Analysis and Improvement of a Construction Permit Approval Process: A Teaching Case for Developing Business Process Development Capabilities, Targeting Developing Nations

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Abstract

With the increasing competitiveness in global markets, many developing nations are striving to constantly improve their services in search for the next competitive edge. As a result, the demand and need for Business Process Management (BPM) in these regions is seeing a rapid rise. Yet there exists a lack of professional expertise and knowledge to cater to that need. Therefore, the development of well-structured BPM training/ education programs has become an urgent requirement for these industries. Furthermore, the lack of textbooks or other self-educating material, that go beyond the basics of BPM, further ratifies the need for case based teaching and related cases that enable the next generation of professionals in these countries.

Teaching cases create an authentic learning environment where complexities and challenges of the 'real world' can be presented in a narrative, enabling students to evolve crucial skills such as problem analysis, problem solving, creativity within constraints as well as the application of appropriate tools (BPMN) and techniques (including best practices and benchmarking) within richer and real scenarios. The aim of this paper is to provide a comprehensive teaching case demonstrating the means to tackle any developing nation's legacy government process undermined by inefficiency and ineffectiveness. The paper also includes thorough teaching notes

The article is presented in three main parts: (i) Introduction - that provides a brief background setting the context of this paper, (ii) The Teaching Case, and (iii) Teaching notes.

Keywords

Business Process Management, Cased based teaching, Best Practices, BPM lifecycle, Developing nations

INTRODUCTION

Over the recent years, Business Process Management (BPM) has emerged as a systematic approach that facilitates to make the organization's workflow more effective and efficient. Many organizations today have

recognized the importance of actively managing their business processes. A 'Business Process' embodies a series of activities that generates an output of value to the organization. BPM sees processes as strategic assets of an organization that must be understood, managed, and improved to deliver value-added products and services to clients. Process Improvement often achieved through integration of process activities with Information & Communication Technology – ICT. The relationship between IT and BPM has been widely discussed by the literature (Hammer & Champy, 1993).

It is widely accepted that BPM can offer many benefits such as reduced costs, high quality services and products, transparency, improved customer experiences, ability to quickly respond to changes and better integration with critical stakeholders (Bandara et al. 2012). BPM can be a particularly useful tool for developing countries considering many needs for process improvement and the impact process improvement can bring to these nations. However, BPM still remains a novel concept for many developing countries, mainly due to lack of resources and expertise to develop BPM capabilities (Bandara et al. 2012).This calls for an emerging need for sharing of knowledge and experience of effective BPM deployments in the developing countries as a means of empowering and encouraging the other nations in same realm. *"To successfully educate executives for the emerging economies, we need cases that are contextually relevant and deal with local companies or those in similar circumstances"* (Pitt and Watson (2011))

Bandara et al. (2012) describe the critical role of BPM in emerging economies and the lack of relevant skills and resources to develop these skills. Pitt and Watson (2011) calls for the development of teaching cases based on real life challenges in emerging economies to provide the target audience the contextual realism necessary for a valuable classroom experience. This paper aims to contribute to this by providing a rich case study that can be used as a teaching resource for BPM education in developing nations.

The narrative is of a municipal council in a developing context; illustrating how the process efficiency is dependent on people, policies, politics and culture. It can be used to train professionals on BPM in the developing world or used for tertiary purposes at both the undergraduate and graduate levels.

A process improvement lifecycle approach is recommended as the methodological framework of teaching here, which also defines the learning objectives and flow of the related teaching. There are many different process improvement lifecycles one can follow. We recommend and use that of Dumas et al. (2013) which discusses process identification, discovery, analysis, re-design, implementation and monitoring & controlling. The specific scope of the learning objectives related to this case study is centred around the lifecycle phases of: analysis and re-design.

TEACHING CASE

This teaching case unveils the story of a series of true actors and incidents, which has been anonymised to sustain confidentiality agreements. It first presents an introductory overview to the public sector agency that this narrative is based upon, then presents the defining moment that initiates this case study and finally presents the details of the case with a call for action from the target students. The case has been anonymised for ethics and confidentiality reasons, and is supplemented by additional information provided in the Appendixes together with a Glossary of terms used to help the reader with the different terminology used.

Agency Background

The Colonial Muncipal Council (CMC) is the oldest and the largest local government authority in Eden and covers a resident population of over 693,000. It has 53 elected representatives and over 12,000 employees. CMC is the main governmental body, which manages the administrative tasks related to the greater Eva area and has a region-wide customer and client service focus. With the recent economic developments in Eden, CMC gets many foreign clients who are interested in investing within the Eva region. However, in the recent past, there had been several occasions where a number of investors had gone back withdrawing their applications for investment in Eden, mainly due to frustrations caused by the lenghty processed involved. The tedious Construction Permit Approval (CPA) process is a major factor for investors' dissatisfaction, records showing that in some cases the investors had to wait more than 11 months to get the permits approved.

