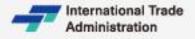
# **Expo-Tech**

2025

Guidelines for Application





# 目錄

Introduction	01
Overview of Service Plans	02
List of Service Plans	03
Diagram of Implementation for These Guidelines	04
Description of Contents for Each Page of Service Plans	06
Explanation of Each Service Plan	07



The International Trade Administration (TITA) of the Ministry of Economic Affairs (MOEA) promotes the "Expo-Tech Digital Exhibition Pilot Program," which applies innovative technologies like AI, IoT, and advanced displays to develop multiple service plans for digital exhibitions. These plans are designed to address the needs for organizing exhibitions, as well as help Taiwanese exhibition organizers improve operational efficiency, while enhancing the value of exhibitions, and thus achieve the transformation goals of both digitalization and sustainability.

These guidelines provide 13 service plans that target different aspects of exhibition preparation, operation support, reception services, and in-exhibition services, as well as illustrate the features, benefits, application scenarios, and related software and hardware costs for each service plan. They also serve as a reference for Taiwanese exhibition venues, organizers, and exhibitors in organizing or participating in exhibitions, while maximizing the preparation efficacy and value of such events.

# Overview of Service Plans

These guidelines present 20 digital exhibition service plans that cover three main processes for the management of exhibitions: event preparation and operation support, reception services, and exhibition visitor services. Each main process is further divided into one or more detailed sub-processes based on the objectives of the plans.

	Preparation and Operation Support	Operation Digitalization	Use platform systems and digital tools to provide the necessary event preparation and support services to exhibition organizers, enabling them to efficiently plan and prepare exhibitions while conserving labor.
	Reception Services	Reception and Guidance	Use AI, IoT, and other technologies to assist organizers in providing necessary reception or guidance services to exhibition visitors.
		Remote Interaction	Use AI, IoT, automation, and other technologies to deliver a realistic exhibition experience to remote online visitors through the Internet.
	Exhibition Visitor Services	Visitor Trajectory Tracking	Use AI, IoT, and other technologies to automatically and very accurately detect and count the flow of people entering and exiting exhibition halls, venues, or booths.
		Physical and Virtual Object Interaction	Use AI, IoT, advanced display techniques, and other technologies that allow visitors to experience immersive interactions with exhibits and manufacturing production lines through digital tools.
		Conversation and Communication Assistance	Optimize the quality of communication between the exhibitors and visitors at the exhibition hall by using AI, mobile devices, and display devices.
		Green Exhibition Applications	Use IoT, energy conservation display devices, and other technologies rather than single-use advertising materials or high-power display devices to present more enriched information at exhibition events.

# List of Service Plans for These Guidelines

Dranavation	Operation Digitalization	O1 Single Registration Entrance for Exhibitors and Visitors
Preparation and		02 Buyer Trajectory Analysis
Operation Support		03 Online Survey
Support		04 Al-Generated Product Marketing Images and Text
	Reception and Guidance	O5 Digital Exhibition Floor Plans and Guidance
Reception Services		Of Accurate Venue Positioning and Navigation
		07 Text and Conversation-Based Multilingual Customer Service
	Remote Interaction	08 Web-VR Virtual Exhibition
		09 720-Degree Panoramic Online Booths
		10 Exhibition Avatar Robots
Exhibition Visitor		Holographic Interaction for Remote Visitors
	Visitor Trajectory Tracking	12 3D AI Entrance/Exit Visitor Calculation
		Autostereoscopic 3D Interactive Experience
Services	Physical/Virtual	14 XR Extended Reality for Factory Areas
	Object Interaction	15 3D Holographic Object Projection
		16 Exhibit Multi-Personnel Interactive Experience
		17 Al-Generated Exhibit 3D Model
	Conversation Exchange Assistance	18 Interactive Conversation Simultaneous Translation Assistance
	Green Exhibition Applications	19 Electronic Paper Digital Posters
		20 Contactless Data Exchange

#### **Preparation and Operation Support**

- Operation Digitalization -01

**Single Registration Entrance for Exhibitors** and Visitors

#### **Preparation and Operation Support**

- Operation Digitalization -02 **Buyer Trajectory Analysis** 

#### **Preparation and Operation Support**

- Operation Digitalization -03 **Online Survey** 

#### **Preparation and Operation Support**

- Operation Digitalization -**AI-Generated Product Marketing** 04**Images and Text** 

#### Reception services

- Operation Digitalization -**Digital Exhibition Floor Plans** 05 and Guidance

#### **Reception services**

- Operation Digitalization -**Accurate Venue Positioning and** 06 **Navigation** 

#### **Reception services**

- Operation Digitalization -**Text and Conversation-Based** 07 **Multilingual Customer Service** 

#### **Exhibition Visitor Services**

- Reception and Guidance -08 **Web-VR Virtual Exhibition** 

#### **Exhibition Visitor Services**

- Reception and Guidance -09 **720-Degree Panoramic Online Booths** 

#### **Exhibition Visitor Services**

- Reception and Guidance -10 **Exhibition Avatar Robots** 

#### **Exhibition Visitor Services**

- Reception and Guidance -11 **Holographic Interaction** for Remote Participants

#### **Exhibition Visitor Services**

- Visitor Trajectory Tracking -12

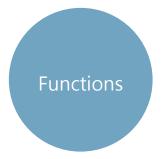
**3D AI Entrance/Exit Visitor Counting** 



## **Exhibition Visitor Services Exhibition Visitor Services** - Physical/Virtual Object Interaction -- Physical/Virtual Object Interaction -13 **Autostereoscopic 3D Interactive** 15 **3D Holographic Object Projection Experiences in the Exhibition Hall Exhibition Visitor Services Exhibition Visitor Services** - Physical/Virtual Object Interaction -- Physical/Virtual Object Interaction -14 16 **Exhibit Multi-Personnel XR Extended Reality for Factory Areas Interactive Experience Exhibition Visitor Services** - Physical/Virtual Object Interaction -17 **AI-Generated Exhibit 3D Model** 04 **Exhibition Visitor Services** - Conversation Exchange Assistance -18 **Interactive Conversation Simultaneous Translation Assistance** 08 **•••** 07 **Exhibition Visitor Services** - Green Exhibition Applications -19 **Electronic Paper Digital Posters Exhibition Visitor Services** - Green Exhibition Applications -20 **Contactless Data Exchange**

# Description of Contents for Each Page of Service Plans

To help exhibition organizers better understand the digital exhibition service plans developed by the EXPO-TECH program, these guidelines suggest the types of exhibition organizers suitable for implementing the 20 service plans outlined here. These guidelines also describe the functions, benefits, user scenarios, required software and hardware, and cost considerations of each service plan.



