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Irina Zálišová, Iva S. Walterová, Radek Bejdák (eds.)



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The FUPOL Policy Lifecycle Model and related Technologies in Practice

Peter Sonntagbauer¹, Silvana Tomic Rotim², Haris Neophytou³, Giorgio Prister⁴, Marjan Gusev⁵, Shaun Topham⁶, ¹Cellent AG, Vienna, AT; ²ZIH doo, Zagreb, CR, ³Interfusion doo, CY; ⁴Major Cities of Europe, Rome, IT; ⁵Innovation doo, Skopje, MK; ⁶Barnsley, UK

Peter.sonntagbauer@cellent.at, stomic@zih.hr, hn@interfusionservices.com, giorgio.prister@majorcities.eu, marjan.gusev@innovation.com.mk, shaun.topham@yaproject.eu

Biographical Details: Peter Sonntagbauer (Ph.D.) is the FUPOL Project Director. He has long-term experience in the consulting and IT industry, out of which more than 15 years international experience in Europe, Asia and Africa as a senior consultant and project manager. Silvana Tomić Rotim, MSc. graduated from the Faculty of Electrical Engineering and Computer Science, Zagreb (1995) and got her master degrees from the Faculty of Electrical Engineering and Computer Science (1997) and Faculty of Economics (2000). She is a Certified Quality Lead Auditor, Certified IS Auditor, Certified Information Security Lead Auditor, Certified Management Consultant (CMC), Certified Management Trainer and a Certified TickIT Lead Auditor. She is currently coordinating the pilot activities in FUPOL.

Giorgio Prister is committed since more than 20 years in the strategic and ICT innovation of cities, by leading sales, marketing and solutions for that market in Europe on behalf of IBM and since six years by leading as President the Major Cities of Europe association.

Structured Abstract

Purpose & Scope

The purpose is to outline the FUPOL model, an advanced e-governance and e-participation approach as well as its application in various pilot cities worldwide. Some experiences gained during pilot implementation in Africa, and Eastern and Western Europe are illustrated.

Design/methodology/approach

The FUPOL Policy Model is provides the integration in a seamless set of main tasks and subtasks. It links various technical features in the domain of policy modelling to guarantee the support of the whole policy lifecycle.

Results/findings

The results achieved so far demonstrate that it is feasible to support the policy design and implementation process in different scenarios and different political settings with the technology envisaged. It has also been acknowledged that local support over a longer period is required to make such an approach successful.

Conclusions

The methodolgy as well as the technical features worked out by the FUPOL project have been succesfully demonstrated in practice. In a next step the exploitation will be set up based on worldwide partner network.

Keywords: FUPOL, e-Governance, e-Participation, Policy Lifecycle, Policy Modelling, |74

INTRODUCTION 1

A recent approach to define a policy process is to consider the use of ICT-tools in the entire process. In particular the involvement of citizens and their opinions can be supported in a more comfortable way by electronic means, because they allow a quick interaction between citizens and governments. In this paper we describe a new model, related technologies and their application in practice.

2 POLICY LIFECYCLE MODELS AND ICT SUPPORT

2.1 History

The well-known definition of Macintosh [1] and published model is proposed by the OECD to reinforce e-Democracy. Both processes define a five-stage PM-process: (1) Agenda Setting, (2) Analysis, (3) Policy Creation, (4) Policy Implementation, and (5) Policy Monitoring. Next to these established process definitions, there are very similar definitions with a deviation in the number of stages. They address the same issues, similar to the parallel existing process definition for the conventional PM-processes. The process definition of Mashinini [2] consists of four phases. His model combines the first two stages of Agenda Setting and Analysis in one stage. Another policy lifecycle process definition was proposed by the World Bank [3]. It describes a more structured process with an assessing and coordination responsibility within the governments. However all of the mentioned models do not address the use of ICT in the whole process, specifically which ICT features are required to support the process.

2.2 The FUPOL Model

In order to address the linkage between policy process and ICT, a new model [4] has been developed in the FUPOL project [5]. It includes a comprehensive, integrated and detailed breakdown of tasks and links them to ICT technologies and benefits. The novel FUPOL Policy Lifecycle is characterized by its six lifecycle stages, main-tasks and subtasks which are combined with technical features.

The various FUPOL features and technologies can be used in several subtasks of the policy process are below.

