

THE TECHNOLIFE METHOD

The TECHNOLIFE method maps ethical issues at early stages of S&T and represents social imaginaries relating to these issues. It is a suite of exploratory, qualitative and quantitative steps:

1. A scoping exercise that defines **hot topics** in relation to the technological fields. Hot topics are issues of concern that involve unsolved social, moral or political tensions and that are immature for regulatory definition and resolution.
2. Deliberation within **KerTechno**, our specially designed online open-source software in which citizens and stakeholders discuss the hot topics. The purpose of the deliberation exercise is to elicit arguments, concerns, imaginaries and alternative frames of understanding with respect to central policy issues seen in the light of broader cultural developments.
3. An online KerTechno **voting system**, allowing for quantitative analysis of results.
4. A qualitative, analytical procedure that identifies the **arguments, concerns, imaginaries and alternative frames of understanding** elicited by the participatory exercise and defines their relation and relevance to early stages of S&T and policy development.

Both the theoretical framework underlying it and its balance between approaches are essential features that give TECHNOLIFE its innovative character and robustness.



TECHNOLIFE is a research project on the ethics of emerging science and technology, coordinated by the University of Bergen. Its partners include Univ. of Copenhagen, Lancaster Univ., Univ. of Manchester, Univ. de Versailles-St.Quentin-en-Yvelines, Univ. of Tartu, Univ. Autònoma de Barcelona and EC-Joint Research Centre (Ispra, Italy)

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TECHNOLIFE on YouTube:
<http://www.youtube.com/TechnolifeDebate>



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Citizens as Neo-Geographers: the Challenge of Responsible GIS

TECHNOLIFE: Ethics with People Key Results



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HOT TOPICS FOR GIS

In the TECHNOLIFE paradigm, hot topics are issues of concern that involve unsolved social, moral and/or political tensions and that are immature for regulatory definition and resolution. In the case of **Geographical Imaging Systems**, the following hot topics were identified:

- a) **Trust in maps and images**: How can we know that images circulated on the web are realistic? And how can we know that maps of the future can be relied upon?
- b) **Surveillance and privacy**: High-resolution imagery and increased capacity for seeing comes along with increased opportunities for surveillance.
- c) **Equality and power**: Access to valuable resources and critical information could be limited to only those with influence and money.

These topics were presented in the form of a short movie, see:

<http://www.youtube.com/user/TechnolifeDebate#p/u/1/3hXJgBMoAwg>

The logo for 'technolife' is displayed in a bold, lowercase, sans-serif font. The letters are grey with a white outline, and the entire logo is enclosed within a thin red rectangular border.

NEW CONFIGURATIONS OF SPACE

The imagery of the **vulnerable planet Earth** being the home of the whole of humanity is above all connected to the iconic photographs from space journeys such as the Apollo programme. Importantly, GIS technologies now allow **non-experts** to create new representations of the Earth, **developing their own configurations of space** in their own communities.



(...) the social production of maps, normally online, is becoming such a powerful tool to enhance the comprehension of territories (including space and people), social processes, expressing denounces, building participatory proposals, and thus taking part in governance, for non-GIS-experts. In this sense, accuracy is not so important since the geo-referenced data is normally quite simple, but its strength is its democratic nature. («Violeta», TECHNOLIFE Forum participant).

CITIZENS AS NEO-GEOGRAPHERS

Citizens are becoming empowered neo-geographers through the deployment of new ICTs. **Centralised models of governance of space**, with inclinations for ever-larger central databases and computer models, **may fail** in this situation. While resources are invested in measuring and predicting citizens' behaviour, citizens can use similar technologies to map space in new ways, create new forms of meaning and culture and thereby change the space in real time. For Europe, the **policy challenge** is to develop institutional arrangements that can accommodate the transformation from a centralised and reactive mode to a **truly participatory and proactive mode**.

RESPONSIBLE RESEARCH AND INNOVATION OF GIS

GIS-based applications can be used as tools against oppression; at the same time, other GIS-based applications appear in the service of the further commodification of space. Although the end use of technology always allows for a creative element, design issues will also have bearing on such opportunities. It is therefore important that **"ethical acceptability and societal desirability"** is not reduced to questions of privacy, data protection and, say, welfare and innovation potential when attended and embedded in the proactive measures proposed above. The frame of **social justice, equality and power** should be a primary one in the ethical framework also for GIS technologies.

... contemporary global "live" maps work on our minds along with the now shared opinion that the globe is not well. [...] What we are seeing is not just an outstanding planet. We are looking at ourselves. What we see is a resultant of what nature and we jointly do. "What on earth are we doing?" presses itself upon all of us. (TECHNOLIFE Forum participant)