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Proposition of A Hybrid Methodology of Project Management

Raouf Jaziri[1], Oussama El-Mahjoub[2] , Ali Boussaffa[3]
[1]PhD, College of Business/ University of Jeddah, Kingdom of Saudi Arabia
[2]Project Management Officer at STB Bank, Tunisia
[3]Project Manager NESTLE, USA
Corresponding author: Raouf Jaziri

ABSTRACT: *Project management aimed to organize the quick and smooth running of a project from the beginning to the end. It represents all operations and tactics that make a project succeed according to the triangle quality-cost-delivery (QCD).There are two famous standards of project management: PMBOK (Project Management Body Of Knowledge) and PRINCE2 (PRojects IN Controlled Environments).This article aims to combine the two methodologies of both PMBOK and PRINCE2 in order to build a new hybrid approach of Project Management.This article also provides Project Manager, entrepreneurs, executives, government officials, investors and others with a framework for practice of Project Management. Our contribution is dedicated to the presentation of the theoretical framework, which draw the scope of the hybrid PM methodology that we propose. This new hybrid methodology is built by the combination of the two standards of Project Management: PMBOK and PRINCE2 leading to an integrative approach in respect to business stakeholders and provides openness on the international scale. In this part, we explain the boundaries of the hybrid combined methodology.*

KEYWORDS *–Project Management, Methodology, PMBOK, PRINCE 2*

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I. INTRODUCTION

Project management aimed to organize the quick and smooth running of a project from the beginning to the end. It represents all operations and tactics that make a project succeed according to the triangle quality-cost-delivery (QCD). Project management focuses on the strategic management and aims to:

- Establish a business plan for a new project. It consists to a pre-study of profitability often called Business Case. Also, it explains risk taking behavior of doing the project,
- Allow you to write a note of opportunity showing how the project aligns with the strategy defined by management,
- Define a business model of the project,
- Make an inventory in advance of all the project risks.

There are some standards of project management for examples: PMBOK (Project Management Body Of Knowledge), PRINCE2 (PRojects IN Controlled Environments), ICB (International Project Management Association Competence Baseline), and the international standard ISO 21500.

After a relatively slow and modest start and in order for it to cope with the accelerating change, the PMI developed four more integrative updates of its PMBoK to become knowledge-based approach while PRINCE on its side evolved to PRINCE2 becoming a more integrative process-based methodology. The rough ideas of these concepts were designed on the rudimentary objective of building a strong basis to a fully-standardized modern Project Management. This article will dig into the underlying features and formal characteristics of each of these approaches providing a more thorough view on the divergence and similarities between the two approaches leading to pathways upon which a standardized managerial framework will be built.

II. THE PROJECT MANAGEMENT BOOK OF KNOWLEDGE: FEATURES AND LIMITS

In 1969, five volunteers in the Georgia Institute of Technology founded the PMI with the goal of developing a platform that could allow different project managers to exchange their knowledge about their

infield experiences. The overall purpose of the PMI has been subject to many adjustments with a final objective of advancing careers and improving organizational success of the profession of project management and that's throughout the standards, tools, resources, publications and networking opportunities it offers [1].

The PMBoK the PMI's main reference is defined as a "guide rather than a specific methodology" which "identifies that subset of the project management body of knowledge that is generally recognized as good practice." [2]. This guide contains a collection of standard processes, terminology and guidelines gathered under five process groups analogically to the project phases:

1. Initiating
2. Planning
3. Executing
4. Monitoring and Controlling
5. Closing

A project is defined, thus, as "a temporary endeavor undertaken to create a unique product, service, or result" [1].

The initiation phase contains two processes: the drafting of the project charter and identifying stakeholders. These processes were designed together to spur all the commitment and motivation needed to whistle the project kick-off.

Next, the Planning phase with 24 processes, consists on building a timeline of tasks and resources (financial, human and material), a schedule to address the business requirements of the project and to assess the different constraints with the various stakeholders.

Following the Planning phase, comes the Execution, in which the project manager ensures that the various resources and stakeholders are completing projects and tasks within the pre-determined timelines. Activities in this process group include: executing the tasks defined in the project plan, acquiring and performing quality control.

After the Execution is the Monitoring and Controlling phase. The objective of this phase is mastering all the project hurdles as well as having an incessant overview on the different constraints and the overall project progression slope. Eleven activities are included in this process group.

The final step is the Project Closure, This last set of processes defines the finish line to all the project activities and provides a formal structure with an assessment of the work that has been performed and the variations that have been perceived throughout the project lifecycle.

Another classification to consider in regards to the PMBoK's set of processes consists on breaking them into a number of ten knowledge areas as follows [1] [3]:

1. Project Integration Management
2. Project Scope Management
3. Project Time Management
4. Project Cost Management
5. Project Quality Management
6. Project Human Resources Management
7. Project Communication Management
8. Project Risk Management
9. Project Procurement Management
10. Project Stakeholder Management

The following figure 1 introduced in the fifth version of the PMBoK, contains a matrix that represents the mapping of the different processes classified according to the knowledge areas and process groups (project phases) they belong to.

