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CASE STUDY 3:

USING BIM PROCESSES TO MANAGE DIGITAL INFRASTRUCTURE INFORMATION IN LOCAL GOVERNMENT

Keywords: Local Authority, Infrastructure, BIM, project information, asset information, PIR, AIR, EIR, BEP, CDE, AIM digital information management

The Situation:

A Local Authority in the UK was awarded £650 million from Central Government to fund 45 infrastructure (highways) projects throughout the County.

Vast volumes of infrastructure project and asset information would be generated from these projects, which needed to be collated, stored and managed in the client's existing IT systems.

The client was aware of inconsistencies in how digital information was currently being formatted, referenced and stored within the organisation. These issues would pose significant risks to the quality of the new infrastructure information that was to be collected, with the likelihood that the client wouldn't be able to fully utilise this new information to support its corporate objectives.

To mitigate these risks, the client decided to adopt elements of the BIM ISO 19650 framework (digital information management processes and standards) across its 5 major infrastructure programmes.

I was contracted to embed the relevant BIM processes in the client's Infrastructure division and raise BIM awareness in the teams.

The Solution

Over a 10-month period, key digital information management processes and standards were embedded in the Client's Infrastructure division:

1. The client's project and asset information requirements were defined, which detailed the information needed by the client, the digital format of the information, and when the information needed to be generated and delivered.

2. The existing **EIR (Exchange Information Requirements) document** was updated to align with the format and terminology documented in the ISO 19650 standard. The updated EIR was shared with external consultants who used it to generate information from preliminary and detailed design activities.

3. An **EIR content governance plan** was created to ensure the contents of the EIR would be kept up-to-date with any new client information requirements, and remain aligned with the latest ISO 19650 guidelines.

4. A **BEP (BIM Execution Plan) checklist** was developed to assess the completeness of consultant BEP documents that were returned to the client in completed tender packs (the consultants were required to complete BEP documents that detailed their strategies for generating and delivering infrastructure project and asset information to the client).

5. To store the digital information, **Project Information CDEs (Common Data Environments)** were set up using one of the client's existing IT systems (Microsoft SharePoint), and a standard document folder structure (developed by the client) was configured in each CDE. Once the CDEs were set up, existing project information was migrated from the client's local computer drives to the CDEs.

6. An **Asset Information CDE** was also created for the Asset Operations team to receive all As-Built digital files generated from the infrastructure projects.

User guides and other BIM training material were also developed, and a portal was created for the infrastructure teams to easily access the documents.

Finally, job descriptions were created for new Information Manager resources that were now needed by the organisation to manage the digital information.

Outcomes

The Local Authority now had standard processes in place to ensure digital information generated from its 45 infrastructure projects were collated, stored and managed in a consistent manner, which would allow the client to better oversee project delivery progress and operational activities.

The new processes (together with the digital information management resources) would ensure the availability of consistently high-quality information, which the client can utilise with confidence to support its corporate objectives.

Key BIM foundations were embedded in the organisation. As the client becomes more familiar with BIM, they will be in a good position to implement more advanced technologies to capture and manage their digital infrastructure information even more effectively.