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CONCEPTING THE HOTEL FOR TOMORROW

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Contents

Foreword

■   It is easier to analyse the past than to create new, broadmindedly envisioned business concepts and to predict future trends. Nonetheless, this report focuses on building the future and shaking the conventional thinking of the reader.

The hotel industry has functioned with traditional operating models for years; product development has been cautious, and it has partially been based on production and cost savings principles. A hotel room has been a space not recognising of anything or anyone, never changing or adjusting itself. Over the past few years, due to customers' experiences and changes in consumer habits, a need has emerged to rethink the basis of the traditional hotel.

At the same time, global megatrends, such as sustainable development, are gaining more ground also in the hotel business. The principles of sustainable development offer no longer a mere competitive edge. They represent a self-evident, default basis for building a customer-oriented but also nature-preserving, sustainable accommodation industry for future decades.

This constitutes the framework for the Finnish Hotel of Tomorrow.

We are mainly concentrating on megatrends and changing customer needs in the framework of the Experience Society. We are creating two hotel room concepts, which are based, on one hand, on preserving the one and only globe we have and on helping the customer connect with nature and, on the other, on technological development and on faith in, and experience of, technology.

Most importantly, though, we concentrate on the customer, who will be able to alter the room according to his or her personal tastes and wishes.

We welcome you to join us for creating the future.

Creating the future

■   Usually when something new is created, the customers are asked for their opinion. This is a well-known and safe way of proceeding with product design. However, if you accidentally ask the wrong customers the wrong questions with the wrong emphases, you often end up with 'wrong' answers.

Customers are not necessarily able to distance themselves from the here and now to reflect on general questions about concept design. There may also be a problem of customers requesting a variety of already existing things without wanting to pay for them. Thus, a customer interview process may end up producing a multitude of unrealistic wishes.

This project draws from the American Hotel of Tomorrow project, where the future face of hotels has been studied for years. In addition, the basis for planning included a bachelor's thesis by three Haaga students, surveys and studies carried out by the teachers and researchers at the Haaga Campus, and both the existing expertise and the research and development work of the partner companies.

The idea is to build two guest room concepts. When they are ready, they will be opened to customer comments. From then on, the concepts will develop on the basis of customer feedback.

Changes in customer behaviour

A changing consumer, a post-modern consumer, a demanding consumer. What is going on? Throughout the history of the hotel business, the consumers have been considered the bottom link in the food chain, whose job is to accept the conceptual decisions and logistics, and stay overnight happily at the hotel of their choice, where they are asked to make themselves at home. While the business traveller would rather be home, today's leisure traveller seeks an escape from home, with new, exotic adventures.

Hotels have traditionally been divided into business and leisure hotels. This division is changing. Many of the newly built lifestyle, design, and chic hotels offer the guest a 'stage' where guests with similar lifestyles meet with each other.

At the same time, as consumers we are becoming more and more demanding, feisty, short-tempered, experienced, and willing to seek not just rooms, restaurants, or bars but experiences – individual, tailored experiences, not mass experiences. From volume-based thinking we are moving towards value-based thinking.

The hotel industry should respond to the needs in the uppermost part of Maslow's hierarchy of needs, the need for self-fulfilment and enjoyment instead of just satisfying the need for shelter and nourishment.

Consumers are also whimsical, impatient, and fickle. Fortunately, they are also wealthier and more willing than ever before to pay for their whims. Perhaps this megatrend will bring us hotel concepts with shorter and shorter life spans. Maybe the hotel business will follow the concept development of trendy restaurants, in which the concepts can be revamped every couple of years.

The role of technology in hotel stays

In the future, the hotels will meet guests' expectations better than before. The rooms will have elements and functions that can be tailored according to guests' preferences. These could include music, lighting, scents, colouring, and to some extent the interior of the room. Highlighting the individual aspects with technological solutions will be one of the most significant changes in hotel rooms. In the future, the room key may be a card with a microchip including information about the customers' personal wishes and preferences. When the customer enters the room, the key card activates the right settings, and the room will be tailored to match the guest's choices. The guest can save several sets of preferences on the key card, then select the most suitable of these.

The uses of many appliances will be more versatile. For example, the television set will function more as a computer does: it can both receive and send data, which makes it possible to use the screen for videoconferencing or for surfing the Internet. Because the number of TV channels in the hotel rooms is on the rise, the channels could be searched and categorised via a search engine such as Google. Using this kind of program, the guests could save their favourite channels on the TV or directly on the key card chip. The traditional hotel folder will become obsolete, with all information to be found on the TV. Television, computer, sound system, and other technology will be combined and controlled by the same device.

The basics – i.e., a good night's sleep and taking care of personal hygiene – will remain important for the hotel guest of the future. The bed

will be easily tailored to individual requirements, and it will even be able to measure the guest's sleep quality. The standard hotel bathroom will be replaced by a spa-style wellness centre. Overall hygiene will be enhanced with smart, self-cleaning materials in textiles and furniture.

Technology brings in new possibilities, and daily activities such as checking in and checking out can be made automatic. Technology will not replace service, but it can free the staff for actual customer service. The biggest challenge is to make the new technological innovations simple, easy, and quick to use.

The role of ecological elements in hotel stays

People are becoming more and more aware of environmental issues, so hotels too should see the importance of sustainability in their solutions. Environmental issues will be taken into account early, in the planning and construction stages. Thus it becomes easier, and more economical, to save energy and materials in the everyday operations of the business. Energy-saving technologies should already be standard choices. In hotel rooms when the lights work with the key card, the lights automatically turn off when the customer leaves the room.

Water pressure and room temperature should be adjustable, but the convenience and comfort associated with a hotel stay should not be compromised. For example, the temperature of vacant rooms could be lowered and then, when the customer checks in, raised again. In the future, district heating and cooling systems, reuse of the heat generated by computers, and windows made with heat-saving materials will become more and more commonplace.

The role of experiences in hotel stays

Technology will help to improve the guest experience. With the lights and music, the guest can customise the room for working, with adequate lighting and comfortable seating on the adjustable couch, on the bed, or at the desk. For relaxation, the lights and colours can be adjusted to change the room atmosphere into something quite different. A rising sun with birds singing, a starry sky at night, or the sound of ocean waves will help the guest to reach the desired state of mind or feeling. The infrastructure

of the rooms can be adjustable according to the needs of individual guests, providing the guest with the requested experience.

In the future, meeting the changing needs of hotel guests will play a major role. By networking with other operators, the hotel can produce the experiences the guests hope for. One does not need to do all of this him- or herself. In the future, the hotel can be the travel destination, not the city in which the hotel happens to be located. This is possible if the hotel has been able to create an image of being attractive and filled with experiences. (Lindfors, Rahko & Salo 2008.)

The early phases
of creating the future

■   The most natural way to describe the early stages of the project would be to refer to the basic task of the Haaga Campus of the HAAGA-HELIA University of Applied Sciences.

> Via its students and graduates, the Haaga Campus wishes to bring new thinking, energy, and courage for change into the hotel, restaurant, and tourism business and thus benefit both working life and society. For our students, we offer learning that responds to the theoretical and practical needs of the industry and provides skills and competencies needed for future supervisory or managerial positions. The learning process promotes ethics and education, and it enhances the characteristics, values, and attitudes needed in the service industry. We train our students to manage entities as required by the industry and guide them into professional growth. Our job is to support regional development and promote international co-operation as well as carry out research and development for the benefit of both the industry and the school.

In other words, future-oriented thinking is part of the Haaga facility's basic mission.

The former Haaga Institute, now the Haaga Campus of the HAAGA-HELIA University of Applied Sciences, is the leading educational institute for hotel, restaurant, and tourism management students in Finland. At the Haaga Institute, the idea of implementing the future-oriented element of the hotel business in the hotel industry education process came up from time to time for years.

Best Western Hotel Haaga is a significant co-operation partner for the hotel, restaurant, and tourism management degree programme that operates at the Haaga campus. The hotel has provided an authentic business environment for hospitality training for students as well as for business experiments and for trying out new concepts.

In winter 2006–2007, when the plans for a massive renovation process at Best Western Hotel Haaga became public, the discussions concerning an experimental project involving a couple of guest rooms started to gain momentum.

These discussions reached a favourable conclusion when the Haaga Institute Foundation and the hotel company promised to allow the school

the use of two guest rooms. The rooms were a small single room and a junior suite.

In spring 2007, a project began: these guest rooms were going to be built as hotel rooms of the future. To supervise and monitor the implementation of the project in co-operation with the steering committee, Ms Tuija Toivola, D.Sc.Econ., was appointed as the project leader. Mr Ari Björkqvist from the Haaga Campus of the HAAGA-HELIA University of Applied Sciences was appointed as the operations leader and project manager. He had a background in the hotel business before starting his career in education. The managing director of the hotel, Mr Pekka Kleemola, represented the hotel company's interests in the project.

