



## **The Company and Project**

### TBA - Providing control panels to help keep Paris moving

TBA provides integrated software to simplify the operations of ports, terminals and warehouses around the world. With a rich heritage in design and engineering, they work across a range of industries from food manufacturing and waste recycling to test systems and tunnelling.

Bensons has worked with TBA since 2013, building a wide range of bespoke control panels. These incorporate various Form 4 Motor Control Centres (MCCs) installed in the UK and around the world, including several control panels for TBA's ports and crane systems. Many of these panels have been installed into containers, allowing them to be easily delivered, commissioned and set to work on site.

### **The Challenge**

Bespoke panels in an air conditioned and water tight environment, to tight deadlines.

In 2018 TBA began a new project to provide systems to control tunnelling and conveyor systems for use in the Paris Metro system.

The project required the design and build of two containerised Form 4 MCCs. The nature of the project meant there were extremely tight deadlines.





Each 6mt container would house a bespoke Form 4 MCC in a fully air-conditioned environment. In addition, each container required electrical power and lighting. A further constraint was that, in order to prevent water ingress, the walls and ceilings of the container could not be penetrated.

For TBA, the success of the build was particularly important as it would place them in a strong position to win substantial follow-on work in further extensions of the Paris Metro system.





## **The Solution**

Coordination of a team of contractors and customising the panel design.

Bensons' engineering team identified specialist contractors to provide welding, electrical and air-conditioning expertise for the fit-out of the containers. Once the mechanical and electrical fit-out of the container was complete, its floor was modified to accommodate the incoming and outgoing cables.

While coordinating the team of contractors, Bensons' engineering team also took the control panels designs from TBA, adapting them for manufacture.

Following a carefully prepared project plan, it was possible to align the completion of the container fit out with the start of manufacture of the MCC. This meant the control panel was assembled and tested inside the container, minimising the time and cost associated with the build.

Close co-ordination between Bensons and TBA meant the factory acceptance test of the completed systems could be undertaken immediately after Bensons' testing of the control panel, with delivery to the site in Paris occurring immediately afterwards.

By having a large separate and secure 370m<sup>2</sup> facility, Bensons was able to carry out the container fit out and panel build entirely undercover. This allowed the teams to avoid any delays caused by poor weather during winter.



SIEMENS

# The Result

### Optimal build - rapid completion – extra projects secured

The two initial containerised MCCs were completed and delivered on time and to budget.

By achieving the aggressive project timescales, TBA and Bensons were successful in delivering a key element of the Parisian Metro extension programme. As a result of this, TBA won a significant tranche of work associated with the broader programme of work.

This resulted in eight containerised systems and over one hundred ancillary panels being built and delivered between July 2019 and February 2020, with each milestone delivery being completed on time and in full.

By working closely with our network of suppliers throughout this process, Bensons was able to optimise its fit out and build process. This made it possible to produce a system in an eight- week period from receipt of instruction to proceed.