

ICT for Governance and Policy Modelling Briefing Paper

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... *A briefing paper for the preparation of
the FP7 work programme 2009-10*



FP7 'ICT for governance and policy modelling'

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It is now recognised that on-line collaborations have the potential to trigger and shape significant changes in the way future societies will function. Extrapolation of the present exponential growth leads to scenarios where very large percentages of populations could, if equipped with the right tools, simultaneously voice opinions and views on major and minor societal challenges, and thereby herald the transition to a different form of dynamically participative "eSociety". While such scenarios are readily imaginable, it must be recognised that we currently do not have appropriate governance models, process flows, or analytical tools with which to properly understand, interpret, visualise and harness the forces that can be unleashed.

By 2020 there could be no barriers any more for citizens and businesses to participate in decision making at all levels. Advanced tools – possibly building on gaming and virtual reality technologies will enable citizens to track most decision making processes and see how their contributions have been (or are being) taken into account. Current linguistic and cultural barriers will have been largely overcome through use of semantic-based cooperation platforms. Opinion mining, visualisation and modelling into virtual reality-based outcomes and scenarios will help to both shape, guide and form public opinion. The processes and tools will have to demonstrate transparency and trust and be devoid of manipulation. The outcomes of such consultative processes should be faster and more efficient in terms of revising policy and making decisions

a) Governance and Participation Toolbox

Significant outcomes expected include: Advanced tools embodying structural, organisational and new governance models to empower and engage all types of societal groups and communities, enable them to exploit mass cooperation platforms and allow governments to incorporate their input. Based on semantic co-operation platforms, these tools will enable the creation, learning, sharing and tracking of group knowledge that cuts across language and cultural interpretation. They should also facilitate transparency and tracking of inputs to the policy making process. The toolbox must include security, identity and access controls to ensure privacy and, where appropriate, the delineation of constituency domains according to the specific needs of government applications.

b) Policy Modelling, Simulation and Visualisation

Significant outcomes expected include: Real-time opinion visualisation and simulation solutions based on modelling, simulation, visualisation and mixed reality technologies, data and opinion mining, filtering and aggregation. This will encompass novel instruments which allow consideration of options based on the simulated behaviour and wishes of individuals, groups or society as a whole to understand the possible outcomes of government proposals, decisions and legislation.

The focus is on advanced tools and technologies to perform large-scale societal simulations integrating all possible variables, parameters, interferences, scenarios necessary to forecast potential outcomes and impacts of proposed policy measures. The solutions will be based on a systems dynamics methodology to analyse and model complex systems, cooperative vs. competitive systems, and also the use of "cloud" computing applications in order to pool web-wide computing resources for large scale data analysis and storage.

The tools should exploit the vast reserves of Europe's public sector collective data and knowledge resources which are also developing dynamically. These encompass data originated from individuals as well as data aggregated for various purposes, and which are generated from all societal actors but which are legitimately owned by or available to government. Underlying functions to be integrated include translation, process modelling, data mining, pattern recognition and visualisation as well as other gaming-based simulation, forecasting and back-casting as well as goal-based optimisation techniques.

c) Road mapping and Networking for 'participation, governance and policy modelling'

(i) RTD roadmap for the domain of ICT for participation, governance and policy modelling to identify emerging technologies and potential applications, taking into account technology trends as well as social behaviours and demands, business potential and impact. It will also consider emerging research directions in the domain and will include insight into research activities undertaken in non-EU countries.

(ii) A dynamic 'Network' to encourage networking of relevant stakeholders and teams working in these areas and to encourage multidisciplinary constituency building;

Expected Impact:

- Improved empowerment of individuals, groups and societies through the use of next generation governance tools for mass co-operation and opinion forming
- More efficient collection of feedback from public sector organisations to continuously improve the governance.
- Improved prediction of policy measures impacts, with increased contribution and involvement of individuals and societies, supported by new technologies.
- Intelligent and optimised use of vast public sector knowledge resources for policy modelling.
- Improved link between the public and policy makers through real time opinion visualisation and data mining.
- Increased trust of the citizens through transparency and feedback of their contributions to policy making.

Instruments:

It is expected that the objectives could be achieved through a number of STREPs (co-operative research projects in the range of 2-3 million euro funding and duration of 2-3 years), and couple of support measures for road mapping and networking.



If you wish to receive additional details, please see: <http://ec.europa.eu/egovernance> or contact: **INFSO-EGOV-FP7@ec.europa.eu**