



SETTING THE PATH FOR A CONNECTED VERMONT



Vermont's Digital Future Conference

May 8, 2012 • Champlain College, Burlington, VT

Conference Report

**e-Vermont Community
Broadband Project**

May, 2012

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e-Vermont Partners

Vermont Council on Rural
Development
www.vtrural.org

Digital Wish
www.digitalwish.org

Front Porch Forum
www.frontporchforum.com

Vermont Small Business
Development Center
www.vtsbdc.org

Vermont Department of
Libraries
libraries.vermont.gov

Vermont State Colleges
www.vsc.edu

Snelling Center for
Government
www.snellingcenter.org

e-Vermont Funders

U.S. Dept of Commerce
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Comcast
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Jan and David Blittersdorf
Foundation
Microsoft
Center for Rural Studies
VT Community Foundation
VT Rural Partnership



I. PREFACE - The Vermont's Digital Future Conference

*It was a windy and rainy Vermont spring day May 8, 2012 as over 300 Vermonters gathered at the **Conference on Vermont's Digital Future**.*

These Vermonters who came together represented local communities, state agencies, individual businesses and nonprofit groups. They brought enthusiasm and hope for improving Vermont's future.

*We gathered to **celebrate** the successes of the two year effort by the e-Vermont Community Broadband Project to expand broadband usage across Vermont.*

*We gathered to be **inspired** by our keynote speaker, Nicco Mele, and to be inspired by each other.*

*We gathered to **create** a discussion and listing of the next steps and priorities for Vermont, to encourage and expand the use of broadband to improve Vermonter's lives and strengthen their communities.*

We are proud to present this conference report. We appreciate all of the participants, volunteers and the help of our partners in making this day possible. It was a special day and even a little rain could not dampen Vermont's bright future.

Mark Snelling, Snelling Center for Government, Lead Conference Organizer

II. INTRODUCTION

Vermont Governor Peter Shumlin opened the Vermont's Digital Future conference by reviewing progress on his administration's goal of delivering broadband access to all Vermonters by the end of 2013. It's a goal that has been pursued with the opening of the Connect VT office and the recent infusion of \$410 million in federal funds (plus private funding) into infrastructure build out.

Governor Shumlin pointed out that we are making this investment because we know how vital high speed Internet is for Vermont's communities. Broadband opens up a whole new level of possibilities for growing strong businesses, expanding educational opportunities, engaging citizens in their government, connecting individuals to friends and family wherever they are in the world, and demonstrating that Vermont is a creative, progressive, entrepreneurial place to live and work. These outcomes all justify the investment.

However, the investment in infrastructure is just one piece (albeit a foundational piece) of what Vermont needs as we navigate the digital age; we also must invest in helping Vermonters make best use of this infrastructure once it arrives.

In a time when one in five adults don't use the Internet, taking true advantage of modern telecommunications begins with basic digital literacy. It continues through establishing the relevance of the Internet to Vermonters' lives, when we know that half of the people who don't subscribe to available high speed service do so because they don't see this relevance. From this essential foundation we are building ways for Vermonters to apply the best online tools available to all sectors of rural life. This work ranges from introducing a small business to how customers can find them online to giving elementary school students the skills they need to be the innovators of the next generation.

In the spring of 2010, the **National Telecommunications and Information Administration (NTIA)** made an investment in how Vermonters use the Internet through a \$2.7 million Sustainable Broadband Adoption grant to the **Vermont Council on Rural Development** for the **e-Vermont Community Broadband Project**. We were one of only two programs in that first round of federal funding to take a community-based approach; we were honored to have program director Laura Breeden with us to open the conference and to learn about what's happening in our state. Other funders (see side bar, previous page) joined the federal government in investing in e-Vermont's efforts to ensure that every Vermonter can take full advantage of the opportunities available through broadband resources.

Since 2010, the **e-Vermont partners** (see side bar) have worked intensively in 24 communities across the state. Each partner has an area of deep expertise and the results over the last two years are impressive:

- The **Vermont Council on Rural Development** leads the e-Vermont Community Broadband Project and has also led individual communities in designing projects to respond to local needs. Projects included wireless Internet zones, online archives for local historic documents, public Internet access using mobile computer labs, community open houses showing how local entrepreneurs use online tools in the creative economy, equipment for a community media center that helps organizations tell their stories in a multimedia format, and improvements to online farmers' markets.

