

Biz NS

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SOUTHERN
One line, infinite possibilities.

Going Green Has
Infinite Possibilities

Biz NS

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NS: A deeper shade of green



On a sun-baked field in the Mississippi Delta, CEO **Wick Moorman** showed what Norfolk Southern means when company leaders talk about sustainability.

With shirt sleeves rolled up on a hot June day, Moorman helped plant a ceremonial Nuttall oak tree, launching a five-year, \$5.6 million NS initiative to restore 10,000 acres of woodlands in the ecologically important Mississippi Alluvial Valley.

Through a collaborative effort with GreenTrees, a privately managed reforestation and carbon capture program, NS has agreed to finance the planting of 6.04 million native hardwoods and cottonwoods. The agreement will promote revitalization of the Delta's environmental health and preserve a critical commercial corridor that spans the Mississippi River.

The trees will rise on acreage cleared decades ago for agricultural use but currently underused or marginally productive. As the woodlands grow and mature, they will bring permanent benefits to a region long served by the railroad. Those benefits range from providing valuable wildlife habitat and flood protection to removing tons of industrial carbon dioxide emissions from the atmosphere.

"Our company is 180 years old, we're a long-cycle business," Moorman told those attending the ceremony. "This kind of sustainable, long-term, long-lasting initiative is exactly what we want to do."

■ CEO **Wick Moorman** talks about Norfolk Southern's long-term commitment to sustainability.

■ At far left is a cottonwood tree.





Trees & Train

Good for business, good for the environment

The GreenTrees initiative is a model for how NS plans to invest in conservation initiatives to mitigate the railroad's environmental impacts.



■ At top right, a ceremonial Nuttall oak is planted to celebrate NS' commitment to reforest 10,000 acres in the Mississippi Delta. Joining CEO **Wick Moorman**, third from left, are from left, **Carey Crane**, GreenTrees founding partner, Mississippi state Rep. **John Mayo**, and **Charlie Morgan**, state forester, Mississippi Forestry Commission.

■ Bottom left, **Blair Wimbush**, NS vice president real estate and corporate sustainability officer, and **Megan Garry**, manager corporate sustainability, helped lead the GreenTrees initiative.

■ Bottom right is a GreenTrees planting of cottonwood trees, part of the group's effort to reforest 1 million acres in Mississippi's Alluvial Valley.

The project, Moorman said, is a prime example of how NS is aiming to balance its business imperatives as a profit-driven, publicly traded company and the need to conserve natural resources. NS recognizes that its business activities have environmental effects – such as carbon emissions from diesel-burning locomotives – and is committed to taking significant steps to reduce and mitigate those impacts, he said.

Blair Wimbush, NS vice president real estate and corporate sustainability officer, describes the initiative as a “triple play” because it carries environmental, economic, and social benefits – the three pillars of the railroad's sustainability strategy.

“This is a perfect blend of the three and is a further demonstration of our commitment to sustainability,” Wimbush said. “You have to be deeply engaged in this to make a difference. I think our employees want that, and they can look to this as evidence. We're in this for the long run.”



Megan Garry, NS manager corporate sustainability, said the project reflects the railroad's interest in being a good corporate citizen in the communities where its customers and employees work and live.

"This really is about our footprint in those communities," Garry said. "This will provide them with cleaner air and recreational opportunities and job possibilities. It's a community involvement program, and so much more."

A good return

To reduce the company's carbon footprint, NS is focusing on ways to improve the fuel economy of its locomotive fleet, from engine upgrades to use of innovative technologies that optimize fuel use and enhance operating efficiencies. The GreenTrees initiative, Wimbush said, is a model for how NS plans to invest in conservation initiatives to mitigate the railroad's environmental impacts.

"We're mindful that we can do something beyond fuel-efficiency gains to have a positive impact on the environment and the communities we serve," he said. "We've decided to make reforestation a central part of our carbon mitigation strategy. That might include other reforestation activities by nongovernmental organizations, and potentially governmental organizations, with whom we can cooperate and collaborate."

NS already is supporting research by The Longleaf Alliance to restore longleaf pine forest ecosystems in the South and work by The American Chestnut Foundation to reintroduce chestnut trees to their historic range.

NS' partnership with GreenTrees will generate benefits for multiple stakeholders, Wimbush said, including farmers and family landowners, surrounding residents, migratory birds, other wildlife, and Norfolk Southern.



Landowners will receive lease payments for offering the use of their land, giving them an economic incentive to restore the land to forest rather than sell it for development or maintain it in its current use. Residents will benefit from improved air and water quality, in addition to job opportunities over the project's duration. The trees will provide vital food and cover for migratory birds, which have suffered from deforestation of the Delta valley during the 1960s and '70s.

Norfolk Southern could recoup its \$5.6 million contribution to the project. Over time, the 10,000 acres of woodland will generate 1.12 million tons of carbon-offset credits that can be sold to companies or individuals interested in offsetting their emissions. NS plans to register the carbon credits with the American Carbon Registry, a nonprofit carbon registry that handles over-the-counter transactions in the voluntary U.S. carbon-offset market.

"We're treating this as an investment," Wimbush said. "While we're restoring a natural resource and growing an asset that has environmental benefits, at the end of the day, we also hope to earn a return on our investment."

This is what being a sustainable corporation means in a free-market economy, he added. It's about a company earning profits to provide jobs, economic opportunity, and shareholder value while at the same time taking responsibility to address any negative environmental effects caused by those business activities. GreenTrees refers to it as conservation capitalism – the idea that American industry can benefit from a revitalized environment.

A seed is planted

Norfolk Southern's decision to invest in the reforestation initiative grew out of a dinner conversation between Moorman and **Carey Crane**, GreenTrees' founding partner. Last year, Moorman and Crane were seated at the same table during a Nature Conservancy event in Richmond, Va. Moorman serves on the board of directors of The Nature Conservancy in Virginia

Over dinner, Crane told Moorman about GreenTrees, and they discussed the notion of conservation capitalism. Until then, Moorman had never met Crane nor heard of the group.

"Carey is an entrepreneur with an interest in conservation, and we started talking," Moorman said. "I was very intrigued by what he was doing."

After returning to Norfolk, Moorman asked Wimbush to find out more about GreenTrees and its work. That led to meetings with GreenTrees executives, field visits to property replanted in cottonwoods and hardwoods, and an internal review by NS' legal and financial departments.

"We think it is a very good initiative," Moorman said. "It supports the Mississippi Delta, and that's important to Norfolk Southern. It makes a lot of sense for us as a company that thinks long-term to invest in something like this."

Representatives of conservation groups and government agencies applauded the size and scope of NS' commitment. Reforesting 10,000 acres in the Delta is substantial, they said.



GreenTrees leaders describe the reforestation initiative as conservation capitalism – conservation with a purpose and capitalism with a heart.

“I could not be more impressed with Norfolk Southern’s decision to do this,” said **Norman Brunswig**, executive director of Audubon South Carolina. Brunswig said the Audubon Society has promoted restoration of the Mississippi River and its flood plains for the past decade. “This contributes directly to our goals of managing the river better.”

Dr. Ted Leininger, project leader of the Center for Bottomland Hardwoods Research in Stoneville, Miss., said the center developed the technique of interplanting cottonwoods and hardwoods as a means of converting crop lands to forest.

“It works,” Leininger said. “Reforesting an area of the Mississippi Alluvial Valley flood plain says a lot for conservation capitalism. It allows landowners greater flexibility and economic opportunities than some of the conventional techniques.”

