Title | **The German Human Resources Management Awards 2006**

A new quality of personnel planning

Many companies do not have the right tools for meaningful long-term personnel planning. But making the wrong decisions can prove to be costly. Therefore, the AOK has chosen a tool which enables dynamic, flexible and holistic planning.

Decisions concerning human resources are among the most difficult any company can make. They are not only associated with high monetary expenditure, but also with high demands on Management. Long-term effects, such as changes in the retirement age, are often underestimated because the consequences of procrastination are not taken into consideration. Knock-on effects, like the organisation of part-time work, often go unnoticed.
Until now, this complexity of Human Resources Management has only been tackled with simple planning models; these have not been able to effectively illustrate the cohesion and inherent dynamism of a company. Concentrating on individual details can lead to a lack of appreciation of the bigger picture. Management, however, expects its Human Resources Management in particular to take a holistic and structured long-term view. It has been necessary to make adjustments to staffing levels in the AOK system for a number of years

now, due to the constantly changing conditions in the health insurance market. In view of future process development, a department dealing specifically with the management of change has now been established at AOK subsidiaries, enabling the Company to react quickly to varying market conditions and statutory changes by implementing organisational measures.

Acting early is made more difficult

Past experience has shown that in planning for quantitative as well as qualitative changes to staff numbers, specific consideration must be given to the medium and long-term effects; this is the only way to minimise inaccurate assessments and the risks associated therewith. Given the constantly changing conditions in the business environment, there is also a risk of being forced into merely "reacting". However, it is important to take action as early as possible in order to retain the ability to act strategically in the medium to long-term. Changes in the work environment and the resulting effects on staff numbers require a holistic view of their interaction in order to be able to initiate the complex human resources decision-making processes in the appropriate chronological order. This necessitates setting up holistic planning models, for which the Human Resources Management would gain the approval of the Board of Directors, thereby enhancing its importance in the strategic development of the Company.

With their innovative approach to the simulation of scenarios, the AOK has taken first place in the German Human Resources Management Awards 2006.

In this day and age it is therefore no longer sufficient for strategically oriented personnel planning to simply continue into the future with the forward projections of past developments – often merely in a selective and linear fashion in terms of trend extrapolation. Methods and IT tools based on this methodology are needed, which can bring more transparency into the increasing complexity of interaction between the business environment and human resources in order to develop robust scenarios for the future on which management decisions can be based.

Existing standard instruments, which mainly consist of complex Excel data files, cannot cope satisfactorily with every determining factor that is actually required. Hence the quality of reporting is often not reliable. In addition, the variation in individual parameters is very complex. Inevitably, therefore, transparency of planning is being lost.

Simulation required

Starting from the basic strategic question: “How many staff and what qualitative combination of skills will be required in future for the AOK system, so that it can competently manage all its responsibilities?”, the AOK Boards have resolved – on the recommendation of human resources managers – that a standardised tool for strategic personnel forecasts, which would facilitate a new approach to personnel planning, should be developed and offered to all 16 AOK subsidiaries and their 70,000 employees.
This tool should be capable of simulating the increasing number of changes that have occurred within the Company and reinforce the strategic human resources measures carried out to date.
Personnel files contain a variety of information on past history, which up to now has not been adequately integrated into the planning process. A planning tool, however, must utilise all the existing data to develop scenarios on the basis of that information. The exact requirements have therefore been ascertained in a preliminary analysis across the whole of the AOK. The following key points were identified as the main requirements.

The personnel forecast model

- supports a quantitative and qualitative personnel forecast for the medium and long-term and thus creates a greater degree of planning certainty;
- takes account of forecast market developments and includes changes in prevailing conditions, as far as foreseeable, for example those brought about by legislation, in the form of different scenarios;
- validates decisions that must be taken with regard to changes, based on a given, pre-determined budget volume on the one hand, and on the other shows the effects of personnel costs arising from changes to individual parameters;
- enables the simulation of different scenarios which spares resources and integrates specific regional requirements.