Describes the main functional features and characteristics of each service plan.



Describes the potential benefits each plan can bring to exhibition organizers.



The guidelines describe the scenarios and processes for different roles - exhibition venues, organizers, exhibitors, and visitors - to implement the target plan at different stages of an exhibition: pre-event, during the event, and post-event. This enables the organizers to understand the operations, information provided, and resources required to implement the plan before introducing it.



Describes the software and hardware needed for each service plan.



Describes the potential benefits each solution can bring to exhibition organizers.

## Single Registration Entrance for Exhibitors/Visitors

Venue

Organizer

Exhibitor

Provides a system for exhibitors and visitors to register for the exhibition, allowing venues, organizers, and exhibitors to acquire necessary visitor data.

#### **Description of Functions**

- · Organizers can use mobile and desktop interfaces on the cloud-based system to set up registration procedures and surveys for collection and analysis of behavioral data about exhibitors and visitors.
- · Exhibitors can edit their exhibition information on the cloud system. Visitors can register online to obtain a QR code that serves as a digital business card with personal information and a check-in credential for quick access to exhibition venues and forums.
- Exhibitors and visitors can scan each other's QR codes to exchange digital information.

https://reurl.cc/ZeVKjA

#### **Description of Benefits**

- ·Once registered, visitors can sign up for entry and exhibition activities without re-entering registration information and exchange digital business cards with exhibitors.
- Organizers(venueadministrators) and exhibitors can use backend data to monitor visitor behavior and exhibition performance to optimize marketing strategies.

## Implementation Guidelines



#### Mark Venue







- This system can be introduced by venues and made available for organizer rental.
- · Exhibition details can be set, including event dates, registration period, required registration information, activity sessions, and check-in control points.
- The numbers and serial numbers of exhibition booths can be set, exhibitor accounts can be approved, and editing permissions can be granted.

Access the exhibitor-specific page in the system to upload and edit exhibition information.



Log in to the designated page to upload business information for exchanges.

Open the digital business card scanning interface to read the QR codes of visitors arriving at booths.

Use the QR code at check-in control points (exhibition and activity entrances) for quick check-in.

Use the business card scanning function on mobile phones to scan exhibitor QR codes to retrieve business cards and downloadable information.

- · At each check-in control point, visitor QR codes can be scanned to authorize entry into the exhibition, activities, etc.
- System-generated reports can be used to monitor visitor counts, visitor backgrounds, and preferences.

Entry and exit data collected at control points can be analyzed, including visitor counts, booth preferences, and exhibition and activity attendance rates.

Analyze and organize digital business card information for booth visitors and event registration and attendance data.

Query or download information booths that visitors exchange during a specific exhibition

## 🔅 Required Software/Hardware

- Mobile devices with a camera for QR code scanning, including phones or tablets.
- (Optional) Printer for exhibitor/visitor badges.

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#### Costs

- · Rental and usage fees for cloud systems
- Rental or purchase costs for mobile tablets at check-in
- · Rental or purchase costs for exhibitor/visitor badge printers

## **Buyer Trajectory Analysis**

Venue

Organizer

Exhibitor

Provides exhibitors with customized online and digital services in various standard formats and services

#### **Description of Functions**

- The buyer trajectory analysis function requires the integration of multiple digital tools, including basic and advanced functions:
  - Standard web page for exhibitor information, online product catalog, visitor (buyer/customer) surveys, e-newsletter formats, and sending systems.
  - -Generate visitor preference analysis charts, keyword advertising suggestions, and target lists for e-newsletter distribution based on visitor behavior and survey results.

https://reurl.cc/mMMV59



#### **Description of Benefits**

- exhibitors' online marketing needs, offer standard web pages for quick launch to reduce preparation costs.
- Based on collected exhibition visitor behavior information, provide potential client lists and keyword ad suggestions to reduce ad costs and improve ad effectiveness.

## Implementation Guidelines



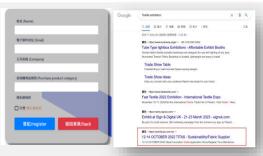
Venue







- Offer exhibitors with standard online surveys and digital product catalogs to register and fill in information.
- Collect exhibitor information and business keywords as a basis for online advertising.
- Integrate survey results and advertising keywords to distribute online ads, digital catalogs, and e-newsletters to visitors (potential clients)



Create QR codes for exhibition booth or product introduction, which exhibitors can print as stickers or displays to collect data on visitor frequency and preferences for exhibits.





Complete exhibition surveys to provide preference information and opinions about the exhibition and receive exhibitor and product information (e-newsletters and keyword ads) tailored to personal interests.

Scan QR codes with mobile phones to get more information on exhibitors or products.

Based on digital catalog downloads, ad placements, survey results, and e-newsletter distribution data, establish visitor preference data and behavioral analysis charts, marking products or services of interest to visitors for organizer and exhibitor reference.



#### Required Software/Hardware

- · Create product images and text for survey web pages and online product catalogs.
- For product online catalog exposure, post the web link of the product online catalog in the e-newsletter and send it
- Use QR code stickers and printers in the exhibition.

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#### © Costs

- as survey web page service, e-newsletter integration, product catalog service, data integration/preference analysis service).
- · Digital ad placement fees.

# Online Survey

Venue

Organizer

Exhibitor

A one-stop bilingual online survey is implemented that can be filled out on smart phones and at kiosks.

#### **Description of Functions**

- · Visitors can launch the online survey system using smartphones to scan the QR code. The survey can be filled out anonymously and is linked to the registration system, increasing the value of the analysis of questionnaire data. Visitors can also fill out the survey on the kiosk interface at the site.
- The survey can be filled out concurrently in Chinese and a second foreign language (i.e., English) to provide a better writing experience for visitors.
- ·The survey can be quickly recovered through an online platform and can control the profile of data through instant charts.

https://reurl.cc/xNVdzE 🥵



#### **Description of Benefits**

- Visitors can use this solution via smartphones or kiosks to reduce the quantity of printed survey copies.
- Online surveys reduce for recycling need manpower in sorting transcription while effectively improving the quantity of returned data.

## Implementation Guidelines







- Design survey questions and establish a survey on the exhibition
- To use kiosks, design the layout of a kiosk at the exhibition hall, venue, and booths, and ensure the availability, safety, and suitability of completing environment.
- Kiosks can be linked to the ID scanner to establish a registered







- Prepare the QR code for launching the survey and place the signboard at the proper location of the venue. For example, using e-paper or posters will allow visitors to quickly find and scan the QR code accordingly.
- Place the kiosk at the venue for visitors to fill out the survey.



platform.







