



Pléiades

General overview

Bruno BERTOLINI

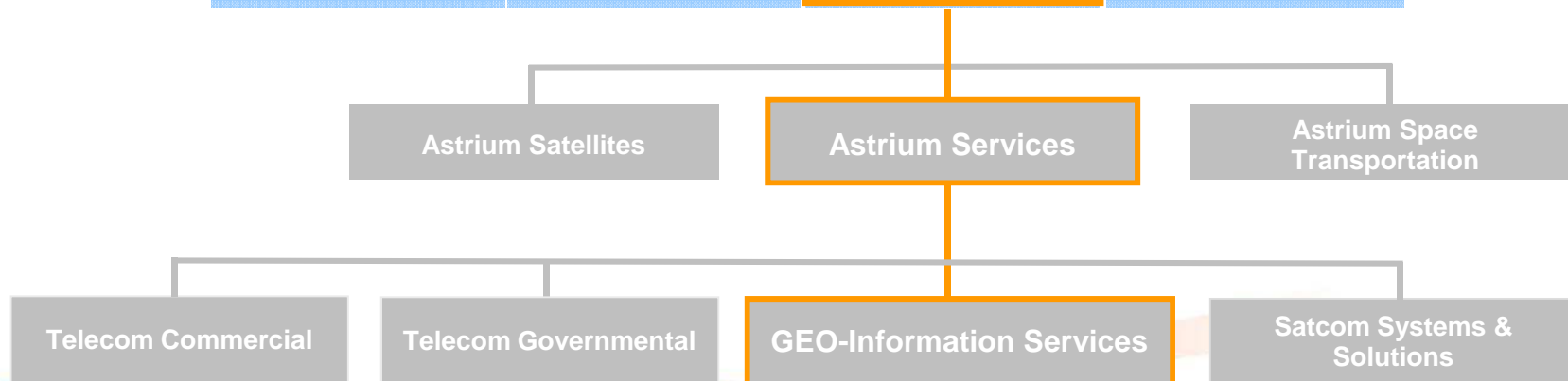
India Sales Manager - Astrium Services

Jan 2013

All the space you need



Astrium Services within EADS



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All the space you need



Astrium GEO-Information Services

Satellite operator & long-term partner of other key players

- Access to the most comprehensive range of EO data
 - SPOT constellation (20 to 1,5m)
 - Pléiades 1A and 1B (50 cm)
 - TerraSAR-X and TanDEM-X (1m to 18m)
 - Third party mission such as FORMOSAT-2 (2m) and DEIMOS-1 (22m)

- ✓ Multisensor, Multi-resolution
- ✓ **+100 billion sq.km** in archive
- ✓ The **most extensive DRS network**

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2011

Pleiades 1A
50cm



Dubai, EAU
Horse racing 2012



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Abu Dhabi, EAU

Yas Island, 2012



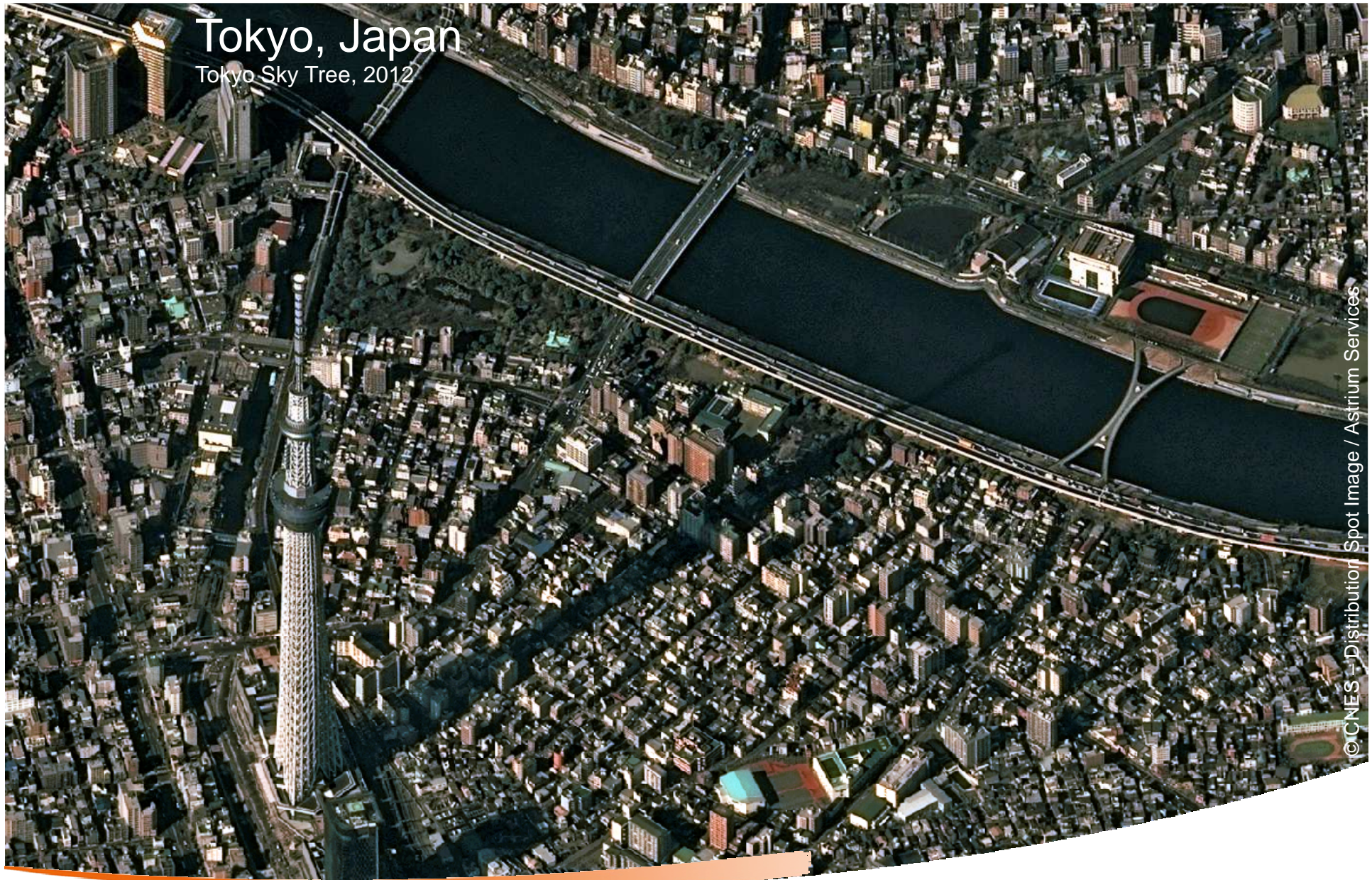
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Tokyo, Japan

