

MULTI-DISCIPLINARY REVIEW AND COMPARISON OF PROJECT MANAGEMENT
FOR SOCIAL ENGAGEMENT PRACTICES

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Nicole Boudreaux Crutchfield

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MULTI-DISCIPLINARY REVIEW AND COMPARISON OF PROJECT
MANAGEMENT FOR SOCIAL ENGAGEMENT PRACTICES

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Nicole Boudreaux Crutchfield

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SUPERVISORY COMMITTEE:

Dr. Jack Norland

Chair

Dr. Christina Hargiss

Dr. Tom DeSutter

Approved:

April 10, 2017

Date

Dr. Edward DeKeyser

Department Chair

ABSTRACT

This paper explores the practices of natural resources management, community development, and public arts by comparing the integration of social engagement as part of project management. All three of these practices originate from goals of social change and continue to advance in their disciplinary fields. Community-Based Natural Resources Management (CBNRM) is framed in the natural resources management discipline. Community Development (CD) practice is framed in public participation and city planning disciplines. Creative Placemaking (CP) practice is framed in the public art discipline. These disciplines point to the intent to transform existing culture with the goal of becoming more democratic, socially just, transparent, and inclusive. Through the analysis of project management traits, key components are identified for successful project implementation with the goal of resulting in healthy and vibrant communities.

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The encouragement for this work came from many resources. I am thankful for friends, colleagues, civic leaders, faculty, National Endowments for the Arts, ArtPlace America and the Kresge Foundation. They believed in our community and the need to share the work of The Fargo Project.

DEDICATION

The research presented in this paper is inspired by the Fargo-Moorhead communities and the many people who shaped The Fargo Project. This work is dedicated to Jackie Brookner and Cali Anicha. Their teachings and holistic vision have shown me the impact of patience.

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INTRODUCTION

This study seeks to identify project management traits to improve social engagement by comparing Community-Based Natural Resource Management (CBNRM), Community Development (CD), and Creative Placemaking (CP) practices. These three disciplines are chosen for analysis because they have a goal of creating social change, are rooted in similar social theories, and use similar vocabulary to shape their practice. The goal of this research is to identify project management traits that can be universally applied by social engagement practitioners.

Based in sociology, social change is the movement of groups of people in society toward different beliefs and actions (Flora & Flora, 2008). Components of society affect this culture, such as demographics, government, beliefs, welfare, events, and the state of the economy. Today, society is influenced on a global level more quickly than ever because of the integration of technology into human lives (Lurie & Hibbard, 2008). This is demonstrated through global issues such as immigration crises, economic meltdowns, and catastrophic weather, which in turn influences governance and policy (Putnam, 1993).

Projects that include citizen engagement typically have a goal of creating social change (McCoy & Scully, 2002; Sheedy, MacKinnon, Pitre, & Watling, 2008). There is a common purpose of improved governance and justice or cultural representation. Practitioners are based in many disciplines, including city planning, public administration, sociology, and ecology. An initiative or vision often sets the purpose of a community action project, requiring the practitioner to organize and facilitate implementation. Community action projects require strategized social engagement for successful implementation. Social engagement is a necessary tool for community action projects to influence social change (Thomas & Mengel, 2008).

Organization and Methodology

This report first presents the definition and origin of the three disciplines. Three organizing themes are identified and highlighted to shape the comparison framework. A comparison of project management traits related to the themes are analyzed for each disciplinary practice. Findings of common project traits are presented, and project case studies are described to illustrate how integrating project management traits can occur. A summary of key findings for replication concludes the paper.

To conduct the analysis, a literature review was first performed to study each of the disciplinary practices. Focus was placed on the history, theory, and goals of each practice. The second step conducted an additional literature review of the organizing themes for social engagement practice. Since project management is a newer field, emphasis was placed on definitions and case studies that highlighted implementation successes and challenges. Once key project management traits were identified, a third literature review was conducted and a comparison of the findings was performed to understand how the practices are advancing and to learn what challenges remain. This comprehensive analysis presents a summary of necessary and innovative project management components that are not typically advocated for or integrated in everyday practice.

Disciplinary Framework and Definitions

As an introduction, an overview of the disciplinary practices CBNRM, CP, and CD is presented through basic definitions and brief descriptions of the disciplinary origins. The origin of these practices follows similar timelines and can be connected to events in history. The disciplines are based on citizens finding a voice in response to environmental, political, and cultural conflicts (Lord, Arts & America, 2015).

Community-Based Natural Resource Management

Community-Based Natural Resource Management (CBNRM) is a practice in the field of Natural Resource Management (NRM). CBNRM developed as a framework in the 1980s (Dressler et al., 2010), and it stems from the concepts that a depletion of resources is a response to the industrialization and consumption of local resources by large institutions (Gruber, 2010). Inclusion of local knowledge in NRM influenced this practice with a goal of more sustainable results (Dressler et al., 2010).

This practice aims to transform how people in the community use and value natural resources and, in response, develops a governance structure that is resilient in both a local and global context. By primarily engaging community-based learning with new methods of managing resources, an economy and culture can be sustained over time (Gruber, 2010). The key to the success of this management practice is to transform the value related to the resources, both in perception and economically. Thus, behavior will change, and threats such as extinction will be overcome as a counter to the Tragedy of the Commons (Gruber, 2010; Robinson Jr. & Green, 2011).

Examples of utilizing CBRNM practices include managing forestry or fishing in a rural community. By using local knowledge to understand the flooding history of a waterway, experts can collaborate with citizens to influence the regulatory review for risk management. Residents can learn about other economic trade that is less dependent on a resource that is being over-farmed or over-fished (Brunckhorst, 2010). Alternatively, experts can learn from long-time residents about unique and detailed local geographical knowledge.

In the late 1990s, there were failed attempts to employ CBNRM practices because the institutional and governance structures lost sight of the primary goals. The power and size of the

government quickly lost the relationship between the problem and solution. Because of large organizational communication issues, it is not uncommon for bureaucracy to take over. This leads to overly bureaucratic policies that are mismatched to the problem or lead to increased value of a scarce resource connected to government corruption and can result in overinflated resource values and problems with social engagement, such as lack of citizen inclusion or limited democratic process (Dankelman, 2010).

With a better understanding of co-governance and resilience theory and the recognition of complexity, there is continued focus on CBNRM as a type of NRM (Kellert, Mehta, Ebbin, & Lichtenfeld, 2000). This practice illustrates a positive example, with its focus on integrated governance and the relationship to social change. Through various techniques and broader engagement and action, this practice is advancing with more implementation success (Foundation for Environmental Conservation, 2010).

Community Development

Community Development (CD) is based on the concept that a group of people will organize to solve problems for the collective whole. The theories of this discipline are rooted in public administration, political science, sociology, and economics (Building the Field of Community Engagement Partners, 2014). Typical CD practitioners work in city planning, community organizing, economic development, and public administration frameworks.

For this study, the primary theory used in CD is normative theory and its transition to advocacy planning and communicative or collaborative planning, which is summarized by the relationship of society to democratic voice (Watson, 2002). This work was formalized in the 1940s by sociologist Saul Alinsky, who focused on organizing community to make life better for the poor (Steyaert, 2013). Advocacy planning developed from the concept of integrating public

participation as a key influence on government policy and that all people deserve a voice to shape their own community.

