

# Welcome



# Introduction



@The\_REVITlution



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# Innovation first

## A BIM Execution Plan (BEP)

What, Why, Who, When?



# So WHAT is a BEP exactly?

- Before I explain **WHAT** a BEP is I would first like to address the **WHY**.
- Why do we need this document?

# Our industry is constantly dealing with

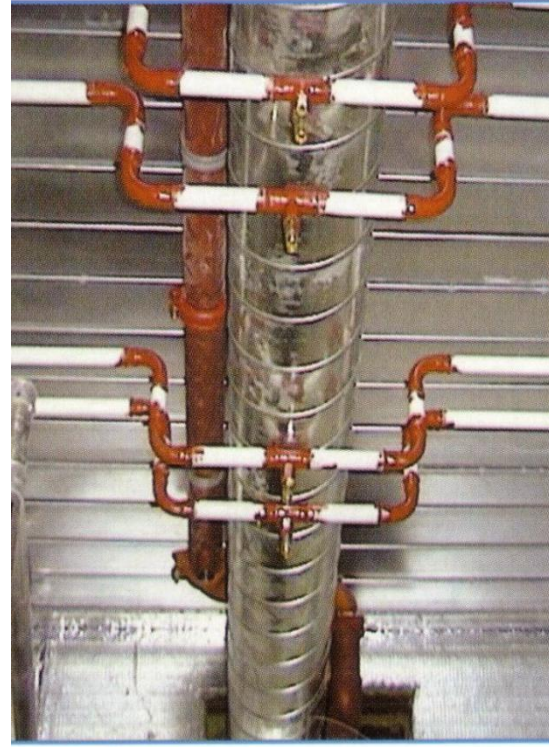
- Incorrect information
- Poorly coordinated Information/Data
- Ambiguous Information
- Lack of Collaboration
- Lack of Communication

