INTEGRATED SMART GRID CROSS-FUNCTIONAL SOLUTIONS FOR OPTIMIZED SYNERGETIC ENERGY DISTRIBUTION, UTILIZATION STORAGE TECHNOLOGIES

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Business model innovation for energy services and solutions

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ARTICLE INFORMATION	ABSTRACT
Published October 2018 Key words: energy industry, business model, business model development, business model innovation	Technological developments, being an important enabler, are crucial to make the envisioned concepts like microgrid or advanced DER aggregation become reality. However, successful commercialization and end user acceptance require from technological innovations to be coupled with a well-defined business model. In the inteGRIDy project, UCP-SCIL is developing a business modeling methodology that will help pilot leaders to unlock the value of technological solutions being developed across ten pilot sites.

Introduction

The energy industry is in constant reshape due to policy shifts, technological advancements and changing consumer demands. These trends have led to the emergence of new areas for business opportunities and new market actors with their distinct novel offerings.

There is no doubt that these transformational shifts are highly dependent on technological advancements, which open up in front of incumbents and new market entrants various new possibilities for shaping their business.

However, how to ensure that market players make the most out of this? How to make novel solutions affordable, adaptable and commercially viable? Or how to make new offerings appealing to the end user? Technology on its own is not enough to realise the opportunities that novel solutions can offer to market players. To bring a novel solution to the market successfully, technological innovation must be coupled with a well-defined business model (Teece, 2010). Therefore, finding the answer to the question of how to help market players to develop viable business models becomes very topical and rather urgent.

In the inteGRIDy project, UCP works on developing a business modeling methodology that will help pilot leaders to unlock the value of technological solutions being developed across ten pilot sites.

A holistic approach to business modeling

While conducting research activities and consulting companies on the topic of business modeling, the team of UCP-SCIL came across a fundamental problem – unavailability of a practical methodological approach to help the energy industry in its transformation towards more sustainable business models. An additional challenge concerns the fact that there is often a lack of expert guidance in the industry on how to create a real economic value with highly technology-driven innovations.

In inteGRIDy project, UCP-SCIL is developing a methodology that will provide a consistent guidance through the business modeling process and help pilot leaders overcome these challenges. This methodology is based on a notion of “blended” approach, which combines online coaching on business modeling with on-site workshops. The ambition is to go even further and develop an online platform that will allow new industry actors, as well as established players, engage in an interactive, easy-to-follow and action-oriented process of business model development for their novel business ideas or existing products/services/solutions.

The methodology that is at the heart of this platform allows the business modeling process to be the way to explore various business model options at hand. It also allows engagement in this process to be the moment when companies seek and find answers to vital questions that must be answered to discover which one of the available

business model options is the winning one. Examples of such questions include: what the most attractive market segment is and how big it is, or what the “job to be done” for the customer is, and what the ways to create a real value with the product/service/solution are. Hence, the business modeling methodology will allow not only opening up the opportunity space with various business model paths available to the company to take, but also closing it by guiding toward the most suitable business model options based on the way the business idea evolves.

Business model prototyping with business model patterns

Finding and exploring various available business model options has traditionally been a very challenging activity. One of the key developments that the work of UCP-SCIL within the inteGRIDy project brings about is making the process of business model ideation simple and easy to perform. The key to understanding the approach lies in so-called business model patterns, which a business model of any company consists of.

A business model pattern can be defined as a proven solution to reoccurring problems in a business model context. Examples of some of the most popular business model patterns include “Razor & Blade” (e.g. Gillette), “Freemium” (e.g. Skype), or “Peer to peer” (e.g. Ebay). Patterns vary in their types from being rather generic, and thus applicable to almost any industry, to more specific ones that make sense only in certain industries. Trying out different pattern combinations help spark creativity, identify blind spots, and most importantly, come up with new configurations that can unlock latent value.

In inteGRIDy, UCP-SCIL is developing a unique pattern library designed to support the business modeling process in the energy industry.

Already now, the pattern library includes 250+ time-tested patterns, which help industry players consider multiple business model options, particularly the ones that are not traditionally associated with the energy industry. For example, a digital transformation pattern pack allows exploring different ways of building digital into a business model and creating value for customer by focusing on digital capabilities.

Currently, business model patterns are organized in seven pattern packs. The UCP-SCIL team is further developing and enhancing a pattern pack specifically tailored to the energy industry, which in combination with other available pattern packs will open up various novel ways of creating and capturing value with the product/service or solution.

