

B7 – Virtual Reality i dagligdagen



VR og BIM...

> Hv

Virtual reality

Fra Wikipedia, den frie encyklopædi

Virtual reality (VR) er en teknologi som tillader en bruger at virke gensidigt med et computer-simuleret miljø, det være et reel eller imaginært et. De nyeste virtual reality miljøer er primært visuelle oplevelser, vist enten på en computerskærm eller gennem specielle stereografiske display (ofte briller), men nogle simulatorer



VR's historie...

Introducing . . .

sensorama

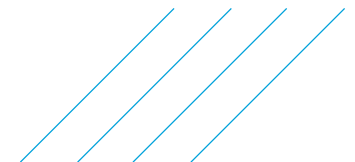
The Revolutionary Motion Picture System
that takes you into another world
with

- 3-D
- WIDE VISION
- MOTION
- COLOR
- STEREO-SOUND
- AROMAS
- WIND
- VIBRATIONS



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TEL. (213) 459-2162



VR's history



VR's historie..

1995...



VR's historie...

17 år senere...



VR's historie...

Oculus Rift VR bundle

Varenr.: OCULUSBUNDLE



4.8 (8)

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3 599

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Forventet på lager online: 16-11- På lager i [5 varehuse](#)
18

Oplev VR gaming på en måde, der får dig til at glemme den virkelige verden. Oculus Rift VR bundle inkluderer headset med integreret VR lyd, to Touch controllere og to trackere med 360 graders tracking for fuld realisme.

- > VR headset med lyd
- > 2 trackere, 2 Touch controllere
- > 360 graders tracking



 [Se større billede](#)



VR og BIM...

- › Hvad er Virtual Reality?
- › Hvad har VR med BIM at gøre?
- › Hvad er BIM?

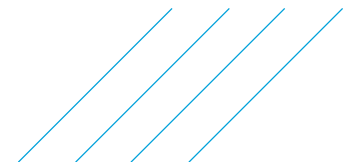
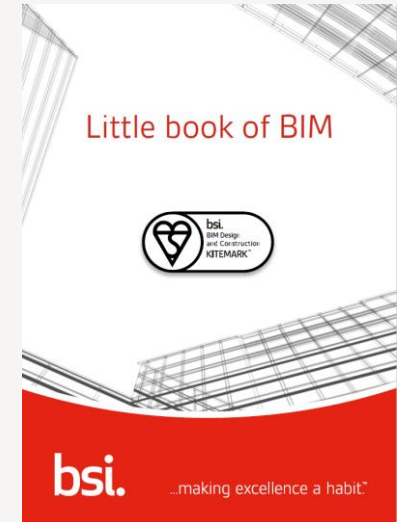


VR og BIM..

