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# Project Case Study – A77 Maybole Bypass

## *Our BIM Journey*

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## INTRODUCTION

## Case Study | A77 Maybole Bypass

Adam Davies



Marcin Sokolowski



## Case Study | A77 Maybole Bypass

### Project Description

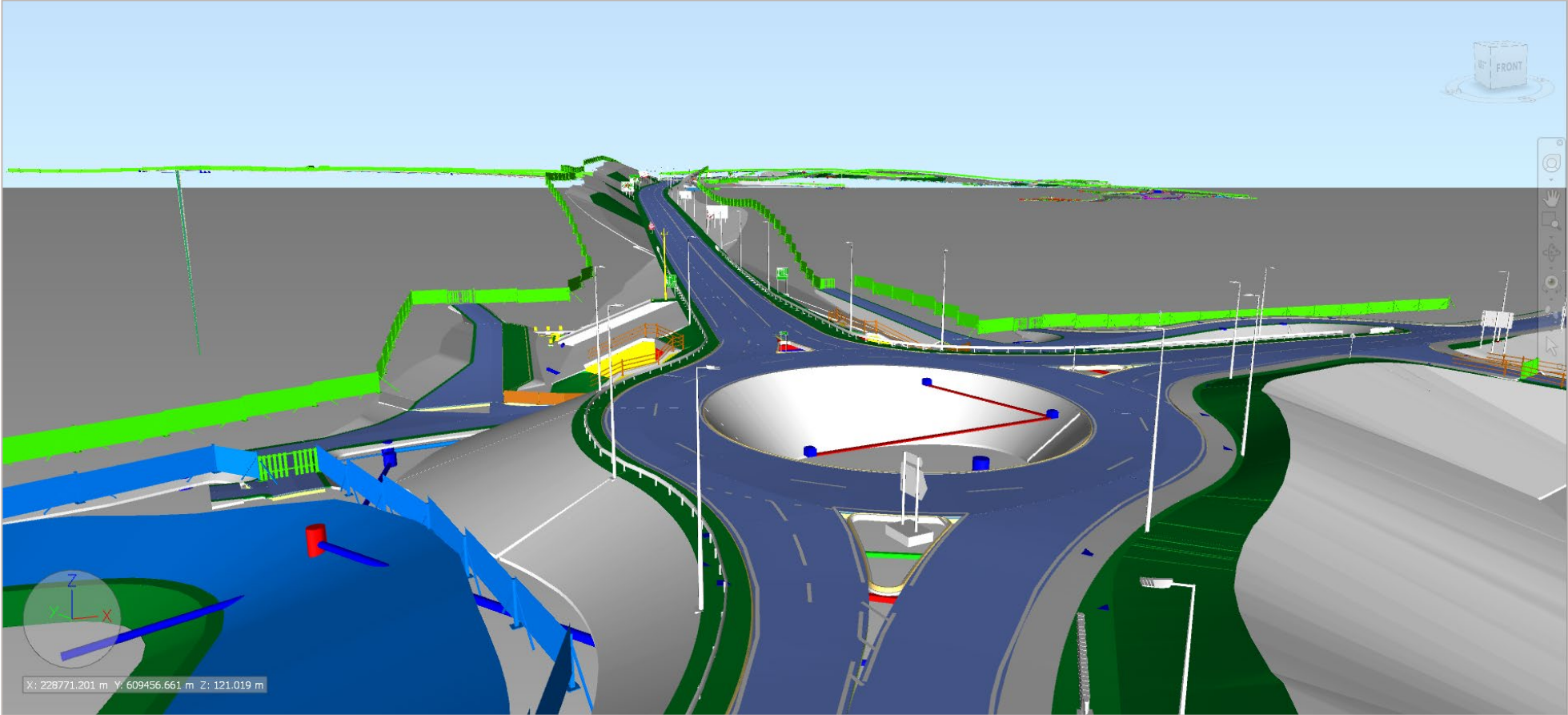
The A77 Maybole Bypass project consists of the construction of an approximately 5.5km long single carriageway bypass to the west of Maybole in South Ayrshire.

