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KMD ON DIGITAL TRANSFORMATION OF CITIES

PRACTICAL EXAMPLES

HANS JAYATISSA, CTO, KMD

KMD HAS **DELIVERED SEVERAL OF THE DANISH PUBLIC DIGITAL INFRASTRUCTURE SOLUTIONS**

DANISH PUBLIC DIGITIZATION STRATEGIES

2001
DIGITAL COOPERATION

2004
PAYMENTS AND INTERNAL DIGITIZATION

2007
JOINT INFRASTRUCTURE

2011
DIGITAL COMMUNICATION

2016
BETTER USE AND SHARING OF DATA

KMD CONTRIBUTION

- Borger.dk introduced as one of the first self service solutions
- WorkZone for Public Sector administration

- NemKonto
- e-Boks
- E-Invoice
- EDI - healthcare

- Municipality reform
- Open data interfaces (OIO) and property data (OIS)

- Digital print and Digital Post
- Election.dk
- NemRefusion

- Data Hub Platform (Datafordeleren)
- LG Support Systems

Source: The Danish Agency of Digitization, KMD

…AND TODAY, DANISH CITIZENS ENGAGE WITH KMD SYSTEMS IN MULTIPLE ASPECTS OF THEIR DAILY LIVES

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When applying for higher education
– KMD Studica

When looking for a job, applying for unemployment benefit, when you get a jobat the municipality and get paid wages
– KMD Momentum, KMD Nova Link, KMD Opus, KMD Nova ESDH, KMD Føniks, and Data Analytics

When geting a credit card
– Banqsoft

When you get a job and get paid wages
– KMD Payroll Cloud

When you go to school
– UVvej, MinUddannelse, KMD Personale, and KMD Elev

…or when you go to an election
– KMD Valg

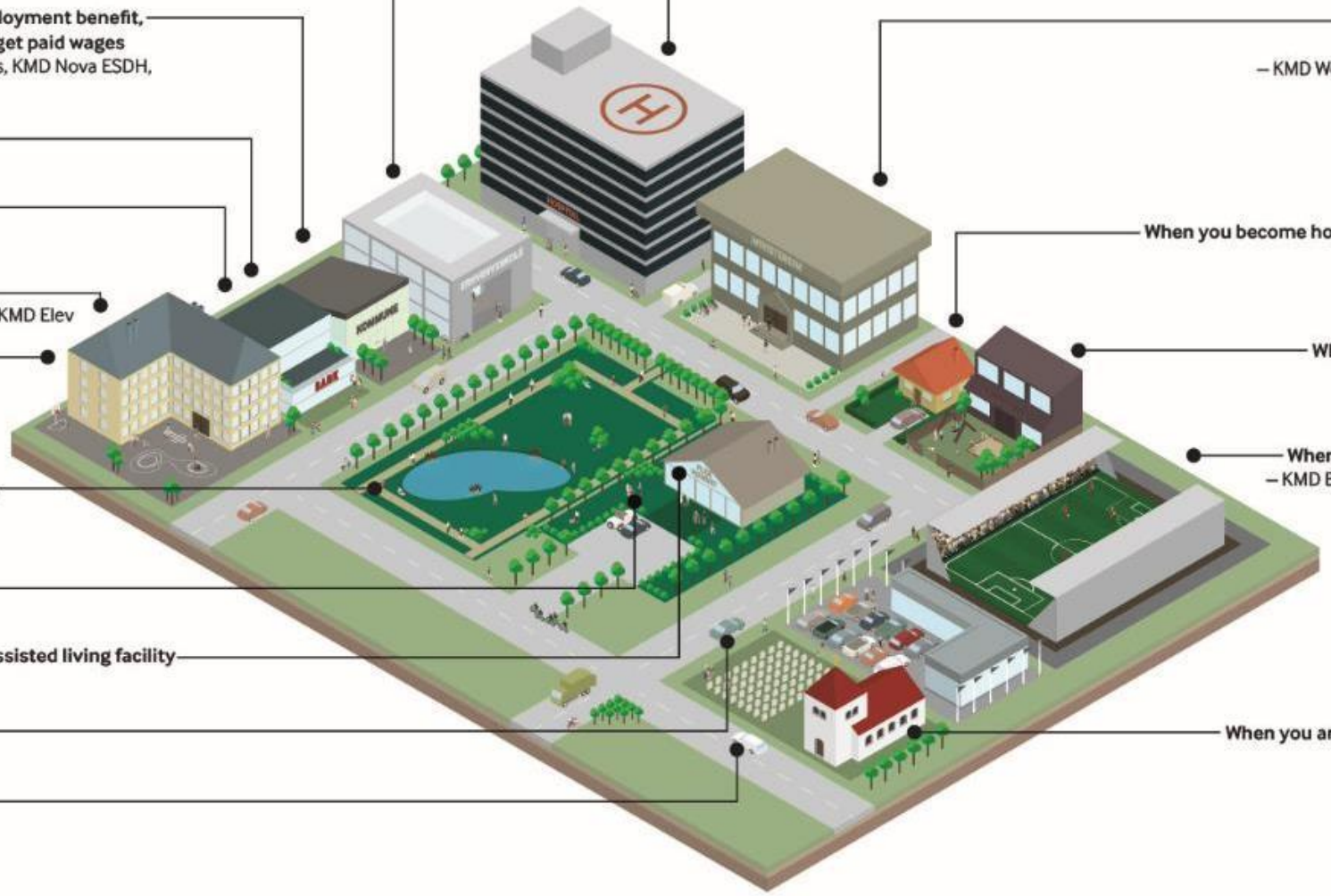
When you receive unemployment benefits or early retirement benefits
– KMD Føniks

