A satellite view of the Earth, centered on the African continent. The image shows the continent of Africa in shades of brown and tan, surrounded by the Indian Ocean to the east and the Atlantic Ocean to the west. Swirling white clouds are visible over the oceans and parts of the continent. The text is overlaid on the center of the image.

# **A new Era for Earth Observation**

**New capabilities to take the pulse of  
our planet ...**

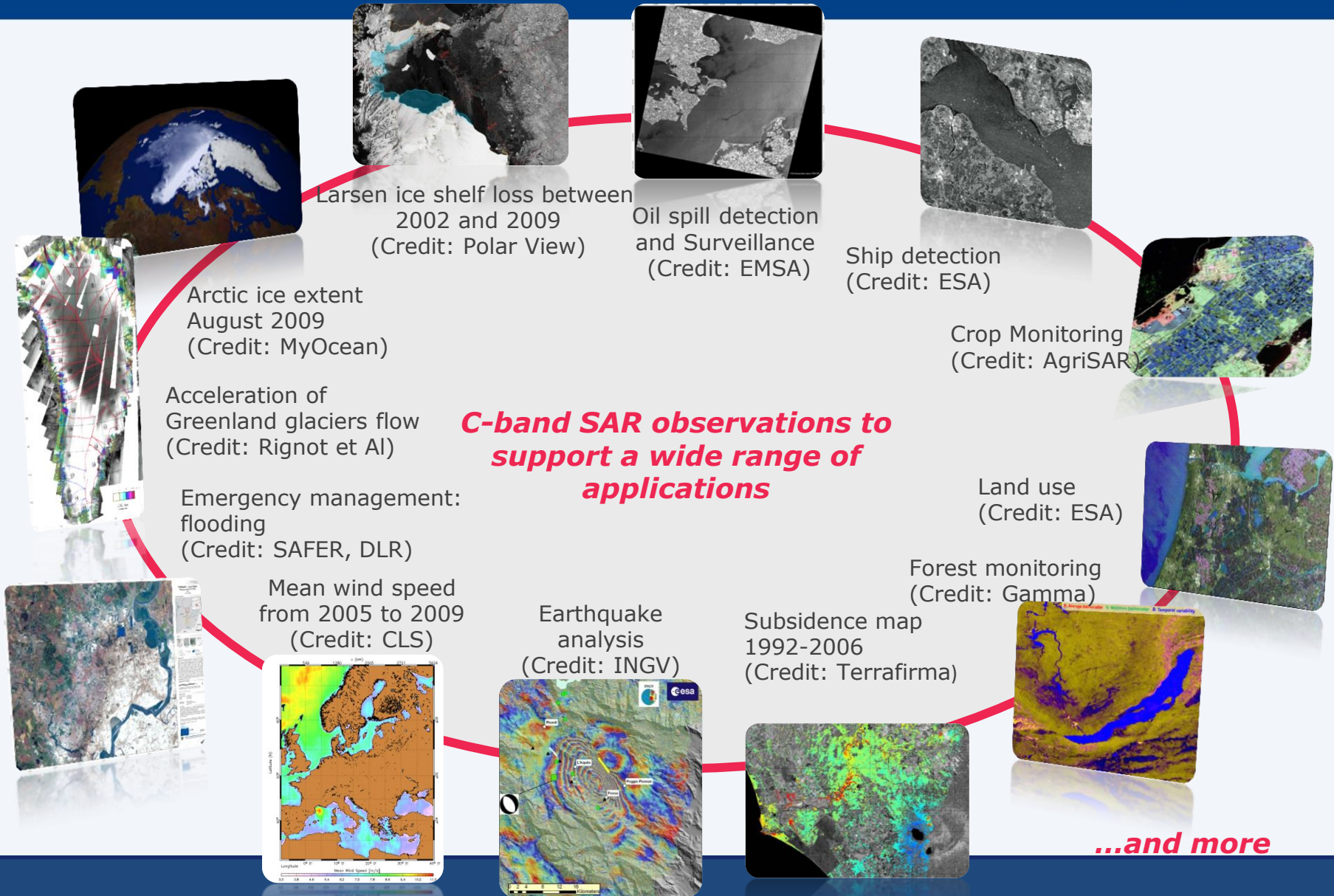


3 April 2014

- C-Band Synthetic Aperture Radar Payload (at 5.405 GHz)
- Life time: 7 years design life time with consumables for 12 years
- Near-Polar sun-synchronous (dawn-dusk) orbit at 698 km.
- Repeat Cycle 12 days repeat cycle (1 satellite)



