

Project management for the development of an innovative industrial sensor



Introduction

Theory suggests that the proof of concept of critical elements of an R&D-project should be tested with preliminary studies ("feasibility projects") before the actual start of product development. This makes sense, reduces risks, increases the predictability and corresponds to good practice in project management. Unfortunately, this does not always work - for various reasons. Managing a project with technical solution uncertainties is very challenging.

Business environment / initial situation of the client company

The technology company is a leading supplier of field instruments for the analysis of liquids and gases in the process industry. At its main site, the company develops and produces high-quality sensors for controlling production processes, which are sold worldwide through its own market organizations.

The new technology, once successfully introduced into production and the market, is a true innovation and therefore a breakthrough both for the field of application and for the production of the sensors.

Task of the interim manager and challenges

The interim manager takes over the management of an innovation project for the development of a technically very sophisticated sensor during the development and industrialization phase. The project team in R&D unites specialists from different fields: Material scientists, engineers for mechanics, electronics and software, chemists, process engineers.

Special challenges:

- New processes were developed simultaneously with product development in the areas of microtechnology, electronic packaging, thin-film technology and cleanroom technology.
- Project management of parallel technical feasibility studies is demanding.
The progress and setbacks require regular alignment
 - with management about the design maturity (prerequisite for a design freeze, impact on schedule).
 - with marketing about the acceptable field of application (application scope).

Solution

- Take over the project management. The predecessor has left the company.
- Conduct a project review, revise work packages, simplify interfaces.
- Restructuring the project organization, clear assignment of tasks
- Support with the development of detailed plans for the individual sub-projects
- Development of a new master plan
- Monitor and control the critical path. Ensure milestones are met in terms of quality, completeness and on time.
- Prioritization of the different activities in case of resource conflicts
- Test planning with objectives of tests and logistical overview.
- Prepare and lead milestone reviews
- Ensure that commercial and technical aspects are well aligned
- Communicate regularly to senior management on the progress of this (expensive) key project

Results

The project was stabilized quickly. Team acceptance was achieved with a realistic master plan. Through the transparent visualization of the project progress and project risks, the expectations of the management were aligned with the project reality. The confidence in the success, and thus the motivation in the team, returned.

The gain of knowledge by parallelizing learning cycles with prototyping, test execution, analysis of results and consequences was substantially accelerated. Field tests with very good customer feedback increased the confidence of being on the right track.

The finalization of the development was handed over to the new project manager.

Customer references

GM, Head of Product Organization:

"Marcel Strotz easily finds his way to all employees regardless of their level of education, origin and hierarchy. With a lot of empathy, he quickly achieved a high level of acceptance in the team."

Head of R&D:

"Marcel Strotz maintains transparent communication, he informs at sensible intervals. He is an equally good listener and conversational partner, which regularly leads to good solutions in discussions."

GM, Head of Product Organization:

"Marcel Strotz is an experienced manager with a wide range of methods and approaches. He appears appropriately confident and remains calm even under pressure - although a healthy, hearty laugh often helps."

Keywords of the mandate

Client	Global manufacturer of industrial sensors
Industry	Industrial measurement technology
Contract length	16 months
Location	Zurich
Turnover	CHF 400 million
Employees	550