

# MoST fagseminar DEC-23

- Presenter :  
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 **NTNU**  
Institutt for datateknologi  
og informatikk

**MoST**  
MobiliteitsLab Stor-Trondheim



**Miljøpakken**  
– åpner nye muligheter



**Trøndelag fylkeskommune**  
Trööndelagen fylhkentjielte



**TRONDHEIM KOMMUNE**  
Tråanten tjielte



**Statens vegvesen**  
Norwegian Public Roads  
Administration

- **Problem Statement**

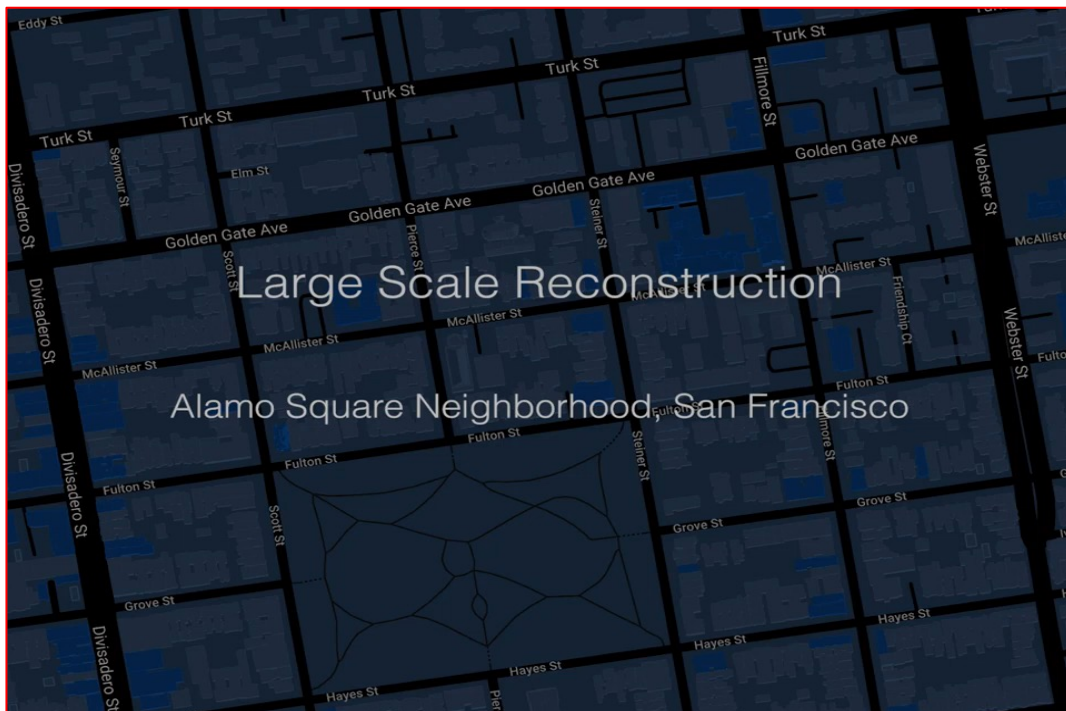
- **Automated AI/Computer Vision**  
Driven Generation of  
**Digital Twins** for Sustainable  
**Mobility Infrastructure**

- **Problem Elements**

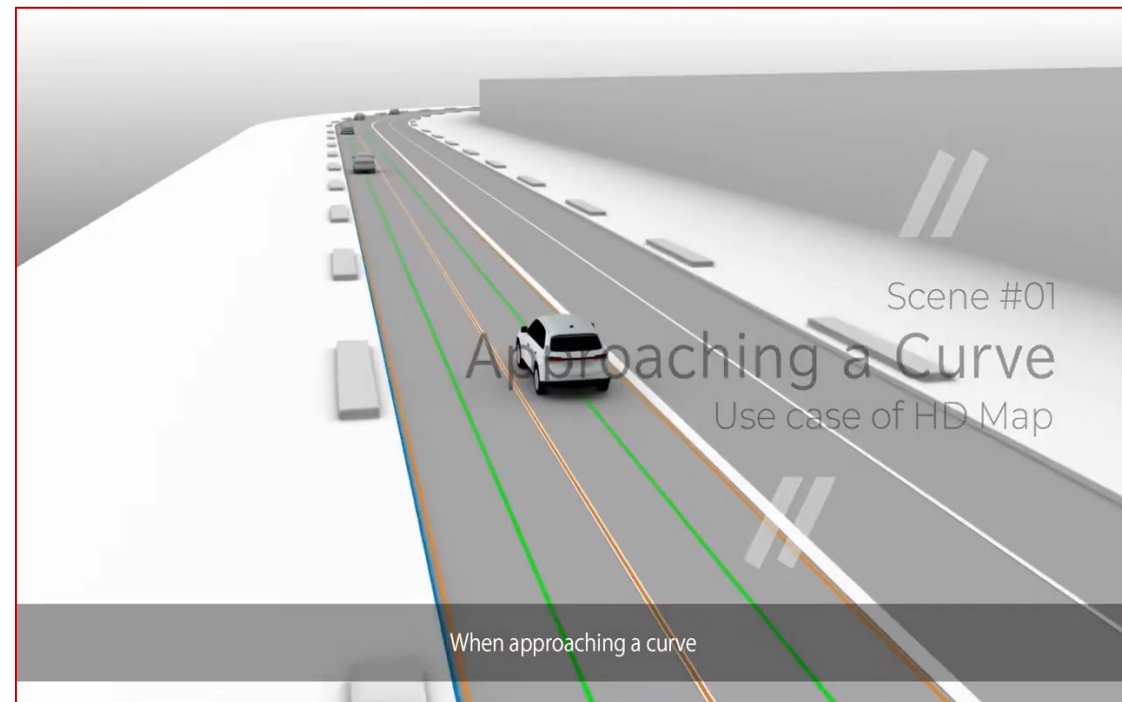
- Tools
  - AI/Computer Vision
- Domain
  - Mobility Infrastructure
  - Road
    - Element of Road
- Output
  - Digital Twins

