

# Interactive Design with Augmented Reality

**Hermen Jan van Ree**

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**Job van Hardeveld**

Cadac Group

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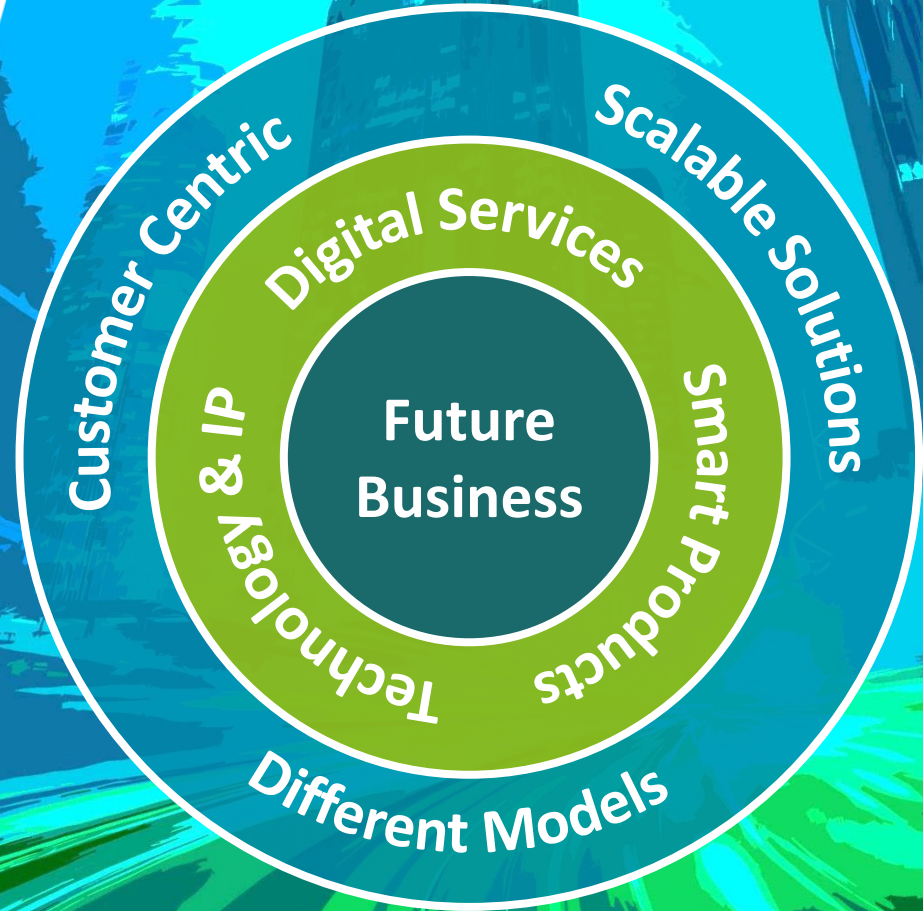


***Hermen Jan van Ree***  
***Global Innovation Leader***

# *International Engineering Consultancy*

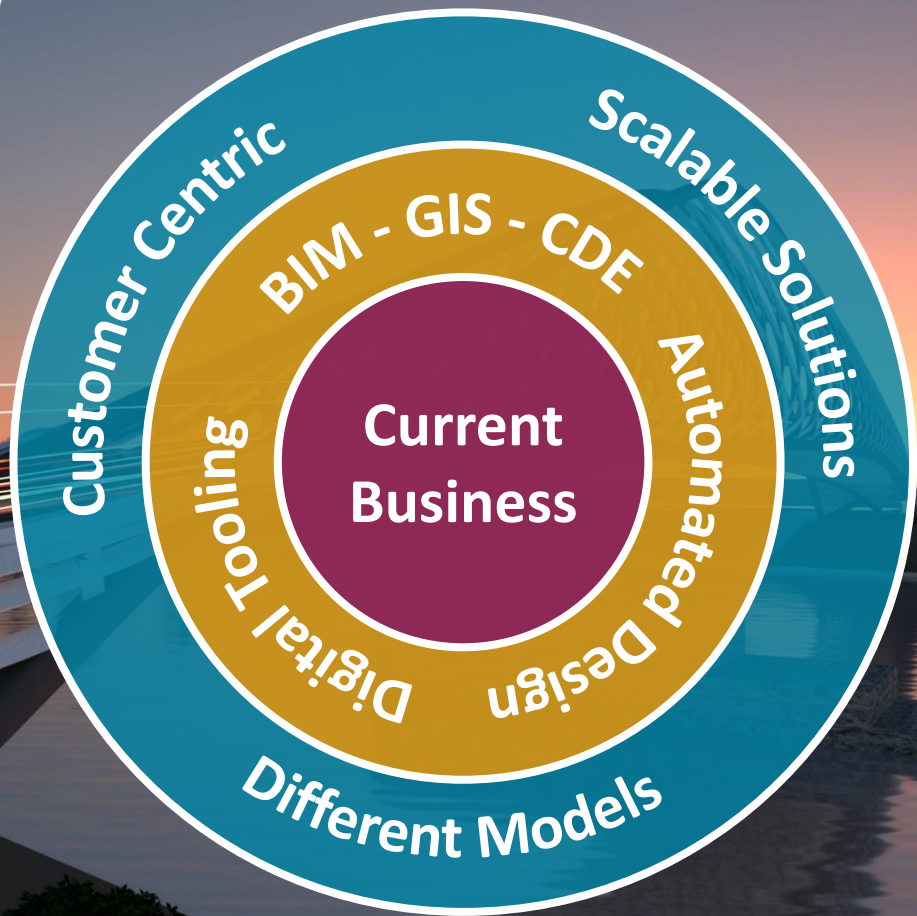


# *Innovating our Future Business*





# ***Digitalising our Current Business***





***Job van Hardeveld***  
***Serious Gaming Specialist***

***Cadac.  
Enabling  
Digital.***

The logo for Cadac Group, featuring the word "Cadac" in a purple serif font and "Group" in a purple sans-serif font, separated by a stylized circular icon.