Charlie Morgan, state forester for Mississippi, said the GreenTrees initiative is giving landowners a strong incentive to return marginal crop land into woodlands.

“When a farmer tells me, ‘This is a good program, I’m doing well,’ that’s a pretty strong statement,” Morgan said, adding that reforestation also improves air and water quality. “It’s the most successful carbon sequestration program in the United States because it works.” **BizNS**

■ At left, **Josh Raglin**, NS general manager facilities, inspects cottonwoods planted in Yazoo City, Miss., by GreenTrees. Raglin has helped introduce sustainability initiatives to NS’ Brosnan Forest preserve in South Carolina.

■ Top, **Jerry Van Voorhis**, who manages GreenTrees project development, addresses attendees at the ceremony to announce NS’ participation in reforestation efforts.

■ Bottom, a Nuttall oak sapling was planted during the ceremony.





NS/GreenTrees by the numbers

For NS, the tree plantings represent:

GreenTrees initiative: A mix of conservation and capitalism

With its tree-planting agreement in the Mississippi Delta, Norfolk Southern has become GreenTrees' largest investor in an ambitious effort to reforest a region known as America's Amazon.

GreenTrees aims to reforest 1 million acres in the Mississippi Alluvial Valley. The private group targeted the region because of its vital role in U.S. commerce, climate, and energy, according to founding partner **Carey Crane**.

The number of hardwoods in the Delta Valley has dwindled to 4 million acres from more than 25 million acres since the 1960s, when land gradually began to be cleared for farming. Since being formed in 2007 by project development and management firm C2I, GreenTrees has planted more than 4 million hardwood trees in the region on land that is now marginally productive and frequently flooded.

GreenTrees' partners label the reforestation effort as conservation capitalism. As an investment partner, NS will help restore a critical ecosystem while mitigating industrial carbon emissions, said **Chandler Van Voorhis**, GreenTrees' managing partner.

"It is conservation with a purpose and capitalism with a heart," Van Voorhis said. "At the intersection is where we feel the fertile ground is for how industry and the environment interact with each other."

The company plants 302 cottonwood cuttings along with 302 mixed hardwood seedlings per acre. The rapidly growing cottonwoods provide wildlife habitat and improve the forest's rates of carbon capture while providing a protective canopy to the hardwood seedlings.



The initiative provides a source of income for property owners who have seen their crops fail amid flooding and poor soil conditions. "We become part of the solution for their getting from a place of losing money to a place where they're keeping their head above water," Crane said.

NS' agreement with GreenTrees calls for planting native hardwoods, including oak, bald cypress, hickory, ash, poplar, and pecan, on land belonging to 40 to 60 landowners within NS' service area in Mississippi and Louisiana. The partnership could motivate other corporations to make similar investments in conservation capitalism, Crane said.

"To the business community at large, when they look at Norfolk Southern, the first thing they say is this is a big, successful company that didn't get that way by foolishly spending money. They're addressing their carbon footprint and looking at it in terms of economics, not just as a philanthropic opportunity."

The collaboration expands the legacy of conservation by infusing it with capitalism. "Our job is to create carbon credits and measure, monitor, and quantify the changes on the land," Van Voorhis said. "We're making a dent, but we need to make a bigger one." ■ BizNS

Faster, cheaper, better



Innovation is part of Norfolk Southern's core culture, summed up in the SPIRIT values of safety, performance, integrity, respect, innovation, and teamwork.

Particularly in these tough economic times, NS' senior executives are encouraging employees to look for creative ways to address everyday business challenges. The idea is to increase efficiency, reduce costs, and enhance safety. That translates into improved customer service and a stronger competitive position in the marketplace.

Mark Manion, executive vice president and chief operating officer, calls it "faster, cheaper, better."

"When we really put our minds to it, we can find a better way to accomplish nearly everything we do," Manion told NS managers at this year's general management meeting. "We have to instill the mindset to question what we see and to make the improvements."

What follows are stories of employees who have done just that. Their improvements, while not monumental in themselves, represent the creativity and entrepreneurial spirit that can help drive NS' long-term success.

CEO **Wick Moorman** says all the time that NS has the brightest, most talented employees in the industry. Here's proof that it is the people who differentiate NS from all the rest.

Willingness to risk change pays off

Challenge: A Norfolk Southern vendor that supplies air filters used in GE locomotive cabs approached **Paula Stiffler**, manager locomotive maintenance, with a question and sales pitch: Would NS consider switching to a new filter that could save the railroad money and was more environmentally friendly?

NS was not in the market for a different filter. In this case, the challenge involved a willingness to introduce change. Stiffler's decision to test the filter impressed Corey Plunkett, SAP integration analyst in NS material management.

"People are reluctant to change," said Plunkett, who worked with Stiffler to evaluate cost savings in his former position as supervisor purchasing-diesel. "Many people don't want to take on the extra work or hassle of testing and following through on a new product. Also, a lot of people don't want to take on the risk of something going wrong, when they can just stick with the status quo."



Paula Stiffler

CASE STUDY #1

Solution: Locomotive cab filters, which fit inside the air-conditioning unit, serve the same purpose as home HVAC filters – to remove particles and dust from the air.

Stiffler, based in Atlanta, saw the potential to save money and benefit the environment. The old filters consisted of a metal frame and paper charcoal filter that were thrown away and replaced every 92 days by NS shop mechanics. The new filter design features a metal reusable frame that slides in and out of the air-conditioning unit. The only thing replaced during maintenance is a foam-like filter within the frame, which costs significantly less than the metal and paper filters.

“It was a big benefit dollarwise,” Stiffler said. “I also looked at it as helping the environment, because we’re throwing away less. We’re creating less waste, so we’re saving on our trash disposal costs.”

Before implementing the change, Stiffler took steps to mitigate potential risks. She field-tested the filters at the Enola and Chattanooga locomotive shops to ensure that mechanics could easily install and remove them.

“I wanted to make sure our mechanics didn’t have any issues, and that we weren’t exposing them to potential injuries during the process,” she said.

In addition, the filters were run through a 92-day cycle in locomotives and inspected by **Leighton Haley**, NS chief chemist, at the mechanical department’s main laboratory in Chattanooga. NS has three laboratories that analyze locomotive oil and water samples and test locomotive filters. The Chattanooga lab also reviewed vendor documentation to ensure that the new product would filter as well as the old type.

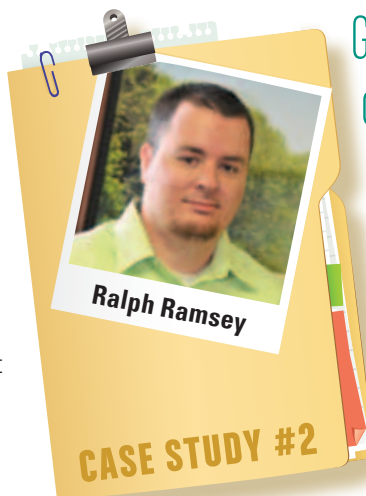
Stiffler took the additional step of asking NS’ law department to conduct a review.

“You really want to investigate all of the pros and cons before you make a change,” Stiffler said.

Result: About 2,000 NS locomotives are equipped with the new filters. Material management estimates NS is saving nearly a quarter-million dollars annually in cab air filter replacement costs.

Stiffler received a 2010 SPIRIT Award for performance for spearheading the change.

“A lot of times we know there’s an opportunity to save money, but we don’t have the experience in material management to know if it’s going to work on a locomotive or on other parts of the railroad,” said Plunkett, who nominated her. “We rely on the field for that. We nominated Paula for her willingness to work with us to get costs down and to show the impact that one of these decisions can have.”



