



BOSCH

Sint Michielsgestelseweg 8
5261 NH Vught

T +31 (0)85 273 51 85
E algemeen@synergio.nl
I www.synergio.nl

Market-driven innovation

In the Conference Systems market

Bosch Communications

The Bosch Group is a leading global supplier of technology and services and operates in the areas of automotive and industrial technology, consumer goods, and building technology. The Bosch Group employs over 3000.000 people world-wide. The business sector Consumer Goods and Building Technology is divided into 4 divisions:

- Security Systems
- Household Appliances
- Thermotechnology
- Power Tools

The business unit Communication Systems is one of the three business units within the Security Systems division. It focuses on the communication of voice, video and sound through mobile and permanent installations. The business unit Communication Systems is the market leader in the area of conference systems.



Its customers are city councils, parliaments, international institutes and rental companies across the world.

The strategic ambition

The strategic ambition of the business unit Communication Systems is to stay a leader in innovation and quality in the conference systems marketplace. As part of this strategic ambition Bosch started a new development project to totally and rigorously renew its conferencing system.

Bosch realized that in order to deliver a successful product, it needs to meet the requirements of the market. Synergio was invited to implement a requirements-based approach to this innovation project, focused on two main elements:

- Development of a new conference system
- Introduction of a new and effective way of working with requirements

Developing the new conference system

The challenge for the project team members' was that they were innovating in three ways:

- Develop an innovative, new conferencing system
- Work with requirements in an innovative way
- Use an innovative requirements management tool

It requires courage to innovate and Bosch definitely demonstrated the courage and the drive to create a market leading conferencing system, again!

Developing the requirements for the new conferencing system followed Bosch's requirements management process consisting of two stage gates:

1. Developing the Commercial Requirements Specification (CRS)
2. Developing the System Requirements Specification (SRS)

The Commercial Requirements Specification (CRS)

A joint team of product management and systems architects was formed to develop a vision for the new conferencing system. Synergio facilitated the vision workshops resulting in a thorough market and competitive analysis. A clear picture of the Voice of the Customer and the Voice of the Business was developed in addition with the most important capabilities of the new conference system. The value of these capabilities for the identified market segments was assessed and with this a prioritized list of capabilities was established.



In addition Synergio assisted the product management team in the process to develop the high level Use Cases for the conference system. These create a clear picture of the way the users will interact with the new conference system using the functions like discussing, voting, interpreting, recording and meeting management capabilities specifically for the chairman of the meeting.

The Commercial Requirements Specification (CRS) was reviewed by all stakeholders and swiftly passed Bosch's first stage gate of the requirements process. Additionally, the USA based business unit management team assessed the work and was very impressed. This resulted in the suggestion to adopt Synergio's way of working with requirements across the business unit.

The System Requirements Specification (SRS)

From the CRS the System Requirements Specification (SRS) was developed. Synergio's requirements process ensured that all stakeholders involved in the development, manufacturing, planning, purchasing, selling, etc. were informed and became involved. Requirements for all processes in the product life cycle were identified by asking 2 questions:

1. Which requirements does the product have for the process?
2. Which requirements does the process have for the product?

Following this, detailed Use Cases were developed and the Product Breakdown Structure (PBS) was created. This allowed the system requirements for each item in the product breakdown structure to be identified and quantified easily in order to make them testable.

Introducing a new way of working with requirements

Bosch has an extensive requirements management process in place. The first step for Synergio was to understand this process and identify areas of improvement. This was done in close cooperation with the key stakeholders in the business unit and provided excellent input for the development of an "Ambition statement". Synergio's "[Ambition statement](#)" enabled Bosch to formulate their requirements ambition in a clear, compact and verifiable way.

Together with the key stakeholders of the project the goals for the new requirements process were defined and the solutions to achieve these goals were identified and made specific. By developing the ambition statement together with all stakeholders, everybody became involved creating a lot of enthusiasm in the team.

Training

One of the solutions identified in the ambition statement was to improve the capabilities of the team to formulate, structure and prioritize requirements. This resulted in a uniform way of articulating requirements. In addition the training provided the team with a structured way to identify the right requirements and have a mechanism to check whether the requirements are complete.

Tooling

Another solution was to implement a new requirements management system. TopTeam from TechnoSolutions was introduced to manage all requirements and relationships. As a result Bosch was able to:

- **Implement full traceability**

TopTeam's traceability network diagram visually shows all traces. In addition it enables a drag-and-drop way of creating, changing and deleting traces.

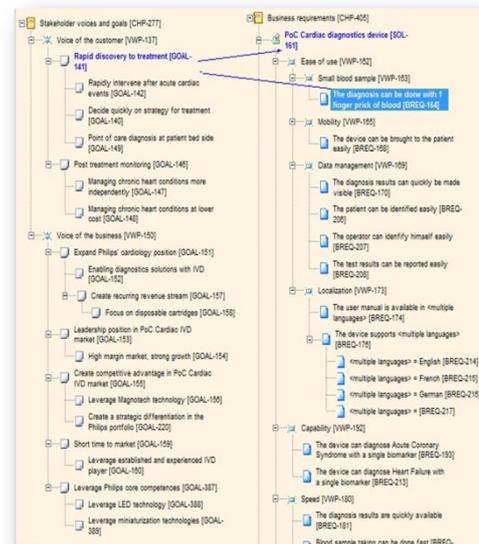
- **Simulate Use Cases**

The Use Cases modeled in TopTeam were developed by product management. The architects use the automatically generated flow diagram in combination with the use case simulation feature in TopTeam to fully understand the interaction of the user with the new conferencing system.

Traceability between requirements and used cases is fully implemented, enabling the architects to check if they cover all requirements.

- **Automatically generate test cases**

From the modeled Use Cases, TopTeam automatically generates the test cases. This allows Bosch to create the entire quality plan in a very early stage instead of at the end of the project.



To make a long story short, the ambition statement became the foundation for the project plan realizing the ambition. It enabled Bosch to have the "right requirements right" for the new conferencing system.

Conclusion

Synergio's way of working with requirements delivered benefits for all team members in the project:

- **Product management**

The requirements delivered by product management were crystal clear. In addition there was a complete overview of the relationships between market needs and high level solutions. As a result there was no misinterpretation of the market needs.

- **Architecture**

The architecture team received a well structured set of requirements with a thorough justification. As a result the requirements were very well understood, enabling the architects to fully focus on identifying alternative solutions.

- **Quality Assurance**

The improvement in requirements provided full traceability of the requirements and a level of detail that enabled the quality assurance team to easily pass the first stage gate in Bosch's requirements process.

- **Project management**

Efficient communication, easy collaboration and less re-work, were the benefits identified from a project management perspective, enabling Bosch to deliver a better product to their customers.



If you would like to know more about Synergio's ways to help you get the right requirements right, please contact us via our [web site](#) or call +31 (0)85 2735185.