***Autodesk  
Platinum  
Reseller***



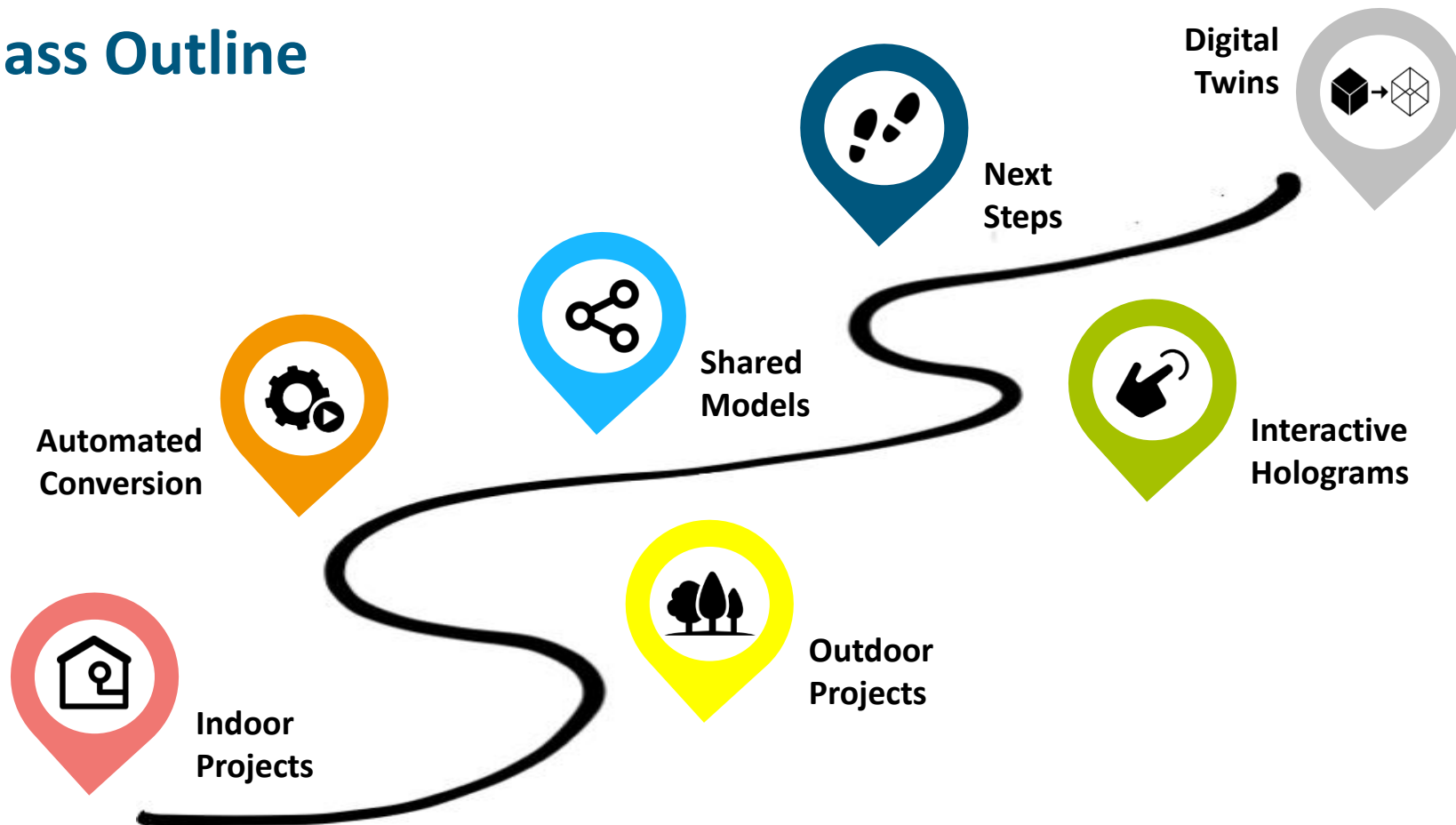


# *Innovative R&D Lab*

Cadac Group



# Class Outline



***Pokémon Go  
as inspiration  
to Engineering  
Consultancy***





*Personally  
inspired by  
Philip &  
Merel*





*Bringing to life  
projects with  
Augmented  
Reality*



# Project Heerlen

## Urban Development

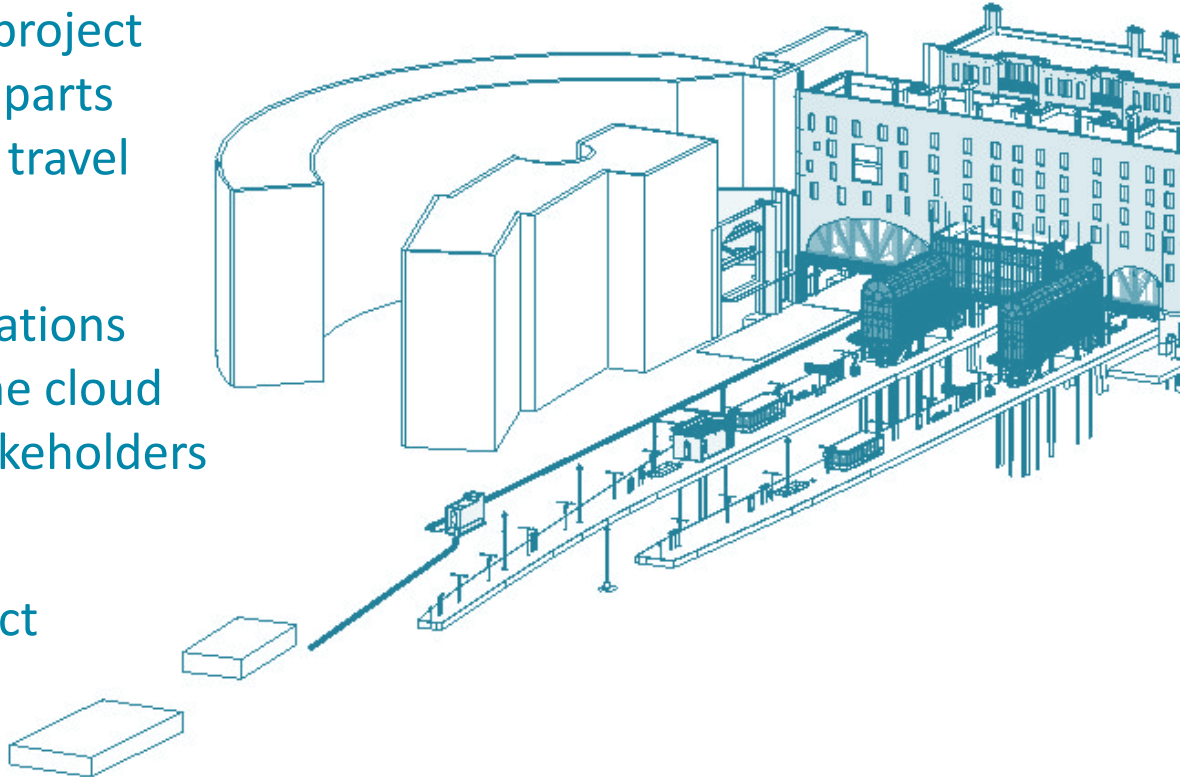
- » Large multifunctional urban project
- » Connecting North and South parts
- » Great place to work, live and travel

