end products that appeal to brand-conscious consumers. In this case, this one-off revenue model can work with higher margins than other one-off revenue models thanks to the already-achieved company brand reputation. <http://smallbusiness.chron.com/premium-pricing-strategy-1107.html>
- 14) Cheap-chic pricing model: As in the previous case, the price is set based on style or design to generate a high margin in the product sold. For that, a superb marketing

strategy is needed, as i.e. IKEA does. Further elements of this model can be investigated in <https://goo.gl/1yvocw>

- 15) High margin-low volume model: Selling expensive but low number of one-off transactions. Opposite to the high volume-low margin model, it prioritizes transaction average amount to transaction average numbers. It is a typical approach for many engineering companies. Again, this link makes a relevant discussion for both models <https://blog.asmartbear.com/price-vs-quantity.html>
- 16) Leasing (product as a service): The product/software/platform is not transferred to the buyer, but it has the rights to use it for a given period. It is typically linked to recurrent revenue models as seen in <https://autodeskfusionconnect.com/what-is-product-as-a-service/> or <https://www.reasonstreet.co/hardware-as-a-service/>
- 17) Discrete fees: This pricing model charges different rates for discrete level of services. It is a typical case of TV content providers or cell phone plans. At the end, it is a combination of several flat fees, so it can be modelled as a recurrent revenue model per fee level.
- 18) Freemium: This pricing model offers the product for free and typically some % of users upgrade to become paying customers of virtual goods or to get expanded access. In most of the cases, this means recurrent cash for the company. <https://www.reasonstreet.co/business-model-freemium/>
- 19) Flat fee: A recurrent revenue model where most of the purchase in a period is included in a fee. See more of this pricing strategy in. <https://www.reasonstreet.co/business-model-flat-rate/>
- 20) Advertising-based pricing: In this pricing model your product is free to your users but a third party pays you for accessing your users' base. It is a recurrent revenue model which profitability depends on the size of your users' base. The key elements in this pricing model can be found here: <https://www.reasonstreet.co/business-models-advertising-supported/>
- 21) Market place model: A market place business brings together buyers and sellers, offering them targeted products/services. It can have a fee for the platform use plus the inherent benefit per transaction. This combination of revenue streams can be modelled with the combined revenue model option. The pros and cons of this model can be analysed here: <https://www.reasonstreet.co/business-model-two-sided-marketplace/>
- 22) Auction-like model: This is a variation of the previous model using an auction-type selling process versus a fixed sales price. As in the previous case, it can be typically modelled as a combined revenue model. Extra insights in this model can be seen in <https://goo.gl/VQns8A>

- 23) Matchmaking platform: It brings together buyers and sellers skipping intermediation, getting possibly either a fee to access the platform, either a fee per transaction done through the platform, either both of them.
<https://www.entrepreneur.com/article/270312>
- 24) Affiliation-signposting: This model sells the right to third parties to offer others product exclusively to you clients. This model usually includes combined revenues: a fee to these third parties (typically recurrent) and/or a fee per transaction.(typically one-off) <https://empireflippers.com/affiliate-marketing-business-model-explained/>

1.3.3 Inputs for the revenue model financial tool.

Since this guide is primarily focused on SME, the bottom-up approach has been the selected one to be incorporated in the toolbox. We have taken the Gary Gaspar model as reference¹¹ and adapted his original SaaS financial model to the 4 types of revenue models identified previously (one off, double one-off, recurrent and combined). **This model is based on defining properly two set of hypothesis and giving them appropriate numbers.** These two set of hypothesis are:

- Revenue growth hypothesis (what drives growth)
- Cost-structure hypothesis (what drives cost),

What drives growth in a business is fully dependent on the revenue model and as such, the linkage between those variables (KPIs) and revenue models can be seen in the table.

These relationships are included in the GROWTH_Hypothesis sheet of the tool only as readable references and link the pricing model with its corresponding revenue model.

Revenue model	KPI 1	KPI 2	KPI 3	KPI 4	KPI 5
One-off	Average transaction amount	% increase of new transactions			
Double one-off	Average consumable price	% increase of new consumable transactions	Average initial purchase price	% increase of new initial purchase transactions	
Recurrent	Average fee	% increase of new customers	% stops subscription		
Combined (one-off +	Average transaction	% increase of new	Average fee	% increase of new	% stops

¹¹ <https://medium.com/the-mission/simple-saas-financial-model-for-early-stage-startups-13895d07b2be>

recurrent)	amount	transactions		customers	subscription
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Table 2: Revenue growth drivers per revenue model.

What drive cost is a business can be categorized under many frames, and the option currently selected divides costs **in two categories: Direct and indirect costs**. Direct costs are those that can be computed directly to the product or service commercialised and indirect costs are those which cannot.

For the sake of simplicity, the following cost categories are considered for the toolset, and are editable in the COST_HYPOTHESIS sheet:

Direct costs:

- Manufacturing cost: Cost for manufacturing a product, including personnel, raw material, equipment... or outsourced
- Assembly cost: Cost for assembly the different parts of the product if the product is not assembled from manufacturing.
- Packaging cost: Cost for the packaging of the product for its safe and easy delivery.
- Warehouse cost: Cost for stocks.
- Delivery cost: Cost for putting the product within the client premises-delivery the service to the client.
- Exporting cost: Cost and taxes due to export the product internationally.
- Maintenance costs: Cost for maintenance of the product, including aftersales support (including services).
- Hosting cost: Cost for hosting any web based element in internet (if the case).
- Payment cost: Payment fees

Indirect costs:

- General & administrative costs: Cost for running the company & its administration (venues, indirect personnel)
- Sales & Marketing cost:
 - Acquisition costs: Cost for a direct acquisition of a client for the product (direct sales department, events...)
 - Intermediation costs: Cost for an indirect acquisition of a client for the product (fees from resellers, ...)
- Research & Development costs:
 - Development costs: Cost for design and developing the product/service). In this cost, investment cost done to set up the business can be included.

- Updating costs: Cost for updating the product/service to newer versions (if needed) including investments to be done in assets, equipment or infrastructures to increase business reach (i.e. new production lines, new factories...).

With this “what drives growth-what drives cost” principle the tool allows to navigate across the four financial models integrated in the sheets named “Financial model ONE-OFF”, “Financial model ONE-OFF DOUBLE”, “Financial model RECURRENT” and “Financial model COMBINED”.

Each of these sheets allows the users to enter quarterly estimates of the corresponding KPIs of the revenue model and output a projection in revenue and cost for three years.

The only element to keep in mind is that the starting point of the model has also to be defined and it cannot be set to 0. (They should be always at least 1 client or at least 1 transaction)

1.3.4 Outputs for the revenue model financial tool.

The projection table of each financial model is the first set of outputs of this tool. As it is in excel file and it has been creating using formulas, it allows the users to think around different scenarios in a three year life span of their business.

In each of the model, a graphical element is included (GR_FM_ONE-OFF, GR_FM_ONE-OFF DOUBLE, GR_FM_RECURRENT and GR_FM_COMBINED **to understand the margins it operates with.**

These two elements, apart from the exercise it represents for the company, are useful pieces of information that can be directly incorporated in the H2020 proposals, if and where relevant depending on the H2020 instrument used.

