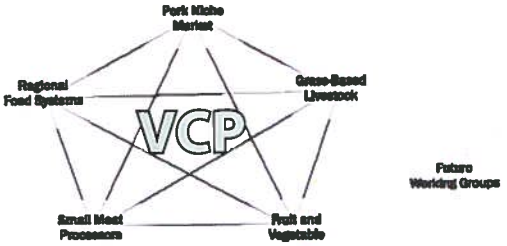
Value Chain Partnerships

An Iowa-Based Network for Food and Agriculture Working Groups

Value Chain Partnerships is an Iowa-based network for food and agriculture working groups that brings together producers, businesses, and state and federal organizations. We work to deliver social, environmental, and economic benefits to our clients and communities. Our community of working groups does this via four core functions: acting as information hubs, catalysts for cooperation, magnets, and scouts. VCP's core functions set it apart from other food and agricultural networks.



VCP's community of working groups drives its collaborative process.

Value Chain Partnerships Core Functions

Information Hubs	Catalysts for Cooperation	Magnets	Scouts
Provide an information clearinghouse	Create solutions collaboratively	Attract funding	Identify food and agriculture challenges
Benefits include: • Access to larger portfolio of knowledge and expertise • Greater awareness of available programs/expertise • Research opportunities available	Benefits include: • Operate more effictively • Coordinated use of resources • Deconstruction of organizational boundaries • Access to a support network	Benefits include: • Ability to leverage resources within the private and public sectors • Increased probability of funding because network is established	Benefits include: • Better grasp of emerging challenges • Improved decision making to modify strategies • Ability to bring in new partners and champions
Benefits provided to farmers, other businesses, and state and federal organizations within a collaborative multi-organizational environment *Pork Niche Market + Regional Food Systems + Small Meat Processors + Fruit & Vegetable + Grass-Based Livestock*			

Pork Niche Market Working Group ***(initiated 2001)***
This working group is comprised of niche pork companies and supporting groups. Its aim is to create and maintain more competitive and viable operations for smaller-scale players in the pork sector.

Regional Food Systems Working Group ***(initiated 2003)***
This working group is comprised of practitioners and community leaders organized by geographic location. Its aim is to increase the investment in and support for local and regional food businesses in Iowa.

Small Meat Processors Working Group ***(initiated 2006)***
This working group is comprised of small meat processors, state agencies, and producer groups. Its aim is to improve the vitality of small-scale meat processing plants in Iowa.

Fruit and Vegetable Working Group ***(initiated 2007)***
This working group is comprised of fruit and vegetable growers and buyers and their assistance providers. Its aim is to build the production, handling, and marketing capacity of Iowa's fruit and vegetable industries.

Grass-Based Livestock Working Group ***(initiated 2008 – a Leopold Center cross-initiative group)***
This working group is comprised of people from grass-based farm and food businesses and the outreach professionals who support them. Its aim is to promote viable grass-based livestock production, diverse market opportunities, and environmental services in Iowa.

Contact Rich Pirog at *rspirog@iastate.edu* or Beth Larabee at *blarabee@iastate.edu*, or visit us on the web at *www.valuechains.org*.

Leopold Center for Sustainable Agriculture

LEOPOLD CENTER

Overview of the

Marketing and Food Systems Initiative

Objectives for the **Marketing and Food Systems Initiative** are to:

- Research and test new marketing strategies and business structures that allow Iowa's farmers and communities to retain more of the value for energy, food or fiber produced;
- Support education, conduct research and facilitate partnerships to increase investment and support of local and regional food, fiber and energy enterprises; and
- Using a communities of practice* framework, conduct research and education to address challenges that impede farmers and farmer networks from being equal partners in energy, food or fiber-based value chains.

Organization

The Marketing and Food Systems Initiative is one of three program areas at the Leopold Center for Sustainable Agriculture at Iowa State University. Program leader is Rich Pirog, rspirog@iastate.edu, (515) 294-1854. Work in this initiative is supported by Beth Larabee, Leopold Center program assistant, and ISU graduate students.

Activities, research and outreach

The Marketing and Food Systems Initiative sponsors a wide range of competitive grants and seminars, as well as an annual workshop to achieve initiative objectives. In addition, the initiative staff conducts in-house research, provides presentations and consultations, and collaborates with food system researchers and educators across the United States, Canada and Europe on emerging topics such as energy use, life cycle assessment, place-based foods and food value chains. On average, the initiative staff annually handles more than 70 media inquiries, gives 25 presentations, writes three in-house papers and one peer-reviewed paper and responds to more than 300 requests for information or assistance.

Competitive grants

The Leopold Center has conducted a competitive grants program since 1988 in accordance with the legislation that established the center. Project abstracts from annual workshops and final reports can be found on the Marketing and Food Systems Initiative page on the Leopold Center Web site. More than 20 projects are currently underway on topics such as:

- Access to capital
- Distribution and processing
- Environmental and economic impacts
- Food and health
- Food safety and energy use in food systems
- Immigrant, beginning and transitioning farmers
- Local food assessment and capacity building
- Marketing and market research
- Profitability and business planning

Value Chain Partnerships

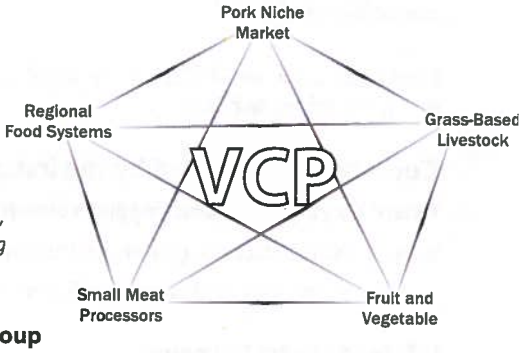
Value Chain Partnerships (VCP) is an Iowa-based network for food and agriculture working groups. The project is led by the Leopold Center's Marketing and Food Systems Initiative and includes ISU, ISU Extension and Practical Farmers of Iowa as core partners. The project was initiated in 2002 with funding from the W.K. Kellogg Foundation, the Leopold Center and ISU, and has expanded to include the operations of five working groups. VCP works to deliver social, environmental and economic benefits to its clients and communities. This is accomplished by leveraging funds and expertise to identify food and agriculture system challenges, foster learning and innovation and implement solutions.

VCP working groups

Pork Niche Market Working Group
(initiated 2001)

This working group is comprised of niche pork companies and supporting groups. Its aim is to create and maintain more competitive and viable operations for smaller-scale players in the pork sector.

Contact: Gary Huber, Practical Farmers of Iowa, gary@practicalfarmers.org



Regional Food Systems Working Group
(initiated 2003)

This working group is comprised of geographically-based practitioners and community leaders. Its aim is to increase the investment in and support for local and regional food businesses in Iowa. There are six local working groups that participate and jointly manage the Regional Food Systems Working Group:

- Northern Iowa Food and Farm Partnership
- Northeast Iowa Food and Farm Coalition
- Southwest Iowa Food and Farm Initiative

* Communities of Practice (CoPs) are groups of people in organizations that come together to share what they know, to learn from one another regarding some aspects of their work and to provide a social context for that work.
From: Wenger E., R. McDermott and W.M. Snyder, 2002. *Cultivating Communities of Practice*, Harvard Business School Press, Boston, Mass.

- Homegrown Harvest of Southeast Iowa
- Northwest Iowa Regional Local Foods
- County of Marshall Initiative for Diversified Agriculture (COMIDA)

Contact: Rich Pirog, Leopold Center for Sustainable Agriculture, rspirog@iastate.edu

Small Meat Processors Working Group *(initiated 2006)*

This working group is comprised of small meat processors, state agencies and producer groups. Its aim is to improve the vitality of small-scale meat processing plants in Iowa.

Contact: Arion Thiboumery, arion@iastate.edu

Fruit and Vegetable Working Group *(initiated 2007)*

This working group is comprised of fruit and vegetable growers and buyers and various supporting organizations. Its aim is to strengthen the production, handling and marketing capacity of Iowa's fruit and vegetable industries.

Contacts: Malcolm Robertson, Leopold Center, malcolmr@iastate.edu; and Margaret Smith, ISU Value-added Agriculture Extension, mrgsmith@iastate.edu

Grass-Based Livestock Working Group *(initiated 2008 as a Leopold Center cross-initiative project)*

This working group is comprised of people from grass-based farm and food businesses and the outreach professionals who support them. Its aim is to promote viable grass-based livestock production, diverse market opportunities and environmental services in Iowa.

Contact: Andy Larson, ISU Extension Small Farms Sustainability Specialist, allarso1@iastate.edu

More information about VCP can be found on the project's web site: www.valuechains.org.

"Cool tools" developed by the initiative

Where do your fruits and veggies come from?

www.leopold.iastate.edu/resources/fruitveg/fruitveg.php

This tool shows leading domestic producers of 95 produce items.

U.S. Food Market Estimator

www.ctre.iastate.edu/marketsize

This tool can approximate markets for more than 200 different food products in every county and state in the United States.

Iowa Produce Market Potential Calculator

www.leopold.iastate.edu/research/calculator/home.htm

This tool compares the supply and demand for 37 fruits and vegetables grown in Iowa.

Produce Profitability Calculator

www.extension.iastate.edu/hrim/localfoods/calculator/index.cfm?fa=c.formLogin

This tool shows crop-by-crop comparisons of profitability for various food crops.

Other special projects

Farm Energy Working Group

This cross-initiative working group led by the Center for Energy and Environmental Education at the University of Northern Iowa began in spring 2009, and is funded as a special project by the Leopold Center.

Good Food Network of the Upper Midwest

The Good Food Network of the Upper Midwest is a learning community comprised of 10 non-profit organizations, four universities and two consultants. Its primary goal is to increase collaboration across states and organizations to build capacity of farmers and other food businesses to supply larger-volume buyers with sustainably-grown foods. States engaged in the project include Iowa, Minnesota, Illinois, Wisconsin, Michigan and Indiana.

Price Laboratory School, University of Northern Iowa

Providing local foods for school lunches and educational materials about healthy eating.

More information

The Leopold Center publishes a quarterly newsletter, *The Leopold Letter*, available upon request in electronic or print versions, and a monthly e-newsletter, *Notes from the Leopold Center*. Other publications include an annual report and periodic summaries of research results from competitive grants. Visit the Center's web site to sign up for these items, www.leopold.iastate.edu/mailing.htm, or contact the Center by calling (515) 294-3711.

MAILING ADDRESS: Leopold Center for Sustainable Agriculture, 209 Curtiss Hall, Ames, IA 50011-1050 **TELEPHONE:** (515) 294-3711 **FAX:** (515) 294-9696
E-MAIL: leocenter@iastate.edu **WEB:** www.leopold.iastate.edu

June 2009

Value Chain Partnerships

An Iowa-Based Network for Food and Agriculture Working Groups

Community of Practice Resource Guide

For use with the Community of Practice Workshop

www.communitiesofpractice.ning.com

July 21, 2009
8:30 a.m. – 9 p.m.

July 22, 2009
8:30 a.m. – 4 p.m.

Stoney Creek Inn
5291 NW 84th St.
Johnston, IA 50131

Developed by the Value Chain Partnerships Core Team and edited by:

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For more information, go to www.valuechains.org

Value Chain Partnerships

An Iowa-Based Network for Food and Agriculture Working Groups

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Definitions

Communities of Practice (CoPs) are groups of people in organizations who come together to share what they know, to learn from one another regarding some aspects of their work and to provide a social context for that work.[1]

Through our work in Value Chain Partnerships, we have found that communities of practice (CoPs) function strategically as:

1. *Catalysts for cooperation* of diverse interests to create solutions for food and fiber producers and businesses;
2. *Hubs* which create, capture, document, and leverage knowledge and deploy this knowledge as technical assistance to assist value chain partners;
3. *Magnets* to attract funding, and for leveraging, channeling, and distributing funding to research and development efforts for differentiated food and fiber products; and
4. *Scouts* to identify emerging value chain opportunities with high potential to deliver economic benefit to sustainable agriculture stakeholders.

Knowledge Management is a framework for designing an organization's goals, structures and processes so that the organization can use what it knows to learn, and to create value for its customers and community.[2]

1 Etienne Wenger, Richard McDermott, and William M. Snyder, *Cultivating Communities of Practice*, Harvard Business School Press, 2002.

2 W.C. Choo, The FIS Knowledge Management Institute, session presentations, Faculty of Information Studies, University of Toronto.

Case Study I

Wenger, Etienne, Richard McDermott, and William M. Snyder, *Cultivating Communities of Practice*. Harvard Business School Press. 2002. Chapter 1: Communities of Practice and Their Value to Organizations pg. 1-4.

In 1988, when Japanese competition was threatening to put the **Chrysler** Corporation out of business, no one suspected that the resurgence of the company (now the Chrysler unit of DaimlerChrysler) would depend in part on the creation of an innovative knowledge system based on communities of practice. While some of its competitors took as little as three years to get a new vehicle to market, a typical new-product development cycle at Chrysler easily ran five years. This was no way to compete. The first order of the day was to achieve a dramatic reduction in this product-development cycle.

The story is well known, though the role that communities of practice played is less widely understood. At the time, Chrysler was a traditional organization typical of large manufacturing operations, with functional units such as design, engineering, manufacturing, and sales. The design department would send a new design to engineering, which would send it back for redesign a few times. The design would then go to manufacturing and be returned for reengineering until the vehicle was deemed "manufacturable." The localized focus of the various functional units limited interaction between departments and thus gave rise to these unavoidable interactions. Repeated hand-offs, duplications, and therefore slowness, were built into the system.

The decision was made to radically reorganize the unit. Engineering would now belong to "car platforms." These platforms were product-oriented, cross-functional structures that focused on a type of vehicle: large cars, small cars, minivans, trucks, and Jeeps. Each platform was responsible for all phases of development associated with the whole vehicle. Engineers of all specialties reported to supervisors within the platform on which they worked. As a result, their primary focus was on the development of a specific vehicle. For instance, if you were a brakes engineer, your main allegiance, your reporting relationships, and your performance evaluation were no longer with the brakes department, but with a platform, such as small cars or minivans.

Eventually, the move to car platforms succeeded in reducing the product-development cycle from five to two and a half years, with a corresponding cut in research and development costs. But the restructuring did not come without its own costs. A host of new problems started to appear: multiple versions of the same part with slight variations, uncoordinated relationships with suppliers, innovations that did not travel, and repeated mistakes. The company had gained the advantage of product focus, but compromised its ability to learn from its own experiences. Something had to be done to save the platform idea.

With a clear need for communication across platforms, former colleagues from functional areas started to meet informally. Managers recognized the value of these informational meetings in fostering learning processes that cut across platforms. Still, they wanted to keep the primary allegiance and formal reporting relationships of engineers with in the platforms. Rather than formalizing these emerging knowledge-based groups into a new matrix structure, they decided to keep them somewhat informal but to sanction and support them. The Tech Clubs were born.

Tech Clubs began to take more active responsibility for their areas of expertise. For instance, they started to conduct design reviews for their members before a design went through quality gates. In 1996, an engineering manager revived the old idea of creating an Engineering Book of Knowledge (EBoK), a database that would capture the relevant knowledge that engineers need to do their job, including compliance stan-

dards, best practices, lessons learned, and supplier specification. The EBoK vision could succeed only if the engineers themselves took responsibility for creating and maintaining the content. Some Tech Club leaders saw the project as an opportunity for consolidating Tech Club knowledge and taking stewardship of it. Documenting engineering knowledge has been tried several times before, but now it was part of the activities and identity of specific communities in charge of designated areas of engineering. This communal responsibility for producing the EBoK was key to its success.

Over time, Tech Club progressively established their value and they have become an integral part of engineering life at the Chrysler division. Engineers have discovered that participating helps them do their jobs better, and the time spent together is a good investment. It often saves them time later and increases their confidence in their own designs. It gives them a chance to get help with specific problems, to learn what others are discovering, and to explore new technologies. Today, there are more than 100 officially recognized Tech Clubs, plus a few emerging new ones. They are responsible for a host of knowledge-based activities such as documenting lessons learned, standardizing practices for their area, initiating newcomers, providing advice to car platforms, and exploring emerging technologies with suppliers. Through the Tech Clubs, Chrysler realized the value of what today people call "communities of practice." Theirs is among the pioneering stories, but it is no longer unique. It reflects a movement spreading all over the world.

Companies at the forefront of the knowledge economy are succeeding on the basis of communities of practice, whatever they call them. The World Bank delivers on its vision of fighting poverty with knowledge as well as money by relying on communities of practice that include employees, clients, and external partners. Shell Oil relies on communities of practice to preserve technical excellence across its multiple business units, geographical regions, and project teams. McKinsey & Company counts on its communities of practice to maintain its world-class expertise in topics important to clients who are themselves becoming smarter and more demanding. The list could go on and on. In all industries, companies are discovering that communities of practice are critical to mastering increasingly difficult knowledge challenges. They are learning to recognize and cultivate these communities. Moreover, once these communities find a legitimate place in the organization, they offer new possibilities – many yet undiscovered – for weaving the organization around knowledge, connecting people, solving problems, and creating business opportunities. And because communities of practice are not confined by institutional affiliation, their potential value extends beyond the boundaries of any single organization.

Case Study II

Wenger, Etienne, Richard McDermott, and William M. Snyder, *Cultivating Communities of Practice*. Harvard Business School Press. 2002. Chapter 6: The Challenge of Distributed Communities, pp. 113-155.

When a geologist in **Shell**'s Exploration and Production Ventures (SEPIV) group learned how the Turbodudes informally share cutting-edge ideas and insight, he realized that there would be tremendous value in establishing the same kind of group globally. Of course, there would be daunting obstacles – how to maintain informality and build trust across time zones and distance, how to share ideas across different organizational units, and how to honor different national and organizational cultures. He knew this would not succeed if it was seen as a "U.S. initiative." But SEPIV management also thought the idea was worth pursuing and formed a small cross-functional team to identify, design, and implement a few pilots. Their goal was to create a structure through which people could share knowledge about oil exploration and development in deep(over 500 meter) ocean water. To do this they planned to build a set of global, technically focused peer communities. They planned to build these communities with people from each of the operating Shell companies as well as representatives from Shell's labs. In the end, they would span 18 time zones and 20independent Shell companies. The team's vision was for these communities to bring the world's leading expertise, no matter where it was located, to bear on problems and issues, no matter where they occurred.

The team interviewed more than 50 people from the Shell companies to identify technical focus areas, barriers to global networking, and the level of energy people had for networking. They found that most people were excited about the idea, but concerned that global sharing would be inhibited by barriers such as knowing who else was interested, reluctance to contact people in other units without preexisting relationships, or business constraints on sharing information across boundaries.

From these interviews, the support team identified three important technical areas in which they would create pilot communities; one focused on geology, one on reservoir engineering, and one on well engineering. These areas included people from both scientific and engineering disciplines.

Because the communities spanned many different companies, it was important to get the support of business unit managers. While most supported the general idea of communities, several were concerned about the amount of time their staff might spend with people from other business units. In addition, there were conflicting priorities among business units. Some, for example, invested heavily in cutting-edge technology; others were too small to do so. To build support, the community-development team created a video about the role and potential value of communities to the organization, gave talks at senior management meetings, and traveled the world, meeting with business unit leaders and potential community members. Most of this involved one-on-one discussion, which altogether took the support team six months to complete. Although they did not get the active support of all the business unit managers, they did convince a critical mass of business units to participate.

The structure of the global communities reflects their diversity. Given the disparity between business units in national and organizational cultures, and the variations in how community members in the local business units were organized, the design team created a structure for the communities that allowed local variation while linking to the larger structure. Each community was composed of a set of local "cells." This made it possible for each business unit, or regional groups of business units, to organize their community in whatever way they saw fit. Some held weekly meetings, like the Turbodoudes. Others networked with each

other informally. By having local community events and relationships, this structure also made the community visible. People could participate in community activities and experience being part of a local community while maintaining a global connection.

Local communities were knit together with a network of coordinators. Each local community designated a coordinator who not only facilitated local knowledge sharing but also connected people to the other cells around the globe. The local coordinators formed a network that shared ideas and offered advice; they held regular teleconferences and occasional face-to-face meetings. They got to know each other as well as the issues in each other's region.

This structure created a group of people – the network of local community coordinators – who ultimately felt collectively responsible for keeping the global community alive. But as in any community, it took some time to discover the value the community could provide. In one community, a local coordinator soon realized that the coordinators' network could be a valuable source of help with his local problems. He regularly began asking if other coordinators had used a certain supplier, tried a new pipe-fastening mechanism, or used a new tool. After several months, the other coordinators in the network learned from his example. Once the local coordinators realized the power of the community, they started to put more energy into building the global community as well as their respective cells.

Of the three pilot communities, two were quite successful. One of them remained rather small. The other grew rapidly, merged with another community, and eventually involved over 1,500 members. It became a model for other global Shell communities. The third never quite clicked, and after a year its members joined other global communities.

Value Chain Partnerships

An Iowa-Based Network for Food and Agriculture Working Groups

What is Value Chain Partnerships?

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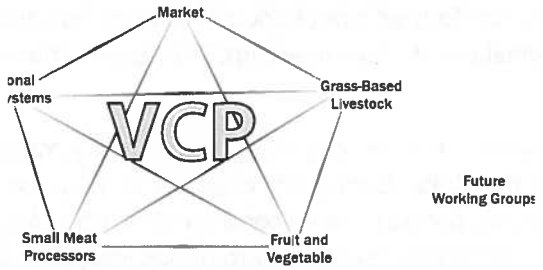

VCP's community of working groups drives its collaborative process.

Value Chain Partnerships Core Functions

Information Hubs	Catalysts for Cooperation	Magnets	Scouts
Provide an information clearinghouse	Create solutions collaboratively	Attract funding	Identify food and agriculture challenges
Benefits include: • Access to larger portfolio of knowledge and expertise • Greater awareness of available programs/expertise • Research opportunities available	Benefits include: • Operate more effictively • Coordinated use of resources • Deconstruction of organizational boundaries • Access to a support network	Benefits include: • Ability to leverage resources within the private and public sectors • Increased probability of funding because network is established	Benefits include: • Better grasp of emerging challenges • Improved decision making to modify strategies • Ability to bring in new partners and champions
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Why Do We Use "Working Groups" Rather Than "Communities of Practice"?

When we began the Value Chain Partnerships project in 2002, we had not heard of the term communities of practice. All of our groups were called working groups. In 2006 we began our work with the Wallace Center for Sustainable Agriculture and were introduced to the terms communities of practice and knowledge management. The communities of practice definition seemed to fit well with the way we were running our working groups, but we continued to call them working groups to avoid confusing our participants. Within the Value Chain Partnerships team, we used the two terms working groups and communities of practice interchangeably.

In 2008 we hired Sue Honkamp to help us with branding and marketing Value Chain Partnerships. Sue helped us reflect on which term would be best to use in our branding message. After much discussion, we decided to stick with the descriptor "working group" rather than change the ending of each group's name. That said, Value Chain Partnerships is a network of working groups that uses a communities of practice framework. Why is this framework so important? As communities of practice scholar Richard McDermott said in his article "Knowing in Community: 10 Critical Success Factors in Building Communities of Practice"[3]:

> *"Communities of practice present an odd irony. They have always been part of the informal structure of organizations. They are organic. They grow and thrive as their focus and dynamics engage community members. But to make them really valuable, inclusive and vibrant, they need to nurtured, cared for and legitimated. They need a very human touch."*

And so it is with the working groups in Value Chain Partnerships. Each of our working groups is very different, shaped by the working group leader and participants' skills and expertise, yet all of the groups function in a collaborative atmosphere where everyone is both learner and teacher.

