INTRODUCING THE PERSONALISATION CULTURE INTO THE MOROCCAN E-GOVERNMENT

Hassania OUCHETTO[(1)*], Ouaïl OUCHETTO[(2)] and Ounsa ROUDIES[(1)]

[(1)] *Equipe SIWEB, Laboratoire SIR Ecole Mohammadia d'Ingénieurs,*
Université Mohamed V Agdal, Rabat, Morocco
Ouchetto@affaires-generales.gov.ma, roudies@emi.ac.ma

[(2)] *Université Hassan II – Aïn Chock, Casablanca, Morocco*
ouail.ouchetto@gmail.com

ABSTRACT

The personalisation of e-government (e-gov) plat-forms is a well-known way to facilitate access to information and to improve both productivity and quality of service.

However, the introduction of personalisation culture into Moroccan administration is becoming one of the problems that hinder effectiveness of e-government services. Many who have tried unsuccessfully to introduce it into e-government portals have found it to be a difficult task.

Accordingly, we have attempted to capture a solution to this challenge. This solution is based on the best practices expressed throughout the patterns language "Evolving a patterns culture" [15], which is a collection of interrelated patterns. It guides, step by step, organisations to introduce a patterns culture. We have tried to make use of these patterns to the Moroccan public organisations. Based on our experience, we have selected "Evangelist", "Early Adopters", "Local Leader", "Grass Roots", "Involve Every One" and "Personal Touch" patterns.

Keywords: Personalisation, patterns, administration, introducing a culture.
----

1. INTRODUCTION AND MOTIVATIONS

The e-gov implementation is important in making Government more responsive and cost-effective". E-government consists of the transformation of internal and external relations of the public service operations based on new information and communication technologies and communications in order to optimize the e-gov services delivery and the art of governing [1]. E-government added new concepts such as transparency, accountability, user satisfaction in the evaluation of governmental performance [2] [3]. It's not just a web presence or simple on-line information, but it implies a deep redesign of the structure and functioning of government. Administrative procedures such as collection, processing and electronic exchange of data inter or intra administrations should be appropriate for the provision of electronic public services that meet the needs of citizens and businesses.

The personalisation and service quality constitute a major challenge for e-government platforms; whether in the context of governmental information systems or access to information and knowledge. Indeed, the relevance of information delivery and its adaptation to user needs are key factors for success or rejection of these platforms.

The diversity of e-gov services coupled with highly heterogeneous nature (multiform and multilingual) of information constitute a real technological and semantic handicap that the current e-gov systems have to overcome to produce pertinent and high quality services. The role of personalisation is, in one hand, to facilitate expression of the user's needs and access to e-gov services, in the other hand, to enhance public satisfaction and increase e-service usage.

The pertinence of these services is not an objective measure generalized to all users; it is defined by a set of specific user or user community preferences.

The personalisation approach has been undertaken in several research areas such as Information Retrieval (IR) [4] [5], Databases (DB) [6], Human-Machine Interaction (HMI) [7], e-gov [8] [9] [10] …etc. In the field of IR, the user makes part of the personalisation process. This process is defined as a provided learning which results from the users' preferences and their interactions with the system. In the DB field, it is not common to integrate the user in the process

----
Corresponding author: Hassania OUCHETTO[(1)], *E-mail: Ouchetto@affaires-generales.gov.ma*

of retrieving information. A SQL query usually contains the criteria considered useful for the selection of relevant data. The profiles are integrated directly into queries by users. Then, during information filtering, they are considered only once. In the HMI field, personalisation focuses especially on the user's expertise level and the user business in order to determine the system dialogue type, the appropriate graphic metaphors as well as the modality of results' delivery.

In the e-gov field, e-gov platforms are user centred. The e-gov portals personalisation is based on the following principle: every user has different needs and must have access to the right information at the right time by using the right way. The personalisation degree varies based on portals types. In general, users are profiled and each user profile is dynamic and changes according to their activities. The profile filters and classifies information in retrieving and dissemination process. In this context, many e-government interoperability frameworks have been implemented in different countries, such as UK e- Government Interoperability Framework [11] and NZ e-Government Interoperability Framework [12] [13].

Although these fields appear to converge highly at the same goal which is easy and efficient access to information, in fact, these areas of research present two conflicting aspects. The first concerns the nature of the processed information: textual documents for the RI, structured data for DBs, interfaces for HMI and services for e-gov. Whereas the second is related to the information access mode: access by keywords for IR, access by logical expressions for DBs, access by metaphor for HMI and using different access technologies for the e-gov.

In the Moroccan e-gov context, the established e-gov action plan contains a significant number of projects. These projects are of different nature organized in various fields (health, customs, finance, education, environment etc ....) and diverse user categories (citizen, enterprise, local community) [14]. However, easy and personalized access is currently an arduous process because the personalisation is still in an embryonic phase. Furthermore, convincing the government to introduce the personalisation in the e-gov platforms implementation is a more arduous task because of many generating resistance.

