



Preservation of digital IG at the ICGC

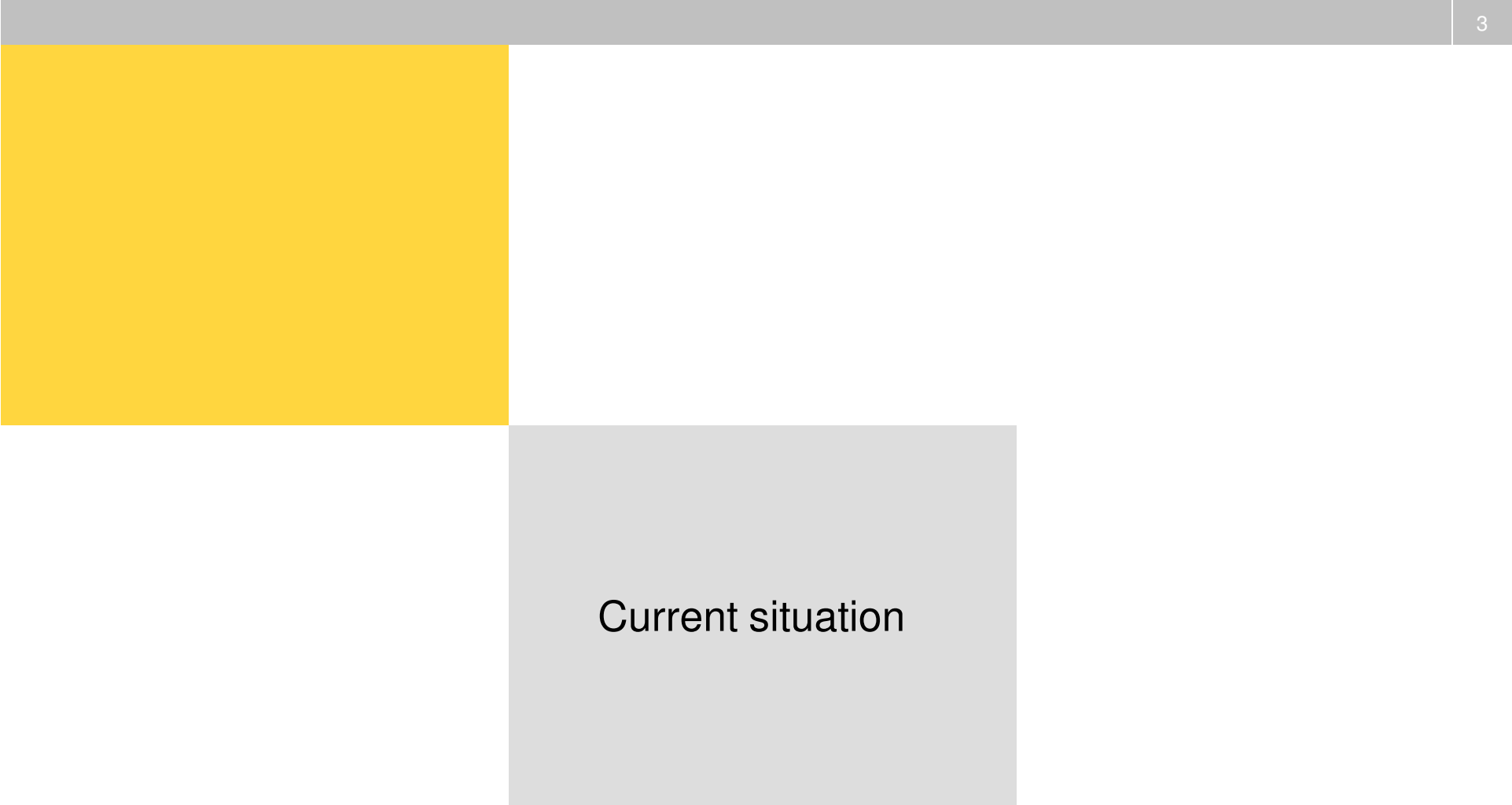
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Contents

- Current situation
 - General issues
 - Specific issues at ICGC
- Preservation project
 - External audit
 - Preservation Plan





Current situation

Digital information

- Hardware
 - Storage support
 - Peripheral device
- Software
 - Communication protocols
 - Operative system

