

# Use and Discard of Workflow Systems

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## SUMMARY

This chapter discusses the implementation and use of Workflow systems to automate business processes in organizations of all types and economic sectors and how/why some of these organizations give up to use the software, even after hefty investments in such implementation projects.

*Use* and *Discard* were the words chosen to characterize the adoption and abandonment of Workflow systems by part of the various organizations that after implementing it had stopped its use; as well as explaining the behavior of those that never installed it in any machine.

The author's intention was to discover the causes of such situations, to understand and to explain, for those interested in Workflow systems, the reasons that drive the organizations to have these types of behaviors.

## INTRODUCTION

The discoveries that we made, throughout ten years of participating in projects of implementation of Workflow systems, suggest that from the universe of organizations that could benefit from the functionalities of the Workflow model only a small number decided to try them, which means that there are a lot of organizations where it is possible to sell workflow systems. It seems they had still not massively adhered to the idea of automating business processes, even because the proper subject "business processes," their elements and its implementation, is something that is far of being consensus for great part of the executives. This, perhaps, occurs due to the taxonomy used to classify the existing elements in processes that, while not being an accurate science, allow each specialist to create their proper nomenclature, which makes it difficult for business processes to be universally understood and used in Workflow systems projects.

## THE QUESTIONS THAT THIS WORK TRIED TO ANSWER

With the research we wanted to answer for some fidgets that afflict studios and specialists of Workflow systems, from academics to non-academics, such as:

- What does it take for organizations to develop Workflow implementation projects?
- What do the organizations expect from the implementation of Workflow systems?
- Why some organizations invest in Workflow systems implementation projects and they end up aborting and throwing away the software and all the investment made in it?
- Why the organizations cannot use the Workflow exploring its original characteristics and functionalities (3Rs)?
- How the organizations record, analyze and organize business processes in order to implement them in the Workflow systems?
- Is it possible to measure the return on the investment (ROI) made with the acquisition and the implementation of Workflow systems?

- How must Workflow systems be "sold" by the organization for the employees in order to make them to perceive the upcoming benefits to be gotten with the adoption of such softwares?
- Who, inside of the organizations, must assume the property (paternity of the solution) of the Workflow system?

The research like the one that we carried through asks many never formulated, or answered, questions before in other works dedicating itself to discover what fails in projects involving Workflow systems. The majority of the works, academic or not, presents cases of success or are written to guide the applicability of such and such product, such and such type of organization.

The result of this work must be understood as a small contribution for a new source of studies regarding the Workflow systems.

### THE ORGANIZATIONS WITH WHICH WE HAD CONTACT

We studied 33 organizations; 15 Brazilian and 18 transnationals (10 of these are established in Brazil), private and government organizations, diverse economic sectors, from 2000 to 2004. Given the character of this work, we decided not to transcript the interviews that we made. However, analyzing them we concluded that there are certain patterns that make the answers quite similar. The main patterns are:

- Repeatability. The answers to the interviews follow a pattern of stable repeatability for certain questions. For example, all organizations, from any kind of economic sectors and origin of their capital, agree that for the success of any Workflow Project a business processes analysis and modeling methodology is indispensable. Another constant repetition is that high management must be permanently involved with the project, as a means to guaranteeing its implementation and consequent success. Almost all the organizations complain about the expensiveness of the softwares specialists.
- Scarcity of data and quantitative information. Consistently no organization wanted to disclose financial data about their projects, be they successful or not. One of the few times such information was given to us it was in a no-contextualized and unproven manner. The lack of financial data made it unable for us to calculate ROI and VOI, and if those values had or not been proven for the successful projects. In fact, we believe that the data existed in many organizations researched; they just weren't given to us.

Although the number of organizations researched were low, we can attest that many others, that didn't even receive us, have the same behavior, but we were unable to compute them at our present work because we did not establish any direct contact, even if informal, with any of their employees.

Here the kind of relationship we had with the studied organizations.

- In 55 percent of the organizations we had the direct participation in all the implementation phases of the Workflow project. Phases that went from the sale to the use of the software by its users.
- In 40 percent of the organizations we had the indirect participation and in some phases of the projects, for an example, we were involved only in the business process analysis and modeling
- In 5 percent of the organizations we only studied what had happened with the project for Workflow implementation.

