

Policy brief

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The SWITCH-ON Market Analysis Framework: support to European innovators on commercialising water information products

SWITCH-ON aims to explore and exploit the substantial and untapped potential of open data to improve water management. One of the project's premises is that new water-related information and knowledge can lead to more efficient use of natural resources and enhanced environmental protection. SWITCH-ON has shown how the use and repurposing (re-using under a different context) of open data can drive high value added innovation with a broad impact on society.

The European Union has expressed a need for promoting entrepreneurship and supporting innovators to commercialise their products. In response to this, SWITCH-ON has produced a structured toolbox that guides innovators to identify target markets and select a suitable business model consistently. This toolbox, called the Market Analysis Framework (MAF), has been applied by the developers of the 14 SWITCH-ON open data products and services, making it a tested and validated framework.

By promoting demand-driven product development, the MAF can help European innovators increase their chances of achieving commercial success, ultimately contributing to the region's smarter, more sustainable, and more inclusive future economy.

Supporting European innovation to achieve smart, sustainable and inclusive growth

Europe's 2020 growth strategy aims for an EU economy that is smart, sustainable, and inclusive. Through policies such as the INSPIRE directive, which promotes the sharing of spatial environmental data to better engage citizens and improve policy, and its Open Data and Digital Single Market Strategies, the European Union is harnessing the power of environmental open data to help deliver this future. The SWITCH-ON project is bringing Europe one step closer to achieving its strategic goals by utilising open environmental data to create innovative solutions for the water sector, guiding better environmental decision making, and democratising information.

In its May 2016 announced vision, **The Three O's – Open Innovation, Open Science, and Open to the World**, the European Commission clearly identifies the region as a powerhouse for knowledge generation. However, it also highlights shortcomings in fostering a stronger culture of entrepreneurship; providing support to innovators in developing better business models; and facilitating market access. One of the key outputs of the SWITCH-ON project – the Market Analysis Framework – has been developed with the aim to address these issues in particular.



The MAF helps product developers to identify and analyse target markets for their innovations, ensuring that a clear market need exists, facilitating strategic communication with the target group, and enabling the selection of a suitable business model. The framework provides the basis for co-creation and demand-driven innovation that can ultimately result in better products and services. The Framework is structured into two main parts, as shown in Figure 1 below. Part I helps users to outline and understand the external conditions that influence markets (e.g. economic, social, and political forces), while Part II introduces tools to identify business opportunities and threats, and evaluate the business potential of specific target groups.