# A wide range of applications



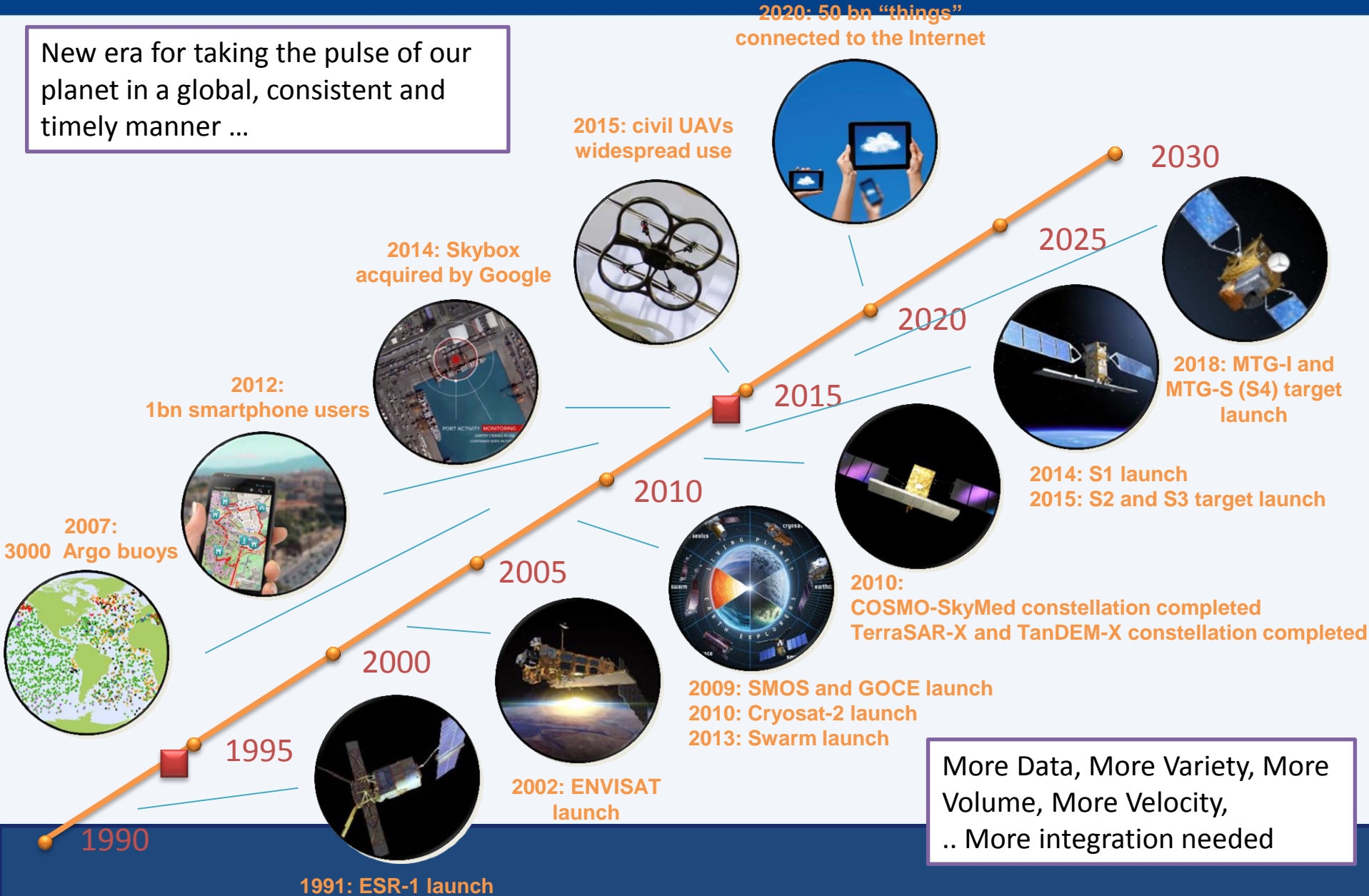
***C-band SAR observations to support a wide range of applications***

***...and more***

# Growing sensing capability at all scales

New era for taking the pulse of our planet in a global, consistent and timely manner ...