Knowledge Areas	Project Management Process Groups				
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
Project Integration Management	Develop Project Charter	Develop Project Management Plan	Direct and Manage Project Work	Monitor and Control Project Work Perform Integrated Change Control	Close Project or Phase
Project Scope Management		Plan Scope Management Collect Requirements Define Scope Create WBS		Validate Scope Control Scope	
Project Time Management		Plan Schedule Management Define Activities Sequence Activities Estimate Activity Resources Estimate Activity Durations Develop Schedule		Control Schedule	
Project Cost Management		Plan Cost Management Estimate Costs Determine Budget		Control Costs	
Project Quality Management		Plan Quality Management	Perform Quality Assurance	Control Quality	
Project Human Resource Management		Plan Human Resource Management	Acquire Project Team Develop Project Team Manage Project Team		
Project Communication Management		Plan Communication Management	Manage Communications	Control Communications	
Project Risk Management		Plan Risk Management Identify Risks Perform Qualitative Risk Analysis Perform Quantitative Risk Analysis Plan Risk Response		Control Risks	
Project Procurement Management		Plan Procurement Management	Conduct Procurement	Control Procurement	Close Procurement
Project Stakeholder Management	Identify Stakeholders	Plan Stakeholder Management	Manage Stakeholder Engagement	Control Stakeholder Engagement	

Figure 1: PMBoK 5th edition's Processes Table[1]

It is also to mention that this set of processes contemplated within either of the classifications is led by a relational map that designates a set of inputs along with the different mechanisms that might be applied to them in order to resolve to the needed outputs.

The limitations associated with the PMBoK are that it is not widely recognized by the British companies and government and all of their partners and those who use the Project in Controlled Environments methodology, another drawback is that the highest level of qualification is the PMP Project Management Professional with no options for further development beyond this knowledge level, it also needs that the personnel working with this approach need to learn to appropriate way to work with it within their organization which may not necessarily reflect the current practices and organizational culture.

To conclude, the PMBoK a guide based on knowledge-led approach encompasses a set of 47 processes classified by knowledge area and project phase that define the best practices a project manager is to follow in order to ensure a maximum of efficiency steered by having a potent handle on the concurrence of the three main

constraints: Time, Scope and Cost.

The next section will be an overview of the different features of the PRINCE2 methodology as well as the set of limits that constraint its scope of work and define the degree of contribution, it could provide to this project work.

III. PROJECTS IN CONTROLLED ENVIRONEMENTS (PRINCE 2): FEATURES AND LIMITS

TheIn 1975, following the outcry that marked many computer projects at the Odyssey of the rise of computer sciences (and because the failure characterizing those projects was basically the substantial likelihood of falling behind schedule) Simpact Systems Ltd. developed the first set of techniques addressing the issues related to the project management under the acronym of PROMPT, Project Resource Organization Management and Planning Techniques. PROMPT introduced seven milestones for the stage flow of a computer project: Feasibility Study, Initial Stage, Specification Stage, Design Stage, Development Stage, Installation Stage and Operation Stage [4].

Next the Central Computing and Telecommunications Agency (CCTA) fostered the guidelines that PROMPT proposed and used then to come up with a first draft of the management structure PRojects IN Controlled Environments (PRINCE). The three main perspectives of progress, initially, were the BAC, Business Assurance Co-ordinator, TAC, Technical Assurance Co-ordinator and UAC, User Assurance Co-ordinator. Those perspectives included a set of methods and procedures for planning and controlling within a deliverable-led approach. Yet PRINCE wasn't generally that accepted predominately because it typically addressed large-scale projects.

In 1996 the Office of Government Commerce, taking into consideration the non-versatility of the first model, put together all the necessary elements to build PRINCE2, the second version of PRojects IN Controlled Environments which allowed advanced customizability making it an even more project-bend methodology. This led to the revised version in 2009, the latest and the most integrative version of PRINCE2.

Managing Successful Projects with PRINCE2, one of the two 2009 official manuals for the methodology (will be referred as PRINCE2 Manual throughout this report) defines a project as " a management environment that is created for the purpose of delivering one or more business products according to a specified business case"[4].

This definition leads to a managerial framework based on a three-sevens structure (7 principles, 7 themes, 7 processes) dedicated to improving the efficiency of the deployment of a project.

The next part of this section will detail the PRINCE2 structure as well as the importance in a project management context, in order to give a concerted overview of the methodology and its specificities.

1.1. The 7 principles

The seven Principles are values that should work in conjunction with the project management process. Each aspect holds a crucial utility, in that the absence of any would contradict fundamentally the PRINCE2 methodology. The basis of these principles are previously learned lessons from both, success stories and failures.

PRINCE2 contains three main managerial levels. Each level has specific tasks, and those levels with their tasks are attributed to different stakeholders:

- *Corporate and Programme Management – Senior Management*
- *Directing the project board – The Project Manager*
- *Managing the project specificities – The project manager + team*
- *Delivering – The project team*
- *Special tasks - Specialist team*

PRINCE2 Manual brings into use seven core principles defined as follows [5]:

1. **Continued Business Justification:** The PINCE2 project is driven by the "business case" in terms of the requirements definition and the validation of each of the stages. Hence, there should be a justification for the project start and that reason is meant to remain viable throughout the project lifecycle. Such a need is addressed in the business case at the initiation step.
2. **Learn From Experience:** The project history should be reviewed continuously during the project. This allows the stakeholders to adapt and adjust the project tasks in order to address any issues the team might face. Notes should appear in all reports and reviews in order to create a lessons data basis for future uses.
3. **Defined Roles and Responsibilities:** Engage all the stakeholders in the project management process. In order for internal and external contributors to get invested in a project, it is imperative that their roles and tasks are defined and agreed on. This allows stakeholders to get involved in the managerial aspect of their part of the process and to understand what the expectations are.
4. **Manage by Stages:** A stage-by-stage approach takes into consideration the planning, the monitoring or

the controlling of a PRINCE2 project. This latter requires at least two management stages: the initiation and the delivery stages.

