**GRADUATE SCHOOL** 

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**Master in Information Technology**

**Capstone Project Proposal Pre-Approval Form**

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| **Proposed Capstone Project Title** |
| **Smart Employee Resource Allocation and Capacity Optimization Analysis System** |
| **Abstract** |
| Digital marketing campaign managers are the right-hand men and women who provide direct support to EY’s (PPEDs) Partner, Principal, Executive Directors and Directors, managing the marketing activities and deal activations of every business engagement their PPEDs have. They plan, organize, coordinate, and control all administrative and operational procedures, activities, and documentation and responding to every information request needed on their end. This also includes tracking marketing campaigns and providing reports EY Oceania Marketing team.  Determining campaign manager’s capacity to acknowledge and provide support is an integral part of Digital Marketing workforce management. Measuring CMs utilization rate would help Account Managers on how to efficiently allocate work request received from different requestor. They also need to identify how much time spent on Billable marketing task and non  GDS administrative work. Determining team and individual utilization rate also help them to plan further growth or optimizing resources by looking at how each team and individual spent their hours. The idea of this project is to build an application that can track CMs utilization by recording all work request provided for all AMs. The objective of this project is to lead the management do a data driven decision making by leveraging the value of data captured through the proposed system. The solution will capture and every task each CM provide on a transactional instance that will provide real time resource capacity analysis and efficient workforce allocation. |
| **Platform** |
| Desktop Application  a. C# Windows Form, Sharepoint  b. Azure Cloud Db  c. Microsoft Power BI & Microsoft Teams Integration |

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| **Background of the Study** |
| Time is the limiting factor for every service business. No matter how efficient you are, you only have 24 hours in a day.  Minus sick leaves, vacation time, and public holidays, most agencies get between 1489 to 1600 working hours each year. Not all of these hours are actually billable. Utilization rate is essentially a measure of how much of this available time is actually used in productive work, expressed as a percentage. Utilization rate is a way to measure the efficiency and productivity of an individual in generating revenue against available bandwidth, divided over a set period of time. In simpler terms, a utilization rate reflects the percentage of an employee’s work hours that can be billed to a client versus their overall availability. To calculate employee utilization rates correctly, it is recommended for BMC Manila to have a tool that captures the time spent by a CM for every marketing activities. I, as a Service Excellence SPOC for BMC Manila propose to build a tool that would allow CMs to log and manage each task received from various requestor. This project will cover BMC efficiency goal for the next Financial year. The tool aims to obtain an efficiency savings of at least 8,000-man hour savings compare to the existing manual utilization tracker they are using. |
| **Significance of the study** |
| Having a standardized approach of measuring employee capacity to handle upcoming and existing work request is what this project aims to do. Eliminating data inconsistency and incorrect utilization reporting will be addressed in this topic. Managers and team leaders will have clarity on how employee workload affect employee’s productivity and work assignments. Improving business process system particularly in workforce allocation is vital to ensure quality of service delivery and stakeholder expectation. Given that organizations are adopting to remote working, employee resource allocation and capacity optimization analysis system is key to handle attrition and properly manage demand of work going on to BMC team. |
| **Statement of the Problem** |
| Absence of business process management system to monitor employee productivity and performance results to inefficient work allocation and further escalation of requestor deliverable concern to the BMC team. Leadership doesn’t have a single source of where to get accurate agency billed and unbilled utilization rate to measure team capacity to extend or  provide services to internal stakeholders. |
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| **Objectives** |
| ***General Objectives*** |
| Develop a system that enable BMC team to track individual day-to-day task to help BMC Leaders efficiently allocate and optimize CMs capacity to manage marketing activities and operations using smart resource allocation system. |
| ***Specific Objectives*** |
| 1. Tracking Billable and Non-Billable request.  2. Monitor employee attendance.  3. Enable task sharing capability.  4. CMs performance review.  5. Optimizing CMs capacity.  6. Identify high-user PPEDDs.  7. Forecasting Utilization demand. |
| **Functions and Features** |
| 1. Task tracking and Task sharing.   2. EA attendance  3. Leave Tracker  4. Descriptive and Predictive Analytics – what is your plans here.  (Hi Doc - data acquired from the system can be used for time series forecasting to predict demand of request in the coming period.)  5. Integration of Power BI Dashboard to MS Teams, Web and Mobiles. |

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| **Proponent’s Complete Name** |
| Dominique Adrias |
| **Comments** |
| Identify what organization the system will be tested.  Dr. Leonard Alejandro, MIT  MIT - Program Coordinator |

Other Comments:

1. Don’t forget the Statement of the Problems - done
2. Significance of the Study - done
3. Discuss the two analytics, what is the benefit of using this two. Why the other two analytics is not included?

Hi Doc – I assume that the 2 other analytic capabilities are diagnostic and prescriptive. This will be the responsibility of the leadership to investigate and prescribe future actions base on the descriptive and predictive reports the system will provide via power BI.

1. Therefore, we will use power bi for the data cleaning and analytics. – hindi ba possible to create some functions to replace the integration? – Hi Doc - Creating another version of data visualization function using c# will take a lot of time to develop and will definitely undergo more studies not related to the topic. The concept of integrating Power BI is for Utilization dashboard that require almost 40% of the development. Building and designing front and back end architecture of the system is almost 50% and the remaining percentage will be spent in research and documentation.
2. Think also, what methods and instrument you are going to use. In addition, explain why you choose that method. Hi Doc- I might need your guidance in this one, shouldn’t it be in chapter 1-3?