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A CASE STUDY OF HOW SYSTEMS FOR INNOVATION CAN IMPACT
MUNICIPAL ECONOMIC DEVELOPMENT

by

Nate Wildes

A Thesis Submitted in Partial Fulfillment
of the Requirements for a Degree with Honors
(Political Science)

The Honors College

University of Maine

May 2012

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ABSTRACT

This study examines the impact a system for innovation can have on local economic development. Traditional economic development in a University community focuses on three options: attract large companies to the area, develop tourism or expand R&D (Richert, 2011). While this model has a number of success stories over the last 50 years, the 21st century has made this model obsolete.

From globalization to a rapidly changing technological environment, 21st century factors mean towns are no longer able to develop strategies or objectives in a time frame adequate to meet the demands of a modern economy. Municipalities that have purposefully or accidentally developed a system for utilizing economic assets have been more successful at weathering the short-term economic changes, and this thesis examines how any town may begin to develop a sustainable method and system for economic development.

ACKNOWLEDGMENTS

The number of people that have directly impacted me, and in turn this thesis, are too many to list in this already long document. However, there are three that must be highlighted, for without them this first paragraph would be all that would be worth reading.

I would have nothing at all to write about were it not for the incredibly brave pioneers on the Orono Economic Development Corporation. It's rare to find a group of people so willing to try something new, so open to listening to such a young and inexperienced person, and so engaged in something that they had (initially) very little confidence in. Your commitment and courage to go on this adventure with me made everything that follows this sentence possible.

Evan Richert, Orono is lucky to have you. Your dedication and passion for doing real and meaningful good in this community was evident in everything you did and said, and I dare say it is rather contagious. Your professional experience added enormous value to this thesis, your leadership in the process made my job a heck of a lot easier, and I learned more from you during this process about the meaning of life than I currently wish to admit.

Finally, both myself and this thesis would be boring, without meaning, and quite frankly a waste of everyone's time were it not for the guidance of Jake Ward and Renee Kelly. Their personal dedication not only to this project, but indeed to me, was all the inspiration I needed to keep going. You are incredible mentors, true leaders, and I will forever be proud to call you my friends.

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THE PURPOSE OF A SYSTEM

The purpose of a system is to, as W. Edwards Deming (Deming 1986) once said, “create constancy of purpose toward improvement of product and service, with the aim to become competitive, stay in business and to provide jobs (Deming, 1986).” While Deming was referencing private sector companies in his book *Out of the Crisis*, the statement can be applied to any organization, including a municipality.

As a governance entity, a municipality exists to manage a populace of residents, businesses, non-profits and infrastructure. How they are managed, what the hopes and dreams of the town are, and the methods by which that town will get to those new places are dependent on the (almost exclusively) popularly elected town councils, instead of a systematic, sustainable approach.

There are two concepts used in this thesis which relate directly to the importance of a system. The first, fail fast, fail cheap, is based on the premise that the faster and cheaper you fail, the more opportunities you have to learn, and the greater the chance for success. The second, “PDSA” (plan, do, study, act), is a concept Dr. Deming introduced when he returned from Japan in the mid-60’s (Deming, 1986). The so-called “Deming cycles” are designed to manage projects and development by companies in a proactive, accountable manner.

ECONOMIC DEVELOPMENT IN THE 20TH CENTURY

Economic development literature in itself exists in a number of categories. Broadly, economic and business literature may be applied to a specific geographic region, or more narrowly, specific theories or practices such as “economic gardening” may address the topic directly. In regards to a systematic approach to economic development, there is very little directly related literature.

This lack of literature may be for an entirely practical reason; the diversity in nearly every category found between towns that are not next-door neighbors makes it extremely difficult to compare actions and results on an objective, data-driven level. What this paper seeks is not a solution to Maine’s economic development struggles specifically, but a broad set of guidelines for what sort of actions may be taken to pursue a successful development strategy in any locally-governed region. Thus, the literature to be reviewed includes a broad spectrum of perspectives, ranging from case studies of a specific area to brief editorial articles drawing attention to one method or other.

Much of the literature noted in the works cited section of this thesis is not directly cited in this paper. The reason for this is that the limited diversity of literature available on the subject would have added unnecessary repetition to the document. The points and specific methods detailed in the document are portrayed accurately and adequately with the limited citations provided. A full list of all literature and interviews referenced in the writing of this thesis can be found in the works cited section.

The best place to start is with the weird. There are many examples of towns or municipalities becoming known for one strange thing or another, but rarely is the story of towns actively trying to be known for things like massive swarms of killer bees told in a

positive light. These ‘weird’ case studies give a hint as to what methods and strategies work for towns faced with what they perceive as wholly negative, unusual or unpredictable assets.

“America The Creative” is a relatively brief article highlighting some of the most dramatic instances of towns ‘thinking creatively’ when it comes to economic development. In reality, the article demonstrates how many towns have benefitted from luck; with no system and a total lack of organization, most examples provided demonstrate the need for a reproducible method to drastically change the economic development of a town or region. Many instances of growth or positive change were the result of good people doing good work that they passionately believed in; not every town has or will have the luxury of citizens with a knowledge and passion for making a positive change in their local economic development.

From Salado, Texas to Colquitt, Georgia, each town profiled has a different set of assets and a different set of liabilities. For example, Colquitt is one of the poorest towns in America, with very few economic assets and a relatively stagnant and uneducated population. However, through a sequence of luck and a stroke of brilliance, a local tradition of performing local folk-tales as musicals was dramatically expanded to a now 40,000+ person festival each year. That massive influx of people brought (brings) an immediate influx of money, talent and attention to a town and area that was in desperate need of something new. This once-annual injection of economic and social activity reverberates throughout the community all year long, creating a dependable and cyclical flow of activity.

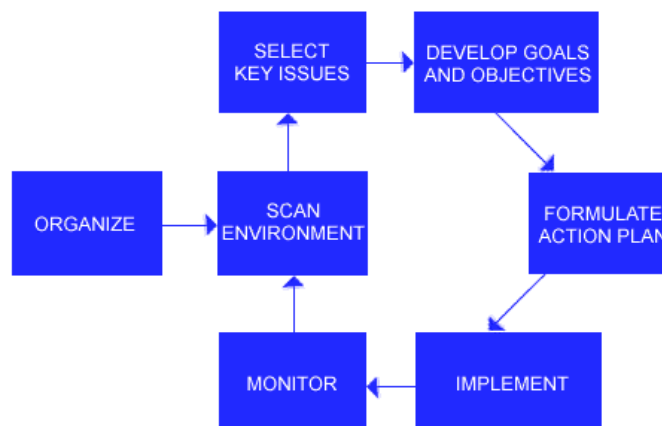
Hidalgo, Texas is also cited as an example of a “creative American town” which capitalized on its site in the migration path of African killer bees. They erected a huge statue of the bee, and dubbed themselves the “Killer Bee Capital of the World.” As a result, tourists and scientists from around the world flocked to Hidalgo to experience, study, witness or just claim that they were a part of the African killer bee migration. While the utilization of unusual assets is irrefutably “creative” and “unpredictable”, so was the method in which Hidalgo, and the other towns cited in the article, went about spurring the economic development.

When considering the economic and social health of a town or community, the municipality typically has two options. One, hire the right people that have the passion and energy to fight through whatever bureaucratic and political red tape that exists to get something done, or two, develop a system which all community members and professionals in charge of economic development understand and are required to use in order to move the community forward. This is the major challenge with communities today; option one, the dependence on the right people, leads to unsustainable, unpredictable and inadequate economic development. Furthermore, this ‘strategy’ is at best useful for spurring growth within the confines of that town, which is a typically politically malleable entity. When considering the economic future of a larger community, such as a state or an entire country, the only viable option is to develop a strategy and system, which others can then use and apply to their own community.