## Job to be Done

- » Technical design and specifications
- » Database and 3D Model in the cloud
- » Managing many different stakeholders

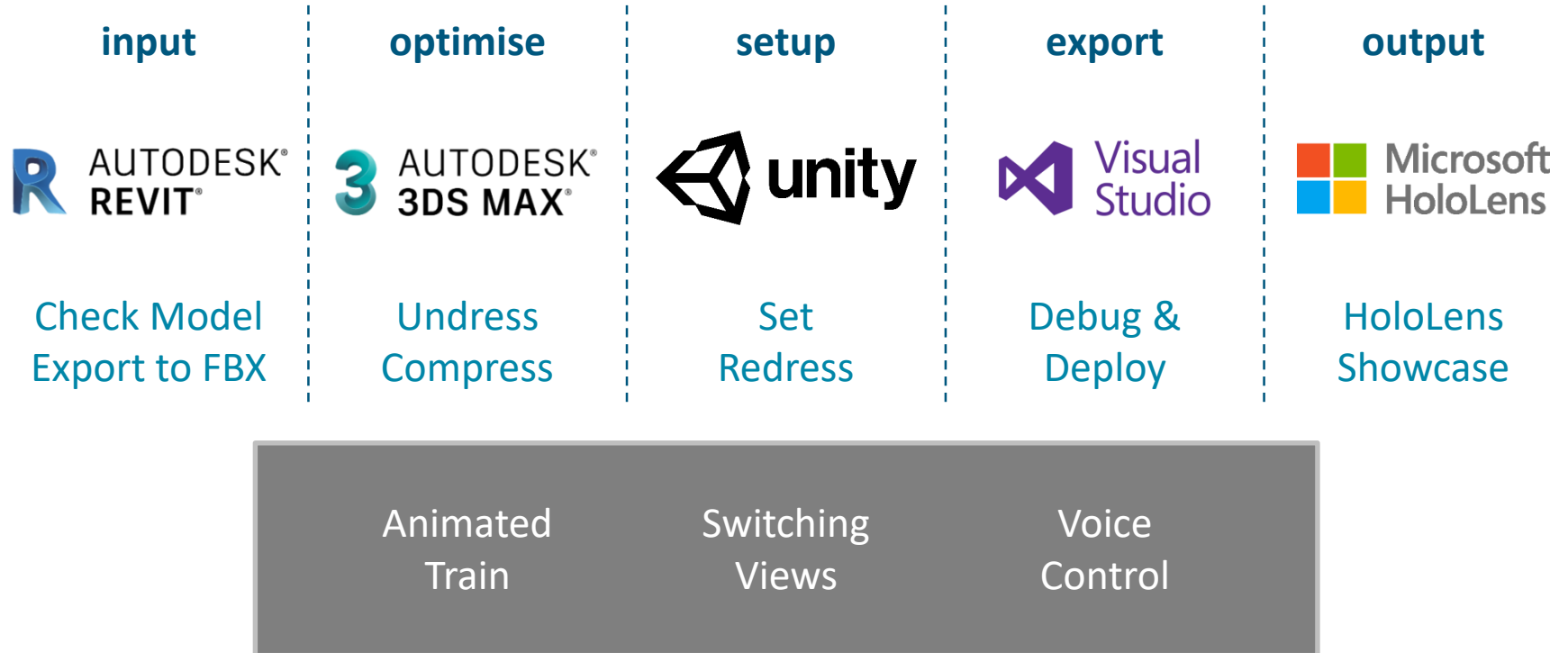
## AR Challenge

- » Bringing to life our first project





# Process Heerlen





*Engaging over  
2,500 residents  
living nearby  
the station*





***Moving beyond  
by showcasing  
our outdoor  
projects***



# Project Waternet

## Water Work

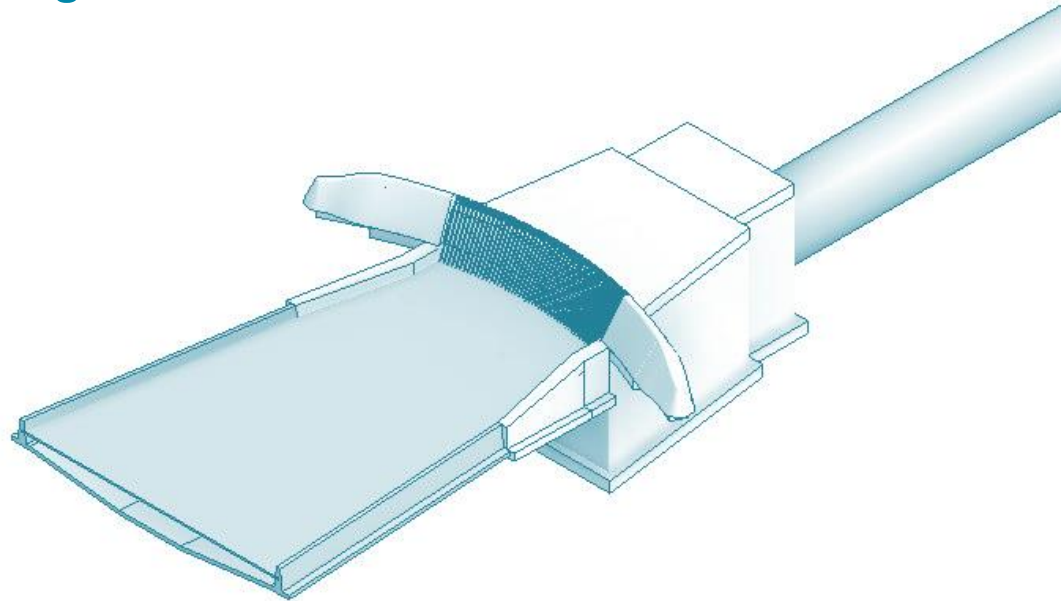
- » Natural water purification
- » Providing water for Amsterdam
- » Replace trench with subsurface piping

