

Development of a Virtual Center for Product innovation and Commercialization

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Abstract

It is estimated that nearly 90% of all new businesses fail within the first five years. Failure of these businesses is often contributed to poor planning and management of the company. Although there is help available for new businesses, it is often very basic and not enough to assist new companies to grow and survive in the competitive global marketplace of today. Therefore, a need exists for a comprehensive resource center to provide various assistance to new companies.

The Virtual Center for Product Innovation and Commercialization (CPIC) is a proposed consortium between Northern Kentucky University, University of Kentucky, University of Louisville and Purdue University. Each university would provide technical assistance in the areas of their expertise. CPIC would be available for new entrepreneurs, start-up companies, and existing companies to use 24 hours a day. In addition to reaching a wider audience this virtual center would reduce overhead costs for the universities. From conception CPIC would offer a number of modules to assist new businesses, with additional modules and features added in the future. Another innovative aspect of CPIC is that it involves students from participating universities to work with faculty experts assigned to each module. Students, especially those majored in entrepreneurial fields will gain valuable practical experience in this process. In this article, we present the development of this unique virtual center in details.

Introduction

It is estimated that nearly 90% of all new businesses fail within the first five years. Although there are a great number of reasons for these failures, if examined more closely they can be contributed to a relatively short list of mistakes. Some of the main reasons for failure are as follows [1]:

- Inadequate planning
- Insufficient capital
- Management failures

- Poor marketing plans & strategies
- Legal issues
- Lack of vision and mission

Virtual globalization of marketplace has reduced even more the chance of success for new start-up companies, since most of these new companies have few resources available to establish a strong foundation to compete in the global marketplace. The cultural and economics effects of globalization have created unique opportunities for colleges and universities that offer programs in engineering and business to provide creative methods for virtual collaboration [2, 3, 4]. The purpose of this paper is to present a unique collaborative virtual resource center available 24/7 to assist new companies lacking scientific, economics or technical know-how knowledge.

This article is presented in four sections. Section I focuses on the justification and mission of the center. Section II defines the center operations and provides a graphical representation and operation of the center. Section III discusses the modules to be implemented by the center. Section IV describes future development and conclusion.

Mission

The virtual center promotes the opportunity to gain the knowledge and innovation skills to cope with the formidable technological, economic, social, and financial changes associated with creating value from technological knowledge in an age of global competition. The focus of the center is on the rapid transfer of research, knowledge, and technology from the laboratory to the marketplace.

CPIC is ideal for professionals who:

- Work in multi-functional, and perhaps global and virtual, product development teams.
- Work in supply chain management or supplier partnering.
- Are interested in general management of technology commercialization processes.
- Work in technology transfer at a university, R&D laboratory, incubator, or science park.
- Are involved in government or commercial research and development.
- Are involved in regional economic development in government or other organizations.
- Want to learn how to transfer Product Innovation, either as new start-ups or spin-offs, or within an existing organization.

The CPIC will encourage professionals to:

- Act as change catalysts for the improvement of technology commercialization processes.
- Form more effective relationships with partner organizations for the transfer of technology into or out of the organization.
- Manage technology valuation and licensing activities.

- Perform more effective and efficient technology assessment.
- Develop fast and effective transfer models, which have enhanced success and application.
- Create more effective public/private relationships, alliances and partnerships.

Center Operation

The Center for Product Innovation and Commercialization (CPIC) operates as a collaborative effort between Northern Kentucky University, University of Kentucky, University of Louisville and other universities and companies. The graphical representation for the center is shown in Figure 1.

