



**Fraunhofer** Institut  
Arbeitswirtschaft und  
Organisation

Project Description for the  
Scenario Project

# FutureHotel

Visions and Solutions for  
Tomorrow's Hotels





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# 1 Challenges for the Hotel Sector

The global hotel sector keeps on growing! The investment activity on the German hotel market is also rising again due to the good economic situation. Within the next 3 years, around 330 new hotel projects with an investment volume of 5.1 billion Euros will be realised in Germany. Global trends like demographic change, growing environmental awareness, increasing mobility as well as the diversity of the population will lead to a change of the guest profile. The different requirements of specific guest types will define the offer. In addition, innovations in media technology as well as the development of innovative, hybrid hotel concepts and the growing demand in the luxury sector offer new chances and challenges for the hotel industry.

For a sustainable strategic positioning in the national and international cut-throat competition, knowing the guests necessities as well as the potential of new technologies will become a vital factor for success for the hotel sector companies. Essential questions are:

- Into what does the hotel sector evolve into? What are the elementary research trends? What key developments can be expected and what is their influence on the hotel industry? Which consequences can be deduced from these developments for the hotel sector companies? What specific guest types form the new target group?
- What possibilities offer new materials, products and innovative technologies for the hotel property of the future? How can logistic and organisational processes in hotels be optimised amongst others by the use of information and communication technologies?
- What innovative hotel concepts and solutions account for the changes of the work and life environment and the new understanding of health in the beginning »Health-Age«?
- How does the hotel room of the future look like? How can one respond to individual necessities of a guest or to different guest types? How can the use of new technologies enhance the comfort of the guest?

For the first time, Fraunhofer IAO will research these questions, amongst others, within an unique conjoint project in collaboration with eight other Fraunhofer-Institutes and important players from the economy. Within the framework of the project FutureHotel, the hotel of the future is projected. That way, new trend-setting solutions for the different areas of the hotel (hotel room, reception, conference areas etc.) are identified under consideration of technological innovations as well as economic, ecological, legal and overall societal aspects.

## 2 Scenario Project FutureHotel

### 2.1 Aim

In the innovation project **FutureHotel**, Fraunhofer IAO develops scenarios and solutions for the hotel sector. Trend analysis, user surveys, scientific studies and best practise research provide a basis. The following targets characterise the work in the network of **FutureHotel**:

- future proof concepts
- holistic solutions
- profitable solutions
- praxis-oriented and short-term realisation
- increasing efficiency and efficiency of processes
- competitive advantage for the partner companies
- public perception
- innovation lead and scientific neutrality

This future observation shall serve the project partners as a decision guidance and provide an established basis for a future compatible strategy development and, at the same time, be a guard rail and signpost for the further development of the hotel sector.

### 2.2 Network Research and Networking

Based on the research platform NextHotelLab in the inHaus-Centre in Duisburg, with co-operation of nine Fraunhofer-Institutes and various commercial partners, the scenario project **FutureHotel** is designed as a conjoint project. Fraunhofer IAO takes up the leading and organisational role and co-ordinates the research work as well as the project management. The methodical competence of Fraunhofer IAO and the experience of the Fraunhofer-Institute as a neutral scientific authority is used to analyse future trends and developments for the hotel branch and to deduce from them business tactics for the project partners. The partners will decide the standards of the project and, in periodic project meetings and workshops, be able to actively engage in the direction and focusing as regards to content.

As a conjoint project, **FutureHotel** addresses companies from the full width of the sector who share the enthusiasm for »Inventing the Future«.

The project addresses companies from the following target groups:

- hotel operators, investors and property developers
- building companies, property developers and project steerers
- architects and designers
- architectural planners and service companies
- producers and suppliers of fixtures
- producers and suppliers of technological product and system solutions
- producers and suppliers of hotel software
- hotel and tourism organisations and associations

The co-operative basic understanding of the **FutureHotel** Alliance shall make a substantial contribution to force the innovation process and to place intentional and purposeful emphasis in the mutual practical realisation of research insights. The different experiences and perspectives of the participating companies, in conjunction with top-level research, provide an enormous driving force with regard to the wide choice realisation of new concepts and solutions. The model of conjoint research enables, through the shared financing of the research and development work, to research questions holistically and in depth, and therewith it offers crucial advantages compared to isolated research activities of individual companies.