Getting a handle on crew lodging

Challenge: When Norfolk Southern’s newly formed crew transportation and lodging group began handling lodging issues for train and engine crews last year, they encountered a large stack of hotel names but

little other information about the facilities or surrounding neighborhood. **Ralph Ramsey**, NS assistant manager lodging, set out to improve the railroad’s oversight of the lodging program.

Solution: To refine the list of 272 hotels in 178 cities across NS’ network, Ramsey turned to phones, roads, and most important, the Internet. He linked hotel addresses to Google Earth maps that provide satellite views and interactive details about the facilities. He also worked with the department’s

Facility	Address	City	State	Zip	Phone	Fax	E-Book Contact	Overlook Hotel	Private Garage
Days Inn	301 Cleveland Ave	Atlanta	GA	30304	770-338-2841	770-338-3150	No		
Comfort Suites	600 Corporate Ridge Drive	Birmingham	AL	35242	205-991-0772	205-991-0630	Yes		14 Per
Best Western Suites	3118 College Ave	Jackson	AL	36204	228-746-6280	228-746-6130	Yes		
Days Inn	113 Ana Drive	Flomston	AL	35030	206-264-8376	260-764-8453	Yes		
Extended Stay America	300 Spring Hill Plaza E	Mobile	AL	36688	731-344-7334	731-344-7643	No		
La Quinta Inn & Suites #004	114 E-455 Service Rd South	Mobile	AL	36688	731-348-6081	731-348-2892	Yes		500 Per
Days Inn	1 Recreation Dr	Mobile	AL	36678	736-833-0900	736-833-0977	Yes		
Days Inn	4144 US Hwy 290	Shelbourn	AL	35171	736-749-8071	736-749-4107	Yes		500 Per
Days Inn	4130 Norwell Drive	Enterprise	AL	36110	205-441-9373	205-440-9311	Yes		500
Days Inn Suites	1701 Skyland Blvd East	Tuscaloosa	AL	35602	205-289-8880	205-289-8614	No		
Super 8 Motel	11761 Depot Hwy	Harrison	DE	19947	302-386-6766	302-386-4714	No		
Quality Inn	117 E. Depot Hwy	New Castle	DE	19720	302-328-6666	302-322-3791	No		50 Per
Extended Stay America	4261 Landon Lane	Jacksonville	FL	32216	904-296-0181	904-296-0314	Yes		
Best Western	7777 Ponte North Blvd	Atlanta	GA	30171	770-446-3001	770-446-4626	Yes		60 Per
Days Inn	1420 E. Lantry	Atlanta	GA	30129	770-974-7796	770-974-0900	Yes		
Clarion Inn	2070 Washington Rd	Atlanta	GA	30387	770-860-1800	770-860-9100	Yes		770 Per
Days Inn	33 Drive Creek Road	Greensboro	GA	30717	770-877-8646	770-877-8646	No		
Holiday Inn	2660 Manchester Expressway	Columbus	GA	31906	706-374-4733	706-376-0740	Yes		
Days Inn	2076 US Hwy 481	Columbus	GA	32519	706-330-2600	706-330-2601	Yes		
Holiday Inn Express	7101 Cantonment Pkwy	Douglasville	GA	30118	770-970-9776	770-970-9407	Yes		
Days Inn	2700 Queens City Parkway	Lawrenceville	GA	30041	770-868-3100	770-868-6070	Yes		
McDonald's Lodge	1100 W. Curtis St	Lawrenceville	GA	30046	770-962-1100	770-962-1100	Yes		
Ramada Inn Lodge	1100 Express Lane	Lawrenceville	GA	30046	770-962-1100	770-962-1100	Yes		
America's Best Inn	1111 Hampton Road	McDonough	GA	30253	770-392-0871	770-391-0871	No		
Howard Johnson	1111 Hampton Hwy Dr	Rome	GA	30160	706-791-1994	706-791-1996	Yes		
LaQuinta Inn	10 Carlson Drive	Rome	GA	30161	706-791-1034	706-791-1034	Yes		
Holiday Inn Express	300 S. Harris St	Sandyville	GA	31087	478-855-1814	478-855-4812	Yes		
Clarion Inn	16 Gateway Blvd East	Savannah	GA	31419	912-970-8000	912-970-8212	Yes		
Days Inn & Suites	1200 South Cobb Rd SE	Tucker	GA	30084	404-278-1600	404-278-1611	Yes		600 Per
Super 8	1828 Ward Hill Ave	Tucker	GA	30084	404-278-1600	404-278-1611	No		
Western Motel	126 N. Main St	Waynes	GA	31401	770-749-8000	770-749-8000	Yes		500 Per
Days Inn	3100 Hickory Point	Waynes	GA	30276	770-878-8000	770-878-8000	Yes		500 Per
Days Inn by Sheraton	7300 S. Cicero Ave	Waynes	GA	30279	770-878-8000	770-878-8000	Yes		2500 Per
Days Inn & Suites	1500 Southlawn Dr	Towson	MD	21286	410-281-7118	410-281-7118	Yes		120 Per
Holiday Inn Lakeside	3000 Marshall Drive	Clarksville	IN	47122	719-344-1111	719-344-1111	Yes		
Days Inn	3010 Bethany Court	Elkhart	IN	46514	317-344-7222	317-344-7222	Yes		
Best Western	374 Basher Creek Road	Evansville	IN	47710	317-940-8000	317-940-8000	Yes		50 Per
Howard Johnson	377 Colburn Blvd	Elkhart	IN	46502	317-344-8376	317-344-8376	Yes		
LightHouse Inn Motel	700 E. Wabash Ave	Frankfort	IN	46081	317-624-2077	317-624-6333	No		
Extended Stay	630 West Third St	Covington	KY	41011	502-581-5000	502-581-5100	No		1200 Per
Country Hearth Inn	1041 Henderson Rd	Danville	KY	40422	606-736-6601	606-736-6614	Yes		
Extended Stay America Louisville	1407 Brooks Lane	Louisville	KY	40207	502-257-7118	502-257-7118	No		

■ Using the Internet, **Ralph Ramsey** helped NS update its list of lodging facilities used by train and engine crews. At left is a computer spreadsheet Ramsey manages to keep track of lodging facilities and ensure they meet NS standards.

contract vendor, MSI, to determine the last time crew members stayed at a particular hotel and the current condition of the property and adjacent neighborhood.

Zooming in on a hotel, Google Earth provides a lodge's name, address, and picture, as well as information about nearby restaurants and businesses. "Right out of the gate, Ralph took the initiative in innovating and updating our data by tying it into Google maps so we could pull those places up and look at them," said **Richard W. Scott**, NS manager crew transportation and lodging.

The idea for the Web link "just kind of popped into my head," said Ramsey, who is based in Bluefield, W.Va. "We always try to make things easier and more user friendly, and the list we had been using wasn't."

Ramsey's job includes visiting hotels twice a year to check for safety, cleanliness, and crew well-being. "Prior to arrival, you can click on a link and gather data that may not be revealed during your visit," he said. "It's really helped us learn a lot more information. If I go online and see that one of those areas is just awful, I work right away to get the crew out of there."

He continues to make periodic on-site inspections. "There are a lot of things I check for that you can't do on the Web," he said.

Result: Ramsey earned a 2010 Spirit Award for innovation. His work has improved the Crew Transportation and Lodging Services' management of properties and sets the stage for reducing costs and improving service to T&E crews. He pared the list of hotels down to 157 by eliminating ones that had closed or that NS no longer used but still was paying a monthly guarantee or rate fee to the franchisor. The review also turned up hotels that no longer met NS standards or were near comparable, less expensive facilities.

