



# Acknowledgements

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Gateway Forum - October 24, 2008

# Summary

The Gateway and Web Improvement Task Force was charged with exploring the information technology landscape at NC State University in order to offer recommendations for extension and engagement and to strengthen the existing Gateways information technology connections between North Carolina communities and NC State University. A “My University” concept was presented to the task force as a starting point and the task force was asked to study the concept, make additions or revisions, and present recommendations to implement the idea.



The “My University” concept identifies three levels of non-formal learning and involvement with the university. These levels are:

- **Level 1.** Online information and awareness;
- **Level 2.** Interactive learning and practice change; and
- **Level 3.** Customized learning and discovery through engaged collaboration and problem solving to address local issues.

The task force found that NC State University has many opportunities to improve public access to university resources by all North Carolinians using web-based and phone-based information technologies. The task force recommends

establishing or enhancing specific technologies and operations to provide a web-based, campus-wide infrastructure for extension, engagement and outreach activities, events, programs, and to address issues utilizing university faculty, staff, and resources. A process for enhancing collaboration at the problem solving implementation level is also proposed.

University engagement and economic development mean partnership-intense relationships with others. We are not simply from the government and here to help; we are a partner in the process. That means we must be creative and collaborative, and the activities must be mutually beneficial.

**Vice Chancellor James Zuiches**

Many learning opportunities and other outreach efforts are offered by the university’s various extension entities, colleges, and educational units. At present, there is no campus-wide infrastructure to consolidate these opportunities and record participation so that an individual might easily discover, participate, and stay engaged with the university. Even within the university, the many extension groups offering learning opportunities lack awareness of and reliable, efficient ways to discover what their NC State extension and engagement partners are doing. It is also difficult for a member of the public to see what is available, or to enroll as a participant. There is not a mechanism for a member of the public to discover university offerings in a specific subject or topic, and if so, if that subject crosses colleges, departments, units, and disciplines, (example: STEM education).

The Gateway and Web Improvement Task Force recommends that a multi-faceted campus-wide extension and engagement infrastructure be established to strengthen the capacity of the university to meet the needs at each of the three levels of involvement. Doing so will enhance the university’s ability to identify constituent needs, market our resources, and improve lifelong access to NC State University by all North Carolinians. Extension faculty will have increased awareness and the ability to discover programs in areas in common with and/or outside of their own.

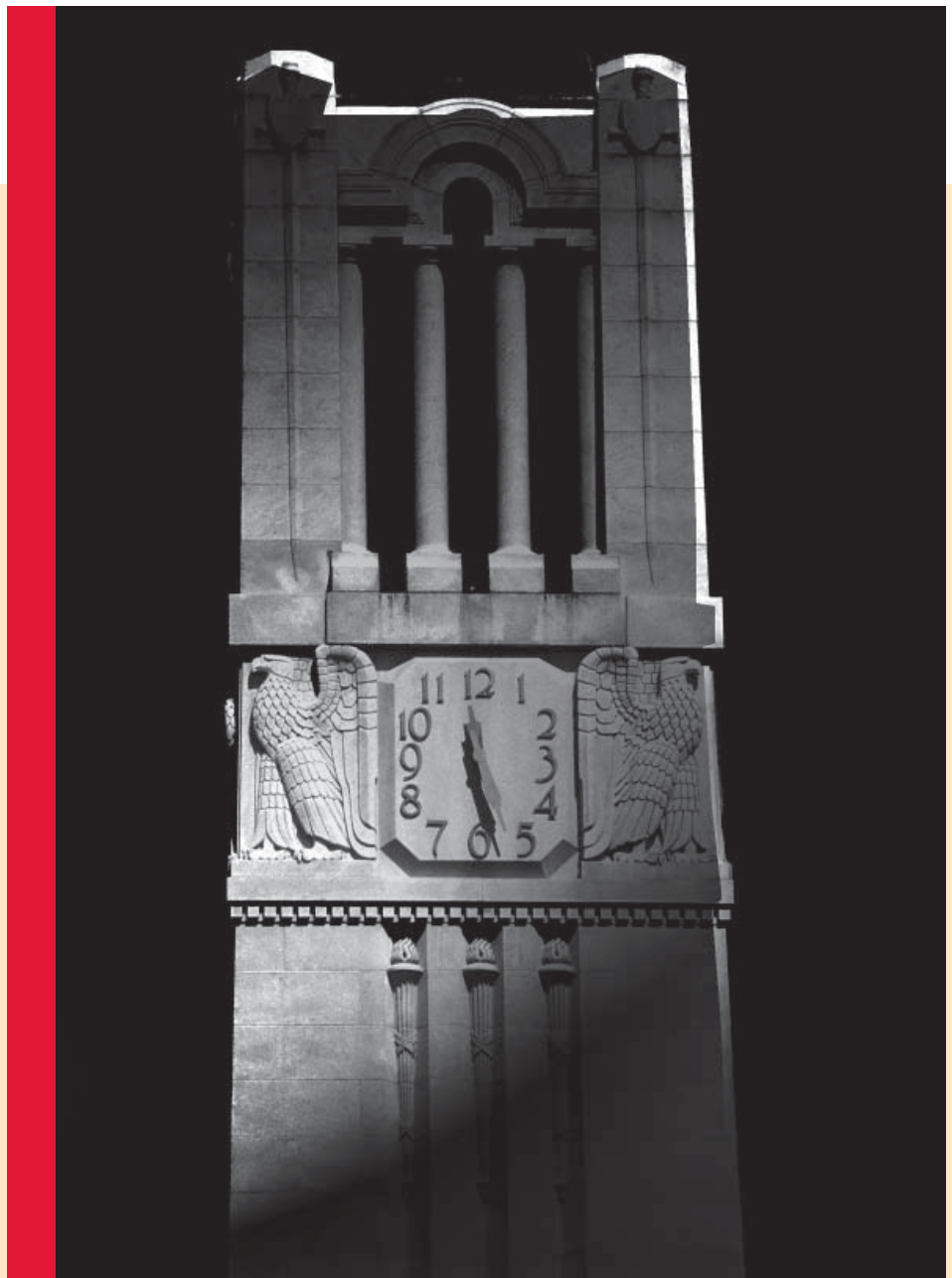
## Background

Several years ago, Cooperative Extension launched the Gateway Initiative and selected 12 counties to participate as pilot sites. The goal of the project was to encourage communities throughout North Carolina to look to the resources of NC State University to provide technical assistance, build partnerships, and work with them to address complex local issues across disciplines and fields.