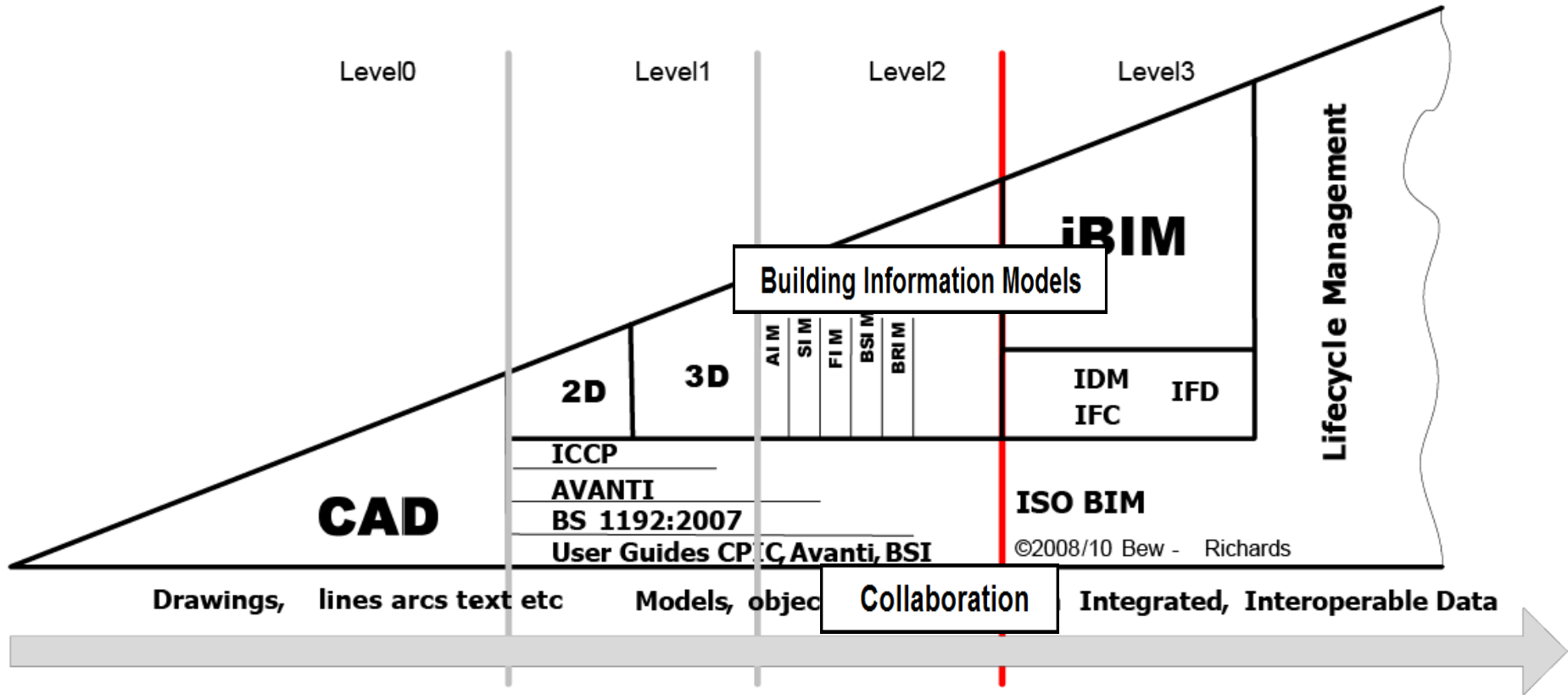
BIM definition

Building Information Modelling (BIM) is a collaborative way of working underpinned by digital technologies, which allow for more efficient methods of designing, delivering and maintaining physical built assets throughout their entire lifecycle.

Greater efficiencies can be realised due to significant pre-planning during the design and construction phases, providing comprehensive information at handover stage.