Since last year, NS has saved approximately \$100,000 by eliminating overpriced lodges and those no longer used. In total, the company has saved an estimated \$500,000 since Ramsey first linked Google Earth to train crew lodging data. That figure includes savings NS achieved by contracting with MSI to build lodging facilities, moving to improved locations, and using hotels with fitness facilities so that T&E crews can participate in the railroad's WellINS initiative.



Sometimes, simple is best

Challenge: Norfolk Southern rules and federal law require that railroad workers repairing locomotives

and freight cars on line of road be protected by placing their own department's locks on main-line rail switches. Securing the switch for road repairs is known as blue flag protection, a signal that rail workers are on, under, or between rail cars on a specific area of track.

"Transportation, engineering, and mechanical departments all use different locks," said **Brian Allen**, mechanical superintendent, Decatur. "In the mechanical department, if we have to work on a locomotive or freight car, we need to secure the switches so that a train can't come in on the same track where we're working."

To secure the switch, a field crew had to remove the lock on the main line switch and then replace it with their own lock to indicate repairs were under way. A number of negative consequences can arise from handling the lock on a main-line switch, including disruption to automated signal systems, and it's done only when it has to be done.

Solution: **Gary King**, a carman based in Decatur, came up with a simple – yet smart – lock-out device for blue flag protection that eliminates having to handle main-line switch locks. The blue-colored metal device he developed fits over the switch lock and is secured by a mechanical department master lock.

"It makes life a lot easier working around main-line switches and locks," King said.



Initially, King had designed and built a prototype for his own use that no one had paid much attention to, and it later was lost. Then one day while struggling with a switch lock, King's general foreman, **Steven Royal**, remembered King's device and asked him to make another one.

After that, NS mechanical managers began the process of having the device reviewed by the railroad's car standardization team for use on the system.

Because the device clasps around the main-line lock, it provides added protection against someone inadvertently throwing a switch on a line being used to repair cars.

"With main-line locks, the key goes in the bottom, and the blue device clasps around the lock so you can't insert a key into the switch lock," Allen said.



■ At left, **Gary King** holds the blue lock-out protection device he developed and shows how it fits over a switch lock.

Result: King's ingenuity earned him a 2010 Spirit Award for innovation. Since then, the railroad has acquired more than 500 of the devices from an NS tool vendor for use systemwide.

The device is particularly helpful during inclement weather.

"During the winter, some switch locks become frozen, and we have difficulty getting them off," King said. "Now, in bad weather, you're not standing out there trying to thaw the locks out."

The device also reduces worker exposure to traffic moving on the main line. "It improves safety because you can easily slip it over the switch lock and move away from the main line quicker," King said.

Allen, who nominated King for the Spirit Award, said the device reduces the potential for human error. "The biggest thing," he said, "is that it saves possible confusion in regard to main-line switches and locks."

Because the device clasps around the main-line lock, it provides added protection against someone inadvertently throwing a switch on a line being used to repair cars.

Technology offers ideal office solution

Challenge: As one of two administrative coordinators in the mechanical department's Atlanta headquarters,

April Brown sorts through lots of reports and e-mails. They flow in daily from the department's eight locomotive shops and 11 division offices.

Maintaining and organizing those documents in an efficient way is essential, said Brown's supervisor, **Shelley Collins**, assistant to vice president mechanical.

"We have a very lean staff of three, and we're constantly looking for ways to improve our work processes," Collins said.

One task that had long challenged the office involved the handling of injury audit, safety performance, and safety audit reports e-mailed from shop and division administrative employees.

The injury audit and safety performance data, tracking employee injuries and the number of injury-free days at each location, were e-mailed on Excel spreadsheets at the beginning of every month. Because the spreadsheets differed in format from location to location, Collins' office manually reformatted the documents to make them uniform, and then saved them to a computer folder. The weekly safety audit reports were hand-written on audit forms and faxed or scanned to Brown's Outlook mailbox.





In all cases, Collins' office had to sort e-mails and faxes to confirm that all 19 of the shops and division offices had filed the reports. Collins asked Brown to try to streamline that time-consuming process. "April took it and ran with it," she said.

Solution: Brown collaborated with two NS information technology senior developers, **Matthew Sandlin** and **Andrew Nortje**, to create an online SharePoint site that shop and division administrative employees use to file the reports. SharePoint is a computer desktop application that creates a common space for users to share information.

Through their teamwork, Brown and the IT developers created uniform reporting forms for the injury and safety performance reports that are housed on the SharePoint site. Shop and division administrative employees enter and update data directly on the site – instead of e-mailing or faxing the reports to Brown.

To minimize errors and ensure consistency in reporting, the form has "drop down" and "check" boxes that eliminate the need to type in numbers and other information, such as agreement job positions. Each shop and division has its own folder; for added security, only employees with specific authorization can access them.

The weekly safety audit forms are uploaded directly to the site or faxed to a mailbox that automatically uploads them.

"Everything is one central location now," said Brown. "This makes the process very seamless, easy to read, and consistent."

Through teamwork, Brown and IT developers created uniform reporting forms for the injury and safety performance reports that are housed on a SharePoint site.

Brown also created a tutorial for field employees on how to use the SharePoint site and conducted training sessions by teleconference and Web conference. She is quick to credit Sandlin and Nortje for their role. "They were vital to the new process," she said. "They came up with solutions, put them in place, and did the initial testing and training."

Result: Brown earned a 2010 SPIRIT Award for performance for heading up the effort.

"This is just a huge time-saver," said Collins, who nominated her.

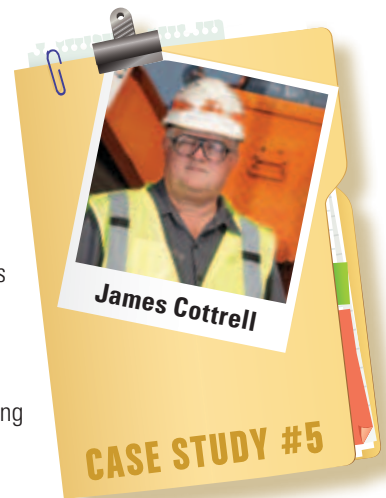
Brown's approach is an example of how railroad employees in office settings can use computer software and technology to improve work processes.

"There's a lot of technology out there that people may not be aware of," Brown said. "They do the same thing day in and day out, and they're probably thinking, 'There has to be a better way.' If you talk to IT and use the resources we have, you would be surprised at what can be made more efficient, or easier, or more consistent."

A safety innovation

Challenge: **James Cottrell** has 37 years of railroad track maintenance work under his belt, and he loves operating the big, powerful roadway machines.

Last winter, when ice and snow limited track work on the Northern Region, he took it upon himself literally to rebuild an old switch undercutter machine that was in disrepair and on the verge of being retired.



■ **James Cottrell** stands next to his rebuilt switch undercutter machine.

The 1997 model undercutter is a hulking 102,000-pound machine. It has a 17-foot-tall metal wheel that digs a ditch down the side of track and a long trench blade resembling a chain saw blade that scours mud and fouled ballast caused by poor drainage. NS owns just a few of the undercutters, and they are in regular demand.

Cottrell wanted to do more than just restore the machine to working order. Because the undercutter's operating parts restrict the cab operator's field of vision, a roadway worker in charge operates a hyrail car in front of the machine to assist. Cottrell wanted to make the undercutter safer to operate.