The program initiative has grown. During the UNC Tomorrow study, significant responses within NC State University suggested strengthening and improving the Gateways Initiative. Several efforts have examined how to achieve this. A Gateway Forum convened by Dr. Patricia Sobrero and Dr. Joe Zublena in October 2008 asked the question, “How do we better connect our communities with NC State?” The highest ranked idea, “Every county is a gateway for total university engagement,” reinforced the need to expand the Gateway Initiative. Several of the top ideas (Appendix C) included suggestions for technology solutions, including:

- Creating “EEED Virtual Access - A web-based interactive site that includes webinars, communications, and information about engagement activities”
- “More efficient use of e-technology to deploy NC State campus and field capacities, better marketing, and use of Cooperative Extension offices as comprehensive ‘retail outlets’ for the system and the state. Ensure that extension and engagement faculty, staff and partners know what is available”
- “Overcoming the distance divide through electronic forms of communication and search engines for database and resources directories”
- “Communication through centralized coordination of outreach and engagement”

In December 2008, the Extension, Engagement and Economic Development (EEED) Executive Administrative Team, EEED Operations Council, and other invited guests explored ways to improve our virtual and web presence to benefit our faculty, engaged learners, and partners across the state. The ideas emerging from these events were synthesized by Drs. Sobrero and Zublena to create the “My University” concept presented in Appendix B. This draft idea was developed to initiate dialogue and recommendations for creating better access both internally and for the public using electronic technologies that may link with face-to-face opportunities. This report will focus on access using technology, but the authors realize that many engaged partnerships require face-to-face encounters as well.



# Implementation Recommendations

Businesses and consumers expect to be able to rapidly find the information and assistance they are seeking on the web. It is well documented that web users typically scan information rather than read and spend only seconds on a site before moving on. They also expect to be able to conduct transactions online.

Some NC State extension and engagement websites are very well designed and support online transactions. One good example is Industrial Extension's Events page, <http://www.ies.ncsu.edu/events>. Even so, North Carolina residents who come to NC State seeking help must first find the particular website that addresses their needs. There is no entry point where they can search for educational offerings from all of the extension, engagement, and economic development entities.

Features customers expect from their experiences using commercial websites are not offered consistently. Online registration may or may not be available, and technologies used differ among sites when it is used. Customers may or may not be able to create an account that saves their information and records past activities. Registration pages look different, with different navigation, making the process confusing to users. The risk is that website visitors will give up and go elsewhere because we make it difficult for them to interact with our sites. This must be resolved if the "My University" concept is to be achieved.

The following infrastructural elements will enhance all levels of the "My University" concept. If implemented, the goals for the level 1 and level 2 "My University" concept should be achievable.

## Recommendation 1

### Implement an extension-wide registration system.

Registration processes for learning opportunities and events targeting the public vary widely across and within entities.

In late June 2010, the university purchased Destiny One™, a registration and learning management system developed specifically for managing continuing education and lifelong learning processes. An Office of Information Technology (OIT) Steering Committee and an Implementation Committee were established to guide policy and manage implementation of the software. All non-credit campus units and departments have been involved in the implementation and planning decisions. Implementation is underway, and administrative units that will be partners in the project are working together.

The acquisition of this system provides an extremely valuable opportunity for extension and engagement non-credit education.



### Needs

- Single point of entry for individuals to discover learning opportunities
- Ability to publicize and document participation in a wide range of learning events
- Flexibility to accommodate the unique business rules for participating organizations
- Capacity to market complementary opportunities (cross-selling)
- Establishment of a means to uniquely identify participants
- Ability to track place of participants/learners by zip code
- Link to unified non-credit records system

## Benefits

- Transforms county extension sites as initial point of contact will have awareness and discoverability
- Enables capture of real data for reporting metrics
- Provides documents of opportunities offered
- Affords a more user-friendly, convenient interface for our constituents
- Improves our competitive position as a provider of learning by enhancing “discoverability” of our resources
- Allows for more informed, targeted, proactive marketing efforts
- Allows for more coordinated communication efforts among the colleges and units at NC State
- Enhances capacity to market complementary opportunities and tailor our interactions with learners to meet their needs

## Recommendation 2

### Implement an extension and engagement-wide non-credit records system.

Attendee records may or may not exist for non-credit learning opportunities. The departments and units offering non-credit opportunities retain records separately. This makes it difficult to report outcomes of multi-disciplinary programs, and impossible to provide participants a comprehensive transcript of formal and non-formal educational accomplishments over time. Such records would also be an excellent resource for encouraging future participation.



### Needs

- Single transcript of extension, engagement, and continuing education participation (services and education provided to the individual)
- Functional connection to the record for the credit-earning student (longer term)
- Flexibility to accommodate the unique business rules for participating organizations including what is/isn't tracked, rules for various kinds of continuing education credits, and security regulations

### Benefits

- Retains the history of the person's expressed interest in the university's services and those that were actually provided to them
- Provides a personal, verifiable record of educational certifications, continuing education, regulatory compliance, and lifelong participation with the university, and continued lifelong learning as an alum
- Enables ongoing, targeted marketing and communications
- Provides a means to record place, enabling the ability to report and map the university's reach into North Carolina communities

## Recommendation 3

### Implement a learning management system that is flexible to meet engagement and extension needs.

Extension and engagement programs and activities, which often include non-traditional students in a variety of contexts (from corporate training to individual self-paced learning,) require a learning management system (LMS) that accommodates the need for flexibility, rapid response, multi-institution participation, and responsiveness to a variety of business operations.

The campus has adopted Moodle as the academic learning management system, and this instance is optimized for the management and delivery of traditional for-credit courses following a standard academic schedule. Recognizing that this

optimization might not meet core needs for extension and engagement, four colleges in collaboration established an extension Moodle server. This server currently provides the learning management system primarily for 160+ Textiles and Engineering continuing education courses and learning units, with an extensive national veterinary medicine collaborative enterprise on the horizon. The College of Agriculture and Life Sciences has provided the core technical management. While the current version of this learning management system adequately serves the current need, more enterprise-level support will be required in the near future.

The task force recommends standardizing on Moodle for extension and engagement-oriented courses, seminars, partnerships, and programs.



