





INNOVATION CATALOGUE HIGHLIGHTS











Status of the innovations featured in this catalogue

The innovations in this catalogue have been classified into three categories to reflect their feasibility and relevance to the meetings industry from today's perspective:



AMBITION

The innovations in this category are in the latter stages of research and development. They can be implemented in the near future.



VISION

These innovations, their feasibility and relevance to the meetings industry are still highly conceptual. It remains to be seen how or whether they will translate into real world applications.

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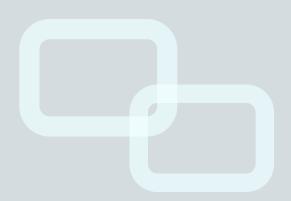
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EDITORIAL

GERMANY HAS BEEN A LEADING DESTINATION IN THE INTERNATIONAL MEETINGS INDUSTRY FOR MANY YEARS. TO SECURE THIS POSITION IN THE LONG TERM, THE GERMAN CONVENTION BUREAU (GCB) AND THE EUROPEAN ASSOCIATION OF EVENT CENTRES (EVVC) PARTNERED WITH THE FRAUNHOFER INSTITUTE FOR INDUSTRIAL ENGINEERING IAO IN JANUARY 2015 TO FOUND THE INNOVATION NETWORK "FUTURE MEETING SPACE".

This research network currently comprises the consortium leaders GCB and EVVC, the project team at Fraunhofer IAO and the research partners Drees & Sommer (architects), KFP Five Star Conference Service (event service provider), Seven-Centers of Germany (marketing cooperation of the seven biggest convention centres in Germany), the National Tourist Board of North Rhine-Westphalia, and the Berlin Convention Bureau.

The Innovation Network "Future Meeting Space"

Meetings, conventions and events are opportunities to exchange experiences, ideas and innovations and transfer knowledge. In Germany they are also an important contributor to the economy as the country has been the leading destination in Europe for international association conferences and no. 2 worldwide after the US. Around three million conventions, meetings and events take

place in Germany every year. They are attended by over 380 million participants. In order to guarantee and build on this pre-eminent position it is imperative to monitor the trends and megatrends that will define the future.

The innovation network "Future Meeting Space" is the newest extension of "Meetings and conventions 2030: A study of megatrends shaping our industry", published in 2013. The study focused on scientifically-based research on major societal trends, so-called "mega trends", and their possible effects on the meetings industry. As the theoretical background was thoroughly researched in this study, the goal for the "Future Meeting Space" is to determine how the study's findings can be implemented in practical, real world applications.

Technology in particular will be a dominant feature as well as a challenge for the meetings industry for years to come. Examples include information and data security, new ways of imparting knowledge, virtual meeting units and networking of virtual spaces, increased participation of people or man/machine interfaces which need to take account of human needs despite the progression of technology.

In the first phase of the project, internationalscale research identified significant developments and innovations in the areas of society, didactics and methodology, technology, infrastructure and mobility. The findings were compiled in an Innovation Catalogue in an effort to shed light on how current developments will affect event formats in the meetings industry in the future.

The Innovation Catalogue focuses on the identification and development of trends and innovations. A team of researchers from Fraunhofer IAO gathered and analysed information from their own R&D activities, specialists and networks.

They also worked with trend scouts to investigate further topics of interest The identified innovations were then assessed by a multidisciplinary panel in order to ensure their relevance to the sector. The panel checked what formats, products and services are already available on the market and how these have already been or could be adopted by the industry.

The Innovation Catalogue also takes the opportunity to speculate on future developments based on current research or even visionary concepts. Furthermore, it offers examples of potential applications in the meetings industry.

From a total of nearly 120 innovations, the outstanding candidates from each field of action were selected for publication. The key criterion in the selection process was the degree of innovation. This was based on aspects such as the novelty of the product or process, the level of development/market maturity and existing public awareness.



SOCIETY

What interests should we expect users to have in the future?



GENERATION Y: 1980-1995

Quick Facts

- Desire for transparency, collaboration and explanation
- Generation Y is characterised by competences such as creativity, empathy and problem solving.