Scan the QR code and launch the online survey for completion.

Scan the QR code on the ID badge with the kiosk scanner to fill out the survey on the kiosk screen.

Download and read the data about survey responses from the system backend. Control the statistics about responses and answers given to all questions by the visitors through instant charts.

#### Required Software/Hardware

- Survey platform system lease: The survey design must be launched 1 week before the exhibition and shall be open for at least half a month during and after the exhibition period, so that curators may continue to review the data.
- (Optional)kiosk: It is recommended to adopt 16" vertical touch screen. Exhibitors may prepare their own by specification or lease from the exhibition hall. Use of on-site power and network cable required.

#### 

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#### © Costs

- Survey system lease, user fees
- Kiosk lease/purchase, relocation fees
- Power, network cable extension and user fees

During event

## AI-Generated Product Marketing Image and Text

Venue

Organizer

Exhibitor

Enter keywords and images of products to generate digital marketing images and text of products, which helps draw more attention and exposure of products at the exhibition.

#### **Description of Functions**

- · Curators and exhibitors can use LLM, Text2Img and other AI technology to quickly process massive marketing images and text data, while generating high-quality text and image content, with automatic translation into multiple languages in order to meet the needs of visitors who speak different languages.
- ·The system basically supports 3 languages, namely Chinese, English and Japanese, which generates written copies in 1 minute and the written copies of products or web pages with rich text and image content under 3 minutes.
- The images can interface with AI anchor for viewers to grasp the features of the products better.

https://reurl.cc/VYbyp6

#### **Description of Benefits**

- · Curators and exhibitors can reduce the time and manpower to prepare marketing materials, thereby boosting the exhibition's effectiveness.
- · Work with machine translation to quickly generate marketing materials in different languages, thereby expanding business potential for overseas markets.

## Implementation Guidelines

## M Organizer



#### **688** Exhibitor



市場營銷經理

專葉守護您的行程!全台最大道路救援服務,讓您自幫旅 不論是商業幸ټ遊是個人車主, 我們都能為您提供優質保 X汉,我們隨時特命,為您解決燃腦之急。不僅價值超高,

- Launch digital marketing image and text generation platform based on the roles (curator or exhibitor). Enter keywords and images of products, and press the generation key to generate digital marketing text and images.
- The users can embed the generated marketing images and text on documents of the exhibition website, online exhibition, posters at the exhibition hall, and product DM.
- Choose a foreign language for digital marketing materials for overseas buyers to read.

Turn the generated digital image and text into posters or play them via electronic signboard. •









Watch the marketing posters via website or on site to capture more product information.

Embed GA tracking ID in online marketing materials (e.g. enewsletter and website images) to profile the interests and trends in products for online visitors.

Continue to browse marketing posters via website or FB to capture product information.

#### 🤁 Required Software/Hardware

- Leasing of digital marketing images and text
- generating platform: It is recommended to launch the platform 1 month before the exhibition in order to establish the digital materials to be used and configured by curators and exhibitors for the exhibition.

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產品名稱:\*

目標受眾: \*

產品特色描述:\*

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- Digital marketing image and text generating platform lease and user fees.
- · Purchase of digital marketing material display installation at the exhibition hall (e.g., electronic signboard, Tablet PC, e-paper posters), and lease fees.

# 05

# Digital Exhibition Floor Plans and Guidance

Venue

Organizer

Exhibitor

Combine with an online exhibition floor plan so visitors can look up booth locations and exhibitor information and generate guided routes.

#### **Description of Functions**

- After establishing the online exhibition map, organizers can allow visitors to use large touchscreen digital displays located at fixed points in the venue to find information, including booth numbers, locations, and descriptions. Visitors can also see recommended lists of exhibitors with similar products or services.
- Visitors can scan location QR codes throughout the venue with smart mobile devices to open a digital map and look up exhibitor information, with suggested routes from the current location to the targeted booth.

https://reurl.cc/DjjR2E

Reception Services

### **Description of Benefits**

- Visitors can utilize this plan with digital displays or smart devices, thereby reducing the usage of paper maps.
- Organizers can use the collected query data to analyze visitor preferences within the exhibition.

## Implementation Guidelines



During event

Post-event

#### Venue







Install digital touchscreens at selected points; or set up a QR code at the exhibition venue in advance for visitors to scan and locate using their smart mobile devices

- Upload the venue floor plan and set booth numbers, shapes, and sizes.
- · Collect information on exhibitors, exhibits, and booth details.
- Set the locations of touchscreens and QR code positioning points.
- Integration with the official exhibition website is also available, allowing online visitors to access the venue floor plan.

Upload exhibitor data.







Analyze searched data within the system to understand visitor preferences for the types of booths they look up and visit.

- Route Search: Within the venue, use digital touchscreens to operate the digital map and locate desired booths. After setting a destination, a suggested route map will be generated.
- Booth Search: Visitors can search for booths using phonetic alphabets, such as the Mandarin phonetic symbol for the first word of the exhibitor's Chinese name or the first alphabetic letter of its English name. In addition to specific searches, a recommended list of exhibitors offering similar products or services will also be available.

#### Required Software/Hardware

- Cloud system rental: To create the online venue map, set up exhibitor information, and collect searched data, the system should go online one month before the exhibition and be kept open for at least half a month during and after the event for visitors and organizers to access.
- ( Optional) Digital touch screens: Screens of 86 inches or larger are recommended. Touch screens may be self- provided according to specifications or rented from the venue.

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#### © Costs

- Rental and usage fees for cloud systems
- Rental, purchase, and transportation fees for digital touch-screens
- · Power and internet cable usage fees

## Accurate Venue Positioning and Navigation

Venue

Organizer

Exhibitor

The online venue floor plan and accurate positioning and navigation functions allow visitors to locate exhibitors and access dynamic navigation.

#### **Description of Functions**

- The full venue map established with UWB (Ultra-Wideband) or BLE (Bluetooth Low Energy) small base stations enables visitors to search for exhibitors within the venue and get precise navigation.
- Exhibitors can register various products and promotional information on the online map platform. When visitors enter the venue, the platform can activate relevant information based on their location.

https://reurl.cc/GjjW7Z



#### **Description of Benefits**

- This full venue map established with UWB or BLE small base stations provides accurate navigation and optimizes visitor movement routes.
- push Exhibitors can information based visitors' on locations, enhancing exhibition effectiveness and engaging potential clients.

## Implementation Guidelines



#### Venue

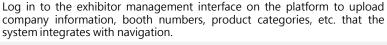






- Evaluate and determine the best locations in the venue to install base stations to maximize signal coverage. Install UWB or BLE small base stations at planned locations.
- Based on the base station coverage area, incorporate actual terrain and layout along with uploaded exhibitor information to establish the online venue map.
- Upload booth promotional information to the online venue map platform.