## Needs

- Flexible registration management to accommodate many different situations
- Ability to provide learner reports to sponsoring management
- Accommodation of online payment options
- Facilitation of multi-institutional faculty collaboration
- Facilitation of multi-institutional student registration
- Scheduling flexibility
- Identity management system implemented to facilitate “guest” registration
- System management by extension and engagement units

## Benefits

- Learning management system adapts to extension and engagement needs as they arise
- Response to new opportunities is rapid and effective
- Content does not need to be tied to unity access, academic year or university enrollment
- Teams can meet using Moodle that will include business, industry, non-profits, government, and education societal sectors when addressing issues and initiatives
- Content creation will not be limited to NC State faculty
- Learning management system is an enhancement for program activities

## Recommendation 4

### Implement a university-wide calendar of public events.

The existing university calendar does not include extension events and program opportunities, or permit searching for user specific interests. Members of the public who are seeking information about events in their communities need to visit the individual organization’s websites to determine what is available in their area.

## Needs

- Single calendar with all university-sponsored events available to the public
- Customizable views of aggregated, localized, and topical programs
- Flexibility to provide/receive feeds from separate extension entities’ calendars
- Support for subscriptions (awareness, reminders, notifications)
- Integration with Extension Registration and Records system and learning management system
- Calendar with the ability to search for specific events, places, and themes

## Benefits

- Internal use as a guide for planning extension events
- Enables awareness of local events or those in specific topical areas
- Ability to market related events of interest to the public
- Ability to map and visually report the location of public extension activities
- Creates visibility of NC State statewide engagement programs integrating discovery, learning, and engagement
- Calendar can be customized to user interests



## Recommendation 5

### Identity access management incorporation of engagement and extension affiliates.

The Office of Information Technology is currently leading an Identity Access Management (IAM) initiative defined as follows: The IAM Initiative is a campus-wide collaborative effort to improve the overall infrastructure used to authenticate users and provide access (authorization) to campus resources. It involves the storage and access of student, faculty, staff, affiliate, and guest identity data and the use of federated identities for access to both internal and external resources.

Today, identity and access management is controlled through WRAP™, a web-based authentication mechanism, which serves only to identify users. The goal of the IAM Initiative is to be able to identify users across different organizations (universities, companies, etc.) and assign access to applications here at NC State University based upon how the user is affiliated with the university (students, employees, alumni, partners, volunteer leaders, and teachers) and the attributes and entitlements that affiliation has at our university.

Currently, collaborators and partners who are not paid by NC State University are excluded from everything but public web resources. To access sites that are more restricted individuals must be added into Peoplesoft as 'no pay' employees of the university before access can be granted to them. Neither is a satisfactory situation.

## Needs

- Identify and include roles/affiliations and attributes descriptive of the range of necessary extension affiliates
- Create set(s) of affiliations with access rights to address the robust and unique access needs of extension affiliates
- Extend decision-making authority on appropriate affiliation/access levels to the college or department level extension entity

## Benefits

- Fewer electronic barriers to project involvement and collaboration opportunities for extension affiliates such as volunteers, government, agency and university partners, advisory council members, and non-credit learners
- Affiliates empowered with accesses that enable them to contribute and participate in collaborations centered at NC State
- Longer term partnerships facilitated because of improved online working environment
- Ability to provide more specific and timely restrictions on resources when warranted

## Recommendation 6

### Form an extension, engagement, and economic development (EEED) technology committee.

Although there are communications among the different extension and engagement groups represented on the EEED Operations Council, technology related needs decisions within one technology group of extension often do not reach other groups of extension technologists. The formation of an EEED Technology Committee would help increase the dispersal of

technology-related information among all extension groups. It would also allow for better representation on technology related university committees because it would be better able to speak as the “one voice” for EEED programs. EEED representation on existing university technology committees is limited, especially in the higher-level committees where many of the most crucial decisions are made. While, IT related decisions often represent well the needs of both academics and research, they do not take into consideration the diverse needs of EEED across the state and its unique mission.



## Needs

- Formation of an EEED Technology Committee including representatives from across the extension and engagement community. The committee should reside either within the OIT Governance framework and/or as a subcommittee of the EEED Operations Council
- More complete representation of operational needs of extension to the larger technical community
- EEED representation within the Office of Information Technology governance structure

## Benefits

- A stronger voice for the unique needs of extension and engagement
- Better communication among IT personnel within the many organizations doing extension and engagement work
- Increased potential for shared resources and more robust technology solutions
- Increased potential for aggregating impact reporting or for presenting impacts

## Recommendation 7

### Implement the concept of “My University” utilizing three levels of engagement.

“My University” as originally drafted includes three levels of engagement ranging from online searching and information at level 1, to collaborative engagement around a priority issue for an individual or community in level 3. These three levels are described below, with specific recommendations related to each. Realistic resources must be allocated to IT infrastructure and business models must be developed if large-scale implementations of level 1 engagement are expected.



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## Recommendation 7.a

### Implement “My University” level 1 engagement - Online information and awareness.

Level 1 can be accomplished through the development of a focused learner website environment. Topical areas need to be client friendly for easy identification and the topic needs could be linked to university or other collaborators learning information. Topical areas should be focused and prioritized based on statewide need and university unique expertise.

Level 1 includes an awareness level of engagement primarily in an online environment. It can be thought of as pulling information or being pushed information. While the committee realizes that awareness may be face-to-face and or in person, the purpose of this report is to focus on on-line and information technology assisted access. It is expected that through awareness and exploration of Level 1 Engagement, that individuals will be attracted to Level 2, an interactive learning environment.

### Examples of Level 1 Online Information and Awareness

- Finding answers to questions online
- Viewing a website or online information such as a fact sheet
- Discovering information about campus tours, courses, speakers, conferences, seminars, events, and local meetings
- Enrolling in a course, seminar, conference, local meeting or event, or arrange for a tour or a meeting
- Enrolling in a Textiles partnership delivered online course through Moodle
- Discovering which faculty are experts in specific issue areas and where they reside

### Benefits

If the recommended solutions are implemented, many of the existing barriers to level 1 engagement will go away. However, capacity to build and sustain these focused learner website environments will be limited without investment in additional technical staff, particularly skilled application developers, and web and course designers.

### Issues

Some very common problems occur with poorly planned information technology projects. Often grant funds are obtained to develop a web resource, but neither funds nor plans are made for sustaining the resource after the grant funds are expended. Also common is the practice of hiring lower cost commercial, temporary or student help to build pilot resources, without having an infrastructure in place to continue or scale the work when the temporary developer moves on or when the project is deemed successful enough to expand. This is especially problematic if technologies used by the temporary developers are not robust and scalable or are not supported by OIT.

