

THE USE OF HYBRID MEETING FORMATS TO INCREASE INTERNATIONAL COLLABORATION IN SCIENTIFIC RESEARCH

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Abstract

The following article considers two examples that illustrate how digitalization is changing the way in which scientific conferences and similar events are run. It begins with a description of the Virtual World Tour, which formed part of last year's Future of Work Conference, and of the follow-up symposium, which likewise incorporated digital elements. The staging of hybrid and virtual events presents conference management with a raft of new challenges and organizational issues. Not least of these is the question of how best to combine analog and digital forms of interaction.

Key words

Digital Events, Hybrid Events, Virtual World Tour, Blending of Virtual and Physical Meetings

1 The impact of digitalization on the form of scientific conferences

The Fraunhofer-Gesellschaft focuses on applied research. Its central mission is to ensure that insights from the worlds of science and technology are put to practical use by profit and nonprofit organizations. The Fraunhofer Institute for Industrial Engineering IAO studies the interaction between humans and technology in order to design better and increasingly efficient ways of working. The organization of conferences and workshops forms a key part of the work done at Fraunhofer IAO. This provides an opportunity to share project findings with a specialist audience and to promote a productive exchange of knowledge at the interface of research and industry. It is becoming increasingly evident that the conference industry is particularly affected by the changes brought about by digitalization. As a result, there is now a growing tendency to blend the conventional, face-to-face conference experience with digital forms of communication.

The conference industry is undergoing significant transformation. Examples of such change include the leveraging of social media and the Internet to advertise events in advance and process applications for registration, the use of dedicated conference apps to provide information and conduct interactive surveys during the actual event, and the provision of multimedia documentary material after the event. In line with this trend, Fraunhofer IAO recently staged the two events described in more detail below. Both were organized with the aim of expanding the international research network that is investigating the future of work. Both can, according to current definitions, be classified as "hybrid events."

Hybrid events consist, on the one hand, of a "classic event as a real, dialogue-based, experience-based forum for communication between companies, brands and their stakeholders." On the other, they also feature "all the new communication channels, technologies and appliances that people now use in order to enter into contact with one another" (Dams and Luppold, 2016, p. 1).

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Permanent connectivity and continuous knowledge-sharing are two key factors that drive new research within the global scientific community. The design of new meeting formats adapted to different target groups now represents a field of research in its own right.

In their model “Hybrid events and return on investment,” Dams and Luppold describe five factors with specific benefits (2016, p. 12):

- (1) **Return on involvement:** this assumes, inter alia, that greater involvement by real and virtual participants makes it more likely that they will engage more thoroughly with an event’s program and its message.
- (2) **Return on interaction:** this assumes that hybrid elements result in noticeably more interaction between event participants and event objects.
- (3) **Return on Interactivity:** this regards interactivity as the totality of all individual interactions that occur between event participants and event objects via the available channels of communication. Maximum interactivity can be achieved through the use of virtual elements, interfaces and feedback channels.
- (4) **Return on Insights:** unlike classic events, hybrid events generate communications that leave behind countless trails in the digital sphere. Using modern tracking software, these trails can be traced, mapped and operationalized.
- (5) **Return on investment:** initially, the inclusion of virtual forms of communication requires event participants to adapt. However, in the medium to long term, hybrid events tend to save money rather than generate extra costs: not only is the degree of interaction frequently more intense; hybrid events are also able to reach a wider range of participants and are not subject to the temporal constraints that limit physical events.

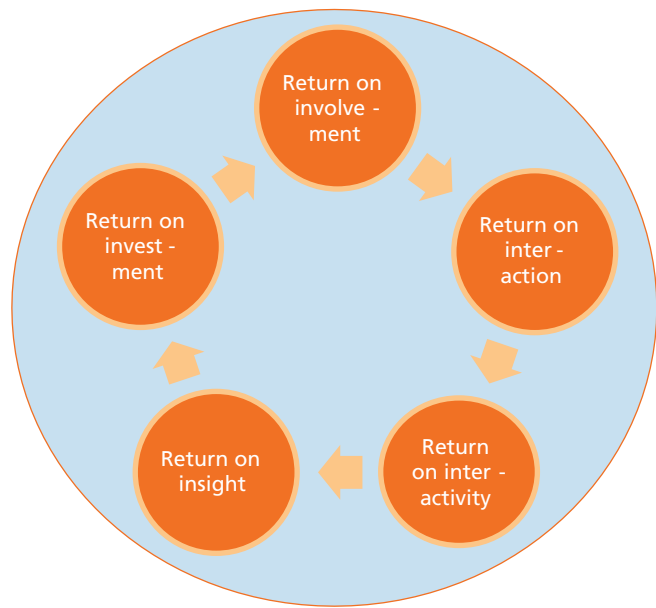


Figure 1: Hybrid events and return on investment (cf. Dams and Luppold, 2016)

As in other spheres of digitalization, here, too, it is vital to achieve a balanced mix of digital elements precisely tailored to the topic and aims of the hybrid event as well its target group. The following describes the experience gained during the organization and realization of two hybrid events at Fraunhofer IAO.

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2 Two examples of digital conference formats at Fraunhofer IAO

2.1 Example 1: The Virtual World Tour as a digital element of the Future of Work Conference held in December 2018

Background

To mark the end of Germany's Science Year 2018, Fraunhofer IAO was commissioned by the Federal Ministry of Education and Research (BMBF) to stage a conference on the future of work, which was held on December 4–5. The physical conference took place in Stuttgart's Haus der Wirtschaft and was attended by around 500 participants. In line with the conference slogan – “Future of Work” – both the BMBF and Fraunhofer IAO were eager to ensure that the event would not only present innovative topics but also feature an innovative format. This gave rise to the idea of a Virtual World Tour that would

accompany the physical conference and provide an insight into the latest research, around the world, on the future of work.

