Measuring Government's Performance (Services) Oman Service Maturity Model (OSMM)

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Abstract—To measure or asses any government's efficiency we need to measure the performance of this government in regards to the quality of the service it provides. Using a technological platform in service provision became a trend and a public demand. It is also a public need to make sure these services are aligned to values and to the whole government's strategy, vision and goals as well. Providing services using technology tools and channels can enhance the internal business process and also help establish many essential values to government services like transparency and excellence, since in order to establish e-services many standards and policies must be put in place to enable the handing over of decision making to a mature system oriented mechanism. There was no doubt that the Sultanate of Oman wanted to enhance its services and move it towards automation and establishes a smart government as well as links its services to life events. Measuring government efficiency is very essential in achieving social security and economic growth, since it can provide a clear dashboard of all projects and improvements. Based on this data we can improve the strategies and align the country goals to them.

Keywords—Government, Maturity, Oman, Performance, Service.

I. INTRODUCTION

IN the process of implementing the e-government there were many challenges faced, one of which was gathering data that is essential for us to understand the level of maturity of each government entity. The data we needed to collect primarily was basically information about where each government entity stands in regards to its readability to move into service automation. Later on as we moved forward in the automation project we needed more information on regular basis about the work progress, yet we figured that we needed this information to be available and updated on regular basis so that we can do constant analysis and close gaps as they come up, rather than wait till we do a mid-yearly assessment which can be too late and cause a major delay in our work.

Our idea was to come up with a methodology and a tool that can help us analyze and assess many factors that can affect our transformation plan and the services quality in order to come up with the best solution and prevention techniques.

II. BACKGROUND

In the e-government transformation project we wanted to not only automate services as they are but we required that each government entity to go through a process of re-engineering its services. We wanted to ensure that each service is enhanced and done in the best, fastest and most efficient way before we move it to automation. It was only fair that we enhance the old manual way and change the policies around the business process so that we don't encounter further obstacles as we move services to being system oriented. Many times we faced situations where policies won't allow certain reengineering aspects to be implemented and approved, as in approving electronic identity or e-signature which in return would need a change in policies and governance before implementing it. Again we were facing a problem of not being able to tackle and measure all these aspects that can surround and affect the transformation process and the service quality.

There are many methods to measure an eservice quality or government performance such as statistics, surveys (web users), focus groups or web metrics [5], but primarily we needed to gather data about the overall services parameters and nature for each government entity, so we used a yearly assessment for that purpose. The assessment was divided into 2 phases, at first we asked all entities to log in all their services in what we called service catalogues. This helped us know exactly how many services are being provided by the government as well as categorize them to which are the services that target people or government or business sector. The second part of our assessment was a questionnaire, asking them general questions about their workforce and details about the service they provide or the services catalogues which will give us information such as how many documents needed to execute the service or how many visits required for such. This information we used and analyzed to form a primary report about the readiness of the government then a 2nd assessment was being carried on to track and report the progress. By comparing the two assessments we should be able to have a clear vision of the progress and identify the weaknesses, yet we had some doubts in the limitations of the assessment results since it was very statistical and in order to analyze this data and relate them to values and expected targets like efficiency, the assessment results had to be analyzed based on a person's point of view which means that different people can see this collected data in different ways. The report was based on opinions rather than actual facts.

The 2 assessments were fit for the initial 2 phases of our project which basically states that we move governments into some kind of web presence and make them document all their work processes, yet as we went on in the project these assessments were not sufficient in regards to providing essential data that can help us track the progress and allocate our resources properly. All countries are in constant lookout

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for more advanced assessment tools and especially countries that are advanced in the smart government projects. The idea was to come up with some measurement tool, which can reflect the true status of every service not just every government entity. Most best practices in this regards was to measure the overall efficiency of the government entity's portal which also didn't give any insight into the internal business process within the organization and not even gave any defined goals or targets for organizations to follow. Service maturity was measured only on 2 levels which are the availability and execution [2], but no maturity was defined for the levels that precede the full automation level. An overall target of full automation of services didn't give the government entities any defined evolutionary path to follow or defined goals to achieve. We had to adopt a measurement methodology and customize it to our current needs as well as create a software that can be live and updated as we go on with the transformation project, the idea of real time data was to really be able to see the status of any government entity at all times and tackle any problem and delays as they occur down the way.

