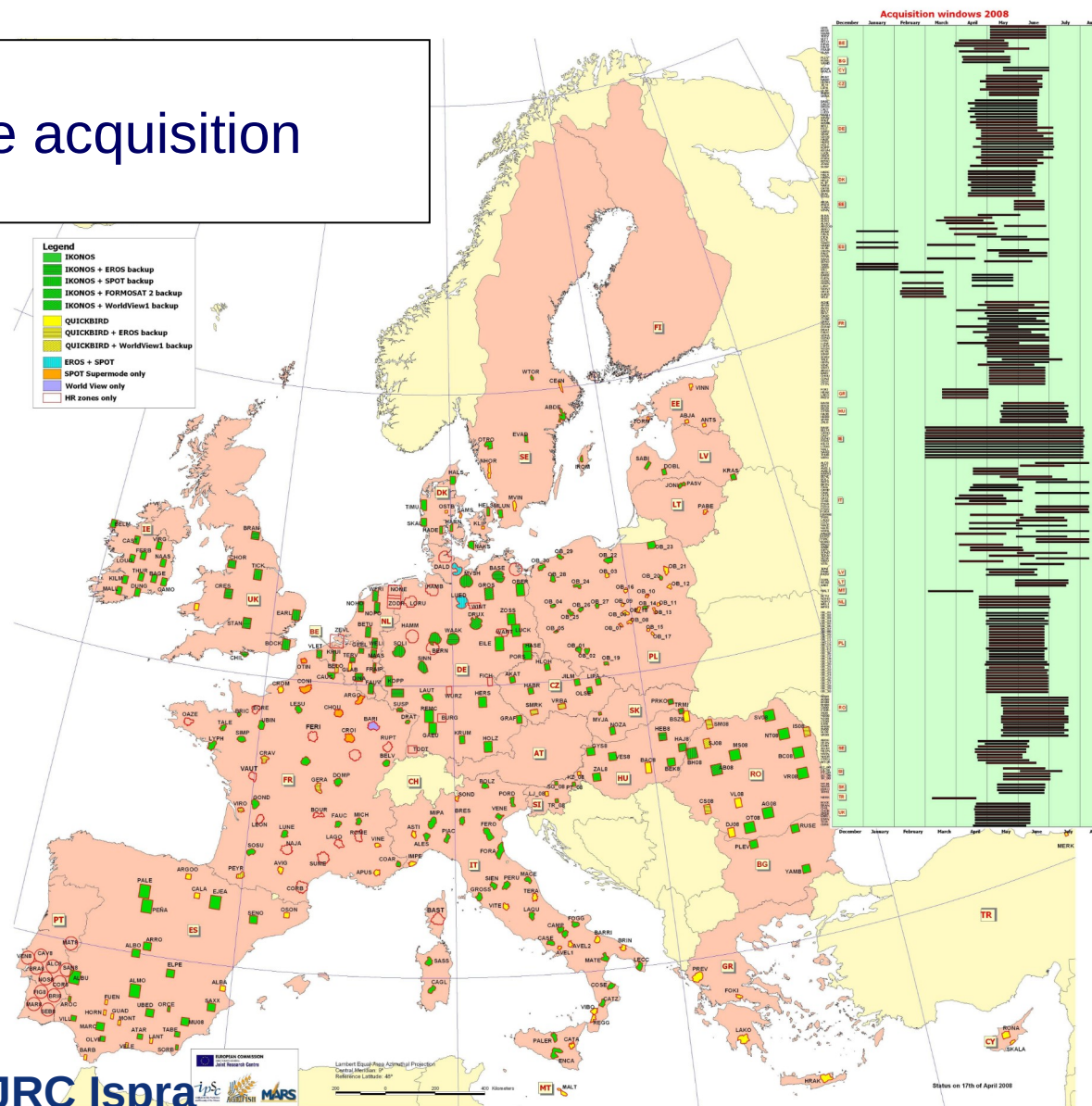


## 2008 Image acquisition



## OUTLINE:

2008 Campaign overview

HR success

VHR success

Backup usage- contractor survey

Expenditure

Preparation for 2009

## 2008 CwRS Campaign Overview Status @ Kickoff

- 264 VHR control zones, 170.000 km<sup>2</sup>  
(c.f. 2007 158.000 km<sup>2</sup>)
- 56 VHR backup zones planned, 47.000 km<sup>2</sup>, 26% of area  
(c.f. 2007 31%)
- 244 HR zones, 568 images, 2,3 images/zone  
(c.f. 2007 2,9 images/zone)
- Budget 6,5 M Euro  
(c.f. 2007 6,0 M)

