dorengo
TECHNICAL SPECIFICATIONS

01
INFRASTRUCTURE

dorengo can be operated both online and offline, ensuring a high level of flexibility.

What are the advantages of the offline mode?
No network or internet connection is required to make the content available on the user devices. There is no need for expensive installation work in the showrooms to set up a network or power supply. Automatically, the devices are updated and statistics are created overnight when the devices are connected to the charging stations.

What are the advantages of the online mode?
Running dorengo in online mode enables you to collect statistics and change the multimedia content in real time. Connections to social media platforms such as Facebook or Instagram and visitor participation are possible.

A combination of online and offline mode enables a larger number of visitors to use the system when there is a limited number of rental devices. This gives experienced users of digital media opportunities for participation and interaction. For large museums or national parks, a mixed operation is recommended in order to lessen and better distribute the load on existing WiFi or LTE structures.

Scalability
The tuomi solution is infinitely scalable. There is no restriction on the number of users. The system can be operated simultaneously by any number of visitors and both rental devices as well as visitor device(s) can be used at the same time.

Reliability
When using the offline version of dorengo, the down time of one unit does not affect the overall operation (no single point of failure). The online version depends on various network components and is slightly more susceptible to failure.

Maintenance and updates
The tuomi systems require very little maintenance. The data on the units is updated differentially and automatically without any need for IT departments or qualified personnel to intervene.

02

TABLETS AND SMARTPHONES

- Visitors can use a rental device or their own tablet or smartphone.

- A rental device can be used by any visitor (including the blind and visually impaired) and are suitable for indoor and outdoor use.

- The rental devices require charging stations, but we would also recommend appropriate charging points for the visitors' own devices.

Advantages of rental units

1. Using a rental unit eliminates the need for consultation and help for those whose own device does not meet the technical requirements.

2. Visitors who are not tech-savvy can be better served with rental units. The same applies to visitors who do not own a smartphone or only use older devices.

Advantages of visitor phones (BYOD)

1. The number of rental units available is limited.

2. In cases where large numbers of visitors show up simultaneously, visitors will not need to wait for a device if they use their own.

03

TRIGGERS FOR RETRIEVING AND CONTROLLING INFORMATION

dorengo works not only with NFC, it can also be triggered by things such as QR codes, beacons, optical recognition, GPS or numbers. The trigger can be determined by what works best for the storyboard or local conditions, among other things.

When using NFC tags or QR codes, content can be triggered both with and without an app. If an app is available, the app starts automatically without user intervention.
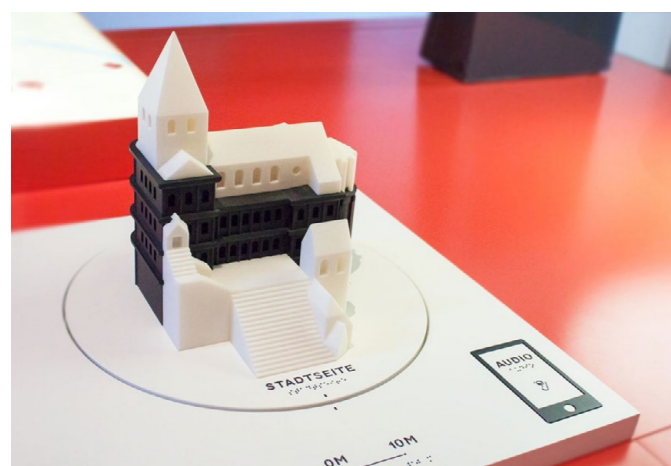
04

SOFTWARE

Application on rental devices

- The operation of the app is simple and self-explanatory. Instruction by museum staff is not required.

- Should small problems arise, these can be solved by the visitor independently or answered by any member of staff, including the security staff.

- The rental equipment does not give visitors access to the system environment.

- dorengo is optimised to enable the rental units to have a runtime of at least 8 to 14 hours. There is no need to replace the battery or recharge it during opening hours.

- Apps for different target groups (different languages, children, visitors with special needs such as the blind and visually impaired) can be called up intuitively on the rental devices without a selection menu.

App for visitor smartphone (BYOD)

- Apps can be made available to let visitors use their own device.

- The app can be downloaded on site or at home.

- When using NFC tags, the app starts automatically so that the visitor does not need to call up the app on their device.

Guidance and control system

1. dorengo can also be used to guide entire groups. The same content is displayed on all devices and the display is controlled by the group leader.

2. dorengo can be used as a management system for content within the exhibition, among other things. e.g., to determine the language used in a film at a media station.

STATISTICS

· The system can collect detailed statistical data. The information is collected on an object-related basis, ensuring complete data protection. The data collected can be used to clarify important questions such as:

1. Which language was called up and how often?

2. How often were which objects called up (ranking)?

3. How long did the visitors stay?

4. How often were tablets borrowed and at what times of day?

5. Which routes were taken by the visitors?

· If required, additional queries are also possible for study purposes (e.g., age group or gender). In this case, the corresponding data protection requirements must be taken into account.