- Generation Y conference guests expect events to provide opportunities for interaction and participation. They do not want to sit in an audience and be fed with information. They wish to meet and work together. An event is used for networking and exchanging ideas.
- At multi-day events, organisers must offer a variety of training seminars outside the main programme so that their guests can fulfil their own professional and personal developmentalneeds. These could include seminars on how best to organise work and leisure time, creative workshops on preparing exotic dishes or excursions into the surrounding area to discover more about its culture and landscape.



CUSTOMISATION

Quick Facts

- Products are adapted to the specific needs of the individual customer
- Product customisation and personalisation
- Levis jeans, Billy bookshelves from IKEA, ...

- Participants at meetings and events expect the programme and content to be tailored to their individual needs and addressed to them specifically in order to make the event attractive and profitable for them.
- Customised offers are becoming increasingly important, especially in the area of travel planning and event programmes. For example, delegates welcome the opportunity to have a voice in the choice of speakers and follow a personalised, flexible schedule at the event.



DOWNAGING/SILVERPRENEURS/ RETIRED BUT NOT TIRED

Quick Facts

- Fit and active well into old age
- Longer life expectancy with shorter illnesses
- Aim: pass something on to the next generations

- ✓ In the future we must support the active sharing of knowledge and experience between generations. Meetings and events are an ideal platform. Young participants, especially, can profit from the experience of silverpreneurs, e.g. in terms of presentation techniques and approaches to problem solving.
- Older people welcome the convenience that technology provides. However, this technology must be inclusive, e.g. offer intuitive controls, and not overburden them with new features.



THE NEED FOR SECURITY

Quick Facts

- Data protection, privacy and information security
- Transport safety, accident prevention
- The risk of global terrorism increases the need for security

- Conference and event venues must respond to participants' greater security requirements. They must not only guarantee their safety but make them feel safe. Any event which involves a large gathering of people is associated with a heightened security risk. Organisers must take steps to mitigate the various risk factors.
- Participants worry that their data is not safe at events as it is easy for third parties to access it if data connections are not secure. Improved data protection and technical know-how at events are essential in order to make it safe to use mobile devices.
- Fewer participants are travelling to events by car because they consider rail and air travel to be safer options.

SHARECONOMY

Quick Facts

- Knowledge, things, resources, experiences... everything is shared.
- "Yours, mine who cares?"
- Industry and IT are joining forces and finding ways to implement sharing concepts.

- Hoteliers face growing competition from websites such as Airbnb or CouchSurfing, which allow users to book accommodation from private individuals.
- Delegates attending meetings and conventions want to share experiences.
 Networking is no longer a fringe activity to fill breaks in the programme. Increasingly it is becoming the main focus of events.
- Crowdfunding helps providers to realise new project ideas, including those in the meetings industry.
- Shareconomy also helps to reduce waste and costs and thus create a more sustainable event.





DIDACTICS & METHODOLOGY

How will new approaches to didactics and methodology influence future meetings and events?



Format

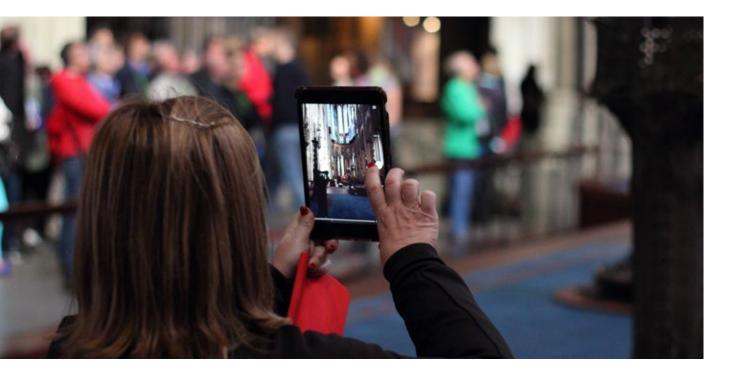
INNOVATION BOOT CAMP



Quick Facts

- Meet up at boot camp
- Identify stimulating, new and innovative concepts
- Companies and start-ups
- Process: For 1.5 days (max. 2), the participants have the opportunity to work in a team made up of representatives from established companies and start-ups with the mission of developing novel ideas. They are required to work with a specific focus.
- Key elements of an innovation boot camp are methods for generating new ideas, teamwork and coaching.

