GEOSPATIAL WORLD FORUM

15-19 January, 2018, Hyderabad, India

ONE GLOBAL PLATFORM – FOUR KEY EVENTS!

GEO BUIZ SUMMIT	AI & IoT SUMMIT	GEO 4SDGs Addressing Agenda 2030	LOCATION — WORLD —
15-16 January, 2018	18-19 January, 2018	18-19 January, 2018	18-19 January, 2018

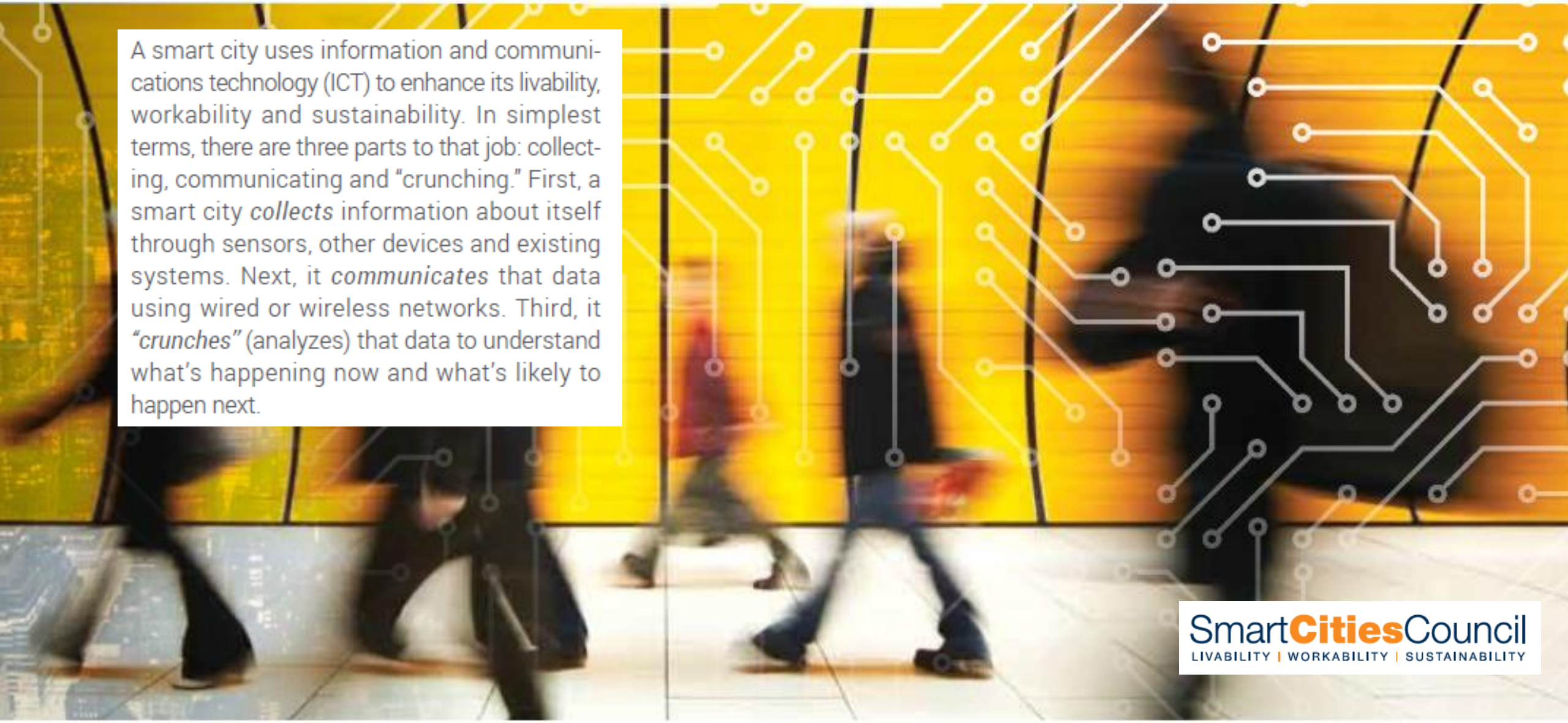
CLICK HERE TO KNOW MORE

GIS Enabling Smart Cities & More Efficient Transportation

Nick Land

Esri Inc.

What is a Smart City?



A smart city uses information and communications technology (ICT) to enhance its livability, workability and sustainability. In simplest terms, there are three parts to that job: collecting, communicating and "crunching." First, a smart city *collects* information about itself through sensors, other devices and existing systems. Next, it *communicates* that data using wired or wireless networks. Third, it *"crunches"* (analyzes) that data to understand what's happening now and what's likely to happen next.

SmartCitiesCouncil
LIVABILITY | WORKABILITY | SUSTAINABILITY

GIS as a Platform

Enabling Smart Cities

- Simple
- Integrated
- Open

Available in the Cloud . . .
. . . and On-Premises

Web GIS Integrates All Data Types

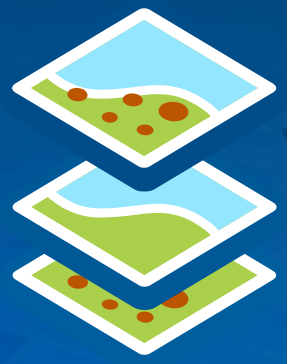
With Web Maps and Web Services

Providing a New Medium for GIS

Web GIS Dynamically Integrates Information

Combining and Analyzing Information

Visual Overlay



Mashup

Spatial Analysis

Modeling

Helping to Discover and Understand Relationships . . .