5. **Manage by Exception:** For each of the managerial levels introduced above, PRINCE2 sets definite tolerances with the purpose of fixing limits for the delegated authority. The six tolerances to consider: *time, cost, quality scope, risk and benefits.*

6. **Focus on Products:** PRINCE2 emphasizes the importance of fulfilling the quality requirements of the products. Each product should have an accurate description defining *the purpose, composition, derivation, format, quality criteria and quality method*

7. **Tailor to Suit the Project Environment:** In order to ensure the efficiency of the PRINCE2 methodology, managing the project environment constraints like the project *size, complexity, importance, capability and risk*, as well as the different justifications and ways to use the PRINCE2 methodology, are critical. The project environment should be established and stated at *The Project Initiation Documentation*.

1.2. The 7 themes

The 7 themes are the knowledge areas that are required to be continuously evolved throughout the project. These themes are integrated to form the basis for the seven processes, which will be defined in the next section.

PRINCE2 introduces a number of seven themes detailed as following [5]:

1. **The Business Case:** In the scope of establishing the mechanisms, the Business Case consists of an *executive summary, reasons, business options, expected benefits and dis-benefits, timescale, cost, investment appraisal and major risks*.
2. **Organization:** Intended to help ensure a clear structure for the responsibility of the different types of stakeholders (business, user and supplier) within the different levels of management.
3. **Quality:** Within the scope of fulfilling the project needs and expectations, a clear definition of the quality requirements is meant to be established, this includes the *quality path, planning and control* as well as *the management strategy*. PRINCE2 manual describes a method to create a Quality Review plan, with the intent of satisfying four roles: *the chair, the administrator, the reviewer and the presenter*, by following three core steps: *the review preparation, meetings and the follow-ups*
4. **Plans:** A number of four levels of planning are introduced in the PRINCE2 manual as well as seven basic steps. The planning levels are *the project plan, stage plan, team plan and exception plan*. The basic seven steps include: *designing the plan, defining and analyzing products, identifying activities and dependencies, preparing estimates, preparing the schedule, analyzing risks and documenting the plan*. The manual also introduces a product-based planning technique which includes four steps: *write the project product description, create the WBS, write the product descriptions and create the product flow diagram.*
5. **Change:** To keep up with the different changes that might occur during the project management process and maintain the stability and security of the project, the project manager needs to master all the project issues and to hold documentation regarding those issues in records like the Issue Register or the Issue reports. The manual unfolds an Issue and Change control procedure which consists of five steps ordered as follows: Capture, Examine, Propose, Decide and Implement. It also mentions that the project board holds the ultimate authority of making any change wherein the project manager writes the Configuration Management Strategy during the initiation stage.
6. **Progress:** Progress control is about ensuring that the project is moving forward in the appropriate way, in order to fulfill the requirements according to the agreed plans and remaining valid to the Business Case. The key feature in this theme is to "Manage by Exception". The progress controls include: the authorizations, end stage assessment, highlight reports, exception reports, exception assessment, checkpoint report, tolerance and project closure.
7. **Risk:** At the initiation phase, the project manager drafts the Risk Management Strategy and hold a Risk Register. This procedure is to identify the contexts and the risks, assess them, plan responses and communicate about them. The main responses detailed in PRINCE2 manual are: avoid, reduce, fallback, transfer, accept and share for threats and share, exploit, enhance, reject for opportunities.

1.3. The 7 Processes

Each of these processes consists of a set of activities and tasks, specifically ordered to achieve particular goals as well as ensure that the project is successful. Seven processes are highlighted within the PRINCE2 manual. Those are [4] [5]:

1. Starting up a Project (SU)
2. Initiating a Project (IP)
3. Directing a Project (DP)

4. Controlling a Stage (CS)
5. Managing a Stage Boundary (SB)
6. Managing Product Delivery (MP)
7. Closing a Project (CP)

The next figure 2 shows how these processes interlace to create the process-based methodology PRINCE2 is about.

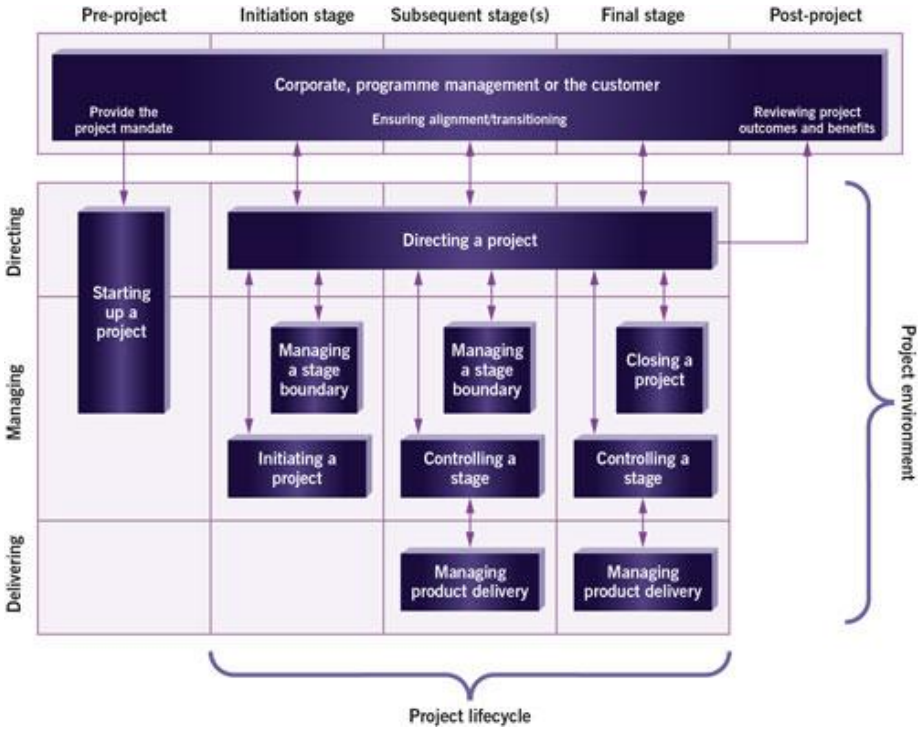

Figure 2: PRINCE2 Processes [5]

The use of these processes correlates highly with the knowledge areas associated with a good-functioning project. The themes presented above serve as guidelines ensuring a better use of the processes to meet project requirements.