For temporary promotional information, exhibitors can update their information through the exhibitor interface and activate updates to on-site visitors in real time.

- Visitors can the QR code at various positioning points to open the digital venue map app.
- After identity verification, visitors can access the online venue map, activate the navigation function, and select or search for target booths to start navigation.
- During navigation, visitors can receive promotional and event information from various exhibitors as they pass each booth



Using the platform, organizers and exhibitors can analyze common visitor paths and statistics (such as main routes, visit rates for each booth, etc.) to evaluate the effectiveness of booth information and promotions that attract visitors, providing references for organizers and exhibitors to plan future marketing strategies.

#### Required Software/Hardware

- · Based on environmental conditions, install fixed or mobile UWB base stations within the venue and provide power and internet connectivity.
- Staff and visitors should carry UWB smart cards to connect with UWB base stations for connection and positioning.
- · With the online map platform, the real-time location, historical movement paths, and duration of UWB smart cards can be monitored.

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- Purchase/rental and installation costs for UWB/Bluetooth
- Purchase/rental fees for USB/Bluetooth cards
- · Management platform usage fee

## Text and Conversation-Based Multilingual Customer Service

Venue

Organizer

Exhibitor

AIGC and Al-generated combined to provide instant text or voice answering for online/offline visitors.

#### **Description of Functions**

- · Provide instant Q&A service about exhibitions, exhibitors, booth guides, or related information in text or voice format for online/offline visitors.
- · Supports at least 8 languages, namely Chinese, English, Japanese, Thai, Vietnamese, Korean, French, and Indonesian.
- Virtual customer service operates 24 hours a day, providing and recorded question/answer consistent answers content automatically.

https://reurl.cc/xNVzDN

#### **Description of Benefits**

- · Reduces the number and cost of multilingual personnel for the exhibitors allocated in exhibition or venue.
- · Records visitor questions and answers to follow up and improve the opportunity for business conversion.

## Implementation Guidelines



Venue







- Collect and prepare contents of visitor questions as training of conversation model and choose the language option for conservation.
- Enhance visitor image by designing the customer service profile image according to the exhibition hall/exhibition.
- To use role of online customer service, add API or link on the website for connection to customer service system.
- To use role of exhibition customer service, design the layout for kiosks at the exhibition hall, venue, and booth to ensure availability, safety and suitability of the interactive environment.

Click on smart customer service profile image on the website and choose the language preferred. Enter questions related to hall/exhibition to obtain the responses.



- Guide visitors to use the interactive experience service through the signboard installed
- It is recommended to install noise-cancellation microphones to filter out surrounding noise due to the noisy environment at the venue.





- Choose the language for use by the smart customer service kiosk at the venue and ask questions related to the exhibition in the chosen language and receive a response.
- Click on the basic questions on the kiosk screen for information updates.
- Ask for exhibitor information and link to the exhibition map to quickly inquire about the location of the booth.



Collect questions raised by visitors during conversations in order to optimize future exhibition processes for applicable units and exhibitor information of interest to visitors.



- Acquire online smart customer service account and embed smart customer service to website to provide
- Install kiosk at the exhibition hall and link to online smart customer service via internet.

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- Smart customer service profile design, customer service inquiry data compilation, and conversation model training
- · Online smart customer service user fees
- Electricity/internet user fees
- · Kiosk purchase/lease fees

Post-event

# 08 Web-VR Virtual Exhibition

Venue

Organizer

Exhibitor

Provides visitors with an immersive experience by allowing them to enter a virtual exhibition hall via web browsing or VR headsets.

#### **Description of Functions**

- Exhibitors can set up a customized virtual booth on a cloud-based platform to showcase various product information.
- Visitors may explore the immersive 3D exhibition space using a VR headset for a first-person perspective. They can listen to guided tours, view 3D product models, and interact with other attendees. Visitors can also connect to the virtual exhibition hall through the internet for a diverse viewing experience.

https://reurl.cc/Ejj39K



#### **Description of Benefits**

- Using the cloud-based exhibition space, exhibitors can present detailed product information that might be challenging to showcase in a physical space, thereby allowing potential clients who cannot attend the exhibition in- person to view products in virtual booths.
- The online exhibition can run longer than the physical event to advance or extend exposure to potential buyers.

## Implementation Guidelines







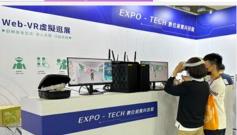
- Establish a virtual exhibition on a cloud platform, including main visuals and booth styles.
- Promote online and physical exhibitions simultaneously to increase overall visitor traffic.

Use the exhibition platform to upload product images, texts, multimedia, and other materials to the booth.





Have staff stationed at booths to interact with online visitors.



- Use a VR headset to enter a virtual booth for a first-person perspective to browse product information, listen to the product description, or view its 3D model.
- Connect to the organizers' cloud exhibition space from mobile devices or computers to browse product details and information.

Analyze visitor behavior data (e.g., visit frequency, duration, and page clicks) to get information about preferences and combine it with physical event attendance to assess exhibition performance and product popularity for the formulation of future marketing strategies.

#### Required Software/Hardware

- Prepare cloud exhibition platform server and computing resources.
- Create necessary digital materials for the virtual space:
  - Images: mainly JPG or PNG.
  - Videos: mainly MP4.
  - 3D models: mainly GLB.
- (Optional) Prepare VR headsets for hands-on experience at physical events (require computers, screens, power, and the internet on-site).

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- Rental and usage fees for the cloud exhibition platform
- Digital material creation costs
- · VR device rental or purchase fees
- Computer and screen rental or purchase fees
- Usage fees for on-site power and internet

## 720-Degree Panoramic Online Booths

Venue

Organizer

Exhibitor

Use panoramic photography to capture the physical booth and showcase it online as a 720-degree viewable virtual exhibition avatar.

#### **Description of Functions**

- · Capture every angle of the booth using 720-degree panoramic techniques and high-resolution photography techniques. Add various interactive materials according to the corresponding booth location or the exhibits that need to be promoted.
- · Set up an optimal visitor route and design a virtual booth that allows viewers to freely rotate in 720 degrees and explore on a computer or mobile device anytime and anywhere.
- The panoramic booth can integrate texts, images, videos, 3D models, and other digital media to provide visitors with more exhibitor and exhibition information.

https://reurl.cc/QRRzE9



#### **Description of Benefits**

- · Visitors can access the virtual booth through the internet to explore the details of each booth and experience the atmosphere of the exhibition without time or location constraints.
- Online visitors can view various exhibition materials (e.g., videos, 3D models) to gain deeper insights into exhibitors and exhibits.
- Extend the exhibition to allow more visitors to participate virtually.