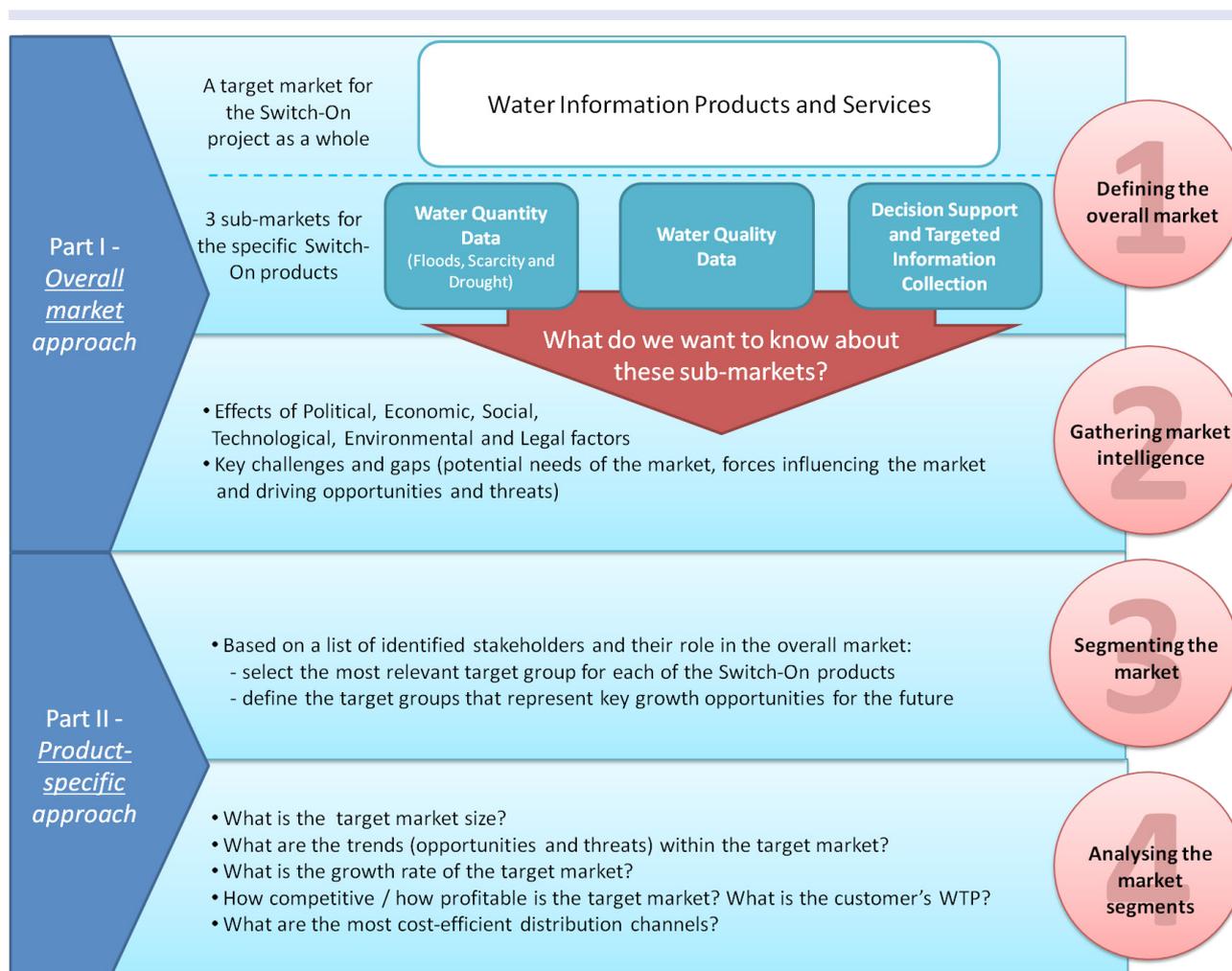


Figure 1. The Market Analysis Framework: SWITCH-ON's stepwise approach to market analysis.

MAF development

The MAF has been tested, validated, and applied for the 14 SWITCH-ON products and services. First, a pilot application of the MAF was conducted for two products in order to gather direct feedback from their developers on issues like usability, process design, and support material. After reviewing this feedback and making appropriate modifications, the MAF was applied for the remaining SWITCH-ON products.

MAF activities, goals, and tools

Table 1 shows the main activities within the MAF, including their goals and suggested analytical tools. Detailed explanations can be found in the “Report on framework for judging market potential of information products” (Anzaldúa et al., 2014), which is **Deliverable 5.1** of the SWITCH-ON project.

Table 1. Activities facilitated by the MAF, their goals, and the related tools.

MAF activities	Main goal	Tools suggested
Market Definition	Specify market boundaries and the need(s) to be satisfied by a product or service	- Approach selection (top-down or bottom-up)
Market Intelligence	Assess macro-environmental factors that influence a product or service’s market using a strategic analysis tool	- PESTEL analysis (assessment of political, economic, social, technological, environmental and legal factors influencing a market)
Market Segmentation	Understand the needs and behaviour of potential end-users and select the most attractive markets to target	- Market segment definition - Target group selection
Market Analysis	Exercises and tools used to determine the attractiveness of the selected market segment and understand its dynamics.	- Secondary research - Market size estimation - Market growth rate estimation - SWOT analysis - Competitor identification framework - Competitive strength map - Porter’s five forces - Cost-volume- profit analysis - Ansoff matrix - Risk matrix

Part I: Defining the market and gathering initial intelligence

Deliverable 5.1 (referenced above) explains why carefully defining the market is important and how this can be done. It then uses the PESTEL analysis methodology to assess the overall market for SWITCH-ON, providing a complete example of a market intelligence exercise. As shown in Figure 1, the overall market identified for SWITCH-ON and its products and services was defined as the market for “Water Information Products and Services”.

Results of the PESTEL analysis: Largely favourable conditions for business development in the EU market for water information products and services

The aim of PESTEL analyses is to help identify external opportunities and threats driven by political, economic, social, technological, environmental, and legal factors. The PESTEL analysis conducted within SWITCH-ON showed that:

- The high level of regulation on the EU water sector, with its clear standards protecting the quantity and quality of European waters and promoting the re-use of public environmental data, can create demand for new tools to assist monitoring, compliance, and reporting.
- Political action at the EU level has been considerable in recent years and has prioritised safeguarding Europe's water resources and promoting the use of open data.
- Economic forecasts suggest that, together with the Information Communication Technologies (ICT) sector, the water sector in Europe will be a large driver of economic growth in the coming years.
- Eurobarometer surveys show that most European citizens think protecting the environment is important and feel they are directly affected by environmental problems. Consequently, demand for information products and services that help to democratise water quality and quantity data could emerge.
- The European water sector is characterised by fragmented solutions and insufficient interoperability across national and international data and information systems. Hence, technology plays an increasingly important role in the sector, with clear opportunities for appliances, systems and methods that harmonise and collaboratively use water-related data.
- Europe is already experiencing the effects of climate change in the form of extreme rainfall and temperatures, which are projected to increase. These challenges are already driving demand for better tools to increase resilience, facilitate adaptation to climate change, and use and manage water resources efficiently.
- The recession has placed limits on the public budgets of Member States and local authorities, which could slow uptake of water resource management innovations.
- The inherent complexity of the water sector and the significant role of non-domestic consumers (e.g. agriculture, energy producers, and the manufacturing industry) make it difficult to predict the extent to which societal changes could translate into new market opportunities.