3 Richard McDermott, "Knowing in Community: 10 Critical Success Factors in Building Communities of Practice," *IHRIM Journal*, March 2000.

Comparing eXtension to Other Communities of Practice Models

Many in university extension are familiar with the term "community of practice (CoP)" with regards to eXtension, and there are many similarities with the way we conceive of CoPs. eXtension CoPs are virtual teams of extension professionals working together to develop public-oriented online content and tools for a particular information "content area," such as dairy cattle, personal finance, or consumer horticulture. There is a large element of collaboration with the aim of developing the "best of the best" by bringing many experts to the same table.

Our working groups incorporate these elements and take them further in several ways:

1. Our CoPs have missions; they focus on making connections and positive change in particular areas (niche pork, fruit and vegetables, etc.). They are not limited to producing online content as their output. Products have included workshops, manuals, and profitable business connections. Furthermore, information produced is not produced for its own sake; our CoPs focus holistically on sector-wide impacts, targeting resources towards the most pressing needs.While our CoPs contain many "experts," they come together as equals with the "clients" (farmers, processors, and other businesses) to generate useful and relevant information together.

2. Our CoPs meet physically, typically with lively unscripted interactions and conversations that carry on well after meetings have formally ended.

3. Our CoPs are limited in scope geographically (most of them are found in Iowa), making it easier to get all the necessary players to the table to make an impact in our region.

Example of eXtension CoP: HorseQuest

www.extension.org/horses

More than 50 university extension horse specialists and other experts operate as the HorseQuest CoP "to harness the Cooperative Extension System's best information to provide traditional and expanding clientele a source of reliable and up-to-date horse information on equine science and management."

Value Chain Partnerships
An Iowa-Based Network for Food and Agriculture Working Groups

Timeline and History of Value Chain Partnerships (VCP)

2001	Preliminary meetings on niche pork producer needs Concept paper submitted to W.K. Kellogg Foundation
2001	Pork Niche Market Working Group formed Kellogg foundation provides $100,000 to jump-start Value Chain Partnerships
2003	Kellogg Foundation, Leopold Center, ISU and others provide $800,000 over the next three years to Value Chain Partnerships Regional Food Systems and BioEconomy Working Groups formed in fall First MBA student with a minor in sustainable agriculture is hired
2004	Value Chain Partnerships working groups coordinate dozens of new projects and begin plans to add a fourth group focused on organic flax
2005	Kellogg provides one additional year of funding to help transition Value Chain Partnerships to a market-based change model Flax Working Groups gets underway Pork Niche Market Working Group receives $400,000 USDA grant to study cost of production and herd health of niche swine herds
2006	Value Chain Partnerships works with Wallace Center for Sustainable Agriculture to develop a new market-based change proposal using Performance Leadership model as developed with business consultant; proposal funded in partnership with the Leopold Center and ISU Colleges of Agriculture & Life Sciences and Business Regional Food Systems Working Group evolves to build capacity of local groups Bioeconomy Working Group closes New evaluator joins Value Chain Partnerships
2007	Flax Working Group closes Small Meat Processing and Fruit & Vegetable Working Groups begin MBA assistantships continue Northeast Iowa Food and Fitness Initiative receives funding from Kellogg Foundation
2008	Value Chain Partnerships focuses on sustainability plan for project continuation after Wallace funding ends Regional Food Systems Working Group expands to six local groups Small Meat Processors Working Group produces first of several new publications Connection made between Value Chain Partnerships and the Wallace National Good Food Network Value Chain Partnerships hires branding specialist Leopold Center funds new Grass-Based Livestock Working Group (coordinator is former Value Chain Partnerships MBA student) Value Chain Partnerships receives funding from North Central SARE PDP program to hold workshop on selecting, initiating, managing, funding, and branding communities of practice (a.k.a. working groups)
2009	Value Chain Partnerships completes branding and positioning work and prepares to hold workshop on selecting, managing, funding, and branding communities of practice Small Meat Processing Group begins looking for new leader for 2010 Pork Niche Market Working Group asks its members to provide partial support for group New tagline for VCP: "An Iowa-based network of food and agriculture working groups"

Pork Niche Market Working Group

Establishment of the Pork Niche Market Working Group

The Pork Niche Market Working Group (PNMWG) began in September 2001 when a face-to-face meeting of various niche pork businesses was held, featuring a facilitated discussion of challenges they faced. Two subsequent meetings were held later that fall with staff representing nine different agencies and groups. Strategies to address challenges were discussed, which led to the creation of four work teams: 1) Credit and Investment, 2) Business Plans and Feasibility Studies, 3) Promotion and Certification, and 4) Herd Health. The different groups attending also considered what they could offer to a coordinated effort to address these pressing issues. At the second meeting, the idea of creating a working group to coordinate activities, developed by the Leopold Center and Practical Farmers of Iowa (PFI), was presented. The consensus was to proceed with forming the PNMWG.

The group's first meeting was held in January 2002. Start-up funding of $25,500 was secured from the Leopold Center, Iowa Pork Producers Association, Iowa State University, Iowa Farmers Union, and the Iowa Institute for Cooperatives. Initial leaders on the PNMWG steering team were Gary Huber of PFI, Rich Pirog of the Leopold Center, Mary Swalla Holmes of ISU Extension, Marty Schwager of the Iowa Pork Producers Association, Jackie Gunzenhauser of the Iowa Farmers Union, and Dave Holm of the Iowa Institute for Cooperatives. The responsibilities of the steering team were to:

1. Provide advice and counsel to the PNMWG coordinator;
2. Provide guidance on the mission, framework, operations and future directions of the PNMWG;
3. Work with the PNMWG coordinator to identify and develop new cooperative strategies to address the challenges identified;
4. Pursue opportunities to bring financial resources to the group to address challenges and create new opportunities for Iowa producers;
5. Work with the PNMWG coordinator to develop the agenda for PNMWG meetings; and
6. Help make decisions about allocation of funds provided to support the PNMWG from Kellogg Foundation R&D monies that flow through the Value Chain Partnerships project

What are the functions of the PNMWG?

Mission Statement of the PNMWG

The mission of the PNMWG is to foster the success of highly differentiated pork value chains that are profitable to all participants, incorporate farmer ownership and control, and contribute to environmental stewardship and rural vitality.

Participants include individual farmers, staff from more than a dozen niche pork companies, and representatives of various agencies, groups and other businesses. The group has met 27 times since January 2002, typically with about 25 people attending. The meetings are used to discuss recent niche pork developments, report on projects, discuss challenges, and strategize ways to collaborate to address challenges. PNMWG has developed and helped implement more than 30 projects supported by more than $1,000,000 in funding. It has disseminated information on niche pork topics through 14 niche pork newsletters, a web site, and presentations at numerous meetings, workshops, and field days.

How does the PNMWG operate?

Initially, the four PNMWG work teams developed strategies to address the challenges that the whole group had identified. However, it wasn't until receiving $27,000 in R&D funds from a 2002 Kellogg Foundation grant for the Value Chains Partnerships project that significant progress was made to tackle these challenges. A system to solicit and evaluate proposals was developed that involved 1) limiting grants to $8,000, 2) requiring submitters to be involved with PNMWG, and 3) requiring that projects be focused on addressing challenges identified by PNMWG. Project selection was made by the PNMWG Steering Team. Using VCP funds, five projects were approved in 2002 and eight in 2003.

Two important developments occurred after the first few years. One was that as people began to organize their activities around projects, the work team structure was abandoned. The second was that in early 2004, the steering team approved a shift in the project selection process that involved targeting funds for specific needs not adequately met within the request for proposals process. This new system identified gaps in the project portfolio and proceeded to work with people who had the expertise needed to develop and submit proposals for projects to fill these gaps. The resulting proposals accessed the VCP R&D funds and funds from other sources.

Significant additional grants included $149,759 from U.S. Department of Agriculture-Sustainable Agriculture Research and Education (SARE) to address niche farrowing challenges, $108,544 from USDA-Value Added Producer Grant (VAPG) program for a feasibility study for niche pork value chains for foodservice markets, and $400,000 from USDA-National Research Initiative (NRI) to use records and veterinary diagnostic services to address production challenges facing niche pork farmers.

While the work continued on various projects, the PNMWG continued to meet quarterly. At these meetings, the participants shared information on recent niche pork developments, reported on projects, and discussed next steps for projects and the PNMWG. Another critical PNMWG function is an annual evaluation each September that assesses member perceptions of various topics, including progress made and issues on which PNMWG should focus.

What has the PNMWG produced?

The PNMWG developed and helped implement 31 R&D projects supported by more than $1,000,000 in funding. Here are some examples:

An Evaluation of the Importance to Consumers of Selected Niche Pork Attributes
This project was a collaborative effort of PNMWG and the National Pork Board aimed at providing niche pork companies with specific, actionable data on consumer demand for niche pork with various unique attributes. The findings included estimates of the percentage of sales niche pork products would achieve when placed in retail meat cases along with conventional pork products at two premium levels. It provided data niche pork companies could use during sales calls with retail meat case managers.

Maximizing Carcass Utilization in Niche Pork Companies
A key challenge identified by PNMWG was the difficulty of marketing the entire carcass at premium prices. This study identified opportunities to combine underutilized pork cuts from different niche companies and collectively market these cuts to processors interested in buying these items. This research led to the formation of a new company, Prime Pork Supply, which has been successful in helping to market previously underutilized carcass parts to processors, which in turn has helped these companies increase revenues.

LTL Trucking Terms and Process Guide
One challenge in supplying niche pork products to distant markets is the need to ship small quantities. These less-then-truckload (LTL) shipments are more costly per unit than full shipments. This guide looked at costs, the process of selecting a carrier, and sample shipping rates to various locations. It subsequently was used by various niche pork companies. It also led to collaborative trucking relationship between two companies involved with the PNMWG. The report's author, a student at ISU, also was subsequently hired by a niche pork company.

Costs, Returns and Production Performance of Niche Pork Farms
The PNMWG was responsible for helping ISU obtain a $400,000 USDA grant to use records and veterinary diagnostic services to address production challenges facing niche pork farmers. Production and economic data were collected from nearly farrow-to-finish niche pork farms. These data had never before been assembled, and the results identified areas with the greatest potential for improvement. Subsequent projects developed and delivered outreach activities focused on these areas.

Niche Pork Production Handbook
ISU animal scientists and Extension staff compiled a 101-page *Niche Pork Production Handbook,* which is divided into 30 stand-alone sections. Topics covered included housing options, bedding management, sow feeding, boar fertility, stockmanship, and improving feed conversion.

Beyond these and other projects, a PNMWG evaluation identified several areas (described next with substantiating quotes from members) where the PNMWG delivered benefits to members.

- Built Relationships, Shared Information, and Deepened Understanding
  - » *"All of a sudden everybody else is talking about some of their problems and I realized that some of our problems were the same."*
- Increased Markets, Business Skills, Job Opportunities, and Collaborative Business Relationships
  - » *"Actually [my business] came out of a project I did for PNMWG within the past year. Through this project we identified a need [for pork brokering services between producers and buyers] and thus formed the business to meet those needs."*
- Improved the Financial Stability of Niche Pork Farms
  - » *"[My business has] changed 100 percent since we [took part in a PNMWG project]—we changed everything in production. We've doubled the pigs per sow per year."*
- Leveraged Resources and Increased Agency Support for Niche Pork Enterprises
  - » *"I think the group as a whole, all of the information that it was pulling together, and the focal points that it was creating, helped Iowa State itself identify some research priorities."*

Future Development and Growth of the PNMWG

All of PNMWG's members share in a strong interest in niche pork production and marketing. Some are competitors in the marketplace, but they see value to having PNMWG work to help address common challenges. Others are technical assistance providers or industry associations that are finding ways to apply their expertise to a segment of the industry that previously had been difficult to target and assist.

Regular face-to-face interaction is crucial to PNMWG's longevity and successes. The development of trust and open communication among its members also is important, as is the ability to secure funds for projects

that further address challenges cited by the members. Skillful facilitation of meetings also is crucial, so that PNMWG members have a forum to continue to learn from each other and from project work, and to help set future priorities. Another key component of success has been the attention given to managing projects so that they are completed with maximum positive impact.

Learning, Knowledge Sharing and Communication

Knowledge is generated and learning occurs through PNMWG's quarterly meetings, projects, and communication activities (i.e., newsletters, web site, and presentations). We cultivate ongoing connections among members through meetings and emails to members. We evaluate the group's continued effectiveness with an annual assessment process each September.

Regional Food Systems Working Group

Establishment of the Regional Food Systems Working Group

The Regional Food Systems Working Group began with a needs assessment meeting of local food practitioners in April 2003, followed by a strategic planning session in August 2003 attended by 12 people from the April session. Based on those two meetings and discussions among the leaders of the Value Chains Partnerships project, a decision was made to form a Regional Food Systems group. In October 2003, invitations to attend the first planning meeting were sent to local food practitioners and farmers across Iowa. More than 30 people attended the event where Pat Boddy served as facilitator. Rich Pirog, VCP project director, coordinated these meetings with assistance from Andrew Hug (VCP program assistant). After two additional meetings, the last in February 2004, the group had developed a mission statement and definition of a regional food system.

What are the functions the RFSWG?

Mission statement of the RFSWG

To support education, conduct research and facilitate partnerships to increase investment and support of community-based, sustainable and environmentally responsible regional food enterprises.

Participants in RFSWG include farmers, community leaders such as bankers and local economic development staff, county and regional ISU Extension staff, representatives from state agencies and various non-profit organizations involved in food system work.

RFSWG defined a regional food system in the following manner:

A regional food system supports long-term connections between farmers and consumers while helping to meet the health, social, economic and environmental needs of communities within that region. Producers and markets are linked via efficient infrastructures that:

- **Promote** environmental health,
- **Provide** competitive advantages to producers, processors, and retailers,
- **Encourage** identification with a region's culture, history, and ecology, and
- **Share** risks and rewards equitably among all partners in the system.

After two years of awarding competitive grants on local and regional food projects, evaluation feedback indicated that the group was not sufficiently focused and was in danger of losing momentum. RFSWG underwent a process to refocus its efforts by engaging with partners who were working in specific geographic areas of the state. In 2006, RFSWG finalized a new set of objectives:

- **Identify** key elements found in specific close spaced geographical areas that create a vibrant and sustainable food system,
- **Work** with leaders in food businesses to identify key elements that are not yet developed,
- **Help** identify and measure key changes in different regions to determine whether there is positive change, and
- **Develop** and implement a continuous learning process across Iowa to determine what it takes to make a regional food system more vibrant and sustainable.

How does the RFSWG operate?

RFSWG changed its operation mode in 2006. It started with a pilot program in one new geographic area (Northeast Iowa Food and Farming Coalition) and then through a competitive process added additional groups representing other geographical regions. A steering committee comprised of RFSWG members, the RFSWG leader, and VCP program assistant reviewed proposals and made recommendations. After a proposal was accepted for seed funding, each new group presented their ideas to the entire RFSWG to get feedback before developing a plan of work.

RFSWG meets on a quarterly basis. As of 2007, local group leaders work with the Leopold Center to plan the agenda for these meetings. The meetings start with a brief check-in on the mission statement followed by introduction of all participants and welcoming of any new participants. A sign-in sheet is used and all new participants are added to the RFSWG mail list. RFSWG conducts an end-of-meeting survey as a way to get feedback on the direction of the group and the format and content of meetings.

As RFSWG began to focus its efforts on geographic-based areas, a small percentage of participants not directly living in or involved in some capacity with one or more of these groups stopped attending. However, attendance at these meetings has grown from an average of 40 people in 2005 to the current average of 70 people. This growth is due in part to the addition of new geographic areas and increased interest in the work of the group by students, farmers, and community leaders.

By engaging local RFSWG leaders in the development of the agenda, RFSWG members have obtained a high degree of ownership in the group. Two notable issues remain critical for a minority segment of the group:

1. A desire to reduce the amount of time in presentations and increase time spent in discussion on key issues, and
2. A desire to use some resources to start sub-groups to tackle specific issues such as business start-ups, distribution and processing, immigrant farmers, food safety, food policy, and others.

What has the RFSWG produced?

(from RFSWG evaluation 2007)

- Leveraging legitimacy and credibility
  - » *"[RFSWG] adds more credibility to local efforts because of state support... If we tried to do it cold turkey, we probably wouldn't have gotten as good a response—we would have been considered just a bunch of renegades."*
- Leveraging time on food systems work
  - » *"I see more interest from my bosses to invest more of my time in local food systems."*
  - » *"[New collaborations resulting from RFSWG] mean for grant programs that I run, food is a lot more on the front burner than it's been in the past."*
- Building skills
  - » *"I am better learning how to communicate with people who aren't part of the choir."*
- Improving knowledge and learning
  - » *"I think [RFSWG] is willing to address the economic hardships of local agriculture even though it's more difficult. . . .They want to take an honest look at it and a complete and deep analysis of what we're up against. That milieu is a better learning environment instead of people avoiding those issues"*

- Improving organizational efficiency
  - » "I think that it has made our job easier in the sense that instead of trying to hunt down and find all of these resources, you go to [RFSWG] meetings and it's just everything you need to know and the people you need to know are all right there."
  - » "[Through RFSWG] I can hear stories where people have struggled—it's nice to let someone else make the mistake so I don't have to."

In 2007-2008, RFSWG:

- Exceeded year-two goals for increased sales of community-based local food over year one sales by more than $330,000
- Exceeded year-two goals for documentation of new baseline purchases of local food by more than $118,000
- Exceeded year two goals for leveraging local resources by more than $59,000
- Played a role in helping Pottawattamie County pass a proclamation that would provide $30,000 each year for four years for a foods council that will help increase commerce of local foods in the Omaha-Council Bluffs trade area
- One food cooperative in northeast Iowa tripled in size and increased the number of local food vendors from 18 to 78
- Added two new local groups; RFSWG now covers more than 35 of Iowa's 99 counties
- Conducted economic impact analysis in five northeast Iowa counties for a set of production and nutritional goals, with analysis in southeast and southwest Iowa set for fall 2009.

The Common Ground (Nature of Members' Relationship)

All members of RFSWG share a desire to build local capacity for local and regional food commerce that will support economic and community health. Each meeting provides a forum to build that common ground.

Future Development and Growth of the RFSWG

The Leopold Center will continue to convene and facilitate meetings. The Center has adopted a servant leadership approach to move RFSWG toward an increasing share of self-governance by its local group leader members in an attempt to increase ownership and effectiveness.

Learning, Knowledge Sharing and Communication

Creating and documenting knowledge

Knowledge is created and then shared by group members through presentations, discussions, and general networking during the meetings. There is a great deal of networking outside of meetings where tacit knowledge is shared. Leaders of other working groups regularly attend the RFSWG meetings and contribute their expertise and assistance to local leaders.

Evaluating the effectiveness of the RFSWG

End-of meeting evaluations and a recurring in-depth evaluation using appreciative inquiry by the VCP evaluator make sure that assessment is ongoing.

Frequent communication with local group leaders occur through e-mails and conference calls. A social networking site for RFSWG is being established for its local leaders.

Dealing with conflicts between leaderships own work and working groups work

As leader of the RFSWG and the Leopold Center's Marketing and Food Systems Initiative, I continue to seek ways to integrate the two by encouraging Leopold Center grantees to actively participate in RFSWG or other relevant VCP working groups.

Flax Working Group

How the Flax Working Group was established

The Flax Working Group was established in 2005 as a new working group in the Value Chains partnership project. Spectrum Organics had partnered with American Natural Soy in Cherokee, Iowa to build a new processing facility for organic flax oil. They formed a new company, Biowa Nutraceuticals, and constructed their crushing facility in 2004. Iowa organic farmers and some conventional growers as well were eager to learn about growing flax and the potential to increase their profitability by adding an additional crop to their rotation.

Why a Working Group for Flax?

A "binding force" was needed for flax development activities. Traditional support from Iowa State University for new crop development would come from the Agronomy Department, but would not provide business development support. For a specialty crop, such as organic flax, development of the production methods without concurrent development of the market would have been unlikely to yield success. Only a limited market exists for this crop. In addition, the specialty food market has specific grain and food quality standards for flax and other products that must be met for farmers to achieve a profit.

Flax Working Group Structure and Function

The Working Group was co-facilitated by Iowa State University Value Added Agriculture and Practical Farmers of Iowa. Members of the Flax Working Group included:

- Organic and conventional crop producers
- A flax oilseed processor, Biowa Nutraceuticals,
- Flax buyers (for food and feed)
- Agronomists
- Faculty working on seed processing
- Extension outreach personnel
- Practical Farmers of Iowa

The Working Group met three times each year, with two winter meetings and a summer field event. Field events featured on-farm research and production and on flax processing.

Accomplishments of the Flax Working Group

The Flax Working Group took a comprehensive approach to the investigation and development of organic flax for Midwest production and marketing. The group:

- Contributed to agronomic research for flax, both on-farm and on the research station,
- Helped coordinate flax harvesting and cleaning research,
- Conducted grower surveys and interviews to gain producer input into production and harvesting guidelines
- Conducted outreach and education with summer field events and articles in the popular press,
- Developed the Flax Production Guide for Iowa (ISU Extension PM 2020) (www.extension.iastate.edu/Publications/PM2020.pdf), and
- Developed a production and marketing financial budget for use by growers.

In two years, the Working Group leveraged an additional $58,089 for research and development form the ISU Agronomy Department, the ISU Agronomy Endowment Fund and Spectrum/Hain Celestial.

Challenges for the Flax Working Group

In late 2006, Spectrum Organics was purchased by Hain Celestial, a large organic food company. The company's interest of the in sourcing local product was less than we had experienced initially with Spectrum Organics.

Both our agronomic research and farmers' experiences pointed out big challenges for flax production, and particularly for organic flax production in the Midwest. Flax is an extremely non-competitive crop and is challenged to compete with weeds in organic systems in the Midwest. In the typical growing areas, North Dakota and Canada, flax is a full-season crop with different competing, cooler-season weed species. Flax grown in the north often is harvested after a frost, which renders weeds less of a problem in the harvesting process. In Iowa, a lot of foreign plant material that collected in the combine with the flax often resulted in lower product quality. In addition, flax grown farther south has lower amounts of the desirable fatty acids that make flax an attractive dietary supplement.

Most farmers who experimented with flax did not find it as profitable as their other small grain alternatives. The number of farmers growing flax declined in 2006 and 2007, and today there are only a handful of Iowa farmers growing organic flax and selling to Spectrum/Hain Celestial. The group was discontinued in 2007.

Lessons Learned from the Flax Working Group

A focus on one crop is too narrow to maintain a vibrant working group. Continued funding was not available for such a narrow focus. In addition, the market outlet focused on only one buyer. Other buyers were sought and recruited into the Flax Working Group. Two feed buyers in the Midwest do purchase small amounts of organic flax for their businesses. These feed companies can source cleaned flax from North Dakota at reasonable prices, and are not likely to buy from Midwestern growers.