## Implementation Guidelines



## 開 Organizer





- Discuss with exhibitors, collect interactive materials, and design the viewing route of the panoramic interactive exhibition.
- After setting up the on-site booth, conduct a photo session before the official opening.
- Create an interactive virtual exhibition on the system, import digital materials, such as images and videos, add interactive items, and set the display content.
- Share the link for the virtual panoramic booth via websites, social media platforms, and digital media to attract online visitors.



Adjust display content as needed in the backend management platform and publish updates in real time.







- Access the link for the panoramic virtual booth on a mobile phone or computer to begin exploration of booth.
- Share the link with others to invite them to view the exhibition.

Analyze online visitor preferences through the number of views for each scene and digital material in the panoramic booth for future marketing and exhibition strategies



#### 🦖 Required Software/Hardware

- Use 720-degree panoramic photography equipment to capture the exhibition.
- · Set up and manage the content of the panoramic virtual booth through the panoramic interactive booth management platform.
- Create digital materials for the panoramic booth:
  - Images: mainly JPG or PNG.
  - Videos: mainly MP4.
  - 3D models: mainly GLB

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#### (\$) Costs

- Usage fees for the panoramic virtual booth management platform
- Rental or purchase costs for 720-degree panoramic photography equipment
- Personnel fees for panoramic booth photography
- Personnel fees for uploading digital data for the panoramic hooth
- · Digital material creation costs

During event

## **Exhibition Avatar Robots**

Venue

Organizer

Exhibitor

Enable remote visitors to experience the exhibition via mobile robots in the venue and even participate in events or meetings.

#### **Description of Functions**

- · Remote visitors can explore the exhibition online through the camera of mobile robots controlled by a remote system (one-person-one-robot mode).
- ·Through remote control, remote visitors can use robots equipped with cameras, audio equipment, and microphones to view exhibits, listen to presentations, participate in meetings, and even communicate with exhibitors.

https://reurl.cc/6vvrqV



### **Description of Benefits**

- ·Remote visitors can connect to the robot's interface to the access exhibition seamlessly.
- This provides an optimal experience for those unable to attend or with specific needs, increasing participation rates and exposure for exhibitors to target audiences.

## Implementation Guidelines



#### Venue







- Assess the robot's movement range within the venue and identify locations for charging stations.
- Introduce robots for rental to organizers and exhibitors.
- Provide service information to exhibitors and visitors to promote the service and gather their interests for participation.
- After venue decoration, scan the exhibition hall to create a map and import it with exhibitor information into the robot's database.
- Set up exhibition booth information (e.g., booth names, docking points) on the platform.
- For scheduled live tours, set up tour routes and schedules in advance.



Upload exhibitor details using the digital organizer's venue map to get booth numbers, locations, dimensions



- Upload exhibition and event details to the online platform and import them into the robot's database.
- Promote and invite visitors who cannot attend the exhibition to use exhibition robots, and introduce products and conduct business with them.

Follow the user instructions to remotely control exhibition robots through the online interface to visit the exhibition, product listen to presentations, participate in meetings, and interact with other attendees.

Analyze visitor usage records, walking routes, types of exhibitors visited, and duration of visit to understand visitor preferences.



#### Required Software/Hardware

- Based on the scale of the exhibition, prepare exhibition robots, provide charging stations, and ensure network access for robot use.
- Introduce an online robot management platform and video conferencing system.
- Equip robots with communication and AV equipment.
- (Optional) Install panoramic cameras for live broadcasting.
- Prepare a stable wireless network for robot connectivity at the venue

#### 

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#### (S) Costs

- · Rental and usage fees for robot dispatch and online management platform
- · Purchase or rental costs of robots
- Power and internet usage fees
- Purchase or rental costs of panoramic cameras

## Holographic Interaction for Remote Participants

Venue

Organizer

Exhibitor

Use 3D projection and live streaming to 3-dimensionally display remote exhibits or interactive content in a holographic box at specific locations in the venue.

#### **Description of Functions**

- The images of demonstrations or interactive presentations recorded in a remote studio (offsite) can be presented in a 3D holographic fashion in remote locations (on-site) under a stable network environment.
- · Recorders can interact with remote participants and exhibition visitors through a two-way communication video interface.

https://reurl.cc/OMM9Rg



### **Description of Benefits**

- Remote participants can communicate face-to-face and interact with attendees on-site through holographic projections.
- exhibition Expand engagement, participation increasing immersion in conferences, seminars, and product launches to enhance user experience.

## Implementation Guidelines



Pre-event

#### Venue

## **∰** Organizer

ന്ന് Exhibitor



Select appropriate locations within the venue to install holographic display equipment.

Establish a high-speed and two-wav network stable between the exhibition venue and the studio.

Coordinate with interactive content providers to determine video content and streaming schedules.

Collaborate with the organizer on holographic content, identify demonstration personnel and program details, and provide exhibitor product information as themes or subjects for interactive content





- live-streaming During transmit video filmed in the recording studio to the holographic boxes at the exhibition venue.
- Hosts can be assigned to guide onsite visitors in interacting with remote participants.

- Play holographic programs to attract relevant visitors: exhibitors can further introduce their products or services to increase business opportunities.
- Online exhibitors can also discuss business with on-site visitors through holographic boxes.





- View holographic content on holographic display equipment in the venue.
- Use the video equipment on the holographic box to observe. communicate, and interact with remote hosts and demonstrators.

Analyze data such as the number of participants in different event sessions to understand visitor preferences.

#### Required Software/Hardware

- · Set up software and hardware equipment in the recording studio at suitable locations.
- · Install holographic projection display boxes within the venue.
- Provide the necessary power infrastructure
- (Optional) Mount cameras, microphones, and speakers to the holographic projection boxes for enhanced on-site interactivity.

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#### Costs

- · Setup, rental, and usage fees for the recording and streaming platform system
- · Rental, purchase, and transportation fees for holographic boxes
- Power and internet cable usage fees
- Rental, purchase, and transportation fees for additional video equipment

During event

## 3D AI Entrance/Exit Visitor Calculation

Venue

Organizer

Exhibitor

Install network cameras that automatically detect and count moving people at exhibition entrances for accurate visitor statistics.