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## Recommendation 7.b

### Implement “My University” level 2 engagement - Interactive learning and practice change.

Level 2 offers the learner interactive online and in-person learning, education, and training opportunities. Classes are calendarized with the topic, location, time, objectives, expectations and any related costs listed. A computerized system that can sort and search the data based on specific topics, locations, and themes will greatly enhance the effectiveness of the learner interface for level 2, and will enable customer/learner customization.

In addition, extension and engagement units should develop more extension curricula to be delivered electronically through synchronous and asynchronous means. This could be accomplished via web conferencing using Elluminate Live! which is already established on campus, available to EEED and supported by DELTA or via course management systems such as Moodle. This is interaction at a learning and practice change level of engagement.

## Examples of Level 2 Interactive Learning and Practice Change

- Certifications
- Classes
- Continuing education and lifelong learning opportunities
- Courses synchronous, asynchronous, or face-to-face
- Internships and externships
- Issue-based conferences
- Licensure
- Non-credit courses
- Seminars
- Workshops



## Benefits

- The recommended registration system would facilitate level 2 activity, whether opportunities were offered face-to-face or electronically, and build capacity for new audiences, learners, and students.
- The system should facilitate access to data to report back to the organization through non-credit activity reports.
- Individual units would also be able to create their own criteria for record keeping for other sets of learners.

## Issues

Software should be designed to summarize data and report outputs, outcomes, and impact while tracking communities of place, interest, and practice. It is important to be able to have this data be useful at a variety of levels from the instructor to administrators; it should be able to demonstrate institutional outcomes and impact. We recommend that specific performance indicators be identified so that the data can be reported across the organization as well as targeted for individual benefits.

We report through silos, but engagement programs that address community-based issues are cross-disciplinary. It is difficult to find how engagement programs across university departments, units, and colleges are resulting in positive outcomes and impact in a specific community of place, interest, or practice. However, this is what the university is being asked to report.

The mapping project may be one way to begin to inform this need, but we also need better software and evaluated performance measures to be able to report accurately on county metrics, for example. We encourage collaborative work across mission areas of NC State to create and report campus-wide impact internally and to the public. The Chancellor's strategic planning project may address this issue.

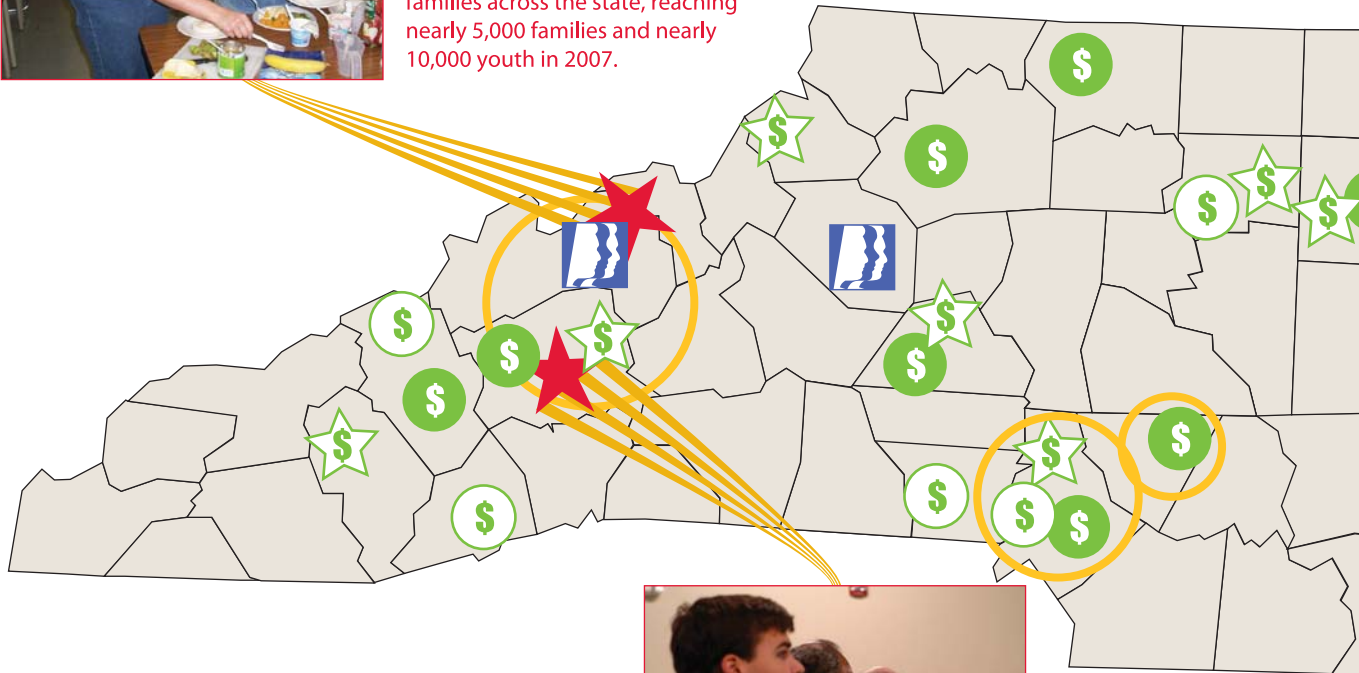


# NC State: Engaging



## Expanded Food and Nutrition Education Program







In Yancey County, North Carolina Cooperative Extension's Expanded Food and Nutrition Education Program (EFNEP) partnered with a local agency to offer a diabetes-prevention program aimed at Hispanic women. For more than 40 years, EFNEP has provided nutrition education programs like this one to limited-resource families across the state, reaching nearly 5,000 families and nearly 10,000 youth in 2007.



## Institute for Emerging Issues Regional Forums

As part of its program of work to modernize North Carolina's system of tax and finance, the Institute for Emerging

Issues (IEI) organized five regional forums across the state, including one in Asheville, where leaders from the business community, civic organizations, school boards, faith-based communities, higher education, and county and local governments to discuss ideas on how local issues affect statewide tax and finance themes. As a result, IEI learned much that is necessary to formulate an agenda for comprehensive reform that matches the needs of all North Carolinians.