- Data Integration and Storage
- Unified Integrated User Interface
- Policy Indicator Dashboard
- Social network aggregation and single window display
- Hot Topic Sensing & Topic Summarization
- Community Feedback Platform
- Visualization of statistical data
- Visual social data analysis
- Knowledge database and visualization
- Outgoing Multichannel Social Media Single Window Messaging
- **Opinion** Maps

Innovation, citizens and government policies

- Simulation and impact visualization
- Visual Fuzzy Cognitive Maps

The technologies have been described in detail in previous publications [6], [7].

3 PILOTING OF THE MODEL AND TECHNOLOGIES

3.1 Introduction

The model and related technologies are currently piloted in six different countries: UK, Cyprus, China, Macedonia, Croatia and Kenya. The focus of the demonstrator domains was chosen in a way that they have not already been covered by other research projects to provide a maximum of added value to citizens and policy makers. They were also selected according to complexity, means the domains cover more than one single (easy) policy topic.

Other criteria were:

- Potential of re-usability by other cities in and outside Europe, including developing countries
- · European and non-European dimension of policies
- "Quick Win": Potential to deliver value for citizens within the lifetime of the project A selection of the results is described below:

3.2 Barnsley

3.2.1 Background

Barnsley is a town in South Yorkshire, England. It is surrounded by several smaller settlements which together form the Metropolitan Borough of Barnsley, of which Barnsley is the largest and the administrative centre. The metropolitan borough has a population of 231,900. As far as citizen consultation is concerned, the Public Administration in the UK is not looking at its first steps in consultation. This is a long-established process in Planning, which has evolved since 1947. Methods are already available to scrutinise how successful particular engagement strategies have been. This means that the pilot is building on existing experience and embedded in statutory processes.

3.2.2 Policy Domain

The policy domain is "Land Use- focussing on its future use for employment". For the initial piloting, ahead of the main consultations on the overall change of the use of land in the Borough which are still to be launched, Barnsley looked at the most prominent planning application passing through the system at the time of the trials. As there were no large industrial or commercial applications being processed at the time, this in fact was for a large housing application on a "green-field site" in the Royston area of Barnsley, selected for its potential in terms of generating interest amongst the public, both for and against proposals made, and being also of political interest.

3.2.3 Current status and lessons learned so far

Essentially the first piloting was concerned with the implementation of the previous landuse policy, as a planning application for housing went through the system. The pilot sought to familiarise the planning and communication teams with the implementation of the FUPOL tools and to consider the input from the citizens as complimentary to their existing methods at this stage. It was also an exercise in building confidence and familiarity, not just with officers, but also with the politicians who will drive the creation of the new "Land–use Policy". The individual aspects of FUPOL were as important as their collective power at this stage of the learning process.

Clearly, the timing of the testing had to coincide with the plan being taken to a committee for determination. Activities started in September 2013 with an awareness campaign. It was found imperative to have political support from the very beginning, given the sensitivity of both "information gathering" and of the actual planning application, and whilst any views from citizens could be treated as if they had arrived via the traditional methods, the main purpose was to test the system. It is certainly not beneficial to projects such as FUPOL, to have to take place in the climate of mistrust created by the numerous "breach of privacy" scandals prominent in the British press and so much effort will need to go into allaying these fears ahead of the main trials, when the focus will indeed change from the technology to the citizen's opinions.

Activities were carried out according to the training manuals with access being provided through a Facebook page and a blog, with a good cross-section of information sources ranging from press to radio and the variety of social media in order to provide the raw material capable of being analysed and made of value to the communicators and disseminators. The emphasis at this stage being to familiarise the campaign team with the tools and to show they work, rather than on their actual contribution to the policy making and implementation processes at this stage of the project. Communication plans were created and rehearsed and a feed-back process through interview, focus groups and questionnaires helped us evaluate this preliminary testing phase. It would be fair to say that there was enthusiasm all round and that the expectations for FUPOL in the real trials to follow are very high.

The most important feedback given did not relate to the FUPOL process as a whole, but to technical and design improvements when the tools were put in the hands of those expected to utilise them on a day-to-day basis and who are familiar with existing ways of carrying out policy making and communications in the Land Planning process.

Examples of this kind of dialogue with the designers during the first phase included:

- Feedback being given on issues such as the time-scales related to when a topic is deemed to be hot, patterns in various media where a topic may be hot at any time, locations where it is hot and what are the patterns occurring, drilling down into sub-sets of data etc.
- Suggestions for improving the campaign "dashboard"
- Issues concerning import and export of data.

