

# EUNIS 2019: Information Management @ Universities: a model proposal

Maria Manuela Pinto<sup>1</sup>

<sup>1</sup>University of Porto - Faculty of Arts and Humanities, Via Panorâmica, s/n, 4150-564 Porto-Portugal, mmpinto@letras.up.pt

## Keywords

Information management, MGSI-AP Model, Portuguese Public University, University of Porto, Portugal.

## 1. Summary

This communication aims to present the main result of a research in the field of Information Management (IM), acknowledged as a cross-sectional and applied area in Information Science (IS).

It comprises a diagnosis made at Portuguese Public Universities, complemented by a more detailed study performed at the University of Porto (U.Porto) involving traditional information services (Archives, Libraries, Documentation Centres and Museums), an area that, in the last few decades, has sustained epistemological and theoretical changes which have impacted on training and investigative models, functional contents and professional profiles, as well as emerging services such as Informatics and the role of IM, that tend to dominate information management in the digital milieu.

The info-communicational flow is considered in its several stages and contexts and managed under the concept of information (human and social phenomenon). IM is defined as the study, conception, implementation and development of processes and services related to the info-communicational flow, serving to build implementation models for maximum efficiency and profitability.

The prospective vision is embodied in the proposal of an Active and Permanent Information System Management Model (MGSI-AP) for the university.

## 2. General Framework

The issue of ICT and its mediation in the infocommunicational phenomenon, with the resulting problems associated to information and communication within an institutional and organizational context, raised reflections such as the one here presented. In this equating a lot is reflected of the multioptional confrontation of challenges and opportunities that the Information Age (CASTELLS, 2002-2003) has assigned to both individuals and groups, within their different roles, functions and activities and, particularly, within the field of Information Management (IM).

"Which Organic Entity is the University?" was the first research question in a study which focused on the Portuguese State University within a period characterised as a crossroad, having attempted to put in perspective and attempted to understand this entity within a dialectic relationship between the "existing" of the secular "Institution" and the "reality/action" as "Organisation" in the Information and Knowledge Age (Pinto, 2015). A role that calls on to an active participation in the new "informational development way", which takes root in the centrality of information and of knowledge as main sources of productivity and competitiveness in the "new knowledge based economics", in the restructuring intervention and development of national economics, in the reinforcement of the interaction with the community, which can be translated into one word only, "change" to be promoted in its midst, leveraged on the outside.

In Portugal, the University is heiress to seven centuries of history (Lisboa, 1290) which makes it unique within the institutional universe, namely among the institutions which integrate, at a general level,

Public Administration (PA) and, at a more specific level, the scope of Higher Education (HE) and the Research & Development System (Pinto, 2015b).

### **3. Methodological approach**

The study developed fits in with a sense of IM as cross-sectional and applied field of study within IS, in permanent integration and crossing with Informational Production (InfP), Information Representation and Organisation (IRO) and Informational Behaviour (InfB), within the framework of the interdisciplinary of Communication and Information Sciences, and in the face of intersciences such as Information Systems and Cognitive Sciences, within the broader framework of Social Sciences (SC) (Ribeiro & Silva, 2016; Pombo, 2006).

We start from a diagnosis applied to all Portuguese state universities between 2010 and 2011, at a time when the problem of the impact of the proliferation of digital repositories was taking on significant relevance. These have been developing since the late 1990s with the creation of digital libraries and archives in the traditional information services (libraries and archives), expanding, not necessarily with their support, to Faculties/Schools, Departments, Documentation Centres and Research and Development Units (R&DU).

Besides the consolidation of the university information system (Ribeiro, David, Azevedo and Santos, 1997; Nunes, 2004), in the beginning of the 21st century a typological diversification is ascertained (Institutional Repository, e-Learning Repository, Data Repository or Knowledge Repository) which has as common features:

1. "contain" digitalised and born-digital information which needs to be managed and made available; and
2. tend to an "autonomous" management, be it into each other, or when it comes to the management of traditional acquis and information services provided within the midst of the same institution;
3. constitute an integral part of the complex diversity of university infrastructures and digital services.

