

**Dissertation title:**

**Development of a prototype for the human resource planning and management and the restructuring of the organizational structures for a demand-oriented and adaptable production of a varied series production.**

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Turbulent supply and demand conditions of greatly changing markets provide manufacturing companies with unexpected challenges. Cyclical, seasonal and trend caused fluctuations of the markets as well as short-term influences of the supply systems have an increasing impact on the structure, the level and the chronology of the production program and therefore also on the planning and management of the production staff. In order to stay competitive, fast responding adaptation processes of the companies are essential. Especially the people and the organization are deemed to be a critical success factor for the implementation of flexibility and conversion requirements.

Regarding the employment of the staff, this means that the available staff has to be adapted optimally to the timing of the demand and thus to achieve an increasing demand orientation of the production process. In addition, the structures of the organization have to be put permanently into question, to be dynamized and its ability to self-change has to be re-enabled and enhanced. The reason for this is that companies tend to adhere to their once successful organizational structures and processes which were designed for stable, controllable and controlled environments and can be found today only in few cases.

To fulfill these requirements, two planning processes were developed. These can be applied in combination and independently of each other. The first planning process enables a situational and demand-oriented planning and control of the staff of the working groups of a production system for each planning period for a determined planning horizon. For this purpose a holistic approach of human resource planning was developed. The second planning process also allows a permanent adaptation of the production's organizational structures to changing environmental conditions. The target of this structural and organizational adaptability is to increase the demand orientation of the staff deployment in the production.

Both planning processes were applied in a varied production of the automotive industry. The feasibility was verified with practical examples. Through the systematic transformation of the cost center structure the demand orientation of the staff deployment could be increased. As a result of this work, a contribution was made to expand the scope of the operational staff planning and control as well as to increase the organizational, structural adaptability of the production.