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## BEONTRA SCENARIO PLANNING

*Customer Success Story:  
Kansai Airports Group*



## AIRPORT CHARACTERISTICS

<b>Project Name</b>	Long-Term Traffic Forecasting Solution for Kansai Airports Group (KAP)	
<b>Client</b>	Kansai Airports Group (KIX, ITM and UKB) Osaka, Japan	
<b>Client Details</b>	IATA Codes:	KIX, ITM and UKB
	ICAO Codes:	RJBB, RJOO and RJBE
	Owner:	Kansai Airports (Orix & Vinci Airports)
	Number of passengers:	51.8 Million p.a. (2019 for KAP)
	Movements:	376,598 p.a. (2019 for KAP)

## PROJECT BACKGROUND

Initially, Kansai Airports had commissioned external consultancy companies to deliver these long-term traffic forecasts, which led to a certain degree of dependency as KAP was not able to update their own traffic forecasts. Hence, KAP was never in the position to gain in-depth insights into the macroeconomic key factors for their traffic development.

### Objective

KAP was looking for an in-house solution to create reliable what-if long-term traffic forecasts on an annual basis in the required level of detail with adjustable time horizons up to 30+ years into the future.

One of the key objectives was to understand the development of the different traffic segments in order to draw multiple long-term traffic scenarios, to plan and prioritize investments into critical airport infrastructure most constrained at expected peak times and, based on this, to dictate master concession planning at KAP.

A further expectation was to have a toolbox at hand that allows KAP to review and update their traffic forecasts on a regular basis, e.g. to evaluate any disrupting event with potential severe effects on the traffic development at KAP which may require potential adjustments of forecast scenarios.

Based on these long-term traffic forecasts, design schedules for specific peak days should be created, transforming the previously created unconstrained long-term traffic forecasts into single flight-by-flight schedules, to allow for a more detailed analysis of any constrained infrastructure such as the runway capacity at expected peak times.

## BEONTRA SOLUTION

BEONTRA's 'Long-Term Traffic Forecasting' solution has been implemented to enable the KAP team to create long-term traffic forecast scenarios in-house according to their requirements up to the year 2059.

The long-term traffic forecasts are based on a wide set of statistical, socio- and macro-econometric parameters, e.g. real GDP and population development of all relevant traffic markets. Besides demand-driven influencing factors, custom-made drivers and alternative projections are being used. Concrete example: due to the current unprecedented crisis caused by the COVID-19 pandemic and the potential long-lasting effects for traffic development, BEONTRA prepared alternative projections of the real GDP development in order to develop multiple future what-if scenarios.

Additionally, the system provided the necessary flexibility to take the planned Maglev high-speed rail connection between Osaka and Tokyo, expected to open in 2037, into consideration as a constrained factor. Previous BEONTRA case examples proved to be particularly helpful for KAP to understand the potential impact of intermodal competition on the development of their domestic traffic market.

Based on the long-term traffic forecast results, KAP creates bottom-up flight-by-flight sample week schedules for selected years. To fill the gap between the known base schedule and the created long-term traffic forecasts for the different regional market segments, KAP incorporates further information from the airport network departments as well input from various airlines.

Based on these design schedules, KAP easily identifies any potential constraint of airport infrastructure at expected peak times. For instance, the built-in Runway Constraints feature quickly detects any potential runway constraint violations and spills flight events to stay below the declared capacity thresholds.

## OUTCOME and BENEFITS

KAP is now able to work independently on their long-term traffic forecast scenarios without external consultancy companies. They have deepened their understanding of the key factors driving their traffic development.

Even in times of extreme uncertainty, KAP develops reliable long-term traffic forecasts for multiple futures – base, high and low traffic growth scenarios – by flexibly and easily changing the selected input parameters. Also, KAP creates design day schedules for specific peak days based on the results from their forecast scenarios to get more details on any constrained infrastructure such as runway capacity at expected peak times.

All relevant socio- and macro-econometric indicators identified as key driving factors are stored in the BEONTRA system. The fact that these are updated regularly by BEONTRA means that the KAP team can focus their efforts on the development, assessment and revision of their long-term traffic growth scenarios.

For KAP, the BEONTRA Scenario Planning suite is a well appreciated and powerful toolbox for airport operators, even in times of extreme uncertainty as it provides the necessary flexibility against the background of ever-changing framework conditions.

*"Using BEONTRA's powerful Long-term Forecasting solution has immensely supported us in understanding the key drivers for our traffic development as well as the correlation between all factors.*

*Even in times of extreme uncertainty, we are able to create reliable long-term forecasts by leveraging all input parameters and multiple future scenarios."*

Sachio Miyagi  
 Aviation Sales & Marketing  
 Department - Assistant Director  
 Kansai Airports Group

For more details on BEONTRA's Long-Term Traffic Forecasting solution, please contact us via [info@beontra.com](mailto:info@beontra.com).