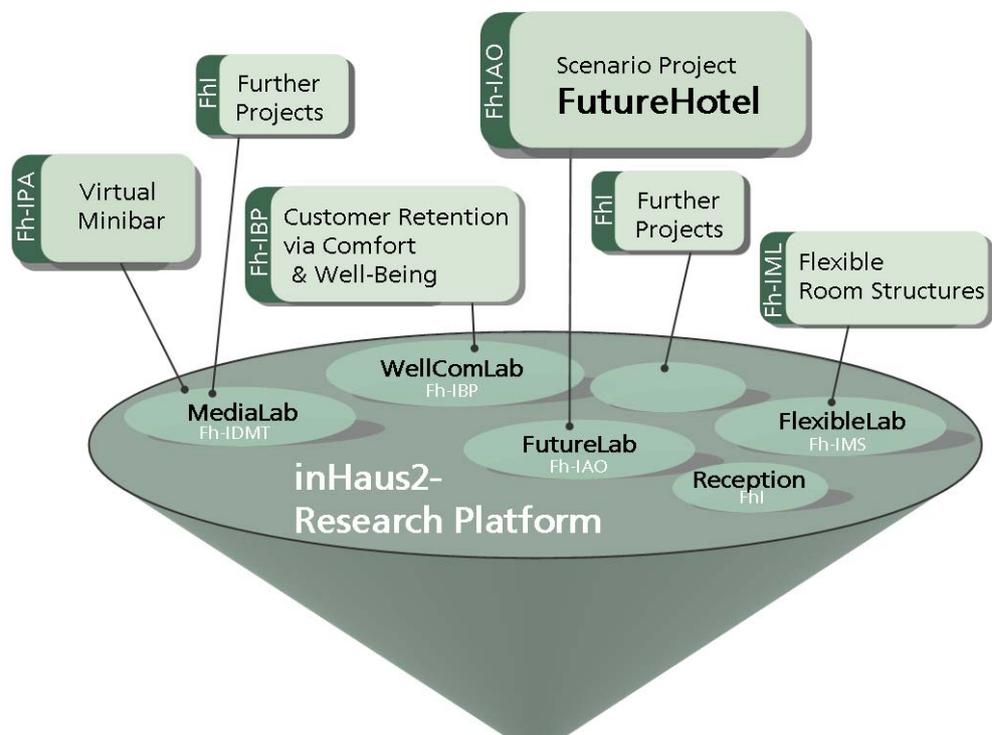


Image 1: research projects on the topic hotel in the inHaus2

## 2.3 Project Structure and Organisation

In periodic project steering meetings, the progress of results of the individual research topics will be presented, discussed and evaluated and strategic directions will be conducted. To promote the individual topics on a professional level, topic specific workshops will be organised if required and after consultation of the project partners.

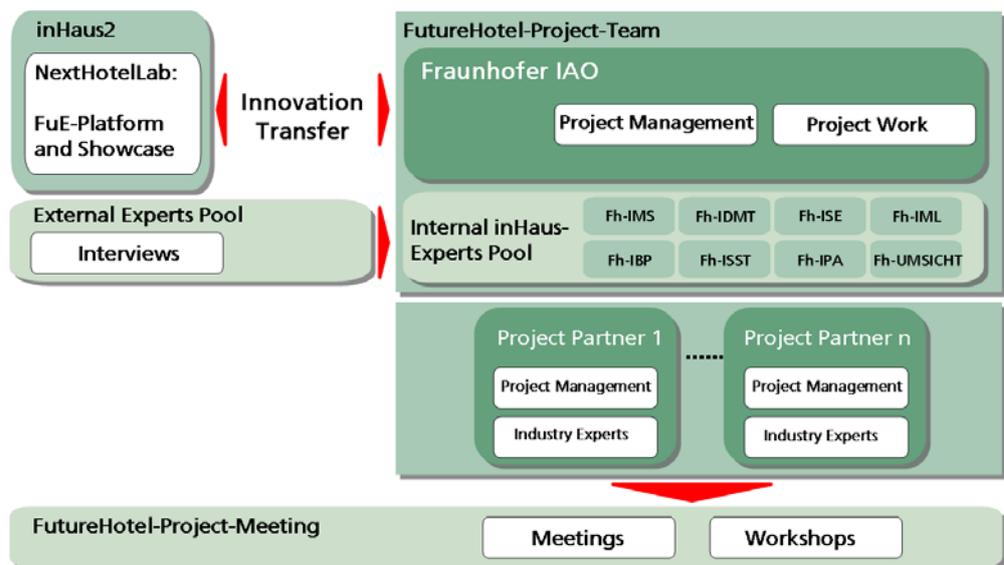


Image 2: project structure and organisation

## 2.4 Public Relations

The activities around the scenario project FutureHotel and the research platform NextHotelLab in the inHausCentre in Duisburg will experience a strong presence in the specialised press and the tele-media.