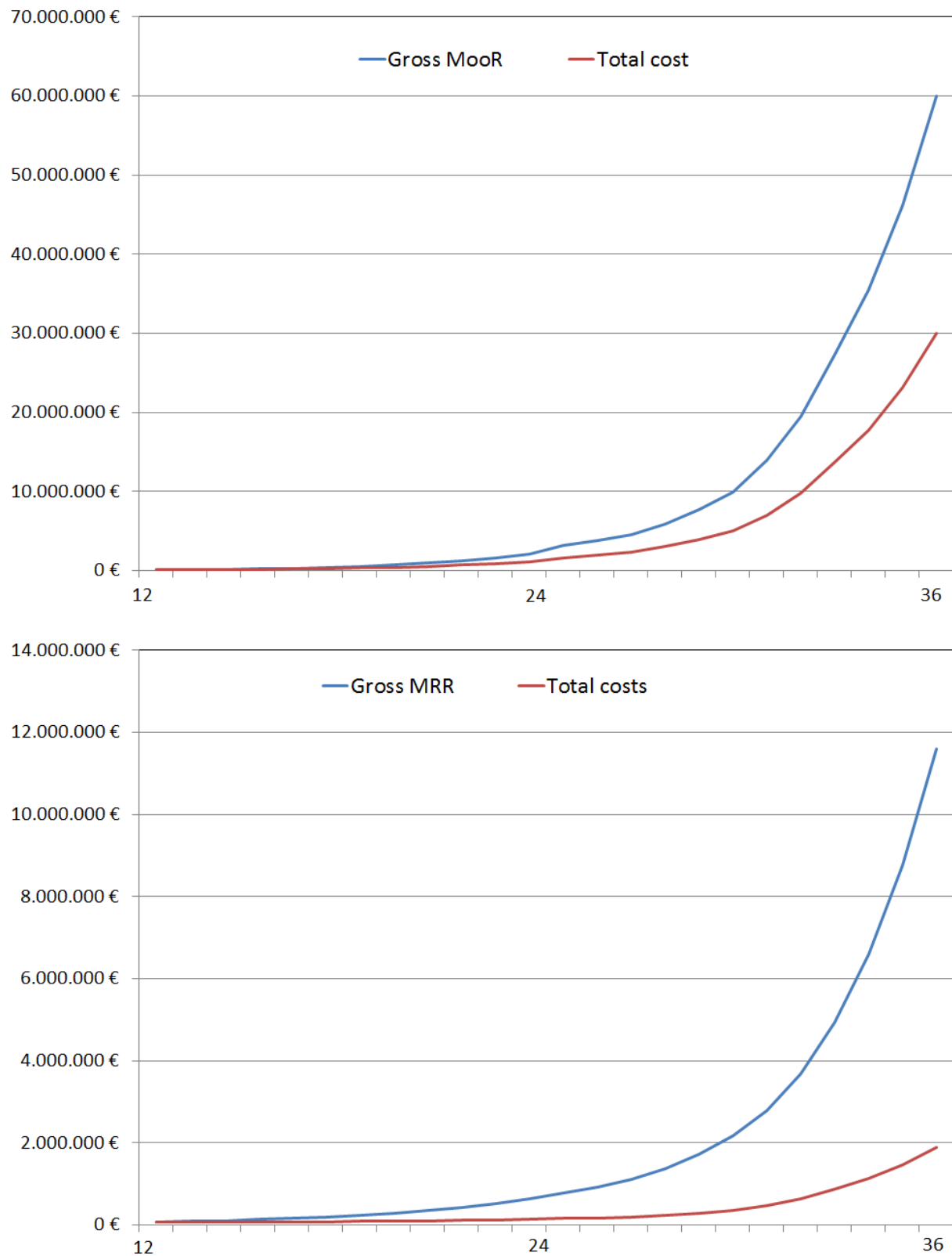


Figure 3: Examples of the business margins for One-off and recurrent revenue models.

1.4 How the tool's outputs are translated into H2020 close to market actions?

With these elements in mind, the next table show where and how each of these output elements can be incorporated across the different H2020 instrument templates.¹²

	Ph2 SME instrument	FTI	IA	RIA
Revenue model selection	Mandatory Executive summary + Section 2.2 Business model	Strongly Recommended Section 2.1	Widely Recommended Section 2.2.a	Generally not necessary, only recommended in cases of RIA reaching TRL>6 Section 2.2.a
Financial projection (P&L table)	Mandatory Section 2.3: Financing	Strongly Recommended Section 2.1	Recommended (in a simplified version). Section 2.2.a	Generally not necessary, only recommended in cases of RIA reaching TRL>6. Section 2.2.a
Graphical representation of the projection GR_FM_XX	Strongly Recommended. Section 2.3. Financing	Recommended Section 2.1	Welcomed Section 2.2.a	Not necessary

Table 3: Recommended output location within H2020 close to market instruments.

¹² http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-call_ptef-pt-2018-20

2 Value proposition tool.

2.1 What is the “value proposition”?

“A value proposition is a statement which identifies clear, measurable and demonstrable benefits consumers get when buying a particular product or service. It should convince consumers that this product or service is better than others on the market. This proposition can lead to a competitive advantage when consumers pick that particular product or service over other competitors because they receive greater value.”¹³

In the definition of value proposition are three concepts worth to highlight:

- First, a value proposition is just a statement; therefore, it is **the promise** you are making to your client. Without this statement you lose an opportunity to tell consumers why they should pick you over competitors. The value proposition is your most powerful way to differentiate your brand from competitors.
- Second, the value proposition objective is to convince consumers/clients to select you among different possibilities; therefore, **it is a comparison**, typically with multiple variables. From a customer’s perspective, they are not only asking how this product is different to one they may already be using, but what value this product or service may have. Customers will never buy a product or service if they don’t feel like they are receiving the best possible deal.
- Third, the value proposition is successful if the clients receive/perceive such value; therefore, it is **fully dependent on the client perspective**. Moreover as the customer is included in the value proposition definition¹⁴, understanding how the customers value your offer is key in today’s company marketing activities. Furthermore, where the environment changes as quickly as today, so does the customer experience and their desires, changing also the value they seek.

2.2 How can you define your value proposition?

Among the multiple tools available to define your value proposition there are two worth to look further: **the value proposition canvas and the value innovation canvas**. They both serve the purpose of helping companies to identify better their value proposition considering client vision but they approach the challenge from different starting points.

The value proposition canvas looks the value from the customer’s perspective while the value innovation canvas looks the value in comparison with the rest of the industry. While the former

¹³ https://en.wikipedia.org/wiki/Value_proposition

¹⁴ Capon, N., & Hulbert, J. (2007). Managing Marketing in the 21st Century: Developing & Implementing the Market Strategy. Wessex, Inc.

is very useful to fit your offer to the client need, the latter is quite more focused in differentiating your offer from that of the competence.

2.2.1 Value proposition canvas

The Value Proposition Canvas is one of the tools created by Ostwalder, Pigneur, Bermarda and Smith¹⁵ as part of the Lean Start-up philosophy. It is a tool widely used in the start-up ecosystem to look at the 'fit' between customers and their products/services.

Value proposition canvas has two sides: the customer segment who you intend to create value for and the value proposition which will help you attract customers. The canvas draws a parallel between products and services offered and customer needs.

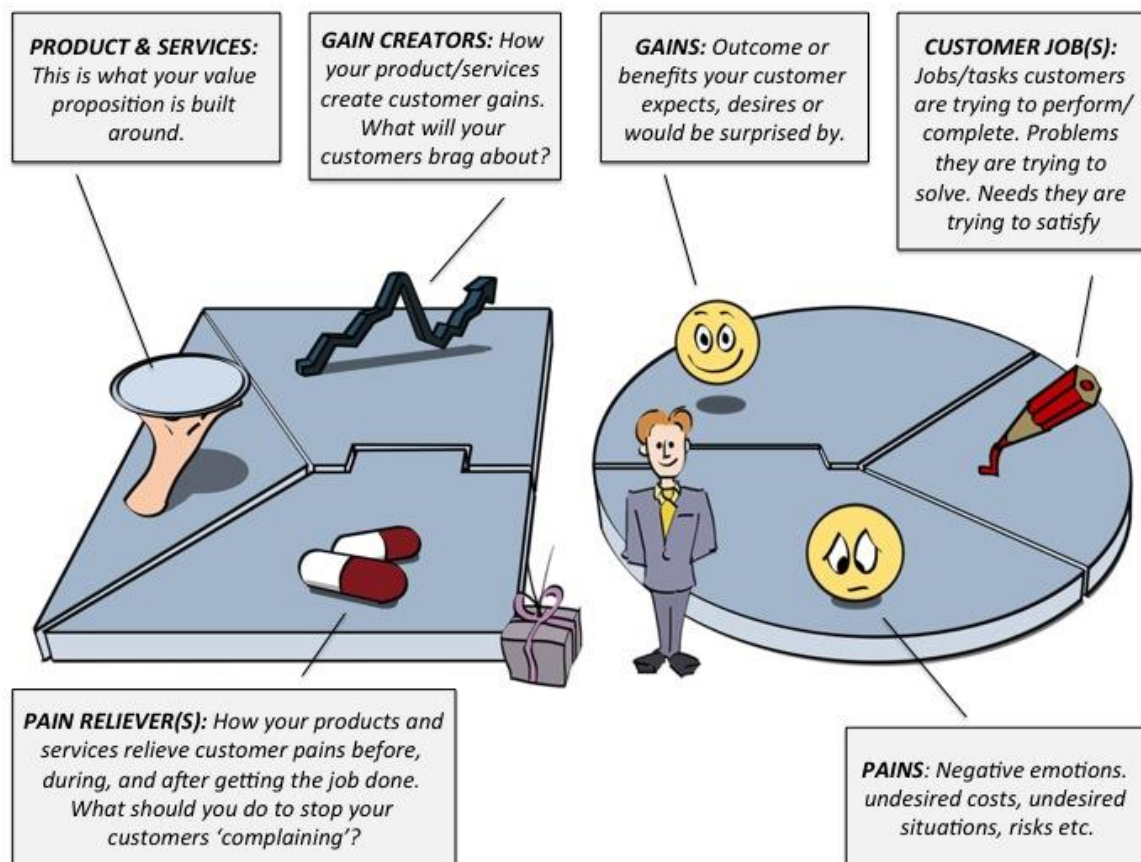


Figure 4. Value proposition canvas.