Tokyo Sky Tree, 2012



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2011

Pléiades 1A
50cm



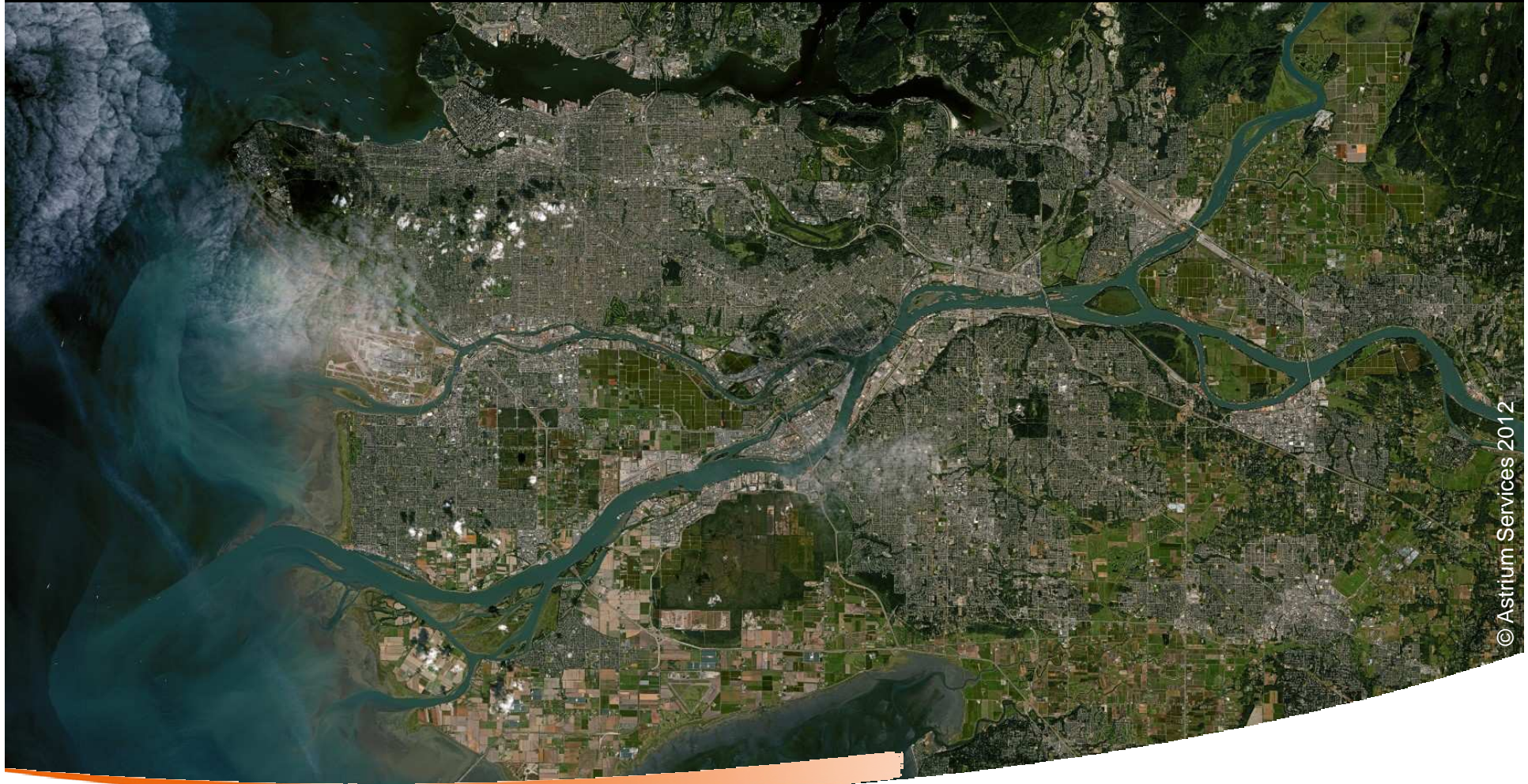
2012

SPOT 6
1.5m



SPOT 6 Vancouver (Canada)

Full swath (60 km)



