HOVINBYEN

Digital Twin in Urban Planning

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Who

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Senior Project Manager, Augment City
-Sept 2022-current date

Previous experience:
Consultant at PwC for 14 years

Expertise:
Simulation, data mining, analysis
M.Phil System Dyamics – University of Bergen

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Challenge

Oslo Municipality lacks the possibility to see coordinated efforts and direction of development

The amount of data that emerges in line with urban planning is scattered and difficult to put into context

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Challenge

On average a regulation process takes 5,5 years. Ideally a regulation planning case should take 1,5 years

-Developer

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Challenge

To initiate an urban planning process, its required to read ~2500 pages of text to get a proper understanding of the area

-employee Oslo Kommune

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Project objectives

1 **Overall objective**

- Explore correlation and context across Regulation and Development Proceedings
- Reduced time spent on analyses in Regulation Planning

2 **Socitey**

- Better collaboration across public stakeholders and across public and private stakeholders in urban planning
- Increased trust across stakeholders

3 **Businesses, Climate and Environment**

- Urban planning circularity
- Understand consequences of various plans
- Visibility, transparency and documentation of consequences

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Project content

Oslo · HOVINBYEN SIRKULÆRE OSLO · AUGMENT CITY · Ruter# · STEEN STRØM & 225 ÅR · STOR OSLO EIENDOM

1 Product concept and project plan

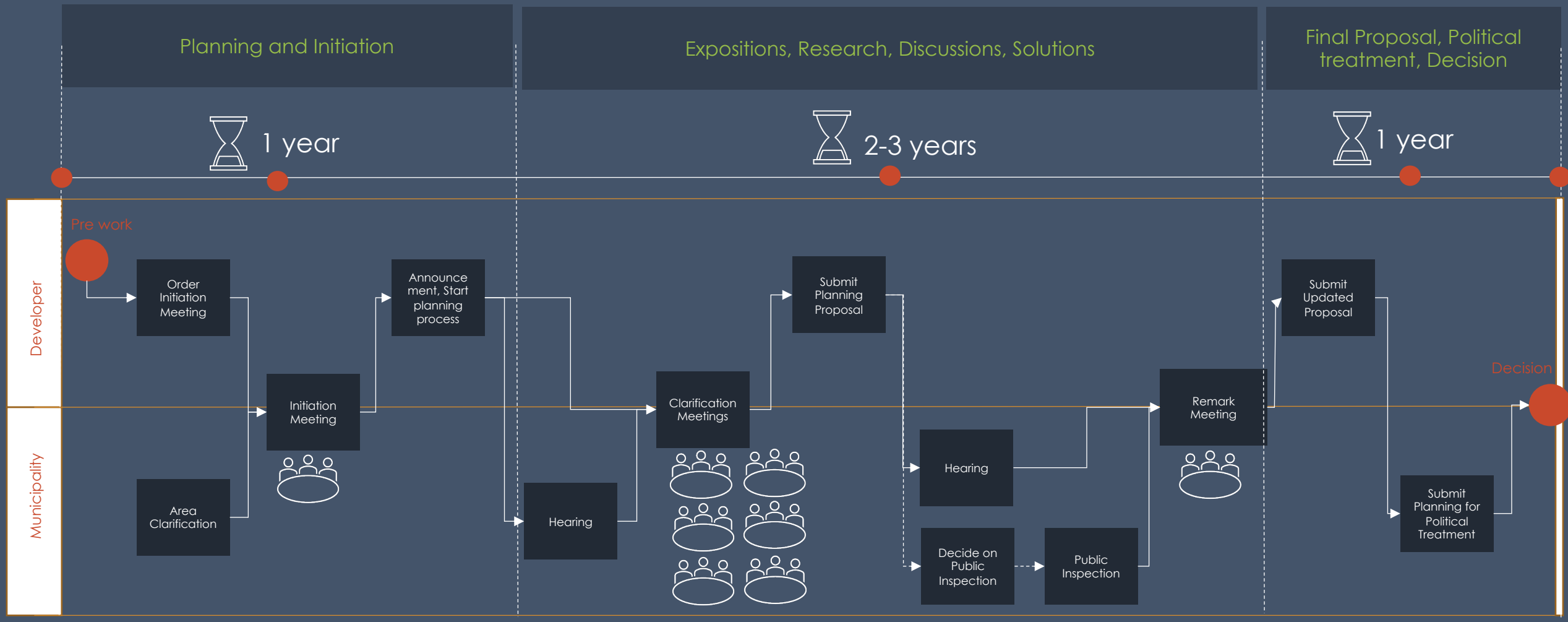
2 Digital Twin AS IS