2020: 50 bn "things" connected to the Internet



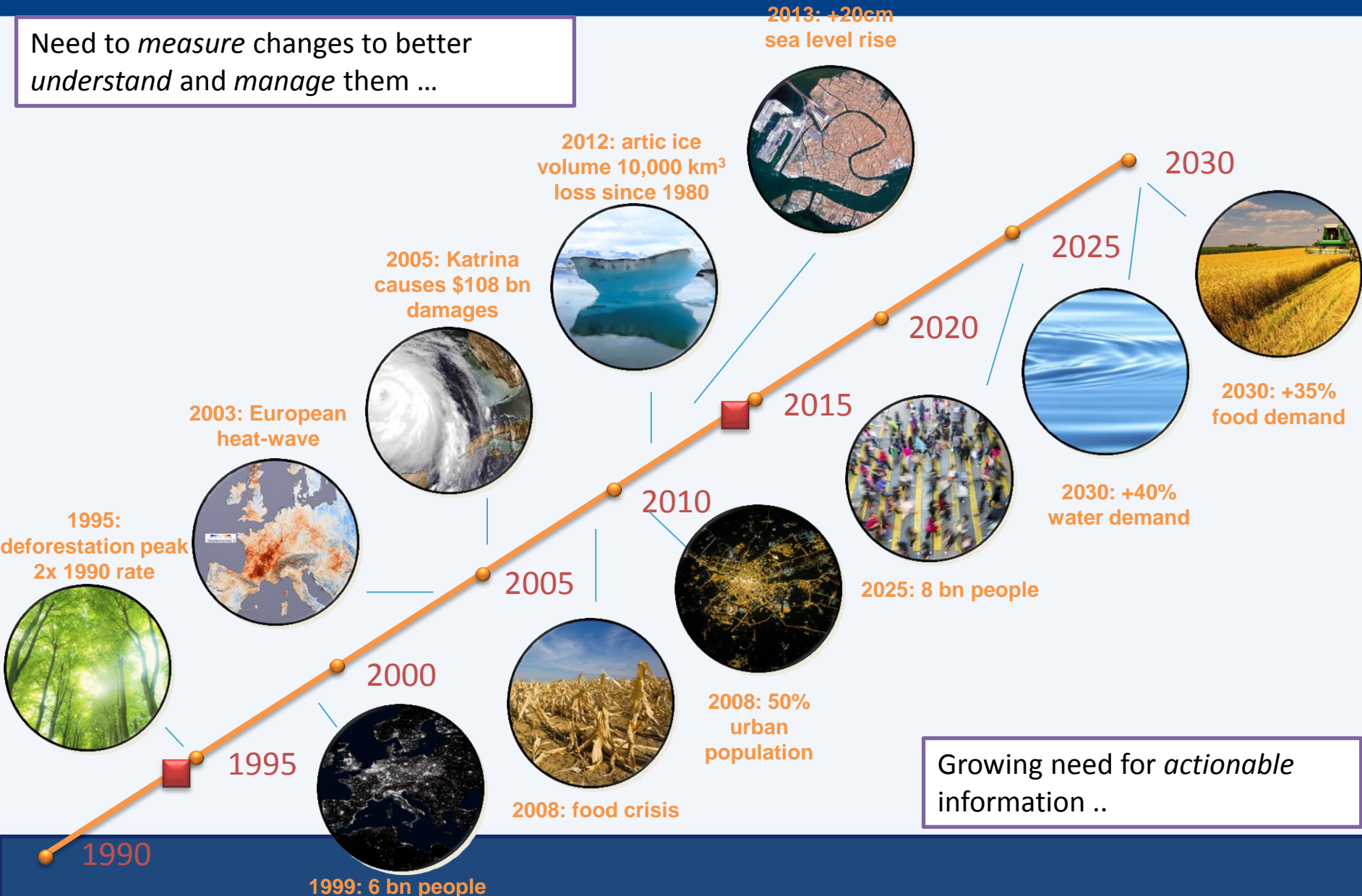
More Data, More Variety, More Volume, More Velocity, .. More integration needed



# Growing demand for environmental information



Need to *measure* changes to better understand and manage them ...