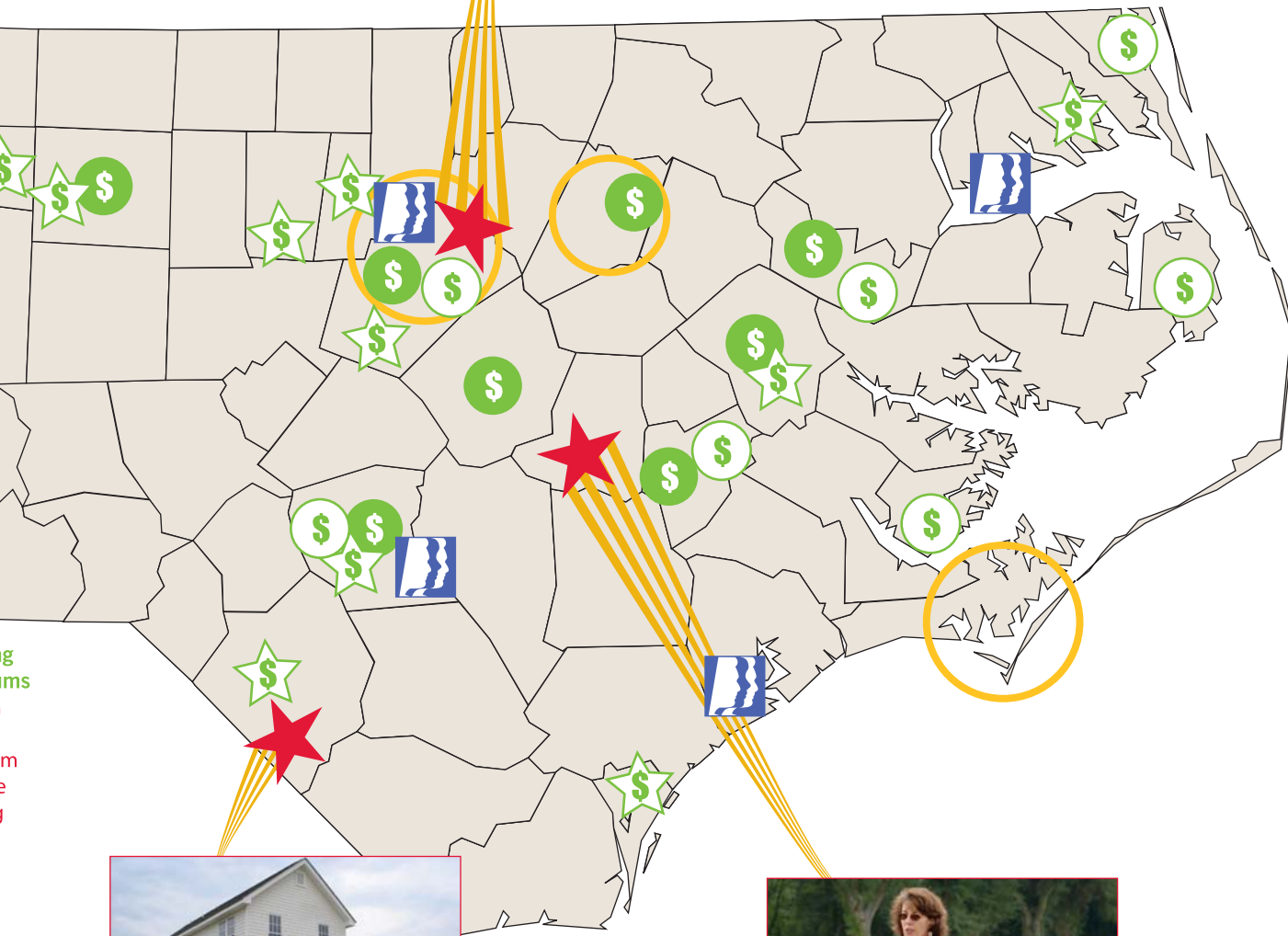
-  101 Cooperative Extension County Centers
-  Industrial Extension Service
-  Gateway County Center
-  Small Business and Technology Development Center
-  Academic Programs
-  The Science House

# Working with Communities



## College of Design's Downtown Design Studio

In Wake Forest, citizens engaged in a series of community design workshops led by the College of Design's Downtown Design Studio to help develop a vision for revitalizing the old W.E.B. DuBois school campus. The College of Design's outreach efforts are bringing a better quality of life and economic opportunities to downtowns, neighborhoods, and other areas across the state.



## Lumbee Home Designs

The Home Environments Design Initiative, a research and extension endeavor of the College of Design directed by Professor Georgia Bizios, FAIA, collaborates with the Lumbee Tribe of North Carolina to address issues of affordable and sustainable housing. The partnership has produced a set of home design guidelines and four prototype home designs. Six Lumbee Home Designs are now under construction or complete.



## Center for Environmental Farming Systems

Based in Goldsboro, CEFS provides a variety of workshops on sustainable agriculture practices for growers and extension agents around the state.

## Recommendation 7.c

### Implement “My University” level 3 engagement - Customized learning and discovery through engaged collaboration and problem solving to address local issues.

Level 3, which involves mutually beneficial collaborative problem solving about a priority issue, is the most resource intensive level of engagement. A learner would enter information on the “My University” portal describing the nature of their issue and answer key questions designed to help the university determine which faculty and potential resources are required to meet the learner’s needs. Based on a zip code, the learner’s information will be forwarded to a county gateway “broker” who will access a university intranet data matrix.

The broker will work through a series of menus/decision points that will mine the data to determine the: key faculty collaborators and key constraints on availability such as costs, student time/class schedules, etc. Once this is developed, the county broker can forward the information to the university engagement facilitator. The facilitator has a key role in organizing/coordinating the university’s resources to respond to the request. The university facilitator and county broker will work as a team to determine if collaboration is feasible, and if so, initiate the process.

There are many examples of successful level 3 collaborative problem solving and engagement already in practice, including existing Industrial Extension Service (IES) and Small Business and Technology Development Center (SBTDC) partnerships with companies, ongoing community projects within the College of Design, and Climate Center information programs for in-state groups and county governments. Our organizations excel at collaborative problem solving when an issue or need is defined and the appropriate specialists are available and engaged to develop solutions together with the community.

The challenge lies in developing the infrastructure that facilitates the process of organizing/coordinating the university’s resources to respond to requests, so the university becomes a viable partner.