Whereas, PRINCE2 presents many drawbacks such as that the methodology only works in an environment with a strong PRINCE2 foundation, this makes it hard to apply it to project management in a broader way. Another drawback is that it excludes the important areas addressing human management and the importance of leadership. Most importantly just like the PMBoK, PRINCE2 is not recognized everywhere especially in the US based companies, its feature as a standard is shared with the PMBoK being both of them the world's standards in terms of project management.

After introducing the two main standard approaches used in the modern project management, the next section will be the benchmarking between these two approaches.

IV. PMBOK AND PRINCE2: A BENCHMARKING VUE

An outer overview of the two approaches presented in PRINCE2 Manual and the PMBoK, fifth edition, outlines many differences [6]. The next table displays the major divergences between the two approaches [7].

- **Overall Benchmarking**

Table 1: PRINCE2 vs PMBoK Overall Benchmarking

	PRINCE2	PMBoK
Origin	United Kingdom	United States
Organization	APM Group, UK (Association for Project Management Group)	PMI, USA (Project Management Institute)
Recognition	Worldwide	Worldwide
Approach	Process-based methodology Defines: What, How, When and Who can do series of management processes.	Knowledge-based approach Sets of tools, techniques and best practices applied in a project management context.
Drivers	Business Case driven	Customer requirements driven

Roles	Defines the roles of all the individuals included in the managerial process	Focuses only on the project manager's role
Main Countries	UK, EU	USA, China, India

The following table 1 will disclose an upper level benchmarking between the two approaches taking into consideration mostly the new elements, the two guides recently included such as the stakeholder management, a knowledge-area that was brought out by the fifth version of the PMBoK. Two levels of comparison, the first is a structural comparison, while the second is a technical one.

- **Structural Comparison**

Table 2: PRINCE2 vs PMBoK Structural Comparison

PRINCE2	PMBoK
Main reference: Managing Successful Projects with PRINCE2	Main reference: Project Management Body of Knowledge
Sections: Introduction, Principles, Introduction to Themes, Themes, Introduction to Processes, Processes, Tailoring PRINCE2, Appendices, Further Information, Glossary and Index	Sections: The Project Management Framework, The Standard for Project Management of a Project, The Project Management Knowledge areas, Appendices.
The seven Principles: Continued Business Justification, Learn from Experience, Defined Roles and Responsibilities, Manage by Stages, Manage by Exception, Focus on Products and Tailoring. The seven Themes: Business Case, Organization, Quality, Plans, Risk, Change and Progress	The ten Knowledge Areas: Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Human Resources Management, Communications Management, Risk Management, Procurement Management, Stakeholder Management
The seven Processes: Starting up a project, Directing, Initiating, Controlling a stage, Managing Product Delivery, Managing Stage Boundaries and Closing a Project.	The Process Groups: Initiating, Planning, Executing, Monitoring and Controlling, Closing.
Each of the Processes is broken into step-by-step activities ensuring guidance throughout the project management activities.	Each of knowledge areas include a set of processes divided into process groups in accordance to the project phases.

The following section is a technical comparison assessing the technical sides and features of PMBoK against those of the PRINCE2 methodology.

- **Technical comparison**

Table 3: PRINCE2 vs PMBoK Technical Comparison

Features comparison	Similarities	Differences
Enterprise Environmental Factors	▪ Both identify the organizational culture and the portfolio context. ▪ Both take into consideration the human resources and their availabilities and include them within the different processes and stages.	▪ PRINCE2 estimates that projects commissioned in a program are likely to have a better support. ▪ The PMBoK recognizes that Project Management is highly correlated to Portfolio Management.
Organizational Process Assets	▪ Both identify a range of organizational process assets to be used by the Project Manager	▪ The PMBoK associates the procurement and the project administration to the Project Manager ▪ PRINCE2 Introduces the Management by Exception principle to delegate certain project activities to the higher management level.

Knowledge Areas	▪ Both recognize risk and quality as the chief knowledge areas. ▪ They recognize that the main project criteria are related and could be traded off against each other. ▪ Both address the Human Resource Management. ▪ The two methods highlight the importance of updating the project plans	▪ PRINCE2 provides seven themes (knowledge areas) to be applied for each of the processes. ▪ PMBoK 5 introduces eleven knowledge areas where each has its own set of processes to be used within. ▪ The PMBoK has a knowledge area called Procurement Management, which has no equivalent in the PMBoK. ▪ PRINCE2 accords special focus on the product delivery by recognizing the Business Case as a theme. ▪ PRINCE2 introduces the Configuration Management in the Change Theme, and a set of project controls in the Progress Theme. ▪ PRINCE2 focuses on the authority delegation as a core element in managing a project by including the project board notion.
Process groups	▪ Both recognize the importance adapting the set of processes with the special phases some projects would include. ▪ They delegate a certain authority to the "Sponsor" to make special decisions inter-phases.	▪ The PMBoK process groups may be applied to every knowledge area and the set of processes are divided into chucks according to each the project phases. ▪ PRINCE2 defines 7 processes, the majority of them are to be used within each of the knowledge areas ▪ PRINCE2 includes the Directing process, describing the work of the project board which has no equivalent in the PMBoK
Roles and Responsibilities	▪ They both highlight the importance of project governance as a framework including structure, processes, decision-making models and tools for managing the project. ▪ Defining roles and responsibilities answer the three following questions: what is expected from me? What can I expect from others? And what makes what decision?	▪ Three main roles are defined in the PMBoK: The Project Manager, The Sponsor and the PMO (Project Management Office) which is the equivalent of the project board in PRINCE2. ▪ The three primary stakeholders introduced by the PRINCE2 are: Business Sponsor, User and Supplier.
Key PM Products		▪ The PMBoK includes three major PM products: The project charter, the project scope statement and the project management plan. ▪ PRINCE2 has three major PM products: those are the project mandate (the delegation to the PM team the managing activities from the Programme Management team), the project brief and the project plan. ▪ PRINCE2 also includes two main products: the Business Case and the Benefits Review Plan.