A number of stakeholders; including the leadership at CMC, operational staff involved in the CPA process, customers and external members (those from Eden's Ministry of Economic Development, and the Eden Local Government Reform Initiative) all had alluded to critical issues pertaining to this process- mainly in relation to the sheer time taken to get a construction permit accurately approved. This has also been effecting the Doing

Business Index (DBI)[1] for Eden, making it a lesser attractive option for foriegn investors. There had been various recommendations from different parties. Some of these have been partially or fully implemented from time to time, yet none have to date, been successful in addressing the core issues associated with the construction approval process.

Defining Moment

It is Wednesday – the so called 'public day' and just the morning yet, of the first week of June 2013. The Colonial Municipal Council (CMC) is in a hive of activity. Over 50 Customers from all over the district have flocked to the council to get their construction permits approve. Some are carrying huge files containing the architectural plans and other documents required to get approval to build their dream homes. Some are at the council to get their large construction plans approved. Irrespective of the requirement they are all eagerly waiting to be served by the council staff.

Many clients are dissatisfied for the wait, and lack of clarity of what is going on. One customer openly demonstrates his rage to the front counter staff; "My application was rejected just because one document was missing" he says in a raising voice. "Why did it take you three and a half weeks to tell me that!... Is there anyone here who knows what they are doing ...! Time wasting mongrels!" he rattles on ...

Justin De Souza; Director of planning division passes by, just returning after yet another meeting with the ministry of economic development. He felt been 'grilled' at the meeting by the ministry secretary "Why is it that we take a long time to process the applications", "No wonder we lose so many foreign investors. Who is going to wait for nearly a year to get their construction permits approved?. Justin what will you do to rectify this...? We need to show a change soon. I don't want to be called in for an explanation at the Cabinet again …". Justin knew that some action had to be taken immediately...

Justin has been in the council for over 7 years. The innovative IT system that he had personally conceived and subcontracted, had dramatically failed. Not only did it take nearly 3 years to implement but also did not produce the results promised. The CMC is still relying on the manual system and running both the manual and automated systems in parallel. His subordinates also have been raising the continuous complains and 'client attacks' they have been encountering. Justin knew that another patch-up solution would not work anymore, and that he needed a detailed and holistic review of the entire process to see where and what kind of improvements are required.

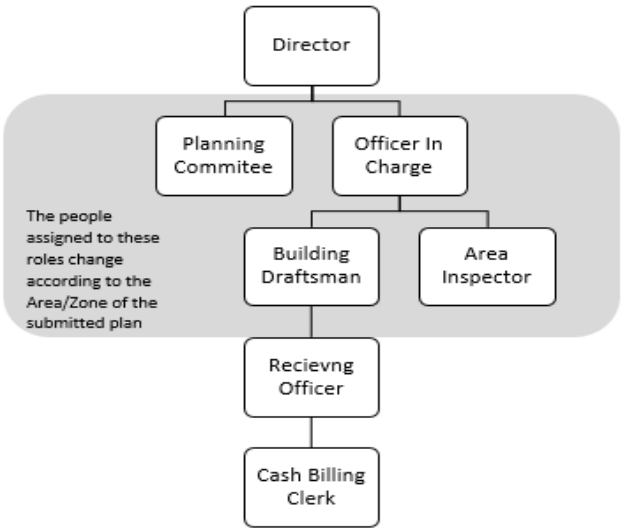

Figure 2: Hierarchy of Roles Involved in Value Chain

The Current Situation

The Construction Permit Approval (CPA) process, driven by the Planning division of the CMC, revolves around application submission, site inspection, technical review by draftsman, cross checking by the OIC (officer in charge), planning committee evaluation and final permit issue process. Even though there are several national guidelines that need to be followed when issuing the permit, the staff work by the rule of thumb. Separate staff are assigned to each of these processes and they handle the administration, management, policies and the IT. Most of the staff have been at CMC for a long period of time and they are familiar with the process and know it by heart. Figure 2 depicts the main actors (CMC employees) involved in competing the various tasks. Figure 3 provides an overview of the core areas involved in the CPA process. Appendices 1 provides Additional information about these roles and related matrices. The following sub sections will illustrate what occurs in each of the main areas.

