



OMSI

OMSI Technology Track Kickoff Part 1
10/21/2020

OMSI Mission & Vision



OMSI MISSION

Inspire curiosity through engaging science learning experiences, foster experimentation and the exchange of ideas, and stimulate informed action.

OMSI 20 YEAR VISION

Ignite an education transformation at the intersection of science, technology, and design, and weave a thriving innovation district into the fabric of Portland to spread opportunities across the Northwest.

Master Plan Guiding Principles



CENTER FOR EXCELLENCE

in science teaching & learning



COMMUNITY DESTINATION

for public engagement and creative problem solving



CENTER FOR SUSTAINABILITY

in its design and as a center for public education



REVENUE GENERATOR

to support OMSI's educational mission and build financial strength

OMSI Redevelopment Objectives



CENTER FOR EXCELLENCE



COMMUNITY DESTINATION



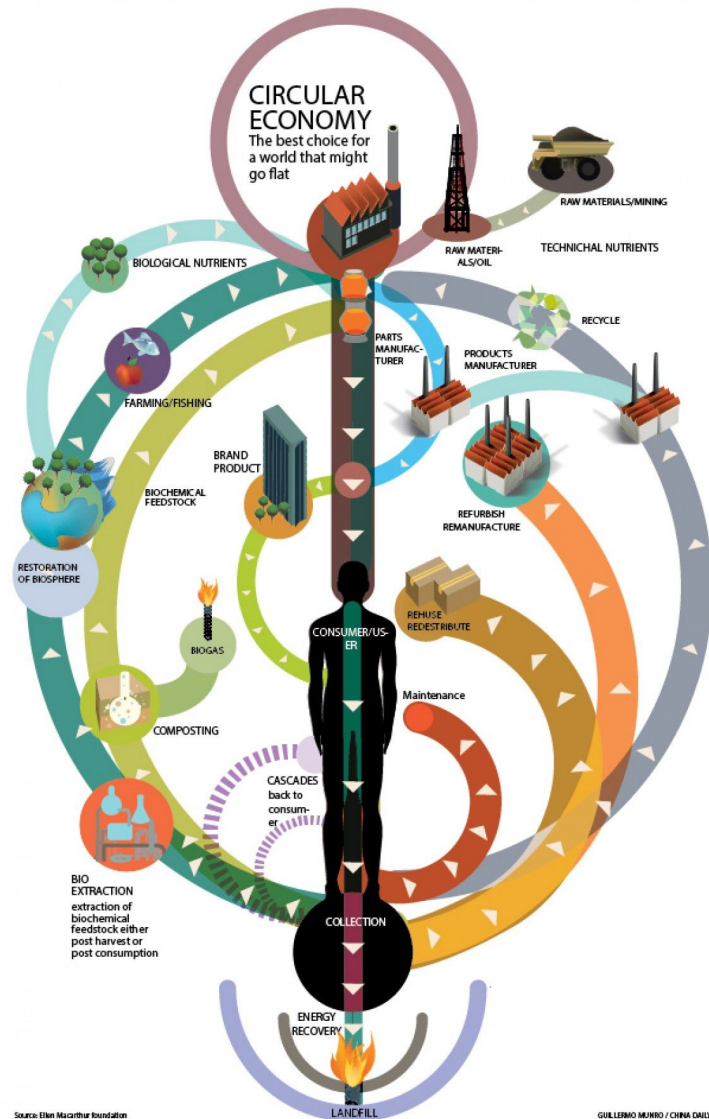
CENTER FOR SUSTAINABILITY



REVENUE GENERATOR

- Affordable mix of housing, office & retail
- Authentic stakeholder engagement using the Civic Ecology process
- Net zero carbon by 2040
- Net positive water
- Circular economy node with net zero waste
- Urban wildlife habitat & Salmon Safe certification target
- Transit-oriented; pedestrian-centric; bike & micromobility infrastructure
- Freight reduction plan
- Re-purposeable structures
- Climate and seismic incident prevention
- Maker space and innovation ecosystem
- Tenant focus on science, technology, biotech, and industry
- Integrated data system
- Next-generation sensor network
- Advanced building performance analytics