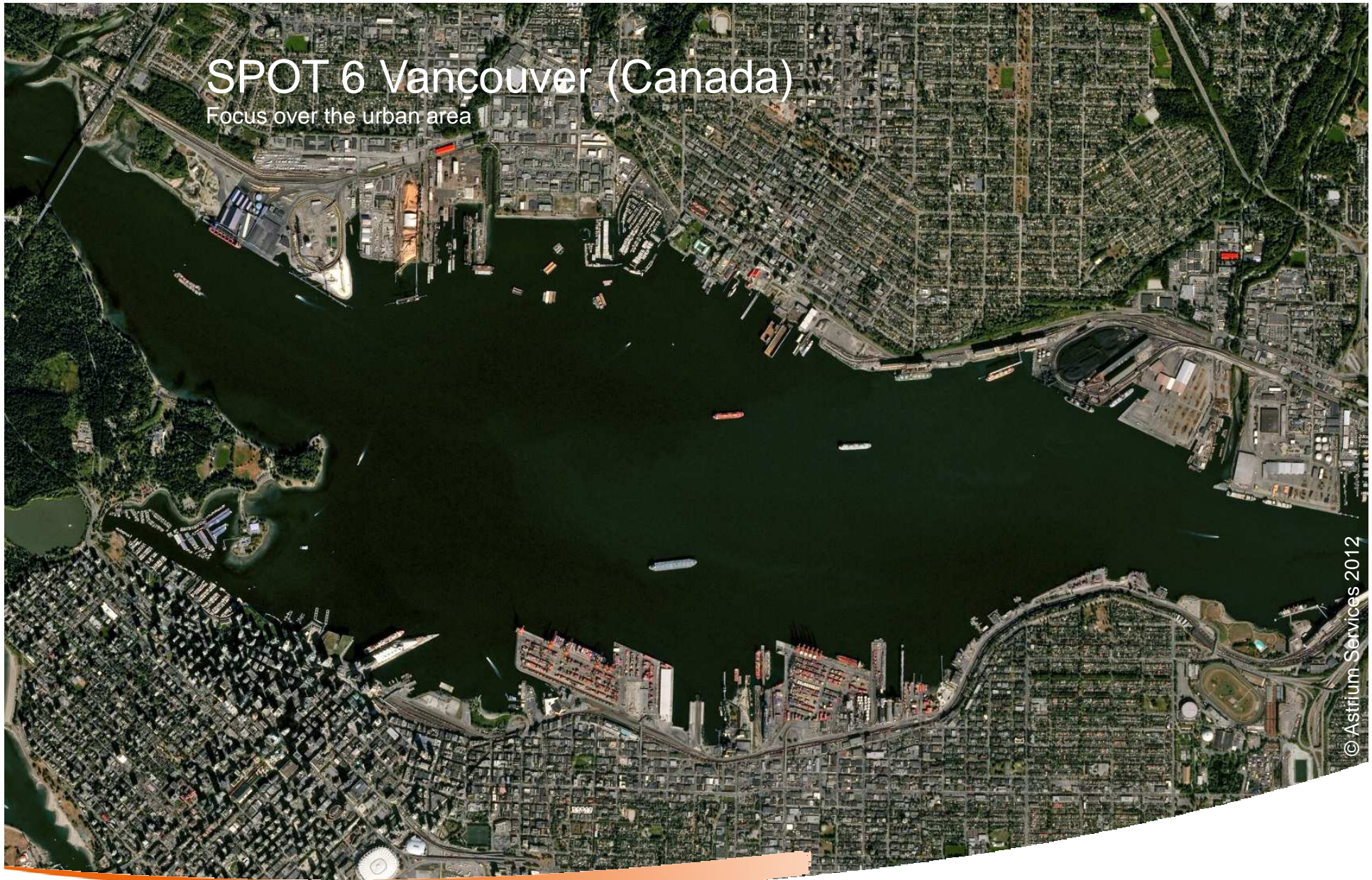
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SPOT 6 Vancouver (Canada)

Focus over the urban area



© Astrium Services 2012

All the space you need



SPOT 6 Vancouver (Canada)

Full resolution



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2011

Pléiades 1A
50cm



2012

SPOT 6
1.5m



2012

Pléiades 1B
50cm



2014

SPOT 7
1.5m

A continuity of service guaranteed until 2024

Pléiades 1A – Taj Mahal

India



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A detailed illustration of a satellite in orbit above the Earth. The satellite has a central body with a circular antenna and two large rectangular solar panels. A bright orange and yellow streak, representing a signal or data stream, curves from the satellite towards the Earth. In the background, another smaller satellite is visible in orbit. The Earth's surface is shown with blue oceans and white clouds, set against a dark blue space filled with stars.

Pléiades 1A&1B...

Accurate

Reactive

Available

...A new era for constellation services

Accurate, Reactive, Available

Sensors

One camera

1 panchromatic
4 multispectral

12 bits

Dynamic range per pixel at acquisition

PAN Colour

Simultaneous acquisition

Geolocation

8,5m CE 90 at nadir

Products

50 cm

Panchromatic
Pan-sharpened

2 m

Multispectral

Ortho rectified

As a standard
Fully automatic processing,
incl monopass mosaics

Per sq.km

Pricing model



Accurate, Reactive, Available

Constellation



1 day

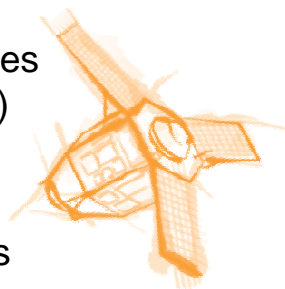
Revisit time with 2 satellites
@ 45° incidence (equator)
@ 30° incidence (Lat 40°)

Twins

Two IDENTICAL satellites

Phased orbit

180° one from each other,
same orbit



Operations

3

of tasking plans per day
One tasking plan every 8 hours

Up to 2h

Before the acquisition window to
post a rush tasking request

30 min

Direct tasking plan upload before
actual acquisition

Processing

30 min

50-cm colour ortho production
of a 20x20 km area ...