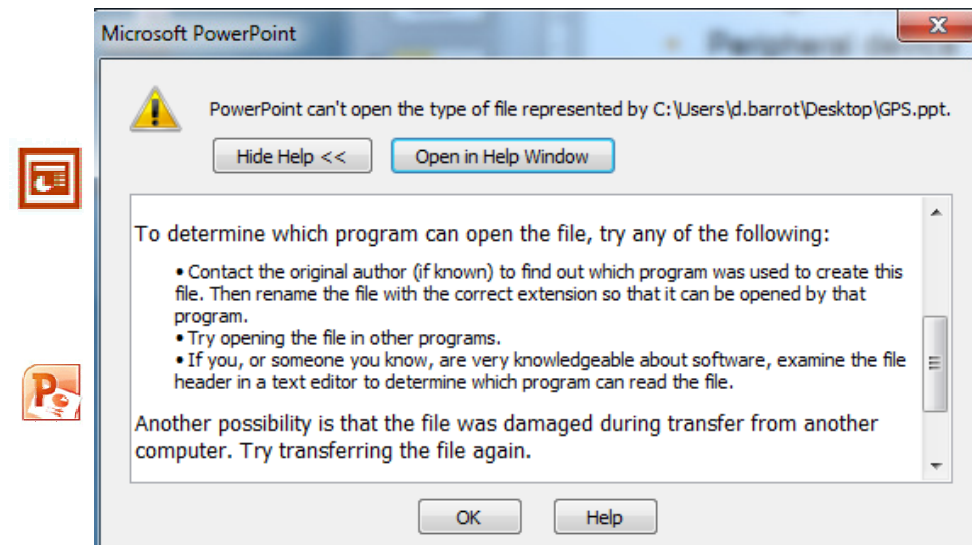
Technological evolution



Digital information

- Hardware
 - Storage support
 - Peripheral device
- Software
 - Communication protocols
 - Operative system
 - Specific software application
- Format
 - Version compatible
 - Complementary files

Technological evolution



Geographic Information

- Product
 - Static
 - Digitalization of analogue documents (paper map, aerial film, photolith)
 - Raster or vector data with specific uses derived from its digital nature (spatial analysis, interoperability...)
 - Dynamic
 - Spatial data bases with continuous updating
- Service
 - Combination of “products”



ICGC

Technological evolution



Data growth



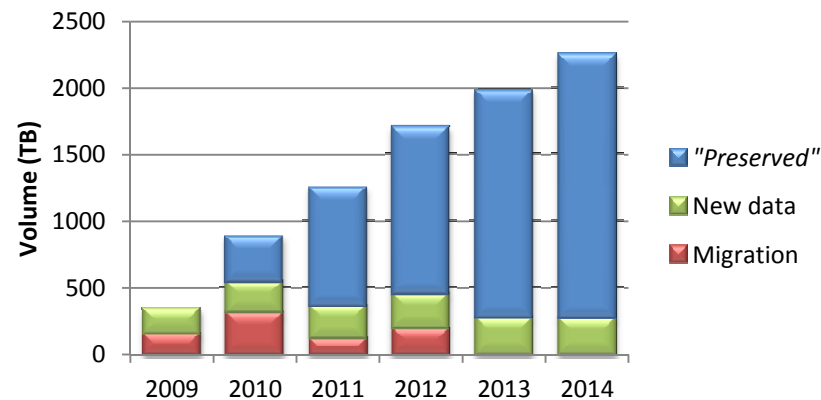
ICGC

Technological evolution

- Media: from magnetic tape open reel to high capacity cartridge
 - More capacity per unit but much more data to store

Migration

Media - LTO4



- Format: from obsolete production/distribution formats to standardized or supported ones by current applications

Transformation

ICGC

Data life-cycle

- Storage by accumulation
 - Organization and classification of stored data depends on criteria of people in charge of processes
 - File names, groups of files, metadata, time of preservation
 - Duplicated data
 - Catalogued as digital information NOT as geographic information
 - Media independent
 - The capacity of finding and understanding the information is sensitive to the staff changes
 - Limited accessibility
 - Internally, all the information is available
 - Externally, current products in several formats and some historical data through view services

ICGC as NMA

Legal obligations

- Responsible for the Map Library of Catalonia
 - Preservation and dissemination of analogue and digital information

Title	Dates	ICGC webpage	Map library
Topographic map 1:5000 v1.5 ed. 1	1983-1992	No	Scanned plot
Topographic map 1:5000 v2.0 ed. 1-5	1994-2014	Last ed. (raster, vector)	Plot
Topographic map 1:10000 v1.0	1994-2004	No	Plot
Ortophotomap 1:5000 ed. 1	1983-1992	WMS (scanned)	Printout
Ortophotomap 1:5000 v2-v5	1994-2008	WMS (image)	Plot (map)
Ortophotomap 1:5000 v6	2008-	WMS (image) Last ed. (image)	No

- Responsible for certain datasets of Cartographic Plan of Catalonia
 - Long-term preservation according to the C4 policies
- Responsible for giving permanent support to the C4



