FOREWORD

Germany has a long-standing tradition of being one the world's top destinations for meetings and conferences. In 2015, the innovation network "Future Meeting Space" was jointly launched by the GCB German Convention Bureau e.V., the EVVC European Association of Event Centers e.V. and the Fraunhofer Institute for Industrial Engineering IAO. Its mission is to future-proof this success and to build upon it with the help of innovative ideas.

The innovation catalogue presented in the following pages was developed in the innovation network's third research phase. The catalogue is a curation of groundbreaking technologies and tools, which all show one thing: Technological innovations that elevate the attendee's (event) experience to a new level and expand an event's reach, will be part and parcel of meetings and conferences of the future. At the same time, human beings and their desire for interaction are still what events are essentially all about. Achieving this blend of emotions and innovations is what everyone involved in the world of events should strive for.

MATTHIAS SCHULTZE, GCB

FOREWORD

Where is the industry heading? Our business is extremely relevant for social cohesion and further development. It's currently strongly threatened by the effects of the corona pandemic. Therefore, it is even more important to think ahead and anticipate future opportunities.

The EVVC participates in the Future Meeting Space to support our members and partners with in-depth research and bundled industry knowledge. This way, they can already develop the technical, organizational and spatial requirements for tomorrow.

From our perspective, the digitisation of processes is along with the required technical equipment of event venues, fundamentally important. Innovations such as VR / AR, e.g. in the form of virtual meeting rooms, provide important added value for participants and venues alike.

ILONA JARABEK, EVVC

Innovation network „Future Meeting Space"

Conferences, congresses and events enable the exchange of experiences and ideas as a basis for developing innovations. In addition, they are the most important platform for education and expanding people's networks.

Business events in Germany have seen a steady growth in attendance of international participants in recent years. However, the ongoing Covid-19 pandemic is challenging event organisers and planners to rethink their approaches and to critically reflect on event formats. Therefore, it is more important than ever to develop a new vision by taking on the mega trends and topics that will matter in the future.

The innovation network "Future Meeting Space" not only focuses on the aspects of networking and knowledge transfer, but also analyses and clusters current developments and trends with the aim of identifying the technological, organisational and locational requirements for successful events of the future.

In its first and second research phases the project revolved around developing novel event formats as well as identifying different attendee types and general success factors. The current third phase is looking into the future role of events within an organisation's communication mix.

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European Association of Event Centres

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Innovation network „Future Meeting Space"

We aim to develop a range of scenarios for this new role of events and to review the future requirements and skillsets for event planners and organisers. Moreover, this research phase is designed to provide insights into the measurability of events. In this context, we have taken both the current and the future generations' expectations into account

As part of our research, we have also produced an innovation catalogue looking at current trends in technology and digitalisation. For this purpose, the Fraunhofer Institute's research team analysed and used information and data from different sources: Their own research and development, expert know-how and networks as well as their work with trend scouts. Moreover, insights from lab and development work as well as the evaluation of innovations fed into the catalogue. Concluding this research phase, the collected findings were reviewed by a multidisciplinary group of experts.

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Innovation catalogue 4.0

The innovation catalogue provides an overview of the following technologies: virtual/augmented reality, data analytics, robotic process automation, AI, blockchain, application programming interface, IoT, cloud computing, fifth generation wireless technology for digital cellular networks und quantum computing. The catalogue includes precise definitions and analyses the capabilities of all these technologies. Examples show how these technologies are already being used in the context of congresses and conferences. Therefore, the innovation catalogue not only improves the general understanding of new technologies, but also promotes the actual use of new digital tools to create technological highlights. Each technology category includes examples of innovative applications.

This publication presents selected highlights of these innovative technologies.

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"

„Innovative technologies and their individual applications have a decisive impact on our rapidly changing world of work and life. This is precisely why it is important that the innovation network "Future Meeting Space" analysed their potential and examined which concrete fields of application are in fact suitable for the efficient use within the meetings industry in order to develop sustainable formats and implement them with the support of technology."

TILMAN NAUJOKS,
Fraunhofer IAO

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FMS

Chapter

INNOVATION CATALOGUE
TECHNOLOGY OVERVIEW

FMS

Techno-logies

Area not yet covered

Related to AI

QC

VR/AR

5G

DA

CC

RPA

IoT

AI

API

BC

Applications
- Digital Twins
- Avatar Conferencing
- Immersive Learning
- Group VR
- Holoportation

Application
- Social Media Analytics

Application
- Edge Computing

Application
- Cognitive Environments
- Multi-Angle Streaming
- Silent Conferencing
- Wearables for Payment

Application
- Two-Way Live-Translation

TECHNOLOGY OVERVIEW: TOP-INNOVATIONS

FMS

VR / AR

Digital Twins*

Virtual Meeting Room / "Avatar Conferencing" *
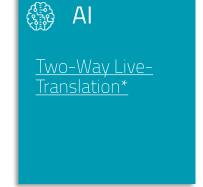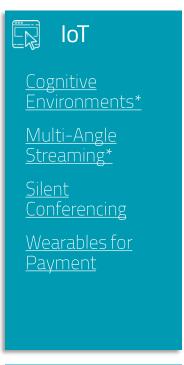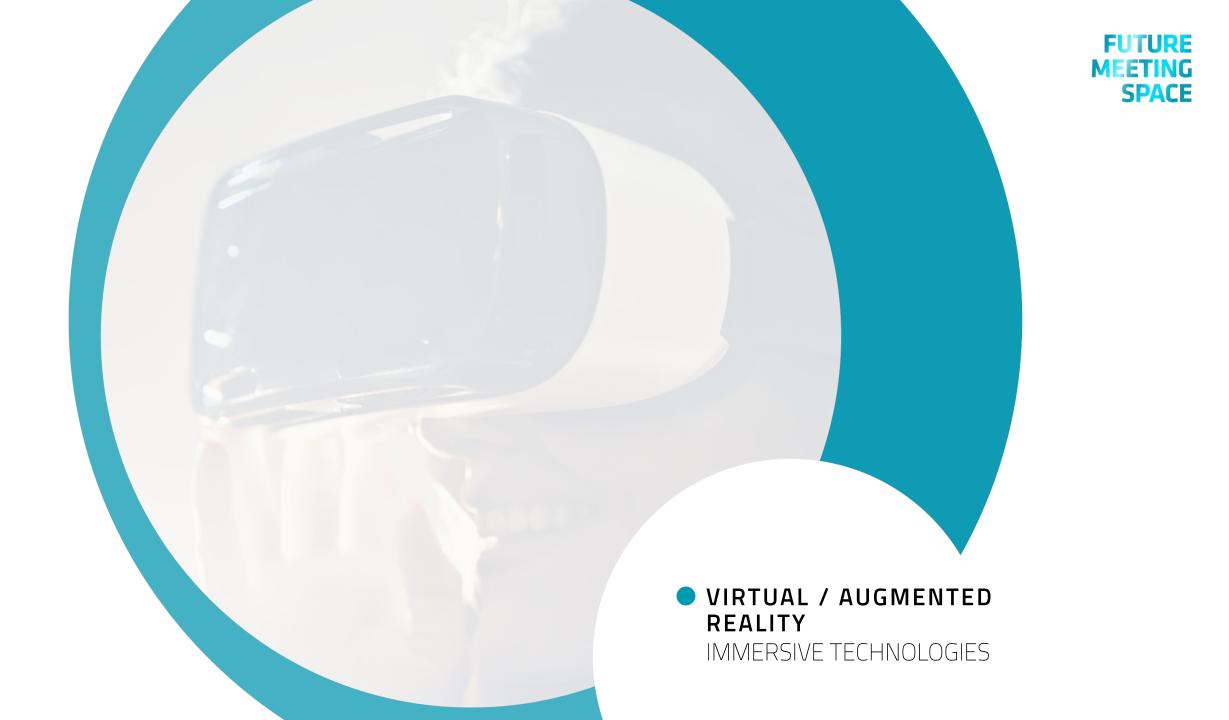
Immersive Learning*

Group VR*

Holoportation

DA

Social Media Analytics*

RPA

Robotic Process Automation

AI

Two-Way Live-Translation*

BC
Blockchain

CC

Edge Computing

API

Application Programming Interface

5G

IoT

Cognitive Environments*

Multi-Angle Streaming*

Silent Conferencing

Wearables for Payment

QC

Quantum Computing

*Top-Innovation

FUTURE
MEETING
SPACE

● VIRTUAL / AUGMENTED
REALITY
IMMERSIVE TECHNOLOGIES

VR/AR

FMS

Quick Facts

- Virtual Reality is an entirely immersive experience that shuts out the physical world.
- Augmented reality adds digital elements to a live view (e.g. on smartphones).