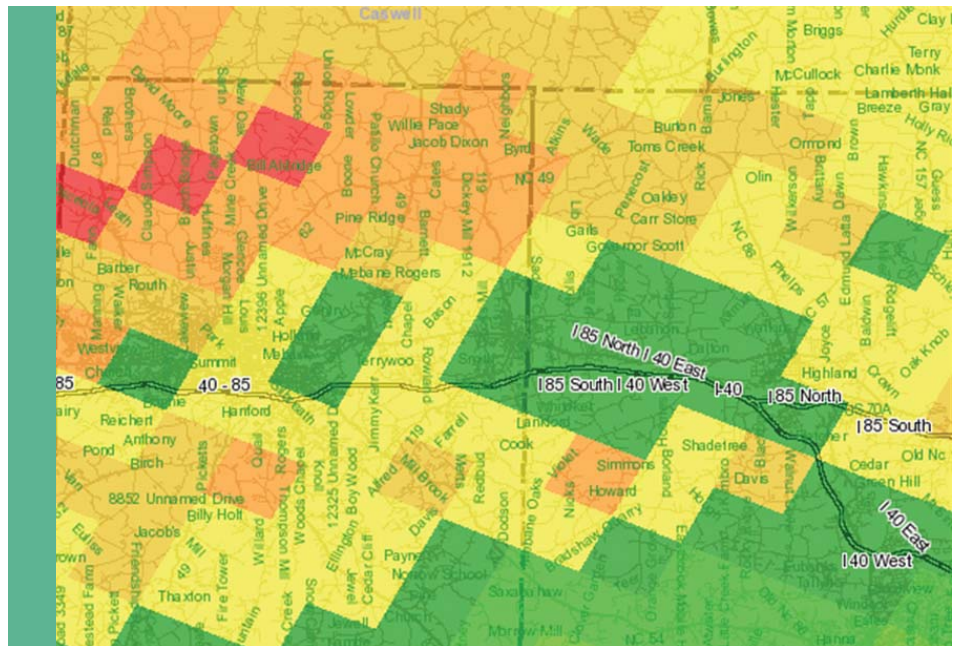
### Examples of Level 3 Customized Learning and Discovery through Engaged Collaboration and Problem Solving to Address Local Needs

Customized learning and discovery working with community-based issues may benefit individuals and/or communities. The following are examples of both.

- Individual Customized Learning
  - The Cooperative Extension State Health Plan (SHP) program assists elderly with Medicare decisions.
  - Industrial Extension Service and Small Business and Technology Development Centers work directly with business owners to address issues and assist them to become more effective and efficient. This work is often initiated by individuals and results in jobs retained and economic benefits to the community.
- Community-based Customized Learning
  - Dr. Jay Levine, College of Veterinary Medicine, collaborated with other colleges and disciplines to address issues within the Sturgeon City community. Riverworks at Sturgeon City is a unique program delivering community recreational and educational engagement that evolved from a city-community-university partnership. The project started with plans to restore the degraded ecosystem of Wilson Bay, on the New River near Jacksonville.
  - The Outer Banks Catch marketing and education program, launched in Summer 2010, was based on local issues and was the fourth community-based educational and marketing program focusing on seafood from a particular North Carolina county or region.
  - During 2003, Debbie Reno, a doctoral student in NC State University’s College of Education, learned that a large number of Martin County high school students planned on leaving the county once they graduated. Working with local Cooperative Extension faculty as well as other N.C. State colleges, together they explored the environment for young people and determined ways to get them more involved in their communities, and persuaded them to stay in Martin County beyond high school. That effort helped the county identify steps to retain young people; those efforts ultimately led to Williamston’s designation by Audubon International as one of the nation’s first sustainable communities.

- Rocky Mount's interest in strong enrichment opportunities in science and math has far-reaching implications. Not having an educated, healthy workforce has also affected the economic future of this region. NC State, along with local partners, universities and colleges, are collaborating through the Gateway Technology Center to offer courses, events, and programs to address employment and career preparation issues. The Collaborative, a working partnership between NC State University, Distance Education and Learning Technology Applications (DELTA) at NC State University, and East Carolina University (ECU), offers credit and non-credit educational offerings. The NC State/ECU Collaborative at the Gateway Technology Center has served more than 20,500 individuals in a variety of credit and non-credit programs since 2006.
- Cucurbit Downy Mildew is one of the most devastating diseases of cucurbits (pumpkin, squash, cucumber, gourds, etc.) worldwide. Growers rely on fungicides to effectively control the disease. The State Climate Office, in collaboration with faculty in the Department of Plant Pathology, created a website for educating growers, forecasting outbreaks and alerting growers to disease in their area. Growers and county extension agents work together to identify diseased plants and report them. Disease risk maps are created each day during the growing season. Growers can call their county extension agent or visit <http://cdm.ipmpipe.org> for identification materials, forecast maps, guidance on how to control the disease, and signup for free email or text message alerts. In 2009, the website resulted in an average of 2-3 fungicide applications, thus saving time and money and reducing environmental impacts.

- The North Carolina Department of Transportation (NCDOT) is required to prepare a weekly erosion control checklist for each of their construction sites. Operating requirements state that NCDOT must inspect stormwater control devices within 24 hours after a rainfall event of 0.5 or more inches occurs. One conventional approach, deploying rain gages at each construction site, would be too costly because of the number of sites to monitor and amount of manpower



required to routinely check and maintain gages. A less expensive rainfall monitoring system was needed. In 2006, the State Climate Office of North Carolina began collaborating with NCDOT to develop a rainfall estimates website that is based on Doppler radar. The website meets NCDOT's needs. Users can define their own monitoring locations and receive email alerts anytime precipitation at that location exceeds a defined threshold. As of March 2011, 647 NCDOT engineers use this service. An estimated 113,000 man-hours are saved annually as a result of less travel and maintenance. This translates to at least \$3 million annual savings. The figure above shows a sample image that is produced on the website.

## Broker / Facilitator Model

A broker/facilitator model is recommended. The model leverages NC State's presence in all 100 North Carolina counties via North Carolina Cooperative Extension or Industrial Extension Service. County extension directors would be logical brokers, as most have high visibility, strong connections with county government, and are well connected in their communities. Filling the facilitator role will prove more complex. Establishment of an extension and engagement facilitator team to define issues and identify possible solution teams or connections should be explored as part of the solution. Members of these teams should possess characteristics such as library science skills, extensive institutional knowledge, strong interpersonal skills, and extensive contacts throughout the state.

## Adequate Infrastructure

Additional technology infrastructure is needed to develop and support the proposed collaborative problem-solving environment. Extension needs an internal expertise database to provide information to these broker/facilitator teams. The most promising solution, already under development is the REACH NC project.

