



**ECONOMIC
PROSPERITY**

Ahead

DEVELOPING SOUTH CAROLINA'S WORKFORCE: A Roadmap for the Future

Policy Dialogue and
Forum Sites, Dates and Clusters 1

Letters From the SC Technical College System
& New Carolina-South Carolina's Council
on Competitiveness 2-3

Introduction 4

The Trip Begins: The Statewide Policy Dialogue 5

Road Map to the Future for South
Carolina's Workforce 6-7

The Journey Continues: The Six Cluster Panel
Discussions & Community Forums

 Advanced Manufacturing Panel & Forum
 at York Technical College 8-9

 Transportation Panel & Forum at
 Trident Technical College 10-11

 Energy Panel & Forum at Aiken
 Technical College 12-13

 Tourism Panel & Forum at Horry-
 Georgetown Technical College 14-15

 Healthcare Panel & Forum at
 Spartanburg Community College 16-17

 Agribusiness Panel & Forum at
 Orangeburg-Calhoun Technical College 18-19

Lessons From the Road: Where Do We
Go From Here? 20



“Workforce development.” It is a phrase you hear often when people are talking about competitiveness and economic development, but what does it really mean?

Workforce development is all about people. It is about bringing to the economic development table the human resources that a state, a company, or an economic cluster needs to succeed. There is no one workforce, especially



in today’s knowledge economy. Instead, there are general workforce skills – such as critical thinking, customer service awareness, teaming abilities and professional etiquette, as well as specialized industry requirements – such as knowledge of certain types of technologies or equipment, healthcare expertise or financial proficiency.

Successful workforce development is a journey, with many sideroads that run in tandem to an ultimate destination. In our case, that destination is South

Carolina’s overall economic prosperity, and an enhanced quality of life for all of our citizens.

Today’s workforce must be prepared to accommodate and manage an extraordinary amount of change. Technology is spurring innovation at an

“The SC Technical College System has a dual mission – to provide learning opportunities that promote both the human and the economic resource development of the state.”

unprecedented rate, and just staying current is more of a challenge every day.

Increasingly, economic health is based on the ability to innovate, to develop new products and then to cultivate the processes

and resources to commercialize them. South Carolina’s research universities are taking the lead in innovating these new products, but a trained, versatile and technologically adept workforce will be essential in order to ensure that

the fruits of this innovation are not exported out of state. Knowledge is the new capital – and education, in all its forms, is the key to developing and maintaining that knowledge.

Last fall, I read an article that indicated 65% of South Carolina’s jobs in 1950 were low-skill or no-skill, and 15% required post-high school training. According to the 2001 *Pathways to Prosperity* report, however, those numbers are now reversed: 65% of the jobs of the future will require an associate’s degree or advanced technical training – exactly the kind of education provided by the 16 Colleges of the SC Technical College System – while only 15% will require minimum skills.

The SC Technical College System has a dual mission – to provide learning opportunities that promote both the human and the economic resource development of the state. In essence, our mandate is to supply the means and opportunities to train South Carolina’s people, ensuring that the state’s workforce is prepared for economic growth and ready to provide the competitive edge South Carolina needs to succeed in the new economy.

“Successful workforce development is a journey, with many sideroads that run in tandem to an ultimate destination. In our case, that destination is South Carolina’s overall economic prosperity, and an enhanced quality of life for all of our citizens.”

It was this role that made our System a natural partner for the Southern Growth Policies Board in its development of the 2007 *Report on the Future of the South*. And it was this role that made us reach out to our state’s premier champions of the cluster concept of economic development – New Carolina-South Carolina’s Council on Competitiveness – to partner with us in the local community forums that were part of Southern Growth’s research process.

As you will see, the participants in the state Policy Dialogue and the Community Forums highlighted many things the state was doing effectively, as well as some areas of caution and concern. We hope you find the information as informative as we did, and we look forward to continued dialogue about next steps as we move down the road to a more prosperous South Carolina.

*Barry W. Russell
President, SC Technical College System*

When Dr. Russell approached New Carolina-South Carolina's Council on Competitiveness about partnering with the SC Technical College System and the Southern Growth Policies Board, I was thrilled to have the opportunity to find out what people in our state's communities are concerned about in terms of South Carolina's competitiveness.

In his introduction, Dr. Russell explained how workforce development ties into economic competitiveness, but what about clusters? How do they support our state's competitiveness, and what are they? We hear this term a lot, and it means different things to different people, but

“Many outcomes of the workforce Forums confirm that New Carolina and our various partners are moving in the right direction.”

New Carolina defines a cluster as a geographic concentration of interconnected companies and institutions in a particular field. Various researchers, including those in our own state institutions, have repeatedly shown that clusters can increase productivity and make companies within the clusters more competitive in global markets. New Carolina aims to find, birth, build, nurture and celebrate industry clusters.

I was pleased that the SC Technical College System wanted to look at the state's workforce issues relative to industry clusters. With some exceptions, fully developed clusters are regional and often drive regional economies. They can also provide a basis for regional workforce strategies. Many outcomes of the workforce Forums confirm that New Carolina and our various partners are moving in the right direction. For example, the New Carolina Education and Workforce Development Task Force, led by Roche's Don Herriott and Total Comfort's Jim Reynolds, is a group of the state's most passionate and experienced education, workforce development and business leadership. They are leading efforts and supporting full implementation of



Personal Pathways to Success, the statewide WorkKeys initiative, parent involvement and statewide apprenticeship programs. With the help of this task force's leadership, of which SC Technical College System is a part, many of the caution and stop signs you'll see on this report's road map diagram will be changed to green lights, and maybe even sooner than 20 years from now. While competition is accelerating around the world, it has, in the words of our Chairman Ed Sellers, "become the survival of the swiftest." We must grow and compete at a faster speed!

“While competition is accelerating around the world, it has, in the words of our Chairman Ed Sellers, ‘become the survival of the swiftest.’”

Dr. Russell is one of many leaders in education who recognize that workforce is a key to our future economy. We count on his leadership, and that of groups like the Southern Growth Policies Board, to help us move toward a "New Carolina." We can do it "rising as one." We are convinced that South Carolina can and will compete with anyone, and we're excited to be part of it. Please visit us at www.newcarolina.org.

*George Fletcher
Executive Director
New Carolina-South Carolina's Council on Competitiveness*

Late in 2006, the Southern Growth Policies Board (SGPB) asked the SC Technical College System (SCTCS) to become a partner in its research for the *2007 Report on the Future of the South*. This report, which focuses on recommendations for building a workforce to support the South's economic development initiatives, will be presented during Southern Growth's Southern Workforce Summit June 3-5, 2007.

The partnership focused on two main information-gathering opportunities: 1) a statewide Policy Dialogue for education, economic and workforce development experts, and policy makers; and, 2) six Community-based Forums with the same types of participants.

The statewide Policy Dialogue was one of six major policy discussions held throughout the Southeast; other regional Policy Dialogues took place in Arkansas, Georgia, Louisiana, Missouri and Oklahoma. In addition, 145 Community Forums were held in 13 states.

The Community Forums sponsored by the SCTCS, however, were a little different than the rest. To help further the state's ongoing drive toward economic cluster development, the SCTCS Forums began with a panel discussion highlighting the unique needs and opportunities of six overarching "cluster" areas: healthcare, advanced manufacturing, transportation, energy, tourism and agribusiness. Following the panel discussions, participants discussed their thoughts on the individual cluster, and outlined ideas for developing the workforce needed to support that cluster.

The SCTCS partnered with the state's resident expert on economic clusters – New Carolina – on the Community Forums. Each Community Forum was held at a Technical College, which also served as a local partner for the event.

The information collected via the statewide Policy Dialogue and the Community Forums often showed the commonalities of need for the future workforce as well as certain unique industry-specific elements. Highlighted in the discussions were general themes ranging from the need to develop comprehensive statewide workforce development solutions to concerns about the

consistent need for funding innovative initiatives. Another primary theme was the idea that the entire educational continuum – pre-K through 16 – must be involved in the process.

Given the fundamental role that workforce development plays in overall economic development, the SCTCS and New Carolina felt it was important to share the information from South Carolina's events with policy makers and leaders in a more complete manner than would be possible through Southern Growth's omnibus report. In addition, this state-specific report includes recommendations for future steps to continue South Carolina's journey down the road to a more prosperous future. One of the most important of these steps is the idea that a structured method for continuing this type of community feedback on this important policy issue should be developed. This feedback will help identify areas of success, as well as areas in which efforts need to be redirected or modified.

PHRASES YOU'LL ENCOUNTER ALONG THE WAY

Clusters New Carolina defines a cluster as a "geographic concentration of interconnected companies and institutions in a particular field."

Career Clusters High school course work and practical work experience organized and tailored around specific occupational groups that offer students core academics and out-of-classroom learning experiences that match their aspirations and abilities. Career clusters are key elements of the EEDA.

EEDA The Education and Economic Development Act of 2005 (EEDA) mandates an overhaul of education in South Carolina in a way that demonstrates to students connections between what they accomplish in school and their professional success in the future. **Personal Pathways to Success** is the initiative designed to implement the EEDA.

Workforce The number of employees potentially assignable for any purpose, or employees engaged in a specific activity or enterprise.

WorkKeys A job skills assessment system measuring "real-world" skills that employers believe are critical to job success. The program evaluates ten foundational workplace skills: applied mathematics, applied technology, business writing, listening, locating information, observation, readiness, reading for information, teamwork and writing.

THE TRIP BEGINS: THE STATEWIDE POLICY DIALOGUE

Industry leaders, educational administrators, workforce development experts and policy makers from across South Carolina all took to the highways and gathered in Columbia for this important statewide Policy Dialogue on workforce development on Tuesday, January 16, 2007.