The implementation of the project involved several starting points. For one, three Haaga students in the hotel, restaurant, and tourism management degree programme started writing their bachelors' theses on the project.

Funding for the project was sought firstly for the preparation phase and then for the implementation itself from the research and development funds of the HAAGA-HELIA University of Applied Sciences. Funding was also applied for from the Tourism and Leisure Services Programme of the Finnish Funding Agency for Technology and Innovation, Tekes.
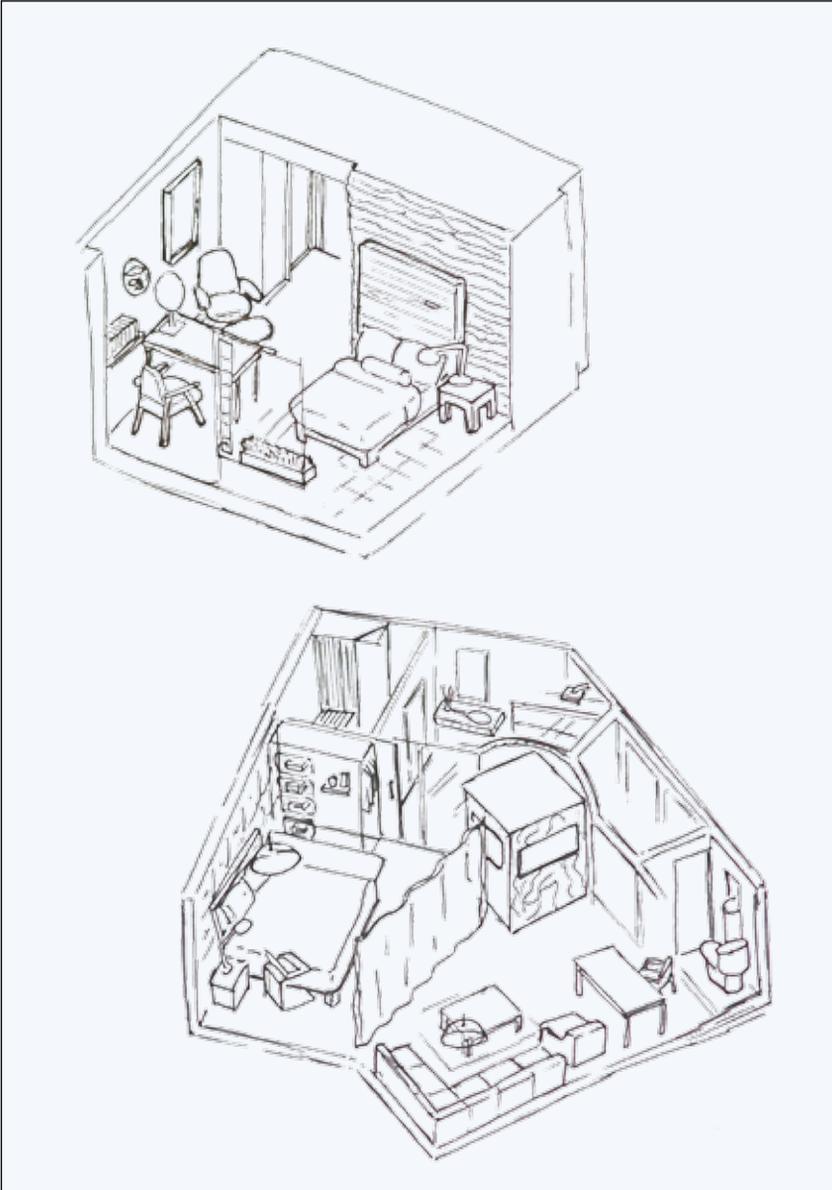
Phases of the Project

The project had two working bodies – a steering committee and the actual project team.

The steering committee held meetings every three months. It served as the executive body of the project, with the function of controlling, directing, and eventually financing the decisions made. The actual project team included representatives of the partner companies, the project manager, and the three students carrying out their thesis work. The team met once a month, and more if needed.

The students worked on their bachelor's projects, which brought in theoretical aspects behind the project, analyses, and future scenario material. The scheduled thesis deadline was spring 2008.

For an international angle, Mr Ron Swidler and Mr Matt Phillips, both American, were recruited for the project. They have been working on the earlier, American version of the Hotel of Tomorrow. The project manager visited these experts twice, at different stages of the project. The basic planning of the two room concepts has been done largely in co-operation with them.

Various sketches were made along the way. Pictures: Ron Swidler and Matt Phillips.

A variety of internal and external members of the project team, partner companies, and a multitude of articles and studies concerning the future have all had an effect on the project.

It was decided that the Finnish Hotel of Tomorrow project and its two room design concepts were going to be covered in a publication at the Gastro Fair in the Helsinki Fair Centre in March 2008. This schedule created some pressure for the completion of the project.

Objectives of the Project

For the hotel industry, the project aimed to create a setting for the application and research of new innovations, including both technical and operational service enhancements. This should enable the research and development of new products and bring the newest innovations to the hotel business.

Another goal was to develop new, competitive business that supports and promotes the whole hotel industry in Finland, especially the operational environment of independent accommodation units, who may have only limited ability for research and development.

The project aimed to build an authentic room laboratory, where service and technology innovations as well as changes in them could be tested with real guests.

Finally, one of the goals was to promote the status of the hotel, restaurant, and tourism management degree programme at the Haaga Campus of the HAAGA-HELIA University of Applied Sciences as the leading hospitality and tourism management programme. For both researchers and students, the project aimed at creating a reality-based, authentic background for future-oriented study of the hotel business. For industry training purposes, the project will be integrated into the curriculum of the school.

Factors creating change

Traditionally, a hotel room has been considered a product, an outcome of the production process of the business. The hotel room has changed along with developments in technology: the TV screen has grown in size and become flatter, and the tiling and beds have been replaced with new ones every 10 years.

The Finnish Hotel of Tomorrow is all about weak signals and especially megatrends. How do large-scale, global development trends affect the growth of hotel concepts?

There are several megatrends that can be named here: the ageing of the population and longer life expectancies bring challenges and also possibilities for the hotel industry. The general growth of wealth both in established Western economies and also in newly developing economies bring change to the global hotel business. Sustainable development and limited energy sources are issues affecting consumption patterns. The growing number of women as hotel guests presents new challenges for

the room interiors, structures, and individual elements. How does the hotel concept development take these trends into account?

The Hotel of Tomorrow, HOT, is a project started by the American hotel design and development company Gettys and Hospitality Design Magazine. In this project, a group of innovative companies representing different lines of business have been building a hotel of tomorrow for years. The work is largely based on megatrends and global development trends.

The Finnish Hotel of Tomorrow project has drawn from this research and development and has built its own guest room concepts inspired by future-oriented work stemming from a variety of sources.

For more information about the American HOT concept, see: http://hot.gettys.com/.

Megatrends

■ According to Mr Mika Mannermaa, Docent of Future Studies, megatrends (large-scale development trends) are a group of phenomena that, on the basis of existing developments, can be seen as having a direction, with this direction expected to continue as well. Megatrends describe the forces changing the terrain of the future in the flow of time. These forces can be influenced only a little or not at all. When we talk about megatrends, the phenomena should be understood on the largest scale, and the trend can include alternative trends and surprises. However, these features must be seen as forming an entity with a direction. (Mannermaa 2004, 73; Mannermaa 1998, 28.)

Mannermaa compares megatrends to a large river flowing toward the ocean. The main direction is clear but the flow includes exceptions and surprises, slow currents and falls, or megatrends. In this flow, you can guide a boat if you know the currents. The same goes for describing megatrends: you can navigate amid the forces if you recognise their existence.

Mapping out the currents, the megatrends, is also done in the business world. The purpose is to outline the development phenomena and try to understand what is relevant about the changes taking place in the operational environment of the business.

Mannermaa states: 'In future-oriented projects, the future of the megatrends is seen as a direction instead of a pack of alternative possibilities. This direction is based on our initial belief in the continuity of the trend.'

Almost anything can happen in the future, but in a single/independent future project a large number of unlikely options have to be ruled out. To some extent, optimisation is a challenge in every future-oriented project. How will the time-related, financial, and other resources be adapted to the goals of the project?

Mannermaa notes that there is a great deal of discussion about whether we should talk about trends or megatrends at all in today's stormy times. He questions whether megatrends, such as the development of the information society, should be considered consistent, i.e. predictable, trends – or is the phenomenon just a series of occurrences that follow one another?

Possible megatrends

Mannermaa, in his book about a quantum leap to the future, Kvantti-hyppy tulevaisuuteen (2004, 73), discusses the development of technology, sustainability, and ecology as possible megatrends of the future.

