



Belgisch **Wegen**congres Congrès belge de la **Route**

LEUVEN • 4-7.04.2022

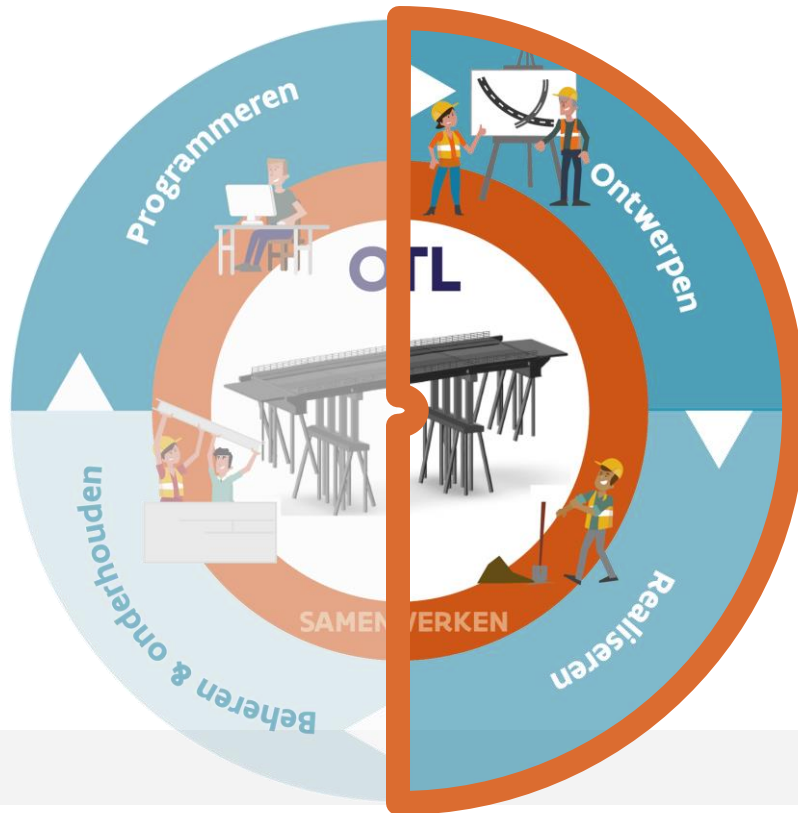
AWV zet BIM in praktijk

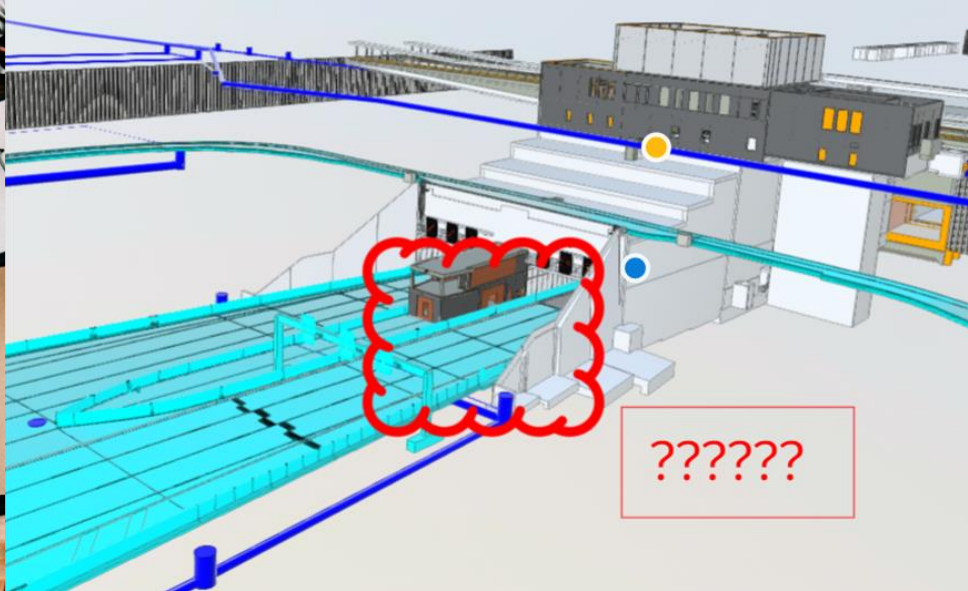




BIM Modelling

Focus op projectniveau



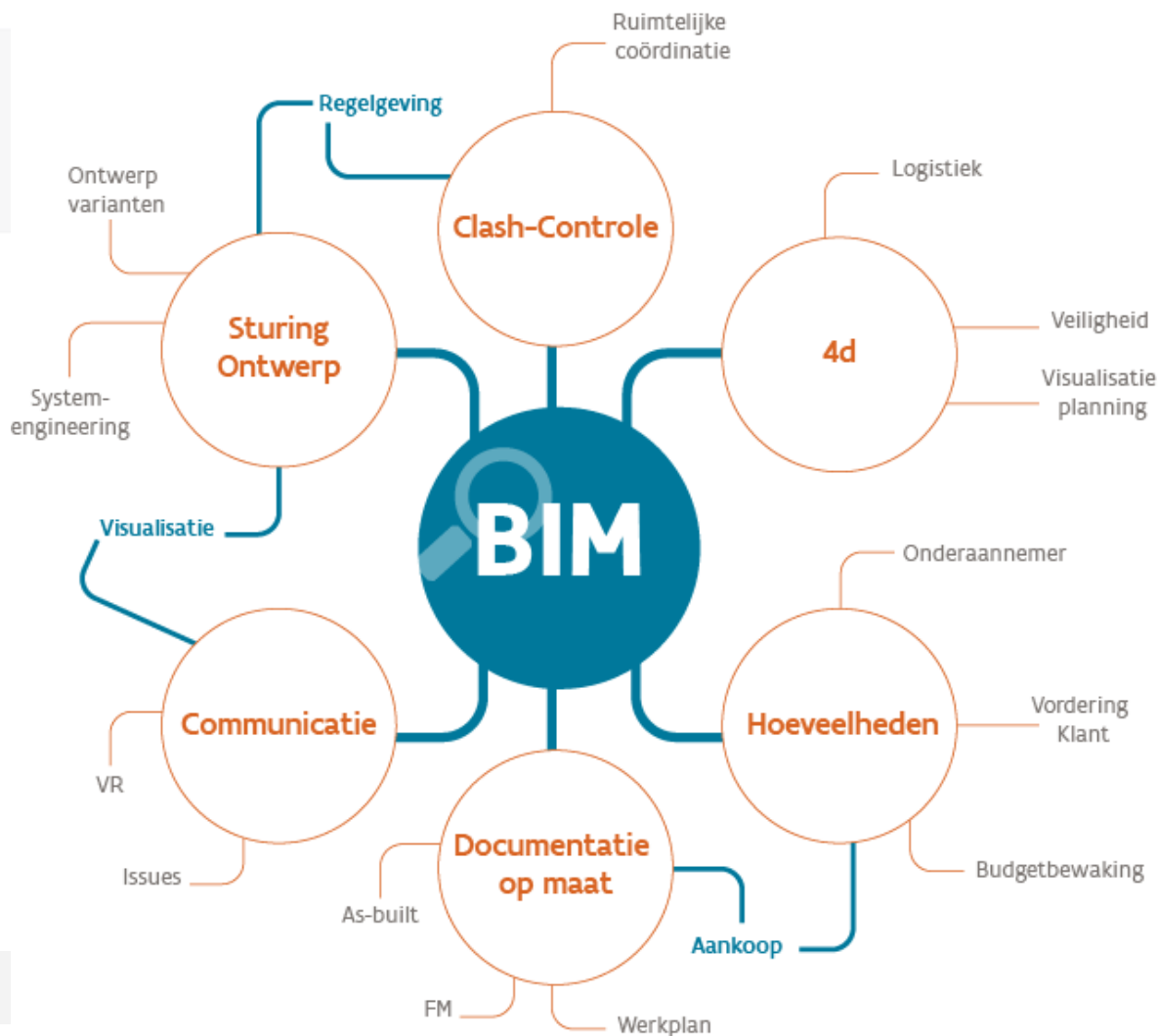




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BIM Modelling is ...





Standaardisatie nodig

Standaarddocumenten helpen ons daarbij...

- Datastandaard
- Algemene spelregels en visie vastleggen
- Projectspectifieke bepalingen en afspraken
BIM-toepassingen, LOG...
- Gedetailleerde specificaties van hoe
inwinningen en aanleveringen moeten gebeuren
- Collaboratieplatform (CDE) opzetten en inrichten