### HYPOTHESIS

We aimed to contextualize our conclusions in the subject of this paper: “Use and Discard of Workflow Systems,” seeking to explain, in part, some of the causes for the behavior of organizations that were involved with Workflow systems.

When we set ourselves into investigating and studying why Workflow software is bought, why some are implemented while others end up inside a drawer or piled up on a shelf, why organizations stop using them, why they don't frequently update both the software and the processes that are executed on them, we didn't expect to find the difficulties that we had to overcome. We believe that the resistance presented by the interviewees was due to the fact of the explicit question that was made when we solicited an interview: we would like to know how the Workflow software is being used on your organization. Maybe, if we had given the research the approach of getting to know the causes and effects of project's *success*, the interviews would have been easier. Some of the refusals were extremely interesting:

For example: we had contact with a Brazilian bank that acquired an American Workflow software ten years ago and implemented on it a credit approval process and in these ten years never updated versions of the software nor the process. Which means: for ten years the software and process are the same. Obviously, no one in the bank wished to give us an interview, something that to a certain extent is comprehensible. The most interesting data was that we tried to retrieve information with one of the analysts that participated on the project. We asked him how a process could stay more than ten years without being updated, he replied: *So you can see how well made it was. We never needed to update it again. It has been working for ten years.*

The organizations studied by us, with rare exceptions, were in two extremes when they decided to implement Workflow. In one extreme were those that did not know the real use of the software and the changes required in the organization's culture for its implementation. In the other extreme were those that expected more that the software could actually deliver. We believe, that if we were to observe another group of companies from now on, it would be possible that this phenomenon would repeat itself, because the introduction of BPM software could have altered the referential already acquired with Workflow systems on the organizations that already knew it and introduced new doubts and worries on those that have not had any contact yet with Workflow. Through our studies we were able to conclude that when organizations interest themselves on implementing Workflow seldom they know what it is and what it is for.

Frequently, also, the responsible for Workflow implementation projects confuse it with Electronic Document Management Systems (EDMS). EDM is not part of the Workflow reference model, WfMC; therefore it is not Workflow, but both technologies can work integrated together. Some Workflow software brands include on their suites Electronic Document Management modules, which to us, confuses the users and makes it more difficult to understand that those technologies are unique, but complementary.

As a result we have seen that when two or more Workflow software are evaluated those that have an EDM module are at given an advantage over those which are purely Workflow systems; being that all buyers wish to “get more for less”. However, what we detected is most unknown by the organizations is what are business processes and, consequently, the hard, but indispensable, work of mapping them, analyzing them, organizing them, and detailing them so that they can be “programmed” on the Workflow software. This indispensa-

bility puts the Workflow systems on a different platform of necessities than any other software.

In one of the companies we have been involved in a Workflow implementation project, during a meeting to discuss its development, five professionals of the business processes modeling and analysis area discussed among themselves for the better part of an hour over which event gave the start to a determined process without reaching any conclusion. We concluded, then, that in the case the project came to being the business processes modeling and analysis' team would have to be trained in the fundamentals of business processes and in a methodology to work with them. That was effectively done.

There is also the problem of the initial un-operability of the Workflow software for the absolute lack of elements that allow it to run, in other words, the lack of legacy data obstruct Workflow systems from being implemented like other softwares. For example, when a company implements ERP software, it populates the databases with data from their legacy files, migrating them from existing systems. With Workflow software this is not possible because, except in rare exceptions, there are no legacy data of the processes if the analysis and modeling has not been done. Because of this the costs of implementation of Workflow software obligatorily involve elements that generally are not obligatorily present in the implementation of other kinds of software.