#### **Description of Functions**

- ·Set up webcams that can accurately detect and count people (with 3D depth-sensing, simulated stereoscopic vision, and bidirectional counting functions) at venue entry points to monitor crowds.
- The detected data can be linked with other functions (e.g., the capacity control system) to trigger capacity control alerts when needed.

https://reurl.cc/0vv7kk



#### **Description of Benefits**

- Simple installation and automatic operation eliminate the need for additional personnel to count manually.
- Data on entry and exit counts at each entrance and venue occupancy can be monitored anytime.

## Implementation Guidelines



#### Venue

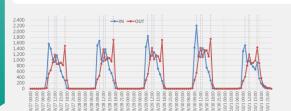




- Aside from the venue entrances and exits, determine other doorways to events or specific exhibition areas that require visitor detection and calculation.
- Install cameras at designated entrances and exits and test the connections with the host.
- Configure activation times for each entrance/exit detection camera on the host

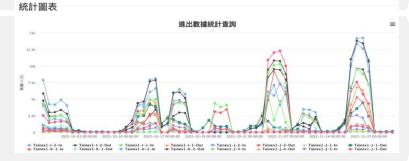


During the exhibition, the frontend server continuously uploads detection data from each camera to the backend cloud platform. Exhibitors, organizers, and venue staff can obtain accounts and passwords to access the backend platform and get the data.



venue data Cloud server . Sat Nov 05 2022 20:20:25 GMT+0800 (台北標準時間) 2455 Number of Exiting Visitors Today 2324 131 12000 Capacity Limited

Generate time-sequenced charts for entry/exit counts and integrate and analyze them to provide references for route planning, staffing deployment, and activity design for future events.



#### 🦫 Required Software/Hardware

- · Webcams: Install them above the detection area (at a height of 2.2 to 6 meters)
- · and connect power and network cables (with usage
- Equipment installation: For each entrance, install one camera; if the doorway is too wide, install two, each covering a designated detection area.
- Data collection: Place a small processing server near the detection area to receive camera data and upload it to the cloud platform.

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#### © Costs

- Rental or purchase fees of webcams and servers
- Installation and removal fees for on-site equipment
- Power and internet cable usage fees
- Cloud platform usage fees

# 13 Autostereoscopic 3D Interactive Experiences in the Exhibition Hall

Venue

Organizer

Exhibitor

Utilize AI technology that can recognize human motion and large LED screens to display digital designs with a 3D visual effect.

#### **Description of Functions**

- Use Al-based pose recognition technology to detect human postures and movements and activate pre-designed interactive content to create a more intuitive, natural, and engaging experience, thereby enhancing user interaction and efficiency.
- Combine a large LED display screen (preferably L-shaped) with autostereoscopic 3D digital design (using human eye parallax and perspective principles to give visitors a stereoscopic illusion) to provide visitors with a direct, natural, and enjoyable viewing experience.

https://reurl.cc/7005L1



#### **Description of Benefits**

- Use autostereoscopic 3D and Al pose-recognition technologies to deliver highly interactive and visually captivating marketing content within a compact space.
- Minimize single-use decorations and boost popularity and foot traffic for exhibitors and exhibitions.

## Implementation Guidelines



#### Venue





#### **ö** Visitor

- Strategically plan the position, angle, and size of interactive screens based on visitor gathering points and likely viewing angles to achieve an optimal 3D effect.
- Install large LED screens in the exhibition venue or hall.
- Set up cameras to capture visitors' body postures and hand movements.
  - Design and create autostereoscopic 3D digital content.
  - Use a backend management platform to adjust digital content on the on-site autostereoscopic 3D screens.
  - Design interactive gesture scripts and scenarios for visitors according to the digital content.



Arrange guides to encourage interaction or showcase physical exhibits to enhance the viewing experience.

Make specific gestures according to the prompts to trigger changes in the digital content.





Analyze user interaction and operation data the system collected to further understand visitor preferences.

## Required Software/Hardware

- Autostereoscopic 3D screens: Screens can be rented from the venue or equipment provider, or self-prepared. The screens should be at least 80 inches, preferably in a protruding L-shaped configuration for optimal viewing experience, and connected to a power source.
- Digital content creation: When creating autostereoscopic 3D digital content, consider diverse viewing angles, shadow depth, and color contrast to ensure a clear and effective 3D presentation.
- A small computer must be installed on-site to connect to the autostereoscopic 3D screen for content display.

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- Rental, purchase, and transportation fees for autostereoscopic 3D screens.
- On-site computer rental or purchase fees
- On-site installation and removal fees
- Power line usage fees
- Digital content creation fees

# **14** XR Extended Reality for Factory Areas

Venue

Organizer

Exhibitor

Film a 720-degree dynamic video of the factory site and display it on a multi-screen setup at the exhibition to allow visitors to enjoy an immersive experience through XR technology.

#### **Description of Functions**

- Record video using 720-degree panoramic cameras to capture spaces and information that cannot be physically brought to the exhibition, such as factory facilities or production environments. Conduct post-production and add interactive information (e.g., text or voice descriptions) to create an XR interactive video.
- The XR interactive video can be showcased on large screens at the exhibition (recommended with at least three 55-inch or bigger screens arranged in a fan shape) for visitors to view and experience.

https://reurl.cc/kOyrbq

#### **Description of Benefits**

- Experiences that visitors can only enjoy through on-site visits, such as visits to factories and production lines, are presented through XR immersive experiences at the exhibition.
- Visitors can effectively understand exhibitors'capabilities, thereby increasing the chances for business cooperation and capturing potential clients' interest.

## Implementation Guidelines



Venue

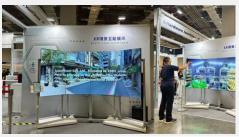






Determine appropriate locations and dimensions for XR screens within the exhibition venue and install them.

- Collaborate with exhibitors to determine filming content, highlight key points, and film dynamic and static panoramic videos on-site (e.g., factory locations) as materials for the XR interactive experience.
- Incorporate relevant information about the filming locations, such as images, texts, and audio, into the video to create the XR interactive experience.
- Enhance visitor interaction by integrating gesture recognition technology according to the video content.





During the exhibition, use the XR interactive system to allow visitors to directly experience the exhibition highlights and arrange staff for explanations.

- Watch the 720-degree panoramic video of exhibitors' locations on a multi-screen display or panoramic booth through the XR interactive experience system at the exhibition.
- Learn more about the exhibition or exhibitors by interacting with and exploring the system.

Analyze collected user interaction and operation data to understand visitor preferences and specific details about exhibitors of interest.

#### Required Software/Hardware

- Operate 720-degree panoramic filming equipment to record images and videos of factories or display rooms.
- Design and produce digital materials and interactive experiences.
- Set up multiple large (55-inch or greater) thin-bezel digital displays on-site to create an XR experience area.
- · Utilize the XR panoramic video platform for the visitors to operate.
- (Optional) A gesture recognition system can also be integrated to provide an interactive service.