The term used for a strategy of implementation in any organization is 'strategic planning'. The North Carolina Cooperative Extension has a resource page on their website dedicated to strategic planning for rural communities. While

focused on assets available and relevant to North Carolina, the outline for the strategic planning process provided could be applied to any rural municipality in the United States. A visual guide to the process they propose is demonstrated in Figure 1.

FIGURE 1. THE STRATEGIC PLANNING PROCESS



According to the document, the purpose of strategic planning is to “help communities make difficult decisions by providing an orderly, yet flexible, way to chart the future” (Mitch & Garber, 2012). The practice of strategic planning is common amongst organizations with a particularly complex organizational hierarchy, or amongst those with leadership unable or incapable of setting a vision and beginning to take action. The system North Carolina lays out is a common method for organizations, particularly politically complex ones such as towns, to implement.

Where the system they propose falls short is in the support for quick action in a fail fast, fail cheap manner that encourages and allows for full learning cycles. When a town begins to strategize and plan their future, whether it is around a specific set of assets or in general, the typical procedure is to build a ‘framework’ of understanding and potential actions, so that when a company, resident or individual has the need to make

something happen, it's been talked to death and studied over and over again already. While this traditional model of economic development planning plays a role in determining what the town wants and how it might get there, it has proven to be ineffective at both developing an accurate plan and laying the right groundwork for effective execution of that plan. Thus, the failing of strategic planning, particularly in a municipal setting, lies in a lack of a system that defines and enables clear leadership, and a process for those leaders to follow. This paper will focus on a case study of Orono, Maine, as they are coached through fail fast, fail cheap efforts to create a new system for municipality-driven economic development.

In an organization with more rigid, legal lines of authority, the source of leadership is clear. These organizations may face a problem with adequate leadership in those positions, but municipalities tend to lack leadership in a position which has the authority to act. As with the Town of Orono, diagrammed in Figure 2, there is often a popularly elected Town Council and School Board (“Town Departments”), with a Town Manager and other related staff employed by the town. Additionally, there may be other

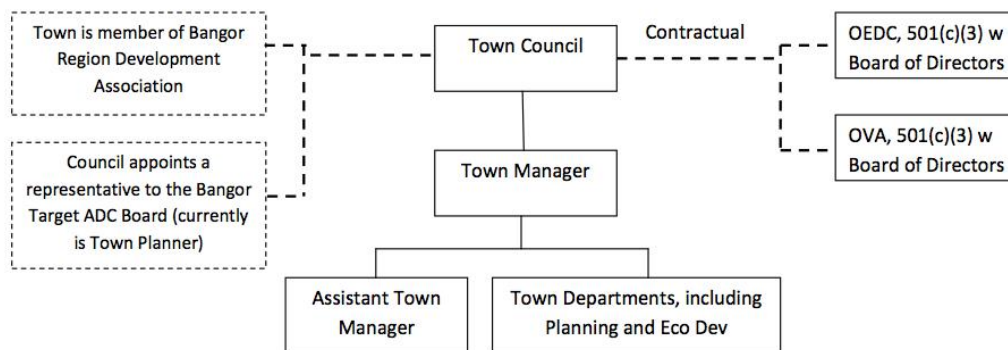


Figure 2: Town of Orono, Maine Structure
Source: Town Manager

entities, such as the Orono Economic Development Corporation, which exist and are given financial and/or legal resources to act in a given space. Membership to regional organizations adds an additional level of complexity, with these memberships serving as an unregulated, unorganized source of information and networking.

In such a complex and politically sensitive environment, having an independent and objective system for leadership and accountability is incredibly important to ensure results. While results in a municipal environment depend on what the town is attempting to create, most economic development initiatives can be boiled down to growth. From population diversity to a larger business tax base, towns must constantly be thinking ahead to what changing trends and technology could impact the makeup of their community. Having leadership and effective organizations that are able, willing and empowered to guide the community through these changes is imperative to ensuring a positive future.

The town of Kennebunk, Maine published a document titled “Municipal Economic Development Options”, outlining what they consider to be the three economic development structural options for a town or municipality. These three options are an economic development committee, municipal economic development staff, or economic development organizations. Each structure ranges in legal capability and fiscal commitment, typically in the order listed from cheapest to the most expensive, and with the least legal capability to most flexible.

The document considers the pros and cons for each of these structures, and provides examples of towns in Maine that have utilized each. While the document omits actual case studies or examples of the benefits and challenges of each structure,

hypothetical challenges regarding political capability are briefly mentioned. While the purpose of the document is clearly present the structural and legal options which municipalities have for economic development, the document is of very little help to towns looking for an effective way to utilize these structures.

In the article, “Small Town Economic Development: Principles of Organization”, author Robert Shively addresses three primary questions that each town faces when developing organizations related to economic development:

1. What type of organization can reconcile the need for broad representation of the various community groups involved in economic development?
2. What type of organization can adequately represent both public and private economic development interests without being subservient to either?
3. What type of organization can marshal the necessary resources of the community to address the broad range of issues it faces in creating new jobs? (Shively, 1997)

When these questions are not addressed, and are in fact ignored when a town begins or revisits the organizational structure of its economic development initiatives, the town is often left with an organization that is both ineffective and wasteful. As Shively notes, a town that goes through the process of forming economic development organizations is much less likely to change or attempt something new after the process is complete. Thus, the important of getting it right the ‘first time’ is of greater concern in a municipal model than that of a private model. Municipalities do not have the luxury of failure; they will exist no matter what, and cannot start ‘fresh’ with the same flexibility the private sector offers. Small failures and/or lack of success can embitter citizens, cost elected officials political support or re-election, create financial havoc, and create a

conservative anti-economic development “do nothing” culture. However, this paper will examine methods which towns may utilize to operate with much greater flexibility and opportunity for failure and learning; factors which can mean the difference between a thriving town and not.

This paper will examine the best practices a town should consider to implement a system for economic development that empowers competent and capable leaders to execute effective economic development initiatives. To put it another way, what combination of organizations and strategic planning yields the most effective, innovative system for municipal economic development? A primary aspect of creating an innovative environment is the makeup of organizations within that municipality; while there are a plethora of successful case studies using a variety of structures, the conclusion is clear: each town will require a unique structure and system. Thus, in order to adequately suggest or examine possible solutions to municipal economic development, one must examine the precursors to forming that structure and system; in other words, what is the system for creating a system?

TRADITIONAL ORONO ECONOMIC DEVELOPMENT

While the financial assets and legal capabilities of towns have been adjusted and expanded over the history of the United States, the ability for governance organizations to act quickly and flexibly has not kept up with the rate in which the world has shrunk. The governance capability of a small town in America is designed to work well with a populace which relies primarily on itself for innovation and growth. From making the

expansion of existing industry in its current location easier through tax abatements and regulation-slashing, to the late-20th century model of utilizing TIFs (Tax Increment Financing), most of the traditional methods for municipal economic development were designed and utilized under the premise that larger enterprises were the quickest and best way for a town to grow (Richert, 2011).

In order to attract these enterprises, towns utilized a so-called 'industrial park model' of making land, facilities and taxes for companies with employee numbers starting around 20+ as manageable as possible. This predominantly consisted of planning, developing and marketing industrial or technology parks of land zones and constructed to function as a destination for office buildings.

Orono, Maine has followed and practiced this traditional model for most of its existence. Pre-1990's, Orono zoned and 'lubricated the wheels of development' for apartment complexes, neighborhoods and other residential-based development designed to service the family community growing around the University of Maine (Richert, 2011).

Beginning in the 1990's, Orono was at the forefront of a wave of new energy coming from the State government and Federal government focused on downtown revitalization. From the National Trust for Public Places to the Maine Street Program, Orono was given access to resources and legal mechanisms designed to boost rural towns in Maine. Thanks to a large grant from these programs in 1995, Orono totally revamped pedestrian traffic patterns, parking availability, performed multiple market research studies and reworked the downtown infrastructure to become more aesthetically appealing.

