Chapter XIV

Knowledge Emergence and Adaptive Management: An Exploration on the Co-Production of Project Needs and Requirements by Client-Specialist Groups

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Abstract

Project definition is the project phase that identifies the needs and values of project stakeholders, and develops appropriate design solutions to satisfy them. Project purposes are constructed through the interconnected relationships of stakeholder needs and values, and the project constraints. Projects comprise diverse stakeholders whose needs and values often conflict given that environments have limited project resources to fulfill all stakeholder interests. The research adopts the perspective that project definition is a learning process that requires the shared understanding of
stakeholder needs and values, in order to resolve them into a collective statement of project purpose. This chapter describes the significance of the project definition as a project delivery phase and outlines a project definition model for knowledge creation. The research identifies that project managers must be able to learn about the needs and values of stakeholders, and adapt the process accordingly to solve those needs. A workplace planning system is described and a case study is documented to support the proposition that project definition is a complex adaptive process, and that knowledge about project purpose emerges from group collaboration.

Introduction

Within the broad knowledge management spectrum of research, this work is concerned with the collective group process within the project setting. The project is of great importance as it forms the collective knowledge work space for the project participants. In particular, this research is concerned with group knowledge - its creation, sharing, and management within project definition activity.

This research is concerned with understanding effective management principles of group processes in the project definition phase of construction projects. We are particularly concerned with organizations that perceive the need for a physical facility to support their strategic and operational goals. Project definition refers to front-end planning and design activity for facility projects requiring capital investment.

We define project definition as the first phase in project delivery consisting of three modules: determining purposes (stakeholder needs and values), translating those purposes into criteria for both product and process design, and generating design concepts against which requirements and criteria can be tested and developed.

The primary goal of the project definition process is to define the customer’s project purpose. Without properly understanding what customers are trying to achieve, designs are not likely to meet those needs. Purpose is a term to signify intent and is the primary driver in value generation. Developing project purposes is a dynamic process and changes to each purpose throughout the course of project definition. Customer and stakeholder needs transition through various states of definition and various levels of commitment by stakeholders. We propose that purpose emerges from collaborative group interaction, that is, it is considered to be an emergent product of the group creation process.

This research addresses the value generation process, notably the value identification and value proposition phases, which are primary activities in project definition. The research focus is on managing the active knowledge creation of “project purpose” by project groups comprised of client (strategists and operations) and industrial specialists. Management typically works within a co-production model (with client groups and specialists) of project development. The research is particularly centered on project managers and the way they dynamically manage changing purposes in the early phase of project definition. Customer and stakeholder needs transition through various states of definition and various levels of commitment by stakeholders. We propose the use of
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