University Expert Web Portal as a Sustainable Part of the State-wide Innovation Ecosystem

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April 6, 2023
Goal of the Study

• Explore value, growth, and sustainability of state-wide innovation initiatives using expert system web portals
• Focus on multi-university initiatives as a part of the state-wide innovation
• Research innovation initiatives focused on connecting university resources to industry
• Discover innovation initiatives’ value propositions created for the industry
• Examine the usage and sustainability of the innovation initiatives
• Inquire on marketing strategies, staffing, data domains, and incentives to develop, use, and sustain the initiatives
Aspirational Framework

• University-industry collaboration as a desired outcome of the state-wide innovation ecosystem
• Differences in cultures between universities and companies
• University resources create a knowledge-based component of the innovation ecosystem
• Cumulative knowledge effect as a result of university networks
• Web tools to assist in connecting resources among universities
• Web tools to assist in connecting university networks to companies
• Costs and benefits of university networks, web tools, and university-industry collaboration
• Interviews as a research tool, representativeness, and learning from successes and failures
Selection Criteria

• Reflect statewide technology and innovation ecosystem
• Bring together talent (university researchers), technology, and facilities of more than one university to create state-wide innovation
• Have a searchable portal containing the talent, technology, and facilities provided by the organizations
• Connect university talent for research projects
• Connect the talent, technology, and facilities of the universities to businesses
• Preferably serve the entire state
Completed Interviews

- ExpertNet (FL)
- FuzeHub (NY)
- University Research Corridor (MI)
- University of Texas Medical Branch
- Texas A&M
- Symplectic
- Oklahoma State University
- Manufactured in North Carolina
- Ohio Innovation Exchange (OIEx)
- University of Illinois, Chicago
- Illinois Innovation Network
- Indiana Innovation Institute

Number of initiatives – 12
Number of interviewees – 15
Initiatives with web portals – 8
Custom-built portals – 3
Industry-oriented initiatives – 7
With web-portals – 3
Results - Framework

• Utility of Universities as a component of the innovation ecosystem
• Universities and university networks represent the supply side of the innovation ecosystem
• University resources create a cumulative effect on the innovation supply
• Utility of web portals for internal use
• Utility of university resources for industry usage
• Industry-oriented initiatives are demand-driven
• Project-based and company-focused approaches are prevailing in the demand-driven initiatives
History, Aspiration, and Value

- Both the ability to use university resources for single or multiple universities and economic development (company, industry, regional) were aspirational goals for creating initiatives and web tools
- The history of interviewed initiatives ranged from 1999 to 2020
- Startup funding ranged from $10,000 to $900,000 (for single or multiple years, not more than 3 years)
- All initiatives considered themselves to be successful and to have reached their initial goal
- The value of the initiatives is assessed by a range of measures: from the initiative being still operational to jobs created and high ROI
Value and Success: Supply Side

- A predominant number of the supply-driven initiatives see the value of the initiative/web tool as a public good.
- Value is structured across the university resources for a cumulative effect of research and utility of a single university.
- Most use a web tool engaging 2-3 software engines (standard or custom-built).
- The utility and funding are not directly connected to the matrix of indicators or measuring ROI.
- Financing of the initiatives is built into a budget of a funding entity (state, university, network of universities).
Value and Success: Supply Side (cont.)

- Current funding is usually aspirational and uses broad economic impact as a testimony of success; **no fee for services**
- Future budget is usually aspirational as well; budgetary goals are set towards using additional resources to illustrate the supply
- Primary audience is researchers (all or only research faculty) to use as a promotional and evaluation tool
- University leadership, governments, and ED organizations are mentioned as a secondary audience; industry/company usage is mentioned sometimes
- Predominant goals: promote single or create collaborative research
Effect of Cumulative Knowledge: Supply Side

• University resources create a knowledge-based component of the state-wide innovation ecosystem

• University networks share a common goal and create a cumulative knowledge effect by providing access to cross-sector innovation

• The expert system web portal concept reaches beyond a supply-side summation of multiple universities’ resources – this is a state-wide open-access innovation resource hub

• Innovation requires continuity of investment and business approach, including but not limited to buy-in from senior leaders at the state, university, college, and department levels
Value and Success: Demand Side

• A predominant number of the demand-driven initiatives have a specific economic development goal (industry, type of organizations/services, region)
• The initial goal is usually conservative and is set to grow
• Each initiative has a specific matrix of success, sometimes including ROI
• Funding is built through a very specifically identified budget and budgeting process
• Majority of initiatives do not have a web tool beyond a website
Value and Success: Demand Side (cont.)

• Usually project-oriented with the fee for the scope of work structure (fee for services)
• The initiative usually aims at sustainability with a set timeframe
• Funding is built as a “lean model”
• Connecting a company to university resources is assisted by a staff person
• Primary audience – companies, industries, and organizations that can benefit from specific services
Sustainability and Growth

• Both the supply-driven and demand-driven initiatives aim at sustainability, but in a different way

• Supply-driven initiatives see sustainability as the stability of a budgeting process in the funding organization; expansion of the initiative is seen as a possibility to increase budgeted funding

• Demand-driven initiatives measure revenue/ROI, and usually, the goal of the increased revenue is to expand the initiative

• Both the supply-driven and demand-driven initiatives usually do not have a formal plan or advisory tool assisting them in achieving sustainability

• Vision of being a part of the state-wide ecosystem is often internal and aspirational
Usage and Marketing

• Marketing is not at the forefront as a specific goal with a budget
• Supply-side marketing is driven by promoting a university and university research in general
• Demand-driven initiatives’ marketing is very similar to marketing project-driven initiatives
• Performance of the supply-driven initiatives usually does not go beyond Google analytics (sometimes with very detailed analysis) and custom reports
• Performance of the demand-driven initiatives is measured by revenue growth, increased pool of clients, and ROI
Additional Findings

- Supply-side initiatives usually do not have a business model
- The business model of the demand-driven initiatives
- Data updates are often encouraged by mandatory evaluations
- Buy-in from leadership is a must and correlates with the success of the initiative
- Staffing ranges from 0.5 FTE to 3 FTE and depends on the complexity of the initiatives and the type of web tool used
- Workforce started to be embraced by the initiatives as the importance of this critical resource of ED is growing
For questions and comments please contact

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