



Optimized product development by a holistic process analysis



Our services – **your benefit**

We are your consultancy partners with focus on **cost optimization** by a holistic analysis of your product development process as well as **increase in efficiency** by applying artificial intelligence and automation. What is more, we support you with **interdisciplinary communication** of complex technical issues within your organization.

At a glance – our philosophy

We want to make this world a better place. For this we support our customers in optimizing their virtual product development by a holistic analysis of the processes and involving all affected stakeholders. We proceed step-by-step and use our long-standing experience in the field of virtual product development:

- 1) Evaluation of Status Quo by an interview with a questionnaire
- 2) Examination of the results and documentation
- 3) Identifying of potential for improvement
- 4) Creating a course of action
- 5) Monitoring of in-house implementation

On demand, this process can be redone several times. An unbiased view from the outside can often help.

Holistic analysis – **customized individually**

Engineering, purchasing, logistics, manufacturing, sales, national laws – lots of areas have an impact on total product cost. The Steinbeis Consulting Center Holistic Engineering is your partner for the holistic analysis of your value-added chain, enabling you to employ this knowledge to optimize your total product cost.

The basic target for all product engineering effort must be: Identify this one **design** which **complies with all requirements** and can be **delivered** to the final customers **with overall minimum cost** effort for the manufacturer.

Topology

Permanent Magnet
Synchronous Motor



Geometry / Materials

Rare-Earth (NdFeB)
versus
Ferrite (Fe_2O_3)

versus
Induction Motor



Copper [Cu]
versus Aluminium [Al]

A design in this context is a **combination** of

- **Topology**
(e.g. permanent magnet synchronous motor versus induction motor)
- **Geometry**
(dimensions of the parts)
- **Materials**
(e.g. rare-earth versus ferrite magnets)
- **Manufacturing techniques**
(e.g. stock removal versus 3D printing)
- **Manufacturing locations**
(e.g. personnel versus logistics cost)

In order to implement this concept at its best, information about all affected domains is mandatory, ideally as early as in the study phase of a project. For this purpose it is necessary to automate the information search as completely as possible and to link the involved IT systems. Moreover, appropriate mathematical models to evaluate the cost have to be provided.

Working as partners – at eye level

We emphasize partnership and technical discussions at eye level. From our point of view, consulting services are not a one-way business, we are also learning continuously and highly appreciate your feedback.

We are convinced that consulting services only make sense when they are desired and not when they are imposed.



Are you curious now?
Then do not hesitate to contact us:

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