



CERTIFICATE

Number **EC-2339/06**

LGAI Technological Center certifies that the Quality Management System of the organization:

INSTITUT CARTOGRÀFIC DE CATALUNYA

Parc de Montjuïc
E-08038 BARCELONA

For the following activities:

Production of the Topographic Database 1:5.000 of Catalonia, of the Topographic Map 1:5.000 of Catalonia and of the digital terrain model,

is in accordance with the requirements of the standard
ISO 9001:2000

This certificate is valid until March 13, 2009
Cerdanyola del Vallès, March 13, 2006

General Director

Ramon Capelades i Font

Manager of the Certification Center

Salvador Boix Iglesias

This certificate shall be valid provided that all the conditions of the contract of which it is a part are fulfilled



ISO 9001 for spatial data: ICGC experience

Dolors Barrot, Maria Pla



DNV BUSINESS ASSURANCE MANAGEMENT SYSTEM CERTIFICATE

Certificate number 172298-2015-AQ-IBE-ENAC

This is to certify that the management system of the company

INSTITUT CARTOGRÀFIC I GEOLÒGIC DE CATALUNYA

C/ Parc de Montjuïc s/n, 08038, Barcelona

complies with the standard

ISO 9001:2008

This certificate is valid for the following scope

PRODUCTION OF THE TOPOGRAPHIC DATABASE OF CATALUNYA 1:5000, OF THE TOPOGRAPHIC MAP OF CATALUNYA 1:50000 AND OF THE DIGITAL TERRAIN MODEL. PRODUCTION OF THE TOPOGRAPHIC DATABASE OF CATALUNYA 1:25000. PRODUCTION OF THE CONVENTIONAL ORTHOPHOTO OF CATALUNYA.

Initial Certification date:
13.03.2006

This certificate is valid until:
30.01.2018

The audit has been performed under the supervision of

Francisco Castelló
Lead Auditor



Place and date:
Barcelona, 30.01.2015

Accredited Unit
DNV BUSINESS ASSURANCE ESPAÑA, S.L.

Albert Canadell
Country Manager



ICGC
Institut
Cartogràfic i Geològic
de Catalunya



**Generalitat
de Catalunya**

This presentation

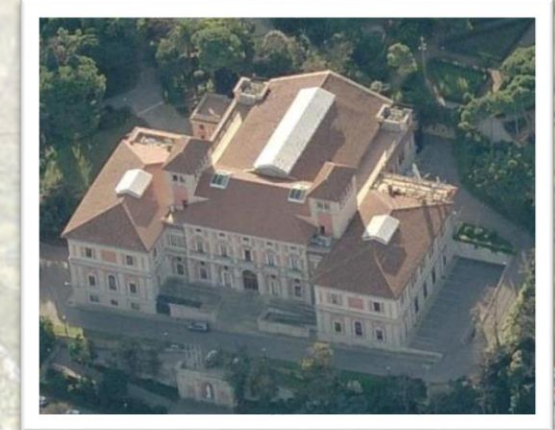
- **Certification background**
- **2006 - 2009 Compliance with ISO 9001: 2000**
 - QMS Consolidation
- **2009 - 2018 Compliance with ISO 9001: 2008**
 - Scope widening & QMS matureness
 - Transition to ISO 9001:2015
- **2018 - ... Compliance with ISO 9001: 2015**
- **Conclusions**

Background

The Organization

Institut Cartogràfic i Geològic de Catalunya (ICGC)

- **Catalan Geoinformation Agency** and reference public service for the application of geo-scientific knowledge (Government of Catalonia)
- **Aim:** Deliver to customers and users valued geographic and geological information and services.
- Creation: 2014
- Merger of 2 Orgs.: ICC (1982) + IGC (2005)
- Location: Barcelona