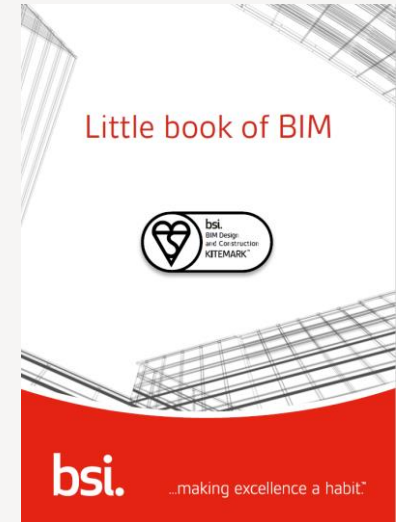
BIM modenhed, UK



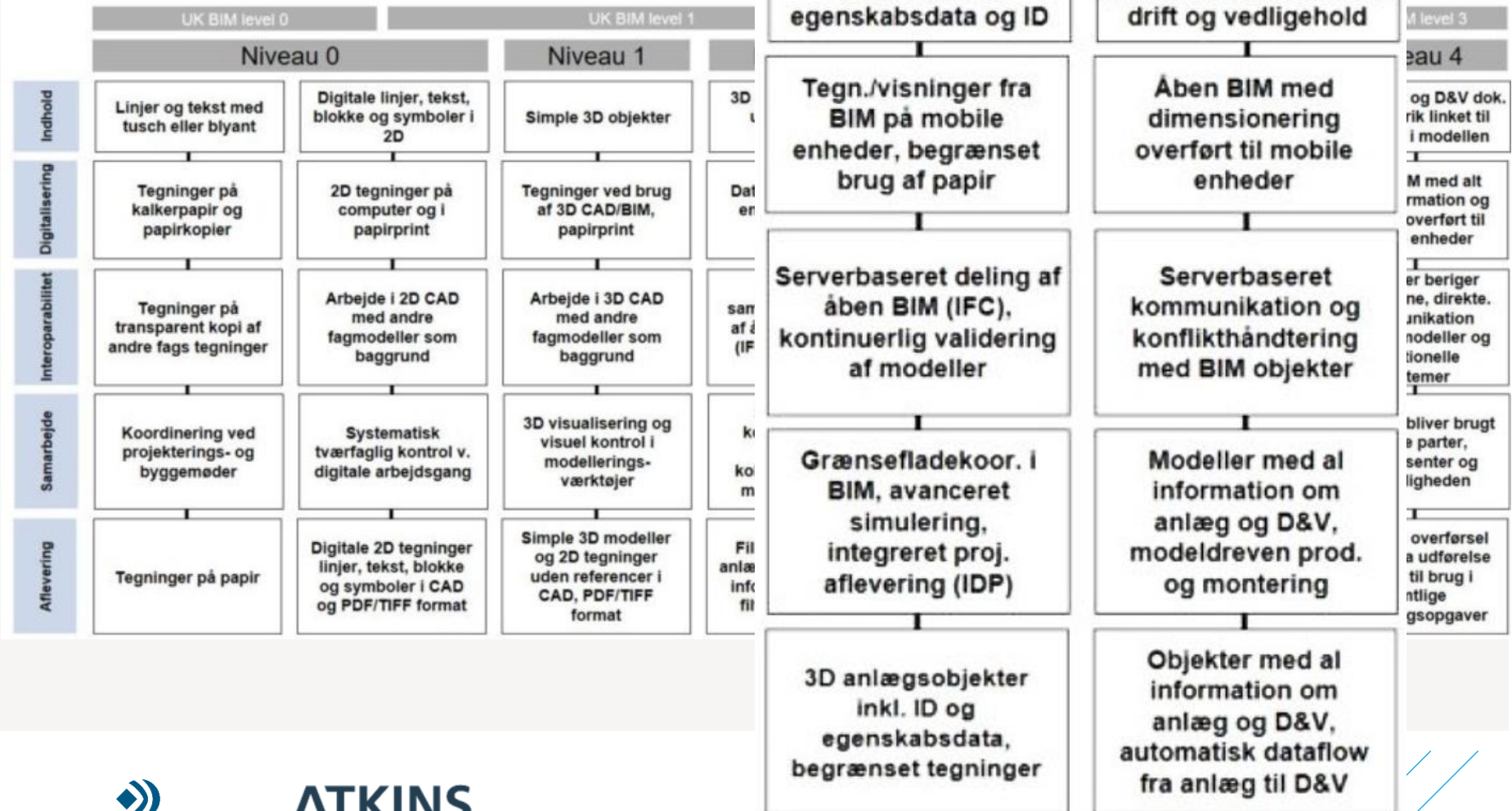
BIM modenhed, UK/BSI

- BIM Level 2**
- All parties use their own 3D CAD models, not necessarily working on a single, shared model
 - Collaboration is used. Data is exchanged between parties and design information is shared in a single file format
 - Federated BIM model is created. Each party can combine data with their own in order to make checks.