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- · Usage fees for the XR panoramic video platform
- Rental, purchase, assembly, and transportation fees for large thin-bezel digital displays
- Power usage fees

# 15

## 3D Holographic Object Projection

Venue

Organizer

Exhibitor

Present digital 3D models of exhibit items in a holographic projection box at the exhibition, allowing visitors to manipulate and observe.

#### **Description of Functions**

- Visitors can interact with virtual exhibits in real time using holographic boxes, which provide 3D models of the objects.
- The box's surface features a transparent touchscreen, enabling the overlay of informational texts and images on actual products within the box to provide a more engaging way for visitors to learn about product details.
- In addition to touch interaction, computer vision and Al gesture recognition technologies can also be used to allow visitors to interact with the exhibits contact-free for better safety.

https://reurl.cc/ezyLlm

## **Description of Benefits**

- Allow visitors to observe exhibit details clearly in a contact-free manner, providing a more comprehensive exhibition experience.
- Enhance exhibit visibility and engagement through digital interaction to boost sales.

## Implementation Guidelines



#### Venue







Place the holographic box in exhibition halls, venues, or booths, as planned by roles (exhibition hall, curator, or exhibitor) to ensure accessibility, safety, and suitability of the interactive environment.

- Organizers and exhibitors determine the product content to be displayed and design interactive and display content to highlight product features.
- Gather a list of products for modeling and generate realistic 3D models using modeling technology.
- Import 3D models into the interactive system and enhance visibility through in-box display devices.



Set up instructional signs and arrange personnel on-site to guide visitors and ensure smooth interactive experiences.



Stand in front of the holographic box and follow instructions to manipulate virtual exhibits using gestures (zoom, pan, switch, rotate, etc.), viewing different parts and details from multiple angles while viewing relevant product information displayed on the screen.

Analyze exhibition preferences based on data, such as clicks, views, and duration for each model or information.

#### Required Software/Hardware

- Configure the required number of holographic boxes and set up power and high-speed internet.
- Prepare exhibit 3D models in GLB format at a height of 150 cm to ensure realistic color and texture presentation. Colors should be at least 24-bit true color, and texture resolution should be 1 mm or finer for the most realistic visual experience.
- Use the object holographic interaction system to play digital content and execute gesture recognition commands.

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- Rental and usage fees for the platform
- Rental, purchase, and transportation fees for holographic boxes
- 3D model and digital material creation costs
- Power and internet usage fees

## Exhibit Multi-Personnel Interactive Experience

Venue

Organizer

Exhibitor

Use IoT and multi-display technology to let visitors review diverse product information at once and enhance their impressions of products.

#### **Description of Functions**

- IoT technology in corporated with high precision recognition and positioning sensor label position, and multitou chscreen of motionso buildan interactived is play to be used by multiple people(up to 6) concurrently
- Visitors can choose the exhibitor/exhibit corresponding sensor label to watch and place the label on theinter action table. The introduction in formation will automatically be displayed. The position and direction of displayed information can be moved and turned according to the label.

• Each label can display 4 self - defined texts ,images, and videos) for display information. contents (including of diverse product

https://reurl.cc/1KNr0D



#### **Description of Benefits**

- Allow visitors to view diverse information of products at once and obtain more complete exhibition experience.
- Enhance product exposure through digital approach, there by increasing sales volume.
- Used by multiple people to enhance interaction and draw surrounding

## Implementation Guide



★ Venue



M Organizer





Use role (exhibition hall, curator or exhibitor) to design the interaction table at the exhibition hall, venue or booth to ensure the availability, safety, and suitability of interactive environment.

- The content provides selection of exhibiting products by role (curator, exhibitor) and designs the interactive content to highlight product
- Collect the product content generated and compile by formats needed in addition to import into the backend system.
- According to the number of exhibits, prepare the sensor label quantity (each label represents one exhibit) and prepare the label' s appearance.



The signboard will be distributed at the site while personnel will explain and guide visitors to go through the interactive experience services.





Place on the interaction table and select and place the label that represents the exhibits on the interaction table. The place will automatically bring out the information of the product and visitors can click on the page for viewing to zoom in the content.

Compile statistics about watching data of all labels (exhibits) at the venue and collect visitor's preferences.

#### 🦖 Required Software/Hardware

 Distribute number of holography boxes according requirements and deploy power and high- speed network.

• 3 D modeling production for exhibition objects (GLB format) with a maximum height of 150cm to ensure the presentation of genuine colors and patterns. Colors must reach 24-bite true color or higher, while pattern resolution must reach under 1 mm to assure the most genuine visual experience.

· Use object a holographic interactive system to play digital content and give commands, such as hand gesture recognition.

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#### © Costs

- Platform lease and user fees
- Holography box lease, purchase and relocation
- · 3D model, digital material preparation fees
- Power and internet user fees

# $1\,7\,$ AI-Generated Exhibit 3D Model

Venue

Organizer

Exhibitor

Use IoT and multi-display technology to let visitors review diverse product information at once and enhance their impressions of products.

#### **Description of Functions**

- •The AI-generation technology can automatically generate the object photos and panorama videos taken by smartphones and video recorders into 3D models that can be independently used after uploading to the platform.
- Each 3D simulation model can be used independently, i.e., sales websites, VR online venues, virtual/reality interaction boxes.
- Large or valuable objects can display 3D simulation models through virtual/reality interaction to reduce space occupied by the booth, transport cost, and risk of damage. The model establishing time and cost are down by 80% or more compared to the traditional labor approach.

https://reurl.cc/DqrWAj

#### **Description of Benefits**

- Reduce cost and time for manual drawing and overcome problems with scanning glare.
- Reduce cost of using virtual/reality interaction by suppliers and improve visitor experience and attention, booth space utilization, and lower exhibition costs.

## Implementation Guidelines

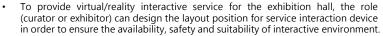


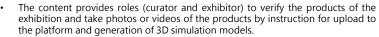












- Import the 3D model into the virtual-reality interaction system adopted to improve viewability.
- The virtual venue can be incorporated with virtual explanation personnel to provide explanations concurrently during the operation.









Signboards are distributed at site and explanation personnel guide visitors to use the virtual/reality interactive design at the site, and operative 3d model for the interactive experience service.





- Online visitors can browse 3D models of exhibits at the online exhibition.
- Venue visitors can browse the 3D models of exhibits via an interactive device at the site.

Analyze visitor preferences according to the clicks, head counts, duration, and other data of all models from the interaction services.