At the same time, there was a flurry of activity with structures and organizations for economic development, and the two primary vehicles that still exist today, the Orono Village Association and the Orono Economic Development Corporation, were born. These organizations came into being to service the two traditional aspects of municipal economic development: growing the existing companies in a way which encourages job creation, and attracting large enterprises.

Orono Village Association (OVA) was born out of the results from a study funded by the aforementioned Maine Street Program, which suggested that Downtown Orono be given a more unified, cohesive voice. OVA was defined by geography; a Downtown Development District was established, encompassing all of the existing companies and allowing for select plots of land which may be developed in the future. Thus, OVA by definition represented retail stores, restaurants and pubs, many of which have existed for decades before OVA's creation. While many of the establishments did not, and do not, have massive job creation or huge revenue growth on the mind, there are a select few that have entered into the OVA envelope, which are seeking expansion and the opportunity for innovative growth.

The individuals who best represent this desire for growth are Abe and Heather Furth, the owners and operators of multiple businesses in Orono. Encompassed within OVA and located in the heart of downtown Orono, Abe and Heather have been seeking the opportunity to expand Verve to at least a second location, and to open additional ventures within the Orono community. Their ability to expand and the opportunities open to them have not been because of the representation OVA has given them, and have in

fact come as the result of other towns, most notably Bangor, actively recruiting them to their community (Abe Furth, 2012).

This is not to say that OVA is a failure, as the purpose of the organization when founded was left vague and without clear direction. To that extent, OVA has been whatever the members have put in the energy to make it do; there is no budget, no accountability for membership, and no mission other than to benefit its members. This poses challenges to members looking for a vehicle to assist them in growth and development, but poses even greater opportunities to turn an existing framework into something meaningful.

The Orono Economic Development Corporation was founded under the opposite premise from OVA; there was a precise and specific need for an organization to exist, and it was founded to serve that purpose.

During the dot-com boom of the late 1990's, there was a company called Envisionet Computer Services, founded and operated by Orono native Heather Blease, and established in Brunswick, Maine. Experiencing accelerated growth, Envisionet approached the Town of Orono looking to establish an additional location in Orono for a several hundred employee expansion. They wanted Orono to support the acquisition of a building and land to call home. With the promise of hundreds of new jobs, Orono agreed, and in process created the Orono Economic Development Corporation to manage the land and building funded by a \$10 million bond.

What has become clear since the financial crisis of 2008, though was arguably true since the late-1990's, is that the enterprise-driven model of development is no longer

a reliable, relevant or capable model for sustained and meaningful municipal economic development.

CLARITY AT THE START

Innovation Engineering was developed by Eureka! Ranch International and the University of Maine, and is based on more than a century of data, research and fail fast, fail cheap cycles of learning. As a systematic approach to innovation, it is designed to work in any corporate, non-profit or academic environment to manage the creation, communication and commercialization of meaningfully unique ideas.

One of the key elements to Innovation Engineering is clarity; clarity at the start yields a higher quantity and higher quality of ideas (Hall, 2001), and creates a systematic way to hold people accountable.

Prior to beginning work on economic development initiatives, a town should have a clear understanding of what it is they want to accomplish as a result of the initiative or project, and what that result will do to impact the town's larger mission or identity. Unfortunately, many towns do not have a clear understanding of what they want to become, nor what they want to accomplish with economic development other than "increased business activity." The sad state of affairs in the municipal economic development realm is in large part the result of the clashing between the globalization of the 21st century, and a representative and local governance model designed in the 16th

century (Richert, 2011).¹

For Orono, the lack of clarity revolved around their mission. Over the last 30 years, there have been a number of medium to large initiatives, some of which included substantial financial investment, which had independent missions and objectives. While they all served as a boost to economic activity in Orono in some capacity, their success and timeframe for impact varied widely. There was no existing strategic plan, mission or vocalized set of objectives which could have been pointed to as the guiding force.

This lack of clarity helped to define the starting point for demonstrating the value of a system to a municipality, and has proven to be a predictable catalyst for change.

ORONO: CASE STUDY

The presentation of this case study will be done within the framework of Innovation Engineering. The development of Innovation Engineering is done through using Innovation Engineering; that is, the tools and systems demonstrated within this thesis are, and have been, adjusted and modified throughout the process. The current format, language and structure used and documented within this thesis are as they were in April, 2012. Modifications made to make the tools and systems work better in a municipal setting have been noted and documented.

¹ This “old model” was designed to ensure democratic governance on the local level, and to ensure that all citizens of a town had an equal chance to contribute and voice their opinions. As a result, the emphasis was placed on *including* as many people as possible, and not on the effectiveness of the governance itself. This has led to an over-emphasis on process, and a lost focus on the mission the town wishes to accomplish. A town that does not proactively address future trends and changes will see a loss in sustainability, just as in any other organization.

The follow charts and tables are organized into four columns: “Innovation Engineering System”, “Orono”, “Evan Richert²” and “Next Steps”. Each column details the relevant information, steps or action taken by the group categorized by column.

The Innovation Engineering system is not a linear process or set of tools. Often described as a ‘tool kit’, the tools and systems within are designed to be used based on the needs of the organization and people. The method and structure for using the Innovation Engineering system is not linear, and is designed to be used in an organic nature.

The case study is organized into Deming Cycles (Deming, 1986), which consist of four stages (Moen, 2011).

Plan	What is the objective? Questions and predictions, plan to carry out cycle (who, what, where, when).
Do	Carry out the plan, document problems and unexpected observations, begin analysis of data
Study	Complete analysis of data, compare data to predictions, summarize in writing what was learned.

² Evan Richert is a land use planning consultant to state and local governments, including the Town of Orono, where he serves as the Town’s planner. Major projects have included transportation and land use studies for Maine Dept. of Transportation and Maine Turnpike Authority and assistance to the Land Use Regulation Commission in its review of Plum Creek’s Concept Plan for the Moosehead Lake Region. Evan is a former faculty member of the Muskie School of Public Service at the University of Southern Maine, where he taught for 13 years and coordinated development of an ocean observing program in the Gulf of Maine. He previously served as Director of the Maine State Planning Office under Governor Angus S. King. He serves on the board of Maine Coast Heritage Trust and was the founding president of the Gulf of Maine Ocean Observing System. He is cited in this paper as an expert on town planning and economic development. See Appendix 1 for full curriculum vitae.

Act	What changes are to be made? Begin forming next cycle, as needed.
-----	-------------------------------------------------------------------

Innovation Engineering System	Orono	Evan Richert	Next Steps
<p>Plan</p> <p>Death Threat: Towns will not understand the value or see the need for a system.</p>	<p>To discover how Innovation Engineering can be used and implemented by a municipality.</p> <p>Orono, Maine was selected as a case study for its convenient location, existing relationships with the University of Maine, and existing economic development organizations.</p> <p>The Orono Economic Development Corporation is the most focused organization in the Orono municipality, and consists of individuals who serve on other governance boards (Town Council, School Board, etc), as well as representatives from the community and private sector.</p>		
<p>Do</p>	<p>An overview of Innovation Engineering was presented to OEDC, providing them with an overview of what a system can do to impact the culture and business of a company, and proposing that Orono become the first test of how to use and implement a system for innovation in economic development on the municipal level.</p>		

Innovation Engineering System	Orono	Evan Richert	Next Steps
Study	OEDC responded positively to the initial presentation, requesting more details on specific elements of the system, and agreeing to actively participate in being introduced to the system.		

