3D REPO

Digital Transformation in The Bund: Shanghai
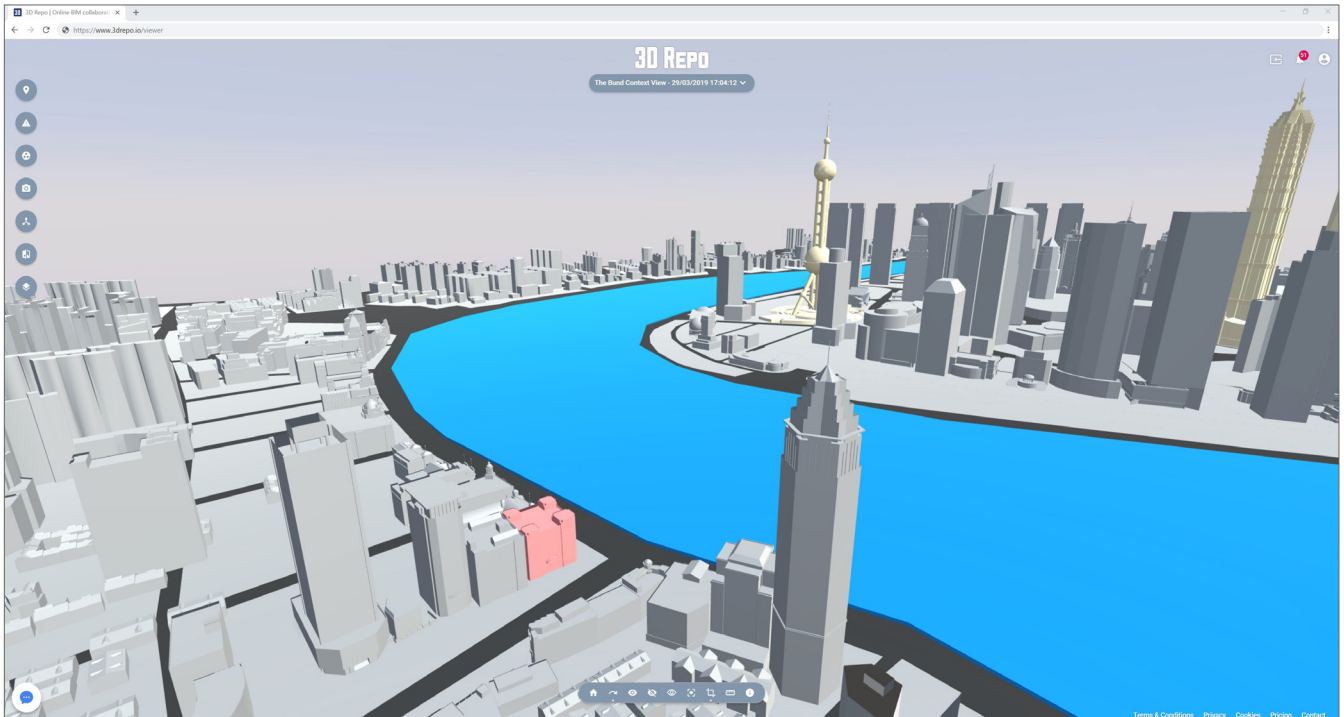

COGITAL

上海久事置业有限公司
Shanghai Jiushi Properties Co., Ltd

Figure 1: Illustration showing one of the client's buildings (in red) in situ of central Shanghai. See the video: https://youtu.be/u3Kj5dyYw30

Digital Transformation in The Bund

The Bund is a busy waterfront area and one of the most popular tourist destinations in central Shanghai. The Bund is made up of 52 buildings with various architectural styles to be seen.

Shanghai Jiushi Properties Co manage seven buildings on The Bund, and wanted a digital solution that would help them better manage certain aspects of the buildings such as:

- Building restoration;
- Asset management;
- Maintain historic importance of the buildings;
- Keep a record of historic features.

Aerial and ground scans of the buildings would first be used to gather the raw data of the buildings, and a scan-to-BIM team would create 3D models out of this data and feed it into a Common Data Environment (CDE) for the client to use. It was important to democratise the models to give the client context and allow them to track changes and view the project as it progressed.