## Job to be Done

- » Technical and structural design
- » Using AR for decision-making

## AR Challenge

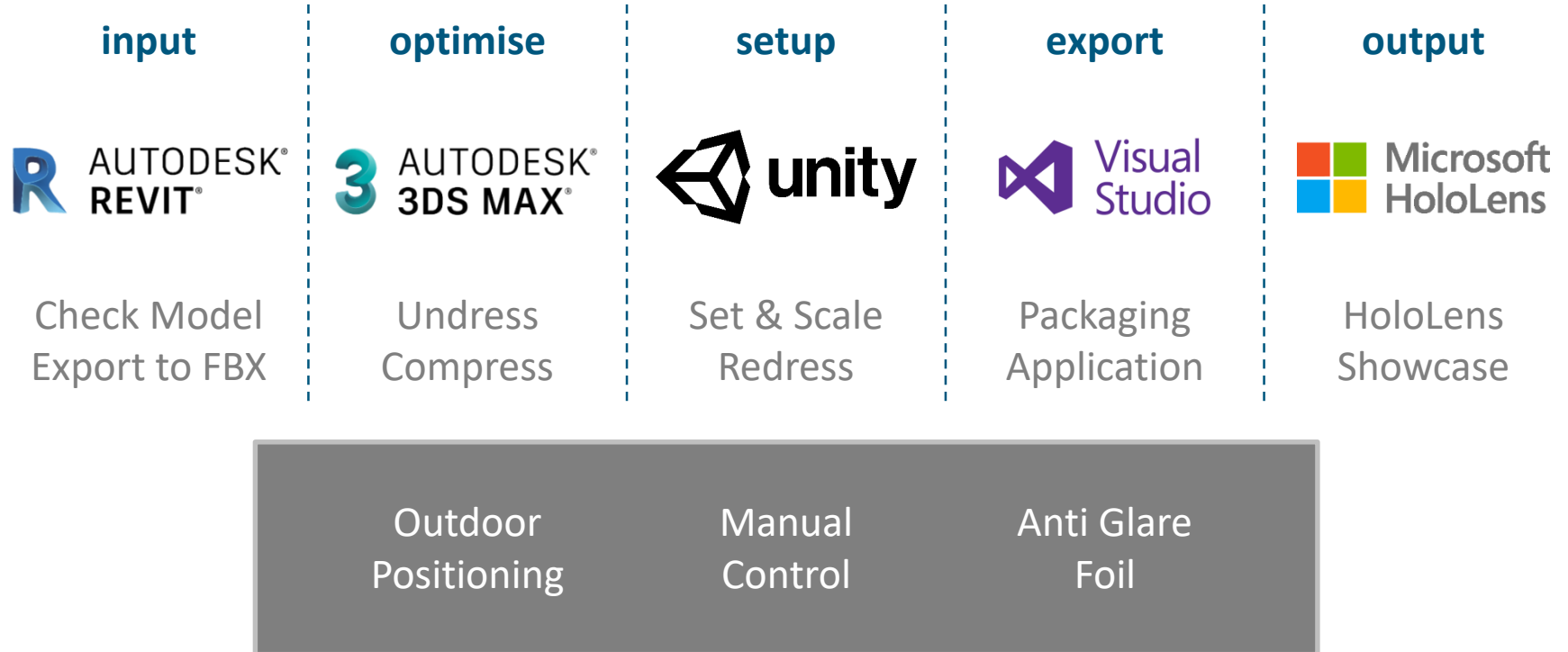
- » Positioning projects outdoors







# Process Waternet



*Comforting  
stakeholders  
and boosting  
decisions*



# *Automating the process with Cadac Modules*





# Project Bronovo

## Hospital Extension

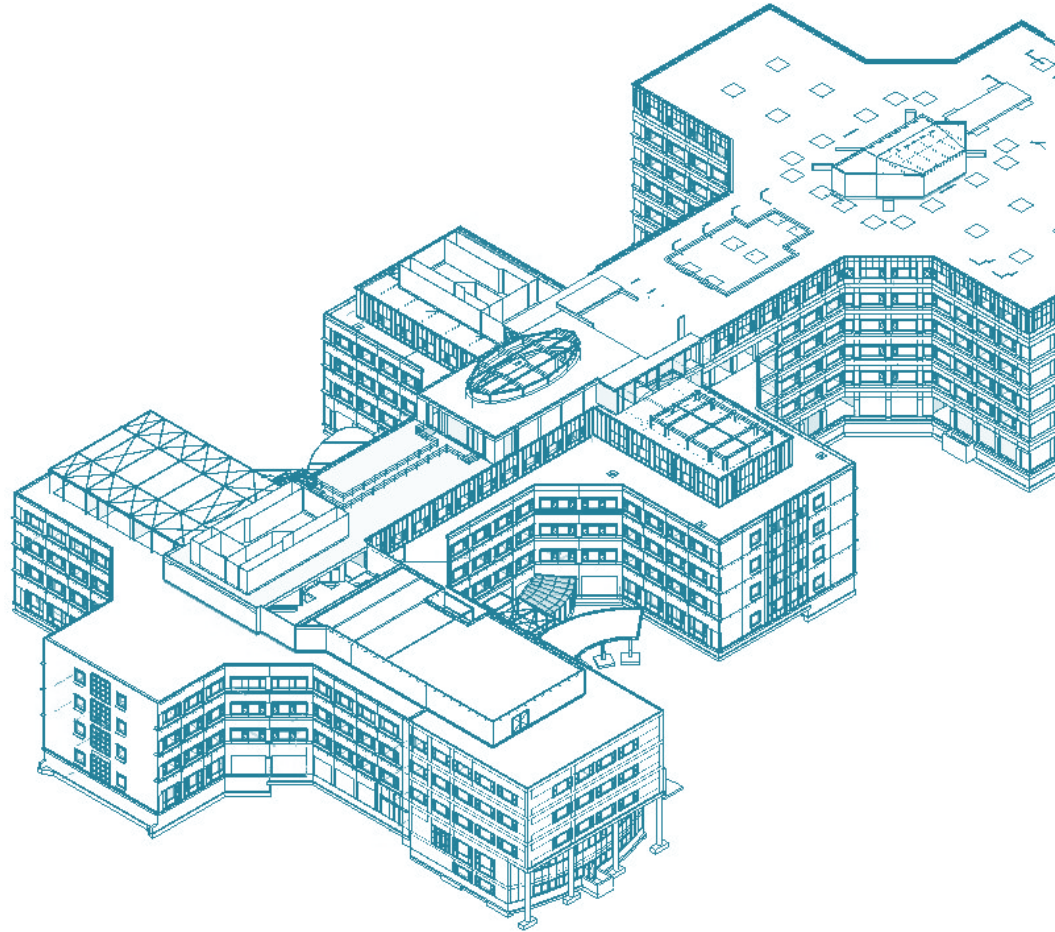
- » Extension of hospital wing
- » ERs and operating theatres

## Job to be Done

- » Structural and MEP Engineering
- » Management and supervision
- » Engaging also medical staff
- » Integrated BIM model