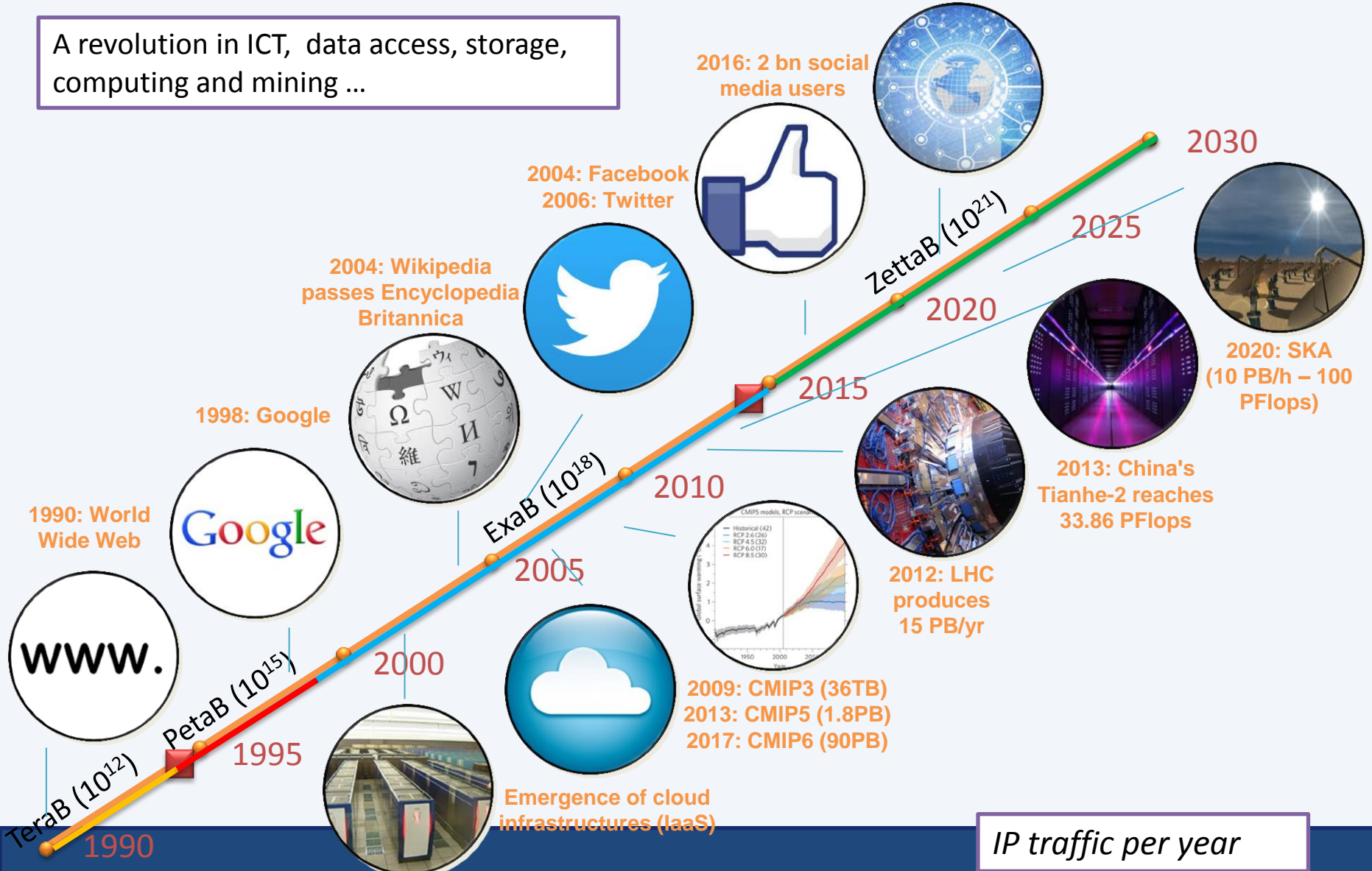


Growing need for *actionable* information ..