# Information geospatially incorrect

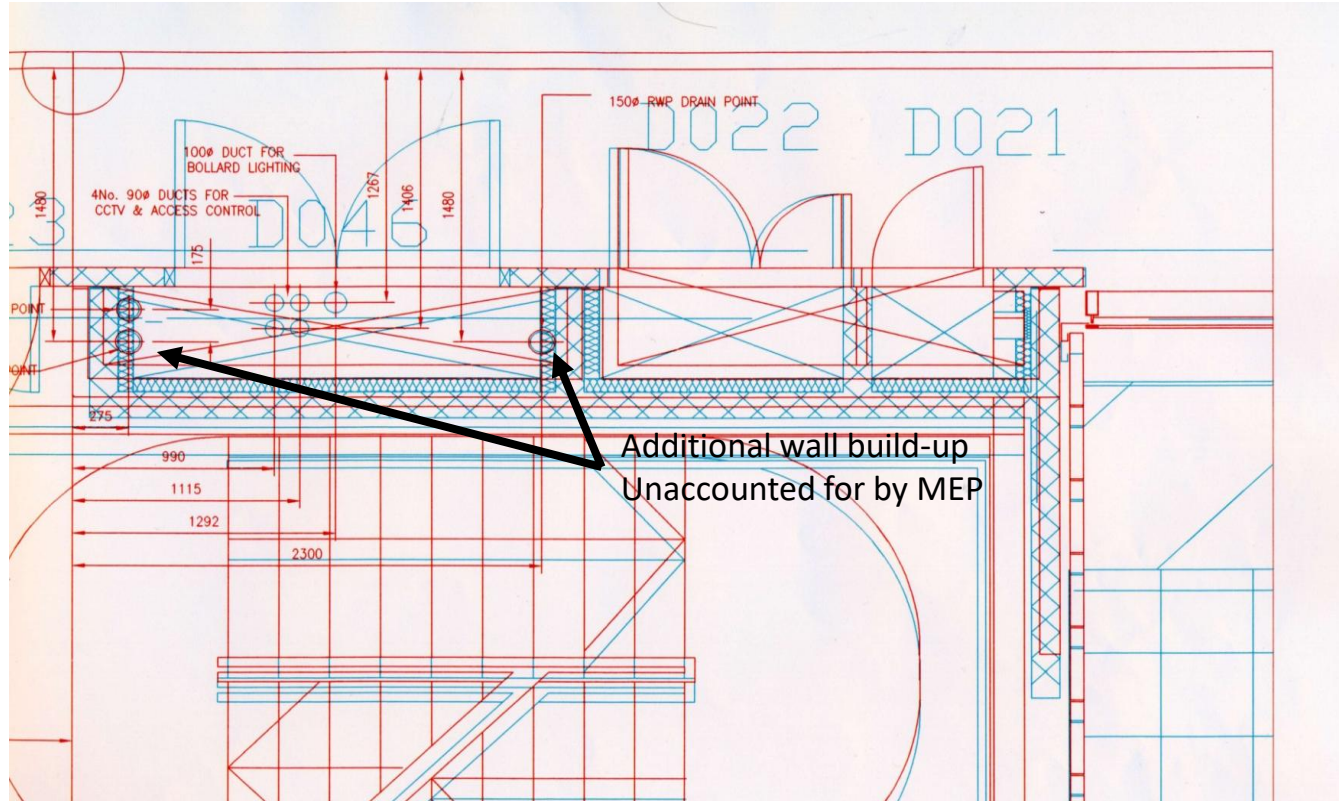




# Information is uncoordinated...



# Uncoordinated Information (2D)





# Information may be ambiguous...



# Common Problems during the delivery phase of a Construction Project

- **Poor client understanding**
- **Client not understanding the design**
- **Value Engineering with parts that are different to the initial specification**
- **Consultants not working together**
- **Lack of Coordination**
- **Lack of Communication between:**
  - Design team members
  - Client to Design team
  - Contractor to Design Team
- **BIM Models**
  - Poorly Built
  - Coordinated incorrectly
  - Over modelled at incorrect work stages
- **Team**
  - Insufficient knowledge
  - Unwillingness to Collaborate
  - Not understanding the brief
  - Not meeting deadlines
  - Not sharing most up to date information
- **Design**
  - Difficult to understand design
  - Incorrect structural materials
  - Building Analysis not carried out correctly



So what can we do to address this?



# BIM as a Journey

- Think about BIM as a Journey
- When you get to the destination you have a task you need to do.
- Lets look at this event today. The Planning, organisation and coordination.



# The Big Picture

- The organisers of todays event had an idea of:
  - What they wanted to achieve.
  - Where they wanted it.
  - Who they wanted to attract.
  - How they would attract them.
  - Who they would like presenting
  - Marketing strategy
  - Budget
  - Sponsors
  - Many more





# Scope

James Please could you present:

“What is a **B.E.P.** to an audience of professionals in Slovakia”



# Planning

- Logistics
  - How do I get to Slovakia
    - Transport
      - Getting to the Airport
      - Airport Parking
      - Flights
      - Getting from the Airport to Destination
      - Hotels
      - Getting back to Airport
      - Flights
      - Getting home from the Airport
      - Costs
      - Currency
      - Passport



# Planning

- Logistics
  - How do I get to Slovakia
    - Luggage
      - Clothing
      - Weather
      - Allowance
      - Toiletries



# Planning

- Presentation
  - Audience
  - Purpose
  - Language
  - Time Limit
  - Easy to follow
  - Hardware Compatibility
  - Software Compatibility
  - Time to write Presentation



The simple task of delivering a 20minute presentation requires a lot of planning, coordination and communication.

If any part of my planning had have failed, I would have either not been here today!

Or worse... Stood in front of you all with a blank screen! With nothing to say!





