

## Case Study Product Development

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### **Test-driven product development is much faster and saves a lot of money**

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#### **New approach speeds up product development and saves a lot of money**

The company develops and produces sophisticated, complex technical systems that are subject to high safety requirements. It is the technology leader in its market segment and aims to become the market leader.

In order to be able to market the products, they must pass an approval test at an independent test center for safety reasons. In the past, errors not detected during product development meant that 60 % of newly developed products did not pass this test at the first attempt, and 20 % even needed three attempts. This led to considerable additional work and major delays in deliveries and ultimately in market development.

A project should now ensure that all products pass the test at the first attempt.

When analyzing the factors influencing success, it was found that projects are more successful

- the more testing is done in the early stages of product development,
- the more test samples are used in the early stages of product development,
- the more changes are made to the samples in the early phases of product development,
- the shorter are the waiting times (e.g. for samples and the test room), and
- the fewer changes there are on the product definition.

In order to take these influencing factors into account, product development was switched to a test-driven approach. This involves first developing the existing test and then developing the product against this test.

Following the changeover, all products now pass the approval test at the first attempt.

A one-off investment of € 300,000 will now save costs of € 4,800,000 per year. This results in a return on investment (ROI) of 1,500 %).

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