Today, CD focuses on framing the practice around asset-based management. This framework defines and measures community by inventorying assets based on seven capitals (Aigner, Raymond, & Smidt, 2002). These capitals are natural, social, built, environment, political, cultural, and financial, and they are knit together to define values and advance CD strategies of a place or geography (Green & Haines, 2008). For this multi-disciplinary comparison, social capital—which is integral in shaping our civil structure and the built environment by focusing on social networks and relationships—is emphasized (Putnam, 1993).

CD and city planning practices are integrated most closely in the United States through local government organizations, where land use planning and social programs correlate with public health and community-wide government programs. These are typically facilitated through local, state, and federal governments. They are formula-based practices and are established through mandates and percentages based on need, such as the United States Housing and Urban Development programs (Green & Haines, 2008).

Public outreach was formally integrated into this discipline in the 1970s, when community development and city planning in the United States recognized the need for democratic process and the inclusion of citizen engagement to shape communities (Aigner, Raymond, & Smidt, 2002). CD involves facilitated participation of stakeholders, a well-defined process for decision-making, planning for future influences, and negating potential nuisances (McCoy & Scully, 2002). Today, it is rare if the CD process does not include public involvement. This is perceived as common practice; however, the participation can be so tightly controlled by group dynamics or public process that true access is limited (Gleye, 2014). There is

room for innovation to make sure access for all is possible and diverse populations are integrated into the decision-making process (Laurian, 2004),

Success depends on the purpose of the outreach and the facilitation and strategy of the work. Grassroots and top-down approaches vary vastly, either encompassing an activism or a formulaic nature (Stoecker, 2001). Ideally, citizen values directly influence policies and goals to reflect fairness, values, and consensus (McCoy & Scully, 2002).

One of the problems or trends today includes not enough transparency to meet the public's demands. In addition, depending on the facilitator of social engagement, the purpose may be to serve a mandate or priority in isolation to a larger system (Laurian, 2004). To bridge that gap, there are grassroots non-governmental organizations (NGOs) and private foundations that use social media to advance the work; examples include Next City, CityLab, What Works Cities, Living Cities, Smart Growth America, 100 Resilient Cities, and MySidewalk. Groups like these are not only utilizing social media to their full advantage, but new practices like “civic tech” are developing. Civic tech is the integration of geographic information services (GIS), scenario planning tools, and open data driven decision-making and policy (Holway et al., 2012).

Creative Placemaking

One of the newest disciplines that uses social engagement to transform culture is a type of public art practice called Creative Placemaking (CP). CP is a term that was coined in 2010. However, public art in relation to social change is not new; it shifted in 1960 in response to cultural movements such as civil rights and environmental justice (Markusen & Gadwa, 2010).

The primary goal of CP is to take art out of the gallery and bring it into the community while activating places (Lord, 2015). CP captures community values for reflecting change, created over time and incorporating geographic places. Art and artists are at the center of shaping

a community while at the same time impacting an economy that connects to the cultural and local context. CP can be reflective, responsive, or proactive (Reconnecting to our Waterways: The Science of a Better City, n.d.).

This movement is shaped through a CD practice (Nicodemus, 2014). Artplace America created a 10-year program to study the intersection of CP and CD. The connecting factors are framed in social change (Axel-Lute, 2017). The practice requires partnerships and grassroots organizing principles using artists and the creative community to animate space (Gadwa & Byrd, 2009). The most important factor is inclusive social focus. A simplified project example would be inviting children to design a playground in their neighborhood that reflects their values and ideas, creating ownership of the space.

Leaders in this field are in the process of creating definitions and frameworks for practice. Significant investment by national private foundations and the National Endowment for the Arts is actively shaping this field. These organizations are leading the investigation and analysis of project definition and success by assisting hundreds of projects around the country to engage in CP activities (Nicodemus, 2014). Discussion among artists is dynamic as practitioners make their way through the development of this field. Defining what makes this practice different from other forms of public art is a stirring discussion. Establishing the importance of this type of work is also debated in many online blogs and symposium settings (Moss, 2012).

Organizing Themes

When reviewing the definitions and origins of the three disciplinary practices, three organizing themes evolved as a comparison framework. These themes are identified commonalities that provide a tool for comparison and create a frame for analyzing the effectiveness of project implementation. The first of the three organizing themes is the role of the

citizen studied through the inclusion of social engagement in each of the practices (Chazdon & Lott, 2010). The second organizing theme is the recognition that a growing body of knowledge is expanding these disciplinary practices. In effective project management, innovative community-based demonstrations can influence policy and governance. The third organizing theme brings forward principles in resiliency by recognizing that our culture and society are changing faster than ever (Project Management Institute, 2013; Olsson & Folke, 2004). By overlaying discussions in social engagement, project management, and resiliency theory, lessons can be incorporated into a multi-disciplinary practice that reflects society’s governance, policy, and cultural values (see Fig. 1). To study these organizing themes in more detail, components are further defined and analyzed as they are related to social change as an outcome (Kellert, Mehta, Ebbin, & Lichtenfeld, 2000; Olsson & Folke, 2004).



Figure 1.1. The relationship among the organizing themes and disciplinary overview.

Social Engagement

To learn about the citizens' role in social change, a transdisciplinary review of social engagement practices was conducted. In this review, comparative historical dependencies that originate from the use of democratic voice for evoking social change can be identified (Lord, 2015). There is a relationship between a citizen's call to change and perceptions of how the physical world is governed and shaped (Piasecki, 2012; Olsson & Folke, 2004; McCoy & Scully, 2002). The citizen, through democratic voice and activism, plays a role in defining this societal change and brings the global issues to a local and regional platform (Lord, 2015; Putnam, 1993; Sheedy, MacKinnon, Pitre, & Watling, 2008).

The three analyzed practices are evolving as the role of the citizen becomes embedded. In project management and decision-making authority, social engagement plays an active role in defining those boundaries (McKinney & Harmon, 2002). Each of the practices studied in this paper integrates the citizen/governance relationship, how it reflects local culture and is realized through successful project implementation.

There are several terms that can mean social engagement and the act of including democratic voice in project implementation. These include citizen engagement, public participation, and civic engagement. The literature calls attention to the differences in these terms, but for this paper, the most common factors are including citizens, engaging a wide range of participants in dialogue, public discussion of societal issues, and citizen empowerment to influence government and policy (Aigner, Raymond, & Smidt, 2002). Of course, there are many derivatives of the ratio of power and the roles of community, governance, and voice (Arnstein, 1969). This paper generalizes the topic for comparison of how CP, CBNRM, and CD are

integrating these components in different ways and through successful project implementation (see Fig. 1.2).

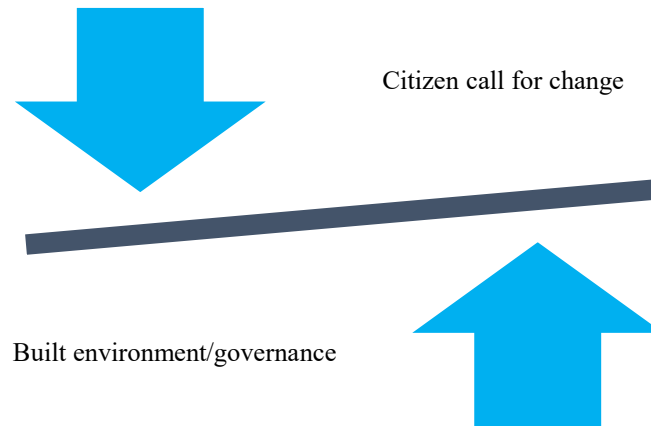


Figure 1.2. Relationship between citizens' calls for change and governance. As the pressure of the structured organization pushes upward, the citizen call to action and public voice pushes downward for a healthy tension.