A crop-based working group with a broader emphasis would likely have more longevity and potential for greater impact over time. A focus on specialty grains or specialty oilseed crops or organic crops would have wider appeal, attract a larger membership, and likely would result in more impact for these industries.

BioEconomy Working Group Narrative

How was the Bioeconomy Working Group established?

The Bioeconomy Working Group was one of the initial working groups formed in 2003, the first year of the Leopold Center's Value Chains Partnership project. At that time, the federal BioPreferred program had just been launched. The existing federal legislation, dictated that any federal entity, when buying products---whether it was office furniture, cleaning products, fuel, etc.--- was required to purchase a biobased version of the product, if it was available at comparable quality and cost. The legislation further stated that, in order to meet the biobased standard for this federal requirement, the biomass used in the product needed to be produced domestically.

HON Industries, of Muscatine, Iowa, manufactures office furniture and office space dividers. In 2003, 25 percent of HON's furniture sales were to the federal government, so they were very motivated to develop a line of biobased products. They embarked on a research and development program to make biobased office partitions, biobased chairs, and biobased tack boards. They needed to source the fibers for these products locally, so they were very interested in working with the Bioeconomy Working Group to establish a supply chain for the needed feedstock.

The Mission of the Bioeconomy Working Group was to make Iowa a leader in bioproduct feedstock production, materials, engineering, and advanced manufacturing.

How did the Bioeconomy Working Group function?

The BioEconomy Working Group met four times each year in Ames. Over time, two of those meetings were held jointly with Advanced Manufacturing Research Collaboration Cluster in other cities across the state. Research and Development Grants were made once yearly. Topics covered in meetings included research reports and updates, business development strategies, and identifying needs in the plant fiber value chain that were to be addressed

Accomplishments of the Bioeconomy Working Group

- Recruited and convened a group of committed people who worked to make a difference in how value chains developed for biobased businesses in Iowa
- Sponsored the 2004 Biobased Industry Outlook Conference in Ames, Iowa
- Received funds for research and development projects, for support staff and for honoraria to participants
- Developed a sustainability matrix for the biofiber economy in Iowa
- Awarded a total of ten research and development grants, four in 2003 and six in 2004

Research and development projects included:

- Biofibers as strengthening agents and extenders in injection-molded plastics
- Kenaf production methods for Iowa
- Kenaf fiber characteristics in fiber mats
- Flax fiber quality and characteristics
- Transportation logistics of corn stover for biofiber
- Study tours to Texas and Michigan to investigate kenaf production and processing

Membership and Relationships / Developing the Community of Practice

The Bioeconomy Working Group developed a partnership with AMRCC. This cluster of industries is a collaborative partnership of Iowa end product manufacturers and their Iowa suppliers. Its purposes are to promote the use of advanced technologies, engineering, and processes; conduct collaborative research; and provide user-to-user sharing of technologies and best practices in Iowa. Their goal is to make Iowa the leader in engineering and advanced manufacturing. Members in AMRCC include John Deere; Pella Corp.; HNI (formerly HON) Industries; Fischer Controls; Rockwell Collins Inc.; Shafer Systems, Inc.; Vermeer Manufacturing; Iowa State University; University of Iowa; University of Northern Iowa; Iowa Manufacturing Extension Partnership; Iowa Business Council; Iowa Department of Economic Development; and Iowa community colleges.

AMRCC formed a Biomass Working Group in conjunction with our Bioeconomy Working Group. The objectives were:

- Promote the use and commercialization of bioproduct materials through engineering and advanced manufacturing;
- Conduct collaborative research and development;
- Share knowledge, technologies, and best practices that will benefit the corporations and citizens of Iowa; and
- Encourage the state, county, and local entities to purchase Iowa bio-renewable products.

Discontinuing the Working Group

About three years into the project, the federal legislation requiring biobased product purchases by government entities was changed. The requirement for the biomass to be domestically produced was removed. Therefore, HON (now HNI Industries) and other manufacturers could source their fiber (at a much lower cost) from Indonesia, Vietnam, etc. The opportunity for Iowa producers diminished considerably, as manufacturers like HNI didn't have to worry about developing the supply chain for domestic fibers — they simply imported the products from offshore.

HON was excellent to work with - they dedicated a number of people in their technology development center to the fiber production and marketing chain project for several years. They respected the farmers and knew they needed to make a profit. However, the company is like most commercial enterprizes - when the legislation changed and they realized that they could import the fibers more easily and cheaply, their interest and support for Iowa farmers developing a system to supply the fibers they needed.

Even if there had been continued market "pull," there were addition issues with local production and processing of kenaf. Among the challenges were:

- Limit to the ability of existing machinery to deliver clean, properly-sized kenaf fibers to the market;
- Profit potential to compete with the bio-renewable energy corn and soybean economy was marginal; and
- Kenaf was and is not supported in the Federal farm program.

Lessons learned from the Bioeconomy Working Group

Although the working group was not conceived this way, it developed a narrow focus of one crop fiber source and one potential market. This is too narrow a base or value chain to support long-term ongoing work. When the one potential market disappeared, there wasn't enough incentive to continue the working group.

Small Meat Processors Working Group Working Group

Establishment of the Small Meat Processors Working Group

Small-scale meat processing plants are necessary for the vitality of Iowa's agriculture and rural way of life. In 1965, there were more than 550 small meat plants in Iowa. Today there are fewer than 200. To address this decline, interested researchers and groups came together to form the Small Meat Processors Working Group (SMPWG) in the summer of 2006. The group has sought to locate, map, and coordinate the resources available at the local, state, and national levels to assist small Iowa meat processors who seek to begin, upgrade or expand their businesses. ISU graduate student Arion Thiboumery coordinates the group's meetings and activities. In fall 2007, the SMPWG joined the Value Chain Partnerships cluster of working groups.

How does the SMPWG function?

To help small, Iowa meat processors expand, upgrade or build new facilities in order to promote rural development and increase agricultural opportunities.

Intended audience

The SMPWG targets three main groups:

1. Meat processors,
2. Organizations and agencies that can provide assistance for meat processors, and
3. Individuals and groups, such as producer groups, that depend upon meat processors.

The SMPWG seeks to coordinate efforts by these different groups with similar interests to help this sector become (and remain) a vital economic segment in Iowa agriculture.

How does the SMPWG operate?

To form this group, a broad swath of stakeholders from the three targeted audiences were interviewed and questioned about several options:

1. How would you conduct this project?
2. Who (else) needs to be part of this working group?
3. How would you envision coordination of comprehensive support for small meat processors?

The key underlying question was, "How would this be valuable to you?" This line of discussion simultaneously began to encourage commitment beyond a perfunctory level, set direction for the group, and establish a foundation to identify how these diverse support elements could best be coordinated to complement each other most effectively.

While many suggestions emerged to direct how the group would function, the approach that clearly rose to the top was to use a project orientation for the group, with three objectives:

1. Work with three "test cases"—small Iowa meat processors actively seeking to expand or upgrade their operations—in order to fully explore, in a highly grounded manner, what support was needed to help these businesses prosper.
2. Produce a guidebook of resources available to small meat lockers that will serve both as a reference for working group member organizations and as an educational tool for small meat lockers

and organizations that work with them.

3. Cultivate inter-organizational trust and familiarity and social capital among working group members so as to facilitate ongoing partnerships.

The original agreement was to hold four working group meetings over nine months, with meetings every two months. It should be noted clearly that many of the CoP members became interested in the group to support objectives 1 and 2, and not so much number 3. The concrete study design and the objective of producing a real, usable product (the guidebook), were much more appealing than nebulous qualities such as "familiarity" and "social capital."

For the next year, meetings were held by conference call every two months. While convenient, this arrangement was not wholly desirable, as most preferred some face-to-face interaction. Group participants presently are trying to gather for face-to-face sessions to encourage more processor input when the board of the Iowa Meat Processors Association meets.

A significant amount of working group activity takes place between meetings with different combinations of group members joining together to carry out projects. The group's coordinator spends a fair amount of time "walking the halls" to help coordinate activities and keep folks on the same page.

What has the SMPWG produced?

- Iowa Meat Processors' Resource Guidebook (www.ncrcrd.iastate.edu/pubs/contents/189.htm)
- Guide to Designing a Small Red Meat Plant with Two Sizes of Model Designs (Iowa State University Extension PM 2077)
- Open House Mini Grants (two years)
- *Iowa Poultry Slaughter, Processing, and Sales Guidelines for Small-scale Producers* (Iowa State University Extension PM 2068) (https://www.extension.iastate.edu/store/ItemDetail.aspx?ProductID=13044)
- Beef and Pork Whole Animal Buying Guide (Iowa State University Extension PM 2076)
- Group members have taken the lead to provide support for small meat processors
  - » Product Costing Workshop (two years)
  - » Plant Productivity Workshop
  - » Succession Planning Workshop
  - » Marketing Workshop
- Extensive media coverage for meat processors and group members
- Broad notice of meat processor-related activities by ISU Extension

The Fruit and Vegetable Working Group

Establishment of the Fruit and Vegetable Working Group

The Fruit and Vegetable Working Group (FVWG) is one of the most recently created working groups in the Value Chain Partnerships (VCP). Funds through the VCP became available at the sunset of the Flax Working Group and the Bioeconomy Working Group (see the narratives for these working groups highlighting the reasons for their closure). As a member of the VCP, the FVWG is focused on building local food systems that reward farmers who use high standards of environmental and community stewardship.

At the start of 2007, the VCP core group conducted a needs assessment. With the help of the VCP advisory group, it was determined that there was a critical need for capacity building in Iowa's fruit and vegetable industry in Iowa. As a result, the FVWG was officially launched with a working group meeting in Ames, Iowa, in November 2007. Invitations to the meeting were sent to producers, academics, retailers, wholesalers, state agencies and non-profits across Iowa to attend what essentially was to be a planning meeting. Approximately 60 people attended the first meeting. Mike Bevins, the State Horticulturalist was the keynote speaker and he gave a synopsis of the horticultural industry in Iowa highlighting strengths, weaknesses and needs of the industry. The main portion of the first meeting was dedicated to a needs assessment that outlined and ranked the most important areas for work in the fruit and vegetable sector. This soon was followed by a web-based survey to gather additional information on the industry needs. From the initial meeting and the web survey results, desired specific topics for education were determined to be:

- Post-harvest quality control
- Marketing / selling to institutions / advertising and promotion
- Educational, financial and other resources available for growers
- It's more important for the group to foster cooperative efforts and working together than providing information for *individuals'* needs"
- "Encourage small grocers to buy from local farmers"
- "Help make a connection between producers and buyers / brokers"
- "Start with small, achievable steps; leverage the success; evolve like the Niche Pork Working Group"

What are the functions of the FVWG?

Mission Statement of the FVWG

The Fruit and Vegetable Working Group will build the production capacity, marketing capacity and financial capacity within Iowa's fruit and vegetable industry, by taking actions that directly address identified constraints.

The working group strategy to fulfill its mission will be to:

- Increase Iowa's capacity for fruit and vegetable production by
  - » Fostering new growers, and/or
  - » Assisting existing growers to increase production levels sustainably, and/or
  - » Increasing total acreage under production
- Identify and meet the needs of Iowa's fruit and vegetable producers
- Increase the quality and the amount of relevant information available to Iowa's fruit and vegetable growers

- Increase the availability of relevant information to Iowa's fruit and vegetable growers
- Explore the possibility of partnering projects with other VCP working groups

How does the FVWG operate?

The Fruit and Vegetable Working Group has met with more than 100 Iowa growers, buyers, processors and distributors during the past year. The group is coordinated by the Leopold Center for Sustainable Agriculture and Iowa State University (ISU) Extension.

The FVWG meets four times a year: two workshops (spring and fall) and two field days (summer months). Members of the working group play the key role in determining programs for the workshops and field days, as well as the areas of research that the industry needs. Generally, the meetings start with a brief check-in on the mission statement followed by an introduction of all participants and welcoming of any new participants. A sign-in sheet is passed around to ensure that new participants are added to the FVWG mail list.

At the beginning of 2009, a six-person advisory team from within the FVWG membership was established. The role of this team is to help in decision making for the working group as well as to encourage internal leadership/ownership within the group.

What has the FVWG produced?

Start-Up Vegetable Enterprise for Beginning Farmers
The project developed example scenarios and a decision aid for new farmers interested in growing vegetables. Several scenarios were constructed with different mixes of vegetables enterprises for a five- to six-year start-up period.

Post-Harvest Handling Decision Tool for Vegetable Growers
A Decision Tool for vegetable farmers was developed to help them make informed choices about their post-harvest handling needs. This will be applicable to start up vegetable production businesses and those looking at expanding.

Future Work
Two research projects will be undertaken in 2009 In addition, the FVWG and its advisory team will identify qualitative and quantitative indicators to chart the group's progress. Examples of possible indicators are:

- Number of fruit and vegetable growers in Iowa
- Number of new beginning fruit and vegetable growers in Iowa
- Increases in production levels as a result of FVWG activities
- Relevant information available to aid capacity increases for fruit and vegetable producers
- Increased accessibility to relevant information
- Producers' sales of Iowa grown fruits and vegetables
- Number of acres of Iowa fruit and vegetables under production
- Purchases of Iowa fruits and vegetables by key groceries, food cooperatives and institutions

Future Development and Growth of the FVWG

The current FVWG coordinators, Malcolm Robertson and Margaret Smith, will continue to play key leadership roles for the group; but they agree that the coordinator position must be compensated financially, and not be simply a volunteer position.

They also intend to put structures in place to begin to create a shared leadership model, both to augment the roles the current coordinators play and to pave the way for new leaders to come.

- Part of this shared leadership will be established through the creation of the working group's advisory team from within FVWG membership.
- During 2009-2010, the existing FVWG coordinators will continue to facilitate the major portion of the planning and development of FVWG meetings, research and outreach.
- As FVWG begins to coalesce as a community of practice, the existing coordinators will identify and foster potential leaders in the group to:
  - » Disperse responsibilities for projects and administration
  - » Ensure long-term sustainability and resilience for the administration of the working group
- FVWG will look to develop or strengthen partnerships with:
  - » Iowa State University Extension and the ISU Extension Value Added program
  - » Leopold Center for Sustainable Agriculture
  - » Practical Farmers of Iowa
  - » Iowa Department of Agriculture and Land Stewardship
  - » Iowa Fruit and Vegetable Growers Association
  - » Value Chain Partners
- FVWG has submitted a proposal for funding through USDA's new Cooperative Research, Education and Extension Service (CREES) Specialty Crop grant program.

Grass-Based Livestock Working Group

Establishment of the Grass-Based Livestock Working Group

The Grass-Based Livestock Working Group (GBLWG) is the newest of the five working groups in the Value Chain Partnerships (VCP). GBLWG was initiated by a strategic investment from the Leopold Center for Sustainable Agriculture in summer 2008. Grass-based livestock is a topic that spans all three of the Leopold Center's strategic initiatives in Marketing & Food Systems, Ecology, and Policy because:

1. There is an expanding awareness of, and market demand for, grass-based food products and their perceived health benefits,
2. Well-managed grass farming tends to have positive environmental effects (e.g. greater water infiltration, reduced erosion potential, increased carbon sequestration, year-round land cover), and
3. Some greater degree of education and policy incentives will be necessary before grass-based livestock production can hold a place amongst the most reputed agricultural ventures in Iowa.

The Grass-Based Livestock Working Group had its first general membership meeting in August 2008 at the Living History Farms in Urbandale, Iowa. Producers and academics from ISU made up the bulk of the 55-person crowd, but state agencies and non-profits also had a noticeable showing. A representative of the Iowa NRCS gave a presentation about CRP-to-Grazing, but the main point of this meeting was a large-scale needs assessment outlining and ranking the most important areas for work in the grass-based livestock sector, framed around four conspicuous, yet interrelated thematic areas: production, marketing, ecology, and policy. The priorities that ranked highest included networking, branding and product differentiation, valuing ecosystem services, and, especially, cost-effective grazing models.

The number of attendees to the second and third quarterly meetings of the Grass-Based Livestock Working Group, which occurred in November 2008 and February 2009, respectively, has stayed consistent around 50. There have been educational components at each meeting, which have included presentations on grazing native grasses in the Chichaqua Bottoms and patch-burn grazing in the Grand River Grasslands, as well as a producer panel on accessing alternative markets for grass-based livestock products. Half of the second meeting was spent with attendees broken out around the four thematic areas – production, marketing, ecology, and policy – and coming up with ideas for research and demonstration (R&D) projects that might take advantage of the $24,000 in seed money provided by the Leopold Center. Each thematic area got its own listserv, in addition to the general mailing list, for further discussion after the meeting. As a result, when the request for proposals for these funds was released in December, there were already several leadership teams that had congealed around a proposed project.

What are the functions of the GBLWG?

The GBLWG statement of purpose

Our statement of purpose explains that the GBLWG exists to: 1) create a diverse and inclusive support network for grass-based farm and food businesspersons, 2) promote innovation, conservation, and information-sharing in the grass-based livestock sector, and 3) help grass-based livestock agriculture realize potential ecological, economic, and social benefits.

This working group was intended to serve as a peer group for graziers from all along the continuum, from the conventional cow-calf operations, to the certified-organic, holistically-managed, grass-finished operations, and all of those in between. Although the primary focus would be on beef production, since the majority of

pasture/forage acres in Iowa are used toward this end, the working group should have diverse representation from the grass-based dairy and small ruminant sectors. As such, the working conception of grass-based livestock is intentionally loose; grass-based livestock animals derive a substantial portion of their nutrition from pasture/forage for a significant period of their lives.

How does GBLWG operate?

So far, the Grass-Based Livestock Working Group has gotten together every three months and will likely continue that quarterly schedule for the immediate future.

All three of our meetings have been in central Iowa, two on the ISU campus in Ames and one is the Des Moines metro area. The idea of holding GBLWG meetings in other areas of the state where grazing operations are more prevalent (e.g. southern Iowa or far northeastern Iowa) is still being considered, but GIS mapping of participants' addresses has actually shown that a Story County meeting location minimizes the total travel distance for all participants. Plus, by changing locations, we may lose just as many participants as we gain.

Outside of face-to-face meetings, GBLWG participants have the opportunity to interact using e-mail listservs. As mentioned earlier, there are currently five such lists; one for the entire GBLWG membership, and four others, one for each of the major thematic areas, which were developed primarily to facilitate conversations about ideas for R&D grant applications. At this point in time, the grazing, wildlife, and ecology list is by far the most active. Soon, the Value Chain Partnerships project will sponsor the creation and hosting of a Grass-Based Livestock Working Group web site, which will be used for transmission of the working group's information, scholarly work, timely news, and events related to grazing and grass farming.

What has the GBLWG produced?

The Grass-Based Livestock Working Group received requests totaling $37,000 for $24,000 in available R&D funds At the third GBLWG meeting, one grant was awarded in each thematic area. Regarding production, an ISU Extension Livestock Field Specialist will be comparing the economics of 12-15 grass-based beef farms grouped by grazing intensity: continuous, low-intensity rotational, and high-intensity rotational grazing. Regarding marketing, Practical Farmers of Iowa are going to hold a workshop on branding and marketing for grass-based livestock products. Regarding ecology, the Iowa Beef Center and Iowa Native Lands will hold a conference on grazing native plant species and to develop several case studies of producers successfully grazing natives. Finally, regarding policy, an ISU master's student will compile existing literature and information to conceptualize a baseline state of the grazing sector in Iowa, outlining management practices, as well as incentives and disincentives to change.

Future Development and Growth of the GBLWG

Going forward, the Grass-Based Livestock Working Group must address several concerns to ensure its sustainability. First, the GBLWG does not exist in a vacuum; there are several other peer-based groups that support grazing and graziers throughout Iowa including the Grazing Lands Conservation Initiative, the Iowa Forage & Grassland Council, the Southern Iowa Forage & Livestock Committee, and numerous regional grazing clusters organized and funded by the Practical Farmers of Iowa. As such, the Grass-Based Livestock Working Group is going to have to coordinate closely with these other initiatives, leverage the capacities of partner organizations, and continue to strive to differentiate itself and its offerings. Secondly, the intentionally large net cast by the GBLWG to attract graziers of all types has resulted in a certain degree of difficulty in appealing to all factions of the grazing community with any one educational topic. As such, panels and presentations at meetings must be planned carefully, and post-meeting evaluations must continue to be heeded, so that conventional

farmers, alternative farmers, and graziers raising species and products apart from beef cattle will all be motivated to attend and to bring their friends. The coordinator will also continue to actively recruit members from sectors that are underrepresented. The strength of this working group must be in its diversity.

Learning, Knowledge Sharing and Communication

Creating and documenting knowledge

The working group has audio recordings of the three GBLWG meetings, as well as archived webinars which were used to transmit educational presentations to participants joining from a distance. These will be made publicly available as soon as the GBLWG web presence is up and running, along with reports and documentation on the status of funded R&D projects.

Evaluating the effectiveness of GBLWG

The Grass-Based Livestock Working Group hires the time of an Extension sociologist for evaluation of the working group. An online questionnaire is delivered via e-mail following each quarterly working group meeting. Given that the meetings do not yet have a set-in-stone format, the evaluation questionnaire does not either, although we are trying to move towards a template that contains questions that will be adaptable to most situations, simply so we can monitor changes in individual metrics over time. The questionnaire asks about satisfaction with different components of the meetings – e.g, research discussions, practitioner presentations, informal networking, etc. – and about the likelihood of implementation of the information.

Dealing with conflicts between leaderships own work and the working groups work

The main "conflict" I have experienced as coordinator of the Grass-Based Livestock Working Group is that people assume I have a much greater knowledge about grass and grazing than I do. I was not selected to coordinate this group because I am a trained animal scientist or an experienced grass farmer, but more so because I am willing to try to unite disparate interests behind a motivating topic. As such, I have developed a network of specialists in Extension and state government that are very well-versed in the technical details of grass-based livestock production, and I have called upon them frequently to answer questions from working group members that I can not fully answer.

Evolution of Value Chain Partnerships: The Iowa Network for Food and Agriculture Working Group

(Sue Honkamp — June 2009)

Tagline

Iowa's Network of Food and Agriculture Working Groups

- Quick description of VCP
- Consistently use this tagline following the name VCP in *all* communication

Positioning

- Value Chain Partnerships is an Iowa-based network of food and agriculture working groups. We work to deliver social, environmental, and economic benefits to our clients and communities. We leverage funding and expertise to identify food system challenges, foster learning and innovation, and implement solutions
- A more thorough description of VCP
- VCP must use clear and concise messaging
  - » A brand positioning statement is a clear and concise description of what VCP stands for
  - » The brand positioning statement will identify VCP's:
    - *Target audience*: Who should VCP address?
    - *Frame of reference*: What type of organization is VCP?
    - *Point of difference*: Why is VCP unique?
    - *Reason to believe*: How does it work?

Objective

- "Increase the viability of Iowa community-based agricultural businesses that produce and market products that result in positive social, environmental, and economic benefits"
- This objective will meet VCP's goal to:
  - » Foster significant social, economic, and environmental benefits for Iowa farmers, businesses, and communities
  - » Become a sustainable multi-organizational program with strong and stable commitments from its core partners and increasing demand for its services by a wide range of organizations and businesses

Target Audience

VCP must identify the target audience that will help them pursue the VCP objective.

