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Virtual Enterprise integration management based on a Meta-enterprise – a PMBoK approach

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Abstract

A Virtual Enterprise (VE) can be viewed as a project, with a lifecycle corresponding to the period between its creation and integration of the constituting elements until its dissolution, comprehending its operation and including its reconfigurations. The authors propose that the VE lifecycle is aligned and can be managed using the frameworks provided by several bodies of knowledge, such as the PMBoK Guide. In this paper the authors propose an alignment referential between the Project Management phases defined by PMBoK and management processes during the VE lifecycle.

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1. Introduction

Project Management (PM) is essential for the development of successful projects, being transversal and having applications in many industries¹. This is particularly true in large projects, where the complexity involved requires a competent project management structure.

PM is the application of knowledge, skills, tools and techniques to project activities to meet the project requirements². So PM comprehends the planning, delegating, monitoring and control of all aspects of a project, and supports the motivation of the various actors involved, in order to achieve the goals set for the project, accomplishing the expected performance in terms of time, cost, quality, scope, benefits and risk³.

PM standards are increasingly recognized as valuable building blocks in modern organizations. Several standards, referentials and normatives provided by recognized bodies and associations offer common language, methods and procedures. For instance, the International Project Management Association (IPMA) offers the “International Competence Baseline” (ICB), The Project Management Institute (PMI) offers the “A Guide to the Project Management Body of Knowledge” (PMBoK Guide) and the Office of Government Commerce (OGC) offers the “PRojects IN a Controlled Environment” (PRINCE2). These Bodies of Knowledge are used by practitioners as ‘Best Practice’ guides to what the discipline comprises⁵.

Complex projects often involve several organizations working together in partnership or through contractual arrangements to achieve global objectives³. In this context, a Virtual Enterprise (VE), in broad sense, is a dynamic network of collaborative enterprises, and hence, a project, as addressed in this paper.

The large body of knowledge in the PM domain can be extended to the domain of dynamic, virtual, collaborative, agile and networked organizations⁴. In this context, networked and virtual organizations management is understood as management of collaborative projects.

The objective of this work is to explore and align the project management lifecycle processes, as proposed by the PMBoK Guide, with the Virtual Enterprise management processes provided by a third party or meta-organization, called Market of Resources.

The remaining of this paper is organized as follows: Section two introduces the VE model and the Market of Resources as a meta-enterprise to support the VE lifecycle phases, providing the inherent management processes. Section three explores the management processes provided by the Market of Resources, while in section four the VE lifecycle management is aligned with the project management lifecycle proposed by PMBoK Guide. Section five concludes the paper.

2. Background

Before proceeding, it is important to present the VE lifecycle, and the meta-organization Market of Resources, responsible by providing and supporting management services for VE creation, integration and operation.

2.1. The Virtual Enterprise model and lifecycle

Virtual Enterprises are commonly defined as enterprises with integration and reconfiguration capabilities that can be achieved in useful time, integrated from independent enterprises, with the aim of taking profit from a specific market opportunity^{9,10}. After the conclusion of that opportunity, the VE dissolves and a new VE is integrated, or it reconfigures itself in order to achieve the necessary competitiveness to respond to another market opportunity⁶. VE reconfiguration is a consequence to keep the permanent alignment of the VE with the market / business opportunity. The VE model is, thus, a reconfigurable network in transition between states or instances (configurations) along time.

Virtual and network organizations span the range from self-organizing to networks that are carefully planned and organized for the purpose of implementing specific projects or processes. A critical determinant in managing distributed network projects is the degree of organizational interdependence among the collaborating organizations⁷.

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