



NL priorities in Space Policy

- From technology push to user pull
- Focus on societal benefits
 - Economic/Commercial
 - Scientific
 - Policy support
- Use of Space Assets priority no. 1
- Focus on Earth Observation

- Application promotion programme cancelled due to perceived lack of results
- Satellite Data Portal to simulate use of Copernicus
- G4AW programme for food security (cooperation with developing nations, funded by Foreign Affairs ministry)



Challenges in application development and uptake

- Customer friendliness – lack thereof
- Technology push/overselling
- Missing link between providers' information and customers needs
- Size of companies (chicken/egg)
- Entrenched interests
- Data price, accessibility, continuity
- Overly detailed regulations
- Benefits of “space information” unknown
- Certification of data



NL Lessons learned (incomplete)

- Demonstration projects fell short of achieving sustainable business
- Application development too much aimed at institutions (GSE, national programme)
- Science goals instead of commercial goals
- Too little user involvement (missing link)
- Too little user commitment (“Easy Money”)



Possible solutions

- Make sure space data is part of geoinformation
 - Geoinformation companies might be missing link
 - Connect with existing strengths (water)
 - Respond to known policy priorities (food security, water quality, development aid)
- Copernicus solves price and continuity issues
 - Accessibility needs to be ensured!
 - Certification?
- Regulations can be solved by government/EC
 - Make room for spacebased information in regulations
- Value Adding “Living Lab”
- Better application development stimulation programmes



Issues to solve

- How to attract more entrepreneurial spirits
 - No overselling, balance between technology push and user pull
 - Link between scientific innovation and customer approach
- Space Agencies not to disrupt emerging markets
- How to overcome resistance of entrenched interests
 - Regulations?
- Governments to embrace space applications
- Balance between luring users and getting commitment
- Pick your battle or shoot with birdshot?
 - Focus or diversify?



Satellite data portal

- Purchase of Sentinel-like data for the period March 2012 – March 2015
- Dutch (registered) users, AoI The Netherlands
- 4 million euro paid by Ministry of Agriculture (+ Economic Affairs)
- Economic profit for end-users (precision agriculture)
- Reduction of pollution (pesticides, eutrophication in agriculture)
- Reduction of governmental costs (e.g. deformations, water management)
- Preparation of NL value adding sector on Sentinel data
- Quick start for NL value adding sector
- Start of central purchase satellite data by Dutch entities
- Larger involvement ministries



Satellite data portal

Preparation for Sentinel-1:

- Radarsat-2 (radar) : 25 meter, 1x per 24 days,
4 polarisations (HH, HV, VH, VV)

Preparation for Sentinel-2:

- DMC-satellites (MS) : 22 meter, 3x per week, 3 bands
- Formosat-2 (MS) : 8 meter, 1x per 9 days, 4 bands
- Formosat-2 (PAN) : 2 meter, 1x per 9 days, 1 band

Preparation for Sentinel-3:

- Link to free online data sets



Use

- 300 users, 60 respondents to poll
- Mainly aimed at application development/Science
- Now 10 % value adding companies
 - Expected to rise to 40 % in 3 years
- Focus on one application (too much?)
 - Cloud cover issue
- Increase in use and diversity of applications expected