- Who are they?
  - » Members of the agricultural community and beyond: farmers, processors, producers, agencies, academics, policymakers, investors, community members
- What do they believe in?
  - » Support local agriculture
  - » Support community prosperity

  - » Support environmental stewardship
  - » Support economic profitability
- What can they do?
  - » Share knowledge
  - » Support the group
  - » Invest resources, including monetary support
  - » Work to change policy

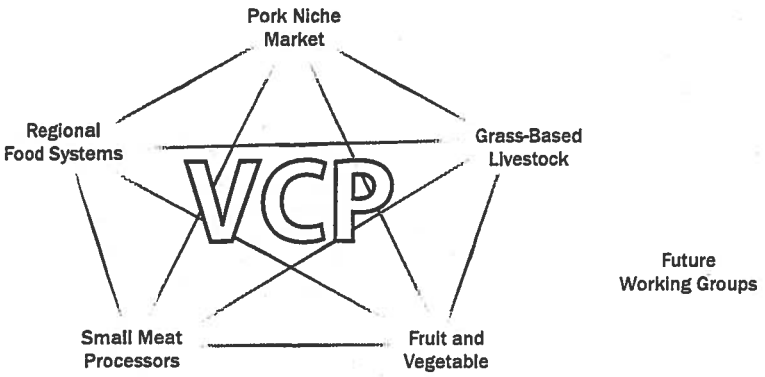
VCP's core target includes individuals, businesses, and organizations who are part of the value chain.

VCP must reach out to potential supporters while resonating with existing supporters. The four categories of supporters (some of whom may fall within more than one group):

- Core target
  - » Working group members
    - – Individuals and their organizations contribute to the group by identifying opportunities, sharing expertise, and working to resolve issues
    - – Farmers, businesses, and state and federal organizations included in the value chain
- Peripheral support
  - » Partner organizations
    - – Ensure that the group stays on track
    - – Provide resources
    - – Existing partners include Leopold Center, PFI, ISU, Extension
  - » Benefactors
    - – Provide financial backing to one or more working groups or VCP as a whole
    - – Funders, investors, grantees, foundations
  - » Influential advocates
    - – Publicly support the team's efforts and bring work to mainstream
    - – Policymakers (including legislators, council members, and advisory boards), media, food buyers, community leaders, educators (including Extension)

Frame of reference: What type of organization is VCP?

VCP is an Iowa-based agricultural network that provides positive social, environmental, and economic benefits in our communities.



Communities of Practice: Useful Information for Selecting, Initiating, Funding, Managing, and Branding

Value Chain Partnerships have established a dynamic set of working groups using a community of practice framework. In doing so, we have developed an extensive knowledge base devoted to initiating, managing, funding, and branding working groups. As our store of information and experience increases, we can apply what we have learned to make our groups more effective and resilient, and to share that information with others. We have organized our findings in the following sections:

- Conditions for success when selecting a community of practice (CoP)
- Suggestions for initiating a community of practice
- Considerations for managing an effective community of practice
- Considerations for funding a community of practice
- Considerations when branding a community of practice
- The roles and skills needed for a leader/coordinator of a community of practice
- Organizational, professional, and business benefits to leading or participating in a CoP
- Assessing performance
- When is it time to end a community of practice?

Conditions for success when selecting a Community of Practice (CoP)

- Critical Mass
  - » Are there enough active, enthusiastic and committed potential participants (producer-led businesses and people representing organizations that provide services to those businesses) to form a functional community of practice?
- Line of Sight to Benefits and Impacts
  - » Are there clear and measurable economic, social and/or environmental benefits for target clients for this particular community of practice?
- Focused on an unmet need
  - » Will this community of practice be appropriately focused on an unmet or underserved need?
- Interest from stakeholders
  - » Is there sustained interest from community members, local businesses, local government and/or regional government?
  - » Is there a grass roots effort already underway? If yes, will this group duplicate existing efforts?
- Leadership Potential
  - » Are there a set of key champions for this issue within local and/or state organizations and businesses?
  - » Are there skilled facilitators identified in Iowa State University Extension and/or other organizations who can assume the responsibility to coordinate the group?
- Potential to attract external resources.
  - » What federal, state and local funds would be available to this Community of Practice (from university, state, federal, private business, angel investors, nonprofit organizations, etc.)?
- Market Potential
  - » Is there a clear, growing demand for the issue or market on which this group will focus?
- Policy Incentives
  - » What agency or government policies are in place that would support or inhibit the success of this CoP? How will policy issues be handled by the CoP?

Suggestions for initiating a CoP

(Requires advance planning and several group meetings)

- Convene key stakeholders and conduct a thorough needs assessment of the issue, including the challenges and opportunities
- Agree on key challenges the group has the capacity to address with existing and potential resources
- Identify individuals and organizations willing to make an initial commitment to work together to address the challenges. This commitment could consist of time, money, or in-kind resources
- Form follows function. Determine if a community of practice or other collaborative group is the best "form" to address the challenges
- Develop a mission, goal, or purpose statement for the group
- Develop a draft work plan and resource plan (see section on funding communities of practice)
- Form a leadership group (steering team) made up of a cross-section of members that will provide input to direct the CoP, and that has the authority to approve uses of CoP resources to assure wise choices, reduce redundancy, etc.

Considerations for managing an effective CoP

- An appropriate amount of discretionary funds is available to conduct projects that will help address needs (see section on funding)
- Shared purpose. The mission, goal, or purpose statement provides direction and a way to choose appropriate activities to keep the group focused
- Shared responsibility. Participants work together to address needs
- Shared ownership of the CoP by its members, which results from conducting activities in a way that empowers members and organizations to believe in the group
- Accountability for performance on research and technical assistance projects
- Consistent, ongoing evaluation to provide feedback on the CoP performance
- Membership is open and can shift over time, with a core group base that provides continuity and directionAn appropriate balance of membership between businesses and/or community leaders and assistance providers/agencies personnel so that the majority of technical assistance needs can be met by group members
- Recurring (quarterly) face-to-face meetings to discuss progress on addressing key challenges, identify other pressing issues that may have arisen, and facilitate member-to-member networking and trust-building
- A clear agenda for every meeting, with adequate time for each agenda item and an opportunity for participants to suggest topics for future meetings
- Regular between-meeting communications via list serves, newsletters, web sites, and phone conversations between the coordinator and members
- Internal communication within partner groups and an environment of trust and openness to assure effective contributions
- The willingness and ability of the group to address sensitive and controversial topics in a respectful manner

- Safeguards to maintain confidential business or client information (where needed)
- A capable, mature coordinator with excellent facilitation and listening skills
- The capacity to recruit new members with the necessary skills to address identified challenges

Considerations for funding a CoP

- Adequate staff time for coordination and sufficient resources for projects are critical for successful CoP operation
- Commitment of in-kind and financial resources from key organizations is important to establish the CoP and to attract grant dollars
- All funders and investors want to see their resources leveraged
- A community of practice approach can help expand the funding pie to get work done rather than increasing competition for limited resources
- Funders will be more attracted to multi-organizational CoPs with similar goals that perform efficiently and show visible results than to individual organizations that cannot demonstrate collaboration with others
- A CoP that operates effectively and builds a reputation for success will find it easier to recruit new members with expertise and financial resources
- Resources devoted to evaluating the impact of the CoP and its project(s) are well worth the investment
- It is critical for projects undertaken by the CoP to have clear and easily measurable metrics as indicators for success. If you can clearly demonstrate through the CoP that you are making a difference, you are more likely to receive additional funding and increase the support for your work
- Grant writers need to cultivate relationships with funders, understand the goals of individual funders, and clearly communicate CoP project goals, objectives, outcomes, and impacts
- Requests for additional financial and in-kind resources should be coordinated across key members of the CoP to increase likelihood of added support

Considerations and suggestions when branding a CoP

Considerations

- Branding will give you the tools to clearly, concisely, and consistently communicate who you are, what you do best, and why it's working
- A more clear, concise, and consistent identity will help you to more effectively reach out to your target audience
- Targeted communication will generate support and increase your group's ability to make an impact

Suggestions

- Determine your objective
  - » What is the objective of your CoP?
  - » Ensure that it is quantifiable
- Identify your target audience
  - » Who will help you achieve your objective?

  - » What do they believe in?
  - » What can they do for your group (and what can your group do for them)?
  - » Identify core and peripheral supporters
- Determine your brand positioning
  - » Identify your frame of reference
    - – What type of organization do you have?
  - » Identify your point of difference
    - – How is your organization different from other organizations within your frame of reference?
    - – What benefit do you want people to associate with your organization?
  - » Identify the reason to believe
    - – Why is your organization so successful?
    - – What is the most convincing support behind your point of difference?
  - » Develop your positioning statement
    - – The positioning statement is comprised of the *frame of reference*, *point of difference*, and *reason to believe*
- Evaluate your CoP's name
  - » Does your name reflect the objective of the group and clearly communicate the work being done by the group?
  - » When used consistently, a tagline can help clarify a name
- Determine your marketing objective
  - » What does your target audience need to do in order to achieve your business objective?
- Determine the marketing challenge
  - » What is the behavior or belief that needs to be overcome in order to get to the marketing objective?

The Roles and Skills Needed for the Leader/Coordinator of a CoP

Roles

- Help people think about sharing information and resources in new ways
- Ensure participants are aware of decisions being reached
- Engage participants (especially quiet or timid people) to keep them involved and contributing
- Maintain a balance between processes and goal-related activity
- Keep the discussion focused on the topic (maintain the fine line between diversionary off-topic items and helpful related-topic discussion)
- Approach controversial issues in an honest and respectful manner and seek common ground
- Synthesize ideas, concepts, questions, and concerns expressed in the group to provide focus and purpose
- Convene meetings and be the contact for questions from other parties interested in the work of the CoP
- Recruit for a diverse membership, and ability to communicate goals, expectations, ground rules, and direction
- Encourage a culture of collaboration across organizations, businesses, and/or communities

Personal skills and qualities for CoP leaders

- Positive mental attitude
- Strong commitment to the CoP mission
- Strong organizational skills and attention to detail
- General expertise in the CoP topic area
- Excellent facilitation skills
- Good listening skills
- Well-developed interpersonal communication skills
- Appropriate sense of humor and timing
- Ability to help the group reflect on its discussions and information being shared
- Capacity to summarize ideas and concepts in a clear and concise manner
- Ability to remain neutral until everyone has contributed ideas
- Awareness of what is *not* being said, and the ability to bring it into the discussion
- "Big picture" thinking balanced with attention to detail
- Capacity to be a "servant leader." A "servant leader" is a *steward* of the resources (human, financial and otherwise) provided by the CoP, and remains focused on achieving results consistent with the CoP's values and integrity.

Organizational, professional, and business benefits to leading or participating in a CoP

CoP Functions	*Key Benefits for Producers and Businesses*	*Key Benefits for Organizations*
Information hubs that create, capture, document, leverage, and deploy knowledge as technical assistance to create solutions for value chain partners	• Greater awareness of a wider range of support providers and services • Greater awareness of and access to research-based information • Access to larger "portfolio of expertise to draw from" and "tacit knowledge"-- information unavailable anywhere else (i.e., not in print or electronic form) • Improved business skills and competencies • Opportunities to participate in research that creates new knowledge used to inform the industry/work	• Better understanding of challenges facing producers and businesses • Greater awareness of complementary technical assistance offered by other participating organizations • More effective organizations and employees due to improved knowledge and work competencies • Access tools others are using to encourage involvement and participation in food systems work • Participating organizations are better able to manage "local politics" associated with doing food systems/ sustainable agriculture work
Catalysts for cooperation of diverse interests that create solutions for food and fiber producers and businesses	• Greater sense of teamwork and low level cooperation (low risk information-sharing) • Opportunities for "high-level" cooperation (where businesses share some risk, resources, and profits) • Access to support network • Private sector access to no or low-cost public sector support and services	• More coordinated use of existing organizational and state resources • Participating organizations work more with other groups and recognize other organizations as assets/ potential partners • Better relationships with an expanded group of partners, including commodity producers, people in other disciplines, and non profits • Deconstruction of organizational boundaries and negative organizational stereotypes
Magnets that attract funding, and leverage, channel, and distribute funding for research and development of differentiated products	• Private sector links with research agendas and consultants who initiate work that benefits producers and businesses • Participating organizations invest more resources such as money and staff time on work that supports the industry and benefits producers than otherwise possible.	• Participating organizations collaborating with unlikely partners, including commodity groups, are more successful at receiving grants • Increased credibility that CoP brings to the work helps focus, coordinate, and leverage new sources of support • Participating organizations are better able to leverage their own organizational resources to commit more staff time and resources to food systems work
Scouts that identify emerging value chain opportunities with high potential to deliver economic benefits to sustainable agriculture stakeholders	• Increased access to new markets • Increased sales • Increased production • Improved financial stability • More efficient operations • Greater business viability due to better decision making	• Participants engage elected officials and government agency staff in conversations emphasizing the need for policy to support the work, producers, businesses, and communities

Value Chain Partnerships
An Iowa-Based Network for Food and Agriculture Working Groups

Assessing the effectiveness of your community of practice

There are numerous ways to evaluate the effectiveness of your community of practice. The following template assesses performance across a number of key areas, including leadership, level of support and cooperation, achieving objectives, and sustainability.

Assessing Performance: Community of Practice Scoring Template

CoP name: CoP leader: Number of years as CoP: Date:

Objectives for past period (from x to y):

Objectives for the subsequent period (from x to y):

Assessment Area		Score				
Assessment area and weighing %	**Assessment questions, relative to CoP's life stage**	**Sub-score**	**Very weak**	**Weak**	**Strong**	**Very strong**
Leadership: 10%	Has the CoP leader…		1	2	3	4
	…brought a cross section of key players to the table?		Comments:			
	…been able to engage, empower, and inspire the CoP team?					
	…established a clear direction, including a working plan?					
	…been an effective communicator?					
	…responded to the VCP team in a timely manner?					
	…consistently contributed to the VCP core team?					
Support/ cooperation: 20%	Is there evidence of support from businesses, farmers, key organizations, NGOs, faculty, staff, and other CoP participants appropriate for the CoP's work activities?		Comments:			
	Is there evidence of cooperation among businesses, farmers, key organizations, NGOs, faculty, staff, and other CoP participants?					
	Is there evidence of satisfaction among businesses, farmers, key organizations, NGOs, faculty, staff, and other CoP participants?					
Benefits objectives effectiveness: 30%	Has adequate progress been made toward the current objectives?		Comments:			
Future objectives: 10%	Do future objectives significantly contribute to the goals of key organizations?		Comments:			
	Is work plan realistic and achievable?					
Sustainability objectives effectiveness: 30%	What percent of its resource target has the CoP leveraged toward the expected goals?		Comments:			
	Will further resources drive further proportionate results?					
Overall	Overall comments:		**OVERALL SCORE:**			

Considerations When Closing or Shifting Focus of a CoP

- Has the group accomplished its goals?
- Have other higher priority issues emerged for a majority of the group that call for a new focus and direction as well as shifting of resources?
- Have key stakeholders stopped participating?
- Are other groups or projects effectively carrying on the needed work?
- Does the group have irreconcilable differences that prevent continued progress?
- Are there no longer resources to operate effectively?
- Are there methods other than the CoP that can better address existing or new challenges?

Perspectives from a Masters student in Business Administration with a minor in Sustainable Agriculture

Andy Larson

For two years I worked as a graduate student within Value Chain Partnerships, and, at first, I really didn't get it. There were so many groups, personalities, politics, and acronyms. But, as I spent more time with Value Chain Partnership's core leadership team, I had the opportunity to experience the inner workings of all the communities of practice. I saw how working groups formed with some combination of passion, serendipity, and strategic intention. I observed how working group members' actions and interactions varied with the coordinators' respective leadership styles. I came to understand the amount of time and effort required to truly build trust within a group, whether the participants were peers or competitors. And I watched as working groups contracted and closed as their relevance came to an end. I still can't accurately describe everything about the community of practice approach that makes these working groups work, but things began to seem more sensible and more cyclical, and it became quite apparent that practical outcomes and mutually beneficial relationships were essential to success.

As graduation drew near and I prepared myself for an Extension position in Small Farm Sustainability, I agreed to contract a quarter of my time to the Leopold Center to coordinate the nascent Grass-Based Livestock Working Group. After the necessary arrangements were made between the Leopold Center and Iowa State University Extension, I convened an advisory committee of representatives from Iowa State University Extension, Practical Farmers of Iowa, Iowa Natural Resources Conservation Service, Iowa Cattlemen's Association, and the Leopold Center's Ecology and Marketing & Food Systems Initiatives. Together we drew up a list of people who should get together as a working group, mostly composed of graziers and the outreach professionals who support them from university, government, and non-profit sectors. There were also a handful of brokers, processors, and marketers on the list from other nodes in the grass-based livestock product supply chain.

Testimonials

Paul Brown

Current Position: Assistant Director, ISU Extension

Affiliation with VCP: Current member of Value Chain Partnerships Advisory Committee

- He believes that the Leopold Center has proven that Value Chains and Communities of Practice provide a "tried and true process"
- He intends to move from a facilitative approach (used for the last 50 years) to a community of practice approach within extension programming.
- "Using this approach, we will engage extension and clients in a topic of interest and journey with them to produce outcomes which result in change over time"

Rudi Colloredo-Mansfeld

Current Position: Associate Professor of Anthropology, University of North Carolina, Chapel Hill; member of the ALCES Foundation

Affiliation with VCP: Former member of Regional Food Systems Working Group Advisory Committee

- While on staff at UNC, he still turns to the RFSWG for support in current projects
- At UNC, received $18,000 grant that was written using the research conducted by the RFSWG
- RFSWG has "pioneered collaboration and created common ground" to do "real work, making real progress"

JoAnne Berkenkamp

Current Position: Institute for Agriculture and Trade Policy

Affiliation with VCP: Former Value Chain Partnerships evaluator on behalf of the Wallace Group

- VCP will "foster transparency in a space that is often competitive"
- VCP has "honed and debugged the process"
- "Benefit (of VCP) is bringing a different cast of characters together to create (the) value needed to keep them there in an environment that supports and allows them to grapple with complex supply chains"

Sue Futrell

Current Position: Owner and Consultant, One Backyard Consulting

Affiliation with VCP: Regional Food System Working Group member

- "(The) benefit of VCP is the mix of people; that combination doesn't typically happen anywhere else and I find it extremely valuable"
- "Importance of the VCP effort (is) to frame and energize more local food systems in Iowa"
- The VCP group has "evolved a model that is practice based, not just academic"

Duane Short

Current Position: Owner, Prime Pork Supply

Affiliation with VCP: Pork Niche Market Working Group member

- VCP allows for "open communication and a cooperative process"
- "A competitive group, meeting together to formulate strategies and answers to problems"
- "Not a typical supply chain but a collaborative one where all work together"

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Internet Resources About Communities of Practice

http://cpsquare.org/ CP
Square is a diverse community of practitioners that has gathered to share knowledge and build a practice around their passion for and belief in the potential of communities of practice as a vehicle for positive organizational and world change.

http://nonprofit.about.com/od/foundationfundinggrants/tp/grantproposalhub.htm
About.com provides information on grant proposal writing geared for not for profit entities, also includes information on foundations and non-profit management.

www.ewenger.com/theory
A brief introduction to communities of practice by author Etienne Wenger.

http://en.wikipedia.org/wiki/Community_of_practice
Wikipedia's definition of communities of practice.

www.co-i-l.com/coil/knowledge-garden/cop/index.shtml
Community-enabled Strategic Results from Self-Organization with George Pór. The Community Intelligence Lab focuses on social, business, knowledge and technical innovation.

www.infed.org/biblio/communities_of_practice.htm
Infed.org is *the encyclopedia for informal education which explores informal education, lifelong learning and social action.* This link features the proceedings from a conference on informal education within a formal setting.

www.funderstanding.com/content/communities-of-practice
Funderstanding's mission is to inspire in people the love of learning. They achieve this by helping educators design better programs and products that engage learners fully, where the learning process is fun, meaningful, deep, and long lasting. This is their take on communities of practice.

http://eric.ed.gov/ERICWebPortal/custom/portlets/recordDetails/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=ED466030&ERICExtSearch_SearchType_0=no&accno=ED466030
From the Education Resources Information Center, ED466030 - Conceptual Analysis and Research Questions: Do the Concepts of "Learning Community" and "Community of Practice" Provide Added Value?

www.anecdote.com.au/archives/communities_of_practice
Anecdote helps business leaders engage their people to be even better collaborators, leaders and change agents using the power of business narrative. Their clients often select us because their approaches are unashamedly pragmatic and practical and are based on our long experience in using these approaches to deliver business value. This page deals with stories of communities of practice.

www.a-i-a.com/capital-intelectual/KnowingInCommunity.pdf
Richard McDermott, Knowing in Community: *10 Critical Success Factors in Building Communities of* Practice,

Organizations That Use a Community of Practice Model

www.communities.idea.gov.uk/welcome.do
This is a site for communities of practice for local governments in the United Kingdom.

www.communityofpractice.net
The VPE/CTO Community of Practice is a Silicon Valley-based membership organization for Engineering VPs, and CTOs where members solve problems, share their business experience and create opportunities.

http://semanticommunity.wik.is/Federal_SOA_Community_of_Practice
The Federal SOA CoP is an open community of practice fostered to assist government and commercial organizations in achieving the promise of Service Oriented Architecture (SOA) through collaboration, demonstration and community efforts. The Federal SOA CoP is open to all.

www.sharedwork.org
The IDEA Partnership Communities of Practice are focused on advancing policy and practice in four key areas: (a) the intersections of the No Child Left Behind Act and the Individuals with Disabilities Education Improvement Act (IDEA); (b) school behavioral health services; (c) interagency transition, and (d) teacher quality. As partner organizations work together and with States, districts, local sites and individuals, they form Communities of Practice whose members learn from each other and take action together in coordinated ways. (Read more about this collaborative work at the IDEA Partnership website at www.ideapartnership.org

www-304.ibm.com/jct01005c/university/scholars/training/replay/communities-practice.html
IBM's community of practice site.

Research Articles

Reference Guide: Creating SMART Objectives

Understanding the benefit and costs of communities of practice

Tapping communities of practice: enjoying the benefits and avoiding the pitfalls.

Knowing in Community: 10 Critical Success Factors in Building Communities of Practice

Concept Use Analysis and Research Questions: Do the concepts of "Learning Community" and "Community of Practice" provide added value?

Results from Coordinated Regional Food Systems Work in Iowa and Implications for Policy Makers

THE UNIVERSITY OF NEW MEXICO SCHOOL OF MEDICINE
TEACHER & EDUCATIONAL DEVELOPMENT
Growing Today's Educators and Tomorrow's Practitioners

REFERENCE GUIDE: CREATING "SMART" OBJECTIVES; IDENTIFYING OUTCOMES, OUTPUTS AND MEASURES FOR YOUR SEAC PROPOSAL

OUTCOMES

What is an outcome?

The outcome of your project is its impact on and benefits to a target population that are anticipated as a result of the achievement of your objectives.

Example words associated with "outcomes" include:

- Improved
- Increased/decreased
- Expansion of
- Adoption of
- Integration of
- Standardized
- Innovative
- Experience with
- Enhancement of
- Updated
- Advanced
- Strengthened
- Promotion of
- Changed behavior/attitude
- Prediction of

OBJECTIVES

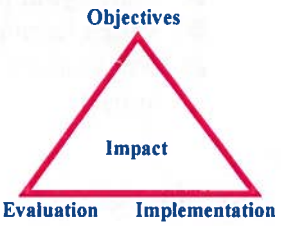
What is an objective?