Project Management

As demonstration activities and case studies about policy and governance and the integration of social engagement are reviewed and compared, project management approaches can be further analyzed to develop more predictable and efficient project outcomes. (Kellert, Mehta, Ebbin, & Lichtenfeld, 2000). Some disciplines define the practice of social engagement as the integration of stakeholders' involvement into the project, and it is included in best management practices in a formulaic way (Sheedy, MacKinnon, Pitre, & Watling, 2008). Some disciplines integrate an organic method of stakeholder input, understanding that the role of the citizen is influential in developing the goals and outcomes of the project overall.

Understanding the strategy behind social engagement and finding an authentic and meaningful method for all involved is necessary at the beginning of project development (Building the Field of Community Engagement Partners, 2014). Integrating social engagement into project management strategies results in successful implementation of activities that leads to

societal change (Kellert, Mehta, Ebbin, & Lichtenfeld, 2000). Since these disciplines address an activist perspective, implementing activities requires organization and strategy that can be captured in project management.

Project management is defined as “the application of knowledge, skills, tools and techniques to project activities to meet project requirements” (Project Management Institute, 2013, p. 5). The Project Management Institute (PMI) is a resource for standardizing project management practices across disciplines. It is an association that promotes the best management practices for project management. Its work applies broadly to business, computer, construction, and many other areas. Project management as standardized through PMI or in the literature review does not provide any discussion about the role of innovation and creativity in the inclusion of project management standards. However, through a case review of successful projects, a theme of innovation, specifically disruption of standard practices, is discussed as a trait in successful project outcomes (Thomas & Mengel, 2008).

To create a comparative study among CBNRM, CD, and CP, specific project management components are analyzed. These include organization, social engagement, uncertainty, metrics, and innovation, and these components define the characteristics of successful project implementation and advancement of social engagement practice (see Fig. 1.3) (Eltham, 2013).

The components have a wide range of variables:

- Organization can be hierarchical, horizontal, organic, or networked. This component defines the structure of disciplinary practice.
- Social engagement captures the level of citizen engagement and the citizens’ role.

- Uncertainty defines how risk and unknowns are integrated into disciplinary practice through feedback and adaptation.
- Metrics presents ways that disciplinary practices are defining success or capturing change and benefit for replicability.
- Innovation introduces the concept that there is a level of creativity needed when approaching problem solving and complex issues.

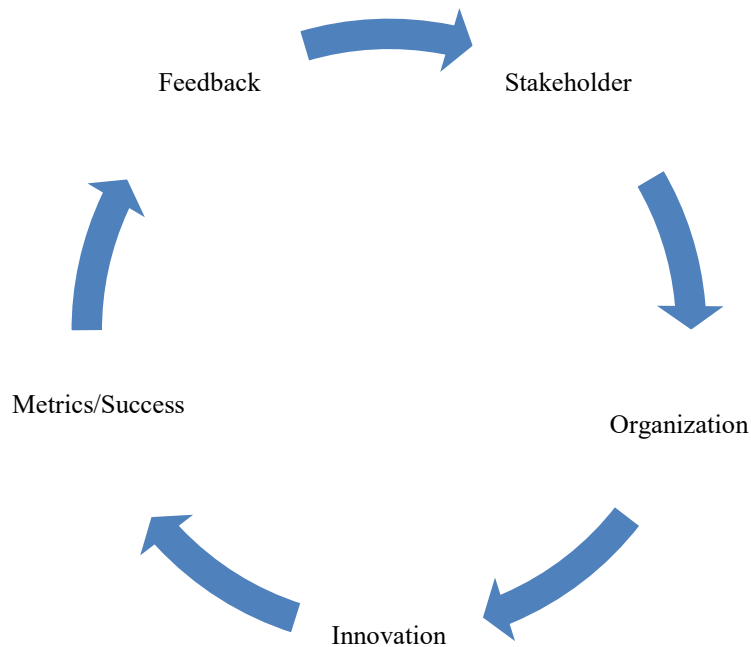


Figure 1.3. Project management factors that influence governance and the built environment.

Resiliency Theory

Resiliency theory in this research is derived from ecology, where the balance of feedback and change is integrated into an entire system (Cote & Nightingale, 2011). This theory is also integrated in other disciplines such as public health and emergency management. Currently, these disciplines are too segregated as a general practice and are missing critical project management elements (Kageyama, 2011). By conducting a cross-discipline literature review, it

was found that a wide range of terms are utilized and defined. Frequent on-trend marketing words, such as healthy, vibrant, and resilient cities or communities unify disciplines (Kenzer, 1999; Markusen, 2013). As such, for comparison aspects, the disciplinary overview and case study review are placed in an urban context.

The concepts of health and vibrancy to describe a community and to measure the qualities related to those concepts are discussed among several disciplines. A continued trend that researchers and experts are trying to define is the use of signposts or indicators to aid in determining signals of change. Many institutions and researchers are trying to find standardized signposts, but there does not appear to be overarching agreement, and the progress varies by discipline and issue (Cote & Nightingale, 2011; Jackson, Kabwasa-Green, & Herranz, 2006; Pearce, 2014).

The inclusion of an arts and culture lens brings a well-rounded approach to this discussion because it includes many indicators and signposts that pertain to a quality of life that is more tangible and witnessed by everyday citizens of the community. It also gets to the heart of the community and is less about government practices, as it can measure the uniqueness of a culture and its sensitivities (Jackson, Kabwasa-Green, & Herranz, 2006).

A unique aspect of resiliency theory is the integration of uncertainty and risk (Olsson & Folke, 2004). This brings important concepts to the forefront of project management, such as scenario development and the incorporation of failure (Carpenter, Folke, Scheffer, & Westley, 2009). This is a seemingly unique concept and not generally integrated in more traditional project management, especially projects defined with a clear profitable financial outcome in business (Stockholm Resilience Centre, 2014).

With resiliency integrated into the overview, adaptive co-management is suggested as a project management style. This is where ecology principles and project management principles overlap. Important components in this work include feedback loops and networks as information and lessons learned are shared and iteratively become included in the project management of a system. This style of management is unique as it includes non-traditional project management roles and outcomes in everyday practices. The role of the citizens, local knowledge, and culture are integrated into project approaches (Chapin III, Kofinas, & Folke, 2009; Thomas & Mengel, 2008).

Figure 1.4 presents a collection of definitions used in this research. These definitions have been developed to reflect practice, case study analysis, and the literature review. They are presented in this paper as a tool for the reader.

Adaptive co-management – The incorporation of monitoring and measuring within project implementation. There is the ability to make changes to a project based on this monitoring. Wait and see and then act. Collaboration, cooperation, and community are all integrated within adaptive management and monitoring.

Community – A group of people and organizations that comprise a collective belonging based on beliefs or geography.

Discipline – The field of work by a professional type, typically connected with a professional association.

Practice – Methods used for day-to-day activities. It varies per discipline or project type, and actions are related to project development.

Project Management – The oversight of components of a project to include all aspects: mission, work flow, communication, and product or outcomes.