## HR Campaign (1/3)

- First come, first served
- 244 zones - @ kickoff 568 scenes planned
- Because of failed windows, more requests could be accommodated. In total 594 ARs were opened
- A tough campaign- overall success rate 91%
- No overlapping windows HR - VHR

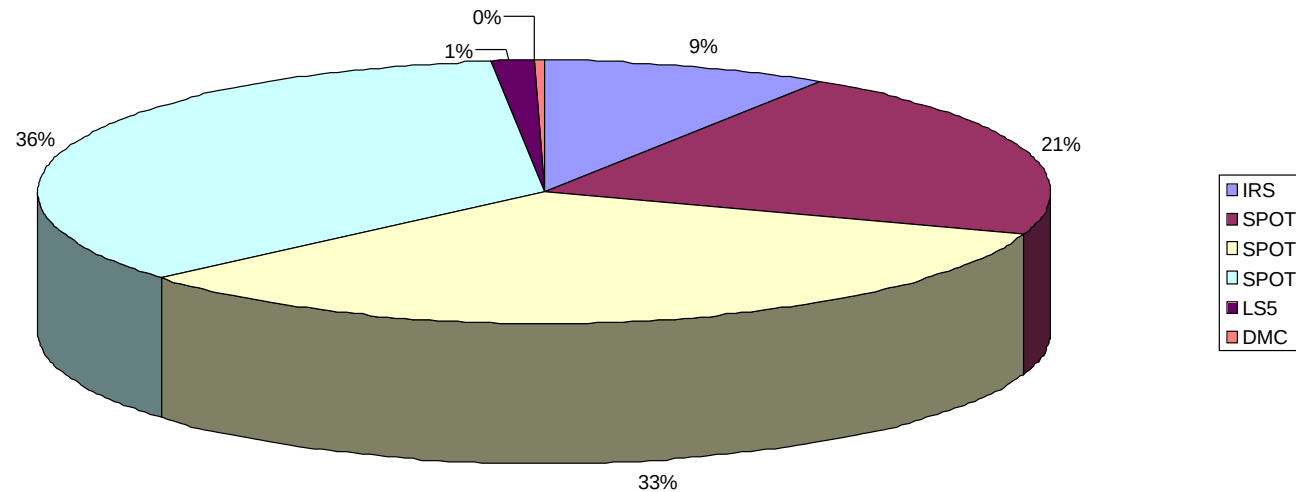
**More information on our poster!**


## HR Campaign (2/3)

Period	Total Zones opened	Closed	Accepted	Failed	Success rate
Autumn	95	2	88	5	95%
Winter	39	0	38	1	97%
HR-1	170	1	141	28	84%
HR+1	200	0	188	12	94%
HR+2	85	0	80	5	94%
archive during VHR window	5	0	3	2	60%
<i>Campaign total</i>	594	3	538	53	91%

- Failed windows over zones located in BE, CZ, DE, FR, RO, UK
- Short windows HR-1, not extended into VHR window to avoid duplicates

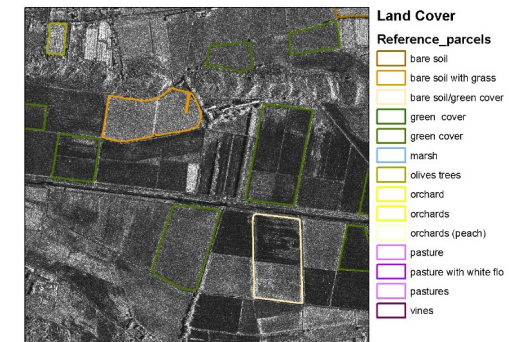
## HR Campaign (3/3)