- **Expected Result**

- 3D Reconstruction[1]



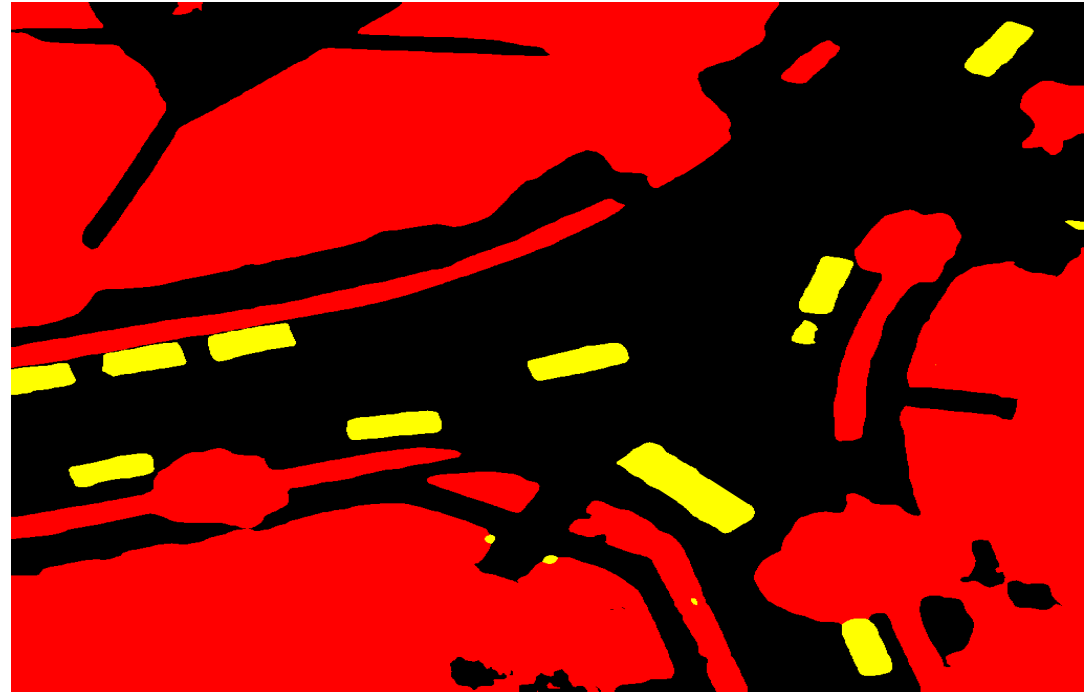
- HD Maps [2]



1)Block-NeRF. (n.d.). Waymo. <https://waymo.com/research/block-nerf/>

2)Dynamic Map Platform Co., ltd.. Available at: <https://www.dynamic-maps.co.jp/en/index.html> (Accessed: 17 November 2023).