ArcGIS

Foundational Apps

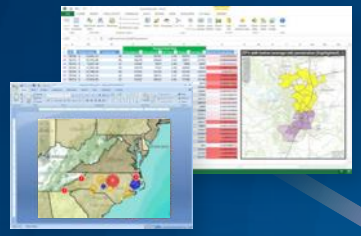
Making the Platform Pervasive

Supporting Common Tasks

- Collection / Editing
- Viewing
- Mapping
- Analysis
- Awareness
- Communication

* Offline Use

Microsoft Office



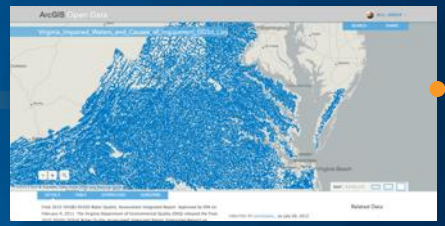
Dashboard

Collector*

Explorer*

Insight

Open Data

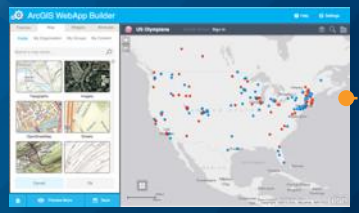


New

Viewer

Story Maps

Web App Builder



Multiple Devices

. . . A Core Part of the Platform

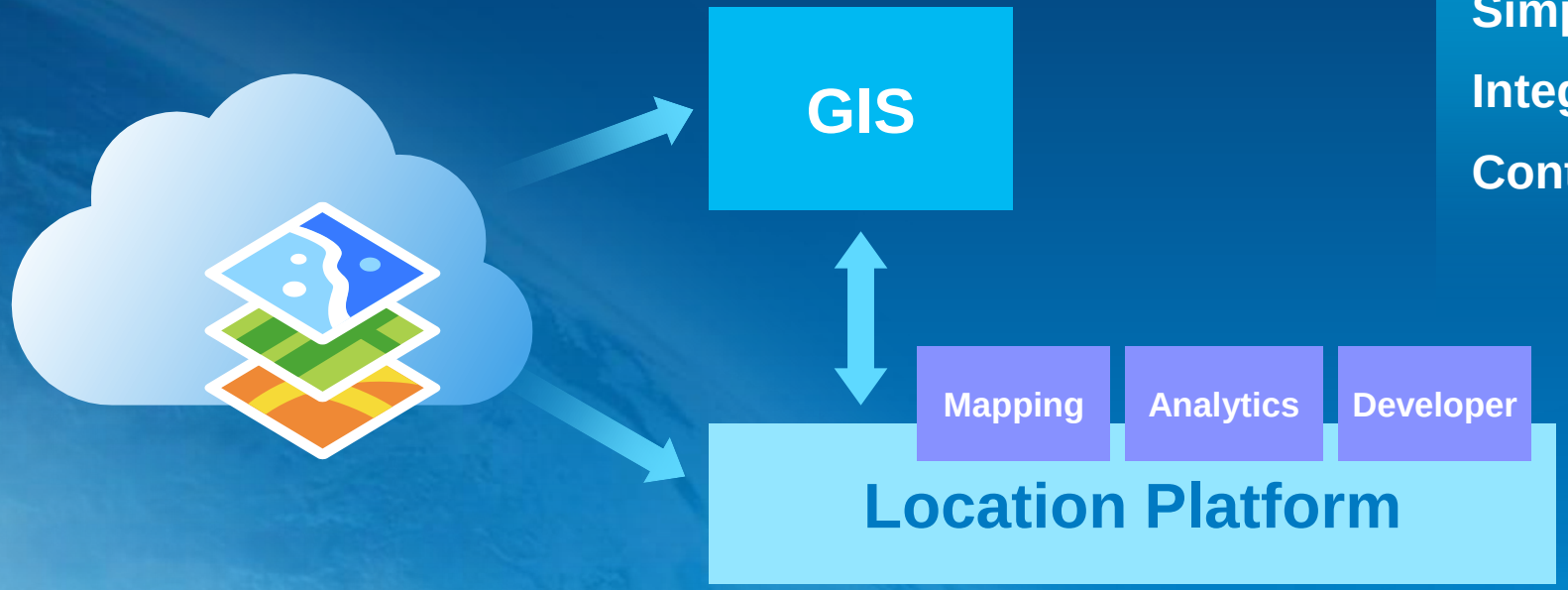
Web GIS Integrates Organisations and People

Breaking Down the Barriers

Creating New Relationships

. . . Supporting Innovation, Integration & Collaboration

The Platform Supports Two Communities



Simple/Easy Apps

Integrated with Enterprise Content

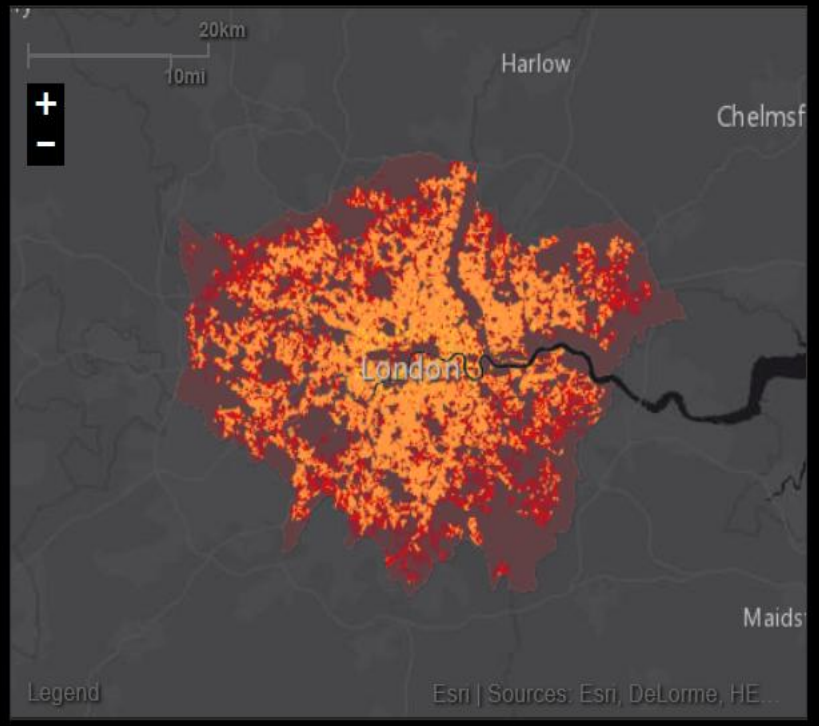
. . . Geocentric workflow and location enablement

(Geo)Smart Cities and Efficient Transportation

Good transportation systems that are efficient, environmentally friendly, and move people quickly, comfortably and affordably to their destinations.