Institutional and commercial activities

International background

Multidisciplinary knowledge fields

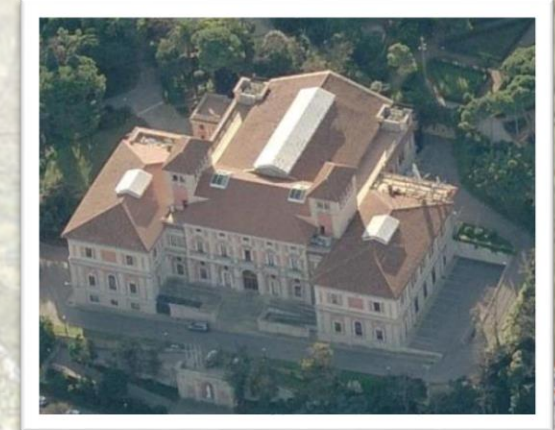
- Geodesy, Geomatics, SDI, Geology, Geophysics

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- Geodesy, **Geomatics**, SDI, Geology, Geophysics

Background

Target: certification

CEO

■ Advantages

- Industrial procedures
- *Reliability*
- External audits
- *Recognition*

Target: to be
ISO 9001 certified



Staff

■ Risks

- Bureaucracy
- *Inefficiency*
- Control
- *Distrust*

Background Criteria

Target: to be
ISO 9001 certified



Quality Management System

- **Feasible scope**
 - Institutional activity
 - Spatial data product
 - *Topographic database 1:5000 (BT5M)*
- **Vision**
 - Evidence good practices
 - *Personnel complicity*