III. METHODOLOGY

Since our main concern was not to just assess the current status but also to give the government entities an idea of the path we expect them to follow and defined targets. We believed the best way to do that was to follow a capability maturity model, CMM sets an evolutionary path for governments or processes to follow; it also helps us focus our efforts on improvements [3]. CMM provides a staging of processes for improvement from level 1 to maturity level 5 [3]. Still CMM didn't provide a specific measurement tool; it just provided an overall targets set at maturity levels without detailed and defined goals and targets for each of these levels. CMM defined level 1 to be the ad-hoc chaotic level and as the maturity level goes up processes becomes more managed till it becomes fully optimized at top maturity level 5.

We were not concerned anymore about staging a 4 level transformation process neither were we concerned about giving a general guidelines or expectations for government entities to meet since this appeared to be not so efficient as we were still unable to collect the right data in order to diagnose weaknesses and tackle problems, hence our main concern became creating a tool, a measurement tool that also includes a maturity model which can provide a definite path for every element that makes up the full process of service execution. We also believed this model can provide a competitive platform and a comparison assessment tool, so it will not only guide entities to where they should be but also motivate them to go higher in the maturity model.

IV. OMAN SERVICE MATURITY MODEL (OSMM)

Our transformation project was based on 4 levels, web presence at level 1, interaction at level 2, transaction at level 3 and transformation at level 4 consisting of general aspects on each level mainly concerned with the web portal and the online services rather than the overall service quality, so we took in consideration these transformation levels as we went on defining the maturity level of services. Another reference for quality was international standards and best practices, we had to also consider all new trends and technological outbreaks so that we always set high standards for constant improvements and this was represented in Level 5 in the maturity model.

OSMM will help us:
- Get more data that the current assessments couldn't collect or provide.
- Provide more information about the future of the government organization.
- Help us define goals and targets even in the rapidly changing environments and technologies.
- Translating strategies into defined goals and targets presented in the form of maturity levels.
- Create a platform for strategic management.

In the beginning our transformation process was based on four key areas, these were the key areas we believed we must enhance in order to achieve full transformation.
- Process
- People
- Policies
- Technology

As we went further into analyzing the factors that can affect the service maturity as well as performance levels we discovered some new elements that could play a big part in affecting the quality of the service. Those key areas cover all aspects and elements that we found could affect the service quality in the government. Now we needed to break down each of these key areas into factors and then further more into detailed elements (indicators) that make up the main area in order for us to be very specific in our measurements and analysis later on. The key processes areas are:
- Business Process
- People
- Quality Control
- Marketing
- Policies and Governance
- Technology
- Knowledge Management

Business Process is basically the whole internal and external mechanism behind a certain service, so in order to evaluate the status and define the maturity levels of the process we broke it down into sub processes and each sub process was broken down into further components. Examples are shown in the grid below (Figs. 1 & 2).
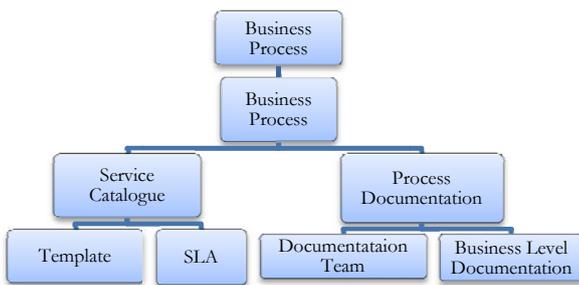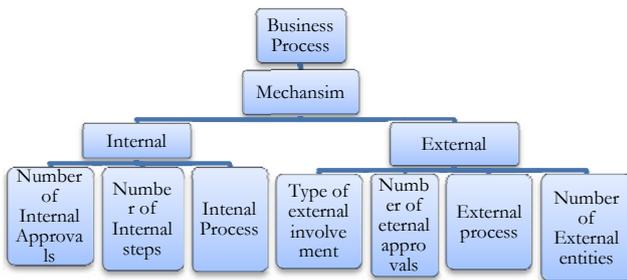
Fig. 1 Business Process Grid

Fig. 2 Business Process Grid

Sample of Business Process Breakdown:
Sample of Factors:
- Service Catalogue
- Internal Mechanism
- External Mechanism
Sample of Indicators:
- SLA
- Business Level Documentation
- Number of internal steps
- Number of visits
- Number of External Entities

After breaking down the business process into many components, for every component we developed a maturity matrix of scale 1 to 5, 1 being the basic requirement for such component and 5 being the highest trend or required target. We considered the maturity of each component to be our performance indicator. Example as shown below (Fig. 3):