- SPOT family as usual acquiring 90 %, but SP2 will only live until 06/2009
- IRS P6 increases (5% -> 9%), DMC still negligible, LS5 less and less
- RapidEye to be benchmarked by CID for 2009 Campaign 

## VHR Campaign (1/2)

- 264 VHR zones
- 2 zones not feasible -> programmed with VHR PAN only
- 6 acquired during Dec 2007 (ES)
- 2 closed in DE on request by regional administration
- Close monitoring is important: 4 zones in PL moved from **QB** to **IK**
- **TerraSAR-X** on 4 zones in IE and 5 test zones
- Finally 250 zones acquired, 160.000 km<sup>2</sup>, 94% success



TerraSAR-X 1m. © Infoterra GmbH

**More information on our poster!**



## VHR Campaign (2/2)

- **IKONOS**

- 94% area success rate BUT 80% of VHR volume!

- **QUICKBIRD**

- 94% success rate
  - Availability is decreasing  
(from 26-29% last 3 years to 20%)

- New blood needed for 2009 campaign:

**Geoeye-1** to be benchmarked by CID



Geoeye-1, Ljubljana. © Telespazio

- Possible solution: VHR PAN only as prime? (under evaluation by GEOCAP). Would require increased access to **WV1**

## Failure to acquire prime and backup solution

Country	Zone	Prime (failed)	Backup solution
BE	FAUV	IK	SPS + SP5
BE	MAAS	IK	SPS + SP5
DE	DALD	not feasible	EROS B, SPS, SP5
DE	LAUT	IK	TSX test
DE	LUED	not feasible	EROS B, SPS, SP5
DE	SOLI	IK	SPS + SP5
FR	CROM	QB	Aerial photo acquired by MS
IE	BELM	IK	EROS B + TSX Spotmap archive data
IE	FERB	IK	TSX Spotlight
IE	KILM	IK	Field inspections
IE	MALL	IK	TSX Spotlight
IE	THUR	IK	Field inspections
IE	VIRG	IK	TSX Spotmap archive data
SI	KZ08	QB	Backup prog. declined- Field inspections

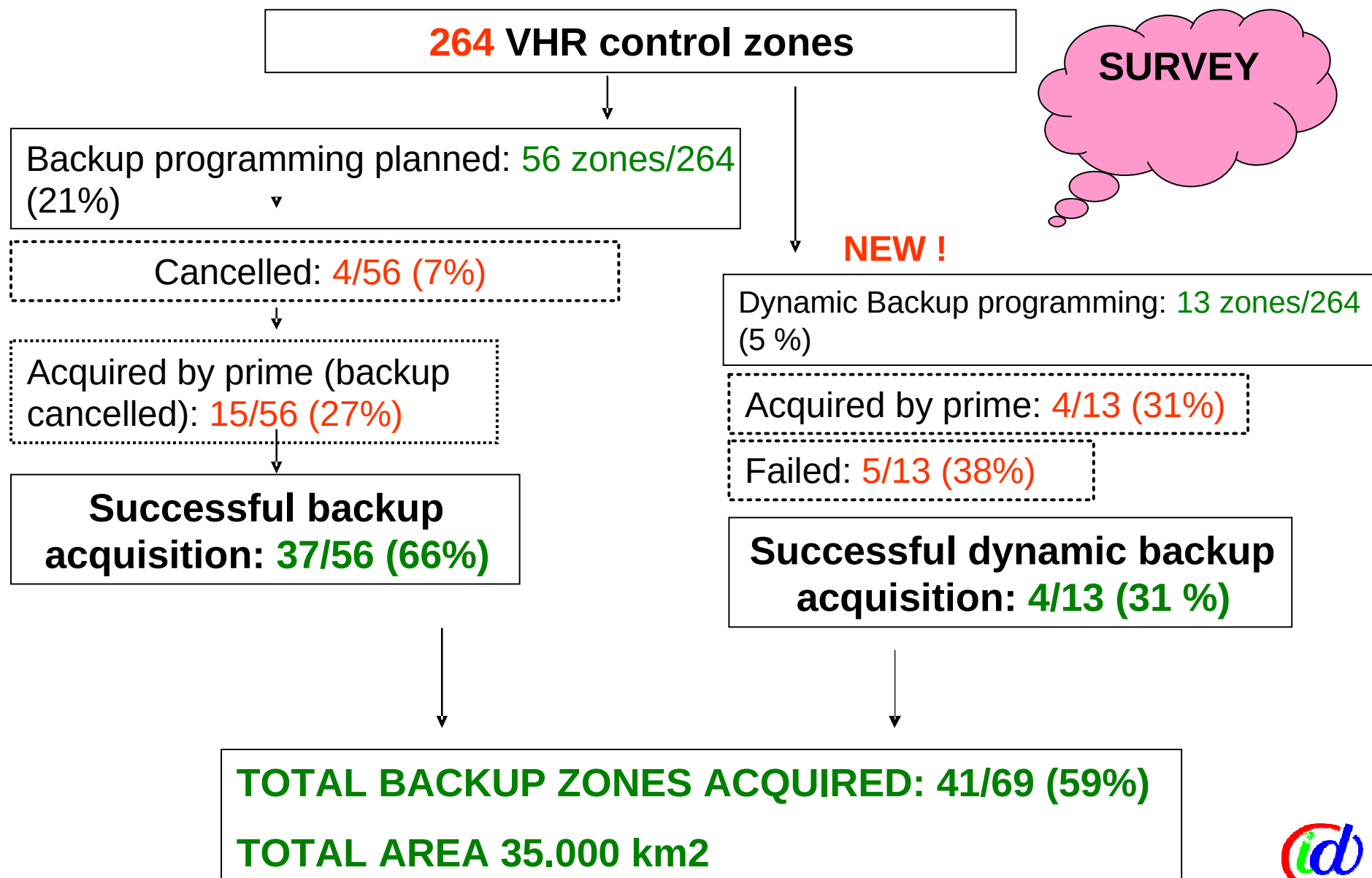
- 6 of 12 failed zones located in IE !