For a period of 24 hours – in parallel to the physical conference in Stuttgart – a total of 12 research institutes in eight time zones around the world would each have the opportunity, in the course of a two-hour live stream, to present their latest research on the future of work. A variety of formats were employed for the various sessions.

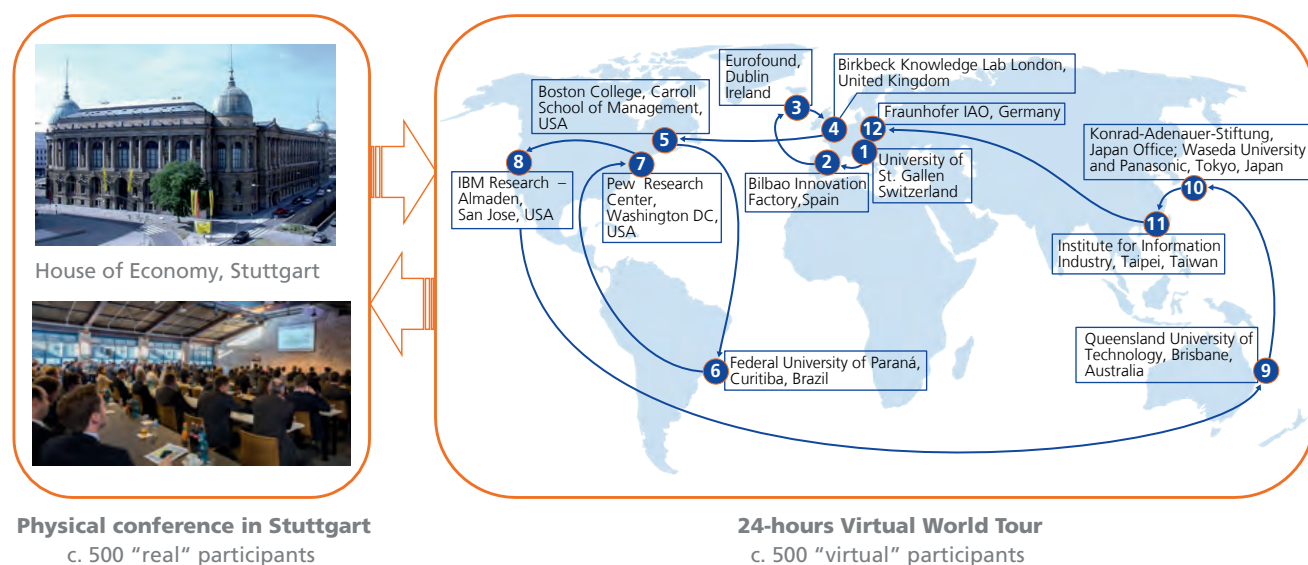


Figure 2: Link between the physical conference in Stuttgart and the Virtual World Tour (author's own graphic)

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The Virtual World Tour opened at midday on December 4 with a live broadcast of the beginning of the first session. It was launched before the entire conference in the Haus der Wirtschaft. In this way, the physical event “coalesced” with the virtual one, thereby drawing conference participants in Stuttgart into a parallel “virtual happening.” The following day, December 5, the closing part of the final session was also broadcast in the Haus der Wirtschaft, from 11:30 a.m. to 12:00 noon. In the course of the entire webcast, a 12-minute video wrap-up was produced, resuming the highlights from each of the 12 sessions and providing conference participants in Stuttgart – as well as online viewers at a later date – with a compact summary of the virtual tour.

The chief aims of the Virtual World Tour were to broaden the scientific dialog on the future of work and to help draw up an international knowledge map identifying the whereabouts of various trends and disciplines within the field of industrial engineering. This will not only help reduce redundancy in future tendering for national research programs but also enhance the opportunities for synergies on the international level.

In addition, the conference presentations and discussions were also made available for viewing, either live or with a time delay, by a specialist audience. For the Federal Ministry of Education and Research, as the commissioning body, a problem-free webcast of the Virtual World Tour, and the positive media coverage it received both before and after the conference, were both key factors in the success of the conference as a whole.

The format of the Virtual World Tour

Various types of hybrid event have now emerged. The Virtual World Tour was essentially a so-called one-way livestream, which was also retrievable as a video file after the conference. An essential aspect of any virtual meeting is that it permits some form of interaction between the various participants. A recent development has been the emergence of technology enabling online participants to interact with, or actively take part in, either “real” or “virtual” events. The Virtual World Tour focused on enabling interaction within each of the individual sessions streamed from the research institutes. The majority of livestreams from the 12 research partners consisted of presentations, round tables and guided tours. The participating institutes were as follows:

- (1) University of St. Gallen, Switzerland
- (2) Bilbao Innovation Factory, Spain
- (3) Eurofound, Dublin, Ireland
- (4) Birkbeck Knowledge Lab, London, United Kingdom
- (5) Boston College, Carroll School of Management, USA
- (6) Federal University of Paraná, Curitiba, Brazil
- (7) Pew Research Center, Washington DC, USA
- (8) IBM Research – Almaden, San Jose, USA
- (9) Queensland University of Technology, Brisbane, Australia
- (10) Konrad-Adenauer-Stiftung, Japan Office; Waseda University and Panasonic, Tokyo, Japan
- (11) Institute for Information Industry, Taipei, Taiwan
- (12) Fraunhofer IAO, Future Work Lab, Stuttgart, Germany

A number of partners engaged in live chats with “virtual” viewers during their livestream session. On the whole, the discussion of a topic specific to an individual partner was limited to the participants of that partner’s own session. Figure 3 shows the classification of the Virtual World Tour within a schema of digital events in terms of the “type of virtualization” and the “degree of interaction” between online participants.