Selected results shall be presented to the general public and the press in the course of publications, events and trade fairs. Once a year the inHaus-Forum with Fraunhofer-experts and external speakers will take place in Duisburg offering to the business partners an exposition area for their company and product presentations.

That way information about the project will be made available to a wide range of trade experts and the label **FutureHotel** will be established as a synonym for future proof visions and solutions for the hotel sector.

## 3 Research Topics for the Project Phase 2008-2010

### 3.1 Hotels in Change – a Vision

Into what does the hotel sector evolve into – how does the hotel of the future look alike? Emanating from this central question, in the project phase 2008-2010 Fraunhofer IAO addresses the following research fields by an integrative observation of the future and under consideration of interdependencies:

*Research field global trends – key developments and their impacts on the hotel market*

- demographic change:  
The demographic change and its impact on society, economy and the hotel sector.
- new markets and global political changes:  
The boom of the emerging markets also implicates new touristic source markets. Different cultures will encounter increasingly in the destinations.
- climate change:  
Impacts of the climate change will draw a new touristic map of the world. Tourism regions will be affected to different extents by the climatic and regulatory changes.
- the world of work in change:  
Changes in the world of work (mobility, flexibility, networking, work-life-balance etc.) will, to a considerable degree, affect the requirements in the hotel as a communication and meeting place as well as a temporary work and life world for guest, visitors and hotel staff.
- changing values in the »health-age«:  
Beyond contemporary phenomena like wellness or selfness, there is a growing need for health, productivity and creativity as well as offers on recreation and prevention in our aging society.
- luxury – the special experience as future market:  
The polarisation of the markets as a chance for growth for the luxury hotel sector.  
Worldwide, there is more and more accumulated wealth, at the same time, the understanding of luxury is subject to a profound change. Classic material luxury goods become less, the special experience, on the other hand, becomes more important.
- low budget as future market:  
The current boom in the low budget sector.

- branding – destination brand:  
Brands develop into new touristic destinations. Not the region but the brand experience becomes the objective.
- unique selling proposition through quality and design:  
Unique architecture and fancy design as unique selling proposition in the hotel sector. Differentiation measures in global competition.
- changing target group:  
The increasing segmentation of the markets requires a strategic target group orientation. Specific guest types have different needs. The specification of the offer conduces to new customers acquisition and customer retention (e.g. lady's room for business women travelling on their own).
- staff as target group:  
A growing lack of professionals requires a new comprehension of how to handle staff (recruiting, staff retention) as well as an attractive offer (work environment design, services and benefits for staff, unique selling proposition towards competitors).

*Research field hotel innovations – new products, technologies and materials for the hotel property, hotel room, reception, etc.*

- innovative technologies:  
Revolutionary technological developments like the internet have radically changed the global tourism and hotel sector, e.g. through transparency of performance, improved information retrieval and exchange as well as the travel and booking behaviour. The innovation speed continues and bears further chances and challenges for the hotel sector.
- innovative buildings:  
Building innovations for economic and sustainable hotel properties.
- innovative materials and products:  
Profitable use of high-tech materials and product innovations.

*Research field hotel concepts – analysis of concepts and services as a factor of success for the hotel sector*

- luxury hotel
- budget hotel
- green hotel
- wellness and medical hotels
- design hotel
- hybrid solutions
- para-hotels

### 3.2 Innovation Platform *NextHotelLab* – Prototypical Implementation, Evaluation and Demonstration in the inHaus-Centre in Duisburg

Approaches and results of the scenario project **FutureHotel** can be realised, evaluated and verified prototypically and project-related in the laboratory areas of the research platform *NextHotelLab* in the inHaus2 in Duisburg.