Capabilities

- Holography, visualisations
- Virtually Interconnected Events
- CAVE system
- Reactive Environments
- Immersive Learning

DIGITAL TWINS

FUTURE
MEETING
SPACE

VR/AR

FMS

„As the current crisis shows how fast disruptions can appear, it is always good to question one's own position in the MICE market and to be prepared for multiple future scenarios.

One of our highlights certainly is the Digital Twin as it gives people the impression of being on-site without travelling."

RAINER
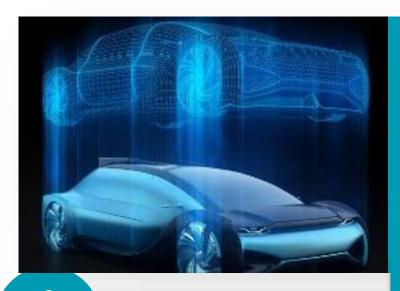KÖNIG,
KFP Five Star
Conference
Service

Quick Facts

- Digital Twins are digital representations of tangible or intangible objects or processes from the real world. It is irrelevant whether the counterpart already exists in the real world or will only exist in the future.

Consequence

- With this method, companies can „virtualise" almost everything.
- Developers can then modify functions, test new settings, and calculate complex simulations at a fraction of the cost of traditional methods.

Description

- Digital twins are much more than just graphical replicas. These twins are first and foremost data bundles that are created in real time and are constantly being updated.

- They „accompany" their real role models throughout their entire life cycle. In this way, they can constantly provide valuable information about how they are being used in everyday life. This feedback enables the continious optimisation of a machine in operation.

- E.g. MindSphere (Siemens), IBM

Transfer to MICE

- A digital twin can create virtual locations and thus provides access to them without the need to travel. This functionality allows for measurements to be taken virtually prior to the physical construction site, for example.

- A digital twin could also be used for an event. The digital twin can invite participants to engage with other participants in virtual spaces or on social media during an event. They can aid in scheduling face-to-face meetings with interesting contacts after the event.

VIRTUAL MEETING ROOMS / „AVATAR CONFERENCING"

FUTURE MEETING SPACE

VR/AR

VR/AR

FMS

Quick Facts

- Service that allows people to work with each other using well-known meeting room facilities, such as whiteboards, in a virtual environment.
- Allows for body language and movement.

Consequence

- It is possible to meet in a virtual space without having to travel.
- Connecting meetings in the real and virtual worlds.

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Description

- Avatars are designed for each participant to enable their attendance at virtual meetings and events. Technical options depend on software, voice chat and file sharing via cloud.

- Virtual rooms include collaboration and presentation tools so that participants can point, discuss, mark and delete things.

- Possibility to record the meetings. The limitation of participant numbers depends on technology.

- Using smartphones, desktops or virtual reality headsets (e.g. meetingroom.io, meetingvr.net)

Transfer to MICE

- Higher attention span and interactivity with lower travel expenses, office costs and decision time.

- The use of new technologies to attend meetings in one (virtual) room allow for interactions that previously would have only been possible if attendees were in fact together in a (physical) room.

- The avatars used in virtual meeting rooms can also mimic body language.

IMMERSIVE LEARNING

FUTURE
MEETING
SPACE

VR/AR

VR/AR

FMS

Quick Facts

- Immersive learning is the process of learning within a simulated or artificial environment.
- This form of learning is already becoming more common through online courses, for example.

Consequence

- The aim of creating an online course in an immersive learning environment is to experience theory and content in real-life scenarios.
- The use of immersive learning environments can accelerate participants' learning progress by eliminating the gap between theory and practice. Ultimately, this will also boost their commitment levels.

Description

- Attendees of online courses will put on a pair of VR glasses to fully immerse themselves into the (virtual) learning world. Because of their engagement throughout the course – highly interactive both virtually and physically – the learning success is enhanced.
- Besides of the VR capabilities, immersive learning opportunities can also be found in augmented and mixed reality environments.
- E.g. https://www.3spin.com/de/dream

Transfer to MICE

- In terms of sustainability, meetings could be attended from remote locations and participants would still find themselves in different environments. This would also eliminate time and costs associated with the trip to the meeting.
- With VR glasses, product demonstrations can be experienced at close range by each participant – at any time. On-site, the possible interaction with the objects helps to reduce the fear of them and to learn about them more easily. These intense experiences will lead to longer lasting memories and learnings.

GROUP VR

FUTURE
MEETING
SPACE

VR/AR

VR/AR

Quick Facts

- Group VR applications utilise 360° shared virtual reality video mapping features inside domes and other interiors. Their capabilities amaze audiences without the need for VR eyewear.

Consequence

- By eliminating the need to wear VR glasses, it becomes a shared group experience.

- By sharing an experience, this technology can bring people together and provide conversation topics.

- Group VR applications can also be used to create exciting experiences for participants as well as to show prototypes to an audience, for example.

"

„*Digitalisation processes and new technoloy options will have a huge impact on our future daily business. Therefore, it is imparative to get a general overview of the new technological tools and the top innovations in this fast-growing market. The use of "digital twins" will transform congresses and events.*

SevenCenters of Germany a long-standing marketing cooperation of the leading German convention centers in Berlin, Düsseldorf, Frankfurt, Hamburg, Cologne, Munich and Stuttgart. We supports this outstanding research project as an active partner because new trends are key to us to serve our clients."

HEIKE
MAHMOUD,
Seven Centers
of Germany

HOLOPORTATION

FUTURE
MEETING
SPACE

VR/AR

„Being part of Future Meeting Space is more important than ever, given that the coronavirus has sparked a multitude of discussions on how we can shape events in the future. We are happy to work with renowned partners and to draw upon scientific research to explore the opportunities available to us today and tomorrow.

One trend that will have a lasting impact on the event industry is AI. As a software company, we see both a potential and a need for AI when it comes to event analysis. Predicting the success of an event can help us make the right decisions at the right time."

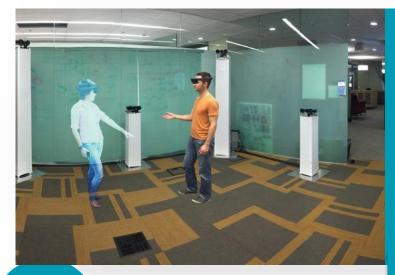KATI RITTBERGER, Xing Events GmbH

FMS

VR/AR

Quick Facts

- By using VR glasses, mixed reality worlds are made accessible to participants.
- Within these mixed reality worlds, people can interact face-to-face with each other as well as with objects that are not on-site.

Consequence

- Holoportation is already being used in research and development to visualise products.
- People can remain connected by having personal interactions.
- Information and data can be arranged spatially which will lead to an improved understanding.

FMS

Description

- 3-D cameras can calculate and texture real people as 3-D models. Reference points at the recording and destination locations will be used to „teleport" the model to the correct location within the mixed reality world. In addition to live videos, recorded monologues can also be played back.

- Tracking sensors can be used to track hand- and eye-movements. This enables intuitive interactions within the environment.

- E.g. https://www.microsoft.com/de-de/hololens

Transfer to MICE

- Subtitles in the lower edge of the VR glasses can replace acoustic translations. This results in greater inclusion of participants who do not speak the language and participants with hearing impairments.

- Names can also be displayed above the respective avatars which will allow for more personal interactions with each other.

- Skilled staff can be teleported for product demonstrations.

VR/AR

FMS

Quick Facts

- Participants can not only see the 3-D holograms, but they can also hear or feel them. Speakers make a small polystyrene ball float. LEDs create colour effects and with the help of sound waves you can also feel it. (https://youtu.be/kaoO5cY1aHk)

Consequence

- This technique allows for an almost perfect representation of products. Only the sense of smell is missing.
- As a result, interested parties can get an even better picture of one's products.

FUTURE MEETING SPACE

DATA ANALYTICS

STATISTICAL METHODS TO EXTRACT INFORMATION FROM COLLECTED DATA

„The Future Meeting Space project is uncovering important insights into how, where and when people are coming together, sharing ideas and what experiences participants will be offered in the future. Being part of a group of innovative companies and organisations is critically important for Maritz Global Events as it helps us shape a successful future.

For the near-term, a highlight for us is how all of us should be using business intelligence data to inprove decision-making throughout the course of an event. This has been ongoing process and is expected to to become even more sophisticated as time goes on. In the long-term, it will be fascinating to see how some of the technologies develop over the coming years."

BEN GOEDEGEBUURE
Maritz Global Events

FMS

Quick Facts

- Scientific approach to extract and analyse data from different data sources.
- The ultimate aim is to draw conclusions from data.
- Data analytics focuses on the evaluation of known data.