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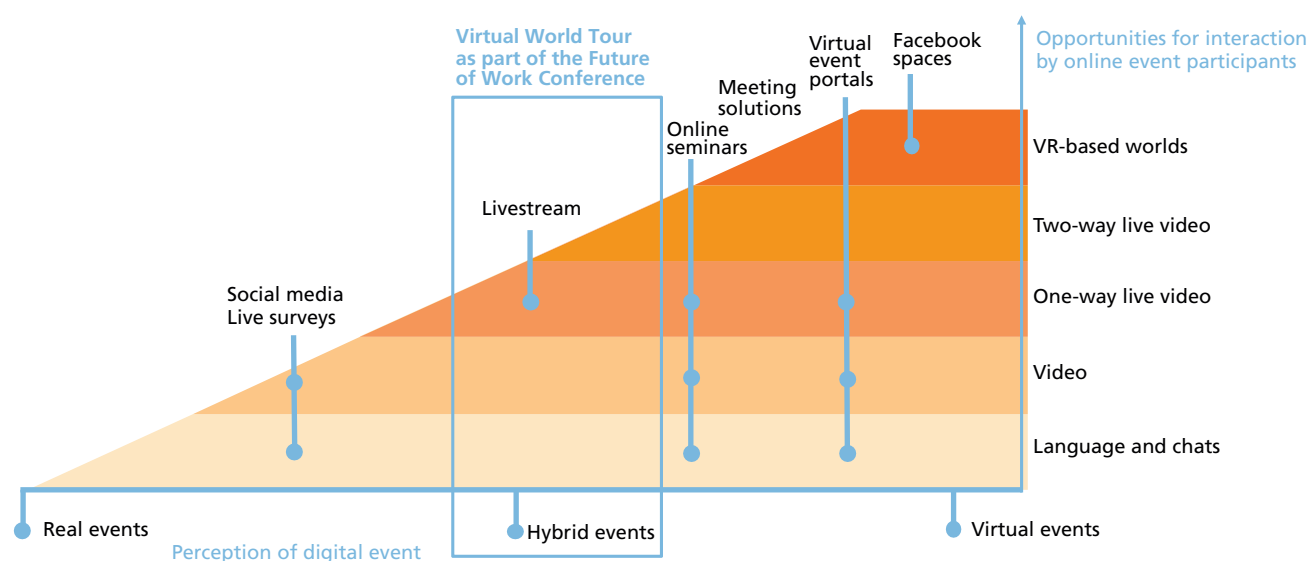


Figure 3: Classification of digital event formats with regard to event type and degree of interaction of online event participants (own graphic based on the classification of digital events in "Der Unterschied zwischen Realen, Hybriden und Virtuellen Events"¹)

Experience gained during the organization and realization of the Virtual World Tour

Once the idea had emerged to stage a virtual event in parallel to the real conference, preparations began. This work was divided up into the following eight project phases:

- (1) Fleshing out the idea of the Virtual World Tour and coordinating the selection of topics
- (2) Choice of webcast/videocast provider
- (3) Acquisition of 12 international partners
- (4) Definition of roles and responsibilities
- (5) Clarification of livestream formats with partners
- (6) Technical checks with all partners
- (7) Advertising for the Virtual World Tour
- (8) Moderation of the Virtual World Tour and its integration within the physical conference

All in all, it took around six months to organize the Virtual World Tour, starting with the hiring of the service provider to actual realization. The following lists the key tasks and main challenges at each phase of the project.

Phase 1: Fleshing out the idea of a Virtual World Tour and coordinating the selection of topics

At the early conception stage, one of the first ideas was to use Google Hangouts in order to realize the Virtual World Tour. In the course of further elaboration of the format, however, it quickly became evident that without full service support such a tool would be unfit for the purpose of producing a professional webcast in a polished TV format with high-quality picture and sound, and featuring an online moderator to provide continuity between the individual sessions. In addition to the identification and acquisition of international partners for the Virtual World Tour (phase 3), it therefore proved necessary to find a suitable service provider. Meanwhile, work continued to narrow down suitable topics on the future of work with which to supplement the program of the physical conference.

¹ Accessed July 29, 2019, www.it4greenevents.de.

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Phase 2: Choice of webcast/videocast provider

In the course of the draft concept stage, the following requirements were identified with regard to a professional webcast/videocast provider:

- Technical facilities for the production and broadcast of a livestream at each of the 12 partners around the world over a period of 24 hours, including own broadcasting studio
- Experience in the realization of virtual events of a complex, international character; provision of consulting on content and technical requirements
- Development of a production, moderation and communication schedule as well as a webcast concept
- Production of a teaser for advance promotion of the event
- Inclusion of a concept for viewer interaction
- Technical supervision in the Haus der Wirtschaft and, if necessary, at individual partners, both at the start and finish of the Virtual World Tour
- Production of a video wrap-up for the presentation of highlights to the full conference in the Haus der Wirtschaft directly after completion of the Virtual World Tour
- Guaranteed compliance with data-protection regulations
- Ensuring a smooth livestream broadcast through the provision of back-up solutions in the event of technical problems
- Option of creating a virtual forum for further exchange between the project partners
- Reference projects with BMBF

Phase 3: Acquisition of 12 international partners

On the basis of Fraunhofer IAO's international network of contacts – supplemented with online research – a number of respected research institutes with projects in relevant fields were identified and invited to take part in the Virtual World Tour. Bilateral contact was established with those that expressed an interest in taking part. This was followed by consultation on potential topics and livestream formats.