"You can never get enough safety," said Cottrell, who works on various gangs in the Northern Region. "The first thing on my mind every morning is safety."

Solution: Cottrell turned to camera technology. Conway Yard provided him with a surplus security camera once used in the yard, while Division Engineer **Craig Webb** let him use an NS credit card to purchase a television monitor, which he installed in the machine cab. Cottrell bolted the camera to a pedestal he placed in the front of the undercutter. The radio shop in Conway helped him hook it up to a 24-volt power system in the cab.

It works better than he imagined.

"Everything's in color; it's amazing," Cottrell said. "I've got a view on a wide screen that gives me about 1,500 feet of visibility on each side of a crossing, plus it'll show about 800 feet down the track. It gives me plenty of time to stop. I don't move the machine now until the camera is on.

"I still look out the window," he added, "but this allows me to go one step further – I've got double protection. I can see what I'm doing at all times."

Cottrell worked with **Kevin Hawkins**, an NS repairman, to tune up the machine's diesel engine and install new parts. Most of the work was done outdoors in winter cold at Rockside Road, a big siding in Cleveland. "We locked everything out and just started tearing into it," Cottrell said.



Among other things, they put in new brakes, windows, hoses, and radio.

"With a little TLC, these old machines will run forever," he said. "You've just got to take care of them."

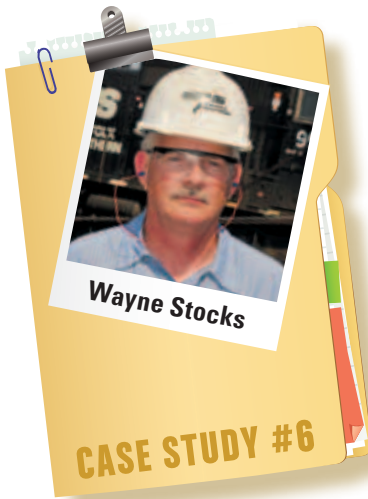
Result: Cottrell's efforts extended the life of a machine that performs essential work for NS with an added bonus – it's now much safer to operate. For his work, Cottrell won a 2010 SPIRIT Award for performance.

"He's one of the best machine operators you'll ever get," said Webb, who nominated him. "He takes excellent care of his machines, and he's one we use for a lot of stuff. He goes wherever he's needed."

New tool makes task safer, easier

Challenge: When multiple locomotives haul trains, handrail crosswalk chains are attached between them, providing a safe platform for train and engine crews to cross from one unit to the other. A "breakaway" ring – similar to a key ring – is inserted as a link in each chain, a precaution that allows it to break apart if someone tries to separate the locomotives without first detaching the handrail chains. Otherwise, the chains could pull down the handrails.





Replacing these breakaway links has been a pesky task. Imagine how difficult it can be to insert a key on a key ring, and multiply that by about 30. Employees have used screwdrivers – eventually ruled out because of risk of hand or leg injuries – and other objects to pry open the rings to slip a chain link on or off.

Unbeknownst to either employee, **Wayne Stocks** and **Mike Patrick**, who work in shops about 900 miles apart, last year set out to solve the problem.

Solution: Patrick got involved after **Brian Allen**, mechanical superintendent Decatur, issued a challenge during a morning safety meeting.

“He tossed a breakaway ring on the table and said employees across the system were having a problem with them,” Patrick said. “I just made up my mind right there I was going to come up with a tool to help out those guys.”

Stocks, who works at Lamberts Point diesel shop, took action after hearing co-workers complain that there wasn’t a safe, easy way to install or remove the breakaway rings.

“There’s almost always a way to do something better and safer,” Stocks said.

Stocks took a pair of pliers used to drain air from train-line hoses and welded a piece of metal on one end. That modification made it thick enough to insert into the breakaway ring and slip chain links on and off without pinching fingers.

Patrick took a similar approach. He modified an electrical wire stripping tool so that it could be inserted into the breakaway ring to open it.

■ **Wayne Stocks** demonstrates use of the breakaway split ring pliers he helped develop. Below is a pair of the split ring pliers, middle, next to an electrical wire stripping tool that served as Mike Patrick’s inspiration.

At the time, Allen, Patrick’s supervisor, was chairman of NS’ car standardization team. He presented Patrick’s idea to the team. That’s when everybody discovered that both Patrick and Stocks were working on solutions.

From there, NS turned to Wulf’s Custom Welding, a tool-making company in Nebraska that has worked with NS in the past to design tools. Wulf developed a final product. The tool, known as breakaway split ring pliers, is now on the market.

Result: For their efforts, Stocks and Patrick earned a 2010 SPIRIT Award for innovation.

“This tool has made our employees’ jobs much easier and safer,” said Allen, who nominated Patrick. “I use Mike for multiple tasks, and he contributes greatly to the shop’s success. He’s a good example of the home-grown creativity coming out of the Illinois Division.”

“Wayne is a leader and model employee for NS,” said **Jim Welch**, senior general foreman car/locomotive in Norfolk, who nominated Stocks.

“This is thinking outside of the box to do a job safer and more efficiently,” added **Ray Jones**, assistant division manager mechanical operations, Virginia Division. “It’s a simple tool to use, and it saves time and possible injuries. We’ve got a lot of people at Lamberts Point and across the division who are always looking to improve our safety process, whether it’s a tool or a job procedure.” ■ BizNS



Chairman's SPIRIT Award: The numbers add up for Carrier

Ken Carrier calls himself a "numbers guy." He has a passion for analyzing computerized business systems to ferret out ways to save money and improve efficiencies.

That's a good thing for Norfolk Southern's bottom line.

Carrier, assistant director fixed asset systems in NS' tax department, works in the arcane world of federal tax rules and regulations. He focuses on IRS rules governing capital assets, such as track infrastructure, to ensure that NS complies with tax laws while maximizing allowed tax deductions and benefits.

"I've always been amazed by Ken's ability to read through complicated IRS rules and figure out how Norfolk Southern can benefit," said **Rob Kesler**, NS vice president taxation. "He's been a home run hitter for us, always looking for ways to do things better and save the company tax dollars."

In his latest contribution, Carrier hit a grand slam. Working on a team of accounting, finance, operations, IT, and tax department employees, Carrier helped implement a new fixed-asset accounting software system that allows NS to begin to depreciate its assets sooner and results in significant tax savings.

The accounting team won an NS Spirit Award for performance in 2009, and the tax team won a Spirit Award in January 2010. For his role, Carrier in May was selected as winner of the 2010 Chairman's SPIRIT Award, which recognizes a high-profile achievement that significantly impacts the company's long-term success.

Tax team members sharing in the performance award were **Chuck Blevins**, manager tax audits; **Bill Tittle**, manager state taxes; **Jim Guilliams**, tax agent; and **Allen Winston**, director income tax administration.

In the past, the chairman's award has gone to an employee who developed new business opportunities or achieved significant productivity improvements in operations. The selection of Carrier for financial innovation and efficiency is a well-deserved departure, said **Deb Butler**, executive vice president planning and chief information officer.



■ The Chairman's Spirit Award given to Ken Carrier.



■ CEO **Wick Moorman**, right, presents the Chairman's Spirit Award to Ken Currier during a luncheon.

"Ken's contributions resulted in significant monetary benefits and savings to the company," said Butler, who oversees the strategic programs group that administers the SPIRIT awards. "His actions exemplify the SPIRIT values, and his commitment to the company's success in this endeavor distinguishes him from among a very worthy group of 2010 SPIRIT Award candidates."