Population Density

London

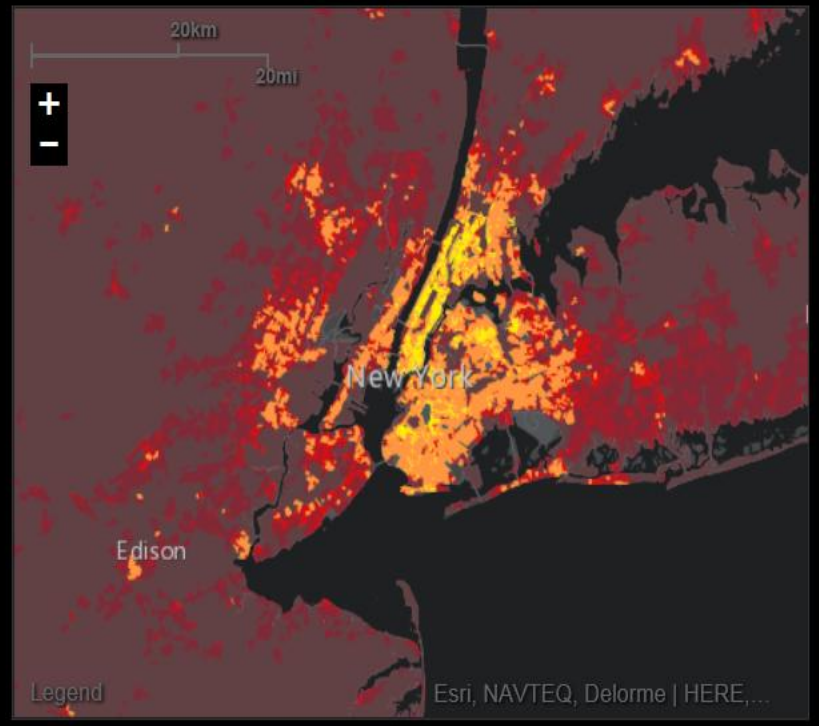


"In mid-2007 it was estimated that London's population was 7.56 million (up 44,000 on the previous year). Of these, 3 million lived in inner and central London and 4.56 million in the outer boroughs," states The Mayor's London Plan. When viewing the entire London area including the outer boroughs, one can clearly see the concentration around the city center.

Census data reveals that population density varies noticeably from area to area. Small area census data do a better job depicting how where the crowded neighborhoods are.

In this map, the yellow areas of highest density range from 30,000 to 150,000 persons per square kilometer. In those areas, if the people were spread out

New York

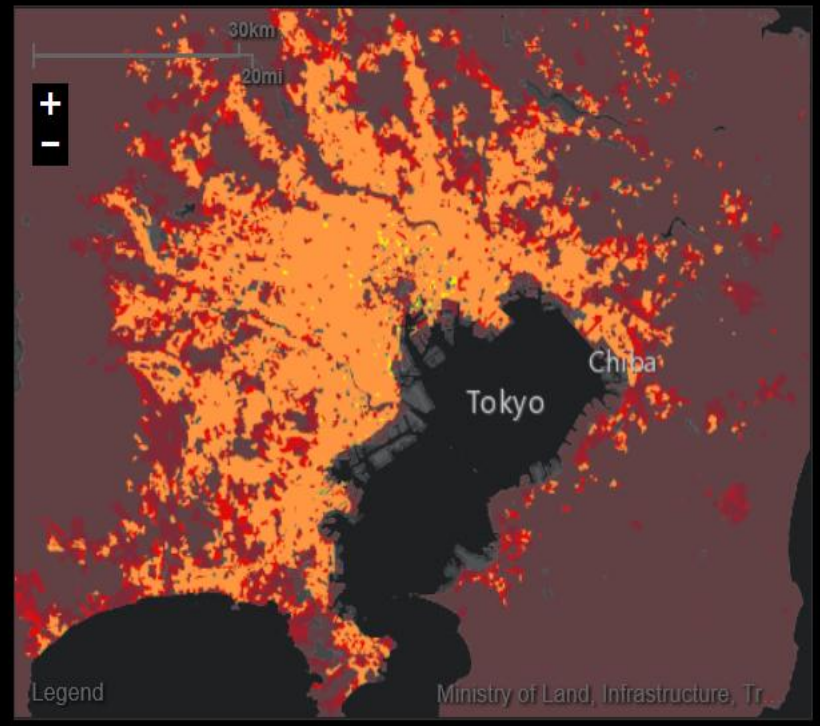


"When you imagine people living densely packed, you may think of New York City. But a new report from the Census Bureau shows California is home to the most densely populated metro areas in the United States," according to KPBS.

That ranking takes the population of the entire metropolitan area, and divides it by the land area of the entire metropolitan area, to provide a summary figure for the metro area (not the city). New York City by itself still leads the nation in terms of population density due to its 8+ million strong residents.

Small area census data reveals that population density varies noticeably from neighborhood to neighborhood, e.g. near Hollywood. Census data reveals

Tokyo



As one of the world's largest cities, Tokyo's population density shows interesting patterns due to the industrial areas around the bay, historic district just west of there, and areas of population growth nestled in among the mountains nearby.

Census data reveals that population density varies noticeably from area to area. Small area census data do a better job depicting how where the crowded neighborhoods are.

In this map, the yellow areas of highest density range from 30,000 to 150,000 persons per square kilometer. In those areas, if the people were spread out evenly across the area, there would be just 4 to 9 meters between them. Very

CICG | Accueil | Urban Observatory C

www.urbanobservatory.org/compare/index.html

Urban Observatory™

Themes

Work
- Commercial
- Industrial
- Predominant Occupations

Movement
- Roadspeed
- Traffic
- Highway Access
- Airports
- Railroads

People
- Housing Density
- Population Density
- Senior Population
- Youth Population