The customer part is composed of customer jobs your customers are trying to complete, related pains that collect the negative aspects they may face while trying to complete them and third the gains that show the positive outcomes which your customers may have.

The value proposition map has also three parts that contain your products and services, your pain relievers and your gain creators. Products and services can be tangible, intangible, digital, financial

¹⁵ <https://strategyzer.com/books/value-proposition-design>

etc. Pain relievers describe how your services and products can soften the specific pains your customers face and gain creators how customers can benefit from your company products and services.

Reaching a fit between your pain relievers and your gain creators with the client pains and gains is the way to obtain a sustainable opportunity for your business model.

2.2.2 Blue oceans strategic canvas.

The strategic canvas is one of the core tools of the Blue Ocean Strategy¹⁶. Based on a study of 150 strategic moves spanning more than a hundred years and thirty industries, Kim & Mauborgne argue that companies can succeed by creating "blue oceans" of uncontested market space, as opposed to "red oceans" where competitors fight for dominance, the analogy being that an ocean full of vicious competition turns red with blood. **They assert that these strategic moves create a leap in value for the company, its buyers, and its employees while unlocking new demand and making the competition irrelevant.**

The strategy canvas is one of the most useful tools in the blue ocean strategy methodology.

It allows companies to analyse their current situation and understand the criteria and assumptions against which both they and their competitors compete, but moreover, **it helps to establish where expenditure and focus are to be directed since it correlates value perception with the value offered.** This allows companies to understand its competitive value in the current environment.

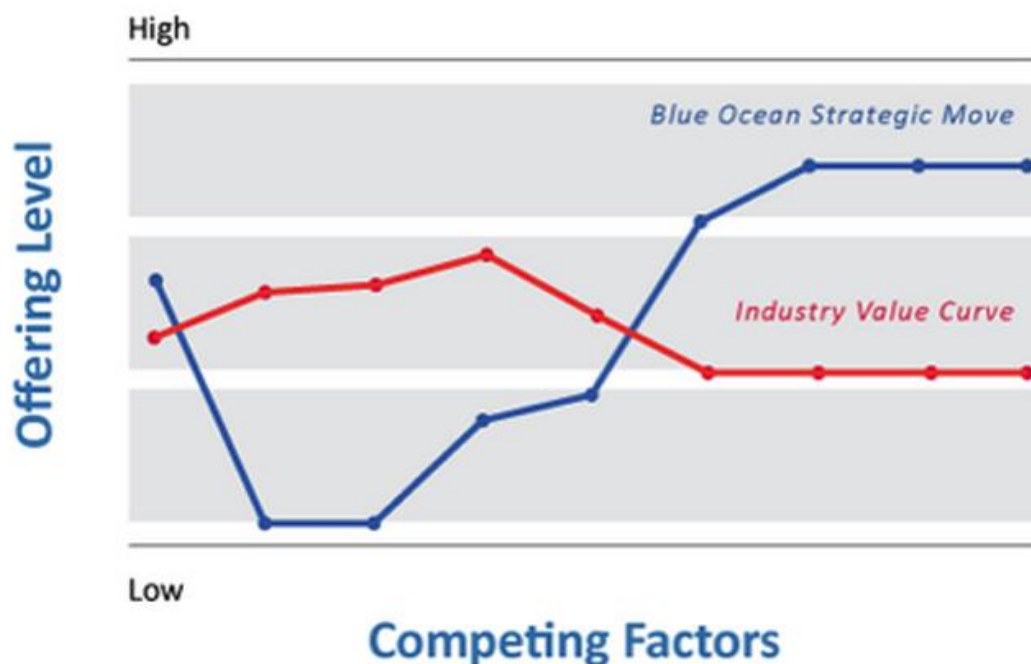


Figure 5. Blue ocean strategic canvas

¹⁶ Kim, W.C.; Mauborgne, R. (2005). Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant. Boston: Harvard Business School Press. ISBN 978-1591396192.

The strategy canvas is based of four actions that aid to eliminate the trade-off between differentiation and low cost within a company along a number of competitive factors.

The four actions framework consists of the following:

- **Raise:** This questions which factors must be raised within an industry in terms of product, pricing or service standards.
- **Eliminate:** This questions which areas of a company or industry could be completely eliminated to reduce costs and to create an entirely new market.
- **Reduce:** This questions which areas of a company's product or service are not entirely necessary but play a significant role in your industry, for example, the cost of manufacturing a certain material for a product could be reduced. Therefore, it can be reduced without completely eliminating it.
- **Create:** This prompts companies to be innovative with their products. By creating an entirely new product or service, a company can create their own market through differentiation from the competition.

2.3 How does the “value proposition tool” work?

The “value proposition tool” developed in the project is a Microsoft Excel® file. **It allows combining the outputs of the previous two approaches into a single set of tables and graphical elements.** In the current context of market creating innovation focus, especially for the H2020 SME instrument and the FTI, the tool has been biased to the blue ocean strategy graphical elements as they aligned better with the concept of creating new market.

2.3.1 Inputs

This tool is composed by an excel sheet with a number of tables and four sheets with preloaded graphical elements.

The first set of 4 tables allows the user to compare the five more relevant features of the product/service and its supporting technology with those of the competence. Somehow, they compiled the left part of the value proposition canvas.

These comparisons are allowed to be done in absolute terms but also in relative terms, with feed the corresponding graphical elements called GR_PROD_FEATURES and GR_TECH_FEATURES.

	Product/service name	Technology background	Feature 1	...	Feature 5
	Insert the names of the commercial product-service you would like to compare	Define which technology is supporting each product or the service	Define a relevant feature worth to compare (from most to less relevant)		

1					
10					

Table 4: Product features table. (Absolute and relative terms are allowed).

As this tool is focusing a research and innovation programme, technology is still relevant in most of the projects, so this is the reason of allowing a separate set of tables for technology. This separate approach also allows the user to decouple the source of their advantages, which is especially useful to define how to protect them in time to ensure sustainability.

	Technology	Feature 1	...	Feature 5
	Insert the names of the technologies you would like to compare	Define a relevant feature worth to compare (from most to less relevant)		
1				
10				

Table 5: Technology features table. (Absolute and relative terms are allowed)

Once the exercise is done to separate product advantages and technology advantages, the next table allow the user to define up to 5 unique selling points compared to the competence. **This forces the user to rank the previously identified product and technological features and just select/group the most relevant one as unique selling points.**

The concept of “unique selling point” is a marketing concept first proposed as a theory to explain a pattern in successful advertising campaigns of the early 1940s. The USP states that such campaigns made unique propositions to customers that convinced them to switch brands. Therefore, unique selling points (USP) refer to the unique benefit exhibited by a company, service, product or brand that enables it to stand out from competitors.¹⁷ **The unique selling proposition must be a feature that highlights product benefits that are meaningful to consumers.**

	Product/service name	USP 1	...	USP 5
	Insert the names of the commercial product-service you would like to compare	Define your Unique Selling Points (from most relevant to less)		
1				

¹⁷ Entrepreneur. (No Date). Unique Selling Proposition (USP). Retrieved March 29th, 2016, from Entrepreneur: <http://www.entrepreneur.com/encyclopedia/unique-selling-proposition-usp>.

