

The image depicts a vibrant, futuristic city on Mars. The landscape is a deep red, dotted with small green plants. In the foreground, two humanoid robots with white and black suits stand on a raised platform, looking out over the city. The city itself is composed of numerous tall, slender, metallic skyscrapers and various smaller buildings. A large, blue billboard on the right side of the image reads "Bhngghg AR6K to Mare". The sky is a hazy, reddish-orange, suggesting a sunset or sunrise. The overall aesthetic is a blend of science fiction and modern urban architecture.

My Dream: Bringing APEX to Mars

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The story starts ...

2000



2004



2007



2015



2018



Location:

- Innovative (Smart) City ~ Leuven, Belgium
- Close to the University ~ 5 min by bike
- Close to the City ~ 14 min by bike
- Close to Forest ~ 4 min by foot
- Close to the Airport ~ 20 min by car
- Close to innovative companies ~ 5 min by bike
- Residential ~ Combo House/Office



Google Earth

Landsat / Copernicus, Data SIO, NOAA

2019

- High Tech – Innovation – Future
- Fully data-driven
- Smart Building connected to Smart City
- A place where ideas come to live
- Show possibilities - Show dreams
- Imaginations become reality
- From the first moment to the last, it's WOW
- Good feeling - Built with LOVE - Feel the PASSION
- It's FUN and you feel the warmth
- God is in the detail

- *A place for the core team of United Codes*
- *A place for customers*
- *A place for partners and people working with us*
- *A place for the community*
- *A place where the best people in the World come together*
- *A place for everybody to get inspired*





How long will it take?

**“Less than two years.
Celebrate Christmas 2021 in the new house!”**

Rob, Architect

2019-2021 (!)

- Research
- Requirements
- **Manage all through an Oracle APEX app**
- Architect plans
Layers with Design, Electric, Plumbing,
HVAC & Smart techniques
- City approval
- Getting offers from builders



**2021
AUG**



**2021
SEP**



**2021
OCT**



**2022 (!)
FEB**



**2022
MAR**



**2022
DEC (!)**



**2023
APR**



**2023
JUL**



**2023
SEP**



**2024
MAR**



**2024
AUG**



**2025
MAR**



**2025
APR**



Our solution for a Smart Building



Brain



Indoor sensor(s)



Outdoor sensor(s)

Hardware

Sensors:

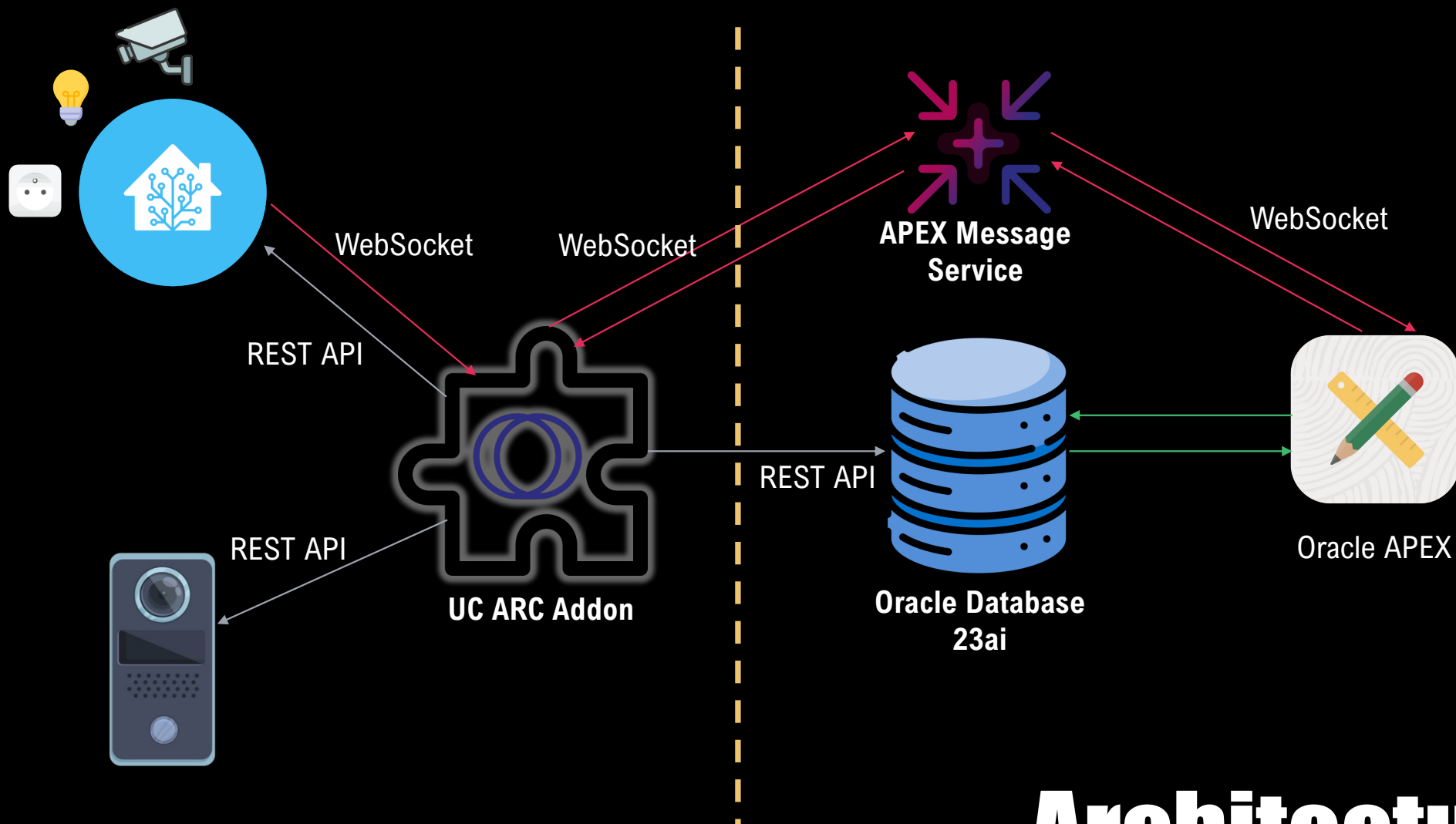
- Air quality
- Occupancy
- Temperature
- Lighting
- Water quality
- Water level
-