Within a perspective of investigation-action, reaching a diagnosis was attempted, to study and contribute towards a theoretical modelation, applied to IM, centred in the management of the university's organisational information system. This was done by asking the following question:

How do the Portuguese State Universities taken on and operationalised IM at a time of profound change and intensive and extensive use of ICT in the intra and inter-organisational context?

### **4. The model**

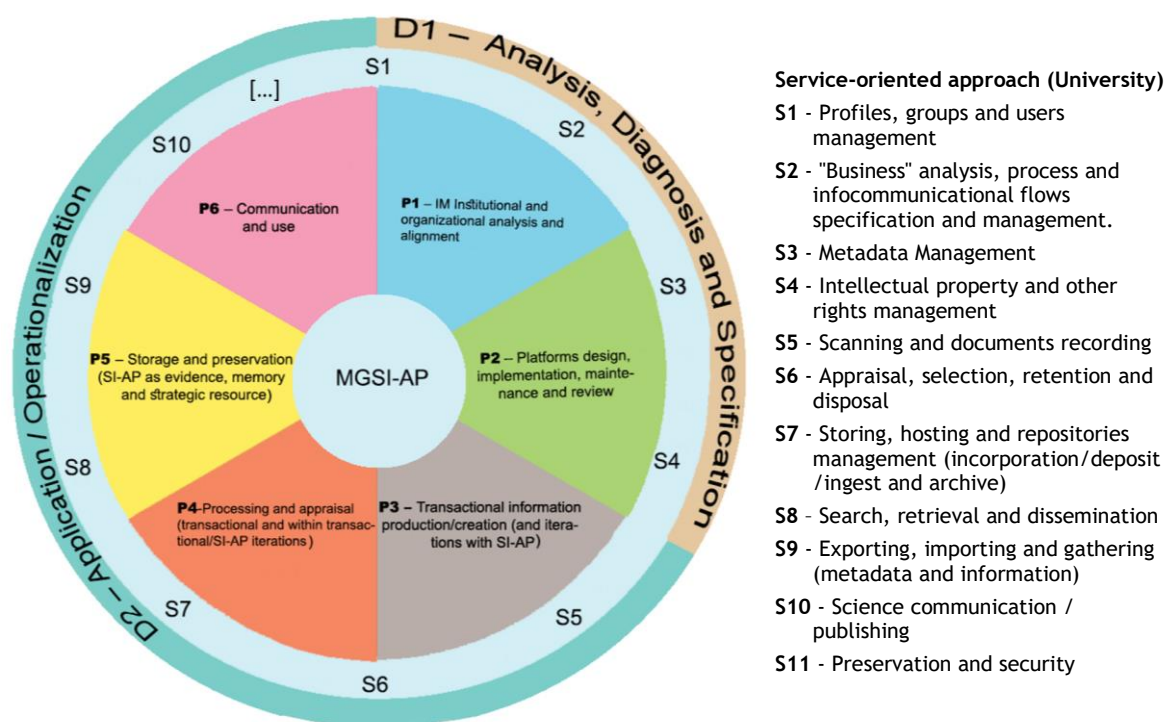
From the aspects considered, here is presented a proposal of an IM model directed to the Active and Permanent Information System (SI-AP) of the University, the natural result of the activities developed in the pursuit and realisation of its goals.

This is a descriptive model of intervention - the Model of Management of the Active and Permanent Information System (MGSI-AP) - which operationalises IM. The corresponding guiding principles are presented and the pluridimensional modelling that was carried out is introduced, sustained in the Systemic Evaluation Matrix which integrates the social/human and the technological dimensions as inseparable and interacting, within the Institutional/Organizational context.

Furthermore, the inherent IM Processes and Services are specified and we conclude with the proposal for an IM model within the U.Porto. This is configured as flexible and dynamic and aims for a balance of the institutional whole within a frame of (moderately) flexible relations (WEICK, 1976) which are established between individuals, groups, constituent units and the University and between these and the outside, thus articulating flows and technology, as well as organisational structure and networks, augmented by communities of practice which reflect and optimize scientific, technical and administrative areas through IM.

