



VERMONT COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY

APPENDIX F

PROJECTS AND INITIATIVES

Projects

Project Number P1.

Project Name Support for UVM STEM Research & Education Building Renovation and Construction

Project Location Burlington

Lead Organization UVM

Project Description To upgrade, modernize, and expand state-of-the-art STEM facilities for excellence in STEM teaching, research, entrepreneurship, and innovation at the University of Vermont

Jobs TBD

Total Cost TBD

Non-EDA Funding Sources Ongoing capital campaign; public and private funds being actively leveraged

Project Number P2.

Project Name UVM STEM Education Delivery & Career Training

Project Location Burlington & Statewide

Lead Organization UVM

Project Description To leverage and continue critical advances in STEM education delivery and career training developed by the 2013 TAACCCT grant managed by UVM

Jobs TBD

Estimated Total Cost TBD

Non-EDA Funding Sources Ongoing institutional recruitment and support of key faculty and staff; ongoing development of both public & private funding for STEM education

Project Number P3.

Project Name iTech: Computer Science Teacher Education Program

Project Location Burlington

Lead Organization UVM

Project Description To increase the capacity for computer science learning and careers in VT and increase gender, race, geographic, and economic diversity in computer science fields

Jobs TBD

Estimated Total Cost TBD

Non-EDA Funding Sources Ongoing institutional recruitment and support of key faculty and staff; ongoing development of both public & private funding for STEM education

Project Number P4.

Project Name VT Behavioral Healthcare Workforce Training

Project Location Burlington

Lead Organization UVM

Project Description Development of a comprehensive plan for VT to address health/mental health staffing shortages & advance competency-based training for health care/mental health care professionals

Jobs TBD

Total Cost TBD

Non-EDA Funding Sources Ongoing institutional recruitment and support of key faculty and staff; ongoing development of both public & private funding for STEM education

Project Number P5.

Project Name Burlington Railyard Enterprise Project

Project Location Burlington – Chittenden County

Lead Organization VTrans

Project Description A network of multimodal transportation infrastructure improvements to support economic development of an emerging creative economy center in Burlington as well as improving the connectivity and access to the waterfront and to the railyard while improving the livability of the surrounding neighborhoods.

Jobs TBD

Total Cost

Non-EDA Funding Sources TBD

Project Number P6.

Project Name Burlington Intercity Passenger Rail Service

Project Location Rutland, Addison, Chittenden Counties

Lead Organization Vtrans

Project Description Extend the Ethan Allen Express Amtrak to Burlington from its current end point in Rutland.

Jobs TBD

Total Cost TBD

Non-EDA Funding Sources TBD

Project Number P7.

Project Name Western Corridor Intercity Passenger Rail Service

Project Location Western Counties, Bennington to Chittenden

Lead Organization Vtrans

Project Description With the State of New York State, develop a passenger rail service that will connect Manchester, VT, North Bennington, VT, and Mechanicville, NY to the Albany, NY and New York City Amtrak services.

Jobs TBD

Total Cost TBD

Non-EDA Funding Sources TBD

Project Number P8.

Project Name Rutland State Airport Infrastructure Improvement

Project Location Rutland Area

Lead Organization Vtrans

Project Description Add four commercially powered solar hazard beacons, a 120' x 130' jet hangar, airport rescue and firefighting building, and airport terminal to support commercial aircraft activity.

Jobs TBS

Total Cost TBD

Non-EDA Funding Sources TBD

Project Number P9.

Project Name Newport State Airport Water and Sewer Project

Project Location Orleans County

Lead Organization Vtrans

Project Description Extend water and sewer lines from Newport City to the airport. Needed to accommodate planned growth on airport property and the surrounding area.

Jobs TBD

Total Cost TBD

Non-EDA Funding Sources TBD

Project Number P10.

Project Name Hartness State airport Infrastructure Improvement

Project Location Windsor County Area

Lead Organization Vtrans

Project Description Add eight commercial-powered solar hazard beacons, a 120' x 130' jet hangar with apron, and sixty-five acres of tree clearing in airport approach surfaces. This airport, in one of the most economically challenged areas of Vermont, has previously competed with Lebanon, NH's which is cutting back its services. Improve road between airport and Springfield industrial park to facilitate freight use.

Jobs TBD

Total Cost TBD

Non-EDA Funding Sources TBD

Project Number P11.

Project Name Stowe-Morrisville Airport

Project Location Lamoille County

Lead Organization VTrans

Project Description Extend runways and create destination for private planes accessing Stowe Mountain Resort and surrounding areas and a proposed new commercial service, Stowe Aviation, which intends to build a flight simulator and flight school.

Jobs TBD

Total Cost TBD

Non-EDA Funding Sources TBD

Project Number P12.

Project Name Redevelopment of properties connected to rail network

Issue:

Vermont owns 305 miles of the rail network, predominantly used for freight haulage, and a substantial number of empty buildings and/or sites with spur lines or sidings.

The rail network is well connected into the regional network, providing good access to major markets for products/commodities made by bulk shippers and customers with large or heavy items.

Objective: List of 2-5 objectives

Activity:

Identify properties and sites that could be redeveloped for manufacturers or distributors of products and produce suitable for rail shipment/delivery e.g. large fabricated plant and engineering equipment such as blades and towers for wind turbines, girders as well as timber products.

Target manufacturers or distributors of products/produce currently hauled by rail including grain for agriculture; cement, lumber and steel building materials; wood chips and pelleted products; fuel/natural gas for residential/commercial use; marble, limestone, talc, granite and slate; marble/granite finished goods/byproducts, salt for de-icing in winter, newsprint and chemicals used in manufacturing

Project Number P13.

Project Name (4-10 word title)

Vermont Accelerator Program

Lead Organization (which organization or agency will be the primary entity responsible for the project?)

Agency of Commerce and Community Development

Primary Contact Person (contact information including, name, title, organization, phone, and email for the person responsible for project submission and providing additional information if needed)

Fred Kenney

Lars Hasselblad Torres

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

A program to seed shared work environments (“coworking” spaces) and startup “accelerators”. A coworking space is commonly seen as a shared work environment where freelancers, telecommuters and startup founders work independently, together. Coworking spaces tend to cultivate a strong sense of community identity, usually through events and informal activities. An accelerator is a structured environment where, often in exchange for equity, a startup team receives free workspace and support services for a short period of time, often about six months. While a coworking space is typically open to anyone who wishes to join, an accelerator program draws on a carefully selected cohort of participants.

Three goals of the Vermont Accelerator Program are to:

- Create a visible, publicly accessible “story” about Vermont’s creative economy as it grows around the state;
- Lower the risks associated with locating a professional or business presence downtown and starting up a new business;
- Provide a framework for the delivery of key services to startups, including networking, mentoring, promotion, workshops and training;

The Vermont Accelerator Program will assist Vermont’s growing independent workforce and support the growth and success of startups by growing a network of dynamic work spaces throughout the state that a) concentrate talent downtown; b) create markets of ideas, talent and resources; c) lower the cost of a business presence on Main Street; d) establish a platform for sharing, learning and networking; e) provide a “one stop” location for mentoring and related support services; and f) facilitate the free-flow of ideas, products and services state-wide.

The program envisions seeding a network of sites across the state that will enable participants to access the facilities and resources of any other site; this provides greater flexibility and business development

opportunities state-wide. Each site will be multitenant facility with onsite management responsible for ensuring continuity of operations, programming, marketing and outreach, and related activities.

Seed resources will include finance and technical assistance.

Coworking

The coworking aspects of the program require a membership structure, minimal cash flow, furnishing and basic services to ensure an appealing, functional work environment for its users. For a period of time it may be important to provide a “community manager” who can establish an open and inviting culture and ensure that events are organized and executed effectively. Over time, the coworking community must adopt its own leadership and volunteer processes to thrive.

Accelerator

In addition to providing no-cost shared work space for its members, an accelerator program must ensure a competitive application and selection process, a focused suite of oversight and mentoring services, and regular opportunities for its members to network with investors and potential customers. The Agency will work in partnership with accelerator founders to establish a financial model, local management framework, advisory board, and partners to ensure an effective program in response to local, state and regional opportunities.

Project funding will provide start-up capital for coworking and accelerator spaces throughout the state as well as follow-on support in the form of technical assistance (grant applications, oversight). Each site will be selected through a competitive process at the Agency of Commerce.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria, in addition to others listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention): Project is intended for employment expansion, through new direct hires and/or contracting.
2. **Investment** (private sector investment generation): Accelerator program requirements include efforts to attract and match investment by private sector actors including angels, banks, and VCs and the use of new tools like Kickstarter.
3. **Income and Wealth** (increase income and wealth of Vermont residents): Project can demonstrate net new spending in a downtown through increased concentration of workers in a downtown area. The project would generate income and wealth for coworking participants and accelerator startups.
4. **Resiliency** (increase the ability of Vermont’s economy to positively adapt to change): The project increases entrepreneurship and innovation and adds to the creation of new products and services as well as the diversity of business types in each region and the state.
5. **Collaboration** (across public and private sector, state agencies, regional and local governments, and other stakeholders): The project relies heavily on collaboration between the Agency of Commerce, the accelerator founders and managers, and the networks and partnerships developed by each

incubator. A scoring criteria for funding is the strength of the partnerships and collaboration with existing service providers to ensure success of their clients.

6. **Matching Funds** (non-EDA funds leverage for the implementation of the project): Project demonstrates local, state, and regional support through commitments from other grant sources.
7. **Project Readiness** (demonstration of ability to execute): project is ready for implementation, including provision of details on budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners. Successful project could be started within six months.
8. **Management Team** (experience and demonstrated capability of the project team): project principals must combine the right mix of business, organizing, and personality traits to inspire confidence in their capacity to anticipate risks and deliver results.
9. **Investment Appeal** (willingness of angel investors to provide investment): the accelerator side of the house must demonstrate the ability to raise funds from angel investors that will serve as both seed capital and underwriting costs.

Draft selection criteria: It is assumed that there would be a limited level of funding available to provide a start-up subsidy. Therefore, there would be an RFP process with selection criteria. Project proposals must respond to the unique needs of an open working space as well as the business requirements of a well-run accelerator program.

Four minimum eligibility requirements for projects are:

- 1) Location is within a population catchment area of > 4,000 people within 5 miles
- 2) At least one college or university campus within 5 miles of proposed site
- 3) An optional connection to gigabit fiber is available
- 4) Location exists within a designated downtown or village center

Additional criteria for project selection include:

- 1) Strength of mission statement and connection to a local and regional opportunity
- 2) Entrepreneurial experience, leadership and commitment of the management team
- 3) Diligence of market research including short-term target and long-term growth markets
- 4) Startup position, including demonstration of partnerships, grant income, tax-credits, third party investment, membership registration, etc.
- 5) Strength of plan for achieving financial sustainability including a plan for earned income, in-kind contributions and grant income over time
- 6) Strength of operational structure including budget and finances, staffing, and advisory board makeup
- 7) Strength of plan to provide services directly or through service provider network and partnerships
- 8) Marketing and recruitment plan, including selection process and criteria for accelerator participants
- 9) Plan to collect, interpret and communicate outcome and impact data over time
- 10) Internal controls, monitoring and accountability processes

Potential Partners: Projects are encouraged to connect with, consult and leverage existing resources as they explore and define their business proposals. These include, but should not be limited to:

- Emerge Vermont
<http://emergevt.org>
- Fresh Tracks Capital
<http://www.freshtrackscap.com>
- LaunchVT
<http://launchvt.com>
- Your Local Regional Development Corporation
<http://accd.vermont.gov/business/partners/rdc>
- StartupVT
<http://startupvt.org>
- Vermont Economic Development Authority (VEDA)
<http://veda.org>
- Venture Foundry
<http://venture-foundry.com>
- Vermont Chamber of Commerce
<http://www.vtchamber.com>
- Vermont Center for Emerging Technologies (VCET)
<http://www.vermonttechnologies.com>
- Vermont Small Business Development Corporation (VtSBDC)
<http://www.vtsbdc.org>
- Vermont Sustainable Jobs Fund (VSJF)
<http://www.vsjf.org>
- Vermont Technology Alliance (VtTA)
<http://vermonttechnologyalliance>

Project Number P14.

Project Name - Master's of Biotechnology degree program

Lead Organization (which organization or agency will be the primary entity responsible for the project?)

University of Vermont with consultation with the Vermont Biosciences Alliance.

Primary Contact Person

Cynthia Belliveau, University of Vermont

Cynthia.Belliveau@uvm.edu

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

Biotechnology is needed to solve world problems of food shortage, human and animal disease, and environmental damage from climate change. The tools of biotechnology require not only the technical skills and scientific knowledge of animals, plants and microorganisms, but the social sciences of ethics, economics, and public safety. Vermont must have a workforce to participate in the biotechnology revolution of the 21st century and, currently, Vermont businesses struggle to find trained people for existing jobs. In-house training is costly and our most talented science graduates go to other states where the biotechnology jobs are centered near research universities and biotechnical training centers.

A Master's in Biotechnology is offered in only a few leading universities around the world and focuses mainly on drugs and medical devices. The development of a program at UVM will place the state in the appropriate leadership position to support jobs in environmental, food, and medical sciences. The nascent biotechnology industry in Vermont includes medical device manufacturing, a monoclonal antibody developer, large-scale fermentation (beer makers), and specialty biological compound manufacturers. Additionally, a large biotechnology company is planning to move to Newport and will need a skilled workforce to succeed.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention)

The program will have two aspects of job creation. The curriculum and management of an academic program will require full time and part time staffing at the University. But, more important, the training program, initially aimed at about 20 students per year will feed the pipeline for biotechnology positions in Vermont and outside of the state. We expect that as the industry reaches critical mass in the state, new companies will sprout from existing companies. This was the

situation in Maine over the past 25 years where a number of companies spun off from companies formed in the 1980s.

2. **Investment** (private sector investment generated)

The shortage of well trained professionals in biotechnology inhibits the growth of Vermont businesses and relaxing the constraint on employee available will spur business investment and growth.

3. **Income and Wealth** (increasing income and wealth of Vermont residents)

Biotechnology is a well paying field, far above the median incomes of other Vermont sectors.

4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change)

Climate change will impact all industries in Vermont this century. How we grow food, treat old and new diseases, clean up our water and produce energy using biology instead of geology is key to our economy. Vermont's size and strategically cooperative nature could be an important model for other states.

5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)

The development of the Master's in Biotechnology program will require partnership with Vermont businesses currently involved in the application of biotechnology. On-line curriculum will supplement skills that are not currently resident at the University. The Vermont Manufacturing Extension Center has a strong commitment to innovation and manufacturing. Biotechnology companies near Lebanon, NH could also use similar skills.

6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)

The University of the Vermont will seek funding from external sources to make this program move forward.

7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)

There is a significant planning period necessary to move this program from curriculum development to student enrollment. Vermont companies could help immediately.

Project Number P15.

Project Name (4-10 word title): Southern Vermont Cold Storage and Distribution Hub

Lead Organization (which organization or agency will be the primary entity responsible for the project?)

Harlow Farm/Westminster Organics, Food Connects, Windham Farm & Food LLC

Primary Contact Person (contact information including, name, title, organization, phone, and email for the person responsible for project submission and providing additional information if needed)

Paul Harlow, Harlow Farm and Richard Berkfield, Food Connects

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

Project will create an expanded cold storage and food aggregation point to enable southern Vermont farmers and producers to access to wholesale markets and food distributors. The site would enable a wider array of producers to produce for winter storage and provide a longer window in which to sell their produce. The site would enable growers in the southern Vermont region to aggregate, wash, lightly process, store and distribute farm fresh products to a wide range of market channels (in-state institutions, retailers, and out of state markets) with educational programming for small agricultural producers and low income households.

The hub is anticipated to be a new structure attached to the existing Harlow Farm packing house with new cold storage rooms, packing areas, and several new loading docks to accommodate 53' semi-trailers. The timeline would be contingent on permitting and total funds, with a target completion by the start of the 2016 growing season.

The target market for the facility would be local farmers, food producers, and community food programs in VT and NH within the Connecticut River Valley. The space would allow farms to grow and enable local food producers and community groups to have a food safety compliant facility.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

INSERT WLEB LANGUAGE---permission from Paul

1. **Jobs** (creation and/or retention)

- a. The Project will enable the near-term future growth of Harlow Farm in addition to enabling other farmers and food business to expand their ability to store, process, and ship goods. Future revenue projections and land utilization on Harlow Farm would suggest that nearly

20 FTE would be enabled if the farm has access to improved storage and packing space as the existing space limitations bottleneck the full use of current farm property. In addition to Harlow Farm, it would be expected that one to two FTE's would be created by other businesses looking to expand their operation.

- b. The majority of the jobs created will be entry level requiring little formal education. There is a significant need for employment opportunities for this cohort.
2. **Investment** (private sector investment generated)
 - a. The project will include private investment made by Harlow Farm. Additional investment is likely by those anticipated to use the facility for storage, packing, and/or shipping. Businesses who will be able to grow given new space and market opportunities will make investments in their own businesses.
 3. **Income and Wealth** (increasing income and wealth of Vermont residents)
 - a. Increasing the number of employment opportunities will increase the economic health of the region through the growth of the overall business community. These will have a positive multiplier effects on the local economy.
 - b. Improved high quality food packing, storage, shipping, and educational space will contribute positivity to improved access to larger wholesale customers, higher margin customers and create higher margin products.
 4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change)
 - a. Additional cold storage and improved enclosed packing house space will allow the farm to grow additional crops for winter storage and sales adding to the overall diversity of the business. Improved interior packing space will support the Harlow Farm's efforts to maintain a high quality, clean environment to meet food safety regulations.
 - b. Creating joint user space fosters innovation and collaboration among a diverse array of partners. The space can enable new products to be developed and additional employment opportunities for local residents.
 5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)
 - a. This project has strong support from a wide group of stakeholders in the southern Vermont and New Hampshire region. As a large regional farm, we have employment interest from a wide area as well as enabling smaller entities to leverage our market access. Cold storage space will be shared with several other farms and be used to support local food access to local stores and co-ops. The local Co-Op association has agreed to commit to buying local through the winter contingent on adequate supply. The additional cold storage from one facility will enable multiple farms to supply this committed demand.
 - b. Institutions and NGOs will share the space for on-farm learning and light processing. Coming direct to the farm will provide access to fresh, local, produce for use in community kitchens, educational training, and student programs. Food Connects, LLC will be the entity leading institutional and educational engagement.
 - c. Local food aggregation & distribution programs such as Monadnock Menus and Windham Farm and Food are based out of Harlow Farm and can use the additional packing house

space and cold storage space to improve their operational efficiencies as well as maintain adequate food safety compliance.

6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)

Private investment (Harlow Farms)

7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)

Once funding is secured project will be ready to go within 12 months.

Project Number P16.

Project Name: Regional Food Processing for Food Access Programs

The Vermont Commodity Program (Vermont's Next Correctional Industry) and the Vermont Food Bank Processing, Warehouse and Food Distribution Facility

Lead Organizations Salvation Farms and the Vermont Foodbank.

Primary Contact People

Theresa Snow, Executive Director
Salvation Farms
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John Sayles, CEO
Vermont Food Bank
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jsayles@vtfoodbank.org

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

Additional infrastructure is needed throughout the state to lightly process and distribute food to meet the food security needs of low income Vermonters. This project brings together the efforts of two organizations to serve a wide range of needs.

1) **Salvation Farms**, through the Vermont Commodity Program (VCP), has been working with private, public, and non-profit partners to raw pack and minimally process Vermont farm-raised surplus crops. The Vermont Commodity Program is a supplemental food source for institutions serving our state's most vulnerable; the young, sick, elderly, and food insecure. Working side by side with inmate crews at the Southeast State Correctional Facility (SESCF) in Windsor to clean and pack edible farm-fresh surplus raw and in Rutland, Windham, and Lamoille Counties with community partners to develop minimally process product, the VCP has captured 144,486 pounds of 15 crops from 22 farms and provided resulting products to 24 institutions and food access sites including the Vermont Foodbank. Renovations to transition an underutilized agricultural building at SESCOF to accommodate greater crop volumes and diversity, increasing appropriate raw crop handling are currently underway. This will provide the VCP and the inmate work crew a workspace and vocational experience that operates at industry standards. Raw packing and minimal processing of surplus Vermont-grown crops is envisioned being incorporated into future infrastructure developments at the SESCOF.

2) The Vermont Food Bank (VFB) gathers and delivers hundreds of thousands of pounds of fresh, whole local produce every year to our hungry neighbors throughout the state through an extensive local partner network. Need exceeds supply, and the VFB's fresh food program is seeking to add capacity to source, process and deliver up to 5 million pounds of fresh food in the coming years. The VFB is planning a physical expansion of our Barre facility to increase refrigeration, sorting and processing capability, and is expanding into other regions, such as Rutland and Chittenden County, to increase fresh food access, processing and distribution. Increased capacity will allow the VFB to expand the availability of fresh foods to our Vermont neighbors, improving their health outcomes and daily lives. Partners with the capacity to deliver processed or preserved fresh foods for distribution will be key to increasing the volume of food and impact on our communities.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention)

A. Salvation Farms projects an increase of two Department of Corrections staff to support the VCP activities at the SESCOF and its eventual transition to a Correctional Industry. Salvation Farms will increase our staff by one providing a Director for the VCP to act as liaison between activities occurring onsite at SESCOF and farms, the Vermont Gleaning Collective, wholesale trucking partners and recipient sites/institutions. Additionally, and possibly most noteworthy, is the workforce development implications of engaging 16-24 inmates per year, in applied food sector education to include food and workplace safety trainings and certification, industry guest visits, optional readings, documentaries, and discussions coupled with applicable work experience. Salvation Farms will work closely with the Department of Corrections, when possible, to identify re-entry food sector work options for inmates who have successfully worked, earned certifications, and gained skills on the VCP crew.

B. The Vermont Food Bank will require 1-4 additional full-time staff as the fresh food program ramps up, depending on the final number of locations and the volume distributed. The VFB's Community Kitchen Academy program could also expand with fresh food opportunities, retaining and adding jobs, and preparing student for employment. An outlet for surplus local produce can also help support local producers by ensuring a market for surplus production.

2. **Investment** (private sector investment generated)

A. Salvation Farms has raised a total of \$59,586 to support the first phase building renovation at SESCOF and another \$140,000 in additional foundation grants, contracts, fees for service and in-kind donations towards the overall project. The overall renovations project budget to

B. The Vermont Food Bank's donors will invest up to \$2 million in the next 5 years directly related to increasing the amount of fresh, local food that the VFB can gather, process and distribute. These funds will leverage federal and other public investment.

3. **Income and Wealth** (increasing income and wealth of Vermont residents)

A. Salvation Farms – the VCP will increase the income and wealth of Vermont residents through food sector workforce development with an inmate population; and developing stability and dependability of the VCP Vermont generating a retention of institutional dollars and redirecting these funds toward sourcing Vermont farm-fresh foods via market avenues

B. The Vermont Food Bank's fresh produce program will provide more fresh, healthy food to our neighbors with low incomes thereby increasing their ability to afford housing, medical care and other means necessary to live an active, healthy life, support their families and contribute to the community. The program also strengthens the local farm economy by creating a reliable outlet for surplus product and by creating new customers for locally grown food.

4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change)

A. Salvation Farms is building a new segment of our food system by engaging key stakeholders whose potential role in managing farms surplus foods has been unrealized until now. Black River Produce is our hired trucking company; we positively impact their bottom line by maximizing the use of their fleet. Additionally, consumption of Vermont produced foods will increase as will the local purchasing power of institutions serving vulnerable citizens.

B. The Vermont Food Bank for 27 years has been supporting Vermont's economic resilience by supporting our neighbors in their time of greatest need, allowing people to make it through times of crisis ready to contribute back to our communities in a meaningful way. Feeding our neighbors fresh local food during the hardest times keeps our neighbors healthier and the producer economy stronger.

5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)

A. Salvation Farms' key partners for this project are:

- *Vermont Department of Corrections, Southeast State Correctional Facility & Vermont Offender Work Program* – Collaboratively work with Salvation Farms to integrate the Vermont Commodity Program into the vocational work opportunity for inmates at the Southeast State Correctional Facility. SESCOF is a 100 bed facility located in Windsor. All offenders participate in daily work assignments, 70% of whom must work within the fence each day receiving a small monetary payment for their time.
- *Vermont Department of Buildings & General Services* – The SESCOF property and physical infrastructure is owned by Vermont's Department of Buildings & General Services and leased to the Department of Corrections. Buildings and General Services plays a vital role in the adaptation of any state owned property and plays a vital role in Salvation Farms renovation of a building at SESCOF.
- *Institutional Food Providers, i.e. Charitable Food Agencies, Schools, Nursing Home, etc.* – Interest in quality assessed, cost effective, easy to receive and utilize locally produced surplus crops is a must among institutions that are serving nutritional- and food-insecure Vermont citizens.

B. The Vermont Food Bank has collaboration as a core part of our mission. The VFB relies on tens of thousands of private sector fund and food donors, the federal government, the state of Vermont and not lastly more than 200 grassroots nonprofits and faith-based organizations to do our work. There is no VFB without partnerships and collaborations.

5. **Matching Funds** (non-EDA funds leverage for the implementation of the project)

A. Salvation Farms Refer to #2, investments.

B. The Vermont Food Bank – Local financial donors (the VFB raises more than \$4 million dollars every year), local and national foundations, business partners, and the state of Vermont.

6. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)

A. Salvation Farms Minimal processing is already taking place at the SESCOF under not-ideal circumstances until renovations can be completed. At minimum, \$65,000 remains to be secure by Salvation Farms before the State can put the VCP/SESCF renovation project out to bid. Beyond that, we anticipate another \$150,000 would be needed to complete the first phase of renovations at SESCOF and provide training for additional staffing to accommodate the added products being produced at the facility. On-going funding for staff will be supplied by the sale of products and foundation grants.

B. The Vermont Food Bank is already engaged in this project and can provide the needed detail in minimal time with minimal effort.

Project Number P17.

Project Name (4-10 word title)

Vermont Livestock Slaughter and Processing Co's ("VLSPC") Relocation and Expansion

Lead Organization (which organization or agency will be the primary entity responsible for the project?)

Addison County Economic Development Corporation

Primary Contact Person (contact information including, name, title, organization, phone, and email for the person responsible for project submission and providing additional information if needed)

Robin Poole Scheu

Executive Director

Addison County Economic Development Corporation

GREAT STARTS HERE!

1590 US Route 7 South, Suite #8

Middlebury, VT 05753

802.388.7953 x 203 (Office)

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rpscheu@addisoncountyedc.org

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

Assistance of \$200,000 is being sought in the \$4 million (total) expansion project for a critical piece of VT agricultural infrastructure, namely, the slaughter and cutting (processing) of all livestock species. VLSPC has completely outgrown its current premises in the county, and has secured financing to move its operations to Middlebury. The project has the backing of VEDA, several prominent social impact investors, and the Development Director of the City and College of Middlebury. More than fifty growers depend upon this capability in the State's largest ag. country, as do fifteen current employees as well as ten additional new employees.

A commitment has been received from the seller of the building in Middlebury in to which VLSPC will relocate, and the construction firm of Neagly and Chase has been hired to manage the extensive fit-up required. The building plans have been drawn. VLSPC is in the process of formalizing loan agreements with lenders who have largely completed their due diligence. The last and only task remaining is to secure approximately \$200,000 as a grant to finalize the mortgage lender's requirement.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention)

VLSPC currently employs sixteen full time employees and intends to hire an additional ten when the expansion move is complete. The \$2.2 fit-up of the building will employ approximately eleven different trades and as many as 35-40 individuals at various stages of the six month construction program. Farmers who are able to grow their herds by virtue of the slaughter and processing capacity that will be provided, will also require additional hired labor on their respective farms.

2. **Investment** (private sector investment generated)

This is a \$ 4million capital expansion program that will provide sorely needed livestock processing capability in the southern part of the State. It will bring approximately \$2.5 million from out of state to investment in the Middlebury Industrial Park, and it will generate investment returns for the in-state investors/lenders. The expansion of VT's agricultural sector by virtue of the processing capacity will be seen in consumer purchases and in the hospitality industry which features VT raised food.

3. **Income and Wealth** (increasing income and wealth of Vermont residents)

VT growers of livestock cannot expand their herds presently because there is a shortage of slaughter and processing capability. While some additional capacity has recently come on line, there still remains a need for slaughter and processing that will enable growers to market to larger food stores and upscale chains. This requires professional cutting, labeling and packaging, which VLSPC's new facility will provide.

4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change)

The primary agricultural sector has undergone extreme changes in the last several decades. Farmers no longer sell meat from their farms that they have slaughtered themselves. Meat must be slaughtered and processed in highly regulated UYSDA facilities which are very costly to build and maintain. While small farms can market their product through direct consumer sales, their ability to sell consistently to larger chains is dependent upon their being able to provide a constant, year-round amount of quality product. This is only possible when a farm can expand, and it cannot expand without the certitude that it can have its animals slaughtered and packaged on a timely basis. Currently livestock producers must wait for weeks, and reserve many months in advance, to secure slaughter "slots." VT's ability to service the demanding criteria of Food Chains and restaurant chains – the fastest growing sector of livestock sales – is dependent upon the infrastructure of slaughter and processing availability.

5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)

The following entities are involved in financing this project:

VEDA, the Vermont Community Fund, Addison County Development Agency, Yankee Farm Credit, and indirectly, the City and College of Middlebury. It has the support of the VSJF Flexible Capital Fund, and

Vermont Sustainable Jobs Fund, Inc. The seller of the building, a private individual, is also supporting the financing with the assumption of a note for a portion of the sales price. Many farmers are supportive of the expansion as their livelihoods depend upon improved and enlarged ag. infrastructure.

6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)

There are very substantial matching funds for this project; just under \$4 million in funding has been committed in principle, dependent upon the acquisition of a \$200,000 equity (grant) infusion.

7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)

This project is completely ready for implementation; the engineer's budget has been finalized and is ready to put out to the trades for bidding; the seller of the building is eager to sign a purchase and sale agreement at the price that has been agreed to. The construction management company is ready to begin work immediately. VLSPC is ready to plan its move and has identified the person internally who will manage the building project for the Company and the actual move from the Company's present location in Ferrisburgh to Middlebury. Construction is expected to take 5-6 months, and VLSPC wants to move in the slow winter months of January or February 2015 if at all possible.

Project Number P18.

Project Name (4-10 word title) **Dairy Farm Infrastructure Development**

Lead Organization (which organization or agency will be the primary entity responsible for the project?)

Vermont Housing Conservation Board (VHCB), Vermont Agency of Agriculture, Food & Markets (VAAFM), Working Lands Enterprise Board (WLEB), Vermont Agency of Natural Resources

Primary Contact Person (contact information including, name, title, organization, phone, and email for the person responsible for project submission and providing additional information if needed)

Ela Chapin, VHCB and Diane Bothfeld, VAAFM

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

In Vermont there are 17 Large Farm Operations (greater than 700 milking cows), 142 Medium Farm Operations (between 200 to 699 milking cows). The majority of these farms have built new infrastructure within the last 5 to 15 years to meet increasing cow numbers. There are a substantial number of dairy farms (751) that milk less than 200 cows and a majority of these farms have not made recent infrastructure improvements. Vermont's dairy farms collectively produce a relatively stable supply of milk at 2.6 billion pounds per year. However, improved infrastructure would assist in increasing both the quality and volume of milk produced in Vermont, which in turn ensures our dairy processors in Vermont have the supply they need to stay and continue to expand, and additional production can help attract additional processing businesses. Needed dairy farm infrastructure ranges from improvements for increased cow comfort, improved labor efficiencies, and expanded facilities.

One of the first steps in any infrastructure improvement or installation is the design of the facility. In Wisconsin, the state supported the dairy industry by providing incentive grants for engineering work on design of new dairy related facilities. Grants would be provided through state and other sources for farms to hire engineers to design new dairy facilities taking into account water quality protection, waste management, integration of new technologies (robot milking machines, ventilation, etc.) and cow comfort.

There are a limited number of agricultural engineers and other technical support for dairy facilities in Vermont as well as construction firms for the installation of the equipment required for dairy farms. Education and training could be provided through programs provided by the state and local colleges.

The next step in infrastructure improvement is implementation, and many dairy farm businesses are already highly leveraged, especially after 4 consistent years of low milk prices. Grants will be provided through state and other sources for farms to help implement infrastructure improvement projects and to ensure they have the equity to leverage the debt capital needed for such improvements.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention)

Dairy farms employ 1-20 full time equivalents. Each business that is assisted in implementing infrastructure improvements will be retaining jobs and likely adding jobs as the business expands or adds new enterprises. Improvements also result in improved working environments, labor efficiency and safety for employees.

2. **Investment** (private sector investment generated)

VHCB's historical experience providing support for dairy farm improvements is that the public investment leverages four or more times the amount in private sector investment or other sources of funds.

3. **Income and Wealth** (increasing income and wealth of Vermont residents)

As dairy farmers make improvements in their business, they improve the financial sustainability of their business, the working environment for family members and employees, and their capacity to make further investments in employees and the farm. This leads to increased income for family farm owners and their employees, and increased business and property values for farmers.

4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change)

Resiliency is one of the most important factors to retaining agricultural businesses in our state. We need dairy farmers to have the resources needed (both financial and technical) to ensure they can weather a variety of risks, including natural disasters, weather-related and disease-related crop failures, herd health issues, and milk price volatility. This project is critical to increasing the dairy industry's resiliency to these and other risks, and the resiliency of the dairy industry has a direct impact on the resiliency of Vermont's overall economy to adapt to changes. As commodity milk prices and markets for other agricultural products shift, so do farmers in response. Many farmers are making investments in their businesses in order to respond to shifting dynamics in the marketplace, such as the current opportunity to assist in the implementation of Act 148 by creating and expanding composting operations, for example. Farmers will also be required to make investments to meet the proposed additional requirements of the Lake Champlain TMDL (water quality improvement plan) as approved by the Environmental Protection Agency.

5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)

The Agency of Agriculture, Food and Markets already collaborates closely with the Agency of Natural Resources, Agency of Commerce, the VT Housing & Conservation Board, the Working Lands Enterprise Initiative and other state-wide entities to address the needs of the dairy industry. This project is an extension of existing collaborative projects, including a new dairy improvement grants

program started with funding from Commonwealth Dairy in Brattleboro, VT, and potential new funding opportunity through the USDA Regional Conservation Partnership Program.

6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)
\$400,000 in private industry match annually (Commonwealth Dairy), and the possibility of additional public and private funds. Up to \$20 million over five years from the USDA RRCP Program, as well as related support and match.

7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)

This project expects to move forward with the funds listed above in December 2014, and then again annually at that time for several years. Dairy farmers will be invited to make proposals for projects, and they will be reviewed and considered in January-February 2015. Projects funded will be implemented in April-December 2015, including engineering studies, construction of new facilities and other infrastructure development projects. Other funds for Water Quality Infrastructure improvements will be provided on a modified schedule dependent on federal guidelines.

Project Number P19.

Project Title Demonstration on-farm integrated solar, wind and biomass project with Smart Grid

Situation / Critical Issue: (25-100 words)

Vermont farms have high demands for energy to feed animals, milk animals, clean equipment, heating, ventilation and lighting for farm structures. Vermont farms also have waste products that can be used to generate energy, have large land bases that may be located away from population centers, can grow energy crops, and can grow fiber crops such as wood and grasses.

Many Vermont farms have tight to limited profit margins and another source of income or a means to reduce energy input costs would be beneficial to long term sustainability. The ability to generate heat to extend the growing season would also allow for greater reliance on local foods during the cold winter months. Barriers to implementation are time to research appropriate renewable sources and available investment funds.

Description of the Initiative: (50-200 words)

Success has been obtained in the adoption of renewable energy production – methane digestion of manure to produce electricity - through the use of consultants to interact with farmers through the decision making, design and implementation process for these projects. Having information regarding renewable energy opportunities in a centralized location will be helpful and is being tackled by Farm 2 Plate. Increased technical assistance for farms of all sizes and for all types of renewable energy would expedite implementation. Consultants could be funded to work directly with farmers from the design to the implementation of the project.

There is great opportunity to utilize current and future methane digestion of manure on farms as a method of managing organic waste products that must be removed from landfills as prescribed in ACT 148. Also new technology is being proposed that can further reduce phosphorus from the methane digestion effluent prior to spreading on farm land. This would have a water quality benefit for livestock producers. Investments in infrastructure will be required.

With new and current renewable energy technology for farms, jobs could be generated in the installation, management and repair of these infrastructure installations.

Outcomes: (How could we measure the success of the Initiative, in terms of jobs, etc.)

Success could be measured through

- Number of installations of renewable energy equipment on farms in Vermont
- Farm numbers and profitability of farms with renewable energy equipment
- Reduction of organic wastes entering landfills and energy production from these wastes

- Jobs could be created and maintained in the field of technical assistance to farmers in selection and implementation of renewable energy on farms and the continued operation and maintenance of this equipment.

Project Number P20.

Project Name Food Safety Program to Maintain Market Access and Ensure the Integrity of the Vermont Brand

Issue: Food safety is a paramount issue facing Vermont fruit and vegetable operations. Producers want to produce safe and healthy food that consumers demand and that protects the quality reputation and brand associated with Vermont agriculture. Most wholesale and retail customers seek assurance that food safety practices are being followed by all farms they purchase from. Many customers are more than ever aware of where their food comes from and connected to the local growers that represent Vermont's community-based agriculture system. Vermont Agency of Agriculture, Food and Markets (VAAAFM) supports the premise of a food safety program and the regulatory authority needed for implementation.

Since 1998, USDA Good Agricultural Practices (GAPs) have provided voluntary guidelines for produce farmers to reduce the risk of microbial contamination related to food borne illnesses on their farms. Now, many producers are pro-actively preparing to adapt to new pending regulatory requirements associated with the U.S. FDA's implementation of FSMA (Food Safety Modernization Act) which will be finalized by the end of June 2015.

VAAAFM currently lacks the statutory authority to implement a produce safety regulatory program but supports developing a state program that offers education, technical assistance, and outreach for compliance prior to enforcement. Vermont's produce industry is receptive to food safety planning and pro-active compliance with food safety regulations but essential infrastructure capabilities are generally lacking. In 2012, UVM Extension estimated a need of \$5-12 million by Vermont vegetable, berry, and apple operations to make necessary equipment and infrastructure improvements to be in compliance with GAP food safety standards. In FY '11 VAAAFM received \$100,000 from Act 52 Section 40 (Jobs Bill) providing capital improvement matching grants to support agricultural producers in obtaining GAP certification. Grants were successfully awarded to 12 fruit and vegetable operations to address: packing procedures, product inventory and tracking, sanitation practices, constructing a pack house, storage space and washing areas. This initial grant program played a vital role in business expansion and job creation for the produce industry in Vermont.

Objective: The initiative will:

- Maintain and expand mid-scale markets for Vermont producers by promoting food safety, ensuring integrity of the Vermont brand, and increasing market access while continuing to grow and expand the state's produce industry.
- Develop the regulatory framework for a food safety program.
- Achieve state-wide of the FSMA by 2017.
- Provide technical assistance, training and planning to support the implementation.

Activity: Final FSMA rules will likely be released during the summer of 2015 and then operations will have 2-4 years to comply, based on farm size. Once FSMA is implemented, many fresh produce growers will be required to adopt and document rigorous production and handling practices that reduce food safety risks.

The proposed rules as they are currently drafted exempt smaller farms with less than \$500,000 in annual food sales if at least 50% is sold to retail customers within a 275 mile radius. Consequently many Vermont growers may not be covered under FSMA regulations. According to the Vermont Vegetable and Berry Growers Association, growers – regardless of total sales or customer base – are indicating their willingness to participate in food safety planning and implementation of on-farm production and handling practices. The sentiment is that food safety is essential on all farms - of all sizes - as it influences market access, impacts economic development within the agricultural sector, and represents Vermont's prominence around value, quality, and brand.

VAAFM recommends the development of a state-level FSMA-compliant food safety program that focuses on education, technical assistance and outreach for compliance prior to enforcement. A comprehensive Vermont Produce Safety and Market Access Program that offers food safety education and training, financial assistance for capital improvements, and regulatory assistance to meet FSMA requirements will support and expand Vermont's fruit and vegetable industry.

A program to increase market access and provide economic viability to our state's produce farms would include the following components:

- Develop the regulatory framework for a food safety program within VAAFM;
- Engage stakeholders to partner with VAAFM to co-lead the discussion and development of a Vermont food safety regulatory framework;
- Support ongoing food safety technical assistance, training and planning; and Capital infrastructure cost-share funding to encourage best management practices through installation of priority food safety practices.

Outcomes:

Identification of industry impact of FSMA regulations (number of farms effected);

- Feedback from stakeholders involved with FSMA, and potentially regulated by FSMA, on their regulatory needs, VAAFM statutory authority, and a state food safety regulatory program;
- Development of Vermont statutory authority language necessary to the framework of a produce safety program; and
- Incentive payments to Vermont fruit and vegetable farms to assist with implementing on farm food safety practices that will help their business maintain or access new markets.

Project Number P21.

Project Name (4-10 word title)

Domestic Export

Lead Organization (which organization or agency will be the primary entity responsible for the project?)

Vermont Agency of Agriculture

Primary Contact Person (contact information including, name, title, organization, phone, and email for the person responsible for project submission and providing additional information if needed)

Chelsea Bardot Lewis, Agricultural Policy Administrator, Vermont Agency of Agriculture, 802-522-5573, Chelsea.lewis@state.vt.us

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

Vermont is an export state. Our products are known and respected nationally and internationally for their quality and the strength of the Vermont brand helps our entrepreneurs sell products across the world. Our market access program has been targeted at the international marketplace because of the resources available through Food Export-Northeast. However, many of Vermont's small agriculture and forest products companies are not ready or interested in international exports, but instead need assistance accessing statewide, regional or national markets. This initiative addresses this critical gap in services to assist agriculture and forest products businesses to supply the considerable demand of regional and national markets.

The Vermont Legislature created a Domestic Export Program in 2014, with a small amount of seed funding (\$50,000). The Agency of Agriculture will launch this pilot program with the following components:

Education and Technical Assistance

- Educational workshops and seminars on topics such working with brokers, maximizing the trade show experience, and identifying trends in specific markets

Market Entry

- Statewide Matchmaker bringing together producers and buyers
- Vermont Pavilions at trade shows to build Vermont brand recognition

Financial Assistance for Trade Show

- Matching grants of up to \$2,000 to subsidize the costs of exhibiting at trade shows

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention)

Vermont's food and agriculture sector has been a major driver for job creation in the state. Since 2011, over 1,100 net jobs have been created in the food system, accounting for over 30% of all job growth in the state. In order to sustain this growth and expand the viability of Vermont's farm and forestry businesses, it is critical that we develop new market channels.

Should funding be secured, we anticipate that over 75 businesses will participate in the education, market entry, and/or trade show assistance offered through this program during the first 12 months. **Gringo Jacks** of Manchester has already committed to participating, and anticipate that they will be able to maintain 4 jobs and create 1 job as a result of this program (total of 5 jobs). Extrapolated over 75 businesses, we estimate that in the first year of this program over 10 jobs could be created, and well over 65 jobs could be maintained.

2. **Investment** (private sector investment generated)

Private sector investment is inherent in this project. Trade show grants will be matched by at least 50% in company investment.

3. **Income and Wealth** (increasing income and wealth of Vermont residents)

Building our export economy will bring more revenue into the state, growing our economy and increasing wealth of Vermont residents.

All participating companies will fill out an evaluation immediately after participation, and at the 6 and 12 month mark. The following metrics will be tracked:

- Jobs maintained or created
- Increased sales
- New distributorships
- Connections made
- Sales leveraged : funds invested

4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change)

Market diversification is a critical strategy for resiliency of our small food, farm, and forestry businesses.

5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)

We are in close partnership with the Vermont Department of Tourism and Marketing and the Chief Marketing Officer, and this program will be implemented in concert with the Made in Vermont program, to be rolled out in summer 2014. We also work closely with the Vermont Specialty Foods Association, which supports this program, and Vermont Fresh Network, which will be a partner in the statewide Matchmaker event.

6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)

\$50,000 has been appropriated from the legislature. We have also applied for a USDA Rural Development Enterprise Grant and are exploring a USDA Federal-State Marketing Improvement Program grant.

7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)

We have the partners in place, and funding appropriated from the Legislature to launch the pilot phase of this project within the next 6 months. EDA Funds would enable us to move from a small pilot into a larger, more sustainable program that would reach many more companies and have a more significant impact.

Project Number P22.

Project Name Expanding the Farm & Forestry Technical Assistance Continuum

Lead Organization - Vermont Housing Conservation Board (VHCB), Vermont Sustainable Jobs Fund (VSJF) and industry-based partners

Primary Contact Person - Ela Chapin, Director, Farm & Forest Viability Program, VHCB

Project Description

The Farm and Forestry Technical Assistance Continuum is a program that strengthens the technical assistance network for both farmers and those in the forest products industry. The Vermont Farm Viability Program at the Vermont Housing and Conservation Board has initiated the project and is building the capacity of agricultural capital and service providers to help farmers with accessing financial markets when business growth opportunities are otherwise constrained. The basis of the program is to provide current agricultural support staff with additional experience in finance so that the assistance provided to farmers includes financing options for implementing farm improvement practices. Additional professional development is needed for business advisors who work with value-added food businesses, as there are not enough providers available to meet the needs of growing businesses in this sector (e.g., the VT Agricultural Development Program based at the VSJF provides year-long in-depth coaching to value added businesses but only has the staff capacity to serve the needs of 8-12 businesses per year).

The technical assistance network for forest products businesses is not as robust as that for the agricultural community. This project will build on the success of the Vermont Farm Viability Program to build capacity of technical assistance providers so that foresters and wood products value added businesses can have the necessary full suite of expertise to ensure their long term viability.

Project Assessment

1. **Jobs** (creation and/or retention)

There are more than 500 logging contractors in Vermont. In addition, more than 200 mills employ more than 3,500 Vermonters. Both loggers and mill businesses face a changing landscape and tackling new business practices requires business planning and possible investments. Between 2009-2013, more than 1,500 new jobs have been added in the food manufacturing sector. This program will help existing businesses stay in business and possibly expand.

2. **Investment** (private sector investment generated)

This project will leverage investment by assisting businesses to access capital.

3. **Income and Wealth** (increasing income and wealth of Vermont residents) As with other sectors, the improvement of business practices leads to greater productivity, and requires a broader skill set for workers. The increase in business income leads to higher wage opportunities for skilled workers.

Loggers have an average annual wage of \$25,000 and improvement in income is necessary to ensure long term viability. Food manufacturing workers have an annual wage of \$32,000/year.

4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change).
Comprehensive assistance provides the necessary support to ensure viability for agriculture and the forest product industry that are in a competitive environment. Resiliency of the Technical Assistance provider network to provide services across all economic sectors, not just working lands, will be enhanced. Business acumen will increase which will result in resilient businesses through improved management and financial stability, increased profit margins and greater capacity to pay livable wages.
5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)
The project will be a collaboration between the lead organizations, relevant state agency personnel, industry partners, various service providers (e.g., RDC, SBDC, VMEC) and counterparts from neighboring states.
6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)
Matching funds through VHCB include state and private foundation funds (@ \$100,000).
7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)
Project is already launching this year (has been in planning stages for three years). Second year funds are critical.

Project Number P23.

Project Name Tech Assistance for Farms and Water Quality

RCPP Draft Framework

General Background

- Application to the national pool addressing a multi-state resource concerns (e.g. Lake Champlain watershed)
- Funding max is \$20M – we are striving for as much match as possible to enable us to request the greatest amount – projects that meet or exceed the request will be most competitive
- Addressing water quality, soil health and water quantity (flood resilience) priorities (National NRCS)

RCPP Vision and Goals

1. Enhance regional cooperation
 - Partner involvement
2. More effectively implement and maintain practices
 - Increasing cost-share, flexibility, outreach to increase signups
 - Long-term agreements
 - Incentive for financial benefits increases signup and participation
3. High priority outcomes
 - Leveraging resources
 - Meeting or avoiding regulations
 - Coordinating with state or national efforts
 - Innovation
 - Outcome based

VT Proposal –Lake Champlain Whole Farm Improvement Initiative

Vision and Goals

Vision – to increase soil conservation, enhance flood resilience, improve water quality and ensure farm viability throughout the Lake Champlain watershed as a first phase for developing, testing and implementing the tools and approach we develop to achieve the same vision statewide and regionally.

Goals

Overall: to develop an integrated strategy designed to meet the mutually reinforcing goals of farm economic viability, soil conservation, and clean water and flood resilience, as the best means to achieve our vision.

Specific:

1. Develop a small farm certification program that will assist small farms to be more economically viable and reduce water pollution through implementation of soil management and water pollution control practices
2. Develop an environmental stewardship program that will provide a mix of economic, technical assistance, and regulatory incentives and opportunities for any farmer willing to move above and beyond minimum state and federal requirements.

Project Area – The project will be developed and piloted in the Lake Champlain Watershed where we have the greatest and most immediate challenges driven by an EPA-led Clean Water Act pollution allocation process (Total Maximum Daily Load or TMDL). Over time, our goal is to extend the practices and approach we develop in the Lake Champlain watershed to address all areas where agriculture is a significant component of the water pollution load.

Project Summary

Small Farm Certification Program (Vermont Component)

Small farm dairies in Vermont comprise nearly one-half of the total milking herd but have received a small fraction of resources spent on technical assistance, regulatory oversight, and funding for improved practices.

In the fall of 2014, VAAFMM will begin the rulemaking process for amending the state regulations guiding barnyard and field practices designed to reduce water pollution as part of the state's commitment made to EPA in the development of a Lake Champlain TMDL. The process should be completed within a year. VAAFMM will also increase the level of oversight and technical assistance provided to small farms. There are approximately 850 small dairy farms in the state, with approximately 550 dairies located in the Lake Champlain Basin. We will evaluate and inspect all small dairies in the basin by 2020. This will generate a high need for additional technical assistance and financial cost-share support for farm infrastructure and management improvement.

All small farms will be required to submit a certification of compliance. The development of a Vermont Small Farm Certification Program will ensure a level of compliance using an innovative and creative approach to water quality improvement.

Environmental Stewardship program (Vermont component)

Concurrently with the small farm certification program, we will develop an incentives program that would provide opportunities to farmers who are willing to go above and beyond baseline regulations and implement additional water quality improvement practices. Based on the "certainty" concept adopted by some states, farmers would receive assurance that they are in compliance with all regulations of the state of Vermont and the EPA, and in addition, will have access to levels of valuable incentives and opportunities that will directly affect their farm viability, and their ability to continue to maintain long-term commitments to natural resource protection. As farmers recognize the importance

of water quality protection and see the connection between natural resource management, business planning and farm viability, we have seen an increased interest in innovations such as manure injection, anaerobic digestors, precision feed management and creative use of shared equipment that allow for more diverse nutrient management planning. This program will reward this innovation and incentivize more of this type of expansion and planning to further decrease agricultural water quality impacts.