The realistic and practical implementation of this model has been an important factor. In view of the complexity of the problems and the demands of the preliminary analysis, it quickly became clear that widely-used linear planning methods fell short in practice. A different approach had to be found, one that is capable of adequately illustrating the integration of the different parameters, including their dynamics. The comparison of the traditional approach with a system-oriented view will demonstrate the strengths of the chosen modelling approach of the new planning tool (see diagram 1).
The challenge of the project was to reconcile a scientifically sound approach with the complex requirements of the AOK system. In concrete terms, the required details as well as the systemic perspective of the model parameters had to be taken into account.

Comparison of different approaches **Fig. 1**

Traditional approach	Cybernetic systems approach
Sequential analysis of separate areas without taking into consideration their connections with each other and with the business environment.	Holistic, systemic consideration of the subject area, including the systems environment.
Linear portrayal of related issues without taking into account the dynamic aspects such as delayed effects and a focus on hard material parameters.	Illustration of the connection between the variables in the model with feedback references, taking account of the soft parameters.
A number of analysts collect an enormous amount of basic data, the relevance of which to the actual business is unclear.	The effective relationship of individual elements with one another, together with up-to-date company data, form the basis for the simulation over a number of years.
Awareness of the strategically truly important factors is essentially being submerged by mountains of data.	Concentration on fundamental factors relevant to the system.
Extrapolated parameters of the past – often with numerical precision to the decimal point – form the basis and stabilisation of personnel forecasting.	Simulation based on the hypotheses of worst / best case scenarios, including uncertainty and risk.
Abstract mathematical modelling leads to non-transparent models which are almost incomprehensible to third parties (black box); modelling is left to the experts.	A graphically oriented model language enables transparent models (glass box) and creates the prerequisite for an interactive modelling process and subsequent confidence in the model as well as acceptance of it.

Cybernetics is the science of control and regulation of complex systems – a basic problem for Management.

Ready for dynamic planning

As a result of adopting this model, it will be possible to see the wood for the trees. Furthermore, this was the only way to achieve a tie-in with the existing operational planning systems of the AOK companies. AOK personnel experts supplied the necessary knowledge. The Malik Management Centre in St. Gallen provided support for the proper operation of the systems-dynamic modelling. This modelling can be implemented by using modelling software such as the innovative IT tools “Dynaplan Smia” or “Powersim”.

Correct interlinking

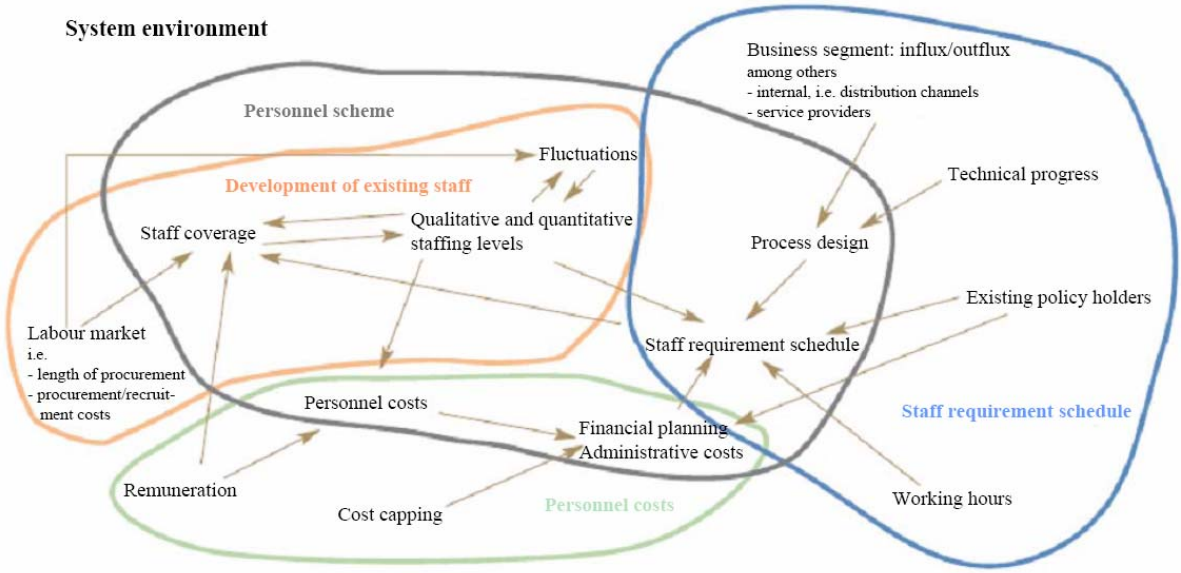
Apart from using actual company data and parameter assumptions, the scenarios are based on a model which gives transparency to the interaction between the business environment and the personnel scheme as well as their inherent dynamism. By implementing the core targets, a structure of several hundred variables has been developed, e.g. age group, being part of the core process and function group, whereby the variables are not set in any order side by side but interlinked with one another. The sub-structure consists of three system elements, i.e. existing personnel development coupled with staffing requirement variations, personnel and service costs (financial planning) and a staff requirement schedule (see diagram 2).
Forecasts about the required future qualifications of staff, for example, can be made by taking into consideration the core processes and making a greater distinction between function groups. The age structure is illustrated in a pie chart up to the age of 70.