Public Participation – Community members, citizens, or democratic involvement in groups involved in decision-making.

Social Engagement – The practice of citizen inclusion in project development or community activity. This can include activism and citizens as volunteers.

Slow Change – In reference to typical project management measures (on time and on budget), this challenges the typical societal acceptance of these measures to allude to other metrics that are important to determine value. Slow Change indicates that time may be longer than a typical project manager is willing to accept.

Social Capital – Citizen and business involvement in shaping a community.

Social Change – The influence of social engagement practices to shift cultural values; the intersection and intervention of a community.

Society – The cultural response based on a group of citizens, businesses, and community represented in a display of value.

Socio-ecological – The combination of social and ecological factors as they correlate and affect a community's cultural value.

Socio-economic – The combination of social and economic factors as they correlate and affect a community's cultural value.

Transformation – The goal of change within a program or cultural shift toward a new paradigm.

Vibrancy – The energy and cultural diversity of a community.

Vision Keeper – Aids in holding the collective goals of the public engagement process, removing personal ego, and acting on behalf of the project goals from beginning to end.

Figure 1.4. Definitions.

Project Management Analysis

Building from the definitions and origins that are common among all three disciplinary practices and incorporating the organizing themes, the next step in this research is to conduct a case study review and an investigation of the literature review. This process will create new insights into project implementation and project management traits related to the three disciplines. Key project management traits to be discussed include social engagement and relationships, organizational structure, uncertainty and risk, and metrics for newly realized values. These traits are highlighted specifically to compare adaptability and responsiveness to community engagement in a changing local context. Highlighting overlapping project management traits and gaps as they may affect implementation and social change concludes this section (Fabricius & Collins, 2007).

CBNRM Project Management Components

Social Engagement and Relationships. A unique aspect of this disciplinary practice is that most available research on CBNRM is related to case studies in undeveloped countries, primarily in rural settings (Dressler et al., 2010). There is little understanding and research about integrating this work into urban or developed countries. Fields like CD are more broadly practiced in urbanized settings and therefore provide opportunities for learning across disciplines to broaden the practice of CBNRM.

Because of the rural applications of this type of practice, most citizen relationships are already established, as in people know each other, as opposed to large urban cities. Therefore, the citizens' voices and access to formal institutional governance may be better in rural settings. The direct influence of grassroots activism can also be an influence through one-on-one relationships. On the other hand, in urban settings, the top-down federal agency governance may

be more dominant and seem to be more outside of an individual's day-to-day activities. Social engagement led by an agency may be perceived as forced and not innovative or organic (Baird, Plummer, & Pickering, 2014).

Successful partnerships and relationships are important for CBNRM to thrive (Lurie & Hibbard, 2008). Many CBNRM practices initiate in bottom-up structures or NGOs trying to affect political governance. Effective communication is easier through partnerships and horizontal governance structures as opposed to top-down. Relationships are also dependent on citizens learning and sharing knowledge (Fabricius & Collins, 2007).

Organizational Structure. Evolution of CBNRM at the United States federal government agency level can be found in reports defining best practices for public participation, stakeholder engagement, collaborative problem solving, and decision-making. The number of publications are vast and are limited to practitioners within the agency or engaged in policy analysis. These guides are not easily accessible as resources for local and citizen-level governance (United States Environmental Protection Agency, 2014).

Seeking replicable processes, publications from the Environmental Protection Agency (EPA), coordinated by the Office of Environmental Justice (OEJ), are the most prominent in setting goals and advancing inclusion and equity in projects. Guides focus on developing partnerships, establishing tools, community capacity building, and visioning (United States Environmental Protection Agency, 2008; 2011).

Locally, there is a dependence on non-governmental institutions, volunteer groups, and institutions to assist in translating between federal and local governance issues. Governance of natural resources requires involving interested participants, allocating authority at multiple, flexible levels, and a mixture of organizations. Integration and evaluation of process and project

management principles is necessary to discover the critical elements that are necessary for replication to obtain successful outcomes (Foundation for Environmental Conservation, 2010).

Uncertainty and Risk. CBNRM practices are incorporated into living systems where there is unpredictability and the potential for natural disasters (Carpenter, Folke, Scheffer, & Westley, 2009). With the expansion of the emergency management field, risk and its relationship to the local economy is integrated into project management more deeply than CD or CP. The incorporation of feedback loops is a key component in the CBNRM practice. Feedback loops are a component of stewardship and resilience theory. The integration of this component ensures that new knowledge is considered as the project adapts based on lessons learned (Cote & Nightingale, 2011). This allows for a project management process that is more flexible and adaptable.

Diversification is also a key component of natural resource management. This not only applies in ecology but also with project management traits, such as stakeholders. These diverse stakeholders and their experiences are incorporated into the feedback loops to ensure that project management has the resources and expectation to adapt to continually changing influences (Chapin III, Kofinas, & Folke, 2009). This discipline is most connected to the components of resiliency theory, bringing uncertainty and risk into project management development.

Metrics. CBNRM includes ecosystem services as a method to capture values and measurable outcomes to define project success. Ecosystem services allow for the ability to take standard economic measurements from the traditional business market and convert them to a different value system. As an example, an ecological benefit such as biodiversity becomes a measurable value that can be compared to other geographical areas and measured over time (Baird, Plummer, & Pickering, 2014). By encountering stewardship in land management

practices, success is further defined by including lessons learned from natural systems and bringing ecological principles into the project management itself through methods like value capture in ecosystem services analysis (Chapin III, Kofinas, & Folke, 2009).

CBNRM Attributes and Summary. The most critical component unique to CBNRM is the involvement of citizens in shaping governance with respect to creating a co-management adaptive management framework (Fabricius & Collins, 2007; Lurie & Hibbard, 2008; Gruber, 2010). The complexity involved in these intricate projects involves multiple elements: change, risk, new actors, and global issues (Kellert, Mehta, Ebbin, & Lichtenfeld, 2000). Thus, the projects require a communication structure and management style that embodies Adaptive Co-Management (ACM) (Walker, Abel, Anderies, & Ryan, 2009; Olsson & Folke, 2004). ACM has a basis in resilience theory applied to social-ecological systems (Olsson & Folke, 2004). Integrating scenario planning and uncertainty in project management is necessary because human practices attempt to govern living unpredictable systems. Thus, project management communication includes linkages, networks, and determining a shared value for all members of the project team (Fabricius & Collins, 2007).

Project management traits:

- Patience due to change being slow
- Dependence on partnerships building on social and mutual interest
- Dependence on local knowledge
- Self-organizing principles
- Need for organizational layers and levels in a horizontal structure
- Experimentation needs to be built into the project to allow for flexibility, adaptability, and uncertainty

- For budgetary purposes, include contingency for failure
- Capital shortages and dependence on volunteers is common
- Inclusion of educational components for citizens to influence community values while building sustenance

CD Project Management Components

Social Engagement. In the United States government, public participation is incorporated into many processes and is mandated by most agencies. For instance, the Environmental Protection Agency (EPA), Housing and Urban Development (HUD), and Department of Transportation (DOT) all have regulatory mandates on how to incorporate community input. Many local jurisdictions also have requirements for citizen notification and participation in land development processes. The processes are mandated to a point of notification requirements and timing requirements. However, these mandated processes typically are not authentic or created to empower decisions; the outreach strategy is mainly to inform (Sheedy, MacKinnon, Pitre, & Watling, 2008).