Interconnected Systems



Source: Ellen MacArthur Foundation

GUILERMO MUNHO / CHINA DAILY

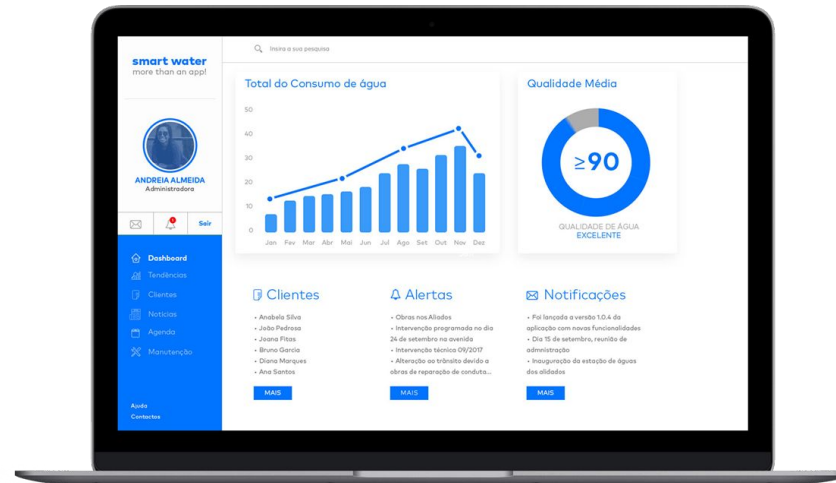
Objectives

- Net zero carbon by 2040
- Circular economy node with net zero waste
- Urban wildlife habitat
- Salmon Safe certification
- Transit Oriented
- Pedestrian centric
- Vibrant business and social activity 24/7

Indicators

- Water flow and temperature in and out
- Heat flow in and out
- Waste flow in and out
- Energy Flow in and out
- Air quality and flows
- Freight flow in and out
- Traffic/Transit flow in and out
- Occupancy
- Social activity 24/7
- Economic activity