Capabilities

- Analysis of data
- Handling/Correlation of data
- Uncovering of patterns
- Identification of anomalies

FMS

Description

- Identifying information from data in order to support decisions within an enterprise (at different organisation levels).

- Data analytics is usually being used in connection with business intelligence, analytical CRM systems, online analytical processing and in various areas of the enterprise that rely data analysis.

Transfer to MICE

- Location search

- Understanding one's customers data analytics can allow for customer segmentation and for tailoring and personalising an event to their needs. Ultimately, this will aid in building stronger relationships.

- Improved decision-making.

- Marketing effectiveness can be improved by data analytics as it can help in the evaluation of campaigns, personalisation of content and creation of content strategies.

SOCIAL MEDIA ANALYTICS

FMS

Quick Facts

- The compression and evaluation of digital data from social networks and media.
- An interdisciplinary procedure that makes use of findings from both the social sciences and the computer sciences.

Consequence

- Based on the analysis of customer activity and opinions (reports and key figures), well-founded decisions can be made.
- Possible applications are, e.g. reputation analyses to protect the company's reputation or the optimisation of customer services.
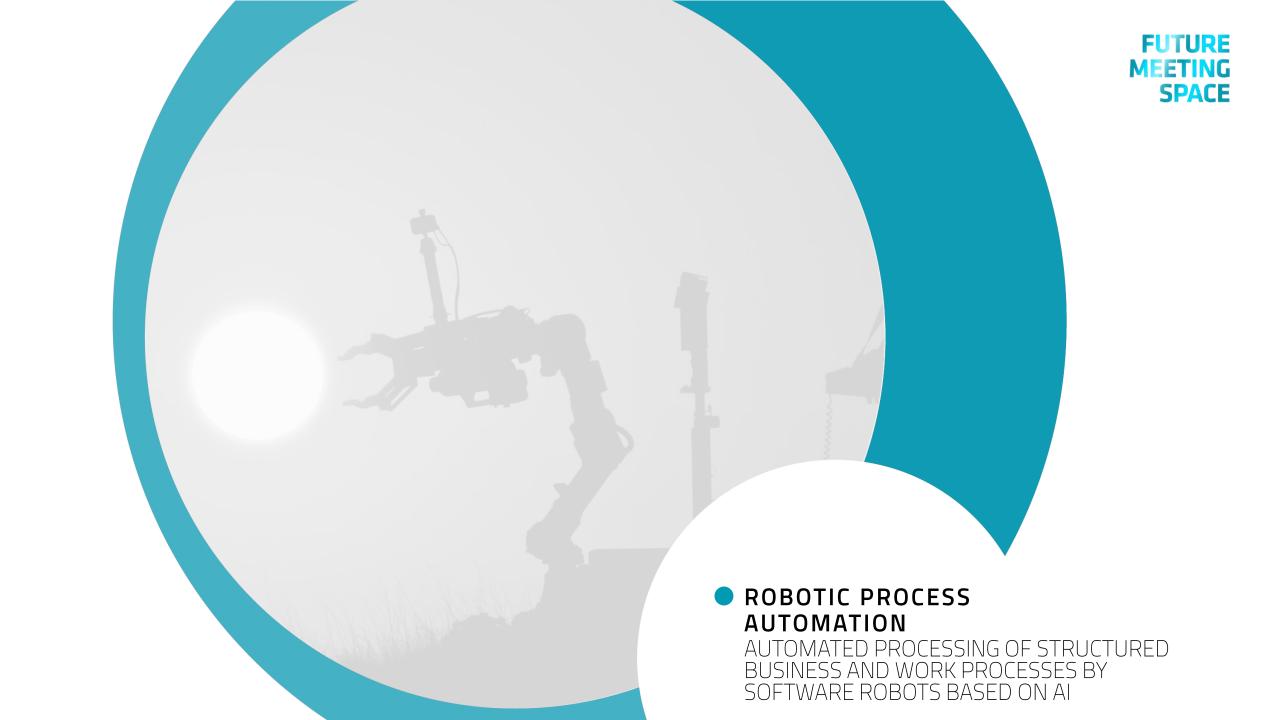
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Description

- Once the relevant platforms and information have been identified, the collected data must be cleansed and condensed. The extracted information can be evaluated in regard to various aspects. The interpretation can be based either on human judgement or on automated algorithms.

- If required, the process steps can be repeated several times.

- Possible data types include text-based data, such as tweets; network-based data, such as Facebook/Xing networks; picture data, such as from Instagram.

- E.g. Quintly, Social Report, Snapshot

Transfer to MICE

- Hashtags or keyword searches can be used to identify trends. The tracking of hashtags and content strategies can also improve one's reach on social networks. This may aid in winning new customers and adding them to one's customer network.

- Based on the collected data and derived information, a persona can be created. This persona will include characteristics, activities and preferences. With the help of these personas, individuals can be addressed very precisely and according to their interests.

● **ROBOTIC PROCESS
AUTOMATION**
AUTOMATED PROCESSING OF STRUCTURED
BUSINESS AND WORK PROCESSES BY
SOFTWARE ROBOTS BASED ON AI

FMS

Quick Facts

- The technology is an approach to process automation in which manual activities are learnt and automatically executed by so-called software robots.

- It is a form of business process automation technology based in bots or AI.

Capabilities

- Three ways to use RPA tools:

  1. attended RPA (bots invoked by user),
  2. unattended RPA (bots that perform tasks in batches based on automatic/timed triggers),
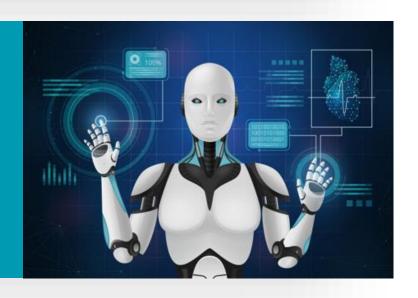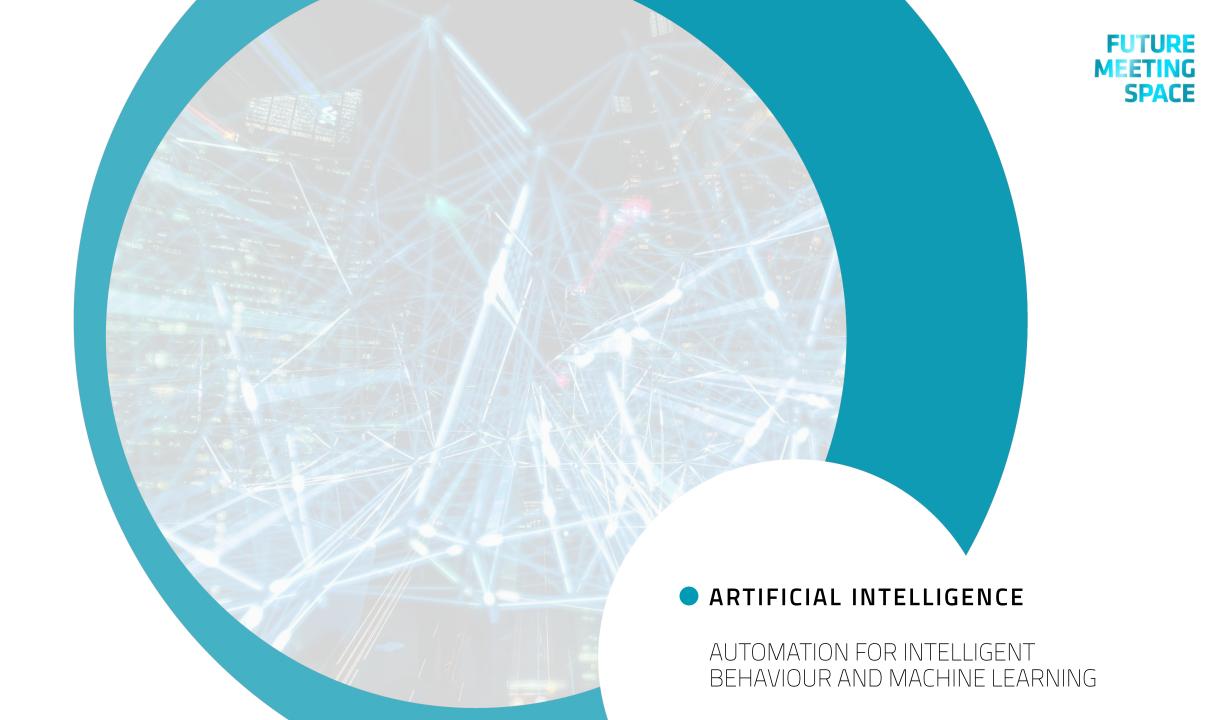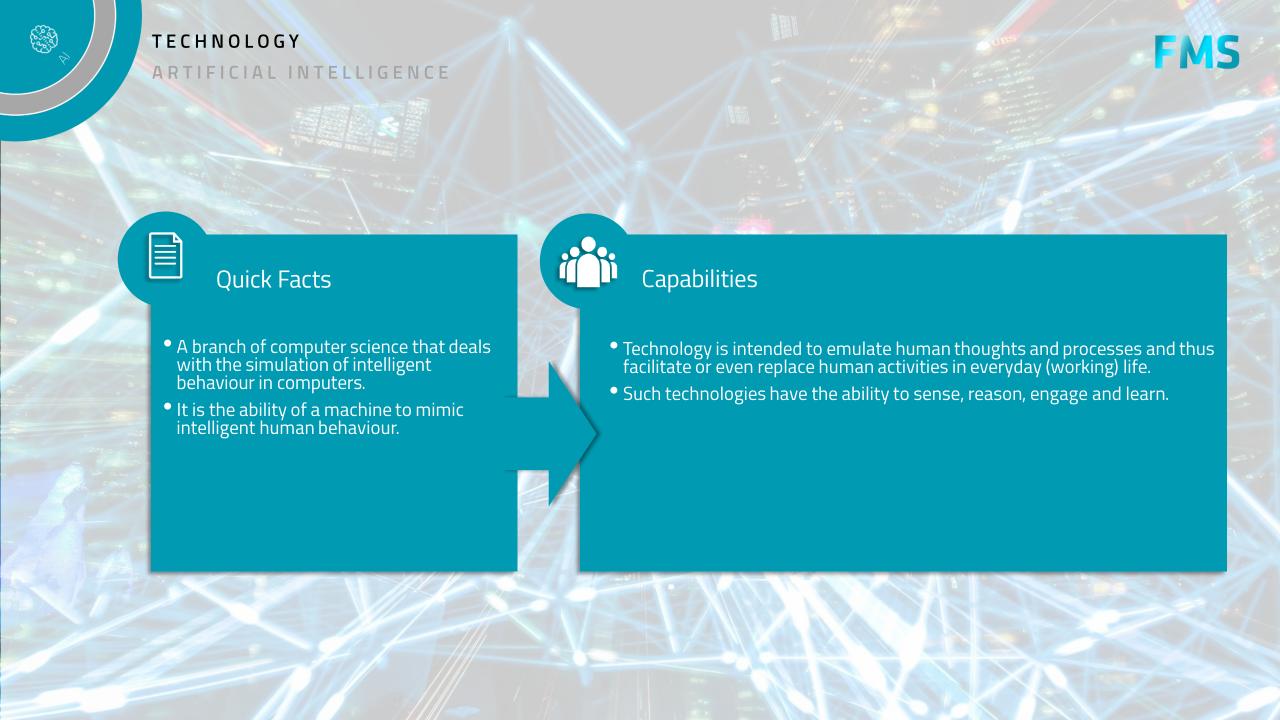 3. hybrid RPA (combination)