3.3 Mtwapa (Kenya)

3.3.1 Background

It is the unique feature of this pilot that the environment is a slum area. Mtwapa is located in Kenya's Kilifi County in the vicinity of Mombasa City. Its population was estimated to be about 50,000 people and half of them live in the informal settlements and slums. The pilot in Mtwapa is part of a slum upgrading project managed by UN-HABITAT. The PSUP Mtwapa slum upgrading project aims at improving living standards of slum dwellers in Mtwapa by addressing the five depravations of slums namely the lack of access to safe drinking water, access to improved sanitation, overcrowding, permanency of living structures, and security of tenure.

The reasons for choosing Mtwapa in Kenya as a pilot were:

- An initial evaluation has revealed that Kenya is an ideal testing ground for new technologies, because the mobile penetration is very high. Kenya has 40,7 mil. inhabitants and already 31,3 Mio mobile subscribers.
- 2) High speed internet is available almost everywhere in the country.
- 3) Kenya is well known for very innovative internet and mobile services like M-PESA (mobile payment). M-PESA is currently the most developed mobile payment system in the world with a large share of the Kenyan population actually using it.

3.3.2 Policy Domain

The policy domain is slum rehabilitation and includes mainly public infrastructure such as for example roads or sanitation facilities.

3.3.3 Current status and lessons learned so far

The technical environment has been set up featuring a Facebook page and a blog as frontend. Likewise a lot of information has been collected from social media and newspapers through the FUPOL core platform to get a better picture of the local challenges.

The local community has been informed about the use of electronic media in the policy modelling and decision making process. Various meetings with the local government and community elders have been held to ensure acceptance. The community was very positive towards the new technology and expects a better communication with decision makers to express their needs.

The most important lessons learned are related to the "social" framework.

- 1) It is required to have "Community Mobilizers" assisting those people, which are not familiar with ICT. This enables also them to express their opinion electronically.
- 2) Postings should be moderated and adequate processes must be in place to respond to questions and concerns of the citizens quickly.
- 3) It is important that both government and citizens are well prepared. It has been realized that this task is quite time consuming. There it is always required to have a local partner able to support the process technology alone cannot do the job.

It has been proven that FUPOL can work in a multilingual environment (Kisuaheli, English, Italian). It could be shown that it was possible to extract separate hot topics in the above mentioned languages out of the mixed responses.



Figure 2 : Mtwapa BLOG with embedded FUPOL opinion map About Online Forum elcome in Ooxeni the ePorticipation wabuite to Region Wide Concern Mo About Us Events

MTWTFSS

Library

Progress

Register

3.4 Pegeia

Pegeia is a hillside coastal town situated in the north of the district of Pafos, Cyprus, with population of around 10,000 residents. The municipality itself covers an area of 4,552 hectares making it the largest municipality in Cyprus in terms of geographic area. One of the most famous Cypriot beaches, Coral Bay, is a popular tourist resort in Pegeia where approximately 2000 holidaymakers visit the beach during the summer months. In addition, because Pegeia is built on the ancient site of the old Akamantida, there are many places of historic and archaeological importance, such as Yeronisos Island where expeditions have unearthed many fascinating and significant archaeological remains. Due to its location, climate, natural environment and rich history, Pegeia is one of Cyprus' main tourist hot-spots, attracting thousands of local and foreign visitors each year. Furthermore, many foreign nationals and expatriates have taken up permanent residence, which has facilitated in turning Pegeia into a cosmopolitan area with a diverse and multicultural society.

Pafos has been selected as the 2017 European Capital of Culture in order to accommodate the influx of tourists expected during the period leading up to and including 2017. In addition, ecological excavations have been taking place on Yeronissos Island for several decades. Many significant findings have brought internationally recognized archaeologists to the island to participate in the excavations. The municipal council, as part of the new sustainable tourism initiatives being planned, has considered various alternatives to promote the island as an archaeological landmark but at the same time doesn't want to affect the on-going excavations.

3.4.1 Policy Domain

The pilot actions for the Municipality of Pegeia are implemented under the domain of sustainable tourism. It includes two scenarios, one for gathering citizen and tourist opinions in order to improve the current infrastructure/facilities of the Coral Bay area, and the second one for determining a policy for promoting the island of Yeronissos as an archaeological attraction without harming the landscape of the island or interfering with the ongoing excavations.