Here, attention focused on which of the institutes had research interests that best suited the topics selected for the forthcoming conference in Stuttgart. Organizational and logistical considerations prevented chosen research partners from being invited to attend the physical conference. As such, the Virtual World Tour not only broadened the range of topics on offer at the physical conference but also made them available to a wider international audience.

Following the selection of the livestream partners, talks were held to specify relevant research topics and to determine the requirements and precise details of the webcast. In parallel, the partners were classified according to time zone, so that a running order could be drawn up with livestreams to fill all 12 slots throughout the 24-hour period.

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The following table provides an overview of the 12 partners and their respective time zones.

	Stuttgart (CET)	Institution	Country	Local time	Time difference
1	12:00–14:00	University of St. Gallen	Switzerland	12:00–14:00	+/-0
2	14:00–16:00	Bilbao Innovation Factory (BBF)	Spain	14:00–16:00	+/-0
3	16:00–18:00	EUROFOUND, Dublin	Ireland	15:00–17:00	-1h
4	18:00–20:00	Birkbeck Knowledge Lab, London	UK	17:00–19:00	-1h
5	20:00–22:00	Boston College, Carroll School of Management	USA	14:00–16:00	-6h
6	22:00–00:00	Federal University of Paraná, Curitiba	Brazil	19:00–21:00	-3h
7	00:00–02:00	Pew Research Center, Washington DC	USA	18:00–20:00	-6h
8	02:00–04:00	IBM Research – Almaden, San Jose	USA	17:00–19:00	-9h
9	04:00–06:00	Queensland University of Technology, Brisbane	Australia	13:00–15:00	+9h
10	06:00–08:00	Konrad-Adenauer-Stiftung, Japan Office; Waseda University and Panasonic, Tokyo	Japan	14:00–16:00	+8h
11	08:00–10:00	Institute for Information Industry, Taipei	Taiwan	15:00–17:00	+7h
12	10:00–12:00	Fraunhofer IAO, Future Work Lab, Stuttgart	Germany	10:00–12:00	+/-0

Table 1: The Virtual World Tour partners and their respective time zones

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The following table provides an overview of the topics covered in the 12 sessions:

Tuesday, December 4, 2018, 12:00–00:00 CET			
Time (CET)	12:00–14:00	14:00–16:00	16:00–18:00
Country	Switzerland	Spain	Ireland
Institution	University of St. Gallen	Bilbao Innovation Factory	Eurofound, Dublin
Thematic focus	Coworking: Current research and practice in work(space) and learning design	Strategic talent management in the digital era	The future of manufacturing and game-changing technologies, and new forms of employment and platform work
Time (CET)	18:00–20:00	20:00–22:00	22:00–00:00
Country	United Kingdom	USA	Brazil
Institution	Birkbeck Knowledge Lab, London	Boston College, Carroll School of Management	Federal University of Paraná, Curitiba
Thematic focus	Artificial Intelligence in education and work	Managing work, life and learning in 2030: Impacts of a digital workforce, freelance economy and fractal education	Smart farming and agro 4.0
Wednesday, December 5, 2018, 00:00–12:00 CEST			
Time (CET)	00:00–02:00	02:00–04:00	04:00–06:00
Country	USA	USA	Australia
Institution	Pew Research Center, Washington DC	IBM Research – Almaden, San Jose	Queensland University of Technology, Brisbane
Thematic focus	The future of work in the United States	The future of work in the area of Artificial Intelligence	Thriving in the digital economy
Time (CET)	06:00–08:00	08:00–10:00	10:00–12:00
Country	Japan	Taiwan	Germany
Institution	Konrad-Adenauer-Stiftung, Japan Office; Waseda University and Panasonic	Institute for Information Industry, Taipei	Fraunhofer IAO, Future Work Lab, Stuttgart
Thematic focus	Demographic challenges and solutions regarding nursing and care for the elderly in Japan	Collaboration between the two brains: Digital transformation of new work-force models in Taiwan	Industrie 4.0 work design with the Future Work Lab

Table 2: Topics of the 12 sessions

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Phase 4: Definition of roles and responsibilities

One of the key challenges facing the project was how to manage communication and coordination with not only the many partners at Fraunhofer but also the various people who were to be responsible for livestream content and technical issues at each of the 12 partners of the Virtual World Tour. Following the selection of digital events specialist meetyoo, as the service provider, a kickoff meeting was held in order to assign responsibilities among the people involved in the project at Fraunhofer IAO, the meetyoo company and meetyoo's technical services provider.

Fraunhofer IAO

- Coordination between meetyoo, meetyoo's technical services provider and Virtual World Tour partners
- Communication with the 12 partner institutes on organizational and content-related matters; guidance with format design for the 12 livestream sessions
- Design of the interface between the physical conference in Stuttgart and the Virtual World Tour, in collaboration with the technical services provider
- Documentation for, and coordination of, the video wrap-up of the Virtual World Tour, in collaboration with meetyoo's technical services provider

meetyoo GmbH (provider for virtual events) and its technical services provider

- Conceptual design of livestream formats and modes of interaction, including verification of technical feasibility and guarantee of professional webcasting standards with, for example, high picture and sound quality
- Technical checks in direct consultation with technicians at the Virtual World Tour partners
- Provision of a webcast studio, including professional and appropriately qualified moderation
- PR work in collaboration with external agencies and the Fraunhofer IAO press department

Phase 5: Definition of the formats with partners

The idea of the Virtual World Tour was uncharted territory for all concerned. In the course of establishing contact with the international partners, the chief task was to ensure that the formats chosen for individual sessions were compatible with the technical infrastructure and the thematic structure. Partners were encouraged to incorporate not only classic forms of presentation, along with existing film material and guided lab tours, but also interactive elements in their two-hour sessions. Recommended formats here included round tables, group discussions and interviews with experts. Partners were given a free hand to design their own livestream format, provided it was compatible with their technical infrastructure and the thematic structure.