- ▼ Teams and groups work together quickly and with a defined goal – which gives the development of marketable, problemsolving business ideas a high probability of success.
- They develop concepts for new products or services and optimise internal corporate processes.



Format

INSTAWALK



Quick Facts

- A tour organised by event organisers or participants with an Instagram hashtag
- Attracts attention, raises the profile of the meeting or event.

- On an Instawalk, participants take photos or film videos of an event, e.g. looking at a topic from different perspectives. These are then bundled and posted on the web to give other users a virtual impression through the eyes of many people and provide a comprehensive picture.
- The event organiser can provide a common hashtag to be used by all participants when they upload their photos. This allows viewers to connect the images to an object or place.
- Boosts the social media presence of linked events or persons.



Method

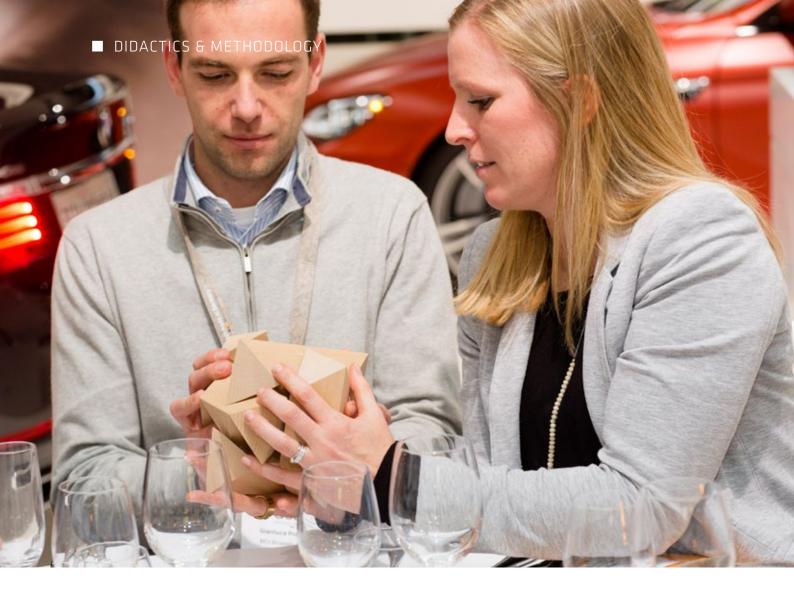
GAMIFICATION



Quick Facts

- The use of elements and processes familiar from games in a non-game context.
- Greater user motivation, learning success, customer loyalty

- ✓ Gamification motivates participants during an event by offering experience points, progress bars, rankings or awards for mastering complex content or visiting as many booths as possible. This is particularly useful in tasks, which might otherwise be considered monotonous or difficult.
- On a "city hunt" a type of treasure hunt
 the players explore a city by completing challenges and solving clues.



Method

DESIGN THINKING



Quick Facts

- An approach for developing innovative ideas to solve complex problems
- Understanding the problem is the key to finding the solution.

- Primary components: multidisciplinary teams, process, flexible venues
- Interactive process: understand, observe, define viewpoints, find ideas, develop prototypes, test
- Combines the creative and analytical sides of the innovation process

Networking

MATCHMAKING

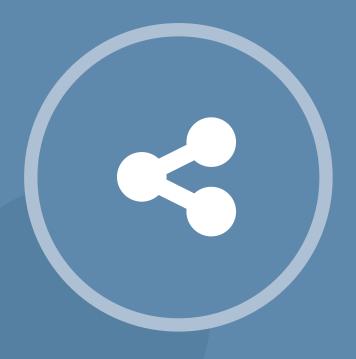


Quick Facts

- Business matchmaking
- Networking participants based on their interests and skills
- e.g. with event app
- Provider: Plazz AG

- Targeted contacting
- Brings together people with shared interests
- Networking before, during and after the event
- Builds contacts between trade show exhibitors and visitors or conference delegates
- Use of productive matchmaking apps at larger conventions and trade show





TECHNOLOGY

Which technologies will shape future meetings and events?