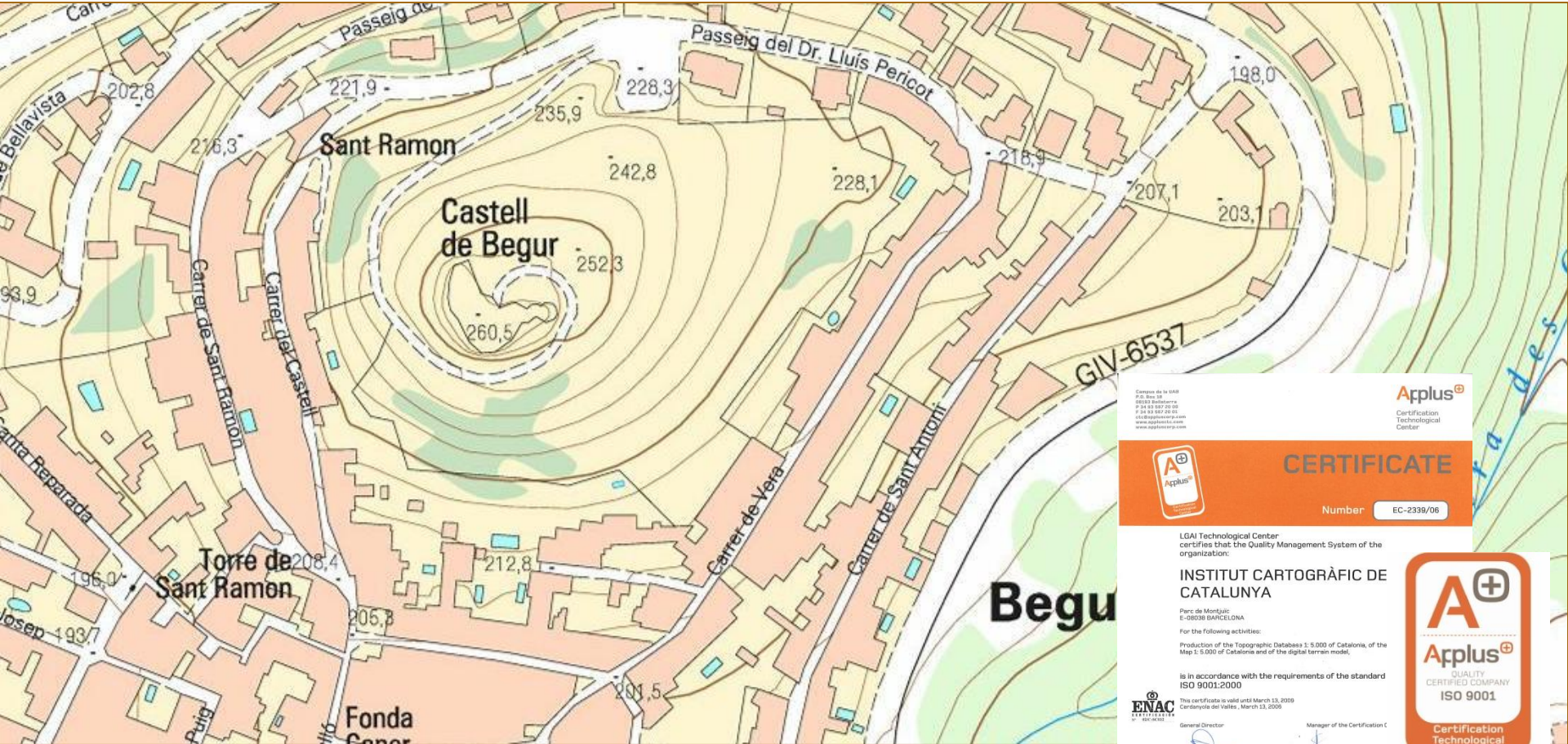
Background

Figures

- Resources
 - 1 year people > Adapt and prepare the Quality Management System documentation according to ISO 9001:2000
 - External adviser > Internal auditor
 - Certifying company > External audit

- Results
 - Characterization of BT5M production as a set of operative processes
 - To be more proactive looking for customer's satisfaction
 - Improvement of the corporative image

2006 - 2009 ISO 9001: 2000





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 Applus⁺
 QUALITY
 CERTIFIED COMPANY
ISO 9001

Certification
 Technological
 Center
ACCREDITED BY IATF

2006 - 2009

QMS consolidation

- Continuous improvement
 - Preventive and corrective actions
 - Wide use of indicators
 - Customer orientation of IT Department

- Customer's satisfaction
 - Customer's opinion
 - DB of complaints, suggestions or questions

2006 - 2009

Balance

ISO 9001 certified

Benefits

- Internally
 - Staff commitment
 - *Certifications ISO 14001, OHSAS 18001*
- Externally
 - Competitiveness
 - *Consultancy projects*

Challenges

- Internally
 - Up-to date documents
 - *Inconsistencies*
 - Indicators meaning
 - *Deviations*

2009 - 2018

Main changes of ISO 9001:2008

Advantages

- Control only relevant documents
- Information systems as infrastructure
- Measures of customer's perception



Challenges

- Competence of people assurance
- Management of physical and environmental conditions