### Reach NC

NC State University is collaborating with UNC-Chapel Hill, Renaissance Computing Institute (RENCI) and UNC General Administration to build an expertise profiling system, REACH NC, to identify and characterize unique strengths in research, extension, and intellectual property. While the pilot includes only the two flagship institutions, the system has been designed to support the inclusion of all institutions in the UNC system and (ideally) all research-intensive organizations in NC.

Through a partnership with Collexis – an industry leader in knowledge management – expertise profiles based on publications are now available (<http://researchprofiles.collexis.com/reachnc>).

The development team sent grant and course data to Collexis to augment the profiles and is working to add extension activities, patents, and other scholarly work. RENCI will enhance the pilot with customized tools to visualize institutional impact (beta site: <http://vis.renci.org/impactviz>). The system's capability to locate specific university experts is a valuable resource for serving academic and industry stakeholders seeking collaborations across North Carolina. REACH NC represents an unprecedented tool to fuel economic development by facilitating public/private partnerships and recruitment of new companies to NC.

Efforts should focus on mining non-confidential data that is already collected. Much of the needed data already exists in various places, however not all of the information is accessible to REACH NC. Furthermore, competency using the REACH NC tool must be developed.



### Recommendation 7.d

#### Pursue a solution for aggregating and using the non-confidential information in the faculty activity reports as a data source for creating these profiles.

- Faculty activity reports would provide an abundant source of some program information and outcomes, but these are not currently collected in one location and they are confidential.

### Recommendation 7.e

#### Extension faculty and staff should be encouraged to upload peer reviewed extension work to the NCSU Scholarly Publications Repository.

- The NCSU Scholarly Publications Repository maintained by the NCSU Libraries could become another valuable data source if its use within EEED was widespread. More information on the repository is available at <http://www.lib.ncsu.edu/repository/spr/about.html>.

## Recommendation 7.f

**Emphasize the importance of having extension faculty and staff develop expertise in using the REACH NC system, and to contribute extension and engagement expertise, scholarship, and program products to the system database.**

- Extension and engagement faculty and staff located off-campus continually help connect people to the university. The Reach NC database can assist off-campus faculty in connecting citizens to the expertise within the university. This would be helpful in development of grants, contracts, multi-disciplinary community projects, and documentation of scholarly publications and community-based reports that address high priority issues and needs in North Carolina.

## Recommendation 8

**Extension and engagement faculty and staff should be encouraged to explore and leverage social media to establish or enhance their own robust professional networks.**

The entity, eXtension.org, a national initiative of the Cooperative Extension System, has developed an internal, social community of practice system that may serve as a model for consideration. Extension faculties nationwide are encouraged to join the eXtension People system at <http://people.extension.org> and become members of officially recognized and funded Communities of Practice and unofficial grassroots communities of interest. Individuals use keyword tags to identify their specialty and interest areas, and also share their social media identities, such as IDs on instant messaging, Twitter, and Google; and collaborative websites and blogs. Member information is searchable by all system members. The system can also be used to generate mailing lists.

## Recommendation 9

**EEED is encouraged to explore the adoption of Creative Commons Noncommercial licensing for copyrighted EEED content.**

Creative Commons Noncommercial licensing eliminates permissions barriers that restrict collaborative activity across universities and other organizations. Precedence for this has been set by the University of Michigan (a non land grant university) Library who in 2008 adopted Creative Commons licenses for its own content. University of Michigan Librarian Paul Courant said, *“Using Creative Commons licenses is another way the University Library can act on its commitment to the public good. By marking our copyrighted content as available for reuse, we offer the University community and the public a rich set of educational resources free from traditional permissions barriers.”* <http://creativecommons.org/weblog/entry/10109>.

In 2010, the University of Michigan launched the Open.Michigan initiative. Open.Michigan encourages researchers, learners, and instructors to maximize the impact and reach of their scholarly work



### Enhanced Building Entry

The front entry of the community center will receive a facelift. New paving materials and seasonal interest trees and plantings will be introduced to differentiate this area from the rest of the site and will "announce" the presence of an indoor exhibit from all approaches. Reconditioned and new dedicated markers will be placed strategically to invite people into the community center.



through open sharing. The Open.Michigan website, <https://open.umich.edu>, is a gateway to a wide spectrum of "open" projects and resources from University of Michigan. It features people and groups actively engaged in opening resources and creates a hub that connects these projects, individuals, and organizations, bringing awareness to the university's efforts and mission.

## Recommendation 10

### Explore program mapping by communities of place and interest.

Explore how to strengthen the mapping of non-credit programs by community of place and community of interest to visualize statewide footprint.



## Implementation Strategy

Moving from recommendation to implementation of any or all infrastructural components, we propose the following generic solution:

- Establish a clear direction and shared governance to facilitate buy-in and acceptance.
- Develop business model(s) that incorporate(s) shared stakeholder responsibility for acquisition and maintenance of an appropriate software application(s).
- Obtain a significant level of sponsorship, with or without funding, to launch each component.
- Seek extramural grant and contract funding.
- Establish an extension technology committee either within the OIT governance framework, or as a subcommittee of the EEED Operations Council.

We recommend that the following entities be managing partners in these efforts:

- North Carolina Cooperative Extension
- McKimmon Center for Extension and Continuing Education
- Industrial Extension Service
- Textiles
- Small Business and Technology Development Center
- Colleges with extension and engagement programs and courses
- Centers and units with extension and engagement programs



## Pilot Projects

### Level 1 Online Information and Awareness

A Level 1 project has been funded for one year with Extension Seed grant funds. The project goal is to a web-based application that will

1. Extend NC State University's outreach and engagement efforts to 8th – 12th grade students across the state,
2. Provide public school teachers, counselors, and principals with resource information for expanded K-12 outreach efforts with the university, and
3. Provide 21st century career information and internship opportunities for high school students, parents, teachers, and high school career counselors.



The database application will facilitate building relationships, establishing partnerships, and leveraging resources among a county public school system, business and industry, North Carolina Cooperative Extension and other organizations within NC State University. Eventually, the application will help students from across the state engage with NC State University and move from school into careers they choose and that contribute to their communities.

The system will be designed in scalable manner, to be extended into other counties and school systems when the pilot project is deemed successful. The project will also complement and serve as a resource to extension agents and specialists pursuing the North Carolina Cooperative Extension School to Career Pathways objective under the goal of Workforce and Economic Development. This program objective seeks to provide opportunities for youth and adults to improve their level of education and increase skills that enable them to be competitive in our global society and workforce.