In focusing on small farms and incentivizing additional management actions, the following actions will be priority activities:

- Farm infrastructure improvement (manure and feed storage, barnyards, heavy use areas)
- Field practices (cover crops, reduced tillage, nutrient management, tile drain management, erosion stabilization)
- Conservation easements (emphasizing floodplains and sensitive areas)
- Forestry practices (forest roads, erosion control)

Activities required for each farm and forestland area to achieve baseline regulations and to achieve certainty will be determined through development of a conservation plan or resource assessment based on an evaluation of individual resource concerns. The plan will require practice implementation and a timeline for qualification for the Environmental Stewardship Program. Multiple partners will contribute the necessary funding, outreach, assessment and implementation of project goals.

Our RCPP application will request funds to help farmers meet state regulations and become positioned for achieving a higher standard that will raise their economic viability, enhance soil conservation, improve flood resilience, and increase water quality protection. In a year-long process of discussion with the agricultural community (Ag Workgroup) during the development of the TMDL, we determined a strong interest in an incentive program that compensated and recognized farmers who had implemented additional water quality practices. Various incentives were discussed, and will be further explored in a planning process with our agricultural advisory committee. Some ***draft*** incentive ideas include:

- 0% interest loans for the purchase of equipment that will help address nutrient runoff reduction (manure injection, reduced tillage equipment)
- Nutrient management plan flexibility – allowing farmers to spread winter manure on land where there would be no water quality impacts (possibly eliminating the need for major waste storage improvements on the farm)
- Recognition – many farmers deal with substantial social and community pressures and believe that recognition of their stewardship, through publicity or signage that was validated by an outside party would provide security and relief.
- Waivers from reports or inspections – while no farmer would be allowed to violate regulations, farmers who have demonstrated commitment to regulations as well as a higher, accountable level of management may receive a “safe harbor” protection from further requirement improvements, relief from reporting or annual inspections.

- BMP challenge – this was a trial program in 2012 where farmers were incentivized to try new field management practices (shorter season corn which increased cover crop success, reduced tillage practices) with the knowledge that any loss in production would be compensated for by the BMP challenge program.
- Increased cost-share – providing a higher rate of support for additional practices

Partner support and leverage

The application will leverage extensive and comprehensive current partner support as well as additional partner resources from non-traditional partners. Some partners have asked about opportunities to participate as well as benefits to their organization or business. Some examples include:

- Dairy cooperatives – can contribute cash or in-kind services that could include assistance by field staff. St. Albans Co-operative has offered a percentage of their field staff time to learn about farm water quality concerns to be able to help producers recognize, find resources for and address any potential on-farm projects.
- Feed/fertilizer dealers – agribusiness of any kind succeeds when a client critical mass exists. These clients, farm producers, will continue to be viable with strong management training and practice implementation that increases their on-farm nutrient allocation and use (rather than running off into streams and lakes) and allows them to meet state and federal regulations without penalty and enforcement. Agribusiness will also need to expand their own employment to address some of the regulatory needs (increased number of nutrient management plans, conservation planning, engineering and monitoring).
- Conservation organizations – groups such as The Nature Conservancy, VT Housing and Conservation Board and the VT River Conservancy can provide match to RCPP funds for conservation easements through their individual donations and fundraising, as well as other grant opportunities they have received, in return, access RCPP easement funds to increase their own programs.
- NGOs – organizations such as the VT Association of Conservation Districts, the Friends of Northern Lake Champlain, and the Missisquoi River Basin Association can provide match to RCPP funds through other grants and donations they receive. In return, they can access technical assistance and outreach funds from RCPP to increase on-farm networking, education and practice implementation.

Project Number P24.

Project Name

Advancing Culinary Arts to support Vermont restaurants and inns

Lead Organization

Vermont Agency of Education in cooperation with the Vermont Agency of Commerce and Community Development

Primary Contact Person

John Fischer, Deputy Secretary, Agency of Education

Phone

email

Megan Smith, Commissioner, Department of Tourism and Marketing

Phone

email

Project Description

The Stafford Technical Center in cooperation with the New England Culinary Institute has developed a program of study that provides advanced training for cooks and others involved in food preparation and service. This training provides the necessary skills to workers that will allow for Vermont restaurants and inns to improve their service and expand the market. During the pilot, NECI and the Stafford Center has prepared several courses

Front of House Servers

Sous Chef

Front of House Management

Line Cook

Baking and Pastry

Certificate of Professional Cooking

Meat fabrication

Sous vide certification

Individual sessions for particular food preparations

This project is to use the results from the pilot effort and expand its delivery to other Career and Technical Centers across the state. Each training has a revenue stream from tuition associated with it. The proposal is for the up-front investment necessary to initiate the training in the other Career and Technical Centers.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** Each set of trainings will accommodate 100 students. In general, these trainings increase the value of the worker about 20%. As with many training activities, the goal is to increase the effectiveness of a worker so that they can improve their career opportunities.
2. **Investment** Estimate to be developed
3. **Income and Wealth** Estimate to be developed
4. **Resiliency** The shortage of trained restaurant professionals is a constraint to the expansion of restaurants in Vermont. In 2012, there were more than 1,300 restaurants in Vermont providing employment to more than 18,000 individuals. Providing enhanced skills training to 2% of the current restaurant workforce reaches more than 360 individuals.
The goal to increase visitation by 10% over the next five years will require an expansion of the restaurant business in Vermont and the number of individuals with those skills by an additional 100 individuals.
5. **Collaboration** – The pilot for this project is a cooperative effort between the New England Culinary Institute and the Stafford Technical Center in Rutland. The expansion of this project to the other Career and Technical Education Centers will build on this cooperation.
6. **Matching Funds** – to be described
7. **Project Readiness** – The results from the pilot will be evaluated during the 2014-2015 school year and the expansion will be ready to move forward for September of 2015

Project Overview P25.

Project Name (4-10 word title): **Wood Pellet Mill in St. Johnsbury, VT**

Lead Organization (which organization or agency will be the primary entity responsible for the project?)
Northeast Vermont Development Association (NVDA)

Primary Contact Person (contact information including, name, title, organization, phone, and email for the person responsible for project submission and providing additional information if needed)

- David Snedeker, Executive Director, NVDA
- Russell Blake, principal in the pellet mill

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

To build a 20,000 ton per year premium wood pellet mill to serve the residential and commercial pellet market in the Northeast Kingdom and other New England states. Wood will be sourced from within the Northeast Kingdom and the northern most counties of New Hampshire. The project will work with foresters and forest landowners for harvesting logs that will lead to the long term development of high quality, productive forests by providing a market for lower quality trees. This project will partner with the Northern Forest Center (based in NH) which is launching the Model Neighborhood Project (which provides subsidized pellet stoves to low income households and commercial facilities) in Lyndonville, VT with the intention of building the demand for wood pellets in the region.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention)

- The feasibility analysis conducted indicates a mill of this size will employ at least 13 employees. A plant of similar size in another part of Vermont employs 24 people. These would be new direct jobs at the mill itself. Indirect jobs include local loggers, log truck drivers and foresters – likely an additional 100 jobs.

2. **Investment** (private sector investment generated)

- This would be a \$4.5million facility with 80% of funding coming from traditional debt sources and 20% being owner and partner financed.

3. **Income and Wealth** (increasing income and wealth of Vermont residents)

- Income through wages would be increased for more than 13 employees as well as the 100+ suppliers of raw materials to the mills.
- By reducing the cost of heating fuel (switching to wood pellets from #2 heating oil) will save money for homeowners and commercial users.

4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change)

- This project would reduce dependency on foreign oil, reduce greenhouse gas emissions, and would provide renewable heat for residents and commercial operations.
5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)
 - This project would be a partnership between Russ Blake as the pellet mill owner, NVDA as the local economic development corporation, local lenders, loggers, log truck drivers, forest land owners, foresters, and end users of the pellets.
 6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)
 - Given the total project cost of \$4.5million, EDA funds would be well matched with private capital.
 7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)
 - An economic feasibility study has been completed along with a wood supply study. A business plan is currently being finalized. Local and state permits still need to be obtained, engineering and equipment studies need to be finalized and capital needs to be raised. The project has been explored over the past year. If funding and permits fall into place, this project could come on line in time for the 2016 heating season.

Project Number 26.

Project Name Forest based recreation destination hubs

Issue:

Vermont is renowned for its forest-based recreation: hiking, wildlife viewing, mountain biking, hunting, skiing and more. The Vermont active outdoor recreation economy (according to the Outdoor Industry Foundation):

- Supports 35,000 jobs across Vermont
- Generates \$187 million in annual state tax revenue
- Produces \$2.5 billion annually in retail sales and services across Vermont
- Accounts for 12% of gross state product

Given the huge economic contribution of recreation, many towns and communities are seeking resources to become Recreation Destination Hubs. The example of Kingdom Trails in Burke, VT which has created a huge boon for the local, regional and statewide economy is often sought to be replicated. People travel from all over the world for this excellent resource. There are many other communities which could benefit from thoughtful planning and design assistance to create a strong, forest-based recreation economy.

Objective: List of 2-5 objectives

- Expand forest-based tourism destinations in Vermont by helping villages and towns develop support facilities and undertake marketing activities.

Activity: Description of the initiative: (50-200 words)

The components of this initiative are:

1. Economic impact study data for emerging non-fee forest based recreation uses (mountain biking, backcountry skiing, destination hiking, etc.)
2. Compile economic impact data for fee based and known recreation uses.
3. Literature review/case studies of trail towns/recreation hubs locally, nationally and internationally.
 - a. Examples: Trail Town Program (<http://www.trailtowns.org/>) along the Alleghany Passage in PA.
 - b. Kentucky Trail Towns:
<http://www.kentuckytourism.com!/userfiles/Industry/Adventure/4%20-%20Trail%20Town%20How%20to%20Guide.pdf>
 - c. Local: Kingdom Trails
 - d. Hunting/Fishing Destination Towns
4. Hire expert to guide a future stakeholder group as a demonstration project (see below)
5. Potential Hubs: Stowe-Rochester, Newport, Waterbury Ride Center, Brownsville, Addison County, etc. Perform initial analysis for potential, solicit proposals to use as template (grant program)
6. Analysis of Businesses in Vermont: what do businesses need to support a recreation-based economy?
7. Incentives for private landowners to allow public recreation access

8. Design a toolkit and facilitated program for communities (including non-profits, towns, town committees, Friends of Groups, etc.) to be able to create a forest-based recreation hub. This will culminate in a program that will award grants to communities for planning and marketing assistance.
9. Training and education on sustainable recreation infrastructure design, construction and maintenance.
10. Funding for recreation infrastructure construction and maintenance (trails, facilities, etc.)

Project Number P27.

Project Name Master Naturalist Program Development: Reconnecting Vermonters to the Great Outdoors

Location: Statewide

Situation/critical issue: (25-100 words)

Vermont residents rank first in the lower 48 states in wildlife-based recreation. In fact, wildlife watching, hunting, and angling bring more than \$700 million to the state each year. Much of this activity takes place in rural areas that rely heavily on this revenue base. However, as the population ages and outdoor recreation loses ground to electronic forms of entertainment, these numbers have begun to slip and the state risks producing a population that no longer is connected to the values of wildlife conservation and environmental protection.

Establishing a Master Naturalist program provides an opportunity to engage our traditional user groups at a higher level, to increase understanding of the natural world, to encourage participation in conservation and recreation activities taking place statewide, and to develop a future generation of Vermonters who are more actively engaged in the natural world. With a strong instructional base, these Master Naturalists will help contribute to future conservation of and recreation activities within the state by serving as mentors and knowledge sources for both residents and visitors to Vermont.

Description of the initiative: (50-200 words)

This project will create a partnership between Vermont Fish & Wildlife educators, natural resources instructors, department scientists and faculty at Vermont colleges to develop a curriculum that will train and certify participants to become Master Naturalists. The curriculum will cover such areas as ecology, natural history, and environmental issues specific to Vermont. It will also provide an understanding of wetland ecosystems and the importance of upland habitats. The program will consist of classroom presentations, discussions, videos, field trips, and practical experience in interpretation. Students receive detailed course manuals and, upon completion, certificate of achievement, patch and pin, and registration in our online student database.

Outcomes: (How could we measure the success of the initiative, in terms of jobs etc?)

1. Vermont will develop a corps of citizen scientists who actively engage in conservation projects across the state.
2. Schools and other organizations will have broader participation in outdoor and nature-based recreational programs.
3. Attendance at state parks, national forests, and other natural recreational areas will increase both by residents and visitors to the state.
4. Revenue generated in fishing and hunting licenses, boat registration fees, expenditures on recreation and camping gear, utilization of state lands and access areas, and visitation to science museums and similar attractions will increase.

Project Number P28.

Project Name Waste to Work – a statewide job creation and capacity-building initiative

Lead Organization

Central Vermont Community Action Council

Primary Contact Person

David Rubin

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Project Description

Vermont is the first state in the nation to mandate the recycling of organics statewide through its Universal Recycling law passed in 2012. This represents an unprecedented opportunity for Vermont to turn a currently wasted material into jobs, economic development and value-added products. Successful implementation of this legislation will require both new and improved organics management facilities and hauling systems, as well as collection materials, comprehensive job training, and public education. A group of organizations from the nonprofit, public and private sectors have come together in a dynamic partnership to leverage resources from within the food system in the development of the necessary infrastructure. This coalition, developed under the Farm to Plate Initiative, is known as the “Food Cycle Coalition.” The Coalition is a platform for supporting the statewide implementation of the vision behind the legislation. This project will help fund critical organics management infrastructure in the state (such as compost and/or anaerobic digester site improvements and development). It will include funding for organics management facility development, business planning, marketing, and job training. Aligned with Vermont’s Food Residuals Management Hierarchy, which prioritizes (in order from most to least preferred) source reduction, capture of quality food to feed people in need, feed for animals, composting and anaerobic digestion, and energy recovery, this project will create jobs and assist in building sustainable organics management infrastructure.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention)
100 FTE – all of whom are low income and/or currently underemployed Vermonters.
2. **Investment** (private sector investment generated)

This project requires the participation of a large number of businesses throughout the food systems network.

3. **Income and Wealth** (increasing income and wealth of Vermont residents)

This project results in the improvement of job opportunities for individuals from lower income households.

4. **Resiliency** (the extent to which the project increases the ability of Vermont's economy to positively adapt to change)

Vermont has limited infrastructure for the management of the organics portion of the waste stream. The development of these industries diversifies the management of solid waste and introduces a new sector to the economy. Every step to diversify economic activity results in greater resiliency to economic shock.

5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)

This project includes dozens of partners from the public and private sector.

6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)

The overall cost for this program will be \$1.8 million.

\$800,000 is match from HHS, Office of Community Services (pending grant award)

7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)

Planning stage – no or partial planning design work done, partners identified but not fully committed, financing not in place, professionally prepared supporting planning or design done, assumptions are reasonable, significant financing committed, regulatory hurdles minimal.

Project Number P29.

Project Name (4-10 word title)

Wetland Restoration Program - to enhance wildlife habitat, flood resiliency, and water quality

Lead Organization (which organization or agency will be the primary entity responsible for the project?)

Vermont Fish and Wildlife

Primary Contact Person (contact information including, name, title, organization, phone, and email for the person responsible for project submission and providing additional information if needed)

John Austin

Email: John.Austin@state.vt.us

Project Description (200 words or less description of the project including what infrastructure or services are being proposed? how they will be delivered? Starting when and for how long? Targeted clients, customers, or citizens?)

Wetlands function as filters to clean water, as “sponges” to absorb the discharge of “flashy” floodwaters, and as critical wildlife habitat. A recent study by the Gund Institute at the University of Vermont suggested that the wetlands between Rutland and Middlebury saved the town of Middlebury up to 5 million dollars in infrastructure and home damage from Tropical Storm Irene alone (G. Galford, pers com). Given the economic value of wetlands for reducing flood resiliency as well as all of the other natural resource values, the Department of Fish and Wildlife is proposing to restore a previously existing program that was eliminated due to funding cuts. The goal of the program would be to work cooperatively with a wide range of partners (e.g., USFWS, EPA, NRCS, DEC, FPR, Ducks Unlimited, among others) as well as private landowners to identify and develop restoration plans for wetlands in strategic locations within various watersheds in Vermont. Funds would be used to restore a wetland restoration ecologist position in the Department as well as provide funds for the conservation of wetland habitats. This program would build resilience for Vermont’s communities and working lands by creating greater capacity to minimize the effects of floods and loss of high quality agricultural land.

Project Assessment (Projects will be assessed by the CEDS Committee based on the seven primary criteria listed below. For each provide a brief description (1-2 paragraphs for each) of how the project intends to address or impact these criteria.)

1. **Jobs** (creation and/or retention)
2. **Investment** (private sector investment generated)
3. **Income and Wealth** (increasing income and wealth of Vermont residents)
4. **Resiliency** (the extent to which the project increases the ability of Vermont’s economy to positively adapt to change)
5. **Collaboration** (including among public and private sector, state agencies, regional and local governments, and other stakeholders)
6. **Matching Funds** (non-EDA funds leverage for the implementation of the project)

7. **Project Readiness** (how soon can the project be ready for implementation including provision of details on: budget; State, local, regional funds to be leveraged with EDA Funds; and roles and responsibilities of partners)

Project Number P30.

Project Name Build on TechJam and Hackathon

Project Location Statewide

Lead Organization ACCD

Project Description The existing TechJam and Hackathon activities are successful in drawing entrepreneurs and making connections with financing resources. Expanding on this success by locating the activities throughout the state and broadening the participation will build on the brand of the two events and provide greater opportunity for the software and IT sectors.

Jobs TBD

Total Cost

Non-EDA Funding Sources TBD

Project Number P31.

Project Name Burlington Airport Infrastructure Improvement

Project Location Burlington

Lead Organization AOT

Project Description Build Customs facility to facilitate the movement of international passengers.

Jobs

Total Cost

Non-EDA Funding Sources

Initiatives

Finance

- F1a. Improving the Financial Markets in Vermont – Laying the foundation
- F1b. Improving the Financial Markets in Vermont – Building the Client base
- F1c. Improving the Financial Markets in Vermont - Serving the Business Community
- F2. Link New Market Tax Credits with EB-5 investment projects.*
- F3. Establish a Local Vermont Investment Market
- F4. Facilitate Employee Ownership*

Other Finance

- F5. *Local Stock Exchange*
- F6. *Children's savings accounts*
- F7. *Financial and Credit Services*

Workforce Development and Education

- W1. Workforce Needs Assessment
- W2. Coordination of Training Programs*
- W3. Develop New Programs of Study to support Priority Career Pathways in six Key sectors of the Vermont Economy.
- W4. Build a Tech-Savvy Workforce in Vermont via the Statewide Digital Literacy Network
- W5. Vermont Strong Scholars Program*
- W6. Develop Vermont Libraries as Community Anchors for Learning, Eco. Dev. and Engagement
- W7. Establish Vermont Career Week
- W8. Make Vermont Home Campaign*
- W9. Assessment of College Role in Career Training*
- W10. Keep College Grads in Vermont*

Other Workforce

- W11. Advanced apprenticeship through client-based voucher system
- W12. A 12 month Dialogue between the Business Community and Educators
- W13. Adaptive K-12 Education
- W14. Employers/education co-operative that delivers rapid response training
- W15. Traditional Working Landscape Skills Training
- W16. Seasonal Work Combination Careers
- W17. Workforce Transportation Analysis Tool

- W18. Vermont Masters of Business & Entrepreneurship
- W19. Advanced Manufacturing
- W20. Vermont Technology Corps

Physical Infrastructure

- I1. SWAT Infrastructure Teams to Support Local Development of Water, Waste Water and Energy Projects
- I2. Align Funding and Permitting to Implement Small Scale Water and Wastewater Solutions.
- I3. Infrastructure Handbook, Outreach Strategy and Targeted Funding for Ongoing Technical Assistance.

Other Infrastructure

- I4. Supporting Municipal Official Capacity
- I5. Preparing for Universal Recycling
- I6. Collaborative Villages using State GIS and Economic Modelling
- I7. Plug-in Modular Infrastructure for Complex New Economy Solutions
- I8. Local Infrastructure SWAT team
- I9. Commuter rail/village redevelopment
- I10. New village-scale models capitalizing on Vermont Creativity
- I11. Community biomass district heat paired with local infrastructure revitalization
- I12. Keeping Pace with New Development: Real-Time Reporting to Help Agencies Target
- I13. Renewable energy on Vermont farms
- I14. Infrastructure Improvement for Vermont Dairy Farms

Transportation Initiatives

- IT1. Redevelop Airports around high value-added products
- IT2. Redevelop of vacant properties connected to rail network for businesses requiring rail access.

Energy Initiatives

- IE1. Expand mortgage-backed weatherization activities to reduce fossil fuel dependence.
- IE2. Incent building of new high efficiency mobile homes to replace current models and to provide additional affordable housing.

Telecom Initiatives

- ITC1. Deliver reliable, high-speed broadband access and cell coverage to key economic hubs and corridors throughout the state.*

Industrial Sites Initiatives

- IS1. Identify growth industrial growth areas in regions around the state and ensure they have the water treatment, energy, fiber and other needs to accommodate growing businesses.*
- IS2. Improve industrial Building availability for small and emerging businesses.*

Housing Initiatives

- IH1. New Home Construction*
- IH2. Building Renovation*
- IH3. Shared Housing, Creating Rental Units and appropriate housing for Elderly populations.*

Business Environment

- B1. Establish and Enhanced Economic Development Technical Assistance Delivery System for optimum Business Resilience/Success
- B2. Develop a Business Cost Reform Program.*
- B3. Implement a State-Wide Entrepreneurial Accelerator Program*
- B4. Made in Vermont*
- B5. Sector Priority Plan*
- B6. Form a Vermont-wide Benchmarking Roundtable
- B7. Host State Wide survey and workshops on ownership transition to ensure that businesses can be successful on an ongoing basis*
- B8. Create and maintain an innovation index*

Other Business

- B9. Simplify and Better Coordinate Permitting Processes
- B10. Brownfields Transformation
- B11. Inventory of business linkages, network strengths and the effectiveness of the networks
- B12. Vermont Business Resiliency Initiative
- B13. Economic Gardening to Boost Prosperity and Create Jobs
- B14. Twenty first Century Permit Reform in Vermont
- B15. Performance Metrics in Economic Development
- B16. Capitalize on the Vermont Brand for High Value-added Experiences
- B17. Marketing Partnerships
- B18. The Role of Natural Resource Value and Economic Development
- B19. Integrated Permitting
- B.20 Regional Brand Development to Support and Enrich the Vermont Brand
Capitalize on the Vermont Arts
- B21. Solidifying a Grant Opportunity Database and small non-profit support

Sector – Specific Initiatives

S-AM1. Expand Collaborative R&D

S-AM2. Establish ongoing networking opportunities

S-AM3. Development an Entrepreneurial IT Sector

Arts and Culture

S-AC1. Capitalize on the Vermont Arts

Finance & Insurance

S-FI1. Use Legacy Insurance Management ACT passed in 2014 new market.

Food, Forest, Tourism (working lands) Sectors

S-F1. Increase the Availability of Traditional Skills

S-F2. Create Seasonal Work Combination Careers

S-F3. Invest in a Center for Science in Agriculture

Health Care

S-H1. Implement Health Care Reform program

Other Working Lands and Tourism

S-F4. Vermont Center for Fermentation and Microbiology

S-F5. Public Recreation Information and Technology

F1a. Improving the Financial Markets in Vermont – Laying the foundation

Issue:

There are gaps in Vermont's capital continuum to that prevent Vermont businesses from access to capital depending on their size, business sector and stage of development. In addition, businesses seeking outside capital need to have the fundamentals of business management apparent for their future success and to decrease the risk to investors.

Objective:

- Fill the gaps in Vermont's capital continuum to ensure Vermont businesses have access to capital no matter their size, business sector or stage of development.
- Provide entrepreneurs with the resources, advisory capacity and leadership skills they need to be prepared to take on outside capital.

Activity:

- Create a comprehensive database of funding opportunities (based on need, business size, stage of development, scale, and market channel) for enterprises that can be accessed online to accelerate the process of finding capital providers.
- Data collection on actual capital (by category) invested – as well as reasons why capital was not invested - in Vermont businesses in 2013 as a benchmark to understand capital gaps and to measure against in future years
- Recruit and train successful business owners, and target women business owners, who have experience in creative funding strategies to serve as mentors or consultants to new or growing businesses in need of that knowledge.
- Create an online benchmarking tool to help entrepreneurs' assess the risk & benefits of taking on various types of capital (i.e., debt vs. equity) as well as understand industry standards.
- Convene a working group with the Vermont Dept. of Financial Regulation, the legal community, funders / investors and entrepreneurs to strategize on ways to help minimize costs to businesses in raising equity and/or risk capital (i.e., set of template documents, community supported enterprise models, small business offering exemption).

Target populations

- Investors
- Investment institutions
- Businesses with a need for capital

Outcomes:

- Increase the capital available for Vermont businesses

Resources Needed: What resources are required and from what sources e.g. public sector dollars, private-public partnerships grants, in-kind, contributed labor/expertise etc.

F1b. Improving the Financial Markets in Vermont – Building the Client base

Issue:

There are gaps in Vermont's capital continuum to that prevent Vermont businesses from access to capital depending on their size, business sector and stage of development. In addition, businesses seeking outside capital need to have the fundamentals of business management apparent for their future success and to decrease the risk to investors.

Objective:

Fill the gaps in Vermont's capital continuum to ensure Vermont businesses have access to capital no matter their size, business sector or stage of development.