# Disruptive innovation in ICT

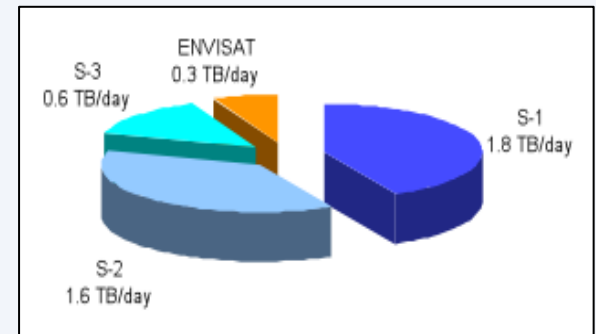
2021: n. of connected devices x7 n. of people

A revolution in ICT, data access, storage, computing and mining ...



IP traffic per year

## Moving the Calculations to the data





# Urban Exploitation Platforms - precursor



## Platform for Urban Monitoring and Analysis (PUMA), World Bank

The screenshot displays the PUMA Data Exploration interface. The main map shows land cover data for Hai Phong and surrounding areas, with a legend on the left detailing various land cover types. The interface includes navigation controls, a search bar, and a data visualization panel on the right showing percentages for different locations.

**Land cover-detailed legend:**

- 111 Continuous Urban Fabric (S.L. > 80%)
- 112 Discontinuous High Dense Urban Fabric (S.L. 50% - 80%)
- 113 Discontinuous Low Dense Urban Fabric (S.L.: 10% - 50%)
- 120 Industrial, Commercial and Transport Units
- 121 Industrial, Commercial and Transport Units (roads)
- 130 Construction sites
- 140 Urban Greenery
- 200 Agricultural Land
- 310 Forest
- 320 Other Natural and Semi-natural Areas including Wetlands
- 330 Bare Land
- 510 Inland waters
- 520 Sea and ocean

**Land cover types - percentage of total area:**

Name	Artificial a...	Agricultural...	Natural and ...	Water
Hai An	30.56	56.61	8.43	4.40
Kien An	39.95	47.43	9.26	3.36
An Duong	34.33	58.79	2.54	4.33
An Lao	28.05	54.27	13.53	4.15

**Percentage of total area for specific locations:**

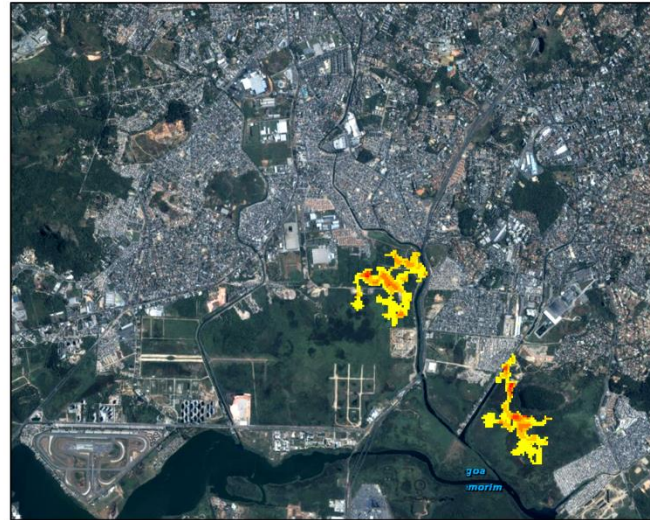
- Hai An: 31%
- Kien An: 40%
- An Duong: 34%
- An Lao: 28%
- Hong Bang: 68%
- Kien Thuy: 27%
- Le Chan: 72%
- Ngo Quyen: 89%
- Thuy Nguyen: 24%