Public
- Open Space
- ParkScore

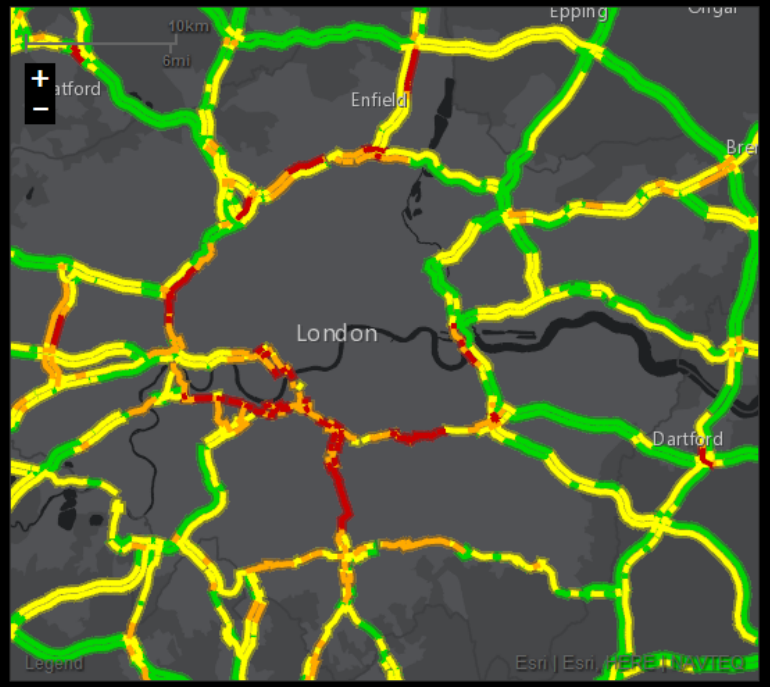
Systems
- Current Temperatures
- From the ISS
- Imagery
- Urban Footprint
- Winds
- New Development

Cities

Abu Dhabi | Atlanta | Auckland | Bogota | Boston | Chicago | Delhi | Dublin | Fresno | Hamburg | Honolulu | Houston | Jo

Traffic

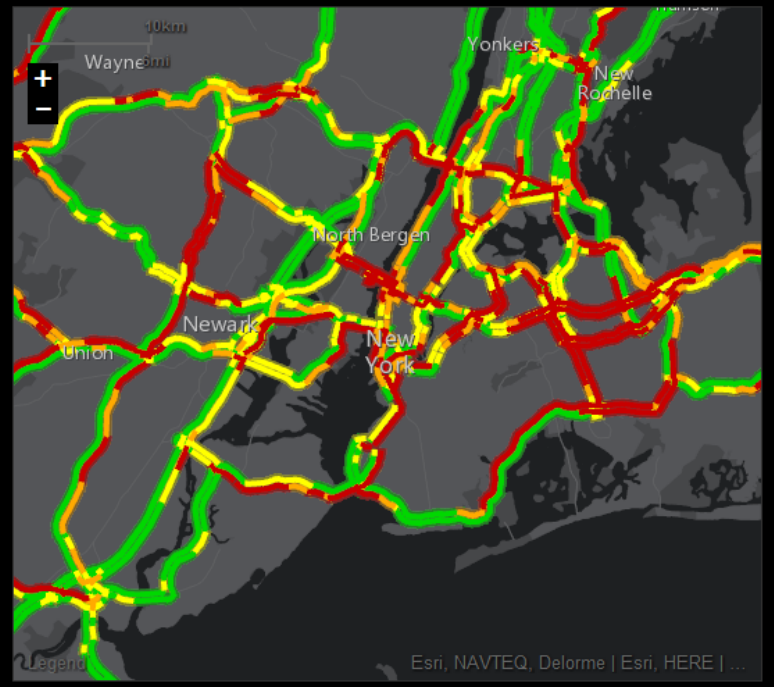
London



- Stop and Go
- Slow
- Moderate
- Free Flow

This map shows the traffic conditions you can expect at this time of day in this city.

New York



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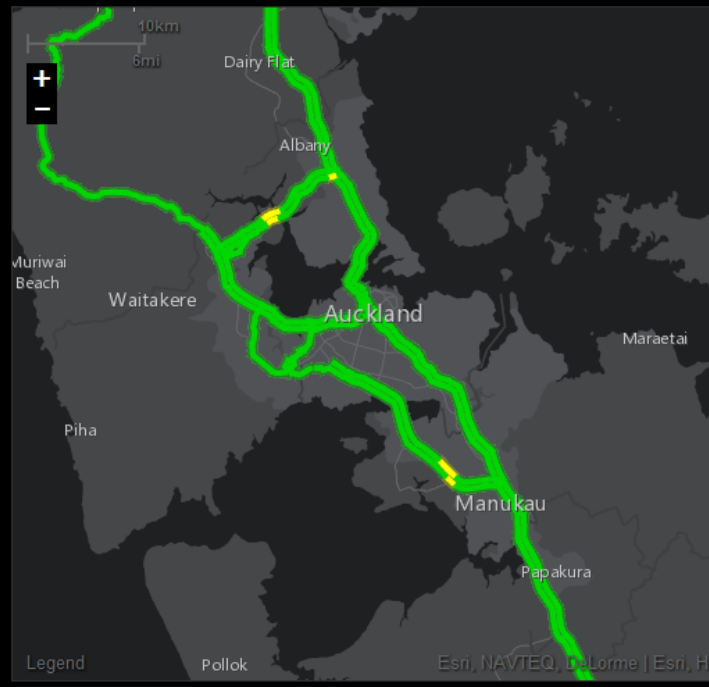
Auckland



- Stop and Go
- Slow
- Moderate
- Free Flow

This map shows the traffic conditions you can expect at this time of day in this city.

“Let the Games be about sport, not transport"

London 2012 Olympics: capital braced for travel chaos as Games Lanes open on Heathrow's busiest day