Currier helped implement and customize a new computer software system known as Power Plant. It has enabled NS to automate and integrate the reporting and record-keeping of track infrastructure construction projects. Power Plant replaced three separate legacy systems that required much manual work to compile data for tax reporting, making it difficult to accurately track the start and completion dates of infrastructure projects.

When flooding damaged track in West Virginia a few years ago, for example, most of the track was repaired and back in service within a week. However, because of the way the old systems compiled data, the multimillion-dollar project was recorded as being under construction for nearly 18 months while smaller portions of the work were completed. That resulted in significant tax costs.

With Power Plant, the tax department has easy access to field reports and can identify immediately when each piece of a large track project is completed and entered into service – rather than waiting until all the work is finished.

The tax implications are substantial. For one, the railroad can more quickly capture the tax benefits allowed by IRS rules for depreciation of capital assets. For another, NS reduces its costs of capitalized interest, which is interest paid during the construction phase of a project. That means NS can deduct a greater share of interest payments as an immediate business expense rather than depreciating the payments over many years as a capital expense.

If the tax jargon is confusing, the result of Currier's handiwork is easy to grasp: millions of dollars in tax savings for NS.

For a capital-intensive business such as railroads – NS in 2011 has a \$2.2 billion capital budget – the long-term tax savings are substantial.

"The bread and butter of any capital-intensive company is how well it manages capital expenditures, because there are tremendous costs if you don't properly manage them," Currier said.

When Currier joined NS in 1985, he worked in the engineering department to develop the budgets and cost details for big capital track infrastructure projects. Once construction began, he monitored the work for variances from the budget. That background, he said, gave him insight into how Power Plant could benefit the company.

"In the world of taxes, it's not just about knowing tax law," Currier said. "It's also about understanding the business and how things are done within the company. When you have all of those pieces, you have a better understanding of the opportunities and problems you may be having when you look at the data."

Currier credited fellow tax department team members and singled out the accounting, finance, IT, and operations departments for the project's success.

"A lot of people contributed to make this possible," he said. ■ **BizNS**

Spreading the word about InnovationNS

They came up with creative names like Team eNvision, the Forward Thinkers, and L.E.A.D. 3. Then, last fall, the class of 26 Norfolk Southern management trainees fanned out across the system with a mission: to promote innovation among NS' operations employees.



"Our employees in the field have tons of ideas on how to create quicker, more efficient, and safer processes."

- **Kara Vezza**,
management trainee

Divided into six teams, the trainees developed business plans to market the InnovationNS website, made presentations to work groups, and surveyed employees. They discovered that many agreement employees were unaware of the InnovationNS website. Of those who knew of it, only a tiny percentage had submitted an idea to improve a work process, save money, or increase operating efficiencies.

In Atlanta rail yards, more than half of around 500 agreement employees surveyed were unfamiliar with InnovationNS. Employee surveys on the Harrisburg, Virginia, and Piedmont divisions turned up similar results. Generally, newer employees were more likely to have visited the website.

"Obviously, this was just a snapshot of the network, but it shows the company has some work to do to promote it more," said **Justin Robinson**, a transportation management trainee on Team eNvision who is now in Lynchburg, Va. "It also showed me that there's room for improvement with technology and innovation at NS, and that it is up to the younger generation to push innovation to keep our competitive advantage in the industry."

As a member of the L.E.A.D. 3 team, **Kara Vezza**, a transportation management trainee, promoted the idea of forming small, interdepartmental innovation teams in the field. They would be similar to safety committees but focused on improving work processes.

"We have to stay one step ahead of the game with other railroads and other transportation companies," said Vezza, now working on the Harrisburg Division. "It's part of all of our jobs to push innovation as a way to help the company grow and improve. Our employees in the field have tons of ideas on how to create quicker, more efficient, and safer processes. I just think there needs to be more push from the field to spread the word."

Kevin Gay, a management trainee on the Forward Thinkers team, said he talked to many employees who had come up with better ways of doing things but did not view them as being "innovative." Gay, now working in Savannah, said he encouraged them to post their ideas on the InnovationNS website because others could benefit.

■ **Kara Vezza**, a transportation management trainee, stands next to “Sir Innovator” **Hayden Newell**, manager innovative research, at the NS Safety Expo in March. A group of management trainees, including Vezza, developed the Sir Innovator theme to promote innovation at NS.



“I told them not to keep these ideas to themselves, because they’re not the only ones doing that work,” he said. “There are other people out there who would love to have an easier and safer way to do their work.”

That’s a point that **Debbie Thomas**, NS director strategic programs, drove home when the teams presented their findings earlier this year to members of the NS Corporate Innovation Council. The council, with representatives from across all of NS’ major departments, evaluates ideas submitted to the InnovatioNS website and helps implement innovations.

The council promotes ideas that enhance safety, revenue growth, service improvement, asset utilization, fuel efficiency, and workforce productivity.

“We’re trying to create a culture where people are naturally innovative and creative,” Thomas said. “It doesn’t have to be a brand-new system or new technology. Innovative thinking really means looking at a process and coming up with ways to work smarter, not harder. The focus is on things we can change that bring value to our company and, in turn, to our customers.”

The “global project” on InnovatioNS offered management trainees valuable experience in the field while helping NS advance a strategic company initiative.

“Their mission was to create a grassroots InnovatioNS campaign, which was really beneficial,” Thomas said. “It gave us help at the field level to educate employees and supervisors about InnovatioNS initiatives.”

Hayden Newell, NS manager innovative research and an innovation council member, said the project underscores the need to get more agreement employees engaged in the InnovatioNS process.

“The message is not getting out to as many people as I think we need to,” Newell said. “There are plenty of ideas out there to harvest. We just aren’t getting input from some of the people who may have ideas.” ■ BizNS



NS protects novel technology with patents



Over the years, Norfolk Southern employees have come up with products or processes so ingenious and novel that the railroad has patented the innovations.

To date, 28 current and retired employees are listed as inventors on eight patents that the U.S. Patent and Trademark Office has granted to NS. Another 15 employees are named as inventors on currently pending applications NS has filed for 10 additional patents, including two for international rights.

"We seek patents for a number of different reasons," said **William Johnson**, NS senior general attorney, who oversees patent issues. "Most of our patents may be used to either give us a competitive advantage or to position NS so that others won't be able preclude our use of a product or process that we have developed from an innovative idea."

With an issued patent, NS effectively gains a legal right to make, use, or sell a product or process that results from an employee inventor's idea.

"As a policy, we try to patent an innovative device or system if we think it has the potential to be licensed to others and manufactured commercially," said **Gerhard Thelen**, NS vice president operations planning and support. "We also do it as a protective measure so that we maintain use of it."

Johnson knows of only one case in which NS has licensed and received royalties for the sale of a device – a telescoping brake stick now used by NS and other railroads. NS patented the device in 1996 as the "multipurpose tool for use with railroad cars." It now is produced and sold, under license from NS, by Omni Group Corp. as the "Sidekick" brake stick. NS shares the royalties it receives on sales of the tool with inventor **Don Browning**, who retired in January as NS manager safety reporting and analysis.

Browning was inspired to develop the tool after an NS employee attempting to use a home-made brake stick was dragged under a rail car and badly injured. The aluminum and stainless steel brake stick Browning invented enables railroad workers to safely set and release rail car brakes from the ground while standing outside the gauge of track. It also can be used to open knuckle couplers and operate retainer valves on hopper cars.

"It wasn't in my job description to do this," said Browning, who lives in Roanoke, Va. "I realized that if we had a compatible tool and we put in proper rules and procedures for using it, we could do this safely. That was the impetus for me taking a look at it."