10				
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Table 6: Unique Selling Point table comparison (absolute terms)

Having looked first inside the company, the next two tables in the tool allows the user to look into the client (in absolute and relative terms). It is an extended version of the left side of the value proposition canvas to include other factors relative to the sustainability of the business as the client brand loyalty or the revolving income time. This table request the following information for each of the product/service to compare:

- **Brand loyalty:** *“Define the average brand loyalty from your clients and identify how each solution is aiming to conserve it”*. It is defined as the set of positive feelings towards a brand and the willingness to purchase the same product or service repeatedly now and in the future from the same brand, regardless of a competitor’s actions or changes in the environment. Brand loyalty is not limited to repeat purchase behaviour, as there is deeper psychological reasoning as to why an individual will continuously re-purchase products from one brand. Brand loyalty in a sector is an indirect measure to understand how easy/difficult is to conquer market share from competitors. Including information on how they are working to conserve brand loyalty can give the company many ideas to test and/or counteract.
- **Revolving income:** *“Define the average duration between clients buying you again (i.e. until the product is outdated)”*. This field aims to understand the time between clients buying you a second time. This concept aims to explore if your business is mainly based on one-time customers, those who find your business, make a purchase and are never heard from again, or conversely, it is based on repeat or recurrent customers. The former are those who return to your business and buy products time and time again while the latter are those under a subscription-like mode. Despite the fact that these customers repeat, there is no predictability with this kind of customer; they buy items or services when the need arises and you never know for sure if and when the next time they will make a purchase. Depending on the industries it can range from hours or days to years, i.e. hardware equipment that are outdated in 5 years vs. fresh products to be consumed in the next week.
- **Gains:** *“What gains is it offered to the client with this solution?”* This field collect the client perspective already commented in the value proposition canvas right side.
- **Complaints:** *“What complains do the clients have with this solution when using it?”* This field collect the client perspective already commented in the value proposition canvas right side. It is built in the “pains” concept, but extending it to understand what elements of your competence leave the client not fully satisfied.

Apart from these fields, this table allows to compare the three main purchase criteria used by your clients to select between the alternative solutions they have available. Again, as there are just

three, a previous ranking exercise is expected. The relative version of this table feeds the pre-loaded graphic (GR_CLIENT PERCEPTION).

In this relative version of the table a comparison in price is also included. **To finalise the input excel sheet, the tool recreates the blue ocean value proposition tool, with two features in each of the four action frameworks of the tool. Eliminate, decrease, raise and create.**

Having already fill in the tables on product features, technology features, unique selling points and client perception, this final table allows the user to summarize and prioritize the key elements worth to be part of their value proposition.

It gives the possibility to compare up to ten value propositions, so it is left at the user criteria to go in depth comparing their value proposition with that from the competence or just compare their value proposition with the standard offered in their markets.

This table is very useful to be translated as such to the proposals, especially in the SME instrument and/or in FTI proposals.

A good explanation of this table gives evaluators a lot of information on how you understand how you are creating value for your clients and furthermore, shows that you have done a thorough analysis of your solutions taken the client into account.

	Product/service name	Feature 1	Feature 2	Feature 3	Feature 4	Feature 5	Feature 6	Feature 7	Feature 8
		Compare the most relevant feature of your value proposition (0=low, 10=high) you would eliminate, decrease, raise or create for your customers							
1									
10									
Blue ocean strategy		Eliminate	Eliminate	Decrease	Decrease	Raise	Raise	Create	Create

Table 7: Value proposition.

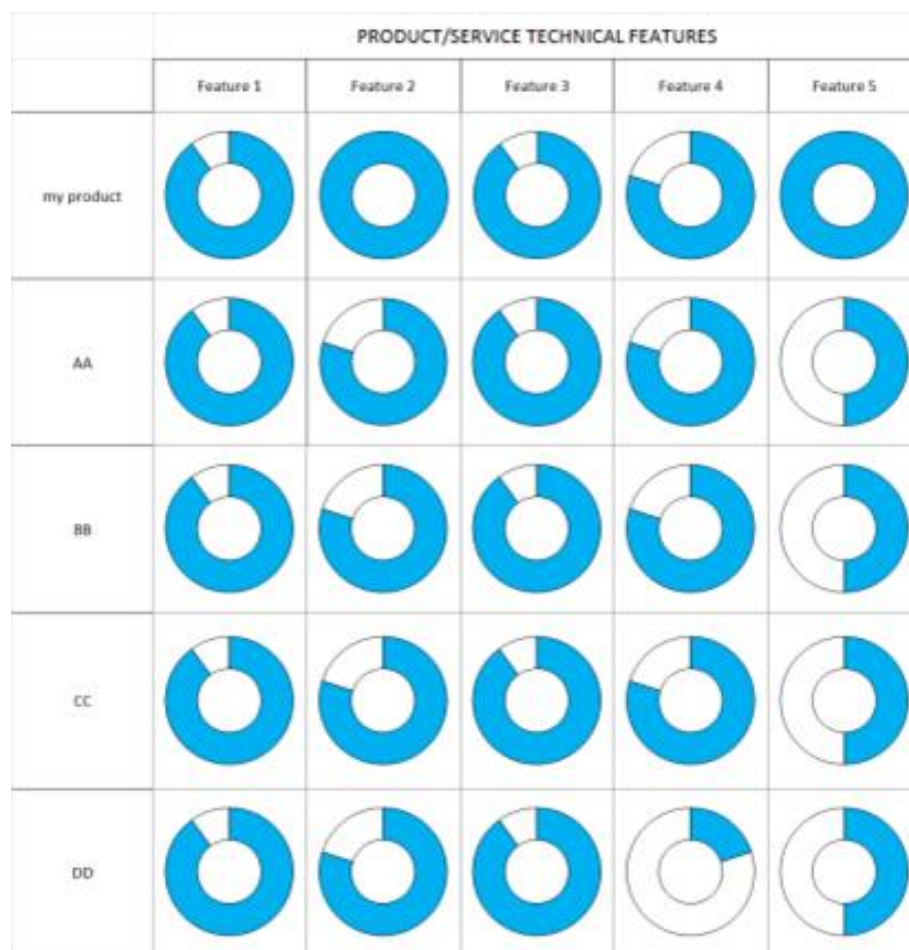
2.3.2 Outputs.

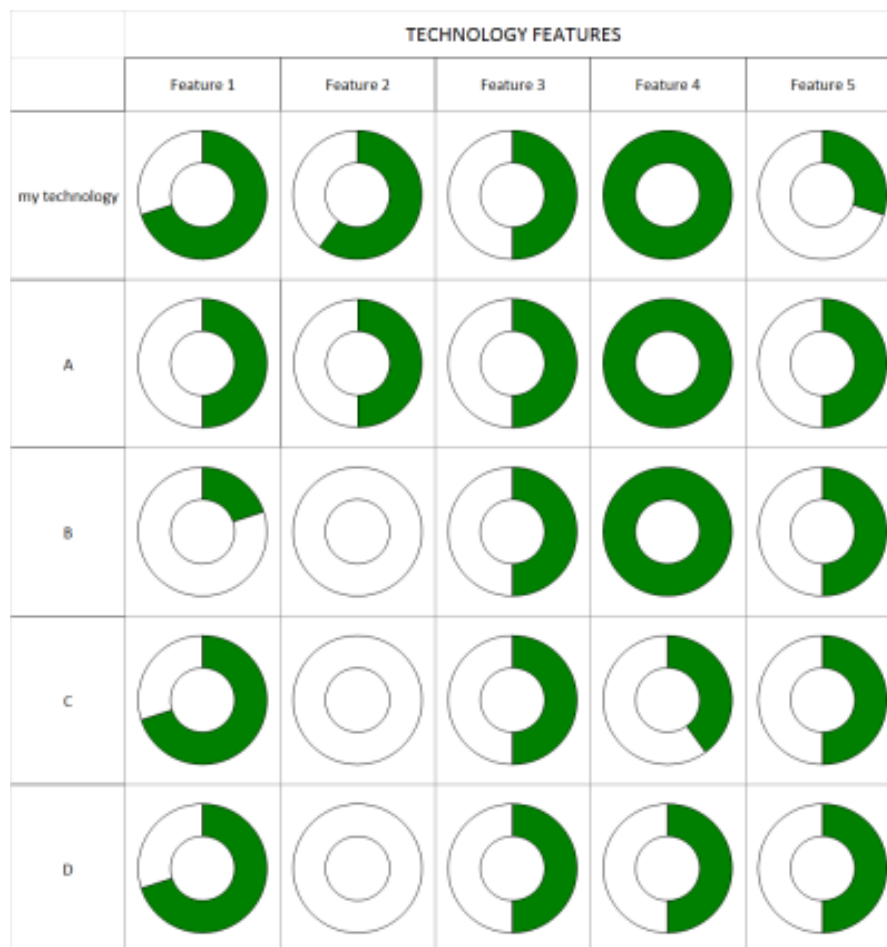
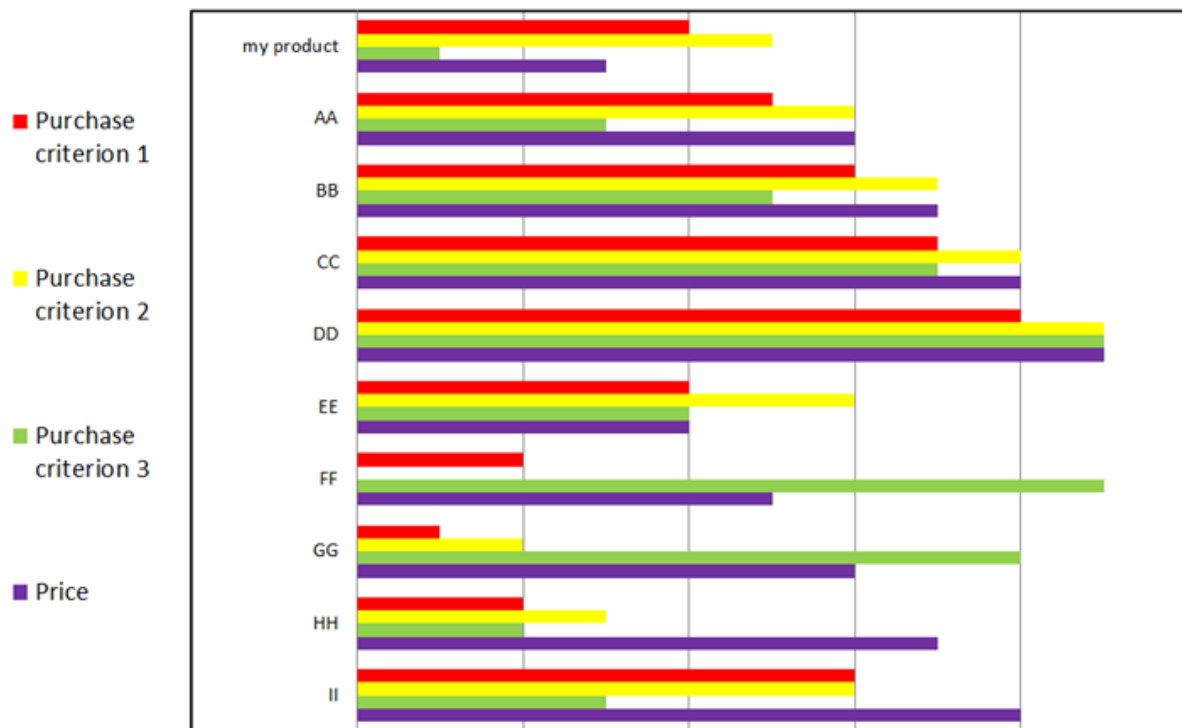
The four graphical outputs are coupled to the tables which are filled- in with relative information in tool. The graphical elements include:

- GR_PROD_FEATURES: shows using rings the different features of your product/service and the competence.

- GR_Tech_FEATURES: shows using rings the different features of the technology supporting your product/service vs other current or future technologies.
- GR_CLIENT PERCEPTION: shows using bars the different perception of the clients, in terms of pricing and purchase criteria of your product and the ones from the competence.
- GR_VALUE PROPS: show the value strategic canvas of your solution vs the competence.

Apart from these graphics, it is evident that the tables themselves are a powerful output of the tool, not only for the “food for thought” that they represent, but also because they can be directly incorporated in the user’s H2020 proposals. Since SME instrument, FTI, RIA and IAs do not share the same proposal’s template nor expect the same depth in the value proposition definition; the location of each of each of these elements as well as its suitability can be different.





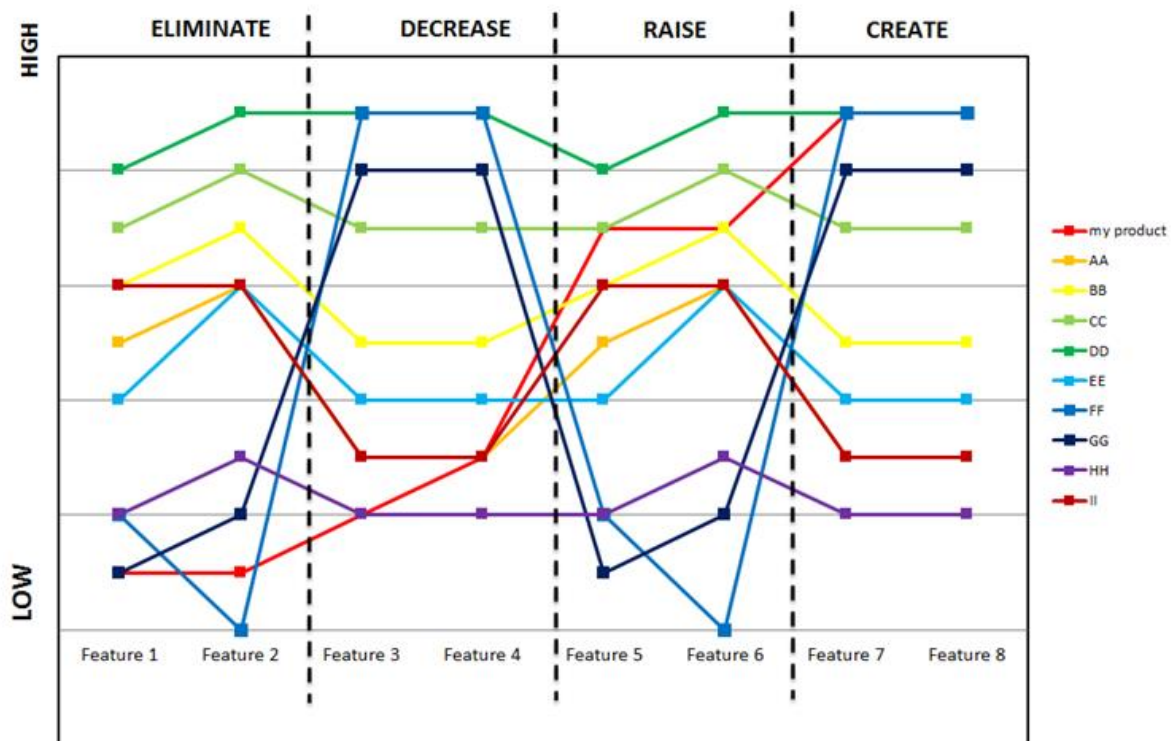


Figure 6: graphical Outputs of the Value proposition tool. GR_PROD_FEATURES, GR_CLIENT PERCEPTION, GR_TECH_FEATURES and GR_VALUE PROPS.

2.4 How the tool's outputs are translated into H2020 close to market actions?

In this way, the next table show where and how each of these nine elements can be incorporated across the different H2020 instrument templates.¹⁸

	Ph2 SME instrument	FTI	IA	RIA
Table product features	Strongly recommended Section 1.1: Challenge and solution	Strongly recommended Section 1.4	Widely recommended Section 1.4	Not necessary
Figure product features				
Table tech feature	Strongly recommended Section 1.1: Challenge and solution	Strongly recommended Section 1.4	Widely recommended. Section 1.4	Widely recommended Section 1.4
Figure tech features				

¹⁸ http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-call_ptef-pt-2018-20

Table USP	Mandatory Section 2.1: entering the market	Recommended Section 2.1	Not necessary	Not necessary
Table client perception	Strongly recommended Section 2.1: entering the market	Recommended Section 2.1	Welcomed Section 2.1	Not necessary
Figure client perception				
Table value proposition	Strongly recommended Section 1.2. Approach	Strongly recommended Section 2.2.a	Welcomed Section 2.2.a	Not necessary
Figure value proposition				

Table 8: Recommended output location within H2020 close to market instruments.

3 Market analysis & competitors tool.

3.1 What is a "market & competitors analysis"?

*Marketing & competitor analysis is an assessment of the strengths and weaknesses of current and potential competitors. This analysis provides both an offensive and defensive strategic context to identify opportunities and threats. The way to define this analysis is variable, but basically consists of combining most of the relevant sources of competitor analysis into a single comparative framework.*¹⁹

The strategic rationale of competitor knowledge is simple. **Superior knowledge of rivals offers a legitimate source of competitive advantage to offer to your client superior customer value.** As any competitor analysis is a comparative exercise, a thorough framework gives companies three main advantages²⁰:

- To identify strategic weaknesses in competitors that your company may exploit.
- To anticipate the strategic response of your rivals to your planned strategies, the strategies of other competing firms, and changes in the environment.
- To response quicker to the changes in the environment, either as an offensive movement to exploit opportunities and capitalize on strengths or either as a defensive tactic to counter the threat of rival firms from exploiting your weaknesses.

3.2 How can you conduct a market and competitors analysis?

There are multiple tools to conduct a market and competitor analyses with a different focus but the question driving your decision is: What information would be helpful for you? The answer of this question will define the level of analysis to be covered in your analysis.