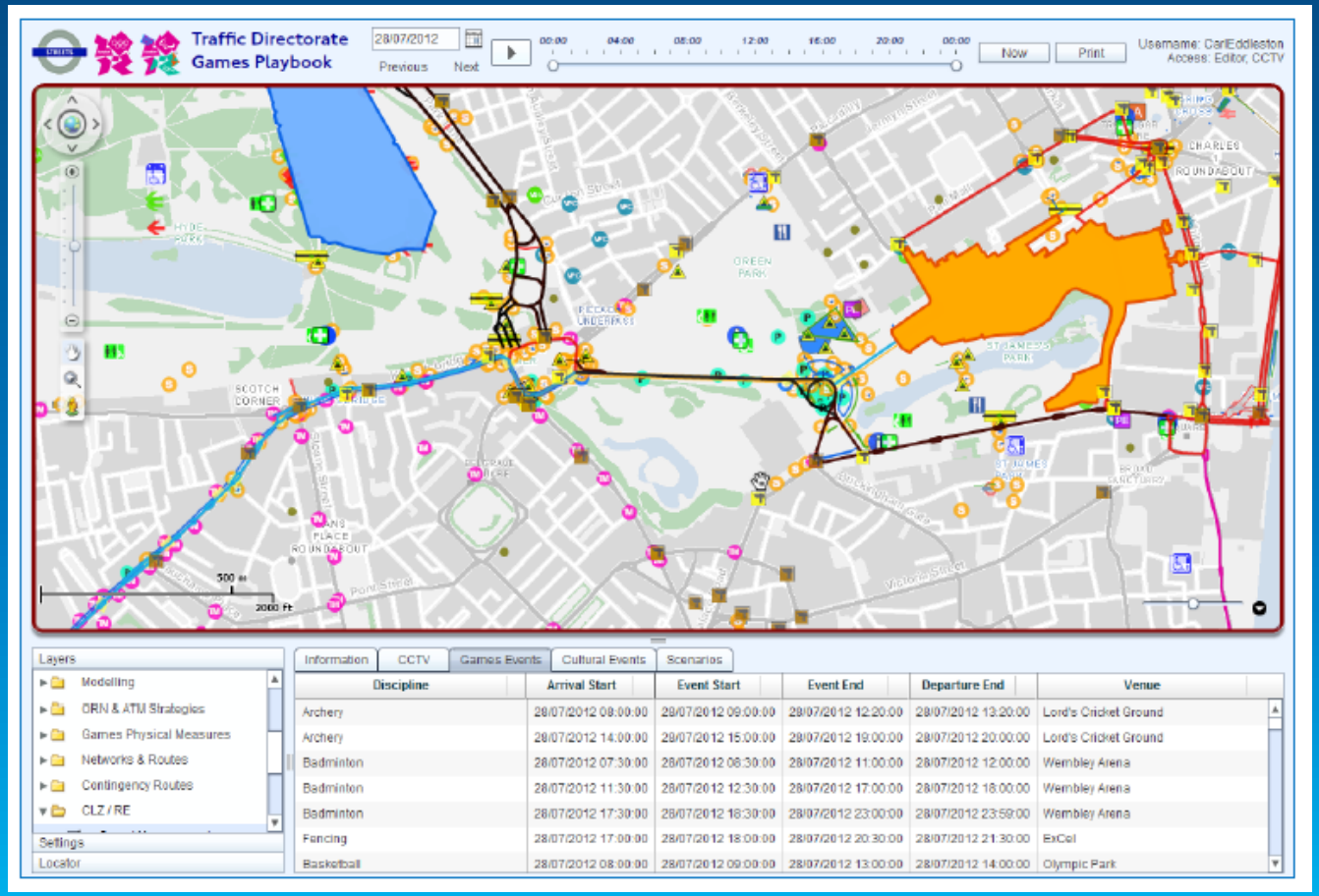
The capital faces its first major transport challenge of the London 2012 Olympics as athletes begin to arrive and the first Games Lane comes in to operation.

London Olympics

Transport for London – GIS was key in “Keeping London Moving & Open for Business”

- One platform for operational planning
- Used by 500 staff
- Static & dynamic data
- Live CCTV images
- Modelling

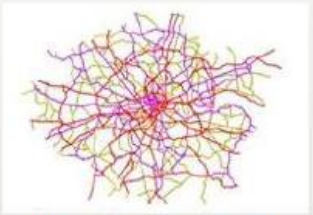
- Outcome:
  - No athlete or official was late;
  - 95.7% success for spectators.



HOME GALLERY MAP GROUPS MY CONTENT MY ORGANIZATION 2 Fiona

Featured Maps

Cycle Superhighway (Existing & Proposed)



Networks, Routes and Areas

Site Fault Management (SFM)

Pragmatic Schemes: Current to June 2016

The Surface Playbook will be an invaluable information tool for operational planning providing a platform to merge multiple Surface systems and allow the integration of new and ever changing information. This step change in ability will be put into place to allow fast, accurate and comprehensive data to be available across all departments.

Use the Featured Maps as a base to start adding layers, or you can create a custom map using the 'Make a map' option.