Another point of attention is: how to internally sell Workflow. We believe that those responsible for the implementation of Workflow system do not know how to "sell" to the organization the benefits generated by the implementation and utilization of this kind of software. The internal marketing has to be another worry for the team responsible for the Workflow implementation, because one of the greatest user's fear is that it becomes in a sort of technology from the "Ministry of Truth," depicted by George Orwell in the book *1984*<sup>1</sup> (where he depicts a scenario of *Big Brother is watching you*). We could verify with end users, that they are afraid that Workflow will contact their supervisors whenever an incident is late, any business rule is broken or that any other kind of "transgression" of the established order happens. Obviously, any Workflow software can go to the point of doing all that. However, the points that should be emphasized to the employees are: better control of the times needed to process each incident, better control over the execution of the business rules, and mainly, the liberation of people from bureaucratic, repetitive, and boring tasks such as, for example, seeking data and information in files of any kind, checking values, calculations and filling out forms.

In an organization, where Workflow software would be implemented, we faced an uncommon situation. The end-users didn't want, in any way, to cooperate with the project team because they said that "it was throwing money away" and that "for six months they were complaining to management for their installations to painted and new short walls to be installed to improve the conditions on their work-place, and while management wouldn't answer to their requisitions, they would spend all that money acquiring a Workflow software". It was necessary to handle the situation with a lot of care so they would collaborate with the project. In the end, we were able to implement the software in the planned deadline and to obtain success with the collaboration of the project's team, but the way we handled those that were boycotting the software was, in a way, more carefully than the rest of the group.

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<sup>1</sup> 1984 by George Orwell, copyright Harcourt Brace Jovanovich 1949, and copyright renewed Sonia Brownell Orwell 1977.

However, in another organization, where the director used the Workflow implementation just to improve his personal status, nationally and internationally, the software had an extremely short life. Between the implementation and the abandonment, only eight months passed. As soon as the director got the post he wished for, he completely abandoned the Workflow. One important detail, the cost of this project was US\$33,000. Conclusion: the director knew how to sell himself real well, but didn't know how to sell Workflow to his subordinates, or even to his replacement, who then discarded Workflow software, considering it unnecessary with expensive and difficult maintenance.

Another frequent problem is that the business processes analysis and modeling are rarely made with a methodology that details the processes in the way necessary so that this software can be properly implemented. We believe this was one of the primary problems that afflicted and/or afflict teams responsible for implementing Workflow systems, because without the data from business processes analysis and modeling there is no way to make the software work. Given certain characteristics from Workflow systems, between which is the indispensable necessity of changing the organizational culture, we verify that in the occasions the software was implemented on a incipient way, meaning, lacking data from the business processes, the results were problematic and, besides the wastage of what could be useful to the organization, we saw grow between the users a strong feeling of rejection to the software. Such behavior is explained by the disappointment that the users face while using Workflow almost as an e-mail program. However, with patience and hard work it was possible to avert many situations that seemed to lead to failure.

As an example, we cite the case of a company that needed to reduce the deadline given to their customers for the generation of proposals and product development. This process involved 140 users; and before the Workflow implementation the company wasn't even able to tell their customers the date that a proposal would be delivered. This means they weren't able to meet the deadlines agreed with their customers for the development and consequently the delivery of a product. At the risk of losing an important customer, responsible for a hefty sum of their revenue, the company decided on a Workflow implementation. It was dedicated for four months to the analysis and modeling of the business process: Customers Requisition. The results were very good, except for one detail: there was no agreement on what metrics should be assumed by each area for the control of times in accordance to their internal Service Level Agreement (SLA). This data was crucial so that Workflow could control bottlenecks and delays, especially in the system programming department. It is certain that all the times in the process were reduced, from proposal creation to product development, but the administration of times continued to be made, principally, by the account managers; responsible and the main connection with the customers of the company. Workflow, in this case, was under a great risk of transforming itself into a luxury e-mail service, being that the project had a total cost of US\$133,000 in 2000.

When we state that the business processes analysis and modeling for the Workflow implementation must generate data so that the software can be "meticulously implemented" we are referring to the data necessary to automate the business rules, times, routes and roles (3Rs). Many responsible for projects of this kind state that ISO 9000 is enough to implement Workflow systems. We hear affirmations such as *we are ISO 9000 certificated, therefore our processes are ready to be automated*.

In a pulp and paper industry we had the following experience. When the project for Workflow implementation started, the industrial manager spent one

morning telling us about the ISO certification of his area; of how the processes under his responsibility were documented and the level of detail they had.