Under the holistic vision of competence, the relevant information of your competitors in 360° will be divided into 7 categories: competitor's background, finances, products, markets, facilities, personnel, and strategies.²¹

The details from each category are depicted below:

- **Background:** Location of offices, plants, and online presences. History – key personalities, dates, events, and trends. Ownership, corporate governance, and organizational structure. Relevance as competition

¹⁹ Bergen, Mark. "Competitor Identification and Competitor Analysis: A Broad-Based Managerial Approach" (PDF). The University of Minnesota. Retrieved 24 January 2014.

²⁰ Fleisher & Bensoussan, "Business and Competitive Analysis: Effective Application of New and Classic Methods." FT Press, 2007

²¹ Thomas O'Connor (2010). Strategic Planning for Distributors: Execution Isn't Everything--It's the Only Thing!. Natl Assn Wholesale-Distr. p. 49.

- **Financials:** Profitability, dividend policy, and profitability. Various financial ratios, liquidity, and cash flow. Profit growth profile; method of growth (organic or acquisitive). Financial shareholder structure.
- **Products:** products portfolios. New products developed, new product success rate, and R&D strengths. Brands, strength of brand portfolio, brand loyalty and brand awareness. Patents and licenses, Quality control conformance.
- **Marketing:** Segments served, market shares, customer base, growth rate, and customer loyalty. Promotional mix, promotional budgets, advertising themes, ad agency used, sales force success rate, online promotional strategy. Distribution channels used (direct & indirect), exclusivity agreements, alliances, and geographical coverage. Pricing, discounts, and allowances
- **Facilities:** Plant capacity, capacity utilization rate, age of plant, plant efficiency, capital investment. Location, shipping logistics, and product mix by plant.
- **Personnel:** number of employees, key employees, and skill sets. Strength of management, and management style. Compensation, benefits, and employee morale & retention rates
- **Corporate and marketing strategies.** Basic contact information. Objectives, mission statement, growth plans, acquisitions, exits. Marketing strategies.



Figure 7: Competitor 360° profile

3.3 How does the “market analysis and competitors tool” work?

The “market analysis and competition tool” is a Microsoft Excel® file **that allows the user to analyse some of the key elements identified in the previous profiles.** The selection of the elements in the different tables and graphics has been biased by the information expected from market and competition in the H2020 close to market instruments. Similarly, apart from the current sources of competition, the tool looks further and covers also future competing sources, widening their usability to instruments in H2020 typically non so close to market.

3.3.1 Inputs.

To consider this wider scope, the inputs of this tool are separated into three input sheets: “COMPETITIVE ALTERNATIVES”, “COMPETITIVE TECHNOLOGIES” and “COMPETITIVE IP& PROJECT”. **These three sheets aims to cover individually what is already in the market and what can be expected to be soon in the market, either through cross-fertilization of technologies from other sectors or either through public or private R&D effort.**

3.3.1.1 *Competitive alternatives:*

Starting from the present, the sheet “COMPETITIVE ALTERNATIVES” covers **the competitor analysis as such**. It covers three tables that bring together only a selection of elements from the overall holistic vision of competence. The specific scope of each of the table and the requested parameters are explained below:

Table Competitors Landscape: This table serve as an overview of the competence globally to set the starting point in the market. Most of the field requested deal with basic company information and location. The concrete fields are the next ones:

- Product/service to compare. *“Insert the names of the commercial product-service you would like to compare”.* As the nature of the projects in H2020 can have a wide scope, this field allows comparing not only direct competitive solutions but also alternative solutions that are currently used/developed to solve the same customer needs.
- Relevance. *“How relevant is this solution in their overall portfolio of product?”* Despite all the selected products are competing solutions, this fields aims to understand how relevant this product is for the company commercializing it. This relevance can be estimated based on the relative weight of this solution in the overall company turnover or based on the company approach in different markets. I.e. it is not the same to “fight against” products which are the core of the offer of your competitors (and therefore represents a key revenue stream for them) or against products which are one out of x in your competitors portfolio. The appetite from your competitor to counteract with you will be extremely different in both cases.
- Company name. *“Insert the names of the companies commercializing each solution”.* Although your competence itself is a product or a service, it is very relevant to know who is commercializing it (not only as brand level but also company owner level)
- Validation status: *“Level of validation of this product/service for your market.”* (In terms of TRL). In general terms, most competing solutions in this table would be already commercial. However, considering the nature of the projects, it could happen that some of them are still under development (probably even ours, since, we are asking H2020 for funding to take it closer to market).

- Size: *"SME/ midcap/ Large enterprise"*. From a market barriers point of view, it makes a difference who is your competitor in terms of size for their capacity to react to you of their capacity to counteract to you.
- Turnover. *"From last year if possible)"*. As in the previous case, it is an indication of the business size of your competence.
- Market share. *"What is the market share of this company for this solution?"* If your competitive scenario calls for a fight in the market share, it is relevant to understand your starting point and which is the logic level in your market to become one of its key players.
- Funds raised. *"How much private funds has this company raise if any?"*. Especially for the SME instrument case when your competitors have already raised private funds it is good to know. It can give you two important insights. 1) Is there a strong market opportunity in this field? 2) Is it still a high growth opportunity in your market?
- Country. *"Headquarters location of the company."* Considering the nature of H2020, identifying also third country competitors is a significant parameter to map globally the competence.

Table Competitors Offering: This table aims to understand how you and your competence sell yourselves to the clients. It responds to the question "what does your competence sell (in a broad sense)? The fields in this table collect mainly elements from the "Corporate and marketing strategies" parts of the competitor's profile.

It is not the typical competitors table but allows you to analyse competence through a client centric point of view. The elements that are included in the table are the followings:

- Product/service to compare. *"Insert the names of the commercial product-service you would like to compare"*. Same than before. (it is the link between the three tables)
- Business model: *"Insert the business model applied for this solution by the different companies"*. As the business model is a wider context than the solution itself, making this comparison will help you to understand better how your competence is approaching the business. A Business-to-business solution vs. a business-to-customers solution for the same product may have a lot of disparities worth to look in detail.
- Key Message: *"Which is the key message used in their marketing campaigns linked to this solution?"* The key message is closely linked to your promise to your customers. This promise highlights your most valuable characteristics. An analysis of competence under this approach helps you to map how your competence tries to hook their clients.
- Blog: *"What are the keywords they use to comment in their blog (if they have it)?"* A blog is a discussion or informational website consisting of discrete, often informal diary-style text entries ("posts"). In the origin, blogs were usually the work of a single individual however, from the rise of social media, they have become more professionalized and many

companies have a blog section in their websites. The idea of these blogs, from the marketing point of view, is to offer content related to topics close to your client's needs, gains and/or pains. By exploring these blogs, you can get ideas on the concepts your competence aims to link to their product and/or solution.

- Social networks. *"Do they have a strong presence in social networks? Followers, YouTube channel..."* In today's world, most companies have some kind of presence of social network with marketing purposes. Having a look to their corporate sites, accounts or YouTube channels can help you to know better the aspirations of your competence. Again, it can give you ideas for your own marketing strategy.
- Last opening. *"Where and when did they open their last center, space, office..."* In dynamic sectors, the last opening of any facility of your competence can give you a clue on their expected next step in the market. A new office in a given region, a new partnership with someone or a new production plan is a preparatory action from which you could extract valuable conclusions.
- Events presence: *"Where is the last conference they attended to present the solution?"* Similar to the previous field, exploring their last conference appearance allows you to check their last developments. In many cases, as you know the sector, the relevance of the conference or the fair allows you to estimate somehow the level of these novelties.

Table Competitors Operations: This table covers the core of the fundamentals of the businesses of your competences. Most of the fields requested come from the "Financials", "Products" and "Marketing" parts of the competitor profile and mainly respond to the question "how does your competence sell?". The fields requested are the following:

- Product/service to compare. *"Insert the names of the commercial product-service you would like to compare".* As the nature of the projects in H2020 can have a wide scope, this field allows to compare not only direct competitive solutions but also alternative solutions that are currently used/developed to solve the same customer needs
- Pricing model. *"Define how the price is set and your revenue stream logic".* Include a short description of the pricing model selected and the different revenue streams of the business.
- Price. *"Define in EUROS the average price of the solution"*
- Cost. *"Define in EUROS the average cost of the solution".* Although price is easier to find than cost (probably in many cases impossible), this analysis can give you a nice overview of the margins in the business operations of your competence.
- Cost structure. *"Define the cost structure behind this average cost".* Considering that the "revenue model financial tool" already proposes you some guidelines to define your cost structure, this field aims to identify the main cost items that you and your competence may

have that justify the cost or the price of the solution. This “main cost items” may include marketing staff, own establishments, infrastructures...