The 6 “P’s”

**Poor Planning & Preparation**

**=**

**P\*\*\* Poor Performance**



**Fail to Prepare**

**=**

**Prepare to Fail**



# What is a **BEP**?

- BIM Execution Plan
- **BIM**
  - Building Information Modelling
- **Execution**
  - The carrying out of a plan, order, or course of action.
- **Plan**
  - A detailed proposal for doing or achieving something



BEP Definition by James Parsons-Moore 😊

**A Detailed proposal for carrying out  
the Delivery of a Collaborative  
Construction Project.**

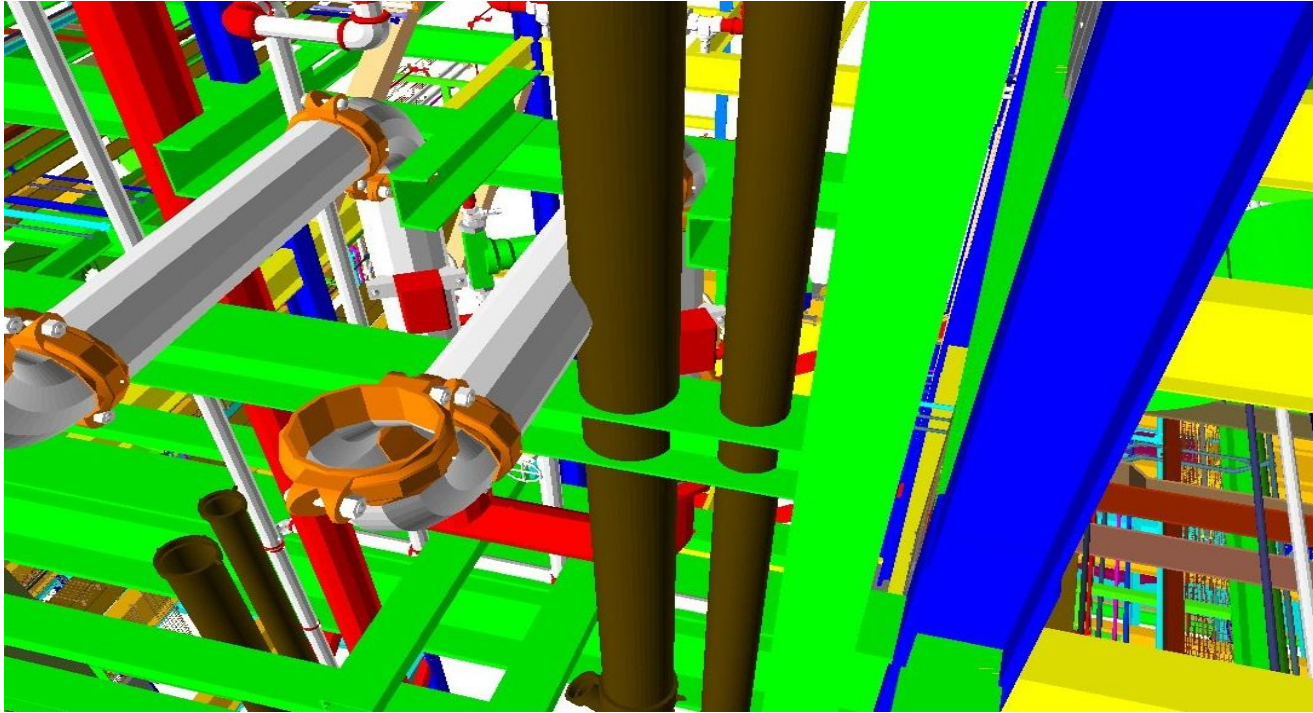


- **The Process of BIM is Less about 3D!**
- **It's more about 3C!!!!**
- **COLLABORATION**
- **COORDINATION**
- **COMMUNICATION**