Innovation Engineering System	Orono	Evan Richert	Next Steps
Act	<p>A small group of 4 members of OEDC, and 2 employees of the town (Town Planner and Town Manager) met with Nate Wildes to learn the Innovation Engineering system, and to begin planning the next cycle of learning.</p> <p>OEDC and town employees responded positively to the system, and we immediately moved into the next cycle: determining a starting point.</p>	<p>There is a difference between having an institutional arrangement in place that can do economic development and having a system in place that can actually get it in done. 15 years ago Orono did a pretty thoughtful job of setting up the institutional arrangement, with OVA and OEDC. But that does not automatically translate into a system of how to go about the task. I/E has the potential to bring to the table a systematized way moving from planning to doing and learning in order to improve the planning and doing.</p>	

Innovation Engineering System	Orono	Evan Richert	Next Steps
<p>Plan II</p> <p>Death Threat: Orono has no mission for which projects, actions and results can be evaluated upon.</p>	<p>Orono lacked what many organizations take for granted: a mission. Unlike for or non-profit organizations, a town exists whether they want to be something specific or not.</p> <p>As a result of the geographic and economic layout of the immediate region, Orono has an imposed image of a college town. OEDC recognized the need for a mission that defined what being a college town meant.</p>	<p>If Orono wants to be a college town, we have to enable and encourage those [elements which define a college town]. Doesn't mean it's the answer, but how do we experiment?</p>	

Innovation Engineering System	Orono	Evan Richert	Next Steps
Do II	<p>Orono leadership and OEDC was coached through a create session designed to capture current ideas relating to their image and mission (known as a brain dump). While this session was effective at capturing ideas, the team needed greater confidence and more industrial tools to make full use of the Innovation Engineering system.</p> <p>As a result, the Town Planner (Evan Richert), two members of OEDC, and the OEDC chair attended the Innovation Engineering Leadership Institute (IELI), a three-day executive training course designed to give the leadership of an organization the tools, skills and confidence to lead the creation, communication and commercialization of meaningfully unique ideas.</p> <p>While the imposed identity of a college town helps to define the perception of Orono, it is too ambiguous to guide actions by governance models.</p> <p>At the Leadership Institute, utilizing Innovation Engineering tools (Appendix E), the mission of Orono was clarified as “the home for startups.” This mission serves both the identity of Orono as a college town, the mission of the University of Maine, and the economic well-being of the area.</p>	<p>“If Orono wants to be a great college town, we have to enable and encourage those units. It doesn’t mean that [being one of the best college towns in America by 2016] is the answer, but how do we experiment?”</p>	

Innovation Engineering System	Orono	Evan Richert	Next Steps
Study II	<p>With a mission statement that was focused and demanded action, OEDC felt confident that they were well-positioned to begin taking action on creating a better community for start-up businesses. To confirm and build confidence that this was a direction worth taking, research was done on the spin-off companies from the University of Maine, and that data was compared to other Universities of similar size. Concurrently, the lack of information on their ‘competitors’ (comparable towns in Maine, as well as other states) posed as a great way to get started.</p> <p>After just 10 days, OEDC volunteers and Orono town employees used Innovation Engineering methods to compile a spreadsheet comparing Orono to 17 other towns in 21 different categories. (Appendix B)</p> <p>The result was a clear indication that more can, and needed, to be done to develop economic opportunities for technology developed at the University, and Orono had a huge opportunity to capitalize on this open market of start-ups.</p>		

Innovation Engineering System	Orono	Evan Richert	Next Steps
Act II	<p>Using create tools and yellow concept cards (Appendix C) to manage the process, over 120 concepts were created and documented.</p> <p>Through a selection process, the group selected their favorite concepts (judged on scope of impact and passion), which were then read aloud and reworked onto a new concept card. The top concept selected was the expansion of fiber optic internet connectivity, which Orono was set to benefit from thanks to the so-called 3-ring binder project (Appendix D).</p> <p>The compilation brought one asset to the forefront of the discussion: fiber optic internet access. With the completion of the 'three ring binder' project by the Maine Fiber Company (Appendix D), Orono was positioned as the central hub for Maine's fiber network. With the main artery of the network bought, installed and open for access, bringing the highest speed internet available in the world to residents and businesses in Orono was a simple matter of lining up a private company partner.</p>	<p>"It's not obvious..that municipalities are intended to innovate. Is it their job to innovate? is it their job to take risks?"</p> <p>"Towns have a very hard time recovering from failure. Failure is not an option."</p> <p>"The politics of using tax payer money to take a risk on something 'adventurous' is very difficult."</p>	<p>Communicate Orono's mission. People know Orono is a town, but they are not told what Orono IS. Speak in actions, and communicate those actions.</p>

Innovation Engineering System	Orono	Evan Richert	Next Steps
<p>Plan III</p> <p>Death Threat: The financial resources and will to invest in a cutting-edge technology does not exist.</p> <p>Death Threat: Specific projects do not benefit from a system and process implemented by a municipality.</p>	<p>With a project selected and a passionate team in place, OEDC was coached through the process of fail fast, fail cheap cycles of learning. The premise of failing is important to ensure that team members and coaches have the courage to face a problem without fear of failure; not every project will be a success the first time, but every project should be a learning experience that makes the next one better.</p> <p>These cycles of learning revolved around the possible uses of, challenges to, and opportunities the highest internet speeds available in the world presents. To develop and test the concept of making fiber optic internet speeds available in Orono to businesses and residents, OEDC compiled a list of constituents that would need to be brought together. These included Orono, Old Town, the University of Maine, the University of Maine System, and a private company.</p> <p>The constituents would have to be brought together to begin forming an action plan for implementing access, and for marketing the communities to take full advantage of being the ‘first to market’ in the region.</p>		

Innovation Engineering System	Orono	Evan Richert	Next Steps
Do III	<p>Members of the Towns of Orono and Old Town, employees of UMaine and the University of Maine System were brought together with representatives from GWI, a telecommunications company based in Maine.</p> <p>The group was coached through a create session focused on possible uses of high speed internet, with concepts and possible applications tied to potential customers and markets that would need to be developed.</p> <p>The resulting conclusions enabled buy-in from all constituencies, and agreement was reached to move forward at an expedited rate to line up potential customers, assets and marketing messages that would be needed to pursue the concept.</p>	<p>MTI (Maine Technology Institute) is an example of investing in intellectual property, technology, to make something happen...regardless of where it is. The coaching/mentoring piece is something that we don't know much about. We need to learn more, and to figure out how they fit together.</p>	<p>Implement the Project Acceleration System via Innovation Engineering Labs, that will manage processes and hold team members accountable for work and collaboration expected. Projects can be collaborated on Labs with people just within your own company/organization, or with people from a broad range of organizations. A single mission can have multiple projects, each with different team members.</p>

Innovation Engineering System	Orono	Evan Richert	Next Steps
Study III	<p>There was enormous positive feedback from residents and businesses in Orono and Old Town, demonstrating a clear social, business and economic benefit.</p> <p>GWI found that the infrastructure for bringing fiber optic internet speeds to a resident or business was cost-prohibitive on a small-scale, but had a large potential to drop in price with time. As a result, concentrated groups of customers, such as a multiple-employee business, an apartment building, or an area such as downtown Orono, posed the best financial probability of success. A map was constructed showing exactly what streets and buildings were immediately financially viable for a first phase.</p> <p>UMaine was already a member of Gig.U (Appendix F), which gave both towns, GWI and UMaine access to a national network of resources and support to help accelerate the project. Gig.U offered the opportunity for a unique marketing message that would garner not only local attention, but regional and national press.</p>		

Innovation Engineering System	Orono	Evan Richert	Next Steps
Act III	<p>The map GWI constructed, UMaine's Gig.U message, business owners and landlords set to benefit from the high speed internet access were brought together to form a group of people set to take action and market the results together; while each entity has a different message to sell to their unique markets, the impact message is one which only has meaning when spoken together.</p> <p>A press conference was scheduled for a future date, to include the leadership from GWI, UMaine, Gig.U, Orono and Old Town. The product provided will range in speed and price, and will remain competitive with current offerings on the market.</p>	<p>"It is going to be important to get the whole (OEDC) Board understanding and investing in the system, so that they can be involved, accountable, and stimulated by it. That is how the system can be sustained and actually be a system."</p>	<p>Online collaboration tools such as the Innovation Engineering Project Acceleration System can assist in organizing and documenting a team's project, such as the coordination of multiple marketing messages, materials etc.</p>

The following chart outlines the concept of bringing fiber optic internet technology to residents and businesses in Orono, Maine.