This includes construction of:

- approximately 5.5km of offline single carriageway;
- three at grade roundabout junctions;
- side roads and junctions;
- 2 No. overbridges;
- 2 No. underbridges;
- 3 No. Box Culvert Structures; and
- all other works associated with a trunk road improvement.



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# Case Study | A77 Maybole Bypass / TIDP



## Task Information Delivery Plan (TIDP)

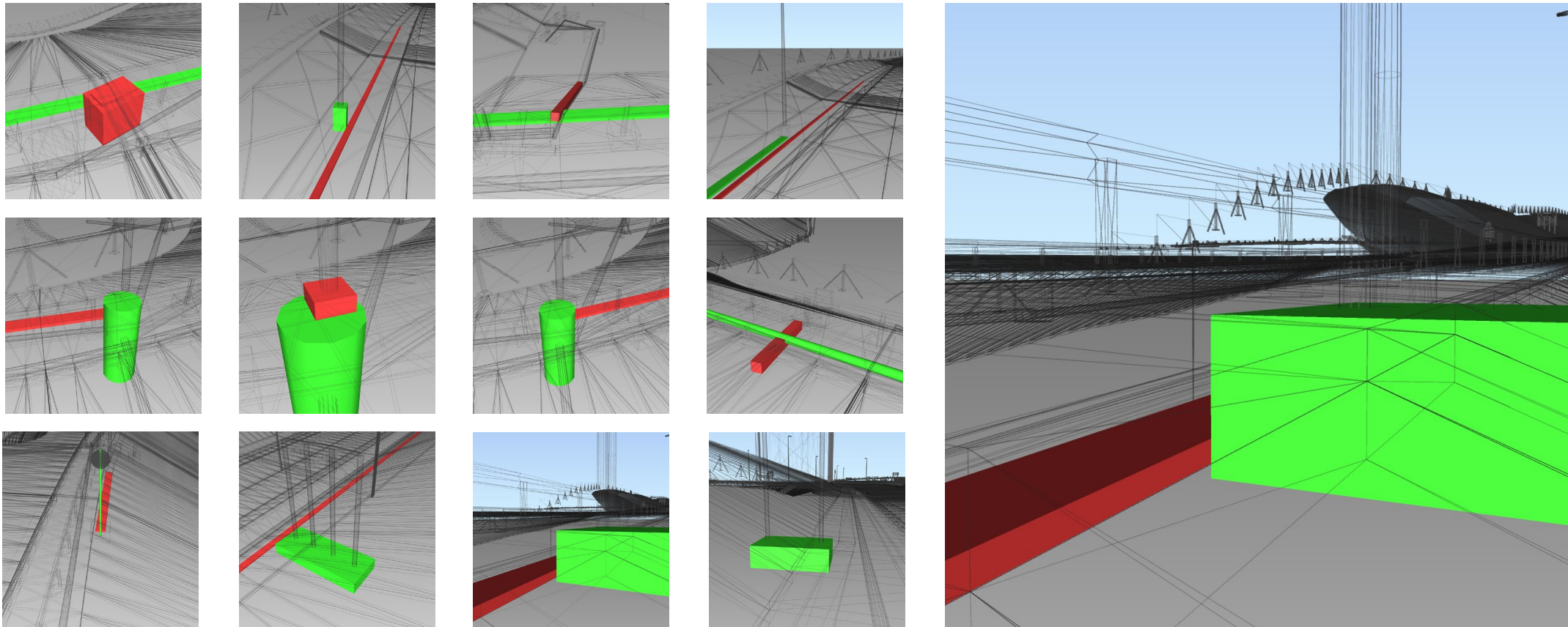
Client:  
Project:  
File Reference:

Wills Bros Civil Engineering LTD  
A77 MAYBOLE BYPASS  
MGT0510-RPS-GN-SWAE-RP-Z-0002 App B TIDP