An objective is a statement that captures in specific terms the intended/anticipated results of your project.

Why have objectives?

Creating clear objectives during the planning process and implementation of a project serves the following purposes:

- Helps planners integrate all aspects of the project
- Serves to connect implementation and evaluation to define impact
- Provides a clear focus for development and implementation
- Forms the basis for evaluating outcomes and success



What are the key components of a SEAC objective?

Objectives should be "*SMART:*"

*S*pecific
*M*easurable/observable
*A*ttainable within scheduled time, budget, and conditions
*R*esults-oriented
*T*argeted to the identified need and desired impact on/benefit to UNM SOM

How do I create a useful learning objective?

To create *specific, measurable, and results-oriented* objectives:

- It's helpful to finish the sentence, "Desired results of this project are to…"
- Start with an observable action word that captures specifically what your desired result is. Examples of words at three levels of thinking are provided below.

Knowledge Level	Application Level	Problem-Solving Level
Define	Apply	Analyze
Disseminate	Caculate	Assess
Identify	Conduct	Construct
Present	Demonstrate	Create
Quantify	Introduce	Develop
Share	Measure	Establish
	Train	Evaluate
	Use	Implement
		Institute
		Redesign
		Refine
		Synthesize

- Avoid ill-defined terms that are open to variable interpretation (e.g., understand, learn, grasp); use instead terms that describe directly observable results.
- When necessary, specify criteria concerning expected standard (e.g., "Identify and utilize an instrument with demonstrated validity and reliability.").

To create *attainable* learning objectives:

- Consider the current level/status of the problem/area of identified need.
- Consider the conditions under which work of the project will take place (e.g., time, funding and other resources, support, facilities, staff, etc.).

To create objectives *targeted to the identified need of/desired impact on UNM SOM:*

- Ask yourself whether the desired impact requires knowledge, application, and/or problem-solving
- Match your action verb to the desired level (see lists of words above).
- Match learning objective with appropriate methodology.
- Ask yourself whether achieving the objectives can reasonably be expected to achieve the desired impact.

OUTPUTS

What is an output?

An output is a product of a project's activities. Example outputs include:

Curricula	Minutes	Protocols
Documentation	Papers	Publications
Instruments	Presentations	Tools
Manuals	Programs	Websites

Avoid confusing outputs (products) with outcomes (impact/benefit) and objectives (action statements articulating desired results).

MEASURES

How can outcomes/success be measured?

Measure What?	Measure How?	Quantify How?
Achievement	Checklist	Categories
Attitudes	Clinical Trial	Comparison to standard
Development	Content Analysis	Difference
Effectiveness	Focus Group	Frequency
Efficiency	Interview	Grade
Fit to Purpose	Observation	Increase/decrease
Improvement	Questionnaire	Instances
Opinions	Self Report	Percentage
Perceptions	Statistical Analysis	Rating
Performance	Survey	Ratio
Progress	Test	Score
Quality		
Rate		
Satisfaction		
Timeliness		
Values		
Usefulness		

UNDERSTANDING THE BENEFIT AND COSTS OF COMMUNITIES OF PRACTICE

PROMOTING HEALTHY COLLABORATION IN COMMUNITIES OF PRACTICE TAKES MANAGEMENT SUPPORT AT ALL LEVELS. AND MANAGEMENT, OF COURSE, WANTS AND NEEDS TO COMPREHEND WHAT THE FIRM GETS FOR THAT INVESTMENT.

DAVID R. MILLEN, MICHAEL A. FONTAINE, AND MICHAEL J. MULLER

THERE HAS BEEN INCREASING INTEREST WITHIN LARGE ORGANIZATIONS IN THE DEVELOPMENT AND SUPPORT OF COMMUNITIES TO PROMOTE COLLABORATION, IMPROVE SOCIAL INTERACTION, INCREASE PRODUCTIVITY, AND TO IMPROVE ORGANIZATIONAL PERFORMANCE [3, 8]. THESE WORKER GROUPS, OFTEN CALLED "COMMUNITIES OF PRACTICE," ARE DEFINED BY A COMMON DISCIPLINARY BACKGROUND, SIMILAR WORK ACTIVITIES AND TOOLS, AND SHARED STORIES, CONTEXTS, AND VALUES. DATING BACK TO THE TRADE GUILDS OF THE MIDDLE AGES, THESE LONGSTANDING VOLUNTARY WORKER ASSOCIATIONS have developed rich and varied forms of both formal and informal social interaction in the modern workplace (for example, hallway exchanges and water-cooler conversations, meetings and conferences, brown bag lunches, newsletters, and teleconferences).

Increasingly, however, these communities are moving beyond

LISA HANEY

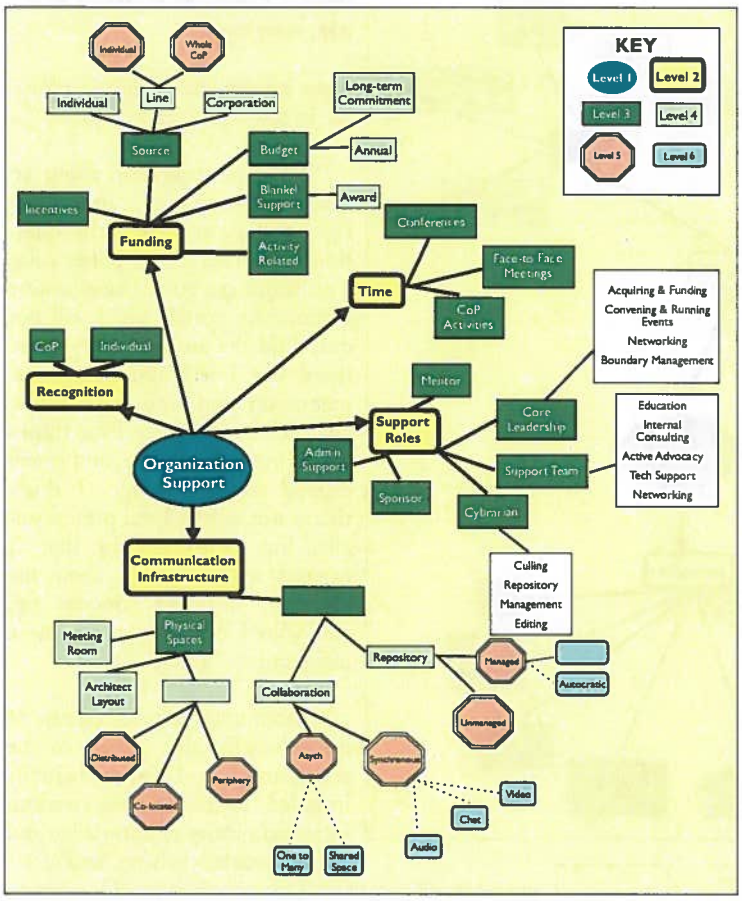


Figure 1. Community of practice mind map, organization support theme.

face-to-face exchanges, to interact in online environments, shared Web spaces, email lists, discussion forums, and synchronous chats. Not surprisingly, the support of these environments demands both financial and technological resources. These demands force organizations to invest with caution while trying to capture the value that communities ultimately deliver to their financial balance sheets. As with any other significant investment in IT and human capital, managers are naturally interested in understanding the impact these communities have on individual performance, team effectiveness, and overall productivity.

To address the challenge of how organizations can begin to analyze these financial tradeoffs, we explore the benefits and costs of communities of practice within large, geographically dispersed organizations and discuss the challenges inherent in justifying the corporate investment in such communities. To better understand the benefits and costs of communities of practice, researchers from the IBM Institute of Knowledge-based Organizations (formerly the Institute for Knowledge Management) and IBM Research conducted a study of nine communities in seven firms sampled from a broad range of industry sectors—finance, manufacturing, pharmaceutical, software, chemical, and telecom (see the table). In total, we conducted semi-structured interviews with more than 60 community members, leaders, and knowledge management personnel. The sample communities were both local and global in scope, and ranged in practice from programming, to biochemical research, to land and real estate development in poverty-plagued nations. After analyzing the interview data, we developed a *mind map*, [2] a nonlinear graphical representation of the factors and relationships in our findings. This map uncovered the following five major community themes, the final two of which serve as the basis for this article:

- *Development path:* How did the community form and evolve? What was its catalyst?
- *Membership:* How and why did members join, leave, or give of their time and energy?
- *Activities:* What did members do in the community? How did they interact?
- *Organizational support:* How was the community supported by the organization?
- *Value:* What value did members receive? How did the organization benefit from the community?

Two themes, *organization support* and *value*, provided the lens and categorization scheme we used to extract the benefits and costs discussed here (Figures 1 and 2).

Recognizing Community Benefits

Our analysis of member interviews originally depicted in the value section of the mind map revealed three distinct categories of community benefits: *individual, community,* and *organizational.* Individual benefits spanned many topic areas including improved reputation, a better understanding of what others were doing in the organization

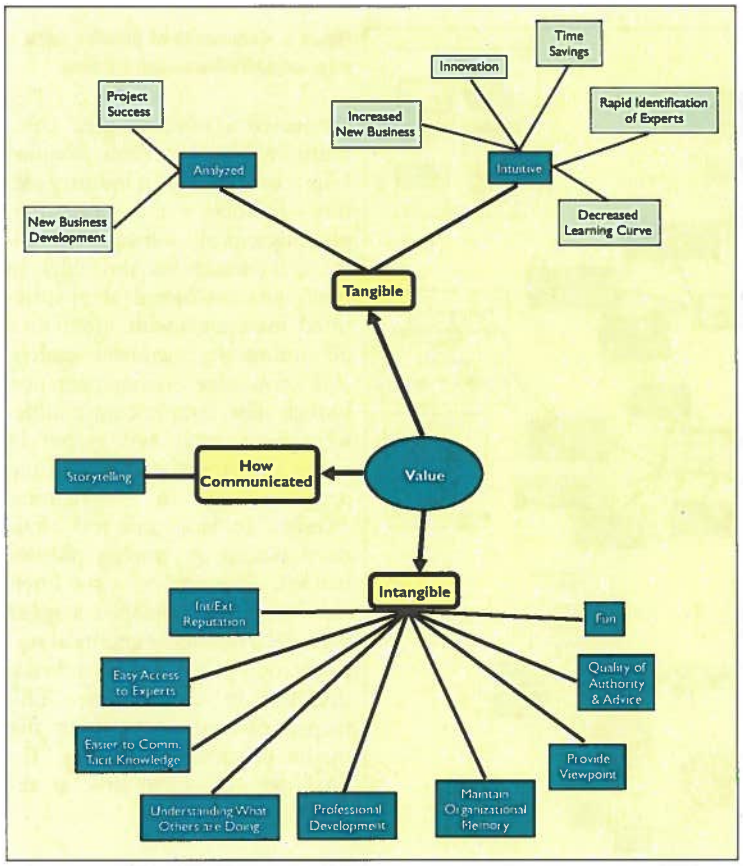


Figure 2. Community of practice mind map, value theme.

• Bristol-Myers Squibb	• NSA
• British Telecom	• SAS
• Buckman Laboratories	• World Bank
• IBM	• United Technologies

Organizations that participated in the research.

and increased levels of trust. The familiar and supportive environment found in many communities of practice encourages member interaction and ongoing professional development and learning about new tools, methods and procedures. Study participants expressed the importance of the benefits of increased access to subject-matter experts and valuable information resources. Together these benefits allowed members to develop professionally, remain at the forefront of their discipline, and gain confidence in their own expertise. Some of the sentiments echoed in the collective comments were:

"If you've done good work on a project, package it up, put it into the tool [community knowledge-sharing database] and it's well-perceived by other developers around the world, it's a good way of getting your name known and raising your profile in the organization." (SAS)

"If I have a question about an offering, for instance ... to find the right person to answer the question might take several phone calls. This way, I can go out here [online community portal] and I will not only find the answer to my questions, but I will also find documentation and information that goes well beyond what I was thinking of in the first place, and it will expand my knowledge. I think that is not only helpful professionally, but personally in that it expands my knowledge about the offerings, who the contacts are, and who I can contact for more information." (IBM)

Community benefits consist of those benefits that accrue to the community. These benefits included increased idea creation, increased quality of knowledge and advice, problem solving, and creating a common context. Communities provide a forum for the free expression of creativity and new ideas, providing members with the opportunity to share ideas and think outside of the box:

"Members might be in a project where they need advice, or they need guidance on how to do something. That's when they really feel good about the fact that they can go somewhere [community portal] and find out where things are, or they can ask on the list server and get some good advice. They get professional, high knowledge advice." (SAS)

"Well, I think because there is a sense of community, shared values, and shared goals; you can talk to people about similar issues that they will have had before. Everybody is quite open and they will give you lots of help." (British Telecom)

Organizational benefits involve the most tangible types of value expressed in communities—business outcomes. Study participants indicated that the improved communication among community mem-

bers contributed to successfully executed projects, increased new business, and product innovation. The more compelling evidence of community benefits for the firm was in the area of time savings. These comments highlight the reduced time to perform a variety of information-seeking and -sharing tasks that contributed to improved operational efficiency:

"It's the fact that we don't have to reinvent the wheel all the time. If we're sharing our information, then I can use what somebody else has learned and work on it somewhere else, instead of spending 80 hours doing it myself. It not only saves time, it also has improved the effectiveness of people's delivery material." (United Technologies)

"It's probably 50% of the time that you will find someone else who has had the problem and who has solved it. Basically, that can save a lot of work." (SAS)

"We are gaining information that enables us to make value decisions quickly. It benefits the business and it benefits customers. I've got a good example. One of my project managers came to me and needed a project implementation for a big proposal going out the next day, and we hadn't yet done a similar project, [so we] requested a PM [online] discussion. He came back within five to ten minutes. The project implementation part was done in a completely different sector and we were able to quickly doctor it into our customer's proposal. If we had had to do it internally, it would have taken us three or four days. It would have taken somebody the afternoon just to collect the information, put it in, and go." (British Telecom)

In summary, study participants described a rich qualitative set of individual, community, and organizational benefits provided by their respective community of practice, some of which can be quantified through traditional time, financial, and transaction cost analysis.

Exploring Community Costs

For a complete understanding of the contributions of a community of practice, we must also consider the costs of supporting a community. All too often the cost estimates for communities are based on the technology investments, which significantly underestimates the total cost of ownership (TCO) for a community. In studying organization support, we found four major categories of TCO cost drivers. These include the costs of the participation time for community members, meeting and conference expenses, technology, content publishing, and promotional expenses.

Specifically, the costs of participation included the salaries for members who were identified as supporting the community through 11 identifiable roles (for example, community member, leader, core team, subject matter expert, sponsor, mentor, facilitator, content coordinator/cybrarian, admin/events coordinator, technologist, and journalist) [6]. Technology costs included the costs of synchronous and asynchronous group messaging applications and community Web sites. Meeting costs included the expenses associated with face-to-face meetings, including travel expenses, as well as the costs associated with electronic meetings (for example, teleconferencing). And finally, the cost of publishing content included the cost of online content development and production costs for community newsletters and promotional materials.

To assess whether the cost categories were reasonable and complete, 36 knowledge management professionals divided into teams of six were asked to consider the TCO framework in a budget allocation exercise. In this exercise, a case study of a developing community of practice was presented and the teams decided how to allocate financial resources across each of the cost areas. There was remarkable consistency among the responses from the six groups. On average, the groups allocated 52% of the community budget to pay for salaries (and incentives) for community workers. On average, 32% was used to pay for meeting expenses, 10% for technology, and 6% for publishing and promotion expenses. The relatively low investment in technology was a bit of a surprise, but may be reasonable given that the exercise assumed that general corporate communication infrastructure (for example, telephone and email) was available to the community at no additional expense.

Developing a Business Case for Community Investment and ROI

The results of our multicompany research offers qualitative evidence for several kinds of benefits from communities of practice, and a reasonable framework to consider the costs to support such communities. There is increasing pressure, however, to augment the qualitative results with more formal measurement of the financial benefits and costs of the communities. Measures of value are instrumental for communities to gain visibility and influence as well as to educate and guide their own development [11]. This emphasis on financial measurement is similar, in most respects, to the formal cost/benefits analysis for investments in information systems [10], electronic performance support systems [5], human factors [9], and usability [1].

No doubt, precise financial measurement of the costs and benefits of a community of practice is a significant challenge. To measure the financial benefits, we have considered two approaches. The first is based on measurements of the cost savings due to specific community activities. An example would be the time saved preparing a customer proposal by using a template found on a community portal (as reported by interviewees). Measurements of these kinds of cost savings could be gathered through a variety of means, including self-report surveys and through well-designed activity logs within the community software environments. This approach is promising, as there were several participants in our study who described costs savings due to community knowledge-sharing activities.

A second approach to estimating the financial benefits of a community of practices is by using a special form of storytelling referred to as a "serious anecdote" [4]. A serious anecdote is a story with an easily quantifiable punchline. An example can be seen in the earlier quotation where an employee utilized his community relationship and community portal to find a specific person and template to achieve a customer-facing business objective in three to four days less than expected. The benefits associated with decreased preparation time can be easily calculated.

In contrast to measuring the benefits of a community, the measurement of the cost to support a community is more straightforward. Based on the TCO workshop results, we believe that reasonable estimates of the costs associated with communities are readily available to community leaders.

Once reasonable estimates of the costs and financial benefits of a community are in hand, there are several traditional ways to evaluate community investment decisions. One method frequently used in capital budgeting exercises is to look at the discounted costs (cash outflows) and returns (cash inflows) over a multiyear horizon, and compare the resulting Net Present Value (NPV) of several investment alternatives [3]. A good illustration of the use of NPV and related financial measures (for example, Return on Investment, or ROI) can be found in a discussion of the cost justification of usability [7].

The financial evaluation of a community is useful for at least two reasons. First, community builders and managers need to be aware of the path to value for their communities and some cost justification is required for many corporate environments. Second, financial measurement allows community managers to compare different communities and focus attention on community activities that work and those that need to be changed.

Measuring and demonstrating the value of communities of practice is as difficult, in its way, as is the measurement and demonstration of the value of user-centered design or usability work (for example, [7]). It should be noted that while we have described various approaches to measuring the costs, benefits and returns for a community of practice, we feel there is much work to be done in this area. Financial measurements of community are often based on soft measures or estimates of costs and benefits of questionable reliability and validity. Many economics and finance researchers are looking into radically different approaches to measuring the value of communities by looking at the assets that a community creates. The valuation of these *intangible assets* may be a promising approach to evaluating community contributions. C

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MICHAEL J. MULLER (mullerm@acm.org) works as a research scientist at IBM Collaborative User Experience Research Group in Cambridge, MA.

Tapping communities of practice: enjoying the benefits and avoiding the pitfalls.(Statistical data)

Kerno, Steven J., Jr. "Tapping communities of practice: enjoying the benefits and avoiding the pitfalls.(Statistical data). ." Mechanical Engineering-CIME. 130.10 (Oct 2008): 22(5). Academic OneFile. Gale. Iowa State University Library. 13 Feb. 2009 <http://find.galegroup.com.proxy.lib.iastate.edu:2048/itx/infomark.do?&contentSet=IAC-Documents&type=retrieve&tabID=T002&prodId=AONE&docId=A186516572&source=gale&srcprod=AONE&userGroupName=iastu_main&version=1.0>.

Engineers, by nature, have an insatiable need to learn. Regardless of specialty, engineers are often most comfortable in an environment that includes like-minded individuals who aren't afraid to push the limits to achieve something new or original. Whether they are designing the architecture for the next generation of computer chips, evaluating the barriers that must be overcome to allow human travel to Mars, or reducing the costs of staple items to raise the standard of living in an emerging nation, engineers are constantly learning, with society reaping the rewards of their efforts.

Despite the considerable investment in education that engineers undertake, a freshly minted university graduate isn't usually the one most capable of pushing the limits in his or her specialty. There is still plenty to learn, and much of that learning occurs outside the classroom. It is often informal, centered around a pervasive or frequently experienced problem or situation, and is open to anyone who is capable of providing relevant, useful information or knowledge, regardless of their location or function on the company organization chart. Such loosely structured groups have given engineers much of their on-the-job training for decades, and have allowed more senior engineers to teach their junior counterparts the more qualitative, organic, and nuanced aspects of their craft. In short, these groups often provide an engineer with the opportunity to bridge the gap between the theory that is taught in the classroom and the practice that allows the work to get done in an efficient, safe, and cost-effective manner. These groups are communities of practice--informal associations of people who, over time, share information about a practical activity.

Communities of practice have potential benefits for everyone involved--practitioners, the organizations they work for, and the engineering profession as a whole. However, organizations often encourage the formation of communities of practice with the misguided impression that, like other organizationally sanctioned structures, they can also be directed for maximum efficiency (read: profitability). This is a mistake, as communities of practice have unique characteristics that distinguish them from other organizational structures, and their effectiveness can be impaired by the inappropriate interference of management.

The term "community of practice" was not formally defined until 1991, with the publication of Situated Learning: Legitimate Peripheral Participation, a book by Etienne Wenger and Jane Lave. This book was essentially an effort to formally codify, describe, and offer examples of a type of learning that has existed for centuries. Within this book, and in the subsequent material that has been written on the subject, learning is described as occurring among individuals who participate in the practice or craft around which the community is centered.

Communities of practice consist of masters, those members possessing superior levels of knowledge and expertise; apprentices, newer, less experienced, or less knowledgeable members; and everyone in between. All members benefit from their association with one another, although in different ways. Apprentices benefit by accessing the collective (if not codified and formalized) knowledge that experienced engineers often have only in their heads, while masters benefit by teaching others, enjoying a certain amount of prestige through the informally conferred guru status, and perhaps learn even more through their association with the newbies. It is this sense of purpose, relevance, and socialization that maintains a given community of practice, and gives its members something to look forward to, however they may choose to meet.

A community of practice at an auto manufacturer might involve the engineers responsible for engine or transmission/transaxle development, or those who integrate several components, such as the complete drivetrain for the vehicle. Communities of practice might bring together engineers who have responsibility for completely separate product lines, such as economy cars, luxury cars, small pickup trucks, and sport utility vehicles. Perhaps one person or group believes it has solved a vexing problem that is common across several vehicle platforms, and wants to share it. Or someone wants to compare notes with others as to what fixes have been tried in the past, or learn what machine tools are being used to produce parts or to integrate a system. Typically, only those individuals closest to or most familiar with an issue have the most complete picture of the relevant conditions and variables, and a community of practice facilitates the dissemination of such knowledge.

While organizations spend countless sums trying to document a wide array of information as accurately and precisely as possible, the effort often cannot replicate the more qualitative aspects of work, and even such statements as "How does the part feel?" or "What time of day did the problem occur?"--while often very difficult to identify in a purely objective manner--frequently have real and important bearing on the situation at hand.

These kinds of problems and their subsequent solutions illustrate the true value of a community of practice. Engineers who may have no direct responsibility to one another within a company are able to spread knowledge and innovation by informally recognizing some aspect of work that creates a common bond or link.