Target: scope widening

2009 - 2018

Scope widening

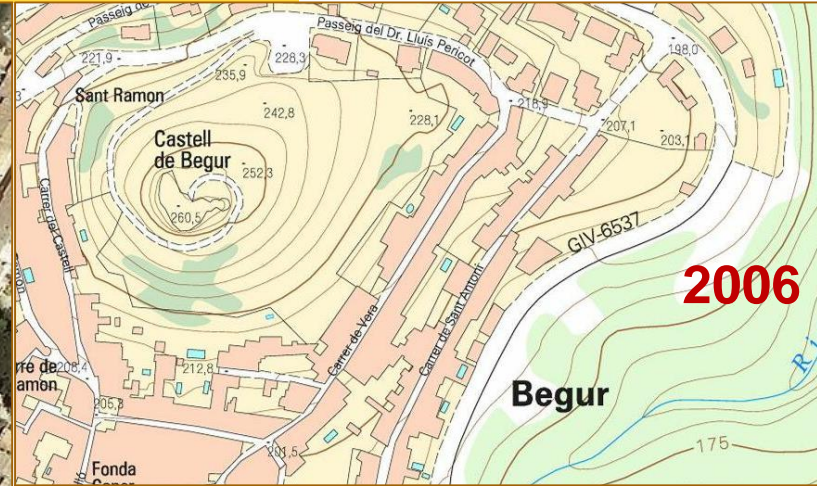
Topographic databases



2012



2014



2006



2011

Orthophotos



2009 - 2018

QMS matureness

- Continuous improvement
 - Traceability of improvement actions
 - Link between DB of non-conformities, DB of projects and improvement actions
 - ITIL orientation of IT Department
 - Services catalogue
 - Increasing communication between IT department and staff (users)
 - Extended use of indicators
 - Indicators to measure quality of processes (efficacy and efficiency)
 - Checking them continuously