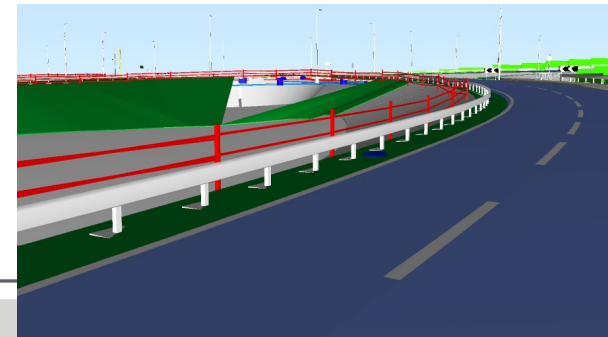
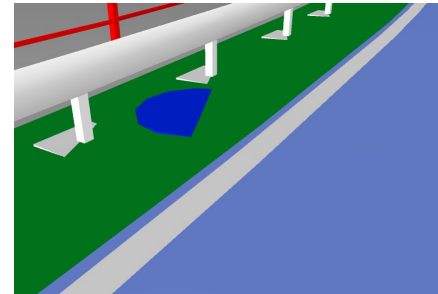
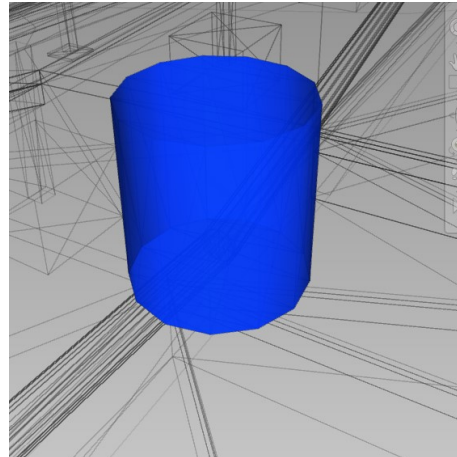
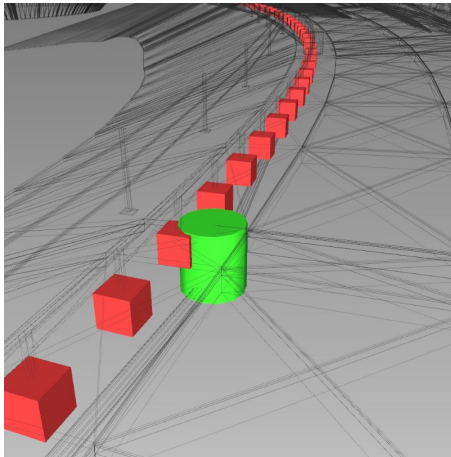
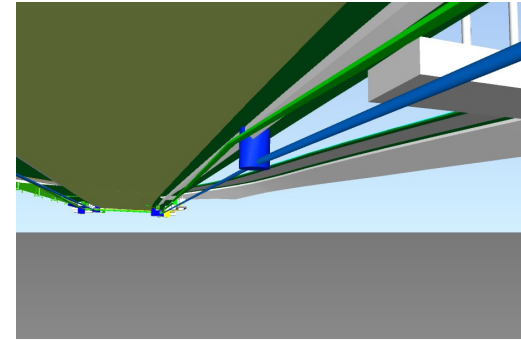
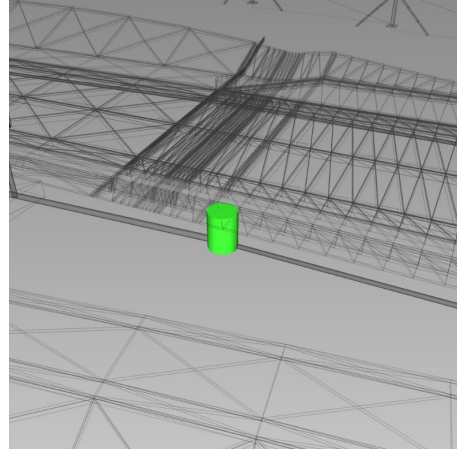
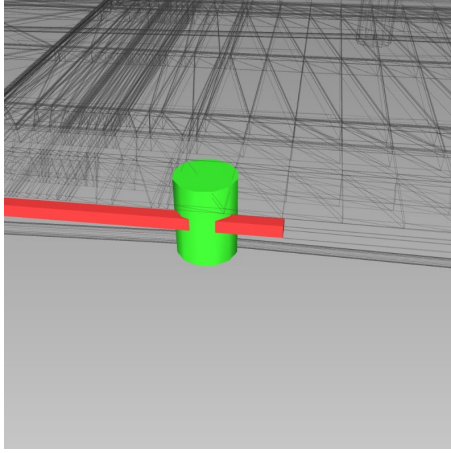
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	Project	Originator	Volume	Location	Location Element	Type	Discipline	Number							C01	C02	C03	C04	C05	C06	C07	C08
Series 700-1000 - Road Pavements																						
RP-1	MGT0510	RPS	HP	SW	AE	SP	C	0001	Appendix 7/1 - Permitted Pavement Options	DOC	Office 365	A.Boyle	E.Lavin	B.Lyons	Aug-19	30.08.19	29.11.19	10.02.20	02.03.20			
RP-2	MGT0510	RPS	HP	SW	AE	DR	C	0001	Road Pavement Plan Layout - Pavement Construction	DWG	Civil 3D	A.Boyle	E.Lavin	B.Lyons	Aug-19	30.08.19	29.11.19	10.02.20				
RP-3	MGT0510	RPS	HP	SW	AE	DR	C	0002	Road Pavement Plan Layout - Pavement Surface Course - PSV Requirements	DWG	Civil 3D	A.Boyle	E.Lavin	B.Lyons	Aug-19	30.08.19	29.11.19	10.02.20				
RP-4	MGT0510	RPS	HP	SW	AE	DR	C	0003	Typical Pavement Details Transverse Joint	DWG	Civil 3D	A.Boyle	E.Lavin	B.Lyons	Aug-19	30.08.19						