## VHR Backup

- **NEW!** Backup opened 10 days after prime
- Backup zones identified with IPs and taking MS requests into account
- If acquisition by prime, backup programming cancelled
- If backup available at window end -> no extension of VHR window
- **NEW!** Dynamic backup: cancelled programming gives possibility to move to another target
- Sensors used: EROS A/B, WV1, SPS, Formosat 2 (bundle)
- If VHR PAN only, SPOT5 10m programmed during the same window to have a multispectral component

**More information on our poster!**





## Backup programming- Evaluation by contractors (1/2)

**SURVEY**

**TOTAL BACKUP ZONES ACQUIRED WITH VHR DATA: 41**

Backup imagery necessary: **18 zones (44%)**

Redundant: **23 (56%)**

No answer: 1

Used because of long time between  
partial VHR acquisitions: 2

Used for area measurements: 15

Failed or partial prime: 9

Cloudy prime: 1

No answer: 5

## Backup programming- Evaluation by contractors (2/2)

**SURVEY**

**TOTAL BACKUP ZONES ACQUIRED WITH MSP COMPONENT: 36**

MSP Backup necessary: **12 zones** (33%)

Used VHR PAN for CAPI: **9**

Used as a complementary image for time period when no other data available: **3**

MSP Redundant: **24 zones** (67%)

No VHR backup acquired: **6**  
(17%)

Not useful: **15** (42%)

Technical problems: **3** (8%)

## Backup programming- other comments

**SURVEY**

- Orthorectification problems reported for 11 zones (27%), mainly EROS A/B
  - More info on EROS B and WV1 in session T2
- Problems to merge PAN with MSP component