Make a Map | Find Groups | Search for Data

For more detail on data content please click here

Port of Rotterdam

- Europe’s busiest port
- Gateway to 500 million consumers
- 90,000 workers

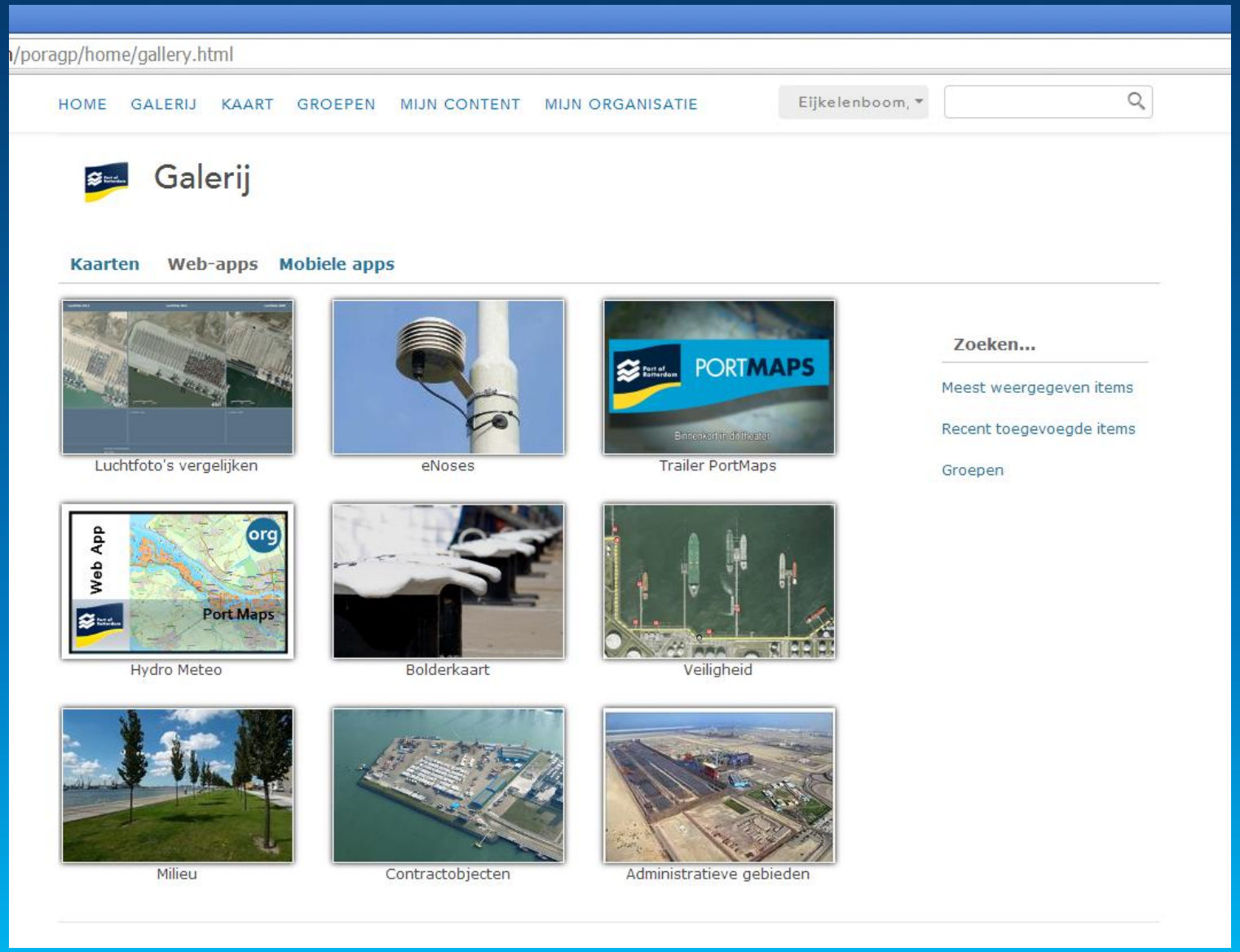
/poragp/home/index.html

HOME GALERIJ KAART GROEPEN MIJN CONTENT MIJN ORGANISATIE Eijkelenboom,

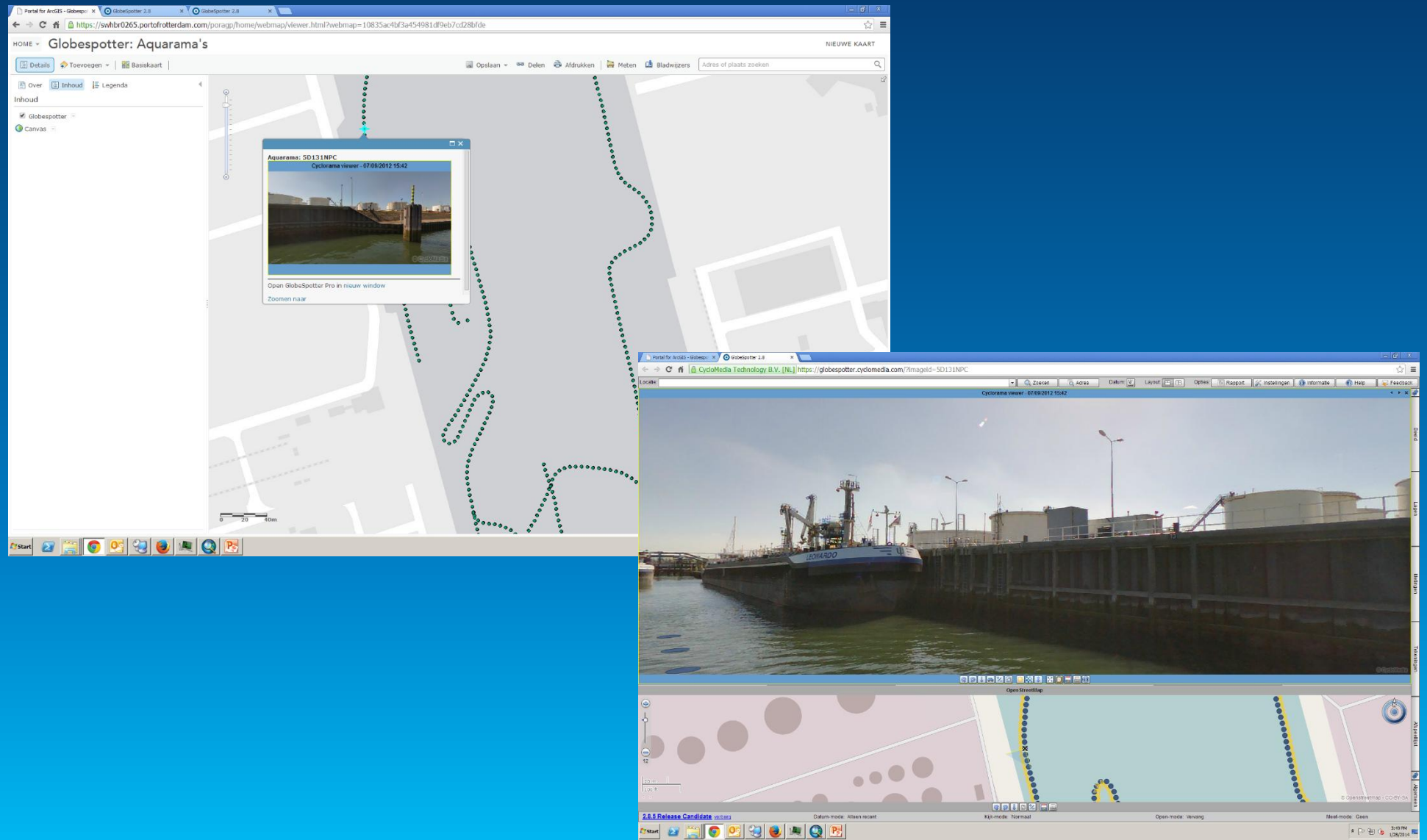
Globespotter: Aquarama's | Natuurborging | Luchtfoto | Veiligheid

Welkom op het POI van het havenbedijf. Het Port Object Information platform stelt zich tot doel om alle geo-informatie welke gerelateerd is aan de haven beschikbaar te stellen. Via het PortMaps Portal heeft u direct toegang tot de verschillende informatie producten en de PortMaps Viewer.

