



## Workshop Report

### Innovative Visualisation and Cartographic Language

Maison de l'Europe (EC Representation to Luxembourg), 2 April 2009

#### I. Purpose and Context of the ESPON Workshop

*“New tools to help with information overload – Visualisation is becoming important because of our desire to understand what’s happening in the world at a time when it’s becoming harder and harder to do so.”*

(The Global Edition of The New York Times, 8 December 2008)

Communication of European territorial dynamics and policy orientations requires visualisation and easily understandable cartographic languages. The political interest in the territorial dimension of development and the aim of territorial cohesion makes the quality of communication more and more crucial. In parallel, technological developments related to the use of computing provide new tools for taking a further step in innovating visualisation and cartography. The ESPON 2013 Programme is facing this challenge.

ESPON offers already a variety of visualisation / mapping tools, such as the ESPON HyperAtlas and has made use of visualisation in geodesign etc. The workshop presented various ways of visualisation and thus offered new aspects for a creative and innovative improvement of the cartographic tool box available for the ESPON 2013 Programme. In that respect, a possible ESPON action on “Cartographic Language: Visualising Territorial Dynamics and Trends”, contributing to the tool box improvement, will build largely on the findings of the workshop.

The purpose of the workshop was three-fold:

- To present the current state of the art and good practice in cartography in terms of presenting facts, evidence and policy orientations as maps and other cartographic illustrations;
- To display possible new avenues that today are open in terms of computer supported cartography being related to complex messages among which are 3D illustrations, animations and dynamic maps;



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- To debate possibilities for developing and innovating visualisation and cartographic languages in support of the presentation of key messages related to European territorial dynamics and cohesion.

More than 50 participants as a mix of cartographers, artists, media people, scientists, practitioners and policy makers attended the workshop for a first exploration and dialogue on possibilities for innovating visualisation tools and cartographic language related to the development and cohesion of the European territory.

## II. Experiences from Innovative Cartography and New Avenues of Visualisation

The experiences from innovative cartography and new avenues of visualisation show the following elements that could be considered when discussing possibilities for innovating visualisation tools and cartographic language:

- **Innovative cartography**
  - Living in a network society results in facing users of innovative cartography who – not necessarily being professionals – are best informed, but also interact in map-making processes, particularly in policy making arenas.
  - Visualising policy concepts as well as synthesising maps constitutes still a challenge requiring a specific cartographic language of geodesign, illustration etc.
  - Despite different cultural approaches in planning traditions, the base line for different kinds of (visualisation and) cartographic language should be cartographic standards; the *grille chorématique*<sup>1</sup> may serve as reference example.
  - Modelling built environments challenges the adequate data availability / collection and the lack of interoperability between emerging standards. This goes as well for the approval of data quality / reliability and the respective integration of grassroots activities and their findings, particularly facing ways of interaction in the sense of e-democracy; case studies usually collect data too.
  - It should be considered that Geographic Information System (GIS) does not correspond to what is generally understood as geography.
- **New avenues of visualisation**
  - Developing mental maps requires the understanding of mind sets and changing perceptions; especially the young generation base their perceptions on oral stories and devices such as games.
  - Open source networks using web-based sources (e.g. Google Map) are increasingly influencing policy making and thus the way innovative visualisation and cartographic languages are used.
  - Multi-dimensional mapping goes hand in hand with multi-visual presentation; going online with map making facilities raise the issues of the degree of public access and possibilities of manipulation.

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<sup>1</sup> (Cheylan, Jean-Paul et al., Les chorèmes: un outil pour l'étude de l'activité agricole dans l'espace rural? in: MappedMonde 90/4, 1990, <http://www.mgm.fr/PUB/Mappedmonde/M490/PREFACE.pdf>)

### III. Key Issues for a Possible Cartographic Tool Box Visualising Territorial Dynamics and Trends

The afternoon discussion focused on questions and constraints being useful in support to policy development related to territorial cohesion. Two input statements nourished the discussion about questions and constraints. The one input derived from the current ESPON 2013 Database Project which also addresses cartographic representation. The other input presented the viewpoint of a practitioner working at the interface between research and policy support.