2009 - 2018

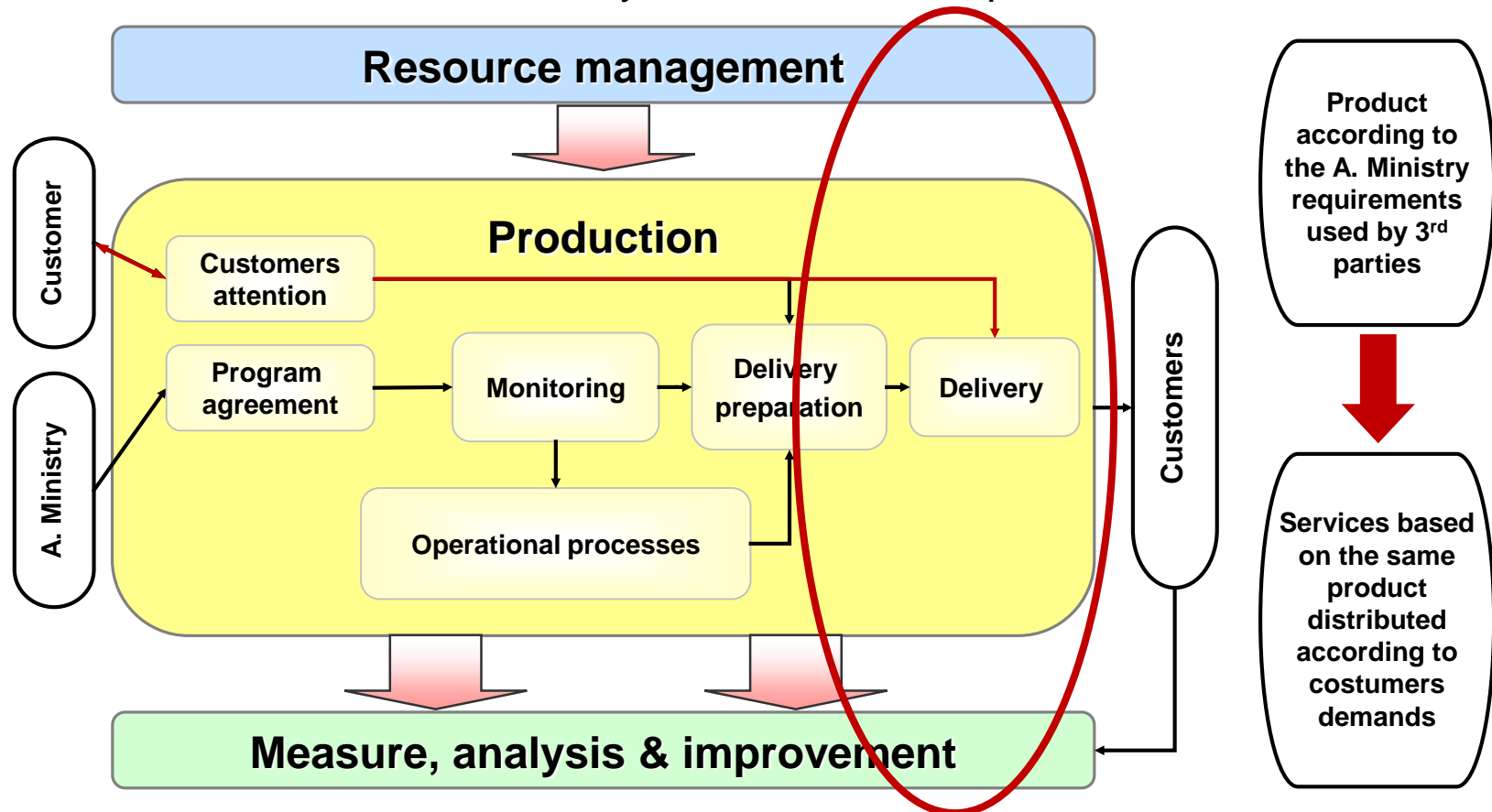
QMS maturity

- Customer's satisfaction
 - Traceability of complaints, suggestions or questions
 - Link between DB of complaints, DB of projects and improvement actions
 - Classification by processes, severity, product, responsible area
 - Customer's opinion
 - Surveying, interviews, suggestions etc.
 - Indicators
 - Average and maximum response time to the complaints
 - Satisfaction as a function of number of complaints and production projects, weighted by the cost

2009 - 2018

SQM vision changes

- Organization: Data producer >>> Service provider
- Customer: Autonomous ministry >>> Users, Enterprises, Administration



2009 - 2018

Main changes of ISO 9001:2015

Advantages

- Process's documents, if they are needed
- Applicable to products and services
- Process model expansion
- Enhancing performance



Challenges

- Knowledge of the organization context
- Understanding stakeholders' needs and expectations
- Risk based thinking
- Management reviews

Target: certification maintenance

2009 - 2018

Transition to ISO 9001:2015

- QMS documented information
 - Use of a content collaboration software, to assure control, maintenance and accessibility: Confluence
 - Creation of a specific space for QMS documented information
 - Linking from/to information of other Confluence spaces, internet, servers...
 - Increasing the volume of information
 - QMS monitoring meetings (private areas)
 - Objectives, improvement actions, indicators, management reviews...

2009 - 2018

Transition to ISO 9001:2015

- Organization's context
 - Relevant issues and its influence
 - Determine internal and external factors that have an impact on the organization (legal, political, social, technical...) and prioritize them: SWOT analysis
 - Threat - opportunity > Generalized use / consume of GI
 - Strength > Capacity of adapting to IT changes, free data and open apps
 - Weakness > Not all historical data and knowledge available
 - Stakeholders
 - Identify and value interested parties and their requirements
 - Valued aspects: impact on product/services, customers' satisfaction, achievement of objectives and compliance with legal requirements
 - Requirements: quality and quantity of service, technical support, communication and transparency

2009 - 2018

Transition to ISO 9001:2015

- Risk based thinking > Infrastructures / Delivery
 - Infrastructures
 - Business Continuity Plan: Business Impact Analysis / Disaster Recovery Plan
List of main activities, impact assessment of its stopping, define recovery time and point objective, resources or actions needed to achieve RTO and RPO
 - Delivery
 - Organizational chart having its own entity, where end the production chains
Analysis of the outputs of the productions chains and definition of derived products and services to be provided

2018 - ...

ISO 9001: 2015

ISO 9001 certified

Benefits

- External monitoring of areas of interest
 - BCP ✓
- Opportunities of improvement
 - Precise identification of responsible people for process and minimum resources.
- Strengths
 - Staff's competence and commitment.
 - Update of technology and equipment.
 - Attention service of IT dep.



Risks

- Observations
 - Management reviews shall include effectiveness of actions to mitigate risks.
 - Strategic objectives should be more detailed.
- Area to improve
 - Knowledge preservation.

Conclusions

- **A different way of looking**
 - Emphasize the positive and repair the negative.
 - Industrial approach gives importance to process interfaces pre and post-production activities.

- **A helpful instrument if**
 - Changes are done to improve not to get the certification.
 - Indicators are revised periodically according to the objectives.
 - Auditor's observations or comments are considered.

**Thank you
for your attention**

Questions?

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