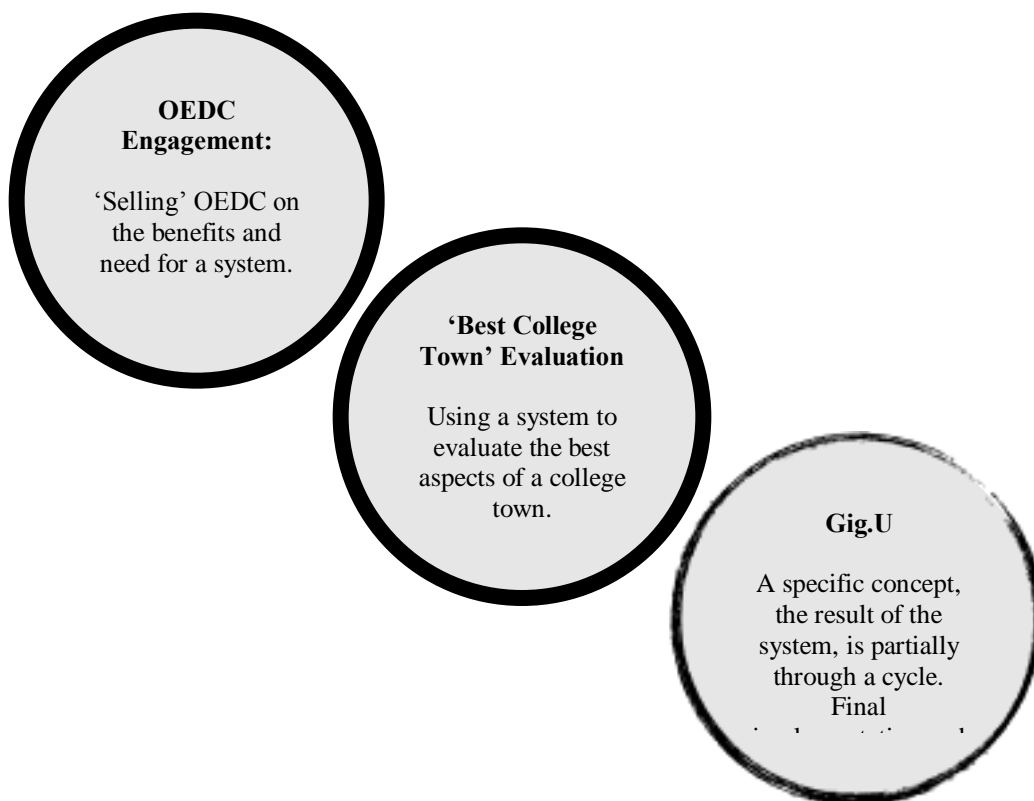
Innovation Engineering System	Orono
Customer Concept	Fiber Optic Internet
Problem	Residents and businesses are restricted to cable internet access, which is limited in total speed, drastically slower at uploading versus downloading, and must be shared between neighbors and nearby buildings.
Promise	Fiber optic internet offers speeds 100 times faster than current offerings in both uploading and downloading, and is exclusive to a single customer, business or building.
Proof	Fiber optic internet technology operates using relatively inexpensive glass strands and light signals. With the hypothetical speed limited only to the speed of light and the hardware competitive with current copper lines, the cost for faster, more stable internet access is within easy reach.

The next chart outlines the concept of Gig.U as a whole, with specific application to the University of Maine.

Innovation Engineering System	Orono
Customer Concept	Gig.U
Problem	Universities are restricted in their ability to serve and consume data by the internet connectivity speeds in their surrounding communities.
Promise	Gig.U will bring the political, knowledge, and business capability of 37 colleges and universities around the United States to accelerate the deployment of next-generation networking infrastructure.
Proof	Gig.U provides a framework and system for consortium members to operate within, rely upon, and leverage to achieve the mission of accelerating deployment. The system and framework has worked in communities before, and is continuously improved with the input and collaboration of members.

CYCLES

As outlined in the tables above, two full and one partial learning cycles (plan, do, study, act) were completed. The learning cycles visually diagrammed below were not only learning cycles in the process of implementing fiber optic network infrastructure, but concurrently learning cycles in how a municipality can best implement a system for economic development.



From convincing OEDC that a system was needed, to evaluating current assets and creating new opportunities, to developing one of those concepts into reality, the learning cycles were very much in line with what any town would have to go through in order to implement a comparable system.

In order to complete the current cycle of developing the Gig.U/fiber optic internet infrastructure into reality, an individual must continue acting as the coach. The group of towns, University of Maine and GWI has been effective so far thanks to the guidance of a third party process coach. Currently, the best person suited for the job is within the University of Maine (Jake Ward, Research, Economic Development, Government Relations), and must act as the ‘human hub’; coordinating messages, desires and actions by each group, in order for the mission as a whole to be a success for everyone involved.

When the Gig.U/fiber internet cycle is completed with the installation and connection of at least a few customers, the next cycle must start. With the ‘act’ part of the current cycle being the implementation of connections to residents and businesses, the ‘plan’ part of the next cycle will likely be related to scalability. A coach familiar with Innovation Engineering, which will likely come from UMaine, must work closely with GWI to study the implementation, and take action based on those learnings.

RESULTS

The results of implementing a system for economic development for Orono are positive. Through feedback from town participants, feedback from partnering organizations, and persons within the University of Maine, the Innovation Engineering system provided an effective framework for the group to work with. There were a few specific advantages that the system brought forth.

Firstly, it gave the management of the town and leaders within OEDC a mechanism to organize the team members in a way which ensured efficiency while

leveraging diversity. The system for implementing new ideas went from the traditional committee meetings, which operated on an open, basic agenda format, to a framework which was structured to demand results. By stating at the forefront that a deliverable was expected by the end of each meeting, it held team members accountable to the process.

Additionally, OEDC leadership was provided with tools to create, communicate and commercialize ideas that they did not previously have access to. While the tools are applicable to a wide range of needs, the coaching of leadership provided them with a clear vision and direction for utilizing the tools within their existing team, and a system for evaluating ideas.

Lastly, the system allowed for greater accountability. When a concept was refined and entered into a learning cycle (plan, do, study, act), there were specific expectations made and documented of each team member. Through the cycle, the progress of the concept was dependent on each team member, and was directly affected when a single individual did or did not participate. While this was a challenge as much as an opportunity, the system allowed leadership to make decisions without the hindrance of “meeting politics”.

NEXT STEPS

The learnings from this thesis indicate that Innovation Engineering has enormous potential when applied to municipal economic development. The system was clearly effective at accelerating the actions of OEDC, as well as generating a large quantity of new ideas. Government, sometimes by definition, is cautious and super-inclusive to the

point of inaction. Innovation Engineering brought the ability for a local government to quickly and cheaply run through complete learning cycles, with each team member responsible for something, leading to decisions and action (Richert, 2012).

There is very little literature available to guide communities through effectively implementing a system for innovation. While papers suggest such methods as strategic planning as the most effective solution for towns to effectively approach economic development, there is no known or readily available literature on the systemization of tools and procedures towns can utilize to implement their strategic plan. Strategic planning addresses the towns mission and objectives while case studies of successful towns suggest possible solutions, but no literature documents a system which successfully utilizes and bridges the divide between the two.