To help develop a snapshot of the workforce of the future, nine small groups of participants were asked to create an announcement for a hypothetical job opening, as well as a road map for South Carolina to reach and exceed its workforce development goals over the next twenty years. To facilitate discussion, the groups were given “tools” to assist them in developing their roadmaps, including job opening descriptions for the first exercise.

Jobs down the road in South Carolina

Policy Dialogue participants discussed hypothetical job openings in the automotive, energy and healthcare sectors of the economy. Many of the positions available will be with small businesses.

The majority of the hypothetical positions created by the participants require at least a two-year associate’s degree. Skills needed to obtain one of these positions will include: technical and computer skills, good communication skills, a professional certification or relevant education, high WorkKeys scores, a commitment to succeed, flexibility, attention to detail and possible foreign language abilities. Two of the hypothetical positions additionally required leadership and management skills.

In order to attract and retain qualified employees, the Policy Dialogue participants felt that companies will need to provide their employees with great benefits: flexible work schedules, good salaries, health insurance and wellness benefits. Some believe 401(k) benefits, on-site day care, uniforms, paid vacation, continuing education, company car, stock options and/or opportunity for advancement will also be essential employee benefits.

According to Pathways to Prosperity (2001), 65% of the jobs of the future will require an associate’s degree or advanced training.

SOUTH CAROLINA’S JOB OUTLOOK

The South Carolina Department of Commerce projects that South Carolina’s workforce will grow 30% more than the national average. **Healthcare** is the fastest-growing workforce sector; with myriad opportunities across the industry spectrum. Growth averages approximately 30%, and options are as varied as diagnostic technicians and support staff to office and records management to mental health and substance abuse counselors.* The greatest need is projected to be in nursing. The Health Resources and Services Administration (HRSA) predicts that by the year 2020, the projected supply of nurses in South Carolina will increase by 11% whereas the demand for that same time period is expected to increase by 48%.†

An established utility infrastructure is highly desirable for new industry and South Carolina boasts readily available water, electricity, natural gas and cutting-edge communications. Two of the largest river basins on the East Coast are located here, along with access to two interstate natural gas pipelines with four distributors. Telecommunications are supported by digitally switched central offices, and nearly \$2 billion has been invested for statewide fiber optic lines.‡ Growing industry will rely on greater **energy** needs, which will in turn require a skilled workforce. Technological advances and workforce shifts will make occupational **training** a necessity as support will be needed to keep increasingly computer-reliant workplaces efficient.

Growth in manufactured goods will require effective transportation. The five major interstates that connect South Carolina to more than 50% of the nation’s fastest-growing markets landed our state’s four major metro areas in a listing of America’s 100 most logistic-friendly cities.§ To support these **automotive** arteries, the South Carolina Employment Security Commission predicts growth for engine specialists, mechanics and heavy and tractor-trailer truck occupations requiring up to two years of post-secondary education.

* SC Employment Security Commission, Bureau of Labor Statistics, US Department of Labor

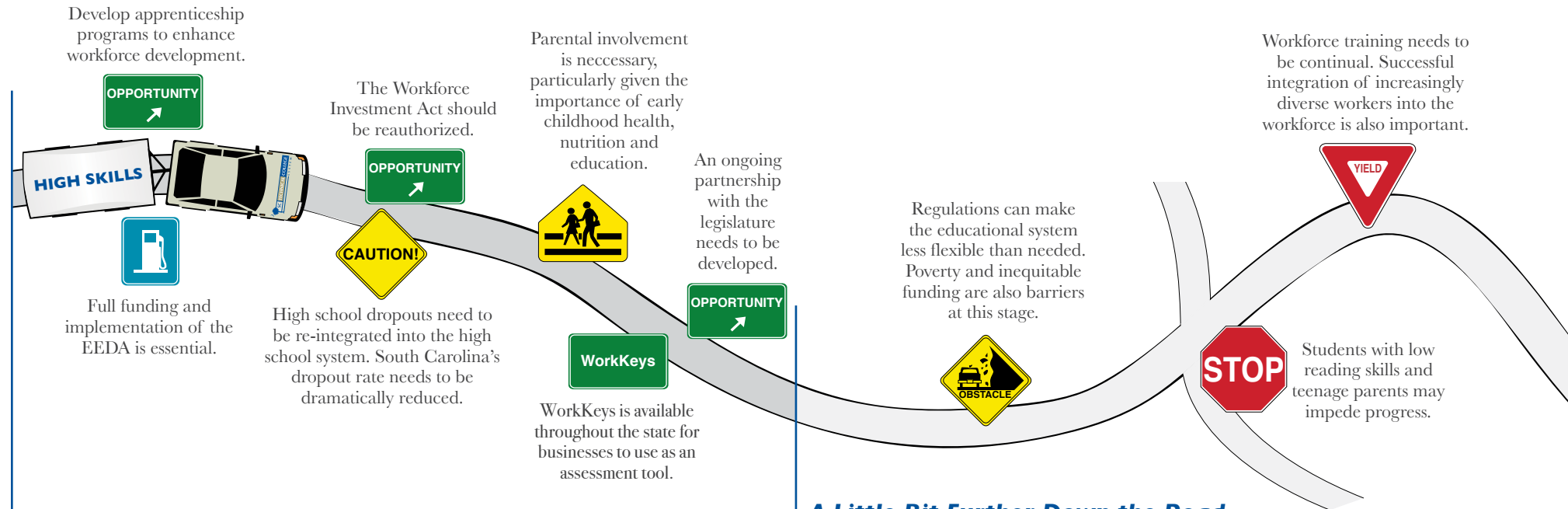
† SC Hospital Association

‡ SC Chamber of Commerce

§ Expansion Management and Logistics Today magazines, SC Chamber of Commerce

ROAD MAP TO THE FUTURE FOR SOUTH CAROLINA'S WORKFORCE

The nine groups participating in the statewide Policy Dialogue were asked to design road maps outlining their vision of the state's necessary steps and priorities for the workforce of the future. Southern Growth Policies Board directed that the activities and achievements were to be specified and measured in five-year increments. Outlined below is a compilation "roadmap" developed by the Policy Dialogue participants.



The Beginning of the Road

(1 to 5 years out)

Forecast for the Future

Full implementation of the EEDA/Personal Pathways to Success throughout the state is important to ensure that South Carolina heads in the right direction from the beginning. The EEDA/Personal Pathways to Success is meant to create a bridge between education and industry by organizing education around career clusters. The goal is to provide students with solid academic preparation and also expose them to real world issues, work experiences and career paths.

A Little Bit Further Down the Road

(5 to 10 years out)

Forecast for the Future

Following the implementation of the EEDA/Personal Pathways to Success all eighth graders now have an industry cluster and career path in mind. Connections between education and industry have increased at all levels.

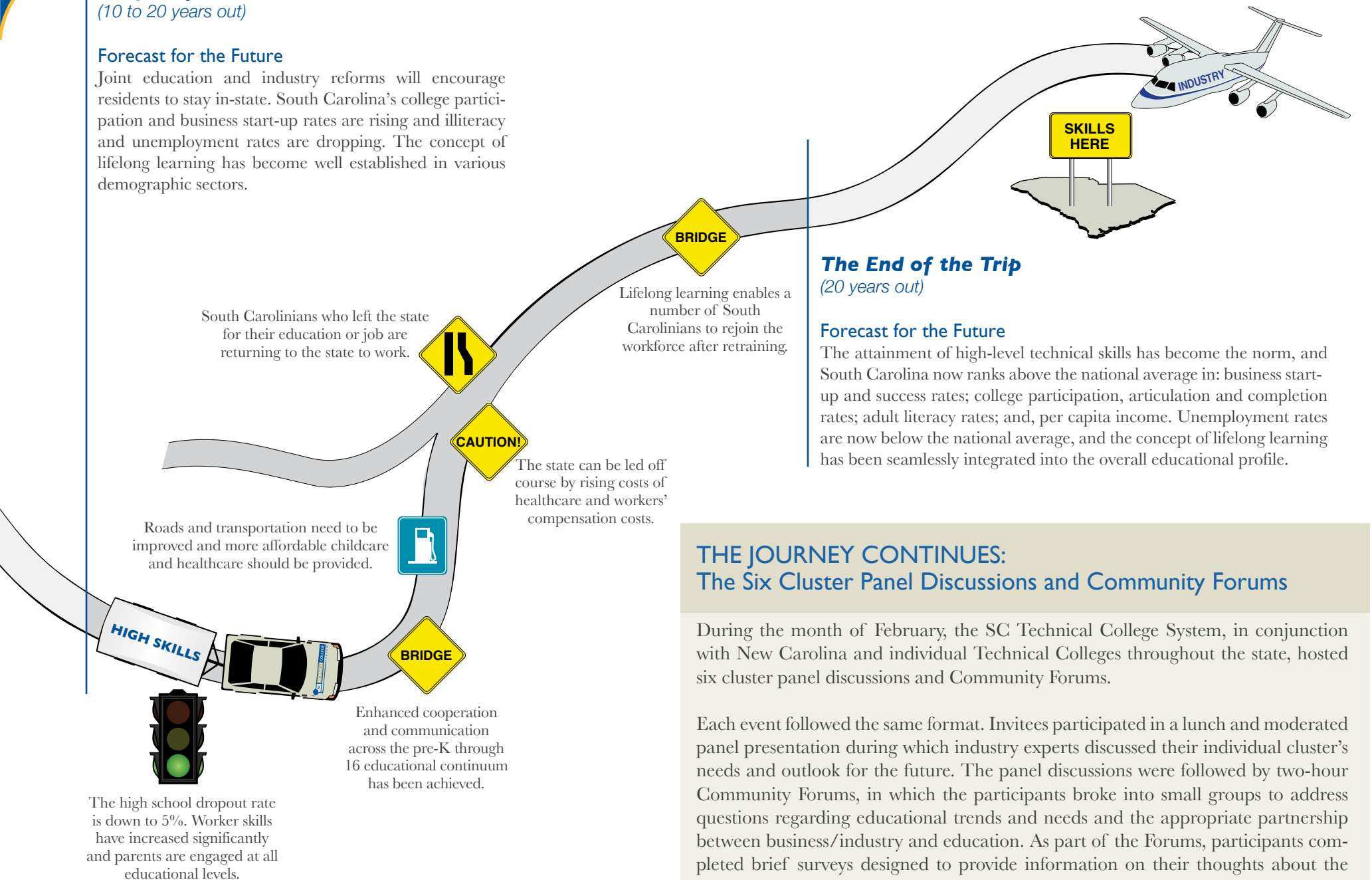
Students have the possibility of participating in dual enrollment at one of South Carolina's Technical Colleges, earning credits while completing high school. This allows them to stay more invested in school and also helps them with a defined career path. Students who are academically able but at risk of dropping out can participate in one of the state's middle colleges, where they will have the opportunity to participate in internships and shadow professionals in their future field.