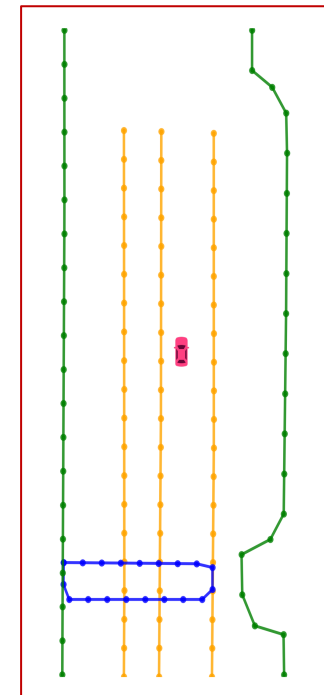
- **Work in Progress**
  - Segmenting Road and Road Elements from Orthophoto



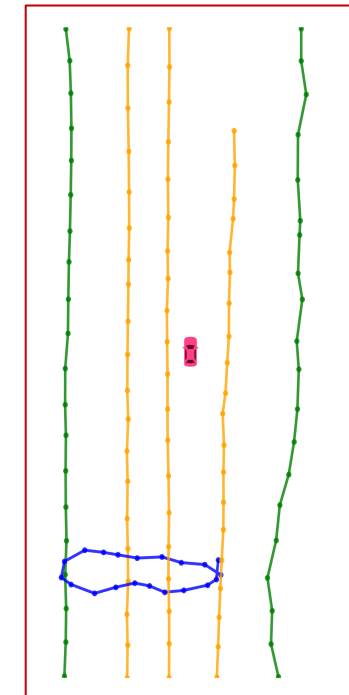
- **Work in Progress Contd.**
  - HD MAP : Detailed Map of Road



Surround View

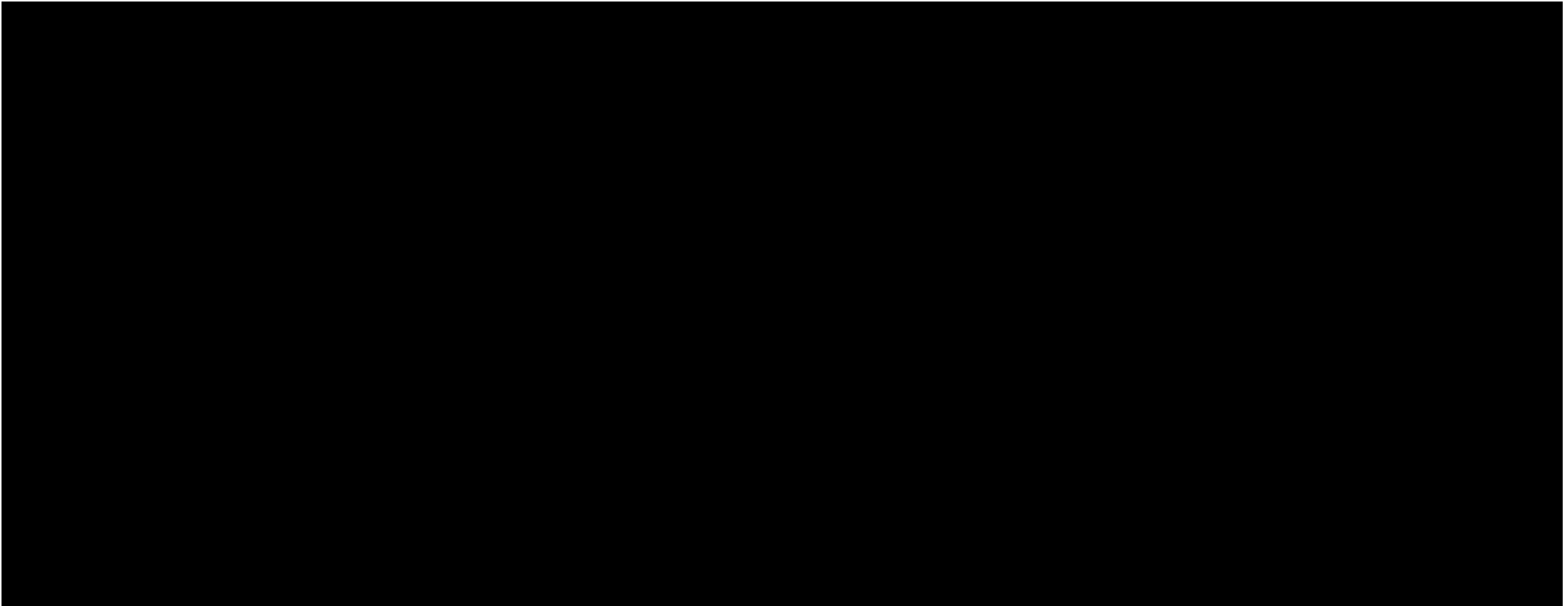


Ground Truth



Prediction

- **Work in Progress Contd.**
  - Digital Twins



- **Future Task**
  - Carla's Digital Twin Generation Tools



- **Features**
  - Digital Twin of a Real-World Road Network
    - Realistic
      - NVIDIA Omniverse
    - Input : Road Network
    - Output : Decorated Map

- **Thanks**



