

Agriculture with Less Bureaucracy

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Abstract. The paper presents the evolution of the traditional bureaucracy to e-bureaucracy (eBURO) and later to mobile bureaucracy (mBURO). It focuses on the optimization of bureaucratic activities using ICT (information communication technologies), especially the CDMS (collaborative document management systems). A study case concerning the implementation of the virtual offices, the online conferencing systems, the collaborative decision support software and the mobile knowledge management presents the POCC (plan-organize-coordinate-control) for each activity.

Keywords: bureaucracy, economy, knowledge management, mobile business, document management system, information communication technologies.

TRANSITION FROM BUREAUCRACY to e-BUCREAUOCRACY

The 3rd millennium started with old vines in new bottles. But not all the vines are good for consumption in the 21st Century. Bureaucracy is one of them.

Bureaucracy has many definitions and we selected some of them; bureaucracy is considered:

- an archaic and anachronistic state of mind;
- a syndrome or a disease of those who aren't good at producing something concrete;
- an tangled, inert, corrupt and inefficient system, perceived differently by those who gave material and financial support to bureaucratic structures and institutions;
- the unsatisfactory way in which the capitalist system tries to come to an arrangement with the inexorable trend toward its own disappearance (Ludwig von Mises);
- a good and "warm" place, seen as such by those inside or those who wish to hierarchically reach positions of decision or hierarchical power;

The end of bureaucracy is foretold by Ludwig von Mises as "The inevitable final triumph of socialism will abolish not only capitalism but bureaucratism". We have faced both "socialism" or "capitalism" and the results were the same: economic and social crisis generated by bureaucrats, sometimes calling themselves as "technocrats".

Bureaucracy is present in the entire economy form, public institutions (ex. ministries, central agencies, local councils, inspectorates, research institutes etc) to private companies (ex. farms, flower shops, equipment retailers, veterinary entities etc)

Before the e-economy emerged we saw the bureaucrat as a person working in an office, often associated with the "budgetary employee" and using the traditional symbols: the office, the paper, the stamp.

The creation of computers determined the transfer of bureaucratic papers activities to the less paper electronic operations.

This transition from bureaucracy to e-bureaucracy was called **BURO-2-eBURO**.

TRANSITION FROM e-BUREAUCRACY to m-BUCREAUCRACY

The development of ICT (information communication technologies) led to a second transition process, this time from e-bureaucracy (eBURO) to m-bureaucracy (mBURO).

Through the use of mobile devices (ex. notebooks, PDAs, iPhones etc) and the new *cloud* computing technology most of bureaucratic activities can be realized anywhere and anytime stimulating the total mobility (TM).

Even public institutions are implementing m-bureaucracy, for example the citizens of Cluj-Napoca can pay their local taxes online, using their credit card and the portal <http://taxe.primariaclujnapoca.ro>.

This transition we called: **eBURO-2-mBURO**.

STUDY CASE. THE IMPLEMENTATION OF VIRTUAL OFFICES, E-CONFERRING, CDMS

During 20 years of existence, Centrul de Afaceri Transilvania Business Center (CAT) developed programs meant to facilitate the transition of the SMEs and the institutions to the Information Society in the new economy.

All the programs databases (ex. suppliers, clients, members, observers, press etc) were united into one redesigned online database.

The **communication process** with CAT member companies was changed in 2008 from the monthly distribution of the information based on paper (ex. currier, post) to the e-mail monthly newsletter system.

From the advantages of the newsletter system we mention:

- it is less time consuming, because no need to prepare hundreds of envelopes each month;
- it is less money consuming, because no need to buy envelopes and stamps each month;
- faster delivery; the emails arrive instantly to the recipients' mailbox, rather than 3 to 5 days through post;
- accurate statistics about the information sent; the software provides a tracking system for each offer. The administrator is able to see if each recipient opened the newsletter, if they read it once or more times, what offer were they interested in through the click on "more details" links, the day and time when the recipients opened and read the newsletter. By sending the information through post none of these statistics were available;
- simple segmentation of the recipients by county, city, industry sector, company type, number of employees etc;
- further segmentation of the recipients; if one recipient was interested in a certain program he can receive an update on that particular program, while the recipients that did not manifest interest in that program will not be informed on the available updates.

In it's almost 4 years of use, *the newsletter system* registered the analytical data allowing the management to close obsolete programs, open new ones and customize the active programs to better suit its members' needs.