Half Way There!

(10 to 20 years out)

Forecast for the Future

Joint education and industry reforms will encourage residents to stay in-state. South Carolina's college participation and business start-up rates are rising and illiteracy and unemployment rates are dropping. The concept of lifelong learning has become well established in various demographic sectors.



THE JOURNEY CONTINUES: The Six Cluster Panel Discussions and Community Forums

During the month of February, the SC Technical College System, in conjunction with New Carolina and individual Technical Colleges throughout the state, hosted six cluster panel discussions and Community Forums.

Each event followed the same format. Invitees participated in a lunch and moderated panel presentation during which industry experts discussed their individual cluster's needs and outlook for the future. The panel discussions were followed by two-hour Community Forums, in which the participants broke into small groups to address questions regarding educational trends and needs and the appropriate partnership between business/industry and education. As part of the Forums, participants completed brief surveys designed to provide information on their thoughts about the state's workforce development efforts, and the types of activities they might support to strengthen those efforts. For information on survey findings, please see page 20.

Event panelists were:

- Robbie Barnett – SC Chamber of Commerce
- William W. Beaver – York Technical College
- Rod Tojdowski – Okuma America Corporation

The panel was moderated by Tammy Durham.

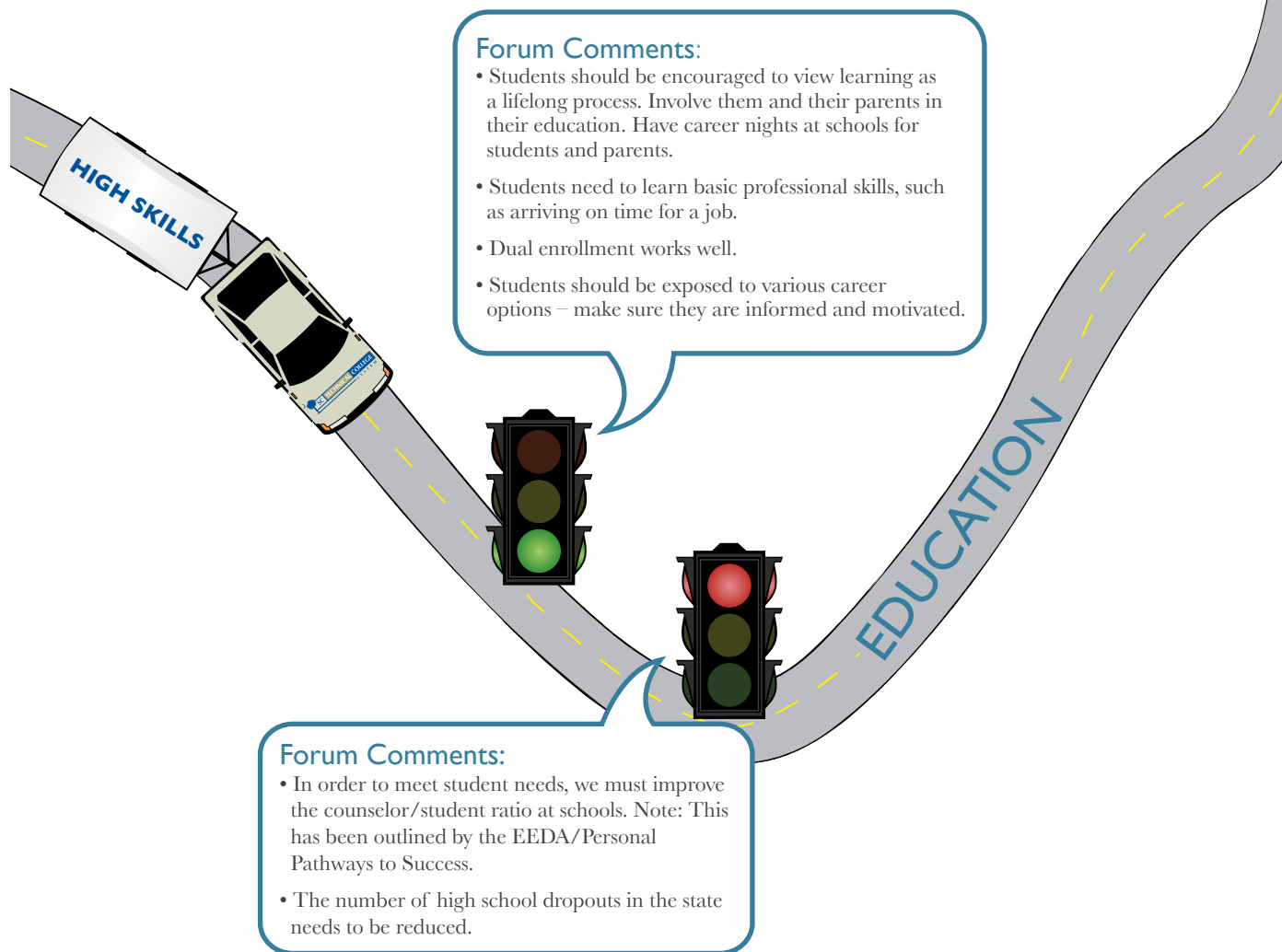
The Advanced Manufacturing Cluster Defined

For purposes of the panel and the Forum, advanced manufacturing encompassed the range of technologically advanced manufacturing processes and procedures currently utilized in many manufacturing facilities, as well as those under development.

Job Outlook For Advanced Manufacturing

South Carolina manufacturing boasts the second highest rate of productivity in the Southeast and the seventh highest in the nation. Opportunities in the coming years will be best in machinery manufacturing, mechanical and electrical technology, computer sciences, skilled production and business management. South Carolina companies have already exported at least \$13.9 billion worth of products to more than 190 countries.*

* SC Department of Commerce



Innovative Opportunities Underway In Advanced Manufacturing In SC

York Technical College recently created “3D Systems University” through a partnership with 3D Systems Corporation. 3D Systems University will be the company’s premier training resource for skill development in 3D printing, rapid prototyping, and rapid manufacturing.

Piedmont Technical College and *Orangeburg-Calhoun Technical College* have been named Leading Educational Affiliates (LEA) for Project Lead the Way, a national initiative to increase the number of students pursuing engineering-related degrees.

Spartanburg Community College, *Northeastern Technical College* and *Trident Technical College* have initiated apprenticeship programs with area businesses. Spartanburg used grants from the SC Department of Commerce, AdvanceSC and the Upstate Workforce Investment Board to develop apprenticeships with LSP Automotive Systems, Timken Company, Sonoco, Spartanburg Steel and others. Northeastern has developed an INA Machine Tool Apprenticeship program, and Trident received a grant from the Alcoa Foundation to implement a program for 10 companies in the Charleston area.

Midlands Technical College provides advanced manufacturing workforce training at its Center of Excellence for Technology, which contains an instructional environmental to support metalworking (CNC), metrology, metallurgy, rapid prototyping and quality.

Florence-Darlington Technical College’s Southeastern Institute for Manufacturing and Technology will be opening in late Summer 2007, and will provide the state with its first Interactive Digital Center (IDC) for the design and creation of sophisticated 3D simulations. A principal component of IDC will be the creation of 3D products for the marketing, sales, product support, service and training functions of business and industries.

Questions for the Future

- Is a certificate program needed as a foundation for workforce entry?
- What role should WorkKeys play?

Forum Comments:

- Education and industry are partners on this path. It is possible to have companies work with specific schools. Mentoring and shadowing are great ways for both sides to get involved.
- Education leaders and manufacturing executives need to speak the same language.

BUILDING THE BRIDGE

Forum Comments:

- School calendars should be posted in business offices.
- Schools should be utilized to educate parents about career options.
- A passion for education and the opportunities provided by the industry needs to be developed.

Forum Comments:

- Industry practices and technology are changing quickly.
- Replacing the aging workforce will require transfer of skills/knowledge from experienced workers.

REPAVE THE ROAD!

Forum Comments:

- The manufacturing industry should launch a public relations campaign to raise awareness of opportunities in the industry, especially among potential employees, their families and their guidance counselors.
- The industry should identify its workplace development needs and be more aware of available workforce development services, such as WorkKeys and Incumbent Worker Training grants.
- Apprenticeship programs work very well in this industry.
- Larger companies need to reach out to smaller businesses, as they are often left out.