Description

- Software technology that automates front and back office processes.
- Emerging technology involving bots that mimic human actions in order to complete repetitive tasks.
- It mimics the way humans operate their computers, use applications and perform proccesses. It eliminates time-consuming programming of an API.
- RPA does not interfere with existing systems or IT infrastructure and it does not make changes to applications.

Transfer to MICE

- Plausibility checks for registrations (name, company, preferences, etc.)
- Automated queries in case on uncertainties
- Creating name lists, signs, accounting, cancellation and re-ordering of catering etc.
- Automated parking services

FUTURE MEETING SPACE

● **ARTIFICIAL INTELLIGENCE**

AUTOMATION FOR INTELLIGENT
BEHAVIOUR AND MACHINE LEARNING

FMS

Quick Facts

- A branch of computer science that deals with the simulation of intelligent behaviour in computers.
- It is the ability of a machine to mimic intelligent human behaviour.

Capabilities

- Technology is intended to emulate human thoughts and processes and thus facilitate or even replace human activities in everyday (working) life.
- Such technologies have the ability to sense, reason, engage and learn.

FMS

Description

- The weak AI is already widespread today – e.g. in image recognition. It is referred to as weak because it does not learn new things independently. Strong AI is forecasted to be able to both learn entirely new things and to reproduce all human abilities in a few decades.

- A sub-area of AI can be found in machine learning, in which the AI learns from its own experiences and draws conclusions, whereby the future behaviour of the system can be influenced.

- Part of machine learning is deep learning, which mimics the learning of the human brain.

Transfer to MICE

- With the help of AI, event-related and customer data can be used to extract more information: Combining customer demographics and past transaction data with social media monitoring can help generate individualised „next event to attend" recommendations.

- AI can predict maintenance cycles for all electronic devices. This will guarantee an event's smooth implementation.

- AI also improves speech recognition and translation services – both aspects are crucial for international events.

- It is the underlying technology for chatbots which can be used for any kind of participant communication.
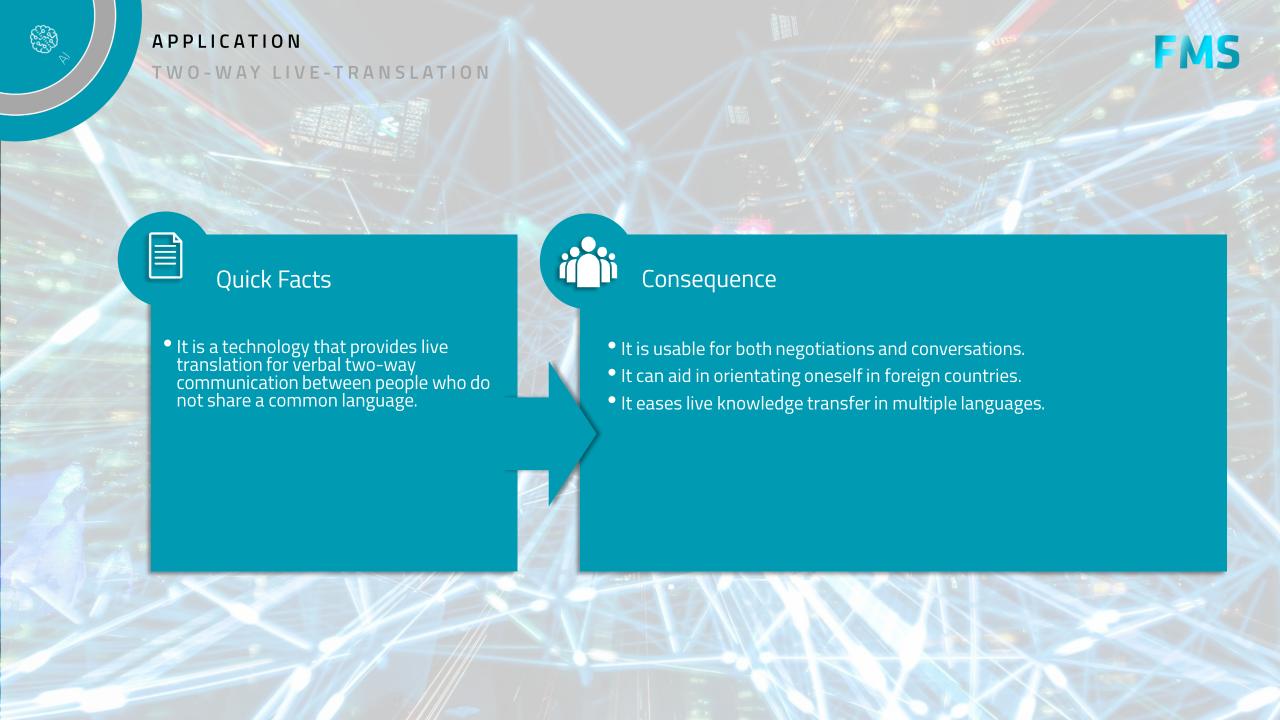
TWO-WAY LIVE-TRANSLATION

AI

"The Future Meeting Space research project helps us to create spaces at LabCampus where people connect, create and collaborate by uncovering the latest insights from the events and meetings industry.

Our highlight is the detailed breakdown and inspirational outlook of how technology can help augment the event and meeting experience in the future."