A more authentic method for inclusion in civic engagement is to encourage relationship building between governing agencies and citizens. This typically takes time, and the initial communications strategy might be initiated simply as dialogue for learning or listening (Sheedy, MacKinnon, Pitre, & Watling, 2008). Many long-range planning methods (comprehensive planning processes) involve a process over a period of one year. In these processes, citizens often have opportunities to vote for and rank priorities for their communities. Over a number of meetings, citizens can witness and validate how their participation shapes policy and governance (Gleye, 2014).

Organization Structure. Whether within an NGO or the government, the organizational structures are generally top-down with multiple layers of power. This can lead to difficult access and intimidation at an individual level, which stems from the formality and inflexible nature of many governmental processes. The communication is typically only one way, and bottom-up is generally not integrated into the process or a feedback system. This structure can stifle social change (Gleye, 2014; Laurian, 2004).

In the federal government's organization process, there is a typical public outreach process that includes: *Notice -> document comment -> public hearings -> testimony -> leader decision*. This is a static process and does not include flexibility or adaptability to control outcomes. However, as a way to inform the public and get their opinions about a project or strategy, it is expected that this process is followed. If outcomes or results are not validated by the public, appeals or lawsuits are typically the only way to effect change.

Uncertainty and Risk. CD integrates portions of resilience theory through the practices of public health, emergency management, and urban design. Responses to national natural disasters like Sandy and Katrina have initiated federal agencies and NGOs to restructure organizationally. Public health presents resiliency in social recovery and access to health care (Zautra, Hall, & Murray, 2009). As the design disciplines connect to human spatial metropolitan contexts, resilience theory surfaces as a social ecological system (Pickett, Cadenasso, & Grove, 2004). Organizations try to make these concepts measurable for comprehension at the policy level and to define qualities of a sustainable community.

Metrics. In this disciplinary practice, metrics are traditionally captured and measured. The United States government holds census counts that formulate the basis of many analyses regarding demographics. At the local level, initiatives such as reducing crime or homeless

populations can be counted and set against a goal that the community has established as acceptable. Public opinion surveys are also common. Measuring and counting can be easy with accessible data; however, an outcome can be pre-determined through political influence (Robinson Jr. & Green, 2011).

In terms of CD, the primary goal is to enhance the community (Aigner, Raymond, & Smidt, 2002). Through participation, each community defines what and how to do this. Therefore, the definition of success is based on the community's interest and definition of quality.

To advance this practice, research points to a need to identify indicators to develop a model or definition of success (Chazdon & Lott, 2010). There is much research asking if there is a typical "healthy" community or quality of life that is sustainable. Many non-profit organizations are trying to fill that void by developing suggestions for metrics that also fit their organizational missions, such as the AARP "livability index" (AARP Public Policy Institute, n.d.; Zautra, Hall, & Murray, 2009). There are currently not many common factors, and each agency seems to use its own metrics and derive its own data for different purposes. These organizations are infiltrating the local government system by providing grants through technical assistance programs, typically two-day seminars to develop a case study and train staff and elected leaders to utilize recommended data and metric tools.

CD Attributes and Summary. This discipline typically leads top-down with social engagement activities; therefore, the best success tends to occur with the aid of grassroots organizations and partnerships (Laurian, 2004). Innovative practices have a bottom-up process built into projects, but over the past three decades, it's a top-down structure that hasn't recognized a need for a diverse approach to reach different populations other than the majority

(Green & Haines, 2008). Social change is very slow, as it typically relies on federal policy changes (Laurian, 2004). Resources are typically limited to invest in the structure needed to facilitate conversation or provide opportunities for diverse input (McCoy & Scully, 2002).

Compared to the other two social practice fields, CD project management is the most predictable and replicable. Challenges come from balancing process and outcome priorities with citizen dialogue (Aigner, Raymond, & Smidt, 2002). Elected officials have a responsibility to balance authority with listening as they govern with a larger outlook.

The CD program, Heart n' Soul, is a good example of public engagement advocacy enhanced through teaching tools for community organizing groups. This private family foundation simplifies governance and brings it to a local level by connecting on a human level through storytelling. Choosing the right approach, including a phased approach, as well as feedback loops, is the foundation of the program (Orton Family Foundation, 2015).

Project management traits:

- Predictable processes and procedures
- Pyramid organizational structure leads to clear roles and responsibilities but not much room for creativity or access to open communication channels
- Leaders can carry vision throughout the organization effectively
- Pragmatic methods for integrating resource limitations
- NGOs typically bring forward creative processes
- Potential to connect community gaps and to provide links between citizens and sustainable outcomes
- Organizations can take the long view and integrate strategic planning

CP Project Management Components

Social Engagement. Within the public art field, there is a growing discipline called “socially engaged practice.” Creative and innovative ways to incorporate underrepresented people is key to this work. Typically, there is a social empowerment theme and a grassroots focus that has a natural connection within this discipline (Gadwa & Byrd, 2009). However, no formal techniques or schooling programs exist, and most practitioners are experimental in nature. A theme in this practice is the importance of cultural sensitivity and reflection of location (Gadwa & Byrd, 2009). Participation is a primary element of the art, typically created through social interventions. Often there are unexpected outcomes on how participation affects the physical shaping of their community or the revitalization of a location, leading to conversation and social connection becoming the primary focus (Hegeman, 2016).

Organization Structure. Since this is a new field of practice, there is not a standardized organizational structure. Many projects come from a grassroots level but are governed by a funding agency. NGOs play a lead manager in these projects. For successful implementation, project management is best practiced in a broad system network versus a hierarchical organization. Many of these projects require teams of interest groups and leadership through a vision keeper (National Endowment for the Arts, 2016).

Uncertainty and Risk. Resiliency theory is not primarily integrated into this discipline, but there is a branch of practitioners focusing on ecological principles and sustaining their work through community capacity building. Given the experimental nature of the work, coping with uncertainty and risk go hand in hand with the innovation of this practice (Hegeman, 2016). These project types rely on limited resources, including volunteers and capital. Since the public is so heavily engaged in the creation of the outcome, the project results cannot be calculated

beyond a vision or hope. How people will respond to outreach activities is uncertain (Markusen, 2013; Gadwa & Byrd, 2009).

Metrics. Currently there are no tested models or metrics within this field of practice. The National Endowment for the Arts and ArtPlace America are two organizations leading the discussion about CP (Markusen, 2013). Currently, both organizations are funding research to aid in defining models and metrics. They are using a comparison study of the many projects across the country. One way of documenting success is through cultural participation; however, there are not good ways to document non-traditional participation or elements that are unique to a certain community, and access can become a barrier (Jackson, Herranz Jr., & Kabwasa-Green, 2003). Americans for the Arts is a good resource to help define the words that shape this practice and provide information on types of metrics (Animating Democracy, n.d.). Recently-published materials by the National Endowment for the Arts and the Federal Reserve of San Francisco help define common practices. This will aid in capturing the value of public arts and defining a creative economy while defining cultural assets (Federal Reserve Bank of San Francisco, 2014; National Endowment for the Arts, 2016).