At an overall scale, the main difference to highlight between these two approaches is that the PMBoK is a descriptive book of a generally accepted set of best practices taken from both the success and failure experiences based on the project management community, whereas PRINCE2 was principally developed in the form of a methodology to be tailored for use on different types of projects initially those undertaken by the British government [8].
The next section will delve into the details of the previous benchmarking and differences tables.

- **Benchmarking Analysis**

The previous tables have emphasized a large set of differences as well as similarities between both PRINCE2 and PMBoK. While the main drawback of both of them is the fact that none of them provides ready-to-use templates that would support their integration within any project management context, the content of the PMBoK as significant as it is, does not provide any specific methodology, it only provides sets of processes and knowledge areas along with bulky information of what is considered good practices for project management without any specific order. On the other hand, PRINCE2 falls short when it comes to comparing the managerial material it offers to the content that could be deduced from the PMBoK.

This led to an examination of the underlying benefits and drawbacks of fostering each of them to support the following screening process which will allow the elaboration of different scenarios, their examination and the selection process of the best alternative which would ensure a certain level of satisfaction targeting and addressing the real business need of managerial standardization.

Table 4: Features comparison in PMBoK, PRINCE2 and the New Methodology

Features	PMI (PMBoK)	PRINCE2	Hybrid Methodology
1-Recognized in the UK and EU?	No	Yes	*YES*
2-Recognized in the USA and India?	Yes	No	*YES*
3-Multi levels of development.	No	Yes	*YES*
4-Increasing value in the international market?	Yes	Yes	*YES*
5-Detailed methodology?	No	Yes	*YES*
6-Not Requiring experience and professional training?	No	Yes	*YES*
7-Flexible Methodology?	No	Yes	*YES*
8-Requires a specific environment?	No	Yes	*YES*
9-Ready-to-use templates?	No	No	*YES*
10-Detailed information about PM processes?	Yes	No	*YES*
11-Highlights the importance of management and leadership?	Yes	No	*YES*
12-Enough authority to the project manager and the project team?	Yes	No	*Yes*
13-The use of exception plans?	No	Yes	*YES*
Improved focus on the lessons previously learned?	No	Yes	*YES*
Works with modules and stages?	No	Yes	
Detailed process map?	No	Yes	
Includes working with specialty programs?	No	Yes	
Work and tests can be administered from anywhere in the world?	Yes	No	
Available in many languages?	Yes	No	
Need for ongoing certification?	Yes	Yes	

The sets of weaknesses from each of the two approaches compile a strong basis to deduce the insufficiency of each of them taken apart to the satisfaction of the main objective consisting on the following goals:

- Providing a flexible approach to be used with the many current partners as well as new potential ones.
- The approach should be associated with a step-by-step methodology to be implemented within the current managerial environment.
- The new methodology should not pose any large gaps with the initial work of screening assessment or project selection.
- It should cover enough material to match the underlying characteristics of the different set of projects.
- The methodology should include flexible ready-to-use templates.

For these reasons the best scenario will be a hybrid approach that includes both of PRINCE2 and PMBoK standards, guidelines, principles, themes and processes all combined together to provide a strong standardized support for large projects taking longer lifecycles where immediate change plans and exceptions are required to adapt to the global market needs and changes [9].

The next section will narrow the scope of this project work to a set of more pragmatic objectives matching the timeline already set. This will be in the form of a basic initial framework on which will be based the outcomes from this project.

V. THE HYBRID METHODOLOGY

Many attempts were made in developing a hybrid approach that joins all the benefits from PRINCE2 to those of the PMBoK to make from their combination a holistic integral methodology with much fewer drawbacks compared to each of them standing alone. However, such a combination does not come without issues specifically for the managerial environment which needs to be a suitable basis to endorsing both them.

The first issue to examine is the organizational governance which set forth a slight difference especially with the notions of the Project Board from PRINCE2 and the PMO from the PMBoK.

The next section will address this issue of combined organizational governance which will allow more flexibility when it comes to the level of authority associated with the Project Board and the Project Manager position.

5.1. Organizational Governance for Projects

With the PMBoK introducing three main roles, the Project Manager, the Project Management Office PMO and the Project Sponsor and PRINCE2 three slightly different main roles, The Business Sponsor, the User and the Supplier these roles along with those specific to each other should be combined all together to provide a strong and flexible organizational basis which would support both of the approaches.

This has led to seven levels of authority where each include one or more stakeholders as shown in figure 2.3. Classified into two large groups, the internal and the external stakeholders.