He notes that several scientific inventions create the basis for techno-logical innovation. As examples he mentions the theory of automation, which preceded the modern computer, and the theoretical and empiri-cal advances in biosciences that created the basis for gene technology. Also those technological innovations that nowadays are usually based on scientific study create new economic/financial potential, production, consumption, and markets. As examples, Mannermaa lists the telephone, radio, television, and computers, all of which were commercialised into a multi-million business. As the market for technological innovations grows, Mannermaa thinks, people's consumption patterns change with the new innovations. For example, the telephone, car, radio, and television set have changed from status symbols into everyday items. This change is based on the developments in science, which are quickly reflected in technological innovations.

Mannermaa believes that biotechnology will be the new technological engine in the society of today. Will the information society be followed by biosociety? Biotechnology is often connected with big and somewhat conflicting expectations. Gene manipulation creates discussion, and its long-term effects on people are not yet known. In addition to biotechno-logy, nanotechnology will have an effect on how the future will emerge. Ultra-thin films with the hardness of a diamond, waste-consuming robots the size of microbes that kill viruses and perhaps reconstruct human cells… all of this may be possible with nanotechnology.

Our thought process for the hotel project started with megatrends. We discussed the trends first with the participants of the project in Finland, then with the partners of Gettys in the United States. The discussion and sparring continued with the Americans. In the course of this, the variety of room concept possibilities were boiled down to themes related to sustainability, and perhaps the other side of the coin, the possibilities created by ever-changing, tailored technology for the development of hotel concepts.

These concepts were polished both with the partner companies in Finland and in co-operation with the American concept developers in Chicago and in Finland.

Concepts realised

A nature room connecting the customer with the environment

■   According to a new study of environmental attitudes and behaviour in Helsinki in 2005 (Lankinen 2005), the following items are perceived as very important: enjoying the beauty of nature (92.8 %), experiencing both the quietness and sounds of nature (83.1 %), and breathing fresh air and enjoying outdoor recreation in natural surroundings (97.5 %).

The environment-related attitudes of people from different countries and hotel guests have been studied quite extensively. Awareness of environmental issues and sustainability principles is considered positive, and this awareness is one of the factors influencing the consumer's choice of hotel. However, it would be excessive to say that environmental awareness automatically and in all situations would have an influence on the choice of hotel or even that it would bring added value to the hotel. It should also be noted that some consumers say they support environmental awareness but behave differently.

One also finds a large number of hotel guests who consider environmental awareness and sustainability issues totally insignificant. Thus, the green concept for a hotel room was somewhat restructured. The best way to influence the guest may include having that guest start reflecting on the issue without the pressure of a guilty conscience. The 'Connection to Nature' room concept aims to be 'sexy' – i.e., interesting, attractive, and thought-provoking. The idea is that the customer may think of his or her own connection to nature and gradually adapt the thinking toward a more sustainable approach.

This room concept simulates rules of nature and its shapes. There are no sharp edges, because these do not exist in nature. In the walls, ceiling, and floors, nanoglass is used, which is complemented with the newest technology. This new technology enables the change of feeling and colours as well as colour and sound environments. There are natural stones, plants, and perhaps even ants that the customer may watch behind a glass wall. The room embodies new technology and recycling concepts. For example, it features a design chair by Frank Gehry, which

A next-generation sustainable room offers the customer a thought-provoking environment. Photos: Kristian Fahler, Testure Oy.

is made from 60 layers of cardboard. At the same time, it is an attractive design element.

In the future, one of the factors influencing the room rate could be the energy consumption of the guest. The room may measure the energy used by the guest, with the guest then paying either more or less for the room, depending on the energy consumption during the stay.

Individual guest technology for tech-savvy customers

While sustainable development is certainly one of the trends, there is also a strong belief in technology. Many hotel guests, along with many representatives of the industry, believe that the development of technology will solve the problems our society is facing at the moment.

This room concept provides a real-time connection to the outside world, family, etc., with Internet access, dozens of TV channels, and the newest technological innovations and gadgets that the guest can 'play with' and use for entertainment during his or her stay. The room also recognises the guest by means of RFID technology. The room can change according to the guest's preferences, and guests can then change the colour scheme, sounds, and feeling as they wish with a wireless remote control unit.

In the future, the communication will not be only one-way, from hotel to guest, as it is at the moment. In the room, the guest can leave comments about the room for the following guest, using a 'roomWiki' application. Using the iMac in the room, the guest can also browse local events, check the weather, or give feedback on the burger he or she had. All in all, feedback will be faster and more direct; it can be given directly from the room and in real time.

A growing number of guests of tomorrow carry their own music and movies with them. In this room, they can dock their iPod and listen to their favourite music, using the built-in sound system in the room. Their favourite film can be watched via an eyeglass video system, which frees the guest from the limitations set by a stationary TV screen. At some point in the future, there will be no television set in the room; it will be replaced with holograms or virtual images.

This room concept challenges our mind into thinking about the following: What kind of new applications can hotel windows have? Will the hotel itself change from energy consumer into energy producer? What is clean room air like? What do we do with the thousands and thousands of hotel room saunas? What other functions that we know from elsewhere can we bring into hotel rooms? For example, the bed can measure the

sleep of the customer and report if the customer suffers from sleep apnea. It is also worth thinking about creating a new earning logic in connection with hotel rooms.

Individual guest technology allows for individual choices. Photo: Kristian Fahler, Testure Oy.

A high-tech bed with sleep apnea measuring capabilities. Photo: Kristian Fahler, Testure Oy.

Future creators

■   The following brief descriptions will give the reader a small glimpse at the partner companies and their areas of expertise relevant to the project.

Creating a good night's sleep

A good night's sleep and sleep comfort are a vital part of hotel stays. For customers, a hotel is primarily a place to sleep and rest, regardless of whether the guest is a leisure or business traveller. Sleep contributes to the customer's vitality and spirit the next day, and also to the image the customer has of his or her hotel stay. A good night's sleep has positive effects, and, likewise, a bad night's sleep has negative effects on the customer's hotel experience.

Unikulma was invited to join the project because the company is known for manufacturing high-quality, innovative beds. In addition, Unikulma conducts important research and development in the field of good sleep and sleep quality. For instance, a new innovation in hotel accommodation is the introduction of sleep apnea studies conducted mainly in hospitals into the customer's hotel experience.

Unikulma has manufactured two, different bed solutions for the Hotel of Tomorrow rooms. One of the beds is shaped as an egg, demonstrating that manufacturing beds of different shapes is possible without the need to compromise sleep comfort. The other bed is a Hype motor bed with a vibration-based massage function intended for weight loss and a motion sensor that switches the lights on when the person using the bed rises and touches the floor with his or her feet. A lighted path guides the person to the bathroom. The bed also incorporates a computer-monitored snore sensor analysing the sleeper's depth of sleep. The results can be sent for further analysis by experts, if necessary.

The mattresses in both beds are made considerably softer around the area of the sleeper's shoulders, which allows the customer to sleep on his or her side instead of sleeping on the back or stomach. Sleeping on one's side is the most ergonomic sleeping position, and it reduces the risks of snoring and sleep apnea.

All textiles in both beds balance heat and the electrical signals in the body. The textiles are also durable and fireproof.

Pillows and the top cloth of the mattress pads are made from anti-bacterial Tec cloth with a silver thread that protects against bacteria, dust mites, and microbes.

The vibration-based massage function increases the metabolism and tissue fluid circulation so that the customer falls asleep more quickly and feels rested.

The Hype bed has an integrated wake-up light in its headboard. In both rooms, the wake-up lighting is based on dawn simulation, allowing the guest to wake up little by little in a more natural way than waking up to the ringing of an alarm clock. The effectiveness of the wake-up lighting is based on the secretion of the sleep hormone melatonin.

Innovative lighting, creating experiences

SAAS Instrument's intention is to design lighting that creates feelings. This feeling aims to support the customer's activities and enhance his or her experience. The Finnish Hotel of Tomorrow project combines the individual parts of the guest room for the first time in a unique manner.

The overall lighting system in the guest rooms gives the guest the ability to tailor the atmosphere in the room in a completely new way. The light is produced with lighting surfaces that can also reflect different colours in the room. In the Individual Guest Technology room concept, the lighting wall has an IP address, which enables distance access; i.e., the guest can choose the lighting tones of the room in advance.

Other features include the various options for the atmospheric lighting in the bathroom and night lights integrated into the furniture.

The technology used is energy-saving LED lights and special lighting solutions, even in the lighting that can be controlled via the Net and whose colour can be changed.

The guest is provided with an opportunity for new experiences and also a chance to relax. The lighting enhances the feelings and experiences provided by the room.

Plane Wave Audio Technology
brings in sound showers

One of the new applications of the room concepts is plane wave audio technology. Plane wave audio elements are very light and thin speaker panels only a few millimetres in thickness. They can be installed to be invisible – the panels can be coated, cut, bent, framed, or joined together into large surfaces.

