

THOMSON REUTERS STREETEVENETS

# EDITED TRANSCRIPT

NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

EVENT DATE/TIME: FEBRUARY 11, 2019 / 3:00PM GMT



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

## CORPORATE PARTICIPANTS

**Alan H. Shaw** *Norfolk Southern Corporation - Executive VP & CMO*

**Andrew Koch**

**Brandon Smith**

**Christine Traubel**

**Clay Moore** *Norfolk Southern Corporation - Director of IR*

**Cynthia C. Earhart** *Norfolk Southern Corporation - Executive VP of Finance & CFO*

**David Osborne**

**David T. Lawson** *Norfolk Southern Corporation - VP of Coal*

**Doug Corbin**

**Ed Elkins**

**Floyd Hudson**

**James A. Squires** *Norfolk Southern Corporation - Chairman, President & CEO*

**Jason Morris**

**Jeffrey S. Heller** *Norfolk Southern Corporation - VP of Intermodal & Automotive*

**John H. Friedmann** *Norfolk Southern Corporation - VP of Network Operations*

**John M. Scheib** *Norfolk Southern Corporation - Executive VP Law & Administration and Chief Legal Officer*

**Joshua Lafferty**

**Karol Lawrence**

**Meghan Achimasi**

**Michael A. Farrell** *Norfolk Southern Corporation - SVP of Transportation*

**Michael Joseph Wheeler** *Norfolk Southern Corporation - Executive VP & COO*

**Steve Ewers**

## CONFERENCE CALL PARTICIPANTS

**Allison M. Landry** *Crédit Suisse AG, Research Division - Director*

**Bascome Majors** *Susquehanna Financial Group, LLLP, Research Division - Research Analyst*

**Brandon Robert Oglenski** *Barclays Bank PLC, Research Division - VP & Senior Equity Analyst*

**Brian Patrick Ossenbeck** *JP Morgan Chase & Co, Research Division - Senior Equity Analyst*

**Cherilyn Radbourne** *TD Securities Equity Research - Analyst*

**Christian F. Wetherbee** *Citigroup Inc, Research Division - VP*

**David Scott Vernon** *Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst*

**Jason H. Seidl** *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

**Justin Trennon Long** *Stephens Inc., Research Division - MD*

**Kenneth Scott Hoexter** *BofA Merrill Lynch, Research Division - MD and Co-Head of the Industrials*



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Ravi Shanker** *Morgan Stanley, Research Division - Executive Director*

**Scott H. Group** *Wolfe Research, LLC - MD & Senior Transportation Analyst*

**Thomas Richard Wadewitz** *UBS Investment Bank, Research Division - MD and Senior Analyst*

**Turan Quettawala** *Scotiabank Global Banking and Markets, Research Division - Director, Transportation and Aerospace, Equity Research*

## PRESENTATION

### Jason Morris

Good morning. Welcome to Norfolk Southern. My name is Jason Morris, Assistant Vice President of Safety and Environmental. At Norfolk Southern, working safely is a guiding principle of our operations. In order to ensure that we serve our customers safely, we start our work with a safety briefing. Our staff conducted a briefing on their safety responsibilities earlier, but we'll start our 2019 Investor Day with another safety briefing for all others in attendance. We're located at the Norfolk Southern Goode Building at 1200 Peachtree Street, on the second floor, in the Peachtree room. For your safety, as you move around the room and the building, please watch for pinch points like the areas between the tables and the chairs, as they roll. Also, be mindful of slip, trip and fall risks like bags, cables and transitions in floor height. Please note that there are emergency exit doors behind the screen wall to my right and your left, and an area for sheltering in place. If evacuation becomes necessary, we'll actually exit through a second set of doors in that area and not the doors to your rear right, which just lead to a balcony and then back into the building. Staff are prepared to direct you out of the building to our assembly location, which is at the corner of 15th Street and Peachtree, right in front of our building and across from the Woodruff Park Center. Further instructions will be given at that location, should we then need to adjourn the meeting or relocate it. Staff are also prepared to initiate a 911 call, if necessary, and lead first responders to our location. You'll see at your tables that there are Wi-Fi instructions and maps and electrical outlet. Restrooms are located out and to the right. Lunch will be provided right outside this room, and we encourage you to participate in our Network Operations Center tours during that lunchtime period. Finally, please take a moment to silence any electronic devices. And if you have any other questions, guides are available. You'll recognize them by their teal shirts and orange lanyard, just like yours. So with that, thank you for your attention. I will now turn the podium over to our Director of Investor Relations, Clay Moore. Clay?

### Clay Moore - Norfolk Southern Corporation - Director of IR

Thank you, Jason. Good morning. Welcome, everyone here in attendance and those listening live via webcast, to Norfolk Southern's 2019 Investor Day. Before we begin, please note that during today's presentation, we may -- we will make certain forward-looking statements subject to risks and uncertainties, and that may differ materially from actual results. For a full disclosure of those risks and uncertainties we view as most important, please refer to our annual and quarterly reports filed with the SEC. Today's presentation is available on our website at [norfolksouthern.com](http://norfolksouthern.com), in the Investors section. Additionally, a transcript and downloads will be posted to the website after today's event. We will speak to a few non-GAAP measures today related to free cash flow and conventional intermodal revenue, and reconciliations for these measures are also posted on our website. Now to start today's event, it is my pleasure to introduce Norfolk Southern's Chairman, President and CEO, Jim Squires.

### James A. Squires - Norfolk Southern Corporation - Chairman, President & CEO

Good morning, and welcome, everyone. It's great to be with you today to discuss how we are reimagining Norfolk Southern. It's a process that's well underway and will carry us through the next 3 years. I'll begin by saying how proud I am of our dedicated employees. A little over 3 years ago, we announced a 5-year plan with the goal of a sub-65% operating ratio by 2020. Since then, we've lowered our operating ratio over 700 basis points, hitting a 65.4% OR in 2018. We made the company more profitable, and we created a lot of shareholder value in the process. We're pleased with our accomplishments and how far we've come. And we can do more by focusing on our successes, and there have been many, and also on how we can do better. It helps to have a great franchise to work with, that's our railroad. It reaches diverse markets and customers. It touches a majority of the country's population, manufacturing and energy consumption. We have solid growth prospects, with top-notch channel partners. As consumer spendings, share of the economy continues expanding, we've grown our intermodal business year after year after year. We have a strong balance sheet to fund investments in safety, efficiency and growth. We use a disciplined and consistent approach to returning capital, with a targeted payout ratio of 1/3 and free cash flow and borrowing capacity for share repurchases. In the last 10 years, we returned over \$10 billion through buybacks alone. We have employees throughout our company who want to win. As we began work on our new strategic plan, we drew



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

on their know-how and we drew on outside experts who helped us benchmark. We looked for areas where we had the most room to improve. We decided to adopt precision scheduled railroading because it works. We hired people in key positions who have worked under PSR and told them to lead us from the front. You will meet several of them today.

Our new objective is an operating ratio of 60% by 2021. We know we can get there because of our record of value creation and because of the steps we have already taken, steps like centralizing dispatching at the Network Operations Center here in Atlanta, which you will have a chance to tour later. This isn't just a plan for shareholder value we will deliver, this is a plan for shareholder value we are delivering. You, of course, want to know what we are trying to achieve, but you also want to know how we will get there. So today, we will give you a productivity and service scorecard to help you track our progress.

In addition to laying out our financial goals, Cindy Earhart will introduce 5 key performance indicators, and Mike Wheeler will follow up with more detail. Then we will brief you on the specific initiatives that will lead to progress on these key performance indicators. You will hear directly from those reimagining operations growth and culture.

So with that as an introduction, here is an overview of today's presentations. Let's start with operations. Job one is improving efficiency and reducing costs, which requires an intense focus on operations. Our original Thoroughbred Operating Plan, or TOP, created a 100% scheduled railroad for merchandise. TOP and its successor TOP II were innovative in their day. But in the years that followed, these original operating plans became overly complex, optimizing individual services on the network, intermodal, automotive, merchandise and unit trains, made sense for each of those services, but it didn't make sense for the network as a whole.

Mike Wheeler will discuss our latest operating plan, TOP21, which is built on a new, simpler PSR foundation. The goal of TOP21 is to make the entire network more efficient. So how will we accomplish this? First, we will reengineer local service through Clean Sheeting. The objective is to turn assets more quickly through regular, consistent local service.

Mike Farrell, our new SVP Transportation, brings with him PSR experience. He is leading Clean Sheeting as well as field transportation, the Network Operations Center and all other aspects of running trains at NS. Mike will discuss how Clean Sheeting works. Then you'll hear directly from those implementing Clean Sheeting in the field about the benefits they have seen and the cultural and operational changes sweeping our railroad.

Second, we'll implement a new PSR-based operating plan, TOP21. The goal of TOP21 is 1 network. Through TOP21, we will operate fewer heavier trains, balance network and asset flows; decrease circuitry, reduce reclassification events, fully integrate local and system operations, and drive down costs.

Third, to ensure TOP21 remains current and flexible, we created a new organization, Network Planning & Optimization, or NPO. NPO's job is to ensure TOP21 is executable by field forces, responsive to customers' needs, rigorously adhered to and financially sound. John Friedmann, VP of Network Planning & Optimization, will tell you about TOP21 and NPO, followed by a panel who will explain how NPO works.

Fourth, we will improve the efficiency of our locomotive fleet. TOP21 will reduce the need for locomotives as we run heavier trains, reduce circuitry and increase utilization. Our goals for our new, smaller locomotive fleet are: Increase reliability and fewer line-of-road failures, improved productivity measured in ton-miles pulled and reduce time locomotives spend out-of-service. As we replace locomotives, we will transition from DC to AC power. We will do so through a cost-effective modernization and rebuild program started in 2016. By 2021, we will have nearly doubled the percentage of AC locomotives in the fleet. This will give us a more productive and reliable fleet.

Doug Corbin, our Chief Mechanical Officer, will explain our locomotive strategy.