Springboard for the Arts, based in St. Paul and Fergus Falls, Minnesota, has been able to develop toolkits for interest groups. The executive director, Laura Zabel, has participated in national dialogue regarding the definition of success for the CP project. There are many writings and dialogues as the field becomes further defined. Zabel takes a non-academic view by integrating the word “love” into the model of CP. She further explains that as artists create something authentic and out of passion, it is connected to a place where people are involved in its making, and if it is reflective of them and their location then it qualifies as CP (Zabel, 2012).

artists --> love --> authenticity = places where people want to gather, visit, and live

To counter Zabel's model, Ian Moss indicates that developing metrics and creating outcomes is not difficult and can function on logic models. As it integrates with strategic planning and CD, the application of this theory assists in project management (Moss, 2012).

CP Attributes and Summary. Going from idea to implementation in a creative process is challenging. Since CP does not yet have a well-defined framework, project implementation can be difficult, but the experimental nature allows for flexibility and adaptability (National Endowment for the Arts, n.d.). CP can benefit by adopting project management traits from both CBNRM and CD to further balance the unpredictable nature of CP practice.

The advantage of CP is that the goal of social impact is cross-disciplinary and community-wide. The newness of the field brings forward resources and interest from many national agencies. It also has a strong local community driver, as typically projects are driven from the bottom up. CP offers a bridge between governance policy and community voice.

Project management traits:

- Dependent on social networks and common interests
- Requires the ability to evaluate projects under different values than in typical business practice, such as time and money
- Experts are challenged to be creative
- A practice of deep listening and compassion should be incorporated for good relationship building
- Partnerships that are multi-purposed and multi-serving will grow and sustain the project

Comparative Findings

The comparison chart for social change fields of practice (Table 1) summarizes the literature review and comparison of innovative case studies. There are attributes and challenges for each discipline. Findings indicate that good project management requires focus on relationships and capacity building (Project Management Institute, 2013; Chazdon & Lott, 2010). Relationships are based on effective communication that integrates citizen learning, organization balance, feedback, and defined metrics (Carpenter, Folke, Scheffer, & Westley, 2009). The chart shows cases in which partnerships and communication are key to broadening the impact of the project. The literature review also supports these findings (Kellert, Mehta, Ebbin, & Lichtenfeld, 2000).

Compared to the other two disciplines, CBRNM is unique because of its basis in resilience theory using an ecosystem-based approach. By integrating uncertainty in project management, a project can be communicated to embrace risk and unexpected outcomes by developing different strategies to stay adaptable (Carpenter, Folke, Scheffer, & Westley, 2009). The other two disciplines have not integrated risk management into their practice as a standard. Thus, most social change projects do not scale up or down to interpret regional or local context. The importance of adaptation is undervalued.

Common disciplinary project management themes that surfaced in this research are listed below:

- Careful consideration needs to be taken to confirm all stakeholders are integrated into the project. This counters the potential for limited access or inequality.
- Feedback loops keep stakeholders engaged, briefed, and inclusive as new stakeholders move into and out of the project.

- Time and patience are important to understand the measure of success.
- Metrics are important for communicating successes, but they might need to be unique and customized to accurately include cultural values in the equation. Using metrics to define success is challenging.
- Finding uniform methods for incorporating risk assessment and change is challenging.
- Human-based intervention and innovation can create dynamic solutions to solve many problems that may seem unrelated while also addressing risk and metric issues.
- Limitations on people and funding are the most common constraints. Thus, an over-dependence on volunteers is typical.

Table 1.1

Comparison chart for social change fields of practice

Discipline	Attributes	Challenges	Relationship Capacity Building Principles	Effective Communication Principles
CBNRM	Partnerships Co-Adaptation/Co-Management Local context Grassroots Risk management	Common vision Lack of governance	Citizen learning, co-management	Focus on links and partnerships and a horizontal structure
Creative Placemaking	Vision and imagination Local context Participatory Awareness building Community voice	Replication Measurable outcomes Governance	All people Artists	Shared values Define metrics
Community Development	Governance Process Asset building Measurable outcomes Indicators Facilitators	Static and inflexible Top-down	Structure Replication Neighborhood organizing	Jurisdictional boundary limitations Multi-disciplinary-cross agency

Comparative Analysis Demonstrations

The comparison among social engagement practices identifies seven project management components that are necessary for successful project implementation. Through a literature

review, disciplinary investigation, and observation through practice, actual projects are presented in this section. These projects are still in process today.

Nationally, there are two case studies that demonstrate how these disciplines can cross over through social engagement practices and evoke social change. These projects illustrate how project leaders can empower community-level change agents. These visionaries embrace experimentation and collaboration to lead to new approaches to project management. These projects combat scaling and governance issues (Ensor & Berger, 2009; Walker, Abel, Anderies, & Ryan, 2009).

The first project is from the organization EcoDistricts, which was started in 2012. EcoDistricts developed a framework protocol for neighborhood redevelopment. It works with communities all over the world bridging partnerships among governance organizations to empower change makers. The EcoDistrict mission is based on a theory of change using socio-ecological principles of providing access for all people. Based in collaboration and resiliency, the work embodies a holistic approach integrating all aspects of a healthy city and challenges traditional governance and bureaucracy (Sun Valley EcoDistrict, n.d.).

The second case study is from the work of Candy Chang, who trained as an urban planner and practices as a public artist. Her social impact projects are based on finding creative ways to engage people in a neighborhood. Through visual exhibits in the public space and by asking simple, open-ended questions, broad input is provided to collaboratively reflect community values. The *Before I Die* project focuses on the community's visible self-identification and calls upon residents to reflect on their vision in creative ways (Chang, n.d.). Chang's work shows how small and site specific interventions can transform policy and community (Juarez, 2012).

CASE STUDY: THE FARGO PROJECT

An innovative public infrastructure project titled The Fargo Project (TFP) is presented as an in-depth case study. This project connects the design of public infrastructure with multi-purpose solutions through social engagement practice and community action. This project is led by the City of Fargo, North Dakota, with broad community partnership and was initially led by a nationally recognized ecological artist, Jackie Brookner (City of Fargo, n.d.). The project integrates CBNRM, CP, and CD practices specifically focused on socio-ecological components.

The Fargo Project transforms an existing 18-acre dry detention storm water basin into an ecological community commons. The basin is being transformed through extensive community involvement with community partners. Through the transformation of the basin, the city and community are learning new ways to practice storm water management. By integrating best practices with storm water management and being able to replicate these practices at other sites, the premise is that the city governance structure can be modified to have a less intrusive land management role, bringing resilience theory into practice (The Fargo Project, 2015).

Originally the project was initiated by working with neighborhoods and interest groups to find a pilot site within the City of Fargo to demonstrate a new project management approach that connects government agencies, non-profits and residents to collaborate in shaping the land in meaningful and significant ways, reflective of the surrounding culture. Through building a community of interest and active listening, discoveries of need and desires shaped the phases of the project. Integrating a flexible and adaptable approach led the project to the management plan that is established today in 2017. The pilot site and the long range plan specific to the programming, construction, and transformation of the site is known as World Garden Commons (WGC). (See Appendices A and B))

In summary, through creative community interaction and a lens toward education about ecological restoration practices, the community understands how its influence can effect change. With the artist carrying the vision of transformation and highlighting components of inclusiveness, new approaches to problem solving are presented. The goal of the entire project is to learn from the pilot project and therefore change how the city, as an organization, can learn new ways of doing business by building a sustainable program to support the ecological community commons, WGC.