From the very beginning, the Virtual World Tour was conceived as a one-way webcast of livestream sessions – i. e., without any systematic interaction with a theoretically unlimited number of virtual participants. Any interaction with virtual participants took place merely in a limited form via the partners' own social-media channels. This, however, was not centrally coordinated or incorporated in any immediate way in the individual livestream sessions.

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Phase 6: Technical checks with all partners

One of the most difficult tasks of the entire project lay with the technical services provider. This was to verify with the 12 partners that they each possessed the appropriate technical infrastructure along with the requisite know-how to record and broadcast a livestream. This task was performed across eight different time zones and included last-minute technical checks in the immediate run-up to going live. Overall, the checks covered not only a general assessment of the technical facilities on the ground but also specific verification of the following aspects:

- **Cameras:** need for high-quality rather than standard webcams
- **Microphones:** recommended use of clip-on or headset microphones and avoidance of boundary microphones
- **Graphic sources:** need for a computer/laptop to display – in addition to the camera picture – graphic content such as PowerPoint presentations on a separate display.
- **Location:** recommended use of facilities such as labs, development centers, workshops, forums and auditoriums; partners were also encouraged to decorate such locations with posters, banners, screens and prototypes, and to switch locations during the live session

In the event that a partner's technical infrastructure was deemed to be potentially unreliable, there was also the option of using a prerecording rather than a live transmission. In all, this option was taken by 3 of the 12 partners.

In order to enable a limited form of interaction with virtual participants, partners were each encouraged to set up a dedicated email address, where incoming questions could be filtered by an editor and, where appropriate, introduced into the live discussion.

Phase 7: Advertising for the Virtual World Tour

A variety of advertising was used to publicize the Virtual World Tour as an innovative digital add-on to the Future of Work Conference in Stuttgart. This included not only standard Fraunhofer IAO channels (newsletter, website, social media) but also a teaser to present the concept and each of the partners involved. A dedicated login page with free registration was created to provide access to the livestream. In total, 500 virtual participants from 38 countries registered. Generally speaking, the number of virtual participants is one of the chief criteria by which the success of a virtual event is measured. With the given personnel capacities, it was not possible to explore the potential of a targeted advertising to increase the number of registrations for the Virtual World Tour.

Phase 8: Presentation of the Virtual World Tour and its integration within the physical conference

The driving idea behind the Virtual World Tour was to broaden the reach of the physical conference in Stuttgart through the addition of a virtual element that would facilitate the inclusion of international research perspectives on the future of work. A number of key factors informed the design of the interfaces – or “points of coalescence” – between the livestream sessions of the Virtual World Tour and the physical conference in Stuttgart:

- Selection and briefing of a professional online moderator
- Drawing up a precise schedule for the moderation online and at the physical conference in Stuttgart, including coordination between the online moderator and the conference moderator
- Explanation of the concept of the Virtual World Tour to participants of the physical conference
- Erection of screens to show the livestreams at the conference in Stuttgart
- Production of a video wrap-up in parallel to the webcast in order to provide a compact summary of the virtual tour

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Figure 4: Moderation of the
Virtual World Tour at the
conference in Stuttgart

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The following graphic provides a summary of the challenges involved in organizing the Virtual World Tour:

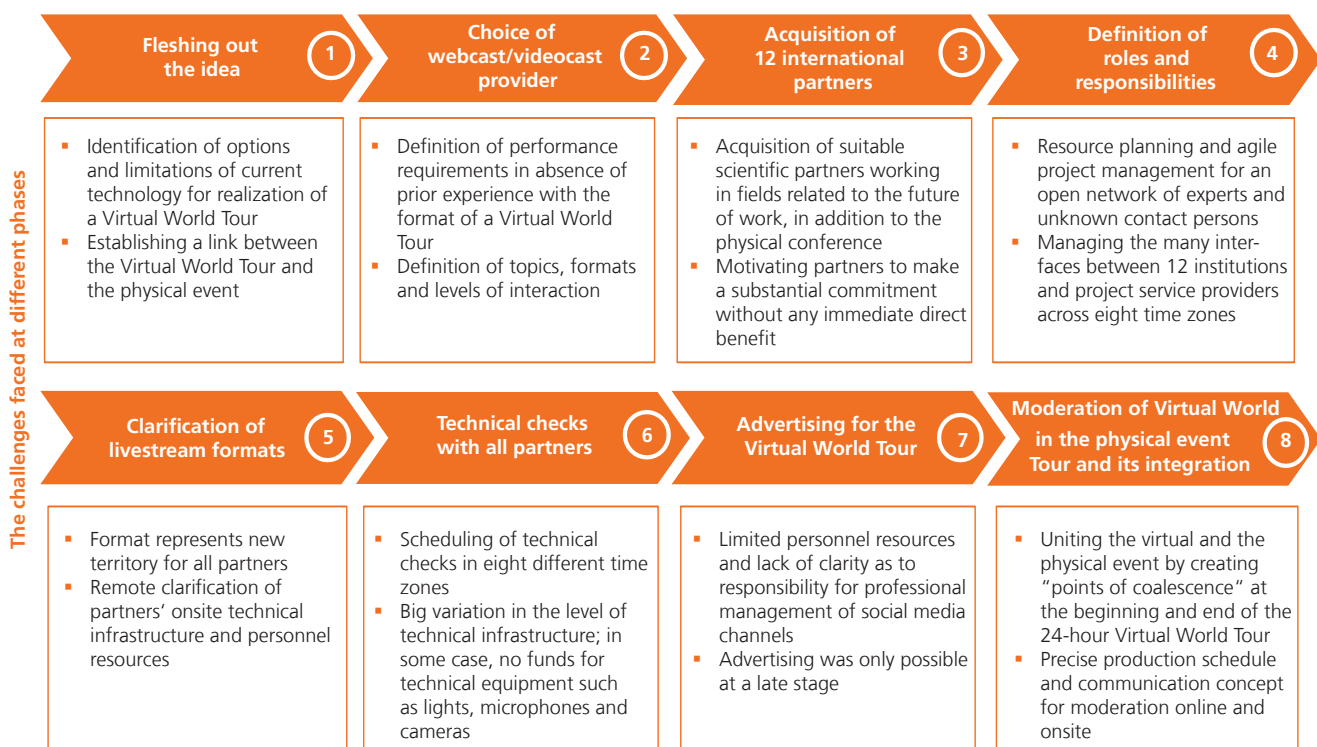


Figure 5: Challenges faced at different phases during organization of the Virtual World Tour (author's own graphic)

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2.2 Example 2: Hybrid elements of the International Scientific Symposium on the Future of Work (July 2–3, 2019)

The International Scientific Symposium on the Future of Work had a number of aims. Firstly, it sought to acknowledge the efforts and achievements of the partner institutes that took part in the Virtual World Tour, from December 4–5, 2018. Secondly, it served to expand the international research network in this field, map out common interests and identify potential for joint research activities. All the Virtual World Tour partners were invited to attend, along with other institutes working in similar fields of research as Fraunhofer IAO. In total, 37 people took part. It was an opportunity not only to discuss current research but also to meet up in person and share ideas in a more relaxed atmosphere. The latter was facilitated by group dinners and visits to local attractions (Esslingen,

a producer of sparkling wine) and innovative companies in the region (Stuttgart Airport Ground Service GmbH, in Echterdingen; and Festo's Scharnhausen Technology Plant).

The symposium format

Although organized as a classic face-to-face event, the symposium also included a number of hybrid elements (cf. fig. 6):

- Livestream of keynotes
- Recording of interviews
- Use of a Mentimeter feedback tool
- Website postings of keynote and interview recordings

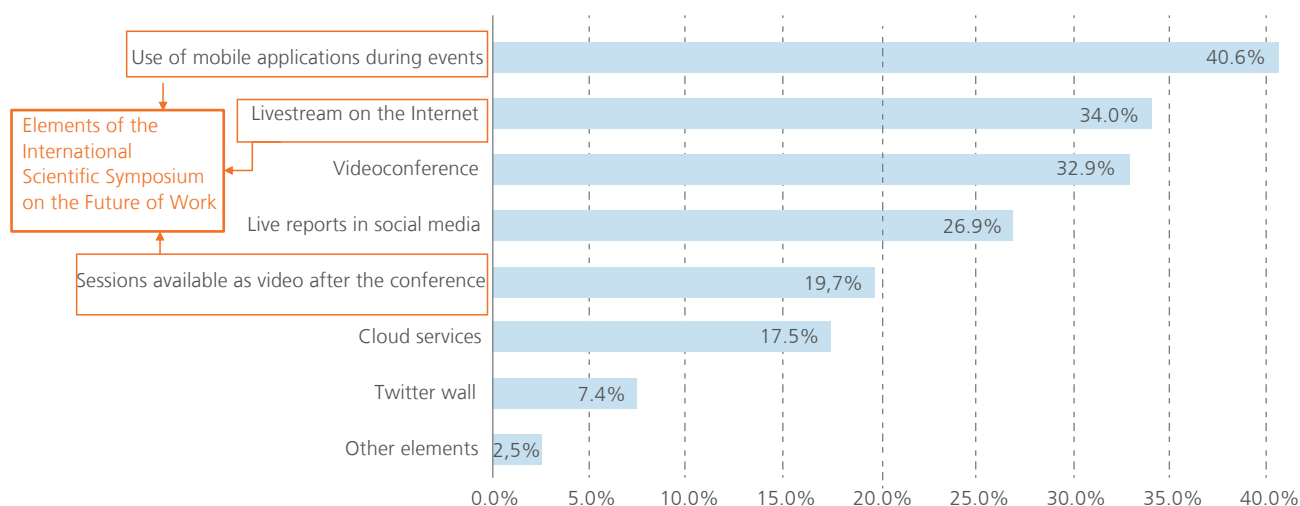


Figure 6: Survey of which hybrid elements were used at events organized
(author's own graphic based on *Europäisches Institut für Tagungswirtschaft* 2019, p. 26)

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Symposium keynotes

All of the symposium presentations and keynotes were recorded and broadcast as livestreams. In addition, a summary of the livestreams was produced and made available, along with all the symposium presentations as well as five short interviews with experts, on the [website of the Conference "Future of Work"](#)².

Topics addressed at workshops and the World Café

The following topics were discussed at workshops and the World Café; three key questions framed the debate:

	Question 1: What are the challenges for business?	Question 2: What are the challenges for research and development?	Question 3: What are characteristic national approaches and initiatives?
Topic 1: Artificial Intelligence and work			
Topic 2: Training and learning		Structure for an international knowledge map as a platform for processing the results of the 2018 Future of Work Conference and the 2019 International Scientific Symposium on the Future of Work.	
Topic 3: Human-machine collaboration			
Topic 4: Impact of digitalization on transformation and culture			

Table 3: Summary of topics and key questions discussed at workshops

The four topics correspond to the core areas of research covered by current projects at Fraunhofer IAO. One of the key aims of this meeting of international experts was to facilitate a discussion of the differences and similarities between characteristic national research topics and approaches employed in investigations into the future of work.

