

kadaster



**Recommendations for the
production and updating
process of the topographic
map of Macedonia**

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The role of the topographic map

The topographical map is the backbone of the Macedonian NSDI.

The more the topographical map is used, the more valuable it becomes.

Therefore it is important to actively promote the topographical map and make it an indispensable part of the NSDI.

The Netherlands

In comparison to 2006

- Topographic maps are produced 5000% faster
- The production procedure are significantly simplified
- The production procedure is fully automatized
- Production costs dropped to 25%
- The update cycle is shortened from 4 to 1 year
- There are 5 releases a year

Is this possible in Macedonia?

Current Situation

Current Situation - Production

- Topographic Map 1:25K ✓
- Topographic Map 1:50K ✓
- Topographic Map 1:100K →
- Topographic Map 1:200K →
- Topographic Map 1:500K ✗

Current Situation - Updating

- 2011: Topographic Map 1:25K ✓
Based on images from 2004
- 2016: Topographic Map 1:25K X
Images will be ready end of 2017

Challenge

- **Production** process of the scales based on the map of 2011 is still ongoing
- **Updating** process of the new topographic map can start within 1 year
- Updating \neq Production

Opportunity

- Potential of **up to date topographic map** as base layer NSDI
- **Technological developments** to automate production processes

Weakness

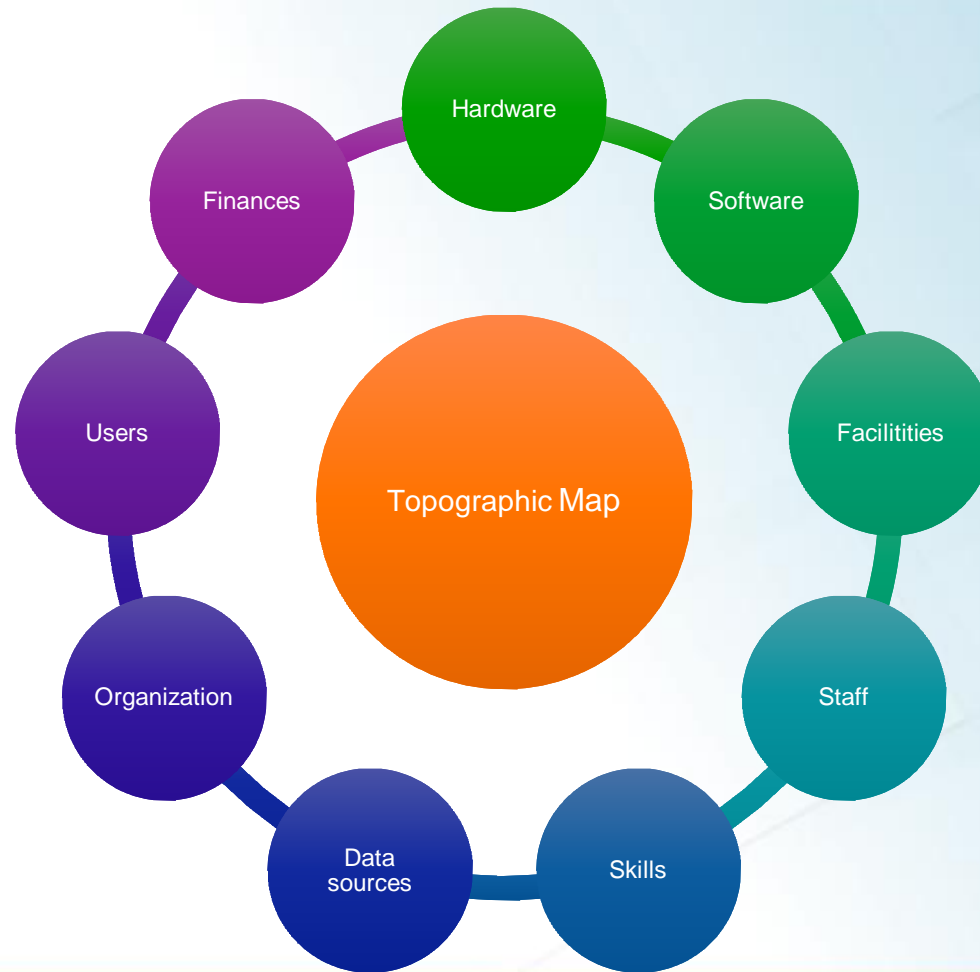
- Not enough **capacity** in mapping department to perform production and updating
- Not enough capacity in AREC for **innovation**

Results of the Project

Report

- Lessons learned from the visit
- Report of the workshop
- Description of the current situation
- Description of desired situation
- Next steps
- Strategic Recommendations
 - Short term
 - Longer term

- Current situation
- Desired situation
- Next steps



Strategic Recommendations

Improve the production and update processes of the topographic map

Further development and involvement of mapping staff and other departments

Inform and involve the users of topographic map products

Improve the current production and upcoming update process of the topographical map series

- Make plan to update 1:25K (20% every year)
- Investigate where production steps can be improved
- Develop plan to automate the production process
- Develop plan for hardware software

Development and involvement of mapping staff and other departments of AREC

- Make personnel plan (number, skills, training)
- Make plan to create motivating working conditions
- Increase cooperation with other departments to address the challenges

Inform and involve the users of your products

- Create a user council
- Develop user communication plan
- Start e-mail newsletter to inform users about AREC (topo) products
- Develop marketing & sales plan to promote topographic map

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In conclusion

The topographical map must be a key element in the NSDI of Macedonia. It should be the reliable, authoritative topographical base on which other spatial datasets are matched. The topographical map needs to be valued by the users and the actuality needs to meet the legal obligations, what is currently five years.

To achieve these goals the mapping department within AREC needs to be adequately equipped. A stable environment is needed that covers the whole production chain for all products and is adaptable for future developments and innovation.