

## Joining forces with your EMS partner for development – more than just design



### more cooperation

Interfaces cost time and money so it makes sense to reduce them. We offer the entire process chain from a single source – from development to after-sales service. We bring down barriers to development created by company boundaries, time zones or cultural differences. Interdisciplinary teams and cross-sector expertise from the EMS partner provide the basis for innovative solutions and eliminate frictional losses. With a complex product portfolio, cooperation with the EMS partner can begin at any stage of product development.



### more excellence

EMS partners have a comprehensive knowledge of all production processes, which makes us the ideal point of contact for DfX – Design for Excellence. This means that production conditions are taken into account right from the development phase. This approach optimises product quality, implementation time and production costs.



### more speed

The development skills of an EMS partner enable design, production (prototypes) and industrialisation (series production) to run in parallel. This significantly shortens time-to-market and time-to-volume and offers genuine added value.



### more expertise

The comprehensive production experience of your EMS partner offers a wealth of benefits. For instance, it is possible to define the limits of miniaturisation or energy efficiency. DfC (Design for Cost) considerations are implemented in parallel to control production costs. We consider the complete production life cycle right from the development phase to find the optimum solution for your product.



### more security

Design and production expertise from a single source – and that includes greater sustainability. Your EMS partner will assist you in the event of discontinued parts (obsolescence management) or defective assemblies (rework services) to ensure your supply capabilities in the long term.

More success with development services from your EMS partner!

## The following ZVEI members ...

- Offer services tailored to customers' requirements.
- Are committed to quality and environment management.
- Have the expertise required to perform the services.
- Determine the desired results and performance indicators together with the customer.



**ZVEI:**  
Die Elektroindustrie

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# Product development is teamwork

Development services from your EMS partner



Services  
in **EMS**

PCB and Electronic Systems Division

# A NETWORK OF EXPERTISE

## What makes the perfect product?

### Material

Materials management should be incorporated into the development process at an early stage. This is because aspects such as fluctuating material costs, statutory regulations, substance bans or standards, obsolescence management and second source components have an impact on the long-term availability of your product.

### Processes

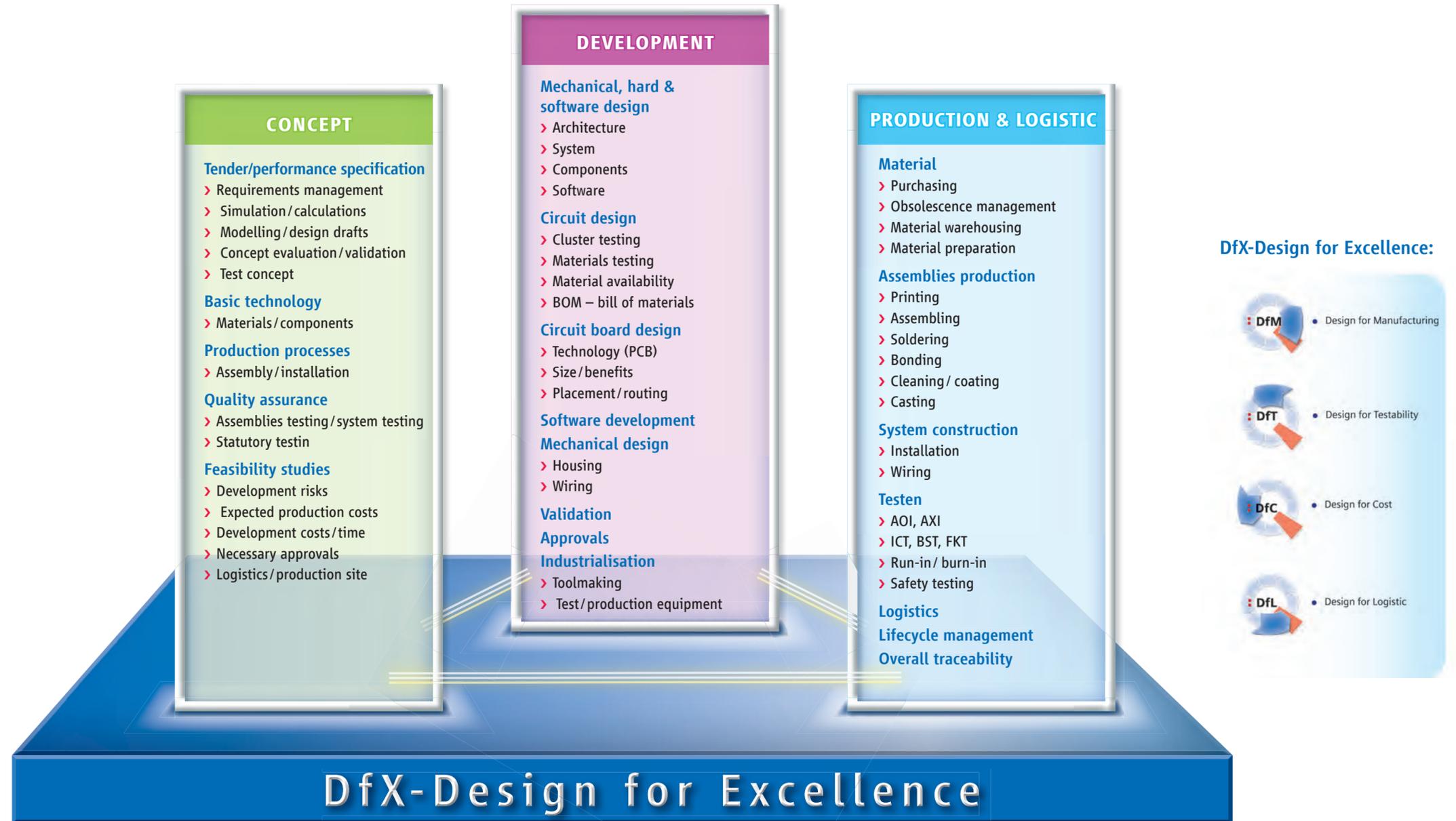
A major advantage of an EMS provider is that they invariably have experience of cutting edge technologies and production processes. With cross-sector production expertise, best practice solutions can be applied early in the product development process. By introducing efficient production processes, this approach substantially reduces the cost of manufacturing to the required quality standard and thus provides a decisive cost benefit.

### Verification and validation

The idea that the development process is complete once prototypes have been successfully commissioned can be dangerous because it's at the series production stage that conditions can vary enormously. Requirements-based testing is essential if you want to avoid any nasty surprises or costly recalls. For the results of these tests to be meaningful, the product requirements must be derived from real operating conditions across the entire life cycle (mission profile). On the basis of these specifications, the suitability of the product for the application scenarios can be checked and verified by carrying out performance, environmental simulation and endurance tests. An optimised test strategy can serve to verify series production quality.

### SCM – Supply Chain Management

From the point of view of SCM, early involvement of the customer in product development is strongly recommended since the EMS provider has extensive logistics expertise and uses standard parts catalogues. By logistically linking customers with suppliers, they are able to offer a high degree of availability for parts listed in these catalogues. This type of electronic cooperation significantly reduces time to market. EMS providers have the opportunity to source products for their internal production network (best-cost country).



Optimisation by employing expert knowledge right from the development stage.

Early synchronisation ensures a favourable price, high quality and long-term availability of your product.