

# EuroSDR/ICA MR Workshop – Breakout 3

## Carto Rules v Up-to-date

- Traditional cartographers want the perfect map
  - However, users are happy with “good enough” if map is more up-to-date
- What is “Good enough”? What is cartographic quality?
  - Quality is “Fitness for purpose” – so need to know purpose
- Topographic map traditionally was general purpose, but originally military purpose
  - (Topo maps show things that an 18<sup>th</sup> C infantry soldier can hide behind, so show coniferous/deciduous trees as soldiers can’t hide behind deciduous trees in winter)
- Now can have different maps for different purposes
  - Pale colours for background context maps
  - Ortho photos for maximum detail (can customers interpret them?)
- Need to ask the customers:
  - Do NMAs know who their customers are now (harder when data free)?
  - Primary customer is still often military in many countries
  - In other countries it is hiker/tourist (Norway)
  - Also local government planners, utilities, environmental, emergency services (Denmark)
- Asking customer for rules is no use – can’t express them
  - Have to develop variety of samples and ask user to choose
- Some customers want everything – lots of content, lots of precision – country on A4!
  - So cartographic expertise is needed to assist to a workable design
- Competitors like Google maps, Apple are good at doing user experience tests to evolve design
  - But don’t publish their rules as evidence
  - Also lack of academic study of map quality rules for 21<sup>st</sup> C map use on smartphones etc
- OpenStreetMap has anarchy – lack of rules, but is still useable?
  - Because up to date (and free)?
- Mapmaking has constraints: functionality (content, lack of conflict), ‘actuality’, time taken, cost
  - Maximise content and actuality, minimise cost, time and conflicts
  - Can’t satisfy all constraints – choices needed
- Zoomable map v fixed scale map
  - Fixed scale – need good rules to avoid and resolve conflicts
  - Zoomable map – can manage without good rules, by zoom in further to resolve conflicts
  - PDF vector maps are half-way – can turn off layers/labels but not zoom for more detail
- How old is ‘Up-to-date’? – Traditionally 5 years?
  - Aim for 1 year for most themes, but 1 month for roads?
  - Swiss military not bothered by 3-5 years (terrain doesn’t change much?)
- Google maps is not very up to date. Also rules not consistent (big cities missing)
- How do we keep up to date? Automated change detection?
  - Presence of change now automated from imagery, but still need manual extraction?
- Perhaps need to put things in quickly ‘approximate’, then refine later when surveyed
- Generalization needs to be 100% so can redo frequently – refresh stack monthly?
- Germany has changed its symbolisation – driven by pressure on costs and resources
  - Not driven by user needs?
- Catalunya – maps have multiple roles, but mainly as background
  - Need to educate users how to get more from data – query/analyse/select
- Denmark – focus is on keeping database up to date
  - Producing map is very fast – 2 hours?
- Spatial context on a small phone screen is hard
  - Future hardware may change balance again – Samsung foldable big display?
- We still need the knowledge of cartographers in the future, but applied as automation