Visualisation

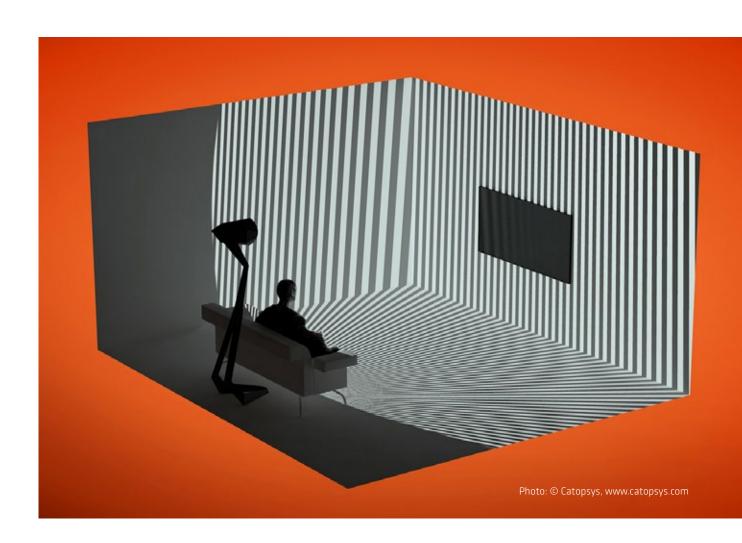
IMMERSIS



Quick Facts

- 180° projection
- Expands a video image to generate a virtual reality using 3D optics
- Provider: Catopsys SAS

- The compact, easily transportable unit is quick to set up and therefore suitable for a wide range of applications.
- Can be used to generate virtual worlds at trade fairs or unusual meeting locations and present products to visitors in virtual 3D prior to prototyping or production.





Presentation Technology

FOG SCREEN PROJECTOR



Quick Facts

- Projects images/videos onto a fog screen
- Supports gesture controls and can be used as interactive touch screen
- Provider: Leia Display System

Potential applications for the meetings industry

Used for creating show effects, e.g. in product presentations at trade fairs and events, or to supplement the real product with additional information.



HOLOGRAPHY



Quick Facts

- Holographic presentation of images and elements
- 3D projection into the room
- Provider: Soscho GmbH

- Enables speakers to appear at conferences without actually being physically present

 yet they are perceived as almost real.

 Holography also opens up new ways to interact with other people who are actually present in the auditorium.
- Is capable of presenting large exhibits, which are difficult to transport, live at trade fairs without removing them from their location.

TANGIBLE MEDIA – PHYSICAL TELEPRESENCE

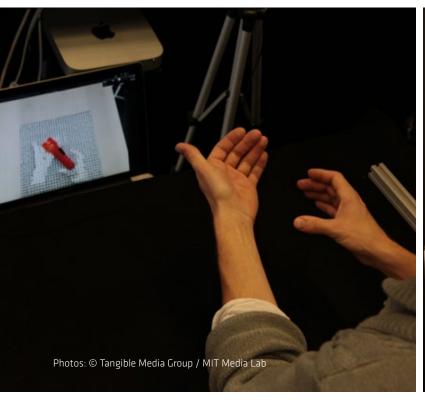


Quick Facts

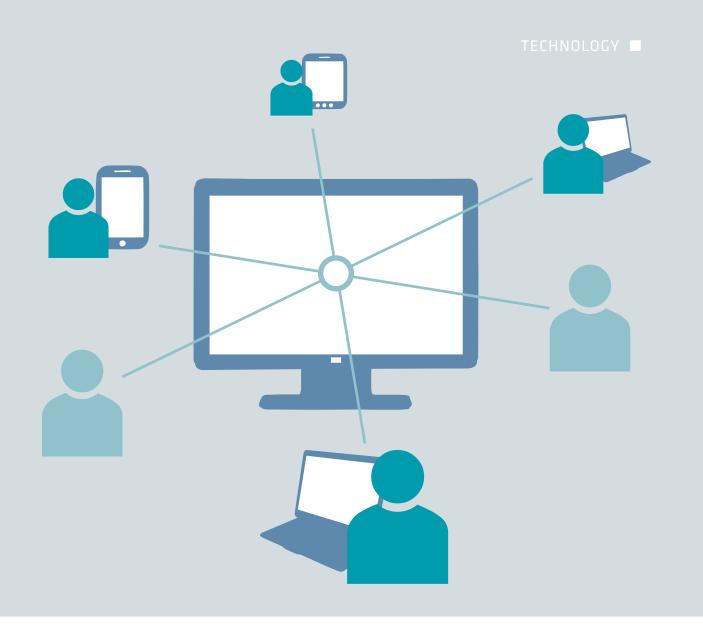
- Physical 3D presentation
- Enables transmission of real physical movement
- Provider: MIT Media Lab