Now turning to growth. As we look into the future, we see favorable economic conditions currently. Unemployment is low, manufacturing is high, and customers are investing. Our franchise has both cyclical and structural growth potential. If the environment changes, we will pivot, as we did in 2016 when the market turned down and again, in 2017 and 2018 when growth surged. You'll hear from Alan Shaw and his team about how they will drive top line growth and margin expansion by yielding up. Yielding up means, one, insure pricing reflects the value of our product in the



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

marketplace; two, direct railroad assets to their most valuable use; three, understand the cost of service and make sure the plan is executable. Using a yield-up approach, we expect to grow revenue at a compound annual rate of 5%.

Service, as we go through PSR, will change, a network that takes into account the needs of most customers won't be ideal for every customer. Our aim is to make service for those who do use our network as consistent and reliable as possible. That's what customers tell us they want. Yes, they want their goods to arrive sooner, but knowing the goods will arrive when promised is even more important. That means being clear about what we can and can't do. Our new mantra is don't promise anything you can't deliver and then deliver what you promised.

Next is culture. To keep up in a rapidly changing world, a company must constantly reexamine its culture. Openness to new people and new ideas is critical, so is having the right leaders in the right jobs, doing the right things, totally committed to shareholder value. You will meet many such leaders today. They understand that our success depends on culture change.

How can we improve? How can we be more efficient while helping our customers grow? How can we drive shareholder value today, tomorrow and the next day? These are challenges that inform our new plan, and they are challenges we are determined to meet.

In closing, our mission is straightforward, serve our customers, manage our assets, control our costs and develop our people. These core principles, the NS way, if you will, are at the heart of our reimagined company. As you'll hear throughout the day today, we strive to be the most efficient railroad with the best customer service and growth in the industry. We strive to deliver superior shareholder value and earn your confidence every day. Thank you. And I'll now turn it over to Cindy to explain our financial goals and key performance indicators. Cindy?

---

### **Cynthia C. Earhart** - Norfolk Southern Corporation - Executive VP of Finance & CFO

Good morning, everyone, and thank you for joining us. We really appreciate it. I am really excited to be here today to discuss the financial benefits of our new strategic plan. You'll see today, there's a lot of energy and enthusiasm in the organization, and I can tell you that the Norfolk Southern team is confident that we're going to continue to deliver on our commitments.

We're going to hold each other accountable, and we have no doubt that we will continue to make great progress that will reward our shareholders, our customers and our employees. We are implementing this new plan from a position of financial strength, with a robust balance sheet and favorable economic environment. In 2015, we laid out our strategic plan, and we have made substantial progress toward achieving those goals. As we stated on our fourth quarter earnings call, over the past 3 years, we have achieved strong financial performance and delivered on our commitment to increase value for our shareholders.

Now to recap those accomplishments. We have driven year-over-year operating ratio improvement for each of the last 3 years, setting company records along the way and achieving a 65.4% OR in 2018.

We have delivered strong top line growth, as we were able to rebound from the 2016 freight recession by growing revenues 9% in 2018 on top of 7% growth in 2017. We have delivered on numerous productivity and efficiency initiatives, driving a decrease in average headcount of 12% since 2015, while growing volumes at the same time. We have continued to push operational efficiencies, improving fuel efficiency and increasing train links. The progress we have made has us eager to deliver on our next round of initiatives that will generate even better financial performance. We are confident that we will extend this track record of financial improvement and shareholder value creation.

Now I will present the financial targets associated with our strategic plan. And throughout the day, you're going to hear about the initiatives that are driving those financial results. Our strategic plan is focused on lowering our cost structure and growing our top line. You will hear initiatives around simplifying our operating plan to reduce complexity in our network and eliminate cost. Our new operating plan will strengthen our service product and provide a platform to drive strong revenue growth. As we implement these initiatives, we're going to provide you with measures that will allow you to follow the progress we are making.

Now it starts with service. We know that it is important that we provide quality service for our customers, and we are introducing a service delivery index to measure our progress. Now while we improve service, we will also reduce cost. And these productivity measures will chart our progress:

## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

train and engine, employee productivity, average train weight, locomotive productivity and cars on line. Now I'll leave the details of these operational metrics and targets to Mike, while I focus on the financial outcomes that they will provide.

So let's turn to the financial benefits of our strategic plan. Beginning with our cost structure. The initiatives that we will discuss will improve employee productivity and asset utilization. These improvements will manifest themselves in terms of savings associated with labor costs, maintenance and equipment expenses, and fuel consumption. Furthermore, you will hear about initiatives that will allow us to leverage our service product and improve our revenue profile, allowing us to benefit from the increased value we are bringing to our customers and to drive strong top line growth.

Let's begin with employee productivity. As we redesign our operating plan, a reduction in crew starts will lead to T&E headcount savings. Once we have implemented the changes to our network and have demonstrated consistent execution on the plan, we will be able to reduce the resources required to operate our network. We're also focused on increasing the efficiency of those who support our operations. Since 2015, we have reduced our annual average non-agreement headcount 11%, as we seized on opportunities to increase employee productivity. As we continue to implement new technologies and streamline organizational process throughout our entire organization, we see further opportunities for improvement.

For 2019, we expect our year-end headcount will be down compared to 2018. You may recall that we brought on additional resources towards the end of 2018 to assist in improving network fluidity. As such, we expect a slight sequential increase in Q1, with headcount then beginning to decline in the back half of the year, with a total decline expected of around 500 by year-end. In total, based on our initiatives, we expect that we can reduce our annual average headcount by approximately 3,000 employees by 2021.

You will also hear about our efforts to improve asset utilization, specifically, measures we are taking to improve the efficiency and the reliability of our locomotive fleet. We are starting 2019 with strong momentum, as late last year, we began returning leased locomotives and storing some of our own locomotives. We will also discuss our DC to AC conversion program. We are targeting the completion of an additional 337 rebuilds by 2021.

We will also continue to purchase, on a periodic basis, new locomotives as we rejuvenate our fleet. Given these programs as well as the planned operational changes, we will be able to rationalize older, less-efficient units. We estimate that we will be able to further reduce the amount of locomotives in our asset fleet by over 500 by 2021. This will improve fuel efficiency and reduce associated materials and maintenance personnel needed to support our fleet.

As we reduce the locomotive intensity needed to run the business and implement technologies aimed at improving fuel efficiency, we do expect our fuel consumption to decline. Based on the current economic environment, we believe that we can grow revenue by a CAGR of approximately 5% through 2021. Breaking this down by business unit, we expect we will continue to see growth in intermodal and merchandise, while coal will likely modestly decline during the timeframe. We expect the changes to our operating plan to benefit our customers in terms of service consistency and asset productivity.

We are focused on improving revenue quality and capturing the value for the service that we provide to our customers.

For 2019, we expect volumes to be up, driven by growth in intermodal and merchandise commodity groups. We expect the favorable pricing environment will continue to provide support for RPU growth, excluding fuel in our truck-competitive markets. These outcomes will equate to margin expansion that we know is important to our investors.

For 2019, we expect to deliver another year of operating ratio improvement and believe that we will achieve an operating ratio that is at least 100 basis points lower than our 65.4% in 2018.

Driven by our operating-plan changes and revenue initiatives, we are now targeting an OR of 60% by 2021.

Now let's move to capital investment. When we make decisions to invest capital, we do so in a disciplined way to ensure that those dollars benefit the network as a whole and drive the greatest returns for our investors. We will invest in our network to ensure the safety and the reliability of our rail operations.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

For 2019, we expect capital expenditures will be in the range of 16% to 18% of revenues, as we will continue to invest to maintain the viability of our railroad and equipment fleets. Of our total capital expenditures, you can expect approximately 60% of that to be invested in core network projects, line-of-road, infrastructure and terminals, necessary to ensure a safe and a reliable network. As we continue to rejuvenate our locomotive fleet, we have allocated approximately 20% for locomotives, primarily towards the AC -- the DC to AC conversion projects.

Of the remainder, spending on technology comprises the biggest portion, as we will continue to invest capital towards the completion of PTC and other technology projects that increase efficiency and improve customer service. Projects that grow our business and provide attractive returns are always considered. As such, the level of capital expenditures in any particular year may vary. But we will maintain the disciplined approach we take in making those decisions and continue to believe that our capital investment needs will approximate 16% to 18% of revenues moving forward.

Improved financial results will boost our free cash flow profile. Our recently reported 2018 free cash flow of \$1.8 billion, an NS record, underpins our confidence in achieving these targets. As we have demonstrated over the years, we are committed to return value to shareholders through dividends and share repurchases.

In 2018, we returned over \$3.6 billion to shareholders through approximately \$2.8 billion in share repurchases and \$800 million in dividends. In January, we increased our dividend by approximately 8% on top of the 25% increase we did in dividends in 2018. We continue to target a dividend payout ratio of around 1/3 of earnings, and we'll use remaining free cash flow and borrowing capacity to repurchase shares. We will continue share repurchases in 2019 in accordance with this capital allocation philosophy. We are clearly committed to the return of capital to our shareholders, and we will continue to do so.

With respect to leverage, we plan to maintain a credit profile of BBB+, Baa1, and we'll continue to target an adjusted debt-to-EBITDA of around 2.4, 2.5x. We believe that this provides appropriate flexibility to react to changes in the macroeconomic landscape, while preserving cost-efficient access to capital.

We have made tremendous progress in achieving the goals that we set out in our 2015 strategic plan, putting us on a path to hitting those targets ahead of schedule. We have significant momentum underway at Norfolk Southern, and there's a lot of excitement about the changes we are driving throughout the entire organization. We know we have work left to do, and everyone on our team is focused on generating further improvements. We will not hesitate to make further adjustments to enable Norfolk Southern to achieve its full potential. Delivering what we promise applies not only to our customers, but also to our shareholders. We are confident that we can achieve these results and are committed to generating greater value for our shareholders. Now I'll turn things over to Mike Wheeler to lay out our operating plan, starting with the fundamentals and building towards a new focus on efficiency and service that's going to make our operations both more resilient and more profitable. Mike?