Provide entrepreneurs with the resources, advisory capacity and leadership skills they need to be prepared to take on outside capital.

Activity:

- Create a promotional campaign to educate entrepreneurs (through workshops, case studies and web content), and service provider networks about the wide range of financing tools and models (in addition to traditional debt) such as Micro-Enterprise funding sources, Vermont Small Business Exemption Offering, angel / equity investment, convertible debt, community supported enterprise / agricultural models, Slow Money investment, grants
- Create regional and statewide networking opportunities for entrepreneurs to connect with all types of capital providers (traditional and non-traditional) at a minimum of 2 matchmaking or networking events per year
- Utilize successful business owners, and target women business owners, who have experience in creative funding strategies as mentors or consultants to new or growing businesses in need of that knowledge.
- Create a one-stop location for sophisticated debt, equity, grant and other complex finance packaging assistance either through an existing entity or through a collaboration of providers.
- Develop marketing / awareness campaign to target younger generation and women to become engaged in investment opportunities in Vermont; hold 2-3 angel investing "how-to" seminars around the state to educate on investment process, how to get involved, due diligence, deal structuring etc. Education could include one-day workshop like "Swing for the Fences: Seed Investing for Entrepreneurs / Angels" delivered by the Natl Association of Seed & Venture Funds. See <http://www.dcnteam.com/dcn/web.nsf/pages/swing.html> for example.

Target populations

- Investors
- Investment institutions
- Businesses with a need for capital

Outcomes:

- Increase the capital available for Vermont businesses

F1c. Improving the Financial Markets in Vermont – Serving the Business Community**Issue:**

There are gaps in Vermont's capital continuum to that prevent Vermont businesses from access to capital depending on their size, business sector and stage of development. In addition, businesses seeking outside capital need to have the fundamentals of business management apparent for their future success and to decrease the risk to investors.

Objective:

- Fill the gaps in Vermont's capital continuum to ensure Vermont businesses have access to capital no matter their size, business sector or stage of development.
- Provide entrepreneurs with the resources, advisory capacity and leadership skills they need to be prepared to take on outside capital.

Activity:

- Meaningfully invest in and market, existing technical assistance programs (like Farm Viability and Enhancement Program , VT-SBDC and Peer to Peer Collaborative, Vermont Agriculture Development Program (VADP)) to increase capacity and expertise in entrepreneurial education & business planning service
- Educate entrepreneurs, technical assistance providers and funders on alternative ownership models for businesses and/or leverage cooperative model to ensure facilities have the scale / capacity sufficient for business to survive and match with business owner goal
- Prioritize public funds to co-invest with private investment to accelerate the development of critical, capital-intensive infrastructure (i.e. food processing facilities).

Target populations

- Investors
- Investment institutions
- Businesses with a need for capital

Outcomes:

- Increase the capital available for Vermont businesses

F3. Establish a Local Vermont Investment Market

Issue: Laws that constrain businesses' ability to raise private investment dollars have been relaxed through Congress' 2012 JOBS Act. This reform creates opportunities for Vermont to upgrade its startup environment in ways that effectively balance the implementation of capital appeals with the necessary fiscal oversight.

Preliminary efforts on this topic recognize the need to join both the ability of small businesses to access investment capital and their ability to craft business plans that reflect the necessary attributes for risk reduction to the investment community.

Objective:

- Increase capital available to small startup and growing Vermont companies.
- Develop the opportunity for Vermont investors to provide their capital to local businesses.

Activity:

Vermont should take advantage of new financing opportunities such as crowd sourced funding. In addition to providing small and unaccredited investors with expanded opportunities to invest in Vermont companies, such a marketplace may also support the exchange of ideas between larger investors and small companies that need access to expertise. A Vermont local investment initiative can build on the existing groundwork laid by groups like the Flexible Capital Fund (Vermont Sustainable Jobs Fund), the Vermont SEED Capital Fund (Vermont Center for Emerging Technologies), and Vermont-based crowdfunding platforms like Launchvt.com.

Target populations

- Small Vermont businesses
- Vermont investors

Outcomes:

- Increased capital

F5. Local Stock Exchange

Issue: Description of the situation/critical issue: (25-100 words)

Vermont is a very entrepreneurial state, with the start up or expansion of many businesses thwarted for a lack of flexible capital. With the emphasis on the local growth of businesses, many Vermonters want to invest "patient capital" in local businesses. Oregon has recently passed laws/regulations allowing for the creation of a local stock market. Vermont could do

the same, establishing the regulations that would allow for this type of investment vehicles for local investors. The multiplier effects of this initiative would be huge!

Objective: List of 2-5 objectives

Activity: Description of the initiative: (50-200 words)

F6. Children's Savings Accounts

Issue: Description of the situation/critical issue: (25-100 words)

A number of states have embarked on establishing children's savings accounts, providing a small grant to all children in the state to be invested for their future. Similar to 529 Education Accounts, families and relatives can save money through tax deductible contributions for their children's education. Research indicates that: children with savings are more likely to attend college (4 times); savings increase economic mobility; savings occur when coupled with learning about money & finance; etc.

F7. Financial and Credit Services

Issue: Description of the situation/critical issue: (25-100 words)

The majority of employee stress and absenteeism is due to family financial crises. Under a recent program, CVCAC has been providing financial and credit services to employees of business in central Vermont and the Northeast Kingdom. These services are sponsored by the businesses' Human Resources Departments who don't have the expertise to provide this type of training and counseling. Training and counseling have proven effective in increasing employees' skills, knowledge, and attitudes about money and their financial futures and preliminary findings show decreased absenteeism. The Community Action Agencies have developed this expertise to provide training and counseling and could provide these services statewide.

W1. Workforce Needs Assessment

Issue:

Throughout the CEDS process, the mismatch between worker skills and employer needs arises. Compiling the anecdotal evidence into a systematic assessment will be able to strengthen the activities that are designed to help link workers and good jobs.

Objective:

- Improve workforce training results.

- Improve ability of young workers (and those seeking career changes) to identify jobs or skill development that meet their career objectives.

Activity:

The Department of Economic Development in collaboration with Regional Development Corporations and other partners will develop and apply a survey of Vermont businesses to better understand the needs of employers with respect to specific skills that are currently lacking in the Vermont workforce. In addition, DED will identify other activities that have pursued similar information.

The results of this survey will serve as a mechanism for Vermont state agencies to pursue focused training activities that will hopefully better meet the needs of Vermont businesses. In addition, the survey results will be available for use by school systems (both secondary and post-secondary), employment counselors and private sector trainers. It is also possible, that the public release of the skills survey results can become a resource for individuals outside of Vermont looking for employment.

The continuing use of the survey tool will provide feedback with respect to the success of training and placement activities. Training and placement will be considered successful when needs are being met, and the training and placement activities will be further reviewed when particular skills are unmet.

W3. Develop New Programs of Study to Support Priority Career Pathways in Six Key Sectors of the Vermont Economy.

Issue:

While there are a number of definitions of career pathways, this term generally refers to a series of connected education and training strategies and support services that enable individuals to secure industry relevant certification and obtain employment within an occupational area and to advance to higher levels of future education and employment in that area.

The CTE system is under-utilized and could serve the workforce and economic development needs of the State in a more robust manner. Clearer focus on priority sectors and consistent quality outcomes would better serve the State of VT as well as our youth and adults, business and industry.

Activity:

The current CTE (Career Technical Education) system consists of 15 regional secondary CTE centers and 2 CTE centers located in independent schools serving the region as a regional CTE center. (Lyndon Institute and St. Johnsbury Academy).

There are over 200 programs throughout the State CTE system offered in a variety of delivery systems (part time, half time, full time) and with a variety of outcomes. These programs are organized within the National career cluster and pathway systems consisting of 16 clusters and 79 pathways which align to various labor sectors and occupational codes.

Vermont Agency of Education has identified 6 priority sector/cluster areas for workforce, economic development and education/training. These include:

- Travel/Tourism and Business Systems (Culinary, Hospitality, Accounting, Management, Entrepreneurship)
- Manufacturing/Engineering (STEM)
- Construction/Green Building and Design
- Local Food Systems, Natural Resources (Sustainable Food and Value-added Systems, Forestry)
- Information Technology (Networking, Software Development, Website Design)
- Health/Medical

The proposal consists of the following:

1. State-wide Consortia will guide each of the priority sectors to develop career pathways. Consortia membership will include education, higher education, business/industry, State agencies. Consortia membership can include: secondary and CTE, higher education CTE, business/industry sector specific members.
2. The charge/mission of the cluster/sector State-wide consortia will be to ensure implementation of Programs of Study (POS) covering grades 9-14 (including non-college postsecondary opportunities), endorse a single POS for each priority cluster/sector, recommend industry certifications and other outcomes required in each POS, manage and update as needed the POS competencies and standards, monitor quality outcomes of POS.
3. Consortia will provide a strong State effort towards comparable quality of educational/training programming, spanning middle school through apprenticeship and college, as well as lifelong learning.
4. Comprehensive career development programs will be essential as well as personal learning plans for each student beginning in middle school. Opportunities for flexible learning opportunities which ensure high quality, rigorous integrated academics must be accessible to all students.
5. Priority areas will provide a way to focus a relatively small amount of Perkins funds on a limited number of high priority programs and serve as a catalyst for innovation and change.
6. Opportunities for students to develop 21st century skills will require investment into greater professional development in pedagogy and curriculum as well as performance assessments

of a valid and reliable nature, further developing a State accountability system.

7. POS are defined as a sequence of courses (or experiences) covering grades 9-14 and include non-college postsecondary opportunities. The secondary level courses/experiences must include postsecondary elements of learning.
8. Priority cluster/sector initiatives will reflect Act 77 Flexible Pathways 2013 and the Educational Quality Standards of the Agency of Education.

Outcomes:

- Upon implementation, we would show measurable improvement of high quality outcomes in the graduates of the CTE Priority Cluster POS. This would be measured by the number enrolled, graduated/completers, number of high quality internships and co-op's, number of rigorous industry certifications, number of postsecondary continuation students, persistence to completion of postsecondary credentials (degree, certificates, scaffolded industry certifications, apprenticeship completers, etc)

W4. Build a Tech-Savvy Workforce in Vermont via the Statewide Digital Literacy Network

Issue: In order to thrive and be competitive in the local, national and global marketplace, the Vermont workforce needs citizens who are skilled in computer and digital technologies and in the effective use of digital information resources, and are equipped to be flexible, life-long digital learners. Without a robust statewide program of digital literacy training and learning resources for citizens of all ages and educational backgrounds, we risk having a population of marginalized citizens, unable to navigate the digital world or to find meaningful, well-paying employment.

Although this initiative has a strong focus on workforce development, there are positive consequences related to quality of life. Citizens who have basic computer skills are more likely to have home computers and internet service – or will take advantage of free internet and computers in libraries and other locations. They will also be able to connect online with family and friends, and have access to the wide range of digital resources: reliable health information, e-books from their local library, streaming audio and video content, online chat groups, etc.

The need for “digital literacy” includes a range of skills:

- Basic computer skills: comfort level using computer hardware, use of computer software and apps on mobile devices, effective internet searching, e-government services access, online form completion, email, e-commerce participation

- Advanced skills to perform job requirements: advanced office applications and software programs, advanced internet searching, e-marketing, and social media.

Objective:

Help Vermont citizens acquire the necessary basic digital literacy skills to get a job or advanced skills to get a new job or start or grow a business.

Activity:

The new statewide Digital Literacy Network will build on the foundation established by the Vermont Digital Economy Project and the Internet Intern Program (VT Council on Rural Development, Department of Libraries and CCV). It will expand the first steps that have been taken to establish a new collaborative Task Force with representatives from groups such as: State government (Agency of Commerce & Economic Development, Agency of Education, Department of Labor, Department of Corrections, etc.), public libraries, adult education/Learning Works, K-12 schools, veterans groups, the disability community, non-profits (human services/community action/United Way), Vermont Small Business Development Center, Vermont Business Roundtable, Vermont Businesses for Social Responsibility, VT Works for Women, VT Chamber of Commerce, Vt Council on Rural Development, CCV, etc.

The work of the Network will include:

- Conducting a needs assessment focused on skills needed in workforce development/economic development
- Establishing a clearinghouse with information about existing programs/training opportunities
- Supporting digital literacy training sites across the state (libraries, community centers, schools, career one-stops, senior centers, adult education sites, social service agencies, etc.)
- Developing a “corps” of trainers to provide free/affordable digital literacy training to citizens
- Establishing curricula – and buy-in for using it – with modules designed for diverse populations across the state
- Establishing documentable levels of technical proficiency that correspond to jobs/workforce needs
- Providing transportation to training sites for those who qualify
- Engaging internet service providers and other commercial stakeholder entities

Outcomes:

- Numbers of people who complete digital literacy curricula at various levels of competency
- Increase in overall use of state e-government sites

- Increased enrollment in online continuing education provided by Network partners
- Increase in employers finding job-ready hires (and corresponding decreased need for on-the-job computer skills training)
- Job creation in areas that require use of technology, including home-based businesses
- Increased online presence of Vermont businesses (e.g. number of websites)

Target populations

This initiative will provide support for:

- existing workers who need new and upgraded skills to adapt to changing job requirements and maintain their current level of work
- existing workers who need new and upgraded skills to advance their careers
- people new to the workforce or who are unemployed and need basic or upgraded skills to: (1) find employment opportunities, (2) secure employment, and (3) fulfill job requirements
- citizens who want to grow existing or start new businesses
- citizens who want to take advantage of learning opportunities and job training available through internet resources (both for online courses and in traditional classroom settings)
- workers returning to the workforce (previously full-time parents, veterans, retired citizens);
- all citizens who need to know how to access and use digital tools and learning resources to thrive in the 21st century economy.

W6. Develop Vermont Libraries as Community Anchors for Learning, Economic Development and Engagement

Issue:

Public libraries in the 21st century may not look much different on the outside, but their services and resources have changed dramatically in the past decade and will continue to do so in the future. When the National Telecommunications and Information Administration (NTIA) designed its Broadband Technology Opportunities Program (BTOP) to target “community anchor institutions,” it included public libraries in that grouping. The result is that 43 Vermont public libraries will all soon have high-speed, high-capacity fiber broadband. And when Google was looking for a place to cite community videoconference services in Vermont, they approached the Department of Libraries and we now have free public videoconference service in 14 libraries. What is the future of our public libraries and how do they contribute to the vibrancy of our communities, to the changing nature of information, and to our ever-growing need for life-long learning?

The public library welcomes all citizens – regardless of their geographic location, age, economic circumstance, education level, or ability. Today’s library offers both physical and virtual

services and librarians are navigators of information resources (including digital and electronic formats), connecting citizens (“cradle to grave”) with the tools and resources needed to enrich and enhance quality of life. “Libraries transform lives” is not just a catchy phrase: libraries help people find jobs, access distance learning, gain parenting skills, get access to quality health information, connect with the world via the Internet, learn to read, and become informed and engaged citizens. Libraries can support the development of such 21st skills as problem solving and critical thinking. And libraries are frequently located in the heart of a community center, contributing to the energy of downtowns – and acting as true community anchors. Strong libraries help make strong communities, and are a selling point for attracting new residents, tourists, businesses and economic growth.

The recently issued Statewide Strategic Plan for Future of Libraries in New Jersey offers a blueprint for libraries in a state that has many urban and suburban communities. In the section on “Library as Community Anchor” the Plan states that “[Libraries can serve all kinds of specialized communities we have never served before ... with new immigrants or specialized professionals in our neighborhoods or be local service providers for large-scale organizations that need help with local scale delivery and customization.” What might this look like in Vermont?

- Library buildings with flexible space provide options -- in addition to book collections -- for computer training labs, parent-child interaction, after-school programming, public forums, and both collaborative and quiet study spaces.
- Libraries provide opportunities for innovative partnerships: tourism, small business, healthcare, adult education, government, child care centers, the maker-space community and non-profits.
- Havens and information centers during emergency or disaster situations, providing safe spaces, Internet access, charging stations, telephone services, restrooms and water, and the expertise of librarians (information, technology, referral). During Tropical Storm Irene, local community residents used libraries for those purposes, but also as places to connect with neighbors, tell their stories, and find a place of calm and stability.

The ideas for the library of the future are limited only by the imagination and needs of the local communities in which they reside.

In this initiative we would work with 5-10 “hub” public libraries to pilot a variety of innovative approaches to support learning, economic development, and citizen engagement. Libraries would be selected for: geographic diversity, staff and facility capacity, and local commitment of time and energy. The projects would be designed by collaborative teams in each of the communities, to include representatives from the library, local government, local business, non-profits and education, and would provide a variety of model programs. Other possible partnerships include: regional planning commissions and state agencies.

Project focus could vary widely, and might include:

- Library building: space reallocation and minimal remodeling to create new space for non-traditional learning (e.g. maker space; business incubator; digital literacy and training; career and job center);
- Citizen Engagement: Staff and citizen training to facilitate community-wide discussion and create a “think-tank” model to engage in problem-solving on local issues, or to develop a community environment of civil discourse and engagement. A program that is being used in libraries in other states to “activate communities” is the Harwood Institute: <http://www.theharwoodinstitute.org/>
- “One-stop shopping” in a small, rural library: postal service, health screenings, parenting training, digital literacy training, food bank, etc.
- Business or Agricultural incubator in a library
- Create parent-child center with science discovery centers and other innovative learning tools for children-preschool-Grade 3.
- Computer labs with programs and training sponsored by partners – even when the library is closed.
- Digitization centers with equipment, services and programs that foster the creation and delivery of digital products.

There are challenges, to be sure. Most Vermont libraries are small and chronically understaffed, but by creating these small pilot projects we could see what kinds of services really resonate with local citizens – and which lead to transforming lives and contributing to expanded economic development and personal well-being.

W7. Establish Vermont Career Week

Issue:

While Vermont has a large student population (40,000) and high achievement levels up through grade 8, employers are finding it difficult to attract a skilled workforce and many students are leaving Vermont to either pursue careers in their home state or work for larger corporations. This initiative is designed to raise awareness of the opportunities here and help Vermonters build the skills needed for these and for future jobs.

Objective:

Vermont Career Week would be a statewide initiative with the following goals:

- Raise awareness of industries, opportunities and career paths in Vermont

- Raise awareness of the education and skill sets needed to pursue the above at various levels and the wages associated with various careers
- Connect employers and future employees and contractors
- Connect students of all ages with training and vocational programs
- Provide an annual one-day state-wide job fair

Activity:

One week a year would be set aside where businesses would open their doors to schools and schools (k-16) would focus educational efforts around career opportunities. Regional job fairs would also be held at this time and a marketing effort would be made to encourage skilled out-of-state applicants in sectors where there is a dearth of in-state talent. Bennington currently has a career week in place that could serve as a blueprint other regions could build from. By focusing all activities around one week, the state could build greater awareness of the opportunities here. The week would require a partnership between businesses and educational institutions and have the support of the state at all levels. It would not require much, if any, funding. It would require marketing and coordination.

W11. Advanced apprenticeship through client-based voucher system

Issue:

Entry level employees may not provide adequate value to employers in the short term and yet with job-specific training, their value increases so that they can gain higher wages and provide greater value to the employer.

Getting entry level employees through the early stages of career development is an investment that has benefits for the state by reducing the need for future social services expenditures and increased tax revenue.

Objective:

- Increase the number of entry level workers moving towards full career opportunities
- Decrease the number of low wage workers
- Improve the availability of trained workers for employers.

Activity:

On an individual case basis, link a young worker (or low wage worker looking for a career change) to an employer with an unmet skills need. Provide a financial package matched to a schedule that moves the worker towards the career. At the outset, the package allows the employer to contribute less than market wage to the worker (due to the lack of value provided) or the employer can use the resources to provide specific contracted training. The schedule must include an end date after which the employer – employee relationship is strictly market based.

Target populations

- Business sectors having difficulty finding skilled workers
- Low wage or underemployed workers with an expressed interest in career development
- Organizations that may be able to represent those target populations
 - Vermont Grocers Association
 - Vermont Association of General Contractors
 - Many others

Outcomes:

- Increased income for Vermonters
- Increased productivity for Vermont businesses

Resources Needed: What resources are required and from what sources e.g. public sector dollars, private-public partnerships grants, in-kind, contributed labor/expertise etc.

Possible sources	Resources required	Value/amount
State of Vermont	Analysis is necessary to determine any possible reduction in existing workforce training expenditures and the determination of a success rate that leads to long term increases in tax revenues and decreased expenditures for social service participants.	\$2,500 package for 400 Vermonters (e.g. \$5 per hour supplement ramped to \$0 over 1,000 hours) costs \$1 million
Other		

Scale

400 individuals
100 businesses

Reference to other Vermont planning activities

2006 Next Gen report

[http://labor.vermont.gov/Portals/0/WF%20Development%20Council/Next%20Generation%20Final%20\(2\).pdf](http://labor.vermont.gov/Portals/0/WF%20Development%20Council/Next%20Generation%20Final%20(2).pdf)

Data reflecting the current situation that this initiative addresses:

There are more than 200 occupations listed by the Department of Labor that have current apprenticeship opportunities. The duration of these apprenticeships range from 2,000 to 8,000 hours. These are traditional apprenticeships that do not have public funding support. The Department of Labor states that there are about 750 individuals currently enrolled in apprenticeship activities.

<http://www.labor.vermont.gov/Default.aspx?tabid=214>

W12. A 12 month Dialogue between the Business Community and Educators

Issue:

Business leaders consistently report that entry level workers are often missing fundamental skills necessary for their workforce. Many of the skills could be the focus of public school curriculum and yet, is often, not. This situation is not new and yet there does not seem to be a connection between the sentiments of employers and changes in curriculum structure.

Objective:

At the conclusion of the first 12 months, Vermont will have identified curriculum changes that are more relevant for graduating students to enter the workforce. As a result, Vermont schools will build on their reputation for high achievement.

Activity:

Education leaders face a list of demands to restructure the delivery of services to students. In order for a useful dialog to occur, a deliberate effort to bring educators and the private sector together to address workforce readiness is necessary. This project will seek solutions that are beneficial for students, beneficial for the support of schools, and beneficial for employers.

A first step is to identify representatives of the education community and representatives of the employer community. A trained facilitator will be necessary to ensure that the discussion moves the understanding for both employers and the education community. It may be that past discussions on this topic have allowed the employers to express their need for broad skills (e.g. problem solving) that do not easily translate to curriculum development. Similarly, educators feel that the programs they design are intended to meet employer needs (e.g. technology centers). Adding specificity to the needs so that they can be matched to actual curriculum content may help bridge the current gap.

Target populations

- Vermont Superintendents Association
- Vermont Agency of Education
- Vermont representatives of National Education Association
- Vermont School Boards Association
- Business representatives (to be identified)

Outcomes:

- In the short run – more examples of private sector participation in public school curriculum development, possible participation in delivery of education opportunities
- In the long run - Improved workforce effectiveness

Responsibility: (Who/which organizations will have primary responsibility? Who will provide support?)

Primary responsibility	Support

Resources Needed: What resources are required and from what sources e.g. public sector dollars, private-public partnerships grants, in-kind, contributed labor/expertise etc.

Possible sources	Resources required	Value/amount
State of Vermont		
Other		

Scale

The goal is to have representatives from a broad range of employment sectors and all of the public schools

Reference to other Vermont planning activities

(Ken Jones will look at the AMP report to find the specific language regarding curriculum development)

2006 Next Gen report (see page 19)

[http://labor.vermont.gov/Portals/0/WF%20Development%20Council/Next%20Generation%20Final%20\(2\).pdf](http://labor.vermont.gov/Portals/0/WF%20Development%20Council/Next%20Generation%20Final%20(2).pdf)

Results from “Linking Learning to Life” (now housed at Navicate)

http://issuu.com/linkinglearningtolife/docs/sor_06_11

People Interested in working on this Initiative: List those people who have indicated an interest in contributing to this initiative, and what they have to offer

W13. Adaptive K-12 education system**Issue:**

K-12 learning curriculum lags behind the skills required for participation in more complex jobs and community activities. Employers are uncertain what is emerging, although it is now clear that in order to deal with greater complexity organizations will increasingly require distributed leadership, coordination, human-interaction, cross-boundary synthesis, creativity and critical thinking skills in addition to technical/professional skills. A more nimble education system is required.

Objective:

- Create a more nimble education system in which the young people develop skills that help them better deal with complexity, uncertainty and rapid change, in particular teamwork, leadership, and project management skills in addition to skills in traditional disciplines.

Activity:

Establish an employer-education consortium foundation to provide small grants to Vermont school districts, schools and teachers to engage in strategic partnerships with learning innovators, employers, and community groups to adopt emerging learning methods/skills development approaches.

The program is designed to promote the adoption of new/emerging learning methods such as collaborative/teamwork-based, blended, STEM + L (Leadership), STEAM (including arts), personalized, STEAM+Ag, vocational/makerspaces and project-based learning.

The program will provide incentives for Vermont school districts, schools and teachers to engage in strategic partnerships with:

- Learning innovators (e.g. Marc Prensky, Media Lab, Big Picture Schools, School for Play, Starshine Academy, etc.),
- Organizations in VT (such as the Rowland Foundation <http://therowlandfoundation.org/>) and elsewhere that actively support innovation in education
- Employers of all kinds (corporations, SMEs, social entrepreneurs, artists, farmers etc.) and
- Community leaders and support groups who have local community projects that need support/assistance.

Because of its small size and distributed/personalized nature (90,000 students in 120 school districts), Vermont has the potential to become a world leader in education innovation, by being able to more rapidly adapt/evolve in-line with/ahead of changing skills requirements. Provide clear information to schools, parents and students about emerging job opportunities and what new skills to invest in.