ANDREA HOFMANN, Munich Airport GmbH
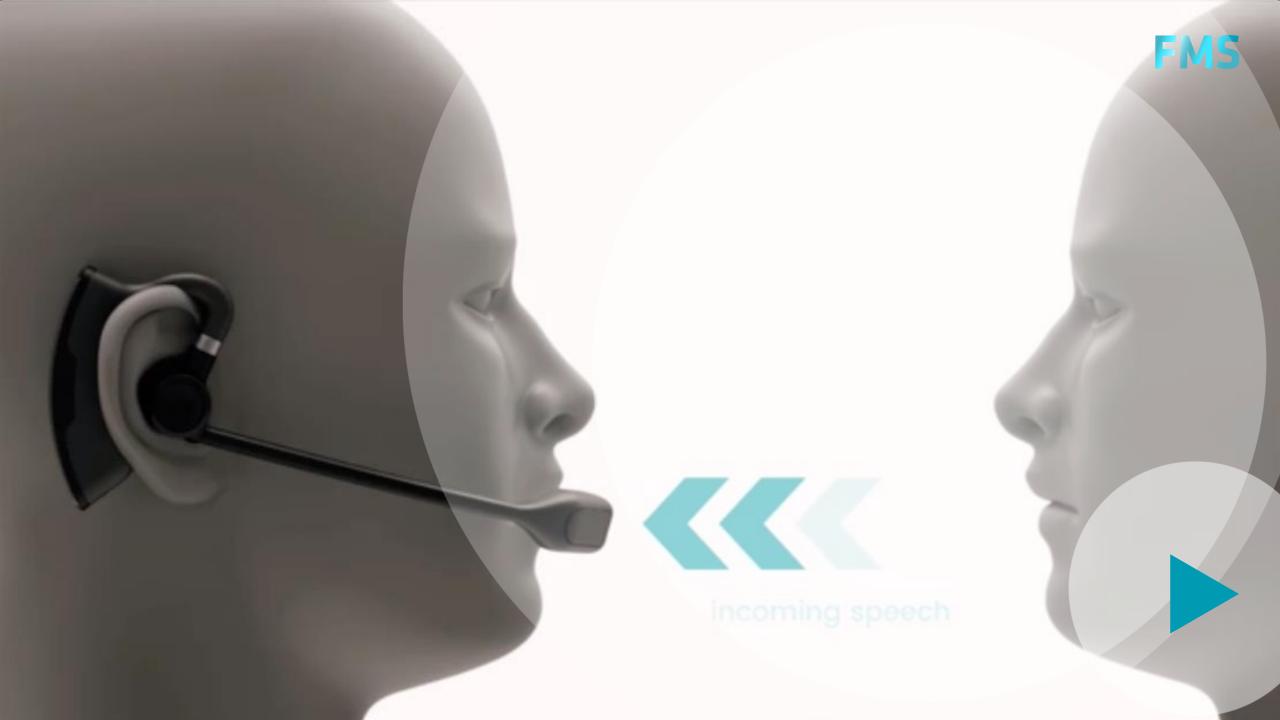
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Quick Facts

- It is a technology that provides live translation for verbal two-way communication between people who do not share a common language.

Consequence

- It is usable for both negotiations and conversations.
- It can aid in orientating oneself in foreign countries.
- It eases live knowledge transfer in multiple languages.
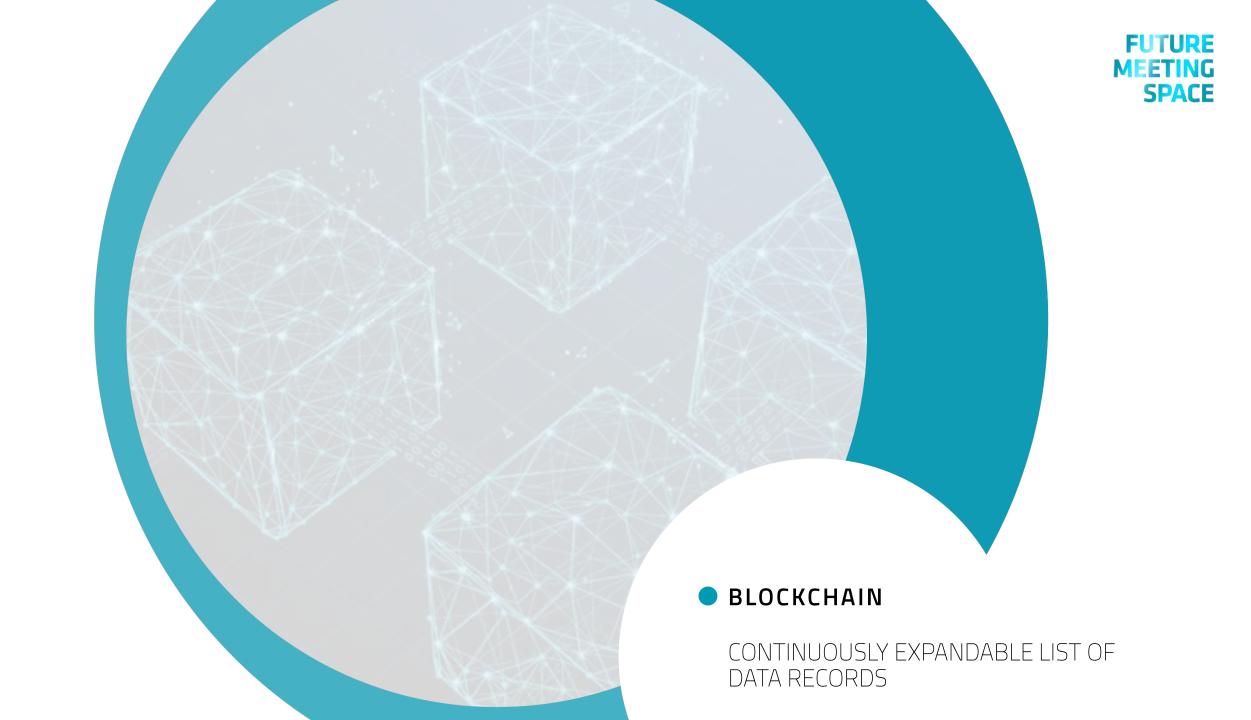
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Description

- Microphones pick up conversations which are then translated and transmitted via headphones.
- Noise suppression enables clear understanding.
- A person's voice is picked up by the device's microphone. AI will then recognize the language and translate one's speech
- E.g.: http://tragltech.com/, Live 30 Languages – Offline 10, also Microsoft Teams

Transfer to MICE

- It is usable without the high cost of translation services (people and technology)
- By eliminating language barriers it promotes easier networking for all participants
- Spoken content can be made available for any participant

Incoming speech

FUTURE MEETING SPACE

BLOCKCHAIN
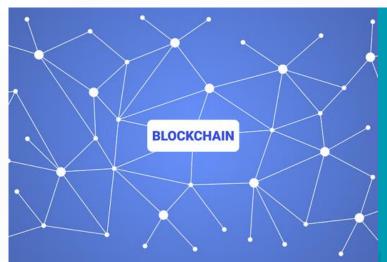
CONTINUOUSLY EXPANDABLE LIST OF DATA RECORDS

FMS

Quick Facts

- It is a decentralised, public, unchangeable data register that is distributed over an entire network.
- All changes and transactions are linked to a chain.
- Miners organise and secure the transactions.

Capabilities

- Security
- Transparency
- Uniformity
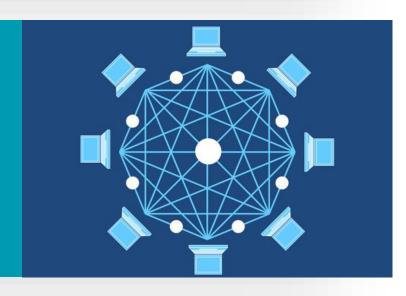- Invariable logic

FMS

Description

- Group chat: Nothing can be changed afterwards
- Information is stored in a history-block, for this a hash (digital fingerprint) is calculated . Additionally, it contains the hash of the previous hash and a chain is created.
- It is a remote network management that anyone can join – everybody receives a copy of the complete blockchain on their computers and the computers check if the chain is still intact.
- A new block cannot be added until every computer has verified it (mining in Blockchain → picture). This use of technology eliminates chances for corruption.

Transfer for MICE

- Implementation of smart contracts with the „If … then …"-condition. For example: If someone is an official participant, they can use car-sharing services over the period of the event via a digital key.
- It is more trust-worthy because corruption and counterfeiting are no longer possible: People trust that their personal data is safe, which is why they provide more data and events can be tailored much more individually.
- With the help of increased trust, larger sums for events can be handled and transferred directly via chatbots (without human contact).

● **CLOUD COMPUTING**

PROVISION OF COMPUTING RESOURCES
VIA THE INTERNET

FMS

Quick Facts

- Cloud computing is a type of computing that relies on shared computing resources rather than having local servers or personal devices to handle applications. It is the basis for the IoT.
- Three types: infrastructure-as-a-service, platform-as-a-service, software-as-a-service.

