K&K project: Engineering the knowledge destination

Prof. Matthias Fuchs

A research project financed by the Knowledge Foundation (*K&K Stiftelsen*) has recently started in fall 2011. Key actors of the destination of Åre, like SkiStar and the destination management organisation, Are AB, jointly engage along with researchers from ETOUR in the co-production and implementation of a powerful *Destination Management Information System* (DMIS). Although huge amounts of customer-based data are widespread in tourism destinations (e.g. data bases save transaction and survey data, respectively, web servers store tourists' website navigation), these valuable knowledge sources typically remain unused.

- Transaction data
- CRM data
- Tracking data
- Survey data

Data Bases

- Navigation data
- Search data [keywords]
- UGC [ratings, blogs, e-reviews]

World Wide Web

**Customer-based data sources in tourism destinations**

The K&K project resolves this deficiency by developing, implementing and testing a DMIS that enables tourism managers the de-centralized ad-hoc generation of strategically relevant knowledge that is crucial to strengthen the drivers behind destination success, namely economic performance, marketing effectiveness and the quality of visitor experience.

From a rather technical viewpoint, structured and unstructured data from heterogeneous data sources is automatically extracted and stored into a central data warehouse. By using methods of business intelligence (i.e. Data Mining and Online Analytical Processing/OLAP) previously unidentified knowledge can be retrieved. This procedure enables a destination wide and all-stakeholder encompassing *knowledge generation*.
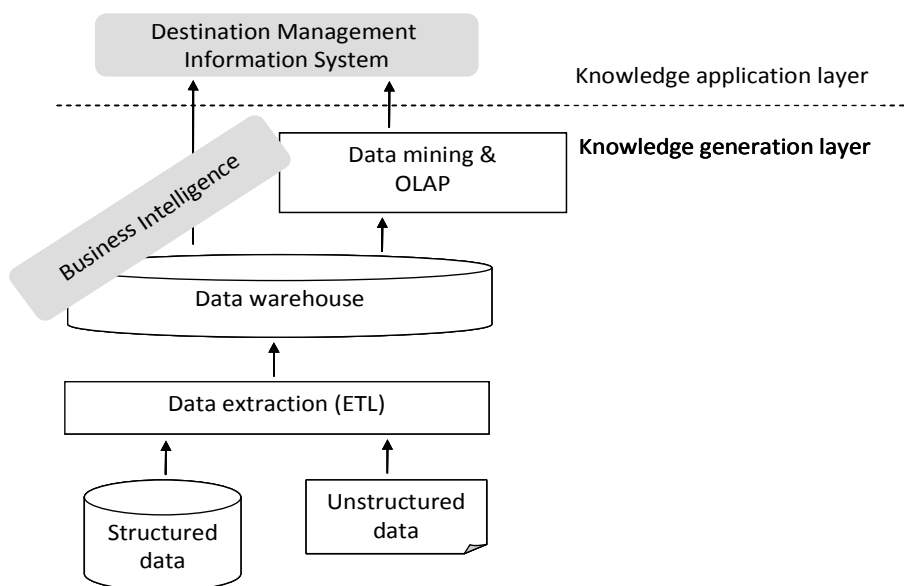
Knowledge destination framework architecture