The platform also needed to be collaborative and easy to use, allowing the client to easily communicate issues and change requests where necessary. Finally, the platform should be able to support both English and Mandarin.

3D Repo was deployed as the engine behind the digital solution for the client, which would provide an overall scheme visualisation of the modelled elements and enable collaboration.

Platform Requirements

1. Provide context & keep client informed

2. Collaborative & easy to use

3. Support English and Mandarin

A Truly Collaborative Platform

To provide context, Cogital uploaded a generic model of Shanghai into 3D Repo so the client could see their models in context to all of Shanghai. The federated model shows the buildings correctly geolocated as seen in Figure 1.
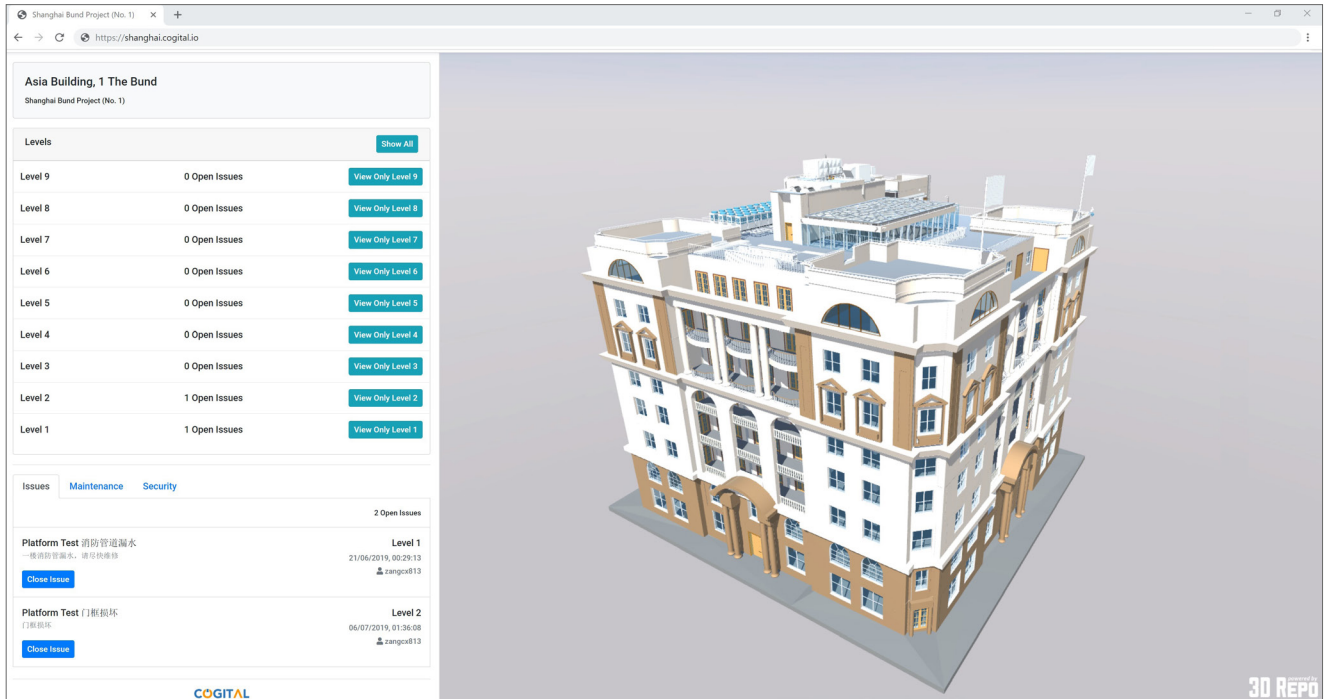
Figure 2: The custom user interface designed for the client and overlaid on top of the 3D Repo platform.

With 3D Repo as the engine, the client can also view the detailed 3D model of the buildings as they are created and federated in 3D Repo, as seen in Figure 2 – keeping the client informed with the progress of the project.

3D Repo is a cloud-based BIM platform, which means it is easily accessible via a web browser from anywhere in the world. This provides a number of benefits to the client including:

- On-demand data access;
- Increased productivity;
- Data is protected with advanced encryption.

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"The 3D Repo platform is simple to use meaning we could involve the client throughout the project, speeding up overall time lines even though they were not used to working with 3D models."