When receiving pension
– Edlund LIFELINK+

When you receive home care or live in an assisted living facility
– KMD Nexus and KMD Nova Vej

When leasing a car
– Banqsoft

When meeting the police
– KMD Workzone



When you fall ill
– KMD Nexus

When meeting any document or record from the state
– KMD Workzone, Grunddata, and KMD Cognito

When you become homeowner, and settles utility supply
– KMD Easy Energy and KMD ESR

When you sign children up for daycare
– KMD Institution

When you play or watch a football match
– KMD Booking, KMD Sport, and Data Analytics

When you are born, married, divorced, deceased
– KMD P-Data

OS2IOT & FIWARE as the backbone for an IOT Context Platform for Municipalities and Regions

AARHUS KOMMUNE

gtm GOVTECH MIDTJYLLAND

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MVP WITH AARHUS MUNICIPALITY & GOVTECH MIDTJYLLAND

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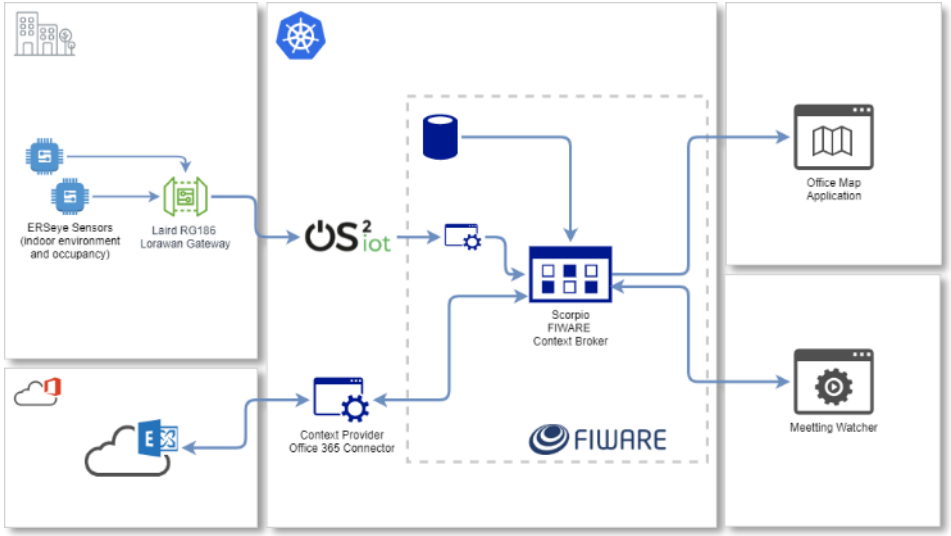
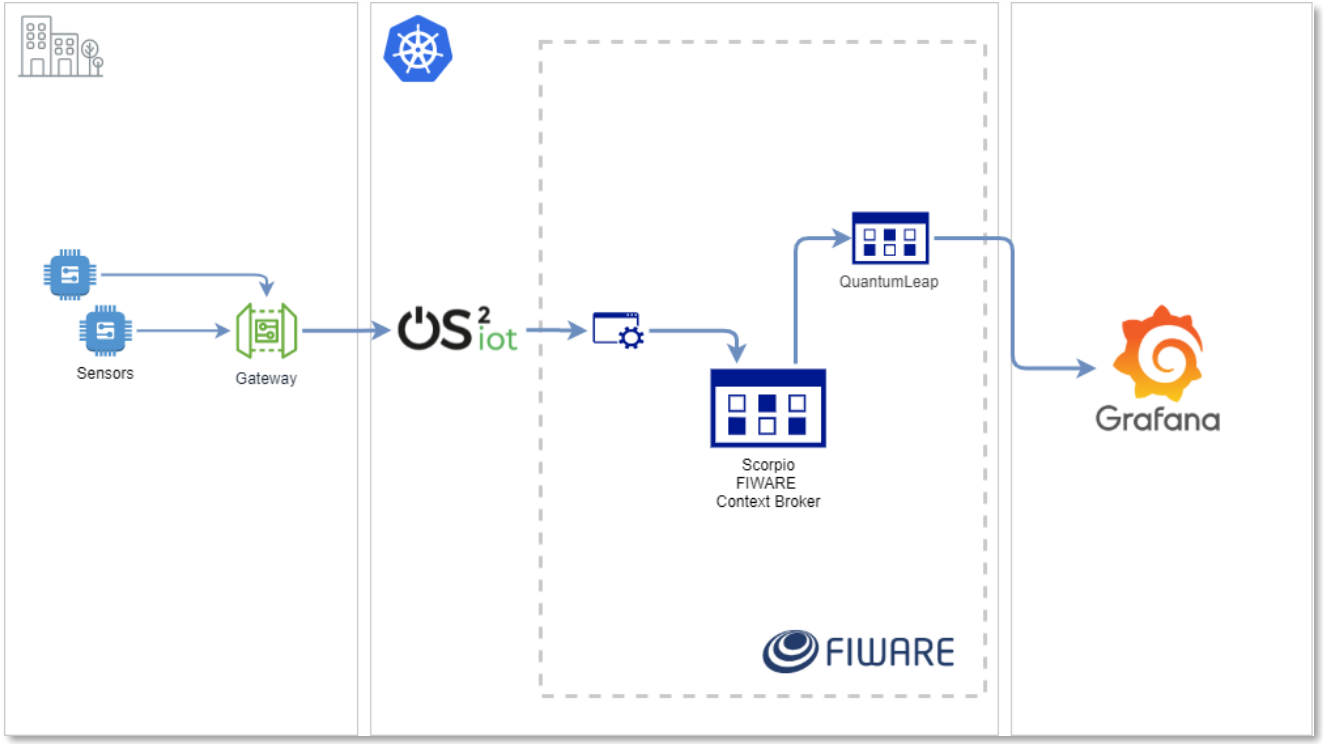
1. Internal POC



2. Customer Pilot (OS2IOT) + Next Steps (Fiware Sandbox)



Twin4Build

Demonstration of a Smart Building Energy Management Platform

TEKNIK OG MILJØ
Aarhus Kommune

SDU

COWI

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USE BIM AND DIGITAL TWINS TO SUPPORT THE ENTIRE ENERGY LIFE-CYCLE OF BUILDINGS – FROM STATIC BIMs TO DYNAMIC BEMs