The panels introduce new sound quality also – the sound is delivered level with the speaker panel so that the sound can be projected in a certain direction. The sound is carried further than with conventional speakers, without compromising its quality or volume. By utilising this feature, the room may be composed of simultaneous adjacent sound fields without any interference – in a hotel room, one guest may watch the news on television while the other rests on the bed and enjoys another sound environment.

Plane wave audio technology includes a variety of features that make it different from traditional, dynamic PA systems. The technology and its directional nature offer new acoustic possibilities and opportunities for integrating sound with structures or furniture.

The general noise level is lower because the audio energy is directed to a specific area.

Interactive TV systems in the hotel room

Quadriga Finland realised an interactive hotel TV system for the two concept rooms as part of the Best Western Hotel Haaga unit.

The service included the design and choice of services for the system as well as delivery and installation of the room's TV equipment. The rooms are equipped with integrated Philips 42" digital hotel TV displays.

The customer is also furnished with a cordless keyboard. The guest can benefit from the opportunities provided by the Internet with this Internet based TV service – surf the Net, read e-mail, and use Internet banking, for example. The introductory screen display placed near the two concept rooms was also designed by Quadriga.

The customer may easily utilise various online services by means of the connectivity features integrated into the Genesis technology, either with his or her own laptop computer or via the cordless keyboard in the room.

International customers may use the services in their native tongue; the system includes 17 language alternatives. Several multilingual versions of movies are available also in the service.

The new technology's demands
for solid electrical design

The role of engineering office Thelec was to realise demanding electrical design for the room concepts and connect the exceptionally complex control functions of the rooms to a single control system, used with one cordless remote control. With a user-friendly touchscreen, the customer can operate the room's functions via a pre-programmed controllable logic unit that commands all equipment and lighting on the basis of situational context.

The idea is to link all pieces of equipment in communication with each other. Also safety issues are taken into consideration: the rooms include smoke detection with address-based allocation and sound production designed to meet evacuation standards. As these solutions become more commonplace, they will increase the attractiveness of the hotel rooms and create new customer experiences, and the price level then can be lowered for serial production.

The control systems in the Hotel of Tomorrow

The role of electronic control systems and control logistics in the Hotel of Tomorrow is much greater than in the hotel rooms of today. As these concepts include the ideas of identifying the customer, of creating colour and sound variation in the room, and of offering experiences for the customer, a large-scale control system is essential. The control system was designed by Electrosonic, a leading expert in the field of control systems, with considerable experience of implementing unique, special projects.

Nanoglass for tomorrow's construction

The Hotel of Tomorrow project included introduction of new surface materials and testing of self-cleaning or easily cleaned wall coverings. The Finnish firm nGlass, an innovative company in its field, realised the new glass structures used in the floors, ceilings, and walls of the two rooms. Nanoglass brings luxury to everyday life. Unique, high-quality materials give a lasting impression of the accommodation, and the ease of care reduces hotel cleaning costs.

The glass tiles and glass element structures produced by nGlass Ltd. maintain and promote the image of high-quality Finnish design and architecture in hotel construction. By using nGlass products, Finnish

hotels stay at the cutting edge in the field of interior design and offer an image of quality to the rest of the world.

Coating to help keep the rooms tidy and clean

Several elements of the laboratory of Hotel of Tomorrow have been covered with a coating that helps to keep the furniture clean, cut the amount of time used for cleaning, and improve the surfaces' durability.

Millidyne Ltd. is at the leading edge of technological development, introducing new materials technology solutions and bringing them out of the laboratory to form practical solutions. Millidyne has introduced coating solutions that improve cleanliness and cleanability as well as the hygiene of the surfaces in the room.

The coatings of the Avalon product line are well suited for on-site protective treatment of glass, ceramics, and steel surfaces, for example. The coating can be used to protect tiles and seams, taps, toilet seats, glass doors, stone floors, steel surfaces in bathrooms, etc.

The surfaces of the room stay in better condition when they are treated with a coating. Cleaning results are better, the time needed for cleaning decreases, and the need for detergents is lower. Better surface solutions improve customer satisfaction, hotel competitiveness, and overall quality.

Protection of room textiles, for improved durability

The role of Soft Protector Ltd. in this project is to introduce a method to protect hotel textiles and leather against dirt and moisture. The protection helps to keep the textiles clean and saves up to 80 % of the amount of time normally used for stain removal and maintenance. Textile and leather surfaces look good longer, making it easier for the hotel to maintain its image of high quality. A tidy room is always tidy, and the customer's perceptions of the hotel are good. Protective solutions enhance cost-efficiency and thus improve the profitability of the hotel.

Interior design and concept planning for the Hotel of Tomorrow

Vallila Interior has adopted a far greater role in this project than that seen in traditional interior design projects. Vallila put their expertise and creative touch at the disposal of the project. They also provided valuable information about combining today's real-life products with tomorrow's innovations to create a functional room. Vallila was designated as the main design company in charge of the project. The company's effort is strongly represented also in the details and finishing touches of the project.

The company's interior design contracting branch, Vallila Interior Contracting, was chosen to realise both concept rooms: both the Connection to Nature and Individual Guest Technology. In addition to construction contracting, Vallila was in charge of the necessary purchases, furnishings, and textile installations.

New possibilities with customer identification

The input of Triventum in this project is manifested in their active participation in concept design and customer identification using RFID technology. Identification is handled by a key card chip and a reader. The RFID technology enables tailored marketing and identification of customer preferences and behaviour.

Hotel of Tomorrow pioneers

Ron Swidler (Gettys) and Matt Phillips (Phillips & Co.) brought international expertise to the Hotel of Tomorrow project in the field of concept design.

Gettys is the leading company in hotel design architecture and hotel development, building new concepts for international markets. One of the product development efforts of Gettys is the Hotel of Tomorrow project, in which a group of top experts from different industries are developing service and product innovations for the needs of tomorrow's customers. Phillips & Co. develops innovative concepts for new products, services, and brands. The company works with product innovations in the fields of nutrition, beverages, hotels, and household applications, among others.

From chaos to launch

The number of project partners increased in the course of the project. When one partner was found, its representative soon recommended another one, who could bring in an innovative touch from another company. The Centre of Expertise Culminatum suggested a few high-technology companies from their own business incubator, and another company knew people who knew other people. This was networking at its best.

Consensus concerning the content of the room concepts and how they would be processed into real hotel rooms was reached. The decision was made to concentrate on two megatrends and their realisation as room concepts. Some concepts brought up in the discussions but not implemented were a Ladies' Room of the Future, a Family Room of the Future, and totally virtual realisation of the concepts.

Project meetings were held frequently, and architecture and interior design partner Vallila Interior drafted the first pictures of the guest rooms. The actual construction of the rooms started in January 2008. When the rooms were ready in the middle of March, the construction phase had lasted about two months.

Simple draft for the Connection to Nature room. Picture: Vallila Interior.

It was soon realised that we had entered a totally new world when we actually started building. So far it had been a game of the brain; now we had to face the rules and regulations of the construction business. The project had several partners who were more familiar with traditional building rules and contracts. In most cases, the contracts were not actually drawn up, since we were still so occupied with the idea of creating something totally new, working on an abstract level and doing things only in our brains. Later it became clear in some cases that an experienced building instructor and head of building operations would have been necessary. Also, the omission of written contracts created some minor responsibility disputes and arguments on financial matters in cases of construction damage.

As the scheduled launch date approached, the project was faced with the perennial problem of deadlines.

The project was to be presented at the GastroPro seminar in the convention at the Helsinki Fair Centre. Two mock rooms were built there to represent the actual room concepts. It was also realised that the project was drawing a lot of media attention. Several newspapers, industry magazines, and even a national TV station presented their interest in the project and wish to publish details of it.

A few days prior to the launch, the rooms were still heavily under construction, with wires protruding from the walls, control units to be tested, and nano tiles to be attached to the ceilings and floors. We managed to get the construction phase 99 % completed prior to the actual launch. The TV interviews were carried out in the two rooms, with some parts still unfinished and some technical details still unfinished. But the main point was that we had succeeded in creating something new, a showcase for the industry professionals and media alike.

The weeks and months following the actual launch turned out to be hectic and filled with media interviews, presentations of the concepts, and industry visits. At a later count we were able to verify several dozen media 'hits' in newspapers and magazines, an interview on national television, and several hundred industry professionals' visits to the rooms.

Customer and expert feedback

■ So far, four studies have been conducted on concept room functionality: an interview-based study called 'Industry professional expert evaluations'; 'Profile of a leisure traveller – usability of technology in the hotel business', conducted during the Matka 2009 travel exhibition at the Helsinki Exhibition and Convention Centre; a report on the experiences of guests sleeping in or visiting the rooms; and a report on the experiences of Hotel Haaga staff of the concept rooms.

