

The Impact of New Technologies and Management Methods on Planning and Everyday Operations at University Library Belgrade

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This paper presents the role of new technologies and management techniques in ongoing process of change at University library in Belgrade. A short sketch of present operations is depicted along with some basic statistics and description of ongoing usage of technologies and description of management related aspects of the organization. This is followed by theoretical explanations and use cases of Enterprise 2.0 implementation and intrapreneurship activities in the library. A brief introduction in European wide research of these topics conducted by one of the coauthors and the relationship between Enterprise 2.0 implementation and intrapreneurship is given. Futuristic insights into the changes in reading process and changing role of human labor in the framework of librarianship are analyzed.

Keywords: New technologies in libraries, Library management, University library Belgrade, Enterprise 2.0, Intrapreneurship, Reading 2.0

Introduction

If the environment of contemporary libraries is to be described by the most dominant characteristic it would be the dynamism of change. All aspect of environment change and some areas of human endeavor and industries change on an almost daily basis. Information and communication technologies (ICT) certainly fall into this category and the changes affecting this industry propagate in almost every other profit and non for profit industry. Librarianship is especially influenced by these changes since the essence of librarianship – information creation by bringing together user and data from library collection he/she needs (Dillon, 2005) is most dependent on ICT. Not only that ICT facilitate more efficient preservation, organization and accessibility of data and allows for unprecedented enlargement of library collections, it also allows for radical improvement in organization of work processes in libraries. Library organizational structure and organizational culture need to change to accommodate for new ways of work, new methods and aims in information creation. Because of this using opportunities provided by novelties in ICT and management are not bonuses for libraries, but are essential for allowing them to continue providing relevant services for their users.

University library Belgrade

University of Belgrade is the largest, oldest and as of 2012 most influential academic institution in Republic of Serbia. University library "Svetozar Markovic" Belgrade is the main library of University of Belgrade and is also heading the network of academic libraries in Serbia. University library employees 100 librarians and support staff members while additional 146 librarians are employed at 31 faculty libraries that are part of faculty's organizational structure. This workforce provides for informational needs of 90.000 students and 7.000 researchers, professors and associates gathered at University of Belgrade library collection comprises of 1.5 million of printed documents and access to 30.000 electronic journals and 40.000 electronic books. Library also promotes the usage of all open access data. Document supply in collaboration with other libraries worldwide provides for accessibility of almost any digital document and most of the printed ones (Filipi Matutionovic & Pavlovic, 2010).

University library operates library automation system Cobiss that allows for acquisition, cataloguing and circulation operations automation. An Online Public Access Catalogue (OPAC) is provided for users in the framework of this system and equipped with federated search for consortia of libraries in Serbia and in the region. Local Area Network (LAN) in the main library building is connected with the Academic Network of Serbia providing for all time high speed Internet connection grounding ICT basis for other technologies implementation. WiFi is provided for users throughout the main library building. Library 2.0 services are well developed with more than 14.000 users networked through social networks Facebook and Twitter. Several RSS feeds are available providing automated information on University library news and books acquisition by subject headings. As of June 2012 a new website is in the testing phase. It will provide a federated search of all digital resources available to users along with the new, more functional design. A responsive design based mobile version of the new website will be available for users by the end of 2012. University library hosts the long term preservation digital repository of University of Belgrade Phaidra, which also serves as an open access repository of doctoral dissertations.

University library hosts numerous cultural and scientific events. It is the base for UBSM art center that is one of the most regarded venues for exhibiting modern art in Serbia. Exhibitions of items from the printed collection and virtual exhibitions of digital items are held regularly. Specialists from all scientific areas give lectures in Knowledge center of the library and a number of virtual lectures are organized by using teleconferencing equipment.

University library was the coordinator of Tempus project "Building cooperative academic library network in Serbia" (2002-2004) and as of June 2012 is coordinating Tempus project "New library services at Western Balkan Universities" (2010-2012). The library is a partner in two CIP ICT PSP projects as of May 2012: Europeana Libraries (2011-2012) and Europeana Newspapers (2012-2014). The library participates in various other projects on digitization and metadata aggregation partnering with institutions from Serbia and across Europe. In line with these projects ex-

expertise on various technical aspects of digitization and metadata models has been developed.

In order to provide for such a diversity of activities many of which are project based a new, more flexible organizational structure has been introduced in 2008. Working processes that overlap several departments are executed by employees who are task driven and not bounded by organizational units' restraints. Also formation of working groups consisting of employees formally in different departments is fostered by objective driven management. Organizational culture is changing too, but it takes more time for all employees across the library to accept new values and standards. Because of this as of June 2012 several subcultures exist mostly in regards to exposure of employees to working in international environment, age and skills and educational levels.

In order to play a proactive role in the changing environment University library management is employing some novel management techniques and fostering usage of new technologies. It is also planning ahead in order to meet head on the challenges of tomorrow. Because of this we will present in two different sections concepts that are relevant for contemporary operations in University library in Belgrade and those that are important for planning of future activities.