## AR Challenge

- » Automating the process







# Process Bronovo

input



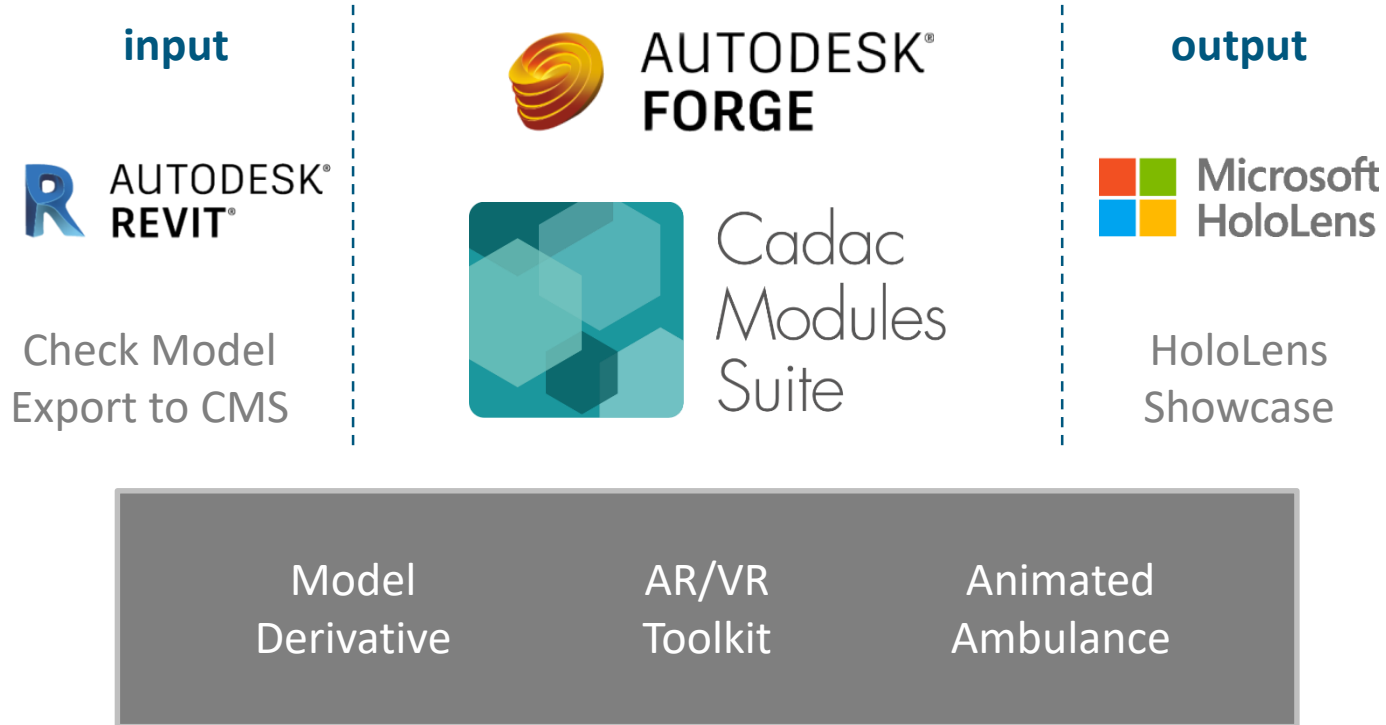
Check Model  
Export to CMS

output



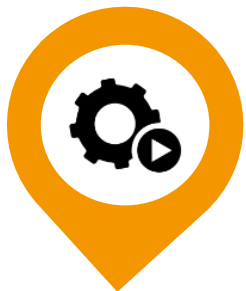
HoloLens  
Showcase

# Process Bronovo





*Involving both  
clients and users  
in our co-creative  
design process*



*Allowing for  
shared models  
and shared  
views*



# Project RHDHV

## Interior Design

» Main entrance renovation

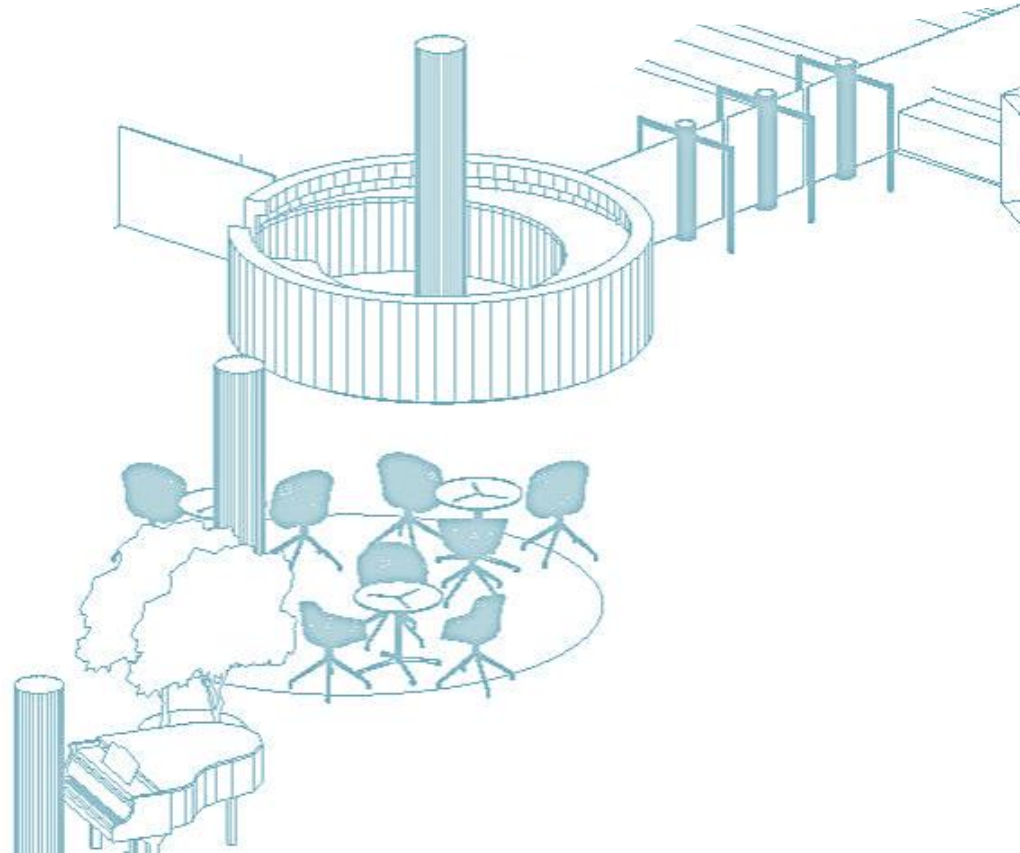
## Job to be Done

» Showing the spatial impact