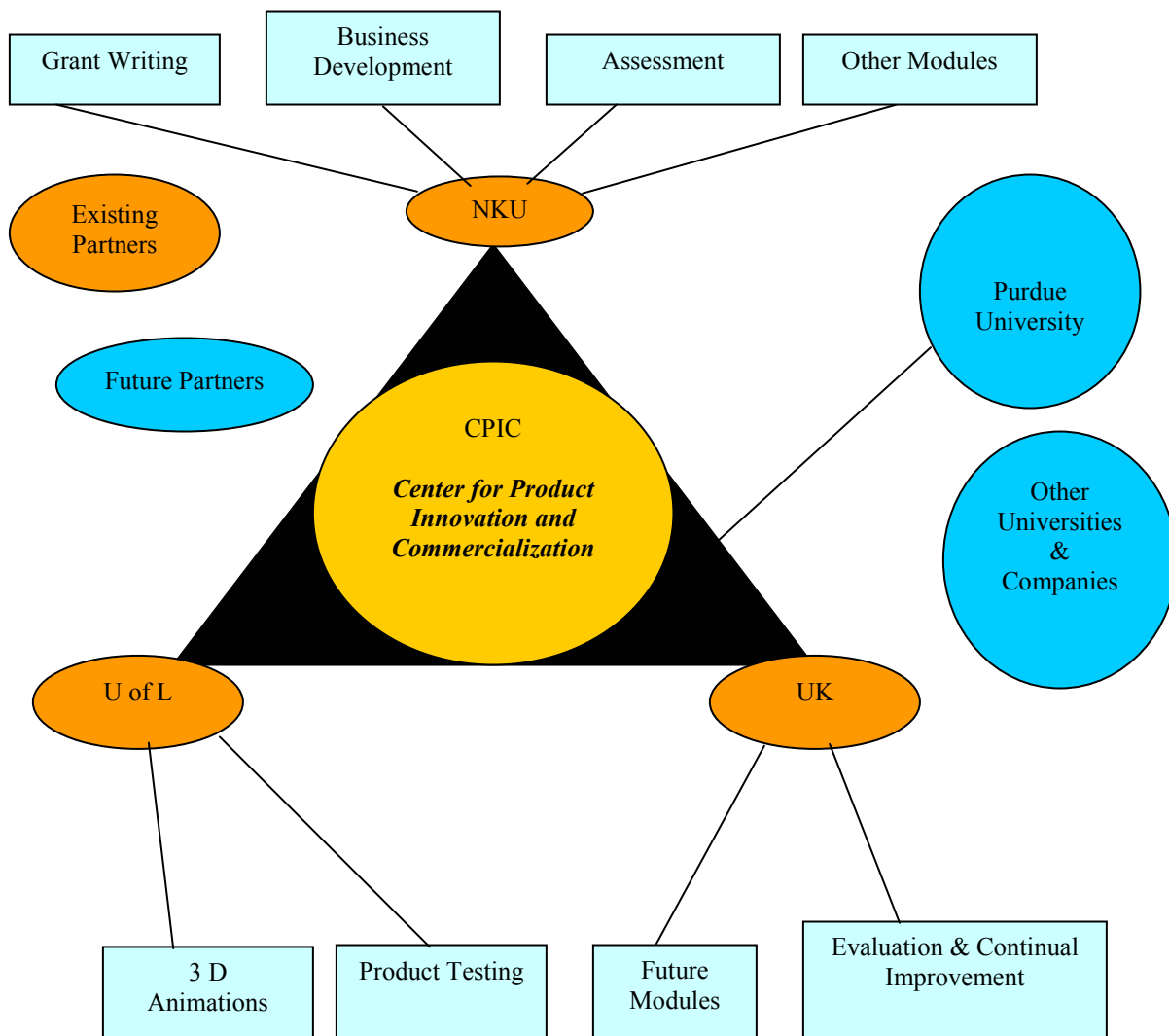


Figure 1.Center Graphical Representation

Each one of the partners in this center will be responsible for creating and maintaining modules assigned specifically to them. The specific expertise of partners will be used in their

*Proceedings of the 2005 American Society for Engineering Education Annual Conference & Exposition
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individual modules. Furthermore, members of CPIC community will be used as experts to provide advice and assistance to clients using the center.

When the client enters the center they will start with the assessment module. After assessment, staff members will recommend appropriate modules according to their needs. Each module is directed by a panel of experts. The panel include faculty from partner institutions who will use appropriate resources including course they teach to complete that section of the project. For example, if the assessment module indicates that the client needs assistance with product design, creating a business plan and writing grants, those modules will be selected for the client. Then, the panel of experts for each module decides and locates available resource to complete the modules. Next, maybe a product design course offered at NKU and a business course offered at UK will be selected to complete the project for the client. This unique approach will give engineering and business/ entrepreneurial students a great opportunity to work on a real world project in a virtual environment. The graphical operation of the center is shown in Figure 2.