Capabilities

- Reduces software, hardware, installation and maintenance costs
- Service can be provided independently of platforms
- Scalable, secure and private
- It enables the fast transfer, exchange and sharing of files, but maintains safety by requiring the file owner's permission.
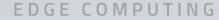
FMS

Description

- On-demand availability of computer system resources – especially data storage and computing power – without requiring direct and active management from the user. The term is generally used to describe data centres that are available to many users over the internet.

- Infrastructure-as-a-service: Internet-based access to storage and computing power

- Platform-as-a-service: Gives developers the tools to build and host web applications

- Software-as-a-service: Is used for web-based applications

Transfer to MICE

- E-commerce applications with which organisations can respond to market opportunities and challenges in a timely manner, whilst also allowing for the assessment of new opportunities and efficiency.

- Storage of large amounts of data (useful for Big Data, Data Analytics)

- Costs can be minimised through Cloud Computing solutions.

EDGE COMPUTING

FMS

Quick Facts

- In contrast to Cloud Computing, Edge Computing technologies process data directly at the source – e.g. at sensors and end devices.

- Information processing as well as content capture and delivery are placed closer to these endpoints.

Capabilities

- Cloud computing has already proven itself, but it also poses problems – especially in regards to latency, for example. Edge Computing describes a topology design in which information processing takes place spatially closer to the source.

- This is particularly relevant for fast calculations. Especially in the field of AI this could be of great importance in the future (e.g. Edge AI).

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FUTURE MEETING SPACE

● **APPLICATION PROGRAMMING INTERFACE**

SET OF ROUTINES, PROTOCOLS AND TOOLS FOR BUILDING SOFTWARE APPLICATIONS

„We are as committed as all of the other partners in this research project to make each event a success for the customer. To be one step ahead we need to look ahead, try different things and be aware of trends. This project brings a variety of opinions, it challenges all of us and it inspires us to do things differently.

It is difficult to limit ourselves to one highlight, but "API" in particular can play an important role in supporting a better communication between the different systems the hotel industry is working with. The "digitised meeting spaces" are another highlight for us as our "virtual and hybrid meeting solution" are already connecting people all over the world without the need for travelling."

ANGELA GRAUN, Radisson Hotels

FMS

Quick Facts

- An API is a communication protocol between different parts of a computer programme intended to simplify the implementation and maintenance of software.

Capabilities

- Data transfer between different programme parts
- Communication between two systems
- In use of web services, it allows to integrate provided content into own programmes.
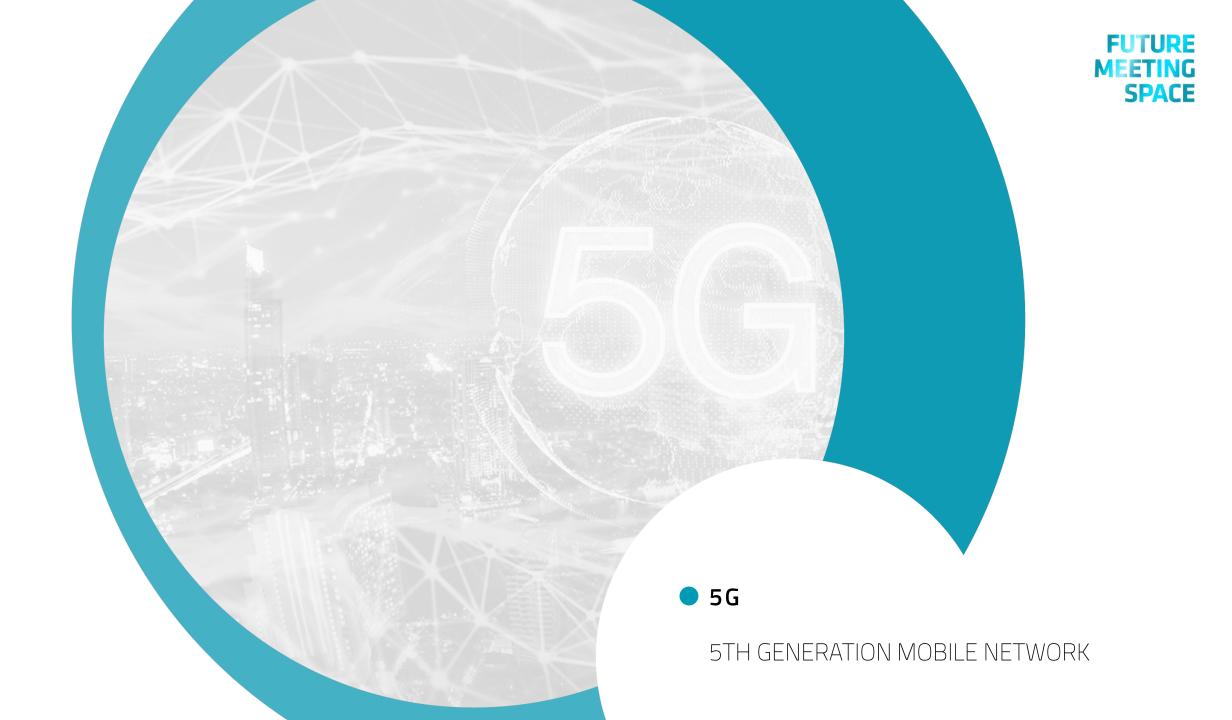
Description

- Basically, an API specifies how software components are supposed to interact. Additionally, APIs are used when programming graphical user interface (GUI) components.

- An API may be used for a web-based system, an operating system, a database system, computer hardware or a software library.

- This interface provides other programmes with a tool to connect to the software system. This enables developers to influence the hardware, for example a screen or data on the hard disk, without having to deal them directly.
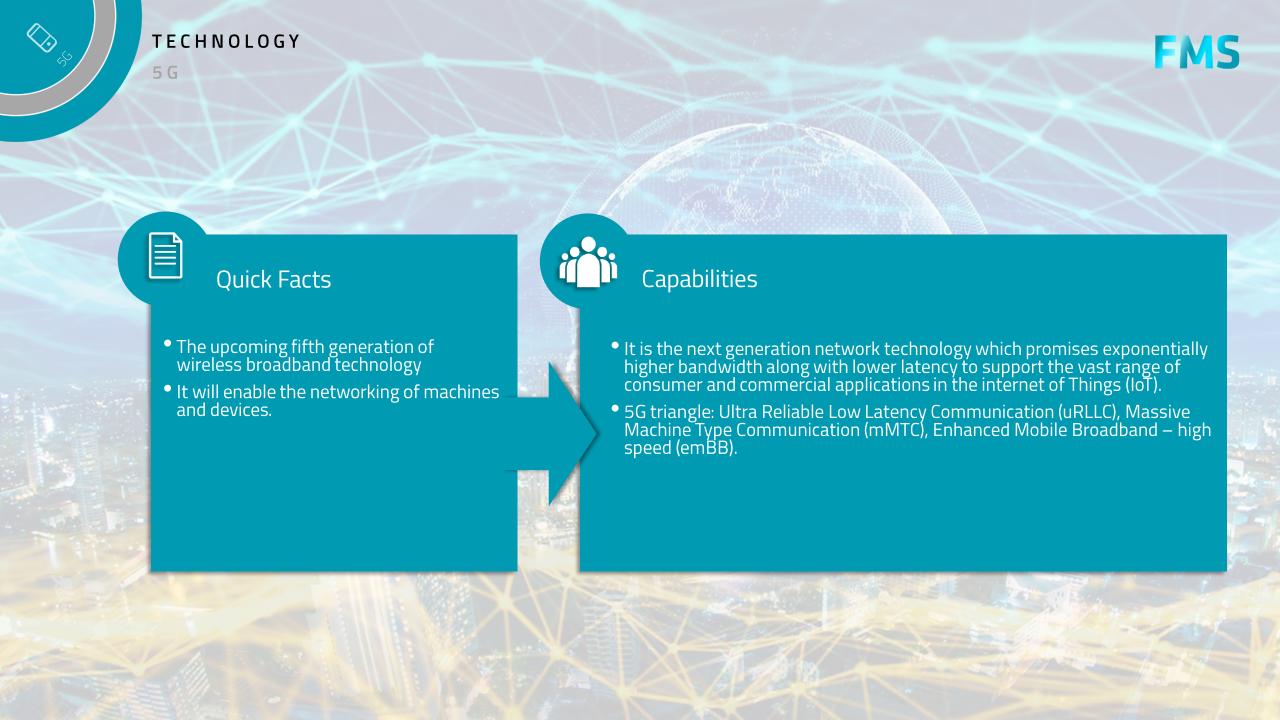
Transfer to MICE

- In the event industry APIs can be used to provide comprehensive platforms which can support providers and locations alike without having to launch an entirely new system. The API can search for offers in any existing webpage to provide individualised offers.
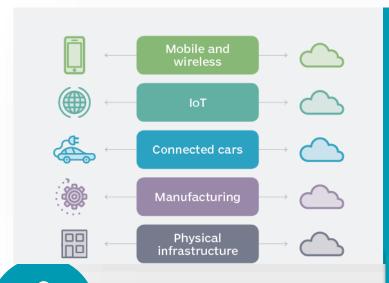
FUTURE MEETING SPACE

5G

5TH GENERATION MOBILE NETWORK

FMS

Quick Facts

- The upcoming fifth generation of wireless broadband technology
- It will enable the networking of machines and devices.

