

5 Working Backwards Questions

Who is our customer?

Intermediary customer/client: IT@M - "IT Referat der Landeshauptstadt München"

End customers: professionals contracted by the City of Munich: architects, building engineers, network engineers

What is the customer problem or opportunity?

Client:

IT@M wants to provide a virtual preview of public buildings in Munich for a vast array of use cases.

End customer:

Today professionals working of the City of Munich must physically access a public building when they want to get an overview over the place and do planning off upcoming works (maintenance, renovation). Physical access to a building is costly and its necessity can lead to delays in the workflow.

What is the most important customer benefit?

Client:

Being able to provide such a service in a cost-efficient and simple way would be major addition to IT@M's service portfolio

End customer:

Giving professionals a virtual preview of a building, they are working on can save time, money, and staff. Ultimately it will result in faster works on a lower budget.

How do you know what your customer needs or wants?

To verify the client need:

We have had multiple sessions with our client in the beginning of the project to get a clear picture of what his expectations are. Furthermore, we have been checking in with our client regularly to make sure, we are servicing our client's need.

To verify the end customer need:

We have conducted interviews with professionals from building sector working for the State of Bavaria. We verified the customer need with our coaches and our client.

What does the experience look like?

"Virtual Preview of the interior of public buildings for maintenance and renovation work"

Client - Creating a virtual preview:

Technology:

- Matterport Capture Application for smart device (iOS): to compile the 3D scans and upload them.
- Ricoh Theta Z1 (360° Camera): to capture the 3D scans
- Matterport Web Application: to share the virtual preview

Features:

- Ricoh Theta Z1 is controlled via the smart device
- 3D scan is post processed automatically after uploading and turned into a virtual preview
- Useful features: Automated face blur, Annotations within the 3D Model

User experience:

A room can be captured using Ricoh Theta Z1, a tripod and an iPhone. The software used is self-explanatory and a scan can be done by a click on the iPhone. Capturing a room takes about 5 minutes. When done scanning you upload your scans to the Matterport Server. A great virtual preview, ready for a VR walkthrough, is created automatically in under an hour.

User benefits:

Entry costs (~1000€) low compared to an existing solution (~20000€). Capture a building properly can be done by 1 person and does not require any training. A virtual preview can be delivered from scrap in the matter of hours. The virtual preview created can be a cost and time saving factor for the city of Munich, as it reduces the need to physically visit a building in the planning phase of buildings works.

End customer - Using the virtual preview:

Technology:

- Matterport Web Application / Matterport 3D preview Application for Android/iOS

Features:

- Free navigation within the virtual preview
- Viewing Modes: Virtual walkthrough, Floor plan view, Measurement mode
- Annotations can be read and edited
- Virtual tour is sharable via link
- Compatible with VR Devices (like Oculus Rift)

User Experience:

The User receives a great visual experience of a space. The virtual walkthrough is comparable to real life. Basic measurements can be taken from all surfaces and objects within the virtual preview. Annotations can be added where suitable.

User Benefits:

Basic measurements and annotations can facilitate the planning process for upcoming works immensely. The virtual preview is a great addition to building plans as it delivers a real overview over a space. A team can easily online collaborate with the virtual preview.