OTL + Artefacten

BIM-protocol

BIM-uitvoeringsplan

Instructiebundel en Topografisch Legendeboek

BIM360

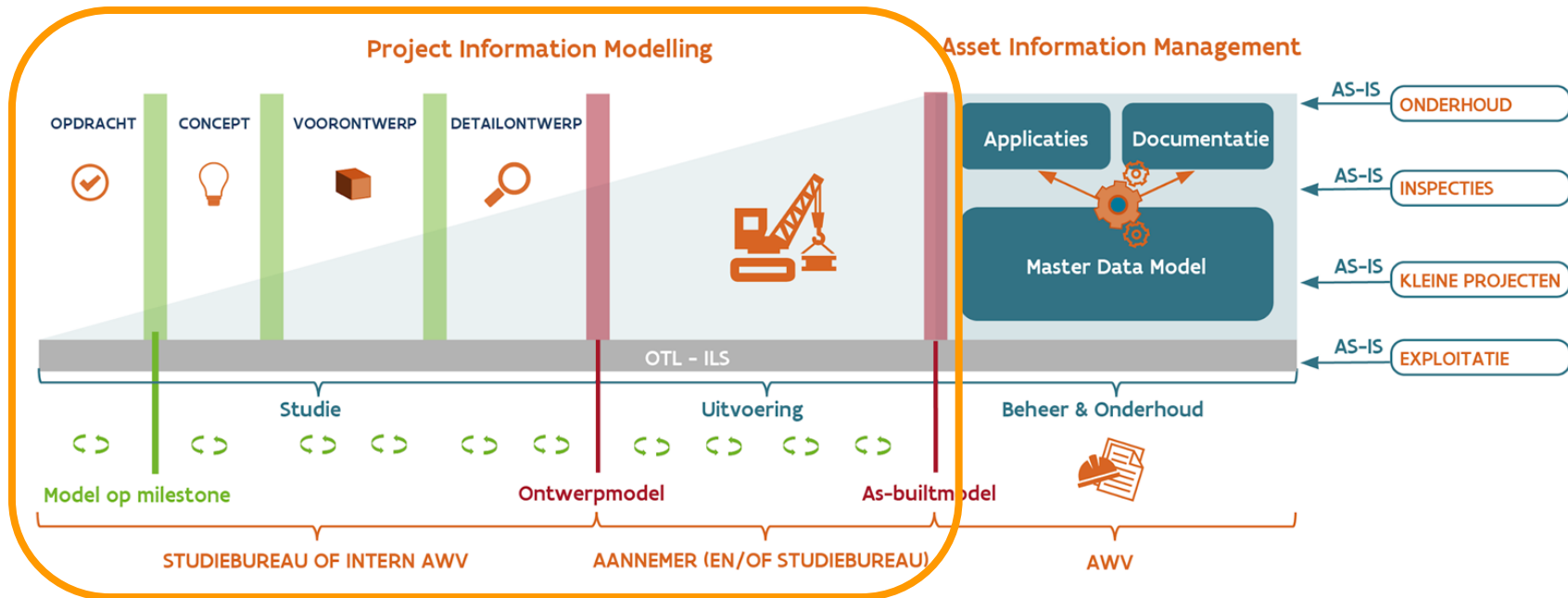


... Maar toch is een projectspecifieke aanpak nodig.

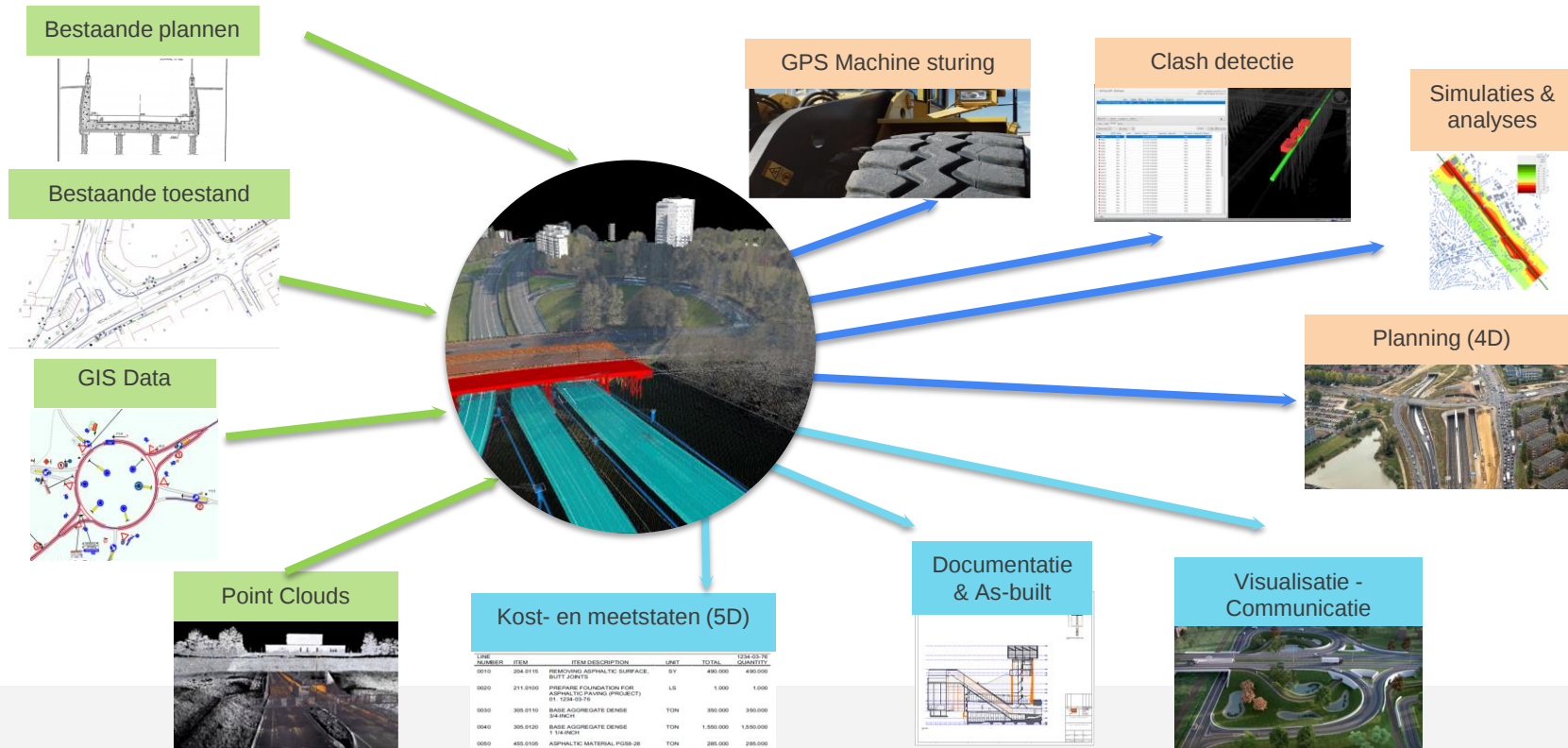
Wat is de meerwaarde van BIM voor DIT project ?