3 Functionality

4 Cloud Access and Training

5 Pilot Project

Current state Regulation Process



Pilots: POC

Pilot 1: Plan Initiatives
Explore various projects and have the possibility to switch between various intiatives from various proposals

Pilot 2: Site Analysis
Visualizing functions for the new urban space, in addition to various alternatives for the innovation district

Pilot 3: Social Infrastructure
Understand the effect of social infrastructure related to population increase (need for kindergartens)

Pilot 4: Mobility
Understand the mobility consequences of population increase and new businesses

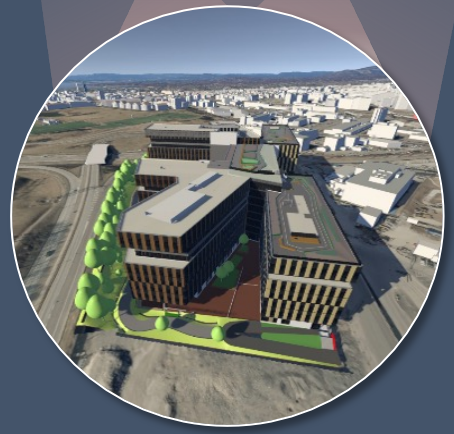
Value of using a digital twin

Planning and Initiation → Expositions, Research, Discussions, Solutions → Final Proposal, Political treatment, Decision

Area Clarification

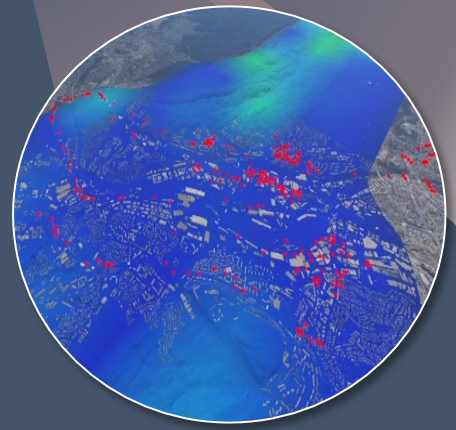
Pilot 2
Site Analysis

Initiation Meeting
Discussion Meetings
Planning Proposal



Pilot 1
Plan Initiatives

Discussion Meetings
Planning Proposal



Pilot 3
Social Infrastructure

Pilot 3
Mobility

In a regulation planning process, it is valuable to use a digital twin for:

- Projects context (pilot 1)
- Reduce time spent on analyses and research (pilot 1, 2, 3, 4)
- Better coordination between stakeholders (pilot 1, 2, 3, 4)

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Value of using a digital twin

One visual digital platform

One common collaboration tool across all stakeholders

Reduced Time

Quickly test various planning initiatives and agree upon solutions

Real time / Updated data

Real time information – the digital twin can be used during the whole regulation planning process (several years)

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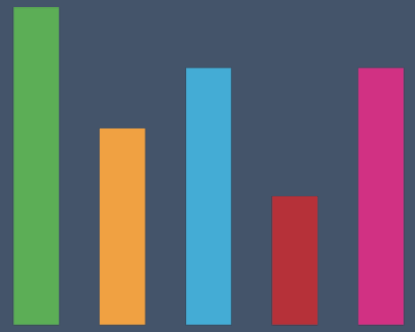
Video



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