Potential applications for the meetings industry

Physical Telepresence allows a far-away speaker not only to be seen and heard by an audience but also to move objects in the room in front of their eyes. This significantly increases the speaker's presence and options for interaction.







BLUESCAPE



Quick Facts

- Tool for linking various devices and working simultaneously
- Work collaboratively and interactively
- Provider: Thought Stream LLC (bluescape)

Potential applications for the meetings industry

bluescape enables a number of speakers to participate in a presentation together. Moreover, speakers / visitors who are unable to attend the event in person can support the lecture from a different location or ask questions via the Internet.



DIGITAL INTERPRETER

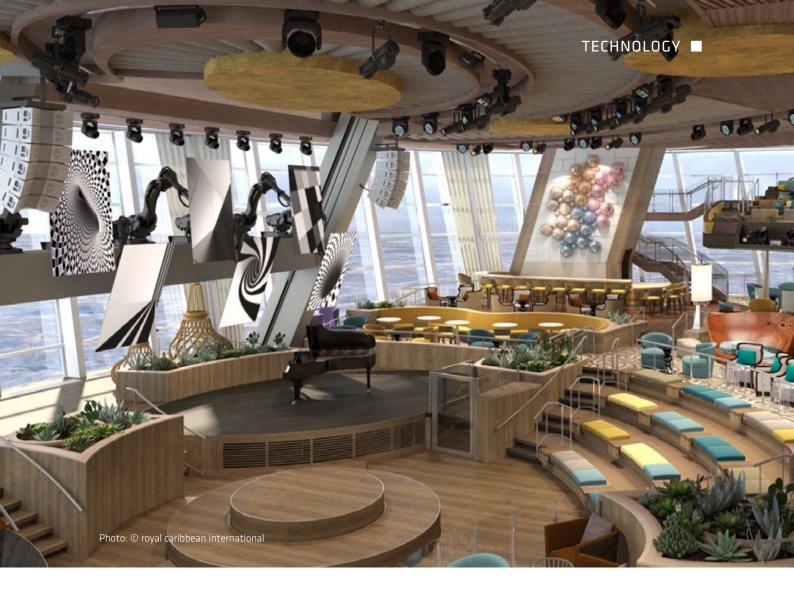


Quick Facts

- Real time, digital voice interpreting
- No human interpreter required
- Microsoft Corporation and Google offer first test versions

Potential applications for the meetings industry

Enables communication in multiple languages at international meetings, conferences, lectures and discussions without the need for interpreters. Digital voice interpreting allows participants to interact spontaneously and breaks down language barriers.



Robots

ROBOT ARMS WITH LED FLATSCREENS



Quick Facts

- Displays mounted on mobile robot arms
- Interactive use of displays
- Provider: ABB Automation

Potential applications for the meetings industry

- The content on the screens may shape the event but here it is further enhanced by programmable robot arms, which are capable of turning the flatscreens in any direction.
- ✓ The scope for potential applications is considerable. As well as enhancing the visual impact of presentations, the flatscreens can also be used to provide directions and as advertising spaces. They could also conceivably be combined for use as a video wall at large events.

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Robots

MAKR SHAKR



Quick Facts

- Order cocktails prepared and served by robot arms via smartphone
- Robots become barkeepers
- Provider: Makr Shakr

- Special visitor attraction at evening gettogethers
- ✓ Infinite range of cocktails possible
- Ordering via app and being served by a robot barkeeper provides a "wow" effect at events and contributes to the overall user experience.