The project was awarded grants by the National Endowment for the Arts (NEA) in 2011, ArtPlace America in 2014, and the Kresge Foundation in 2015. All three organizations frame their work as community development through neighborhood revitalization and neighborhood organizing. Their work is multi-disciplinary in nature, but they continue to build innovative practices to make sure artists and the community are integrated into the project management and collaboratively participate in creative problem solving (National Endowment for the Arts, 2016)

TFP Project Management Components

Social Engagement

The lead artist defined the approach of the project and programmed the social engagement into this project, specifically including people without easy access to city hall. So that all community members can have a voice and shape the public space around them, the project team consciously invited participation from neighborhood members and held more intimate discussions that involved meeting in people's homes and attending weddings and church events (Laurian, 2004). The act of invitation was deeply personal and crafted to engage people in ways that would interrupt their day-to-day activities and be meaningful. This approach is contrary to the traditional infrastructure design process, which typically occurs in the office of

the city engineer with mandated legal notices to property owners and formal town halls with already-designed construction plans presented.

Organization

This project thrives on partnership development. It originated in 2010 with the City of Fargo; however, by partnering with the Fargo Park District, Lutheran Social Services, River Keepers, the Plains Art Museum, the Arts Partnership, the Fargo School District, West Fargo School District, North Dakota State University, the YMCA, and countless volunteers, the project team investigated many topic areas to define this project (National Endowment for the Arts, n.d.). Some of the prominent topic areas included refugee resettlement, cultural narratives, regional geography, nature, storm water, vegetation, community needs, and recreation.

By learning about the partners' needs, a more holistic and multi-faceted approach further defined TFP's work. This included identifying opportunities and needs for job training, community centers, construction knowledge, access to scientists, public health, and education. These needs were then integrated into TFP as a multi-year, systematic approach adaptable to partnership interests. Finding national organizations that share these community building interests has sustained TFP's work to date (City of Fargo, n.d.).

By networking and building bridges of partnerships among other organizations and projects, more participants were engaged and assisted with defining the value of transforming the space. Because of this project, additional separate partnerships and goals among participants have been shared and expanded into other projects and programs. Examples include a community garden program and succession planning for some of the NGOs.

The challenges encountered have also included integrating this project into the existing government structure and the parameters that come with project management, such as time and

budget (National Endowment for the Arts, n.d.). Time to build relationships can take months as both parties begin to collaborate with and learn from each other. Capital resources for infrastructure can typically be estimated because of standardization, but because of the customization and new knowledge developed, learning while building is very much a part of this practice. Communicating those unique aspects lends to an approach that is more suited for experimentation or creating a pilot. Scaling up and operationalizing these lessons is not intuitive.

Uncertainty and Risk

Defining how to physically transform and ecologically restore the detention basin with input from the community and experts helped to define TFP's scope. The city's expertise was lacking the skill set and knowledge needed to work with natural systems or construction methods. Determining when to transition between experts, volunteers, and city staff required careful attention to details and extensive discussion (Asleson, Cunningham, & Ingram, 2016).

At the early stages of design formalization and implementation, it was recognized that a multi-disciplinary project approach and a wide variety of skills were needed throughout the full length of the project. Intermittent training was also needed to cross-train and learn from other disciplines so that collaborative problem solving could add to the knowledge and experiences for everyone involved. The key focus areas were building knowledge for transformation of the physical space while working with natural systems and building local capacity not only for artists, but for all professions regarding social engagement work.

Metrics

The project manager has been challenged to define metrics appropriate to measure success, which can relate to the community as well as the funders (Markusen, 2013). Particularly with CP, the funding organizations are looking for ways to measure "vibrancy." For TFP,

success is identified by the transformation of the existing detention basin, both physically and in how the community engages with the site. This project is slow to evolve; therefore, outcomes are slow to realize, and measuring them is even slower. Reminding the funders and the community about the outcomes has become the best method for sharing success.

Outcomes

Small organizational and physical changes have begun, such as changing the mowing practice of the basins. Typically, parks are mowed too often, which wastes energy and destroys the conditions for a healthy biosystem. The Parks District stopped mowing Rabanus Park so that the team could inventory the vegetation. After witnessing this change, the Public Works Department also learned the value of not having to mow as frequently and has altered its practice citywide.

Through the broader acceptance of native and natural plantings, both the Fargo Park District and the City of Fargo is building capacity in new typologies for landscape plantings. New knowledge is developing from controlled experiments sponsored by North Dakota State University. Specialist contractors are invited to share their knowledge instead of performing to standardized specifications. New landscape typology is then shared with surrounding community members by building education and tolerance for a local aesthetic specific to North Dakota. As an example, in 2017 the Fargo Park District is taking lessons learned at the Fargo Project and applying it to an existing storm water facility at another site, revamping it from a retention facility to a detention facility using perennials and grasses specifically appropriate for this region.

An unexpected outcome of TFP is building capacity and developing strategies in different sectors of the community than originally planned. This includes increasing social capital for

community programming, job training programs to meet the need of a lack of contractors knowledgeable about local ecological conditions, and consultant training to learn new project management approaches and increase awareness about watershed management at a resident level. Through project development, gaps in these community assets were identified and integrated into the project development strategies over time (National Endowment for the Arts, 2016).

The original funders' goal of increasing the artists' role in creative problem solving was realized in Fargo. Prior to TFP, local artists were primarily involved in the community as studio artists or for commissioned work. This project built capacity among local artists through inclusion as team members and team leaders. The artists connected with many community groups that they generally would not have encountered. In addition, the regulatory agencies and other community organizations have experienced the increased value of the artists who are involved in creative problem solving.

Discoveries

In terms of process and timeline, TFP had the luxury of being more fluid than a typical park or city infrastructure project. Specifically, the timeline of the project needed to extend much more than originally planned as new knowledge and findings were uncovered and incorporated into the project. Through social engagement and outreach the artist team focused on building a community of interest to create and support the project. As feedback and knowledge was uncovered, the project timeline grew to make sure sustainability and resilience was built within the project management structure. (See Appendix A)

The fluidity of the project management roles was not incorporated or fully defined in the project (Asleson, Cunningham, & Ingram, 2016). Expectations and misunderstandings developed

and sometimes realization of these misunderstandings was not uncovered until conflict occurred. It was quickly learned that a key when communicating about the project was to introduce the experimental nature of the entire project, creating an environment for open communication and acceptance of possible failure.

The need for a public communication specialist was also discovered after year two of the project. Building outreach and community awareness took several months, even years. Neither the project manager nor the lead artist were communication experts, and hiring a content contributor to keep the communication active helped build community interest and capacity.

The role of the expert and the role of the volunteer were sometimes masked in this project. The community is small enough so that the expert and the community volunteer roles overlapped significantly. Sometimes it is hard to determine whether interest in the project comes from career or community motivation or both. This project has relied too heavily on volunteers, and while volunteers don't expect monetary compensation, acknowledging their contributions in a meaningful and appreciative way is important and often overlooked. Relying on volunteers too heavily also causes concern about the sustainability of the project. Therefore, having slowly developed activities that are integrated into existing programs or building on the foundations of existing partners provides a depth for the project team to sustain.