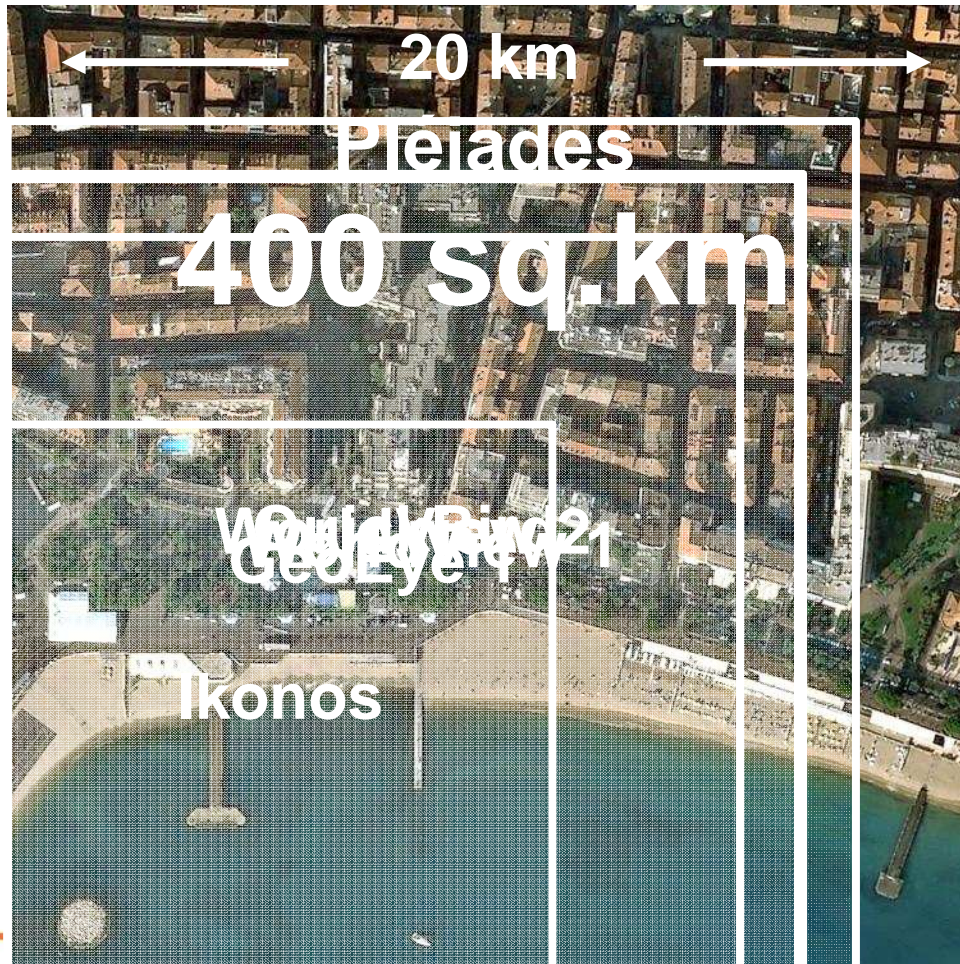
2-3 h

...for a 60 x 60 km monopass
mosaic



Accurate, Reactive, Available

The broadest swath



- Pleiades' 400 sq.km
 - A large footprint for its resolution, 20 km
 - In the spirit of SPOT family, meant for wide coverage

Maximised information
on target and surroundings

Optimised production

Easier data handling



All the space you need

Date - 17

Accurate, Reactive, Available

Acquisition capacity

1M sq.km | Max theoretical acq. capacity
Per day, per satellite

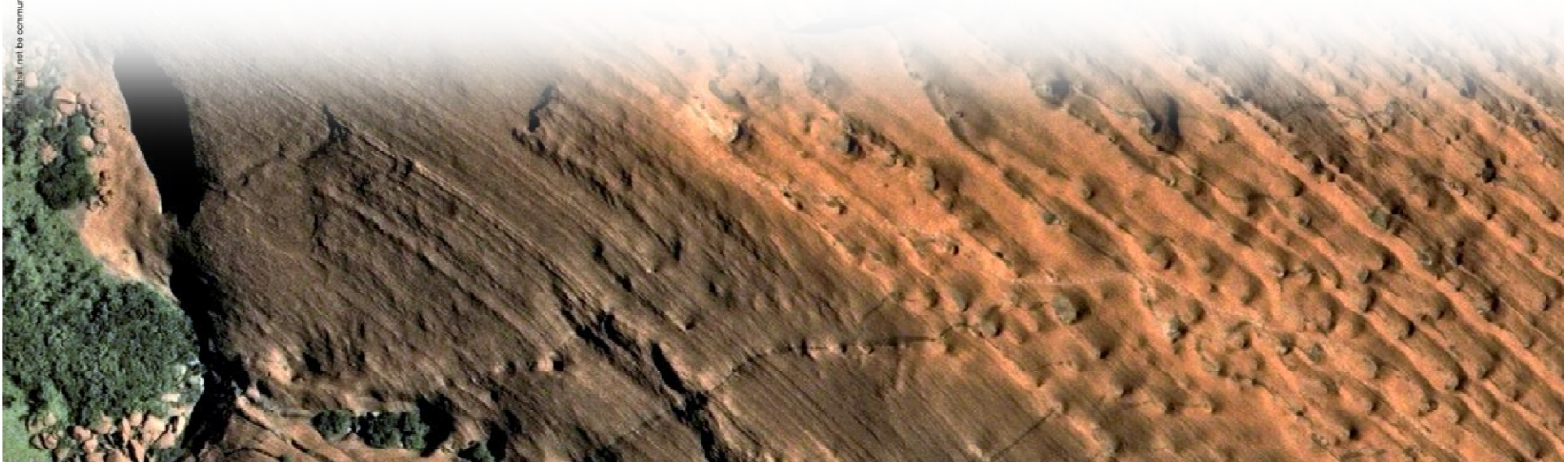
Up to 600 | Images per day, nominal
acquisition capacity (per sat)

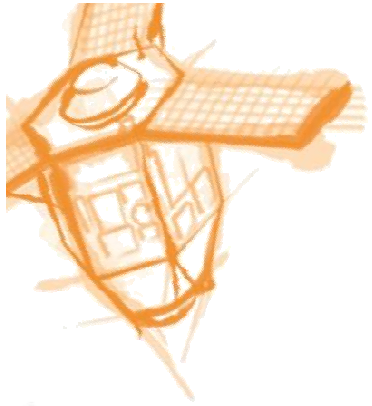
20 km | Widest swath at nadir on the
VHR market

Agility

4 | CMGs

**Monopass
collection
scenarios** | Multi-target,
Mosaic,
Stereo, tristereo,
Border / coastal / corridor





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Pléiades 1A

WHAT CAN IT BRING TO CITIES IN TERMS OF URBAN PLANNING AND MANAGEMENT?