CRAFT ROOTS

Whether they realize it or not, modern engineers can trace the lineage of their training to artisans and craftsmen of the past. These individuals originally undertook an apprenticeship to learn their craft. Beginning with the Industrial Revolution, training gradually shifted to the university, where it tended to become more formal, codified, and structured. However, despite the somewhat outdated imagery commonly associated with the term, apprenticeships in modern society are served wherever high levels of skill, knowledge, and expertise are demanded.

The similarities between occupations of long ago that required an apprenticeship and those of modern times that are staffed by professionals are striking. Both allow for the management of increased task complexity and ambiguity by confronting it with highly skilled and knowledgeable workers, who are capable of using their skills with a high degree of flexibility, creativity, and independence. Engineers who are plugged in to the appropriate communities of practice have an opportunity to increase their knowledge, skills, and networks of business and personal contacts, all of which can result in more engaged and more productive employees.

Engineers who have had the opportunity to absorb innovative and novel engineering experiences from peers and can apply them in subsequent situations also command a premium in the employment market. Since companies need to attract, develop, and retain talented and motivated people, association with a community of practice can be very rewarding, financially and otherwise, to an engineer.

Companies are very adept at creating departments and teams to organize the work activities of employees. Just about everyone knows their position on the organization chart, their salary grade, their title, their boss, etc. However, such organizational structures frequently do not group employees along lines that facilitate knowledge exchange, enthusiasm, or passion for what they do.

A community of practice might be regarded as plugging a gap in an organization. For example, when attempting to solve a given technical problem, would you most likely seek advice from your boss? A fellow team member? An online knowledge base? If you find yourself seeking out knowledge and advice from a particular person or group on a fairly frequent basis, it is you and these individuals who, perhaps without even recognizing it, form a community of practice.

Schlumberger Ltd., a company involved in the gas and energy exploration industry, provides a useful example. A knowledge management system called Eureka links technical experts in its Oilfield Services unit into communities of practice. It is through these communities of practice that relevant tips, tricks, and conceptual understanding are shared. Engineers, regardless of location, can access the collective knowledge of their peers within the company. Each technical expert within Schlumberger has two organizational "homes"--the formal, rational, hierarchically sanctioned home that corresponds to a position on a chart, and the Eureka technical community, the informal, natural, horizontally linked network of peers who share a common interest, goal, or passion regarding what they do to create wealth for the corporation.

THE RISKS OF INTERFERENCE

Communities of practice exist in nearly every organization, whether or not they are formally recognized. Paradoxically, when an organization tries to direct their activities, it runs the risk of reducing their usefulness.

The reason is that management often misunderstands how a community of practice creates value. If management learns that a certain group of employees has developed a collaborative relationship with one another, perhaps the worst thing to do would be to give this informal, natural network a formal job to complete. Yes, a community of practice represents a resource to a company, but the value creation process it enables cannot be quantified in terms of formally codified documents, easily presented to an audience within a three-ring binder in two-day seminar format.

Peter Hillen, a partner with Congruity Corp., a consulting firm in Los Altos, Calif., probably said it best: "The community of practice needs to do the work it thinks it needs to do, not the work some guy in a suit tells it to do."

Another mistake is to assume that knowledge transfer or lessons learned from a community of practice can be seamlessly recreated in another organizational setting. Does the following scenario sound familiar?

A company observes that, although processes for common operations at several plants are identical, one seems to outperform the others. In an effort to duplicate this efficiency in a new plant, a team of engineers descends to formally codify all processes in great detail. These processes are subsequently given to a team of instructional designers to design appropriate training curricula for the workers in the new plant. Then management is disappointed to learn that, despite its efforts, the new plant fails to live up to expectations.

What happened? It is very likely that much of the value created by the employees in the top-performing plant was lost in translation. Shop-floor or line employees talk to engineers, who hand off their documentation to instructional designers, who then create the curricula to teach the employees of the new plant the lessons of the best. It is also likely that the workers, however informally, had coalesced into communities of practice centered around the relevant matters at hand.

How could such an organizational wild goose chase be avoided? One idea would be to simply send the employees from the top-performing plant to train the new workers themselves. This would ensure that both sets of workers are speaking the same language, and that the more elusive and difficult-to-document practices are appropriately communicated. The communication might create goodwill and understanding between the two plants-ingredients that might provide fertile ground for another community of practice.

Companies and their management must not expect a community of practice to be the magic solution to a business problem. Inappropriate application and cooptation of

communities of practice by managers can be especially damaging. A valuable community of practice may not only cease to exist, but its former members may sour on the concept of engaging in such an informal group, and be reluctant to share the ideas and information so critical to innovation. Worse, they may leave for a competitor, whose organization is more hands-off and has a better understanding of what conditions are necessary for communities of practice to thrive.

Facilitating the effectiveness of communities of practice may be as simple as laying off the gas, so to speak, on the work output expected of engineers. Creativity and innovation cannot be forced, and pushing the limits often involves trial and error (read: failure). However, engineers are a motivated, disciplined group, and will very likely create the communities of practice they need to learn, to explore, and to get the job done. Management must learn to stand back and give communities of practice the organizational space necessary to be most effective. Time and patience are required to yield benefits, but they're usually well worth it.

Editor's note: ASME hosts a communities-of-practice Web site that it calls ASME PeerLink. It is intended as a forum for problem solving and sharing solutions, ideas, and other resources among colleagues and professionals. More information can be found online at peerlink.asme.org.

COMMON CHARACTERISTICS OF COMMUNITIES OF PRACTICE

* Continuity of mutual relationships, both task-and work-related. Usually collegial, but may be strained.

* Rapid flow of information between community members (very fluid grapevine).

* Conversations and other interactions often have the character and "feel" as if they are being continued from where they stopped.

* Problems and other issues are framed quickly. Little necessity for providing an extensive background. Common consensus regarding membership and who belongs. Barriers to membership are minimal and very informal.

* Awareness of others' competencies, strengths, weaknesses, and where one's contributions can be maximized.

* Common stories, legends, "inside" jokes, humor, etc. A shared and evolving Language, including jargon, acronyms, and unique terminology. Language shortcuts often evolve to increase communication efficiency.

* Common perception, viewpoint, or vantage point of relevant external environment. Viewpoint is frequently Localized or parochial.

Compiled from Wenger (1998); Nickols (2007); Roberts (2006)

To Learn More

Numerous publications are available that discuss communities of practice in greater detail These are the main ones that provided information for this article.

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DISTINCTIONS BETWEEN COMMUNITIES OF PRACTICE AND OTHER STRUCTURES

Structure	Purpose of Group	Who Has Membership
Community of Practice	Create, expand, and exchange knowledge, to develop individual capabilities	Self-selection based on expertise, interest, or passion for topic(s)

Formal Departments	Product or service delivery	Group's manager and subordinates reporting
Operational Teams	Ongoing operation or process care and maintenance	Organizational fiat, assigned by management
Project Teams	Accomplish predetermined task or objective	Those who bear direct responsibility for accomplishing the task
Communities of Interest	Informational	Self-selection based upon individual interest
Informal networks	To be in an "information loop," to validate relevant people in life, collect and share common information	Friends and business acquaintances, friends of friends, those who possess and provide information of value
Structure	Boundary Clarity	How Is Cohesiveness Maintained
Community of Practice	Fuzzy	Passion, commitment, cognitive identification with group and its interests, goals, and knowledge
Formal Departments	Clear	Job requirements, common goals and objectives, hierarchical
Operational Teams	Clear	Shared responsibility for ongoing process or operation
Project Teams	Clear	Team acknowledgment of the project's goals, milestones, progress
Communities of Interest	Fuzzy	Information access, sense of

		likemindedness
Informal networks	Not defined	Mutual needs, relationships, regards towards others, perceived value in belonging and participating
Structure	Longevity	
Community of Practice	Start, evolve, and end organically (last as long as topic relevance, value, desire to learn communally)	
Formal Departments	Relatively permanent (lifespan typically related to product or service relevance)	
Operational Teams	Ongoing (lifespan typically related to relevance or necessity of process or operation)	
Project Teams	Specific (ending exists, typically occurs when project is acknowledged as complete)	
Communities of Interest	Start, evolve, and end organically	
Informal networks	Ambiguous (exist as long as contact between individuals continues, or memory remains intact)	

Source: Wenger, E., McDermott, R., & Snyder, W.M. (2002). Cultivating Communities of Practice, p. 42. Boston: Harvard Business School Press. Copyright [c] 2002 by Harvard Business School Press. Adapted with permission.

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Knowing in Community:

10 Critical Success Factors in Building Communities of Practice

by Richard McDermott, Ph.D.[1]

The Limits of Knowledge Management

Many companies are discovering that the real gold in knowledge management is not in distributing documents or combining databases. In the last few years many companies have used the internet and other new information technology to link professionals across the globe to share documents or compare data. But many are discovering that the real value in knowledge management is in sharing ideas and insights that are not documented and hard to articulate. This undocumented, hard-to-articulate knowledge is what has been called tacit knowledge (Polanyi, 1958). A group of systems designers for a computer company tried to share their knowledge by storing their documentation for client systems in a common database. They soon discovered that they did not need each other's documentation. They needed to understand the logic other system designers used – why *that* software, with *that* hardware and *that* type of service plan. They needed to understand the *thinking* of the other system designers. A petrophysicist trying to interpret unusual data from a deep sea oil well needed help from a colleague who had seen similar anomalies and could help him *think through* how to interpret it. Only in the course of the discussion were they able to understand the anomaly. A geologist faced with an array of new seismic tools needed to know which would be most useful in his particular application. A product development team at an auto company found through their internet that another development team had developed and rejected a design ideas similar to one they were considering. They needed to understand the reasons for the rejection and get feedback from the other team on the approach they were considering. A sales manager working with a particularly difficult client needed to know how sales managers for other product lines had dealt with that client. In all these cases people needed tacit knowledge; knowledge that was not documented, that their peers had never previously articulated, and that needed to be *thought about* to be shared (McDermott, 1999a).

Using typical knowledge management methods to leverage tacit knowledge often results in information junkyards and empty libraries. At the heart of most knowledge management efforts is an attempt to document and share information, ideas and insights so they can be organized, managed and shared. But documenting tacit knowledge frequently does more harm than good. When a major computer company first introduced its knowledge site, it asked field engineers to place their files in a common database. But, like many other companies, this company soon discovered that their staff did not want to hunt through many, redundant entries. As one engineer said, "My own file cabinet is bad enough, why would I want look through everyone else's file

1. Published in the *IHRIM Journal*, March 2000. Thanks to Etienne Wenger and Bill Snyder for thinking through the core concepts of this article and John Smith for comments. A series of articles on leveraging knowledge is available from the author at McDermott & Co., 189 Overlook Lane, Boulder, CO 80302 USA +1.303.545.6030. Email: Richard@RMcDermott.com

cabinet." Rather than a resource, the company had created an *information junkyard*, full of potentially good material that was too much trouble to sort through. The field engineers wanted someone familiar with their discipline to assess the material, decide what is important and to enrich the documents in the database by summarizing, combining, contrasting, and integrating them. This would make the junkyard useful. Another company instructed their professional staff to document key work processes so others could easily learn from them. Most staff felt their work was too varied to capture in a set of procedures, but eventually they completed the task. Within a year the database was populated, but little used, *an empty library*. Most people found the information to be too general to be useful. The help they needed was still in the experience – the tacit knowledge -- of their peers.

Sharing Tacit Knowledge Requires Interaction

Tacit knowledge is always recreated in the present moment. Part of the reason these attempts to codify knowledge fail is that most of us cannot articulate what we know. Our knowledge is largely invisible and often comes to mind only when we need it to answer a question or solve a problem. When professionals solve problems, they don't just cut and paste "best practice" from the past to the current situation. They *think about the current situation, reflect* on their experience, *generate* insights, and *use* those *insights in the present* to solve problems. They draw from their experience to *think about* a problem. An architect looking for a design that will work on a steeply sloping site, looks at the site "through the eyes" of one idea, discards it and sees it again "through the eyes" of a different idea, drawing on different information about the site in each thought experiment. In running these experiments, the architect is not just looking for pre-made solutions, but thinking about how those solutions might apply and letting ideas *seep* from one framework to the next, so a new, creative idea can emerge (Schon, 1983). Professional practice is a kind of thinking improvisation. *Knowledge is a kind of sticky residue of insight left over from using information and experience to think.*

Knowing is a Human Act

Knowledge always involves a person who knows. My bookcase contains a lot of information on organizational change, but we would not say that it is knowledgeable about the subject. The same is true for my computer, even though it can store, sort and organize information much better and more quickly than my bookcase. Thinking of our minds as a biochemical library is little different from treating it as a bookcase or computer. But knowledge is much more than that. To know a topic or a discipline is not just to possess information about it. It is the very human ability to use that information to think.

Since thinking is at the heart of professional practice, sharing it also involves thinking. We don't just express bits of ready-made knowledge stored in our heads. Sharing knowledge involves guiding someone through the logic we used to solve a problem in the past or drawing on our experience to help them see their own situation better. To do this well we need a great deal of information about the current situation. We need to know something about those who will use our insights, the problems they are trying to solve, the level of detail they need, maybe even the style of thinking they use. For example, novices frequently solve problems by following step-

by-step procedures, but experts solve problems in an entirely different way. They typically develop a theory of potential causes based on their experience and test to see if the theory is correct, often testing the least complex or expensive theories, rather than the logically correct ones, first (Konradt, 1995). The knowledge useful to novices is very different from the knowledge useful to experienced practitioners. Sharing knowledge is *an act of knowing* who will use it and for what purpose. This often involves mutually discovering which insights from the past are relevant in the present. *To share tacit knowledge is to think together.*

But sharing tacit knowledge one-on-one is not enough to leverage it organization wide. Since personal interaction, whether face-to-face or through email, is usually limited to the people directly involved, others interested in the same issue are excluded from the ideas and insights shared. This is one of the problems with using skill directories or yellow pages to link people to share tacit knowledge. While the directories are useful to help individuals expand their personal network, they do little to include others in their collaborative thinking. How do you preserve thinking together and leverage knowledge throughout the organization?

Communities of Practice Leverage Thinking

Ironically one of the oldest elements of organization is key to leveraging tacit knowledge, communities of practice. Communities of practice are groups of people who share information, insight, experience, and tools about an area of common interest (Wenger, 1998). A community's focus could be on a *professional discipline* -- like reservoir engineering or biology -- *a skill* -- like machine repair -- or a *topic* -- like a technology, an industry, or a segment of a production process. In a manufacturing company, for example, communities were formed around steps in the production process. Shell Oil Co.'s New Orleans operation, which is organized into cross-functional teams, formed them around key disciplines and topics that cross individual teams. Communities of practice have always been part of the informal structure of organizations. They form spontaneously as people seek help, try to solve problems, develop new ideas and approaches. Some say that spontaneous communities of practice have always been the real vehicle through which technical knowledge spreads through organizations. Spontaneous communities of practice are informal. People participate in them as their interest, time and energy dictates. Although they usually gel around a particular topic or domain, the specific issues they focus on change over time, as the needs and interests of their members change.

Communities are held together by passionate interest and value. Communities of practice frequently form around topics community members have invested many years in developing; topics they are often passionately interested in, a science, a craft or a manufacturing process. But communities of practice are not just celebrations of common interest. They focus on practical aspects of a practice, everyday problems, new tools, developments in the field, things that work and don't. So people participate because the community provides value. Community members frequently turn to each other to help solve technical problems, like interpreting anomalous data. Because they are often linked, not only to each other but also to suppliers, universities and others outside their organization communities of practice, they often keep members informed of new developments in the field. Because community members share a common technical interest,

they can share ideas and concerns with others who really understand. And praise from community members is often the most meaningful because technical peers really understand the difficulty of the work or the brilliance of an analysis. As a result, people often have a great deal of their professional identity tied up in their communities.

Communities of practice link people in many ways. Communities frequently link people with a common interest who do not have regular day-to-day contact. For example, in Shell Oil's New Orleans operation, communities link people who work on different teams. In this double knit organization (McDermott, 1999b) teams are the core organizational structure. Communities form around technical disciplines and topics that draw people from many teams. Each community operates in its own way, but the Turbodudes community is fairly typical. The Turbodudes draw people from different disciplines (geology, geophysics, petrophysics, reservoir engineering) who are interested in a particular kind of geological structure common in the Gulf of Mexico, turbidites. The Turbodudes stay together through five key components: a coordinator, mentors, a weekly meeting, presentations by outside vendors, and a website that stores topics discussed at previous meetings. For the last two years the Turbodudes have met every Tuesday at 7:30 in the morning, before the other organizational meetings begin. Typically twenty to forty people come to the meetings. While there are often many new faces at the meetings, there is a core group of ten high-contributors who make most of the meetings. The meetings seem very informal. The coordinator asks who has a question or problem. After a short presentation, others offer their observations, describing the logic or assumptions they made in formulating those observations. A technical specialist takes notes on her computer. The following day meeting notes are posted on the community's website. While the meeting only lasts an hour, people often leave in small groups hotly engaged in discussions of the meeting's topic. But these meetings are not as informal as they seem. Between meetings the coordinator "walks the halls" connecting people with others who share similar concerns, following up on the meetings topics, and finding topics for the next meeting. To keep discussions focused on cutting edge topics and to keep senior community leaders engaged, the community developed a mentorship program for people new to the field. The mentorship program provides an avenue for basic questions and distributes the job of educating new community members in an equitably.

Communities thrive on trust. One of the main dynamics of the Turbodudes and many other communities of practice is that members ask for and offer help solving technical problems. Regularly helping each other makes it easier for community members to show their weak spots and learn together in the "public space" of the community. Having frank and supportive discussions of real problems frequently builds a greater sense of connection and trust between community members. As they share ideas and experiences, community members often develop a shared way of doing things, a set of common practices, and a greater sense of common purpose. Sometimes they formalize these in guidelines and standards, but often they simply remain "what everybody knows" about good practice. In the course of helping each other, sharing ideas, and collectively solving problems, "everybody" often becomes a trusted group of peers.

Communities of practice are ideal vehicles for leveraging tacit knowledge because they enable person-to-person interaction and engage a whole group in advancing their field of practice. As a result, they can spread the insight from that collaborative thinking across the whole organization

Critical Success Factors for Community Building

Communities of practice are a new/old kind of organizational form. Even though communities of practice have been part of organizations for many generations, we have only recently begun to understand their dynamics and tried to intentionally develop them. Because they are organic, driven by the value they provide to members, organized around changing topics, and bound by people's sense of connection, they are very different from teams and other organizational forms most of us are familiar with (McDermott, 1999b; Wenger & Snyder, 2000). The challenges they pose and the factors in making them successful are also different.

There are four key challenges in starting and supporting communities capable of sharing tacit knowledge and thinking together. The *management challenge* is to communicate that the organization truly values sharing knowledge. The *community challenge* is to create real value for community members and insure that the community shares cutting edge thinking, rather than sophisticated copying. The *technical challenge* is to design human and information systems that not only make information available but help community members think together. And the *personal challenge* is to be open to the ideas of others and maintain a thirst for developing the community's practice. Ten factors, dealing with each of these challenges, are critical to the success of communities of practice. Without them, communities tend to flounder or fail.

Critical Success Factors in Building Community

Management Challenge

1. Focus on topics important to the business and community members.
2. Find a well-respected community member to coordinate the community.
3. Make sure people have time and encouragement to participate.
4. Build on the core values of the organization.

Community Challenge

5. Get key thought leaders involved.
6. Build personal relationships among community members.
7. Develop an active passionate core group.
8. Create forums for thinking together as well as systems for sharing information.

Technical Challenge

9 Make it easy to contribute and access the community's knowledge and practices.

Personal Challenge

10. Create real dialogue about cutting edge issues.

The Management Challenge

Knowledge management, like total quality and reengineering has become the latest of management fads. Many professionals have found that if they just keep their heads low they can escape the

extra work and impact of these fads. With so many pressures drawing on their time, it is often hard to get the attention of professional staff. Four factors can communicate that management really does support knowledge-sharing communities.

1. Focus on knowledge important to both the business and the people.

To show that communities of practice are important, form them around topics at the heart of the business, where leveraging knowledge will have a significant financial or competitive impact. Communities of practice at Shell, a very technically oriented company, started around technical topics. At a manufacturing company, we formed the first communities around major steps of the manufacturing process. But the topics also need to be ones people feel personally passionate about. In the team-oriented structure at Shell, forming communities around disciplines gave people a chance to talk to peers about topics dear to them. As one geologist said, "With so many meetings that aren't immediately relevant to your work, it's nice to go to one where we talk about rocks."

2. Find a well-respected community member to act as coordinator.

Communities are held together by people who care about the community, who have some heartfelt interest in the topic and the people who participate. In spontaneous communities, where there is no organizational attempt to support them, an individual or small group spontaneously takes on the job of holding the community together. They keep people informed of what each other is doing and create opportunities for people to get together to share ideas. This role is also critical to the community's survival. We have found that successful community coordinators are well-respected members of the community. They are usually senior practitioners, but not usually the world leading experts. Since their primary role is linking people, not giving answers, being a leading expert can be a detriment to effectiveness. What's most important in a coordinator is that they are able to connect with community members on a human level. For a large, vibrant community, this role is often full time. It should at least be a substantial part of the coordinator's job. We have found that when it is less than a quarter of their job, coordinating the community falls off their plate.

3. Make sure people have time and encouragement to participate.

One of the great limiting factors of a community's effectiveness at sharing knowledge is the time people have to participate. In the short term, sharing ideas and insights is usually less pressing than team and individual responsibilities. So community participation, even when very valuable, can easily be surpassed by more pressing tasks. Allied Signal supports learning communities by giving staff time to attend community meetings, funding community events, creating community bulletins, and developing a directory of employee skills. One management team addressed this issue by folding community participation into their planning and budgeting activity. They agreed on the number of person/years they would budget for communities for the year. This allocation was based on the centrality of the community to the annual business goals, the number of problems teams were experiencing in the community's domain, and the potential for cost savings, cycle time reduction and quality improvement in the area. Most major communities were budgeted two to four technical people. Out of that most communities had a

full-time leader. Community members who felt that they would be core contributors could then opt to have a percentage of their time allocated to the community. This insured that the time they spent on community activities was specifically allocated and would not interfere with their team responsibilities. It also insured that the time and energy they invested in the community would count in their performance appraisal.

4. Build on a core value of the organization.

To make sharing knowledge acceptable and routine, match your core cultural values rather than try to change them. Failures in implementing knowledge management systems are often blamed on the organization's culture. It is argued that people were unwilling to share their ideas or take the time to document their insights. But organizational culture is hard to change. It rarely yields to efforts to change it directly, by manipulating rewards, policies, or organizational structure. A recent study of corporate culture and knowledge management (McDermott and O'Dell, 2000) found that however strong your commitment and approach to knowledge management, your culture is stronger. Companies successful at sharing knowledge did not try to change their culture to fit their knowledge management approach. They build their knowledge management approach to fit their culture. They describe knowledge management as a way to enable people to pursue something that the organization and its members already valued. This made sharing knowledge a more natural step that required less convincing than a direct change campaign. At American Management Systems (AMS), for example, "leveraging" what you know by educating colleagues, writing, helping others, and teaching junior staff members has been central to the company since its inception. "Leveraging" what you know is how you build a reputation as a world class thought leader. Without evidence of leveraging it is not possible to be promoted to partner. As a senior AMS manager said, "It's not what you know that gives you power; it's what you share about what you know that gives you power." As a result, AMS has always had many informal communities of practice, through which people found and offered help. When the company was small and housed in a single location, this informal networking was a natural part of people's daily work. Now that AMS has grown and has offices around the globe, informal networking is more difficult. The "coffee pot" just does not scale to a global level. The AMS community building staff described their efforts as legitimating what already existed, providing structures, leadership, and software to extend people's ability to "leverage," even though those structures and systems have greatly increased the documenting and sharing knowledge.