3.4.2 Current status and lessons learned so far

Preparation of the campaigns relating to the two pilot tests for the Municipality of Pegeia began in June 2013, when public administration staff were trained in using various FUPOL platform features. Campaigns and Opinion maps for collecting comments and recommendations from tourists and local residents were subsequently hosted on the municipality's official website in both Greek and English along with general campaign information. Additionally, links to the opinion maps were posted on the municipality's official social networking sites (namely, Facebook and twitter) to promote the collection of comments and recommendations for both campaigns. A launch night was held later in the month to introduce FUPOL to the citizens of the municipality. The event was attended by around 250 Pegeia residents, who were informed about how the FUPOL platform allows them to express their opinion, contribute in the decision-making process and participate in the formation of policies. The campaigns and gathering of opinions were advertised online through the Municipality of Pafos' portal on the DIEGO platform, while the SEED platform presented information about the campaigns in Greek and English with carousel slides at infokiosks.





The FUPOL platform has enabled the Municipality of Pegeia to involve the public in all aspects of the policy-making life-cycle. The responses from both the local residents and tourists indicated that they were keen on participating by providing their comments, opinions and recommendations in order to help design new or improve current policies. In fact, it was frequently noted by citizens that the ability to provide a comment or recommendation visually felt that their opinions mattered and that they was being considered. One of the challenges, however, lies in appealing to more tourists and improving the quality and variety of proposed improvements.

Currently, the two pilot scenarios are at the evaluation phase. A focus group was carried out and a number of questionnaires were handed out to both citizens and public administration staff to rate FUPOL's governance model with respect to policy design, to assess public involvement and evaluate the platform features of FUPOL's ICT framework, in particular, campaigns, social media window/social media aggregation, opinion maps and questionnaires. The results of the evaluation will help the project partners to calibrate and improve the current FUPOL features.

3.5 Skopje

3.5.1 Background

Skopje is the capital of Republic of Macedonia, cultural, economic, educational, science and business centre with about 506 926 inhabitants and area of 1818 km.

Competencies, that are matters of public interest and local significance for the City of Skopje are: Planning and Spatial Organization, Protection of the Environment and Nature, Local Economic Development, Communal Activities, Culture, Education, Sport, Social and Child Care, Healthcare, Protection and Rescue, Firefighting and Supervision.

The modernization and efficiency of City administration, its processes, functions and procedures are the strategic objectives of the administration development. Using the new technologies and ICT infrastructure are the base of achieving these objectives. These objectives are upon the competences of ICT and modernization Department.

Like other cities in the Western Balkan region, in recent years, the City of Skopje has experienced a huge construction boom. A new airport and many new buildings were constructed to make Skopje more attractive as a city and tourist destination. The growing number of citizens led to construction of new residential buildings and increased need for the transportation of commuters. As a result, the number of cars has increased in Skopje in the last few years with negative side effects such as air pollution, higher level of noise, congestion, lack of parking space, increased daily commuting time (to work, school, recreation, shopping, etc.).

3.5.2 Policy Domain

The pilot and related is focused on urban development planning, especially community facilities including recreation facilities and traffic. In the policy domain of traffic a specific challenge that is addressed is the optimisation of the bike infrastructure. It is a political objective to increase the % of the population using bikes from 2,5 % to 5 %.

3.5.3 Current status and lessons learned so far

The city of Skopje launched its first trial in July 2013 engaging the public in a discussion about outdoor sports equipment and subsequently in October 2013 about street lightning. Various PR activities were launched to alert the citizens on the possibilities of using electronic channels to influence policy decisions. While the first campaign on outdoor sports equipment did not have a big response, which was probably due to the timing (summer vacation) the second generated a lot of public interest. In December 2013 through January 2014, the main focus was the creation and popularization of the Vodno mountain recreational activities campaign. Public opinion was gathered by a questionnaire and an interactive map demanding the placement of pins at points of citizens' interest. The campaigns were publicized through Twitter and Facebook. A total of 2010 views are recorded to the posts. Public dialogue was sustained with 15 comments, 5 emails and 39 filled questionnaires.

In the month of January 2014 the City of Skopje launched its third trial, about the recreational habits on the mountain Vodno. This campaign was consisted of two survey lists and a chance for citizens to comment on the internet. This campaign was also a success and it generated many comments, suggestions and critical comments by citizens. In furthering openness and accessibility to the citizens, all comments and suggestions about the FUPOL project can be given through email (skopjefupol@gmail.com). This resulted in over 50 comments on this subject on the interactive map, the social media profiles (Facebook, Twitter and blogspot) and by e-mail.