---

### **Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Thanks, Cindy. Good morning, everyone. I'm very excited to talk about how we are reimagining operations at Norfolk Southern. As Jim noted, we understand what it takes to be the best operators in the business. In the past, we routinely served our customers well and did so with efficiency. We executed in the field and innovated in our planning.

Norfolk Southern knew the value of a scheduled railroad and set sights on becoming one. The excitement that accompanied the development of our first scheduled plan, the Thoroughbred Operating Plan, or TOP, was evident throughout the company as well as the development of TOP II. The creation of TOP and TOP II magnified the efforts of our employees and contributed significantly to our success.

Now our folks work as hard today as we did then. However, we have not kept up, and that's not acceptable. Now the issue is not with the effort of our people. Over time, the network and traffic have evolved, and our philosophy towards operating has not kept up. We're changing that. We're doing things differently. Every effort we take, from centralizing dispatchers from our 9 divisions into the Network Operations Center, that you'll see at lunchtime, to the Network Planning & Optimization group you'll hear about in a bit, including implementing precision-scheduled railroading throughout our operations. This is focused on modernizing the philosophy and implementing that new approach across our system. We are now seeing good results with the initiatives that are underway.

## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

Train speed has improved 13%, and dwell improved 20% over last year, continuing sequential quarterly improvement over our last several quarters. We are also creating resiliency as evidenced by our quick bounce-back after the recent polar vortex.

Today, we're going to give you a view into how our transformation is proceeding. Throughout the day, you'll hear us discuss our 5 core principles: Serve our customers, manage assets, control costs, work safely and develop people. You've seen these principles before at every railroad that is undertaking transformation because they are fundamental. Focus and alignment are key to our success, and starting every conversation with the same principle ensures that every employee is focused on the common goals and aligned in how Norfolk Southern will pursue them.

Initiatives based on the 5 principles can be found everywhere in the company. Some are completed. Some are underway, and some await the right time for implementation. Today, I will introduce 4 of our most important initiatives. While all of them serve to improve service, volume, efficiency or margin, we anticipate that these 4 will have the most significant impact on the value we bring to our shareholders.

Let's dig in. The first initiative is Clean Sheeting, a process that has been underway for well over a year and which has already received commentary on our earnings calls and in many analyst reports. While some of our initiatives focus on 1 or 2 of the 5 precision-scheduled railroading principles, Clean Sheeting drives at all 5. The express purpose of Clean Sheeting is to provide a valuable service product to our customers, one that our team can deliver consistently, reliably and efficiently. Mike Farrell, Senior Vice President Transportation, who I will introduce shortly, will explore our Clean Sheeting process in greater depth. He spent the better part of the last 18 months learning about our system and location-by-location, applying the Clean Sheeting methodology.

At its core, Clean Sheeting, like the 5 principles it serves, is an implementation of precision-scheduled railroading. Where other railroads have used the vision and insight of just a few key individuals to implement PSR, a key feature of Norfolk Southern's Clean Sheeting process is that in addition to streamlining operations in the territories we visit, we are investing in the training of our employees so that they too become skilled at designing and implementing operations based on Clean Sheeting principles, and that's critically important.

You'll hear Mike talk about our progress in Clean Sheeting the entire railroad, and you might envision a once-and-done initiative. While that first pass will and has yielded significant improvements in our operation, the effort to Clean Sheet will never end. By training our leaders in the execution of Clean Sheeting, they will be able to continually seek improvements in our operations without compromising our service or efficiency.

Clean Sheeting is now a permanent component of our operational planning as it has become the NS way.

Hand-in-hand with Clean Sheeting is the development of TOP21, our reimagined operating plan that views the railroad in a unified way. Clean Sheeting starts in the terminals, applying PSR tenets that then spread to adjacent territories.

In contrast, TOP21 looks at our system holistically and designs a PSR-based railroad from the top down. John Friedmann, Vice President Network Planning & Optimization, will introduce you to our latest version, TOP21. Like TOP and TOP II before it, TOP21 depends on high-quality data, process integration and railroad analytics, but the level of accuracy, integration and flexibility achieved is far superior.

Now the TOP21 plan doesn't adapt itself to changes in our operating conditions. It takes a well-designed team to ensure that the plan supports our principles and adapts to a changing world. Accordingly, John will also describe our Network Planning & Optimization function, which is purpose-built to create a team that can maintain and approve -- improve our operating plan.

That role as custodian of the operating plan has traditionally been embedded deep in headquarters operations. No longer. The NPO reports jointly to myself and the Chief Marketing Officer, and has dedicated interfaces to customer service, marketing and our Network Operations Center and field transportation groups. Central to our operating philosophy is a locomotive fleet that is healthy, flexible, efficient and well positioned. Doug Corbin, our Chief Mechanical Officer, will spend a few minutes explaining our locomotive fleet strategy, a strategy that addresses all aspects of the fleet, from the health of the hardware to the way we maintain it, to its integration into TOP21 as an essential driver of superior service.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

The Clean Sheeting process I mentioned a few slides ago is designed to improve operations in all conditions, winter and summer, high volume and low volume, in the best conditions and in the worst conditions. It's a great tool in our toolbox, as it always leads to improvement regardless of the starting point.

Imagine though if we could systemically drive our performance in a more advantageous direction. That's the precise goal of the last initiative we'll discuss this morning, the Cars On Line Team, or COLT. COLT's mission is to collaborate with our customers to improve operating conditions, namely, by reducing the cars on line, so that every action we take is timely and value-added. I'll bring a few key members of our COLT team and customer-facing initiatives up to describe the team, its mission and the results we've already seen. Aligning the initiatives with our principles helps keep our team focused on the most important contributors to running a superior railroad.

More importantly, for your interest, however, every one of the initiative leads to value, shareholder value, customer value and employee value.

Cindy highlighted the 5 areas in which you'll see expense improvements in our new strategic plan, the service delivery index, T&E productivity, train weight, locomotive productivity and cars on line. To hold ourselves accountable for progress in each one of these areas, we've identified corresponding metrics that will accurately track our progress towards the goals Cindy described. In alignment with our corporate goals, we have chosen metrics that control cost while encouraging growth, lead to enhanced service without precluding efficiency and underscore the difference between controlling costs and saving money.

Our first metric, the service delivery index, is a comprehensive summary of our transportation performance, indicative of the service perceived by our customers. SDI is more representative of the performance required for every type of traffic, intermodal, coal and carload, and it is customer-facing, and thus, is a better measure of the railroad's total performance. It is based on the commitments we have made to our customers.

Train and engine group productivity. Having enough train crews is essential to our quality of service product. Having just the right amount is essential to the achievement of our financial goals. Accordingly, we will measure and track T&E productivity by the tonnage of traffic moved per active crew member. In 2018, we achieved a little over 35,000 GTMs per active T&E. Our initiatives will drive that higher. Train slots are a precious commodity. Improving our usage of each slot is essentially creating free capacity, no extra capital and lower overall expense. For the past few years, we pursued train length. While length is important, train weight is an all-encompassing measure.

Our baseline for tonnage per road train is 6,400, and we plan to increase that number considerably. Locomotives are essential and expensive. The fleet initiatives that Doug will present, combined with our attention to manage assets, will ensure that we get the most out of every unit. Our metric is 1,000 gross ton-miles per active locomotive and starts off the new plan with the baseline of 103,000 gross ton-miles per active locomotive, and we plan to achieve significant locomotive productivity.

Cars on line. You're familiar with this metric. For our purposes, we're adjusting the industry definition to more closely align with actual impact on the railroad in a timely fashion. For instance, while the industry metric ignore system cars used in maintenance activities, we all know that it doesn't matter whether the car blocking the siding is a revenue load or a maintenance of way gondola, it has the same effect on fluidity and performance.

Likewise, industry metrics are often slow to recognize that a private car on an industry siding is essentially offline. We care, and we'll make the adjustment to better track our performance. Our 2018-derived baseline is a little over 163,000 cars, and we expect to reduce that number continuously through 2021.

Clearly, we have a plan that drives increased shareholder returns, higher customer service and increased capacity for growth. We have the right plan, a strong team and the processes and metrics to ensure progress.

Now let's talk about these initiatives in greater detail. Let me introduce one of our newest members of our team. Mike Farrell joined the company in November as Senior VP, Transportation, bringing with him deep experience implementing PSR. He is responsible for executing our operating plan. Our field transportation, car mechanical and the Network Operations Center report to Mike. He'll talk about some of the core disciplines used in operating our railroad to being the best operator around. Mike?



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Michael A. Farrell** - Norfolk Southern Corporation - SVP of Transportation

Good morning. My name is Mike Farrell, Senior Vice President, Transportation. I've been on the property for 18 months, most of which have been as consultant. After working for 3 Class 1 railroads, I have a lot acquaintances to the north and to the west, but I knew very little about this organization, and they knew even less about me.

I could go anywhere, see anything and hear everything. It gave me the opportunity to understand the strength and weaknesses of this great franchise. There were times I pushed too hard and others, I pulled back too much. At the beginning, NS had one toe in and one foot out, all along testing the PSR strategies. We were a very solid organization, and we had very little accountability as a whole.

So we started out slow, knocking out one barrier after the other, building trust and producing results that others are finally starting to see. This wasn't an overnight success, and it's certainly not smoke and mirrors. There was a lot of hard work by many folks and for the most part, a new way of looking at old problems. So when I was awarded this position, we were ready to go, the foundation was dug, the solids were diminished, and the team was energized. My team still kids me about this being the longest show of Undercover Boss ever produced.

Clean Sheeting is all about execution. If we truly hold our people accountable, we must produce a plan that is deliverable. It starts in a room like this, lined with white boards, and really our main focus is to understand the operation from car arrival to car departure, whether it's a small terminal in Indiana, a major hump yard in Alabama or the coal fields in West Virginia. The true magic of these sessions are the collaboration of our teams and the education we gain from each other. Clean Sheeting is a process that Norfolk Southern uses for the base of operation, service designs, marketing and coordinated efforts across the network. Since we can't bring all of you Clean Sheeting, but bring some of the Clean Sheeting to you through the session from Toledo, Ohio, late last year.