1. Wanneer kunnen we BIM inzetten?

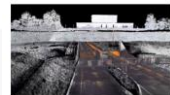


2. BIM Toepassingen: Hoe/waarvoor gaan we BIM gebruiken?





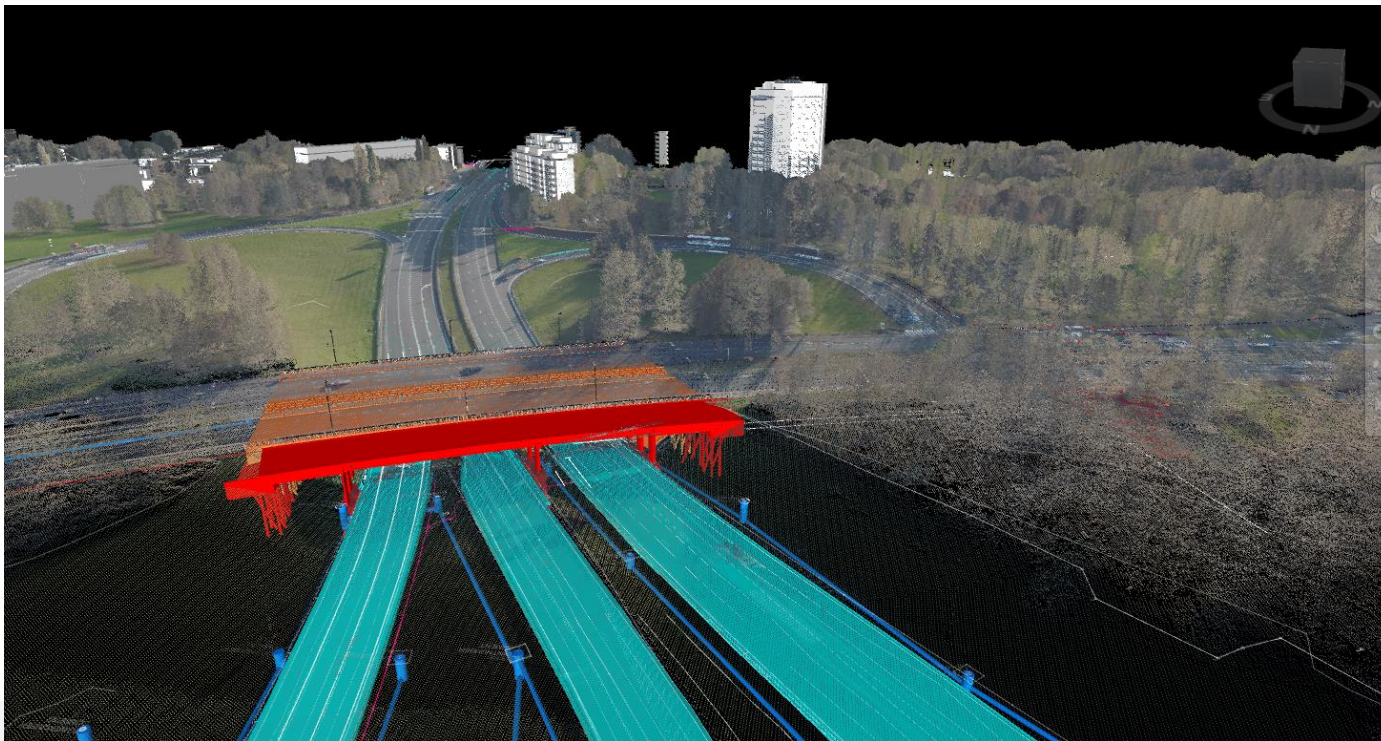
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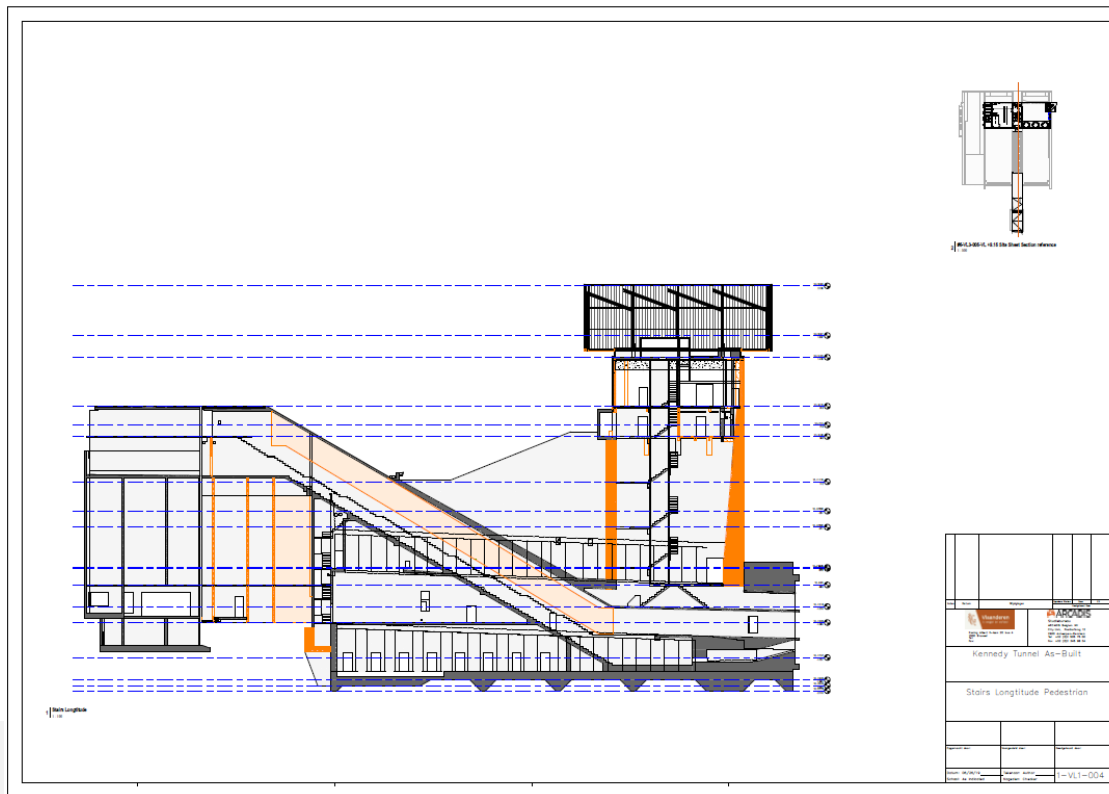
Verzamelen van
informatie