Event panelists were:

- Stephen Connor – SC Ports Authority
- Chuck Jenkins – Vought Aircraft Industries, Inc.
- Will Williams – SC Department of Commerce

The panel was moderated by Mary Thornley, President of Trident Technical College.

Transportation Cluster Defined

For the purposes of the panel and the Forum, various transportation sectors – such as aviation, ports and automotive – were included in the definition of the transportation cluster.

Transportation Job Outlook

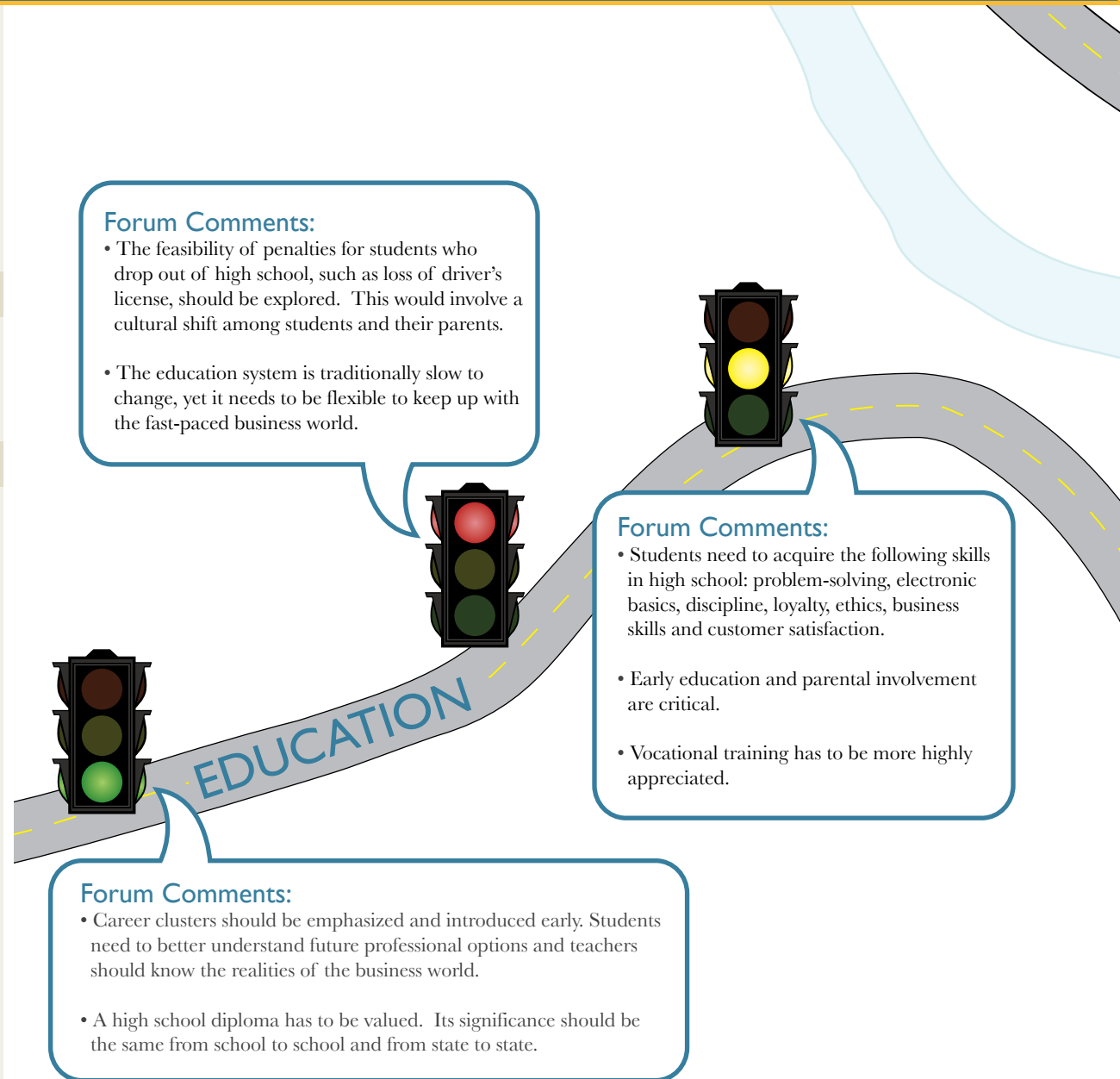
South Carolina airports are relied on by residents, businesses and visitors for trade, travel, health, welfare and safety needs. Air transportation and services are projected to grow 25% by 2010, while pilots, copilots and flight engineers are projected to grow 19% and mechanics and service technicians by 20% by the year 2014.*

The South Carolina State Ports Authority owns and operates three seaports. The busiest of these is Port Charleston, ranked as the second-most efficient port in the nation. Shipping-related jobs are projected to grow by 22% by 2014.

Automotive opportunities include not only manufacturing and maintenance, but also logistics management of product transportation and storage, and urban transit. By 2014, a modest 12% growth is expected in transport equipment, but leaps of 31% in local and interurban passenger transit and 25% in trucking and warehousing sectors are predicted. In the consumer arena, a 33% jump is expected in automotive services along with a 35% spike in the automotive electronics arena.* Opportunities are expected to be plentiful and earnings relatively high, especially for those who complete formal technician training.†

* SC Employment Security Commission, Bureau of Labor and Statistics, US Department of Labor

† Bureau of Labor and Statistics, US Department of Labor



Forum Comments:

- The feasibility of penalties for students who drop out of high school, such as loss of driver's license, should be explored. This would involve a cultural shift among students and their parents.
- The education system is traditionally slow to change, yet it needs to be flexible to keep up with the fast-paced business world.

Forum Comments:

- Students need to acquire the following skills in high school: problem-solving, electronic basics, discipline, loyalty, ethics, business skills and customer satisfaction.
- Early education and parental involvement are critical.
- Vocational training has to be more highly appreciated.

Forum Comments:

- Career clusters should be emphasized and introduced early. Students need to better understand future professional options and teachers should know the realities of the business world.
- A high school diploma has to be valued. Its significance should be the same from school to school and from state to state.

Innovative Opportunities Underway In Transportation In SC

Trident Technical College, in conjunction with the SC Technical College System's Center for Accelerated Technology Training (CATT), has implemented a workforce training program for Vought Aircraft Industries, Inc. and Global Aeronautics as they manufacture sections of Boeing's Dreamliner 787 aircraft using composite materials.

Greenville Technical College's McKinney Regional Automotive Technology Center is positioned to train people for many of the expected 20,000 jobs that Clemson University's International Center for Automotive Research (ICAR) is expected to generate.

Questions for the Future

- Are school board members aware of the disconnect between education and industry?
- Does a "customer-service" orientation need to be part of the relationship between business and industry and education?
- How does South Carolina compare to other states?
- Is South Carolina being too hard on itself?
- Can the community or industry be a surrogate family for children who are not getting what they need in the home? How can community organizations help out?

Forum Comments:

- The trucking industry would like to see a change in the required legal age of 21 for a commercial driver's license. Considering that insurance companies won't insure anyone with a commercial license under age 23, the trucking industry cannot consider employees who are less than 23. Considering the overall shortage of drivers, this is not good for trucking.

REPAVE THE ROAD!

Forum Comments:

- The industry has to put forth a unified message and an engaging marketing campaign to make the community more aware of the opportunities involved.
- A generational shift is clearly taking place in the workplace. This needs to be addressed. Young employees require reasons to stay with the same employer, such as good salary and benefits.
- The industry needs to set up more mentoring and internship programs for students.

Forum Comments:

- The transportation industry should be more present in the classroom and the classroom should be part of the transportation industry. The bridge between education and industry can be reconnected and the interaction needs to be continuous, not sporadic.
- The EEDA has to be fully implemented.
- More young adults need to be involved in this conversation.
- Communication and collaboration are very important for any endeavor.

HIGH SKILLS

Event panelists were:

- Ron Calcaterra – Central Electric Power Cooperative
- Rachel Card – Engenuity SC
- Fred Humes – Economic Development Partnership
- Todd Wright – Savannah River National Laboratory

The panel was moderated by Steve Simmons of Aiken Technical College.

The Energy Cluster Defined

For the purposes of the panel and the forum, various energy-related sectors – such as electric, nuclear and hydrogen – were included in the definition of the energy cluster.

Job Outlook for Energy

Opportunities abound as the industry shifts to a more productive automated model. Those with two-year technical college training in advanced technologies will have the best opportunities in both the **electric** and **nuclear** power industry – where earnings are significantly higher than in most other sectors. Computer operator, programmer and support specialist positions are set to grow by 18% while nuclear technicians are poised to spike by 31%.*

In the 2006 State of the Union Address, President Bush set a national goal of replacing more than 75% of oil imports from the Middle East by 2025. The best way to achieve this is through new technology, and South Carolina is uniquely positioned to take the lead in this arena. The Savannah River National Laboratory – one of only 12 Department of Energy designated labs in the nation – has made broad advancements in **hydrogen** research. The joint efforts of national scientists with South Carolina's post-secondary institutions, researchers and the private sector serve to accelerate the use of hydrogen as a viable energy source.†

* SC Employment Security Commission, Bureau of Labor Statistics, US Department of Labor

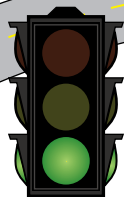
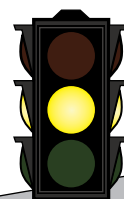
† Center for Hydrogen Research

Forum Comments:

- Schools should focus on core sciences. We need to make sure smart children do not get bored.
- Enhanced connections between high school and higher education are needed.
- Education needs to be flexible and continuous at both four-year institutions and two-year colleges.
- Early childhood education is critical.
- Young adults today will have to be lifelong learners.