- **The Snelling Center for Government** is building websites with 16 municipalities statewide, and modeling best practices for e-government in rural towns. They have organized regional workshops and statewide conferences on the issues of broadband use, including the Vermont's Digital Future conference.
- **Digital Wish** has distributed 1,326 Netbooks to classrooms serving 1,260 Vermont students, conducted over 3,000 educator trainings and launched a statewide afterschool program where students create computer games and websites using Microsoft Kodu and Expression software.
- **The Vermont Small Business Development Center** has worked directly with 126 business clients, presented 40 business workshops, and developed a toolkit for businesses starting to explore online strategies for meeting their business goals.
- **The Vermont State Colleges** have offered 62 workshops on basic Internet topics and have piloted two new projects. *Internet Interns* places students in local libraries to provide computer assistance for patrons. *iConnect* trains participants in technical and pedagogical skills for working with people new to using the Internet.
- **The Vermont Department of Libraries** is working directly with 27 public libraries to upgrade equipment, expand public Internet access and improve online services.
- **Front Porch Forum** manages 28 forums and 7,729 subscribers in e-Vermont communities. The average subscription rate is 28 percent of households, with some towns reaching rates over 80 percent. In December 2011, FPF launched a new online community calendar tool.

At the heart of all the work e-Vermont has undertaken is the starting question: What are *your* goals? We start with core goals, challenges, opportunities, interests, concerns – then move from there to pair desired outcomes with appropriate online tools and strategies.

Today, we know some of the tools that are commonly useful across towns, some of the systems changes that need to happen to ensure individuals and whole communities fully realize the Internet's potential, and we have invited all Vermonters (plus others from beyond our state) to join a common conversation. The conversations convened in this conference followed topics that e-Vermont has heard discussed at community, state and national levels:

- Establishing a New Foundation for Business in the Digital Age
- Building the Local Economy with Online Tools
- Sharing Local News: Neighborhood Forums and Citizen Journalism
- Engaging Citizens in State & Local Government
- Ensuring No Vermonter is Left Behind the Digital Divide
- Accessing Health, Medical and Social Services Online
- Bringing Technology into the Classroom
- Developing a 21st Century Workforce (k - 16)

As this report details, many creative perspectives and common themes emerged over the course of the day. Participants expressed the need for Vermont to continue its aggressive campaign to achieve universal broadband infrastructure and to pair these efforts with the two things we know

make this infrastructure most effective: affordability programs and training in the skills to use it. Vermont needs to build a culture where investing in the use of appropriate technology is seen as fundamental to success for businesses, schools, organizations, individuals and communities. This culture looks like technology in every classroom and in common core standards; it looks like attention to establishing trust in the process of bringing essential services online, and like businesses who have fully integrated online tools into their most basic planning. We also need training that addresses not only fundamentals but also how local leaders, such as teachers, legislators, and parents, demonstrate through their own practices the positive impact technology can have on daily life in Vermont.

The call for action coming out of this conference comes in a time when change is eminently possible. Keynote speaker Nicco Mele opened the day by detailing the potential for individuals, small groups, and small communities to make the biggest changes in the digital age. Nicco revolutionized our understanding of how grassroots efforts flourish online when he served as webmaster for Howard Dean's 2004 presidential campaign. Dean's approach to accumulating campaign funding \$100 at a time is a now-classic example of technology shifting power from large institutions to individuals. This shift plays out again and again in the Internet's web of connected individuals as we increasingly turn to each other for information, innovation, opinions and resources.

The flip side of this new virtual world of opportunity is the disruption to existing structures, which can be a good thing. But it can also lead to losing the inherent value those structures provided. Here in Vermont, we've done a remarkable job at holding onto the core values that have served our communities well for centuries while at the same time embracing the advantages of the digital age. We begin from values like the importance of personal connections, knowing the people you do business with, feeling part of a community, and finding ways to contribute to that community. From that starting point great things can happen online. Local historical societies can put their documents and pictures online for everyone to see, elementary school students can connect with local business owners to teach them how to use social media in the local economy, towns that were physically torn apart by Tropical Storm Irene were able to use their virtual connections to come back together to rebuild.

Vermont has built a strong foundation for a prosperous state. It's a foundation of close ties in the real world, of creative thinking and strong character, of believing in what can be accomplished by community members all working together, and it's a foundation that serves us well as we look towards Vermont's Digital Future.