Enterprise 2.0 and intrapreneurship in advancing everyday library operations

Enterprise 2.0 describes the use of Web 2.0 tools and approaches by organizations in order to foster internal functions (McAfee, 2009). Enterprise 2.0 flattens the organizational structure providing better chances for ideas coming from the organizational bottom. When implemented properly it empowers employees at all levels taking away information dominance of any specific group. In essence Enterprise 2.0 describes the use of Web 2.0 technologies for fostering internal functions of an organization e.g. communication, collaboration, innovativeness. In libraries Enterprise 2.0 describes the use of Web 2.0 technologies by librarians for fostering communication and collaboration with librarians and other employees. It should not be confused with Library 2.0 a concept that describes the use of Web 2.0 technologies in a library for fostering communication and collaboration between patrons and librarians. On the other hand these two concepts have a lot in common since the underlying technologies are the same Web 2.0 technologies and therefore knowledge and experience gained in implementation of one might be valuable for the usage of the other.

Intrapreneurship is the practice of entrepreneurial skills and approaches within an organization applied by employees (Pinchot, 1985). This concept is very well studied and described in many industries, but librarianship theory almost never deals with cases of intrapreneurship in libraries though one might meet them very often. Therefore any application of this concept in libraries so far has been based on intuitive decision making by intrapreneurs and managers alike. When existent in an organization intrapreneurship leads to growth and profitability (Antoncic & Hisrich, 2003) which in case of libraries may translate to higher level of stakeholders' satisfaction and funding increase. Some factors that affect the levels of intrapreneurial activities in an organization originate in the organization itself. Others are products of the environ-

ment. In order to foster intrapreneurship management of an organization needs to manipulate factors it can have influence upon: communication between employees, formal control, organizational values, empowerment of employees and information gathering. Managers also need to know environmental factors that might be out of their scope of influence and add them up in order to have a precise forecast of intrapreneurial activities in their organization.

Research into Enterprise 2.0 implementation and intrapreneurship at University library in Belgrade provided quantitative and qualitative data supporting existence of the relationship between these two concepts. (Sofronijevic et al. 2011). At University library in Belgrade Web 2.0 tools are used for fostering and furthering collaboration between employees who already collaborate closely. The Google apps platform has been activated under the unilib.rs domain name. Gmail with a proprietary domain and Google calendars are used and are the most successful part of the adoption. Blog and forum technologies are used for internal communication between closely linked employees who used to exchange a great number of e-mail messages on a daily basis. This has proved to be very useful because the volume of internal e-mail in organizational units that adopted these technologies has decreased significantly. At the same time existence of intrapreneurial activities at the library was proved. The organizational culture is generally favorable for intrapreneurship. The important insight is that the positive trend showing that an increase in managerial activities that foster intrapreneurship leads to significant improvement of these activities. The library management can upgrade the rules and regulations of the library to make them more suitable for intrapreneurial activities

Recent survey (Sofronijevic, 2011) showed that high level of awareness does exist among librarians in Europe on Enterprise 2.0 issue. On the other hand implementation of Enterprise 2.0 is sketchy with some examples of high level implementation and numerous initiatives at various stages of progress. In many libraries just a general idea of the need for implementation exists. Qualitative phase of the research showed that successful implementation is always related to high levels of intrapreneurial activities. Support of the top management has been filtered out as a key activity in long term successful cases of implementation.

Planning for Reading 2.0 and the race against/with the machine

The reading process as a paradigm for the intimate experience and individual cogitation of the content is changing, mostly because of technological and social innovations known as the Web 2.0. Emerging new quality in reading may be described by Reading 2.0 concept. Reading 2.0 implies interactivity that blurs the distinction between the author and the reader and creates the new reality where instead of authoring principle we are comparing someone's contribution to the collaborative process of content creation and consumption. Reading 2.0 represent an extended set of characteristics describing the traditional reading process. Those characteristics can be described as interactive or collaborative. Librarians can use the described changes in reading process by fostering the creation of community of collaborative readers and using the expertise of their members to pinpoint key parts of the text. Librarians may also collect, organize and make available for other users these key parts of the

text fostering efficiency of scientific communication and productivity of researchers (Sofronijevic, 2011a). Having this in mind plans are made at University library in Belgrade on creating an online reading environment that may foster Reading 2.0.

Emerging technologies allow for replacement of a human employee with the mechanical one in number of areas that were considered creative and impossible for automation until recently, such as authoring of a structured text, translating most kinds of texts, vehicle driving, diagnosing patients. Pattern matching and pattern recognition capabilities of machines can match those of humans in growing number of areas changing industries and non profit organizations for ever (Brynjolfsson & McAfee, 2011). In order to play an effective role in academic libraries librarians must not compete with the machines in areas where capabilities of machines are equal to those of humans, but develop skills and knowledge in those areas in which humans are still far superior to machines. Having in mind U shaped graph of skills and competences that will be needed in academic libraries instead of the linear one management of University library in Belgrade fosters life long education of top experts and training in specialized mechanical skills of non expert employees.

Conclusions

Aiming at providing effective services for its users University library in Belgrade attempts to exploit every opportunity provided by usage of free technology and novel management techniques. Only by being on top of everyday changes academic libraries could perform their information creation role in the framework of budget cuts and rising user expectations.

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