- Delivery method. *“Define how each solution reaches their target clients (own forces, distribution channels...)”*. This field aims to look into the marketing of the product to capture information about the capacity to reach widely the market and how you and your competence interface with it. I.e. your own staff selling your product is not the same than selling it into a retailer shelf or through just as an online-shop.
- International reach. *“Define how and if the solution has already reached international markets and where (EU, LATAM, US...)”*. This field aims to see the international presence of the solutions in the global market. This information can help you drive your market priority selection and also define a different approach per geographical markets.
- Known clients. *“Identify 2-3 key clients already using this solution”*. It is always good to have references for your product. However, collecting this information for your competence can help you in identifying clients that have the problem you are trying to solve.

3.3.1.2 Competitive technologies:

The sheet COMPETITIVE TECHNOLOGIES aims to **look into the technology development domain**. **This sheet serves as a kind of SWOT analysis, from a technological perspective of the future competences of the user’s current offer.**

Considering the scope of H2020, this sheet includes three tables: one covering existing technologies commercial relevance to understand the level of threat they suppose for the user’s product or services, a second one identifying the key flag-holders that are developing such technologies and finally, a last one, expressed in relative terms, that serves as dataset for the graphical output of this sheet.

Table Commercial Relevance. This table covers information regarding technologies that can potentially become a competence for our product/solution in a short/midterm. It includes not only the technology name, ordered by relevance but also 4 key elements:

- Availability: *Define the degree of availability of this technology in other sectors or domains.*
- Transferability: *Define the degree of direct transferability from other sectors to your market.*
- Barriers: *Define the main barriers to ensure quick success of the technology in your market*
- Drivers: *Define the main drivers that will help to boost this technology in your market*

Table Technology Flag holders. This table collects the information of the companies that can be considered the reference of such technology development. It includes just a basis set of information including:

- Company name. *“Company name owning or developing this technology”*.
- Country. *“Headquarters location of the company.”* Considering the nature of H2020, identifying also third country competitors is a significant parameter to map globally the competence.
- Size: *“SME/ midcap/ Large enterprise”*. From a market barriers point of view, it makes a difference how strong is your future competitor.
- Funds raised. *“How much private money has this company raised if any?”* Considering that it includes technology development, the level of funds raised can give an idea on the technology development speed and its promising growth.

Table Commercial Relative Relevance. This table summarizes in relative terms the technology availability and transferability concepts and includes a third field that deals with the Validation status, in terms of TRL (research level, lab level, demo level, industrially relevant level, commercial scale). This third field complements perfectly the previous one to offer a relevant overview of the closeness of any of these technologies to become a real competitor.

3.3.1.3 Competitive IP & projects:

The sheet COMPETITIVE IP & PROJECTS **aims to look into the state of the art around your competitive solutions from even a wider perspective. It has two tables that look at different “worlds”**.

The first one called “table IP Assets” collects information from the patent world to allow the users not only to map possible conflicts for exploitation but also to locate patents that are still on the research domain worth to maintain an eye on them. In this table, the following fields are requested:

- IP asset: *“Insert the reference of the IP identified”*.
- Technology: *Which technology is this IP based on?”* This field offers the link to the previous analysis on technology.
- Relevance: *“How relevant is this patent for your solution (order by higher relevance)”*. To ease the graphical outputs, the relevance order is fixed in the table.
- Description: *“Describe briefly the scope of the IP.”*
- Coverage: *“Describe the locations covered by the patent.”* Despite the entry point of the patent, coverage not only implies if it is a PCT or not but only, in which countries/market it is already active.
- Exploitation: *“Which TRL does the IP refer to?”* Since patents or IP assets can have multiple scopes, this field aims to define its closeness to exploitation, in terms of TRL, as a common frame used across H2020.
- Status: *Describe its current status (filled, granted, expired...)*

- Owner: *Define the owner of the IP.* This field is included to consider those cases where the IP owner is different from the company aiming to exploit it.
- Company: *Define which company has its exploitation rights?* From a competitive analysis perspective, this is one of the most relevant information, as it can be a future competitor to your solution (if not yet already)
- What's relevant: *Why is relevant for your solution?*

The second one, called "table projects", looks to funded projects, typically within the R&D domain that may have some relation with your solution. This table allows you to make a small State of the art analysis using public-domain data hubs, as the H2020 participant portal dashboard²² or others similar at national level (i.e. the grant transparency portal from the Spanish Government²³)

The fields requested in this table are the following:

- Project reference: *"Project identifier"*
- Technology: *Which technology is the project about?"* This field offers the link to the previous analysis on technology.
- Relevance: *"How relevant is this project for your solution (order by higher relevance)".* To ease the graphical outputs, the relevance order is fixed in the table.
- Dates of execution: *What is the project timing (start-end date)?*
- Type of funding: *Who fund the project? EU level, national level, regional level, private funding...*
- TRL level: *What is the TRL expected as output?* In most of H2020 topics, there is rather clear the TRL levels that are targeted in the call. This can be a useful starting point to understand the degree of maturity of the project.
- Coordinator: *who is the coordinator entity?* Only in cases where there is a consortium.
- Key stakeholders: *Who else (relevant) is in the consortium (if applicable)* especially interesting, if any of your competitors is there.
- What's relevant: *Why is relevant for your solution?*

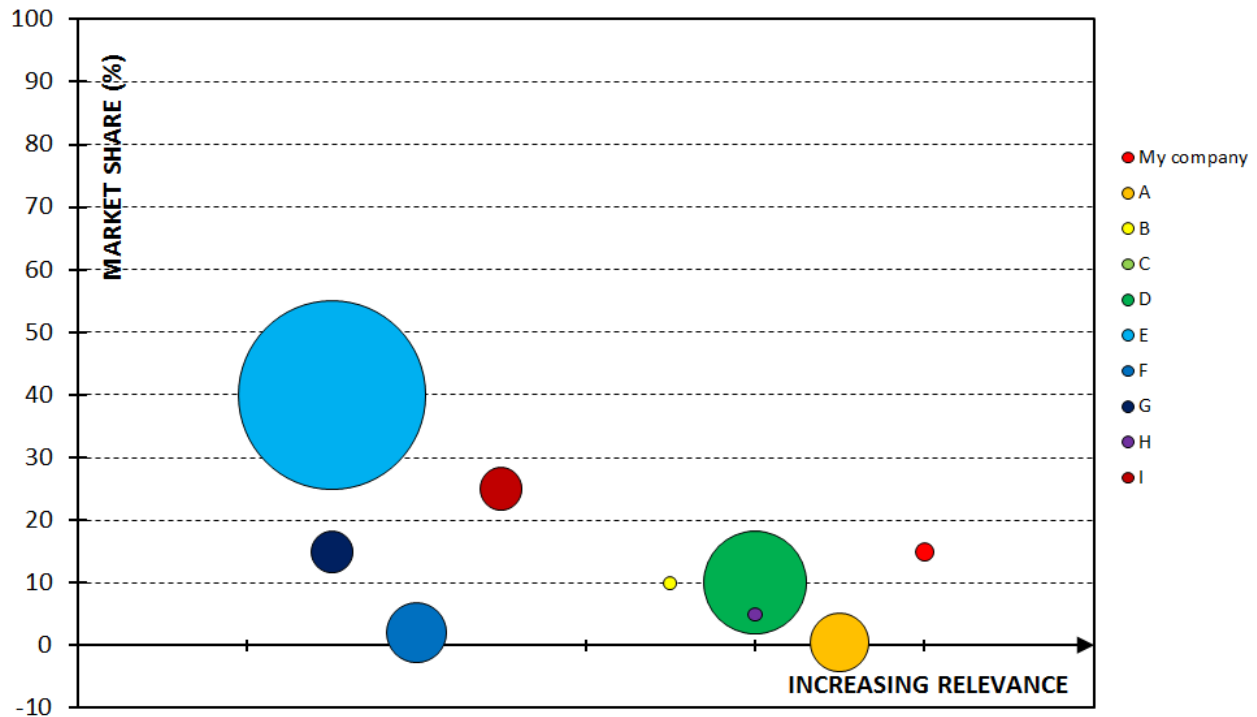
3.3.2 Outputs.

Filling in all of these tables is not an easy task, so if it is done systematically it already serves as a repository for a lot of useful information on your market and competitors. Apart from this, the tables with relative information are already coupled with three graphical elements of the tool:

²² <http://ec.europa.eu/research/participants/portal/desktop/en/projectresults/index.html>

²³ <http://www.infosubvenciones.es/bdnstrans/GE/es/index>

- **GR_MARKET:** that shows a photo of your competitive landscape based on their turnover, the relevance for your company and the current market share.
- **GR_Tech:** shows potential technologies' transferability and availability to your market based on its current TRL level. It is a kind of photo of your future key competitors.
- **GR_OVERALL:** shows the overall state of the art in your market considering together technologies, current solutions, IP and project. It gives a nice whole picture of your competence.



