Chapter 2
Designing and Implementing an Innovation Management System in Young Academic Institutions Using Agile Methodology

Sachin Ahuja
Chitkara University Research and Innovation Network, India

Archana Mantri
Chitkara University Research and Innovation Network, India

ABSTRACT

This chapter proposes the use of agile methodology in designing the innovation management system in young academic institutes. Technology innovations from most universities and research institutes originate out of chaos. As a result, it is difficult to associate structure to its management. While there have been many social science research methodology based studies on this subject under the broad umbrella of "Innovation and Technology Management", there is usually an absence of well defined process to help young academic institutions to manage their intellectual property better. There is a strongly desired need to associate a clearly articulated structure for translation of ideas into technology innovations that will help young academic institutes to inculcate research in students and faculties and would help identify the best commercial application of technology innovations. Agile methodologies are best suited to be adopted in the academic scenario as rapidly changing environment of academic institutes can be easily handled using agile methodology. The aim of this chapter is to produce an evolutionary advance practical innovation management process for academic institutes out of this chaos to inculcate research in students and faculties using agile methodologies.

INTRODUCTION

The working of academic institutions is changing at a rapid pace. The technological changes are taking place at a very high speed especially in comparatively new and emerging disciplines. The traditional disciplines are also applying the knowledge of emerging disciplines. The fast change in the computer

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technology and information technology is affecting the way of life in the campus and off the campus. Apart from the technological changes, colossal transformation is taking place in various dimensions of the employer market such as competition, merger, collaboration, economic reform, adoption of new technology, way of functioning, corporate culture, continuously changing work practices, shifting in product services, and market. Continuous changes in the external environment are forcing the institution to change the way of functioning.

Besides academics, research has become essential for institutes to prove their excellence. The traditional system of teaching learning process is required to be changed in sync with the new scenario. The focus must be on research and innovation for developing a culture of knowledge sharing within the organization. Also, there is a need of evolving a robust support system that embeds the innovation management in academic institutions along with the existing academic teaching learning process. The system must be able to identify talent, provide direction and facilitate innovators to a nurturing bed. The rapid changing environment of academic institutes has seeded the way to use agile methodology for developing a system for innovation management since the very first need of adopting agility is defined as dynamic, context-specific, aggressively change embracing, and growth-oriented which aptly fits into the environment of academic institutes.

We are following agile methodology in this innovation management process. The focus is on delivering the conversion of patentable idea into patent application in shortest duration of time. The concept of Sprint in agile methodology best fits in this type of situation. Sprint refers to the duration in which agile project team has to develop working software. Sprint duration can be one week, two weeks or three weeks etc. The sprint duration can be negotiated and decided by taking consent of customer. Here the duration for conversion of patentable idea into filed patent application is been finalized after the discussion between the university authorities, coordinator and patent attorneys.

INNOVATION MANAGEMENT PROCESS

The term innovation comes from latin word *innovare*, which means 'to make something new'. The element of newness can be found in various definition of innovation which has been introduced into the literature. Khandwalla (1985), states that organizations are deemed excellent because of their uniqueness, their pioneering spirit and innovation. At different stages the excellence is something that makes the institution distinct than others. It is not necessary that all the institutions achieve excellence on all the dimensions of excellence but each institution achieves excellence in its core areas of performance. The parameters for excellence can be derived from the deployment of processes to achieve predefined objectives. The plans are implemented to achieve excellence at every stage of implementation and regular monitoring and feedback contributes a lot in achieving the excellence (Steen Hoyrup, 2012).

Innovation management is the management of innovation processes. It refers both to product and organizational innovation. Innovation management includes a set of tools that allow managers and engineers to cooperate with a common understanding of processes and goals. Innovation management allows the organization to respond to external or internal opportunities, and use its creativity to introduce new ideas, processes or products. It is not relegated to R&D; it involves workers at every level in contributing creatively to a company's product development, manufacturing and marketing.

By utilizing innovation management tools, management can trigger and deploy the creative capabilities of the work force for the continuous development of a company. Common tools include brainstorm-