TFP Discussion

The Fargo Project case study demonstrates how CP, CBNRM, and CD come together through integration of the project management framework and implementation. CP is highlighted through the leadership of Jackie Brookner and collaboration of the city planner. Their backgrounds brought together ecological restoration and community development with a local, place-based approach (National Endowment for the Arts, n.d.). By involving the community in

the design, learning from local experts, and building community partnerships, principles of CBNRM were integrated into the project. WeDesign, a community design event held in April 2012, brought these roles together. As the community design moved into construction and transformation of the site, the adaptive co-management approach was integrated into the governance framework. As the City of Fargo institutionalizes TFP by replicating project management components, CD practices are brought forward through local government agencies by integrating more organic engagement and outreach activities with all stakeholders. TFP as a case study provides an example of how a multi-disciplinary approach can include overlapping goals and principles in project management but still create transformational change.

RESEARCH DISCUSSION AND SUMMARY

Each discipline offers a unique approach for integrating social engagement as a component in project management activities. By reviewing these practices with a resiliency and transformative lens, perspectives can be combined to suggest a comprehensive approach for integrating social engagement practices in project management to influence social change. This leads to the identification of three critical components for project and policy development that act as overarching drivers. These components should be compared to other disciplines for future integration into project management standards.

- 1) There is a common goal of influencing cultural change in society, typically regarding an injustice or inequality.
- 2) These activities are typically born out of a democratic process and are primarily influenced by human intervention.
- 3) Social change requires creativity and a collaborative problem solving approach.

CONCLUSION

Through a multi-disciplinary comparison, key project management traits are identified for successful implementation of social change projects. The traits' cross-subject areas are related to natural resource management, public arts, and community development. These traits are also encompassed in an organizational system consisting of shared values and leaders with creative vision and flexible management style (Chazdon & Lott, 2010). Successful project implementation requires interdisciplinary work, as resources are too scarce to work in disciplinary silos (Foundation for Environmental Conservation, 2010). Terminology and organizational structure should be shared across disciplines to improve efficiency.

For social change project success, common themes include adaptive co-management principles and stakeholder involvement (Kellert, Mehta, Ebbin, & Lichtenfeld, 2000). However, to capture values as they shift culturally, incorporating a reiterative process into project management is imperative. Broadening cultural values through community access to participation can lead to slowly shifting community goals (Chazdon & Lott, 2010).

There is need for continued research focused on the integration of interdisciplinary thinking to find key implementation techniques for results-driven projects that can sustain over time. There is a need for many more comparisons and case study observations to create a working project management model that is replicable. As these practices continue to advance, there is much to learn from theories related to system thinking, participatory action research, and adaptive complexity theory (Carpenter, Folke, Scheffer, & Westley, 2009). The goal is to develop a project management process that includes flexible and adaptable components, yet defines key elements to shape successful implementation outcomes to increase efficiency.

It is important to study these disciplinary crossovers because we are in a new geography with revolutionary social change practices. Access to governance and the rapid sharing of ideas and knowledge are changing the world. The case studies in this research are too isolated from each of the other disciplines and are not effectively shared among community members. This is unfortunate because there are common goals and common roots related to improving community and society in general.

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APPENDIX A


To further understand the context of The Fargo Project (TFP) the project timeline is provided in Figure A.1. The program evolved as new information was discovered. The project was afforded flexibility in the timeline to accommodate new lessons learned and findings from the community involvement and partnership involvement.




Figure A.1 The Fargo Project timeline.

APPENDIX B¹

COMMUNITY PARTICIPATION



During the first year of the project, primary efforts were to create relationships with city residents to understand the kind of commons the community wanted. The ecological artist team and other volunteers engaged over 400 people of all ages and backgrounds in the initial visioning outreach.



In spring 2012, over 200 people participated in the WeDesign workshop charrette. The community contributed their ideas for the basin.

HOW TO GET INVOLVED

SPRING 2015

- Design instruments for the Listening Garden
- Design tile projects for the Listening Garden

SPRING-SUMMER 2015

- Community workshops for Natural Play area

SUMMER 2015

- Make slit drums for Listening Garden
- Carve miramba logs for Listening Garden
- Planting trees, shrubs and grasses
- Discussion groups for planning the prairie restoration job skills program
- Grow vegetables with the World Garden, Tuesdays, 2-4 PM

FALL 2015

- Create seats for Listening Garden
- Prairie planting and management
- Installation of instruments and seats for Listening Garden
- Begin building natural play structures

CONTACT US!


Kon Majok
konmangoog@gmail.com


Cali Anicha
cali.anicha@earthlink.net

Jackie Brookner
jackiebrookner@gmail.com



The Fargo Project:
World Garden Commons
 4315 18 Ave S



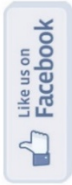



Figure B.1. Front page of a brochure used at community events in 2015.

THE BASIN

Over 20 large stormwater basins protect the city from spring and summer flooding. These barren sites are typically mowed short and provide the community with little amenities.

This pilot project will demonstrate how holistic ecological restoration, socially engaged ecological art, and active community process can transform functioning stormwater infrastructure into vibrant and innovative green spaces for our urban community. The basin has already begun transformation by being allowed to grow naturally.



THE VISION

The Listening Garden



The Listening Garden is an intimate place to listen to the natural sounds of the Commons and "speak" by making music with slit drums and a log marimba. There will be many opportunities for people of all ages to participate in the creation of project elements in 2015.

Planting the Prairie



Like working with plants? Help us plant the prairie at World Garden Commons! Planting will begin in Fall 2015 and continue through 2016 and beyond.



The Overlook & Natural Play



The Overlook provides a gathering place for cultural events of any size. A series of decks provide prairie vista views. The top deck expands a the lawn, creating an outdoor room. The Natural Play area provides opportunities for all to interact with natural structures and materials.

World Garden Community Garden



The community garden welcomes everyone who would like to participate on a regular basis. The regular meeting time is Tuesday 2:00-4:00 pm during the growing season.

Figure B.2. Back page of a brochure used at community events in 2015. The brochure highlights how to get involved and design elements planned at the pilot site for The Fargo Project.






Growing Together
 A local community gardening group of volunteers has a mission to provide a safe place for our New American neighbors. We operate 6 community gardens in the Fargo area that produced over 45,000 lbs of food in 2015. Growing Together offers other events that encourage integration including Community Table.

Through The Fargo Project, local government uses a participatory process to help community members identify needs and the response to these needs. With water as the vehicle for connecting people to the land, this approach intentionally encourages a collective creative response.

The World Garden Commons at Rabanus Park is the first installation of The Fargo Project. Artists, neighbors, engineers, landscape architects, and ecologists collaborate to transform a neighborhood stormwater basin into an ecological community commons.

While the 18-acre basin continues to hold stormwater during summer rains, the neighborhood benefits by gaining acres of prairie, walking trails, gathering spaces, and a community garden. The effort is made possible through partnerships with ecological artist Jackie Brookner (1945-2015), a growing group of community partners, the City of Fargo, the Fargo Park District, and funding from ArtPlace America, The Kresge Foundation, National Endowment for the Arts (NEA) Our Town, and the North Dakota Outdoor Heritage Fund.





More information:
www.TheFargoProject.com
 Facebook/The Fargo Project: World Garden Commons

Figure B.3. Front page of a brochure used at community events in 2016.



Figure B.4. Back page of a brochure used at community events in 2016.

¹ The brochures in this chapter were co-authored by Nicole Crutchfield. Nicole Crutchfield had the primary responsibility as project manager of The Fargo Project. These documents are provided as an example of the type of communication materials used by The Fargo Project team and the City of Fargo to engage community members. Permission to reproduce these brochures has been granted by The Fargo Project.