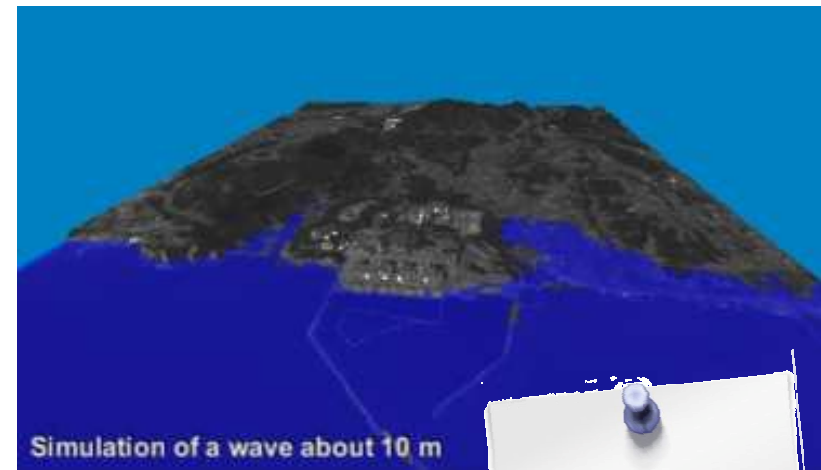
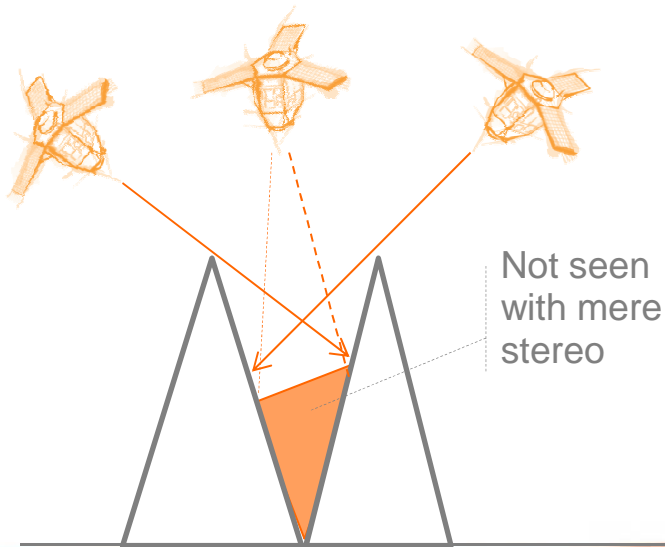
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Date - 19



I wish I could better manage disasters damages for my city

- Accurate 3D models
 - to modelize flooding and anticipate risk, evacuation and rescue



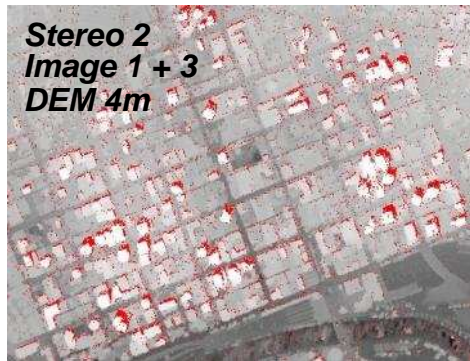
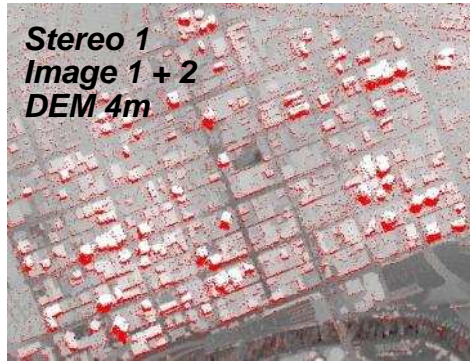
Pléiades
Tristereos

TerraSAR-X
GCPs

I am
insurers'
best friend



Stereo or Tristereoo?



Merge of the 3
stereo DEMs

In red: hidden items



Illustration of
Tristereoo benefits
over Melbourne. A
difficult urban area
featuring a
concentration of
skyscrapers



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I wish I could better manage disasters damages for my city

- Pre/post mapping after earthquake, storm, flooding, tsunami...
 - Quickly delivered to plan evacuation and rescue



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I wish I can better manage my airport

- Air traffic expansion, combined with cities growth convert airports in critical areas
 - Runway databases
 - Obstacle mapping
 - Complying with regulation (eTOD)