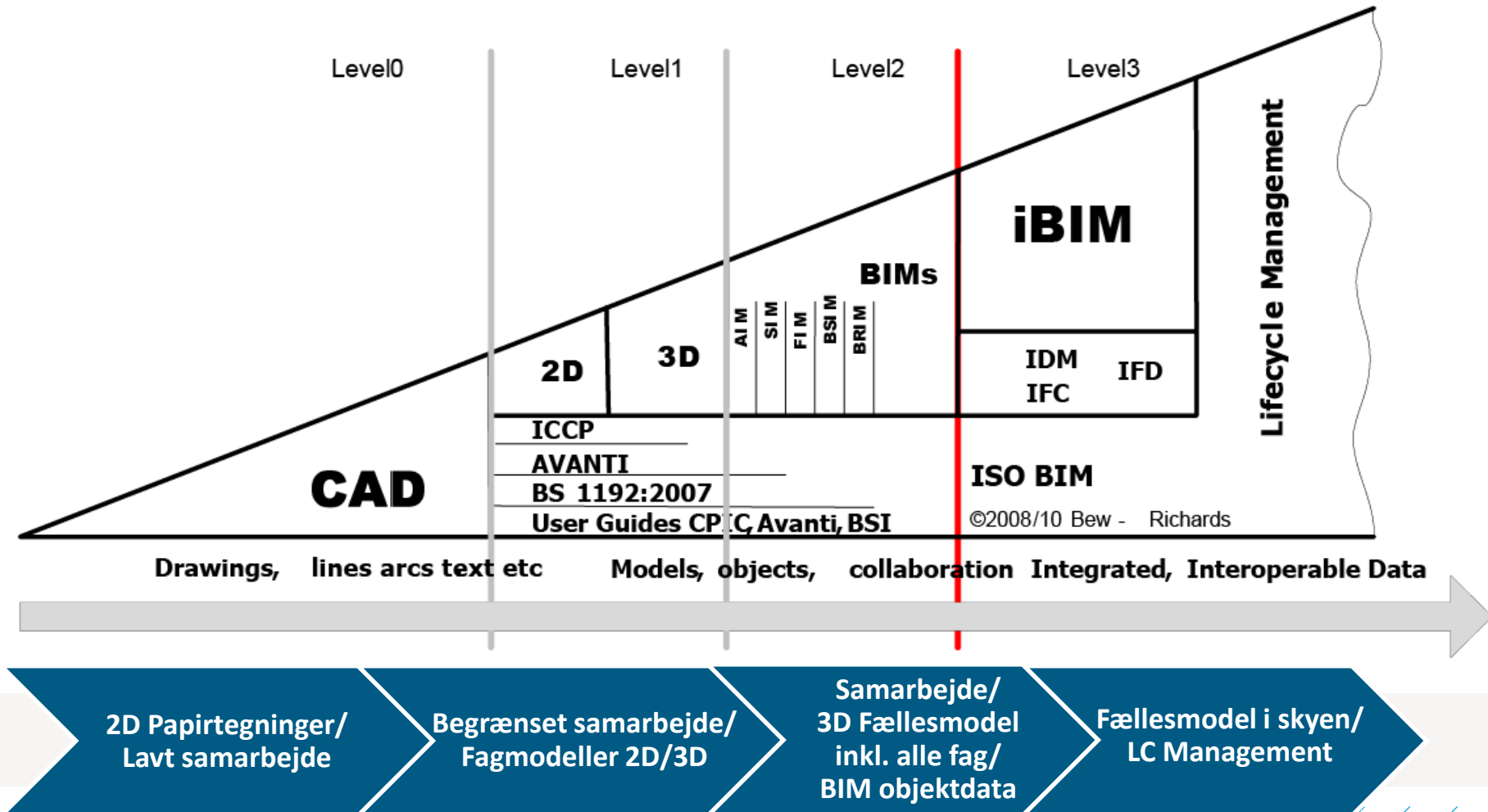
-
- BIM Level 3**
- Full collaboration between all