When he ended his presentation we asked him:

- What are the intervals between the periodic audits for the recertification of these processes?
- From six weeks to six months, he answered.

We then asked:

- And in these periods how much time do you spend with the pre-audits, until the external audit team start their job of re-certification.
- From two to three weeks!

We conclude that, even though the company was ISO certified, there was no process management culture sufficiently developed to make people stick to the rules of the business that set the standards for the operation.

We then analyzed the level of detail of each process and we found:

- Data and information about “the tasks” without separation into activities.
- Roles briefly detailed and documented.
- Inexistence of information about times.
- Business rules solely for detours.

Besides that, important connections were missing between processes of distinct areas such as, for example, between the process of chemical recipes update (we are talking of a chemical industry) and the process of industrial costs calculation, because every time a recipe was updated the new percentages were sent to the financial department, so they could update the industrial costs, on a piece of paper! Particularly in this project we had an additional difficulty to make people understand that the ISO norms delimitate, restrict and guide; but they were not made to detail who, when, how, in what time and where (the activity) the job must be made, fundamental information to any Workflow system.

Another point of attention was the ownership of the Workflow project. Without the involvement of someone with effective power to support the implementation and utilization of the Workflow system it tends to be put aside until discarded. To our understanding no other software has the need to be “sponsored” in a way as firmly and explicitly as Workflow. This is due not only for its cultural component, but also because the business processes analysis and modeling team frequently will need access to data and confidential information, or at least, of very restricted access and circulation, something that only someone with enough power will be able to authorize.

One time, in an important government organization, we had the need to access a certain record, crucial for calculating productivity of the installed capacity and estimate the resources necessary to operate the new process. When we solicited such data from the employee that was responsible for it, he told us: “Impossible. This data is confidential”. However, since the data was indispensable for our work we appealed to a general manager who in front of us called the same employee that had denied our access and requested that he made available whatever we asked. In the same day all required data was sent to us.

However, even with strong sponsors, there are always exceptions.

In a project for implementation of Workflow all the information we needed were always provided for us. Until the day we needed to access the salaries and positions records, so that we could set the Workflow with the data that

would enable it to calculate the cost of production of each incident; which was denied by the sponsor of the project, the CFO. She wouldn't back off this decision, objecting that we didn't need this level of detail to parameterize the Workflow system.

### IN RESPECT OF USE AND DISCARD OF WORKFLOW SYSTEMS

There are people that consider it unimaginable to study the use and discard of Workflow systems instead of studying the benefits that the software that represents the Computer-Supported Cooperative Work (CSCW) concept better than anyone else, brings to the organizations. Some people ask us whether there are companies that would stop using Workflow. What kind of companies are these?

Here are the main questions of the research and their respective answers.

1. What does lead organizations to develop Workflow implementation projects?

We concluded that, mainly, they expect:

- To organize their processes;
- To boost up the productivity of the processes automated by Workflow;
- To organize and rationalize the volume of documents treated by the processes manually executed;
- To diminish processing times.

2. What do the organizations expect from Workflow systems?

We concluded that organizations expect more from Workflow systems than what they effectively offer, for factors such as:

- Overselling by the representative of the Workflow software.
- Not knowing its real benefits.
- Not knowing the costs involved in a Workflow implementation project.
- Not understanding the cultural transformations that will run through the entire organization as a result of the software implementation.

3. Why do some organizations invest in Workflow implementation projects and then abort them, shelving, purely and simply, the software?

We have various answers for which we emphasize the following:

- The Workflow's sponsor left the organization.
- The Workflow's sponsor changed posts.
- The Workflow's sponsor abandoned the project
- The software became considered expensive for not being implemented correctly.
- The software had difficult maintenance without hiring an expert on the product.
- The expert on the product is very expensive.
- The annual, obligatory, maintenance fee became prohibitive.

4. Why aren't the organizations able to continue on exploring the original characteristics and functionalities of Workflow?