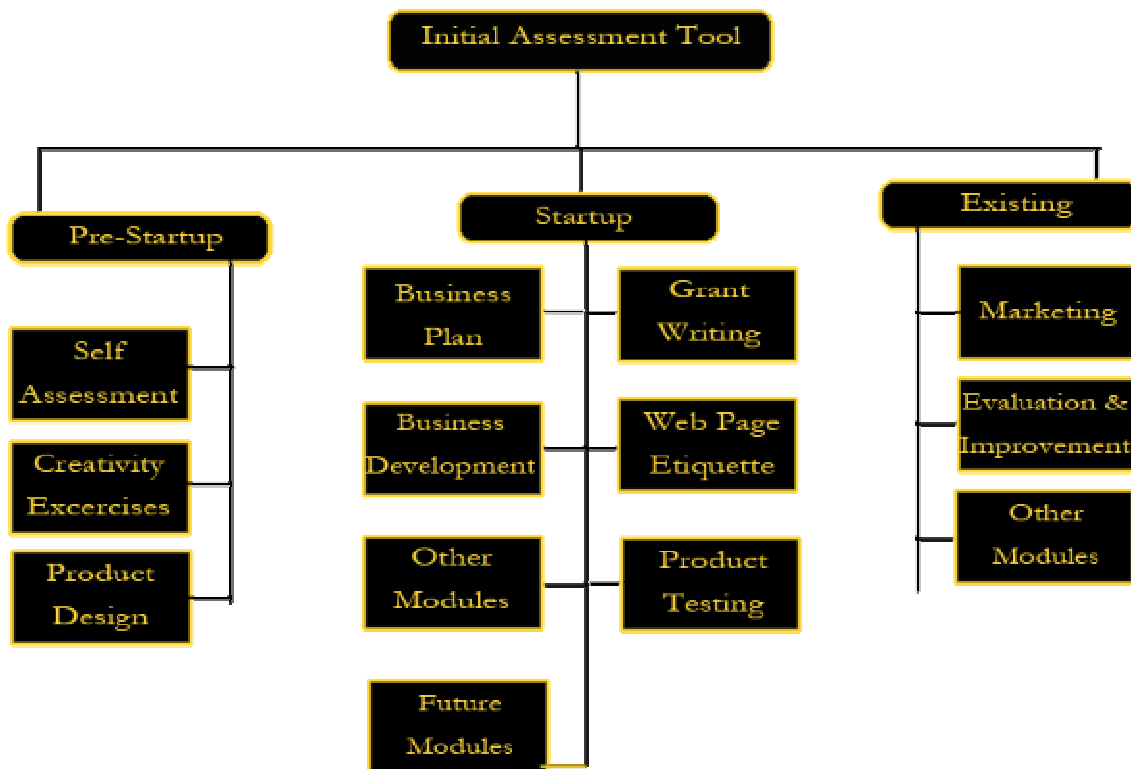


Figure 2. The Graphical Operation of the Center

Modules

When the client enters the virtual center, they begin with the assessment tool to evaluate the needs of the client. Other modules include The Business Plan Module which provides the client with business plan basics, advice, and additional resources. The Grants Module provides information on finding the grant, writing the grant, application review, and follow-up advice. The Presentations Module and Website Module assist clients with tips for development and implementation, as well as, additional resources for their needs. Other modules will be added using similar formatting.

Future Development

More research is underway to determine future needs of CPIC. There are many additional modules that could be developed in the future to meet the client's needs. Suggestions include but are not limited to the following:

1. Legal (Workers comp. Laws, Federal and State tax laws, Insurance, Registering a name, and Licensing permits)
2. Record-keeping
3. Helpful Software
4. Feasibility Studies
5. Customer Profile/Target Audience
6. Venture Capital and other funding options
7. Structure (Sole proprietor, Partnership)
8. Location and lease details

Additionally, CPIC could offer mentoring and networking opportunities. New Start-up companies could mentor with existing companies to receive advice, guidance, and support. Additionally, CPIC members could network together to assist each other in achievement of their goals. As a final future recommendation, CPIC staff should develop a tracking system to track user access and determine methods to evaluate center's effectiveness and customer satisfaction.

Conclusion

Start-up companies have only a 10% chance of success in the first five years of business. And competition is fierce in today's global market for new companies to succeed. With this in mind, it can easily be determined why a center such as CPIC would be beneficial to start-up companies in Kentucky, Midwest region, and eventually nationwide. There are some resources available to small business owners at the present time; however, none of these resources provide a virtual consortium consist of many experts from several major universities. It is vital that this region be serviced with a center such as CPIC to ensure companies have extensive information available together in one place. The main goal of the center is to help new companies to foster better business decisions and increase their chances of success in the competitive global marketplace of today.

Acknowledgment

The authors wish to express deepest gratitude to the late Dr. James Gray and all of students registered for MST 612 class for their contributions to this project.

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