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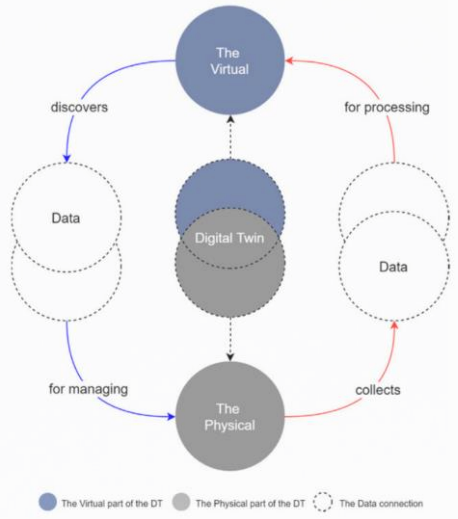
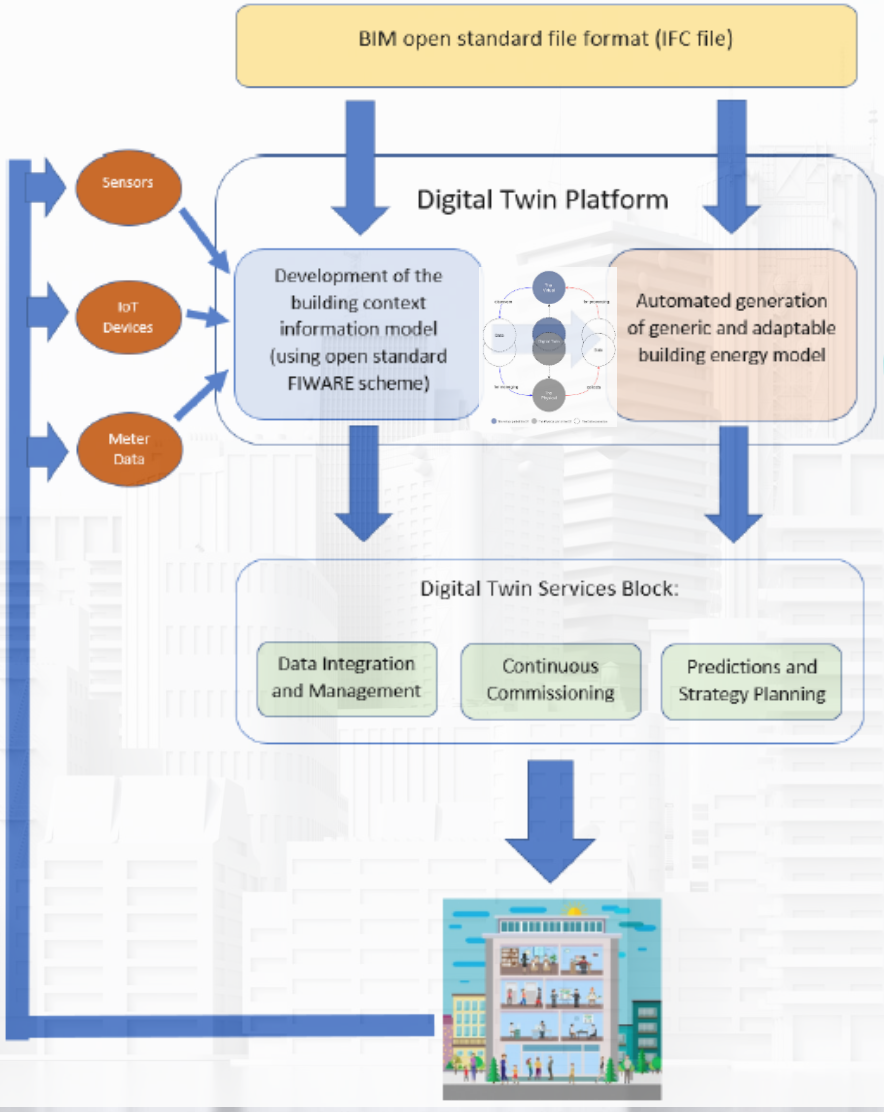
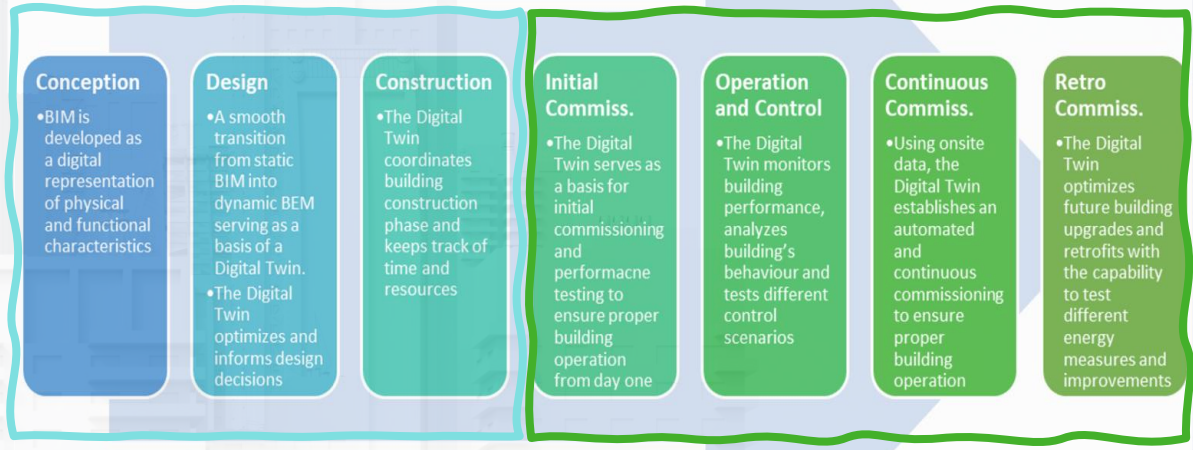