Input - Ontwerp en bestaande toestand

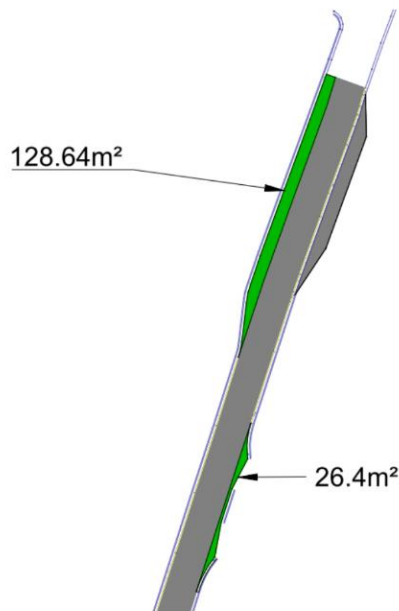


Output - Plannen





Output - Hoeveelheden



Arquimedes and job control - 2015.m - [BUILDING-Decomposition tree]

File Database Processes Show Tree Job control Window Help

27 CC2010 m³ Basement wall, B<3 m 81,004.77

Code	CC	Ut	Summary	Supplier	SalesQuant	ExecQuant	StudQuant	OrigCenQuant	SalePrice	ExecPrice	ProbablePrice
CR			Leveling		1.000		1.000		143.60		
CRL010			m² Blinding concrete		10.813			10.813	13.28		
CC			Retaining elements		1.000		1.000		13,245.73		
CCS010			m³ Basement wall, H<3 m		49.469			49.469	267.55		
CS			Surface elements		1.000		1.000		9,847.47		
CS2010			m³ Reinforced concrete		59.469			59.469	165.59		
CA			Ties		1.000		1.000		1,137.69		
CAV010			m³ Tie beams		4.595			4.595	247.54		
E			Structures		1.000		1.000		39,334.90		
EH			Reinforced concrete		1.000		1.000		39,334.90		
EH010			m² Stair slab		18.400			18.400	130.85		
EHU020			m³ Reinforced concrete		432.950				85.29		

Basement wall, B<3 m

Basement wall, H<3 m, C25/30 mixed at plant with waterproof admixture and reinforcement=71.102 kg/m³, wall thickness=0.20 m

Assign job items and quantity extraction

Building

C:\CYPR\Arquimedes\Arquimedes-Building

Revit entities Materials Rooms

Stairs Structural Columns Structural Foundations Wall Foundation

Types of Wall Foundation

Type Name	Type Mark	Keynote	Type_Codified
Strip footing			
Excisor			

Description

Basement wall, H<3 m, C25/30 mixed at plant with waterproof admixture and reinforcement=71.102 kg/m³, wall thickness=0.20 m

Entity

No items have been selected.

Id	Family Name	Type Name	Phase	Level	Length	Width	Thickness	Net area	Net volume
197636	Wall Foundation	Strip footing	New construction		12.350	1.050	0.400	0.000	5.355
197718	Wall Foundation	Strip footing	New construction		6.325	1.050	0.400	0.000	2.657
197730	Wall Foundation	Strip footing	New construction		12.100	1.050	0.400	0.000	4.914
TOTAL					30.775			0.000	12.926