Figure 4: Snapshot of Vodno recreation campaign



3.6 Zagreb

3.6.1 Background

Zagreb is the capital city and the largest city of the country of Croatia, its metropolitan area has a population of 1.2 million. The City of Zagreb ensures the necessary community facilities for the education of preschool (kindergartens) and school (schools) children and for their every-day involvement in sports activities and access to the City's cultural facilities. Involvement in sports activities and access to cultural facilities should be enabled for all other Zagreb's citizens and visitors, too. There are 60 public kindergartens that work on 204 locations. They take care for 31.877 children in 1.344 groups. Also they offer a preschool program for 798 children as well as different programs according to the interest of children and financial possibilities of their parents. There are 66.020 primary school children organized into 2.712 classes. Zagreb has 106 public primary schools and four schools for children with developmental disabilities. There are 6 private primary schools with 531 students in 46 classes.

There are 64 secondary schools with 36.648 students organized into 1.405 classes. Beside the public schools there are 4 religious and 15 private secondary schools. Regarding university education it is important to mention that 80% of all Croatian student studying at Zagreb university. Currently there are a lot of problems in providing adequate facilities for all above mentioned categories. Some of them are: insufficient number of kindergartens in some city districts, more than 30 years old kindergartens, without the adequate gym halls and playgrounds, lack of school premises in the existing primary and secondary school facilities, dilapidation of a part of the existing school facilities, lack of gym halls and playgrounds in primary and secondary schools, lack of primary and secondary schools with special education programs, lack of premises for holding university education, lack of accommodation facilities for an increasing number of students coming from other parts of Croatia and from abroad, unequal distribution of cultural programs across city districts, lack of sports facilities, an unequal distribution of sports and recreation facilities across city districts, insufficient number and inadequately equipped playgrounds, etc.

3.6.2 Policy Domain

The City of Zagreb has implemented two pilots in the domain of Land Use & Improvement of Social Infrastructure. The first one consists of two tests, one regarding the policy setting in the field of social infrastructure (kindergartens, schools, cultural and sports facilities), and the other one for gathering the opinions about a centre for autism. The second pilot also consists of two tests, one for the policy setting in the field of social infrastructure as well, and the other one for gathering the opinions apropos the children's playground in Remete.

3.6.3 Current status and lessons learned so far

The first pilot initiative was launched in May 2013. The City of Zagreb via FUPOL platform launched a campaign to gather citizen input on social infrastructure in Zagreb. The actual topics have been opened for discussion on the websites of the City of Zagreb, on the social network pages of the City of Zagreb and blog (http://zagreb-fupol.blogspot.com/), using the FUPOL platform. For that purpose it created four opinion maps, for schools, kindergartens, sports facilities and the Centre for autism with sensory park. The media has been informed about the new campaign through the Press Conference, the website of the City of Zagreb and Twitter and

Facebook of the City of Zagreb and the FUPOL leaflet has distributed to 32 locations in the City. The articles about the beginning of the campaign regarding social infrastructure and the Centre for autism have been published on different portals. All employees of the city government involved in policy-making in the two aforementioned domains are educated, they are given access rights and they are provided with continuous support in using FUPOL platform. Also, using the FUPOL platform, its feature for social network aggregation, the City of Zagreb created social media windows for searching through the social media sources. Once such content is available, the facilitator can use the specific platform functionalities (hot topic sensing) to extract the most debated issues; he can also provide certain visualization to present the results to decision makers in the City. It is a way to recognize the most interesting suggestions and include them in the agenda for the definition of new policy issues in the management of social infrastructure improvement.

By applying the FUPOL platform, the City of Zagreb has ensured the involvement of citizens in all phases of the policy creation. So far conducted phases are setting the agenda and creating the city's policies in the defined domains, and certainly plans to apply FUPOL approach in the phase of implementation and monitoring. During the campaign for the two earlier mentioned tests, held were two evaluation workshops with representatives of the city administration. One of them was related to the evaluation of simulation model and simulator, and other to evaluating other FUPOL features used in the campaign: campaign, opinion maps, questionnaires and social media aggregation.

Based on the current usage of FUPOL approach and platform, and their evaluation, there have been areas for improvement identified and in line with that feedback has been provided to partners who work on developing FUPOL features.

The key success factor for achieving the objectives in regards to project as such is the involvement of all important participants, especially citizens; therefore it is very important to start public campaigns in early stages of the project. Also, it is very important to involve the key public administrators and enable a good mechanism for evaluating the success of the project.

4 CONCLUSION

The results achieved so far demonstrate that it is feasible to support the policy design and implementation process in different scenarios and different political settings with the technology envisaged. It has also been acknowledged that local support over a longer period is required to make such an approach successful. In a next step the exploitation will be set up based on a worldwide partner network.

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