Technical University of Denmark | M.Sc. Architectural Engineering
A Lean and integrated management process of temporary construction items (TCIs)
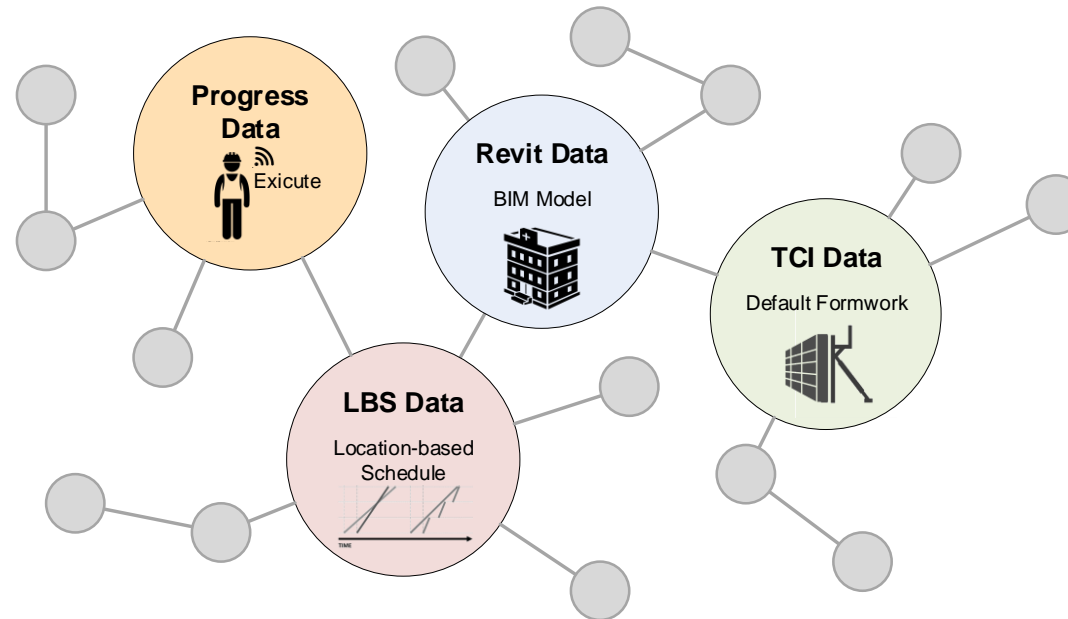
DTU

Unlocking the value of Linked Building Data (LBD)

A Lean and integrated management process
of temporary construction items (TCIs)

Interview for evaluating the developed prototype solution and its potential in the construction industry

Interview Guide

I.   Solution Presentation

II. Evaluation Interview

- Introduction of Interviewee   Section 1

- General Validation of the Solution   Section 2

- Improvements/ Further Development   Section 3

  - Data Sources & Extraction

  - Data Management

  - Data Processing & Querying

  - Data Visualization & Distribution

- Business Model   Section 4

Section 1: Introduction of Interviewee

Question 1
Can you give a background about yourself and your career? What are your experiences with the use of BIM-based technology in construction planning & management?

Section 2: General Validation of the Solution

Question 2
What is your first impression after the presentation of the prototype solution? From your perspective, where do you see the most potential in the proposed solution, integrating TCI planning and management in the existing BIM-based project delivery?

Section 2: General Validation of the Solution

Question 3
What are the benefits of the proposed solution? Can you name the benefits for each of the following stakeholder group? Who else might benefit?

Client	Contractor/ CM	TCI Provider

Section 2: General Validation of the Solution

Question 4
By integrating TCI planning and management into the construction process, the proposed solution aims to improve productivity and safety on site. In what extent do you see this intention fulfilled? What would be required to solve both issues with the proposed solution?

Section 3: Improvements/ Further Development

Question 5
Would you and how would you use the proposed solution in one of your projects? What further development/ considerations are needed to apply the solution in a real construction project?

Section 3: Improvements/ Further Development

Question 6
Step 1 - Data Sources & Extraction: Do you see any obstacles in the way, the BIM-data is now extracted from a project? What modifications are needed to apply this step in a real construction project?

Section 3: Improvements/ Further Development

Question 7
Step 2 - Data Management: Do you see any obstacles in the way, the data from different sources is now stored & managed as Linked Data in a triple store? What are the requirements for a Linked Data environment for a project?

Section 3: Improvements/ Further Development

Question 8
Step 3 - Data Processing & Querying: Do you see any obstacles in the way, the data is used to provide all needed information to create a TCI utilization plan? What modifications are needed to apply this step in a real construction project?

Section 3: Improvements/ Further Development

Question 9

Step 4 - Data Visualization & Distribution: How can the developed TCI utilization data be visualized to create value on a construction site? The proposed solution allows to display the data both in a linked Power BI-Dashboard as well as the application Exicute. Is this approach reaching all parties in a construction project who can benefit from the developed data?

Section 3: Improvements/ Further Development

Question 10
The proposed solution is enabling a passive monitoring of TCIs, based on progress information from the construction process. A further development for an active tracking of TCIs is the implementation of IoT-sensors. What is your opinion about this? Is an active tracking necessary for TCIs on a construction site? If yes, how can this technology be implemented in the system architecture?

Section 3: Improvements/ Further Development

Question 11
Is the prototype solution easily adjustable to create a holistic TCI planning & management tool, not only for formwork but also for other TCIs as scaffolding, supporting structures or fencing? Where do you see obstacles in that?

Section 4: Business Model

Question 12
The ideal future scenario (presentation slide 42) requires an involvement of many different stakeholders in a construction project, to deliver their specific input as linked open data, which will be accessed by a calculation tool. Is this vision realistic in the near future? Why?

Section 4: Business Model

Question 13
Assuming that the proposed solution is offered as a **Consultancy Service**, providing detailed information about the TCI utilization on a construction site. What would be the benefits of this business model? Would you consider paying for this service?

Section 4: Business Model

Question 14

Assuming that the proposed solution is developed as a **holistic Software Solution**, providing detailed information about the TCI utilization on a construction site. What would be the required further developments of the existing prototype and potential obstacles? What are the benefits of this business model? Would you consider buying this software?