Output - Visualisaties en communicatie

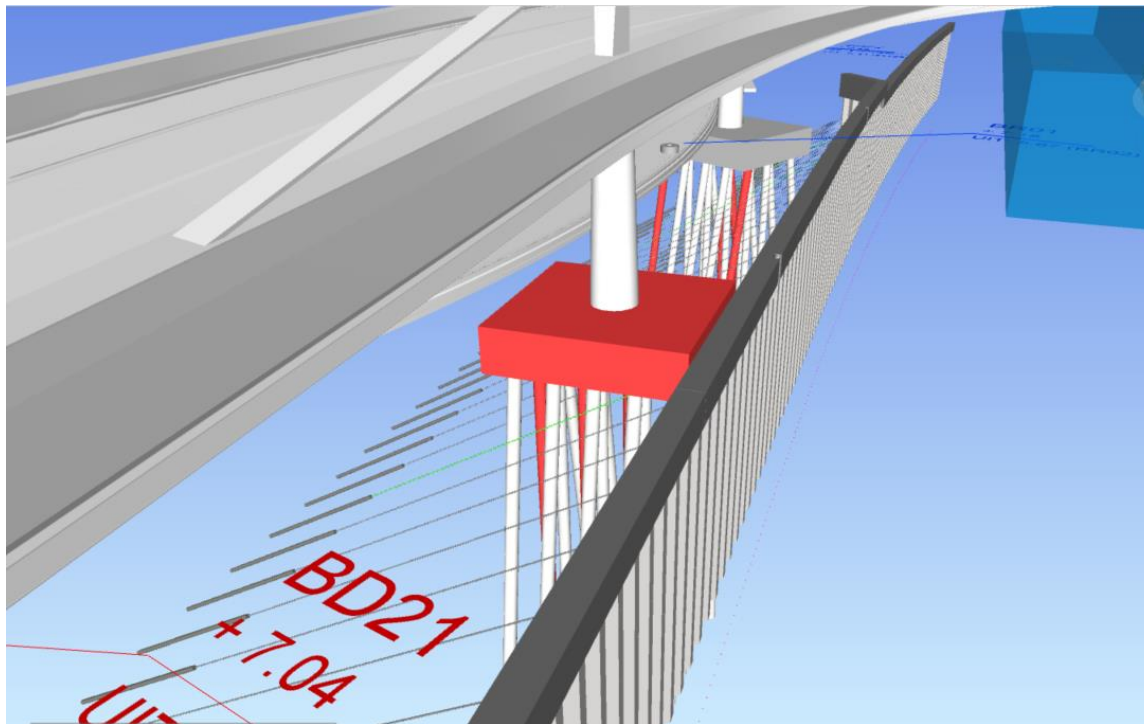




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Analyses - Clash- en issuedetectie



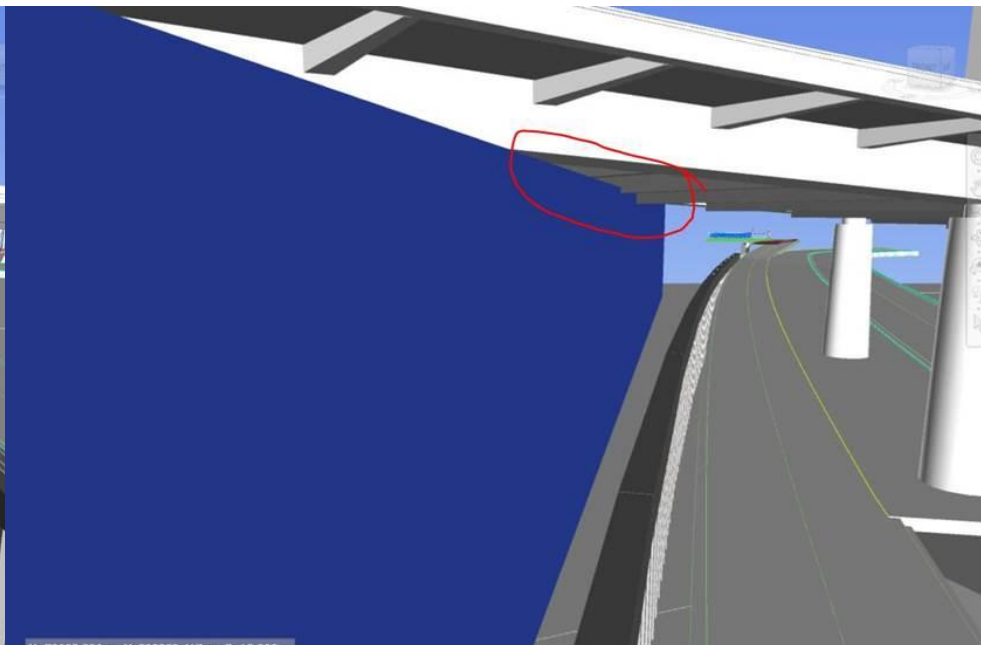
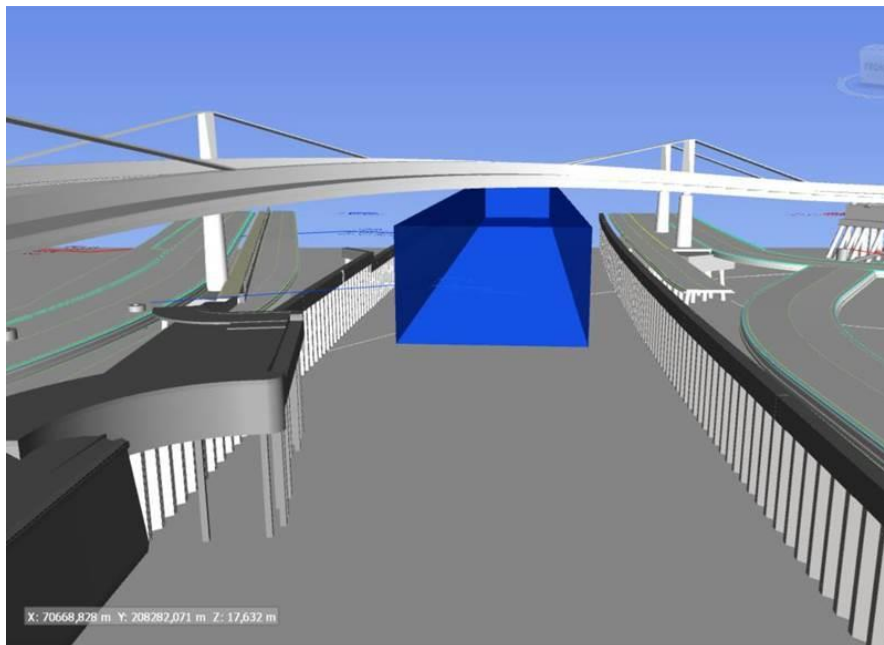