The first level include the Project Customer alone. The customer defines criteria and the quality levels and expresses needs to be addressed and ultimately satisfied by the means of project, He is the node following the project delivery and the one assessing the overall project outcomes either or not they effectively match the initial project needs and objectives.

Just like the Project Customer, the Project User belongs to the external environment and is considered as a direct stakeholder in the project management activities as he is the party who will use the final product of the project and will assess its effectiveness and if it really matches his expectancies from such a project.

The Project Sponsor is the party who is held responsible for the development of the project and delivery of the final product. This is the upper level of project management as it is the first node who assesses the different scenarios, selects the best among and blows the kickoff whistle of the project start. Business partners have a significant role in the screening of the different business alternatives and their assessment and intervene in all of the project work so including them at the same level as the Project Sponsor is substantial.

Talking about Business partners, the Project Customer and the Project Sponsor, the project board includes representatives from all of these parties, with the main goal of leading at a tactical level all the project work via appointing the Project Executive and the Project Manager, translating the outline business needs to objectives and goals and breaking the overall project work into stages and modules, it also gives authorization for every work package and assesses its outcomes and manages all the required exception plans as well.

In this Context, the Executive Manager will be slightly at an upper level of authority compared to the project Manager. This latter will lead the work packages stages while the Executive will lead the entire project and the communication flows between the Project Board and the project managers in the case of a project requiring more than one manager.

Supporting Experts will support the Project Manager with their expertise in his day-to-day work and will have more influence and support, in a more specific context, on the Exception Plans. While Experts are an external stakeholder, the Project Management Office, internal one, also supports the day-to-day project work through providing both the Project Manager and the Project team with the necessary information, documentation and templates needed for each step of the project work.

Suppliers, just like the PMO, but as external stakeholders, support all the project work by providing all the required and necessary goods and services that the Project Team and Manager will use in each of the project steps.

The Project Team itself will be broken down into two different groups, the Project Management Staff who will be responsible for all the initiation, planning and controlling activities, while the Project Staff will lead the project execution.

The next section will state the requirements which will be the inputs to all the Project Management activities as well as the Stage Management activities. These pre-requisites are to be available beforehand to use the information they include within all the nodes of the project management processes. They are based on the Enterprise Environmental Factors and the Organizational Process Assets notions introduced in the fifth edition of the PMBoK guide.

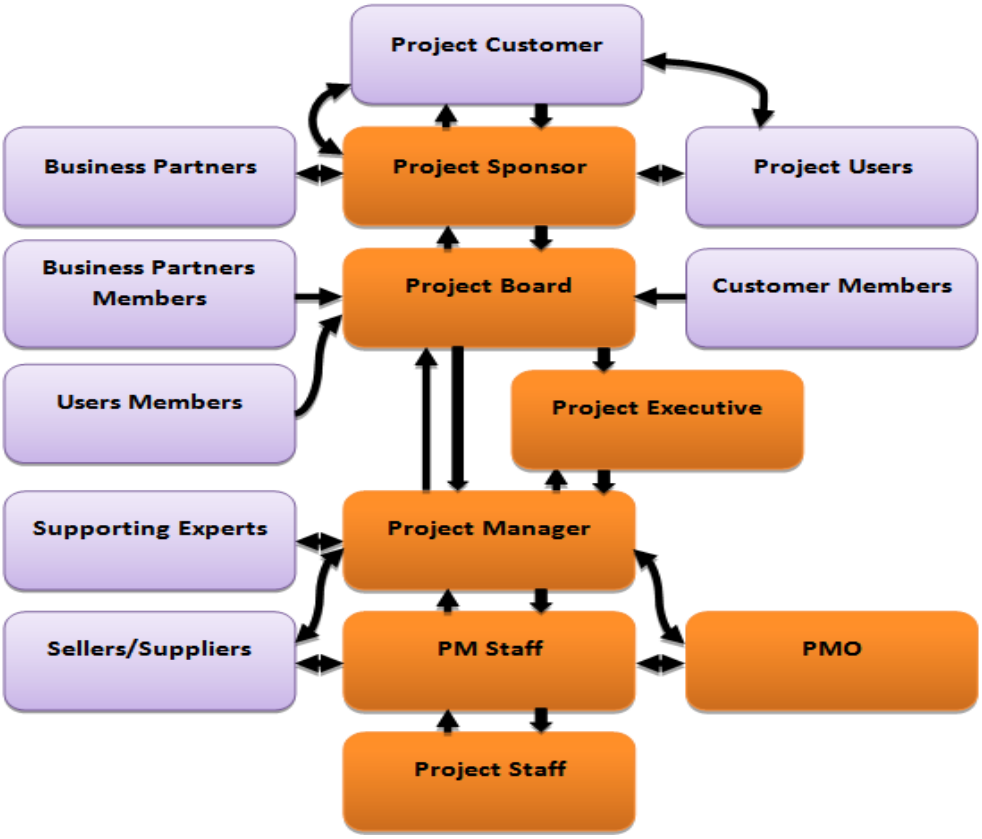

Figure 3: Combined Organizational Governance

The stage forms will be elaborated following the fifth edition of PMBoK guidelines and grouped under four big dimensions: Integration Dimension, Human Dimension, Technical Dimension and Decision Dimension. These forms are less formal than the project documentation and are subject to tailoring and changes depending on the project needs and the company's strategic choices.

The modern project management is based on the concurrence of several disciplines. They intervene all together during the stage lifecycle to shape the managerial perspective and influence its success rate.

In their book "Project Management: The managerial Process" Larson and Grey introduced two dimensions entailing the majority of disciplines defining the totality of the stage management work, the technical dimension and the sociocultural dimension.