Pléiades 1A – New Delhi Airport

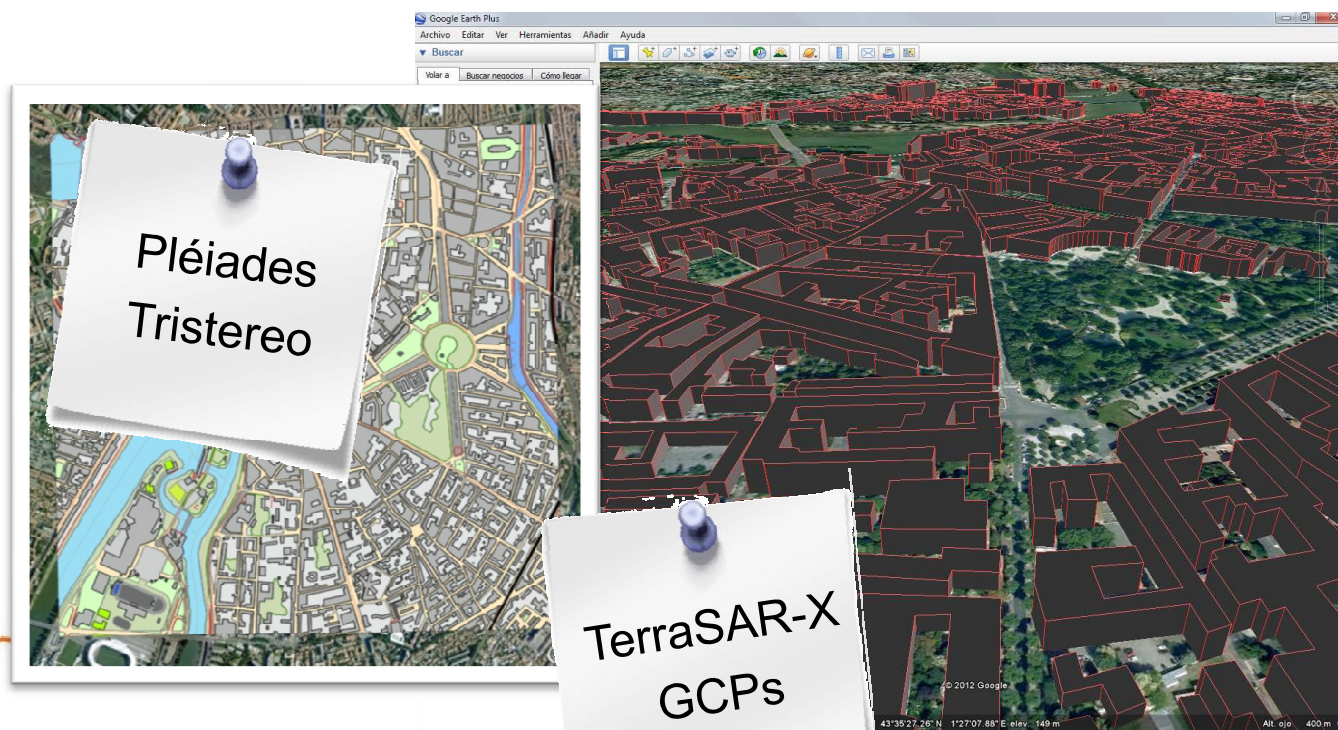
India

500 airports
already
available in
stereo

I wish I can better plan my urban dev

- 2D and 3D mapping up to 1/5000 scale with Pléiades
 - Simulate sitting of new infrastructure / impact study
 - Land use classification (valuation, cadastre, census)
 - Roads and network extraction
 - Communicate on projects and share info with partners

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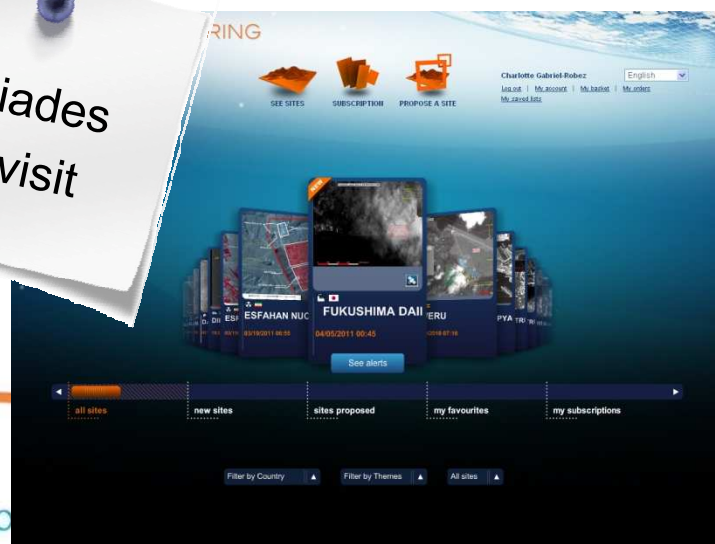
Date - 24



I wish, I wish, I wish

- I can better prepare my town against terrorist attacks
 - Pléiades
 - Photointerpretation (raw image up to processed report)
 - Mission planning (3D databases LoD1-2)
 - Risk identification (oblique views)
- I can monitor specific phenomena at the pace I want
 - Civil engineering progress, illegal building, land cover change, and even... video!

Pléiades
Revisit



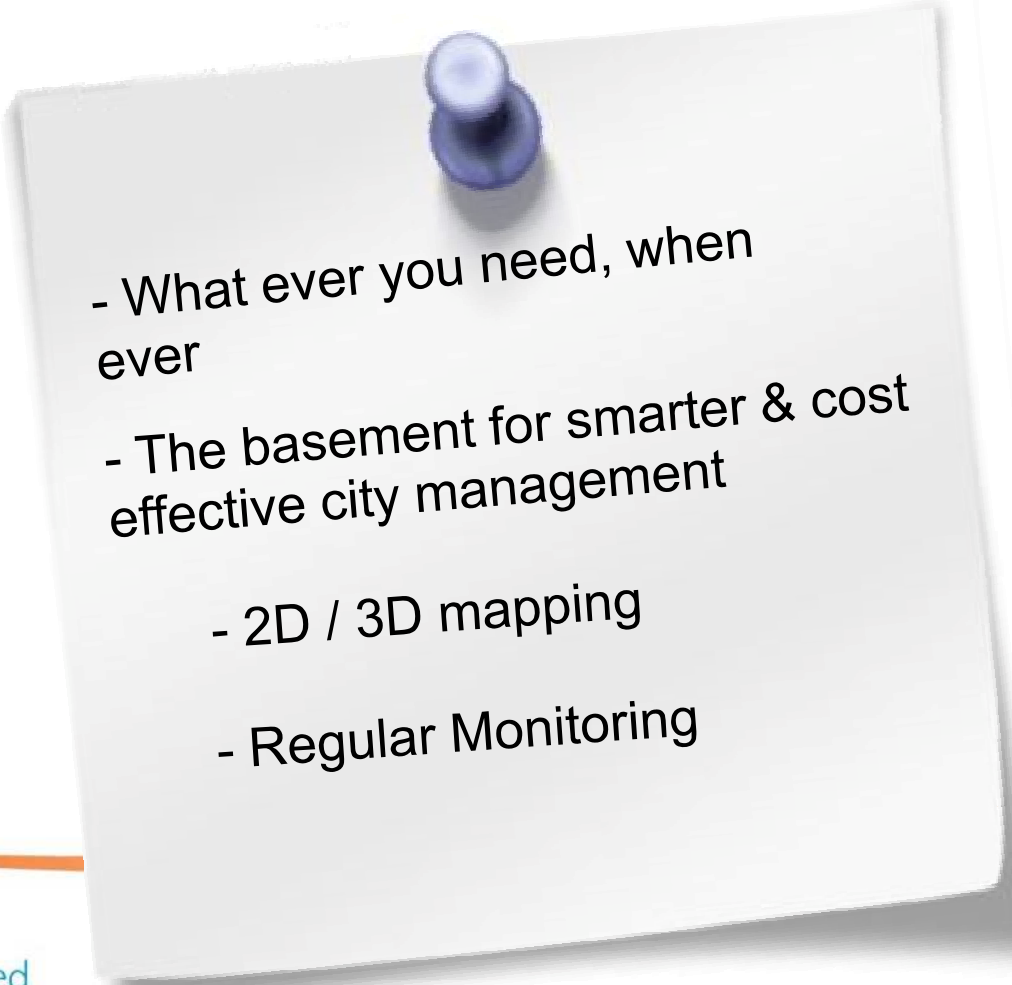
✓ From detection to
and i... cation

Pléiades
Resolution

Pléiades
Persistent
Surveillance

Pléiades and TerraSAR-X

A genuinely smart constellation for a new service era

- 
- What ever you need, when ever
 - The basement for smarter & cost effective city management
 - 2D / 3D mapping
 - Regular Monitoring

for the next dec.
and beyond!