Dashboard



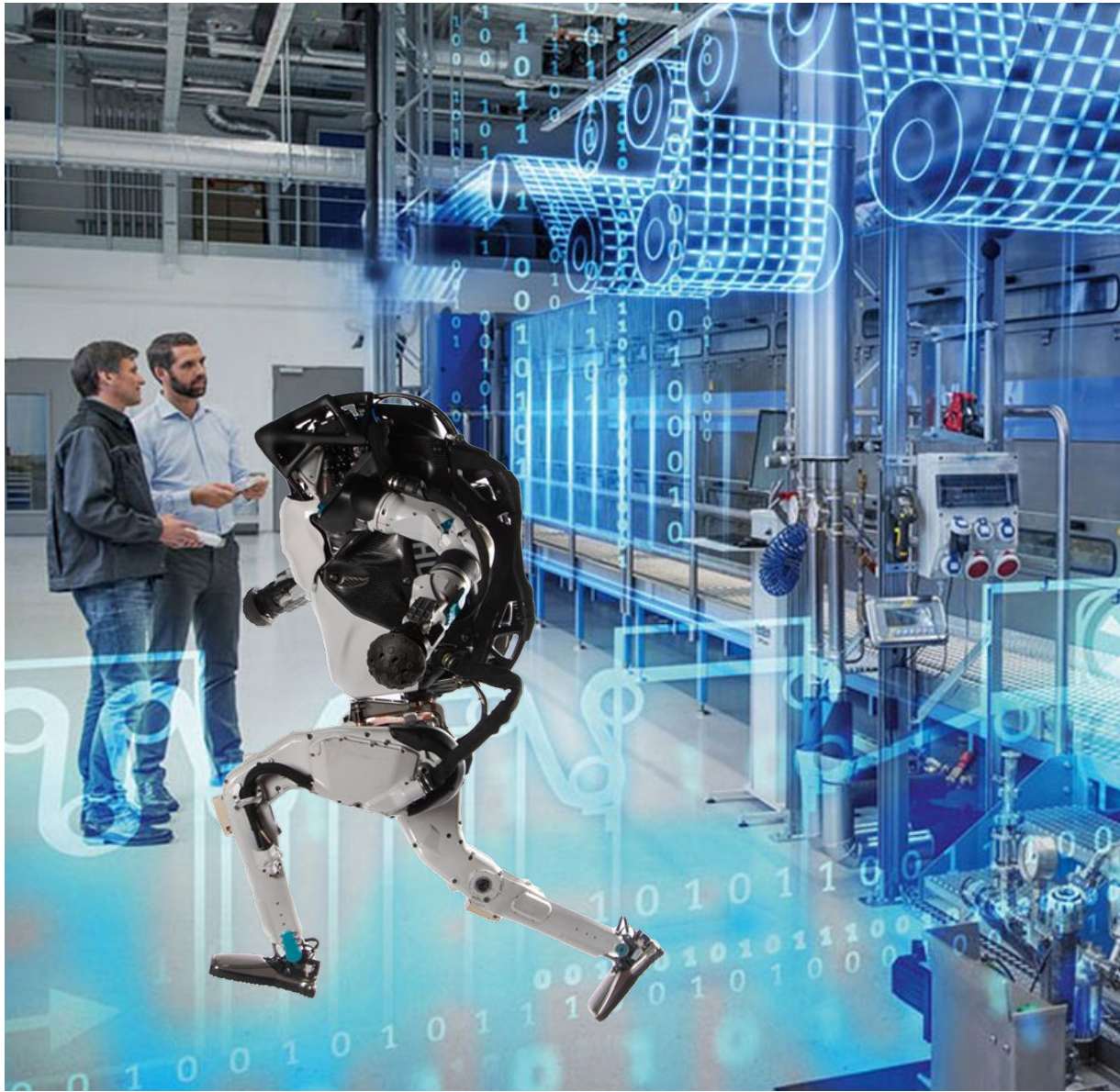
Data, Sensors

- Transportation and Mobility
- Equity & Inclusion
- Civic Ecology Charrettes
- District Energy
- District Water
- District Waste

Displays

- Online Device
- Public Displays
- Control Center

Digital Twin



Model Building

- Partner with Intel on District Scanning
- Portable Model

Wayfinding

- Fixed pathways
- Obstacles

Education

- User Interface
- Data mapping

Automated Docent

- Virtual Tours
- Field Camps (Hancock Station)

Citizen Engagement and Education



Citizen Engagement

- Civic Ecology
- Circular Economy

Education

- Popup
- Online
- Augmented (Kit for online)

Gamification

- Change behavior through games
- Rewards for helping OMSI meet goals
- Carbon Currency

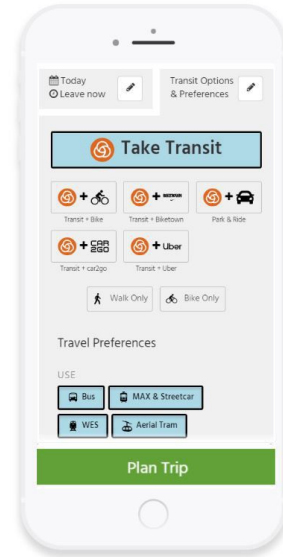
Targeting

- Based on transcript
- Based on preferences

Application

Membership

- History of participation
- Offers



Education

- Transcript
- Preferences



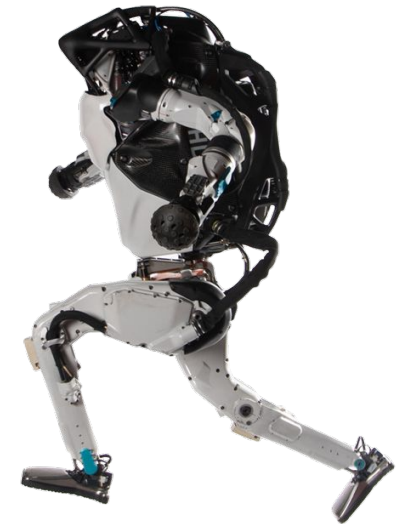
Transit and Mobility

- Multi-Modal trip planning
- Wayfinding
- Incentives
- Parking



Access to Digital Twin

- Virtual Tours
- Field Camps (Hancock Station)





THANK YOU