Apply 3D model to website or e-commerce marketing.

## Required Software/Hardware

- Cameras and video recorders to take high-resolution photos and videos.
- To take photo of ultra-large objects (such as houses and vehicles), use drones.
- Exhibit 3D model generation platform.

#### © Costs

- Platform lease and user fees.
- Fees for the purchase and lease of cameras and video recorders.

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### Interactive Conversation Simultaneous Translation Assistancence

Venue

Organizer

Exhibitor

Use AI language technology to translate words spoken by both parties simultaneously into the language understood by the other party, with the translation presented on a digital device.

#### **Description of Functions**

- Exhibitor and visitors can choose language preferred for face-toface conversation and display the content spoken by the other party in their frequently used language via digital signboard, interactive monitor, and mobile device screen.
- Interactive conversation and simultaneous translation assistance can be used at the information service center of exhibition, venue service center, booth counter, and supplier matching zone to optimize the quality of communication between foreign visitors, domestic exhibitors, and service personnel.
- · Currently, the languages include Chinese, English, Japanese, Thai, and Vietnamese. For special language needs, users can submit such issues and discuss with the technical providers.

https://reurl.cc/Gn2MKG

#### **Description of Benefits**

- · Less need for multilingual service personnel at the exhibition and improve quality of communication.
- Extend application and provide simultaneous translation service for events at the forum

## Implementation Guide





**™** Organizer



ന്ന് Exhibitor



- Choose role (exhibition hall, curator, or exhibitor) to design the service locations for providing bilateral and simultaneous translation assistance, assure the availability, safety, and suitability of interactive environment.
- Use role setting and allow users to choose the language preferred, select proper translation interface, such as transparent screen, tablet PC, double monitor or smart mobile devices.
- For industries with more uncommon terms at the exhibition, the content can provide roles (curator or exhibitor) with such terms in advance for model training and adjustment.



Arrange for corresponding service personnel at site, install description posters, launch translation device, and choose the language preferred on the interface menu. Additionally, it is recommended to use a noise-cancellation and voice reception device to prevent interference.





Visit the service installation site, choose the language preferred on the interface menu and start asking questions.

Collect questions raised by visitors during conversation as use for optimizing the future exhibition processing by unit of use.

#### Required Software/Hardware

- Deploy power and network according to service installation
- Set up one facility per site according to service requirement. Depending on user requirement, install proper digital display device to fulfill scenarios needed for service.
- To improve quality of translation, both parties are recommended to user noise-cancellation microphones to prevent interference from external sounds.

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- Translation service user fees.
- Digital display device lease and purchase fees
- · Noise cancellation and voice reception installation.
- · Power and internet user fees.

# 19 Electronic Paper Digital Posters

Venue

Organizer

Exhibitor

Use e-papers, which display digital images and texts in a low power-consuming and reflective manner, to replace traditional posters and printed materials in exhibitions.

#### **Description of Functions**

- By using e-papers that do not require constant power to display content, traditional exhibition materials of various sizes, from small signage and visitor badges to wall poster and LED display screens created through splicing, can be replaced.
- The establishment of e-paper display areas requires prior planning for placement, stands, and power lines. The content to be displayed should be designed based on the e-paper resolution and uploaded to the management platform by the provider (e.g., the organizer or exhibitor). During the exhibition, the platform can automatically change the combased on a preset schedule.

https://reurl.cc/LWly39

#### **Description of Benefits**

- E-paper only requires power when changing the display content, and when displaying the same content for a long time, it consumes no additional power, demonstrating its energy efficiency.
- Remote connectivity can be utilized to update content at specified times, meeting the real-time flexibility needs for frequently updated information in the exhibition.

## Implementation Guideliness



Venue





- Select the installation location, format, and required size of the e-paper digital posters for the manufacturer.
- As e-paper does not reflect light, if the chosen location has insufficient natural light, it is recommended that external light sources be added.
- Create the content to be displayed and upload it to the management platform, then set the display sequence and timing.











- Based on the preset content and rotation schedule, activate the e-paper to display content as scheduled.
- Adjust the content as needed during the exhibition and publish updates instantly through the management platform.

After removing the e-paper posters, the content should be cleared via the management platform to prevent any residual electronic ink on the e-paper, thereby maintaining the quality for future use.



#### 🤹 Required Software/Hardware

- Purchase the required e-paper specifications and quantity, and plan the display method.
- Create digital content for e-paper posters (in JPG or PNG format) and upload it to the e-paper content management platform for configuration.
- If content needs to be changed multiple times every day, connect power lines and internet cables; if changed only once a day, portable power can be used, or the power line can be removed after changing the content.

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#### Osts

- E-paper product rental/purchase cost
- Installation fees for e-paper products (or rental/purchase cost of mobile display stands)
- Power line and internet usage fees Display content creation costs

# Contactless Data Exchange

Venue

Organizer

Exhibitor

Exhibitor and visitors can scan the QR code of each other using smart phones to exchange the contact information or digital marketing information between both parties.

#### **Description of Functions**

- participants (exhibitors and visitors) smartphones to scan the QR code of the other party to complete data links and exchange contact information immediately, which helps obtain product marketing data without having to worry about inadequate quantity.
- · Compile contact information online and shorten time to sort business cards later, or directly use email on the system for contact.

https://reurl.cc/0KMYvK

## **Description of Benefits**

- Exhibition participants do not need to prepare many printed business cards or large product posters, which reduces the use of one-time data.
- ·Shorten the time for compiling data subsequently and prevent data loss and lack of business opportunities.

## Implementation Guidelines



## M Organizer



## **ö** Visitor

· Curators can launch the contactless data exchange platform and give explanations at the supplier conference or on registration webpage.

· Link to registration system to generate visitors' e-business cards automatically.

Exhibitors can establish their e-business cards upload to the digital marketing materials provide to visitors.

Upload image business cards or use registration data to generate e-business cards when applying for exhibition registration.



Install description poster at the exhibition and encourage participants to use contactless data exchange solution.

Provide QR code for visitors to scan or scan OR code of the visitors to obtain their business cards and share digital marketing materials with visitors.

Provide QR code for exhibitors to scan or scan QR code of exhibitors to obtain the business cards and digital obtain marketing materials.







Exhibitors and visitors can browse information of all business cards acquired through backend platform without creating files manually or losing the business cards.

#### 🤂 Required Software/Hardware

- · Open the account for contactless data exchange platform.
- Exhibitor and visitors open separate accounts.

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- Contactless data exchange platform subscription/user fees
- · QR code advertising board preparation

During event

# EXPO – TECH Guidelines for Application

Guiding
Organization:



Implementing Organization:



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