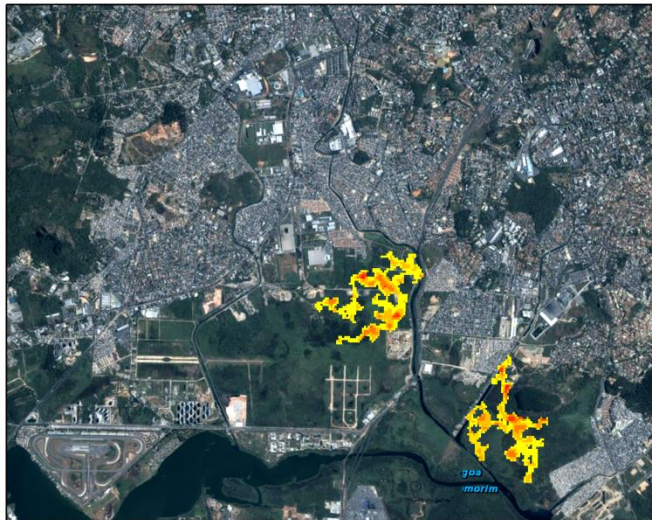


Rio de Janeiro, Brazil

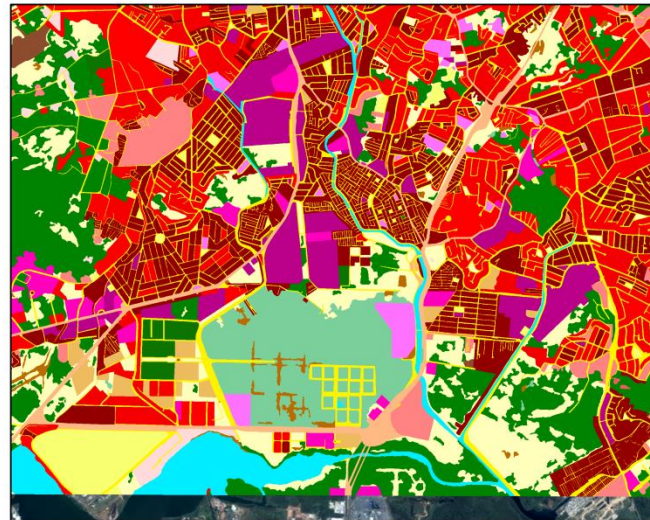
24th December 2001, 04h00m



24th December 2001, 12h00m



25th December 2001, 00h00m



Land Use 2011



THE WORLD BANK

### Water Column (meters)



### Land Use







Is there cropland in the red box?

Japan

Image © 2013 DigitalGlobe

Google Earth

Week 8 will end in 2 days, 10 hours, 3 min, 46 sec

MAYBE

Follow us on [twitter](#) to get the latest news about Cropland Capture!

ESLOBCOVER

## APP CAMP

THE ESA APP DEVELOPER LAB

Registration now closed  
participants will be informed soon

Educeo.net  
Educeo.info

>> Geocoding

>> Land Cover Data

>> Disagreement

Show Combined Disagreement Map

Cropland Disagreement Maps:

- Show GlobCover - GLC-2000
- Show GlobCover - MCDIS
- Show MCDIS - GLC-2000

Forest Disagreement Maps:

- Show GlobCover - GLC-2000
- Show GlobCover - MCDIS
- Show MCDIS - GLC-2000

>> Validated Area

>> Additional Data

Load Confluence Points

Load uploaded Pictures

display legend >

Legend:

- cropland disagreement
- high cropland disagreement
- forest disagreement
- high forest disagreement
- forest and cropl. disag.
- forest and cropl. (high) disag.
- forest (high) and cropl. disag.
- high forest and cropl. disag.

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image © 2009 DigitalGlobe  
© 2009 Cnes/Spot Image  
Image © 2005 TerraMetrics  
4°57'15.61" S, 20°46'14.06" E, elev. 1073 ft

Google

Elev. alt. 5858.17 m

## A NEW GLOBAL PARTNERSHIP: ERADICATE POVERTY AND TRANSFORM ECONOMIES THROUGH SUSTAINABLE DEVELOPMENT

The Report of the High-Level Panel of Eminent Persons on  
the Post-2015 Development Agenda



Moving from Millenium Development Goals (MDGs) to Sustainable Development Goals (SDGs)

*“We also call for a **data revolution** for sustainable development, with a new international initiative to improve the quality of statistics and information available to citizens. We should actively take advantage of new technology, crowd sourcing, and improved connectivity to empower people with information on the progress towards the targets. “*

High-level Panel on the Post-2015 Development agenda



*We are the tip of an Iceberg ...  
of an information revolution & the Internet of Everything.*



**Thank You**



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European Space Agency