» Engaging abroad stakeholders

## AR Magic

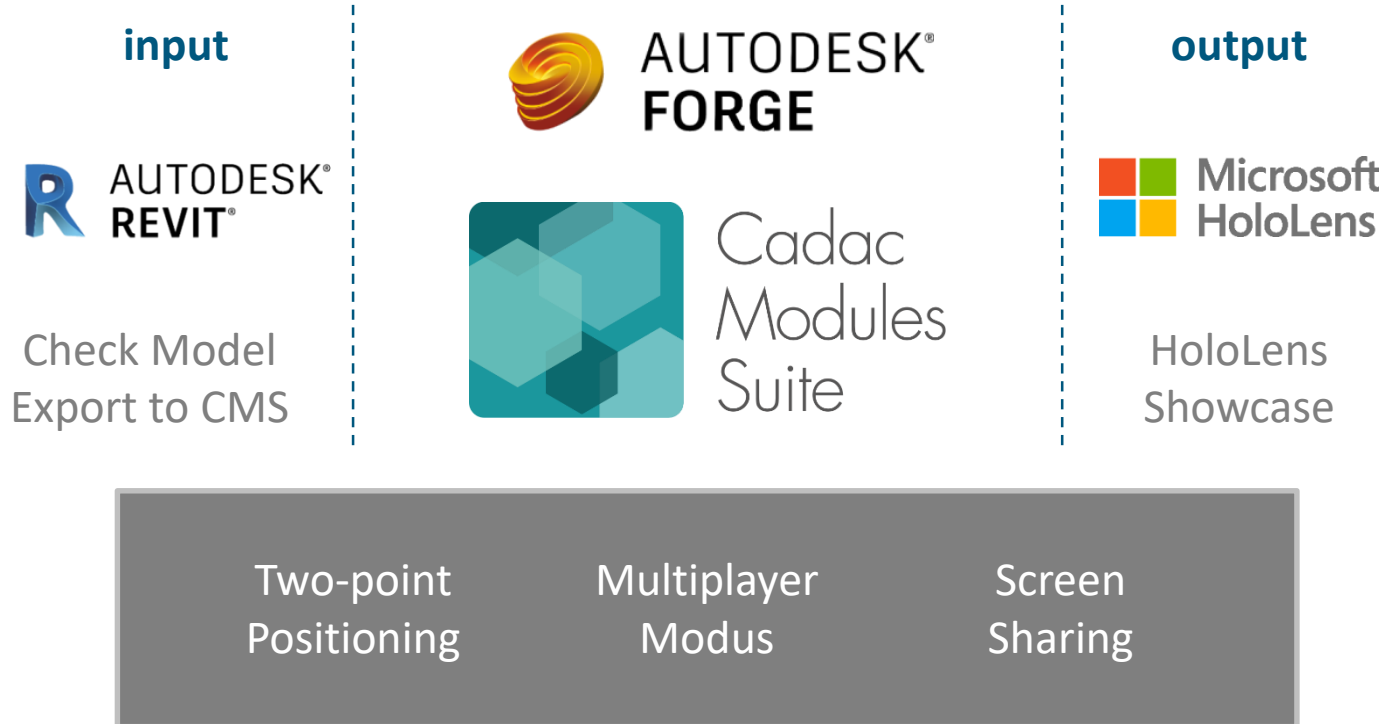
» Sharing model and view







# Process RHDHV



*Allowing  
for off-site  
involvement  
on the site*





*Interacting with  
holograms and  
co-creating  
solutions*



# Project Ede

## Transport Hub

- » Make-over of Ede-Wageningen
- » Station with iconic wooden roof
- » Many more related functions

## Job to be Done

- » Integrated design and tender docs
- » Tender management and supervision
- » Continued services and three contracts