Field 1	Organisation /Originator		Volume		Location		Location Element		Document Type			Role		Number		Status		Revision	
Field 1	Field 2		Field 3		Field 4				Field 5			Field 6		Field 7		Field 8			
MGT0510	RPS	RPS	HIGH - Road Pavements	HP	Scheme Wide	SW	All Elements	AE	Drawing	Drawing Rendition, created solely to be printed either to pdf or paper	DR	Civil Engineer	C	Four digit sequential number	0001	Construction or Contractual	A1	Construction/ Contractual	C01

## Case Study | A77 Maybole Bypass / Clash Reports



## Case Study | A77 Maybole Bypass / Clash Reports



# Case Study | A77 Maybole Bypass / BIM360

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Approval workflow \*  
Design - Internal Review

Overview

Description  
This workflow applies to acceptance of design between RPS and Wills Bros

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Review name \*  
ST20 Sample

Documents for review \*  
Total: 1 document  
Add documents

10.3.5 Design Packages/10... 1 document

MGT0510-RPS-SB-S1520-DR-C-0104-01 C02.pdf V1

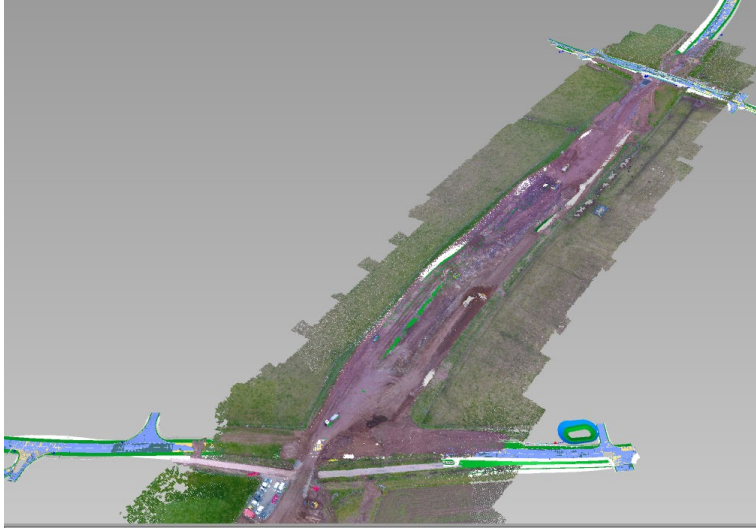
Notes

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October 2019