Wearables

VIRTUAL REALITY GLASSES



Quick Facts

- Multi-functional glasses with a miniature built-in computer in the frame
- Enables "augmented reality" technology
- Provider: Alphabet Inc. (Google)

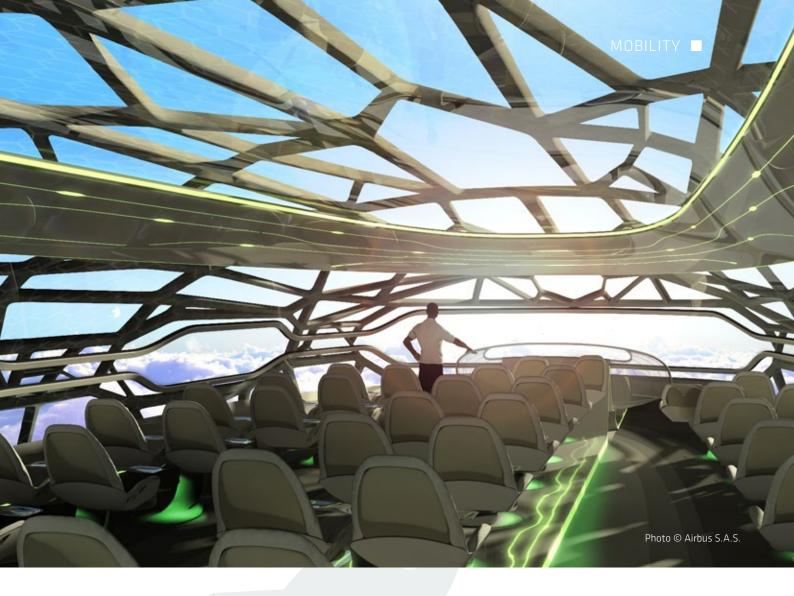
- Supplements information from the wearer's environment – augmented reality
- Visualisation of data, e.g. directions, additional information about speakers, delegates/conversation partners or machine control





MOBILITY

How will innovations in mobility change travel and meetings?



Air Travel Trends

AIRBUS CABIN OF THE FUTURE



Quick Facts

- Future scenario of an aircraft cabin
- Intelligent networking optimises the use of the cabin and offers many new features
- Provider: Airbus S.A.S.

- Business travellers can decide individually how they want to use their flight time. If they want to work they can retreat to a quiet area of the aircraft.
- An interactive room is available for meetings and presentations during the flight.



Intersite Networking

ZOOMORPHIC ROBOTS



Quick Facts

- Robust, animal-like robots on four legs
- Able to move even over rough ground
- Manufacturer: Boston Dynamics Inc.

- This type of robot can be used to build (event) infrastructure in remote or difficult locations. The robot is capable of moving over rough ground and can therefore be deployed, e.g. to lay cables through a forest or transport materials.
- It can explore hazardous terrain in dangerous situations and regions or be used, e.g. for transportation and to carry equipment for soldiers in the field.



Intersite Networking

DRONES



Quick Facts

- Unmanned flying objects
- Autonomous or remotely controlled
- Legislation allows only very restricted usage so far

- Drones can be used in remote locations for transporting materials to build and support infrastructure.
- In the near future, they can be used to fly visitors, exhibitors and materials around large sites.

 Drones can also be used to transmit live images, in security applications and for surveillance to increase the security level.
- In addition, the use of drones is useful in building maintenance and offers rescue teams a new means of transport.

Intelligent Transportation Systems

DRIVERLESS VEHICLES



Quick Facts

- Vehicles are driven without human interaction and are networked with each other (connectivity).
- Developers: various automobile manufacturers and suppliers, Google ...

- Users can profit from the travelling time to the event by working, finding information or relaxing. They can make the final preparations for the upcoming event during their journey.
- The vehicle navigates the route autonomously and is therefore also suitable for accessing events in remote locations.
- Driverless cars are an interesting mobility concept for large (trade show) sites.