In the proposal developed, the complexity of the multidimensionality of vectors being analysed was considered, i.e., the systemic components and groups of variables, as well as IM's dimensions (2), processes (6) and services (11) which also integrate the model.

Figure 1 - MGSIU-AP Model (D imensions; P rocesses e S ervices) (Pinto, 2015)



Its implementation, naturally, runs through technology and by the assurance of the system(s)' interoperability, technological evolution responding with an ever growing level of efficiency and effectiveness, be it through a management system *in situ*, that is, in the production system, be it an *in app* system, i.e., which accumulates the role of supporting production and information management and which, without questioning the information services organically constituted, presents a base for a systemic look and an integrated management of services and of the organizational information system.

## 5. REFERENCES

- Castells, M. (2002-2003). *A Era da Informação : economia, sociedade e cultura*. Lisboa : Fundação Calouste Gulbenkian.
- Nunes, S. (2004). *Alternativas para a interoperabilidade entre sistemas de informação universitários* (Master's thesis, Faculdade de Engenharia da Universidade do Porto). Retrieved from <https://repositorio-aberto.up.pt/handle/10216/210>.
- Pinto, M. M. (2015a). *A gestão da informação nas universidades públicas portuguesas: Reequacionamento e proposta de modelo* (Doctoral dissertation. Universidade do Porto, Universidade de Aveiro. Retrieved from <https://repositorio-aberto.up.pt/handle/10216/90823>.
- Pinto, M. M. (2015b). The Portuguese University : knowledge leverage towards innovation. In Jamil, G., Maravilhas Lopes, S., Malheiro, A., & Ribeiro, F. (Ed.), *Handbook of research on effective project management through the integration of knowledge and innovation*. (pp. 466-490). IGI Global. doi:10.4018/978-1-4666-7536-0.ch024.

Pombo, O. (2006). Práticas interdisciplinares. *Sociologias*, 15, 208-249. Retrieved from <https://seer.ufrgs.br/sociologias/article/view/5570>.

Ribeiro, F., & Silva, A. M. (2016). The epistemological maturity of Information Science and the debate around paradigms. In Kelly, Matthew, & Bielby, Jared, *Information cultures in the digital age : a Festschrift in honor of Rafael Capurro*. (pp. 111-124). Dordrecht: Springer. Doi: 10.1007/978-3-658-14681-8.

Ribeiro, L., David, G., Azevedo, A., & dos Santos, M. (1997). Developing an information system at the Engineering Faculty of Porto University. In Jean-François Desnos & Yves Epelboin, *Proceedings of the EUNIS 97 - European Cooperation in Higher Education Information Systems*. (pp. 282-287). Retrieved from: <https://repositorio-aberto.up.pt/handle/10216/606>.

Weik, K. (1976). Educational Organizations as Loosely Coupled Systems. *Administrative Science Quarterly*, 21(1), 1-19. doi: 10.2307/2391875.

## 6. AUTHORS' BIOGRAPHIES

First A.



**Maria Manuela Pinto** holds a PhD in Information and Communication in Digital Platforms (2016); a Specialization in Documental Sciences (1998); a graduation in History (1985) and IT technical training from IBM (1985-1992).

She is assistant professor at Faculty of Arts and Humanities of U.Porto, Department of Communication and Information Sciences, and teaches in the Bachelor of Arts in Information Science and Master in Information Science (partnerships with the Faculty of Engineering); Bachelor in Communication Sciences, Master in Museology, Master in Creative Industries Communication and Management and PhD in Information and Communication in Digital Platforms.

She is board member/researcher at the Centre for Research in Communication, Information and Digital Culture (Porto) and collaborator of the Centre for Innovation, Technology and Entrepreneurship-Institute for Systems and Computer Engineering.

Email: [mmpinto@letras.up.pt](mailto:mmpinto@letras.up.pt)