To capture a solution to this challenge, we have been inspired by the best practices expressed throughout the patterns language "Evolving a patterns culture".

2. EVOLVING A PATTERNS CULTURE

"Evolving a pattern culture" is a patterns language that introduces patterns into organizations [15]. It presents a set of patterns that addresses this issue. Its aim is the introduction, step by step, of patterns into an organization, with the long-term goal the evolution of a patterns culture. These patterns were written by contributors from different organizations all over the world who have found a close connection between their experiences. They believe that the creation of a pattern language needs to be the work of a community. So, many people have contributed, and continue to contribute, to the development of this language. Accordingly, the present patterns system consists of 18 interrelated patterns [16] (cf. figure 1), including: Evangelist, Early Adopters, Grass Roots, Involve Every One, Personal Touch, Do food, Didicated Champion.... Etc. To illustrate this language, we present the Evangelist pattern.

Name: **Evangelist**

Context: You're part of a software development organization that wants to stay abreast of new technologies.

You're excited about Patterns. Maybe you went to a conference, read an article or book and, as a result, started learning more. You feel Patterns will have value for your organization and want to spread the word.

Forces: It's hard to translate enthusiasm into action that has lasting impact. New ideas are always out there more than we can handle. You only have so much time to get your ideas across.

Problem: *How can you get Patterns going in your organization?*

Solution: Become an Evangelist for Patterns. Tell others. Let them feel your enthusiasm. Give Brown Bags. Begin to identify Early Adopters and grow the Grass Roots. Real impact will require a Local Leader and a Corporate Angel. Be on the look out for possible managerial support.

Resulting Context: If you are successful in conveying your enthusiasm, a small group of those who also believe in the new idea will support you. These Early Adopters will help spread the word and create Grass Roots support for Patterns.

Rationale: To grow your idea into real change for your organization, you must be willing to invest yourself in your cause. As you look for possibilities in every situation, you can take advantage of even small windows of opportunity to get your idea across.

Known Uses: The patterns movement at AG Communications Systems began with the work of an <u>Evangelist.</u>

Related Patterns: An <u>Evangelist</u> will often use <u>Brown Bags</u> to capture the interest of <u>Early Adopters</u> who grow into the <u>Grass Roots.</u>
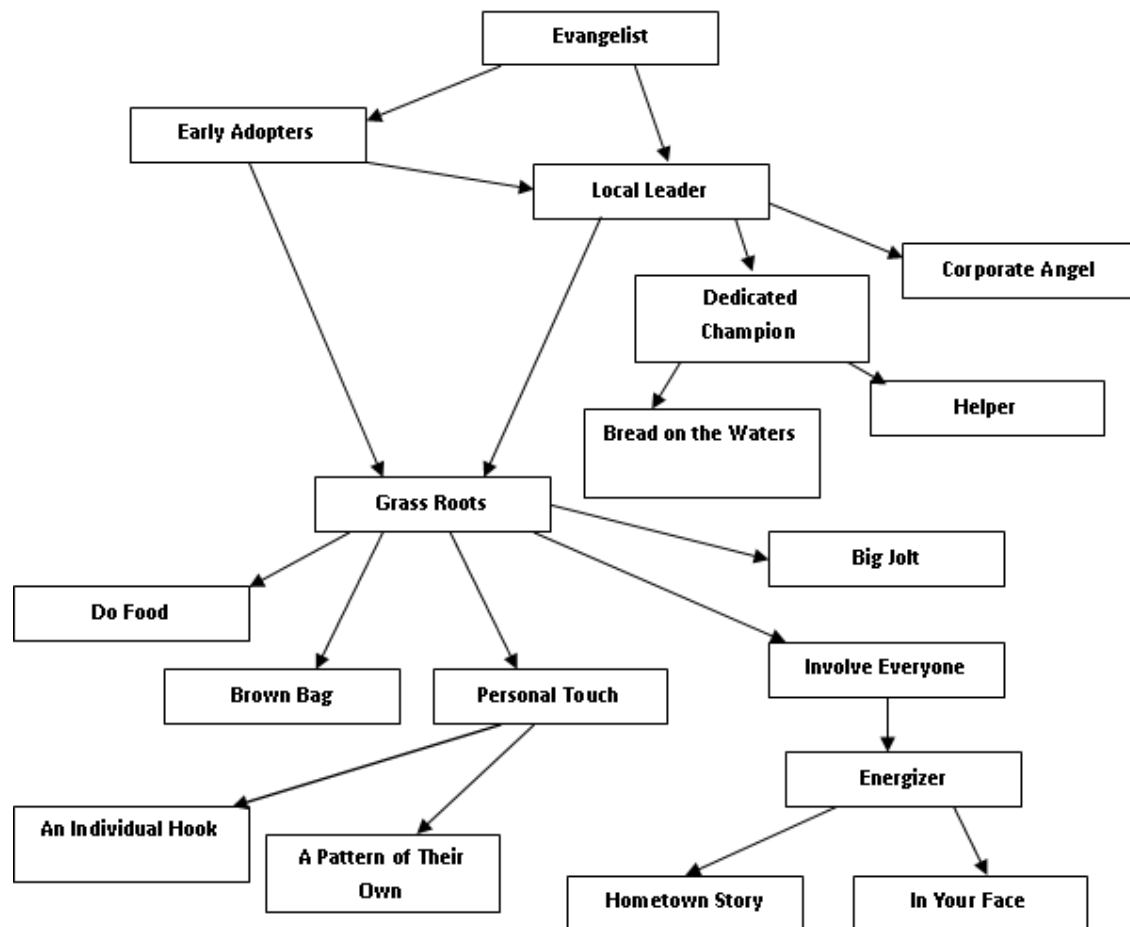