[1] Economies are ranked on their ease of doing business, from 1 – 185. A high ranking on the ease of doing business index means the regulatory environment is more conducive to the starting and operation of a local firm. This index averages the country's percentile rankings on 10 topics, made up of a variety of indicators, giving equal weight to each topic. One topic been 'Dealing with construction permits'. Associated indicators include; (i) Duration to issue a permit, (ii) Number of procedures, and (iii) Cost.

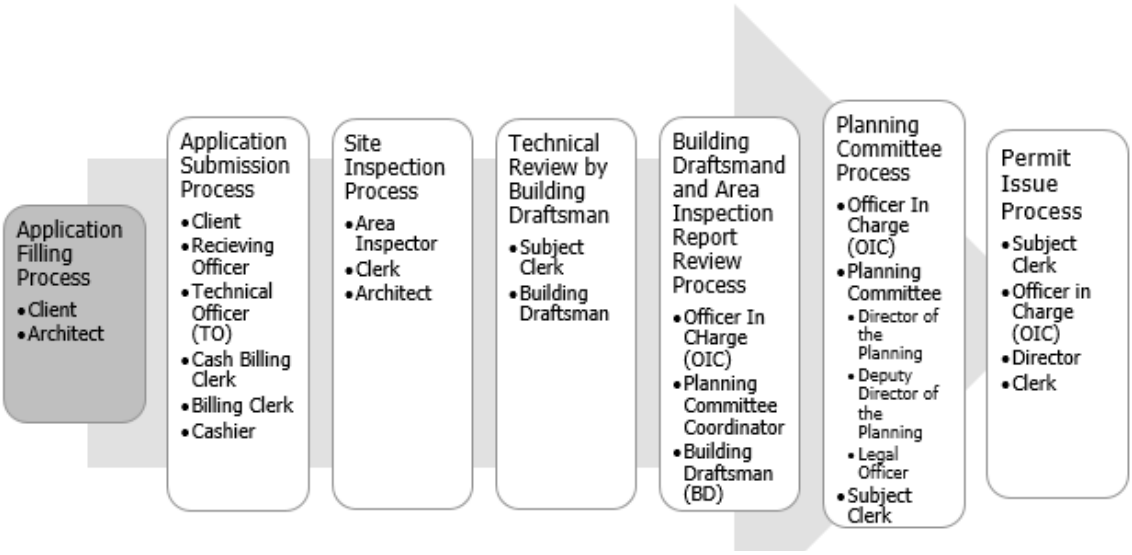

Figure 3: Value chain and the roles involved

Application Submission Process

The CPA process is triggered with the application submission. 140 applications (this includes both new and revised ones) are submitted at the counters per week. The clients who are planning to construct either residential or commercial buildings have to submit a duly filled application form along with other required documents (various clearance certificates and building plans). The application form can be obtained from the application counter, which is located at another division at the CMC, for a small fee. Although the applicants are given the option of downloading the application form from the CMC website this method is rarely used due to malfunctions in the CMC system.

Filling the application is a tedious task with various sections requiring a vast amount of information. The guidelines issued with the application form does not clearly define these requirements. Furthermore, the application is expected to be filled according to the guidelines set by the government but these guidelines are not readily available to the clients. It is estimated that on average it takes an experienced applicant at least 2 hrs to fill the application in (without getting the clearances required) and that an inexperienced applicant can take upto 6 hrs to fill the same form. Apparently 85% of the forms submitted are incomplete and needs to be sent back to the client to be corrected and/ or completed.

Obtaining the different clearance documents/certifications (street, water, fire, drainage and security zone clearance), as required by the CMC, is also a hassle as the applicants find themselves visiting various departments on multiple occasions due to a lack of coherence between related departments. Each clearance is due to take 3-5 hours to obtain from multiple different counters at CMC. All clearances are compulsory to get the application process started.

Once all required documents are gathered the application can be submitted to the Planning Division at their Receiving counters at the CMC. The receiving counters are open to clients on “public days” from 8am – 4pm and on other week days from 8am – 1pm and are manned by a Receiving Officer and a Technical Officer (TO). There is no dedicated TO – instead qualified Building Draftsman at CMC act as Technical Officers and rotate this role around a weekly roster. The receiving officer checks the application for completeness which can takes 5 to 20 minutes and the TO then checks matters for the necessary technical details and documents which takes about 30 minutes to 45 minutes . There are no individuals allocated to looking after the any application – and this lack of any case based routing at the counters makes them heavily crowded and understaffed. This also prevents the ROs and TOs conducting any substantial error checking at the counters resulting in incomplete application submissions, which will only be uncovered much later in the process. Furthermore the lack of guidelines (very often, there is none) or reference information (which is often assumed knowledge) in handling unique/complicated cases adds to the confusion at these counters.