5. How do organizations document, analyze and organize business processes to implement them on Workflow systems?

Both questions above have only one answer: Most of the time organizations cannot utilize Workflow, exploring its characteristics and original functionalities because they record, analyze, organize and detail business processes in an inconsistent manner, without proper methodology, and because of that cannot correctly utilize the software. The documentation of the processes, for Workflow automation, should not be long, because too much information will cause confusion on the software implementation team, keeping them from

seeing the essential. It should also not be minimalist, because in this case the team would lack needed data for Workflow's correct implementation. The documentation generated by the business process analysis and modeling should be balanced to allow the implementation team to rapidly present results without, however, compromising the correct workings of the system. We know that this is a very difficult task, because it requires a process/Workflow analyst with practical experience and consequently knowledge that cannot be demanded from anyone.

6. Is it possible to measure the return on investment (ROI/VOI) made with the acquisition and implementation of Workflow systems?

We conclude that yes, it is possible. The calculation should be made taking into consideration the increase of productivity obtained in each process; that means, calculating the time spent on delays and re-works, or not, eliminated with the implementation of the software adding the processing time of each incident inside the process. There is a common known fact among general Workflow researchers that any process has a gain of 25 percent productivity when they are implemented on systems like these. Unfortunately, we could not localize the source of such figure. However, studies made by us, along the projects we have been involved show that this tendency is true, obtained by the elimination of re-work and delays of all kinds, including intentional errors or not.

In a certain project it was possible to calculate the increase in productivity and marginal gains obtained with the implementation of the Workflow system. It was an insurance company and this was its case:

The call center of this company received a request for quotation of products that totaled over US\$500,000. However the insurance company missed the deadline to present their proposal because the CFO was traveling and nobody else could sign the proposal. In other words, there weren't business rules properly defined that would allow another employee to take the responsibility for signing a proposal of this size. There was also no control on the times nor formal routes. After Workflow was implemented the insurance company never missed deadlines again.

7. How can Workflow software be "sold" by the organization to the people that are part of it so that they can see the benefits that are possible to be obtained with its implementation?

We believe, from what we heard and experienced, that the main approach should be that the software will liberate people from repetitive, extremely mechanical tasks, transferring them over to Workflow and they will be able to use their productive time with the execution of nobler tasks, such as those that require decision making and creative thinking.

8. Who should assume the ownership of the Workflow system?

This is a question that generated polemic between those interviewed. And as such it was not possible to answer it with only one answer. However, the consensus seems to be attributing the responsibility for the Workflow system to levels higher-up on the organizational hierarchy. It doesn't seem appropriate to us attributing software such as Workflow on some employee on a middle hierarchy level that does not have the power to make it be implemented and used. In the organizations where the propriety of Workflow system was attributed to middle hierarchy level employees the software was unable to be used in its full-form, nor fulfill its potential, transforming itself rapidly into a luxury e-mail program.

There is an important point to be emphasized here:

Companies that develop and or sell Workflow software preach that their products are “user friendly,” easy to install, parameterize and program, to the point of stating that any end user, with training, will be able to include, update and modify the descriptions, parameters, data and information of the processes automated by the software. Our perception is that this is nearly impossible. No end user, even trained on the software that was bought, will be able to assume such tasks because Workflow software products are complex, even the simpler ones, because they have a great variety of technological components; such as agents of various kinds, multiple language interfaces, telecommunication components, components of the operating system they are executed on and database integration modules, among many other things.

Another point to consider is that the logic to be employed on the creation of any process inside any Workflow software is not linear. For us to program and parameterize processes in a Workflow software we need to use various types of logic and business process analysis and modeling is not something that any end-user is ready to do, even because if he was he wouldn't have time for the other tasks and would be a process analyst and not an end-user.

When we asked to some of the executives why the software was “abandoned” we got answers such as:

“The software had a yearly maintenance too expensive, 20 percent its total value by year, tied to the dollar exchange rate at the time of payment. The software needed specialists to be updated or to have the process modified and that staff was also too expensive. We abandoned American software and changed to Lotus Notes, that while is not considered Workflow, suits well to our needs. Besides Lotus Notes programmers are plenty and cheap.” Said the president of an American company settled in Brazil, emphasizing the cost versus benefit theme.

“The customers for whom we were working abandoned the project development for a new product. We believe that the software was too expensive to be used by solely us.” Again the theme of cost versus benefit is present in the answer of the partner from a Brazilian company.