The major death threat that this successful system for municipal economic development faces is reproducibility. Innovation Engineering was successful in Orono because the coach (the author of this thesis) had the confidence and knowledge to lead a totally new kind of group in implementing a system that was not built for them. To reproduce the system in other towns, there are two initial factors/steps that must be in place:

- A coach educated, practiced and confident in the Innovation Engineering system must be in place.
- The tools and systems currently used in Innovation Engineering must be translated to be better understood and more quickly accepted by both professional and volunteer economic development team members.

In order to educate a coach and translate the tools and systems, a concerted and

focused effort by the University of Maine must be made to train additional people that work in a municipal government, and the tools and systems must be customized with their assistance. The Innovation Engineering Project Acceleration System, currently located at www.InnovationEngineeringLabs.com, should be utilized as a project management tool, which consolidates information flow, prioritizes actions that the team leader decides, and organizes and documents the steps and actions needed on each cycle of learning.

The Innovation Engineering system currently works when there is an effective coach to make it work on the fly, but in order for it to be accepted from the bottom up, adopted into the institution of a municipality, it must be directly applicable and easy to comprehend. Innovation Engineering currently tries to be all things to all people, which is the cheapest and fastest way for people in all industries from all kinds of companies to use it, but the politics and constantly fluctuating makeup of a municipal government make it necessary for a system to be applied directly to them.

In conclusion, Innovation Engineering as applied to municipalities requires additional cycles of learning and development to become a successful, reproducible product. The results show success, but a level of success which demands additional cycles in different towns. These cycles are required to generate the diversity needed to drive out anomalous factors present in Orono, and such cycles can begin in any town where a confident coach educated and practiced in Innovation Engineering exists.

APPENDICES

APPENDIX A

Evan Richert is cited in this paper for his professional expertise as a town planner. His insight into the process, tools, and extraneous factors are documented verbatim or paraphrased for simplicity. His life-long experience in town planning, municipal governance and economic development is greater in scope and depth than anyone else in the State of Maine.

Curriculum Vitae
EVAN D. RICHERT, AICP

Address: 38 Willow Way, Brewer, ME 04412, evan@richertplanning.com

Positions Held

Principal, Richert Planning, Brewer, Maine, 2003 to present. This sole proprietorship specializes in land use, municipal, transportation, and regional/landscape-level planning. Current or recent clients include the Town of Orono (planning and economic development services); Maine Land Use Regulation Commission (review of a 400,000-acre concept plan and rezoning in the Moosehead Lake Region); Maine Department of Transportation and Maine Turnpike Authority (corridor-wide transportation-land use plans).

Associate Research Professor: Muskie School of Public Service, University of Southern Maine, Portland, Maine, 2002 to 2010. Taught graduate level land use planning courses; served as principal investigator for two multi-year research and service projects: the Gulf of Maine Census of Marine Life and the Northeast Regional Association of Coastal Ocean Observing Systems.

Director: Maine State Planning Office, Augusta, Maine, 1995 to 2002. The Director is an ex officio member of the Governor's Cabinet. Related appointments included:

Chair, Land and Water Resources Council (1995 to 2002)

Chair, Land for Maine's Future Board (1995 to 2002)

Chair, Gulf of Maine Council on the Marine Environment (1996 and 2001)

President: Market Decisions, Inc., South Portland, Maine, a market research and planning consulting company, 1981 to 1995

Planning Director: City of South Portland, Maine, 1977 to 1981

Education

Syracuse University, Master of Regional Planning, 1974

Syracuse University, Bachelor of Arts, Journalism and Political Science (dual degree), 1969

Academic Appointments and Certifications

American Institute of Certified Planners

Adjunct Professor in the Graduate Program for Community Planning and Development, Muskie School of Public Service, University of Southern Maine, 1997 to 2002

Visiting Lecturer in Environmental Affairs, Bowdoin College, Brunswick, Maine, 1990 to 1994

Civic and Professional Activities

Member, Board of Directors, Bangor Target Area Development Corporation

Member, Board of Directors, Maine Association of Planners

Member, Board of Directors, Maine Coast Heritage Trust, 2002 to 2011

Founding President, Gulf of Maine Ocean Observing System, 1999 to 2009

Member of Growing Smart Directorate, American Planning Association, 1995 to 2001

Publications – Planning, Transportation, and Public Policy

Richert, E. 1988. *The People of Maine: A Study of Values*. Commission on Maine's Future, Augusta, Maine.

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Richert, E., Godfrey, P., Hooper, K., and Morris, C. 2008. *Sensible Transportation: A Local and Inter-Community Transportation Handbook for Maine*, Maine Department of Transportation (Augusta, ME).

Richert, E., and Pinette, A., 2010. "Planning Practice: A Really Big Rezoning," *Planning*, American Planning Association.

APPENDIX B

	HS Size		HS Grad Rate		2010 University undergraduate student body size (National Center for Ed Statistics)		2010 University total student body size (National Center for Ed Statistics)		2010 Town population		2010 Median Age		2010 % Owner-Occ'd Housing		% Students off campus		Economic/Financial ED Incentives		
Drono	347	94%	9183	11,501	10,162	21.9	43.9%	68%											
Old Town	592	89%	9183	11,501	7,840	33.0	55.5%	N/A											
Farmington	870	94%	2646	2430	7,760	32.1	56.8%	66% 2 TIF Districts, 1 Pine Zone											
Bangor	1304	91%	2526	3110	33,039	36.7	46.2%	65%											
Brunswick	871	84%	1762	1762	20,278	41.4	67.7%	30%											
Durham, NH	707	95%	12458	15095	14,638	21.0	57.9%	52% None other than TIF											
Burlington, VT	1187	94.62%	11593	13854	42,417	26.5	40.7%	55%											
Ambert, MA	1219	97.00%	21373	27569	37,819	21.6	48.4%	48% Economic Opportunity Areas w deferred taxes for 10 years											
Storrs, CT	2157	94.0%	17345	25498	15,114	20.6	37.7%	54%											
Ithaca, NY	1430	84%	13939	20939	30,014	22.4	26.4%	60%											
Troy, NY	1300	80%	5431	6704	50,129	30.2	38.1%	46%											
Palo Alto, CA	6940	80%	19535	19535	13,809	22.6	20.2%	69%											
Brookings, SD	775	96	11203	12,816	22,056	23.5	47.1%	70% do not find them necessary											
Menomonee, WI	1000	8301	9,339	16,264	23.4	40.3%	69%	The city does not offer financial incentives for economic development but there are possible incentives through the state state grants and low interest loans depending on job creation because SD is the lowest cost state to do business in US, they have access to a network of investors, low interest loans, venture capital investors. There is no corporate or personal income tax or personal property tax. They have many spin off businesses from university research. They recently partnered on 2.4 M commercialization center. They can use TIFs but they do not find them necessary											
Orangetown, NY	600	5822	5,989	13,901	22.0	43.3%	36%	The city does not offer financial incentives for economic development but there are possible incentives through the state state grants and low interest loans depending on job creation Main street grants of \$25,000 for more street businesses. County acts as facilitator and has strategic plan to focus on certain businesses, just starting to look at the arts as an economic driver. They offer low interest loans at a constant 4% which are attractive in the economy. County offers some economic development support											
Rolla, MO	1000	5508	7,205	19,539	26.2	41.9%	70%	There are no local financial incentives for economic development. They do have enterprise zones and a business incubator for new businesses. They have many connections with the local university and lots of spin offs in science/engineering/technology											
*Danvers, CT			26,943	21.5	64.0%	N/A													
**Palo Alto, CA			64,403	41.9	55.7%	N/A													

4 towns w 6-yr public universities and rated among top 10 small town college towns by eYudvik.com (College Town Index)