Forum Comments:

- We need public financial support for higher education.



Forum Comments:

- Let children know they can do it. Encourage them to stay in school.
- Co-op programs, internships and apprenticeships can be great options for high school students.
- Educate students and parents about careers and choices. Not all jobs will require a four-year degree. Let's focus more on what happens after high school, not the diploma itself.

Innovative Opportunities Underway In Energy In SC

Aiken Technical College is in the beginning stages of a partnership with the Savannah River Site to train technicians for the hydrogen fuel initiative at the Center for Hydrogen Research.

Midlands Technical College recently revised its engineering technology curriculum to include courses in fuel cell technology to support the development and applications of next energy products and services.

Spartanburg Community College has partnered with Duke Energy to offer a new radiation protection technology program. Students will initially receive a one-year certificate in fundamentals of radiation sciences, and after three additional semesters of coursework, students will graduate with an Associate Degree in Occupational Technology majoring in Radiation Protection.

Questions for the Future

- Can we promote success stories in this cluster?
- How are other countries addressing workforce development issues in this industry?

Forum Comments:

- South Carolina's quality of life and other resources make it attractive to business and industry.
- Professionals need to spend time in the classroom and inspire children. They can be mentors in math and science and show enthusiasm for their work.
- Industry can participate in the articulation of programs of study for the energy cluster from high school to graduate school. Businesses can design courses for colleges to highlight business training needs.
- School-to-work programs would also offer opportunities for students and prepare them for a particular position in this sector. Collaboration and innovation are required.

Forum Comments:

- Our communities need to encourage and celebrate academic achievement.
- South Carolina should focus on keeping its college graduates in the state and providing them good professional opportunities.
- Discussing the local and global environmental issues and context is critical to the energy sector.

Forum Comments:

- The energy industry may need to pay for some of the costs of educating its future employees.

PAY TOLL

REPAVE THE ROAD!

Forum Comments:

- Businesses need to develop a unified view of the energy industry and focus on its image as a good place to work. The diversity of this sector makes it hard to create a consistent message.

Event panelists were:

- Brad Dean – Myrtle Beach Area Chamber of Commerce
- Pauline Levesque – Myrtle Beach Area Hospitality Association
- Greg Mitchell – Horry-Georgetown Technical College

The panel was moderated by Greg Thompson of Horry-Georgetown Technical College.

The Tourism Cluster Defined

For the purposes of the panel and the Forum, a range of hospitality sectors were included in the definition of the tourism cluster:

Job Outlook For Tourism

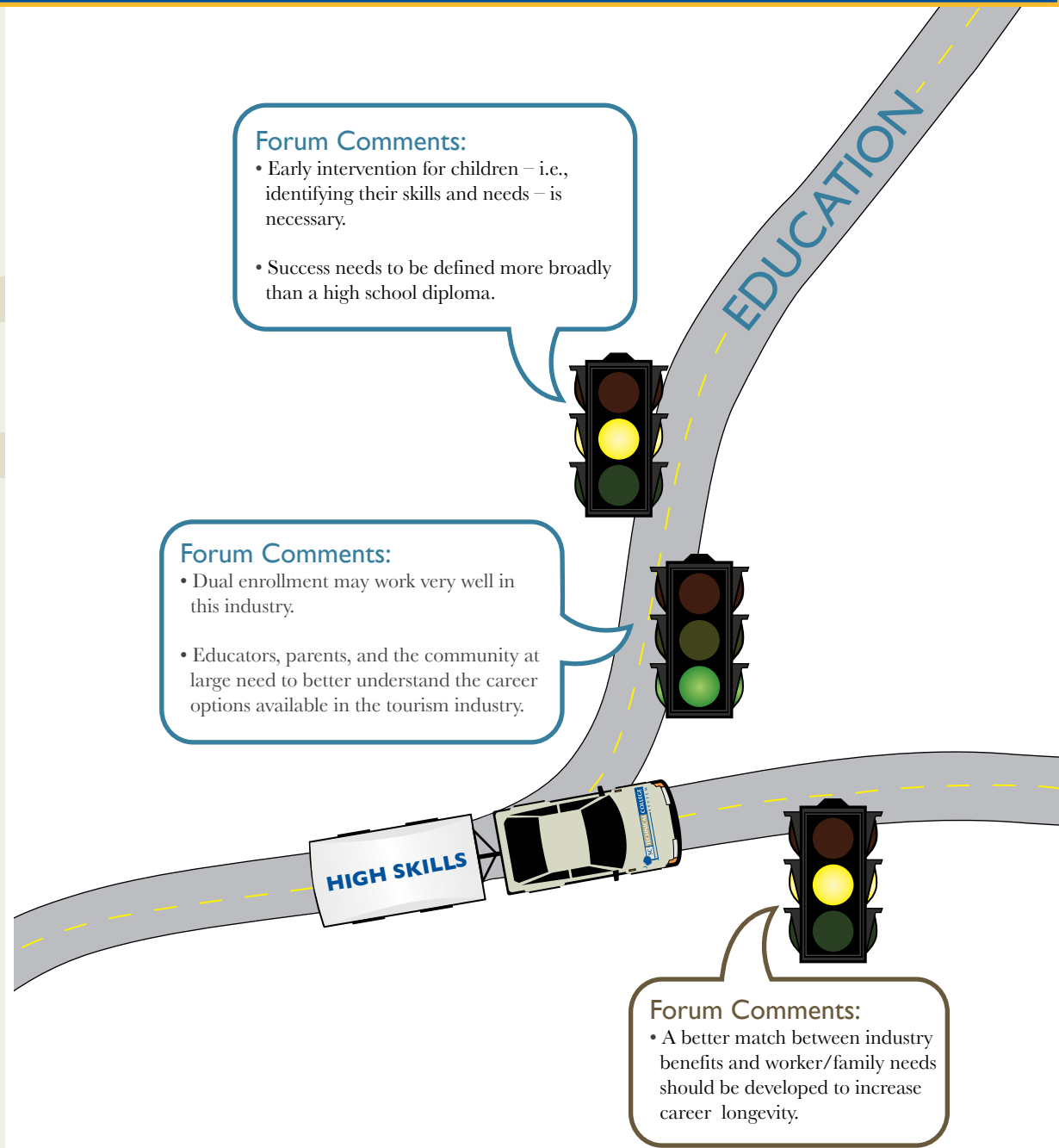
South Carolina – with its beautiful and varied beaches, golf courses, mountains, parks and historic sites – is known as one of the nation's top vacation destinations. Tourism spending, at approximately \$16 billion dollars, adds almost \$9 billion to the state's annual economy and contributes to more than 11% of South Carolina's total employment.* Tourism is the state's No. 1 industry.†

The **hospitality** sector is served by a variety of industries and myriad employment gains are projected through 2014. New opportunities abound in the personal care industry as accommodations become more competitive with their amenity packages. Spa practitioners, such as massage therapists, skin care specialists, manicurists and cosmetologists could see growth up to 20%. Managerial positions will be in demand as public relations professionals and event, meeting and convention planners are projected to grow by 18% and 24%, respectively. And despite the proliferation of online travel booking and planning services, travel agents are projected to see the greatest growth at 36%, followed closely behind by travel guides at 30%.‡

* The Economic Contribution of Tourism to South Carolina, SC Department of Parks, Recreation and Tourism

† New Carolina website.

‡ SC Employment Security Commission, Bureau of Labor Statistics, US Department of Labor



Innovative Opportunities Underway In Tourism In SC

Horry-Georgetown Technical College and *Trident Technical College* each offer programs in culinary arts, hospitality and tourism. In 2005, Trident opened the Culinary Institute of Charleston to provide exceptional opportunities for students as they pursue careers in one of South Carolina's target cluster areas.