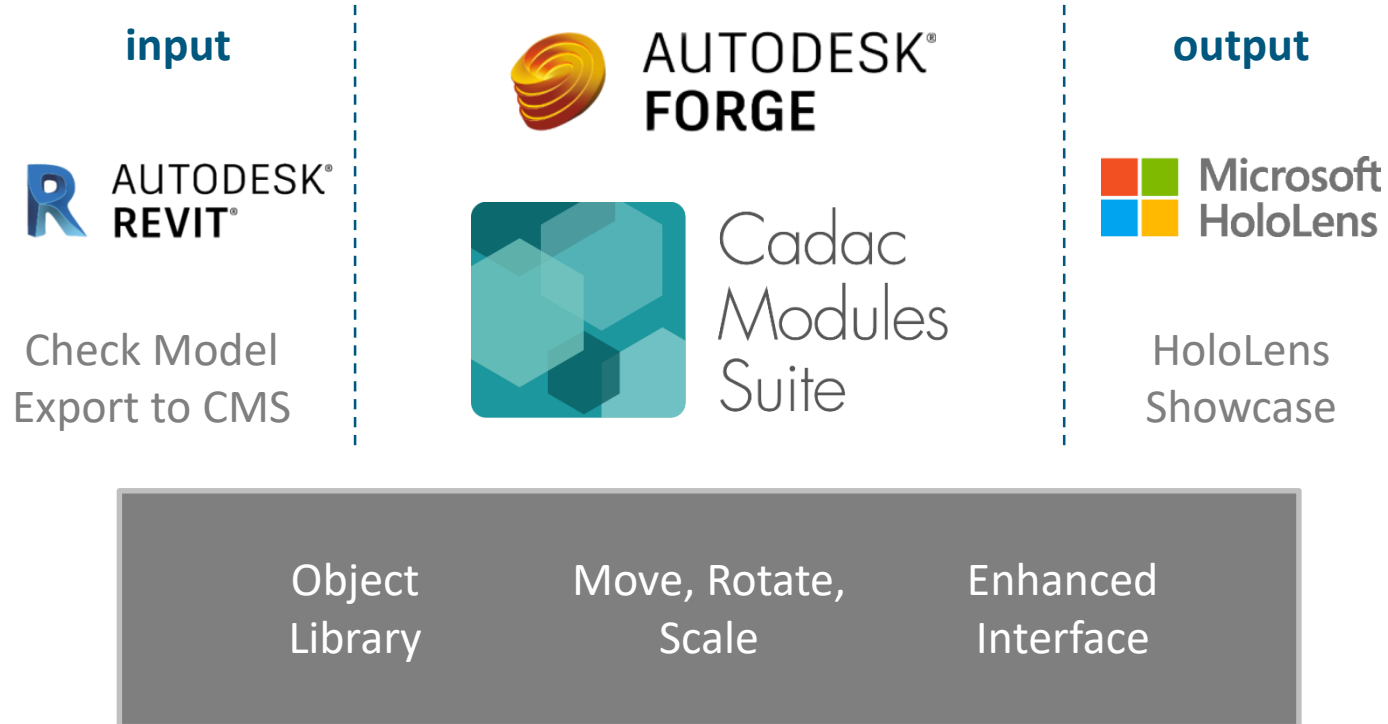
## AR Challenge

- » Moving and inserting objects





# Process Ede





*Allowing our  
customers to  
develop part  
of a design*



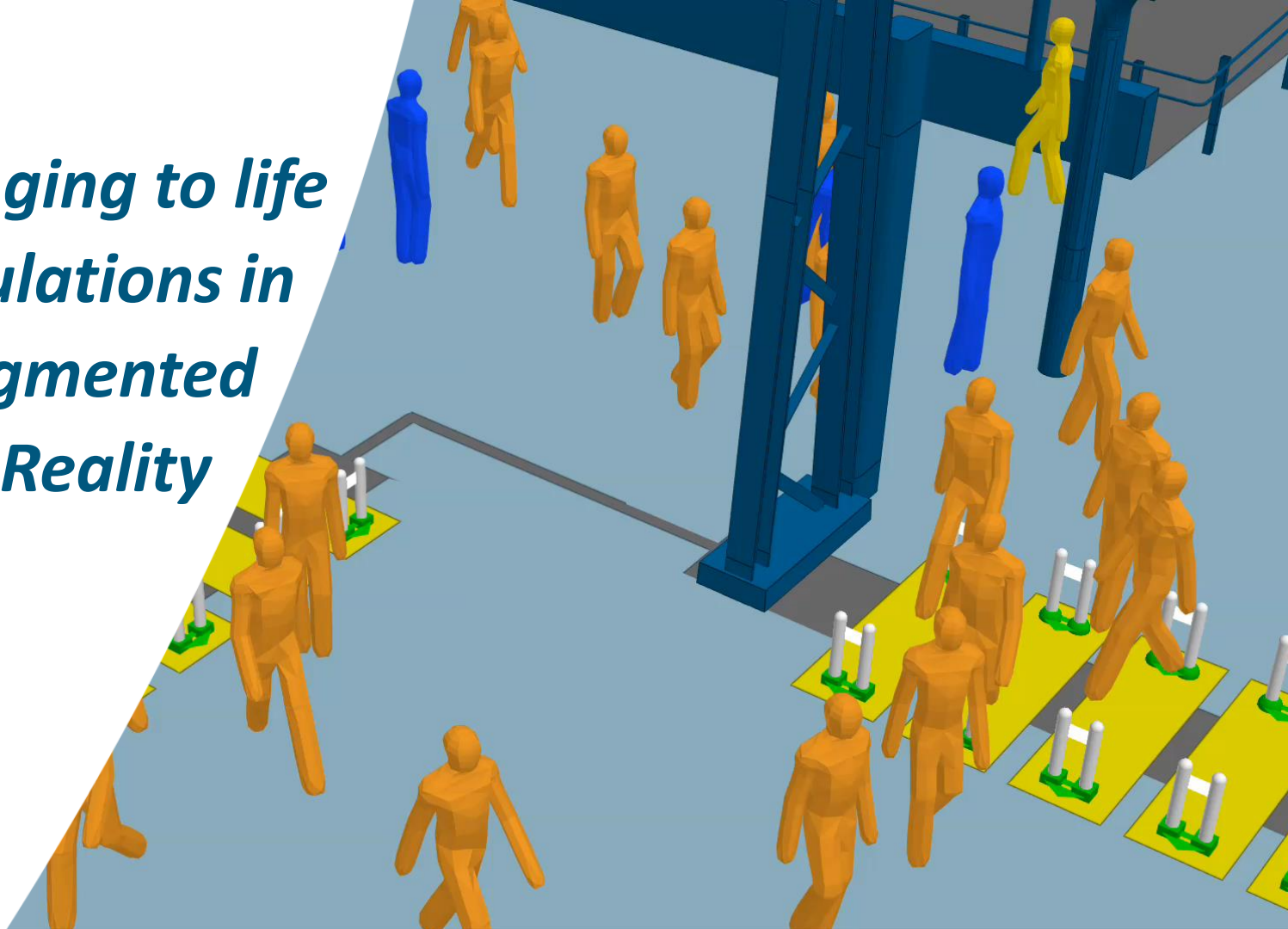
***Sync Solutions***  
***AEC Simulations***  
***Parametric Design***  
***Digital Twins***



***Developing  
an Automatic  