	HS Site	HS Grad Rate	2010 University undergraduate student body size (National Center for Ed Statistics)	2010 University total student body size (National Center for Ed Statistics)	2010 Town population	2010 Median Age	2010 % Owner Occ of Housing	% Students off campus	Economic/Financial ED Incentives
Dromo	387	94%	9183	11,501	10,162	21.9	43.9%	68%	
Old Town	592	89%	9183	11,501	7,840	33.0	55.5%	N/A	
Farmington	850	94%	2086	2410	7,760	37.1	56.8%	60% 1 TIF Districts, 1 Pine Zone	
Banger	1304	91%	2526	3110	33,039	36.7	46.2%	65%	
Barnwick	871	84%	1762	1762	20,278	41.4	67.7%	10%	
Durham, NH	707	95%	12458	15095	14,638	21.0	57.9%	52%	None other than TIF
Burlington, VT	1187	94.52%	11,593	13,554	42,417	26.5	40.7%	55%	
Amherst, MA	1219	97.00%	21373	27569	37,819	21.6	48.4%	46%	Economic Opportunity Areas w deferred taxes for 10 years
Sterrs, CT	1197	94.0%	17345	25498	15,114	26.6	37.7%	54%	
Hhaca, NY	1430	84%	13939	20939	30,014	22.4	26.4%	65%	
Troy, NY	1300	80%	5431	6704	50,129	36.2	38.1%	48%	
Palo Alto, CA	6940		19635	19635	13,809	22.6	20.2%	69%	They have a number of financial incentives but indicate that they rarely have to use them because SO is the lowest cost state to do business in US, they have access to a network of investors, low interest loans, venture capital investors. There is no corporate or personal income tax or personal property tax. They have many spin off businesses from university research. They recently partnered on 2.4 M commercialization center. They can use TIFs but 75% do not find them necessary.
Brookings, SD	775	96	11,201	12,816	22,096	21.5	47.1%	75%	There is a revolving loan fund available for gap financing
Menomonie, WI	1000		8301	9,339	16,764	23.4	40.3%	69%	The city does not offer financial incentives for economic development but there are possible incentives through the state state grants and low interest loans depending on job creation
Dorcento, NY	600		5822	5,989	13,901	22.0	43.3%	30%	Main street grants of \$25,000 for main street businesses. County acts as incubator and has strategic plan to focus on certain businesses, but starting to look at the area as an economic driver. They offer low interest loans at a constant 4% which are unattractive in the economy. County offers some economic development support
Rolla, MO	1000		5503	7,205	19,539	26.2	41.9%	70%	There are no local financial incentives for economic development. They do have enterprise zones and a business incubator for new businesses. They have many connections with the local university and lots of spin offs in science/engineering/technology
**Amherst, CT					26,543	21.5	64.0%	N/A	
**Palo Alto, CA					64,403	41.9	55.7%	N/A	

4 towns w 6-yr public universities and rated among top 10 small town college towns by eHubLink.com (College Town Index)

APPENDIX C

Customer Concept Card For Product, Service, or Process Innovations

Start from the front or back side of card, filling in all that you can.



Innovation Name: _____
Suggestive of the Benefit

NEWS HEADLINE: *Explain your idea in 1 sentence. The first...*

The Customer & their PROBLEM *Clearly describe:*

- 1) *WHO* is the Customer for your Innovation and
- 2) *WHAT* is their Problem (complaint, frustration, wish)

Customer Benefit PROMISE *Make a Customer Benefit Promise to address the problem. Answer the question, "Why should I, the customer, care?"*

More details on the BACK of CARD...

Product, Service, Process and PROOF

- Provide a description for the following*
- 1) Describe the Product, Service, or Process and how it works
 - 2) Provide **PROOF** that the innovation will deliver the benefit **PROMISE**

DEATH THREATS Rather than compromise the idea, identify the biggest unknowns / hurdles

PASSION This project is important to me and to my organization because...

Rough Estimate of Customer Cost in time, energy, money _____

This is a great value when you consider... _____

Strategic Purpose: This innovation could generate growth primarily with...

___ Current Customers ___ New Customers

Inventor's Autograph: _____

APPENDIX D

Construction

- We recently completed a 26 mile long segment of the Three Ring Binder that passes through Amity, Cary Plantation, Hodgdon, and Orient.
- Construction of four segments is scheduled to begin in May. These segments will pass through:
 - Belfast, Searsport, Stockton Springs, Prospect, Bucksport, Verona Island, Orland, and Ellsworth
 - Ashland, Eagle Lake, Masardis, Nashville Plantation, Portage Lake, T14 R6 WELS, T15 R6 WELS, T7 R5 WELS, T8 R5 WELS, T9 R5 WELS, and Winterville Plantation
 - East Millinocket, Grindstone Township, Hersey, Herseytown Township, Medway, Moro Plantation, Mount Chase, Patten, Sherman, Soldiertown Township/T2 R7 WELS, and Stacyville
 - Ebeemee Township, Long A Township, Millinocket, T3 Indian Purchase Township, T4 Indian Purchase Township, T4 R9 NWP, and TA R7 WELS

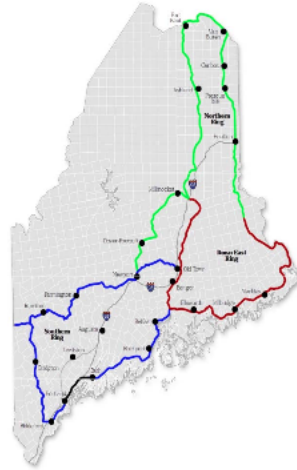


What is the Three Ring Binder Project?

- A public private partnership, the Maine Fiber Company, Inc.'s Three Ring Binder Project represents an investment of over \$32 million in Maine.
- \$25.4 million in funding provided through the Broadband Technology Opportunities Program (BTOP), matched with \$7 million in private investment.
- The Three Ring Binder will provide ultra-modern, high capacity (144-288 strands) fiber optic cable that is available for lease to all qualified users on an equal basis.
- The network will pass through more than 100 communities throughout rural Maine, making broadband internet more readily accessible to 110,000 households and 600 community anchor institutions, including hospitals, rural healthcare clinics, community colleges, University of Maine campuses, libraries, government facilities, and public safety departments.



Progress to Date



- 150 miles of existing fiber and 26 miles of new fiber are currently available for lease, including segments spanning from:
 - Portland to Brunswick
 - Bangor to Orono
 - Hodgdon to Orient
 - Ellsworth to Bar Harbor
- 150 miles will be constructed by mid-summer of 2010.
- 500 miles will be constructed by the end of 2011.
- 1,100 miles will be constructed by the end of 2012.
- Lease price for customers is \$9-\$15 per strand, per mile, per month, and available on an open access, non-discriminatory basis.



Open Access and Transparency

- The Three Ring Binder Project provides fiber optic cable that is available for lease to all qualified users on an open access, equal basis. Leasing rates are the same for all customers.
- No customers are given preferential treatment, and no single entity may use more than 20% of the capacity of any segment of the network.
- We have the capacity to provide fiber to all interested parties, and are obligated to lease fiber to all qualified parties.
- The Three Ring Binder Project is highly transparent – a Google map on Maine Fiber Company’s website (www.mainefiberco.com) identifies the entire 1,100 mile route.
- We have published tariffs detailing our pricing, which is far lower than market value.



Middle Mile Dark Fiber

- The Three Ring Binder will provide 1,100 miles of middle mile dark fiber.
- Existing middle mile facilities in Maine are not always available on an open access, non-discriminatory basis to all carriers.
- The Three Ring Binder will allow carriers to have their own middle mile facilities.
- The Three Ring Binder is providing carriers access to communities that they can't currently serve, and enabling them to use their capital to build last mile connections.
- We act as a wholesaler; commercial carriers are our clients, not our competitors.
- Our project is both reducing the cost of delivering broadband internet, and increasing access to broadband internet throughout Maine.