Our task is to figure out how to build new institutions and new ways of doing things that take advantage of our technology and help us bring about the world we want to live in, and the country and state we want to have... do not be afraid of the technology, do not let the technology lead you...we must decide what we want and use this technology to build a new and better world. –

Nicco Mele, Keynote Address, Vermont's Digital Future Conference

*See the full speech online at e4vt.org

III. CONFERENCE PANEL & DISCUSSION NOTES

Highlighted below are some key concepts that were discussed in the conference's four tracks; recommendations from all tracks are summarized in Section IV.

Track 1: Creating Economic Opportunities through Connectivity Panel

Panelists: Charles Curtis, Draker Laboratories; Halley Silver, King Arthur Flour Company; Missy Parks, Green Mountain Coffee Roasters; Sabrina and Lionel Morrison, Porter Brook Group

Moderator: Patrick Ripley, VT Small Business Development Center

Followed by Discussion: Establishing a New Foundation for Business in the Digital Age

Facilitator: Pat Moulton Powden

Building the Local Economy with Online Tools

Facilitator: Linda Rossi, VT Small Business Development Center

Key Concepts from the Opening Panel:

- There are technical considerations that all businesses are thinking through with their sites, including in-house site management, setting up content management systems that let multiple people update and have agility with their pages' content, deciding whether to have open or closed source code, incorporating 508 usability standards, figuring out how to match sites to different devices such as smart phones.
- Usability is a big issue. Panelists have found that they need usability experts or design teams who can close the user vs. engineer communication gap. Also, the 508 usability standards – which ensure site access for Americans with disabilities – should receive more attention.
- Part of the new platforms for websites is an ability for more people to be involved in designing and maintaining the site. Decentralized content management helps with real time updates, some panelists have encouraged more employee contributions to site content (although without great success so far) and crowd sourcing can draw content from customers. For example, King Arthur Flour uses crowd sourcing to help customers shop with recipes in hand.
- Social media allows 1:1 connections with customers worldwide. It builds value and a loyal customer base. However, sometimes you really do need a live person on the phone – Draker Labs gives the example of communicating live with engineers and contractors on site. Social media can't be the only contact.
- Employee training has evolved with the evolving use of computer technology. Even at the most basic level, GMCR now uses PeopleSoft for tasks like logging timesheets, which means that all employees need digital literacy. As customers interact with businesses more through an online presence, employees need to be very familiar with the site and with navigating through a customer's eyes so that they can provide good customer service.

- Technology has allowed flexibility for telecommuting in some companies.
- Search Engine Optimization, once a high expense for some businesses, was also discussed. The way that Google analyzes sites blocks many of the old tools for improving position in the search. Now the key thing is content – fresh content that customers use and (where applicable) write good reviews about.

Conclusions from Establishing a New Foundation Discussion:

As background, the group notes two things:

1. Vermont has a lot of innovation here and innovative potential, combined with a high quality of life, and we need to do a better job branding it.
2. As we work towards the objectives outlined by all the conference groups, we need metrics and analytics that let us define success.

The primary recommendations are:

Implement tax policies and investments that create an incentive for workforce growth, in an environment that maintains the values and character of Vermont and that fosters collaboration or clusters between workforce and colleges. This recommendation builds from observations of all the assets Vermont currently has as a location for entrepreneurial businesses, telecommuters, and workers focused on achieving high quality of life. However, there seems to be a disconnect translating these assets to young people in our college system. At the same time, there is also a disconnect translating current and emerging business needs into the training these students receive. Creative models are out there for ensuring that Vermont’s strengths turn into a strong foundation for tomorrow’s businesses.

Invest in infrastructure that gets Vermont the size of pipe our businesses need, starting January 1, 2014 (the basic broadband build out is scheduled to be completed December 31, 2013). The group expressed concern that we’ve set the bar too low for the speed and capacity of our Internet. We need to ensure a level of connectivity that encourages more Vermonters to both contribute to the Internet and pull down the applications they need to do what they want to do.

Create not only universal broadband access, but also affordability, outreach programs, and training in baseline digital literacy alongside training tailored to the needs of particular groups. There is growing inequality between the digital have’s and have-not’s, from young students who lack the computers and connectivity at home for learning, to adults who are entirely uncomfortable with the online world, to websites that don’t meet standards for accessibility. Setting a “New Foundation” requires a strong foundation in the basics of helping all Vermonters navigate the online world.

Conclusions from Building the Local Economy Discussion:

Provide “Internet 101” training for businesses and residents in every Vermont town.

