



Creating the Agri-Food Informatics Research Institute

in-for-mat-ics (in'fər-măt'iks) *n.* - science of applying analytics to large volumes of data used in decision making as a response to changing business conditions, policy considerations, and social norms impacted by economic and environmental compliance standards that continue to evolve.

Project Concept

Through a grant from the U. S. Department of Commerce's Economic Development Administration (EDA), the Great Valley Center is coordinating the creation of a business plan to determine feasibility and guide development of the Agri-Food Informatics Research Institute, at the University of California, Merced. The purpose of the Institute is to research new information-based technology and technological applications for the agri-food system. UC Merced is located in California's primary crop production area and hopes to serve as a resource for the economic and intellectual development of the region.

Defining the Agri-Food Informatics Research Institute

The Institute will be interdisciplinary in nature, and will draw from a diverse group of fields including agriculture, natural resources, engineering, computer science, and business. The Institute will focus on the application of information science to all aspects of the agri-food industry, from seed production to product delivery. It will identify, research, develop, apply, and transfer information, analysis, and communication technology to agri-food and associated businesses and organizations. In doing so, the Institute will help business become more efficient, competitive, and responsive to ever-changing markets and regulations, both domestically and globally. Informatics may be used to address an array of topics such as regulatory compliance, environmental monitoring, quality assurance, traceability, and tracking new agricultural technology and markets.

“This is an exciting new field of research that brings together the activities of data collection and analysis for decision-making that can have a profound impact on our economy,” commented Carolyn Lott of the Great Valley Center. The Institute will assist existing farms and companies in developing tools and information to compete in an increasingly global market, as well as encourage the formation and growth of new enterprises. Agri-food and related industries will participate in collaborative research, educational programs, training, technology transfer, conferences, and publications pertaining to a broad range of crops, as well as dairy and livestock. The Institute will work in collaboration with public and private research, development, and educational organizations to identify and address challenges in areas related to its mission.

A Unique Opportunity

The Institute will be unique in application of information technology to the agri-food sector with the goal of creating a sustainable food and agriculture industry in California. To be sustainable, the agriculture industry must be able to support itself economically, environmentally, and socially through time. These three goals are inextricably linked and reinforce each other, and can all be addressed using the application of informatics. Informatics can help businesses become more economically sustainable by helping to reduce costs, use resources more efficiently, create higher value products, and identify market opportunities. For example, informatics can help producers employ precision agriculture to reduce their need for inputs such as fertilizer, which has positive financial and environmental implications.

Informatics is a useful tool in evaluating and improving the efficiency of the total food supply chain. Informatics can result in improved market linkages and communications, leading to better decision-making. In the final analysis it is hoped that the Institute can play an important role in maintaining and expanding food production in California, which in turn preserves the “culture” of California agriculture, as well as the millions of jobs that it supports.

Project Implementation

After seeking competitive proposals to complete the scope of work, the Great Valley Center selected Agland Investment Services, in Larkspur, California, to prepare the study. The Project Manager is Mr. Andrew Arnold, formally with John Deere Food Origins. Agland will prepare the business plan in collaboration with UC Merced, industry, government, and additional interested parties to ensure the plan has support and input from the stakeholders. William P. Mott, President, Agland Investment Services said, “[w]e are pleased to be involved in what could become a very unique institution. After all, California is the 6th largest economy in the world; it is the ‘Gold Standard’ for the production of diverse food and agricultural products. Furthermore, the San Joaquin Valley is next door to Silicon Valley....in this context there must be an opportunity for new thinking and synergism to take place”.

Project Goals

This project will result in a business plan that will:

- Clarify the mission and goals of the Institute, its clients, how it will operate, and its facility needs.
- Identify the founding board of directors, advisory boards, management structure, and staff qualifications.
- Identify potential funding organizations and stakeholders to support its operations.
- Identify alternative locations on and off-campus.
- Identify economic development opportunities and job creation strategies in the agri-food industry sectors.

At the completion of the development of the business plan and an outline of “next steps” to be taken, UC Merced will take responsibility for the creation and operation of the Institute.

Project Phases

The Agri-Food Informatics Research Institute will be created in two phases:

Phase I – Scoping

Determine the breadth of the Institute through interaction with a steering committee of appropriate agri-food industry experts and an advisory committee of businesses who have donated to the project. Interviews and focus groups with stakeholders will play an important role in defining the strategy, goals, mission, and structure of the Institute. Industry participants will include producers, processors, and agriculture service providers.

Phase II – Business Plan and Relationship to the University

The results of Phase I will be summarized and an organizational and business plan that will be prepared for discussion with stakeholders, potential financial sources, and the University. The final plan will be submitted to the EDA.

Anticipated Benefits

The goal of the Institute is to conduct research and generate new ideas and technologies that can be put to practical use to benefit industry, the economy, and the environment.

The Institute will conduct research that is expected to have ancillary benefits for the following significant regional issues:

- Act as a central resource for the diverse information needs of the food and agribusiness sector.
- Help agri-food businesses use computing and communications technologies to become more competitive and efficiently serve global and domestic markets.
- Encourage job creation and local workforce training in new and existing businesses serving the agri-food industry.
- Help resolve agriculture-related natural resources issues including weather prediction, land use, water, and air quality.
- Help agriculturalists address a range of challenges, including labor and energy costs.
- Foster collaboration among the diverse crops and sectors of the agri-food industry.
- Raise the reputation of California's Central Valley as a center for continuing innovation in the agri-food sector.

The Institute will serve as a gathering point for agri-technologists to talk, network, and develop technologies that might result in spin-offs that create or support local business. It will attract compatible investment, encourage a new cluster of related business, and create new jobs.

The Agri-Food Informatics Research Institute is appropriately placed in California's Central Valley, the center of food and agricultural production in California. It will connect the research community with the private sector and develop a network to enhance innovative agri-technology. The Institute will help in the continuing evolution of the Valley's agri-food industry and the regional economy.

For further information, please contact:

<p>Carol Whiteside, President Great Valley Center 201 Needham Avenue Modesto, CA 95354 Tel: (209) 522-5103 Carol@greatvalley.org</p> <p>or</p> <p>Carolyn Lott, Senior Program Manager Great Valley Center Carolyn@greatvalley.org</p>	<p>William Mott or Bill Scott 900 Larkspur Landing Circle, Suite 205 Larkspur, CA 94939 Tel: (415) 461-5820 wmott@aglandinvest.com</p> <p>or</p> <p>Andrew Arnold Project Director Tel: (209) 648-6810 Andrew1arnold@yahoo.com</p>
--	---