## Level 2 Interactive Learning and Practice Change

A level 2 project has been funded for one year with Extension Seed grant funds. The project goal is Learn and Engage regarding Leadership Development for Community Decision-Making through the “NC A & T Community Voices” Extension program.

1. Extend NCCE outreach and engagement efforts to community leaders and emerging community leaders whether public, private or non-profit organization.

2. Provide these leaders with an engaged learning environment in an informal classroom in which peers build leadership skills through engaged interaction.

3. Provide an open participatory learning environment among peers, which builds leadership, community decision-making and problem solving skills.

4. The Community Voices program is to develop new groups of community and emerging leaders who can work together with other citizens to identify, investigate, and solve problems in their communities and counties using available resources and securing outside resources. Another primary goal of the program is to develop a shared group leadership process in which the organization and its staff can work with community groups as partners to help share programs and use resources to meet the specific needs of community citizens. This shared process gives staff members of organizations the leadership skills and strategies to work effectively with both non-traditional and traditional audiences whether in social, economic or environmental issues.

5. All levels of training in Community Voices are based on a participatory approach. This means that learners are actively involved in the training and help shape the focus and direction of the training. This program is designed to be implemented into several communities within a county or counties in order to develop an adequate base of leaders to address county and community issues.

6. Level 2 “Learn and Engage” easily transitions into Level 3, since the newly trained leaders in Community Voices need co-facilitators to help them facilitate the program skills and strategies in their base communities. This is where a trained extension agent becomes the broker/facilitator for the community leader.



## Mapping Pilot of Urban Raleigh Community Programs - Level 2 Interactive Learning and Practice Change and Level 3 Customized Learning and Discovery through Engaged Collaboration and Problem Solving to Address Local Needs

During 2009 and 2010, a pilot Google mapping project identified barriers to mapping place the programs. The pilot began with one targeted community, Raleigh and the Research Triangle area. It was discovered that street address of the program's location delivered is rarely collected. As a result, the EEED Office worked with faculty who had mutually beneficial partnerships and programming focused on a specific community of place and together we developed a short instrument to collect the data needed and then map the program partnership locations. These were largely level 2 and level 3 programs.

See: <http://brookline.ces.ncsu.edu/engagement>

Focus groups will be conducted to determine the usefulness to faculty, departments, and units engaged in level two or three programs across the state.

### Appendix A Task Force Members

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Jane Albright, Industrial Extension Service

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## Appendix B

### The “My University Concept”

#### Original “My University” Concept

#### A Gateway to the University for All North Carolinians

#### Dated January 14, 2009

### Concept

North Carolinians seeking information and collaborative assistance from the university will have public access to “My University” portal. This portal will offer three levels of potential learning/involvement:

1. Online access to information and learning
2. Access to existing educational opportunities such as in-person educational opportunities, and
3. Engaged collaborations to address community-based issues.

Each progressive level offers greater hands on involvement between the learner and “My University” faculty and may require financial and time commitments from the learner.

**Level 1 Online Access** can be accomplished through the development of a focused learner website environment. Topical areas need to be client friendly for easy identification and the topic needs could be linked to university or other collaborators’ learning information. Topical areas should be focused and prioritized based on statewide need and university unique expertise.

**Level 2 Access to Existing Educational Opportunities** offers the learner in-person educational training opportunities such as campus tours and events, summer programs, seminars, and non-formal courses. Classes are linked to a calendar with the topic, location, time, objectives, expectations, and any related costs listed. A computerized system that can sort the data based on topic and/or location would greatly enhance the effectiveness of the learner interface for level 2. The public and stakeholders can enroll online and choose options that enable them to attain personal and professional goals.

**Level 3 Engaged Collaboration to Address Community-based Issues** involves collaborative problem solving, strategic planning, and relevant actions with community groups. It is the most resource intensive level of involvement. A learner would enter information on the “My University” portal describing the nature of their issue and answer key questions designed to help the university determine which faculty and potential resources are needed to meet the learner’s needs. Based on a zip code, the learner’s information will be forwarded to a county gateway “broker” who will access a university intranet data matrix.

The broker will work through a series of menus/decision points that will mine the data to determine the following: key faculty collaborators and key constraints on availability such as costs, student time/class schedules, etc. Once this is developed, the county broker can forward the information to the university engagement facilitator or university engagement broker. The university-wide facilitator/engagement broker has a key role in organizing/coordinating the university’s resources to respond to the request. The university facilitator and university-wide broker and county broker will work as a team to determine if collaboration is feasible and, if so, initiate the process.

“My University” could provide the learner with the opportunity to become an alumnus of the university based on specified criteria. “My University” portal could have the abilities to track user preferences and offer other offerings similar to some private systems such as amazon.com.

“My University” can be organized only for NC State University or can be scaled to the UNC system depending on desires and resources.

## Appendix C

### Gateway Forum - October 24, 2008

#### How do we connect our communities with NC State?

##### Top three ideas from each table

1. Every county is a gateway for total university engagement
2. EEED virtual access - A web-based interactive site that includes webinars, communications, and information about Engagement activities
3. Target audience identified at the university level (i.e. business/industry, education, city/county government) - Communicate these needs with a central point of contact within university
4. New faculty engagement project - Orient new faculty to EEED by involving them in a proposed service project with extension and engagement outreach in the community
5. EEED Advisory Council - made up of leadership from all individual advisory systems. Results in greater communication and visibility at University for EEED
6. More efficient use of e-technology to deploy NC State campus and field capacities, better marketing and use of Cooperative Extension offices as comprehensive “retail outlets” for the system - the state. Ensure that outreach people know what is available.
7. Program delivery system developed and overseen by the EEED Office
8. Overcome the distance divides through electronic forms of communication and search engines for database and resources directories
9. Communicate through centralized coordination for outreach
10. Program development (by appropriate interdisciplinary response)
11. Leadership in extension, engagement and economic development to structure and define our form and function regarding our work in NC; establish ongoing needs assessment to prioritize initiatives; assemble internet task forces or “solution units” to pursue major NC goals and needs
12. Develop strategies for greater partnerships with community colleges
13. Develop University process education transfer/exchange to address critical needs and issues
14. Accommodate internal barriers and opportunities in order to bring capacities to bear on relevant outreach needs - by reculturing thru multi-college brainstorming and interaction
15. Capitalize on and build knowledge of existing infrastructure



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