Intelligent Transportation Systems

CAR-2-CAR COMMUNICATION



Ouick Facts

- Cloud-based vehicle system
- Vehicles are networked with each other and provide each other with traffic information.
- Developers: Volvo Car Group, Delphi Automotive PLC

- Networking all vehicles can improve traffic safety for everyone on large trade show sites with busy roads.
- Service staff are provided with the information they need to respond quickly and eliminate hazards for visitors.
- Guidance systems can direct vehicles along less busy routes at large events.
- In local public transportation, apps inform passengers about traffic jams, cancellations and delays in real time.



Intelligent Transportation Systems

CAR-2-INFRASTRUCTURE COMMUNICATION



Quick Facts

- Autonomous parking system
- The vehicle independently finds a parking space and parks itself in the car park
- Developer: Volvo Car Group

- Guests can drive up to the main entrance. The car then drives itself to the car park (which can even be some distance away).
- Saves space: parking areas and routes can be planned and used more efficiently.



EDDA-BUS



Quick Facts

- Fast charging system for charging electric buses in just a few minutes
- Pilot project in progress since 3 November 2014
- Currently operating in Leipzig, Germany
- Developed by Fraunhofer Institute for Transportation and Infrastructure Systems (IVI)

- The fast charging system simplifies electromobility and boosts energy efficiency in local public transportation networks.
- The system is ideal for use in logistics concepts on large event sites allowing participants, exhibitors, speakers and materials to be transported cost-efficiently and with minimum environmental impact.





INFRASTRUCTURE

Developments in buildings, such as hotels and event venues

Building Technology - Lighting

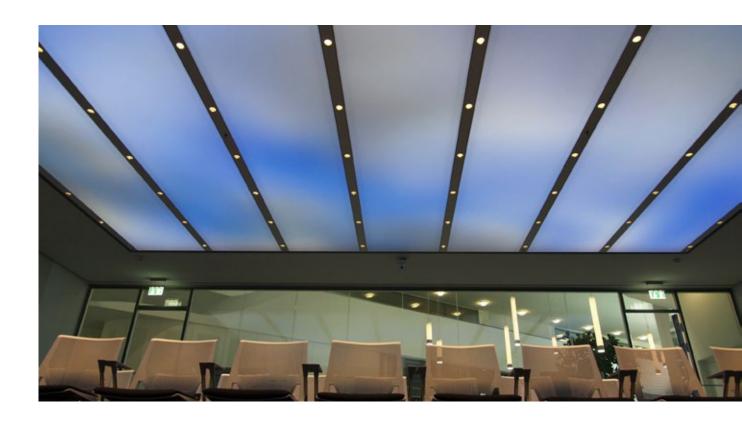
VIRTUAL SKY



Quick Facts

- Simulation of natural light using a virtual LED sky
- Improves lighting conditions
- Providers: Lights GmbH & Fraunhofer Institute for Industrial Engineering IAO

- Use of the "Virtual Sky" in meeting rooms can dramatically improve lighting conditions. Even rooms without natural daylight are transformed into attractive and practical meeting venues.
- Virtual Sky can also be used as a show effect at meetings and events.





Building Technology - Air Conditioning

PHASE CHANGE MATERIALS



Quick Facts

- Phase change material: latent heat storage system - stores heat/cold energy over a long period to be released without loss at a later time.
- Mixture of paraffin wax and polymer network
- Provider: DuPont AG
- www.energain.co.uk, www.micronal.de

- Acts as an air conditioning system
- Reduces energy consumption and provides a pleasant climate in meeting rooms by maintaining the temperature at a level between 20° and 26° C. A comfortable indoor temperature is important for the well-being and productivity of participants.



Internet/WLAN

EXTENSION OF GLOBAL INTERNET ACCESS



Quick Facts

- Satellites/balloons provide Internet access in remote locations
- Providers: Alphabet Inc. (Google), SpaceX Corporation

- Projects: SpaceX and Project Loon
- This solution offers long-term Internet access for events in remote locations, such as beaches, forests or islands, and increases their attractiveness as event destinations.



