e-Government made smart and easy

Imagine an e-Government service that can learn from how you interact with it and simplify your experience accordingly. This solution now exists and can act as a model for all existing systems.

The digitalisation of public administrations is moving forward. Its purpose? Leaving burdensome paperwork behind and replacing it with easy-to-use, web-based platforms. But the truth is, for e-Government to be a success it needs to be more than a mere transposition of paper-based forms to digital equivalents. And this is where public administrations have been struggling so far.

“The idea behind online services is to hide all complexity from the user, but we can't do that by replicating the traditional processes of public administration,” says Dr Marco Pistore, Senior Researcher at FBK-IRST.

The SIMPATICO (SIMplifying the interaction with Public Administration Through Information technology for Citizens and cOmpanies) project was born from the realisation that, wherever it's happening, the potential of e-Government services is not fully exploited. E-services are typically designed from the sole perspective...
of public administrations, which is particularly problematic for users with poor computer literacy, low familiarity with administrative procedures, and/or limited knowledge of legal and technical jargon.

“We believe in the digitalisation of services as an opportunity to provide citizens and businesses with easier, more personalised interaction mechanisms. These should expose only the layer complexity required by a specific user for the service s/he is interested in,” Dr Pistore explains.

Information in a form you can understand

The project team has developed a new platform based on language processing and machine learning. Rather than complex and ill-adapted interfaces, SIMPATICO proposes to adapt the interaction process to the characteristics of each user. It simplifies texts and documents, enables feedback, and engages all stakeholders to integrate their knowledge in the system. This is what Dr Pistore refers to as the ‘wisdom of the crowd’.

“We gather user input in two ways: explicitly – for instance through queries that people submit while using online services – and implicitly. In this second case, we collect data on user interaction to identify general usage patterns and specific user profiles. We can identify those parts of the form that are perceived as more complex or ambiguous by users, while at the same time gathering information such as users’ nationality and mother tongue. Thanks to this information, we can simplify the texts embedded in the form based on linguistic skills and biases of a specific citizen,” Dr Pistore explains.

This is perhaps one of the project’s greatest achievements: a simplification of texts that considers specific user skills.

If you are working in a public administration, there is no need to worry about the hassle of switching to an entirely different platform either. As Dr Pistore points out: “What makes SIMPATICO particularly interesting is the fact that we build on top of existing tools. It’s an overlay that, for any existing system, has the double advantage of reducing customisation effort and keeping back-office processes unchanged.”

Among the system’s extensive list of features are automatic field compilation, dynamic walkthroughs, text simplification, online query answering and other techniques that adapt to the specific characteristics and skills of users. Three pilots engaging citizens and civil servants were successfully tested in the city of Trento (Italy), the region of Galicia (Spain), and the city of Sheffield (United Kingdom). In all cases, users were actively involved.

SIMPATICO can be applied to all kinds of online services offered by public administrations, from child
enrolment in kindergarten to services for vulnerable groups (foreigners, elders, disabled citizens, etc.). The municipality of Trento has already decided to adopt the system for all their online services, and other cities have already expressed interest.

**Keywords**

SIMPATICO, e-Government, public administration, digitalisation

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