The Fraunhofer-inHaus-Centre is a world-wide unique innovation workshop for buildings, rooms and the application processes which take place here. In this centre, innovative product components and system solutions are developed and tested with new efficiency effects for engineers, operators, investors and users of commercial and residential properties. Coming along is a broad spectre of research and development activities for new product and system solutions for manufacturers, system integrators and service providers. Promoted by the NRW-Ministry for Innovation and Science, Research and Technology, the European Union, the Federal Ministry of Education and Research and the Fraunhofer Headquarters, on an area of 1.400 square metres in the inHaus2-Research Complex the *NextHotelLab* for the sector of hotel and event is developed. Here, a *NextOfficeLab* and a *NextHealth & CareLab* serve as an application laboratory for the office and service sector as well as the hospital and nursing home sector. Throughout Europe the inHaus-Innovation Centre, thus, becomes an unique location for application oriented research in the sector of room and building systems.

Currently inHaus2 is under construction. The building will be inaugurated in November 2008 accompanied by the inHaus Forum 2008 with top-class guests and speakers.



Image 3: Inhaus2 of the inHaus-Centre in Duisburg

## 4 Procedure and Project Roadmap

The **FutureHotel** project work of the phase 2008-2010 is organised in the following work packages:

### 4.1 Basics Analysis and Best Practice

With a comprehensive meta study (literature research, evaluation of relevant research work etc.) and global best practice research (e.g. Germany, Europe, Asia, the U.S.) a snap-reading method of the current stage of development of the hotel sector in Germany compared internationally is elaborated and the most important research fields are detected. Consulting the project partners, the fundamental survey fields for the following user and trend study will be defined on this basis (e.g. potential of high-tech workplace-solutions in hotel rooms for the target group of business travellers).

**Aims:** Analysis of the relevant trends and developments for the hotel sector; identification of the masterminds of this sector in an international hotel survey; analysis of innovative concepts, services and layout design elements;

**Useful result:** as-is reference for hotel projects with innovative solutions; catalogue of content-based, functional and technical requirements; identification of improvement potential.

### 4.2 User Study **FutureHotel**

A comprehensive user study with user interviews in selected, exemplary environments (inhouse-interviews, monitoring, examination of behaviour patterns, evaluation of the results etc.) serves for identification of current guest types, the analysis of the specific requirements of these guest profiles for the hotel sector and the identification of needs for optimisation.

**Aims:** analysis of current guest and staff necessities; analysis of the changing guest types and necessities.

**Useful result:** user study **FutureHotel**.

#### 4.3 Trend Study FutureHotel

Within a diversified market study (especially R&D and management), a systematic expert study in multiple rounds (Delphi-Study), the future relevant developments of the hotel sector will be collected and innovative trends in the near and far future (time horizon up to the year 2020) will be identified. Examples for key factors are demographic change, aspects of energy efficiency and sustainability, technological development, social factors of influence (globalisation, growing ecological awareness etc.).

**Aims:** collection of current and future relevant global developments and trends in the hotel sector; monitoring of potentials and feasibilities.

**Useful result:** trend study FutureHotel (incl. Delphi report).

#### 4.4 Scenario Report FutureHotel: »Hotels in the Year 2020«

On the basis of this user and trend survey, various prognosis will be deduced under variable general conditions. This can be a matter of extreme as well as probable future projections. After that, the projection bundles will be combined into scenarios and described and interpreted in the scenario report. The scenarios will be drawn to interpretation and assessment of current hotel concepts.

**Aims:** coherent picture for the hotel in the year 2020; interpretation and deduction of consequences and need for action for the German hotel sector.