A simulation cockpit is at the user's disposal for the simulation of scenarios. Data on personnel schemes can be input, subdivided into core processes and function groups. These are subsequently integrated into the simulated calculation together with the actual company data. The user interface then shows the effects of parameter changes over time. Different scenarios can simply be compared to one another and further developed to form the basis for operational planning.

Complex personnel scenarios can be simulated

From the AOK's viewpoint, the personnel forecast model constitutes a quantum leap in strategic personnel planning. For the first time holistic, complex staffing scenarios have been simulated in a comprehensible way – not just limited to partial aspects such as demography – as a basis for strategic decision-making processes for all the groups involved. The advantage is that the planning tool has also gained approval by Management because it is linked to management strategy and allows for consistent planning. The number of health insurance companies involved in this shows the widespread acceptance of the tool in the AOK system. An internal newsgroup has been set up to exchange experiences between AOK companies and to further develop the system.

The interconnection of system elements **Fig. 2**



The starting-point for the modelling is system definition and differentiation of the business environment.

This development shows that the model has given rise to a sustainable learning curve. A new quality of debate about personnel planning now permeates the whole of the AOK system. In practice, a new standard in strategic personnel planning has therefore been established for everyone concerned.

The model shown is generic in nature. In view of the standardised approach, an adaptation for companies outside the AOK system is also conceivable.
When using a personnel forecast model, a company's entire knowledge on the subject of personnel planning is laid bare. The result is a mutual understanding of all related issues by those responsible in Human Resources, and therefore a new quality of communication with each other.

Consistent planning

The specialist knowledge of individual departments will be joined together to form a whole. The dynamics of the system can be explored through simulation. This means that the future effects of a likely decision will already be predictable today and, aside from a gut feeling, a reference system is in place for possible future development. It is not about an exact forecast, since the precise behaviour of complex systems cannot be predicted. However, it provides an insight into the development of inherent staff dynamism and at the same time effectively facilitates the making of difficult decisions.
By cross-linking the personnel forecast model with company and departmental strategies, as well as the resultant strategic staffing requirements, the personnel forecast model is being integrated into medium to long-term management planning. As a result of the transparent illustration of essential personnel planning factors and their interdependence, personnel scenarios of a quality previously not available can now be simulated.
The model creates an important basis for decisions and offers assistance in the decision-making process. In this way it considerably strengthens management planning and clearly enhances the quality of planning. This provides an opportunity to introduce measures at an early stage and to prevent mistakes which often involve high costs.

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