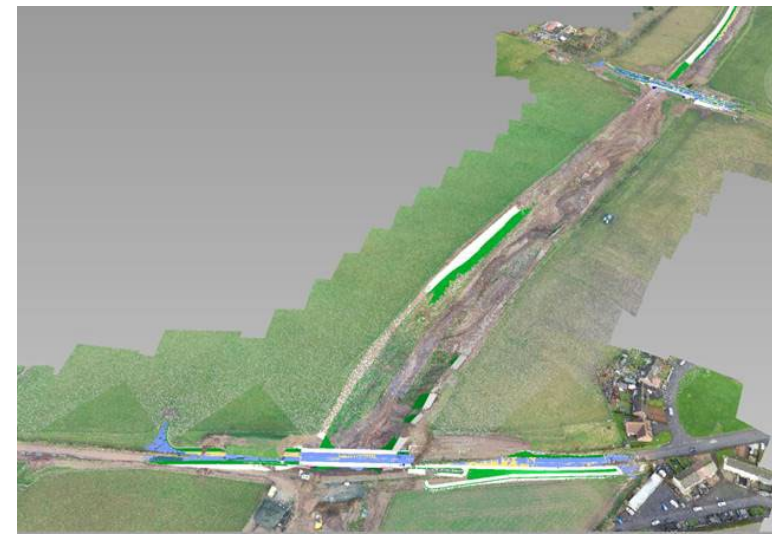
December 2019



August 2020



February 2021



# Digitalization

Project life cycle

Sustainability

Market

Subs

Client

Construction companies

Business partners

Augmented & Virtual reality

Automation

BIG Data

Digitalization

Construction/  
Industry 4.0

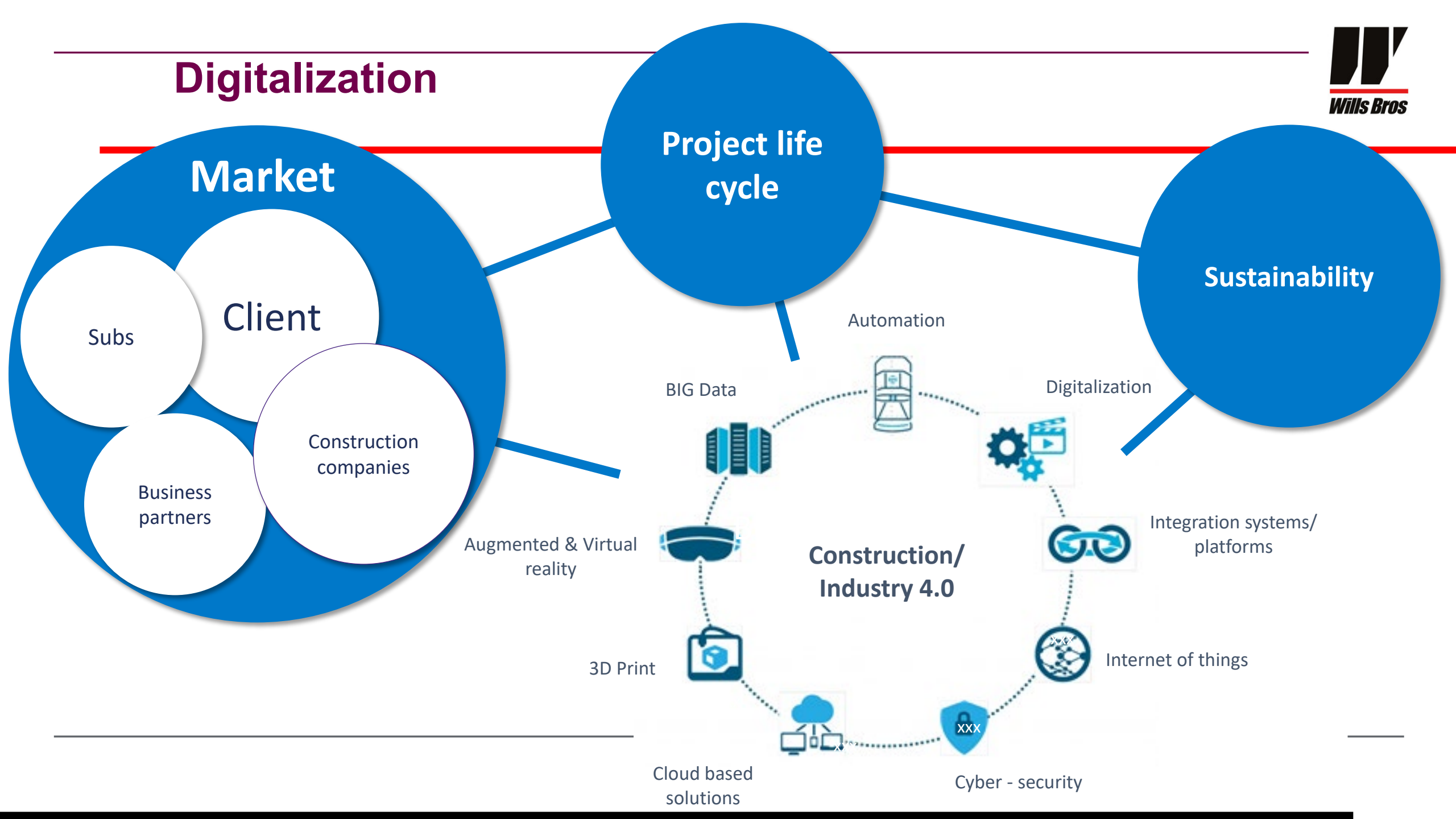
Integration systems/  
platforms

3D Print

Internet of things

Cloud based solutions

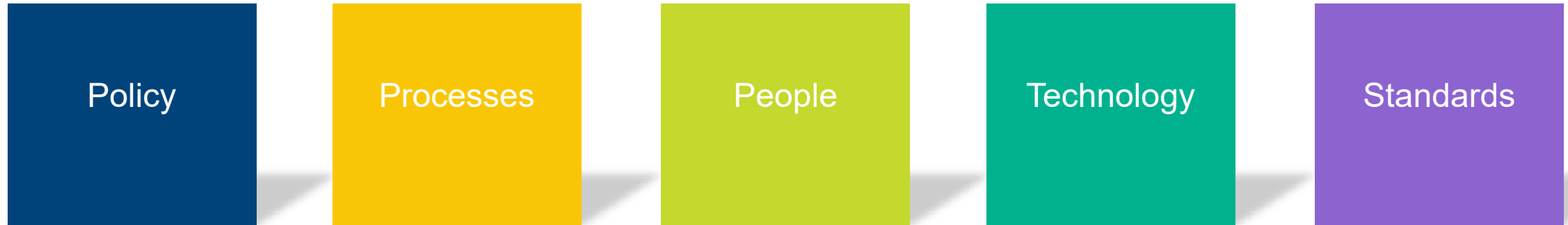
Cyber - security



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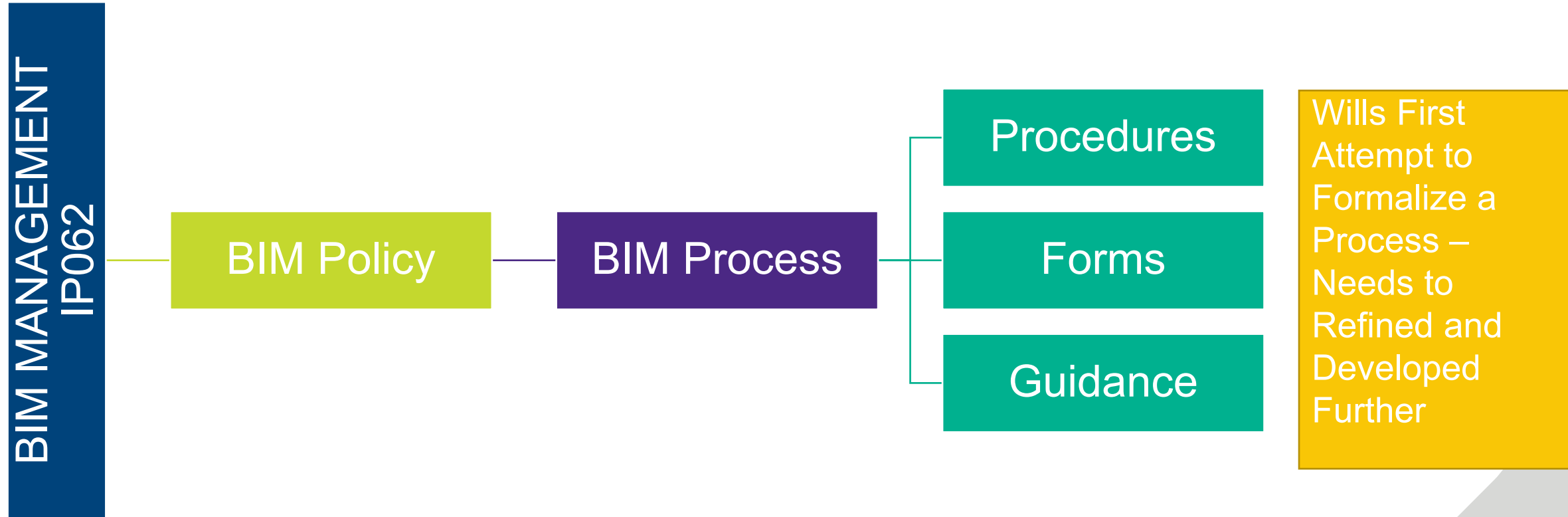
# Requirements