“First because we decided not to manufacture the new product anymore and because of that the software became too expensive for our size and needs.” Quote extracted from the answer of the general manager of a French company settled in Brazil.

For many executives interviewed the software was abandoned for being too expensive. But what is expensive? If we wish to use the idea of cost versus benefit we could even calculate the return on investment, but people that made such statements were speaking in absolute terms. This means, they (and the organizations they work/worked for) were unable to perceive which were or would have been the benefits granted with the adoption of a workflow system as a solution to automating the business processes management (BPM). Being pragmatic, when people say it's expensive, they are explicitly recognizing that good or service is not worth what they are being asked for. It is different when people say it's expensive, but it's worth it! Then they are recognizing the intrinsic value of the product.

The costs involved with the implementation of a Workflow system are high, even with software “made in Brazil.” Included in the project should be the costs of acquisition, maintenance and the consulting services for implementation, without forgetting the costs of the cultural change that Workflow imposes to the organizations, even harder to be measured.

In the root of the price of Workflow softwares it is what we call *cost of uselessness*. This type of cost factors in the composition of Workflow software be-

cause there is a vicious circle that imposes that who develops it to create, year after year, bigger and bigger features, adding to the product things that will never be used by the organizations, under the penalty of not being able to sell new versions to who already possesses the product; but at the same time imposing to the new customers the onus for functionalities that will never be utilized. This led us to conclude that customers will always be buying much more than they need or will come to need. Of all existing functionalities in any Workflow software the customers studied in this paper utilized, or utilize, 20 percent to 30 percent of them, but the software, each year, brings more and “better” functionalities, which will cost more and more; and will never be used. It is in this context that we should understand the diverse organizations studied by us that opted for developing home-made solutions based on dynamic spreadsheets using Online Analytical Processing (OLAP), or preferred to use Lotus Notes, even knowing that both these solutions aren’t essentially Workflow.

To conclude, we foresee that the evils that afflict the use and discard of Workflow systems will continue to exist, and with more intensity with the marketing actions that will be generated with the BPM acronym. This means that organizations are again beleaguered by specialists in all sectors, that now promise them a new software which will make all the business processes integrate customers, suppliers, partners, stakeholders, employees and all and any element that they can, may wish or have to interact, giving both the internal and external organization’s ambient a complete view and essentially integrated from its operations. Things that Workflow systems already proposed to do and, if well planned and implemented, can do it very well!

### CONCLUSION

The interviews gave us data and information to conclude that:

- Many organizations “bought” Workflow not knowing the real advantages and challenges that exist in the adoption of a technology that would make them organize and keep themselves organized.
- Various organizations expected more of the Workflow software bought which any of them could deliver. Expectations such as processes auto-organization, short implementation deadlines and easy maintenance to keep definitions updated are among the top unrealistic expectations, in great part created by the promises of the sellers.
- The major part of organizations studied that abandoned Workflow did it because they needed to permanently do business process analysis and modeling. This means, those responsible didn’t expect the necessity of keeping a business process analysis and modeling team on their staff.
- It was also possible to conclude that the result of the business process analysis and modeling work, in a great number of the organizations interviewed, did not generate sufficient data and information so that the Workflow software could be programmed with fidelity to the environment and security by the process analysts in Workflow.
- Even though it seems routine, or at least it should be, software upgrading is always a high-risk activity. In the case of a Workflow upgrade the risk of stopping the entire organization is exponentially bigger. The following case illustrates with perfection the difficulties that organizations face to upgrade their Workflow systems.

One certain Workflow implementation project was developed by a company we will call “A” for a government organization. For problems that are not fit to de-

scribe here company “A” left the American software representation in Brazil and, obviously, ended its contact with the governmental customer after implementing with success a big and complex business process. One year later the manufacturer released a new software version and the process originally implemented (and working flawlessly for a year) by company “A” stopped working. Here we have the first problem that should be analyzed by the following question: how can an upgrade, of the same software, make the ambient that was working flawlessly for a year stop? Pressured by the customer, the manufacturer indicated another company, which we will call company “B” to make the ambient work as before. Suddenly, however, company “B” concluded that the problem was with the process originally implemented and working correctly for a year (we need to repeat it to make it clear that the solution worked for a year). In conversations with technicians of the customer we concluded that there was ignorance from the manufacturer, by his new representative in Brazil, to assume their functions and actions and even more so from company “B” to solve the situation caused by the newly-upgraded software version. The result was: company “B” blamed the problem on the business process analysis and modeling. According to people inside the governmental organization, company “B” said that the cause of interruption in the working of the process in the new version of the software was the very process.