# Uncoordinated Information (3D)



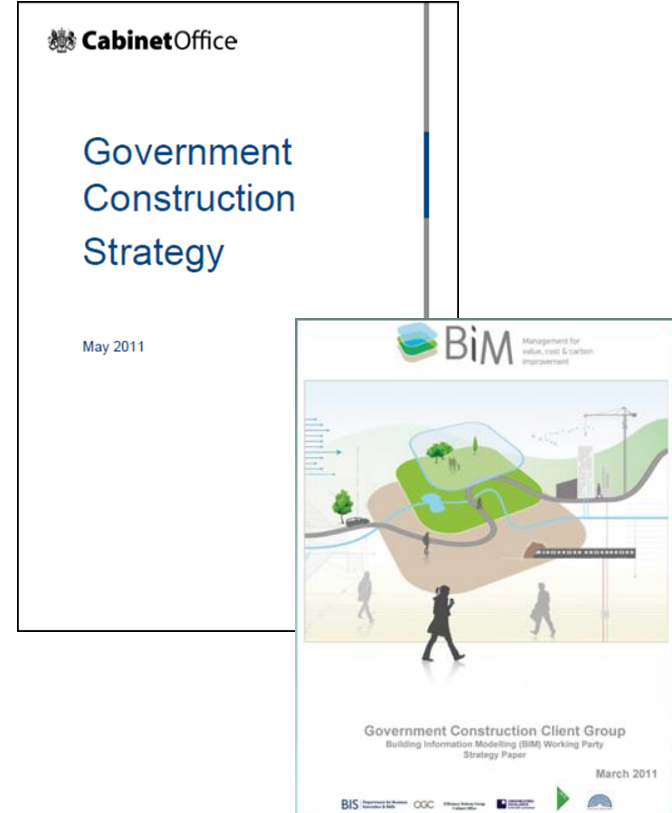
# UK Government Mandate

Published in May 2011

Target for centrally funded government projects to:

“Deliver centrally coordinated actions to reduce construction costs by 20% by the end of the five year life of the current parliament.”

BIM to be adopted on Government projects... Target March 2016



## Lower costs

33%

reduction in the initial cost of construction  
and the whole life cost of built assets

## Faster delivery

50%

reduction in the overall time, from inception to  
completion, for newbuild and refurbished assets

## Lower emissions

50%

reduction in greenhouse gas emissions  
in the built environment



Industrial Strategy: government and industry in partnership



Construction 2025

July 2019

Industry must therefore meet the challenge – **only through the implementation of BIM** will we be able to deliver more sustainable buildings, more quickly and more efficiently



**STRATEGY****NEED**

Employer's Information  
Requirements  
(EIR)

Capex  
start

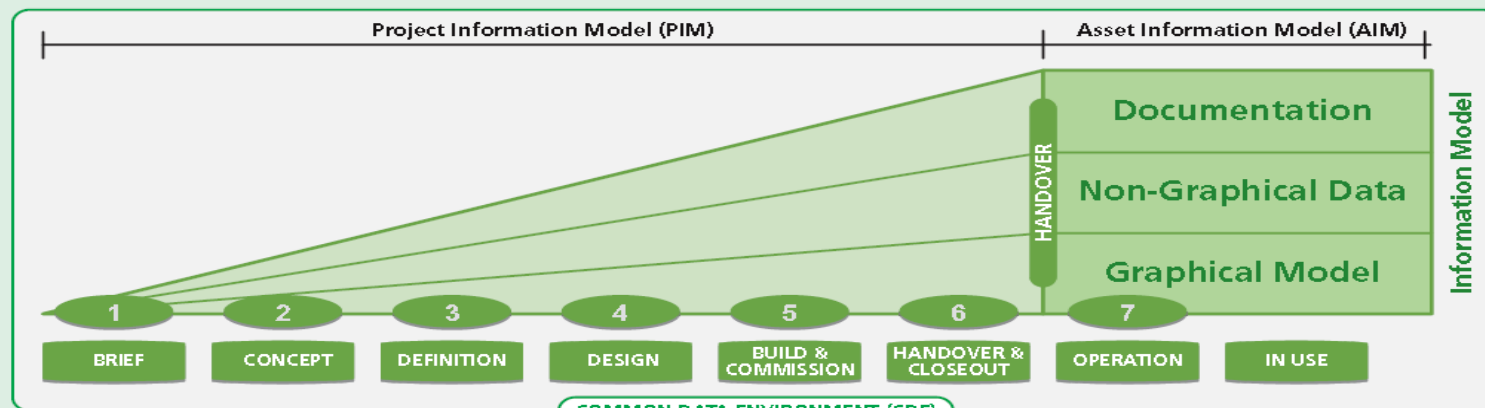
**PROCUREMENT****EXECUTION**

BIM Execution Plan  
(BEP)