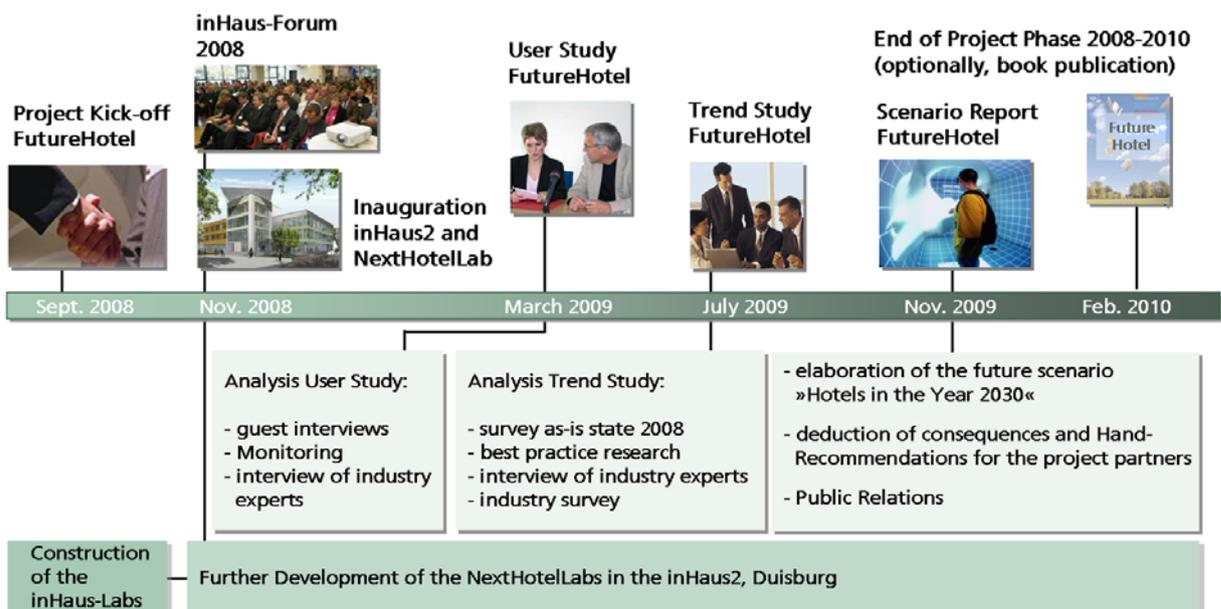
**Useful result:** scenario report FutureHotel (incl. recommended procedures for the project partners).

## 4.5 Future Development and Operation of the inHaus-NextHotelLab

As »built vision« and showcase for the scenario project **FutureHotel**, the research platform *NextHotelLab* in the inHaus-Centre Duisburg especially serves as the *FutureHotelLab* for prototypical application and demonstration of project contents.

**Aims:** visualisation and validation of project contents on the basis of real prototypes.

**Useful result:** partners can use approaches and products realised in the *NextHotelLab* and also use them as a reference. In addition, the *NextHotelLab* offers the project partners an exclusive platform for the presentation and evaluation of own products, system solutions and concepts.



## 5 Competences in the Fraunhofer-Network

### 5.1 The Fraunhofer IAO, Stuttgart

Fraunhofer Institute for Industrial Engineering IAO investigates current topics in the field of technology management. The institute particularly helps companies to recognise the potential of innovative organisation forms as well as new information and communication technologies, to adapt them individually to their need and to employ them consequently.

The Institute helps companies to draw up technology strategies aligned to the competitive environment and the market. It plans the deployment of technology for the entire enterprise, in the business sectors and in individual projects. In keeping with the holistic approach pursued, attention is also given to the individual and social values held by people in their working environment. This not only addresses the task of creating ergonomic solutions, but also the additional qualifications required by employees in coping with the decentralized organisation of work and the implementation of new technologies.

Research projects are conducted in close collaboration with small and medium-sized companies and industrial corporations predominantly under direct contract; furthermore, the institute participates in various research programs.

### 5.2 The inHaus Experts Pool

The following Fraunhofer Institutes engage in the inHaus network and will be integrated in the project work if necessary:

- Fraunhofer IMS, Duisburg
- Fraunhofer IBP, Stuttgart
- Fraunhofer ISST, Berlin and Dortmund
- Fraunhofer IDMT, Illmenau
- Fraunhofer IML, Dortmund
- Fraunhofer IPA, Stuttgart
- Fraunhofer ISE, Freiburg
- Fraunhofer UMSICHT, Oberhausen

## 6 Project Duration, Financing and Contact

### **Project Duration:**

The project phase 2008-2010 starts September 1<sup>st</sup> 2008 and ends February 28<sup>th</sup> 2010. The contractual obligations encompass the total time of these 18 months.

### **Project Financing:**

The participation fee for the scenario project **FutureHotel** is a fixed price of EUR 33.500,- per year and project partner. This makes up to a total cost of EUR 50.250,- per project partner for the 18 months of the project phase 2008-2010.

Project financing through the partner enterprises includes a proportional share of all costs for academic staff, academic assistants as well as cost for material, consumption, fees and travel costs for the preparation and the presence at meetings and presentations.

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