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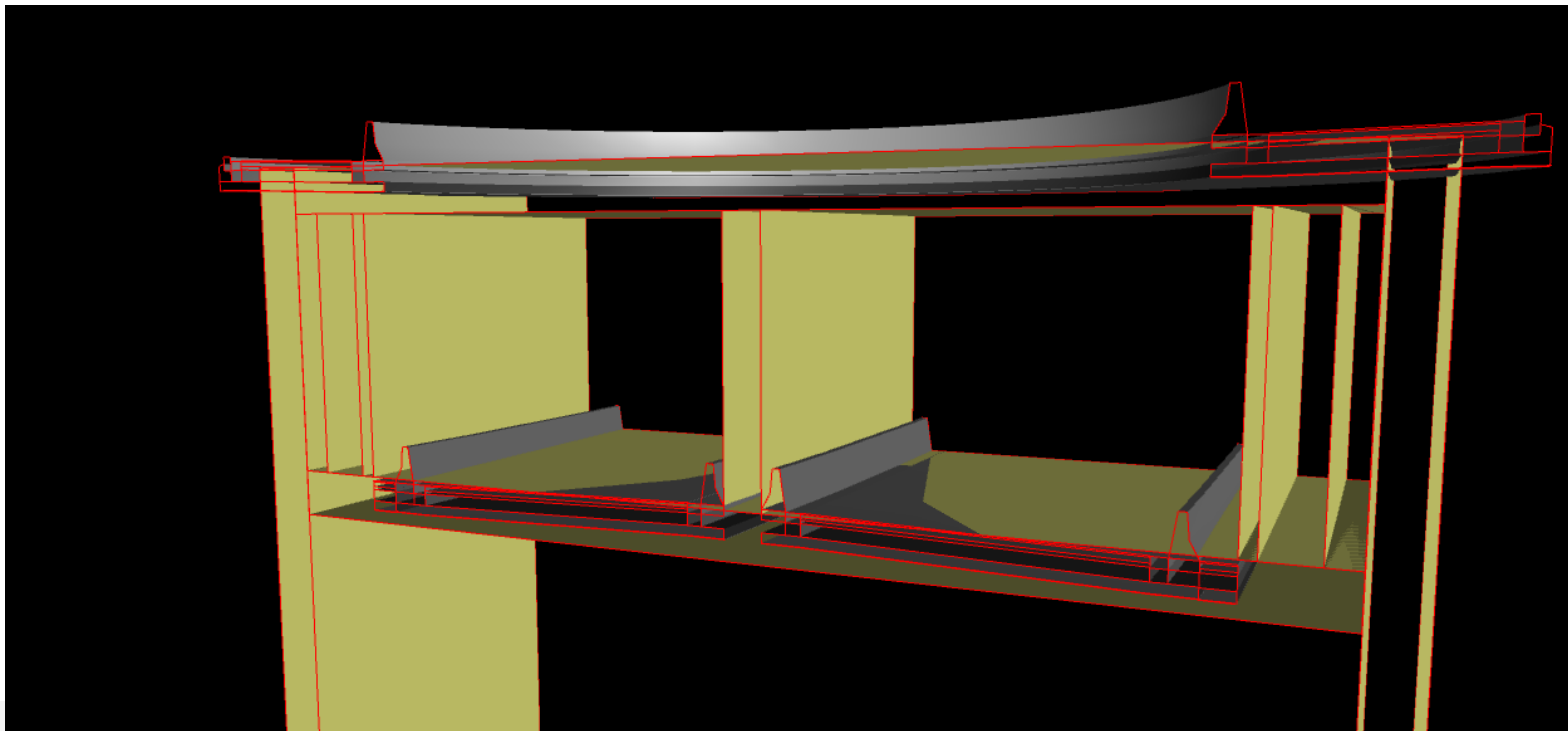


Analyses - Clash- en issuedetectie





Analyses - Clash- en issuedetectie



Andere BIM-toepassingen

4D (fasering)

Waterafvoer

Geluidsschermen

Zichtanalyses

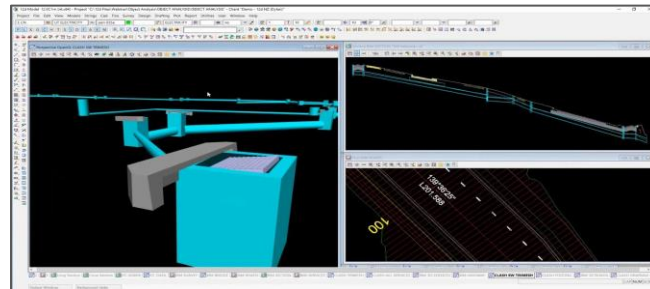
Analyse daglicht en schaduw

Logistieke stromen tijdens werfuitvoering

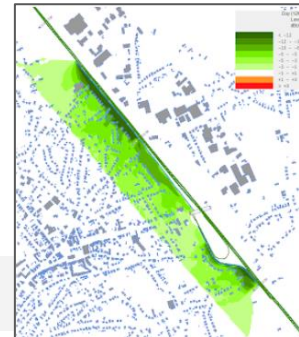
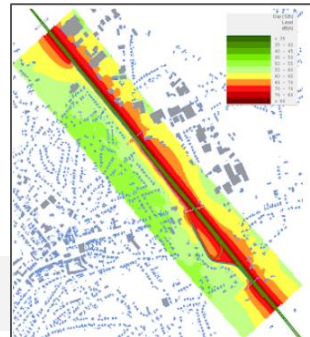
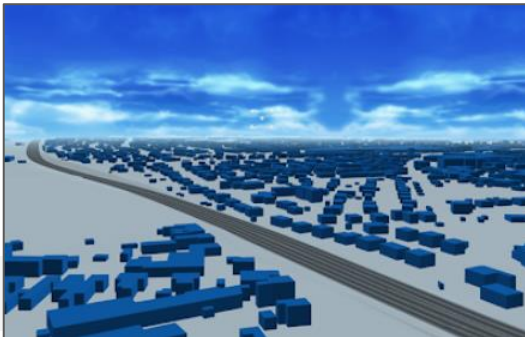
...