Challenges

- Make-ready
- Availability of conduit on bridges, getting access to existing facilities – hundreds of thousands of dollars to cross each bridge when building new conduit
- Pole line gaps – MFC to fill in gaps; will be a pole owner in a few short sections



Customer Concept

Confidence in your claim
 low = < 30% med = 40%-60% high = >70%

Product/ Service / Process Name:	
NEWS Headline Explain your idea in one sentence. The first...	
Confidence ↓	Assumptions / Logic
<i>low</i> <i>med</i> <i>high</i>	
The CUSTOMER & their PROBLEM Clearly describe WHO is the customer for your innovation and WHAT is their problem	
Confidence ↓	Assumptions / Logic
<i>low</i> <i>med</i> <i>high</i>	
Customer Benefit PROMISE Answer the question, "Why should I, the customer, care?"	
Confidence ↓	Assumptions / Logic
<i>low</i> <i>med</i> <i>high</i>	
Meaningfully Unique Product/Service PROOF 1) How does this innovation work? 3) Provide PROOF that the innovation will deliver the benefit PROMISE	
Confidence ↓	Assumptions / Logic
<i>low</i> <i>med</i> <i>high</i>	
STRATEGIC PURPOSE	PASSION This project is important to me and to my organization because...
This idea could generate growth with... <input type="checkbox"/> Current Customers <input type="checkbox"/> New Customers	
Customer Cost in Time, Energy, Money _____ This is a great value when you consider...	



20 QUESTIONS For Thinking Deeper about Your Idea

Answer all that apply.

1. The REAL problem we are addressing with this idea is...

2. The "word of mouth BUZZ" on this idea would be...

3. The THREE things that we do better than others...

4. The parts of this idea that CUSTOMERS will be most EXCITED about is...

5. The REAL TRUTH about why we are able to promise what others can't...

6. Customers will see this as a great VALUE because...

7. In 5 words or less the real news is.

Announcing the first _____

8. What numeric promise of X More, Y Less or Z % Improvement would really WOW customers?

9. The occasion, situation and or customer that this innovation would be the most valuable to is...

10. Customers who would be willing to pay the most for this innovation is...



INNOVATION
ENGINEERING

20 QUESTIONS For Thinking Deeper about Your Idea

Answer all that apply.

11. The PRIMARY product, service or process that this innovation will most replace would be...

12. What is the most important element of our offering? The element that is most exciting?

13. The next generation improvement in this idea would include....

14. This offering is a better value for the time/money invested because....

15. After a customer has bought the innovation they will be most likely to boast to others about....


16. In reviewing our innovation, what would most upset and concern our competition would be....

17. If a customer didn't use our innovation their next best option is....

18. The biggest difference customers will notice versus the options they have today will be...

19. Your child or grandmother - with no technical knowledge - could understand that you're promising...

20. If you were to make the idea even better - what would you change?

CONCEPT PITCH SHEET	
To: <i>(Specific Customer)</i>	
Subject: <i>(News Headline)</i>	
<p>Are you frustrated with... <i>(Problem this innovation is addressing)</i> _____</p> <p>_____</p> <p>_____</p> <p>Introducing... <i>(Name: Suggestive of Benefit)</i> _____</p> <p>The first... <i>(type of Product, Service, System)</i> _____</p> <p>_____</p> <p>to promise... <i>(Benefit PROMISE, "Why should I Care?"</i> _____</p> <p>_____</p> <p>_____</p> <p>Here's how it works... <i>(Describe the Innovation and exactly how it works)</i> _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>We are able to make the promise above because... <i>(What meaningful difference makes the promise possible?</i> <i>Provide reasons to believe that this innovation will actually work as promised.)</i> _____</p> <p>_____</p> <p>_____</p> <p>The cost is... _____ for... _____ <i>(money, time, hassle)</i></p> <p>Which is a great VALUE when you consider... _____</p> <p>_____</p> <p>_____</p>	
Why we LOVE this idea... 	



THINKING DEEPER About Your Idea

News	What makes Idea UNIQUE?	WHO Cares?	WHY do they care?
OPTION A "Obvious"			
OPTION B "Unexpected"			
Translate	FREE WRITE using these prompts. Fill in the complete space available.		
	The REAL problem we are addressing with this idea is...		
	The "word of mouth BUZZ" on this idea would be...		
	The THREE things that we do better than others...		
	The parts of this idea that CUSTOMERS will be most EXCITED about is...		
	The REAL TRUTH about why we are able to promise what others can't...		
	Customers will see this as a great VALUE because...		
Clarify	NAME of the product / process / service that captures the essence of the idea	NEWS HEADLINE <i>The core idea in one sentence</i>	
OPTION A "Obvious"			
OPTION B "Unexpected"			

APPENDIX F

About Gig.U

How will America lead in developing the next generation of Internet applications if other countries use more advanced networks than those used in the United States?

How will America's research universities — today the leading such institutions in the world and the most important asset for economic leadership in the global, knowledge based economy of the 21st Century — continue to lead in international research if researchers, faculty, and students in other research communities have access to far better tools than those available to our research communities?

These two questions have profound implications for the American economy and society. We enjoy a leadership position today in many aspects of the broadband ecosystem because of investments made decades ago, just as we enjoy a leadership position in research institutions because of investments made in centuries past. That leadership, however, will not go unchallenged. In a climate of greater international competitiveness and constrained public investment, our leadership in both areas requires new approaches if it is to be sustained.

To meet the dual needs of strengthening our research institutions and our leadership in developing next generation applications, a group of leading research universities, working in partnership with their local communities, has come together to form the University Community Next Generation Innovation Project (“the Project”).

Our mission is simple: accelerate the deployment of world-leading, next generation networks in the United States in a way that provides an opportunity to lead in the next generation of ultra high speed network services and applications.

Through an RFI process, the Project will work with current and potential network service providers, as well as others, to create a critical mass of next generation test beds by accelerating the offering of ultra high-speed network services to their communities. While economic hurdles impede upgrading networks in all communities, those hurdles are smaller in university communities as they enjoy characteristics that both lower the cost of deployment and increase demand, making them the most attractive targets for initial next generation network deployments.

The Project will build on foundation stones already in place, such as organizing done through the Google Community Fiber initiative, to create an environment in which private risk capital has sufficient incentives to provide next-generation services. This effort will focus business leadership and policy makers on a critical but often overlooked point: from both an economic and a policy perspective, a small amount of financial capital and political capital focused on upgrading university communities can yield major gains for both the future of America's leadership in research and for the American economic leadership.

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Nate Wildes grew up in Cumberland, Maine with his younger sister Rebecca and parents Nancy and Bruce Wildes. He attended Greely High School in Cumberland, and graduated in 2008 before beginning his bachelors degree at the University of Maine. He is a Political Science major, Innovation Engineering minor with an expected graduation of May, 2012. He has served as President of the Class of 2012 since 2009, was elected as Senator to the University of Maine Student Government, and served as the Undergraduate Student Representative to the Faculty Senate. In 2010 President Robert Kennedy appointed Nate to the Presidential Search Committee, which hired Dr. Paul W. Ferguson as UMaine's 19th President in July of 2011.

During his tenure at UMaine, Nate interned at Eureka! Ranch, Macdonald Page & Company, LLC, and was employed at the AEWG Advanced Structures & Composites Center and the Foster Center for Student Innovation. He also founded his own company, Stillwater Poster Company, LLC, which seeks to provide alumni and community members of the University of Maine with a meaningful way to give back, by purchasing student art that directly supports art scholarships and the student artists at UMaine.

After graduation, Nate starts work at Eureka! Ranch International, to research and develop tools and systems for companies, non-profits and academic institutions to create, communicate and commercialize meaningfully unique ideas. His long-term plans include public service, traveling the world, and enjoying a plethora of blueberry pancakes.