² <https://www.arbeitsforschungstagung2018.de/index.php/international-symposium>

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Use of interactive presentation software

At the conclusion of the symposium, interactive presentation software featuring an online feedback tool was employed to record participants' response to three selected questions and to then compare their answers to the results of a previously conducted survey³. Using a Mentimeter software tool, participants were able to answer questions via smartphone. Their answers were then being immediately displayed onscreen by the presentation software.

In response to three questions, symposium participants were asked to provide an assessment on a scale of one to five (1 = very small; 5 = very high). A comparison between the results of a written survey of 305 companies and the answers provided by symposium participants yielded the following differences:

Question 1 (cf. fig. 7): How much of an impact will Artificial Intelligence (AI) have on the division of labor between humans and machines over the next five years?

- In the case of all sub-questions in this category, the assessment of symposium participants (15 people) lay 0.3–0.5 points lower than in the written survey. In the eyes of symposium participants, therefore, the impact of AI on the division of labor between humans and machines over the next five years will be slightly lower than that suggested by the results of the survey.

Question 2: How high will the demand for specialists be at your company over the next five years?

- In the assessment of symposium participants, the demand for experts capable of explaining and providing training in the use of AI systems will be 0.4 points higher than that recorded in the written survey. Symposium participants assessed the demand for experts able to proficiently use AI systems at 0.4 points lower, and the demand for experts in the ethics of AI systems at 0.4 points higher, than in the written survey.

Question 3: How much of an impact will Artificial Intelligence have on personnel management and leadership in your company over the next five years?

- The assessment of symposium participants largely corresponded to the results from the written survey, with a variance of 0.1–0.2 points. The only exception here was in their assessment of the impact that AI will have on "cooperation with and among employees." Here, the impact was assessed at 2.7 points – 0.4 points higher than in the written survey.

The complete survey and results are presented in the study *Künstliche Intelligenz in der Unternehmenspraxis*, published by Fraunhofer IAO (Baur et al., forthcoming).

³ Bauer et al. (eds.), *Künstliche Intelligenz in der Unternehmenspraxis* (Stuttgart: Fraunhofer, forthcoming).

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What impact will Artificial Intelligence (AI) have on the division of labor between humans and machines over the next five years?

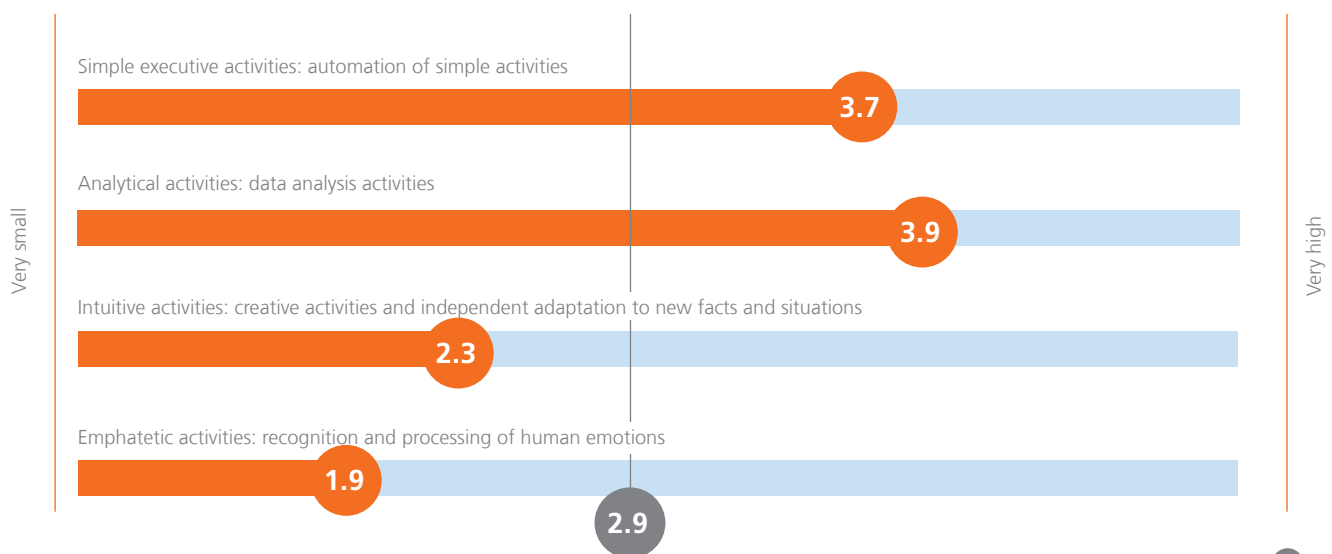


Figure 7: Symposium participants' response to Question 1 via the Mentimeter feedback software tool (author's own graphic)

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3 Outlook

According to the latest “Meeting- & EventBarometer” from May 2019, the figures indicate an increasing heterogeneity of event formats (cf. EITW, 2019)⁴. This diversification also includes an increasing use of digital elements, new marketing tools and greater internationalization. On average, event organizers put the proportion of hybrid events at 10.4 percent. This marks an increase on 2017 of 2.3 percentage points. In 2016, an earlier “Meeting- & EventBarometer” study surveyed future trends in this area (cf. fig. 8). All of the companies surveyed thought it was very likely (60 percent) or likely (40 percent) that real events would remain a constant feature despite the growth in digitalization. All in all, 95 percent thought it was very likely (35 percent) or likely (60 percent) that real events would be supplemented by virtual elements. And 75 percent of the companies surveyed said that they would like to participate virtually in an event should it prove impossible to attend in person.