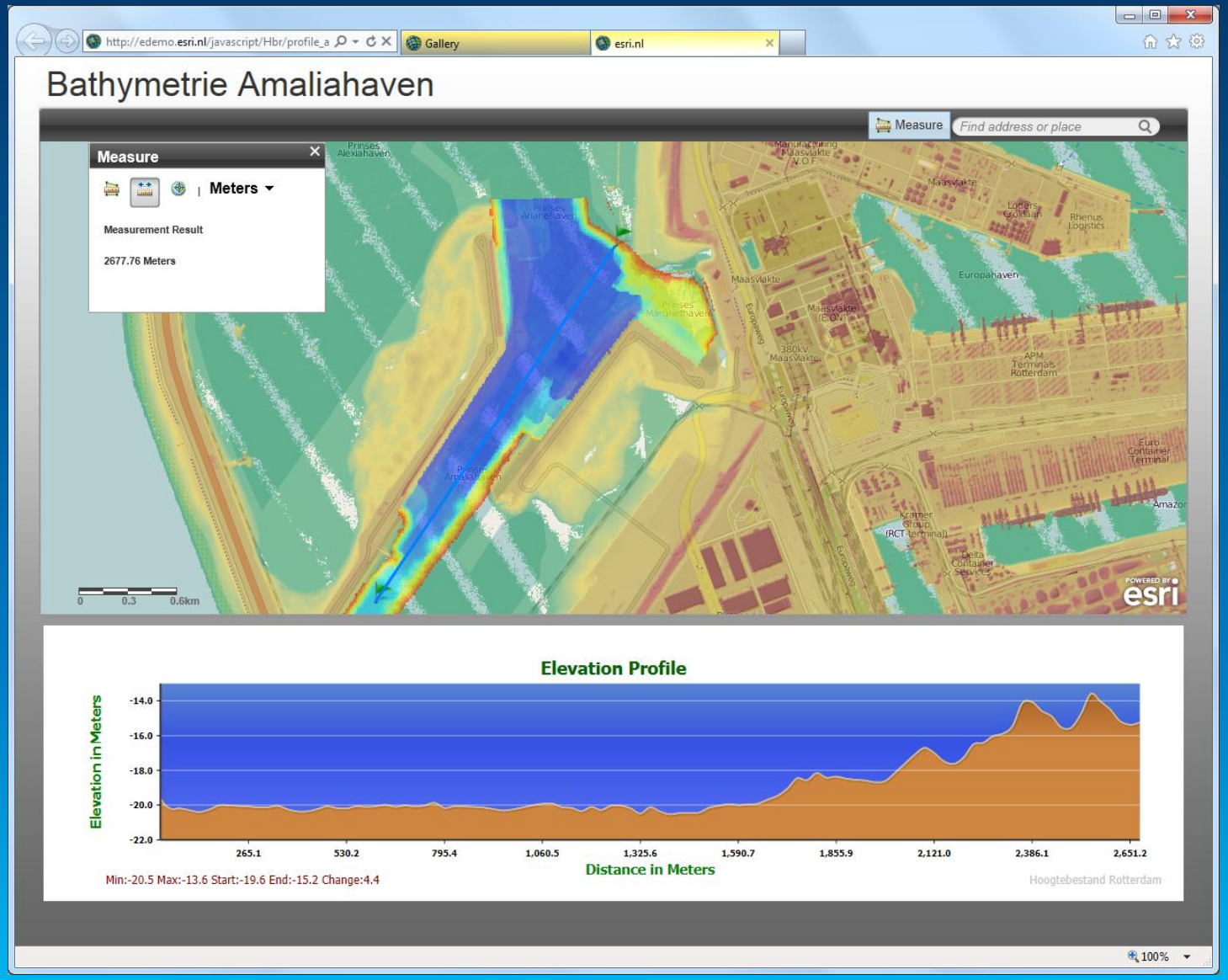
Easy access to information



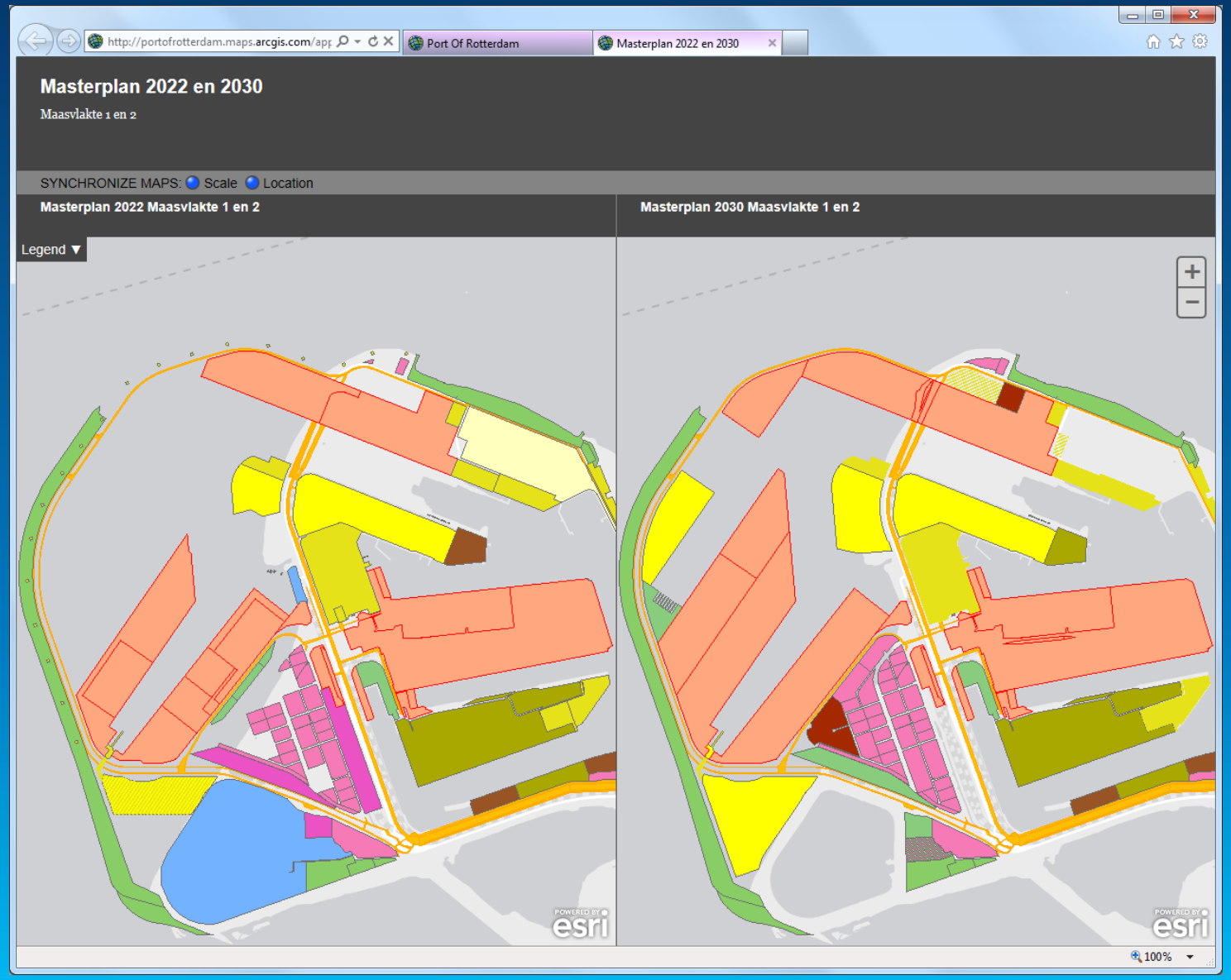
Integration with Cyclorama



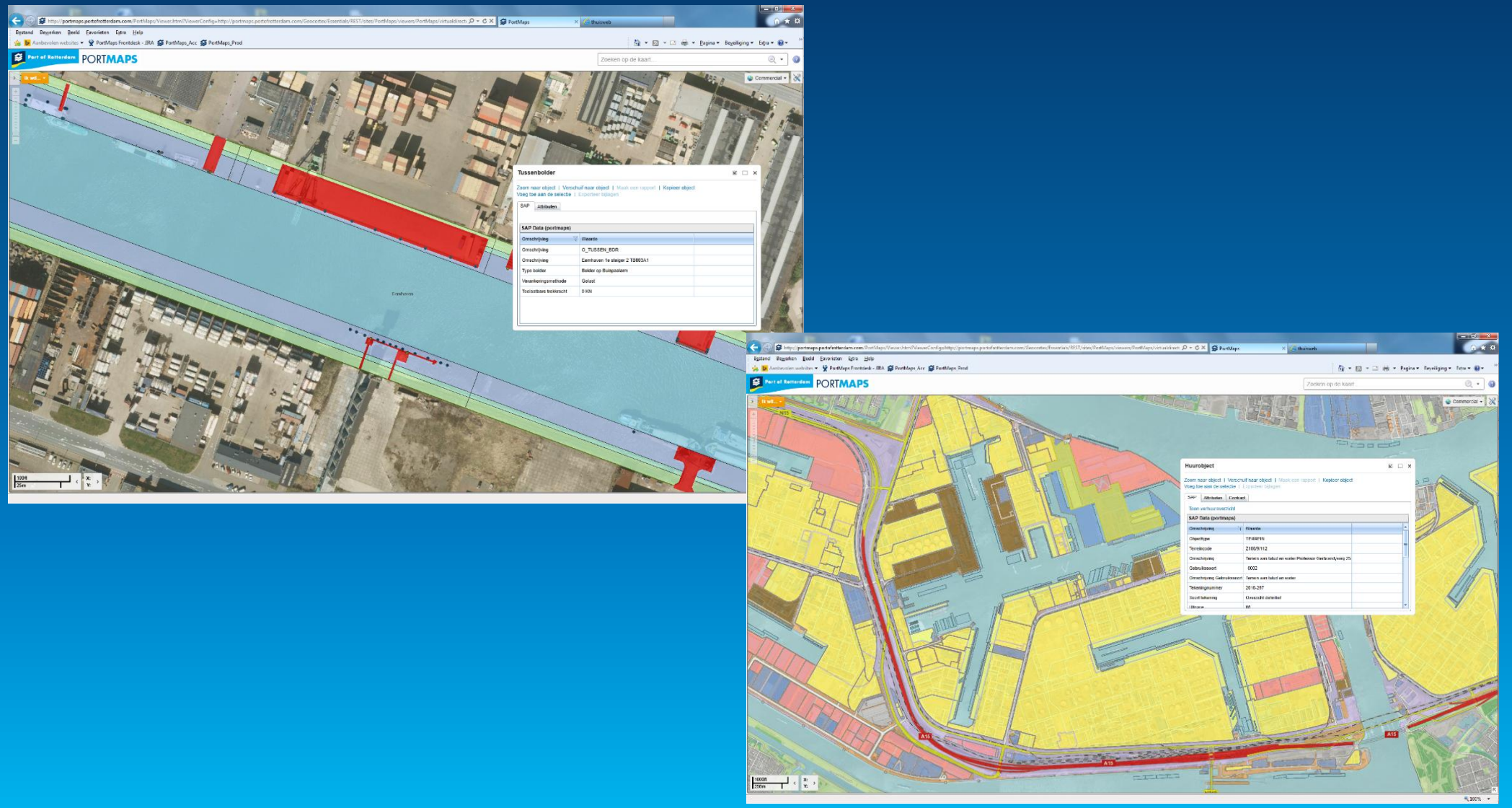
Bathymetry


Bathymetrie Amaliahaven
Measure
Find address or place
Measure
Meters
Measurement Result
2677.76 Meters
Elevation Profile
Elevation in Meters
-14.0
-16.0
-18.0
-20.0
-22.0
265.1
530.2
795.4
1,060.5
1,325.6
1,590.7
1,855.9
2,121.0
2,386.1
2,651.2
Distance in Meters
Min:-20.5 Max:-13.6 Start:-19.6 End:-15.2 Change:4.4
Hoogtebestand Rotterdam
0
0.3
0.6km
esri

Masterplan Scenarios



Integration with Business Systems



Understanding our world.