– Alain Waha
Co Founder, Cogital

Access anywhere

Democratised data

Enhanced collaboration

Collaboration Simplified

A lightweight web application was placed on top of the 3D Repo platform which allowed Cogital to control the functionality that their client needed to see and interact with, further simplifying the user experience for the client who was not familiar with using 3D models. 3D Repo's open API made it super simple for Cogital to build on top of, and fully customise the user interface.

The client can view the 3D model and log any issues or change requests into 3D Repo for other collaborators -

https://3drepo.com

to see, and where necessary the scan-to-BIM team can action design changes. Once an issue has been resolved it can be closed off in the web application, which also closes it in 3D Repo.

Cogital also added extra data entry fields for their client to enter information such as type of issue, and extra comment fields. With an agile custom UI, Cogital were also able to incorporate live feeds of the CCTV and surveillance cameras so the client could select those cameras in the model and view the live feeds from the platform.

Finally, a custom login portal was created which allowed the client to login using their 3D Repo credentials, and easily switch between English and Mandarin as seen in Figure 3 - the authentication system is managed by 3D Repo.

Figure 3: The custom login portal allowing the client to switch between English and Mandarin.

"As well as being highly collaborative, 3D Repo's open source platform gave us the ability to customise the user interface to meet the specific needs of our client."

- Tom Baker
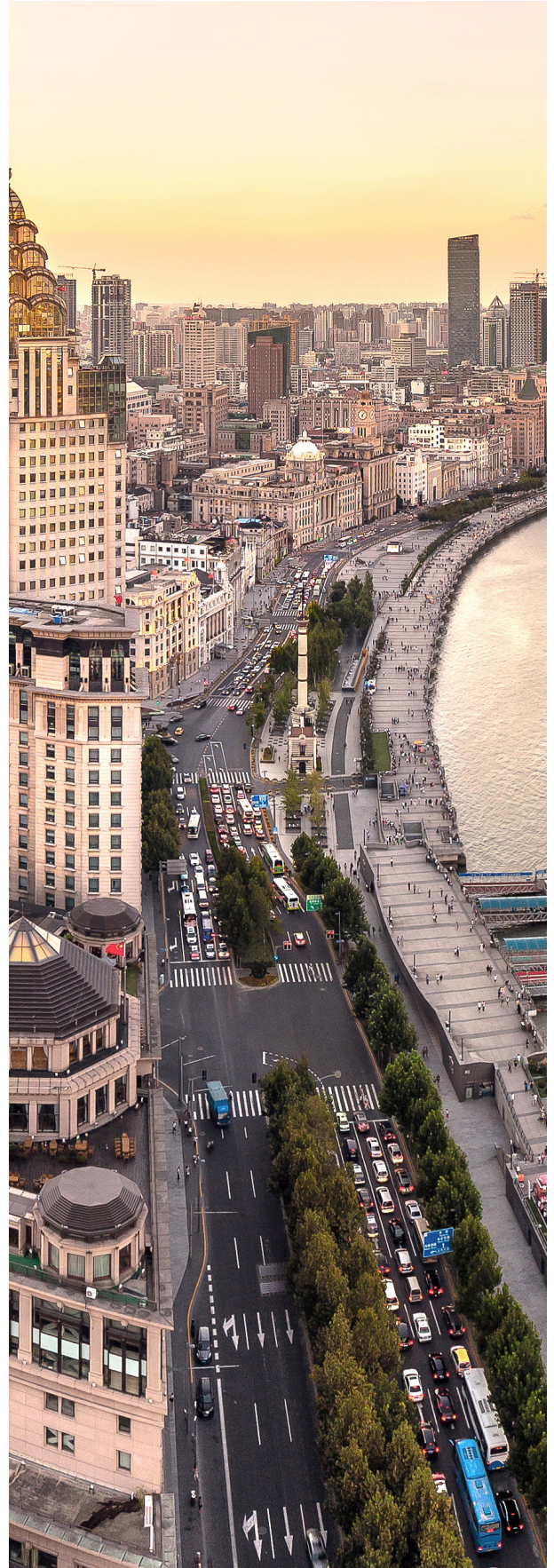Technology Consulting Director, Cogital

Figure 4: Ariel view of The Bund in Shanghai.

Get in touch today

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