Preservation
project



External audit

ISO 16363:2012

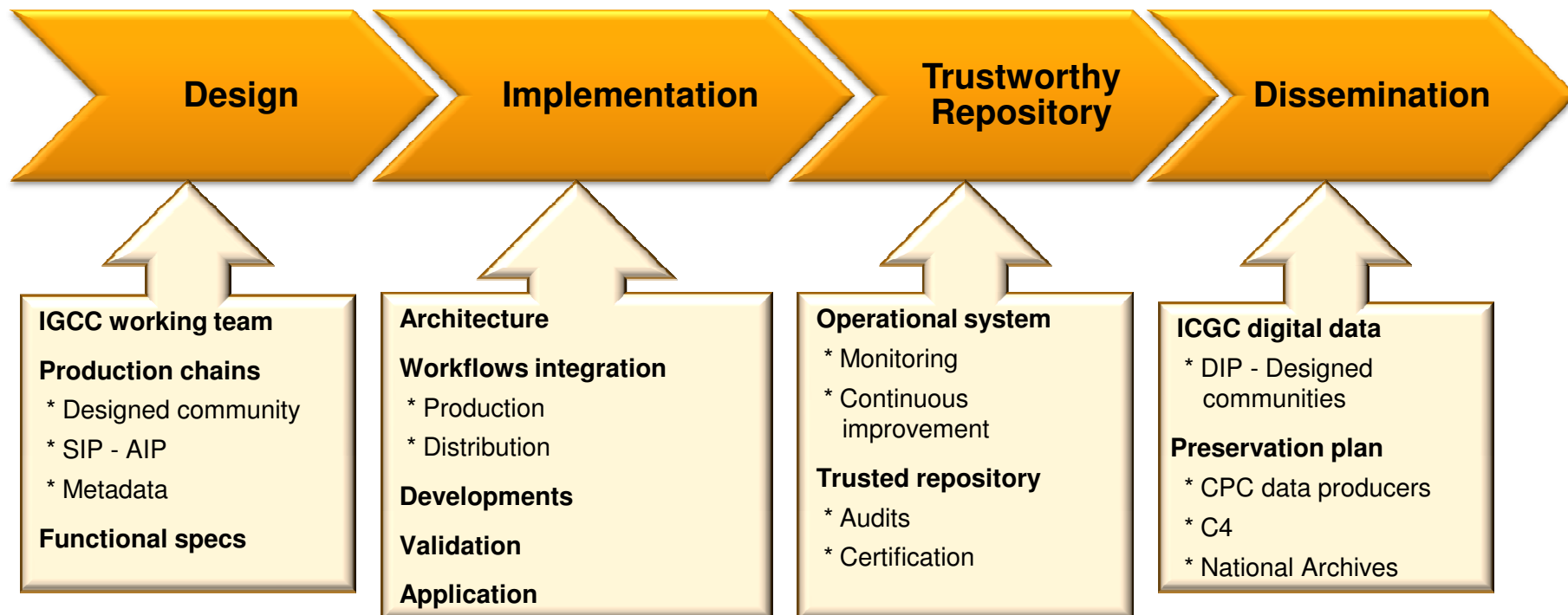
- Test to detect assets and weaknesses
 - Organizational infrastructure
 - Management of digital objects
 - Infrastructure and risk management

- Main conclusions
 - Organizational infrastructure is adequate to assume the long-term preservation of digital objects.
 - A preservation strategic plan must be created including designed communities
 - Criteria to select data to be preserved long-term
 - Establish preservation workflows (ingest, validation...)



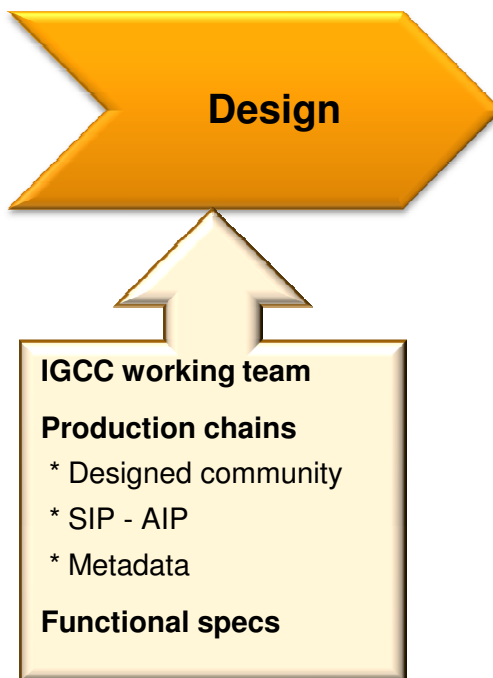
Preservation plan

Roadmap



Preservation plan

Design



- ICGC working team: Map library, IT and Data bases departments
- Initial study over ISO 9001 production chains:
 - Topographic database 1:25 000 – Orthoimage
 - Proposal of an ISO 19115-1 extension for preservation metadata
- Analysis based on NDSA levels of digital preservation (C4 working team)

Preservation plan

On going

- Following ISO/AWI 19165 Geographic information -- Preservation of digital data and metadata
- Selection criteria “what to preserve” in the current production lines
- Definition of SIP and ingest process
- ...

Sustainable

Thanks for your attention

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Preservation plan

- Preservation extension
 - Package information
 - Preservations actions
 - Relations among resources

Design > Metadata