■ Conductor **Willie Perry**, who works on the Pocahontas Division, uses a telescoping brake stick patented by NS.

On the cutting edge

A desire to improve safety and efficiency of operations or to reduce costs has been a primary driver behind ideas leading to patent applications.

"A lot of people think the railroad industry is antiquated and doesn't use much new technology, but Norfolk Southern has been trying to spur innovation and new growth," said **Hayden Newell**, NS manager innovative research and a member of the railroad's Corporate Innovation Council.

Newell is working to develop stronger, more versatile rail spikes and an improved method of making them. NS has filed for a patent based on his design. Later this year, Newell hopes to conduct lab tests on a spike prototype, which he envisions will be stronger, longer lasting, and easier to apply than spikes now being used.

NS' push to improve locomotive fuel efficiency and reduce emissions has led to innovations that could prove valuable in the future. A major effort involves the NS 999, a first-of-its-kind battery-powered electric switcher locomotive unveiled in fall 2009. Thelen, **Gibson Barbee**, NS senior energy engineer, and **Bob Runyon**, retired NS electrical engineer, are among the inventors listed on an application to patent the locomotive's unique battery-management system.

NS' push to improve locomotive fuel efficiency and reduce emissions has led to innovations that could prove valuable in the future.

In addition to electric switcher locomotives, NS plans to develop a battery-powered road unit that would be used in tandem with conventional diesel-electric locomotives to provide power.

"We're developing a unique expertise that is not out there on the market currently," Thelen said. "The NS 999 patent will give us the ability to manufacture these battery locomotives and to develop it into a business if we want to."

Similarly, NS has filed for a patent on an engine cooling system for the company's SD60E locomotives, part of a new initiative based at Juniata Locomotive Shop. The shop is rebuilding 1980s-era EMD SD60 road units into the SD60E, with the "E" standing for Enhanced. Its dual-circuit cooling system, developed by **Don Faulkner**, Juniata general superintendent, and **Bill Thompson**, a shop machinist, will improve fuel economy and lower emissions.

From his years at NS, Browning knows the company has the talent and expertise to generate many innovative ideas. Employees, however, don't always come forward with them.

"I think many people don't understand that there's a benefit to them and to the company," he said. "You've got to step back and take a look at the bigger picture beyond what your individual job entails and say, 'If I help improve a process or come up with an idea, what are the implications beyond what I'm doing?' People need to see how the things they do could change the company or the industry in a positive way." ■ BizNS

■ NS has applied for a patent on the battery-management system developed for NS 999, an all-electric switcher locomotive built by the railroad.



Pride and a legacy of safety



“What it’s really all about is everybody going home safely to our families. Doing that every day, and seeing people retire healthy and being able to enjoy retirement – that’s No. 1 in safety to me.”

– **Eddie Marrs**,
gangleader pipefitter

As **Eddie Marrs** contemplated Norfolk Southern’s 22nd consecutive year as the industry leader in safety, he talked about a T-shirt he received in 1993. The shirt celebrated NS’ fifth straight E.H. Harriman Gold Medal as North America’s safest railroad.

“You either have to be real proud of safety or crazy to hang on to a T-shirt for that long,” said Marrs, NS gang leader pipefitter and welding instructor in Bluefield, W.Va. “Well, I’m real proud of the fact that I have that and that we’ve won it for 22 years. The record just keeps getting better every year.”

That pride in safety brightened a rainy day in Washington as an NS contingent picked up the 2010 Harriman gold at a May luncheon hosted by the Association of American Railroads.

CEO **Wick Moorman** accepted on behalf of employees.

“Twenty-two Harrimans,” Moorman told the industry crowd. “This is possibly the strongest indication I could ever cite for just how great our team at Norfolk Southern is.”

Marrs was among 17 operations employees selected to represent employees, based on their safety performance and leadership. The safety culture runs deep at NS, several said in interviews.

“In the early days, when I signed on with the Reading Company, it was more important just to get the work done,” said **Gary Lombel**, NS conductor in Jersey City, N.J., with 37 years. “With NS, it’s work safely – work slowly if you have to, but get it done right and be safe.”

“Our word is work safe, home safe,” said **David Dodson**, a bridge and buildings foreman in Crewe, Va. “I think everyone at Norfolk Southern has the concept that we work smarter instead of harder – that means we use the proper tool and follow the safety process to keep people from getting hurt.”

“Being No. 1 in safety means business,” said **Gary Price**, machine operator from Marion, Va. “We’ve got a bargaining chip the competition doesn’t have. We’ve got proof through the dedication of our employees and our safety record that we will get a customer’s product where it needs to be on time and safely.”

“What it’s really all about is everybody going home safely to our families,” Marrs said. “Doing that every day, and seeing people retire healthy and being able to enjoy retirement – that’s No. 1 in safety to me.” ■ BizNS

Working safely is a lifestyle at Sheffield



■ Above, **Al Van Buren** is terminal superintendent at Sheffield.

■ At right above, left to right, are **Mark Allen**, supervisor maintenance of way, and **Randy Mansell**, Sheffield yardmaster and chairman of the terminal's safety committee.

■ At right below is **Pat Fuller**, a conductor at Sheffield.

In 1978, when **Randy Mansell** arrived at Sheffield Terminal for his first day as a brakeman trainee, the entrance gates were barricaded. Rising smoke from the hump yard revealed why: A consist of engines had derailed, killing an employee.

"That brought a light to me as to how important it is to respect the equipment we work with," Mansell said. "That's where I started from, and from that day forward it put me in perspective with the safety program."

In the 33 years since then, Mansell, NS yardmaster, has helped build a truly impressive safety record. The terminal's transportation employees are working on 11 years without a reportable injury. Mansell has chaired the terminal's safety committee for the past seven years, but does not take credit.

"Basically, everybody's a safety chairman at Sheffield," Mansell said. "It's not about getting recognition. Safety is just part of our everyday business."

It's uncommon for a hump yard to achieve a decade of injury-free service, said **Al Van Buren**, terminal superintendent. Yard employees are exposed constantly to moving rail cars and engines.

"Any time you've got employees beating the gravel around rolling stock, there's an opportunity for injuries," Van Buren said.

Van Buren, a nearly 27-year NS veteran, has worked at Sheffield the past 18 years, serving as a trainmaster and senior trainmaster before being promoted to superintendent in February.

Sheffield's safety record, he says, can be summed up in one word: attitude.

"Injuries are just not accepted here," he said. "That attitude is instilled from the older guys on down to the new people as they come on. They work safely, and they mandate that their fellow workers work safely."

No silos at Sheffield

Sheffield has six receiving yards and 32 classification tracks where rail cars are sorted by destination and made up into trains. Coal moving to Georgia Power's Scherer utility plant outside Atlanta is a big commodity, as is general merchandise such as clay, steel, plastic products, and chemicals.

Around 40 full-time transportation workers, including yardmasters, trainmasters, and switchmen, are based there. They work with a cast of mechanical employees at the yard's diesel shop and engineering employees who do track maintenance.

"The company has been talking the last few years about tearing down silos between the operating departments," Mansell said. "At Sheffield, there have never been any silos. We look out for one another regardless of the department we're in. If we see somebody in a situation they shouldn't be in, we don't have any trouble crossing the line to tell them, 'Hey, that's unsafe, stop that!'"



That caring attitude underlies Sheffield's safety record, said **Steven Flanagan Jr.**, a conductor based in Sheffield and local chairman of the United Transportation Union.