The Community Challenge

The greatest danger to *growing communities* is for them to lose energy and drift into apathy, letting the coordinator carry all the responsibility for community care-taking. When the coordinator moves on to other interests or work, then the community can easily fall apart. The greatest danger to *successful communities* is that they become too enthralled with their own success and see their work as that of "preserving the practice" from change. Several factors can help keep the energy of the community going, get others involved it, and keep the community on the cutting edge of its field.

5. Involve thought leaders

Getting respected thought leaders involved as soon as possible, preferably from the start, is one of the key ways to build energy in the community. Building a community usually starts with finding, nurturing and developing the networks that already exist. Typically there are key players who either have an important specialized knowledge or who are well-connected and influential members of that network. Involving these people is important because they legitimate the community, drawing in other members. One of Shell's global networks had to involve a group that had developed an important new technology. Many people said that they would not participate unless this group did. Everyone wanted access to their ideas and technology. As it turned out, they were relatively inactive members of the global community. But once the community was running, it realized that participation of the group was not as central as they thought it would be.

6. Create forums for thinking.

Build energy though community contact. Of course documented reports, templates, tips, analyses, proposals, etc. are helpful to most community members. But live contact is key to building a sense of commonality, enthusiasm and trust. In addition to individual meetings and web connections, create opportunities for the community as a group to share ideas. Most of Shell's global communities have face-to-face contact one to three times a year. These are rarely meetings of the whole community. Usually they involve coordinators or groups who specialize in subtopic of the community. Several of Shell's global communities also hold biweekly teleconferences. This creates more of a relationship, even when people are spread across the globe. In addition these events punctuate the community's life. By creating events, they give the community a sense of history. However the community develops, a common history gives it a chronology, time and the possibility of progress. Without events it is hard for the community to see itself move through time. So physical events are important to building the ongoing energy of the community.

7. Maintain personal contact among community members

Contact -- and the social connection and obligation that comes with it -- is key to ongoing community success. The coordinator of one of our most vibrant global communities said, "This is all about relationships. People don't really contribute to the community because it is good for the company. They do it because I ask them to." Successful coordinators visit community members, find out what they are working on, refer or introduce them to other community members, bring in new ideas and find opportunities for the community to develop its practice. They keep the community energy up by building one-on-one relationships among community members strong. The Turbodudes' coordinator tracks the number of people who attend the meetings and has found that the strongest predictor of high attendance is how much time he spent the previous week walking the halls. Successful coordinators build and maintain these personal connections outside official community meetings. When people come to the meeting they are already connected with some members of it and can focus their energy on exciting cutting edge issues. Even when the community's topic is very scientific or theoretical, it is the *human* connection that builds a base for effective knowledge sharing.

8. Develop an active, passionate core group

Participation in communities varies. Most have a core group of high contributors, a large group of "lurkers," who listen but add little, and a larger group of peripheral members who only participate occasionally. When we first discovered this distinction, we thought we should encourage even participation. But soon discovered that the lurkers often get great value without taking away from the core contributor's interaction. Many lurkers say that they use the community to find out who is working on what or learn about the field and make contact later.

More important than balancing participation is to build an active core group. Active core group members not only contribute but often feel responsible to help develop the community by inviting or easing participation of people they know. In one global community, a core group member is a conduit for people who are less comfortable in English, the community's common language. He posts questions and loads documents for them, slightly editing them as he goes. In another community, a core group member calls people he thinks would benefit from items posted on the community's website and helps them connect to it. Active core group members are potential successors to the coordinator. Core group members are not always world leading experts on the topic. What makes them effective is their heartfelt caring about the topic and the community. Coordinators can develop a core group by involving them in meeting planning, asking them to take over some meetings, host subgroups, or organize elements of the website. The most important thing in developing potential core group members is to give them visibility in the community without requiring them to spend much extra time.

The Technical Challenge

There is so much good technology for collaborating and sharing information that it is tempting to focus on the functionality of products. But the real challenge is to design the social side of information technology.

9. Make it easy to connect, contribute to and access the community.

Ease of use has little to do with software functionality. As the market bursts with many different kinds of knowledge management software we find two things particularly important to communities. First, software should make it easy for community members to connect with each other, contribute to and use information from the community's knowledge base. Ease of use is more about how the software integrates with people's daily work, the knowledge they need to share, the way they think about their community's domain and how they move about in it, than with specific features of the software itself. Shell's global communities chose software that was less than ideal for organizing documents because some people were already using it and others were at least familiar with it. But ease of use is more than the software itself. One local team that was very active in their global community said that the reason they contributed so much was because they chose to use the same software for storing team documents as the community used. Thus, saving for the team or posting for the community involved the same number of steps. Familiar software reduces the friction in connecting to the community and its space.

Friction

An interesting way to think about communication within a community is in terms of friction. Friction is the resistance or difficulty you face in trying to connect, contribute or find help. The greater the friction, the less likely people will take the time to connect or at least connect regularly. One of the reasons local face-to-face communities are so much easier to start and maintain than global ones is that there is very little friction: walk down the hall and look for someone to talk to. It took a global community member in Nigeria 20 minutes to connect to the community website because their bandwidth was so narrow. A lot of friction. Even though he did not need to be typing in at his computer the whole time, he found the experience of connecting painful and did so much less frequently than other community members. To have a global teleconference one coordinator needed to participate in both evening and morning sessions. The more special effort it takes to connect, the more friction you need to fight. Always try to keep friction at its lowest level.

Easy integration, which sometimes translates into standardization, needs to be balanced with making the community space familiar and easy to move about in. Community space needs to be organized according to some principles or taxonomy. A good taxonomy should be intuitive for those who use it. This means it should reflect the natural way community members think about their field or topic. Like the architecture of a building, a taxonomy enables people to move about within a bank of information, find familiar landmarks, use standard ways to get to key information, create their own "cowpaths," and browse for related items. Different communities are likely to have different natural taxonomies, not only in the key categories through which information is organized, but also in the way that information is presented. A group of geologists, who often work with maps, wanted their website to be a picture. They think in pictures. A group of reservoir engineers wanted their website to be organized like a spreadsheet. They think in tables. The key to making information easy to find is to organize it according to a scheme that tells a story about the discipline in the language of the discipline.

The Personal Challenge

The most valuable and vibrant community events focus on solving problems rather than presenting practices. But openly discussing problems, sharing half-baked ideas, or thinking aloud in public doesn't come naturally to most of us. As one community member said, "It's hard to talk about your problems in front of a lot of people you don't know." The personal challenge for most community members is to develop this capacity.

10. Create real dialogue about cutting edge issues in community forums.

Relationship happens in true discussion, not report outs on best practices. In the beginning stages of community development, we often orchestrate community meetings so a senior, well-respected community member asks for help and people we know have some insights to offer are in the room. This helps legitimate the discussion of problems. Even when we "stage" the event, the request needs to be real and the discussion genuine. After several rounds of well-respected community members requesting help, others usually start asking. The coordinator finds potential requests and solutions while "walking the halls" and asks these people to come to the meeting prepared to discuss the issue. During the meeting the coordinator lightly facilitates the discussion by asking people the logic of their suggestions. This helps the community discuss assumptions, alternative assumptions and think together rather than engage in a battle of positions.

Sometimes a community does not have enough connection and trust for this approach to work. There we have focused on building trust one-on-one before building it with the whole community. To build trust among a group of sales managers, we divided them up in to a series of three person discussions, sharing problems and solutions. We chose the groupings carefully to first build on then extend the trusting relationships within the group. Only after many rounds of relationship-building in three person groups did the whole community begin to trust each other enough to talk openly. Even though the coordinator only participated in a few of these discussions, he gained credibility with the group by orchestrating what was for them a painless transition from mistrust to connection.

Conclusion

Communities of practice present an odd irony. They have always been part of the informal structure of organizations. They are organic. They grow and thrive as their focus and dynamics engage community members. But to make them really valuable, inclusive and vibrant, they need to be nurtured, cared for, and legitimated. They need a very *human* touch. As leaders, organizational designers and support staff, we have little experience in how to develop this sort of organic organizational element. Too much support and they lose their appeal to community members. Too little and they wither. The challenges they pose and the factors that help them thrive are different from the factors most of us as organizational leaders, designers and support staff are used to working with.

It is ironic that information technology has made possible for us to *imagine* people sharing ideas and insights across the globe as easily as across the hall. But since knowing is a human act, the heart of sharing is finding a common interest, making real connection, caring for each other thinking, and building a community that trusts each other enough to ask for help and share half-baked ideas. It is ironic that for the first time in history, information technology has made global community possible, but it takes acts of the human heart to make it real.

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ABSTRACT

The concepts of "learning community" and "community of practice" may hold value to researchers, but questions exist as to how well they help in organizing and clarifying the type of critical thinking involved in investigative work. This paper approaches the problem from two directions. One is to deconstruct the two concepts themselves and explore their range of meanings. The other is to explore more grounded research questions about learning and the conditions for learning that are relevant to researching learning communities and/or communities of practice. The purpose of this investigation is to develop criteria by which one can judge whether these two ideas provide useful frameworks for organizing questions involving learning communities and communities of practice. The discussion includes asking what kind of empirical evidence is needed to recognize such communities when perceived, and what kind of learning is occurring, how it is taking place, and what the factors are that affect its magnitude and direction(s). If these concepts do not provide added value to researchers, then it is possible that they may provide the route to yet other theories that provide greater purchase on the problems of facilitating learning in a wide range of contexts. (RT)

Conceptual Analysis and Research Questions: Do the Concepts of "Learning Community" and "Community of Practice" Provide Added Value?

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Conceptual Analysis and Research Questions: Do the concepts of 'learning community' and 'community of practice' provide added value?

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Honest, knowledgeable researchers know how little they know and how much is yet unknown. They ponder and debate about how much is knowable. They are trying to see but working in the dark. Concepts can be likened to searchlights of varying beam width and intensity. They help us to see some things but not others. Indeed areas outside the beam appear darker than ever. When the electricity of new publications diminishes, the light dims; and they look elsewhere for new sources of energy. What do the searchlights of 'learning community' and 'community of practice' enable us to see on the ground? Is it novel, is it important, what significance does it have for policy and practice? Do they give us a long steady beam, running off the mains? Or are they like fireworks which make big bangs, fragment with many pieces or form beautiful patterns in the sky? Does their illumination of the ground get noticed before they fizzle out?

This paper approaches the problem from two directions. One is to deconstruct the two concepts themselves and to explore their range of meanings. The other is to explore more grounded research questions about learning and the conditions for learning that are clearly relevant to researching learning communities and/or communities of practice. The purpose will be to develop criteria by which we might judge whether these two ideas provide useful frameworks for organising such questions. However we choose to define them, we need to know what empirical evidence we need to recognise such a community when we see it: and to understand what learning occurs, how it takes place and the factors that affect its magnitude and direction(s). Only then will we be able to decide whether these concepts provide added value to researchers. If not, they may have provided the route to yet other theories that provide greater purchase on the problems of facilitating learning in a wide range of contexts.

The term *community* is used in several, quite different contexts, each with its own theoretical perspectives. In ecology, a *community* comprises all living organisms within the boundary of a defined geographical area – sometimes the area is a single habitat, sometimes it accommodates several habitats and the organisms that move across and between them. When applied to *learning communities* this ecological perspective draws our attention to the learning opportunities available to people living in a particular area or working for the same organisation (habitat). This raises questions of inclusion and exclusion. Who gets access to what kinds of knowledge (food)? Is it consumable (digestible, palatable, reachable without spending too much energy) and does it meet their dietary needs (relevance, part of a balanced diet)? Economists have pointed out that knowledge, unlike other commodities can be given to others without losing it yourself; but this is not entirely true because certain kinds of knowledge have greater value when they are scarce. This does not apply only to commercial knowledge but also to power relationships in organisations and in wider society. Who is at the top of the food chain?

Another feature of ecological communities is that they are studied in relation to their physical environment and climate. Moreover, the relationships between species can be extremely complex. This is analogous to learning in the workplace and in other community settings, where influences on learning include other human beings, learning resources and other cultural artefacts, the physical environment, the structure and range of ongoing activities and the prevalent culture and learning climate. One interesting semantic paradox is that while human organisations like to refer to themselves as communities, they also refer to their surrounding population as *the community* (as indeed I did in the previous sentence). So the term community may refer to either insiders or outsiders, but rarely, as in ecology, to both together or the relations between them. Thus *community care* is offered outside hospitals; but *community colleges* offer most of their learning inside their own walls. The term *community school* usually implies classes for adults or recreational activities for young people on its own premises. It does not imply offering the wider community greater participation in the education of their children?

A political definition depicts communities as interest groups to be courted or appeased, bit players in the great game of national and regional politics. These may be occupational groups (e.g. the farming community), religious groups, ethnic groups or cultural groups (e.g. local choirs). All are interested in acquiring resources for learning on behalf of their members, and these have to be identified and fought over. Underlying battles over resources for learning are many overt or covert disputes about what counts as knowledge and what counts as learning. Often public funding is given only to learning for qualifications or learning that takes place in formal settings where participation can be monitored. The net effect is to prioritise the needs of some learners over others, particularly those who feel uncomfortable in formal settings. There is also a micro-political dimension to learning within organisations that affects both access to learning opportunities and the different values accorded to different kinds of knowledge.

Thirdly there is an ideological definition of the term *learning community* that goes beyond criticism of the inequitable distribution of learning opportunities to advocate the development of 'ideal type' learning communities which maximise participation through a culture imbued with inclusive, interdependent views of human relationships and democratic values. This construes learning as an integral part of reciprocal human interaction, constrained and facilitated by skills, structures, networks and cultural factors; and raises questions about opportunities for mutual learning across professions and between professionals and their clients. This might have seemed unrealistic 20 years ago, but today's organisations for health and social care are increasingly committed to relations of mutual respect between professionals and clients. For how long can this principle coexist with lower levels of mutual respect between different professional groups or between professionals and other health workers, particularly when the main benefit may be learning more about their clients? This third definition lends itself to smaller scale forms of community such as teams and working groups, as well as to whole organisation; because smaller groups provide more scope for the negotiation of relationships between members. However, even in small-scale communities questions arise as to how feasible it is to develop and sustain equity in small groups when it is conspicuously absent from their parent organisation.

The term *community of practice* has been appropriated by Lave and Wenger (1991) for a particular theoretical perspective that attributes all learning to engagement in the activities of such communities. In their view, the learning not just of language but also of technical skills and cultural knowledge takes place though a process of increasing participation in communities of practice. Their focus tends to be on the reproductive nature of such communities as newcomers are inducted and continue to acquire competence and status within them; and they consistently emphasise commonalities rather than diversity. As Engestrom (1999) argues, "the instability and inner contradictions of practice are all but missing" (p12) from Lave and Wenger's accounts. Engestrom's (1993) own definition of *community* comprises the "multiple individuals and/or subgroups who share the same object" (p67). This would serve equally well as a definition of a *community of practice* that allows greater diversity, if that term had not been already appropriated. However, his central concept is that of *activity systems* in which agency is conferred on an individual or sub-group working within the context of a community characterised by its own rules, tools and division of labour. "An activity system" he argues, "incorporates both the object-oriented productive agent and the person-oriented communicative aspect of the human conduct" (p67). Production and communication are inseparable. This contrasts with Lave and Wenger's (1991) definition of a *community of practice* as "a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice"(p98). Engestrom's starting point, the activity system could be described as starting from the *practice* end of a community of practice, while Lave and Wenger's emphasis on participation and a set of relations among persons starts from the *community* end.

Wenger (1998) offers a more elaborate theory in which he puts forward three dimensions of a *community of practice.* The first dimension he argues is the *mutual engagement* of participants. "Practice resides in a community of people and the relations of mutual engagement by which they can do whatever they do." (p73). In this context he argues for both complementary contributions from those with different types of competence and engagement with peers who have largely overlapping forms of competence. *Joint enterprise,* his second dimension, is reminiscent of Engestrom's object-oriented activity. "It involves not only a shared goal but mutual accountability. Then thirdly he refers to a stored *repertoire* of discourse and action, arguing that, "communities of practice can be thought of as shared histories of learning" (p87). Indeed each dimension is associated with a particular set of leaming processes.

- "*Evolving forms of mutual engagement*: discovering how to engage, what helps and what hinders; developing mutual relationships: defining identities, establishing who is who, who is good at what, who knows what, who is easy or hard to get along with.
- *Understanding and tuning their enterprise*: aligning their engagement with it, and learning to become and hold each other accountable to it; struggling to define the enterprise and reconciling conflicting interpretations of what the enterprise is about.
- *Developing their repertoire, styles and discourses*: renegotiating the meaning of various elements; producing or adopting tools, artefacts, representations; recording and recalling events; inventing new terms and redefining or abandoning old ones; telling and retelling stories; creating and breaking routines." (p95).

Lave and Wenger's focus on social relations remains the dominant feature of this later analysis; and raises two important questions about the object of a community's enterprise:

1. What is the actual balance between commonality and diversity within that group and is that balance appropriate for their clients?
2. To what extent does diversity of professional practice signify a flexible client-centred approach or a high risk of low quality outcomes?

There is also a danger that when relevant communities of practice are dysfunctional, the role of individual agency will be ignored. How do individuals construct learning pathways though a range of often fragmented social settings? This latter question would of course be ruled "out of order", because Lave and Wenger argue not only for the reasonable proposition that participation in a community of practice is a good way to learn, but also for the unreasonable (in my view) proposition that participation is the only way to learn. My own approach is to treat questions of this kind as empirical rather than theoretical, and to assume that they will yield different answers in different contexts.

Before proceeding to examine approaches to researching learning communities and communities of practice, one further piece of conceptual analysis is needed. As with the terms *learning society* and *learning organisation*, we have to ask how to define learning by a group, differently from learning by its individual members. What is the difference between a *learning community* and a *community of learners*? An ecological definition can only handle the latter, because it confers no sense of agency. So to avoid a long debate about agency within communities, I will focus on organisations, groups and teams whose agency is less contested.

In order not to get bogged down in discussions about types of knowledge and types of learning (these will be discussed later), I start with my earlier suggestion (Eraut 1997) that it would be helpful to focus on just two related processes, the development of understandings and the development of capabilities. The capabilities of an organisation, group or team can be inferred from actions attributable to their agency. Their understandings can be inferred from evidence about the reasons behind these actions, including any alternatives considered and rejected. Evidence about how discussions and disputes were resolved will be relevant to judging their decision-making capability as well as their understandings. The next step in the argument is to note that the understandings and capabilities of a group can be both greater and lesser than those of its individual members; greater when their mutual engagement leads to greater cooperation, exchange of knowledge and synergy, lesser whenever relevant member knowledge is rejected or neglected. Often both are true at the same time. Scaling up leads to the proposition that the learning challenge for an organisation is two fold: to develop ways of accessing the knowledge of its constituent groups and individual members and to find economical and constructive ways of using it. This challenge is made more difficult by the large amounts of tacit knowledge possessed by both individuals and groups, which can only be accessed through their active engagement in relevant decisions and practices.

Both the ideological definition of a *learning community* and the Lave and Wenger definition of a *community of practice* are theoretically driven, though often accompanied by cherry-picked examples. They have led to significant debates about the nature and context of learning, which have added value to our research community. What is less clear however is how these ideas might be further examined in a wider range of contexts. At the most general level we might ask the following questions.

> How communal is learning and how communal is practice?
> What is different about learning at different levels of an organisation?
> What are the factors that affect learning in a wide range of situations; and under what conditions is each factor likely to be more or less important?
> How strong is the influence of social relationships on learning; and to what extent is that influence amenable to change at the very local level?
> What are the 'worst case' and 'best case' scenarios for learning; and under what conditions might they be accepted as 'normal'.

At a Division I symposium at Montreal on *Professional Learning in the Workplace*, evidence was presented that, learning in a wide range of workplace settings often took the form of learning from other people and learning through overcoming challenges posed by the work itself. (Alderton1999, Eraut1999). Often they were inter-related. These learning opportunities, whether or not they were appropriated, depended heavily on (1) the frequency and nature of interpersonal encounters and (2) the nature and structuring of the work. Some working arrangements require regular communication between members of a working group and/or certain individuals, some encourage it, some allow those who take the initiative to meet, some make it very difficult for people to meet who might benefit from doing so. These opportunities for mutual engagement, in formal or informal settings get accepted or ignored for a variety of reasons. Apart from the scope and pattern of such opportunities, these include the quality of social relations in the workplace, the manner in which people's work is evaluated, the local microculture and individual factors relating to power, status, confidence and dispositions.

These and other findings contributed to the theoretical framework of a current project, studying the learning of nurses, engineers and accountants in their first three years of employment. Since the engineers and accountants have trainee status at this stage, and the nurses select jobs on the basis of prior familiarity and learning opportunities on offer, our framework treats learning as an integral part of working. This enables us to use the same four structuring dimensions for both formal and non-formal learning contexts. These are:

1. The nature, range and structure of work activities
2. The distribution of work activities between people and over time and space
3. The structures and patterns of social relations in the workplace
4. The outcomes of work, their evaluation and the attribution of credit/praise or blame.

Key variables affecting the extent to which the **activity structure** requires, facilitates or inhibits learning in the workplace include:

- the extent to which activities involve transactions with co-workers, clients/customers, suppliers or other outside people
- the range and variety of activities making up a person's job, both during a specified period and over time
- the extent to which activities allow flexible decisions to be made at the discretion of individual workers or their immediate managers, rather than being totally programmed
- the scope and demand for inventiveness, problem-solving or creativity from individuals or teams
- the extent to which the activity structure encourages or provides time for meta-level activities such as planning, reviewing, strategic thinking, or quality improvement
- the degree to which the activity structure makes it difficult for individuals and/or groups to perform at the level of their competence
- the nature of formal and informal communications within the workplace and across its boundaries
- the congruity between the activity structure, short-term organisational goals and strategic priorities.

We have also found across a range of projects that, in spite of the affordances offered by modern communications technology to transcend some of the of the constraints of **time** and **space,** most social relationships and informal exchanges depend on people being together in the same place at the same time. Working relationships and the exchange of information significantly depend on mutual trust and regard, and the development and maintenance of such trust, as well as awareness of and respect for other people's perspectives and expertise, are greatly facilitated by informal contact. This may arise through **co-location** of work, incidental encounters, opportunities around the edges of meetings, or social time in or near the workplace (typically over lunch). These depend on the individual and collective management of time and space. Examples that came to our attention include:

- communication about patients between junior doctors and nurses being constrained by them being on different rotations and schedules
- the problems posed for people working in several locations
- trainees being allocated to different shifts from those responsible for giving them support
- bad management of meetings removing time for informal discussions or sharing concerns
- managers being too busy to offer their subordinates any quality time
- opportunities to meet members of other groups during the course of one's work allow natural networkers to make contacts across the organisation at the risk of being regarded as inappropriately absent by managers and colleagues
- in-house courses facilitate networking when sufficient informal time and purposive mutual discussion are built into their design; and the accruing benefit may exceed that related to the course's declared prime purpose.