Capabilities

- It is the next generation network technology which promises exponentially higher bandwidth along with lower latency to support the vast range of consumer and commercial applications in the internet of Things (IoT).
- 5G triangle: Ultra Reliable Low Latency Communication (uRLLC), Massive Machine Type Communication (mMTC), Enhanced Mobile Broadband – high speed (emBB).
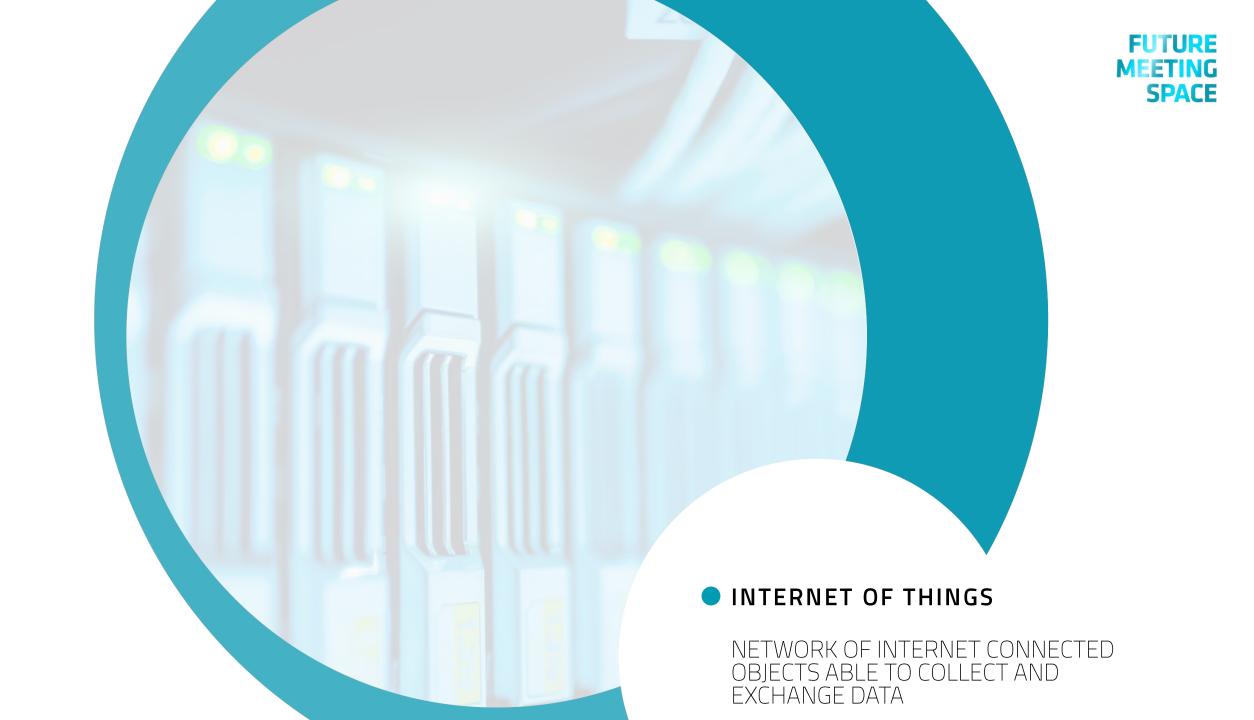
Description

- Due to network slicing, the 5G network contains a variety of network layers – each application has its own appropriate layer.

- Due to the resulting flexibility, real network capacities can be interconnected to network areas depending on demand. This enables customer-specific solutions.

Transfer to MICE

- The low latency of 5G will make AR and VR applications both immersive and far more interactive in any location and independent of WI-FI networks.

- Wearables and mobile devices can easily be used in any location even when there is no WI-FI available.

- 5G can lead to faster and more intense interactions with event participants.

- More information can be stored in clouds and it will be more accessible than stored locally.

FUTURE
MEETING
SPACE

● **INTERNET OF THINGS**

NETWORK OF INTERNET CONNECTED
OBJECTS ABLE TO COLLECT AND
EXCHANGE DATA

FMS

Quick Facts

- The interconnection of everyday objects or machines both in a private and industrial environment via the internet

Capabilities

- Location-independent use and control
- Entire process sequences can be automated
- Networking
- Predictive maintenance

FMS

Description

- Each device receives a unique identity (address) within the network and is equipped with electronic intelligence. This enables the devices to communicate over the internet and to perform tasks fully automatically.

- Intelligent devices are often referred to as smart devices.

- The IoT is generally used in smart homes and buildings, e.g. for automatic heating and climate control.

Transfer to MICE

- Different functions and services are linked with each other, e.g. a camera at the entrance could ensure that only authorised persons have access. Additionally, the camera could scan whether the participants are wearing a jacket and inform them via an app where the cloakroom is.

- Efficient temperature regulation can save both electricity and money. Ultimately, this will also make events more sustainable.

- Monitoring visitor flows

COGNITIVE ENVIRONMENTS

FUTURE MEETING SPACE

IoT

IoT

Quick Facts

- Cognitive environments are the next generation of smart buildings.

- The environment thinks for itself. For example, sensors in the room and on the body can adapt the working conditions to the requirements of the current activity.

Capabilities

- No need to control the lighting or aerating manually anymore. This means, temperature and oxygen levels are kept at optimal levels automatically.

- This will result in better decisions, greater efficiency, improved learning and significantly reduced costs.

Description

- Cognitive environments are more than just smart environments. For example, predictive maintenance is part of a cognitive environment: Data on a machine's condition can be obtained by sensors. Trends and developments can then be identified from changes in sensor values. This will enable the proactive maintenance of systems.

- An individual's data can also be communicated to the environment via sensors and the environment can then react to changes. For example, if sensors detected that someone needs to concentrate, their phone could react and mute itself for a certain duration of time.

Transfer to MICE

- With the help of sensors, it is possible to identify the current status of an event and adjusts the temperature accordingly: In times of concentrated work, temperatures may be lowered, for example.

- Cognitive environments can give event organisers feedback on their participants' peak performance hours. This will allow for a flexible and spontaneous adjustment of the agenda to achieve the highest level of knowledge transfer.

- Predictive maintenance will eliminate technical failures in event technology. Unnecessary maintenance work can be avoided and money can be saved.

MULTI-ANGLE-STREAMING

FUTURE
MEETING
SPACE

IoT

FMS

Quick Facts

- Participants can livestream an event and / or it will be streamed by the event organisers.

- This can allow for the multi-angle-streaming of an event.

- Users can access the streams via a platform and switch between different perspectives.

Capabilities

- If the number of on-site participants is limited, more people will be able to participate remotely, which will increase an event's reach (e.g. concerts, sports, fashion shows, etc.)

- The different viewing angles create an on-site feeling.

- Oftentimes the streams can also be watched again afterwards.

Description

- With onsite and virtual participants attending the same events simultaneously it is important to have reliable streams in place. Audio and image synchronity and access for mobile devices are only two examples.

- One main stream is required, but can certainly be supplemented with further options (e.g. backstage videos, etc.)

- A previously streamed event can be re-watched on platforms. Users can switch between different perspectives in real time.

- https://www.f6s.com/thelokiapp ; https://onlinemarketing.de/news/multi-angle-streaming-begeisternde-live-momente

Transfer to MICE

- Various functions are available, e.g. the possibility to generate images or quotations from a talk or parts of a presentation directly from the stream. It is additionally possible to share them with other participants, peers or on social media.

- Additional video material can be made available on individual topics, such as the product presentation of a new car model, recordings of test drives or technical details, for example.

- Furthermore, event participants have the possibility to participate in events which overlap with other obligations.

SILENT CONFERENCING

IoT

FMS

Quick Facts

- The presentations' audio is only available over headphones.
- Personal devices and headphones may also be used to access a silent event's audio.