The grants are of two kinds.

- Seed funding to support the implementation of leading edge/innovative education/ learning practices, especially in vocational and higher education. In order to receive a grant, the school district/school must work with:
 - a leading education, economic development, leadership, expert/consultancy group to implement a new program AND
 - a network of employers whose long term interests will be served by preparing young people for more complex work environments, a vocational education/higher education/private training provider, and community organization that will benefit from the improved skill sets, AND
 - other schools in Vermont AND
 - community leaders.
- Funding to expand the program, within a school or beyond the original school or school district.

W14. Employers/education co-operative that delivers rapid response training

Issue: Employers (business, public, and non-profit) can no longer necessarily fill the role of entry-level trainer and this now falls to the education system. The education sector cannot

anticipate the needs of the workforce, often because the employers are not aware of new training needs until they suddenly appear.

Employers have no guarantee that trained employees will stay. Employers may not have the skills or facilities to adequately train people.

Objective:

- Create linkages between employers, educators and workers so all are able to adapt rapidly to changing skills demands in response of social and technological change.

Activity:

An organized, accessible training resource that is a result of collaboration between educators and industry, but also involves people seeking new career opportunities. It allows small business and other employers from the public and not for profit sector to join together to procure the appropriate training and plan personalized programs. One focus of the program will be to try and anticipate future training needs and be prepared for them. A second focus will be to rapidly respond to new skills needs with high quality training programs delivered in a cost-effective manner.

Set up clusters/councils focused on the critical sectors for the Vermont economy to monitor skills and training needs and advise training providers on what is or will be needed..

Outcomes:

- Employers would be able to hire at entry level instead of higher levels
- Increase retention
- Increase focus on business/activity, because training is managed elsewhere
- Rapid response training

W15. Traditional Working Landscape Skills Training

Issue:

Traditional working landscape skills are diminishing (woodcrafting, timber, food growing, value adding production etc.), limiting the ability of Vermont to more fully capitalize on the multiple opportunities in this sector in terms of both production and employment.

Objective:

- Develop the capacity of Vermonters to participate in the working lands sector.
- Increase the available number of employees in forestry and agriculture

Activity:

Develop a multi-entity approach including existing businesses, non-profits/ college and universities, business literacy programs, associations, and any other appropriate resource.

Conduct a market analysis to more fully understand the opportunities for this sector and current or anticipated challenges to the sector. Develop a series of programs (food education, vocational-tech, woods programs (including maple sugaring) and others as appropriate) to strengthen this sector. Develop curriculum, especially for traditional skills. Use Libraries as information and education/training centers. Include skills development in market analysis and development. Include adult learners as current workforce as well as school age learners as the workforce of the future.

Outcomes:

Achieve increases in:

- Amount of product/availability
- New markets created/served for products produced
- Number of people and businesses newly in a market
- New Market areas engaged
- Number of people seeking training

W16. Seasonal Work Combination Careers

Issue:

There are significant gaps in the supply of skilled workers in key sectors of the Vermont economy which could be resolved by offering seasonal workers the opportunity to pursue combination careers which result in the equivalent of full-time work, thereby providing adequate wages for more attractive, long-term housing options.

One major gap is in farming; Vermont farmers have challenges finding labor, which limits the state's ability to achieve its sustainable agriculture goals. Vermont's ski industry is another seasonal work opportunity. Shortages of employees with specific skills is one of the greatest barriers to attracting new businesses and expanding businesses in Vermont, particularly for the green economy.

Objective:

Develop a system that supports combination careers for seasonal workers that creates the equivalent of full-time work.

Activity:

Encourage the establishment of contract employment organizations to recruit workers interested in "permanent"/full time employment who have the skills and interests in working two or more different jobs, for 5-6 months during the skiing season, and in agriculture or forestry during the remainder of the year

Establish a training program for seasonal workers that has three legs. The first leg provides the necessary training and support to advance in a field associated with the original seasonal job such as other roles in the hospitality sector, a second leg enabling the seasonal worker to

acquire the necessary skills for an off-season career, but also a third leg, to enable the workers to develop skills in fields where there are major shortages (e.g. IT), so that over time, the third skill becomes the basis for a permanent career.

Outcomes:

- Create “permanent” full-time equivalent work for young singles and young marrieds
- Reduce the dependence of seasonal workers on economic support.
- Increase workforce to enable the working lands sector to expand.
- Reduce dependence on off-season financial support for seasonal workers
- Facilitate access to housing for which

Target populations

- Seasonal workers
- Employers in the tourism and agricultural sectors
- Contract employment agencies

W18. Vermont Masters of Business & Entrepreneurship

Issue:

Vermont is a state of start-ups and small businesses. Often, whether or not these are successful depends on the education of the principals or access to mentorship. While some of this is available via the Small Business Development Centers, venture capital firms and other resources, many basic business skills—ranging from writing a five-year business plan to tax strategy, best HR practices, etc. — are learned by osmosis.

Objective: List of 2-5 objectives

Activity: Description of the initiative: (50-200 words)

The Vermont Masters of Business & Entrepreneurship would be similar to a classic MBA but with a focus on emerging and small-scale companies. Similar to our new food venture curricula, this program of studies would be offered at a variety of institutions (ranging from state colleges to tech centers to universities) and students could select courses from various institutions (in person or online) and pursue them on their own one or two year time-frame. An MBE would help pre-qualify entrepreneurs for funding or additional help from state supported organizations. The MBE would be a calling card for Vermont in attracting entrepreneurs to the state, and helping them find success. It could also be used as a means to attract venture capital. It would build from programs launched by University of Michigan (currently ranked #1) or even Southern New Hampshire University (primarily online). The Vermont state colleges would take the lead on developing curricula with various tracks. SBDC and others would encourage emerging business leaders to enroll.

Classes would be geared toward basic business literacy with a focus on the skills needed to run a small business, ranging from finance and accounting to marketing and social media to HR and legal issues.

W19. Advanced Manufacturing

Issue:

Manufacturing offers good opportunities in Vermont, not just in food, aerospace, wood products and semiconductors but manufacturing generally. The manufacturing environment is changing rapidly and, therefore, economic development approaches must be adapted to be able to help manufacturing thrive and grow in local and regional economies. Although there have been major decreases in employment nationally in manufacturing in the past 40 years, manufacturing is still a very important part of the economy:

- Manufacturing pays higher than average wages;
- Success in manufacturing is associated with success in the economic base overall contributing to growth in all sectors;
- Manufacturing is an important economic multiplier, and responsible for considerable R&D and exports;
- Manufacturing has stopped shedding jobs and is contributing to the recent recovery.
- Technology is changing manufacturing:
- Declining price of computing power allows small companies to be players in the global market;
- Increasing rate of disruptive technologies make it hard to dominate market for an extended period of time—or at all;
- 3D printing is making it possible for small batch, custom manufacturing.

Opportunities exist in niche manufacturing and at cross-sections of sectors technologies, processes, and knowledge areas including:

- Advanced materials composites and bio-manufacturing;
- Nano-technology and molecular based manufacturing.

On-shoring and near-shoring are creating new opportunities for U.S. manufacturing, driven by:

- Increase in labor costs in China;
- Reduced value of U.S. dollar;
- Added cost of transportation and logistics and getting product into the hands of end-users;
- Increases in American oil and natural gas production are increasing demand for machinery and chemicals and providing lower-cost energy compared to the past;
- Lack of quality control and intellectual property protection outside of the US.

Objective: List of 2-5 objectives

Activity: Description of the initiative: (50-200 words)

The Vermont Advanced Manufacturing Partnership developed a detailed report with recommendations for the cluster which will help strengthen and grow manufacturing in Vermont. The report notes that change in the “face” of manufacturing and that many manufacturing companies are now small, technologically sophisticated with highly skilled workers and global markets.

This initiative involves the adoption of the key recommendations including:

- Develop and implement an education model (K-16) to adopt competency-based math standards for students and teachers that can support advanced manufacturing skills development based on models developed by Boston University and the University of Michigan no later than 2014.
- Develop and implement entrepreneurship curricula in Vermont schools and state colleges such as Champlain College’s “BYOBiz” program. Support and build on the successes and investments of the Vermont Manufacturing Extension Center (VMEC) and its federal partner NIST MEP, to teach and encourage the use of “Innovation Engineering” as a proven system to accelerate the creation and commercialization of meaningfully unique ideas while working with higher education in Vermont to develop a post-secondary curriculum modeled after the Innovation Engineering degree program at the University of Maine.
- Restore full funding to the Vermont Training Program in the Agency of Commerce and Community Development and create a special fund targeted to upgrading the math skills of Vermont workers.
- Help create an “Innovation Ecosystem” to sustain a culture of ongoing practical research and development by developing a non-profit Vermont Advanced Manufacturing

Innovation Center modeled after the Nanotech Center in New York and the Dartmouth Regional Technical Center (DRTC) leveraging the resources of the University of Vermont, Vermont Technical College and the other Vermont state colleges, Norwich University and others as appropriate.

- Develop a “Vermont Innovation Index” with dashboards to monitor trends and compare Vermont to national metrics to measure performance and guide policy and financial investments.
- Create a Manufacturing Division within the Department of Economic, Housing and Community Development and report back to the Governor and legislature no later than June, 2013.
- Create a low-cost virtual tool for manufacturers to exchange information on supply chain issues, excess capacity availability, equipment and space sharing, and other general information to connect Vermont’s manufacturers.
- Facilitate and accelerate expanded access by Vermont manufacturers to global markets using primarily existing technical assistance resources to help them reach the 95% of consumers who live outside our nation's borders.
- Develop an ongoing public relations campaign to tell the manufacturing story. Strategies could include, but are not limited to:
 - Promote an annual Manufacturers’ Open House and/or Manufacturers’ Summit.
 - Create a website and other possible ways to showcase Vermont manufacturers.
 - Encourage local manufacturers in reaching out to local educators and guidance counselors to conduct tours and hold speaking engagements in the classroom.
 - Create annual Innovation Awards for the most exciting research and best practices by Vermont manufacturers.
 - Promote manufacturing speakers for VT National Education Association conventions and local civic organizations such as Rotary International, Lions Clubs, etc. to tell exciting success stories.

Target populations: Who/which organizations might be involved, and how might they be involved or their interests served?

Vermont Manufacturing Extension Center (VMEC) - <http://www.vmec.org/> - helps improve and grow manufacturing in Vermont and strengthen the global competitiveness of the state’s

smaller manufacturers.” -This is accomplished by leveraging private and public partnerships and by providing hands-on implementation assistance, consulting, training and coaching. The goal is to help Vermont manufacturers achieve sustainable and profitable growth through innovation, increased productivity, improved manufacturing and business processes and the adoption of advanced “Next Generation Manufacturing” business practices and attributes, all leading to the creation and retention of high wage manufacturing jobs.

Vermont Aerospace and Aviation Association -

http://www.vtchamber.com/programs/VT_Aerospace-Aviation.aspx/ - founded in 2006 as a part of the Vermont Chamber of Commerce and is charged with representing and serving a network of 250 manufacturers and supply chain partners within the aerospace and aviation industry. The VAAA serves the following industries: Aerospace, Aviation, Automotive, Defense, Energy Services, Utilities, Oil & Gas, Engineering Services, Industrial, Medical Device Manufacturing, Optics, Research & Development, and Telecommunications.

The Vermont Wood Manufacturers Association – <http://www.vermontwood.com/home> - represents nearly 110 primary and secondary processors and related businesses statewide. Member companies employ approximately 2,500 people and produce wood furniture, bowls, toys, carvings, flooring, windows, doors and much more. VWMA's mission is to support the industry in Vermont and promote its long-term viability by expanding members presence in the marketplace, ensuring a sustainable supply of raw materials, increasing workforce skill and acting as responsible employers and community members. Supporting the wood products manufacturing industry in Vermont.

Reference to other Vermont planning activities: (List name of the report and location on web or otherwise)

The Vermont Advanced Manufacturing Partnership developed a detailed report <http://accd.vermont.gov/sites/accd/files/Documents/accd/AMP-Report-2013.pdf> - Completed in January 2013 by the Agency of Commerce and Community Development.

W20. Vermont Technology Corps

Issue: Description of the situation/critical issue: (25-100 words)

This project is modeled after the Youth Conservation Corps and AmeriCorps/VISTA, but involves technology. Students interested in careers in technology apply to the program to spend a year working for a VT technology company with subsidized wages and periodic group training and one-to-one counseling on "soft skills", "work readiness skills," and peer group training in financial management, career exploration, etc. Students receive student loan forgiveness or scholarship assistance with college, if they stay in Vermont for some period of time after the year is up.

I1. SWAT Technical Assistance Pilot Project

Develop a pilot project for ten communities and offer support from four technical assistance teams made up of professional to address the specific community need for water, waste water, and storm water infrastructure. The four teams will cover:

- **Feasibility:** Provide engineering assessments and alternative systems analysis.
- **Financing and Funding:** Assist those communities in developing economic analysis for specific projects and provide guidance on fiscal planning and capital access exploration and benefit estimates to determine project viability. If viable, work with the community on capital budgeting, and bonding as appropriate and help identify and evaluate funding and financing options.
- **Project Management:** Support communities as they move from project feasibility to developing requests for proposal, contracting and construction. Structured project management requirements will provide municipalities with the proper project oversight tools.
- **Public Outreach:** Successful implementation often hinges on voter support. An inclusive, thoughtful education and outreach process can assist in providing information, answering questions and calming fears.

Secure funding and work with project partners to develop a grant process for municipalities to apply for one or more of the SWAT technical assistance teams. A key to the success of this initiative is the creation of a funding package that will allow municipalities to have access to the necessary expertise for project scoping, planning, construction and management.

I2. Align Funding and Permitting to Implement Small Scale Water and Wastewater Solutions

Align funding, permitting and education to replicate the successes of other rural states in implementing small scale water, stormwater and wastewater solutions necessary for economic development. A number of states have invested in education and outreach, planning for permanent management of on-site systems, and used federal funds creatively to enable smaller, decentralized wastewater treatment options that are necessary for maintaining community vitality. New advances in green stormwater infrastructure design and construction provide opportunities to at once beautify communities, save costs and protect the environment. Vermont can do the same. Tackling these issues is not easy, but is critical to Vermont's future. Overcoming these challenges will require additional resources and discussion to develop detailed recommendations.

This would require research into the details of programs in other states including program details, partners, funding, performance measures and any lessons learned.

I3: Infrastructure Hand-Book, Outreach Strategy and Targeted Funding for Ongoing Technical Assistance

Local government in Vermont is rooted in strong citizen participation (most small towns are managed by part-time, unpaid volunteer officials and less than 25% of Vermont's local governments are headed by professional town or city managers). However, managing the increasing complexity of local government leaves volunteer boards little time for strategic or capital planning. In many places, communities need help recognizing which infrastructure investments are worthwhile and necessary to grow jobs,

businesses and housing that can help their economy and their residents. Without this knowledge communities can fail to recognize the benefits of bonding for infrastructure maintenance improvements, and only see the negative aspects of short term tax increases.

Department of Housing and Community Development (DHCD) staff met with the State Treasurer to explore how the state could help municipalities finance infrastructure. We learned that the cost of borrowing money is at an historic low and Vermont has the highest overall credit ratings of the New England states. The ability to issue bonds to support infrastructure is not a problem in most cities and towns. However, voters only support issues they understand and communities need help communicating the necessity and long-term benefits of infrastructure investments. To fill this gap, more state or regional assistance should be targeted at community and capital planning. Capital planning not only helps local officials identify which assets need attention in any given year, it engages the public and can help overcome the reluctance to support critical infrastructure investments necessary for communities to thrive. In addition, improved local capital planning helps local and state government identify needs and save money by investing in maintenance that extends the life of existing infrastructure and, in some instances, helps minimize unnecessary expansions.

Lessons learned and the 'how tos' from the pilot project SWAT technical assistance teams documented as part of the project requirements, compiled into an easy-to-use online manual including check lists, best practices, and sample financing plans and training provided to communities state-wide. Increased education would provide communities with tools and outreach to help more communities create capital and asset management plans that identify, prioritize and fund the infrastructure needed.

Action Steps: not sure how detailed you need – we would need to develop proposals and find funding?

Target Populations:

- Municipal officials
- Developers
- Consultants: Engineers, architects, landscapers

Outcomes:

- New investment in water, waste water and stormwater infrastructure necessary to support new business and housing development within our community centers; thus, reducing development costs and increasing economic opportunities.
- Existing systems maintained, upgraded and sustained.

Responsibilities:

- The Department of Housing and Community Development: Take the lead in developing a full proposal and seeking support from various funding sources.
- Agency of Natural Resources: Partner as they have the expertise in federal and state permitting requirements and latest technology for water, waste water and storm water infrastructure.
- Office of the State Treasurer: Partner as they work on these issues locally and state-wide.
- Regional Planning Commissions: Partner as they work on local and regional planning efforts and have information on development needs, location and quality of existing systems and provide the on-the-ground support to communities.

- Vermont League of Cities and Towns: Partner as they work closely with municipalities and understand the limitations and best outreach and training methods.

Resources Needed: \$500,000- 700,000

Scale: Pilot project for 10 communities; education and research on initiatives in other states would be state-wide.

Reference to other Vermont Planning Activity:

- Report to the Vermont General Assembly on ways to improve and strengthen the state designation programs designed to promote compact development and the efficient use of resources. December 15, 2015. Report link [here](#).
- Wastewater Solutions for Vermont Communities. January 2008. Report link [here](#).
- Vermont State Land Use Goals 24 V.S.A. §4302.
- As part of their FY 2015 contract, the Regional Planning Commissioners will be working with DHCD and others to develop and test a methodology to regionally assess public water and waste water needs. The methodology is proposed to assess existing capacity in villages and downtowns to 1) retain existing businesses and residents, and 2) support the development of additional housing and businesses. This may include an assessment of parcel sizes relative to waste water and drinking water permit requirements, existing water and sewer system capacity and permit limitations (if present) presence of known (to the RPCs) brownfield sites with a contamination issues, and known physical constraints such as watercourses, soils, ledge, and physical infrastructure (roads, sidewalks).

I4. Supporting Municipal Official Capacity

Issue:

Water systems, wastewater, energy siting, and transportation projects all require a strong set of skills and experience. Many Vermont municipalities rely on volunteer boards and administrators without that experience. The success of some communities and the consistent participation of some state agency workers has resulted in a cadre of individuals with experience that can be shared with future community infrastructure projects. That experience may be available either directly or through the development of tools.

Objective:

- Improved performance of municipal government in planning, designing and implementing infrastructure projects.

Activity:

This project will use sample projects to determine more systematic ways to provide municipal officials the support they need to go through each stage of an infrastructure project. One result may be the identification of individuals that are available for assistance.

Another possible result is the development of tools that are applicable for municipal infrastructure projects.

Target populations

- Vermont League of Cities and Towns (in part to get a sense of what already exists)

Outcomes:

- Increased value of public infrastructure

15. Preparing for Universal Recycling

Issue:

Vermont law requires organics to be removed from the waste stream. Complying with the law will require new businesses to foster composting and other organics processing.

Objective:

- Facilitate the formation and growth of businesses that will identify, isolate, transport and process organics to result in value added products.

Target populations

- Vermont Department of Environmental Conservation – Division of Solid Waste Management and the Regional Solid Waste Districts for planning the activity.
- Private sector

Outcomes:

- Increases in Vermonter Income
- Increases in state GDP (any link to GPI is helpful, here)

16. Collaborative Villages using State GIS and Economic Modelling

Issue:

Many more of Vermont's villages and townships have considerable potential to be destinations for local, regional and international visitors, but lack the synergistic mix of shops, restaurants/cafes that ensure success.

Objective:

- Help the 200+ villages and towns in Vermont become more vibrant and economically synergistic.
- Put in place a transparent, adaptive process for local and regional collaboration.
- Create critical mass/synergies for participating Vermont villages and towns so they become highly successful destinations that reflect the Vermont brand.

Activity:

Establish a consultancy that brings together talents from the University of Vermont, other academic institutions as appropriate, ACCD, and economic development partners and allies to optimize the Vermont villages for best economic/social outcomes. Use the State GIS as a transparent way to collect, share and analyze critical data for cross-boundary land-use planning decisions. Use economic modelling to undertake what-ifs of alternative scenarios for citizens to directly explore, understand, and make decisions that help towns/villages/regions identify gaps, barriers, and alternative solutions to the way their townships and villages currently function. The approach should also incorporate/make use of leading edge interaction, leadership, learning and decision methods to help facilitate constructive conversation and collaboration across disciplines, localities and points of view in order to realize tangible outcomes.

Offer the service on a competitive basis to a limited number of villages/towns in any one year, so that they are required to develop local political support within their community and with two or more contiguous neighboring communities in order to participate in the program. The service should conduct what ifs around what elements are missing/could be added to the mix, and to develop and test scenarios to determine what new facilities, businesses, or re-arrangements of existing uses might achieve the greatest synergies.

The villages/towns participating in the program should also consider long term infrastructure development scenarios that take into account the potential optimization of the village or town, including land swap possibilities that might result flood mitigation, improve traffic flows and access, incorporate other features/amenities such as water access and cycle ways/trails that would enhance the visitor experience or improve parking for locals and visitors.

Apply the learning from a recent world-wide study of 50 leading tourism destination villages by James Cook University Department of Tourism published in 2011 that provide the impetus for the initiative. See:

http://eprints.jcu.edu.au/15469/4/15469_Murphy_et_al_2011_front_pages_.pdf

The most successful tourist destination villages have these common characteristics

- A clear theme such as heritage, ethnicity, arts and crafts
- A way of presenting themselves which appeals to the tourist such as streetscapes, signage and parking
- A compact tourist shopping precinct, with links to the main village
- Good transport links to source markets
- Professional approach to imagery, branding and marketing.

Outcomes:

- Increase in business and jobs in the tourism sector
- Revitalization of towns and villages

17. Plug-in Modular Infrastructure for Complex New Economy Solutions

Issue:

Some of the new/emerging industry sectors in which Vermont has the potential to be a significant early and or major player present legal, regulatory, marketing and funding challenges that if overcome, could give the state a significant first-mover advantage.

Typical sectors include any new innovations which have multiple technological parents, that depend upon synergies between multiple parties or complex technological or supply chain ecosystems, and which require cross-boundary skills for which there are no or few courses currently available, or which require unusual combinations of high level technical, creativity and leadership coordination skills for success.

Vermont has chosen to be a key player in several of these new sectors including sustainable clean energy generated locally, electric vehicle transport systems, artisanal food, culinary tourism, high value-add destinations, all of which require this synergistic approach in order to attract and sustain willing entrepreneurs, appropriately skilled workers and investors willing to take the risks.

Objective:

- Kick-start new sectors of the Vermont economy, especially in new-to-the world fields, especially sustainable products/services, complex systems management etc.
- Accelerate development of the green, high-valued added manufacturing and wise application of knowledge economy.
- Deal with the complex regulatory, funding and implementation issues in a whole systems way.

Activity:

This initiative would develop a “plug-and-play” approach that resolves many of the barriers to participating in an emerging, multi-faced opportunity. This requires synergies/critical mass for

success, e.g. Zip cars, the internet, are only really useful when many people are connected into the system.

The sponsor of the program creates a platform or franchise opportunity that designs/develops the systems, procedures and components ahead of time, in order to simplify the complex and expensive array of legal, regulatory, funding, shared capacities/capability issues up-front. This makes it easier for investors to understand the opportunity, to eliminate some of the major risks and identify the skills required, and find the workers most suitable for the tasks.

A (systems of systems) platform approach has been developed by the Vermont Sustainable Jobs Fund to encourage the development of sustainable agriculture (Farm-to-Plate), forestry and biofuels. The Vermont Clean Energy Development Fund has also been developing a modular/platform approach to local community solar energy production, smart-grid and biomass.

This initiative could benefit from the application of systems of systems engineering methods which have been developed by the complex project management community to plan and develop systems with numerous interdependencies.

Examples of where this initiative could assist are:

- Launching new-to-the-world products or services which requires an ecosystem of supporting products and services for success, especially those that offer sustainable, wise application of knowledge or resilient/adaptive solutions.
- Synergistic redevelopment of villages and towns throughout Vermont so they can become thriving visitor destinations embracing culinary tourism, the creative arts and the working landscape

Outcomes:

- Creation of new businesses in emerging sectors e.g. clean energy, in which Vermont can be a world leader.

I10. Local Infrastructure SWAT team

Issue:

Vermont's infrastructure, especially water and waste water, is aging and its redevelopment/replacement is increasingly beyond the planning (and funding) capacities of municipalities/towns and villages to undertake on their own. The leadership of Vermont communities is largely volunteer – about 8,000 people – which changes frequently, exacerbating the issue. Towns and villages are administered mainly by part-time staff, many of whom do not have the skills to plan/undertake major projects. This is a Catch 22 situation. Development/redevelopment by the private sector is often unable to proceed until water, waste water and other infrastructure is in place.

Objective:

- Increase the number of Vermont towns and villages that have adequate infrastructure, especially water and waste water services
- Enable property developers to undertake new projects to redevelop brownfields sites that result in an increase in the revitalization of downtowns, expanded new business investment and increased housing availability.

Activity:

Establish state SWAT teams to help communities design, fund and develop the infrastructure they need. The initiative will help communities:

- Design, plan and implement new infrastructure projects.
- Provide training to local administrators to help develop skills in project management, capital raising, and other areas
- Identify sources and gain access to Federal funding (e.g. EDA, USDA, HUD, EPA).
- Undertake and manage bond issuance, where appropriate/possible
- Work with developers to plan/remediate/redevelop brownfields
- Work with other municipalities/towns (e.g. shared services of many forms)

Outcomes:

- New investment in water, waste water and other infrastructure necessary to support new business and housing development, reduce the cost of housing and increase job opportunities.

