How can I get more out of my R&D department?

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How can I deliver new products on time, on budget and within scope? Product development is a complex process involving numerous mutually-influencing factors making it difficult to separate the symptoms and causes of the problems from each other. Sirris wants to bring companies together to discuss such problems and share best practices. You can also take part!

The development process for new products is not simple. For most managers, being able to deliver new products on time and on budget remains a continuous challenge. Asking the rhetorical question, ‘Do you manage to deliver your R&D projects on time, on budget and within scope?’ is like trying to kick down an open door. We are convinced the question is relevant and that there are no ready-made solutions available, contrary to what some tool providers would like you to believe.

Symptoms and causes

Regular, recurring **symptoms** at companies with an R&D department include the following:

- The project budget is exceeded
- Production costs are higher than originally assumed
- Product quality is difficult to achieve (first time right)
- Time-to-market is too long

Underlying **causes** can include:

- Design repetition
- Lack of knowledge
- Incomplete or changing requirements
- Resource overload
- Ambiguous and changing priorities
- etc.

Choosing the right options

Product development is a particularly complex process in which many factors influence each other. Identifying the symptoms and causes of a problem is not always easy. Is the time-to-market too long because the requirements are continually changing, or do the requirements change because the time-to-market is too long?

The intense interaction of symptoms and causes makes choosing the right solution very difficult. Important issues that also arise: How do I avoid using a solution that is not beneficial for my

company? Which solutions are the most suitable for me, and in what sequence should I deploy them?

The **solutions** for such causes can be roughly divided into three categories:

- *Organisational and Business* (matrix versus line structure, co-development, resource sharing, collaborative engineering, etc.), product portfolio, roadmap, etc.
- *Pocess-based (methods)* : set-based engineering, NPD, NPI, lean product development, INCOSE, visual management, etc.), complexity management
- *Tool support*: CAD, CAE, PLM, project portfolio management, resource planning, etc.

A complaint often heard is that R&D projects go wrong because of poor planning so that the necessary resources are not available on time. People often initially react by reaching for complex planning tools. This attack on the symptoms is often not enough, especially when the underlying problems remain unknown and are therefore still in place.

In addition to the cause analysis for a given problem, you must also take account of the company-specific context. Although the symptoms may appear to be the same and recognisable, the solutions that work for company X may not work for company Y because of differences in the underlying causes, or because of a different company context.

Would you like to find out more? Your contribution counts!

From experience it emerges that engineering resource planning is an increasingly recurring complaint and a good starting point for this is to find sustainable improvements. Are you also experiencing problems? Would you like to participate in an exchange of in-depth ideas with other companies? Contact us to participate in this **new initiative** in which we want to help companies deal with similar problems.

Together with other interested companies and on the basis of their expectations, Sirris wants to find out more about how to define these issues (learning networks, collective research, collective support, individual support, etc.), and at what level (Flemish, national, European, etc.).

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