Rooms of tomorrow
– a positive surprise for the customers

Even in the early phases of the room concept project, it was important to collect customer feedback constantly from the guests and visitors to the rooms. The first major survey was carried out between August 2008 and May 2009. Those sleeping in or otherwise visiting the rooms were handed a feedback questionnaire with an emphasis on quantitative questions. In total, 45 evaluation forms were gathered from person staying overnight in the rooms and 68 forms from shorter-term visitors. Of those staying overnight, 57 % were men, and most of the feedback-givers were 35–49 years of age. By professional orientation, the main groups giving feedback were people in managerial positions (37 %) and other employees (30 %). Roughly 81 % of those staying overnight reported being on a business trip; thus, in most cases, the accommodation was paid for by the employer.

For the most part, the guests had little advance information about the Hotel of Tomorrow rooms. They had received some information from acquaintances, but many of them heard about the rooms at the hotel reception. As a whole, the rooms were considered a positive surprise. Especially for the Connection to Nature room, the first impression was very positive.

The room equipment and fittings were considered to be of good quality, although there were some problems with the new technology of the rooms. The equipment seemed to be complex to switch on, and the special features were difficult to adjust. The multilevel lighting was

considered excellent, if the guest was able to use it. Overall, the guests wanted simplicity and clear instructions for the equipment.

The general opinion of the rooms was mainly good or excellent: The rooms were considered as clean and peaceful. The high-quality beds were considered the best element in the room, thus representing the most essential element of accommodation. However, the rooms' general functionality showed some room for improvement.

Half of those staying overnight were satisfied with the price of the accommodation. The average fee for a room was €130 per night. Customers indicated future willingness to pay €115 per night for the Connection to Nature room and €130 a night for the Individual Guest Technology room.

The Hotel of Tomorrow rooms had a positive impact on the guests' impression of Hotel Haaga. Almost all respondents thought they would recommend the hotel to their acquaintances.

In addition, those staying overnight gave the following development suggestions:

Connection to Nature

There were requests for a bigger sauna, instructions for switching on the computer, and a minibar. The chair at the desk was modern and beautifully designed but uncomfortable to sit on. The bathroom floor needs better protection against shower water. The lighting lacked a function for 'bedtime reading'. The iron in a room of tomorrow should be integrated into a cupboard from which it can be easily removed/lowered, with a power point within reach. Praise was given to the vanity mirror. The sharp edges of the glass surface under the washbasin need to be rounded. There is no rubbish bin in the lounge area. Women requested a cleverly placed full-length mirror by the door and a clock for the TV wall in the lounge area. The ecological furniture (cardboard chair) was considered to be excellent. An outdoor thermometer was requested to be placed in the room. The electricity sockets under the desk are difficult to reach. They should be level with the desk. There is not enough space available beside the basin in the WC, especially for women. The lights should not come on in the toilet during the night if a pillow falls from the bed.

Some customers requested better information on how to use things: the Internet, sound system, and iPod technology.

Other comments included the following:

'The bed is the best ever had in a Best Western hotel, absolutely top. +++' 'The tree design on the ceiling is way TOO BIG for such a small room. Nature means also peace, quiet, tranquillity. Such a big pattern in a small room is overwhelming.' 'The motion sensors make noise. Reduce the sounds from technology also made by the speaker panel above the bed (when switched off). Space is important; the room was considered to be too small. Consider placement of the furniture such that power points are more easily accessible.' 'Make music available in the Apple products.'

Individual Guest Technology

> The customers wanted the technology in the room to be checked prior to the customer's arrival. The computer and the iPod should be constantly updated such that the latest software versions are installed. The customer needs information about what to do if/when the technology is not working or does not meet the expectations of real life. The customers feel stupid if the equipment does not work as described, even when the fault is in the equipment, not the customer. A more suitable area for a laptop was requested. Clearer instructions for the various functions of the room were requested also. Some technical elements should be developed so that also elderly people could benefit from the room. The air conditioning was considered to be too loud. More warmth for the furnishings was requested. One response mentioned: 'Space curtains are quite farfetched!', and one offered a postscript: 'The instruction booklet would be 100% more convincing and readable if it were proofread and professionally prepared.' Attention should also be paid to the functionality and user friendliness of the equipment. A movable desk was requested; if the customer has a laptop, there is no desk space. In some occasions, there was no electricity in the toilet sockets and the toilet entrance light was lit all night.

Concept room visitors' need for help with the technical equipment

Approximately 550 persons and 116 groups visited the Hotel of Tomorrow rooms during the study. Of the visitors, 68 gave feedback on their experiences. Almost all experts in the field visited both rooms during their stay. The visitors had received information about the rooms from their work or other acquaintances.

The first impression of the rooms was mainly positive. The Technology room evoked conflicting feelings among the respondents. The 'space like' atmosphere of the room was considered cold, and the amount of technology was odd; however, some visitors saw the room as beautiful and modern. The Connection to Nature room was deemed surprisingly small by the visitors. Nevertheless, the room was viewed as warm and comfortable.

The room equipment and fittings were considered of good or excellent quality. The bed and air filter were seen as the best elements. The size of the latter did catch the eye of several visitors. As for room characteristics, the fixtures in the Technology room, especially the silvery curtains, were seen as awful. More warmth and a more human approach were requested for this room, with the use of different fixtures. According to the visitors, the Connection to Nature room required more sense of space and natural elements that would support the theme, such as sounds from nature.

The functionality of the rooms was perceived in different ways. In particular, the functionality of the Connection to Nature room was questioned. The Hotel of Tomorrow rooms were, however, considered well suited to normal hotel accommodation. In the future, the visitors indicated, they would be willing to pay €105 per day for the Connection to Nature room and €160 a day for the Individual Guest Technology room.

The visitors claimed that the Hotel of Tomorrow rooms had a positive impact on their impression of Hotel Haaga. Approximately 80% of visitors indicated that they would probably recommend the rooms for their acquaintances.

On the basis of the visitors' feedback, the following issues should be addressed, among others:

The Nature room needs a greater sense of space; this could be provided by removing furniture, improving the lighting, or lightening the furnishing colours. Natural elements such as plants or nature sounds could be added to the Connection to Nature room. The furnishing of the Technology room could be improved to become more attractive. In particular, the textiles should be reconsidered. More attention should also be paid to the functionality and user friendliness of the rooms. The vast amount of technology requires instructions. The work area in the rooms should be improved.

The importance of clean hotel rooms for exhibition guests

The customer feedback survey for the Hotel of Tomorrow rooms analysed customers' thoughts and impressions surrounding the Hotel of Tomorrow room concept. The survey was conducted at the exhibition stand for the Hotel of Tomorrow rooms, where both of the Hotel of Tomorrow room concepts were introduced to the exhibition visitors. The visitors were then asked to fill out a questionnaire measuring their impressions. In total, 373 questionnaires were filled in during the exhibition. Most of the respondents were 35–49 years of age. Women were more active than men in completing the questionnaire. Roughly 66 % of respondents reported being a consumer, while 17 % were students of tourism and the same number indicated being professionals in that field. The respondents had slept, on average, 14 nights in a hotel in 2008. The most important characteristic cited for a hotel room was its cleanliness. The respondents valued also fresh indoor air and a peaceful sound environment in the room.

High quality sound reproduction and large room size were considered the most trivial characteristics. As to room fixtures, a high-quality bed was deemed essential by 95 % of the respondents. Second most important was a well-equipped bathroom. About half of the respondents appreciated storage facilities. Having a computer and a large flat screen television set was perceived as the least important room characteristic. The possibility to work in the room divided opinions strongly.

About 80 % of respondents had a positive image of the Hotel of Tomorrow rooms. The type of the room did not substantially affect the perception. There were no significant distinctions between the two rooms in consumers' inclination to pay for either. The Connection to Nature room's atmosphere was perceived as warmer than the feeling in the Technology room. The Technology room was seen as masculine and the Connection to Nature room as feminine, with this sense of gender orientation not as evident, however, in the Connection to Nature room.

The impressions of the Technology room were of a more modern feel than those of the Connection to Nature room. Both rooms were seen as feasible hotel environments.

Both of the rooms were considered suitable for hotel accommodation, and 60 % of the consumers were interested in paying for these rooms. The Technology room was considered to express the future more strongly than the Connection to Nature room was.

The Connection to Nature room was considered more attractive than the Individual Guest Technology room, which resembled a laboratory. Approximately 30 % of the respondents suspected that there was too much technology in the Individual Guest Technology room. By contrast, the respondents indicated that there was not an excess of ecological products in the Connection to Nature room. The consumers remembered especially those fittings and services that are traditional. A high-quality bed and an Internet connection were first to come to mind for most of the respondents. The steam room and bathroom with its tub in the middle of the room with glass walls for separation were examples of exceptional services mentioned.

