

FUNCTIONAL DESCRIPTION

INCREASING ENGINEERING EFFICIENCY

MAKE ESSENTIAL DECISIONS FOR YOUR SYSTEM

In addition to the classic disciplines such as mechanics, electrics and machine control, digital networking, IoT and work across distributed locations play an increasingly important role in today's product development. In order to be able to achieve high quality at low costs and under tight schedules, a structured functional description of the system is of crucial importance.

Functional description for complex structures

The specification of a system – a component or a whole plant – is one of the most important stages in the development. The essential decisions for the design of the system are made here.

In order to keep time and costs low and to ensure quality when requirements increase, a detailed and hierarchically structured functional description is of crucial importance.

A description as detailed as possible for new functions is the first central step in the specification of mechatronic systems.

For projects with a high level of innovation, a function description is essential.



How do you bring all disciplines together?

The mechatronic description of functions for existing or planned developments is created in close cooperation of all disciplines in workshops.

At the same time, a common terminology is created that ensures the uniform description and the same understanding of the system functions for all involved.

In addition, the mechatronic function structuring enables the recognition and utilization of reusable functions.

With the help of detailed functional descriptions, it is even possible for you to reduce development times, since parallel processing is possible in different departments.



APPROACH

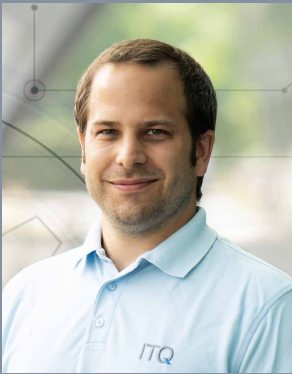
Break down complex functions

In the functional description, the overall function is divided in a tree-like structure into less complex, hierarchically structured sub-functions.

Depending on the project complexity, separate documents are created for all or only for the most important sub-functions. These documents each contain an

overview of the mechatronic structure and a description of the interfaces to other (sub) systems.

A detailed process description as well as details for example on operating modes, setting parameters and faults give the development teams a comprehensive picture of the system and its functions.



"Our customers' machines are very complex, mechatronic systems. Functional descriptions make this complexity manageable and enable one parallel, cross-disciplinary development."

Simon Lehmann
Senior Consultant
✉ lehmann@itq.de

BENEFITS

Functional descriptions enable you to

- Master complex systems
- Structure systems functionally
- Create a central documentation for everyone
- Uniform terminology
- Develop mechanics, electrics and software in parallel
- Lower response times
- Time savings through reduced development time
- Compare functions continuously
- Achieve sustainability

SERVICES

We accompany you on your way

- Conducting interactive workshops to develop the content and procedure using concrete examples
- Mechatronic structuring of your plants, machines and components
- Support in defining a uniform terminology
- Support in the creation of functional description
- Analysis of the development process and integration of the functional description
- Accompanying the application of the functional description in all departments