This training isn’t just about basic digital literacy, but also about educating businesses and residents about available tools. Sometimes these tools are very general. For example, Google Places is a free service to be sure your business has a “place” on Google; public libraries provide access to national databases for research. Tools developed in Vermont support our communities, for example virtual farmers’ markets or Front Porch Forum. In the group discussion, tools that used online resources to strengthen community in general were often cited as tools that also support a strong local economy.

Approach technology, online tools, and Internet use as an investment not just an expense. Truly investing in online assets means being prepared to pay more for something that will meet business needs better than other (sometimes “free”) solutions. It also means analyzing the performance of online tools and ensuring there is a valuable return. The group recommends making funding available to support business advising and appropriate technology investment (“e-Vermont type funding”).

Catalog, communicate, and connect existing technology resources for maximum efficiency and effectiveness. These resources include tools, technical assistance, funding and share space and / or shared equipment opportunities for businesses.

Track 2: Connecting Communities Panel

Panelists: Lauren-Glenn Davitian, CommonGood VT; Kristen Hughes, Bent Northrup Library, Fairfield; Susan Clark, Middlesex Town Moderator; Michael Wood-Lewis, Front Porch Forum

Moderator: Scott Campitelli, RETN

Followed by Discussion: Sharing Local News: Neighborhood Forums & Citizen Journalism

Facilitator: Ann Galloway, VTDigger.org

Engaging Citizens in State and Local Government

Facilitator: Mark Snelling, Snelling Center for Government

Key Concepts from the Opening Panel:

- We know that online tools can help communities feel connected. In PF (now in 40 percent of Vermont) towns are sharing basic posts, as well as details that enable much deeper discussion on local topics. All posts are from an identified neighbor. Over time, surveys of FPF members show increased feelings of connection to community. In Fairfield, a virtual farmers’ market connects people to local producers, then to the library where they go for pick up, and to each other as they all participate in the same project. Virtual options in Middlesex let citizens participate in Town Meeting even when they can’t physically be there. CCTV provides podcasts of public meetings.
- The big challenge in using online tools for community connection is to not disenfranchise people who don’t use online tools. This divide isn’t just between people who do / don’t have high speed access, or around ability to afford Internet; there is a social divide of

people who simply don't want to be online. In Middlesex, for example, they created many places where anyone could get online and had absolutely no takers. On the other hand, even if people don't use particular online tools they benefit from their friends and neighbors being part of online discussions and then relaying information offline.

- We need to have a larger discussion of community, values, and the role that technology plays. It's important that conversations be driven by what we need/want, not driven by the technology itself.
- We also need to be better about sharing models that work. One place collecting models and discussing how to implement them is e4vt.org.
- Online platforms can be about transparency in how a town works and about helping a town work better together. Cambridge, like many towns, is pushing town officials to post more online. In Fairfield when a community group didn't work, they posted a blog to gather feedback. Fairfield also uses online tools to capture comments and information from people who commute out of town for work. It was clear after Tropical Storm Irene when towns had set up ways to talk and work together online, to capture volunteers willing to help and to work through the physical disruptions from flooding.
- Online platforms can be a key part of a communications security plan, because they open up so many channels for communications. At the same time, towns need to think about who owns these platforms and how local control is maintained. Individuals also need education to think critically about Internet security, privacy, and access issues.
- It's important to understand the distinction between community dialogue and un-biased journalism.
- Susan Clark notes that this use of online tools is really about slow democracy, about being connected to sources of information and perspective, about including people in the conversation and building a true back and forth.

Conclusions from the Sharing Local News Discussion:

Ensure universal access to broadband and cell service, including affordability programs. This recommendation includes both making Internet affordable at the household level, such as through government regulation and a broadband equivalent of the Lifeline program, and public access points in a community. There are lots of examples of how to create public access – at the public library, through hotspots and Wi-Fi zones, at town halls and community gathering spaces.

Provide education and training in using online tools. Communities already have the resources within them to offer assistance with learning the Internet, public libraries are becoming repositories for digital literacy information, schools can provide students who have grown up using the Internet. One piece of basic training that shouldn't be overlooked is information literacy or media literacy, which includes knowing how to find trusted sources and how to separate opinion-based conversation from stories reported by journalists.

Develop a system for towns to have standard protocols for information sharing. We are used to these protocols offline, like rules of order for Town Meeting or requirements for what municipal information is posted publicly; we need protocols to give us guidance online too. **Develop capacity to curate local news.** The group discussed the importance of the human factor in collecting local news to go online, presenting information in a manageable way, maintaining civility in discussions, and ensuring that everyone can participate. This role takes training and funding.