Capabilities

- Silent conferencing can increase participants' attention and their focus on the presenter. This can enhance their learnings and may motivate them to stay longer.
- They can save time and space, which allows for more event elements in one place without a lot of distraction or walking.

"

„Our mission is „Connecting bright minds".
Therefore, we want to provide the most efficient
and the most exciting communication platforms.
„Future meeting space" helps us to create them
and to share insights with forward-looking
colleagues.

Silent conferences are very interesting for our
conference participants. Imagine the possibility to
tune in to various sessions without leaving your
seat."

FMS

MAREN
PUYGRANIE
MESAGO

Description

- Very suitable in a location with difficult acoustics or other activites happening simultaneously in the same room.
- They can be used in conference rooms, trade show floors and other places.
- E.g.: https://silentconference.com/de/

Transfer to MICE

- Possibility to tune in to any concurrent session in a venue, without the need to leave the seat.
- Suitable for general lectures as well as breakout sessions.
- Exhibitors at trade shows or conferences can do business and talk quietly with their customers without exposing oneself to noise pollution.
- The option of using multiple channels at the same time can also make silent conferencing useful for very large conferences.
- Run several sessions in one room.

WEARABLES FOR PAYMENT

FUTURE MEETING SPACE

IoT

FMS

Quick Facts

- Different services can be used to connect a device with a customer's bank account.

Consequence

- Even today, it is already possible to use different wearables for payment - such as sunglasses, contactless payment jackets, rings and others.
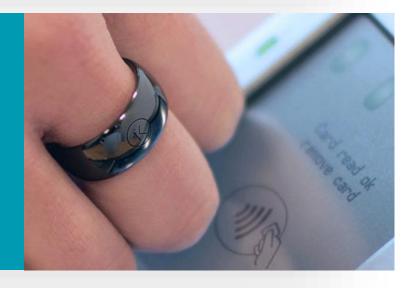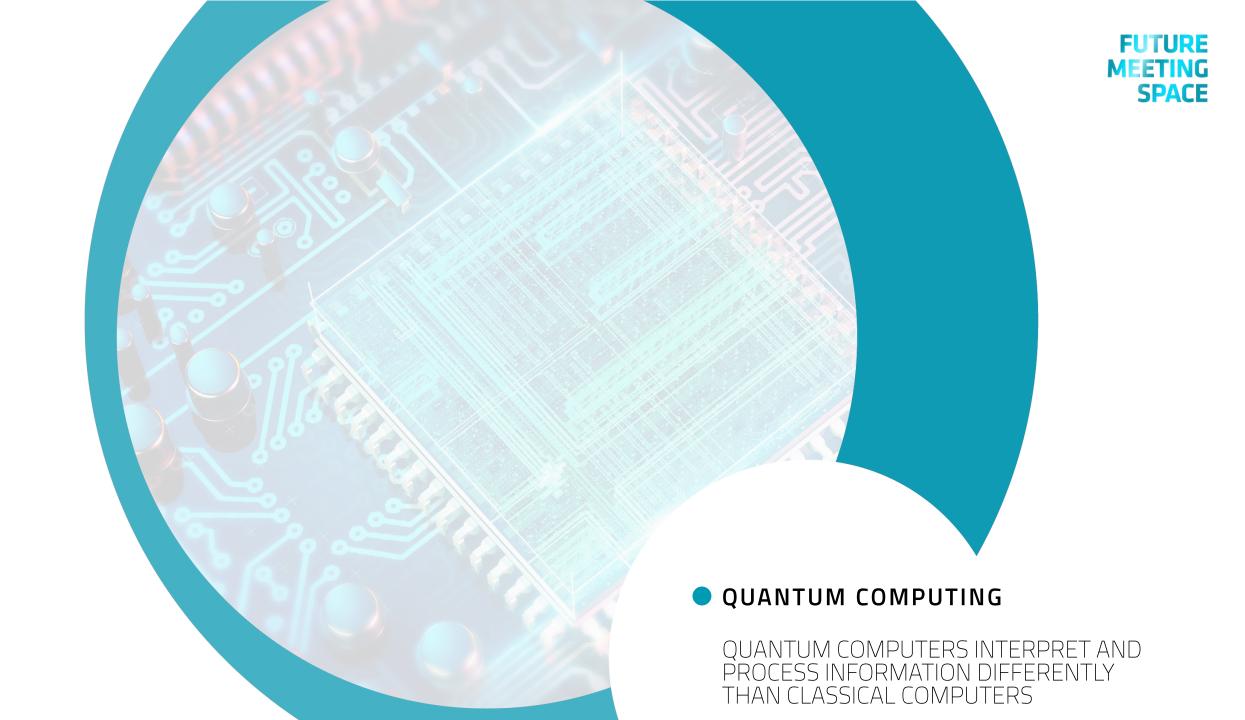
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Description

- Wearables are any piece of technology you can wear on your body, such as fitness trackers, smart watches, wireless earbuds and even VR/AR headsets.
- The technology works like a contactless debit and credit card with Near Field Communication (NFC). Therefore, wearables must contain a NFC chip.
- They may be safer than cards because they do not reveal details about a bank account or any other private information.
- E.g.: Apple, Google or Samsung Pay

Transfer to MICE

- Special wristbands could be invented, which would work as payment methods. They could potentially make an event completely cashless.
- Special POS systems would also have to be implemented to make payments with any personal wearable payment device possible.

● **QUANTUM COMPUTING**

QUANTUM COMPUTERS INTERPRET AND
PROCESS INFORMATION DIFFERENTLY
THAN CLASSICAL COMPUTERS

FMS

Quick Facts

- Quantum Computing does not work on the basis of the laws of classical physics or computer science, but on the basis of quantum mechanical states.

- It uses quantum-mechanical phenomena such as entanglement and superposition to perform computation.

Capabilities

- Search in extremely large databases and the factorisation of large numbers can be achieved more efficiently than with classical computers.

- Further applications can be the mapping of how materials behave as well as the training of machine learning systems, which would be significantly more efficient than it is nowadays.

- In general, it enables much faster simulations for the scientific community.

Description

- In classical computers, there are normal bits, which can have binary values of 0 or 1. Quantum bits (Qubits) can take both values at the same time. The probabilities can be measured which value is taken. A quantum machine with ‚n' qubits can be in a superposition of up to 2(n) unique states simultaneously.

- If the Qubits interact, the state of one qubit depends on the state of another qubit. In this case there is a phenomenon called entanglement.

- There are different kind of Qubits for example atoms, ions, photons, electrons, etc.

- Their respective control devices are working together to act as computer memory and as a processor.

Transfer to MICE

- The analysis of huge amounts of data can be done faster with quantum computers. For example, machine learning with quantum processors can execute more complex routines. Thus, searches of unstructured data would be significantly faster. In case of critical situations at an event, risk assessments and crisis management decisions could be calculated more quickly and a recommendation for action could be derived faster.

- Quantum sensors can measure physical quantities such as frequency, acceleration, temperature and electromagnetic fields with new precision. This can lead to more effective reactions to external event influences.

RESEARCH PARTNERS

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Research partners of the third research phase are KFP Five Star Conference Service GmbH, Xing Events GmbH, Maritz Global Events Inc., Radisson Hotels, Seven Centers of Germany, Munich Airport Academy/ Lab Campus, Mesago Messe Frankfurt, EVVC European Association of Event Centers and GCB German Convention Bureau e.V.

Besides the research partners, the project is supported by a grant of the Education Foundation of the Professional Convention Management Association (PCMA).

EVVC — Europäischer Verband der Veranstaltungs-Centren e.V. European Association of Event Centres

Fraunhofer IAO

GCB Meetings made in Germany ●●● German Convention Bureau

K·F·P Five Star Conference Service

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SevenCenters of Germany

XING Events

IMPRINT & CONTACT

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Project Organisation & Project Management

GCB German Convention Bureau e. V.

Kaiserstr. 53, 60329 Frankfurt, Germany

www.gcb.de

Matthias Schultze, Managing Director, schultze@gcb.de

Sarah Skavron, Project Manager / Assistant to Managing Director, skavron@gcb.de

Birgit Pacher, Manager Research & Development, pacher@gcb.de

Project Concept & Project Process

Fraunhofer Institute for Industrial Engineering IAO

Nobelstrasse12, 70569 Stuttgart, Germany

www.iao.fraunhofer.de

Dr. Stefan Rief, Head of Organisational Development and Work Design Research Unit, stefan.rief@iao.fraunhofer.de

Tilman Naujoks, Project Manager, tilman.naujoks@iao.fraunhofer.de

Katharina Dienes, Project Manager, katharina.dienes@iao.fraunhofer.de

EVVC — Europäischer Verband der Veranstaltungs-Centren e.V. / European Association of Event Centres

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