ENVISIONING THE FUTURE OF THE CURB WITH PROCEDURAL STREETS

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Outline

• Setting the Stage
  • Trends & Data

• 3D Streetscapes
  • CityEngine
  • Workflow
  • Complete Street Rule

• Benefits of Approach
  • Managing Uncertainty
  • Communication
  • Coordination

• Case Study Application
Under Pressure

Deliveries

Scooters

Greening

Drop Offs

Bus Shelters

Public Space
Getting Data
What is CityEngine?

• Founded in 2008 by Procedural
  • Bought by ESRI in 2011.

• Initial Shapes + Code = 3D Models
Procedural Workflows

1. Base Geometry
2. Procedural Rules
3. Generated 3D Model

Base geometry

Final 3D model

Iterative refinement

Graphics by ESRI
Complete Street Rule

Customization

Visualization

GIS Data Connection

Analytics

Scenario 1: On-Street P. 61.0000095

- DoBl & Scooter Parking Length (m)
- On-Street Parking Length (m)
- Passenger Loading Length (m)
Scenario Oriented Design
Communicating Change
Connecting the Curb to the City
Layered Networks

• Alameda Multimodal Arterial Plan Case Study

Metrics

Identifying Priorities

Defining Success

Identifying Improvements

Visualizing Improvements at Scale

PERFORMANCE MEASURE COMPARISON FOR MISSION BLVD

BASELINE CONDITIONS

PROPOSED IMPROVEMENTS

Transit Reliability: 0.51
Congested Speed: 11
VC Ratio: 1.44
Infrastructure Index: Very Good
Congested Speed: 12
Bicycle Comfort Index: Poor
Pedestrian Comfort Index: Fair
Truck Accommodation Index: Very Good

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Questions?

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