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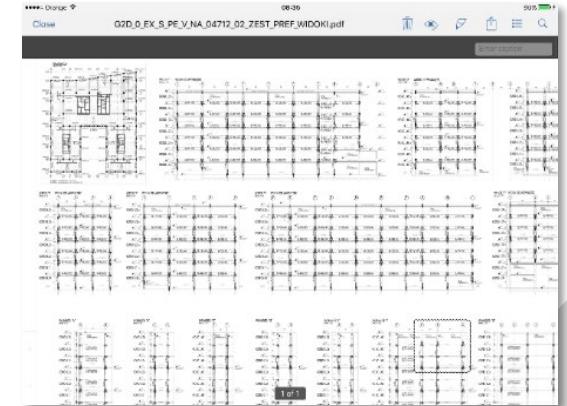
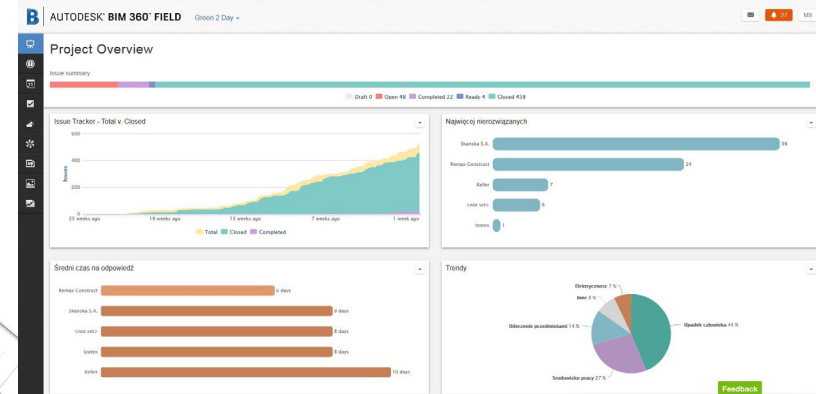
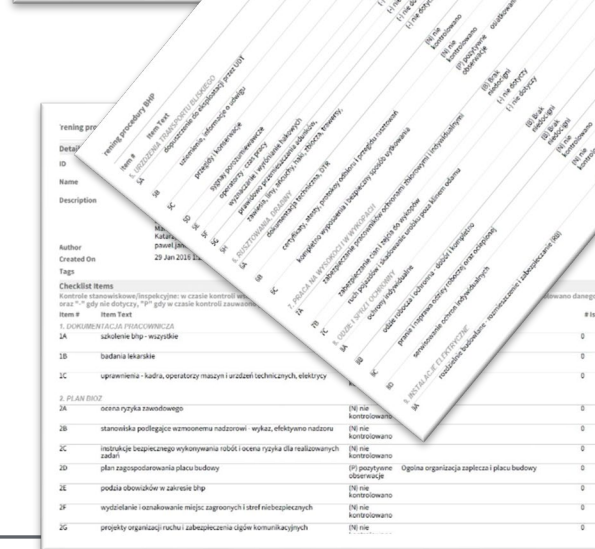
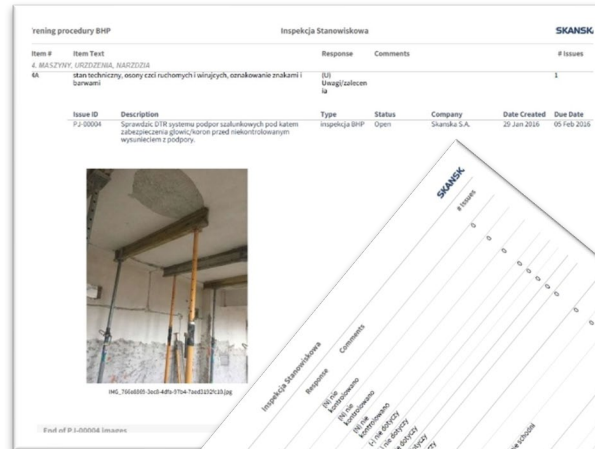
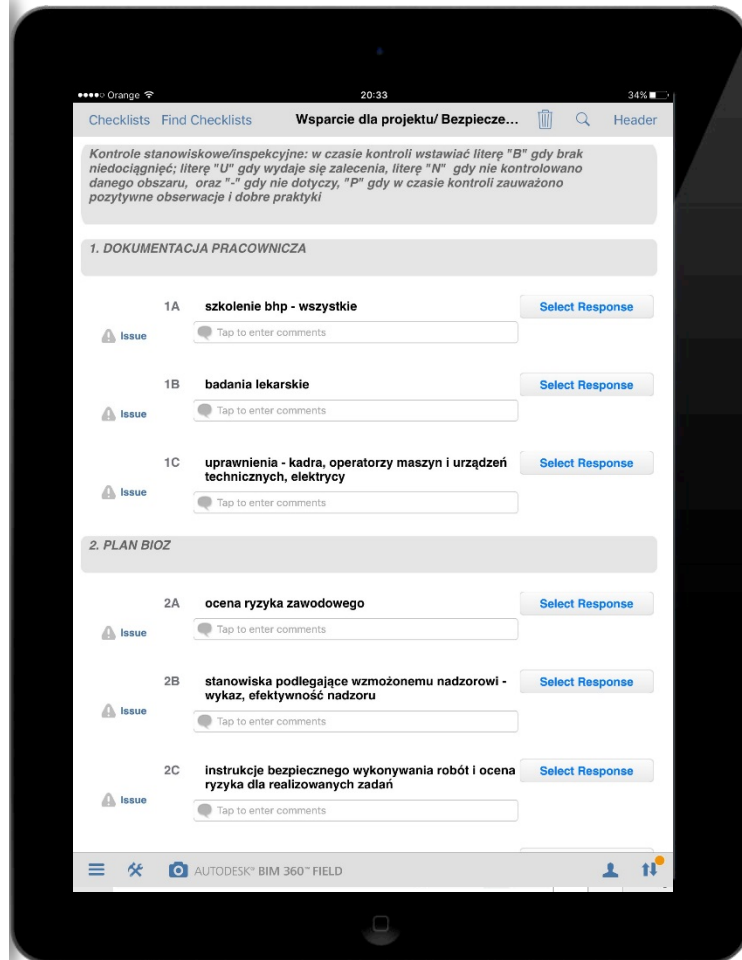
# BIM Management

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# Mobility on site / improving operations

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# Pilot projects

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**PILOT PROJECT PROPOSAL – 4D and 5D BIM**

To apply 4D and 5D BIM modelling on projects and identify potential benefits, requirements, and risks

Muhammad Saifurrazvi | Wills Bros  
Muhammad Zaid Redwood | Wills Bros  
13-08-2010  
BIM Department | Rev 3

PILOT PROJECT PROPOSAL – 4D and 5D BIM

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# BIM Certification

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**BSI KITEMARK CERTIFICATE**

**BS EN ISO 19650-1:2018**  
**BS EN ISO 19650-2:2018**  
**BS 1192-4:2014**