Revit Sync  
Solution***

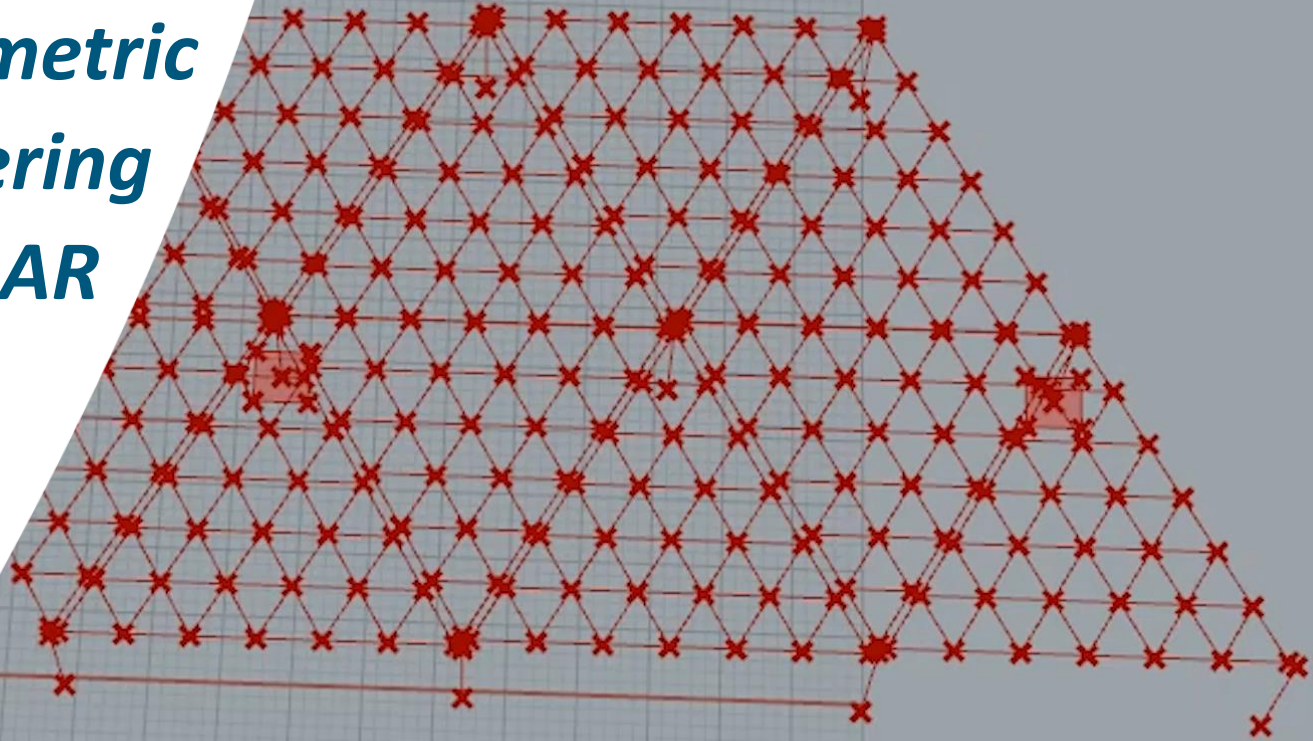


*Bringing to life  
Simulations in  
Augmented  
Reality*





***Blending  
Parametric  
Engineering  
with AR***



***Realising  
Digital Twins  
for the Built  
Environment***



*Let's meet  
Again at AU  
in Las Vegas*

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