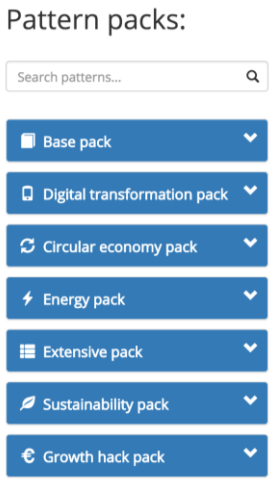

Figure 1. Business model pattern packs on the Business Modeling Platform

In combination with the Business Model Canvas, business model patterns

become a powerful way of structuring the newly developed ways of creating and capturing value.

These developments will make business model innovation an accessible and easy to perform an activity for both novel and established players in the energy industry.

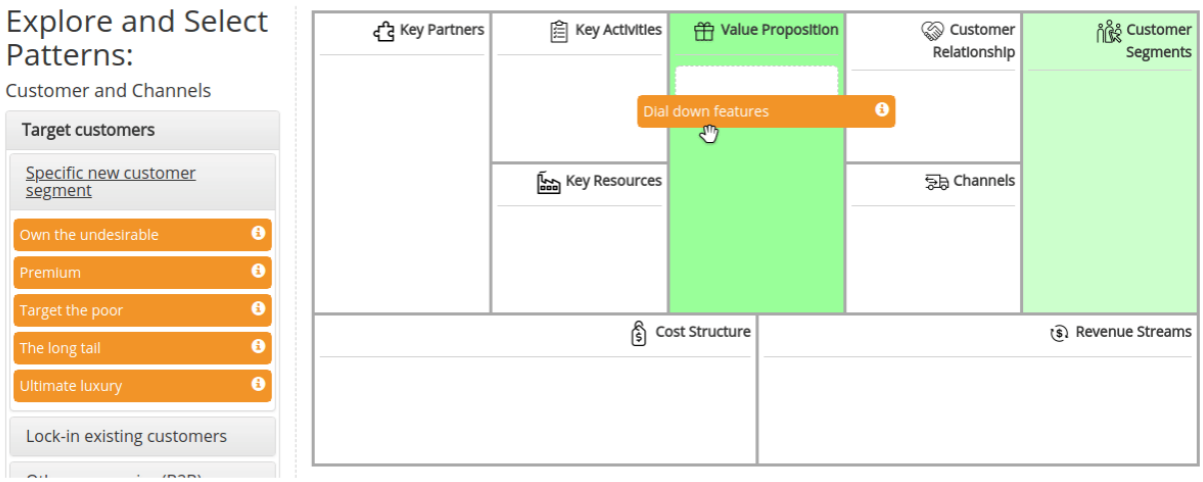

Figure 2. Business model configuration using the Business Model Canvas and business model patterns on the Business Modeling Platform

Conclusions

The goal of UCP-SCIL is to develop a business modeling methodology that will allow pilot leaders, and potentially the whole energy community, look at business ideas in novel ways, unlock hidden potential with technological innovations and configure viable business models. This methodology is now in its testing phase, where UCP-SCIL applies it to develop business models for ten pilots together with the pilot leaders.

References

[1]. Teece, D. (2010). Long Range Planning. “Business Models, Business Strategy and Innovation”: http://www.businessmodelcommunity.com/fs/root/8jig8-businessmodelsbusinessstrategy.pdf

About UCP-SCIL

Universidade Católica Portuguesa (UCP) is among the best universities in Portugal and the business school is the number one business school in Portugal according to the Financial Times Ranking (ranked 26 in Europe). Its MBA programme is ranked 36th in the world. The business school has strong ties to Portuguese businesses, the national government and the city administration of Lisbon. UCP has a tradition of national and internationally funded research projects within innovation, strategy and organizational fields.

The Smart City Innovation Lab (SCIL) is a multi-disciplinary research group at Católica Lisbon School of Business and Economics. SCIL’s mission is to empower businesses to create well-being in urban areas via digital technologies, novel business models and sustainable values. The research of the group focuses on business models, entrepreneurial strategy, and digital innovation.

Information about the authors

Alina Margolina is a Project Manager working on the inteGRIDy project from the side of the Smart City Innovation Lab at Católica Lisbon.

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