China Railway Engineering Design and Consulting Group Co., Ltd (CREDC) is the subsidiary of the Fortune Global 500 listed enterprise China Railway Group Limited. The Jinan Branch is a wholly-owned subsidiary of CREDC that runs railway, high-speed railway, and city subway projects in China. Their projects include Ji-Qing High-speed Railway, Qinglian Railway, Qingdao Subway, etc.

Headquarters
Beijing, China

Industry
Engineering Design & Consulting

Employees
3,000+

Website
http://www.cec-cn.com.cn/

**Strategies & Goals**

- Transform direction of information management from the traditional way to digitalization
- Develop big data with better collaboration, more innovation, and enhanced security

**Challenges**

The client’s business scope includes post project evaluation, planning, surveying, design, consulting, implementation, and more. Multi-trade, multi-team, and multi-project phase collaboration and management are very common in railway projects. Under the large project team structure, they are facing challenges of ensuring:

- Real-time reports to government and investors
- Model performance enhancement with full design
- Progress management with valid site record
- Site safety and quality control across various parties and construction teams

**Solution**

The client had chosen iTWO and later upgraded to the iTWO 4.0 platform to manage their projects. Backed by the 5D BIM and Cloud technologies, iTWO 4.0 helps them realize project lifecycle management in one integrated system and increase management efficiency dramatically.

**Digital Landscape without iTWO 4.0**

Before implementing iTWO technologies, the client used different in-house software tools across departments. Different teams processed and managed their own data. The isolated data couldn’t show the overall picture of the projects.
iTWO 4.0 is an enterprise platform achieving multi-project management. Its strengths in project collaboration, integration with ERP and PM systems, and database configuration meet our business needs. RIB shares the same vision with CREDC. We’re willing to be running together with RIB to digitalize the railway industry with BIM technologies.

---

**Xiaogang Wang**
General Manager of Information Division of Jinan Branch, CREDC

---

The client has used iTWO technologies to thoroughly manage their projects. After upgrading to iTWO 4.0, the integration has been implemented step by step due to parties and data migration from the existing platforms after approval. iTWO 4.0 helps the client to achieve model consolidation management, model-based QTO & estimate and schedule management, visualized reporting, and effective data management in one integrated platform. More modules of iTWO 4.0 will be implemented.

---

**Outcomes**

| Save Cost 5%  | Save Duration 5%  | Save Analysis Time 20%  | QTO Discrepancy ≤3%  |

With the implementation of iTWO and iTWO 4.0 technologies, the client has optimized their project schedule, improved cost control, and enhanced quality and safety control.

---

**AWARD**
The "Jinan East Train Station" of Jiqing High-Speed Railway Project that used iTWO technologies, awarded "Innovation Prominence Award Nomination."

**BOOK**
In 2019, The BIM textbook Collaboration Platform for BIM Application – Mastering iTWO 4.0 was published and promoted to the railway and city transit institutions in China.

---

**Digital Landscape with iTWO 4.0**

<table>
<thead>
<tr>
<th>Controlling</th>
<th>Inventory</th>
<th>Procurement &amp; Sales</th>
<th>Site Mgmt.</th>
<th>Cost</th>
<th>Design</th>
<th>Authorization</th>
<th>Master Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Tower</td>
<td>Portal</td>
<td>Inventory</td>
<td>Dispatching</td>
<td>Site</td>
<td>Bid</td>
<td>Contract</td>
<td>WIP</td>
</tr>
<tr>
<td>Package</td>
<td>Requisition</td>
<td>RFQ</td>
<td>Quote</td>
<td>Price Comparison</td>
<td>Contract</td>
<td>PES</td>
<td>Invoice</td>
</tr>
<tr>
<td>Schedule</td>
<td>Progress</td>
<td>Defect</td>
<td>Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QTO</td>
<td>Estimate</td>
<td>Budget</td>
<td>Logistics Job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3D Model</td>
<td>CAD Preview</td>
<td>Model Comparison</td>
<td>Model Visitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User</td>
<td>Clerk</td>
<td>Role</td>
<td>Group</td>
<td>Module</td>
<td>Company</td>
<td>Project</td>
<td></td>
</tr>
<tr>
<td>Unit</td>
<td>Currency</td>
<td>Calendar</td>
<td>Customizing</td>
<td>Controlling Unit</td>
<td>Workflow</td>
<td>Report</td>
<td></td>
</tr>
<tr>
<td>Material Catalog</td>
<td>Material</td>
<td>Assembly</td>
<td>WIC</td>
<td>COS Master</td>
<td>Rule</td>
<td>Cost Group</td>
<td>Billing</td>
</tr>
<tr>
<td>Master Data</td>
<td>Control</td>
<td>Portal</td>
<td>Site</td>
<td>Bid</td>
<td>Package</td>
<td>Requisition</td>
<td>RFQ</td>
</tr>
<tr>
<td>Schedule</td>
<td>Progress</td>
<td>Defect</td>
<td>Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QTO</td>
<td>Estimate</td>
<td>Budget</td>
<td>Logistics Job</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3D Model</td>
<td>CAD Preview</td>
<td>Model Comparison</td>
<td>Model Visitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>User</td>
<td>Clerk</td>
<td>Role</td>
<td>Group</td>
<td>Module</td>
<td>Company</td>
<td>Project</td>
<td></td>
</tr>
<tr>
<td>Unit</td>
<td>Currency</td>
<td>Calendar</td>
<td>Customizing</td>
<td>Controlling Unit</td>
<td>Workflow</td>
<td>Report</td>
<td></td>
</tr>
<tr>
<td>Material Catalog</td>
<td>Material</td>
<td>Assembly</td>
<td>WIC</td>
<td>COS Master</td>
<td>Rule</td>
<td>Cost Group</td>
<td>Billing</td>
</tr>
</tbody>
</table>

---

iTWO 4.0 is an enterprise platform achieving multi-project management. Its strengths in project collaboration, integration with ERP and PM systems, and database configuration meet our business needs. RIB shares the same vision with CREDC. We’re willing to be running together with RIB to digitalize the railway industry with BIM technologies.

---

© RIB Software SE All Rights Reserved
Vaihinger Straße 151, 70567 Stuttgart, Germany ribmarketing@rib-software.com www.mtwocloud.com