Cameras

Solar
Electricity
HVAC
Appliances
Battery
Alarm
Switches
Access Control

Automated Pool & Jacuzzi

Infrared cabine
Servers (AI, HA, DB)
Japanese Toilets
TVs
Microphones
Fire detection
Touch screens
Audio



Architecture

Entities

Entity Tree

Select which entities you want to sync.

☒  Main Floor

☒  Landscape Office

☐  Outside

☒  Break Space

☒  Storage Room

☒  Berging

☒  Storage Room

☒  Toilet Office

☐  SAS

☐  Entrance

☐  Sitting Room

☐  Kitchen Private

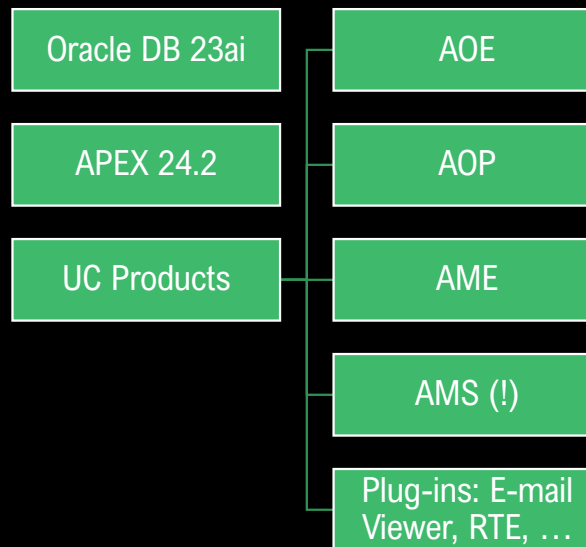
☐  Toilet Private

☐  Basement

☐  Upstairs

Save Settings

Demo APEX App





Goals

- Combine different data points
- Get unknown insights
- Predictive Analytics & AI-driven Insights
- Virtual assistant for Building Management
- Proof with data what people say is “true”
e.g. sound of highway, heatpump is better than central heating, ...

Walk through home with AR

Visit us at our booth!