Business Process	L1	L2	L3	L4	L5
Service Catalogue	Not Created	Created on hard copy	Created and published on portal	Published on Oman.om	
Process Documentation	Not Created	Created on hard copy	Created and published on portal	Published on Oman.om	
Internal Service Process	Manual	Semi-automated	Fully Automated		
Number of Visits	4 or more Visits	3 Visits	2 Visits	1 Visit	0 Visits

Fig. 3 Maturity Model Matrix

This maturity matrix measures each service individually, which means that each service goes through this maturity matrix. Each of the key process areas was broken down in the same way and for each component or sub process we defined a maturity path and each maturity level of each component is scored, the overall scoring of the business process area will tell us at which level of maturity this service is. The overall scoring all the key processes added up will tell us at which maturity level is the entire government entity at.

V. MEASURING VALUES

Most countries which have implemented the e-Government were so concerned with measuring service quality based on general measurement factors that cannot be quantified, for example transparency and reliability. Measuring values gives a message to citizens that the government is working on constantly improving their services [1]. The values quality measurements were mostly done by surveys which tested the usability of the portal and the customer satisfaction, yet it didn't measure the overall service quality from all other factors like the internal process behind the service which is an important indicator of efficiency and reliability. The greatest challenge was to break down general values into measurable quantified factors or components.

Some of these values we needed to measure in regards to the service quality were:
- Transparency
- Accuracy
- Excellence
- Reliability
- Responsiveness
- Empathy
- Fairness
- Equality
- Safety
- Time efficiency

Our target was to create a formula to measure these values, the formula would consist of different factors which if measured up together they would give us an accurate measurement for the maturity level of these values for each service and for each government entity.

Let's take for example Transparency, as a value means an open government that offer the public access to information and policies as well as establish communication channels for the public [4]. We entered all these small components in our maturity model and did an evolutionary path for each component as below (Fig. 4):

Business Process	L1	L2	L3	L4	L5
Service Catalogue	Not Created	Created on hard copy	Created and published on portal	Published on Oman.om	
Policies Published	Not Published	Published on hard copy	published on portal	Published on Oman.om	
Feedback Channels	20% of channels utilized	40% of channels utilized	60% of channels utilized	80% of channels utilized	100% of channels utilized
Service Workflow	No Tracking	Sms and Email	Online Tracking	Real Time online Tracking	
Service Rejection Justification	None	Verbally	Letter	Email	System Justification
Grievance Channels	None	Yes using official Letter	Using Web Portal		Using Electronic Channels
Service Delivery Time	No Defined Time	Defined Time	Published Timeline	Monitored Timeline	Automated Monitoring

Fig. 4 Maturity Model Matrix

If we are able to measure the maturity of the above factors we can then measure the transparency of the government entity in regards to this service, in other words if the service catalogue is publish, policies are published, there is a channel of feedback and grievance, you can actually monitor the time consumed to execute your service, you can follow the workflow and you do get proper justification in case of rejection, this can all mean that the government entity is being transparent. So the formula would be calculating the score of each factor depends on where it is in the maturity model then adding it up and diving it on the number of factors, the result score would tell us at which level is the maturity of transparency for this service.

If we then calculate the level of transparency for each service and then add them all up we will get the level of maturity of Transparency for the entire government entity. This method will help us break down general values or expectations into accurate factors that are quantifiable and could be verified; moreover these factors do have an evolutionary path that is linked to transformation levels, historical background, latest trends and public needs.

VI. CONCLUSION

Vision of OSMM

To create a unified tool, that measures the maturity of the government performance and its service quality.

Mission

- Since you cannot manage or improve what you cannot measure, this methodology can provide a performance measurement platform.
- It can provide essential information to decision makers.
- It will also help you perform GAP analysis on each service and allocate the pain areas and find proper solutions.
- It is a projects real time data that can be used to generate periodic reports about the evolution and the quality of service provided by the government.
- It can be used for assessments or comparisons between government entities.

- It can be applied to almost all areas and all sectors; it should be applicable to implement almost anywhere provided that the factors that are measured relates to that sector or process.
- Gather the data needed to perform constant analysis and reports that will help us execute the e-Transformation project.

Goals

- Provide a competitive platform for government entities and encourage them to move higher in the maturity grid.
- Give all government entities clear goals and targets which are clearly stated in the Level 5 of the maturity matrix.
- Challenge ourselves to always be up to date with latest trends and technologies and always update the maturity model with the best practices and latest trends at level 5 and by that insure constant improvements.
- Overcome the reasons behind the failure of past assessment models or tools.

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