

Introduction

The sharing of information in the construction industry has caused problems over the last decades by contractors missing vital information due to bad communication. A Common Data Environment (CDE) has been introduced which aims to improve the communication between all stakeholders in construction projects by holding all information in one accessible hub. A CDE can provide increased productivity during construction projects, enabling real-time collaboration between respective parties, compared to older systems which may take weeks longer to complete due to the time to send, review, adjust and approve. This essay will focus on analysing the principles and methods which go on during the creation of a CDE.

Findings

The creation of a CDE follows certain standards, one of these standards is ISO 19650 (ISO,2018) which is multiple standards combined which outlines Building Information Modelling (BIM) should be managed. ISO 19650 is also a management system used throughout construction processes, from tender stage all the way to project handover. Companies in the UK are not governed by standards but they may want to introduce them into the company to increase the productivity and provide employees with methods of carrying out their work. Following standards helps in the construction industry as it provides guidelines which can help reduce errors during the construction process. The standard also uses methods which help define designs by allowing contributions by all stakeholders at the same time. This also reduces time in the contract which will allow time to be distributed to parts of the project where time may be needed in order to make sure that quality is achieved.

Workflows are used throughout CDE's, these are used to ensure that progression is tracked throughout the construction process and essential milestones are reached. Ensuring that milestones are hit in the construction process are essential in the completion of a project. Workflows also help during the design process of a construction project as data is progressively developed by various parties included in the contract, this will give the principal designer the incentive to communicate with the client to ensure that designs are finalized in time. CDE's workflow follows the following process:

- Work in Progress – Where the principal designer is producing the drawings and proposals ready for the client.
- Client Sharing – The principal designer shares his first draft of drawings to the client for approval.
- Feedback – The client will provide feedback to the principal designer, either approving the drawings or providing alterations of what they would like to be included or deducted
- Published – Client and principal designer have come to a conclusion on how they would like the asset to be produced. The plans will then be published to the domain for contractors to carry out the work.

This process is key to ensuring that all stakeholders have approved the proposed designs.

BIM is the main contributor to a CDE as it provides up to date drawings, which can be easily accessible to all stakeholders in the projects. BIM is a helpful tool in the construction process as it can identify errors in the constructions design. Correcting errors identified in the designs will allow cost certainty to the client as there should not be any variations during the projects duration, allowing the project to also be more efficient. The introduction of BIM into a CDE will increase the popularity of it as more companies will be introduced it. Increased popularity will lead to more companies using the method, which will produce cost certainty across the construction industry which will help local authorities who have to work to certain budgets given to them. Although there is no data regarding the amount of companies who have introduced a CDE into the work, according to (NBS, 2019), 73% of the the current UK construction industry are using BIM services to carry out construction projects.

Reference List

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Property Title Extension of ACBA4005	Detail Importance of a CDE	Property — Originator — (Date) Functional Specification — (Date) Social Specification — (Type) Form — Role — Number — Description — Suitability — Revision 4005 — UWTS — XK — 00 — 00 — Designer A105 — Importance of — Design — → CDE File Path: \\TRUSERV\Folder Redirection\evanharrow\Desktop\REVIT\Assignment - Existing.rvt	Scale date 04/22/24	Drawn EH checked GT	Prifysgol Cymru Y Drindod Dewi Sant University of Wales Trinity Saint David	(S0) UNCONTROLLED Not to be used as a reference document Check Status Before Quoting	Revised By Reason
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