

Czech republic (CZE) National Mapping is historically maintained by civilian and military mapping services in parallel. Both of them collect, maintain, disseminate and produce data and maps from territory. There is no competition, external information sources are the same, they are just processed for different purpose and complemented by specific information sets. Both services have been running digital production line for years, both have met troubles with vendor lock when vendor had stopped production platform support. Both services then migrated to common Oracle/ArcGIS platform.

Main CZE National Mapping features:

Feature	Civilian	Military
Map scale line	10k, 25k, 50k, 200k, 500k and 1M	25k, 50k, 100k, 250k, 500k, 1M
Map printing	On demand using preprocessed PDFs on High-tech LED printer	bulk stocks printed on printing press
Printing technique	CMYK	Mixture of CMYK and direct colors
Geodetic reference system	National JTSK with own ellipsoid, grid and height system	NATO standardized UTM/WGS-84 with MSL
Map Index	National	Fit to NATO standards
Old production platform	Oracle, MGE	Unix ArcInfo and Microstation/IPLOT
Current production platform	Oracle, ArcGIS	Oracle, ArcGIS
Coverage	CZE territory only	CZE territory with small buffer around borders IOT smoothly join with partner's rescue services
Future Vendor Lock Mitigation Strategy	Use platform to the edge with inhouse developers while permanently observing state of the art	Not identified yet
Vector Data Scales	MRDB 10k base+25k, 50k, 100k, 200k...	MRDB 25k base+50k, 100k, 250k, 500k...
Current generalization approach	Semiautomatic, many custom tools	Semiautomatic, using tools ported from ArcInfo production line and COTS functionality as much as possible
Custom Rendering Tools (national specific symbology as ridges, rocks etc.)	Mostly Implemented	Fully Implemented

Since data information flow coming from internal and external sources is annually faster and faster, mapping production cycle is already far behind up-to date information. Still we feel demand for high quality map portrayal, even for online mapping services. Observed recent success with automated generalization process abroad, as part of Czech National Geoinformation Infrastructure effort, we started to automate generalization process once again. We have open a separate project, aiming to decrease cartographer's manual work for civilian mapping production in scales 10k and 25k. If successful, we expect it opens door to harmonize database collection and map series (both symbology and edition synchronization). Of course solution is expected to be open to smaller scales and military environment.

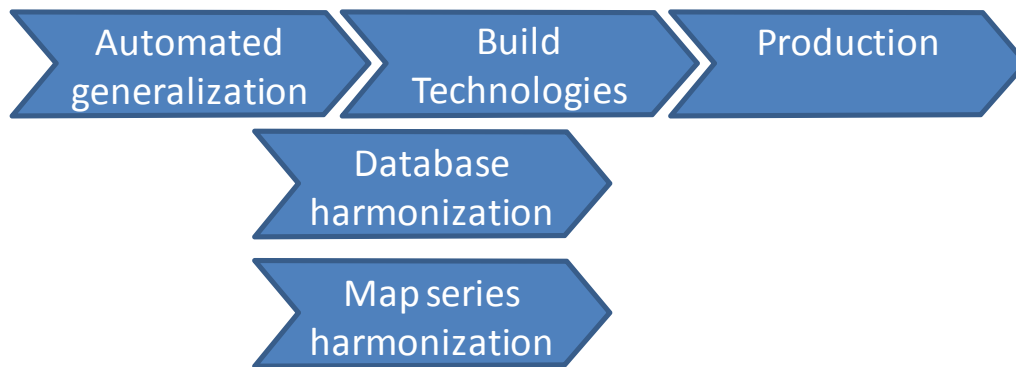


Figure 1 The place of the automated generalization project in harmonization strategy

Since generalization operators/algorithms set necessary for these scales are limited to well described reduction, enhancement, shifts to side, symbolization and typification we are free to keep focus on their automated selection with proper order and parameters (generalization strategy). For this purpose, XML based cartographic knowledge database is under development with aim to upgrade it into ontology dictionary in later stages.

We are amazed by Dutch and Swiss remarkable success in this area, exploiting ArcGIS capability on the real edge. Thanks to the excellent presentation of Dominik's SwissTopo team we understand that to reach higher level of quality drastically increases development resources needed. Benefits of Agile Scrum project management are apparent. While CZE NMA's long term resources are limited to three positions, moreover not dedicated to generalization, we can't copy this great identified lesson. Still searching for a way how to combine this approach with sophisticated generalization strategy enabling us to decrease solution cost and time in a reasonable manner.

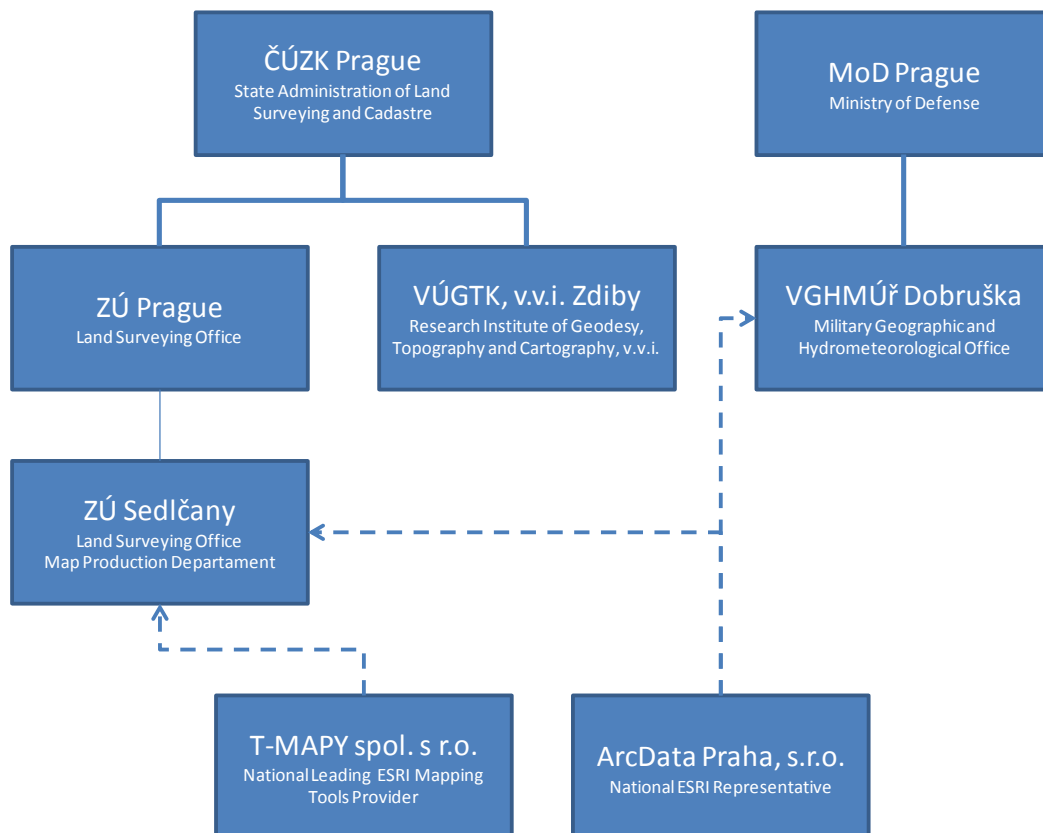


Figure 2 CZE National Mapping Key Players Break Down