Consumers expect that, in the future, more and more emphasis will be put on environment-friendly hotel solutions. They also expect that individual services and interactivity will increase. In addition, consumers expect that individual-oriented service will retain its importance alongside new technological solutions and increasing automation.

In analysis of future hotel room target groups, traditional segmentation criteria were brought up, such as age and the purpose of the trip. The Individual Guest Technology room is considered to best meet the

needs of young consumers. There were also several mentions of business travellers and those seeking experiences.

The Connection to Nature room was considered suitable for nature enthusiasts and 'eco-friendly people' with high regard for environmental values. However, the consumers saw that the Connection to Nature room could attract a wider target group and that the room would be suitable for all kinds of travellers.

Hotel business experts' concrete development suggestions

The third piece of research was carried out as a group discussion among the hotel business experts. The Hotel Business Expert Evaluation, part of the Hotel of Tomorrow research series, was conducted as a qualitative group discussion in which a group of executives and managers of independent hotels and hotel chains were invited to join discussion of related research themes. The topic was the evaluation and further development of the Hotel of Tomorrow rooms for serving the hotel business. The event involved seven experts and a moderator.

According to the experts, there were two separate lifestyle lines in the Hotel of Tomorrow rooms: a) a green lifestyle, the 'eco' line, and b) the business lifestyle, the 'technology' line. In the hotel business, these two extremes in the same hotel do not function very well in respect of the customer mix. As commented by the experts, 'If one is thinking profitability, it is clearly very difficult to bring green-thinking customers and top business executives together in a single hotel, if not utterly impossible.'

According to the experts, the basic needs of a hotel guest are adequate comfort, good acoustics / sound environment, and quality sleep. They suggested that for new hotel construction, the Hotel of Tomorrow rooms offer the ideas of user-friendly adjustment of lighting, acoustic solutions, indoor air freshness, and a good bed.

The hotel business experts engaged in animated discussion about the nature of the consumer trends of the moment and how they will change in the near future.

They agreed that the ecological and technological approaches will unite and complement each other. They also stated that an independent hotel or a hotel chain would implement one style at a time, to improve marketing, for example.

There is, nevertheless, a fear that a hotel built for 'green-thinking' customers will not be financially viable. This target group requires the same service elements as business travellers do: Internet connections, computers, and other technological services. However, they are not willing to pay for these services.

An interesting expert opinion was also voiced that in the future the hotel business will be as thoroughly examined in relation to its ecological approach as the aviation industry is today. Service industries produce more carbon dioxide emissions than industrial production does. In this regard, the travel business has a negative image in the public eye. It was suggested that the image of the hotel business could be improved if the business itself develops its ecological operations.

The experts stated that, at the moment, the hotel business is seeing three megatrends: the ecological approach, cost-efficiency, and service customisation.

The experts made the following development suggestions for the project:

Suggestion 1.
A third concept room should be built. This room should include the service items of the two Hotel of Tomorrow rooms that are receiving positive references. This should be done one service item at a time. Through this approach, the actual improvement of the hotel room could be analysed in relation to bringing each individual service into it. Also, laboratory-like research could be carried out addressing the importance of these services in the customer experience when compared to so-called normal use. At the same time, the cost effects of the individual services could be determined.

Suggestion 2.
Emphasis should be placed on determining true ecological aspects. At the moment, the 'eco' room is naturalistic but not ecological (i.e., not efficient in its use of energy, water, and other utilities). There were no mentions in the room presentation as to whether water and energy consumption has been taken into consideration and whether there has been any improvement. From culture to culture, the temperature deemed suitable usually differs quite a lot (ranging from 18 °C to 24 °C). The customer finds it irritating if the room needs to be cooled down several degrees to achieve a pleasant temperature.

Suggestion 3.
The customer should be able to see the importance of his or her choices, for example, as amounts of carbon dioxide emissions or percentages com-

pared to the figures for a regular hotel room. How excellent it would be if people could have the choice of influencing the level of ecology of their stay (the size of their ecological footprint during the stay). The objective could be to demonstrate to the customer the size of the carbon footprint of the stay, the importance of appropriate room temperature, and the meaning of taking either a bath or a quick shower. There should be more of these kinds of possibilities to influence the use, purchase, and choice of hotel services.

Suggestion 4.
The customer invoice could be smaller according to the cost accrued by the hotel for the customer's choices of consumption. The customer should pay only per the actual use.

Suggestion 5.
Customer feedback and experiences should be collected more often. Customers' feelings and service experience impressions fade quite rapidly with time. Feedback should be collected right after the service experience. For example, the questionnaire could be picked up from Reception right after the guest leaves the area. Research results should be examined in combination with customer profile (business or leisure traveller, single or family traveller, etc.).

Suggestion 6.
Collecting customer feedback on the Hotel of Tomorrow rooms over a longer time would bring to light individual comments and more general feedback issues of relevance.

Suggestion 7.
It would be interesting to separate the new technological services and solutions in the Hotel of Tomorrow rooms from the style issues, 'eco' and 'future', to determine the real importance of the equipment and fittings for room guests and hotel management.

The experts stated that, at the moment, price is the only factor affecting customer purchase decisions related to business services in the hospitality industry. Environmental issues and ecological approach have a role in tender documents but not in the actual purchase decision. One expert claimed that it is in the hands of the hotel to emphasise the meaning of customer choices during the stay for achieving environmentally friendly hotel business.

Waste sorting seemed to be working well in the hotel rooms. There is concrete evidence already that ecological issues are of great importance to a large number of customers. Ecological thinking is more common among young clients than among the older age group.

The importance of human interaction in the hotel business was also widely discussed. From the business development point of view, highly advanced technology service represents mere cost cuts and increased efficiency.

Hotel staff views that the rooms were challenging to use

The views of the Hotel Haaga staff were examined through qualitative theme interviews. The interviews were targeted at reception personnel and hostesses.

Several development suggestions were uncovered in the interviews for improving the functionality of the Hotel of Tomorrow rooms. The clearest improvement could be achieved by training the staff in use of the rooms. The hostesses were familiar with the special features and equipment of the rooms since they spend a lot of time in them. The reception personnel, however, were quite uncertain of the fittings and functions in the rooms. It was suggested that the best way to get acquainted with the rooms was to stay overnight in them.

Also development of communication was seen as essential. The reception personnel thought it would be important to receive information on the changes made in the rooms, so that they would have up-to-date expertise in the rooms. A weekly 'info-email' was suggested as a solution for this. The reception personnel also needed a summary of the customer feedback collected, for purposes of improving their own work.

The staff noted that the technology in the rooms should be checked. In particular, the sauna should be guaranteed to be in order. A customer interview was suggested for diversifying the collection of feedback. This could be realised during the weekend, when the customers aren't as busy as on weekdays. One member of staff strongly believed that regular customers would provide a major contribution to the development of the rooms and would be willing to participate in the research.

The room fittings could be improved. From the reception personnel's point of view, the rooms lacked an iron and an ironing board as essential items. The Nature room does not have a minibar, which is exceptional.

In addition to the essentials, the Hotel of Tomorrow rooms needed 'something extra'. The Technology room especially, as a suite, needed a product that the hotel could offer free of charge to the customer. The reception personnel pondered the extra effort this would bring to the floor attendants, but when they were asked, the effort was not seen as substantial. One hostess commented: 'Any product can be found from storage.' Adding special products to the minibar is possible and is included in the price of cleaning, but if there are other requests, there will be a charge for extra services. According to the hostesses, the customer could be informed of the possibility of receiving these products from Reception.

A receptionist suggested that a 'thank you' and 'welcome' note from the hotel manager or the Hotel of Tomorrow development team could be added to the rooms. This would tell the customer that he or she is well looked after. Also, the customer would benefit from presentation of the room's special features, such as the glass cabinet in the Technology room.

The hotel staff did not have a clear opinion on the identity of the most capable developers of the Hotel of Tomorrow rooms. 'It is hard to make improvements in co-operation, as every party has a unique vision. The most important characteristics are functionality and usability; therefore, Hotel Haaga should set specific criteria that should not be overstepped,' said one of the receptionists. Another receptionist stated that the hotel should bear the responsibility for planning the sales of the rooms.

Development suggestions for the Nature room:

The placement of the furniture should be reconsidered for this room. At the moment, the room is seen as cramped, which causes problems, especially for cleaning the room. The bathroom should be fixed so that shower water stays near the shower area. The lighting should function better. The theme of the room is important, but 'eco-thinking' should not lessen the functionality of the room.

Development suggestions for the Technology room included the following:

Adding instructions for the room, including fault situations Ensuring the proper working of the sauna Increasing cosiness.

The collection of customer feedback is going well after some lack of information in the beginning. Almost every guest who stayed overnight filled in the customer feedback questionnaire, and some have given oral feedback. The ticket for the prize draw has improved the collection of feedback.