If any documents are missing or if there are any mismatches identified, the Receiving Officer will explain and return the application to the client. A recent audit revealed that 68% of the applications are returned and then 75% of these are incomplete even in the next submissions. Sometimes the missing details are bought back the same day, at the other times, it can take weeks before clients come back to the CMS. Even though there are some forms to collate and articulate the feedback to the clients, they are rarely used. One reason for this is the work

load of the RO's and TO's - as documenting any feedback is next to impossible during peak times. The verbal feedback is often either misinterpreted by the clients or they forget it. Due to this, it is not surprising to find a client resubmitting the application with similar errors again and again.

After the TO has checked for accuracy of the information, the Receiving Officer (RO) accepts the applications, provided there are no obvious problems. He creates a new physical file for the application bearing a unique identification number and updates the IT system with the new case information. This process takes only 5-10 minutes (in case the systems is working). The CMC employees do not trust nor rely much on the IT system, due to limitations of it. Hence it is mandatory that all details are entered into a manual ledger, which is the primary document maintained for status tracking and auditing purposes. This, naturally creates duplication of work. It is not surprising that the staff is unhappy with the IT system considering the numerous problems that hamper the day to day tasks. For instance, the computer gets locked automatically and the staff has to re-enter the passwords for each and every function they use. The system does not make provision for some updates such as street name changes; hence the outputs produced by the system may contain obsolete/incorrect information. The information flow within the IT system is very weak and does not flow to the next person in line resulting in duplication of work. For example the Billing information has to be entered twice; once at the planning division and once at the accounts payable division.

Once the details are entered, the IT system sends the bill to the cash Billing Clerk (also present at a separate counter). The receiving officer advises the client to proceed to the Billing Clerk. The cash Billing Clerk checks the application type and hands over the appropriate bill to the client (the description of the payment is stated in the bill). The client then takes the bill to the Accounts Payable department located in another section of the CMC which takes about 5 minutes. As the existing IT system is not integrated with other related systems, the Billing Clerk at Accounts Payable has to check the received billing information and enter the details to the accounting system manually. S/he then generates the invoice and hands it over to the client who takes it and the required cash to the cashier. The cashier gives the payment receipt to the client upon payment completion, which the client then takes back over to the cash billing clerk in the Planning Division. Finally the client is provided with the details of an Area inspector to arrange for an inspection, if possible, for the same day.

The Receiving Officer also sends a request for the relevant records file from the Records room, in order to update the physical file for the application. The Management of the Records and the functions of the record room are out of the scope of this analysis. However, it can be stated that it is a large system and some case files are very large and complex to say the least. The record files are requested early, to prepare for the site visits by the Area Inspector. Once received, the records, along with the physical case file are transferred to the Area Inspector through the Subject Clerk (a role/ designation allocated to each division, whose sole task is to transfer the physical files around the division's officers).

Site Inspection Process

The purpose of this process is to examine the physical condition of the land being proposed for the building construction. When an application is submitted by a client, a receiving officer checks the 'zone map' and identifies the relevant Area Inspector (AI) for that region, and informs the client. The client and the AI are expected to coordinate the arrangements (date, time, transport) for the site visit. The client is able to make an appointment with the AI for the on-site inspection – in case of AI availability it is a 2 minutes call, else the client may need to wait for the AI to be contactable. It is not uncommon to have double bookings or delays in the planned visits- due to external issues like available traffic and transport of the day.

At the CMC, there are three AIs assigned for each geographical zone but due to the increasing number of client requests and the limited time of the AIs, many cases face significant delays during this process. The CMC has declared Wednesdays as a 'public day' on which the staff is available full time for the general public, at their respective offices. Apart from public days, AI's are also required to be in office on Mondays after 2pm and Fridays after 2 pm in order to be available for meetings. Thus, there is only a limited time during the week for site visits.

According to the usual practice, a request for the relevant record file is already made to the record room by the receiving officer on behalf of the AI. When the AI receives the case file from the subject clerk (after the application submission process), he does a preliminary screening of relevant documents before leaving for the planned site visit. , he needs to get the files from the record room, which can take time but the actual screening takes only about 15 minutes. The case file (case history file) is a bulky file that contains very old documents regarding the case (land / building), the latest architectural plan, the originals of clearance certificates and other documents submitted by the client. The AI also collects the relevant street plans (referred to as the record file) for the area from the record room.

Once the documents are collected and screened, the AI visits the site with the client. On some occasions, for site visits regarding high rise buildings, the Architect is also requested to be present at the site, and the client will need to coordinate this. Before leaving the CMC premises, the AI makes an entry in the log book kept at the security desk outside the planning division. The log entry gives details of the files that are being taken out and the time they left for the site inspection. However, the security officer is not aware of the need to validate the accuracy of the details recorded here.