During this crisis the purchasing power of the companies decreased and some of them went bankrupt. This might be an explanation of why the open and interest rate in the information sent gets lower during 2008-2011.

For the first 4 newsletters of 2011 the open and click on details statistics are presented in the table and chart bellow:

CAT Newsletter 2011 Statistics

Newsletter (2011)	Open rate (%)	Click rate (%)	Click rate from total (%)
NL1	7.92	19.7766	1.56683
NL2	5.92	10.10127	0.60
NL3	5.75	14.49882	0.83
NL4	5.35	11.38991	0.61
Average for 2011	6.23	13.94	0.90

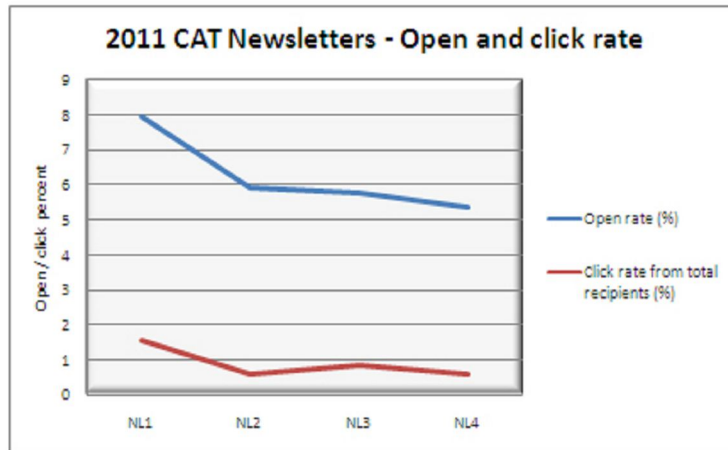


Fig. 1. 2011 CAT Newsletter – Open and click rate (%)

The average open rate is 6.23% and the average click on “further details” is 0.90%.

Considering only the recipients that opened the newsletter, in average 13.94% of them clicked on “further details” link. The data for each newsletter is presented in the table and chart below.

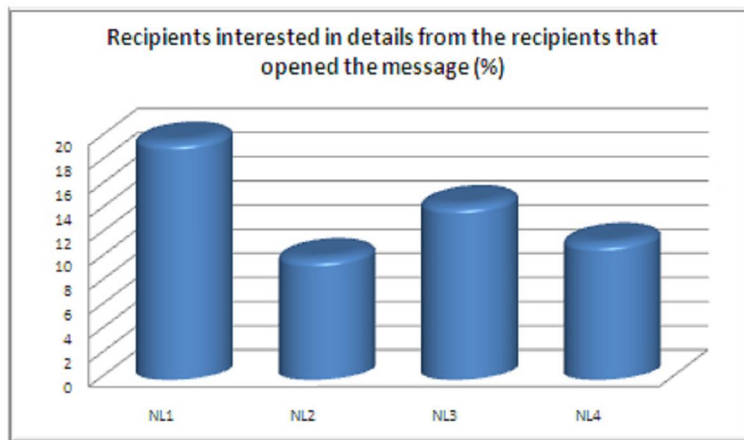


Fig. 2. 2011 CAT Newsletter – Recipients interested in further details (%)

Fast and secure communication through newsletters can be just as easily implemented in research institutions (ex. to inform the stakeholders, press, partner institutions), universities

(to inform students, professors, press) or companies (ex. to inform suppliers, clients, partners, press, branches).

Together with the newsletter system, in 2008 CAT transferred its **e-offices** from its own hosted Open Webmail to Google Docs.

The old e-office only allowed FTP (File Transfer Protocol) upload and download of files and their classification in folders. Files could not be shared or modified directly online.

Google Docs allows the user to create new files: *Document* for MS Office Word type, *Spreadsheet* for Ms Office Excel, *Presentation* to replace Ms Office Power Point presentations, *Online Form* creator and *Drawing* which is similar to the Windows Paint tool.

It also enables the user to upload files (.doc, .xls, .pdf, .zip, .ppt etc), modify the files directly online. Through of its most important advantages are the collaborative features. Any user can share documents with other users allowing each of them to view or edit them.

CAT tested this feature, sharing and modifying a document by more than 25 users at the same time.