Require towns to provide information online following set standards (see above). Online tools can be important parts of government transparency, but only if they are used regularly and effectively. We know that websites and social media are how many community members would prefer to engage locally, it's time to make that happen. Clear standards also reduce confusion over the rules of public information or public discussions going online (for example, what counts as public record, what's the line between moderation and censorship, what are best protocols for town officials' use of social media).

Conclusions from the Engaging Citizens Discussion:

Fund Community Hubs for town communication and engagement. As more information goes online, that doesn't mean that communities can lose their real world gathering places. Real world "hubs" can become more important as they provide access to the technology to engage online. Public libraries are often locations for gathering and for Internet access, but they lack funding. Towns should designate, and fund, hub locations that provide information on community resources and access to online engagement.

Provide state level support for putting town records online. State funding can help towns with the labor-intensive task of getting their records online. The state can also provide technical support, developing standard methods for digitizing records, methods for managing data, and a common format that ensure towns can easily share data with each other. Towns also need to find best practices for how to present their information in a way that's user friendly for citizens; simply putting a giant data set online doesn't necessarily improve transparency or engagement.

Improve two-way interactions with state and local government. We need to find a good way to manage the information flows that are online, especially now that conversations – not just broadcast information – are possible. We need to ask what information is most important for citizens to have online, what standards should be common for information sharing (see previous recommendation), where are two-way forums appropriate and where are they not, what is the best platform for two-way forums, and how can government workers best manage the flow of information and communications to make sure it enhances (instead of disrupts) their work. An advisory group should fully evaluate this issue.

Track 3: Building Digital Literacy Panel

Panelists: Joyce Judy, President of Community College of Vermont; Angela Talbert, Internet Intern; Barry Lampke, Champlain Initiative; Dan Lucier, VTel

Moderator: Martha Reid, Vermont State Librarian

Followed by Discussion: Accessing Health, Medical and Social Services Online

Facilitator: Helen Labun Jordan, e-Vermont

Ensuring No One is Left Behind

Facilitator: Karen Marshall, Connect VT

Key Concepts from the Opening Panel:

- We see problems with basic digital literacy across Vermont. Sometimes there are complicating issues, such as English as a second language, underlying illiteracy, or people who know how to text or use Facebook but don't know the kinds of computer skills needed for the workforce. The digital divide is strong for low income families, seniors, and new Americans.
- Libraries have had a lead role in digital literacy education for a long time, whether it's taught in school libraries or to the general public in public libraries. This instruction is paired with e-resources through the library, which include free classes, e-books, access to online journals, and equipment to get online. Libraries also have resources for patrons with special needs. Funding, staff time, and hours of operation are perpetual constraints on how much libraries can do for digital literacy.
- The Community College of Vermont has placed Internet Interns in public libraries to serve as 1:1 instructors on basic computer tasks. Patrons' use of Internet Interns is varied both in the questions they need answered and in how frequently they come in for help. Some people come in regularly for assistance learning and practicing tasks. If beginners don't get that practice time they may quickly forget what they have learned.
- VTel has also built 1:1 help sessions in their digital literacy work and, like the interns at libraries, has found that to be most effective. Their reach for setting up these assistance sessions goes beyond libraries to community organizations, Department of Labor offices, senior centers, and others; they have held over 1,000 community forums. VTel does see promise in a new workshop format they're trying that trains core groups of volunteers to help others. This approach has been used in other states with success.
- CCV has an iConnect program that also increases the number of people who can work 1:1. It's a little different than train the trainer. The iConnect workshops and materials build skills for working with Internet beginners for staff at state agencies, community organizations, senior centers, etc., where clients may have difficulty utilizing online resources. The goal isn't to offer a full computer basics training through these staff, but to impart enough information so that beginners can get to online tutorials & resources and start to practice on their own.

- The Champlain Initiative, which began in 1996, developed a mentoring program using high school students. Target audiences for assistance were the Senior Center and Vermont Works for Women. Challenges were transportation, schedules and where to meet, because parents were uncomfortable with students going alone to people's houses and schools were concerned about people coming there after hours. The Vermont Works for Women group was particularly difficult to address because parents had concerns over children working with ex-inmates. Vermonters involved in the correctional system are particularly difficult to assist because prisons don't offer Internet access.
- All communities have assets they can use to address digital literacy, the trick is how to engage people who aren't yet digitally literate, connect them to 1:1 assistance, have places available to get online to learn and practice skills, and find a way to offer home-based instruction to those who can't travel to a library or other public Internet access point.
- Learning online skills is made more difficult by websites that are hard to use. Not all websites follow basic usability guidelines, and even then those guidelines are written for the average computer user, not beginners.
- There are a lot of questions about infrastructure, whether we're building out high enough speeds, whether 4G is the right tool for the future. The challenge is to not let concern about infrastructure prevent us from improving digital literacy using the options we have today. On the other hand, the quick changes in what technology is in standard use requires flexibility in how we can educate beginners.