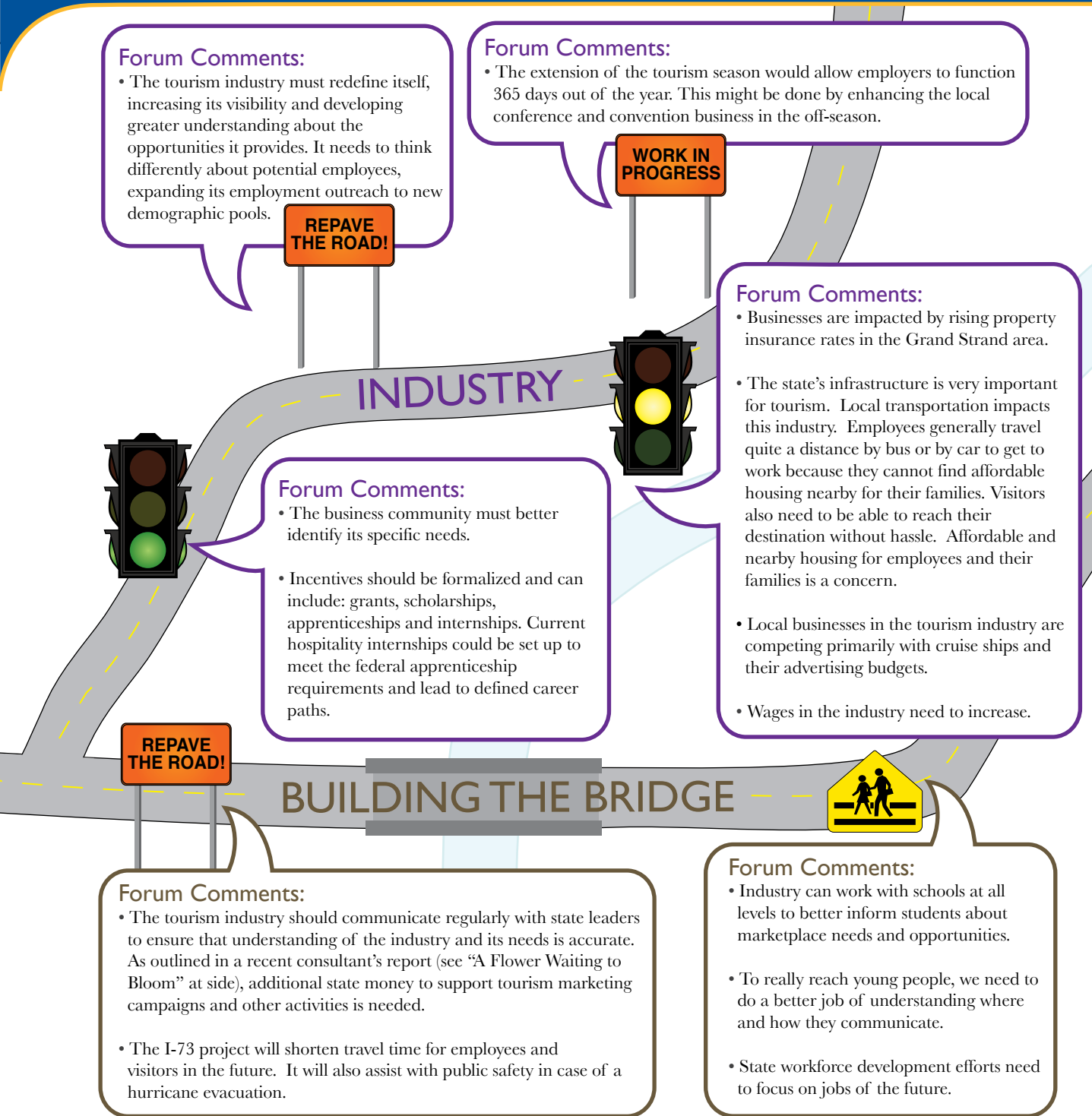
Technical College of the Lowcountry offers programs in hospitality/tourism and golf instruction and management to meet the growing demands of the tourism cluster. The College's New River Campus opened in October 2006 on the Beaufort-Jasper border and is ideally positioned to expand educational opportunities in the Lowcountry.

Questions for the Future

- Does the high school diploma need to be redefined to include soft skills, work ethics, good manners and basic computer skills?

South Carolina Tourism – “A Flower Waiting to Bloom”

A recent report on the impact of tourism on South Carolina's economic development indicated that the industry is strong, but its “positive impact could be increased significantly.” The report's authors indicate that South Carolina could become “...one of the USA's leading tourism states in less than two decades,” if the recommendations in the South Carolina Tourism Action Plan 2006 (TAP) are implemented. For more information on the report, go to www.newcarolina.org.



The opinions and comments outlined above are a compilation of the thoughts of participants and are not necessarily reflective of the opinions of the SC Technical College System, New Carolina, their Boards, or Staff, or the panelists, and/or their organizations.

Event panelists were:

- Ingo Angermeier – Spartanburg Regional Healthcare System
- Ben Davis – Employment Security Commission
- Glenn Robinson – Mary Black Hospital

The panel was moderated by Carrie Davis, Channel 7 News.

The Healthcare Cluster Defined

For the purposes of the panel and the Forum, the healthcare cluster encompassed the overall healthcare industry.

Job Outlook For Healthcare

South Carolina will see a surge in healthcare job opportunities through 2014.* Opportunities abound, as many specific professions fall within the categories of nursing, allied healthcare and support staff that are projected to rise in South Carolina by at least 30% by the year 2014.† Further, salaries for nursing and allied healthcare workers average around \$32,000*, which is higher than the state's current per capita income of \$29,215.‡

Nursing is projected to have the greatest need, as the Health Resources and Services Administration (HRSA) predicts that South Carolina's supply of nurses will increase by only 11% while the demand for that same time period is expected to jump by 48%. Statewide, the vacancy rate for nursing positions is 12.6%, forcing half of the nursing workforce to be recruited from out-of-state, with some hospitals offering signing bonuses as high as \$12,000. Demand for **allied health care professionals** is also growing in South Carolina, with the SC Hospital Association reporting shortages ranging from 29-51%.

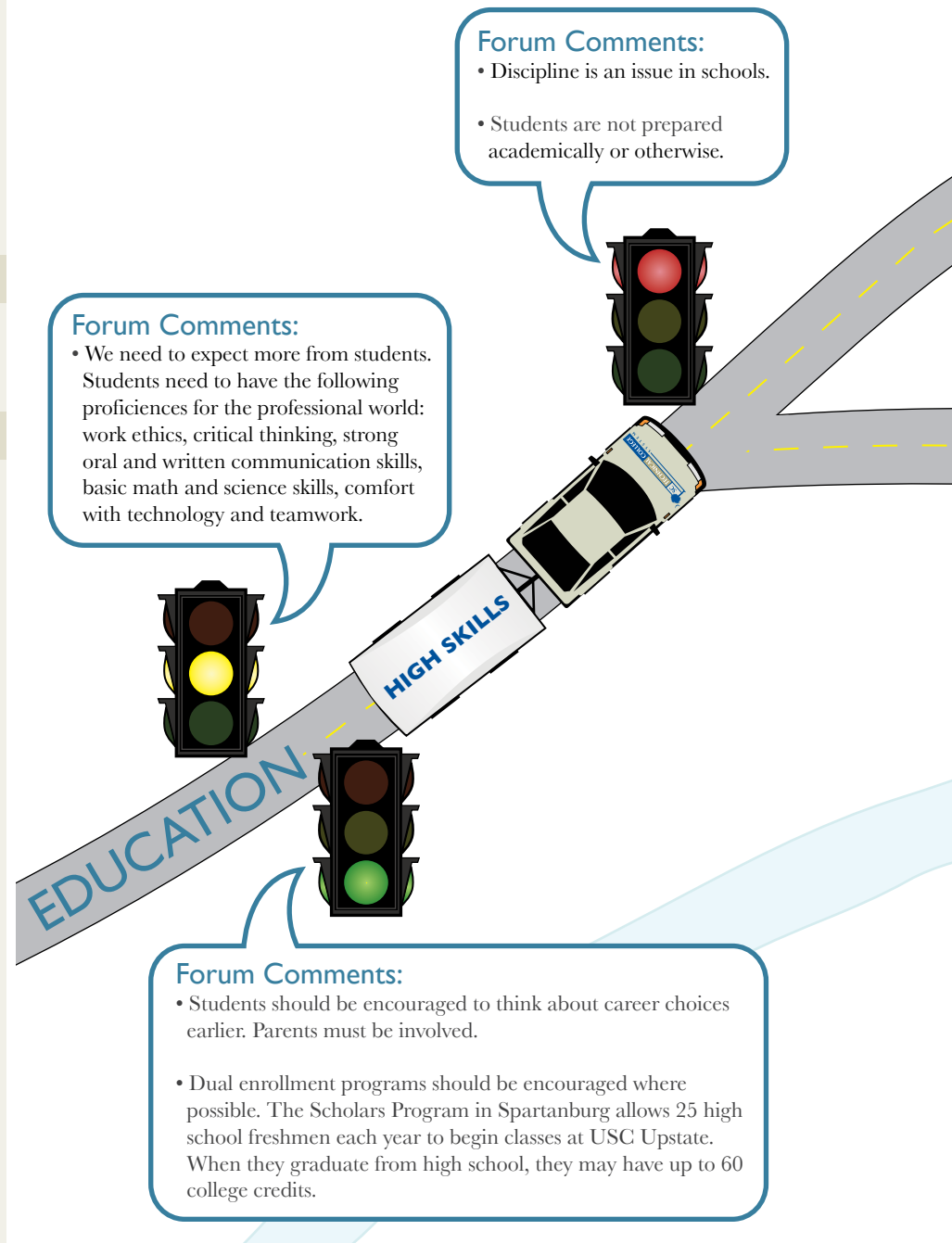
An aging population will further threaten an already serious shortage of caregivers. Currently, more than 40% of all hospital discharges are for people 65 years old or older. The state's 65+ demographic is predicted to surge to 13.6% of South Carolina's population by 2010, and 22% by 2030. At the same time, the nursing population is also aging. With an average age of 45 and 17% of nurses 55 and older, caregivers will quickly join the patient population. Other allied health professions are experiencing similar aging trends, dramatically illustrating the need to recruit a younger – and larger – demographic into the healthcare workforce.§

* Bureau of Labor and Statistics, US Department of Labor

† SC Employment Security Commission, Bureau of Labor Statistics, US Department of Labor