(presentation)

**Michael A. Farrell** - Norfolk Southern Corporation - SVP of Transportation

If you've ever worked with me, for me or around me, you'll understand the art of simplification. The simpler we can make it, the easier it is for us to execute. So we truly live and die by the plan and we manage the exceptions. If you truly believe in the processes as I do, then there can be no recovery plan, there can only be the plan. The quicker we get back to plan, the quicker we recover.

Won't be really long before you start me -- hear me rattle off the 5 core principles of serving our customers, managing our assets, controlling our costs, working safely and developing our people. I'll hit on a couple of these because they're very important. First thing is to serve our customers. We're not doing it to our customers, we're doing it with our customers. We just finished a large Clean Sheeting major terminal across our network, and we've brought a major customer into the process at the beginning. We worked through the process, and at the end, we brought them back to let them know what we had discovered to see if it was executed on their side. They made a couple of adjustments, we agreed on it. So now we're in the process of executing it. So we've allowed them into the loop of our Clean Sheeting process.

The one that gets us probably in the most trouble is controlling costs, because people don't understand the difference between the controlling costs and cutting costs. And if you've been in the business long enough, you can say you know what? You have 5 too many jobs and 10 too many locomotives. So if you don't -- if you're not used to understanding what that means, people will go and they'll just cut the job and get rid of the locomotive, but we still have the work to do. So whether you have 1 job or 1 car or 100 jobs -- excuse me, whether you 1 car or 100 cars, you still need a job. Now whether it's -- do you need 1 job or do you need 100 jobs is the question. So we use a formula called baseline minus 1. We set our triggers and escalate which I'll get into, but we're always having 1 less than we need instead of 1 more than we need. It keeps us light on our feet and agile to making decisions.

Tomorrow, because the traffic comes in sporadically at times. Tomorrow, we may need an extra on first shift. The next day, an extra on third shift. So it allows us to use the resource where we need them as we work through the traffic.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

These strategies [reflecting] the playbook of PSR and are at the foundation of every Clean Sheeting session.

So what does success look like? In the early 90s, I had a large operation with a few key customers. My boss walked in and says, "Mike, how you know if you had a good day?" I was, kind of, speechless. I turned around, I looked at the phone, and I said, "I don't know, sir. I guess my phone didn't ring." He said, "Wrong answer. Mike, you need to know if you had a good day, a good week or a good month." This is a very simple question but far too often difficult to answer. It didn't take me long to realize that wasn't good enough. We worked a 24-hour a day, 7-day a week operation. We must understand if we have a good shift, a good day, a good week and a good month.

If you want to change the culture or if you want to change the game, you need to change the culture. And really, it comes through the organizational structure. We succeed in 2 ways. The organization of the operation and the organizational structure. The organization of the operation is what we do through the Clean Sheeting process. The organizational structure is what we do when we build the organization from the top down so we can grow it and develop it from the bottom up. I've been on the property for 14 months and all along, I was saying if I was ever in charge, what would I do? So I had it all mapped out because what I realized early on is that we were a 2-division railroad, which was very difficult to keep up on. Our management was -- did not have the time to make an impact. They were reporting the news, they're not making the news. So one thing we had to do is, we had to step back and take a look at the accountabilities of every position within the organization. We went to a 4-region territory. So we ended up with a General Manager on the north to south and the east and the west. We gave them each superintendents along with the mechanical forces to handle more of the strategic issues moving forward to how we can improve next month and next year. The superintendents we've reestablished. We put them into the day-to-day tactical solutions with our customers to make sure that the plan we had was being executed. We got rid of the mechanical off of them. Most of you guys know we got rid of the super -- or the dispatching office away from them. So really they're focused on the execution of our service plan.

Another change that we had made through the organization is we installed what he called a Director, Transportation Services. We took the old Assistant Division Superintendent position and we changed it to a Director, Transportation Services with some new people. Really their focus is to handle the analytical side of our network. So there's 9 of them, 1 for each superintendent. So if we're slow on a division, if our growth not where it needs to be, if we're not serving customers the way that we ought to be, they go in and they do the research and see if it's a one-off or if it becomes consistent. If it becomes consistent, we change the plan, roll it back into the plan, so again our superintendents can deliver each and every day.

You'll see the dotted line there, which is really important. We talk a lot about the dotted line. These are the positions that are above the dotted line that I just explained. The positions below are the ones that really build our consistency and sustainability day in and day out. When we talk about building the organization from the top down to develop and grow from the bottom up, we're talking about the people below the dotted line. Those are the yardmasters, the trainmasters, the assistant trainmasters, the car foremen, the carmen that work around the clock. What we need to make sure is that there's no joint accountability, there's no vague expectations, and there's no gaps in critical functions. And when we understand that and what everybody's supposed to do and let them know what a good day looks like, then we can push this organization down to every level. The foundation of what we're trying to build is what's going to keep us stable for years to come. So we need to make sure that we're stable on the foundation of our organization. So again, we build it from the top down, so we can grow up from the bottom up. When we have a plan that we've already established the Clean Sheeting process and we set the organization upright, we drive down the plan, we hit our triggers and we escalate. That keeps us fighting from the front rather than the rear. Extremely, extremely important and it drives the accountability down through every level of the organization. You heard me ask you earlier, how do you know if you had a good day? This is really how we know if we had a good day. It's our 4-key discipline. We run trains on time, switch in 6 hours, put the right car in the right train, right block, and we do it all safely.

Running trains on time is critical, simple as that seems at time. It's the end result of everything we do, and it takes a team effort to get there. We start the train on time, we set it on time, flags up on time, flags down on time, power-ready on time, crews on time, air test on time, signal on time, depart on time. It's the end results of everything we do. If we did nothing more than run trains on time, we're going to balance our network.

For 14 months, I told this organization to run trains on time. For 14 months, they told me, they had no power and had no crews. I said, you have plenty of power, you have plenty of crews. It's just how you're managing the resources. Within 48 hours of my announcement to this position, we went from 40% on-time train performance to 85%. What changed? The level of the expectation. I expected it to run on time and they delivered. We're still in the low 80% to this date, 3 months later, we've never missed a beat.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

Switching cars in 6 hours really creates urgency, get the car in, get it across and get it back out to our customer or on the next outbound train. This really gives us a time stamp so we can set a trigger again so we never fall behind. If we're 4 hours into -- if we're 4 hours before train and we know we might not make it, switching in 6 hours, it creates a trigger, creates an escalate. An escalation, we get the right people, given the situation and circumstances, do we need an extra next shift, do we need it the shift after to try and stay ahead of the problem -- or ahead of the solution. So really, switching cars in 6 hours is all about urgency of our organization. Putting the right car in the right train, right block, that's just discipline. Handle the car onetime. It comes in, put it to the right track the first time and it goes out, and then do it all safely. So we've got the teamwork of running trains on time, the urgency of switching cars in 6 hours, the discipline of putting the right car in the right train, right block, and we're going to do it all safely.

Through the reorganization and the structuring combination with our 4 key disciplines, we have seen -- already seen significant improvements. Car dwell is down 20%. Train speed is up 13%. Cars online have been reduced 8%, and all the key metrics are trending positively. The inventory is moving, and our customers are being served.

So where does the rubber meet the road or should I say the steel wheels meet the rail? It's when our process management at Clean Sheeting has a belief in our 5 core principles, that's where the magic begins, that's where the light bulbs go off, and that's where we start fighting from the front rather than the rear. It's where we're gaining the confidence in our ability to execute, not only on the good days but every day. It's where labor costs are reduced, maintenance and equipment expenses are controlled, fuel consumption will be managed and our revenue targets will be met through the capacity dividends across our network.

Thank you, and let me hand it over to Mike Wheeler.

---

### **Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Thank you, Mike. Mike, let me ask you a question there. So we've got real sophisticated modeling tools that we use for modeling our system train plan, we've got industrial engineering, operation research putting our train plan together across our system. But in this video we saw, we saw a lot of whiteboarding being used, which looks like a lot of manual work in the local yards. Can you explain how that local yard and what you're doing in the Clean Sheeting ties into the modeling and the network operating plan that we put together on a system basis?

---

### **Michael A. Farrell** - Norfolk Southern Corporation - SVP of Transportation

Sure. Well, they kind of work in conjunction. You throw a bunch of limitations into a model and it kicks out something that should be executable. But if you don't go through the process because it doesn't tell you the number of tracks you have, the length of the track, the number of leads you have, the capacity that you may have. You have to go through it really longhand, and that's what we do through Clean Sheeting. The first thing we really do is to seek to understand, can we execute the plan that's being delivered, or do we need to adjust the plan to make sure it's executable? So at the end of the day, we just want to make sure that we have an executable plan that we can hold everybody accountable to that we can deliver day in and day out.

---

### **Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes. Great. And you've got the folks in there at the Clean Sheeting that really are doing the modeling of the network plan and actually taking what you're developing in the Clean Sheeting and the changes you make and tying it in with our system plan, right?

---

### **Michael A. Farrell** - Norfolk Southern Corporation - SVP of Transportation

Yes, that's correct. We're working in conjunction with each other. We had to go back. We just did a great one out in Bellevue where we said we want to get down to a certain number of blocks, they put in the model and said, that's not going to work. They went over, I said, no, that's not going to work. They came back and they said, no, that's not going to work. And we settled where it was actually an executable plan, which is



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

probably better than both of us really agreed upon, but it was the collaboration of both sides, the NPO and the field that was able to come up with the deliverable plan.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, that's great. All right. Again, thanks, Mike.

So Mike has laid out a great operating philosophy but we know that for that to be successful, we need a great team putting it into place and that is hundreds of people across the railroad at NS. But I've asked 4 of our leaders to come up here and talk today about their experience. And they represent field transportations, customer service and marketing. So why don't we go ahead and start with introductions.

---

**Floyd Hudson**

Floyd Hudson, Division Superintendent on the Pittsburgh division. The core lines of the Pittsburgh division run between Cleveland, Ohio and Buffalo, New York and from Cleveland to Harrisburg, Pennsylvania.