www.pinnacleconsultingengineers.com



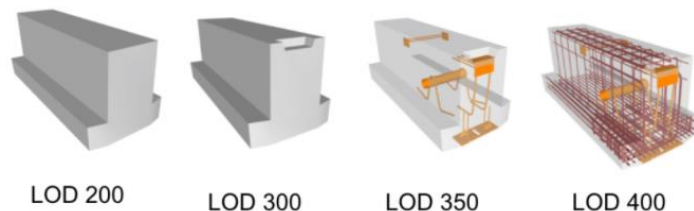
www.youtube.com - Drainage and Object 3D Clash Detection - Training Webinar Series





3. Wat gaan we juist gaan 'bimmen'?

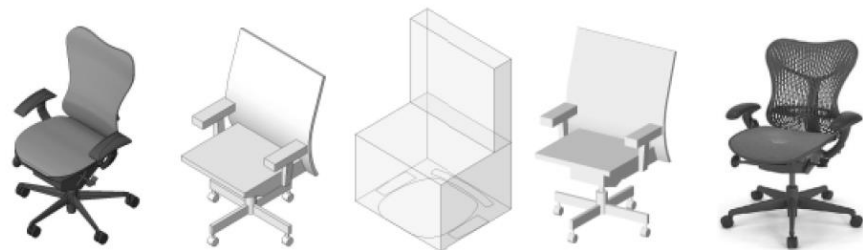
LOD - Level of Development



<https://revititq.com/level-of-development/>

LEVEL of DEVELOPMENT

LOD 100 LOD 200 LOD 300 LOD 400 LOD 500



Concept (Presentation) Design Development Documentation Construction Facilities Management

DESCRIPTION:

Office Chair
Arms, Wheels

WIDTH:

DEPTH:

HEIGHT:

MANUFACTURER:

Herman Miller, Inc.

MODEL:

Mirra

LOD:

100

DESCRIPTION:

Office Chair
Arms, Wheels

WIDTH:

DEPTH:

HEIGHT:

MANUFACTURER:

Herman Miller, Inc.

MODEL:

Mirra

LOD:

200

DESCRIPTION:

Office Chair
Arms, Wheels

WIDTH:

DEPTH:

HEIGHT:

MANUFACTURER:

Herman Miller, Inc.

MODEL:

Mirra

LOD:

300

DESCRIPTION:

Office Chair
Arms, Wheels

WIDTH:

DEPTH:

HEIGHT:

MANUFACTURER:

Herman Miller, Inc

MODEL:

Mirra

LOD:

400

DESCRIPTION:

Office Chair
Arms, Wheels

WIDTH:

DEPTH:

HEIGHT:

MANUFACTURER:

Herman Miller, Inc

MODEL:

Mirra

PURCHASE DATE:

01/02/2013

(Only data in red is useable)

practicalBIM.net © 2013



3. Wat gaan we juist gaan ‘bimmen’?

LOD - Level of Development

LOI - Level of Information

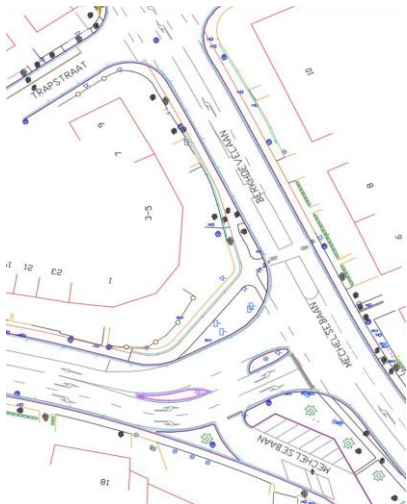
- Beschreven in de datastandaard (bv. de OTL)
- Een selectie van die aan te leveren informatie
bv. een ‘subset’ van objecttypes, eigenschappen, relaties uit de OTL
- Afhankelijk van o.a. de fase en scope van het project

LOG - Level of Geometry

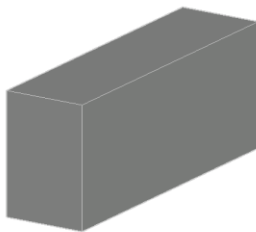
- Een meer of minder gedetailleerde geometrie per object type
- Bv. LOG -1 tot LOG 4



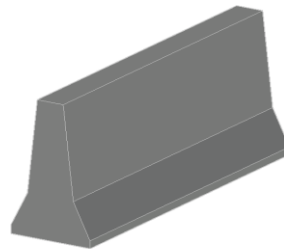
LOG Niveau 0



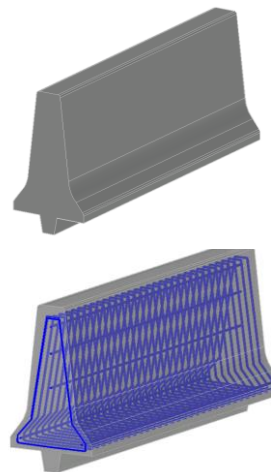
LOG Niveau 1



LOG Niveau 2



LOG Niveau 3-4





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BIM in een project = maatwerk



EEN ORGANISATIE VAN



MET DE STEUN VAN

Meer info <https://wegenenverkeer.be/zakelijk/bim>





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Contact

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