Payment Systems & Entrance Controls

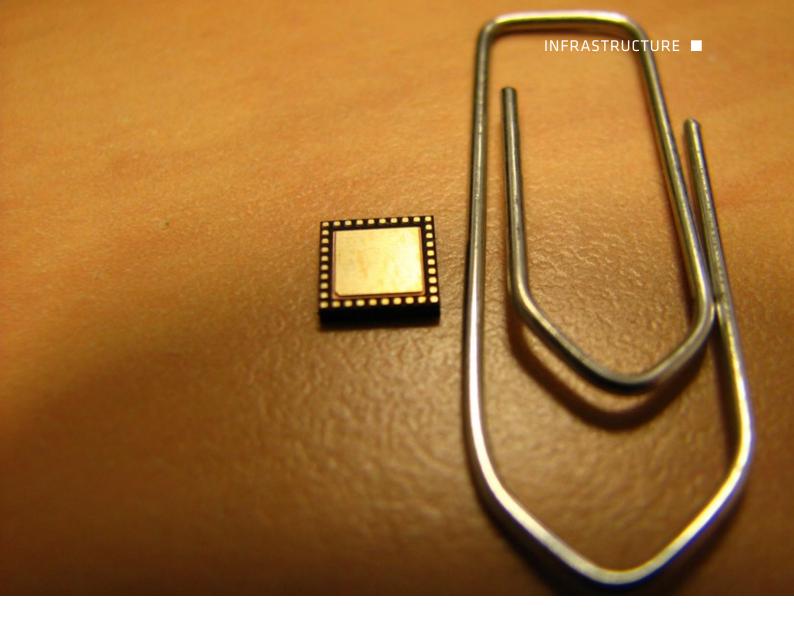
ALTERNATIVE PAYMENT METHODS



Quick Facts

- Payments using Google Hands Free:I'd like to pay with Google
- Simplifies in-store payment processes
- Provider: Alphabet Inc. (Google)

- Payments are currently possible using smartphones with payment terminals.
- With Google Hands Free, the customer does not require any devices.
- Simplifies on-site payments, e.g. of participation fees or food and beverage purchases at events.



Payment Systems & Entrance Controls

CHIP IMPLANTS



Quick Facts

- An implanted chip with a range of functions
- Unlocks the user's phone, serves as customer card, gym membership card, office access card, ...

Potential applications for the meetings industry

Microchips cannot only be used to identify business partners and participants at events but also as a ticket for trade shows and large events in combination with an entrance system: The visitor can register at home. The system reads the chip as the visitor walks past and detects whether he has already registered or still requires a ticket.

OUTLOOK

FOLLOWING THE PUBLICATION OF THE INNOVATION CATALOGUE, INTERVIEWS WITH INTERNATIONAL AND GERMAN EXPERTS AND OPINION LEADERS IN THE ABOVE FIELDS WILL BE CONDUCTED. AT THE SAME TIME, FOCUS GROUPS OF EVENT PLANNERS AND PARTICIPANTS WILL BE FORMED IN GERMANY AND OTHER COUNTRIES IN ORDER TO BENEFIT FROM THEIR EXPERTISE AND TO IDENTIFY THE NEEDS OF USERS.

Building on the previously gained insights, the organisational, didactic, technological and venue requirements of future meeting and event formats will be investigated and described. The "Future Meeting Guide" will compare familiar formats with newly developed, innovative scenarios. These will subsequently be assessed by the stakeholders.

The results of the research phases provide an instruction manual for designing future-oriented, organisational, technological and spatial frameworks for "Future Meeting Spaces". The project shall serve as a secure scientific foundation for recommendations for future action as well as present the research results in detail.

Finally, a future meeting scenario will be selected and prepared for its implementation. In order to do so, further conceptual development and adaptation of the scenario to the use case/ show case will be conducted. This second phase of the project is scheduled to begin in summer 2016.

RESEARCH PARTNERS



Five Star Conference Service



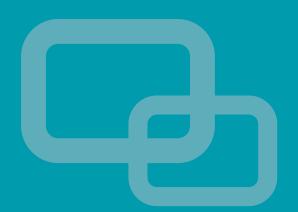








FUTURE MEETING SPACE INNOVATION CATALOGUE





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