ASTRIUM

AN EADS COMPANY

Pléiades 1A, India

Bangalore



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Pléiades 1A, India

Hyderabad

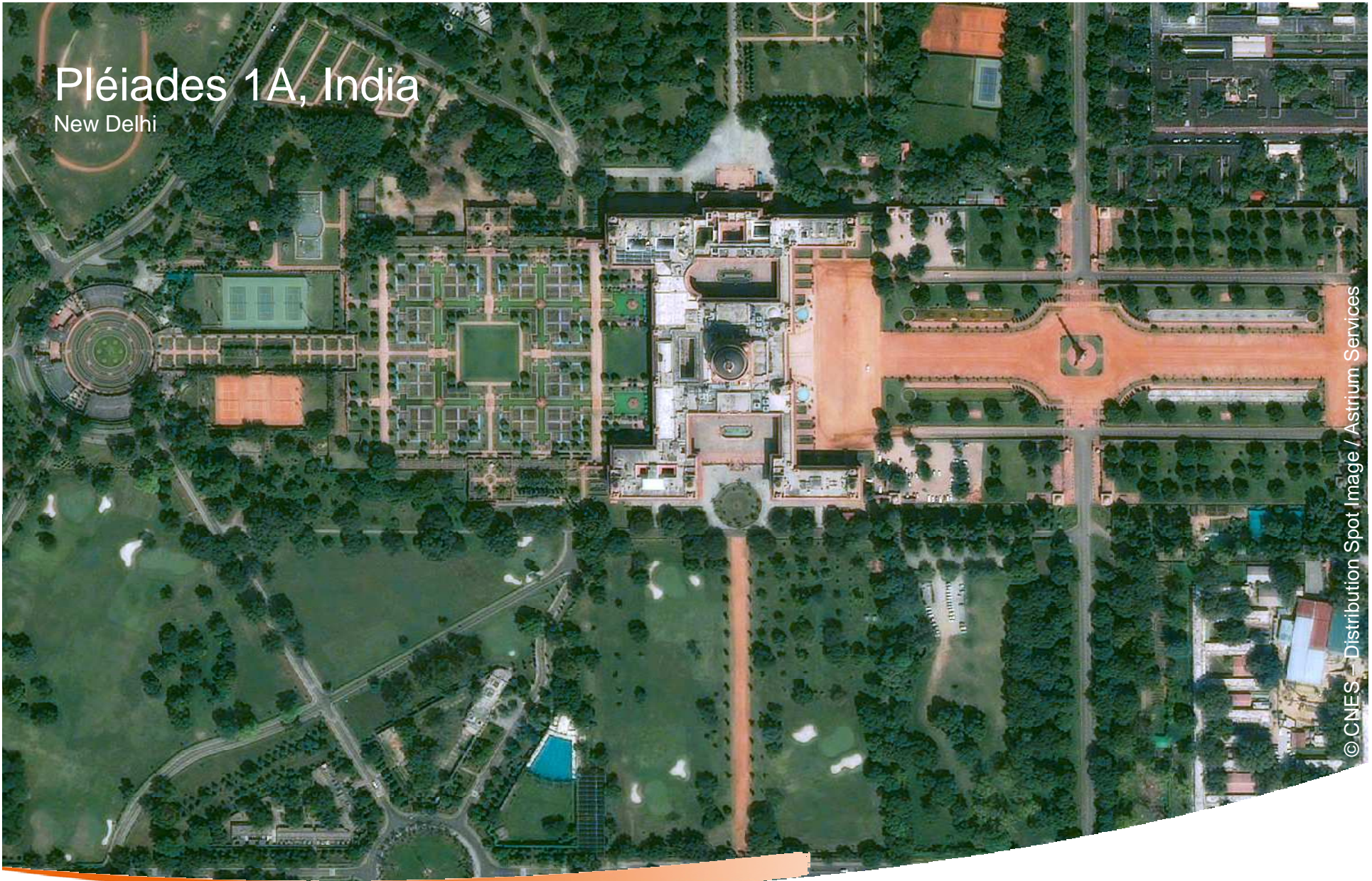
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All the space you need