Figure 1: Evolving a patterns culture

The rest of the patterns are described in the same formalism. The next section shows their reuse in the context of Moroccan e-gov.

3. MOROCCAN E-GOV PLATFORMS PERSONALISATION: OBSTACLES AND SOLUTIONS

The experience has generally shown that introducing the personalisation into e-gov platforms implementation is not a natural or "spontaneous" task. As it was discussed in [17] and [8], there are obstacles towards the personalisation of e-services provided by the public sector. These obstacles concern both the citizen and public administration and are analytically discussed in [17]. Some of the most important ones concerning the citizen are: (i) access mechanism of services, (ii) control the user has over the whole process, (iii) privacy of sensitive user data, (iv) trust and (v) acceptance of the delivery channels and the back-end processes. Some of the most important ones concerning public agencies relate to legal, process-based, financial, governance-based and technical issues [13].

In the case of the Moroccan government, in addition to all these obstacles, we have identified other difficulties of the introduction of personalisation. These are mainly due to the apprehension of new technologies and the weight of resistance to progress.

To solve this issue, taking into account the Moroccan culture as well as the relevance of each pattern of ML Manns, we have proposed a new patterns system.

It is to be recalled that the "Evolving a patterns culture" system, described above, is a very successful solution to introduce patterns culture into the American context. However, there are many differences between American and

Moroccan cultures. Such differences have incited us to look for an adaptation strategy. This strategy is essentially based on an approach of simplifying and adapting the system. The reasons behind the simplification are (i) a lack of the patterns in Moroccan culture (ii) a difficulty of understanding a system of 18 patterns (iii) the lexicon used by the language patterns (the patterns names) does not fit Moroccan culture. Therefore, it has been necessary, on one hand, to reduce the number of patterns, according to their importance and their adequacy in the "Evolving a patterns culture" system and the Moroccan culture respectively; on the other hand, to change some patterns' name without altering their content. The result of the present strategy is depicted in figure 2.
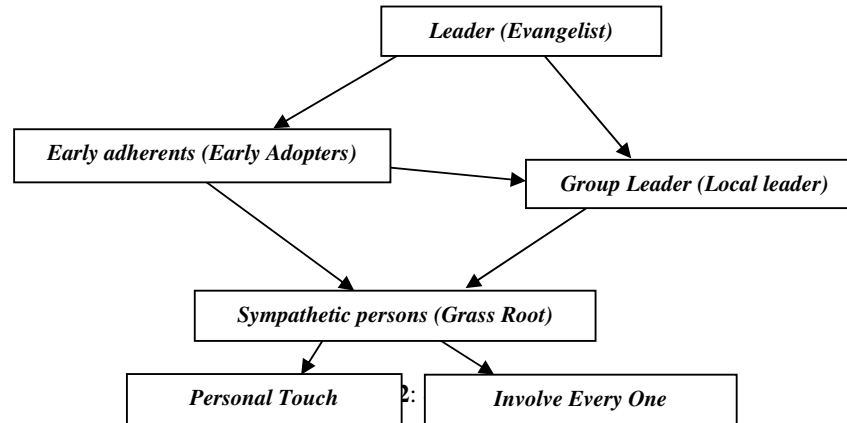

Figure 2: Selected patterns

After looking for a "Leader (Evangelist)", the pattern "Early adherents (Early Adopters)" identifies and energizes a group of colleagues willing to introduce the personalisation as an important component in the e-gov platforms. The third step is to enlarge the number of people involved in the project by encouraging their participation ("Sympathetic persons"). The pattern "Personal Touch" focuses on personal contacts to persuade a person. The next step is to convince all users based on the pattern "Involve Every One".