At the site, the AI goes through a standard checklist to validate if all requirements are in order. In addition to the check list, the details given in the case file are matched against the physical condition of the site. For example, if it is a commercial building, the number of vehicle parking slots needs to be a certain minimum. AI makes a rough sketch of the land in his note book and marks the measurements and other significant details. This diagram is just done in a casual manner and is not standardized. He also checks if all the clearances (water, drainage etc.) are in order and all exceptions/discrepancies are noted down. These issues are generally pointed out to the client or the architect during the inspection. The time spent on this process varies according to the size and location of the land and the size and type of the planned building. The on-site inspection for a normal building takes about 45 minutes but for a complex building the time can vary.

When the inspector returns to the office from the site visit, the log book entry is updated to indicate that the files are brought back from the site visit. If the requirements are incomplete the site inspector requests the client to do the necessary amendments and resubmit the architectural plan. In this case, the file waits with the AI until the required documents are provided by the client with the amendments.

If there are no major issues and concerns identified in the site inspection, the AI prepares the site inspection report which takes about an hour. The first part of this report (including 'Field Minutes' and other preliminary information from the site visit) is completed by the AI and the latter part (inclusive of the technical details) is to be completed by a draftsman. This may also require referencing the regulatory guidelines of the government. The AI hands over the partially completed report and field minutes along with the case file and the other documents to the subject clerk. It is checked for missing documents which can takes up to 5 minutes and any such documents will be requested from the relevant department. The completed file is then transferred to the relevant draftsman for detailed review of technical details. The subject clerk looks up the document containing details of zoning and officers assigned for each zone before handing over the case file to the relevant building draftsman. This process usually takes no more than 5 minutes.

Technical Review by Building Draftsman

The purpose of this process is to check the technical details of the building plan and the survey plan. Even though one geographical zone is usually assigned to one draftsman, due to the shortage of draftsmen, each one would be assigned to multiple zones. While checking the technical details of survey plans is a critical aspect of the CPA process, the draftsmen find themselves over burdened by the number of tasks assigned.

The very first task of the draftsman is to check if all necessary files are available. As the case file is transferred from hand to hand on multiple occasions, there have been many instances where files or documents have been lost or misplaced. Most of the delays observed at this stage could be eliminated by a simple check to make sure all the required documents are forwarded prior to the Draftsman's validation. If a file is found missing, the subject clerk will be requested to supply it. The draftsman starts the checking process once he is supplied with the complete case file with all the relevant documents.

The Draftsman checks the survey plan for the correct boundary line, street line, building line and for any special criteria specified. He inspects the survey plan in detail while comparing it with the building plan and the minutes provided by the area inspector. He also makes necessary measurements on the survey plan and the building plan according to the correct proportions. If all required details are provided, a simple application can be checked within 1hr and a more complex one within about 3 hours. CMC has no details readily available about the types of applications that arrive and how long it takes to check this information. The issue here (as in other places of the process) is dealing with missing information. At least 50% of the applications do not have all the required details (such as the correct boundary line, street line, building line etc.).

If all survey plan details are correct, the draftsman checks for the related zone. In cases where the land is located inside a special zone such as coastlines/ ports/ high security areas, he checks for the necessary clearances and possible violations of any special regulations which can takes approximately 30-40 minutes. If any details are not correct it is noted down and conveyed directly to the client.

Once the checking is completed the draftsman's processing report is duly filled on the IT system, printed and attached to the case file. The case file is then sent back to the subject clerk. An entry is made in the dispatch book to record the status of the case file. These can takes approximately 1 hour. The Subject Clerk hands over the case file to the relevant OIC who then initiates the OIC process.

Building Draftsman (BD) and Area Inspection (AI) Report Review Process

The purpose of this process is to analyze the AI and BD reports and track any mismatches. This process commences when the OIC receives the AI's and Draftsman's reports as well as the case file, from the Subject Clerk. Once he receives the above documents, he analyzes the BD and AI reports along with the case file which takes approximately 45 minutes. If any file/details is/are missing, the OIC requests the client to send the missing details to him, the time it takes is unknown and can depend on the client and missing information .

The implementation of one of the basic Best Process Practices of; 'Capturing Information Once at the Source', is evidently not present at the CMC. The users (OIC) would at times only realize that certain key documents or information was missing, once half way through the document analysis process. This would intern not only delay the process but also waste valuable man power as the OIC needs to then re-analyze the documents once re-submitted. As the customers themselves were not ready with the documents the process would suffer from Customer response delays as well.

