FORECAST FOR STAFF RESOURCE PLANNING IN CALL CENTERS

Service quality and communication efficiency are decisive competitive factors for companies of all sizes. In order to provide optimal support for customers and prospects, more and more companies are turning to service and call centres.

Staff resource planning is one of the most significant factors for determining the quality of a service centre. Allocating too few workers results in long wait times and dissatisfied customers, while assigning too many eats into the budget. It is difficult to predict the number of calls that will be made on a single day. Until now, insurance companies have had to fall back on their managers' intuition in making these estimations, or have relied on simple average values, with all the unreliability and fluctuating service quality these methods entail.

Our approach is to forecast staff resource planning in call centreswith artificial intelligence

Optimising telephone services using a better method of predicting caller numbers is a task that is perfect for AI applications, as they work best with large data volumes, a clearly defined task and simple performance measurement criteria. These AI-based estimations constitute a more scientific method than the ones outlined above.

Caller figures from the previous few years form the data basis. A machine learning system uses these to search for patterns and detects connections between the number of calls and factors such as the day of the week, time of day, holiday period, public holidays, weather and advertising activities. The activity prediction for the service hotline is continuously compared with the actual values and the parameters are adjusted accordingly.
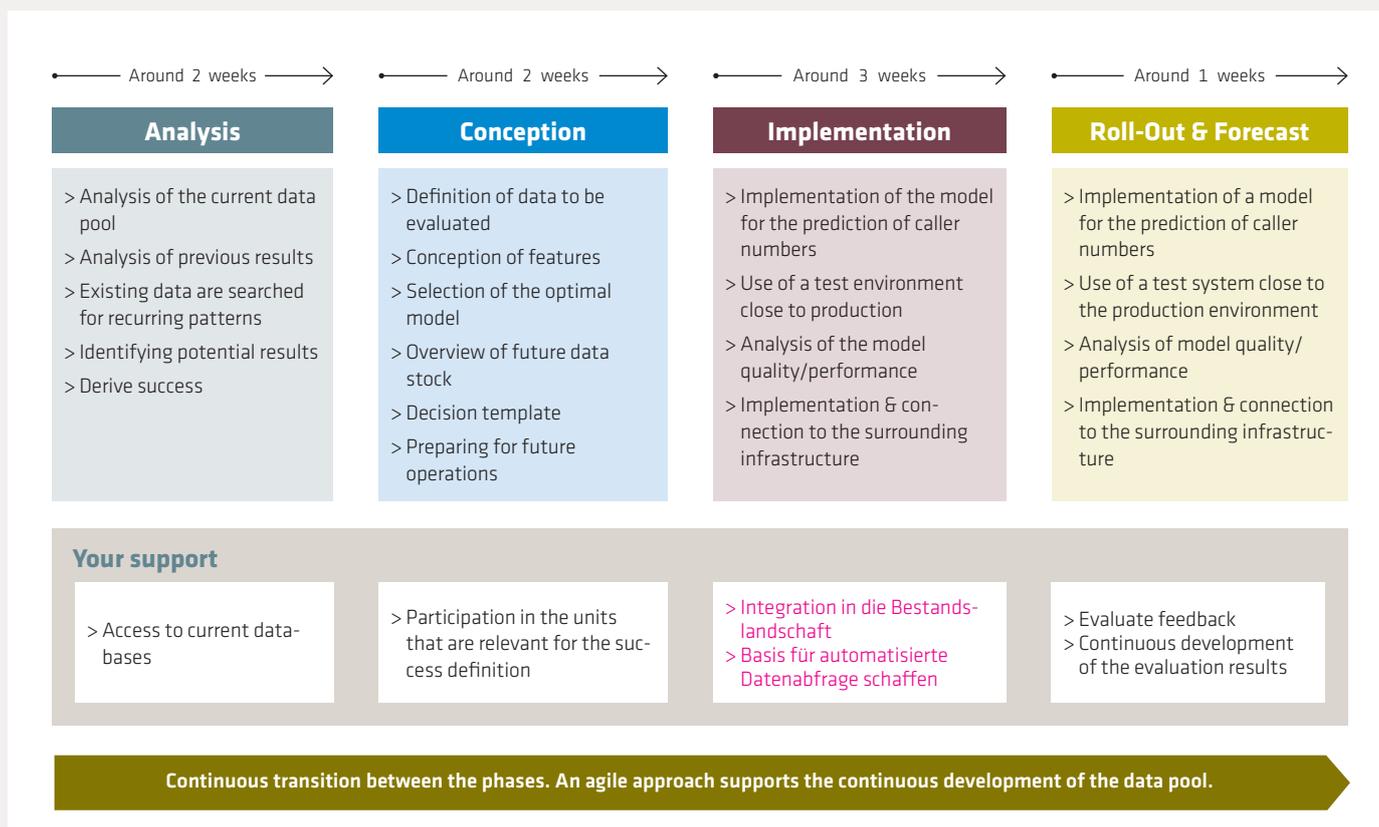
With our telephone forecast service, it is possible to have daily forecasts in increments of up to 30 minutes.

> The daily forecast estimates the total number of callers for the day
> The 30 minute prediction estimates the number of callers in per cent over the course of the day
> The half-hourly forecasts are then scaled with the daily forecasts

Drawing up personnel schedules

When drawing up personnel schedules for the coming weeks, various influencing factors must regularly be taken into account:

> Daily, weekly and seasonal tasks
> Consideration of capacities (working hours, vacation times, etc.)
> Target specifications per employee
> Consideration of legal framework conditions
> Focus on cost leadership
> Focus on customer satisfaction
> Efficient processing by defining planned processing times per operation type

Around 2 weeks	Around 2 weeks	Around 3 weeks	Around 1 weeks
Analysis	**Conception**	**Implementation**	**Roll-Out & Forecast**
> Analysis of the current data pool > Analysis of previous results > Existing data are searched for recurring patterns > Identifying potential results > Derive success	> Definition of data to be evaluated > Conception of features > Selection of the optimal model > Overview of future data stock > Decision template > Preparing for future operations	> Implementation of the model for the prediction of caller numbers > Use of a test environment close to production > Analysis of the model quality/performance > Implementation & connection to the surrounding infrastructure	> Implementation of a model for the prediction of caller numbers > Use of a test system close to the production environment > Analysis of model quality/performance > Implementation & connection to the surrounding infrastructure

Your support

> Access to current databases	> Participation in the units that are relevant for the success definition	> Integration in die Bestandslandschaft > Basis für automatisierte Datenabfrage schaffen	> Evaluate feedback > Continuous development of the evaluation results

Continuous transition between the phases. An agile approach supports the continuous development of the data pool.

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> Regression problem with a weak temporal dependency

> Stand-alone solution with minimal integration into the existing IT landscape (communication exclusively via CSV files)

> White box model (regression tree): This model guarantees that the participants are able to track the decision-making process of the AI solution.

Data-based planning in eight weeks

In just eight weeks, our forecasts will help your service centre with data-based employee scheduling.

Our mission

To put customers in contact with customer service employees faster and resolve their queries more promptly. This results in higher satisfaction levels and reduces the likelihood that they will change providers. At the same time, work organisation supported by machine learning offers a more reliable basis to both employees and managers at call centres in terms of planning. This helps in holiday planning, for example, which can involve a lot of work.

Do you want to learn more about our forecast for staff resource planning in call centres using AI? Get in touch with us!
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