At the level of *knowledge application* a further project goal is to realize the interactive visualization of business intelligence results in a most appropriate form. Below an exemplary user interface of the DMIS, the *DMO Cockpit,* is presented.
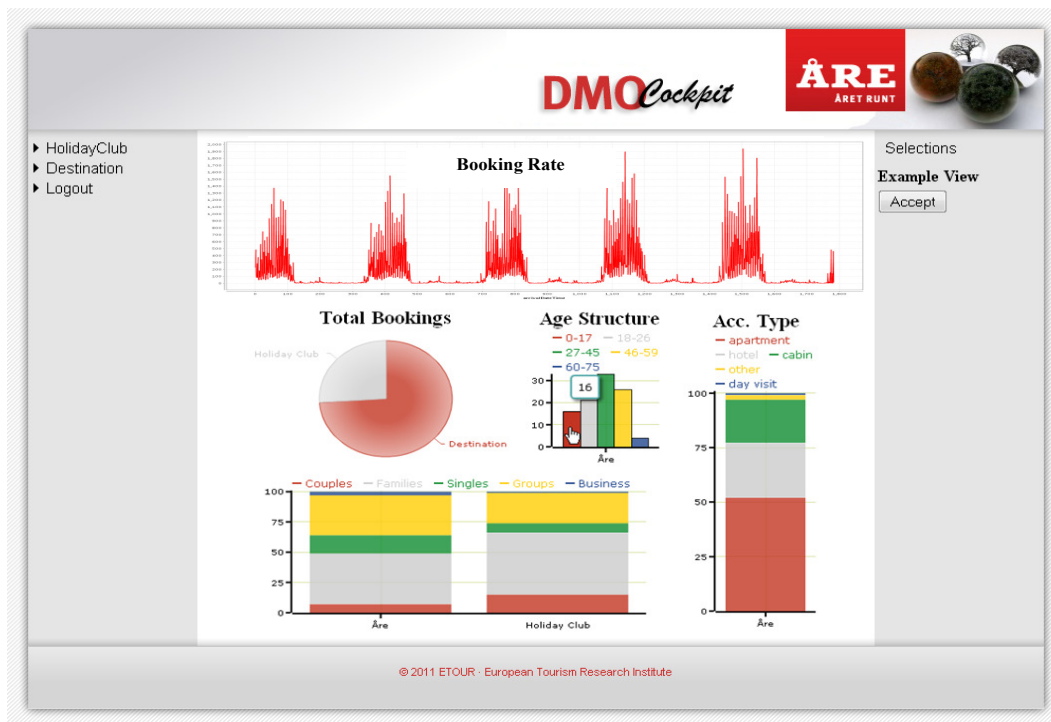
Interactive knowledge visualization through the DMO Cockpit

From a managerial perspective the destination wide analysis of customer-based data pursues two objectives, namely to:

1) *Monitor the fulfilment of strategic destination goals*
2) *Support decision making to increase the degree of strategic goal fulfilment.*

More concretely, the strategic goals comprised by *Åre-Vision 2020* can be continuously monitored: for Åre AB, as being the central representative of local destination suppliers, DMIS will visualize the share of *satisfied guests,* the increase of *foreign overnights* in the winter and in the non-skiing season*, the increase of *customer contacts*, the *advertising reach* and the *brand awareness* of various target segments. Finally, destination stakeholders will benefit through the support of their decision making particularly in the field of marketing and capacity planning (e.g. forecasting, market basket analyses, understanding of cancellation behaviour, etc.). For instance, the achievement of SkiStar's major marketing goal, namely to "market the destination with a clear profile through advanced Internet technologies by ensuring that local suppliers maintain highest service quality" will be effectively supported by personalized marketing and customer reach which is, subsequently, controlled by conversion rates, both, at the level of single suppliers and the tourism destination as a whole.

The 2-year *K&K Stiftelsen* project will be conducted in collaboration with the University of Applied Sciences Ravensburg-Weingarten and begins in September 2011.

References

Chekalina, T., Fuchs, M. & Lexhagen, M. (2012): Determinants of the Co-Created Destination Experience: An Empirical Validation from Sweden, In: M. Kozak (eds.), *Advances in Tourism Marketing*, Cambridge Scholars Publishing (in print).

Fuchs, M., Chekalina, T. & Lexhagen, M. (2011): Destination Brand Equity Modelling and Measurement – A Summer Tourism Case from Sweden, In: Tsiotsou, R. H. & Goldsmith, R.E (eds.), *Strategic Marketing in Tourism Services*, Emerald Group Publishing Ltd., Bingley, UK (in print).

Fuchs, M. & Höpken, W. (2009): Data Mining in Tourism (In German: „Data Mining im Tourismus"), Praxis der Wirtschaftsinformatik, 270 (12): 73-81.

Höpken, W., Fuchs, M., Keil, D. & Lexhagen, M. (2011): The Knowledge Destination – A Customer Information-based Destination Management Information System, In: Law, R., Fuchs, M. & Ricci, F. (eds.), *Information and Communication Technologies in Tourism 2011*, Springer, New York: 417-429.

Lexhagen, M., Kuttainen, Ch., M. Fuchs & Höpken, W. (2012). Destination Talk in Social Media: A Content Analysis for Innovation In Christou, E., Chionis, D., Gursory, D. & Sigala, M. (eds.). *Advances in Hospitality and Tourism Marketing & Management*, 31st May-3rd June, Corfu, Greece (in print)

Pitman, A., Zanker, M., Fuchs, M. & Lexhagen, M. (2010): Web Usage Mining in Tourism – A Query Term Analysis and Clustering Approach. In: Gretzel, U, Law, R. & Fuchs, M. (eds.), *Information and Communication Technologies in Tourism 2010*, Springer, New York: 393-403.

Prof. Matthias Fuchs
Project Leader