We deduced that company “B” did not work hard enough to get to know the process, how it was programmed and even less knew the software in question. Beyond that, we recognize that it was a process with a high degree of complexity, being that not only was it running on low platform but it also accessed two mainframes located in different organizations situated on two distinct geographic places. On these occasions, consulting business process analysis and modeling companies think it is easier to remake the process than to understand the problem and correct it, even because, in theory, it is possible to (re)construct a process that works, even if less complex and sophisticated. The ignorance about the real functionalities of the software that is being acquired is another source of problems for all organizations that invariably end up abandoning the use of the software, for, consistently, expecting more than it can do. One of the episodes that marked us the most during the interviews was of a project that was being developed by a Brazilian consulting company that had aborted in the middle of the project by a customer when he found out that the manufacturer had made a promise of a solution that would not work ever in the way it had been sold/bought.

To illustrate the case is the following:

A consulting company had been hired just to develop the business process analysis and modeling project for its automation in Workflow software; and was developing the project normally when in a certain moment the customer wanted the software to make with six hundred licenses what could only be done with six thousand licenses. After a week arguing with the consulting experts ways that would not imply in having to buy six thousand licenses, the customer asked for the company that had sold the software so that those responsible could explain why they had promised something that the software would never do with the bought configuration. In the meeting, of which participated the three parts involved: the representative that had sold the software, by the way a branch office in Brazil of the American company that manufactured the same; the customer and the company hired to implement the solution, were discussed for more than two hours technical questions pertinent to the product and the process that should be implemented. The consulting company stated that there was no way to do what the customer

wanted with the number of licenses acquired and the manufacturer's representatives ensured it was possible to do so.

One important detail to be noted here is that the consultants knew extremely well the software in question for they already had developed eight projects with the same product; while the representative had "specialists" that had been recently hired and, because of that, had no knowledge, or life-experience with the software. The customer, until then not knowing whom to believe, asked the two "specialists" of the Brazilian branch office to make a technical report on the problem with the following approaches:

- They should say if the solution that the consulting company had developed up to that point was technically accurate or not.
- If it was possible or not to develop the project with the characteristics that he, the customer, wanted and
- How, technically, should the solution be developed in case the same was possible to be implemented as they (the branch office representatives) had promised them with the store-bought solution.

Eight months after the meeting the report which the two specialists from the branch office in Brazil had committed into presenting in 72 hours was not neither made nor presented. Because of that the customer cancelled the project and returned the software.

We understand that the choice for any software should not be restricted to the analysis of the product's functionalities. It is also required to know the reputation of the manufacturer, of its representatives and even more so if the people who are in charge of support and technical assistance are fit for such tasks.

We finally conclude that organizations suffer the evils that repeat in a reoccurring form, because they can't break the vicious circle of "buying-technologies-to-solve-problems/solve-problems-because-bought-technologies" once they don't know or forget how important is the organizational culture (change management) and the business process analysis and modeling. Workflow continues to be a powerful instrument to automate processes and which sales, for various reasons, stood beyond what was expected by scholars, researchers and manufacturers of this kind of software.

Among the causes appointed by our research about the use and discard of Workflow two consistently repeated: lack of culture to work in the CSCW structure and the lack of methodologies fit for the business process analysis and modeling—AMOP, an acronym that we created to designate it.

It may seem that in these 10 years we were involved only with problematic projects or failed ones; however that is not true! The reason for this paper was to draw attention of those who may get involved with Workflow projects so that, in a kind of benchmarking, may be able to avoid the situations described here.

We hope that the research in this field has continuity and that Workflow systems may be implemented and used by any kind of organization with security and without stopping along the way in any problems it may face.

There is still much to learn about and with Workflow.