The experience gained from the Virtual World Tour should provide inspiration for new experiments, not least those investigating combinations of analog and digital forms of interaction in “many-to-many” communication scenarios across institutions spread around the globe. This should also include a consideration of formats that incorporate a direct dialog with an open online community.

In the words of an innovation manager from our collaborative partner meetyoo⁶, the future will offer “an even better digitalization of physical experience. However, the problem is that whenever you digitalize a physical event, you’re always competing with a physical experience. One consequence of this might be that we need to completely rethink virtual meetings, so that they no longer remind us of a physical event.”

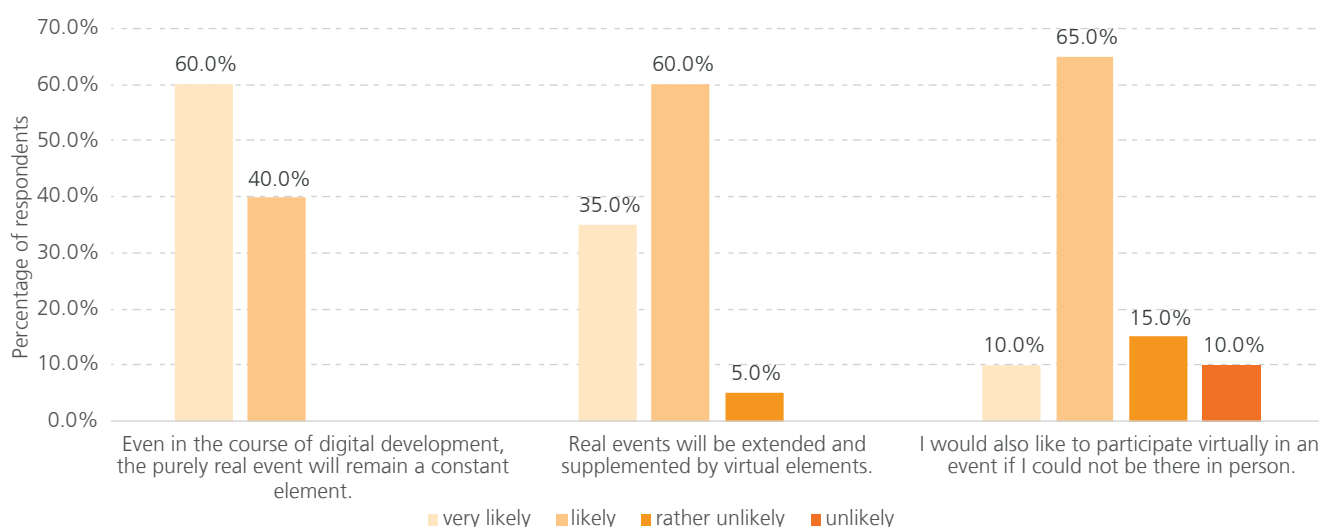


Figure 8: Survey of event organizers worldwide on their attitudes to virtual events, 2016 (source: Statista)⁵

4 https://www.gcb.de/fileadmin/GCB/Discover_Germany/MEBA/190516_MEBA_ManagementInfo_2019.pdf (accessed August 26, 2019).

5 <https://de.statista.com/statistik/daten/studie/649738/umfrage/umfrage-unter-veranstaltern-weltweit-zu-virtuellen-veranstaltungen/>.

6 Interview with Tim Gutsche and Michael Schirmer from meetyoo GmbH, July 24, 2019.

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Ever since the emergence of webconferencing tools, developers have been investigating the technology required to facilitate communication between participants of meetings in virtual space and those of meetings in physical space, and looking at ways of making this dialog user-friendly and interactionally beneficial. Research from a number of years ago already showed that participants of virtual meetings often communicate more actively than in face-to-face meetings, not least when the discussion is moderated in a professional manner (Allmendinger and Hamann, 2008). A key research question remains how best to combine online and face-to-face meetings with regard to the appropriate levels of virtualization and interaction. The emergence of new technology has now placed this question in a new dimension: “The use of collaborative formats during the actual event, such as “blog parades” or virtual round tables, or social-media platforms such as Twitter, turns participants into active agents and propagators. The result is that physical and temporal boundaries dissolve, giving way to open, interactive and virtually collaborative 4.0 events” (Knoll, 2017, p. 4).

Despite this dissolution of boundaries and the acceleration of communication on virtual levels, we must also remember that there are neuronal and psychological limitations to the human capacity to absorb and process information.

In other words, there is now a broad field for future experimentation into new types of event and ways of connecting international research communities such as the Future of Work research network. This could well involve the creation of online working groups in order to further explore the topics examined in the symposium. At the European Conference on the Future of Work, held in October 2020 in Bonn, a collaborative virtual space or holodeck – “a room that provides holographic simulations for recreation, training etc.”⁷ – might offer one way of providing an attractive extension to the physical conference facilities.

⁷ <https://www.definitions.net/definition/holodeck>.

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Biography

Karin Hamann joined the Fraunhofer Institute for Industrial Engineering IAO, Service and Human Resources Management department, in Stuttgart in 2001. She received her MBA in Psychology in 1999 from the Eberhard Karls Universität in Tübingen. From 2008 to 2011, she worked for the European Medicines Agency in London as a national expert on virtual communication and E-Learning. Her work focuses on designing learning environments based on digital technologies, accompanying the introduction of new communication concepts and supporting the design of knowledge-sharing in international networks. She is currently working amongst others on a research project about internationalisation of vocational training and education with one focus on China.

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