---

**Joshua Lafferty**

Good morning. I'm Josh Lafferty, the Division Superintendent on the Pocahontas division. Up until December, I was the Assistant Superintendent on the Harrisburg division where I first participated in Clean Sheeting. So the Harrisburg division runs from Harrisburg East to about Baltimore, Philadelphia. It stretches as far north as Schenectady, New York and as far south as Lynchburg, Virginia.

---

**Steve Ewers**

Steve Ewers, Assistant Vice President Service Management. I'm in charge of our Customer Service Groups for industrial products and coal. As part of my responsibilities, I'm also leading a new initiative at Norfolk Southern, focused on reducing the number of cars online.

---

**Meghan Achimasi**

Good morning. I'm Meghan Achimasi, Director Market Planning and Analysis. I oversee business process and market planning for the industrial and products marketing team, and I'm also part of the Cars On Line initiative chaired by Steve.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Great, good. Let's get started, Josh, you've been involved in Clean Sheeting on the Harrisburg division up at Allentown and Enola, which is just outside of Harrisburg. So you've seen what the yards look like before Clean Sheeting and you've seen what the yards look like after Clean Sheeting, so give us a little bit of your experience on that.

---

**Joshua Lafferty**

Sure. So my first exposure with Clean Sheeting was in Allentown, Pennsylvania. So Allentown is a hump yard for us. And one of the first things we identify as an opportunity was the fact that some cars were being switched more than once. As the process that we call rehumping, it's an inherently inefficient step when it comes to building an outbound train for departure. Prior to Clean Sheet, we were rehumping about 160 cars day at Allentown. After Clean Sheet and with an improved repeatable plan in place, it's rare that we ever rehump a car at Allentown now. And that's one of the primary purposes of Clean Sheeting to get rid of these unnecessary cartouches. Now I know it was a bit more complicated. You know it was a very unique yard. It's bit of a hybrid. We have a flat-switching component to the yard. It's a hump yard in some ways, and it's the staging yard for eastbound



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

trains. So what we realized as we went into the design phase was that some cars were being switched multiple times within the yard and in some cases they were being switched in different parts of the yard. To give you an example, what we challenged ourselves to do at Enola was to determine, where should each car be switched? Or should it be switched at Enola at all. So for example, going into Clean Sheet, there were a group of cars that would arrive at Enola, be switched and handled sometimes in different parts of the yard. Some cars were there for 4 days before they departed the terminal. After Clean Sheet, some of those same cars dwell for as little as 16 hours. And I'd tell you, Enola will also show you how with Clean Sheeting, you can do things you never thought were possible. I think one of the most notable things I was surprised by was the reduction in pullback jobs. So a pullback assignment is a crew that works in the classification yard of a terminal. This is a crew that moves the classified cars in the class yard to the foraying yard. This is the crew building your outbound train. Historically, Enola has always had 2 or 3 pullback assignments all in the town. Going into Clean Sheeting, we knew this to be a very busy part of the yard. And I'll be honest, as we went to design a new plan, I assumed -- we assumed that we had to keep at least 2 or 3 jobs in that area doing that function. We're down to 1 per shift now. And to be honest with you, Mike, it's actually working better than ever.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, that's good to hear. That's great stuff. Now Floyd, I'm sure you've probably seen a lot of the same experiences that Josh has in the yards, but why don't you tell us how Clean Sheeting at the local level involves the transportation with the customers as well?

---

**Floyd Hudson**

Yes. Mike Farrell just said it, Clean Sheeting is not something that we do to the customer or we do it with the customer. We reach out through our Clean Sheet during the planning, implementation. And even after implementation, just to ensure that things are going according to plan. I've got a story for you here at Youngstown. We've got a customer that prior to Clean Sheet, we served 3 days per week. We had upwards of 150 cars on hand per day, and that's about half the capacity of that yard and about 6 days worth of inventory for that customer. There were cars everywhere. But as a part of Clean Sheet, we increased service to 5 days per week. And we went out to the customer, we had a discussion about pipeline management, simple pipeline management. And we saw that after a week or 2, while things got better, the inventory reduced a little bit, it still wasn't good enough, we weren't happy with that and neither was the customer. So we went back out, we had a pretty crucial conversation about pipeline management. Because there was still some things that they could do on their end that they just weren't doing. And we as well, so we increased our service to 7 days per week. As of this morning, when I checked at 5:00, there were 8 cars in the yard for that customer. 150 to 8. Now what does that mean? It means that train 15M leaves Conway, Pennsylvania, and it leaves on time. Those cars get to Youngstown, they switch within 6 hours, they make the next local out, and we did it all safely. And that's the process, that's the program. Our people are brought into the mission, our employees helped build the plan. They're there from the beginning. They've taken ownership and pride in the plan. It's -- their involvement also has helped us ensure that we have a plan that's executable. Not just 1 day, but every day, consistently. And we've talked about expectations, decision-making. We've removed complexity from their jobs and made their jobs easier [and who they work with].

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, right, exactly. Well, Josh how about -- do you have any epiphanies during this process?

---

**Joshua Lafferty**

Yes, I really did, I'd tell you it was -- about 2 weeks after we started really executing a new plan at Enola and now this was a tricky place. And I remember stopping by the terminal, hanging out in the tower with my terminal superintendent and the yardmaster and looking out the window at the yard. We were having a conversation about how things were going, we were 2 weeks deep into a new plan. And we were talking about how well they were doing. They were hitting their metrics. Everything was improving. Dwell was going in the right direction. They were running trains on time, and the plan was really clicking. And I remember making a comment something to the effect of, hey, God, it's great that you're doing so well here, but it's kind of easy, I look out the window, it's kind of light, the volume's down. It's pretty easy to execute when it's slow like this. Well, little bit I know, the terminal superintendent was quick to correct me. We had, in fact, been handling more volume in that week as we had been in



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

the entire past year. So to me looking out the yard, it just felt like it was slow because we were being that much more efficient, and that's when I realized the process was really working.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, pretty impressive. How about you, any epiphanies?

---

**Floyd Hudson**

The biggest thing for me was realizing the things that we can get accomplished as a team. Meghan's team, Steve's team. Everybody in the same room meeting face-to-face, we've got one common goal. In the past, we knew what the problems were, we knew there were inefficiencies, but we never had a forum, a place to get together and really work these things out. Clean Sheet has been a lot about a culture change. And I can tell you, we've embraced that change. We're moving forward, and we're continuing to find ways to do things better together.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, absolutely. Good. Well, we've talked about Clean Sheeting on 2 of our divisions, we have 9 divisions out there. So let's talk about Clean Sheeting across the railroad, Steve. Why don't you talk about what metrics we're using to see how Clean Sheeting is going? And what are we seeing from those?

---

**Steve Ewers**

Sure. We've chosen to hone in on 4 key metrics to evaluate the success of Clean Sheet. The first 2 metrics are customer-facing, shipment consistency and local operating plan adherence. The final 2 metrics, which are more embedded in railroad operations and, therefore, less customer apparent are inventory and dwell. I'll start by defining the metrics and then tell you what we've seen so far. The first metric, shipment consistency, measures the percentage of cars that adhere to their original end-to-end trip plan. These original trip plans are created for every car at either origin or interchange [as ever]. The second metric, local operating plan adherence or something we refer to as LOPA, measures the percentage of cars that adhere to their local delivery plan. LOPA is really looking at that first mile and last mile of service. The third metric inventory represents the number of cars waiting at a particular yard; and the final metric, dwell, represents the average number of hours cars spend sitting in the yard. So what have we seen so far? At this point, we clean sheeted approximately half of our yards and we expect to be done with this initial phase before the end of the second quarter. Our inventory and dwell metrics have improved at the majority of our clean-sheeted locations. And while the customer-facing metrics have shown some improvement, we still got a little work to do to get them to where they need to be. But we are confident that they will improve further, especially as we continue to increase our service frequency to more than 5 days a week, as Floyd noted earlier.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, Great. Thanks, Steve. Well, I know Meghan that we have made some changes based on the feedback from the teams out in the field. Can you tell us about some of the changes we've made?

---

**Meghan Achimasi**

Sure. We have, Mike. One example is the conversion of more of our customers' facilities from close gate to open gate. Now background on that, at a closed-gate facility, cars are ordered individually by the customer to a specific location. Those cars remain in our yard until the customer chooses to receive them. Contrast that to an open-gate facility where Norfolk Southern can deliver the cars in the next available service window following their arrival at the serving yard. We work with our customers to really decide which gate status best matches their operational need and the impact of that collaboration can really be significant and we have some recent examples. In Savannah, after a joint review with a paper customer, we saw



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

that the local dwell fell by half and the local service improved nearly 20 points when that customer transitioned from closed gate to open gate. And similarly, in Charlotte, we saw that the serving yard dwell fell by 75% when that customer switched from closed to open gate and accepted more frequent service. So overall, 76% of our customers are now open-gate facilities and that is up 10 points from before we started the Clean Sheeting process. So that's one example of the change. There are others. Another involves the accessorial rules that we announced in October and that we put in place January 1 of this year. The changes that we made really allow us to better align stakeholder incentives with the improvements in asset utilization. So on the one hand, we did increase demurrage charges and reduced tariff credits and that incentivizes our customers to unload cars more quickly and return them into service. But on the other hand, because we are confident in our ability to improve that service, we actually increase the service credits that customers are in for NS delays versus the schedule. So this combination of charges but also credits provides mutual incentives for both the customers and Norfolk Southern to get it right and spend those assets as fast as possible, and it really creates a virtuous cycle of continuous improvement. The operational behavior that's encouraged by these 2 changes alone is providing long-term benefits to our network. And as customers reengineer their supply chain, all stakeholders realize the benefits that come from improvements in asset utilization and, of course, the better service product.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Absolutely. Very good, thanks. When we did the introductions, you noted that you were in the marketing division. We didn't explore it at the time. But why don't you tell us about how marketing is so involved and aligned with everything that we're doing across the company?