BIM modenhed, BIM infra



BIM modenhed, UK



BIM modenhed, Trimble

BIM Evolution

CURRENT

2D Drawings



Single discipline
Manual and CAD
Discipline approach

3D Models

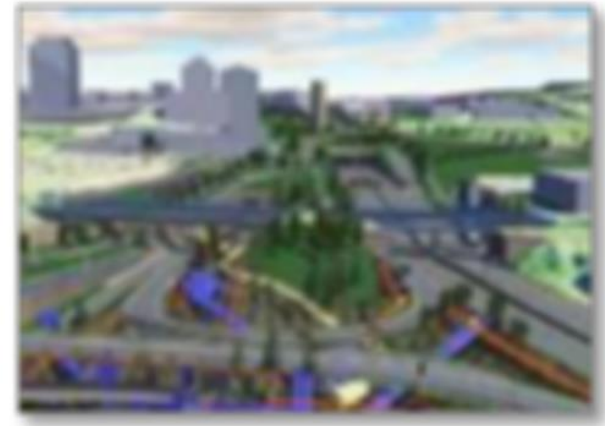


Single discipline
Limited intelligence
Discipline approach

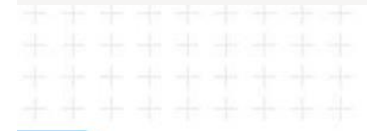
ISOLATED



3D Collaboration Models. Level 2



Multi-discipline
VR visualization
Project collaboration



Structure. Level 3



- Trimble Quadri Level 3**
- Quadri Easy Access use web services
 - Quadri support IFC standards,
 - Quadri is a collaborative, multi discipline model server

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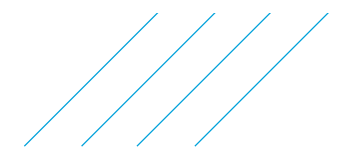


TRANSFORMING THE WAY THE WORLD WORKS

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NCUC 18, B7 – Virtual Reality i dagligdagen, Mikkel Bennedbæk

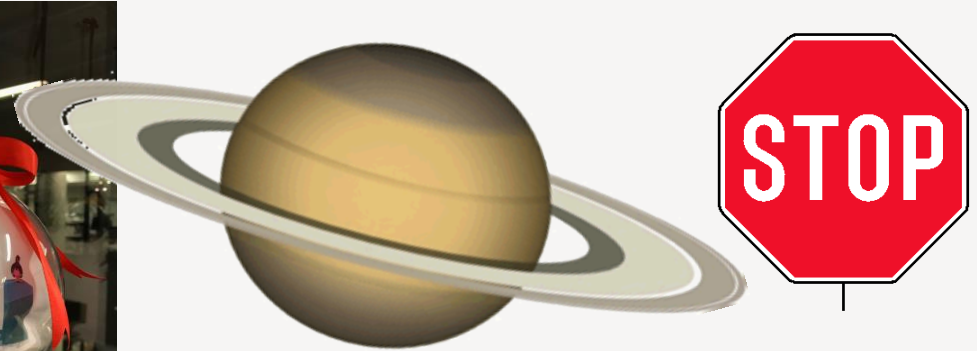
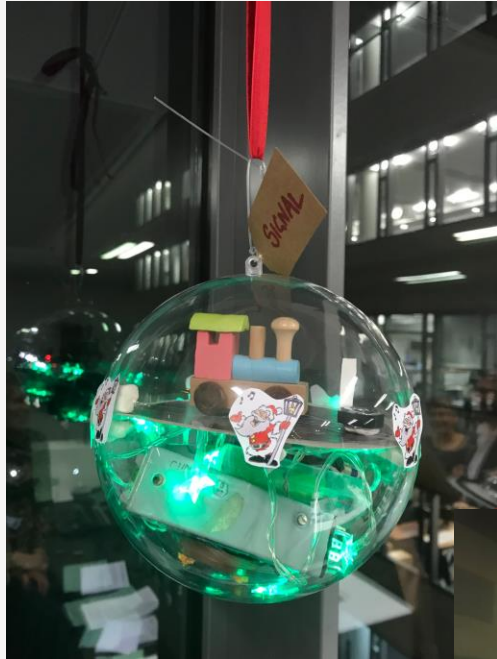


Hvad kan VR/AR-visualisering så bruges til?

- › Lækker autentisk præsentation af et projekt
- › Vurdering af flugtveje og pladsforhold
- › Visualiseringer
- › Projektgennemgang ved projekteringsmøder
- › Andre muligheder?
- › Kan det bruges ifm 3D kvalitetssikring?
 - › Kan markups fra Navigator importeres i LumenRT?
 - › Hvis de kan – hvordan skal de så se ud?



Idéen...