"At Sheffield, everybody has your back," he said. "Safety is drilled into us every day, and everybody watches out for one another."

Another key is good communication between supervision and agreement employees. Everyone's opinion is considered important, said **Pat Fuller**, a conductor at Sheffield.

"That creates an atmosphere where we feel like we're in charge of our own destiny," he said. "That's what it's all about. Without buy-in from employees, you won't have much of a safety program."

Passion and purpose

Fuller, a 35-year NS veteran, works with conductor trainees as part of the railroad's accelerated conductor training program. He takes them under his wing for at least a week, immersing them in NS' safety process.

Every day, he writes a message in ink on his hand: "Passion with a purpose." The purpose, he said, is to ensure that everybody goes home safely; the passion is taking that message to heart and living it every day. Tears were shed when Fuller brought in former railroaders who talked to trainees about career-ending injuries.

"I think the new guys understand how important the rules are, but I'm trying to instill the passion in them," Fuller said. "It's about making the right decisions based on knowledge and what they've been taught. It's about taking personal responsibility for what they do."



"Without buy-in from employees, you won't have much of a safety program."

- **Pat Fuller**, conductor

A proactive approach

Employees are encouraged to report potential safety hazards immediately rather than wait until the next safety committee meeting.

"If they have an issue with a switch hard to throw or a broken rail in the yard, we want to know right away so we can correct those things and eliminate the possibility of derailments or injuries," Van Buren said.

Another example of Sheffield's proactive approach is its helicopter landing pad, built to ensure a quick medical evacuation if an accident occurred. To keep costs low, Mansell worked with **Mark Allen**, NS track supervisor maintenance of way, to build the pad with asphalt left over from a grade-crossing job. "It's something I thought of because if you get hurt on the railroad, it's going to be bad," Mansell said. "A few minutes of improvement in the emergency response time might save your life." ■ BizNS

An NS pioneer: 'I've just done my job'



Sandy Beckner did not set out to be a trailblazer when she became the Kentucky & Indiana Terminal Railroad's first female locomotive engineer. In fact, Beckner had not even aspired to become an engineer when she signed on with the NS predecessor railroad in 1978.

"It just happened," she recalled. "A friend of mine worked for **Ray Hawkins**, the vice president of labor relations at K&I, and encouraged me to apply for a job as an operator in the yard. After a year, Mr. Hawkins asked me what I thought about being an engineer. I told him I hadn't thought about it."

Hawkins, however, had. He believed it was time for a woman to break through the gender barrier. "For some reason, he thought I would be the best candidate," Beckner said.

More than three decades later, Beckner is NS' longest tenured female engineer. At Louisville, where she has

spent her railroad career, Beckner is second in seniority in transportation and the only woman engineer. In May, CEO **Wick Moorman** attended an event in Louisville to recognize Beckner's 35 years of service.

"It's a milestone because they just did not allow women to serve in that capacity back in those days," said **Deb Thomas**, NS director strategic programs and chair of WiNS' Leadership Council, a women's support network at NS. "If you consider where we were in the '70s, those kinds of jobs were predominantly male jobs." Thomas said Beckner has compiled an exemplary work record at NS, working injury-free throughout her career.

Despite her unique status, Beckner has not sought the limelight. "Mr. Moorman said I was a pioneer," she said, "but when you're the only pioneer, you tend to just want to blend in, especially in railroading, which for so long has been a man's world. It's easier to blend in."

The Georgetown, Ind., resident was in her early 20s when she became an engineer. Before accepting the job, she talked it over with her parents. "My dad was all for it," Beckner recalled. "Mom was a little leery of me doing that type of work."

Beckner was not deterred. From the moment she climbed aboard a locomotive, she vowed to meet the job's demands. "I told myself I'd step back if I couldn't do the job 100 percent," she said. "I had to go on instinct and use a lot of common sense. I worked all different shifts and jobs. I enjoyed it, but it was challenging."





■ At far left is **Sandy Beckner**, NS' longest tenured female locomotive engineer.

■ Far left bottom, **Sandy Beckner** operates a locomotive in the Louisville, Ky., yard.

■ At left is a collage of career photos and news articles written about **Sandy Beckner** over the years.

Early on, Beckner performed multiple tasks, including working as a hostler and fueling and sanding engines. She worked many second and third shifts, often in bitterly cold weather. "It wasn't easy being called out all hours of the day and night," she said. "You have to get your mind set that this is a way of life."

Taking that approach was especially helpful when working in extreme temperatures. "I can remember working on 95-degree days," she said. "We didn't even have a fan, and the thought of air conditioning was unheard of. It was pretty cool when they started installing fans on switcher locomotives."

These days, Beckner works a yard job in Louisville, including yard switching and transferring cars from one yard to another. "You're learning something all the time," she said. "The hardest part is not running the locomotives, but learning everything that goes along with it. A lot goes into trying to be a halfway decent engineer."

She maintains that even 30 years ago, there was no difference in expectations for a female and a male engineer. "We all performed the same job," she said. Still, for many of her male co-workers, working alongside a female engineer was a major transition.

"Those guys had been on the railroad 30 and 40 years," Beckner noted. "It was a different type of person from what you have today." Even so, her work ethic won over naysayers. "I've worked with some great guys and gained some great friendships. Now, I'm one of the old heads." Beckner acknowledges that her job isn't a top career choice for most women. "Transportation hires start out as switchmen, and many women wouldn't want to be out there at 2 and 3 o'clock in the morning switching boxcars and tying handbrakes, especially when it's 20 degrees."

Despite the challenges, Beckner only briefly considered switching careers. About a year after joining the railroad, she had an opportunity to work for Ford Motor Co. "The thought of working on an assembly line inside a building didn't appeal to me," she said. "I'd much rather be outside." Plus, she appreciated the railroad's benefits. "Norfolk Southern has been a good company to work for. I had no reason to leave."

Beckner plans to remain in the Louisville yard for three more years and retire after her 60th birthday. Until then, she plans to continue operating locomotives just as always. "I've pretty much just done my job, kept my nose clean, and showed up when I was supposed to show up." ■ BizNS

BizNS



ON THE COVER:

NS' effort to reforest the Mississippi Delta demonstrates the connection between environmental sustainability and good business practices. Pictured is a cottonwood leaf captured in morning light in Yazoo City, Miss.

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The BizNS Team

I joined NS three years ago as a contract writer, and it didn't take me long to realize I wanted to work here full time. The people are top-notch, the company is first class, and the railroad is a fascinating business.

As the new editor of BizNS, I am thrilled to be part of an industry that helped pioneer America's development and has an even more promising future: Trains today are the safest, most efficient, and environmentally friendly way to deliver

the goods that are the lifeblood of our economy.

Before coming to NS, I spent 28 years as a reporter and editor in newspaper journalism. I like talking to railroad people and hearing their stories. I hope to share many in BizNS as we explore the opportunities and challenges NS faces in the highly competitive world of freight transportation.

Producing BizNS is a team effort, and we have a great team. **Casey Thomason** has an insider's view, having worked as a locomotive engineer before parlaying his talent with a camera into a job as NS photographer. **Elizabeth Cooper**, our new contract writer in the red blouse, is an award-winning journalist with more than 20 years in news and public relations. **Audra Byrn**, NS creative design consultant, brings a creative flair honed by more than 20 years in graphic design. **Frank Wright**, NS' veteran design manager, back row, left side, offers wisdom and perspective gleaned from 34 years in railroading.

Let us know how BizNS is serving you, and keep those ideas coming. ■ BizNS


Manager Corporate Communications

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