I10. Commuter rail/village redevelopment

Issue:

Vermont continues to operate a substantial rail network primarily for freight, for daily services to and from New York via Albany and Springfield/New Haven, but not commuter rail, which has been attempted before but with little success.

The provision of more frequent rail services between towns and villages along a rail corridor is linked to higher rates of economic growth. In the context of a current trend towards young singles and marrieds (for which there is a gap in population/labor market) choosing to re-settle in urban settings within walking distance of amenities, a limited rail commuter or shuttle service may have a synergistic outcome. However, Vermont starts from a very low base; only 0.8% of Vermonters use public transport compared to the national average of 4.8%. %; in part, this is a reflection of the limited public transportation opportunities in the state.

In view of the imminent restoration of the “Knowledge Corridor” Vermonter service in 2014 via Greenfield and Northampton, MA, there may be some demand for greater frequency of services, such as the extension of the New Haven-Springfield shuttle to Brattleboro or White River Junction. Another option might be for a more frequent local commuter service, especially if this could be implemented concurrently with the development of higher density apartment

living in towns along the lines. A Rutland-Middlebury-Burlington-St. Albans corridor is another possibility on which work is already underway.

Objective:

- Determine whether there is sufficient demand to support the extension of the Springfield Shuttle to Vermont destinations or offer some limited commuter rail in combination with the provision of housing that is affordable and attractive to you single and young marrieds.

Activity:

Study the impact of the concurrent redevelopment of downtowns along the I-91 and I-89 rail corridor with an increase in housing density designed to attract young singles and marrieds.

Examine whether the provision of frequent local commuter train services (e.g. Brattleboro-Bellows Falls-White River Junction) would be viable. Examine similar situations elsewhere in the world (e.g. Northern Italy and Switzerland, recognizing these have much higher population densities, but may provide important lessons learned).

Outcomes:

- Understand the relationship between high density housing at transport nodes and more frequent commuter rail transport services In Vermont.

I11. New village-scale town planning models that support Vermont Creativity

Issue:

At each stage of human cultural development, new village/city structures and ways of living come into play. During the second half of the 20th Century, people migrated to the suburbs, abandoning village and urban center living in favor of the one-third acre block. In many suburbs, a new kind of “village” emerged, the shopping center, which became a powerful response to the shift to greater mobility.

The shopping center meme (or unit of cultural communication, which was adopted all around the world and invaded many other cultures) involved the creation of a space with an ultra-large car park, at least one department store, several supermarkets, 50 to 100 specialty shops, a cinema, post office and government services to serve the consumption needs/interests of the suburb dwellers.

As retail and entertainment has become increasingly web/cloud-centric, another major cultural re-organization of our “village/town” spaces is underway. The shift appears to be back to city centers and village scale life, but with the addition of new and necessary features that better support the kind of highly interconnected and interdependent world we now are collectively creating.

The question that arises, is what is the new patterns of living and interacting that are ready to emerge and on which the citizens of Vermont can become a leader? What new “lifestyle technologies” that will underpin this new way of life? How can we now best organize the facilities for where we live, learn, play and work that is a good fit which what is emerging?

How can Vermont capitalize on what is emerging, to reinvent how Vermonter’s live work and play together in a way that is environmentally and socially sustainable, and allows people to bounce back from whatever emerges.

Objective:

- Develop new models of village scale living in Vermont around knowledge work and the creative arts.
- Develop village-scale public-access manufacturing based including makerspaces, 3-D printing that support an artisan community AND modern electronics/software/materials development.

Activity:

Redevelop downtowns around public access design, software development, and manufacturing spaces with libraries playing key roles in developing people, and operating as a hub for personal learning/development and new business incubation.

This project would involve undertaking a series of pilots to explore what new combinations of facilities and restaurants/cafes, experience retail, one-stop shop government services living spaces, and entertainment space would be viable as a 21st century synergistic equivalent of the shopping center.

The initiative will borrow from the multi-function-polis idea from Japan, which argues that in the future we should re-integrate into village scale-living, the functions of home, work, spiritual, play/recreation, learning and nature have become separated. Each aspect of the spaces in which we live our lives is enriched by all the others so that home has elements of play, work, spiritual, learning and nature.

This initiative could be integrated with re-invented library functions that provide high-touch, high-value added response to working and living in the cloud as a place for people to meet, work and learn together, especially in relation to the growth of makerspaces.

Some links:

Public access manufacturing, usually in association with a vocational learning partner

<http://techshop.ws/>

Makerspace links

<http://www.americanlibrariesmagazine.org/article/manufacturing-makerspaces>

Makerspace start-ups

<http://makerspace.com/makerspace-directory>

One of the originals in this space in Rhode Island, and what they have created::

<http://www.as220.org/about/>

Target populations

- Artisans, designers, product developers, software developers and hardware who wish to make new artefacts (makerspaces)
- People who wish to learn a new skill (coaching and mentoring learners)
- People who want to read a book, movie
- People who want to start a business (incubator spaces)
- People who wish to discuss complex problematic issues (Meeting spaces)

Outcomes:

- New businesses
- New skills for people
- New knowledge-based focus for community life
- New ways of working and learning together
- Localization/customization of knowledge created and available anywhere in the world

Resources Needed: What resources are required and from what sources e.g. public sector dollars, private-public partnerships grants, in-kind, contributed labor/expertise etc.

Possible sources	Resources required	Value/amount
State of Vermont		\$100,000 per village for an initial town planning study
Other		

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Scale

5-6 villages/towns a year

I12. Community biomass district heat paired with local infrastructure revitalization

Issue: Description of the situation/critical issue: (25-100 words)

Vermont downtowns face two challenges: 1) aging water and wastewater infrastructure and 2) reliance on imported (to Vermont) and expensive fossil fuels for building heat. Development is hindered by limited infrastructure and by high energy costs, and local forests are not optimally utilized for sustainability and economic impact.

Addressing only water infrastructure creates a lost opportunity to install shared heating infrastructure while the streets are torn up (dig once; pave once).

NOTE: this initiative builds off of/steals from/is designed to complement the Local Infrastructure SWAT Team initiative. See also the description of the issue in proposal "Local Infrastructure SWAT Team")

Objective: List of 2-5 objectives

Activity: Description of the initiative: (50-200 words)

Establish state SWAT teams to help communities design, fund, and develop the water, wastewater, and district heat infrastructure they need, while identifying and developing local sustainable wood sources or local waste/farm digesters to use for district heat. The initiative will help communities:

- Design, plan, and implement new comprehensive infrastructure projects
- Provide training to local administrators to help develop skills in project management, capital raising, utility operation and rate-setting, and other areas
- Identify sources and gain access to Federal funding (e.g. EDA, USDA, HUD, EPA, DOE).
- Undertake and manage bond issuance, where appropriate/possible
- Work with developers to plan/remediate brownfields
- Work with other municipalities/towns (e.g shared services of many forms)

Initiative could be further expanded by tying to organic waste/farm digesters developed as a result of Act 148 and helpful for meeting Lake Champlain phosphorus runoff/TMDL levels.

Outcomes/Performance measures: How could we measure the success of the initiative, in terms of jobs etc?)

- Increase in the number of Vermont towns that have adequate water and waste water infrastructure to support new business and housing development, reduce the cost of housing, and increase job opportunities.
- A greater local market opportunity for low-grade wood/chips, and improved forest health.
- Reduction in imported fuel costs, keeping more heating dollars in state.
- Reduction in the state's greenhouse gas emissions.

I13. Keeping Pace with New Development: Real-Time Reporting to Help State and Local Agencies Target

Issue:

Vermont lacks a system to track the two fundamental drivers of demands for infrastructure improvements, economic development and natural resource protection: new development and the subdivision of lands. Because more than 80% of Vermont's land development occurs under the radar of regional and state agencies, they often don't learn where new development actually occurs until years later when it is finally recognized through the analysis of aerial photos; schools reporting enrollment changes, national census data, or public demands for improvements. With budgets getting tighter and staffs shrinking, our agencies need real-time data that allow them to anticipate where demands will occur so they can proactively allocate staff and resources to meet the growing and changing needs of Vermonters and their communities.

Objective: List of 2-5 objectives

Activity:

This project will develop a simple online system for reporting new development and land subdivisions by taking advantage of GIS and online map technologies. A contractor working at the direction of an interagency working group will develop the system. A single regional planning district can beta-test the system with its constituent towns. Then, when a building permit, certificate of occupancy, subdivision approval or easement is recorded in town records, the municipal zoning officer will enter the relevant information into the reporting system. This will allow the real-time roll-up and dissemination of development data traditionally stored in municipal offices throughout the state in different formats effectively inaccessible to local, regional and state planners.

Reporting categories can be simple and easy to understand, such as:

- New development/subdivision approved and type (housing, business, industrial, mixed)
- Re-development/remodel that changes the building envelope by 10%
- Changes to the primary use of a parcel
- Certificate of occupancy issued

The reporting system can build directly on the statewide electronic parcel map in development by the interagency Parcel Mapping Workgroup (VTrans, ACCD, ANR, VCGI and RPCs). Training and support to help municipalities learn the system will be needed.

Outcomes/Performance measures: How could we measure the success of the initiative, in terms of jobs etc?)

- Vermont will finally have regular, predictable and consistent data to measure changes in development patterns at scales relevant to municipalities and regional planning commissions.
- The data can be used to measure the effectiveness of existing regulations and programs designed to guide development.
- Development hotspots, trends and patterns can be identified as they develop rather than once demand for services peaks.
- Technical assistance and planning support can be tailored to meet the needs of municipalities and regions based on actual and current development trends.
- Because the collected data can directly support the forecasting of population growth, housing units, and employment; businesses can use it to assess the potential for new markets and opportunities, and to fine-tune the goods and services they provide.

I14. Renewable energy on Vermont farms

Issue:

Vermont farms have high demands for energy to feed animals, milk animals, clean equipment, heating, ventilation and lighting for farm structures. Vermont farms also have waste products that can be used to generate energy, have large land bases that may be located away from population centers, can grow energy crops, and can grow fiber crops such as wood and grasses.

Many Vermont farms have tight to limited profit margins and another source of income or a means to reduce energy input costs would be beneficial to long term sustainability. The ability to generate heat to extend the growing season would also allow for greater reliance on local foods during the cold winter months. Barriers to implementation are time to research appropriate renewable sources and available investment funds.

Activity:

Success has been obtained in the adoption of renewable energy production – methane digestion of manure to produce electricity - through the use of consultants to interact with farmers through the decision making, design and implementation process for these projects.

Having information regarding renewable energy opportunities in a centralized location will be helpful and is being tackled by Farm 2 Plate. Increased technical assistance for farms of all sizes

and for all types of renewable energy would expedite implementation. Consultants could be funded to work directly with farmers from the design to the implementation of the project.

There is great opportunity to utilize current and future methane digestion of manure on farms as a method of managing organic waste products that must be removed from landfills as prescribed in ACT 148. Also new technology is being proposed that can further reduce phosphorus from the methane digestion effluent prior to spreading on farm land. This would have a water quality benefit for livestock producers. Investments in infrastructure will be required.

With new and current renewable energy technology for farms, jobs could be generated in the installation, management and repair of these infrastructure installations.

Outcomes/Performance measures: How could we measure the success of the initiative, in terms of jobs etc?)

Success could be measured through

- Number of installations of renewable energy equipment on farms in Vermont
- Farm numbers and profitability of farms with renewable energy equipment
- Reduction of organic wastes entering landfills and energy production from these wastes
- Jobs could be created and maintained in the field of technical assistance to farmers in selection and implementation of renewable energy on farms and the continued operation and maintenance of this equipment.

I15. Infrastructure Improvement for Vermont Dairy Farms

Issue:

In Vermont there are 17 Large Farm Operations (greater than 700 milking cows) and 142 Medium Farm Operations (more than 200 and less than 699 milking cows). The majority of these farms have built new infrastructure within the last 5 to 15 years to meet increasing cow numbers. There are a substantial number of dairy farms (751) farms that milk less than 200 cows and a majority of these farms have not improved infrastructure within the last 20 to 2 years. The total number of farms produce a relatively stable supply of milk at 2.6 billion pounds per year but improved infrastructure would benefit milk production through better cow comfort in Vermont.

Activity: Description of the initiative: (50-200 words)

One of the first steps in any infrastructure improvement or installation is the design of the facility. In Wisconsin, the state supported the dairy industry by providing incentive grants for engineering work on design of new dairy related facilities. Grants would be provided through state and other sources for farms to hire engineers to design new dairy facilities taking into account waste management, integration of new technologies (robot milking machines, ventilation, etc.) and cow comfort.

There are a limited number of agricultural engineers for dairy facilities in Vermont as well as the technical assistance and construction firms for the installation of the equipment required for dairy farms. Education and training could be provided through programs provided by the state and local colleges.

Outcomes:

Success could be measured through

- Number of engineering designs for dairy far infrastructure improvements
- Number of farms that used designed to build new dairy infrastructure
- Increase in trained professionals – engineers, technical assistance and equipment installation in Vermont.

I16. Workforce Transportation Analysis Tool

Issue:

Vermont is a rural state with a majority of employees commuting relatively long distances to employment locations. Businesses currently strongly consider access to highways, rail, and airports in the siting of facilities for the efficient movement of goods, but the consideration of transportation options for employees is critically important as well. The high cost of car ownership and fuel can limit the ability of businesses to attract employees from a wide commute shed, particularly for lower wage jobs. Additionally, recent data indicates that “millennials” are less interested in driving and embrace being able to “stay connected” while they travel, and public transportation allows them to do that. If Vermont hopes to retain and attract this generation of workers, offering convenient and affordable workforce transportation options that do not require an employees to drive alone to work will be very important.

Activity:

Create an interactive online map that combines the public transportation routes and vanpools operating throughout the state with the areas identified in Regional Plans and Town Plans as targeting for business and industrial growth. The map will demonstrate 1) areas targeted for growth and development that already benefit from public transportation and 2) areas intended for growth and development that do not currently offer public transportation resources.

The map should have the capacity to list the level of service on each route and its days and hours of operation so those considering development can better understand whether the existing public transportation service will meet their employees’ needs. The link to the online map should be widely dispersed to economic development partners throughout the state, such as developers, planning commissions, and Act 250 Commissions, as a means to begin the conversation about the critical importance of considering workforce transportation options when siting businesses.

A print version of the map should also be created so it can be displayed at chambers of commerce and regional planning commissions throughout the state. The map should be updated at least annually. Funding will need to be provided to create the map as well as to assist transit providers in compiling the needed information in the proper electronic format.

Outcomes:

Better alignment of business locations with public transportation is not a short term adjustment. The goal of this initiative is to make the various development partners throughout the state more fully aware of the importance of workforce transportation and to provide a tool for analyzing current public transportation resources so they can be used to their fullest extent.

To achieve this goal, the outcomes should include:

- Distribution of the map to chambers and planning commissions in each county/region throughout the state.
- Open houses that include local developers and public transportation providers held in each county/region of the state on an annual basis to help inform each other of plans and challenges.

IT1. Airport redevelopment around high value-added products

Issue:

Airport-related economic zones are common locations for business development. Vermont has 16 airports, of which 13 are owned by the State. Several of these airports, in particular, Newport and Morrisville have good potential for development. The airport at Newport is a Free Trade Zone and there are plans to expand investment via the EB-5 Visa program.

Companies locate in these zones in order to have convenient air freight or private passenger service. In other instances, the businesses are there because their owners or executives are pilots. In some instances, fly-in communities have been developed (e.g. Hidden Lake Estates Airpark in New Port Ritchey, FL –

see <http://www.floridaairporthomes.com/hidden%20lake%20estates%20airpark.php>) to combine residential, business and airport locations.

Objective:

Promote investment in new manufacturing, storage/warehousing and aviation related services at Vermont airports, with particular emphasis on Newport and Morrisville.

Activity:

Explore the opportunity for the establishment of high-value added manufacturing or distribution from one or more airports for emerging industry clusters, e.g. foods/perishables, or components for which there is high regular just-in-time demand.

Outcomes:

- Expand high value-added manufacturing and/or warehousing capacity at one or more airports to support just-in-time delivery to US, Canadian or European locations.
- Expand aviation related services at these airports
- Expand investment through the EB-5 visa program

Target populations

- Foreign investors seeking to migrate to US

IT2. 54. Redevelopment of properties connected to rail network**Issue:**

Vermont owns 305 miles of the rail network, predominantly used for freight haulage, and a substantial number of empty buildings and/or sites with spur lines or sidings.

The rail network is well connected into the regional network, providing good access to major markets for products/commodities made by bulk shippers and customers with large or heavy items.

Activity:

Identify properties and sites that could be redeveloped for manufacturers or distributors of products and produce suitable for rail shipment/delivery e.g. large fabricated plant and engineering equipment such as blades and towers for wind turbines, girders as well as timber products.

Target manufacturers or distributors of products/produce currently hauled by rail including grain for agriculture; cement, lumber and steel building materials; wood chips and pelleted products; fuel/natural gas for residential/commercial use; marble, limestone, talc, granite and slate; marble/granite finished goods/byproducts, salt for de-icing in winter, newsprint and chemicals used in manufacturing

IE1. Expanding Mortgage-backed Weatherization Activities**Issue:**

The State of Vermont has a goal of reducing its reliance on fossil fuels 90% by 2050. One objective to meet this goal is to reduce the heating demand of 80,000 homes 30% by 2020. Weatherization activities are taking place across the state; the current pace of weatherization is not sufficient to meet the 2020 and 2050 goals.

This project will help the State of Vermont to meet its fossil fuel reduction targets by developing the proper incentive package to encourage the expanded use of private capital for

weatherization. Currently, more than \$20 billion in equity exists in Vermont homes. A small percentage of this equity can be applied to weatherization efforts to help meet the goal of weatherizing 80,000 homes by 2020. For example, a \$100 million investment will result in the weatherization of about 10,000 homes and a reduction in fuel oil use of \$6 million annually. The project will have the additional benefit of strengthening Vermont's economy due to the local nature of weatherization activities compared with out-of-states sources for fossil fuels.

Objective:

- Increase building weatherization (improve housing stock)
- Reduce money spent out of state on the purchase of fossil fuels
- Increase employment in the construction sector.

Activity:

One piece of this project is the simple analytic tool of a mortgage calculator that includes energy costs before and after refinance with weatherization. A draft exists at:

<http://accd.vermont.gov/business/resources/ec>

Develop a statewide initiative along the lines of the VPIRG initiative which packaged solar hot water systems and financing on a town-by-town basis, e.g. "Solar Montpelier," for weatherization and renewable energy investments at the household level.

Action steps: List the actions that should be taken, 1....., 2....., 3....etc. Who, What and by when (Year and quarter, e.g 3rd Quarter, 2015)

Target populations

- Banks
- Weatherization service providers
- Organizations currently involved in expanding the participation of home weatherization

Outcomes:

- Increase in capital investment in real property (long term possibility of increasing Grand List value)
- Increase in income to the contractor community

IH1. New Home Construction

- Provide technical assistance and incentives to municipalities to create areas ready for housing development.
- Provide support and training to municipalities to identify and remove zoning barriers and enhance density.
- Support of the creation of Neighborhood Development Areas (NDAs) to reduce development costs and uncertainties in areas designated for growth that are identified and supported locally.

- Provide grants (up to \$20,000) for planning, site identification, drafting regulations and design guidelines, infrastructure analysis.
- Award tiered incentive grants to municipalities when an NDA is created, units permitted and built. Allow grants to be used for any local capital need.
- Match housing developers to municipalities with areas ready for development.
- Promote the creation of accessory dwelling units as a means of increasing density, providing starter units and options for aging households that free up larger single-family homes.
- Target areas with excess water and wastewater capacity for additional housing development.
- Prioritize municipalities with infrastructure needs for the SWAT Technical Assistance Pilot Project to help reduce development costs.
- Work with builders and developers to encourage and facilitate more energy-efficiency and high-performance construction.

IH2. Building Renovation

- Expand funding for the preservation, rehabilitation and creation of housing in areas where homes are not affordable at typical Vermont wages.
- Preserve existing publicly assisted, mixed-income housing in employment centers.
- Improve financing options for single and multi-family developers.
- Create revitalization and reinvestment incentives and tools for housing in blighted areas.
- Identify property tax barriers to investments and improvements in residential housing.
- Foster partnerships between publically funded and private housing developers to create mixed income developments and neighborhoods.

IH3. Shared Housing, Creating Rental Units and Appropriate Housing For Elderly Populations

- Provide incentives for private owners to improve small multi-family rental properties.

B1. Improve Business Technical Assistance Delivery

Issue:

Colleges and Universities are often the source of new ideas that can have future market potential. The commercialization of ideas from the academic institutions benefits from networking and an organized networking function may facilitate the opportunities for academics to move their ideas to action.

It may be useful to think of the academics as more than a source of new products. Some of the social science academics may be able to help in recruiting foreign nationals to Vermont.

Professors within economics and business may be able to help with financing models and computer science academics may be able to help structure the IT needs of a new company.

There is a network of Technical Assistance providers for small businesses and expanding the participation in that network is a goal for this project.

Objective:

Increase success rate for Vermont small business start up and growth companies

Activity:

The State of Vermont will establish a networking function to both gather information useful for starting businesses and facilitate the sharing of that information through the existing service providers. In order for this function to be both effective and efficient with public dollars, the role of the private sector will be greater than other business assistance programs.

It may be that Technical Assistance programs begin by focusing on individual sectors such as additive manufacturing or gaming. It may also be that the programs begin in limited geographic areas. However, the long run benefits from a supply chain perspective and statewide marketing support the idea that the technical assistance program become comprehensive, both for sectors and geography.

B6. Permanent Vermont-wide Benchmarking Roundtable

Issue:

Each region of Vermont has skills/capacities that could be applied to other parts of Vermont.

Activity:

Establish a Permanent Vermont Roundtable in which key the members of sectors - towns/villages, health services, education, businesses both small and large, artisans/artists, hotel/motel operators, farmers, etc. benchmark their performance on issues of critical importance to their sectors and share their learning with others in their sector, or more widely when appropriate.

This approach is modelled on the Health Roundtable, a voluntary organization comprising 130 hospitals across Australia and New Zealand, who work together to learn from each other. Each month, an issue that is critical to the success of the members (or a sub-set) is surveyed/measured. The relevant operational/management staff of the participating organizations then meet, compare notes, and learn from the most successful organizations/operators.

This approach could be applied to providing support to help Villages/Towns across Vermont learn from each other in respect of developing/financing infrastructure, redeveloping brownfields, developing culinary tourism projects etc. Here is a short list of some of the

capacities/skills that participants in the regional workshops regarded as being useful to adopt/adapt from other regions:

- Ability of a region to partner with a major institution so that the institution has woven business into the small town without making the town feel taken over, e.g. Waterbury and GMCR, Middlebury and college,
- Affordable housing and renovation of older structures and infrastructure, e.g. Bennington
- The collaborative success of the Mad River Valley in its tourism ventures
- Co-working spaces in Montpelier and Burlington
- Focus on technology businesses (as undertaken in Chittenden County)
- The northern Vermont cooperation experience and models around food, Hardwick's food venture center
- The ability to integrate technical and liberal arts education, tech centers, e.g. Essex Tech. Communication gap with Bennington Tech Center.
- Regional transportation networks, particularly rural-Chittenden and Washington counties
- Software and technology cluster from Chittenden

Outcomes:

- Rapid learning from others in Vermont leading to greater efficiency and productivity of existing enterprises e.g. reducing the costs of a service/function by eliminating waste/duplication, leading to lower individual/business costs.
- Learning how to start ventures in other parts of Vermont similar to successful existing ventures.

B9. Simplify and Better Coordinate Permitting Processes

Issue:

Around the world, but starkly so in the USA, political leaders are currently unable to work together to implement the kinds of policies, laws and regulations that are needed to enable society to deal successfully with accelerating change, All parties have supporters who have a

vested interest in the maintenance of some aspect of the status quo, rather than adapt to change..

Governance - the way we make, implement and evaluate the impact of the decisions we make together – has not been reinvented to the same degree that every other aspect of our lives has been changed. It is increasingly becoming a millstone around our collective economic necks, preventing us from changing how we teach/learn, how we fund/develop infrastructure, how we resolve conflicts about preserving the environment and heritage while adopting modern technologies, and whether we establish the feedback system such that improvements are made in a timely way rather than avoided.

The State of Vermont, because of its small population, short relationships distance between citizens and political leaders, and the complexity and distributed nature of its governance systems, provides a unique opportunity to be a laboratory for regulatory, policy and governance innovation. This is exemplified by the State's ability to rapidly adopt new laws and regulations for the Captive Insurance Sector.

Debate and discussion continue to dominate, whereas the kinds of discourse necessary for dealing with high levels of complexity and uncertainty - dialectical and ethical dialectical discourse, which integrates interests and ideas – are not valued, nor incorporated into our institutions.

One of these new kinds of discussion – polarity thinking – helps people who are at loggerheads, see the importance/value in the other aspect of an issue, especially the kinds of problems with both/and aspects, which like breathing in and breathing out are both necessary for our survival. These tools will be necessary to decide crucial issues such as how to deal with sustainable energy production, how to transform K-12 education so that the skills people need for an increasingly uncertain are developed ahead of time or how to redevelop villages on they are more vibrant, and blend the old with the new.

Objective:

- Create new jobs in regulatory and governance innovation that help Vermont adapt to transformational change.