---

**Meghan Achimasi**

Absolutely. I'm happy to be up here with my operating and customer service colleagues. Well, marketing's relationship with the customer is really important and it's been evidenced in these operational discussions that we've already been a part of. It's really our understanding of our customers' business as a whole that unlocks the value in this process. And it enables us to jointly design service that's valuable for our customers but executable for Norfolk Southern. So marketing and sales is providing that link between the customer, the business and operations so that we're creating enterprise solutions on top of everything that's happening locally.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, that's great stuff, good. So there's a lot of good stuff going on about Clean Sheeting, but let's talk also about the Cars On Line team that you talked about, Steve, and you're a big part of and, kind of, what we're doing there? And the metrics that we're going to be using there as well?

---

**Steve Ewers**

Sure, Mike. We know the Cars On Line measure is a barometer for our service. When the railroad is spinning well, fewer cars are needed because equipment cycles quickly and reliably. But when the railroad slows, customer pipelines get longer, our yards become congested and this increases the number of cars online. However, at any service level, the number of cars online also has a causal and degrading impact on our service levels. For example, when NS has to sift through 60 idle cars to get to the 5 that are needed, it takes more crew time and introduces more opportunity for plan failures. Redeploying that capacity and those assets is vital to our Clean Sheeting and TOP21 operating plan initiatives, and the consequences for our customers are equally pressing. As cars accumulate, customers bear that dwell through longer turn times on track. This increases their operating as well as capital cost while at the same time degrading their local service. So rather than just tracking the number of cars online, last September, we put together a team, charged for the first time with aggressively eliminating the systemic issues elevating these numbers. And that's the Cars On Line Team or COLT. Our goal is to reduce the number of cars online by 12% by the end of the second quarter through a combination of better service and new or improved processes.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, that's great, Steve. And we've talked about collaboration with the customer in this so much. Why don't you tell us how that actually works in practice?

**Steve Ewers**

Yes. We need to bring down the number of cars online. We need to bring it down in a targeted way that preserves the platform for further growth with our customers. We won't get there tackling the problem with information from only our point of view. To that end, we set up COLT with teams in both the field and the headquarters. The field team is responsible for interacting directly with our customers to better understand the drivers of their behavior. The headquarters team then translates that feedback into actionable solutions for systemic problems. And Meghan helps lead our headquarters' team, and I'll let her describe those interactions in a little more detail.

**Meghan Achimasi**

Thank you. So step number one is that we knew we needed a deeper understanding of cars online. The AAR snapshot that comes out weekly, I'm sure you're familiar with it. But we decided we needed a much more granular level of understanding so that we could identify and find solutions for sustained improvement. As one example of this, and I think Mike you mentioned it earlier, the AAR excludes maintenance of way equipment, but we've purposely chosen to include that in our internal metric because it gives us a more complete picture of all of the assets on our network. So with this new set of information, with a richer understanding of cars online, we identify customers for our COLT field team to interview, which is a complement to the Clean Sheeting initiative. Now our COLT field team is comprised of marketing and sales representatives many of whom have prior NS operations or customer service background, so they're working with operations, with the customer and local transportation to identify solutions to problems, addressing cars online and congestion. And then they translate those opportunities back to the headquarters team. So based on our data and also these behind-the-scenes interviews, the headquarters team decides which levers are most effective in bringing down cars online. For instance, if we see that cars are sitting idle and they're empty, those present opportunities for a better fleet sizing or a better order management practices by our customers. Now this is an iterative process and it does not stop with one implementation. So best practices from one location can be applied to similar customers and similar challenges. It is up to the COLT team to keep those processes going and keep the momentum going. And I can tell you we are fully aligned with marketing and operation on what needs to happen. Now you may wonder where do these cars go once they're not online anymore, where do they end up? So NS cars that are no longer needed are being sold and scrapped. Private cars can be shifted to other carriers, including short lines or better still, private cars that are engineered out of our customers' pipelines can be released from leases or sold. And in that case, our customers benefit from lower asset investment, reduced inventory carrying cost, better service and lower accessorial charges. So it's a win-win. During seasonal downturn, you'll see that cars that are part of NS strategic fleet will remain on our lines, but only a part of formal storage programs and out of the way of day-to-day operations.

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes. Absolutely, great stuff. Thank you. Steve, we talked about a 12% reduction in cars online is our goal, and I know we've made a lot of headway already, but why don't you tell us where we stand on that so far?

**Steve Ewers**

That's right, Mike. Our internal measure which, again, excludes private cars on private property, this is a real-time view of how we're progressing. And looking at the number of cars online, today, we're down 15,000 cars versus our 2018 baseline, which is over halfway to our goal. But we're certainly not going to stop there as we transportation, marketing, customer service as we work together to drive this number even lower.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Michael Joseph Wheeler** - *Norfolk Southern Corporation - Executive VP & COO*

Yes, great. Thanks, Steve. Well, thank you to the panel for being up here today, but more importantly, thank you for what you're doing out in the field and your headquarters team to drive these results that we're talking about here today. And I expect all of you will realize that what we're seeing is we're eliminating the rehumps, the rehandles. We're seeing the reduced dwell that we talked about. Our serving yard inventory is down. Our service is up, better customer collaboration and customer alignment. And this thing we call the capacity dividend, and the capacity dividend is where we're making these yards more fluid, freeing up track space to allow growth. And the assets that we're freeing up, that capacity then can be used for other business to grow as well. So this capacity dividend is pretty exciting. So that's great stuff. Thank you, all. And that's what we have on the Clean Sheeting and cars online initiatives, and hopefully you got a lot of out of that. We are going to take a 10-minute break at this time, and then we'll come back for a Q&A with the management team. So let's plan on coming back at 11:35. Thank you.

(Break)

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Okay. Well, thank you for your attention this morning. We'll get into the first of 3 Q&A sessions we will have today. And we'll run 10 to 15 minutes per Q&A session, this will be the first. We'll have another one right after lunch, and then we'll have the third Q&A session at the end of the day. We're going to try to get you -- conclude and get you out of here by 3:00, that's our goal. I think you know everyone on my team with the possible exception of John Scheib, whom you may not know. John heads our legal government relations, HR labor relations, corporate communications functions. So with that, give us your questions.

Yes, sir.

## QUESTIONS AND ANSWERS

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

We have mics coming around as well. To your left here. Sorry, sorry, wait. Hang on. Go ahead.

**Ravi Shanker** - *Morgan Stanley, Research Division - Executive Director*

Ravi Shanker, Morgan Stanley. If you can give us kind of your high level [payment and conversation] with customers about this, given that you're the second Eastern rail to implement PSR. Does that make your life easier or harder, in terms of having that conversation with the customer, given that I'm sure they're all going to be concerned about disruptions and such? And second -- first of all, thank you for all the details you've given us this morning. I think the approach to have a both top-down and bottom-up approach, a very interesting one. How has the buy-in been from, kind of -- from the rank and file in terms of making these changes? You've given us a number of examples, but what innings do you think you are in, in terms of changing the culture to being -- to implementing a PSR mindset?

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Okay. Well, let's start with the customer side of that question. And we have been in constant dialogue with our customers since we started PSR implementation. Now some of them are in a wait-and-see mode. I think, in general, customers are pleased with the approach that we have taken because we have said that we will be collaborative and we have been. We're trying to do this in a very consultative way so that the model meets their needs as well as ours. And we talked about that a lot this morning and we will some more later. So, in general, customers are very receptive to the approach that we have taken and they've also seen the service improvements, just in the last few months so that's essential. On the buy-in side, our employees are really excited about the new direction of the company. They feel that they have new marching orders and new direction,



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

clear priorities and accountabilities. So I think they're very excited. John heads up our human resources functions, and he's been spending a lot of time in the field just to take the temperature of our employees. So John, what's your...

**John M. Scheib** - Norfolk Southern Corporation - Executive VP Law & Administration and Chief Legal Officer

Sure, Jim. So I can tell you the enthusiasm level's incredibly high. I've had the fortune of being a -- 3 different Clean Sheetings recently, including one last week. And you've heard Mike Farrell talk about all the different folks that are in the room from our field operations to our customer service folks, labor relations folks, office -- operations folks. Incredible excitement in buy-in into the 4 key disciplines and what we're doing. But at the same time, within our office staff, I spend time each week in our little lounge in the office buildings talking with folks. And the energy around the strategic plan is really high. We have had lots of people involved in developing these initiatives, and they are all go.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

This team is very aligned around our goals. Next?

**Justin Trennon Long** - Stephens Inc., Research Division - MD

Justin Long with Stephens. Maybe, Cindy, a question for you on the financial targets, specifically the 60 OR by 2021. Could you just talk about how top line dependent that target is? I think last time, we got a strategic plan. You gave us the total productivity savings you expect. So is there a way to think about total productivity savings and how that's expected to drive margin improvement versus leveraging the top-line growth? And then secondly, I also wanted to ask about gains on sale and what you're factoring in for both 2019 and 2021?

**Cynthia C. Earhart** - Norfolk Southern Corporation - Executive VP of Finance & CFO

Sure, Justin. So, I mean, obviously, we said early on that our plan is really dependent upon both productivity as well as top-line growth. So there are significant pieces for both of those. In terms of our productivity, and Alan -- though Alan will talk a little bit about our whole yield-up strategy. In terms of productivity, the areas of productivity are what you would expect, the biggest piece by far being compensation and benefits. We're also seeing improvements in equipment rents, materials and fuel, by far, will be the comp and benefits tied to the 3,000 average headcount reduction that we plan to see by 2021. On your second question -- remind me what your second question was?

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

About the real estate gains.

**Cynthia C. Earhart** - Norfolk Southern Corporation - Executive VP of Finance & CFO

Gains on sale. Yes. Obviously, we had big gains on sale, we had a very big sale in the fourth quarter of 2018. And we certainly don't expect to have gain like that in the planned period. We obviously are continuing to focus on monetizing assets that we don't need in the business, and we will continue to focus on that. In terms of guidance, looking out over the plan period, I would say that, kind of a normalized rate for gain on operating property is probably in the \$30 million to \$40 million range for a year. Obviously, very difficult on a quarter-by-quarter basis. And then we'll also continue to have, as we have in the past, gains on sales of nonoperating property down another net. And typically, that's been in the \$10 million range on an annual basis.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Jason?

FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Jason H. Seidl** - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

Jason Seidl from Cowen. I guess a question for Mike or Mike. I think when we had the Clean Sheeting conversation up here, it was said that the majority showed improvement. So I guess -- of the ones that haven't showed improvements, what was sort of the obstacle from getting them to where we need them to be?

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

There are times when we have to go back and fix a clean sheet. And as we -- we tried to point out earlier, it is an ongoing process so it's not one and done. We will continue to go back and refine the operation locally. A big part of what we're trying to do is train our people at the local level, to do this themselves dynamically. Mike, your thoughts?

**Michael A. Farrell** - *Norfolk Southern Corporation - SVP of Transportation*

No, it's a great point. I mean, it's a trial and error for a lot of our people. Again, we're trying to build up from the ground up so some of these guys have never done this process. We need to allow them to make some mistakes in order to get better in the future. So we're just learning as we go. And we're able to duplicate and sometimes we may be going a little bit faster than what we probably should, just to try to get through the system, but we're always learning from the ground up.

**Jason H. Seidl** - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

And how hard is it to get that customer buy-in as well? So you mentioned the customer facing's been a little bit lagging, if you will, with this. So how hard is it to get that customer buy-in that this is going to be good for them?

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Well, the -- we've tried to include the customers in the Clean Sheeting. Talked a little bit about Decatur. We did a big Clean Sheeting in Decatur, where we have a large presence and big agricultural products customers. We brought them in, as we said, how'd that go?

**Michael A. Farrell** - *Norfolk Southern Corporation - SVP of Transportation*

So normally, the way the big clean sheets go is, I come in, I kind of layout the 5 core principals and the 4 key disciplines. I educate our team, and we brought in the customers at this time. We went through the same strategies that I would whether they were part of our team internally or externally. And then we allow them to get up and tell us what their expectations were, so they could -- we could help develop the next suitable plan. And at the end of the week, we brought them back again and say, hey, this is what our team has developed and discussed. What are your thoughts? They came back and helped make a couple of adjustments, put a couple of other windows in. We made our adjustments and we signed off at the end of the week. So we're really, truly, trying to be in front of it instead of behind it. As long as they know what we're doing ahead, I think we've had some great success with it.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Alan, you were there for the Decatur Clean Sheeting as well. What's your impression of customer receptivity to what we're doing?



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

Our goals are completely aligned with the customers. They want an efficient and reliable service product, they want their assets to turn quickly. They want to be part of that process and so they are engaged. And what we also have in addition to Clean Sheeting is the Cars On Line Team, which you heard Steve and Meghan talk about. And the Cars On Line Team is used to complement Clean Sheeting, and it goes out into the field after we clean sheet a location. And we go and we survey all of the customers. And we find out if we're doing exactly what we said we were going to do. If the customer's doing exactly what they said they were going to do, and what barriers there are to reducing the pipelines. And so we're engaging the customers in the Clean Sheeting. As the Clean Sheeting session moves on to another location, then we bring in the COLT, Cars On Line Field Team and engage the customers as well to make sure that we're following those processes.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Let's take another question. In the back. Yes?

**Unidentified Analyst**

Yes. Right here. Sorry with Deutsche Bank. Just a quick question on the yield-up initiative. Does that include repricing of contract? Just a little bit more color there, or just a richer mix. And obviously, you're not pursuing yield-up initiatives in a vacuum. Just help us understand the competitive dynamic? And then just a follow up to that with respect to the OR goal, I mean by our math, you're looking at \$1.8 billion of revenue growth, \$1.3 billion of profit growth. That looks like -- a lot of that's back-end loaded, 2021, if I'm not mistaken. So just going to the earlier question, how much of the yield-up initiatives is really predicated on that, accelerated drop through above the 50% to 60% incremental margins you typically target?

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Sure. Let me start and I'll turn it to Alan for further description of what we're trying to do. We get a lot more into yield up this afternoon in the marketing presentations but the overall objective is revenue quality -- revenue management and revenue quality. In my opening comments, I mentioned the importance of pricing commensurate with the value of our product in the marketplace so that's absolutely part of this. As is sending NS equipment to the highest and best use, making sure that our equipment is being used efficiently and profitably. What are some of the other tenants of yield up, Alan?

**Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

It's collaborating with our customers on developing a more efficient service product. And that creates network simplification, which creates the capacity dividend that Mike talked about, which creates the opportunity to apply those assets to opportunities with higher returns. And it's testing the limits of market-based pricing. Norfolk Southern is collaborating with our customers. We are providing a platform for growth. We've got a very powerful franchise. Those are 3 competitive advantages. Customers want to grow, and they want to align themselves with this consistent and reliable service provider that will support the growth. And we're going to price into that. We have already.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

[Tony]?

**Unidentified Analyst**

Jim. Also on yield up, a quick one. Is there -- have you thought about or do you see a regulatory impact? The executive chairman of NSF has been talking about what happens when 2 carriers in the same region go through this process, and potentially demarket, and what the impact could be



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

for a newly rampant STB? And secondly, have you rethought about how you cost failure? Like derailments and line outages and whatnot? And what you internally cost that out as?

---

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Well, let me take the first part of that. I'll ask John to comment generally on the regulatory environment right now. We're in regular communication with the STB. They know what we're trying to do. We're trying to do this with our customers. The STB appreciates that as well. John, thoughts on the regulatory environment, in general?

---

**John M. Scheib** - *Norfolk Southern Corporation - Executive VP Law & Administration and Chief Legal Officer*

Yes. [Tony], we're engaged with our regulator quite regularly. Everything that we've done is aligning, customers and railroads and equipment utilization which are things that are good and in the national interest. And so we feel that the regulatory environment's just fine for us. And we're doing the right things for our customers, our shareholders, and frankly the ability to move freight for the country.

---

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

The -- now we talked about the capacity dividend. And where we have assets that are underutilized and will stay underutilized, we'll monetize them. So that is very much a part of our strategy. On the other hand, some of that capacity dividend will go to resilience. So that we have a more resilient network with the capacity to handle shifting volumes.

Yes? Tom?

---

**Thomas Richard Wadewitz** - *UBS Investment Bank, Research Division - MD and Senior Analyst*

Yes. Jim, Tom Wadewitz from UBS. When we talk about simplification, taking out work events that sometimes translates to a reduction, the hump yard network and rationalization of the yard. I was wondering if you could offer some thoughts on how that may fit into the plan? And then also you gave a pretty good sense of the timing on Clean Sheeting? What about TOP21 in the train schedule redesign, just a sense of when that timing, when that would be complete?

---

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Okay. Let's start with the assets. So as we move through this, we certainly will have opportunities for yard rationalization. We emphasized the importance of concentrating volumes on the network of avoiding unnecessary switching activity. That all goes along with the opportunity to reduce the asset intensity of the operation. So that's coming. Now let's see, you mentioned...

---

**Thomas Richard Wadewitz** - *UBS Investment Bank, Research Division - MD and Senior Analyst*

Oh, just the timing.

---

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

The timing. Right.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Thomas Richard Wadewitz** - *UBS Investment Bank, Research Division - MD and Senior Analyst*

Yes, timing on TOP21, and the train schedule redesign.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

We'll be rolling out TOP21 throughout the year. And really in the following years, it's meant to be a dynamic exercise in conjunction with Clean Sheeting. So it'll be a phase rollout and a progressive rollout. Mike?

**Michael Joseph Wheeler** - *Norfolk Southern Corporation - Executive VP & COO*

Yes. So as we implement the Clean Sheeting, we find opportunities that come out of Clean Sheeting, and we go ahead and implement them into the operating plan, change the operating plan. At the same time, we're doing the modeling to develop more operating plan changes as we get going. So they're really, really tied together. In the summer, during the Clean Sheeting transition really when the full operating plan change takes place.

**Brandon Robert Oglenski** - *Barclays Bank PLC, Research Division - VP & Senior Equity Analyst*

Brandon Oglenski from Barclays. I think you'd mentioned that headcount was actually up in '18 as volume came on and so it didn't necessarily meet your expectations. But I think someone mentioned earlier that as we go through the Clean Sheeting process, once we reach those levels of success then we can take headcount down. So can you talk a little bit more about what you're looking for in success? And then when we should we expect the 3,000 headcount to come out? Is it next year or 2 years into the plan?

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Sure. We gave you the numbers. Cindy, why don't you run through those again?

**Cynthia C. Earhart** - *Norfolk Southern Corporation - Executive VP of Finance & CFO*

Sure. I mentioned that we brought on some additional resources towards the end of last year to help with network fluidity. So in the first quarter, you'll see headcount up a little bit. As we rollout the NS 21 plan, you'll start to see the back half of the year, resources start to come out. And we said that, you should see about a 500 reduction for end of the year headcount. So you can see that, from a headcount perspective, which we'd said 3,000 average headcount reduction by 2021. That is a little bit more back ended.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

So let's take one more question and then get back to the presentations. Yes?

**Scott H. Group** - *Wolfe Research, LLC - MD & Senior Transportation Analyst*

It's Scott Group from Wolfe. So when we've seen some of the other rails do PSR, we've seen, at least, for a period of time CapEx fall below 15% of revenue. So you're doing 30% locomotive productivity yielding up so more of the revenue growth coming from yield instead of volume. Why aren't we seeing the CapEx come a little bit lower? And then maybe just, Mike Farrell, just big picture, you've been at CNCP, what's different about what we're doing here versus CNCP, if there is something different?



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Okay. Let's start with the CapEx. This is a capital-intensive business. You have to spend money to make money. It's always going to be that way, it's not going to change. What's the right level? Well, it depends on the returns that you get from the incremental dollar once you've put the maintenance CapEx back into it. If you go back over a long period of time, back to the early 2000s, I think you'd find that the industry averages around 18%. So I think, we're in the ballpark. We'll see how it goes. If returns aren't responding as expected, we'll reduce it. But, Cindy, why 16% to 18%?