The application process is terminated within the OIC process if the submissions violate any building planning regulations/acts at which case the OIC advises the client to withdraw the application and resubmit with proper details.

If all details are available and the documents are complete the OIC prepares the 'OIC Report' for the Planning Committee which takes approximately 1 hour. Once the report is completed it is printed and a copy is uploaded to the system. The OIC Report is attached to the case file and sent to the Planning Committee Coordinator. The Planning Committee Coordinator then sorts the files as per the OIC's recommendations. The time it takes can vary on the nature of the case. The coordinator then decides on a date for the planning committee meeting on this case. If this meeting is within a normal meeting time then it takes approximately 10 minutes to arrange the meeting date. If special people need to be there- the coordination can vary, and days can go by till a time can be confirmed to meet. Then the date is informed to the planning committee.)

Planning Committee Process

The purpose of this process is to review the OIC's Report along with the Case file to issue the final decision (approval or rejection). The process commences when the OIC's report and the Case file is submitted to the planning committee. The planning committee, which is responsible for approving or rejecting the proposed construction project, consists of the Director of Planning, Deputy Director of Planning, a Legal Officer, Representatives from Fire hazard inspections as well as Water & Drainage inspections, the OIC/AI and, when necessary, several other responsible personalities. The meetings of the planning committee will be held on a daily basis starting from 4.00 p.m. onwards.

The completed OIC Report and the Case file will be forwarded to the planning committee convener to be submitted at the committee meeting. One of two conveners organizes the files submitted by the OIC's for the daily meetings. The convener checks the availability of the OICs who compiled the cases to be presented at the meeting. If the OIC is not available, the AI who handled the same case can present it. If there is no responsible officer for a particular case, it may be postponed until the next day. In most cases, the time taken for the decision may depend on the availability of relevant OICs/AIs for the planning committee meetings, which can cause delays at this point of the process.

During the meeting, each case is briefed by the relevant OICs and reviewed by the committee and will be concluded with one of the following decisions. If all the documents have been submitted and reviewed, the application will be approved. In cases where a certain clearance (water / drainage / fire) is pending, the application will be approved subject to the confirmation of the required clearance. Ultimately, if the application doesn't include sufficient evidence, it may be rejected. One of the committee members notes the decisions and conditions (if there are any) on the OIC's report itself and the signatures of three committee members are to be placed.

At the end of the meeting, the convener takes the case files and records the particular date of the meeting and the decisions made in a word document and forwards a copy to the Data Entry Clerk. The Data Entry Clerk enters the details of the planning committee minutes according to the data available in the workflow system. Combining the tasks of the Convener's data recording and the Clerk's system updating to be done by one person can be more effective, but still, the conveners notes are passed on to the clerk to be entered to the system. Once the system is updated, the data entry clerk forwards the case files back to the relevant OIC or subject clerks. Each meeting is about 2 hours long.

When the subject clerk receives the files, he has to prepare the approval or rejection letters to be sent to clients. In case of approvals, 4 copies of the letter should be made and sent to the related authorities. At the same time, the Convener prepares the permit and gets it signed for approval by the Director. Requiring the permit to only be

authorized by a single person (the Director) is another source of delay. This especially affects customers requesting permits for commercial purposes as every postponed day could mean a loss in income.

In the case of a rejection, the subject clerk should prepare a rejection letter explaining the reason for rejection. The rejections are briefly recorded in the Reject File and all the documents submitted by the client are sent (posted/handed over) back to the client. However, a copy of the file will be retained in the records room. Once the application is rejected, the clients who intend to pursue a permit need to resubmit their case from the beginning. Unfortunately due to a lack of adequate personnel, the CMC is often found unable to facilitate inquiring customers with further guidelines or explanations. This results in an application being rejected for the second time.

Permit Issuing Process

The purpose of this process is to issue permits to the cases approved by the planning committee. Once the approval is granted from the planning committee, the OIC verifies the payment details by ensuring the payments made on amendments. If there are outstanding fees, the OIC contacts the client and requests the payment be completed in order to proceed with the permit. Since there is no standard notification system, the time taken to notify a client on balance payments is not optimal. Once the payments are settled, the OIC will draft the construction permit. In the meantime the data entry operator will update the status of the project by indicating the construction permit approval. The permit is then printed and the system updated accordingly. The OIC signs the permit and then sends it to the Director of the Planning division for his/her final approval. Once the Director signs the permit the Subject Clerk will inform the client and issue the construction permit to the client.