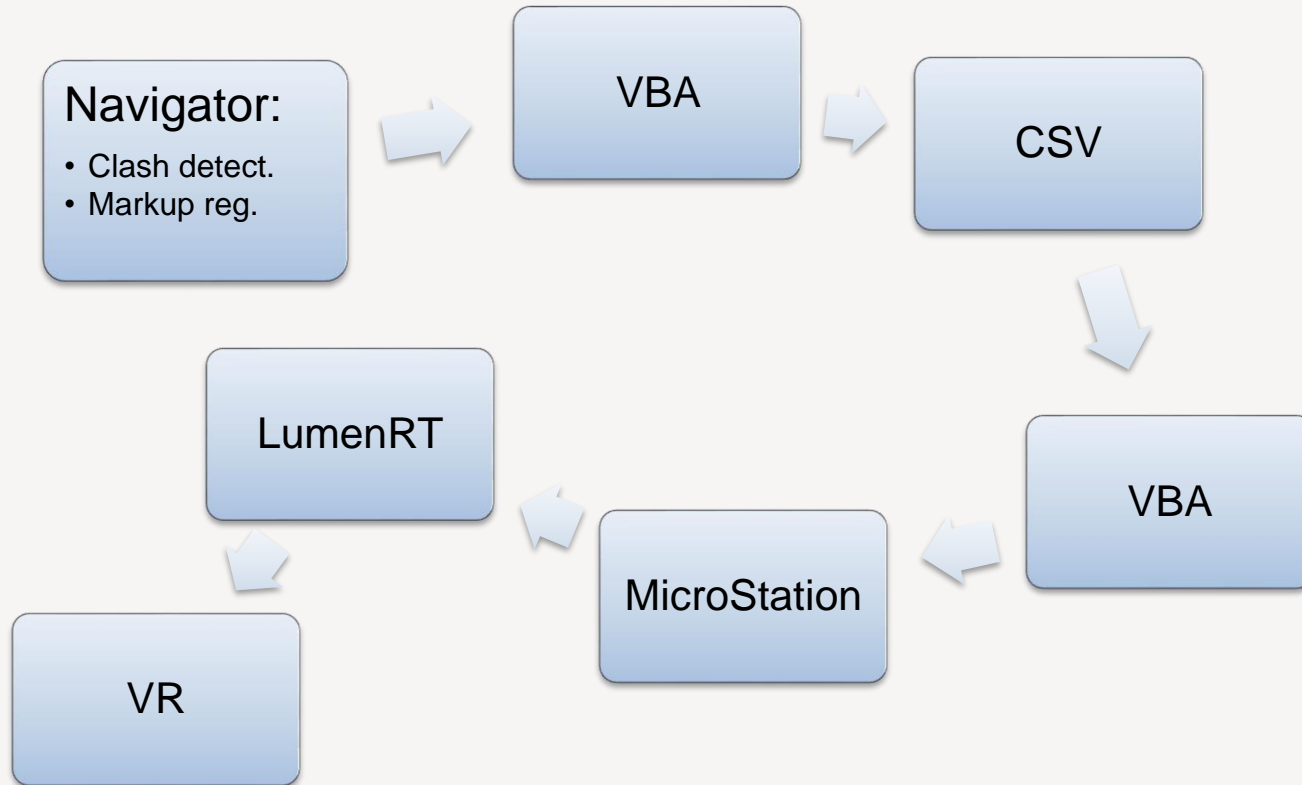


Resultatet...



Navigator, BIM og Virtual Reality.

Processen...



Demo



Udviklingspotentiale

- › Mulighed for tilføjelse af markups direkte i VR-model
- › Autogenereret og rutebaseret markup visualisering (hvor alle markups gennemgås)
- › Links (2 vejs) mellem markuprapport og markups i VR-model
- › VR-modelgenerering via ICS
- › Indbygget funktionalitet i Navigator CE.



BIM modenhed, Atkins

“The first organisation in the UK to achieve the BSI Kitemark for BIM Level 2 is SNC-Lavalin’s Atkins business”



Spørgsmål?



Tak for opmærksomheden...