The **social structure** of a workplace may closely parallel the formal organisational structure, but usually has several aspects that cut across it. Apart from demographic variables such as age, class and gender and sometimes also ethnicity, there are links

between people who live near each other or travel together, people with common outside interests, people who used to work together, etc. These can all affect who talks to whom, who helps or consults whom, and hence who learns from whom. But there are also many relationships that can be seen as trade-offs. Many networks arise from people exchanging information or doing each other favours. We have also found that some workers are seen to be generally keen and helpful contributors to the collective good while others are seen as lazy, unhelpful or aloof; and this can affect their access to information and to learning opportunities. Fessey's paper for this symposium notes that student nurses and newly qualified nurses on a surgical ward were given more opportunities to learn new techniques and procedures if they were perceived as generally willing to do things and help out in a crisis; and the cumulative effect of such differentiation could have a large impact on their overall professional development. While Miller, Ross and Alderton (1998) found that nurses' stages of acceptance into a clinical team were related to their ability to ask questions and to seek opportunities for learning.

The fourth and final dimension is that of **outcomes and their evaluation.** The outcomes of work affect workers both directly and indirectly. Direct effects include performance-related pay and standards of quality. Indirect effects include external evaluations of their work that may affect their future employment prospects and will almost certainly affect their motivation, confidence and disposition to learn. These are also affected by their self-evaluation, which is distinct from but nevertheless influenced by their perceptions of how others evaluate them. A critical factor is that some outcomes are given greater attention than others, which in turn affects the way in which workers deploy their time and effort. If the outcome priorities differ significantly from management-set activity priorities, the former will tend to prevail; but if the conflict of priorities cannot be tacitly resolved in this manner, profound alienation is the likely result.

Often, however, there may be no disagreement between management and workers, just a set of agreed goals that are difficult to achieve with the resources available. Given some sense of efficacy, this may constitute a challenge from which considerable cooperative learning may result if (a) management is able to manage the problem-solving process in an appropriate way and (b) the relevant expertise has been developed in the workplace. The latter, it should be noted requires a strategic perspective on learning in the workplace which is still comparatively rare.

When we focus on trainees or newly qualified professionals, the relationship between working and learning becomes more problematic than for experienced workers; because situations where there is working without learning are more likely to be criticised and situations where there is learning away from the workplace are more likely to be treated as normal. There is also the problem of distinguishing between claims made about high commitment to learning by managers, trainers and advocates of learning communities and the low commitment to learning often found in the workplace itself. The five archetypal scenarios described below represent the most plausible of eight possible combinations of the extreme ends of three continua:

- **Assumptions about learning** range from treating learning as being based only on social participation in workplace activities to treating learning only as the outcome of formal instruction

- **The social status of the trainee** ranges from one of equity with that of other workers to that of being a subordinate or interloper in the workplace.
- **The commitment to learning** in the workplace itself may be high or low, either because or in spite of policies at organisational level.

Scenario 1 is derived from the aspirations of those advocating a learning community that is democratic. This accords high status to trainees and assumes a high commitment to learning in the workplace. Trainees and newly qualified workers are welcomed as members of an ongoing community and learning though participation is of critical importance. There is no ideological opposition to learning off-the-job in formal settings, as long as all have similar opportunities, but the expectation is that such learning will need to be transformed within the community itself in order to be useful. Mentors are not appointed because mentoring is a shared role across the community, in which all give and all receive in some aspect of their work. Trainee learning is not regarded as being any different from that of other members of the group.

Scenario 2 is based on Lave and Wenger's (1991) portrayal of a community of practice. Trainees have lower status, but are seen as starting on trajectories that raise their status over time. A key characteristic of such communities is their acceptance of clear progression models developed as part of their traditions of practice. In so far as these progression routes are codified, the purpose is to inform others about their established practices, not to change those practices. Learning takes places only through social participation and there is very little direct instruction. The business of induction and progressing newcomers is an integral part of their practice and the commitment to it is correspondingly high. Mentoring by those a little further ahead is not uncommon.

Scenario 3 could be described as the all too familiar downside version of Scenario 2. Although the "contract" between "apprentices" and their employers involves the exchange of labour for learning opportunities, the latter is often neglected. Apprentices and trainees may find themselves engaged in long periods of routine, repetitive work that has long ceased to be a source of learning. The lack of challenge and low status result in comments like "I'm just a pair of hands." In hectic, resource-starved working environments it becomes particularly difficult for local managers to avoid slipping back into this essentially exploitative relationship that often leads to progression opportunities being delayed.

Scenario 4 differs from the first three in its focus on learning from instruction rather than participation. A detailed curriculum is developed at organisational level, specifying what has to be learned in terms of objectives, outcomes or competencies. This may also be linked to qualifications and hence to more rigorous and possibly less valid assessment regimes. Normally there is a substantial amount of off-the-job as well as on-the-job learning. One effect of this can be to make trainees seem like part-time workers, who begin to be regarded as more of a burden than an asset to their working groups. When mentors or supervisors are expected to play a substantial role in the assessment, as well as the support, of learning, then it may be them rather than the trainees who regard themselves as being treated like slaves. Moreover the prescribed learning outcomes for trainees may not match the learning required to do a useful job in any particular workplace. In such circumstances it is easy for trainees to

perceive that the curriculum has little credibility in the workplace, and that too diminishes their status. Nevertheless the commitment to learning may remain fairly high, and there is a high level of organisational investment in learning.

Scenario 5 is the downside version of Scenario 4, in which the organisational commitment is to have a good "trainee scheme" on paper. This looks good at the central office but is no guarantee of implementation at local level. The effect is a low, *laissez faire*, level of commitment at local level, which leaves trainees without any management support. They have to take the initiative in seeking help in the workplace and learn how to approach their more experienced colleagues for help without being branded as a nuisance. Demands for local assessment may be met by adopting a tick-box approach in which trainees take responsibility for recording their own learning and just get their log-books or portfolios signed off by their supervisors. Off-the-job learning is provided outside their employing organisation, but insiders show no interest in it.

The positions of these five scenarios along the three continua can be summarised as follows:

Scenario	Status of Trainee	Commitment to Learning	Dominant Form of Learning
1	High	High	Participation
2	Low	High	Participation
3	Low	Low	Participation
4	Low	High	Instruction
5	Low	Low	Instruction

Fessey's paper comes the closest to describing what Lave and Wenger might accept as a community of practice, but there are also important differences. She provides a closely observed in-depth account of the progression of newly qualified nurses in a single setting where many of the indicators of a positive learning climate were absent. The ward had a 'bad' reputation, the manager was still learning the basics of her job and there was no one-to-one mentoring of newcomers. Nevertheless a lot of learning took place. Her paper demonstrates how much of the practice of surgical nurses is uncodified and tacit, and how little of it is amenable to formal off-the-job instruction. There are many examples of learning contingent on mutual engagement. But her ethnographic work shows that newcomers encountered a baptism of fire and that those who stood aloof or failed to muck in were not invited to participate, became excluded and left. Experience in other nursing contexts suggests that, with more support, many of these early leavers might have been retained. Practice was communal for the survivors but the commune implicitly selected its future members, and let go of newcomers it actually needed to appropriate.

There were also several examples of both static and more complex trajectories than those found in the Lave and Wenger model. The ward depended for its very survival on experienced Health Care Assistants who shared significant aspects of their nursing knowledge with the newly qualified nurses. Yet, although routes are now beginning to open up for HCAs to become nurses, these are of the "back to school" variety rather than the "on-the-job" learning trajectories of trainees and apprentices. Several

"included" nurses transferred to other wards after reaching capability; some sought more convenient working hours, some a more friendly context, some were interested in better long-term career prospects. Such more complex trajectories involved unlearning and relearning some aspects of practice and resituating others; and this transformation of both knowledge and identity was well supported in some new contexts and badly supported in others. Overall, I would argue that Fessey's study confirms Lave and Wenger's model of learning at the micro level, but confounds their rather parochial concept of a community of practice, and challenges its positive, somewhat ideological overtones.

McKee's paper is concerned with junior doctors (residents in North America) whose work is distributed across several different settings, unlike the nurses observed by Fessey. Whereas old-timers had followed trajectories characterised by learning within communities of doctors organised into small teams (or 'firms') and departments (comprising a small number of firms), this system was being rapidly eroded by changes in working practices. Diminished opportunities for mutual engagement, or even informal encounters, were affecting job satisfaction, learning and the quality of care. Doctors' sense of working in a community was slipping away while at the same time an upheaval in the public perception of doctors was forcing changes in their identity. Junior doctors entering the fragmented hospital contexts were confronted with a profession in transition and significantly reduced learning opportunities. Changed working practices not only affected opportunities for mutual engagement, but also fragmented their experience of patient care. When patient contact is limited to short episodes rather than sequences of events, the consequences of earlier decisions may never come to the doctor's attention, thus reducing the value of the case experience on which much of a doctor's professional knowledge is constructed. The net result is a non-community of partial practice.

A second problem McKee identifies is that of specialisms and sub-specialisms. If each sub-specialism were to become a separate community of practice, this would also detract from doctors' learning; because their postgraduate (residency) experience would be based on a series of attachments to sub-specialisms that they were unlikely to join. Their teachers/mentor/supervisors would be receiving junior doctors who would only rarely become future colleagues; so their interest in supporting learning would inevitably wane. The notion of an apprentice-type learning trajectory would carry little credibility. This situation is exacerbated for the particular group studied by McKee, family doctors seeking to practice in community settings. For them the learning opportunities in hospital settings, where they have to spend three years after leaving medical school, were becoming even less relevant.

Finally, McKee addresses the issue of learning from mistakes, which research has shown to be a critical aspect of learning in the work place because it affects the whole learning climate. Where mistakes are treated in a punitive manner, the positive affect that sustains mutual engagement is shattered, the confidence so necessary for learning is lost, and communication is inhibited. McKee's junior doctors encountered a culture of blame in all hospital settings; while simultaneously being exposed to seminars for intending family doctors, in which learning from mistakes was a central part of the

agenda. Overall, McKee's paper suggests that trends in the organisation of health care are making communities of practice less and less achievable. However, the general concept of "community" does capture some of the factors that affect the quality of the working/learning environment. In order to improve the quality of care received by patients, re-engineering will have to be superseded by re-humanising.

Miller's paper challenges the notion of a community of practice with evidence that occupational identity is still linked in several important aspects to membership of a profession; and a profession is a much larger and more diverse community than any community of practice. She explores the conditions under which it becomes possible for professionals to develop an additional allegiance to a multi-professional team, the different forms that such an allegiance might take, and the consequences for the quality of care experienced by patients. If one defines a community as all the health care workers in a particular location, then multiple professions imply multiple perspectives and multiple practices, the antithesis of a community of practice. Moreover issues of relative power and status, and issues deriving from the differing allegiances of single location and multi-location workers constrain cooperation and hence patient-centred care. Given this diversity of both status and participation, advocating the democratic concept of a learning community is unlikely to have much impact.

Miller's analysis, while recognising these many constraints, focuses attention on the ethical principle of improving the quality of patient care. This has much greater potential for developing and sustaining the commitment of health care teams because it is emphasised in national policy, espoused in local policies, and features prominently in the codes of conduct of all health professions. It also matches Engestrom's definition of a community as individuals or sub-groups who "share the same object." The issue of location remains important because of the opportunities it creates for mutual engagement, and the chances of what Miller calls "integrative working" are greatly enhanced by members of a team being co-present in both time and space (see p6 above). Where co-presence is infrequent, this may signify that team members have responsibility for differing patient populations that only partially overlap. This raises an important question about the interpretation of Engestrom's concept of 'object'. Does it refer to patient care in general or to the care of particular individual patients? The evidence suggests that it is discussions about individual patients that develop and sustain multi-professional teams, because there is enough concrete shared experience to enable meaningful discussion and the sharing of relevant knowledge. Discussions about patients in general would be more abstract and get bogged down in the difficulties of understanding the discourse and knowledge bases of other professions. For some team members, especially hospital nurses, 10% or more of their time may be spent with any one patient; whereas for others it could be as little as 1%. This second group are likely to be members of several such teams, so it would be impossible for them to spend much time with any one team. In that context the term "same object" can easily mislead.

Given that individual factors also affect team working and that natural on-the-job development of teams may depend on factors like co-location, the arguments for relevant off-the-job training and experience of cross professional working become very strong, in spite of the challenging nature of such work. In the UK there is a very strong policy push in this direction, but Miller argues that many initiatives are

inappropriate and ineffective because they are not directed at teamwork *per se*. This may require experiential learning, but it is unlikely to happen often through direct participation in communities of practice because they are so extremely scarce. However, it is interesting to note that two of Wenger's three dimensions of participation (see p3 above) – mutual engagement and joint enterprise – are key features of Miller's "integrated working". The third dimension – shared repertoire – can be found to a small extent in such teams, but it is the processes used to develop a shared repertoire or discourse that are similar. Nevertheless, one can argue that these three dimensions provide a model of inter-professional learning, without needing to refer to the problematic concept of a community of practice.

Two other points raised by Miller deserve our attention, both concerning factors that appear to be necessary for good teamwork. One is the need for support from the line managers of the team members, the other is the need for stable and predictable contexts. Neither was available to the nurses and doctors described by Fessey and McKee. Since these same factors probably apply to many putative communities of practice, it is pertinent to ask how frequently such conditions are likely to be found in today's post-modern conditions of employment.

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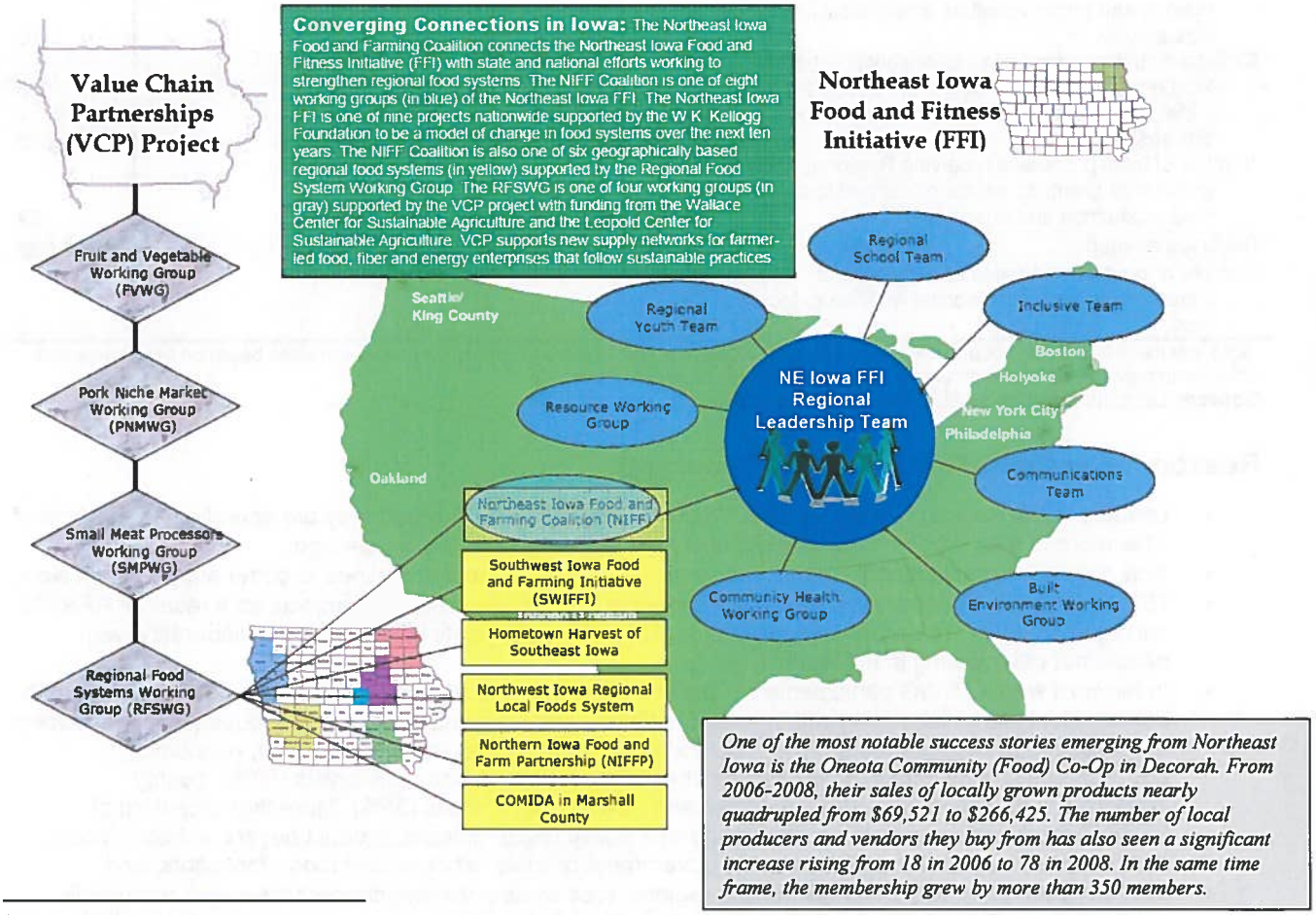
Results from Coordinated Regional Food Systems Work in Iowa and Implications for Policy Makers[1]

Regional Food Systems work in Iowa is providing new farming and community development opportunities at the same time it improves access to healthy foods. Better food and more successful farms are emerging from new collaborations that bring people across the value chain together to support regional food systems. As a result of these successes, new policy recommendations include:

- Require future food system efforts to take a comprehensive approach by including partnerships spanning the value chain (from suppliers and producers to processors, distributors, and consumers) with representation from multiple and diverse organizations, institutions, agencies, and disciplines
- Provide support for food initiatives that connect multiple and diverse groups along the value chain with state and local government officials including city and county governments.
- Provide resources to support widespread information sharing, networking, learning, and joint problem solving among leaders of food system efforts to avoid duplication of efforts and maximum results.

Activities in Iowa Supporting these Recommendations



One of the most notable success stories emerging from Northeast Iowa is the Oneota Community (Food) Co-Op in Decorah. From 2006-2008, their sales of locally grown products nearly quadrupled from $69,521 to $266,425. The number of local producers and vendors they buy from has also seen a significant increase rising from 18 in 2006 to 78 in 2008. In the same time frame, the membership grew by more than 350 members.

[1] This document was prepared in December, 2008 by Corry Bregendahl, Assistant Scientist, North Central Regional Center for Rural Development (NCRCRD) in cooperation with Rich Pirog, Associate Director, Leopold Center for Sustainable Agriculture; Brenda Ranum and Ann Mansfield, Co-Conveners of the Northeast Iowa Food and Fitness Initiative; and Cornelia Flora, Director, NCRCRD.

Outcome of Activities in Iowa

Table 1. RFSWG- and FFI-supported Regional Food Systems Activities and Outcomes, 2006-2008.

	Northeast Iowa (NIFF)	Southwest Iowa (SWIFFI)	Southeast Iowa	Northwest Iowa	TOTAL
Increase[1] in local food sales	$377,595	$164,716	$160,569	$175,900	$878,780
Increase in number of producers selling local food to local businesses/buyers	11	3			14
Increase in number of restaurants buying and serving local food	11		5		16
Increase in number of new markets and businesses (excluding farms and restaurants) that sell local food (farmer's markets, Community Supported Agriculture, buying clubs, wineries, etc.)	11	1	1		13
Number of existing farmer's markets experiencing growth in number of participating local food producers/vendors	2		2		4
Increase in number of retail grocers selling local food	1	2			3
Increase in number of institutions buying/serving local food (hospitals, colleges, retirement centers/nursing homes)	3		2		5
Increase in the number of conferences, public events, and public activities where local food was served	7		3		10
Mini-grant dollars awarded to local agriculture and food entrepreneurs by Regional Food groups to initiate or expand local food production and businesses	$10,485		$1600		$12,085
Number of local producers receiving Regional Food group mini-grants to initiate or expand local food production and businesses	34		5		39
Dollars leveraged	$742,965	$30,000	$21,067		$794,032
Number of programs initiated or expanded to increase access of low income families to local food	1		1		2

[1]Note that these figures are not documented total local food sales but rather the total change or *increase* in sales based on benchmark data collected in previous years and provided by participating businesses.

Source: Leopold Center for Sustainable Agriculture

Reasons Why these Outcomes are Occurring

- Leaders in the Regional Food Systems Working Group (RFSWG) report they are spending an average of 11% more of their time on local and regional food work than they did a year ago;
- 42% say their organization is changing organizational policies and guidelines to better support such work;
- 75% of participants either initiated or participated in new collaborations or projects as a result of RFSWG participation. 65% are collaborating with other RFSWG participants while half are collaborating with people not participating in the working group.
- In terms of who RFSWG participants are collaborating with, the breadth is diverse and varied (see graph below). Most are collaborating with non profits (86%), other regional food efforts/groups (80%), producers and agricultural entrepreneurs (78%), ISU Extension field and county agents (77%), economic development professionals (64%), ISU faculty (62%), dieticians and nutritionists (59%), county government officials (58%), state agencies and government officials (55%). More than one-third of RFSWG food leaders are also collaborating with public health officials, product buyers, school officials, food service directors, Farm Bureau, city government officials, lenders, and food processors; and
- 55% say partnering with others is helping regional food system leaders connect their work with public policy change. Exemplary policy changes include the creation of buy local purchasing policies, changes in enforcement of state regulations that formerly limited health facility purchases of local food, creation of a county-based food policy councils and local food coordinator; and school participation in food systems work.

Learnings from Workshop on How To Use Communities of Practice To Address Sustainable Agriculture Issues

(From SARE PDP Proposal)

Educators (Extension, government agencies, and other agricultural educators in the governmental, profit, and non-profit sectors) will acquire the skill set necessary to utilize a Communities of Practice (CoP) framework with farmers, ranchers, and the general public on developing programs and activities that enhance the sustainability of our food and agricultural system.

Long-Term Outcomes

Systematic Changes

- Support Extension programming
- Work across organizations, leveraging resources, and providing technical knowledge
- Increased efficiency of moving from tacit to explicit knowledge
- Diffusion of leadership roles among a larger group of stakeholders
- Increased, sustained buy-in of stakeholders
- More successful problem solving by sustainable agriculture educators

Intermediate Outcomes

Behavior, Practice, and Policies

- Change the way they deliver services to their clients, using the CoP model or elements of the model
- Create new communities of practice around their specific issues in food, fiber, and energy
- New/stronger relationships with new organizations/partners
- Leverage more state and local resources in providing assistance and education to clients
- Sharing CoP model and experiences
- Assist and advise new CoPs they organize and begin work
- Increase the total number of organizations using the CoP model to do sustainable agriculture and food systems work

Short-Term Outcomes

- First-hand participation in an existing CoP meeting
- Awareness of the CoP model as a viable way of organizing diverse stakeholders into productive, synergistic problem solving teams
- Awareness of the structure and function of CoPs and the benefits of using CoP approaches
- Knowledge to start, facilitate, manage, fund, and/or support CoPs in their own state or region
- Fresh perspective on seeking out, recognizing, and utilizing the human and financial resources available within their regions and subsequently their accompanying social and monetary resources
- Increased motivation and confidence to work across organizations
- Shared project leadership