However because those two dimensions are very inclusive, and primarily based on the processes introduced in the PMBoK, no tailoring processes were associated to the links managing the relationship between them or between the disciplines defining the scope of each. Such links have a substantial influence on the success rate as well as the smooth running of the managerial activities undertaken within them. They will be defined in this part of the stage as an independent third dimension for the stage management process.

Furthermore, the decision-making process and all the change that could stem from have a significant impact the totality of the stage scope and objectives. This process as well as all the processes created to ensure the successful implementation of the changes that could occur consequently are not without importance. Hence, the decisions-related process will be defined as a fourth dimension. A classification table will be provided in the appendix.

5.2. The Technical Dimension

This dimension is the technical side of executing stages, involving the formal and logical components of the managerial process.

It includes the majority of the stage planning and implementation processes as well as the start-up, preparation and stage closure activities. The documentation associated to the stage scope, risk analysis as well as the work breakdown structure is included within this technical dimension.

Following is a high-level list of the elements and processes constituting this technical dimension:

- Stage Charter
- Stage Management Plan
- Scope
- WBS

- Schedules
- Costs
- Quality Plan
- Risks
- Procurement
- Baseline Budgets
- Status Reports
- Progress reports
- Stage reports

5.2.1. The Human DIMENSION

This is the social side of the stage management. With all the variety of activities ranging from managing the stakeholders to the selection and validation of the stage team, this dimension demands the dedication of all the players, basically because of the high degree of variability characterizing the management of human resources.

This dimension includes:

- Stakeholders
- Organization
- Delegation of Authority
- Governance
- Leadership
- Human Resource Plan
- Communications
- Stage Team
- Negotiation
- Politics
- Problem Solving
- Teamwork
- Customer Expectations

5.2.2. The integration dimension

Primarily, this is where the PRINCE2's seventh principle "Tailoring to suit the stage environment" and the PMBoK's Stage Integration knowledge area meet in order to consolidate the stage components and dimensions with each other. Technically, this is where the links and ties between the standard methodology, the managerial process related to the organism and the stage's specificities and environment are accentuated.

To leave no confusion, the processes and disciplines involved in each of the technical and sociocultural dimension cannot be implemented efficiently if they do not synchronize their work together. As an example, this dimension assesses the degree of synchronization between the scope management and the work breakdown structure, provide the necessary justifications to such a change and adjusts the future work accordingly. For the sociocultural dimension, it helps validate the good practices related to the HRM for the stage team selection relatively to the stage need, or the required stage manager profile ensuring its ability to master the stage.

The compatibility dimension also translates the transversal requirements of human resources for each part of the stage into a set of links on which several interventions could be done. Whether improving them, adjusting the bilateral relationships or modifying them, this will help reduce the amount randomness surrounding the human resources management and ensure the best use of resources in each of the stage phases.

In this third dimension:

- Assess the stage environment
- Evaluate the risks and changes that could occur during the execution of the stage
- Assess the decisions and alternatives that could occur during the stage lifetime
- Create the method's process map specific to the stage and the related timeline for each of the steps
- Establish the stakeholders relationship map, the teams' structures and roles
- Set up the communications pathways, technology and methodology
- Tailoring the stage phases
- Adapting the teams roles and interaction to the strategic goals
- Analyze and assess the global work contribution between the different dimensions

5.2.3. The Decision-Making Dimension

The three above dimensions have a crucial influence on the good management of stages, however their probability of failing of falling within the range of challenged stages would still high when compared to the

success rate. The missing part in the context is the one related to making good decisions.
Because decision are a critical component of stage management in the sense that the planning is never exact at a first pass and several changes are endorsed in later stages of the stage, setting up a managerial process supporting the decisive part for the stages is substantially required especially for stages putting in action huge amounts of resources.
Following are the outlines of a six-step process for making hard decisions:

- Assess the business situation
- Develop information, value tradeoffs and alternatives
- Evaluate the risk and return alternatives
- Decide among alternatives
- Plan for action
- Implement the plan

Meanwhile the uncertainty wrapping the decision-making framework is not always accurately valued. Work including the assessment of probabilities and the use of simulation to assess the current data and the value of the needed or lacking information is done.

Moreover, in many cases, the decisional process exhibited above could face cases with conflicting objectives, for this case utility models related to the organizational strategy should be developed along with the risk the organization could bear when longing to any of the alternatives.

The next section is a description of how this methodology will endorse the type of management by stages which will be compared to projects inside larger projects.

5.2.3.1. A Management by stages

The PMBoK, in the Project Lifecycle section introduced the concept of phase as the elementary part of a stage lifecycle. On the other hand the PRINCE2 methodology relates to this idea by its fourth principle "manage by stages" where stages are defined within as the elementary parts of projects.
Starting from this commonality as a building block for the hybrid approach, the four above-stated dimensions will be used to shape the overall and detailed perspectives of the framework at the aim of providing it with more practicability and usefulness in a stage management context.
The generic lifecycle introduced in the PMBoK contains four phases, they will be used in accordance to stage management being a work package considered as a sub-project where all of the guidelines from the PMBoK will be applied.

The following figure 4 represents the process map for the new hybrid methodology based on a single stage model for simplification purposes. For the instance of multiple stages, which would obviously be the case for the majority of projects undertaken within the organizations fostering this methodology, this process map will be expandable to other stages preserving the same relational scheme as of the single stage model.