At first, selling the Hotel of Tomorrow rooms seemed challenging. This was due to unclear pricing, lack of product knowledge, and a feeling of uncertainty in relation to the functionality of the rooms.

According to the receptionists, the customers found it difficult to use the equipment and fittings in the rooms. The customers also thought that the rooms were too technical.

Persons accommodated in the Hotel of Tomorrow rooms were seeking experiences; thus, there were doubts as to whether the rooms are suitable for normal hotel accommodation. There were differences of opinion on which room was better suited to accommodation. The lighting in the Hotel of Tomorrow rooms was seen as the characteristic most readily transferable to standard hotel accommodation. The Technology room was seen as more suitable for work than the Nature room.

The staff noted that the customers were satisfied with the price paid for the Hotel of Tomorrow rooms. The receptionists stated that there existed potential for raising the price of the rooms. According to the staff, the Technology room could cost about 400 euros and the Nature room about 200 euros.

They shared a strong opinion that the Hotel of Tomorrow rooms improve the customer's image of Hotel Haaga. The rooms attract new clientele to get acquainted with the hotel. The desk staff also believe that the customers will share their experiences with their friends.

What´s next?

■ The Finnish Hotel of Tomorrow and the guest room concepts were made public in March 2008. This was not a sign of completion of the project but, rather, a brief stop en route. After the project became public, it became subject to public criticism and suggestions for development. New partner companies can now be invited in to test their products and service innovations in the guest rooms. The room concepts include an element of customer feedback, which will provide authentic customer opinion nearly in real time.

The funded project continued until the end of January 2009. The project continues as an internal project of the HAAGA-HELIA University of Applied Sciences, and the guest rooms will be integrated as parts of the accommodation business training of the school. The rooms are being used in several courses of study, and they serve as platforms for market studies, customer survey practica, and further concept development testing.

Furthermore, the project welcomes new innovative companies to test their new products and services in a living laboratory and with real customers. Some construction companies have shown their interest in adopting parts of the room concepts in their own hotel building projects.

The Finnish Hotel of Tomorrow has several links to corresponding research projects in the fields of
- shipbuilding
- homes of the future
- the office of the future
- testing of new materials for home and industry use
- customer behaviour studies
- sustainable development in public buildings
- use of 'smart' technology for customer identification.

Plans also exist for taking this project to a new level and exporting parts of the concepts and some of the knowledge in concept-building for other areas of the service business.

You can follow the latest developments of the project at www.fhot.fi.

The future exists in our time

The hotel laboratory and the concepts of the future need to adapt to changes; otherwise, there is a real danger of creating a museum of the future, already out of date on the day it is born. In world economics and consumer habits, the cycles of change become faster and faster. In the past, a business idea could carry a business for years, if not decades. But now is the time of constant renewal. One has to follow, at least, the macro trends and weak signals of the surroundings and pick up on those that directly affect one's own competitive environment. The old saying 'Do or Die' has never been more true than at present. Perhaps the most essential ability is to see change as a possibility, not as a threat. Hotel chains have better in-built chances to realise this, thanks to their massive resources. The independent hotel businesses have only one choice: to specialise and be the best at what they do. (Nordstrom & Ridderstrale 1999.)

The material below offers two predictions for the future – two slightly different views of the future of the accommodation business operating in the framework of turbulent world economics.

The first view is that of the writer and the second that of Dr V.A. Heikkinen on the future of the hotel industry.

Traditional hotel structures are shaking
– are you ready?

This scenario has been built to represent a possible future of predominantly the Nordic, and, in part, purely the Finnish, hotel business.

November 2015

The traditional division into business and leisure hotels is disappearing. The consumer's (accommodation) needs are versatile, so the consumer is not interested in purely production-based thinking. Customers are preoccupied with themselves and with the supply the hotel offers them. Thinking 'What's in it for me?' is becoming more and more common. Since the world economy is doing well and wealth is increasing, the customer is more inclined to pay for excellent service and for service in general. Hotel chains relying on self service face new challenges. In addition to price, the customer values surprising qualities, such as tailored experiences, flexibility, fast actions, and uniqueness.

The 'everything for everyone 3.5-star hotel' that has ruled the scene for decades is in trouble. It knows how to run its business cost-effectively, use labour efficiently, and outsource services to the customer, but it does not understand the mental core of the customers of the new generation.

The two-dimensional hotel business has become three-dimensional. One extreme includes the economy hotel operating with the utmost cost-effectiveness and polished operation models. In these hotels, the customers handle everything themselves while logistics and new technological solutions take care of the traditional service operations. The basic price is incredibly affordable; however, all additional wishes cost extra or there are no additional services available.

The second extreme consists of different manifestations of new luxury: casual luxury (luxury for the middle class), experience luxury (luxury for forerunners and trend-setters), and extreme luxury (when nothing matters).

The traditional hotel (chain) is placed between the two extremes, seeking its position in the markets. The challenge is that, on average, things run smoothly but the customer does not have a lasting impression of the hotel stay. The hotel experience is 'quite nice' or 'okay'.

The ownership structure of hotels has changed. In addition to insurance company and bank ownership, nouveau riche making their money in other business and foreign investors are acquiring hotel businesses. The hotels become smaller rather than bigger. This is due to the fragmented needs of the customers and their desire to experience something unique. This is difficult to produce in a 400-room hotel. A clear increase in average room price will compensate for the costs of a small hotel – in those hotels that know how to brand experiences.

As a constructional creation, the hotel is becoming mobile. The traditional thinking of constructing hotel buildings to last the next 50 years is shifting to construction of movable, convertible, and mountable Lego puzzles from pieces – buildings that meet the changing needs of time and customers. The hotel swims, floats, and flies. Space travel will enable accommodation outside the atmosphere well before any of our readers will retire.

The hotels have integrated the themes of sustainable development into their everyday operations. The hotels are 100% recyclable, and recycling of hotel materials is standard procedure without any fuss. New hotel buildings move from consuming energy to producing it. The hotel may sell its solar and wind power to its whole quarter. Also other forms of energy will gain ground from fossil energy sources.

The customer's consumption habits are monitored by sensors placed all over the hotel. Every customer has a personal consumption profile in

the hotel customer accounts. On the basis of these profiles, the customer receives tailored offers. The physical and mental state of the customer can be altered – every customer can be influenced separately in a different way. The social media have become incorporated into the accommodation industry as an everyday marketing channel and replaced most earlier media. One-way marketing has shifted to two-way marketing, actual real-time marketing. Mass marketing is dead – long live the individual and his or her needs.

There are no listed prices, neither as a concept nor as an operating model. Revenue optimisation functions efficiently with tailored customer data management. The hotel charges every customer a fee that the customer is able to pay in general; in other cases, there is a customer with more well-established credit. The prices are defined according to the daily market price.

A summary of the hotel markets in November 2015:

- Strong target group segmentation and focus on selected customers
- New operators
- New technology for hotel construction
- New world of marketing
- In some respects, new pricing principles

These are the challenges for new, up-and-coming hotel executives.

Where are you going, accommodation industry? Hotel EcoForesight

V. A. Heikkinen, Principal Lecturer,
University of HAAGA-HELIA Applied Sciences

At the source of the hotel of the future

◼   The development of the accommodation industry is shaped by numerous factors that change slowly and are difficult to predict. Also, dynamic and unforeseen phenomena play a role in this development. All change factors have an effect on the operating conditions and markets of companies in the hotel industry. The main megatrends affecting the industry are:

  a. climate change
  b. chain formation and specialisation
  c. increasing tourism
  d. the increasing average age of travellers.

The objective of this essay is to look into the year 2020 and foresee the development in the experience and leisure industry as well as in the operating environment of the hotel industry. We examine also phenomena of tomorrow in the hotel industry, which is a multi-reflective crystal ball for researchers in the field of future studies and tourism. The industry combines the basic motifs of travelling: sleeping, eating, recreation, meetings, and seeking experiences and enjoyment.

The proactive development of the tourist industry relies on strategic intelligence, which implies that the future is not invented but constructed. This visionary development combines stable and identifiable phenomena and unforeseeable, non-linear change factors. In visionary thinking, the key is to maintain one's sense of proportion and the ability to recognise international and local change factors, stable and dynamic economic regions, and rapidly changing hypercyclical markets.

The objective of the essay is to introduce an application of a proactive model by Aaltonen (2007; 2004; 2003) and Snowden (2002) and to

create the ecological vision Hotel EcoForesight for the accommodation industry by analysing foreseeable and identifiable but also unforeseeable phenomena. This essay is based on scenarios I have created for the tourist, accommodation, and experience industries, as well as on my research trips, document analysis, and several expert discussions.

