

## Solution Lab in Brief

A Solution Lab is

... one week of interdisciplinary and intercultural cooperation to generate innovation, entrepreneurial spirit and trendsetting solutions.

... an approach that combines the creativity and inventiveness of young talents, the experience of business experts and a well elaborated methodology to generate sustainable success.

### **1. Selection of projects**

The Solution Lab Methodology is suitable for a wide range of challenges like the development of ideas for new products, services or business models for start-ups, the conception of market entry strategies for well-established companies or the development of communications campaigns for cluster initiatives.

Each Solution Lab bases on challenges given from start-up-teams, well established companies, cluster initiatives or public institutions. But not each challenge fits to the Solution Lab methodology. Suggested projects should meet the following requirements:

- The challenge should be solvable within a short period like one week – or a series of several Solution Labs.
- The expert knowledge required by each challenge should be specific but not extremely narrow.
- An interdisciplinary and/or intercultural approach can be adopted from the beginning of the process.

In other words, projects must be selected keeping in mind that the group of participants is not expected to find a solution, which could be found through "business as usual", i.e. by devoting client company's internal resources to the problem. To the contrary, the selection of projects intends to generate "out of the box" solutions.

Four examples show how this works in practice.

### *1. Business Model generation of a cluster initiative*

Customer: Regional association for climate protection in the Upper Rhine Region ("Klimapartner Oberrhein")

Challenge: Development of services that allow a self-supporting financial structure

Solution: On the basis of interviews with experts, analyses of the latest research results and own ideas the team developed a concept, described several services and prepared a business model.

Implementation: The concept became part of the strategic development concept of the cluster for climate protection. Furthermore, core elements were integrated in the grant application to get initial funding.



Figure 1: Solution Lab in St. Georgen in the Black Forest Region /  
Cooperation Partner: University of Cologne / Prof. Siegemund

### *2. Development of a mobile energy storage*

Customer: Group of middle-sized companies in the Black Forest Region, Germany

Challenge: Fixed wall sockets are not very helpful in flexible workspaces. So how could a system of flexible sockets look like?

Solution: In a series of several Solution Labs, students and

PhD candidates developed a mobile energy storage for DC-power. People in co-working spaces can charge their mobile devices, like Laptops or Smartphones, quite easy wherever they are. The mobile powerbox can be moved to the place where energy is needed. In addition, further modules can be integrated into the box, e.g. sound/music, lighting, data storage or a dead man's switch.

Implementation: In cooperation with companies prototypes have been developed. Now a partner for the industrial production is interested in the mobile power box.

### *3. Development of an online platform to sell regional products*

Customer: Group of start-up companies in Germany and Algeria, supported by the German Government and the "German-Algerian Chamber of Commerce"

Challenge: In rural areas, producers of food and artisans have barely access to markets for selling their products.

Solution: In an ongoing series of binational Solution Labs between Germany and Algeria, participants developed an online platform, a logistics concept for worldwide shipping and a promotion concept to identify clients in rural areas.

Implementation: At least one more Solution Lab is planned on this subject. First German and Algerian clients could be identified and a binational core team is established.



Figure 2: Algerian-German Solution Lab in November 2019 (Dr. Carsten Hutt, SciConomy, on the left side, participants from Algeria who won the journey to the next Solution Lab in Germany, right side).

### *4. Development of ideas for a cable-based connection between a smart glove and a micro-computer fixed on the upper arm*

Customer: French automotive supplier

Challenge: A smart glove with lots of sensors for production processes should be connected with a micro-computer fixed on the upper arm of the worker. The connection needed to be cable-based, safe and comfortable also in hot rooms

Solution: Development of concepts with a special textile solution

Implementation: The solution is now implemented in the industrial process

## **2. Selection of participants**

Concerning participants, we can distinguish three core aspects in terms of selection criteria.

Each challenge requires its specific qualifications, like scientific discipline, special experiences or cultural background. For a market entry strategy in Asia for instance, it is more important to have participants from Asia in the team than specific disciplines or qualifications.



*Figure 3: Solution Lab in co-operation with Université de Strasbourg / Prof. Emmanuel Muller*

In general, soft skills like capacity for teamwork, openness for new approaches, ideas and methods as well as communication skills are very important. In the selection process, applicants should show that they already worked in comparable environments, e.g. in student associations or other forms of voluntary work.

Finally, it is important to find the "appropriate individuals", who fit together in a team structure. Scientific qualifications, soft skills, cultural background and experiences of the team members should complement each other.

### 3. Procedure

The procedure of all Solution Labs should follow more or less the same pattern (see figure 4 below). The overall process is well elaborated and works for different challenges, regardless of whether the teams were asked to develop a marketing strategy, a business model or a new application scenario for an already existing product.

It is important that the management team shows the process at the beginning of the Solution Lab and explains the procedure and its design.



Figure 4: procedure of more or less all Solution Labs

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