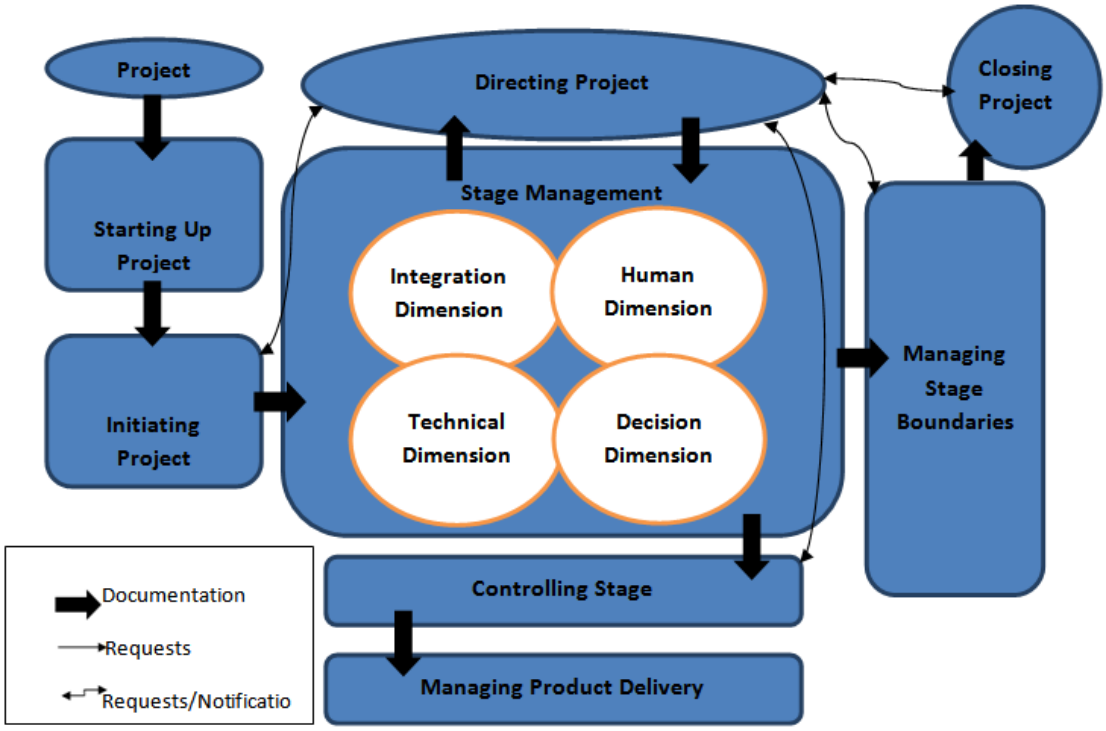

Figure 4: Process map of the new hybrid methodology

VI. CONCLUSION

This article aims to combine the two methodologies of both PMBOK and PRINCE2 in order to build a new hybrid approach of Project Management. It provides stakeholders of both public and private companies with a comprehensive summary of the project management framework and practices. It presents a practical toolkit to help manage new projects. It provides researchers in the field of project management with:

- An overview of the organizational requirements related to Project Management
- Project Management principles namely PMBOK methodology and PRINCE 2 approach.
- Recommendations on how to fulfill the obligations of Project Management process.
- Principles of the proposed hybrid methodology standards and the process of its implementation,
- A user Manual and guidance for Project Manager and executives in meeting their obligations with respect to the proposed hybrid methodology.

This contribution also provides Project Manager, entrepreneurs, executives, government officials, investors and others with a framework for practice of Project Management. Finally, it serves as a reference tool for educational institutions that will train the next generation of project managers, entrepreneurs, investors, and policy makers on good Project Management practices. In fact, this contribution, is dedicated to the presentation of the theoretical framework, which draw the scope of the hybrid PM methodology that we propose. This new hybrid methodology is built by the combination of the two standards of Project Management: PMBOK and PRINCE2 leading to an integrative approach in respect to business stakeholders and provides openness on the international scale. That's why, we have explained the boundaries of the hybrid combined methodology. Finally, last but not least, this research can serves as a basic to a future investigations in order to develop this hybrid methodology. Futures researches can present stage documentation that will include two main parts, the forms that will be used as templates to the different project and stage management activities. In addition, they can provide the stage documentation. Both of these documents will give a better grasp on all the details and data that the project team must include in these forms for a more standardized project management environment.

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REFERENCES

[1]. Project Management Institute. (2013). *Project Management Book of Knowledge*. PMI
[2]. Stackpole, C. S. (2013). A Project Manager's Book of Forms: A Companion to the PMBOK Guide, 2nd Edition. Wiley.
[3]. Larson, E. (2013). Project Management the managerial process 5th Ed.McGraw Hill
[4]. Central Computer and Telecommunications Agency. (2009). *Managing Successful Project with PRINCE2*. 2nd edition,CCTA/Stationery Office Books
[5]. Prince2 process model. (n.d.). Retrieved 01/04/ 2018, from www.prince2.com/prince2-process-model
[6]. Bell, D. (2009). Comparing the Differences and Complementary features of PRINCE2 and the PMI PMBoK Guide. ESI International.
[7]. Rankins, G. (2009). Comparing PMBoK and PRINCE2 in 2009. Goal Professional Services Pty Ltd.
[8]. Siegelaub, J. M. (2004), How PRINCE2® Can Complement the PMBOK® Guide and Your PMP®.Retrieved 01/04/2018https://www.prince2trainingen.nl/PRINCE2Websitefiles/Prince2PMBOK.pdf
[9]. Wideman, R. M. (2002). Comparing PRINCE2 with PMBoK, Retrieved28/03/2018http://www.maxwideman.com/papers/comparing/comparing.pdf

Raouf Jaziri. "Proposition of A Hybrid Methodology of Project Management"American Journal of Engineering Research (AJER), vol. 7, no. 4, 2018, pp.113-127.