Copyright
All copyright-relevant data (images, films) on the devices are encrypted. If required, the system can be set so that copyright-protected data can only be accessed within the museum.

INCLUSION AND ACCESSIBILITY

· The devices deliver a high level of accessibility for almost all visitor groups. The technology is easy to use and understand, even for people without user knowledge and the devices are also suitable for older visitors or visitors with disabilities.

· Tours can be set up in any number of languages, including special tours in easy or simplified language, tours with subtitles or tours with sign language videos.

· Font sizes, contrasts and colours can be changed. In combination with a guidance system and audio descriptions as well as tactile surfaces, the NFC technology is also highly suitable for visually impaired and blind visitors.

· To support people with physical disabilities, NFC tap points will be installed at a suitable height for wheelchair users (approx. 80 cm, which is also a suitable height for children). The virtually operation-free technology also enables visitors with impaired motor skills (e.g., people who have lost an arm, hand, or fingers) to use the multimedia guide.

CONTENT MANAGEMENT SYSTEM

· The content management system is multi-client capable. Each client can maintain any number of projects (e.g. several exhibitions).

· The data maintained in the system can be accessed both through an app and, if required, via the internet.

· The system can manage any number of languages.

· The system can manage any number of special tours such as children's tours, theme tours etc.

· The responsive design of the applications (apps) is freely configurable.

· Applications can be enlarged or changed by the museum staff at any time.

· Content can include texts, images, videos, and audio files

· Content such as animations or queries can be added as needed.

· Content can be grouped and presented at a common information point.

· Content can include „interactive images" - e.g. building plans with marked interactive areas and contents; these can be created and managed by the client.

· Apps can be automatically generated for any module in the content management system. The update process is automated so that it is not necessary to manually import data.
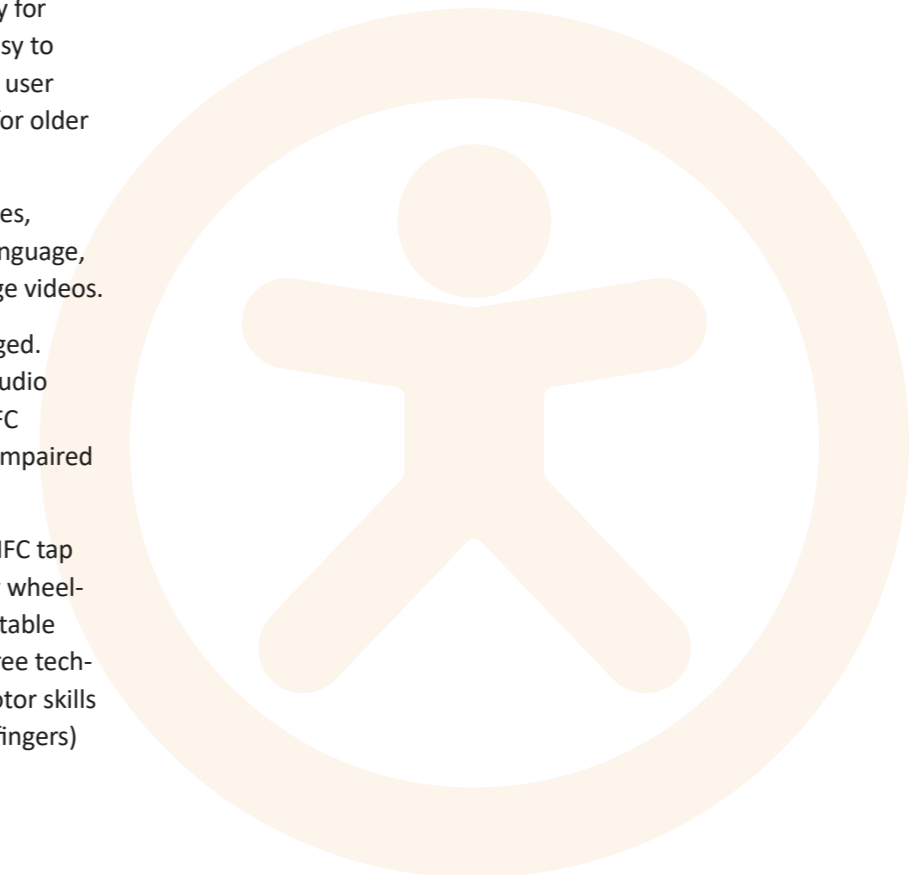
customizable

barrier-free

interactive

educational

mobile

multimedia

tuomi S.A.
7, Fausermillen - 6689 Mertert, Luxemburg - Telefon +352 26705 90

tuomi GmbH
Niederkircherstraße 2, 54294 Trier, Deutschland - Telefon + 49 651 460 416 0

www.dorengo.com | info@dorengo.com