Activity:

Establish a multi-disciplinary business unit in association with University of Vermont to turn regulatory, policy and governance innovation into a business.

Build on the success and experience of the Captive Insurance Sector and Vermont's ability to work with legislators to rapidly adapt, adopt, experiment with and fine tune regulatory and governance systems that help provide greater certainty for business in a rapidly

changing/transforming and increasingly more complex world, and at the same time deliver highly desirable win-win outcomes for communities.

Begin by choosing those sectors where governance, regulatory and policy reform could result in the biggest economic AND social gains for the citizens of Vermont, around which the State and its private, not-for-profit and research partners develop synergistic businesses.

In key sectors e.g. sustainable development, food safety, social programs, etc work with Federal and international regulators to operate as a policy/governance and regulatory laboratory at all scales – local, regional, state, national, international.

Work with leading developers of governance and decision making systems to pilot programs in governance and regulatory innovation, especially:

- Systems thinking, including Meadows effective leverages hierarchy
- Polarity, or both/and thinking and implementation
- Complex project management, including evolutionary contracting
- Evolutionary and behavioral economics

Outcomes:

- New approaches to decision making, governance and regulation in Vermont which allow the economic goals of this plan to be achieved.
- Vermont becomes a leader in governance and regulatory innovation in critical fields such as sustainable energy, waste re-use, close-cycle no-waste system (all outputs are inputs to other systems), the best of village scale and modern 21st century amenities.

Scale

- Adaptive governance at every level, state, regional and local.
- Adaptive relationships between business, community, government and not-for-profits that recognize the interdependence of systems and eliminate blame and blame-shifting

Reference to other Vermont planning activities

Relates to all Vermont planning activities.

B10. Brownfields Transformation

Issue:

The owners of brownfield sites take on the responsibility of cleaning them up. However, in Vermont the task may be too complex or risky for many Vermont property owners/prospective purchasers/developers and as a result downtowns remain depressed, blighted or under-

developed, and the pressure to avoid brownfield re-development makes greenfield development more attractive and leads to sprawl. Generally brownfields are regarded as large scale industrial complex/sites, affected by hazardous substances, pollutants or contaminants

However, there are multiple definitions of what a brownfield is depending on the agency or law being used. In Vermont many sites are often small-scale. The contaminants are often the byproducts of early industrial operations which were not regulated at the time, including former gas stations, dry cleaners, automotive repair shops, print shops, and other buildings where chemicals or other pollutants were stored or used.

Objective:

- Bridge the gap between the capacity of developers to undertake the necessary clean-up/redevelopment work and the complexity and risks of the regulatory, funding, and remediation task as well as gaining community support for rezoning/new use.

Activity:

An entity would be established that specializes in the co-ordination of all key regulatory/permitting, investigation, planning and gaining access to funding/grants/loans necessary for brownfield site redevelopment in Vermont. This entity would help developers and communities identify new uses, involve the key stakeholders in the process, source technical and funding assistance including Federal Grants to assist with the clean-up assessments/ investigations and advise or help establish project funding including tax credits and block grants, tax increment financing, and other tools as necessary. A major role of the entity would be to build capacity in the Vermont consulting and economic development communities to support and undertake brownfields redevelopment.

Outcomes:

- Reduce the number of brownfields in Vermont
- Build capacity in local developers and consultants to undertake brownfields development
- Reduce pressure towards sprawl
- Redevelop downtowns so they are more vibrant
- Make Vermont villages and towns very attractive to young people who now favor urban/village-scale living

B11. Inventory of business linkages, network strengths and the effectiveness of the networks

Issue:

Some Vermont business networks are robust, well connected, and appear to contribute significantly to the success in their sector whereas other sectors are poorly connected and could benefit from learning about and adopting the promising practices of others.

Objective:

- Understand how the most successful Vermont business networks are connected and operate.
- Apply this learning to other networks.

Activity:

Undertake an inventory of business networks in Vermont to identify which are the most effective, how they are connected and along what dimensions, and how their approach to working/learning together could be applied to other sectors. Also, learn from the experience of industry clusters in other parts of the world, for example:

- Advanced manufacturing networks in Northern Italy and Southern Germany,
- Knitwear cluster in Bangladesh – (see Cluster Navigators, New Zealand)
- IT companies in Silicon Valley,
- Health Roundtable of 120 hospitals in Australia and New Zealand,
- Complex project management community (UK, France, Canada, Brazil, Australia)
- Future Centers, 30 of them, mostly in Europe that focus on health care (Spain), taxation (Holland), town planning (England) , information technology (Saudi Aramco).

Upon completion of the inventory, identify ways in which better intra- or inter-network collaboration can be used to support Vermont business development, and development programs to provide necessary services and resources.

Outcomes:

- Improved knowledge about the extent, structure and activities of business/industry networks in Vermont
- Identify the networks that are most successful and what makes them so
- Apply the most useful replicable strategies to, or develop new strategies for other sectors, particularly those that are underdeveloped or emerging.

B12. Vermont Business Resiliency Initiative**Issue:**

Many Vermont businesses were caught unprepared by Irene and other such disasters, lacking a plan that could have minimized damage to business premises, preserved inventory and records, and provided customer/supplier/employee information mechanisms.

Objective:

In future business emergencies such as natural disasters and severe adverse weather events, Vermont businesses will have plans in place to minimize losses of property and economic activity due to such disasters.

Activity:

Refine, implement, train potential users and disseminate a new online business damage assessment system which will be beta-tested in January and which can capture business, cultural, historical, and agricultural damage that all partners can access and then send out recovery grant information, etc. to those affected.

Develop and implement resiliency filters/screens for EDA and other Federal and State business funding programs so that funding applicants are required to have developed and tested disaster preparedness, continuity of operations, flood/disaster insurance and other emergency plans to protect public and private investments.

Target populations

- All Vermont businesses particularly those with significant physical inventory and records in flood-vulnerable areas

Outcomes:

- Protection of business assets and investments in disaster-prone areas

B13. Economic Gardening to Boost Prosperity and Create Jobs**Issue:**

Vermont needs to identify second-stage entrepreneurs and make sure they have the right services and resources in place to help existing companies continue their growth trajectory.

Growth entrepreneurs (10-99 employees, revenue between \$1-50 million) are significant job creators because of their appetite — and aptitude — for expansion. And because they often have national or global markets, they bring outside dollars into the community. Called “second stage,” this includes companies with potential for high growth and those with steady growth that may be less dramatic but still impressive. Second stage is a critical juncture for businesses as they are often ‘too big to be small but too small to be big.’

Although funding and resources exist for small businesses and startups, second-stage entrepreneurs have different needs to continue growing. For example, second-stagers wrestle with refining core strategy, adapting to industry changes, expanding their markets, building a management team and embracing new leadership roles.

NOTE: at least 41 states are utilizing this approach and have the data to prove that it works.

Objective:

- Accelerate growth of second stage businesses
- Job creation

Activity:

This initiative would be implemented with and through the National Center for Economic Gardening.

Economic gardening is an innovative entrepreneur-centered economic growth strategy that offers balance to the traditional economic practice of business recruitment. It was pioneered by Chris Gibbons in 1989 in the City of Littleton, Colorado. During the 20-year period that Gibbons practiced Economic Gardening in Littleton, **jobs grew from 15,000 to 30,000 and sales tax revenue more than tripled from \$6 million to \$21 million without any recruiting, incentives or tax rebates.** Economic Gardening isn't about connecting entrepreneurs with support institutions or helping them with workforce development or tax credits. It's about leveraging sophisticated research tools and focusing on very strategic growth issues.

The three basic elements of economic gardening are:

- 1. Providing critical information needed by businesses to survive and thrive.*
- 2. Developing and cultivating an infrastructure that goes beyond basic physical infrastructure and includes quality of life, a culture that embraces growth and change, and access to intellectual resources, including qualified and talented employees.*
- 3. Developing connections between businesses and the people and organizations that can help take them to the next level — business associations, universities, roundtable groups, service providers and more.*

This initiative will address the first element of economic gardening: providing critical information to businesses through high-level technical assistance. This TA comes in the form of a 4-5 person virtual National Strategic Research Team (SRT) that will act as extended staff for each participating company. The SRT engagement focuses on four key strategic issues that are front-loaded in this process and best serve the companies and their immediate needs. They include Core Strategy, Market Dynamics, Marketing Leads, and Management Teams.

- **Core Strategy & Business Model** – Dealing with changes in strategic direction, the business model and opportunity development.
- **Market Dynamics** – Involving the unique relationship between the company, their customer, and their industry.
- **Marketing Leads** – Identifying and finding very specific markets and customers to match the company as it evolves.
- **Management Team** – Issues around the changing role of the entrepreneur and their team as the company grows.

Each business will receive up to 36 hours of SRT time on specific business issues identified by the company with help from the SRT. A business's involvement with the Team typically lasts several weeks and the entrepreneur will need to commit to spending approximately 6 to 8 hours collaborating with the team.

Target populations:

Organizations involved would include the Agency of Commerce and Community Development and the RDCs of Vermont.

Businesses would be primarily second stage businesses that are focused on growth, but can include larger Stage 1 businesses as well.

Companies interested in participating in the Program must meet certain minimum qualifications of second-stage companies. For example, in order to be considered for selection as a participant in the Program, an enterprise must meet the following criteria at the time of selection:

1. Be a for-profit, privately held company headquartered and operating in Vermont.
2. Have between \$750,000 and \$50 million in annual revenue.
3. Employ 6 to 99 full-time equivalent W-2 employees, including the owner.
4. Maintained its principal place of business in Vermont for at least the previous 2 years.
5. Potential growth in revenue next three years must exceed \$1 million.
6. Demonstrated growth in either revenue or employees in 2 of the last 5 years.
7. Provide product(s) and/or services beyond current service area to regional and/or international markets.
8. Exceptions can be made; must be referred by a Program representative.

Note: these criteria can be modified to some extent, but the program is **not** designed for emerging and start-up businesses.

Outcomes:

- For each business, we can measure the number of jobs created and the revenue growth.
- Increase in tax revenue (sales tax, business and income taxes) can also be easily measured.

Resources Needed: What resources are required and from what sources e.g. public sector dollars, private-public partnerships grants, in-kind, contributed labor/expertise etc.

Possible sources	Resources required	Value/amount	
State of Vermont	The program can be scaled up or down depending on how much you wish to spend. The current cost is a maximum of \$4290 per company (if they use all 36 hours allotted). There are approximately 65,000 businesses with headquarters in Vermont, of which 6500 are Stage 2 (10-99	Potential investment options:	
		# Businesses	\$
		25	\$107,250
		50	\$214,500
		75	\$321,750
100	\$429,000		

	employees) and 37,000 are Stage 1 (2-9 employees).	
Other		

Reference to other Vermont planning activities

Addison County Economic Development Corporation has done a small pilot program which recently ended so it's too soon for any real data.

B14. Twenty first Century Permit Reform in Vermont

Issue:

In the late 1980s, Vermont established a multi-agency project to improve permit processing. This program, titled Permit Expediting Program (PEP) established baselines for the time necessary to complete each permit and agencies reported the results of their permit improvements over time. In addition to yielding positive results with respect to permit processing time, PEP also identified some of the major hurdles in completing initial permit applications. As a result, some of the permit programs updated their permit guidance materials

Flash forward to 2013. There are some changes to permits themselves and changes to the application process for most permit programs. The principles of PEP can be re-established to refocus agencies on their permit processing mechanics and to re-open the dialog with businesses regarding the difficulties of permit applications. In addition, the track record of permit issuance can give confidence that most permit applications in Vermont are granted.

Objective:

Build confidence in the private sector that the Vermont permit process has certain outcomes of timeliness and high rates of approval.

Activity:

Establish and publicize the benchmarks for each permit in Vermont. Publish the success rate of permit applications. Use the report during the annual Economic Development summit to get feedback from the private sector on possible areas for improvement.

Target populations

- Vermont state agencies
- Representatives of the business community

Outcomes: Greater confidence in the private sector regarding the certainty of permit applications. Stronger communication between regulators and the regulated community (A metric or some other gauge of business environment needs to be developed)

B15. Performance Metrics in Economic Development

Issue: Both the Executive and Legislative branches of Vermont government are interested in improving the performance measurement systems for all of the state government functions.

There are many programs in Economic Development that will benefit from a closer relationship between the level of investment and the changes in Economic conditions.

Objective:

- Improve the linkage between government activity and economic results.

Activity:

One example is a link between the marketing budget for the Department of Tourism and Marketing and the dollar value of overnight stays at Vermont lodging establishments. The Vermont Rooms tax collects revenue on the basis of that dollar value, therefore, any increase in tourism leads to an increase in Rooms tax revenues. The success of those marketing efforts that have a goal to increase tourism in Vermont will be reflected in an increase in Rooms tax revenue. While Rooms tax revenues are also susceptible to influences beyond the marketing supported by the Agency, just as with other businesses, adaptability to those other economic influences are a realistic challenge for the Agency to tackle.

Another example is the VEGI program overseen by the Vermont Economic Progress Council. The VEGI incentive payment is directly linked to the increase in tax revenues that are expected from growth in the workforce as the result of new business investment. While the VEGI annual report includes the data for these companies after the incentive is provided, there is not currently a mechanism for the discussion of these results.

One possibility is to use the results from Tourism and Marketing and VEGI as a part of the Annual Economic Development Summits starting in the Fall of 2014.

Target populations

- Vermont state agencies as the source of information
- The Vermont business community to discuss the results in considering future economic development policies.

Outcomes:

- Increasing GDP

B16. Capitalize on the Vermont Brand for High Value-added Experiences

Issue:

Should Vermont expand its current marketing efforts that has a focus on tourism to include branded food/agriculture and wood/artisan products as the “Vermont thing” high-value added experiences? If so, in what areas and how can it be done cost-effectively and with measurable results?

Objective:

- Growth in enriched culinary tourism and agricultural/food production jobs including food processing, quality control, marketing and promotion, distribution, presentation etc.
- Brand recognition for Vermont food, beverage and artisan/craft that exudes the "Vermont thing".
- Integration of production/delivery to increase value earned locally.

Activity:

In the commodity-product-service-experiences continuum, the most value is achieved when what we grow/mine/collect or further process is delivered as an experience, e.g. commodity (coffee bean), product (bagged ground coffee), service (cup of coffee at diner or Starbucks), experience (coffee served as part of a memorable culinary tourism experience).

This initiative builds on the current efforts to market Vermont to local, regional and international visitors. It will involve developing/marketing high-value experiences around the creation and enjoyment of boutique/artisan food products (farm stays, “factory” visits etc.) that themselves will carry a distinctive Vermont brand, e.g. cheeses, yogurt, maple syrup, ciders and beers that are truly world class (locavore, local culinary tourism, farm-to-plate, culinary experience in restaurants in Vermont and major cities). Also incorporated into the high-value experience mix will be the process of creating wood products, crafts and art as well as the products themselves (e.g. artisan workshops as storefronts, destination villages with multiple food/art experiences).

A strategy is to borrow from successful whole region branding campaigns such as King Island Dairy in Australia. The promotion of the brand as a must-have experience in and by local restaurants and their chefs, as well as leading chefs and top restaurants in major cities, leads to brand recognition on the specialty supermarket shelf and attracts new visitors to the destination desiring unique/rich experiences associated with the product.

See: <http://www.shimajournal.org/issues/v1n2/d.%20Khamis%20Shima%20v1n2.pdf>

Strategic criteria will be developed for belonging to the brand, so that the product range is seen as a consistent/related, ultra-high quality in terms of environmental and social values. Those

who join the brand should meet high standards of presentation/quality/flavor/texture and consistent packaging/presentation (similar to the French "[appellation d'origine controllee](#)").

Signing up for the program should also include the requirement that each business (restaurant, café, farm, manufacturer, artist, artisan etc.) provides a high-impact experience of the product/service for visitors and provides staff with essential training in marketing, promotion, presentation, quality etc.

Outcomes:

- Increase in both employment and value of goods and services sold by companies that are part of this effort.

B17. Marketing Partnerships

Issue:

The Vermont Department of Tourism and Marketing uses partnerships with individual businesses to complement the dollars available for specific marketing campaigns. Not only are the public dollars leveraged, but having private sector partners adds focus to some of the marketing messages and delivery.

It is possible to pool some of the particular industry sectors in Vermont that do not currently have sufficient exposure. Examples of these, typically smaller business groups include forest products, specialty foods, and possibly some small, high tech manufacturing. The source and formula for public sector funding are to be discussed, but learning from the VDTM approach and understanding the economic benefits for any particular sector are important to move this idea along.

Objective:

- Increase the market share of Vermont products (sales and GDP)

Activity:

Provide matching funds to Vermont business sectors that have organized to develop a marketing strategy.

Target populations:

- One step in this project is to use the CEDS analysis and outreach to identify sectors that will benefit from a public-private partnership for marketing.
- Associations of businesses will be a starting point.

Outcomes:

- Increase the sales of Vermont products (GDP)

B18. The Role of Natural Resource Value and Economic Development

Issue:

Classical economics undervalues natural resource value. The working landscape provides many high value services that are not monetized and therefore, cannot be valued by traditional analyses. A result is that development choices do not take into account impacts on the working landscape.

Objective: List of 2-5 objectives

Activity: Description of the initiative: (50-200 words)

1. Fully characterize aspects of the natural resources that can be monetized

- Water supply and purification
- Water retention and flood and drought control
- Shade and temperature modification
- Wildlife habitat
- Biological resilience in less disturbed and fragmented plots
- Property value on adjacent (built) properties
- Sustainable timber production
- Recreation
- Aesthetic / tourism

2. Describe qualitatively the impacts that are not easily monetized

3. using the analysis of monetized and non-monetized value, provide information and presentations to identified audiences.

B19. Integrated Permitting

Issue:

Under the current system, development projects are required to go through multiple levels of permitting, each with their own guidelines and measures of compliance. Projects move through municipal permitting, and then major projects are required to additionally move through Act 250. The issue arises where certain elements of the permitting process are duplicated with no recognition for the efforts and facts already demonstrated to meet municipal guidelines. Developments are therefore required to duplicate costs and extend timelines to comply with additional layers of permitting despite having already demonstrated the project's compliance.

Objective: List of 2-5 objectives

Activity:

Recognition of municipal development compliance on specific targets during Act 250 review to alleviate cost and timeline inflation due to duplication. Where municipal guidelines and

compliance measures are comparable, or more stringent than, Act 250 guidelines, compliance would be presumed to have been completed in Act 250 review if they have already been satisfied at the municipal level. This could be achieved through municipal approvals creating rebuttable presumptions under certain Act 250 criteria.

Outcomes:

- Cost savings for development projects moving through the permit process.
- Simplified State review.
- Reduced timeline for project applications.

B20. Regional Brand Development to Support and Enrich the Vermont Brand

Issue:

Although some regions of Vermont have distinct and recognizable brands, there are other regions that do not. The Regional Marketing Organizations of the 80's and 90's helped to encourage regions to collaborate, work together, and develop a brand that would help visitors to Vermont distinguish among the many and various opportunities for enjoying all the state has to offer. Regional brands would enrich and add to what VDTM is marketing beyond Vermont's borders, and would bring important attention to areas of the state that are under-marketed. They would also help create marketing partnerships within the region, putting more resources into promotion and marketing.

Objective: List of 2-5 objectives

Activity:

FCRCC and LCIEDC propose to revive the Islands and Farms regional brand, bring the sectors of the tourist-related community together to develop innovative programing, marketing, promotion and community involvement. A cohort would develop an image, slogan, theme and other deliverables that could be utilized over multiple platforms. A consistency of message will help identify the regional identity created. The combination of a strong graphic icon with a strong emotional connection will be a key element in developing loyalty among visitors and buyers, local retailers and other organizations endorsing the brand.

The shared regional events will include our growing interest in diversified agriculture, local foods and markets, and help to support economic growth among supporting producers and farmers. Likewise local artists and crafters will be included in the brand.

Outcomes:

- Increased awareness and appreciation for the region
- Ability for new companies, projects, programs and events to align with the brand and increase visibility
- Available for the entire community to use

- Spread the brand message locally, and through the power of VDTM
- Other regions can replicate our process and develop their own brands.
- The success of the initiative will be evident in an increase in visibility of the region's assets, and an increase in tourism. An increase in the Rooms and Meals Tax would be another measurable outcome.

B21. Solidifying a Grant Opportunity Database and small non-profit support

Issue:

Vermont has a large share of nonprofit organizations carrying out a range of public benefit activities. Since the demise of VANPO, there is no central resource for these nonprofits to share information and expertise. A more vigorous effort to identify potential funding sources and foster partnerships between the nonprofits will increase the flow of grant dollars into the state.

Objective:

- Improve the ability of Vermont nonprofits to access funds.
- Improve the operational aspects of Vermont nonprofits.

Activity:

To move this initiative forward, we will meet with the Vermont Community Foundation and some of the larger granting organizations in the state to determine the focus of the effort that will be most beneficial.

Target populations

- Vermont nonprofit organizations

Outcomes:

- Increase state GDP.

S-AM1. Increase Capacity and Performance for Collaborative R&D & Commercialization between Industry and Institutions:

Issue:

- Total R&D - When measured as a percent of gross state product and compared to other states, Vermont performs at a lower level than the United States and considerably lower than New England. In 2010 Vermont ranked 29th.
- Vermont Industry R&D – Vermont industry performed 24th highest among all state in industry R&D performed as a % of gross state product in 2010
- Vermont Academic R&D - when measured as a percent of gross state product, Vermont outperforms the US as a whole and performs at a level similar to New England as a whole. In 2010 Vermont ranked 11th on this indicator.
- However, industry in Vermont funds only 1.5% of R&D performed at Vermont's universities and colleges, a level that is lower than the US and New England.
- And, there is a mismatch between academic R&D performed and statewide industry strengths in Vermont - In terms of field of study of the academic R&D performed, in 2009 82% of R&D performed at Vermont's universities and colleges was in life sciences. This is driven by R&D performed by the University of Vermont and related to having a medical school. This however creates a mismatch with statewide industry strengths. Overall, Vermont's does not have employment concentrations in life science industries that perform and commercialize R&D. Additionally, Vermont academic R&D is less concentrated in environmental and physical sciences, fields which have high employment concentrations throughout the state; are aligned with Vermont industry sector assets, and offer opportunities for future growth.

Additionally:

- Vermont Ranks Well on Entrepreneurial Climate and Business Formation – this provides an opportunity to convert R&D efforts into new business formations, jobs, and wages.
- Vermont ranks well in patents but it is concentrated in technologies for computer and semiconductors related to the IBM plant in Chittenden County.
- Vermont companies have recent success in attracting venture capital in alternative energy, ecommerce, and media.
- Vermont has a program to incentivize graduates entering STEM occupations that can be leveraged/aligned with this program.
- Vermont has an Innovation Engineering program through Vermont Manufacturing Extension Center which can be utilized to assist start-up and early growth companies as well as mid-to-large companies seeking to innovate.

- Vermont has a strength in leveraging federal Small Business Innovative Research funding.
- Vermont has a host of programs that support R&D, Innovation and Entrepreneurship.

Collaboration and alignment can improve these conditions increasing scale and diversity of R&D and therefore its impact on the state economy.

Objective:

- Increase collaborative R&D among Vermont's research institutions and industry leading to commercialization and innovation in the State's targeted industry clusters
- Increase the State's capacity for competitive R&D to further leverage federal and industry funding
- Diversify the State's R&D, commercialization, and innovation base and align R&D with Vermont industry and Assets
- Increase technology transfer including licensing and spin-offs at Vermont R&D Institutions
- Increase start-up and growth of innovative companies and further increase employment wages, and exports
- Support STEM education and occupations

Activity:

1. Provide R&D/commercialization state grants to leverage collaborative, competitive R&D and commercialization projects among Vermont's research institutions/entities and industry. Grants must include multiple Vermont research entities and private sector industry with preference give to the targeted sectors of:

- Energy and Environment
- Manufacturing – Aerospace, Semiconductor and Circuit Manufacturing, Nanotech, and any manufacturing involving advanced technologies
- Information Technology
- Health/Life Sciences
- Innovation and R&D Intensive Activities regardless of Cluster (catch-all)

2. Expand Innovation Engineering Program to recipients of state R&D funding and Vermont start-ups and early state companies

3. Annually evaluate State programs and investments to support R&D, commercialization, innovation, and entrepreneurship

4. Connect new State funding for R&D with STEM education programs in K-12 and higher education

5. Identify and invite academic talents from around the world with the research interests that align with Vermont's future, and encourage them to collaborate/join with Vermont business, government and higher education institutions.

Target populations:

- Vermont Universities and Colleges and Other Research Institutions Conducting R&D
 - University of Vermont
 - Middlebury
 - Norwich
 - Other new institutes that might be established with unique research interests

- Vermont R&D, Science, and Technology Intensive Companies
- Vermont Science, Technology, and Innovation Support Entities and Organizations
- Vermont EPSCOR - <http://www.uvm.edu/~epscor/new02/>
- Vermont SBIR and STTR
 - http://www.uvm.edu/~epscor/pdfFiles/2013_gww/west_VT%20EPSCoR%20SBIR%20Overview%20090713.pdf
- Vermont Manufacturing Extension Center (VMEC) - <http://www.vmec.org/> and Innovation Engineering
- Vermont Advanced Manufacturing Partnership – Full report with recommendations at: <http://accd.vermont.gov/sites/accd/files/Documents/accd/AMP-Report-2013.pdf>
- Vermont Center for Emerging Technologies (VCET) - <http://vermonttechnologies.com/>
- Vermont Science, Technology and R&D Intensive Industry Associations/Organizations
 - Vermont Aerospace and Aviation Association - http://www.vtchamber.com/programs/VT_Aerospace-Aviation.aspx/
 - Vermont Technology Alliance - <http://www.vermonttechnologyalliance.org/>
 - Vermont Technology Council - <http://www.vttechcouncil.org/>
 - Vermont Bioscience Alliance. - <http://vtbiosciences.org/>

Outcomes:

- Increase collaborative R&D among Vermont's research institutions and industry leading to commercialization and innovation in the State's targeted industry clusters
- Increase the State's capacity for competitive R&D to further leverage federal and industry funding
- Diversify the State's R&D, commercialization, and innovation base and align R&D with Vermont industry and Assets
- Increase technology transfer including licensing and spin-offs at Vermont R&D Institutions
- Increase start-up and growth of innovative companies and further increase employment wages, and exports
- Support STEM education and occupations

Responsibility: (Who/which organizations will have primary responsibility? Who will provide support?)