Part II: Tools to segment the market and analyse the segments

Using the PESTEL analysis results as a backdrop, the market under scrutiny can be divided into specific segments (i.e. groups of actual and potential customers aggregated based on similarities in their wants and needs, geographic location, or socio-demographic profile). These market segments can then be examined from the viewpoint of the individual organisation that supplies the product or service.

Part II of the MAF presents an easy-to-use, step-wise approach to collecting and analysing key information on individual market segments. It empowers product developers by providing a wide set of tools to critically evaluate the attractiveness of a business opportunity. The output can be used to prepare business plans and other strategy documents.



MAF results

Applying the MAF yielded clearly defined target groups for each of the 14 products and services being developed in SWITCH-ON (Figure 2). It also laid the groundwork for selecting appropriate business models and elaborating customer-oriented marketing communication strategies.

For each of the products:

- A primary target group and a key growth opportunity were identified. The former was the main focus of study for the rest of the MAF application; the latter was regarded as an opportunity for market expansion at later stages.
- A communication strategy was developed based on the communication goal and target group identified.
- A SWOT analysis was conducted to recognise the main strengths and weaknesses of the assessed product as well as any internal and external challenges and opportunities.
- The competitiveness of the products was analysed.

The MAF application concluded by selecting a business model and preparing a business model canvas. These exercises helped to put the information gathered throughout the MAF process into action and to shed light on the sensitivity of a selected business model to changes in pricing.

Product / Target Group	FIRM	riverinfo.eu	Forecast Broker	SHIFT	APRIL	wPRISMA	wPOLIS	DIWADIS	RUTPRINT	eEUROD	UNCOVER	HyCAW	Sale Trip	SHIPA
Local authorities		○								○				
National and Regional Authorities	⊙		⊙		○	⊙	⊙				○			
European Central & Regional Water Authorities						○								
Water Managers		⊙						⊙		⊙	⊙			
Water Suppliers					⊙									
Insurance and re-insurance companies	○												⊙	
General public													○	
Citizen org's, environmental org's								○						
Agriculture				⊙										
Agri and Food highly water intensive industry												○		
Hydropower Producers			○											
Hydropower technology producers														⊙
National Hydropower Associations														○
Manufacturing Industry							○							
Educational Publishers									⊙					
Water saving technology providers												⊙		

Figure 2. Identifying and classifying target markets for all SWITCH-ON products and services.

Key: ⊙ = Primary Target Group; ○ = Key Growth Opportunity.

Detailed descriptions and product demos can be found on: water-switch-on.eu/products.html

Key conclusions

The SWITCH-ON MAF is a tested and validated framework that has helped the SWITCH-ON product developers to develop strategies to commercialise their products and services. It has been designed to be widely applicable and should be useful for other organisations seeking commercial success.

The MAF follows a structured, step-wise approach that builds on the knowledge and expertise of firms. Applying the framework in an iterative and incremental manner allows product developers to produce living market analysis documents that can be fine-tuned as new information and resources become available. This is an advantage relative to traditional market analysis reports, which often provide just a static, consumable picture of the market at a specific point in time.

However, applying the MAF does require significant effort. Users must be committed to incorporate the research findings into further product development and marketing activities.

While applying the MAF cannot ensure commercial success, it does persuade innovative product developers to explore potentially unfamiliar concepts that could make them significantly more competitive in the future. By doing so, it can help those developers contribute to Europe's smarter, more sustainable, and more inclusive future economy.

Further information

SWITCH-ON Website | www.water-switch-on.eu

This policy brief also draws on the following reports:

Anzaldúa, G., Ridgway, M., Wenzel, M., Mysiak, J. (2014) *Report on framework for judging market potential of information products*. Technical Report for Deliverable 5.1 of the SWITCH-ON FP7 Project.

Anzaldúa, G., Wenzel, M., Szendrenyi, A.B., Ridgway, M., Stein, U., Lukat, E., Andersson, L., Neset, T., Wilk, J., Mysiak, J. (2015) *Report on analysis of SWITCH-ON products potential for new markets*. Technical Report for Deliverable 5.2 of the SWITCH-ON FP7 Project.

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