Pléiades 1A, India

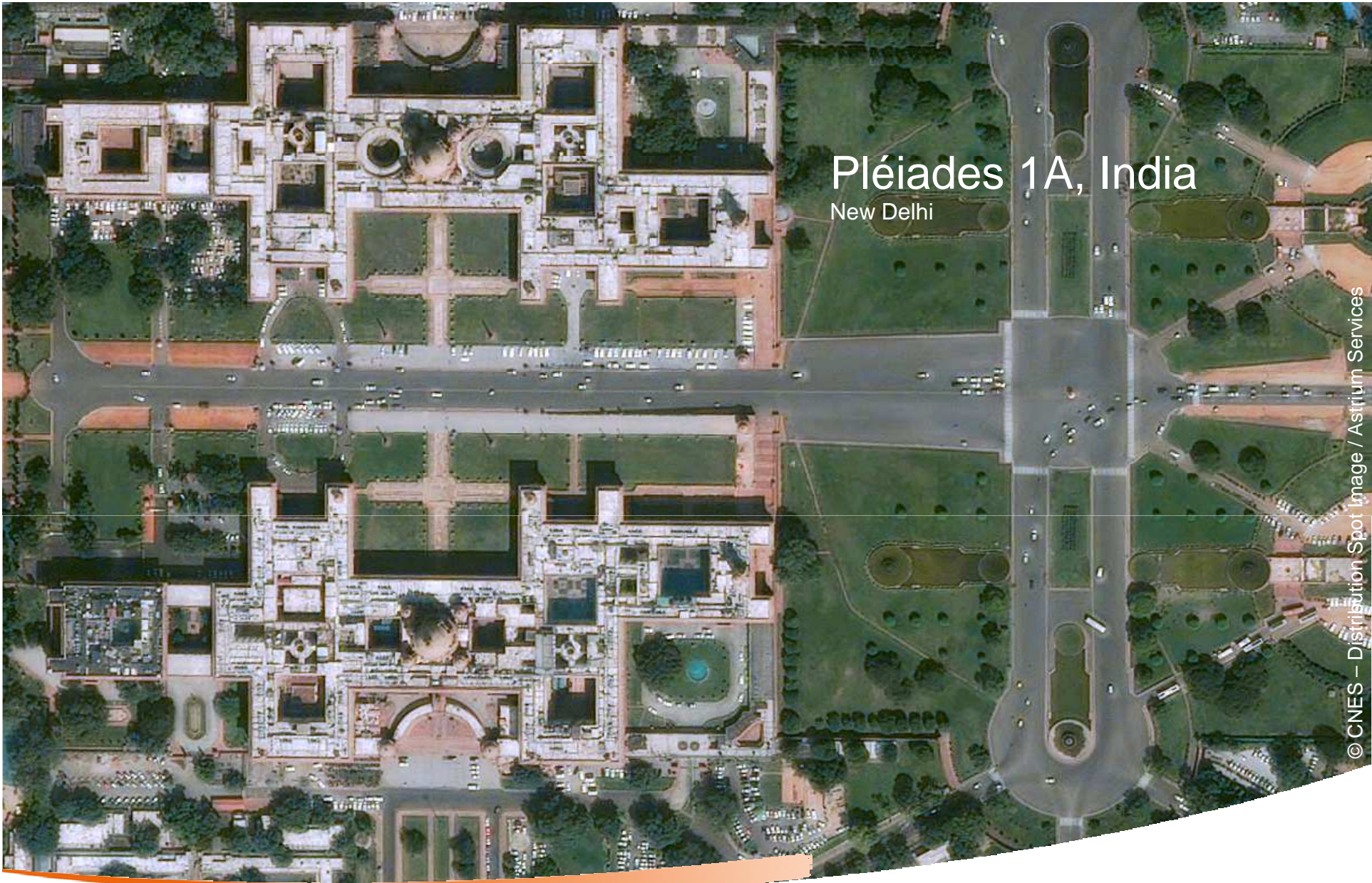
New Delhi



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All the space you need





Pléiades 1A, India
New Delhi

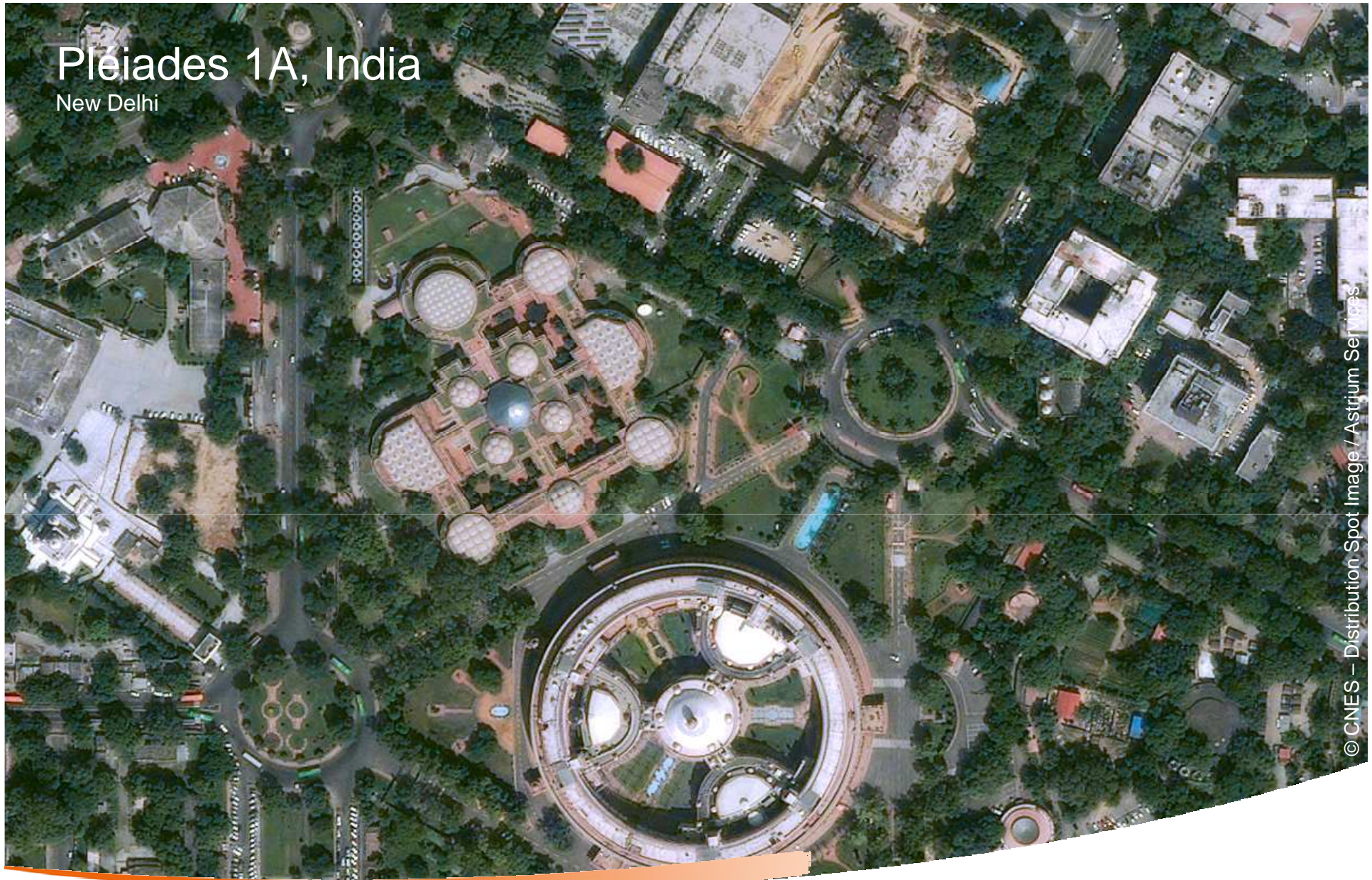
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All the space you need



Pleïades 1A, India

New Delhi



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All the space you need

