ISO 9001 for spatial data: ICGC experience

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This presentation

- Certification background
  - QMS Consolidation
  - Scope widening & QMS matureness
  - Transition to 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
- **Location**: Barcelona

Institutional and commercial activities

International background

Multidisciplinary knowledge fields

- Geodesy, Geomatics, SDI, Geology, Geophysics
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Background
Target: certification

CEO

- Advantages
  - Industrial procedures
  - Reliability
  - External audits
  - Recognition

Staff

- Risks
  - Bureaucracy
  - Inefficiency
  - Control
  - Distrust

Target: to be ISO 9001 certified
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Quality Management System

- Feasible scope
  - Institutional activity
  - Spatial data product
  - Topographic database 1:5000 (BT5M)

- Vision
  - Evidence good practices
  - Personnel complicity
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
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
QMS consolidation
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
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

Orthophotos

Topographic databases

2012

2014

2006

2011
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
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
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…
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
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
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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