**CONTRACT AWARD****DELIVERY**

Master Information  
Delivery Plan  
(MIDP)

MOBILIZATION



ASSESSMENT

Maintain, Refurbish, End of Life or Build

Opex  
start

MAINTENANCE and USE (PAS 1192-3)

SUPPLIER'S  
INFORMATION  
EXCHANGE

EMPLOYER'S  
DECISION POINT



For details on supplier's  
information exchanges  
and employer's decision  
points see  
CIC Scope of Services

**Legend**

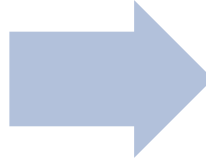
Green Information process  
Blue Management process



EIR

(Employers Information Requirement)

- What Do we want?
- What do we want to do with it



BEP

(Pre Contract)

- How are we going to deliver
- Who do we need to deliver it

# BEP (Pre Contract)

## Typical Contents

### **1 PROJECT INFORMATION**

### **2 INFORMATION REQUIRED BY THE EIR**

2.1 PLANNING OF WORK AND DATA SEGREGATION

2.2 CO-ORDINATION AND CLASH DETECTION

2.3 COLLABORATION PROCESS

2.4 HEALTH AND SAFETY/CDM MANAGEMENT

2.5 COMPLIANCE PLAN

### **3 PROJECT IMPLEMENTATION PLAN**

### **4 PROJECT GOALS FOR COLLABORATION AND INFORMATION MODELLING**

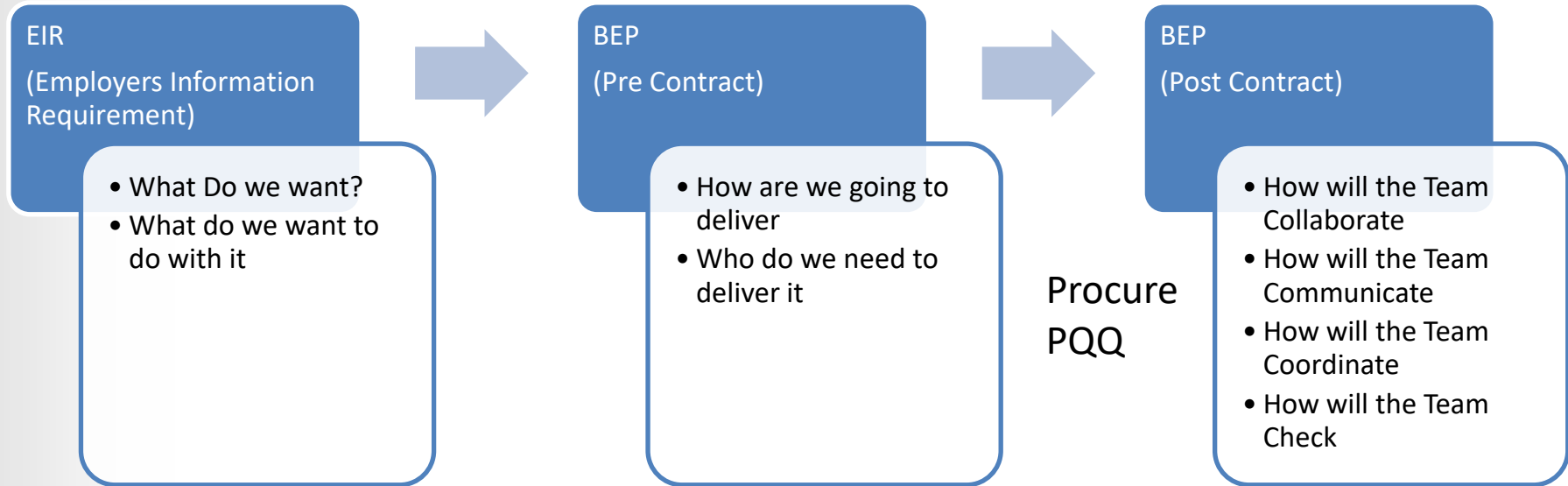
### **5 MAJOR PROJECT MILESTONES**

### **6 PROJECT INFORMATION MODEL (PIM) DELIVERY STRATEGY**

# Tender

- BIM Kickoff Meeting with Design Team





# BEP (Post Contract)

## Typical Contents

### 1 PROJECT INFORMATION

#### 2 INFORMATION REQUIRED BY THE EIR

- 2.1 PLANNING OF WORK AND DATA SEGREGATION
- 2.2 CO-ORDINATION AND CLASH DETECTION
- 2.3 COLLABORATION PROCESS
- 2.4 HEALTH AND SAFETY/CDM MANAGEMENT
- 2.5 COMPLIANCE PLAN

#### 3 MANAGEMENT

- 3.1 ROLES, RESPONSIBILITIES AND AUTHORITIES
- 3.2 MAJOR PROJECT MILESTONES
- 3.3 PROJECT INFORMATION MODEL DELIVERY STRATEGY
- 3.4 SURVEY STRATEGY
- 3.5 EXISTING LEGACY DATA USE
- 3.6 APPROVAL OF INFORMATION
- 3.7 PIM AUTHORIZATION PROCESS