Phase 2

- Repeat in other buildings
- Connect them
- Digital City



Examples of city projects

Sound



Examples of city projects

Monitoring van Leuven: realtime luchtkwaliteitsindex

NEDER-OVER-HEEMBEEK STEENOKKERZEEL AARSCHOT VOORHAVEN (HAREN) BRUSSELS

ZOEK DE DICHTSTBIJZIJNDE ZOEK EEN STA

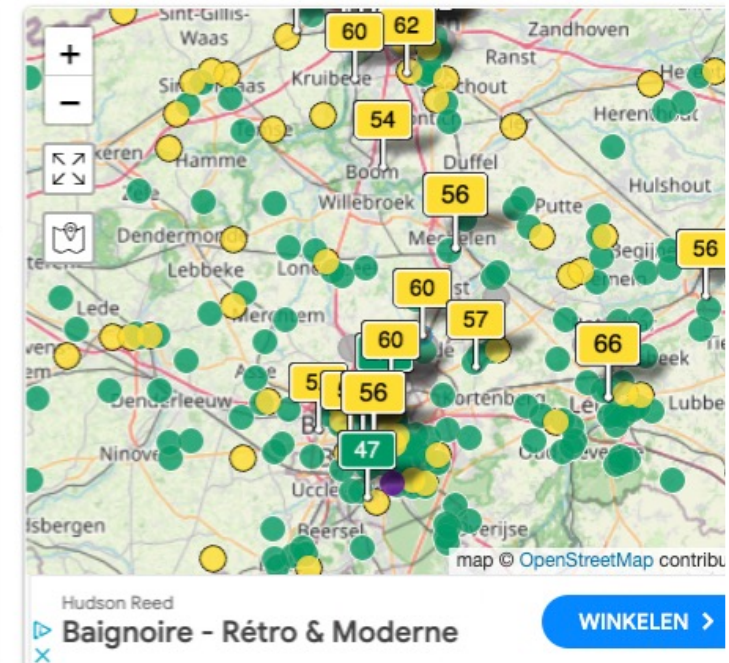
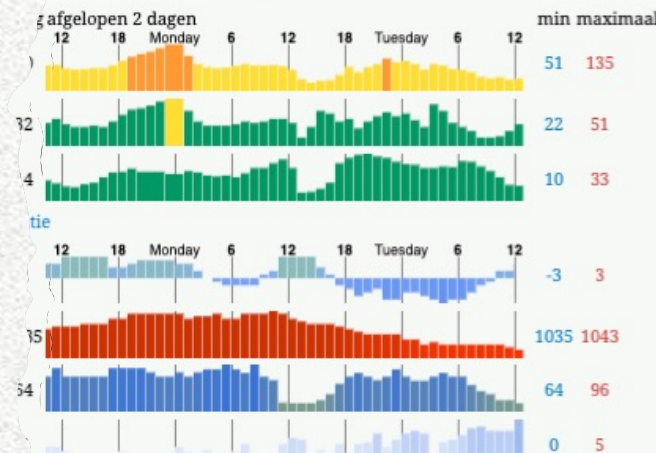
oorde: De realtime luchtkwaliteitsindex (AC)

0

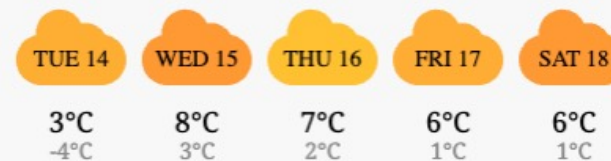
Matig

Updated on Tuesday 13:00

temperatuur: 2°C



VOORSPELLING VAN DE LUCHTKWALITEIT



Air quality

12:25

5G



Radio2 en 'Goeiemorgen morgen!' vieren op 23 jan
Radio2

**Onderzoek toont aan: elkaar
goeiemorgen wensen, maakt
echt gelukkiger**

Een 'goeiemorgen' zeggen én terugkrijgen
doet deugd, zeker als dat gebeurt tussen
wildvreemden. "Het zorgt ervoor dat we ons

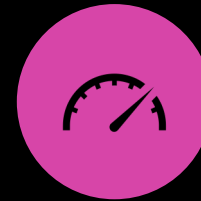
Examples of city projects

HappyNess

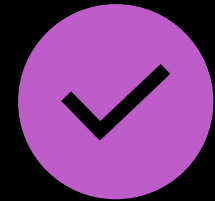
Why Oracle DB & APEX?



CONVERGED
DATABASE



EASY SCALABLE



EXISTS FOR LONG
TIME – EASY TO
UPGRADE



WORKS ON-PREM &
IN THE CLOUD



SAME PLATFORM
FOR HOME TILL
CITY



VECTORS, AI, TEXT,
JSON, RAG, ...

Phase 3

- Go to other cities and countries
- Our ambition:
The platform runs MARS!



Thank you to the whole UC Team!



**Dimitri
Gielis**
CEO & Founder



**Philipp
Hartenfeller**
Product Lead



**Kevin
Thyssen**
Senior APEX
Consultant



**Kevin
Coorens**
Consultant



**Jackie
McIlroy**
COO



**Vito
Van Hecke**
Consultant



My Dream: Bringing APEX to Mars-Dimitri Giellis

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Please fill in your
evaluations

Q&A

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