When more people are editing the same document, mistakes can occur. This is why Google added a “history” option to each document. Any user with access to a document can see the date, time, changes that were made and by whom. The user can also reverse the document to a specified older version from the history database.

Although highly efficient, Google Docs does not have **project management** features. In order to assign the staff to projects, tasks or deadlines, in 2010 CAT implemented a self hosted platform at www.e-cat.ro/office see figure.

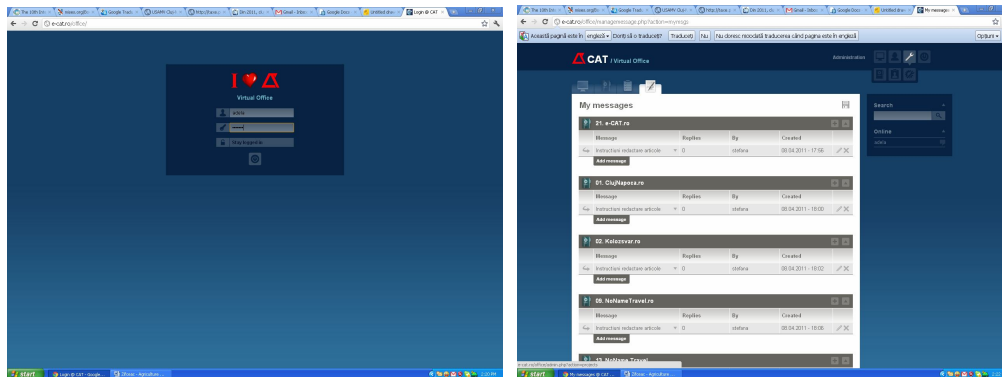


Fig. 3. CAT virtual office www.e-cat.ro/office

It allows users to be grouped in:

- administrators – are project managers who can create/delete users, assign projects/tasks/deadline to users, create/modify/close/delete projects, milestones and tasks, send messages to users etc
- users - are project team active members who can send messages, close the tasks they finished, add files to share with the team and use the time tracker features.
- clients – are project team passive members who can view milestones, tasks and task deadlines for the projects that are assigned to them, but do not have the option to make any changes

Additional account types can be created by administrators according to their needs.

The platform has also a written chat feature available to all logged in users.

Currently the CAT platform is to develop its IT projects, by 42 administrators and users. This virtual office platform can be implemented by SMEs, research teams, training centers etc

Additional to the virtual office written chat, CAT needed a **audio-video conference** platform. After testing different available products, Skype (www.Skype.com) was selected. It is successfully used each day for briefings, debriefings and ad-hoc conferences. Its main advantage observed during the tests was the sound clarity and the on line stability. It needs less computer resources than Yahoo Messenger so it can be used even without a very fast Internet connection. Skype Extra features include, but are not limited to: send faxes, audio-video call recorder, call backup, Gmail call recorder, SMS2Skype, screen sharing, call center, desktop sharing and remote control, and even voice stress analysis etc.

All these innovations and optimizations in the last 4 years reduced by 95% the CAT monthly costs (ex. paper, telephone, rent, local travel, time, salaries...).

CONCLUSIONS

During the last decades the traditional bureaucracy was slowly replaced by the **e-bureaucracy (eBURO)**. Now, the new knowledge based economy, is redesigning a new less bureaucratic system that we called **mobile bureaucracy (mBURO)**.

The transition process was called **BURO-2-eBURO-2-mBURO** and it is represented in figure 4



Fig. 4. The transition process from bureaucracy to e-bureaucracy and later to mobile bureaucracy

The new m-bureaucracy is applied in public institutions, universities, farms, SME's, large companies and associations and organizations, but also by individuals.

The study case on Transilvania Business Center's electronic communication system, virtual office and collaborative document management system, highlight the advantages of ICT use in economic activities, mainly in agriculture, veterinary medicine or biotechnologies.

Even if a farm or factory is not "mobile", a lot of activities could be virtualized and they can be highly optimized through the use of virtual offices, mobile management and mobile marketing techniques. Their virtual platforms using *cloud* computing can include all the applications necessary for their activities (ex. ERP- Enterprise Resources Planning, CRM – Customers Relations Management, PM – Project Management ...)

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Priority Axis 1 "Education and training in support for growth and development of a knowledge based society"

Key area of intervention 1.5: Doctoral and post-doctoral programmes in support of research.

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