To make our solution more readable, we have formalized by the following pattern entitled "Introducing personalisation into the Moroccan e-gov".

Name: Introducing personalisation into the Moroccan e-gov.

Context: You seek to improve the quality of service in your e-gov platforms, to introduce personalisation into your e-government strategies, let your passion for the new approach drives you. You're a member of e-gov committee or Information system manager that wants to stay abreast of new technologies and to improve the e-gov access and to meet the user needs.

Forces: - Fear of facing a new approach
- Changes resistance
- Personalisation is not a priority
- Difficulties of acceptance of the delivery channels and the back-end processes.
- Absence of integrated e-gov architecture
- New ideas are accepted if they satisfy the personal needs

Problem: How can you convince your government to introduce personalisation in the e-gov platforms?

Solution:
• To become a Leader
• To search the Early Adherents
• To search a Group Leader
• To develop a Sympathetic Persons
• To Involve every one
• To make Personal touch

---

4. CONCLUSION

We have proposed a new strategy to introduce personalisation into Moroccan e-gov platforms. This strategy is mainly based on an approach of simplifying the "Evolving a patterns culture" system and adapting it to the Moroccan culture. The present solution is formalized by a new pattern which is composed of six patterns: Leader, Early Adherents, Group Leader, Sympathetic Persons, involve every one and personal touch.

This first undertaken study deserves to be refined by other specific patterns and assisted by a software environment.

REFERENCES

[1] Mital A. A., Kumar M. , Mohania M. K. , Nair M., Batra N., Roy P., Saronwala A., Yagnik L., A framework for eGovernace Solutions, IBM J. Res. Dev. 48 issue 5/6 (2004), 717-733.

[2] Mohammad H., E-government in Jordan. Eur. J. Sci. Res., 35 No.2 (2009), 188-197.

[3] Almarabeh T., A General Framework for E-Government: Definition Maturity Challenges, Opportunities, and Success, Eur. J. Sci. Res., 39 No.1(2010), 29-42.

[4] Zemirli, W. N., Modèle d'accès personnalisé à l'information basé sur les diagrammes d'influence intégrant un profil multidimensionnel. Phd Thesis (2008), University Paul Sabatier.

[5] Chaker, H., Chevalier, M., Soulé-Dupuy, C., Tricot, A. Système de recherche d'information pour les tâches métier, Proc. Coria, (2010), 301-312.

[6] Ughetto L., Voglozin W. A., Mouaddib N., Database querying with personalized vocabulary using data summaries, Fuzzy Set. Syst., 2008, 2030-2046.

[7] Duvallet, C., Boukachour, H., Modélisation par agents d'une interface intelligente, Rencon. Jeunes Chercheurs Inter. Homme Mach., (2000), Ile de Berder.

[8] Guo, X., Lu, J., Simoff, S., Applying Web Personalization Techniques in E-government Services, Proc. AusWeb05, (2005), 233-235.

[9] Ouchetto H., Fredj M., Roudiès O., Des patterns processus pour l'e-gouvernement, Rev. Electr. Int. Tech. Infor (2007), http://www.revue-eti.net/document.php?id=1467.

[10] Cai, Y.-J., Tang, Z.-W., Gao, T.-P. E-government Platform of Personalized Information Service Based on Gridding Management, icnds, 2, Int. Conf. on Networking Digit. Soc. 2, (2009), 123-126.

[11] E-Government Interoperability Framework, Version 6.1 (UK),
http://interim.cabinetoffice.gov.uk/govtalk/schemasstandards/e-gif/e-government_interoperability_framework_version_61.aspx

[12] New Zealand E-government Interoperability Framework (NZ e-GIF), Version 3.2,
http://www.e.govt.nz/plone/archive/standards/e-gif.1.html

[13] Dais, A., Nikolaidou, M., Alexopoulou, N., Anagnostopoulos, D. , Wimmer, M. , Scholl, H., Ferro, E., Introducing a Public Agency Networking Platform towards Supporting Connected Governance, Springer 5184 (2008), 375-387.

[14] http://www.egov.ma/EN/Pages/default.aspx, Accessed 12-07-2011

[15] Manns M. L., Rising L., Introducing Patterns (or any new idea) into Organization, Wall street journal (2000), 135-136.

[16] Manns, M. L., Rising, L., Evolving a Patterns Culture, EuroPLoP 2000, 2000,
http://hillside.net/plop/plop99/proceedings/manns/manns_patterns.pdf

[17] Pieterson W., Ebbers W., Dijk J. V., Personalization in the public sector: An inventory of organizational and user obstacles towards personalization of electronic services in the public sector, Gov. Inform. Q. 24 (2007), 148-164.

****