Resources Needed: What resources are required and from what sources e.g. public sector dollars, private-public partnerships grants, in-kind, contributed labor/expertise etc.

Possible sources	Resources required	Value/amount
State of Vermont	Dollars to incentivize collaborative R&D and commercialization between and among Vermont industry and R&D institutions - Grants should be large enough to impact State’s clusters and incentivize large scale initiatives. Consider breaking into two components:	Planning grants to prepare for projects: \$25K-\$50K and R&D/Commercialization projects (\$100-\$500K) to be matched 1:1 by collaborative partners collectively. Additional funding will be needed to provide marketing and communication re: program, technical assistance, administration, tracking and evaluation.
Other		

Reference to other Vermont planning activities: (List name of the report and location on web or otherwise)

Vermont’s Commission on the Future of Economic Development, a 2012-2013 Legislative Committee on Enhancing Vermont’s Software and Information Technology

Vermont Advanced Manufacturing Partnership Report

Vermont’s Energy Future – 2011 Comprehensive Energy Plan - There is potential to grow the alternative energy aspect of the Energy Cluster as the State intends to grow the use of renewable energy setting a goal of 90% of the state’s energy coming from renewable sources by 2050. The Comprehensive Energy Plan recognizes the impact that pursuing alternative and renewable energy sources could have on the local economy in terms of job creation and keeping dollars closer to home. The Comprehensive Plan notes the importance of developing

and implementing Plug-in Electric Vehicle (PEV) infrastructure to support the use of PEV's throughout the state.

The Green Economy and Environmental Enterprises in Vermont: Opportunities for the 21st Century - This report was prepared by the Snelling Center for Government and the Greater Burlington Industrial Corporate to identify ways to advance the green economy in Vermont. The Energy Cluster can fall into the green economy in terms of the need to support innovation, research and development, and entrepreneurial activities related to energy. The report notes the importance of raising "Vermont's profile as a hub of environmental integrity, innovation and opportunity" which can be done through the development of alternative energy sources. The Clean Energy Development Fund - A review of Vermont's Clean Energy Development Fund was also conducted. The CEDF was created in 2005 with the purpose of "increasing the development and deployment of cost-effective and environmentally sustainable electric power resources – primarily with respect to renewable energy resources, and the use of combined heat and power technologies - in Vermont." They offer funding opportunities to businesses and organizations involved in clean energy projects. During 2012, over \$5.7 million was awarded to projects across the state. The CEDF plays a role in advancing the development of renewable energy technologies including PV, solar thermal, wind systems, and biomass projects. Vermont has also recently developed specific assessments and recommendations to support the growth of IT and high tech businesses through the work of a 2012-2013 Legislative

Committee on Enhancing Vermont's Software and Information Technology and a 2102 industry initiative lead by the Vermont Technology Alliance, Vermont Technology Council, and Vermont Bioscience Alliance.

The Committee on Enhancing Vermont's Software and Information Technology Economy was charged with studying "...ways to encourage the continued growth of investment and job creation in the software and information technology sector; to develop strategies to assist software and new media entrepreneurs to start new businesses in Vermont and to foster growth among established software businesses; to review workforce training and education opportunities as they apply to the software and information technology sector; and to review and make recommendations regarding the impact of current state programs and regulations including existing economic incentives and current taxation policies." The Committee identified four key areas in which Vermont state government can take important steps to enhance the software and IT economy, including Education, Marketing, Finance, and Collaboration and Networking. Recommendations include:

- "The state's STEM incentive program is working successfully and should be continued and expanded.
- Vermont's K-12 education system does not provide adequate opportunities for students to learn critical skills that are prerequisites for college level study and career preparation in the fields of computer science and hardware/software engineering.
- State education policy, as it relates to computer science and technology, be amended and reorganized to differentiate between distinct technology programs of study: basic

computer skills (e.g., use of word processing, spreadsheet, and communication applications) – provide critical skills that nearly all students should possess, regardless of career aspirations; IT maintenance (e.g., hardware/software/networking installation and support) – a program of study most relevant for students on a vocational/two-year degree path; and software/hardware engineering – a program of study that supplements college preparatory math and science courses with theoretical and applied education that is specific to software and hardware engineering (e.g., logic, programming theory, and applied software development)

- The state take additional steps to promote its existing internship programs in the technology and scientific fields, and to expand these programs to include teachers and guidance counselors.
- Vermont’s tourism industry promotions emphasize Vermont’s rural agricultural and recreation image mostly to the exclusion of Vermont’s technology sector, which reinforces a misconception that Vermont is not “tech friendly.” The Committee recommends that the Department of Tourism and Marketing promote Vermont’s technology industry and opportunities to both in-state and out-of-state audiences. The Committee further recommends that the Department of Tourism and Marketing co-promote Vermont’s technology industry with other marketing efforts.
- Adjust language in state contracts so that the state shares intellectual property (IP) rights developed under a state contract with the contractor if the contractor is a Vermont-based company, ensuring the state has the right to use the IP and the contractor has the right to develop it commercially.
- The state’s procurement process be improved to offer more streamlined opportunities for Vermont businesses to conduct business with the state.
- The VEGI program be modified to make it more accessible and less burdensome to use for smaller technology companies, which could be accomplished by simplifying the documentation required under the “but-for” clause.
- Funding for first-loss funding and loan guarantees through VEDA be replenished.
- State law be changed to provide preferential treatment for capital gains that are reinvested in Vermont technology companies.
- State law be amended to eliminate the Business Entity Tax for the first three years of the life of the business organized as a pass-through entity.
- Vermont statutes be amended to provide a clear safe harbor provision for the potential employee misclassification of independent contractors in the software and IT sectors.
- Vermont Center for Emerging Technologies (VCET) is working well and provides high value for Vermont’s software and information technology industry.
- Increase funding and provide other appropriate support to Vermont-based technology organizations, industry networking and trade shows, and Angel Investor networking.
- State agencies take necessary steps to make state-collected data more readily available for consumption in machine-readable format.
- The state authorize one property tax exemption to be awarded to a recipient designated by the regional development corporation in each region to support a regional incubator space during the recipient’s first five years of operation.”

- In 2012, an industry initiative led by the Vermont Technology Alliance, Vermont Technology Council, and Vermont Bioscience Alliance found and recommended:
- “The majority of the high-tech companies in Vermont earn 90% or more of their revenue from out-of-state customers.
- Tech companies in Vermont have a hard time finding business financing. The state should do more to help local financial institutions recognize the benefits of investing in Vermont’s knowledge-based businesses.
- Tech companies need educated employees. The vtTA and the VTC would like to see increased communication between Vermont’s tech companies and its high schools and colleges. The state’s new science, technology, engineering and math initiative, which offers a financial incentive for recent graduates who accept STEM related jobs at Vermont companies, is a step in the right direction. The VTC and vtTA members want to see an increased focus, not just on science and math, but on graduating students who can write and reason, and work collaboratively to solve problems.”

Vermont Advanced Manufacturing Partnership - Completed in January 2013 by the Agency of Commerce and Community Development, this report focuses on providing recommendations to help strengthen and grow manufacturing in Vermont. The report notes that change in the “face” of manufacturing and how many manufacturing companies are now small, technologically sophisticated with highly skilled workers and global markets.

Recommendations include:

- Develop and implement an education model (K-16) to adopt competency-based math standards for students and teachers that can support advanced manufacturing skills development based on models developed by Boston University and the University of Michigan no later than 2014.
- Develop and implement entrepreneurship curricula in Vermont schools and state colleges such as Champlain College’s “BYOBiz” program. Support and build on the successes and investments of the Vermont Manufacturing Extension Center (VMEC) and its federal partner NIST MEP, to teach and encourage the use of “Innovation Engineering” as a proven system to accelerate the creation and commercialization of meaningfully unique ideas while working with higher education in Vermont to develop a post-secondary curriculum modeled after the Innovation Engineering degree program at the University of Maine.
- Restore full funding to the Vermont Training Program in the Agency of Commerce and Community Development and create a special fund targeted to upgrading the math skills of Vermont workers.
- Help create an “Innovation Ecosystem” to sustain a culture of ongoing practical research and development by developing a non-profit Vermont Advanced Manufacturing Innovation Center modeled after the Nanotech Center in New York and the Dartmouth Regional Technical Center (DRTC) leveraging the resources of the University of Vermont, Vermont Technical College and the other Vermont state colleges, Norwich University and others as appropriate.

- Develop a “Vermont Innovation Index” with dashboards to monitor trends and compare Vermont to national metrics to measure performance and guide policy and financial investments.
- Study the possibility of creating a Manufacturing Division within the Department of Economic, Housing and Community Development and report back to the Governor and legislature no later than June, 2013.
- Direct ACCD, working with VMEC, to create a low-cost virtual tool for manufacturers to exchange information on supply chain issues, excess capacity availability, equipment and space sharing, and other general information to connect Vermont’s manufacturers.
- Facilitate and accelerate expanded access by Vermont manufacturers to global markets using primarily existing technical assistance resources to help them reach the 95% of consumers who live outside our nation's borders.
- Develop an ongoing public relations campaign to tell the manufacturing story. Strategies could include, but are not limited to:
 - Promote an annual Manufacturers’ Open House and/or Manufacturers’ Summit.
 - Create a website and other possible ways to showcase Vermont manufacturers.
 - Encourage local manufacturers in reaching out to local educators and guidance counselors to conduct tours and hold speaking engagements in the classroom.
 - Create annual Innovation Awards for the most exciting research and best practices by Vermont manufacturers.
 - Promote manufacturing speakers for VT National Education Association conventions and local civic organizations such as Rotary International, Lions Clubs, etc. to tell exciting success stories.

Notes

¹ Vermont’s Energy Future – 2011 Comprehensive Energy Plan. http://publicservice.vermont.gov/sites/psd/files/Pubs_Plans_Reports/State_Plans/Comp_Energy_Plan/2011/CEP%20Overview%20Page_Final%5B1%5D.pdf

² Ibid

³ Clean Energy Development Fund website. http://publicservice.vermont.gov/topics/renewable_energy/cedf

⁴ Clean Energy Development Fund Annual Report to the Vermont Legislature, Fiscal Year 2012. http://publicservice.vermont.gov/sites/psd/files/CEDF%20Annual%20Report_FY%202012.pdf

⁵ Enhancing Vermont’s Software and Information Technology Economy Committee, January 15, 2013, State of Vermont, The Committee on Enhancing Vermont’s Software and Information Technology Economy, www.leg.state.vt.us/reports/2013externalreports/285638.pdf

⁶ Ibid

⁷ Tapping Tech 2.0 - Transforming Vermont's Economy, March 2012, Vermont Technology Alliance, Vermont Technology Council, Vermont Bioscience Alliance, www.tappingtech.org/tappingtech2.pdf

⁸ Vermont Advanced Manufacturing Partnership Final Report – January 2014. <http://accd.vermont.gov/sites/accd/files/Documents/accd/AMP-Report-2013.pdf>

S-AM3. Entrepreneurial IT

Issue:

Information technology though small relative to the whole state economy, offers opportunities that fit well with Vermont. The independent nature of the profession, easy start-up, high wages and integration with other clusters/sectors.

The Information Technology Cluster (also referred to as the “IT Cluster”) includes industries involved in the design, development, support, and management of hardware, software, multimedia, and systems integration services. For this analysis, the IT Cluster does not include hardware, semiconductor, or electronic components manufacturing; those industries are assessed as part of the Manufacturing Cluster. Industries within the IT Cluster are expected to see growth over the next 10 years and IT will become more important in every aspect of the global and Vermont economy. For example, the increased automation of operations in the Forestry and Wood Products Cluster will result in increased demand for those with IT skills to be able to create, manage, and maintain the equipment and lands. The IT Cluster is one that crosses through many aspects of the economy and is, therefore, important to Vermont.

- Overall good fit with Vermont in terms of supporting small independent businesses, entrepreneurs, contractors, and consultants
- Low barriers to entry - low capital requirements
- Can be influenced by quality of place but also requires access to broadband and other talent (for networks)
- Vermont’s strengths based on employment in Custom Computer Programming Services and Computer Systems Design Services
- Vermont’s occupation strengths are based on current size and projected growth, include Computer User Support Specialists, Software Developers (Applications), Network and Computer Systems Administrators, Software Developers (Systems Software), Telecommunications Line Installers and Repairers, and Computer Systems Analysts
- Higher than average wages with higher education degrees (associate’s and beyond) typically required
- Continued growth nationally and globally projected in IT markets - The IT consulting industry is expected to grow further by 1.2% to reach \$337.0 billion in 2013 and global and national growth projected in IT Security, Software and Application Development, Enterprise Software, and Cloud Computing
- IT intersects with other sectors including telehealth, health records, and business analysts

- Recent success in accessing venture capital – media, electronic, internet, and ecommerce companies in Vermont received \$19.3 million in venture capital between 2005 and 2012[1]
- Significant improvement in the availability and quality of broadband throughout the state through ConnectVT, thus making IT businesses, contractors, and entrepreneurs more likely to start and expand
- The State has a program to provide direct incentives for students in STEM to locate and remain in Vermont
- Vermont Center for Emerging Technologies (VCET) provides support (start-up, incubation acceleration) specifically for the software and information technology industry; however the program is relatively small and concentrated in Chittenden County (there is need for expansion of funding and services)
- IT and high tech goods and services are export oriented (i.e. bring new wealth into the state)

Objective: List of 2-5 objectives

- Provide more opportunities of and incentives for preparing K–12 students with critical skills needed for college level study and career preparation in the fields of computer science and hardware/software engineering
- Provide incentives, such as mentoring of students through high school and college, to support and encourage young people to acquire at least an associate’s degree or bachelor’s degree.
- Make this a state funding priorities for this clusters, because this sector provides critical support to other clusters.
- Identify how to link the Made in Vermont brand of quality in rural agricultural and recreation to opportunities in this sector, especially to create the tools, methods and processes to support sustainable development, culinary tourism, etc.

Activity: Description of the initiative: (50-200 words)

Vermont has recently developed specific assessments and recommendations to support the growth of IT and high tech businesses through the work of a 2012-2013 Legislative Committee on Enhancing Vermont’s Software and Information Technology and a 2102 industry initiative lead by the Vermont Technology Alliance, Vermont Technology Council, and Vermont Bioscience Alliance.

This initiative would adopt many of the recommendations of the Committee on Enhancing Vermont’s Software and Information Technology Economy was charged with studying “...ways to encourage the continued growth of investment and job creation in the software and

information technology sector; to develop strategies to assist software and new media entrepreneurs to start new businesses in Vermont and to foster growth among established software businesses; to review workforce training and education opportunities as they apply to the software and information technology sector; and to review and make recommendations regarding the impact of current state programs and regulations, including existing economic incentives and current taxation policies, including:

- Continue the state's STEM incentive program which is working successfully but should be continued and expanded.
- Vermont's K–12 education system provides additional opportunities for students to learn critical skills that are prerequisites for college level study and career preparation in the fields of computer science and hardware/software engineering.
- State education policy, as it relates to computer science and technology, be amended and reorganized to differentiate between distinct technology programs of study: basic computer skills (e.g., use of word processing, spreadsheet, and communication applications) – provide critical skills that nearly all students should possess, regardless of career aspirations; IT maintenance (e.g., hardware/software/networking installation and support) – a program of study most relevant for students on a vocational/two-year degree path; and software/hardware engineering – a program of study that supplements college preparatory math and science courses with theoretical and applied education that is specific to software and hardware engineering (e.g., logic, programming theory, and applied software development)
- The state take additional steps to promote its existing internship programs in the technology and scientific fields, and to expand these programs to include teachers and guidance counselors.
- Develop partnerships between Vermont's tourism industry, working lands and the IT sector for the development of apps and tools that support the sector, especially to help Vermont achieve its sustainability and heritage goals. In doing so dispel the rural agricultural and recreation image mostly to the exclusion of Vermont's technology sector, which reinforces a misconception that Vermont is not "tech friendly."
- Adjust language in state contracts so that the state shares intellectual property (IP) rights developed under a state contract with the contractor if the contractor is a Vermont-based company, ensuring the state has the right to use the IP and the contractor has the right to develop it commercially.
- The state's procurement process be improved to offer more streamlined opportunities for Vermont businesses to conduct business with the state.

- The VEGI program be modified to make it more accessible and less burdensome to use for smaller technology companies, which could be accomplished by simplifying the documentation required under the “but-for” clause.
- Funding for first-loss funding and loan guarantees through VEDA be replenished.
- State law be changed to provide preferential treatment for capital gains that are reinvested in Vermont technology companies.
- State law be amended to eliminate the Business Entity Tax for the first three years of the life of the business organized as a pass-through entity.
- Vermont statutes be amended to provide a clear safe harbor provision for the potential employee misclassification of independent contractors in the software and IT sectors.
- Increase funding and provide other appropriate support to Vermont-based technology organizations, industry networking and trade shows, and Angel Investor networking.
- State agencies take necessary steps to make state-collected data more readily available for consumption in machine-readable format.
- The state authorize one property tax exemption to be awarded to a recipient designated by the regional development corporation in each region to support a regional incubator space during the recipient’s first five years of operation.”

It is also proposed that key recommendations of the 2012 initiative by the Vermont Technology Alliance, Vermont Technology Council, and Vermont Bioscience Alliance found and recommended be adopted including:[5]

- Help local financial institutions recognize the benefits of investing in Vermont’s knowledge-based businesses.
- Increase communication between Vermont’s tech companies and its high schools and colleges. The state’s new science, technology, engineering and math initiative, which offers a financial incentive for recent graduates who accept STEM related jobs at Vermont companies, is a step in the right direction. The VTC and vtTA members want to see an increased focus, not just on science and math, but on graduating students who can write and reason, and work collaboratively to solve problems.”

Data reflecting the current situation that this initiative addresses:

Initiatives that have assessed information technology and economic development related issues and have developed detailed goals, findings, and recommendations include ConnectVT,

Vermont's Commission on the Future of Economic Development, a 2012-2013 Legislative Committee on Enhancing Vermont's Software and Information Technology and a 2102 industry initiative lead by the Vermont Technology Alliance, Vermont Technology Council, and Vermont Bioscience Alliance. As a whole, these initiatives provide excellent guidance for a focus on IT Cluster strategies and, in particular, the Legislative Committee on Enhancing Vermont's Software and Information Technology provides specific recommendations for the State, providing a solid action agenda for growing the cluster.

- In 2013, total employment in the IT Cluster in Vermont totaled 6,362. This represented 1.78% of all employment in Vermont in 2013[2].
- In 2012, the latest year for which establishment data is available, there were 878 total establishments in the IT Cluster in Vermont representing 3.56% of all establishments in the state. The average establishment size in the IT Cluster was 7.2 employees per establishment compared to an average establishment size of 14.5 in Vermont for all industries.
- In terms of industry concentration as measured by national location quotient, only Libraries and Archives (3.15) and Custom Computer Programming Services (1.15) had concentrations above the national average.
- Between 2008 and 2013, the IT Cluster lost 6% of employment (389 jobs). Losses were driven by Data Processing, Hosting, and Related Services (438 jobs lost) and Wireless Telecommunications Carriers (except Satellite) (93 jobs lost). Custom Computer Programming Services (256 jobs gained) and Computer Systems Design Services (102 jobs gained) led IT subsectors with job increases. Overall, the IT Cluster is projected to increase employment by 17% (1,117 jobs) between 2013 and 2023. Employment increases are projected to be led by Custom Computer Programming Services (607 jobs to be gained) and Computer Systems Design Services (584 jobs to be gained).
- In 2013, top occupations in the IT Cluster include Computer User Support Specialists (484 jobs), Software Developers, Applications (448 jobs), Network and Computer Systems Administrators, (364 jobs), Software Developers, Systems Software, (332 jobs), and Telecommunications Line Installers and Repairers (304 jobs).
- Between 2013 and 2023, occupation growth in the IT Cluster is projected to be driven by Software Developers, Applications (167 jobs to be gained), Software Developers, Systems Software (140 jobs to be gained), Computer User Support Specialists (85 jobs to be gained), Computer Systems Analysts (67 jobs to be gained), and Network and Computer Systems Administrators (53 jobs to be gained).
- Wages in the IT Cluster are typically higher than wages in all industries in Vermont, which in 2013 were \$38,401 on average annually. In fact, all but three of the top 20

occupations in the IT Cluster had higher wages than the average for Vermont as a whole in 2013. Most occupations in the IT Cluster require at least an associate's degree and many require bachelors and beyond.

S-AC1. Capitalize on the Vermont Arts

Issue:

Vermont has a large share of arts activities with concentrations in performing arts venues and small craft artists. The Vermont Council on the Arts supports the loose network of the arts in Vermont, but the economic benefits from the arts go beyond the specific arts community. Strengthening the linkages between the arts and other sectors of the economy may be one way to highlight the relative strength of the Arts in Vermont from a marketing perspective and new ideas at taking advantage of the strength may arise.

Objective:

Increase the economic activity associated with the Arts.

Increase earnings for Vermont's arts-related entrepreneurs and the proportion of these earning their livelihoods from artistic activities

Increase the understanding of the role of the Arts in the economy so that multiple sectors can capitalize on Vermont's strengths in the Arts.

Activity:

As with most networking opportunities, the first step is to convene representatives from the Arts community (with the possibility that the presentation of the arts product be the draw) with others that have economic development as their interest.

Target populations:

- Vermont Arts businesses
- Other businesses that may capitalize on the Arts

Outcomes:

- Increase state GDP

4. Farm and Forest Product Viability

Issue:

Vermont businesses in food and forest products will benefit from technical assistance.

The Vermont Higher Education Food Systems Consortium has recently formed

- The Consortium has a need for student recruitment

- The Consortium has a need for curriculum development

The Consortium can develop a project to provide support to each step of the supply chain for both food and forest products.

Objective:

- Increase the number of farm and forest product business start ups
- Improve the long term success of farm and forest product businesses

Activity:

Working with the Consortium and the Agency of Agriculture Farm Viability program (to identify the starting point), develop a menu of support services:

- Business planning
- Workforce development (recruitment, training)
- Marketing

Action steps: List the actions that should be taken, 1....., 2....., 3....etc. Who, What and by when (Year and quarter, e.g 3rd Quarter, 2015)

Who	What	By When

Target population for further developing the initiative

- The Vermont Higher Education Food Systems Consortium
- Regional Development Corporations
- Small Business Development Centers

Outcomes:

Increase GDP (especially in the Food and Forest products industries)

S-F4. Vermont Center for Fermentation and Microbiology

Issue:

Vermont is a leader in cheese, beer (and distilled spirits), bread, fermented ciders, kombucha, kimchi, sauerkraut and other fermented food products. The University of Vermont has a strong Nutrition Science department and the state has a strong and growing specialty food industry. Specialty food affects multiple economic sectors.

Objective:

- Vermont becomes a worldwide leader in fermentation science
- At the end of the funding (10 years), the Center will be self-sustaining
- The Center yields a generation of entrepreneurs in the fermentation field.

Activity:

Create a center and provide adequate funding for 10 years. The center will include a Research and Development function. Bring experts in the field together and send others out on the road. The Center will provide certificates and degrees.

Target populations

- Organizations that may be able to represent those target populations

Outcomes:

- Vermont increases GDP (X businesses with sales greater than \$1 million), including exports
- New jobs in fermentation
- Vermont is a model and incubator of new ideas
- The Center provides Vermont businesses with research and development in the field
- Builds on Vermont terroir and VT Brand

People Interested in working on this Initiative: List those people who have indicated an interest in contributing to this initiative, and what they have to offer.

S-F5. Public Recreation Information and Technology

Issue:

Vermont is renowned for its forest-based recreation: hiking, wildlife viewing, mountain biking, hunting, skiing and more. Increasingly, the public expects more and better recreation.

information, maps, publications and emergent technologies such as smartphone apps, software tools and more in order to get the most up to date information and interactive nature experiences. As a state, we have an opportunity to become a national leader in providing and developing these technologies, as well as to develop the next generation of programmers and designers.

Objective:

Develop new software tools to support the forest-based recreation.

Activity: Description of the initiative: (50-200 words)

This initiative would enhance projects which are already underway including websites, publications and software tools. It would also provide support to both professional designers and firms to be able to develop new tools, map services and publications. Ideally, these firms would work with students from Vermont schools, universities and colleges such as VTC, Champlain College, adult education programs and other to engage natural resources students and software engineer students in an internship or job program.

Outcomes/Performance measures: How could we measure the success of the initiative, in terms of jobs etc?)

- Increase in mapped trails, recreation sites and other related public recreation information.
- Increase in tourism and recreation dollars spent in the state (lodging, gear, etc.).
- Increase in tourism and recreation related jobs and businesses.
- Increase in trail and recreation technologies.
- Increase in Vermont students' skills in software design and engineering, website design and other related skills including GIS technologies.