

**The Frontiers Technology Assessment Programme
Multi-path mapping: integrating micro and nano tools
within a single-cell analysis platform**

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To be able to handle the many new challenges faced by modern science and technology R&D the Frontiers network of excellence will explore a number of issues relating to

- organisation with respect to integration, research agenda coordination and strategy development;
- Ethical Legal and Societal Aspects of new technologies (ELSA); and
- the effect of images of nanotechnology on research agenda setting and policy.

To enable *substantial* and a *high standard* of exploration of these important challenges, the Frontiers network of excellence includes scholars of socio and economic theories of technical change, technology and innovation studies and technology assessment. Together with other members of the network of excellence they will coordinate a number of *Technology Assessment Projects*. The first three projects will each cover one of the points mentioned above based on a specific nanotechnology field or generic challenge.

The first project deals with the challenge of integration of various micro and nano components, tools and techniques into a platform for further research purposes and perhaps for application in society (such as the medical sector, pharmaceutical sector etc.). The subject topic is “*towards an integrated cell analysis platform and beyond*”.



Figure 1: Workshop session, 12th June 2006, De Rode Hoed, Amsterdam

The process topic was how to deal with roadmapping and strategy articulation in an emerging field where the complex mix of varying and evolving research lines need to coordinate to enable an integrated analysis platform. Together with representatives for the research sector, technology assessment and industry sectors, the Frontiers team will explore some of the issues involved with integrating a number of research lines, how to develop a roadmap but maintain flexibility to allow further research and integration of results from more fundamental research orientations.

The output will was a multi-path roadmap of possible directions, a number of scenarios based on both work from the participants and analysis from the technology assessment scholars and a list of action points and recommendations for the Frontiers network (and more broadly to the European Research Community).

For the topic itself, a better understanding of integrating different (often disciplinary diverse) research lines for a technology platform (such as a Lab-on-a-chip) and a better understanding of the evolution of the field of micro and nanotools for integrated cell analysis was reached.

The Multi-path Map of Integrated Cell Analysis Platforms (ICAPs Map)

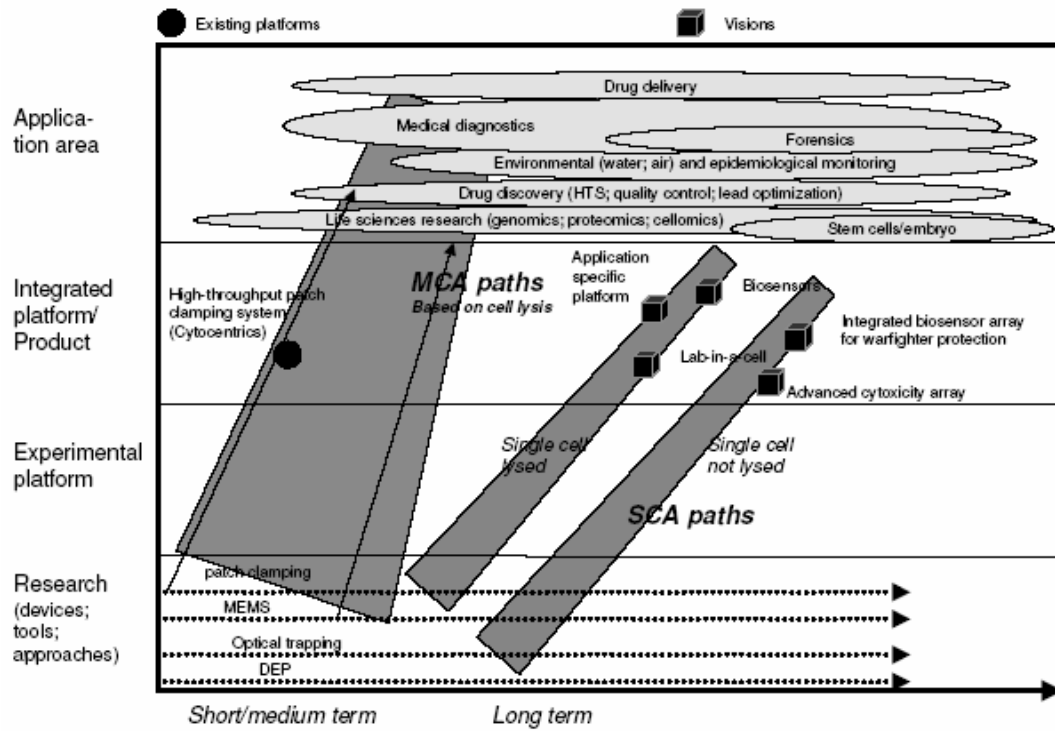


Figure 2. Multi-path map of paths to applications

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