Chapter III

BM_Virtual Enterprise as an Agile/Virtual Enterprise Model

Introduction

Chapter III presents the BM_Virtual Enterprise (BM_VE) model, as an Agile/Virtual Enterprise, in total or partial conformance with the BM_Virtual Enterprise Architecture Reference Model (BM_VEARM) (i.e., as a dynamically reconfigurable network integrated over the global domain, satisfying the requirements for integrability, distributivity, agility and virtuality as the competitiveness factors). According to BM_VEARM, a virtual enterprise (VE) is “... an optimized enterprise, synthesized over a universal set of resources, with a real-time replaceable physical structure, and when the synthesis and control are performed in an abstract or virtual environment.” The importance of presenting the BM_VE is in the fact that VE, or Agile/Virtual Enterprise (A/VE), implementation and management is not possible without Market of Resources (MR), and similarly defined structures and/or organizations, as an external independent institution that would serve as an environment to support the VE dynamic integration, operation and reconfiguration, as well as “boost” to the networking (VE) dynamics, providing overcoming (i.e., minimizing) of the two
fundamental networking disablers: (1) “transaction” (i.e., reconfigurability) costs, and (2) the VE partners’ knowledge and rights protection. Market of Resources is the third mechanism, or tool, that BM_VE, or any VE conceived as a dynamically reconfigurable enterprise network uses. It is an institution, or enterprise, operating as a meta-enterprise of the operating VE.

BM_Virtual Enterprise uses three main mechanisms, or tools: Broker, Virtuality and Market of Resources. Broker is the agent of agility and virtuality. Virtuality as a tool is a specific organizational structure pattern that contributes to further improvement of agility/reconfiguration dynamics.

The consequences of virtuality, as defined in BM_VE model (i.e., in BM_VEARM), are: (1) the hierarchical structure of VE, or A/VE, organization, (2) the Resource-centered Virtual Enterprise Definition (in a way the inverse definition of the “traditional” VE definitions), and (3) the virtualization process.

The consequences of virtuality in BM_VE, following BM_VEARM, the Resource centered Virtual Enterprise Definition, and the process of virtualization, following BM_VE and BM_VEARM, directly implied by the (BM_VE) VE Extended Life Cycle, characterized by the “contractualization of the Market of Resources” environment, or a meta-enterprise for its (VE) implementation and management.

BM_VE is a ubiquitous enterprise too. This is exactly because ubiquitousness is necessarily based on the Resource-centered Virtual Enterprise Definition. Market of Resources, and similarly defined environments, enable VE, or A/VE, to operate as a ubiquitous enterprise too. Ubiquitous enterprise, and VE as a ubiquitous enterprise, could be considered as the next generation (enterprise) organizations.

**BM_VE Organization**

BM_Virtual Enterprise (BM_VE) is a Virtual Enterprise (VE) whose organizational structure is in a total or partial conformance with the BM_Virtual Enterprise Architecture Reference Model (BM_VEARM) presented in the previous chapter. Using the BM_VEARM elementary structure, or structural pattern, as the organizational structure’s building block, BM_VE provides capability to effectively and efficiently manage the competitiveness factors integrability, distributivity, agility and virtuality (see Chapter II). Actually, BM_VEARM directly provides two main mechanisms to manage the above-mentioned competitiveness factors, (i.e., to achieve the highest levels of the VE (organizationl) structure dynamic reconfigurability, or agility), which are: (1) Broker and (2) Virtuality.