The main questions structuring the dialogue with workshop participants included:

- Which content could best be visualised in an innovative manner?
- Towards which target groups could innovative visualisation and cartography be a promising option?
- What tools for visualisation and cartographic language could be developed in an innovative way?
- Which media should be considered for the communication and dissemination?

The discussion of these four questions led to the following four key messages:

- **Define clearly the target groups and the purpose to be addressed in order to visualise innovatively!**
  - Target groups might be policy makers, the private sector, the media, the ESPON Research Community, practitioners, other Structural Funds Programmes as well as the wider public in general, focussing specifically on the young generation.
  - ... and they show different respective demands and an understanding which have to be listened to.
  - A clearly defined purpose of visualisation activities in question, initiated by the ESPON 2013 Programme, is indispensable in order to visualising target-orientedly; the role of a map / information in a (political / social) process as possible awareness-raising / knowledge-production-supporting instrument is to be closer explored and defined.
  - Communicating particularly with the media needs operating with win-win situations, i.e. the information interest of the media should be considered when conceptualising visualisation activities.
- **Develop a target-group-oriented visualisation and cartographic tool box, taking into account and improving existing tools!**
  - Developing a visualisation and cartographic tool box needs a reflection of the demand(s) of the respective target group; tailor-made as well as simple, readily understandable, easy-to-use solutions (e.g. catalogue maps) are required.
  - The ESPON HyperAtlas is an example of an existing tool for a specific purpose, namely to analyse and visualise a spatial phenomenon taking into account its multiple possible representations.

- The integration of grid data in regional analysis is to be considered further.
  - The cartographic language and visualisation tools used with the ESPON context needs a modernisation without disrespecting methodological standards.
  - Creating a European cartographic language (possibly called “ESP(ON)eranto”) might be helpful.
- **Select the visualisation and cartographic language corresponding to the demands of the target groups!**
    - In selecting the adequate cartographic language the goal should determine the way; the fuzzier the policy, the less geographically precise and more innovative the cartography should be.
    - The cartographic language selected should follow the KISS Principle: “Keep it Short and Simple”; information overload is to be avoided.
    - Telling stories and keeping the storyline is one way to communicate, especially when communicating / explaining possible reasons for a specific phenomenon.
    - In selecting visualisation and cartographic languages one should learn from those having been used in the past and having proved to be appropriate and sound.
    - Different territorial phenomena should be presented on different layers.
    - Target-group-oriented elements, such as time series, 3D / surface maps, maps provided by Google Map, icons (e.g. those icons used in developing the European Spatial Development Perspective – ESDP) should be an integral part of the cartographic language chosen; this goes as well for movies, blogs, vodcasts, etc. as contemporary elements of communication.
    - Mental maps will play an increasing role in presenting different ways of perception.
  - **Choose adequate ways and places of presenting innovative visualisation and cartographic language!**
    - Living in a media world will to a certain extent influence the choice of the appropriate platform for presenting innovative visualisation and cartographic language; a proper consideration of the respective technical infrastructure, considering regulations (e.g. INSPIRE) in particular, is necessary.
    - Nevertheless, a good (printed) self-explaining map is still a good map, even without a legend.
    - Printed material may in some cases (e.g. events) play a meaningful role as add-on towards online publications and vice versa.
    - Going online with innovative visualisation and cartographic language tools, particularly map making tools, should consider measures to counteracting manipulation and – against the background of maintaining high scientific / analytical standards – to certify the data quality as well as to provide an easy access and use by all.

All presentations given during the ESPON Workshop on Innovative Visualisation and Cartographic Language as well as this Workshop Report are available at [www.espon.eu](http://www.espon.eu)