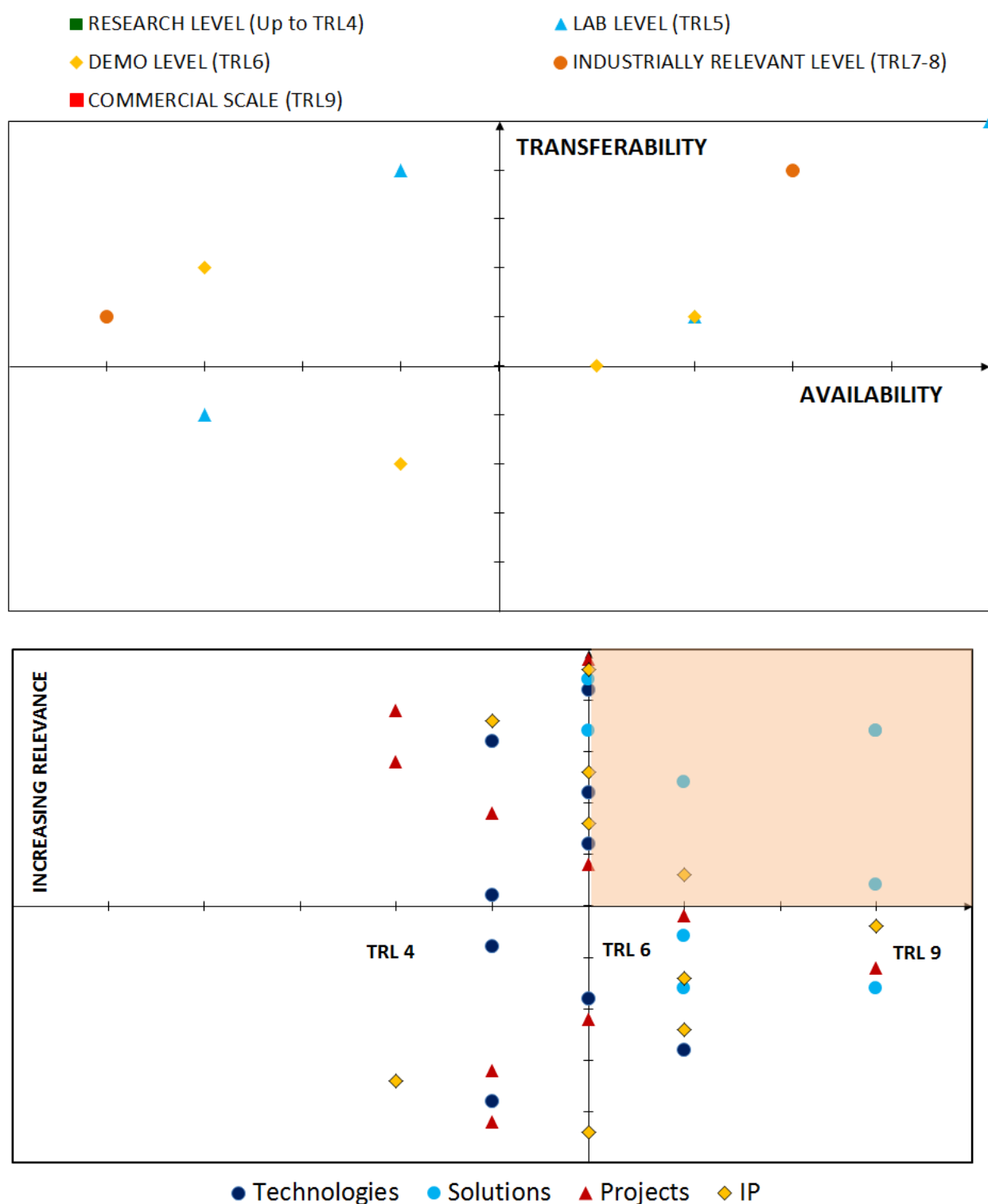


Figure 8: GR_MARKET, GR_TECH and GR_OVERALL graphical outputs of the tool.

3.4 How the tool's outputs are translated into H2020 close to market actions?

As in the previous case, both the tables and the images could be useful in the different H2020 close to market actions, in its correct location along the proposal. In the next table,

recommendations are offered on where and how each of the outputs of this tool can be incorporated across the different H2020 instrument templates.²⁴

	Ph2 SME instrument	FTI	IA	RIA
Table competitors landscape	Mandatory Section 2.1: Entering the market	Strongly recommended Section 2.1:	Welcomed Section 1.4	Not necessary
Table competitors offering	Recommended Section 2.1: Entering the market	Recommended Section 2.1	Not necessary	Not necessary
Table competitors operations	Strongly recommended Section 2.1: Entering the market	Strongly recommended Section 2.2.a	Welcomed Section 1.4	Not necessary
Figure GR_MARKET	Strongly recommended Section 2.1: Entering the market	Strongly recommended Section 2.1	Not necessary	Not necessary
Table Commercial relevance tech	Not necessary	Welcomed Section 1.4	Widely Recommended Section 1.4	Recommended Section 1.4
Table Technology flag holders	Not necessary	Welcomed Section 1.4	Widely Recommended Section 1.4	Recommended. Section 1.4
Figure GR_TECH	Not necessary	Welcomed Section 1.4	Widely Recommended Section 1.4	Recommended. Section 1.4
Table IP assets	Strongly recommended. Section 2.4. IPR and legal framework	Strongly recommended Section 2.2.b	Widely Recommended Section 1.4	Widely Recommended. Section 1.4

²⁴ http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-call_ptef-pt-2018-20

Table Projects	Not necessary	Recommended Section	Strongly Recommended Section 1.4	Strongly Recommended Section 1.4
Figure GR_OVERALL	Not necessary	Strongly Recommended Section	Widely Recommended Section 1.4	Widely Recommended Section 1.4

Table 9: Recommended output location within H2020 close to market instruments

4 Concluding remarks.

As the H2020 instruments become closer to market, higher attention has to be paid to the business side of the proposals. However, as not all instruments request the same level of detail, having a clear frame for what to expect in each of them can be a key piece of information for H2020 participants, especially SME and newcomers that are less experienced in the H2020 world.

The toolbox presented herein is built with that purpose: “define a frame for the business related elements of H2020 proposals”, and consist of a collection of three tools tailored to the H2020 “language” and expectations.

This toolbox uses the business model canvas as reference, allowing users to navigate through the canvas modules up and down, not limiting the analysis to the own company but expanding it also to competitors. As the scope of the toolbox has been widened to cover also future scenarios, the different outputs that can be obtained are fully useful across the whole spectrum of instrument within H2020 with the remarks included during this document.

This document expects to be a user guide to easily interact with them and to offer some guidance to use properly the outputs obtained with the tool.

In that sense, the first toolset, which includes the “Revenue model financial tool” and the “decision tree for pricing strategies”, looks into how the business generates cash. Although it is fully focused in the two bottom modules of the canvas, (the cost structure and the revenue streams), with its corresponding adaptation, its outputs are worthy piece of information to be included in most H2020 IAs, FTIs and SME instruments.

Similarly, the second tool, (the “Value proposition tool”), as it looks into the core of the developed product, service or process, is fully focused in the central module of the canvas. The information used to define it is the one expected in detail in most FTI and SME instruments and partially in most IAs and RIAs.

Finally, as the “Market analysis & competitor tool” looks around the market and how to reach it now and in future scenarios, it has multiple outputs worth to be considered across the four H2020 instruments. Although it basically concentrates in the business model canvas modules that correlate with market (customer relationship, channels and customer segments), it goes beyond the company canvas and allow a complete analysis of the competitive environment. In this respect, the outputs linked to current competition are more suitable for FTI or SME instruments while those linked to future scenarios are more linked to IAs and RIAs.

To conclude this document is worth to remember that the tools themselves are just frames for the user to insert the data. The quality of the data inserted by the user is directly linked to the quality of the outputs generated by the tool. In this sense, although this document issues recommendations on which outputs to include and where, depending on the H2020 instrument, it

always has to be kept in mind that the hypothesis considered to reach these outputs are probably as important as the outputs obtained. At the end, the goal of this kind of information within the H2020 proposals is not only to demonstrate how great the opportunity is, but also demonstrate that you understand what drives the growth of your business and the grounds of the market you are aiming to enter.

Annex 1: Guiding map for the revenue model selection.