Foreseeable and unforeseeable hotel industry

A number of foreseeable and identifiable, slowly changing phenomena can be seen in the hotel industry (see Table 1).

SLOW CHANGE FACTORS	HOW IS THE FACTOR REPRESENTED IN THE INDUSTRY?	HOW DOES THE FACTOR INFLUENCE TRAVELLER BEHAVIOUR?
1. Growing tourism markets	Hotel business successful everywhere	Increasing tourism
2. Business models	Basic concepts, economies of scale	Brand loyalty
3. Operating culture	Experience industry based on production of services	Customer confidence in the services
4. Occupational structure	The industry seen as interesting and international	Low income, short career paths

Table 1: Slow change factors.

In general, the logic behind travelling does not change. Travel can be defined as representing a global and local, or glocal, leisure, lifestyle, and experience industry consisting of meaningful, customer-oriented service contents: travel planning, booking systems, transportation, restaurants, accommodation, and entertainment services. New services will be emerging out of existing services in the travel and entertainment centres, if entrepreneurs are willing to take the risk and/or establish a functional subcontract network.

Hotels will remain in city centres and near tourist attractions. Many classic and modern hotels are already tourist destinations. There is growing interest in tourism in the consumer goods industry and commerce. People assemble in centres offering entertainment, nature, wellness, culture, and sports services under the same roof. Where there are emotion and experience services, there will also be people. And where there are eternal-pleasure- and wellness-seeking consumers, there will also be brands, concepts, and fashion. Out of date congress hotels and tourist centres are re-conceptualised by adding experience, sports, and culture events to them.

Customer and consumption behaviour is mainly traditional. Consumers' travel, conference, and dining motifs and seasonal changes in tourism are still present. The criteria in choice of a hotel are also the same (price, location, brand, safety, previous experiences, product range, etc.), regardless of the concept. Habits, purchasing power, and the amount of time available are crucial in choosing services. The clients adapt to self-service systems and automated hotels. People are willing to pay for individualised service.

An unforeseeable business environment has become familiar to an increasing number of accommodation companies and consumers. Many companies react rapidly to changes in environment and complex economics. Customers will come and go, but future business and senior clients act in a more unpredictable manner than before.

RAPID CHANGE FACTORS	HOW IS THE FACTOR REPRESENTED IN THE INDUSTRY?	HOW DOES THE FACTOR INFLUENCE TRAVELLER BEHAVIOUR?
1. Climate change	Green strategies, energy-saving programmes	Responsible, partly extremist 'eco' thinking
2. Dynamic economics	Hypercyclical market changes	Unexpected coalitions and bankruptcies
3 Complex markets	Tightening competition for customers and money	New concepts, processes, and products
4. Fragmented markets	New concepts, ultra-luxury, low-budget rooms	Non-loyalty
5. Process improvement	Automation, streamlining	Services bought according to needs

Table 2: Unforeseeable change factors.

At the moment, the phenomena of climate change are more difficult to foresee than before. Even competitive and most attractive tourist areas may face large accidents and uncontrollable environmental disasters. Marketing experts of the hotel brands and various other brand-makers are helpless when the weather is not right, epidemics break out, centres of crisis expand, or pollution spreads or when nuclear power plants cause image risks. This competition for good reputation means that a peaceful environment is more attractive than a traditional tourist destination. In risk tourism, a one per mil decrease in the number of tourists has an immediate effect on hotel and spa occupancy rates and on restaurant and entertainment service demand.

In hyperdynamic, international cities contributing to the leisure industry, such as London, St Petersburg, Moscow, and Dubai, already established earning models may fail and the customer organisation may change. Companies operating in transportation and tourism, as well as

their marketing and service processes, are so intertwined that bankruptcy, contract terminations, and alterations of timetables (air, ship, or train schedules), for example, can cause a domino effect and rapidly come to affect the whole service chain. The mobility of travellers and the reachability of travel destinations are rapidly changed by, for example, difficulties Russians face in getting a visa for Finland, pandemics, sudden wars, and environmental damage.

Travel destinations are in a fierce battle with each other in this virtual and physical playground of the leisure industry. The same Web site and 'Travel Destination 2.0 software' presents New York, Tokyo, the Cayman Islands, and Lapland in one glance (see the work of Gatterer, Braun, & Girig (2009) on selecting a hotel). Every destination includes wellness, experiences, parties, and authenticity.

The industry is still polarising. Global and smaller local hotel chains are strengthening their position through acquisitions and coalitions. The most well-established operators, well-known brands, and famous service concepts are seen and heard, thus getting the best seats. These seats refer to the right location, the right quarter, and the best and most significant guests.

In a complex business environment, the traditional earning logic of three-star hotels does not function, because the consumer has become more individualistic than before. Niches are interesting. There will be more five-to-seven-star (or even nine-star) ultra-luxury hotels and small cheap, casual, child-friendly, discriminating-seniors, design, comfort, cheap & chic, boutique, sex, bungalow, and 'eco' hotels as the demands, time management, and purchasing power of consumers become more fragmented. A chameleon traveller wants a hotel to be online, but occasionally it could also be an unknown oasis, an offline hotel. The purchasing power of every tourist is different. The tourist does not want to pay extra for casual accommodation, since it is possible to obtain the same services from a more affordable, two-star motel.

Alternative, experience-serving concepts without any star credit are built by inter-innovative coalitions. The hotel becomes a showroom and a distribution channel for the creative, entertainment, media, construction, technology, and food industry as well as for the pharmaceutical industry. The game and technology industry as well as artists are able to create constantly changing interactive digital environments, also referred to as micro worlds, from the mountains of the Himalayas to the orgies of the Romans. Recorded, virtual desert islands resembling the Third Life world, individual dreams, and hip-hop dance scenes are brought to life. The food industry alongside with the pharmaceutical industry will

introduce functional 'super-meals' to the restaurant menus of spa hotels and their targeted minibars.

Eco-visionary operating environment

The main paradigm of tourism strategies and scenarios has long been the building of financial viability and profitability, although the most important social challenge has been in sight all along: climate change. Many seekers and builders of the future have lacked the ability to believe that the change observed is actually real: 'We can see it, but we don't believe it'. We believe in perpetual growth and finding something new, with radical support for the competitiveness and competitive edges of different regions, whilst we are facing a rescue mission.

The biggest change in the tourist industry is seen in selection of new focus: all studies of the future will emphasise an ecological approach, responsibility, environmentalism, and reduction of carbon dioxide emissions.

The demand for change is presented by everyone: the governments, tourist centres, travellers, and restaurant goers. Climate change knocks on everyone's door and affects everyone's cash flow. Travel companies and destinations have no other choice but to react, because the existing operating conditions will vanish overnight.

The strong environmental competence of hotels is created by contribution to the realisation of a project called Hospitality Clean Strategy, Zero Strategy. Eco-efficiency, micro power plants, energy recovery systems, utilisation of greywater, paperless functions, and washing dishes and laundry with 37 °C water will become the central attractive features of hotels and tourist centres. 'Green washers' are exposed in eco-portals and real-time media.

The staff learn to follow and analyse energy consumptive subjects and participate in the prevention of global warming and in projects encouraging saving of energy and water. Hotels will learn to apply intelligent technology, such as intelligent kitchens and other 'smart' hotel features, and nanotechnology. Brand-makers need to create new ways to make the customers love the economical nature of the brands, and new connotations.

The essential competitive environments of hotels are nature and glocal markets. Business environments will adapt to the natural environment and not the other way around. The business objectives of commerce may be fulfilled – if they are to become reality at all – only after the operating environment has been secured through implementation of ample environmental solutions and reduction of carbon dioxide emissions.

A one- or two-star hotel room with new asceticism (a table, chair, bed, and toilet) can be transformed into a five-star ubicomp centre, a miniature office, and a home, with the fastest WLAN, the lowest emission levels, and the longest life cycle.

The main value of the hotel is responsible and sustainable business. The reception area of the hotel is and will be the heart of every hotel, as it influences the traveller's state of mind and welcomes the guest. Also automation-based hotels need digital servicing and, in addition to robots, natural smiles, intuitive attention, and instinctive hospitality.

The ecological need of renewal is supported by 'green' competition and changes in student behaviour. Key international institutions want to show off their social responsibility, service production, and product life cycles, as well as present the ecological footprint they leave.

It is essential to get students to realise whether the overnight stay is quintessential to a hotel or whether there is some other authentic form of being in a hotel. An increasing number of virtual travellers have seen the different versions of the Habbo Hotel; princess- and murder-themed castles; and theme and amusement parks, where experiencing the 'real real thing' – for example, clean nature – is the key objective. Wellness becomes selfness, referring to self-emancipation, freedom of mind, and the relationship of work and rest, and their quality (See Gatterer, Braun, & Girig 2009). The travel destination is the self, me, for which the hotel offers multi-sensory but also intimate surroundings.

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