‡ Bureau of Labor and Statistics, US Department of Labor

§ SC Hospital Association



Innovative Opportunities Underway In Healthcare In SC

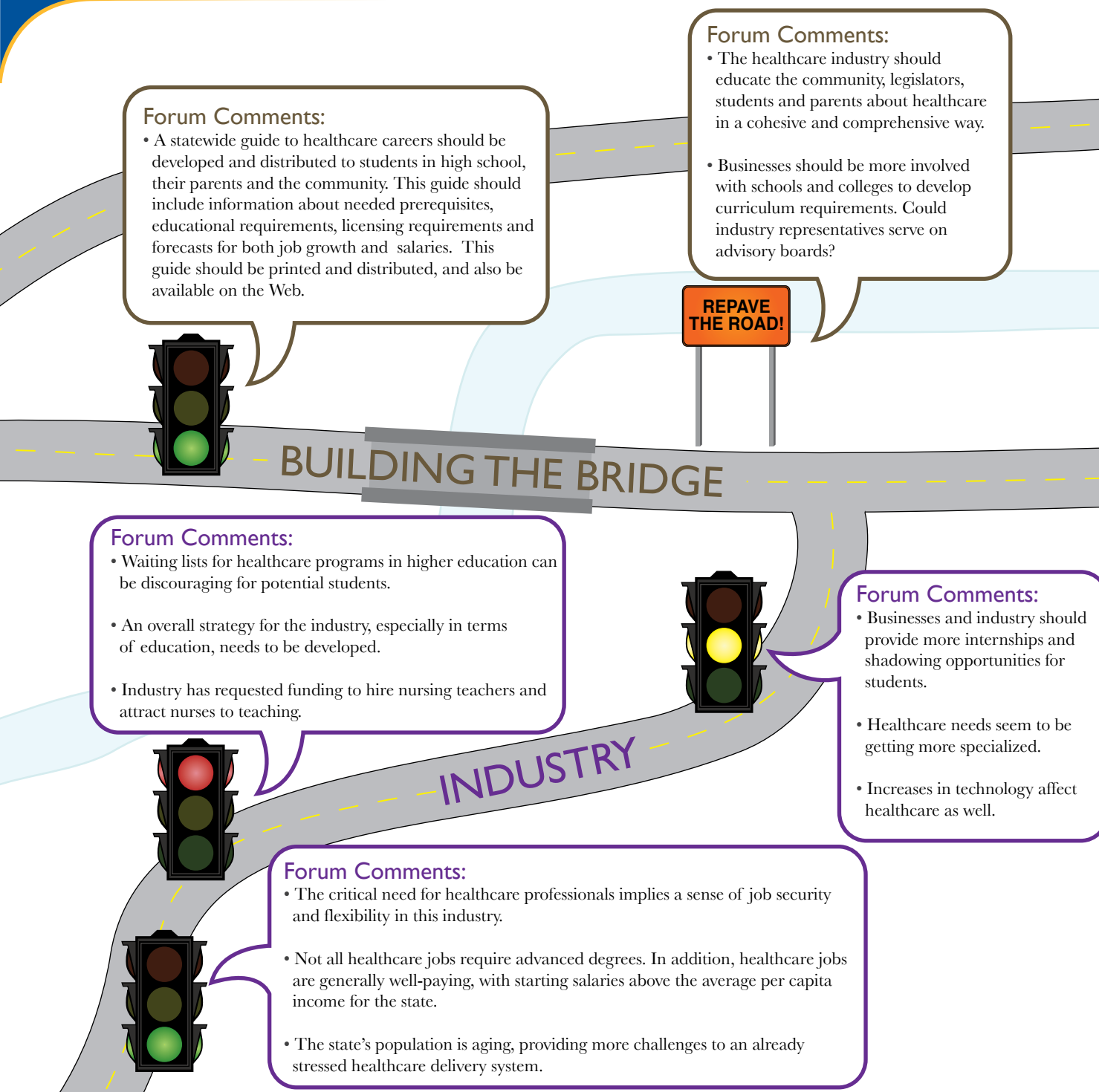
Spartanburg Community College is responding to the pharmacy technician shortage in the Upstate due to state certification laws by offering an expanded certificate program. The program is designed to provide qualified and highly trained technicians for hospital and retail pharmacy practice settings, and includes additional training in specialized areas such as compounding, aseptic technique, IV admixtures and chemotherapy procedures.

Denmark Technical College, Northeastern Technical College and *Williamsburg Technical College* are meeting rural healthcare needs by implementing new nursing programs – an Associate Degree in Nursing (RN program) at Northeastern and Licensed Practical Nursing programs at Denmark and Williamsburg.

Central Carolina Technical College plans to help meet its service area's healthcare workforce needs through a partnership with the City of Sumter to renovate a training facility. The College will expand existing programs in nursing and surgical technology while implementing new programs in areas such as radiology, dental hygiene, physical therapy and health information technology.

Tri-County Technical College has entered into an "LPN to Professor" collaborative with Clemson University and four area hospitals to provide students with the opportunity to seamlessly transition across levels of education in order to address the critical shortage of nurses and nursing faculty.

According to the South Carolina Hospital Association, healthcare represents \$2 billion of the state's economy.



Forum Comments:

- A statewide guide to healthcare careers should be developed and distributed to students in high school, their parents and the community. This guide should include information about needed prerequisites, educational requirements, licensing requirements and forecasts for both job growth and salaries. This guide should be printed and distributed, and also be available on the Web.

Forum Comments:

- The healthcare industry should educate the community, legislators, students and parents about healthcare in a cohesive and comprehensive way.
- Businesses should be more involved with schools and colleges to develop curriculum requirements. Could industry representatives serve on advisory boards?

REPAVE THE ROAD!

Forum Comments:

- Waiting lists for healthcare programs in higher education can be discouraging for potential students.
- An overall strategy for the industry, especially in terms of education, needs to be developed.
- Industry has requested funding to hire nursing teachers and attract nurses to teaching.

Forum Comments:

- Businesses and industry should provide more internships and shadowing opportunities for students.
- Healthcare needs seem to be getting more specialized.
- Increases in technology affect healthcare as well.

Forum Comments:

- The critical need for healthcare professionals implies a sense of job security and flexibility in this industry.
- Not all healthcare jobs require advanced degrees. In addition, healthcare jobs are generally well-paying, with starting salaries above the average per capita income for the state.
- The state's population is aging, providing more challenges to an already stressed healthcare delivery system.

The opinions and comments outlined above are a compilation of the thoughts of participants and are not necessarily reflective of the opinions of the SC Technical College System, New Carolina, their Boards, or Staff, or the panelists, and/or their organizations.

Event panelists were:

- Perry Arant – Orangeburg Milling Company
- Johnny Brailsford – Shady Grove Nursery
- Fred Broughton – SC Department of Agriculture
- John Hane – Blackwoods Farms
- John Haralson – SC Forestry Association
- Bill Summers – Golden Kernel Pecan Company
- Francis Wolak – Clemson University

The panel was moderated by Anne Crook, President of Orangeburg-Calhoun Technical College.

Sue-Ann Shannon of the Palmetto Institute also presented remarks.

The Agribusiness Cluster Defined

For the purposes of the panel and the forum, various agribusiness sectors – such as biofuels production, lumber and farming – were included in the definition of the agribusiness cluster.

Job Outlook For Agribusiness

Agriculture remains a top industry in South Carolina; in fact, wages for the **farming, fishing and forestry** employment sector are ranked fifth in the nation with \$46,600 annually at the top end of the income spectrum.* Current research and capitalization on alternative fuel initiatives could propel the industry's success to an even higher level.

South Carolina ranks second in the nation for its number of biodiesel pumps and seventh in ethanol pumps,† as the already existing agricultural infrastructure shifts its operations to meet biofuel production needs. Corn, grasses, soybeans, wood pulp and even food wastes can all be made into alternative fuel sources, not only achieving environmental mandates, but also providing new opportunities for farmers and foresters.‡

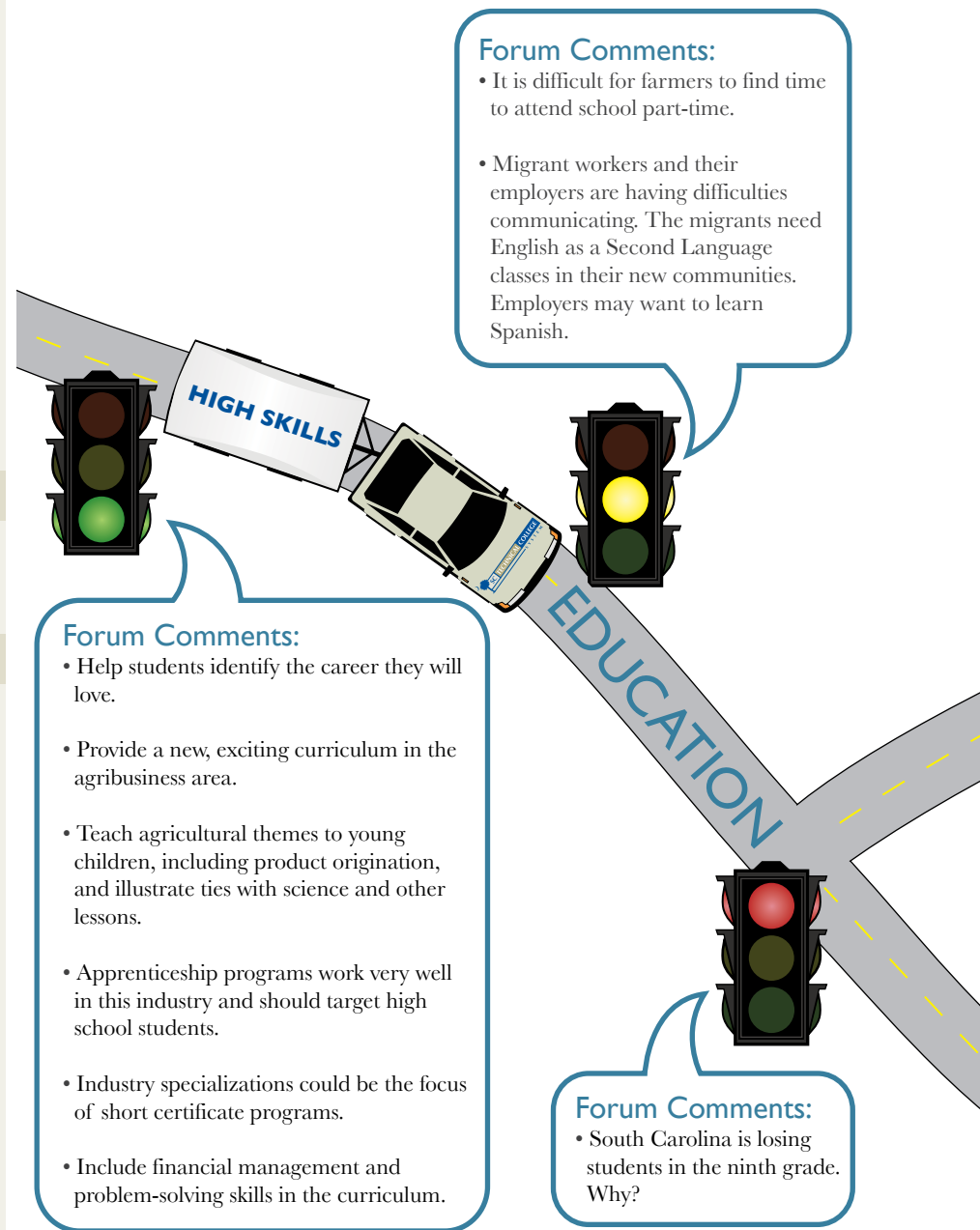
Forestry Commission experts project unprecedented demand for timber over the next decade, and predictions are that reforestation returns will be in the range of 12-14%. Four new mills are now under construction in the state to meet an expected 40% growth in pulpwood demand. Employment growth at 14-19% for forest and conservation workers and technicians with at least two-year technical degrees is projected for South Carolina through 2014.§