**More information on our poster!**



## Backup programming- Conclusions (1/3)



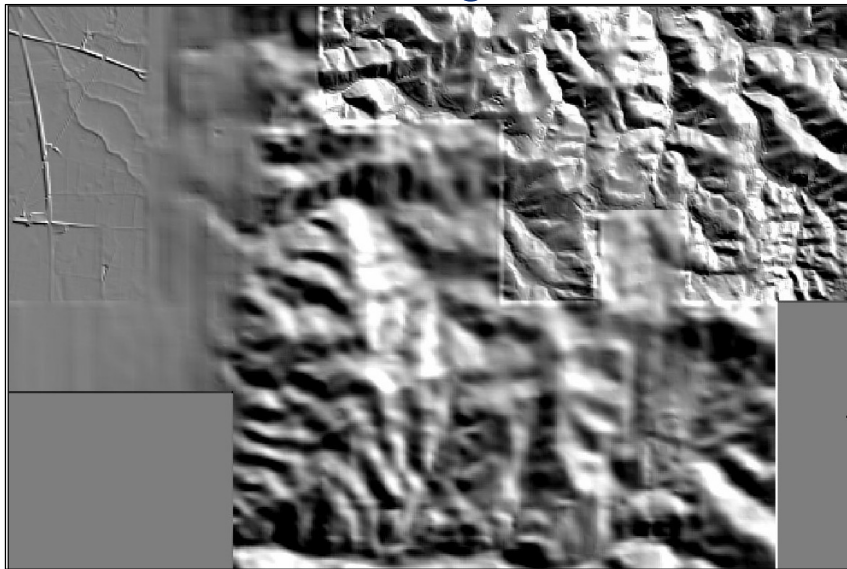
**SURVEY**

- The methodology used this campaign is appreciated by contractors, same procedure in 2009
- Delayed programming start and cancelling when prime acquires avoids purchase of duplicate imagery
- Organization of dynamic backup works well, feedback from image providers vital
- Lower success rate on dynamic backup due to short windows (1-2 weeks)
- MSP component well received by contractors, but guidelines on usage needed?

## Backup programming- Conclusions (2/3)

**SURVEY**

- Orthorectification problems common
  - Thorough check of DEM quality
  - Use good GCPs, and good check points (need to be of required accuracy, and clearly visible on imagery)
  - Follow JRC guidelines



e.g. CwRS zone 2008 - quality of DEM very variable and not acceptable (worse than SRTM - X )



e.g. CwRS zone 2008 – examples of well placed (left) and not well placed GCPs (right)

## Backup programming- Conclusions (3/3)

**SURVEY**

- Availability of WV1 for the CwRS campaign remains to be proven
- Be sure to have ancillary data and knowledge on backup sensor image processing before requesting/accepting a backup at Campaign start. It is a waste of budget if it is NOT used
- Contact JRC if problems - new colleague in CID available to help

## Expenditure 2008

- 6,5 M Budget
- Expenditure:
  - VHR Prime 3,1 M Euro
  - VHR Backup 0,6 M Euro
  - HR 1,5 M Euro
- Planning for 100% Success rate..
  - Always a surplus at Campaign end
  - More information in the next presentation

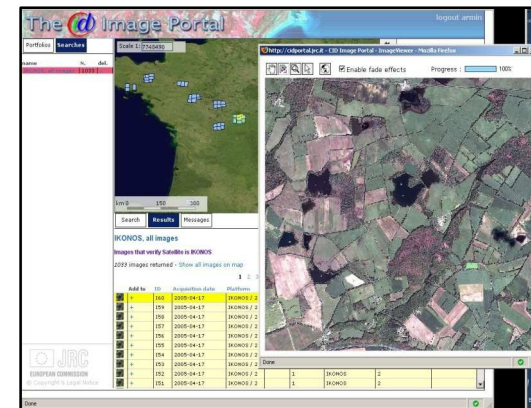
## Image return and CID portal

2008; 30 contractors

- all FTP delivered source imagery has been harvested automatically (17/30)
- rest ongoing (CD/DVD delivered source, orthorectified data)
  - 13/30 received
  - only 5/13 who had CD/DVD delivery have completed image returns
  - please proceed...
  - 2009 Campaign: no more image return of HR orthorectified data, or FTP delivered source

CID portal (see presentation T2, and sw demonstration)

- all data is loaded here for EC Services, and MS Administration's usage (adhering to Terms & Conditions)
- apply online to get access to the CID Portal



<http://cidportal.jrc.ec.europa.eu/home/idp/cid-portal/registration>

## 2009 Campaign

- Benchmarking of new sensors: Geoeye-1, RapidEye 1, TerraSAR-X, CosmoSkyMed (?),
- Pls send shapefiles & ancillary data by 31/12
  - Template will be sent

Thanks for your attention!