Conclusions from the Accessing Services Discussion:

The group had a general observation that individuals and organizations concerned with digital literacy and / or access to medical, human, social services online need a better way to stay connected and talk to each other about tools & best practices.

The primary recommendations were:

Set up a centralized help center for basic computer questions. This center would combine a very simple online platform and call line. There should also be mapped data on where other help resources exist so people can be referred to a location near them. It would be a place where service providers can send people who have computer questions. Organizations that are shifting applications / forms / information to an online platform should be training their staff & volunteers to work with Internet beginners and providing clear, basic instructions for how to navigate their sites.

As more systems go online, ensure that leaders within these systems are making effective use of online tools themselves, for example legislators, teachers, librarians, health providers. . . starting with legislators. The first step is a mentoring program / modernized page program that brings students to the state house to work with legislators on using online tools to better serve their constituents.

Establish trust around using the Internet for crucial, personal transactions. There are four elements to establishing trust in online tools for managing essential information:

Ensuring that the secure sites are in fact secure (a technical issue); Clearly stating the policies for how information received through the site is used; Educating the general public on safe & secure web use; Recognizing that it's possible some information shouldn't be managed online

Make websites easier to navigate, especially for beginners. The websites housing essential services tend to be *big* government sites with lots of information. Organizations outside of government can use social media to provide an easy entryway that highlights the pieces of the site that are of relevance to their work. Site designers can both follow best practices for beginner friendly sites and embed instructions / explanatory tutorials in the site. There should always be an actual person to call and hold accountable for a site functioning properly and being reasonable to navigate. Sites need to be designed with future devices in mind, for example mobile phones.

Conclusions from the No One Left Behind Discussion:

Establish community hubs for accessing the Internet. Set standards for what it means to be a hub that provides public Internet access and then establish a network across the state. Public libraries are a common hub today, but need more funding to be most effective. Adding more hub locations into the network will help people who have trouble reaching the library during the hours it's open; public access TV stations, churches, fire stations, town halls, schools, granges – all can be places for access.

Support Internet access at home. We need to take another look at how Internet subscriptions are priced. Government subsidies (such as the universal service fund / Lifeline for telephones), provider programs, incentivized sliding scale fees, payments from services that are pushing people online (like Medicare) should all be explored. We also need to deal with the infrastructure build out problems that present challenges for rural areas, where installing and maintaining physical infrastructure is expensive compared to the number of customers reached. New technologies combine with land use planning should be sought out to minimize this problem.

Implement a digital competency strategy across the state. We have models of programs that work for digital literacy learning, including 1:1 instruction, train the trainer, iConnect, library programs, programs through adult learning networks and programs through providers... It's time to fund a massive, statewide effort that builds on best practices we've learned and on collaboration between programs.

Track 4: Education Innovation Panel

Panelists: Bill Anton, Dover Elementary School; Frank Gerdman, Vermont Adult Learning; Geoff Gevalt, Young Writer's Project; Heather Chirtea, Digital Wish

Moderator: Tim Donovan, Chancellor of Vermont State Colleges

Followed by Discussion: Bringing Technology into the Classroom

Facilitator: Eric Bird, Digital Wish

Developing a 21st Century Workforce (k-16)

Facilitator: Elaine Young, Champlain College

Key Concepts from the Opening Panel:

- Technology opens up new opportunities for engaging students in learning. Integrating technology into the classroom is a chance for educators and students to think like entrepreneurs. Students aren't just consuming information any more, they're producing it and they are engaged in learning from each other. The Young Writer's Project models this concept with a fully student led site, featuring students' work and students commenting on each others' work. Technology is also being used to immerse learners in a global community and bring in experts virtually who would otherwise be inaccessible, to connect what students are learning with stakeholders in the local community, and to get students interested in school before they make a decision to drop out.
- It's important to have a purpose, and to engage teachers, administrators, IT staff, students, community in defining goals. Technology is replacing the mindset of taking a test off a shelf by giving us new ways to demonstrate proficiencies. Setting creative goals for technology in education requires everyone to be clear about their goals and open to learning new approaches for reaching those goals.
- Education should prepare students to enter the 21st century workforce and be successful. But, businesses look at skills around problem-solving, ability to work in teams, ability to process huge amounts of information, critical thinking; teachers too often care about skill sets and proficiency against core standards. We need to correct this mismatch.
- Professional development is key to success in any technology initiative. Eighty two percent of teachers in the Digital Wish surveys weren't comfortable with digital literacy so that's why they weren't teaching it. Teachers have to feel comfortable and confident to teach. We need to build more models of peer-to-peer learning, co-teaching that engages a technology person, time for teachers to observe colleagues in other schools, have mentors. Technology is always changing, so part of the process is being comfortable with being uncomfortable – you can't teach a single set of skills and consider development complete.
- When we look at bringing equipment into the school it's important to know that technology fluency is a basic skill, not a frill or extra. We can hand computers out like football equipment, or combine school supplied devices with kids bringing their own, or replace textbooks with computers, etc. We've allowed our communities to think they can only have technology if

they get grants; technology needs to be an investment, a continuous budget item.

- The school building and infrastructure don't exist for just the students' education but for the benefit of all the community as an access point. We need to redefine what we think about the school building itself as a learning center, community center and a place to share.
- We're at the end of the age of constraint in education. Teachers become facilitators to a dynamic learning process that is more individualized to, and centered on, the learner than it ever has been before. The entire system is shifting; we've had our school and teacher system in place and asked what we can do with this format to promote learning. But in the future there probably won't be a structure of a teacher lecturing at the front of the classroom, there may not even be classrooms, there likely won't be printed textbooks; we need to start envisioning how learning happens first, then envision how school happens.

Conclusions from the Technology in the Classroom Discussion:

Fully fund a state level mandate for 1:1 computing with access to equipment, Internet connectivity, and applications, for every student in the state. Providing direct access to every student is the most effective way to integrate technology into learning, and clear leadership from the state is needed.

Transform student learning to integrate technology into common core standards. It is counterproductive to promote use of technology without these goals reflected in the standards used to measure classroom performance. Technology needs to be embedded into teachers' current professional development, assessment, and training. At the same time, the value of digital learning needs to be integrated into the culture of the school system.

Provide professional development for educators in cyber safety, global citizenship, and digital and information literacy training. Past teacher training hasn't necessarily prepared our educators for technology in the classroom, we need to give them the skills to both use technology effectively and ensure students are truly literate in navigating 21st century information sources. **Include community and parent involvement.** None of these initiatives will be truly successful without also engaging the parents and the full community so that they also understand the importance of technology fluency.

Conclusions from the Developing a 21st Century Workforce Discussion:

Establish a public / private partnership that becomes the single most important clearinghouse for information, best practices, and training in digital learning environments. As noted in the third priority, opportunities for new approaches to learning and the skills needed for the workforce after graduation are constantly changing. The environment is much different than it was a generation ago, and it continues to change. For students to succeed and excel in an information-driving society, it's important to have a common clearinghouse for sharing what works and what is needed.

Develop a sustainable and scalable level of internal infrastructure for schools and learning centers (including libraries) that allows them to be successful in leveraging available technology so that they can create engaging learning environments. Schools and libraries are anchor institutions receiving big pipeline broadband through fiber build outs. Learning centers need to know how to take advantage of this, and future, investments through having clear objectives and guidance in maximizing the infrastructure's potential. If we succeed, students will stay engaged in their learning with better overall educational outcomes.

Incentivize working partnerships among all stakeholders (workplaces, schools, etc.) to create an adaptive culture in order to take advantage of our growing creative and technology-enabled economy and society. This priority recognizes that the future looks different from what most of us grew up with and change is constant. It takes ongoing conversation to know what skills are needed for the workplace, to learn techniques that make best educational use of new technologies, and to engage the entire community in creating a learning environment that supports the 21st century workforce.

IV. SUMMARY OF RECOMMENDATIONS

(See previous section for an expanded version of these recommendations)

Establishing a New Foundation for Business in the Digital Age

- Implement tax policies and investments that create an incentive for workforce growth, in an environment that maintains the values and character of Vermont and that fosters collaboration or clusters between workforce and colleges.
- Invest in infrastructure that gets Vermont the size of pipe our businesses need, starting January 1, 2014.
- Create not only universal broadband access, but also affordability, outreach programs, and training in baseline digital literacy alongside training tailored to the needs of particular groups.