Way Forward – Your Role

Your team is requested to conduct a comprehensive process analysis and improvement project for CMC's Construction Permit Approval (CPA) process given the context above. The main challenges are expected to centre around: development of a detailed understanding of the current (as-is) process with an unbiased discussion of its issues and weaknesses; definition of a (graphical) process model describing the process; identification of key performance indicators, benchmarks, and other performance metrics and a proposal of opportunities and recommendation for process improvements.

For Justin to be successful (and in consequence for your team to be successful), it will be important to provide him with quantified and qualified benefits of the suggested improvement ideas. Justin wants to implement some things rapidly for some quick wins - by the next 3 months, but is also very interested on the longer term improvement ideas (with a horizon of 12- 18 months) proposed by your team. Justin also needs to understand the best implementation strategies to achieve the improvements in an effective and efficient manner.

Justin understands that the information provided thus far in this case may not be sufficient for the detailed analysis and recommendations expected from you and has offered to provide more details on request. He will join your class/teams via a discussion board later in the semester to clarify any missing information. Your unit coordinator will keep you posted on this further.

TEACHING NOTES

Students are to work in teams of 4-5 members and are expected to come prepared (having attended the relevant lecture and read the readings) for each session. The instructor will provide an outline of the course on which topics are covered when and what tasks are to be completed for each session. Students are expected to maintain a portfolio of the artefacts created within the case discussions and activities. This is to be able to use artefacts across lifecycle phases (at different sessions) and also to build the resources that will be part of the overall Analysis and Improvement Reports.

1. What is this case about?

1.1 What are the main goals of this process?

1.2 What are the main phases of the described process?

1.3 Who are the key stakeholders in this process?

1.4 What roles do these different stakeholders play within the process?

1.5 What areas/aspects of the process are not clear for you – derive a detailed set of questions that you seek to ask at the client side Interview.

2. What reference models and/or process frameworks might you consider to better understand this process?

2.1 Where might you be able to get some benchmark details about this process?

2.2 What are the pros and cons of using a process

frameworks and/ or reference models in defining and understanding an as-is process?

3. Where might this process fit into the overall process portfolio of this organization?

3.1 Is it a "support" or a "core" process?

3.2 What might be the previous processes and what are the interfaces to them?

3.4 What are the subsequent processes and what are the interfaces to them?

4. Capture the overall contextual boundaries of this case / process (you can use tools like SIPOC and IGEO) to capture the context of this process.

4.1 What are the advantages and disadvantages of these approaches?

5. Model the current (as-is) scenario for this process.

5.1 Derive a high level value chain that describes this process.

5.2 What modelling tool and technique will you use to model this process? Justify your selection.

5.3 Document the modelling guidelines your team will use for this modelling effort.

5.4 Apply the guidelines and derive a complete "as-is" process model for this process.

5.5 Reflect how easy or difficult it was to abide by the guidelines you had created – describe your response with some samples from your work.

6. Provide a preliminary analysis of the process.

6.1 Derive a SWOT analysis about this process.

6.2 What are the strengths and weaknesses of doing a SWOT analysis on the process?

6.3 What the current constraints of the process?

6.4 Derive a stakeholder objective matrix for this process.

6.5 How are the objectives of the different stakeholders similar or different?

6.6 How can this effect the process improvement initiative?

6.7 What aspects of the process can you do a Pareto analysis on?

6.8 What other techniques can you use here to enhance your preliminary understanding of the process?

6.9 Provide a summary document that articulates your preliminary understanding of the process.

7. What are some of the issues of this process?

7.1 Maintain an issues register for this process.

7.2 How might you prioritise these issues?

7.3 Conduct a root cause analysis (making the relevant assumptions as deemed relevant) to 3 of the top priority issues identified by your team.

8. Provide a detailed analysis of the process's current performance.

8.1 What qualitative and quantitative techniques might you use here to derive a detailed performance matrix of the current process?

8.2 What are the pros and cons of these suggested techniques

8.3 Conduct and show evidence of at least 5 relevant KPIs (making the relevant assumptions as deemed required for the analysis)

9. Describe how we will be using best practices

9.3 What are the Process Improvement Best Practices we can use to address the issues identified in this case?

9.4 What can be some challenges or problems that might occur when applying those selected Process Improvement Best Practices?