Static digital twin (BIM/IFC)

Dynamic digital twin (BEM/NGSI-LD)

OBJECTIVES AND EXPECTED OUTCOME

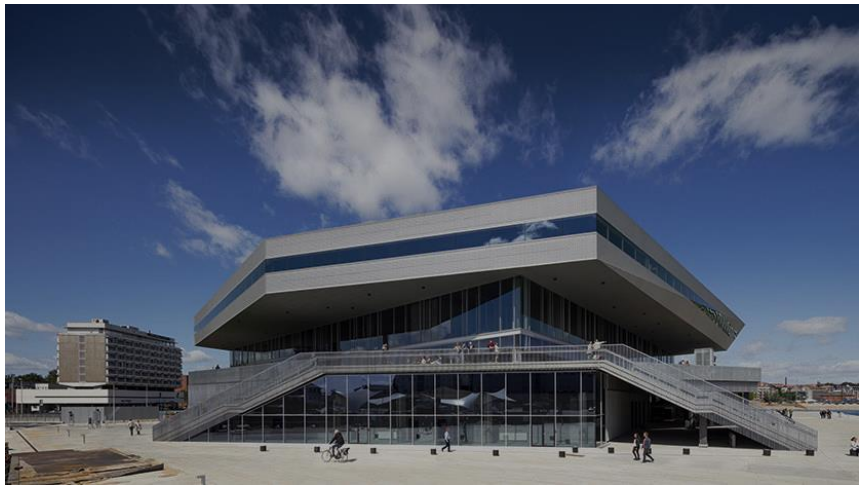
OBJECTIVES

Replacing the static Building Information Model (BIM) with **real time operational models** combining flexible and adaptable dynamic energy models and real-time data to provide the following services:

1. **Collecting, integrating and managing building data** within a flexible, effective and open standard context information model.
2. **Real-time building performance monitoring** and automated continuous commissioning and fault detection, enabling smarter operation and facility management along with performance optimization
3. **Strategy and planning support** over the whole building life cycle through informing optimal decisions and running 'What if?' scenarios in advance.

EXPECTED OUTCOME

1. Owners will have **higher energy-efficient buildings** from day one
2. Facility managers will have **a tool for smarter facility management** through advanced monitoring, automated continuous commissioning and timely maintenance intervention
3. Consultants and planners will have **a solution aiding in effective strategy planning and optimal decision-making support** through running 'What if?' scenarios in advance, predicting impacts and testing control and management regimes in virtual environment.



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THANK YOU

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