Building the Local Economy with Online Tools

- Provide “Internet 101” training for businesses and residents in every Vermont town.
- Approach technology, online tools, and Internet use as an investment, not just an expense.
- Catalog, communicate, and connect existing technology resources for maximum efficiency and effectiveness.

Sharing Local News: Neighborhood Forums & Citizen Journalism

- Ensure universal access to broadband and cell service, including affordability programs.
- Provide education and training in using online tools.
- Develop a system for towns to have standard protocols for information sharing and develop capacity to curate local news.
- Require towns to provide information online following set standards (see above).

Engaging Citizens in State & Local Government

- Fund Community Hubs for town communication and engagement.
- Provide state level support for putting town records online.
- Improve two-way interactions with state and local government.

Accessing Health, Medical and Social Services Online

- Set up a centralized help center for basic computer questions.
- As more systems go online, ensure that leaders within these systems are making effective use of online tools themselves.
- Establish trust around using the Internet for crucial, personal transactions.
- Make websites easier to navigate, especially for beginners.

Ensuring No One is Left Behind

- Establish Community Hubs for accessing the Internet.
- Support Internet access at home.
- Implement a digital competency strategy across the state.

Bringing Technology into the Classroom

- Fully fund a state level mandate for 1:1 computing with access to equipment, Internet connectivity, and applications, for every student in the state.
- Transform student learning to integrate technology into common core standards.
- Provide professional development for educators in cyber safety, global citizenship, and digital and information literacy training. Include community and parent involvement.

Developing a 21st Century Workforce (k-16)

- Establish a public / private partnership that becomes the single most important clearinghouse for information, best practices, and training in digital learning environments.
- Develop a sustainable and scalable level of internal infrastructure for schools and learning centers (including libraries) that allows them to be successful in leveraging available technology so that they can create engaging learning environments.
- Incentivize working partnerships among all stakeholders (workplaces, schools, etc.) to create an adaptive culture in order to take advantage of our growing creative and technology-enabled economy and society.

V. NEXT STEPS

This summer the e-Vermont Community Broadband Project will also be producing an electronic and printed report from our two years of work encouraging best use of online tools to promote local goals across the state. This report will incorporate the conference findings, community stories, best practices, existing resources, online and offline tools, and recommendations for the future.

Many of the topics addressed on May 8th are also addressed in toolkits, webinars, and other reference materials on the e-Vermont website: www.e4vt.org

For the remainder of 2012, e-Vermont will take our findings on the road – sharing information, building networks, and gathering resources to support recommended next steps. If you're interested in finding out more, or have a workshop, conference, or other meeting where you would like e-Vermont to participate, please contact Helen Labun Jordan at Helen@vtrural.org.

To stay in touch with what's happening, and receive the forthcoming full report, keep checking e4vt.org for updates, like us on Facebook ([/e4vt.org](https://www.facebook.com/e4vt.org)), and send your contact information to info@vtrural.org with a request to be added to the list for our occasional e-newsletter.

If you wish to contact any of the e-Vermont partners directly, please refer to the listings on the acknowledgements page and the services link at e4vt.org.

VI. ACKNOWLEDGEMENTS

We thank the following businesses and organizations for helping this conference be a success:

e-Vermont Partners

Vermont Council on Rural Development
Snelling Center for Government
Digital Wish
Front Porch Forum
Vermont Small Business Development Center
Vermont Department of Libraries
Vermont State Colleges
Broadbandvt.org
Flywheel Communications

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e-Vermont Funding Partners

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Evslin Family Foundation
Jan and David Blittersdorf Foundation
Microsoft
Center for Rural Studies
VT Community Foundation
VT Rural Partnership

The e-Vermont Partnership would like to thank the Shumlin Administration for its consistent and determined leadership to advance telecommunications in Vermont, and the state's congressional offices for their advice, support and dedication to the progress of e-Vermont and Vermont's Digital Future.

But most of all, we are encouraged by the leadership, dedication, and capability of Vermont digital leaders active as champions in each of the 24 e-Vermont Communities, and, through this conference, throughout the state. They are sowing the seeds of community communications and future prosperity; they are Vermont's digital heroes.

VII. CONFERENCE ATTENDEES

Alex Aldrich	Vermont Arts Council, Montpelier
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Gail Aloisio	Northeastern Vermont Development Association, St. Johnsbury
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