9.5 Explain any strategies that can help us face those challenges/ problems.

10. Explain the general approach to Benchmarking.

10.1 What is the most suitable Benchmarking Type that can be applied in this case?

10.2 What are the Benchmarked performance measures that we can use in this case?

10.3 Identify the benefits of Benchmarking in improving the business process.

11. Provide some short term (within 3-6 months) and long term (within 12-18 months) improvements for this process.

11.1 Discuss your recommendations and how you derived at it.

11.2 What approach(es) did you use to generate these improvement options (and why were these approaches chosen)?

11.3 What are the constraints that hinder/ influence your recommendations?

11.4 Summarise your recommendations in a detailed business case.

12. **Develop a detailed implementation plan for your recommendations (integrate this suggested implementation plan to the business case created above)**

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APPENDIX 1

Staff number in the CMC

- 3 subject clerks are in the planning division- 2 FT and 1 sessional (called only for peak times)
- There is 1 billing clerk. When she is away a receiving officer (from the receiving desk) also covers her role
- There are 3 receiving officers (who are qualified draftsman)
- There is also have a Technical Office at the receiving counter supervising these three ROs
- AIs are allocated per area. We have 52 areas and each AI covers 3 areas... When an AI is on leave the others cover them
- There are 8 Building draftsmen Full time (had 10, 2 recently retired) and 4 interns (trainings now for 3 days a week) with us
- There is one planning director and 1 deputy director

Monthly Salary

Role	Monthly Salary Scales (LC)
Director	90,000.00 - 100,000.00
OIC	72,000.00 - 78,000.00
Area Inspector	35,000.00 - 40,000.00
Building Draftsman	55,000.00 - 62,000.00

Receiving Officer	55,000.00 - 62,000.00
Cash Billing Clerk	27,000.00 - 35,000.00
Intern	17,000.00 - 20,000.00
Deputy Director (Planning Committee)	97,000.00
Planning Director (Planning Committee)	88,000.00
Subject Clerk	15,000.00

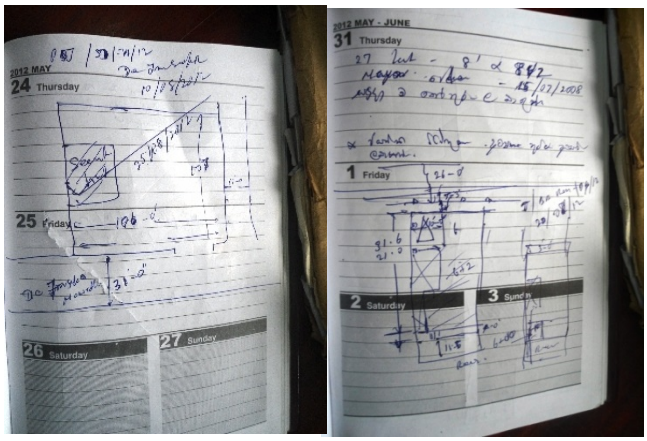
Table 1: Monthly Salaries of the People Involved

Due to anonymising of the case study the actual currency is not given, instead, it is called local currency.

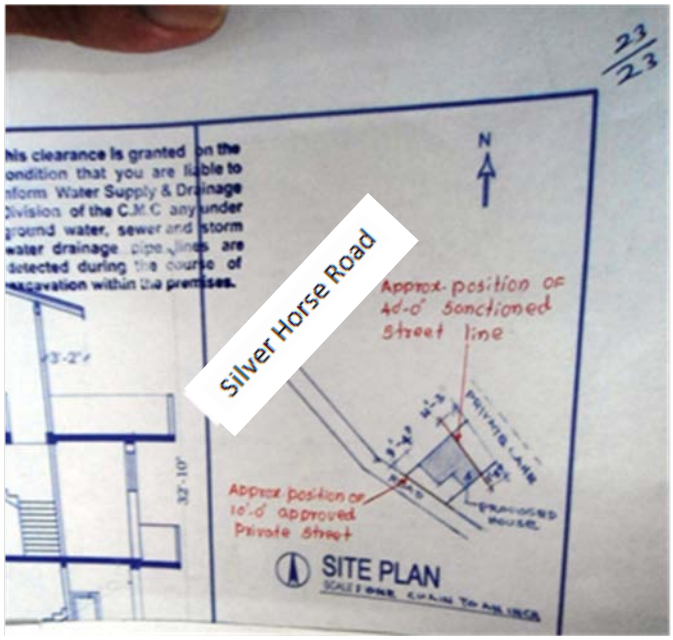
100 LC (Local Currency) = 1$

Some pictures shared by Justin

Example Case file in Records Room



Two Examples of sketches made by AIs during site visits



An example of survey plan reviewed by a draftsman

GLOSARRY

BPM – Business Process Management

BPMN – Business Process Modelling Notations

ICT – Information Communication Technology

IT – Information Technology

CMC – Colonial Municipal Council

CPA – Construction Permit Approval Process

DBI – Doing Business Index

RO – Receiving Officer

TO – Technical Officer

OIC – Officer In-Charge

BD – Building Draftsman

AI – Area Inspector

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