* Bureau of Labor Statistics, US Department of Labor

† Palmetto State Clean Fuels Coalition

‡ Palmetto Institute

§ SC Employment Security Commission, Bureau of Labor Statistics, Department of Labor



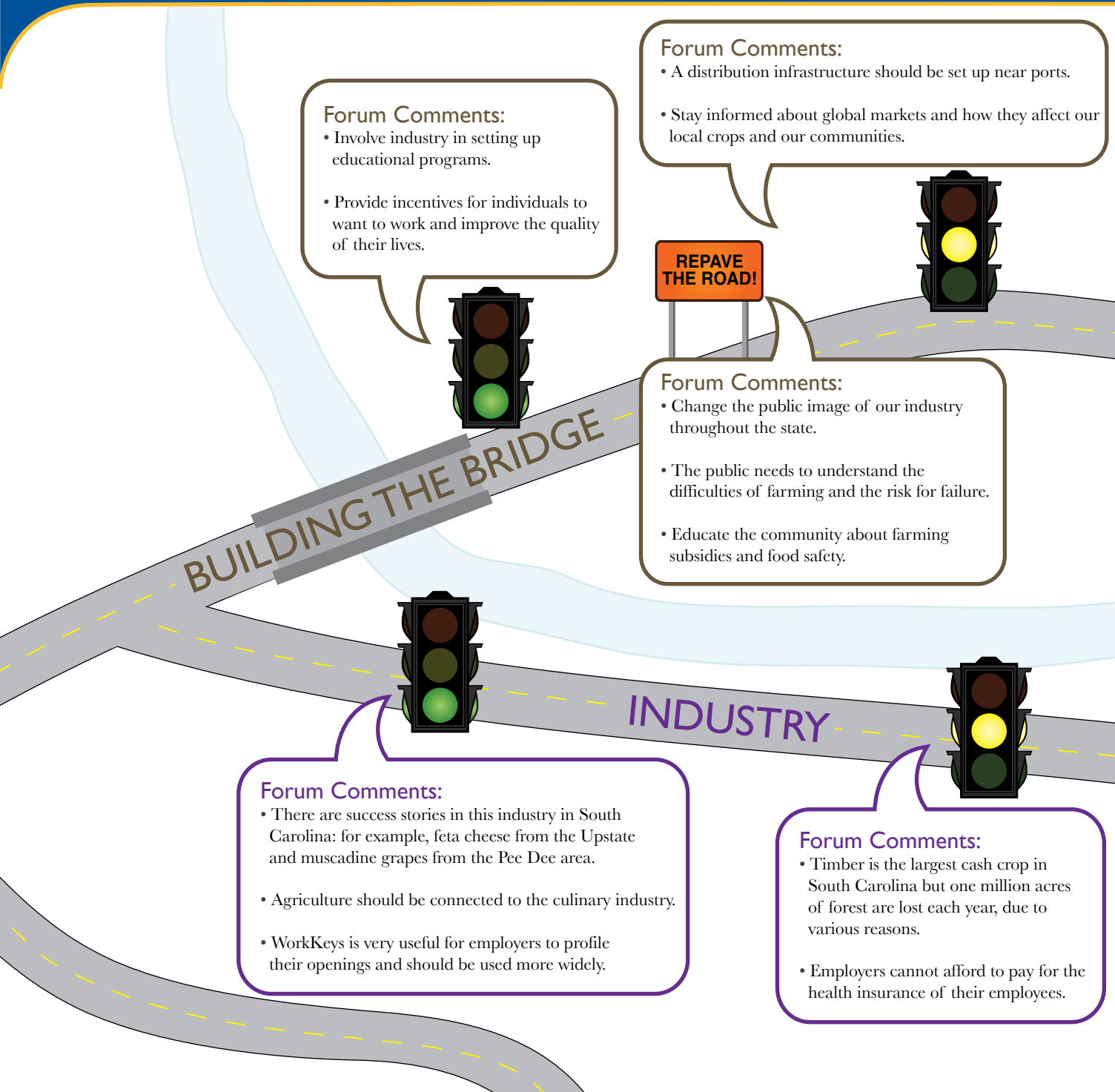
Innovative Opportunities Underway In Agribusiness In SC

Orangeburg-Calhoun Technical College (OCTC) has partnered with Clemson University to offer a 1+3 program. Students spend their first year in a key agriculture center of our state, and then transfer to Clemson to complete the remaining three years for a four-year degree. Additionally, OCTC received a federal grant with Claflin University and others to expand biotechnology training options.

Horry-Georgetown Technical College has recently implemented a wildlife management emphasis in its forestry management technology program to complement its other agriculture-related offerings in golf and sports turf management, horticulture and timber harvesting. Horry-Georgetown Technical College also has transfer agreements with Clemson University in its turf-grass and horticulture programs.

Questions for the Future

- Should we create a certificate on work ethics for students to obtain while in high school?
- Are best practices being documented? Are incentives to retain employees in industry being used?
- How could South Carolina farmers supply food to South Carolina schools?
- Where are our niches?



The opinions and comments outlined above are a compilation of the thoughts of participants and are not necessarily reflective of the opinions of the SC Technical College System, New Carolina, their Boards, or Staff, or the panelists, and/or their organizations.

LESSONS FROM THE ROAD: WHERE DO WE GO FROM HERE?

The “early years” impact tomorrow’s workforce.

Since today’s children will one day replace the aging workforce, we must:

- Improve opportunities for early childhood education; and,
- Promote health and nutrition for South Carolina’s children.

More qualified students need to make it through the pipeline and transition into the workforce.

- Continue full implementation of the EEDA/Personal Pathways to Success.
- Implement strategies for parental involvement throughout their children’s education, and promote an understanding of the viability of all education options.
- Develop efforts aimed toward including the increasingly diverse population in the state’s knowledge economy workforce.
- Leverage federal resources to support re-entry into education and/or the workforce.
- Leverage efforts to reconnect with adults who may have dropped out, supporting their entry into the workforce.

A workforce that is more closely aligned with the needs of business must be created and maintained, and must be flexible enough to meet the needs of today as well as tomorrow.

- Foster greater awareness of the state’s key industry clusters, how they have changed, and the myriad professional opportunities within each.
- Enhance the emphasis on soft skills – such as work ethics, professionalism, and critical thinking skills – in addition to the highly specialized technical skills required in today’s knowledge economy.
- Advance the integration of innovative learning opportunities – such as dual enrollment, internships, apprenticeships, and job shadowing – to allow individuals to experience the link between education and the professional world.
- Continue to make WorkKeys an available resource for businesses to use as a screening tool for employees.
- Nurture a culture of continual learning and provide the appropriate resources to support this culture.

Primary stakeholders need to be more involved in the process.

- Seek input from students and those preparing for entry and re-entry into the workforce on best strategies to address workforce issues.
- Emphasize the continued collaboration between industry and education in setting statewide priorities and leading policy discussions.
- Enhance collaboration and communication among post-secondary institutions to ensure a seamless transition between institutions and sectors.
- Develop a structured method for continuing Community Forum feedback.

FORUM SURVEY THEMES

(note: responses compiled from all six Forums)

- 65% strongly agree that South Carolina should boost investments in industry-based programs at technical/community colleges. An additional 31% somewhat agree with this idea.
- 71% strongly agree with the idea of promoting career specific training through dual enrollment programs that link high school and post-secondary education. An additional 25% somewhat agree with this idea.
- 57% strongly agree with the idea of including soft skills in the school curriculum. An additional 32% somewhat agreed with this idea.
- 51% strongly agree with the idea of providing entrepreneurial training in K-12 classrooms. An additional 40% agreed somewhat with this idea.
- 36% strongly agree with the idea of developing outreach and support programs for minority and disadvantaged students. An additional 50% somewhat agreed with the idea.
- 36% strongly agree that promoting post-secondary education for everyone would be important even if it meant raising taxes. An additional 40% somewhat agree with this idea.
- 42% strongly agree that communities should focus on serving industry, even if it means a difficult and time consuming overhaul of public education. An additional 45% somewhat agree with this idea.



www.newcarolina.org



www.sctechsystem.com