#### 4 PLANNING AND DOCUMENTATION

- 4.1 REVISED PROJECT IMPLEMENTATION PLAN
- 4.2 AGREED PROJECT PROCESSES FOR COLLABORATION AND INFORMATION MODELLING
- 4.3 AGREED MATRIX OF RESPONSIBILITIES ACROSS THE SUPPLY CHAIN
- 4.4 TASK INFORMATION DELIVERY PLAN (TIDP)
- 4.5 MASTER INFORMATION DELIVERY PLAN (MIDP)

#### 5 STANDARD METHOD AND PROCEDURE

- 5.1 VOLUME STRATEGY
- 5.2 PIM ORIGIN AND ORIENTATION
- 5.3 FILE NAMING CONVENTION
- 5.4 LAYER NAMING CONVENTION
- 5.5 AGREED CONSTRUCTION TOLERANCES FOR ALL DISCIPLINES
- 5.6 DRAWING SHEET TEMPLATES
- 5.7 ANNOTATIONS, DIMENSIONS, ABBREVIATIONS AND SYMBOLS
- 5.8 ATTRIBUTE DATA

#### 6 IT SOLUTIONS

- 6.1 SOFTWARE VERSIONS
- 6.2 EXCHANGE FORMATS
- 6.3 PROCESS AND DATA MANAGEMENT SYSTEMS

# So... WHO needs one?

- Typically the Client and Lead contractor
- Whoever is setting out the deliverables on a project
- Anyone with a supply chain below them
- Forms part of the contract for deliverables

# Summary

- What
  - A Detailed proposal for carrying out the Delivery of a Collaborative Construction Project.
- Who
  - Client, Lead Contractor, Any Lead supplier.
- Why
  - To allow every stakeholder to understand
    - Project deliverables
    - Project Coordination
    - Project Collaboration
    - Project Communication
    - Project Checking and Validation
- When
  - Pre Contract
    - On Completion of EIR (Employers Information Requirements)
    - Issued with PQQ BIM Capability Assessment at tender stage
    - Created by Client with Design Lead or Lead Contractor
  - Post Contract
    - On novation of All design team and consultants
    - BIM Kick of meeting
    - Created by Client/Lead Designer/Lead Contractor/Information Manager

# Thank you

- Any Questions?





# Thank you



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