**Cynthia C. Earhart** - Norfolk Southern Corporation - Executive VP of Finance & CFO

Well, I'll also remind you, and you'll hear a little bit more about this in a bit from Doug Corbin. One of the big areas of concentration for us is the DC to AC conversion of our locomotive, and Doug will talk about where we are in our percentage. We're behind others in that kind of technology. We're -- for 2019, about 20% of our capital budget is really dedicated to locomotives, primarily to that conversion. So I think that's a little bit different in our capital budget and that will go all the way through 2021, those investment in those locomotives and rejuvenating that fleet.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Okay. Mike, you've worked at 3 PSR railroads, including NS at this point. What's different, if anything, about NS?

**Michael A. Farrell** - Norfolk Southern Corporation - SVP of Transportation

Well, I think CNCP, we really started from the top down. We had to kind of develop people as we went along because there wasn't a whole lot of knowledge at those railroads. I've been fortunate enough to be at the ground floor of this for the last year. So I've been developing people for the last year. So when we talk about building from the ground up, so we can develop them from the bottom up, we've already developed most of our people at our ground level, which is a whole different philosophy. So when we decide to make a decision and move down, they already understand why we're doing it, they don't have to think about why we're doing it.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Good. Okay. Thank you very much. We'll be back after lunch for another Q&A session.

(Break)

## PRESENTATION

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

(technical difficulty)

What you've heard about so far, these efforts start with the customer. We promote and focus on the behaviors that provide consistent, reliable service to customers, 5 to 7 days a week. We concentrate on running trains on time, switching cars within 6 hours, getting the right cars in the right blocks on the right trains and doing it safely. And then we ensure we move trains across the railroad using the right number of crews and according to plan. The Clean Sheeting process you heard about navigates the short-term extremely well. Over the long term, we know that other factors come into play. Customers change their traffic flows. Our transportation partners modify their operations. Employees are hired, trained and retire. And the asset base that is relatively fixed in the short-term can be modified to suit our needs in the long term.

Accordingly, we need a more unified, strategic and long-term planning process to keep our operating plan healthy for years to come. That long-term plan will come from network planning and optimization, an effort headed by John Friedmann, our next speaker. Before I bring him up, let me give



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

a little background. Earlier, Jim spoke about the Thoroughbred Operating Plan, TOP and TOP II, which were our first ventures in the scheduled (inaudible). Those plans optimized our operations as 4 separate networks: intermodal, automotive, carload and unit train. While advance for their time, the resulting plans were modified infrequently due to the complexity and available resources of the day. That was acceptable for customers, capacity and information systems of the past. Those days are gone. Artificially separating our network resources and depending on layers of tactical adjustments to an old plan is a good tactic but an untenable strategy. In the future, we recognize one network and we'll optimize that network to carry all of our traffic. The plan that supports our single network will integrate our customers' business plans, current and future, plan for timely acquisition and disposal of assets, and ensure that our crew resources are sufficiently sized and positioned to support the operations that Mike Farrell's team executes at. With that, let me turn it over to John. John?

### **John H. Friedmann** - Norfolk Southern Corporation - VP of Network Operations

So I'm not your last speaker today, but I think I'm the last person to wish you good morning. Mike said, my name's John Friedmann, I'm Norfolk Southern's Vice President of Network Planning & Optimization. Network Planning & Optimization or NPO for short, is all about the operating plan and getting the operating plan right for our network. Mike said, we're taking a view of all of our traffic in one holistic network to try and optimize this one way instead of 4 separate networks. Network Planning & Optimization is responsible for creating the operating plan, balancing its costs and benefits and rapidly iterating it to meet changing conditions. NPO has end-to-end responsibility of the operating plan for both road and local operations across the entire network. It balances executability, cost and service levels. NPO also forecasts our resource needs and our line capacity. Now let me draw a distinction between Network Planning & Optimization and our Network Operations Center, which you'll tour later today. The Network Operations Center or NOC is worried about what happens today, tomorrow, next week. Well, NPO has a further time horizon. It looks out next month, next quarter or beyond.

Now to talk about the operating plan. Mike said, we used to talk about as many as 4 separate networks. An intermodal network, an automotive network, carload and unit train. And while it made certain intuitive sense to think of this, this way, broken down among commodity lines. It really ignored the shared nature of our locomotive and our crew resources, as well as the limited nature of our line capacity. And when we were optimizing it, we weren't optimizing it one time. We were doing 4 separate optimizations. So really the next logical step for us in developing an operating plan was to build in one network. And optimizing one network reveals efficiencies that we wouldn't otherwise be able to see with a -- with multiple networks.

Now Norfolk Southern prided itself on its ability to adapt the operating plan on the fly. But while adaptation is great, calling audibles increasingly difficult in our interconnected network environment. So when the operating plan needs to change, it's NPO that's going to change it. And by eliminating variation that allows transportation to focus on execution of the operating plan, and NPO to focus on the development of the operating plan. Transportation and NPO, however, share the same guiding principles, serving our customers, managing our assets and controlling cost. Our new operating plan, called TOP21, is designed to be executable in all circumstances. It's designed to be resilient to shocks, and it's also designed to be rapidly adaptable to changing conditions. Now let me be clear here. TOP21 isn't just a new operating plan for Norfolk Southern. It's a different kind of operating plan. It's a precision-scheduled railroading operating plan. To make sure of that, we hired a director of service design from a prominent Canadian railroad, brought in to advise us as a consultant on a long-term basis. And those of you who are familiar with PSR will recognize the principles that underwire our operating plan. Operate as one network, balance our flows, serve our customers frequently and reduce our dependence on our major terminals.

Again, you've heard us talk about multiple networks. Operating as one network really helps us understand the efficiencies that can be gained across the network. By looking at Norfolk Southern as one network, things that were invisible to us in the past suddenly will become visible. Let me give you an example. The picture of train 23G, going from Louisville, Kentucky; Norfolk, Virginia. It primarily hauls intermodal traffic to Norfolk. But now, as the picture shows, it carries coal as well. You see, in the Knoxville area, it took the small mines there almost a week to generate enough coal to fill out a unit train. And since train 23G was going through Knoxville anyway, it stops and picks up this coal, 15 cars at a time, saving locomotives and crews. And it gets the coal from Knoxville to Norfolk in less than 24 hours. This isn't just harvesting efficiencies, this is Norfolk Southern thinking differently. Again, it's about finding efficiencies that were invisible to us when we operated 4 networks, it's suddenly become visible when we operate one network. Now, Norfolk Southern generally has enough resources to operate its network but too often those resources are in the wrong place. Having enough locomotives is great, but it's not helpful when you need those locomotives in Chicago and they're in Harrisburg instead. Our new TOP21 network will be more balanced. We can't tell customers where to ship, but we can smooth unbalanced flows. We can model new



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

business opportunities versus spare network capacity, furthering our goal of operating the same number of trains in each direction, in each of our main lines, every day.

Mike Farrell talked to you about Clean Sheeting. Reimagine our local service, fewer resources and streamline traffic flows.

The capacity created by Clean Sheeting is foundational to our TOP21 operating plan. As far as Clean Sheeting, we're converting as many of our customers as possible to 7-day per week service. What this does is, it helps keep the system in motion at all times. Now, keeping that system in motion requires the cooperation of everyone involved, the railroad, sure, but also shippers and receivers. But when we keep the system in motion, the steel wheel's moving. It creates a capacity dividend for us. It creates free capacity that we can use to either add new business or improve the efficiency of the operating plan. Our fourth technique is reduced dependence on our major terminals. We found out that the cheapest handling of a railcar is simply one that we don't do. We figured out that we can reduce railcar handlings with some forward-looking preplanning at the initial terminal, combined with a well-placed block swap and move the trip. For that reason, we're looking to block as much as of our traffic for the final destination yard as we can.

Reducing dependence on hub terminals saves car miles, which, in turn, reduces the demand for nearly every resource in the railroad. Let me give you an example involving Winston-Salem in North Carolina.

Previously, all the carload traffic that came out of Winston-Salem headed south to a hub yard in Linwood, North Carolina. Even at that traffic, it would eventually turn right back around and head north. Well, we found that by doing a little more work in Winston-Salem, putting that capacity dividend to work, we could send that traffic out of Winston-Salem on a more direct route. Avoiding the trip to Linwood, saving 100 miles of [circuitry] and freeing up capacity in Linwood for Linwood to absorb work from other outlying terminals. Even better, the train that carries that traffic directly north from Winston-Salem was a dedicated automotive train that now carries all kinds of traffic. So we save circuitry, we created capacity at a hub yard, all without adding any kind of train miles. This is the kind of different thinking that we're infusing into our operating plan.

So let's review.

Operate as one network. Balancing our flows. Serving our customers frequently and reducing our dependence on major terminals.

Norfolk Southern is implementing a precision scheduled railroad operating plan tailored for our strategic plan. We've repeatedly said that we're willing to look at the industry and adopt best practices, and I can't think of a better example than that -- than our TOP21 operating plan. TOP21 will reduce the resources needed. As we eliminate work, we'll take out people, yards, locomotives, all while improving or maintaining customer service. And we'll measure ourselves by the 5 metrics that Mike Wheeler showed to you before: our service quality index, the productivity of our crews and our locomotives, the size of our trains and the number of cars we have online.

So far, I've talked to you about our operating plan and how we're going to become more efficient. Now I'd like to talk to you about Network Planning & Optimization, the organization that's building, maintaining and communicating the operating plan.

I'd like to call up the leadership of NPO to tell you how NPO operates, and what we deliver.

Christine, Brandon, David, could you introduce yourselves, and tell us a little bit about your roles with NPO?

---

### Christine Traubel

Sure. Hello, everyone. My name is Christine Traubel, and I'm the AVP of Commercial Planning within NPO.

My 24-year career with Norfolk Southern has primarily been in marketing, where I've served a variety of roles that have really helped me understand what our customers need. And now commercial planning serves as a bridge between marketing and the operating plan.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

Now in my most recent job, I ran Norfolk Southern's automotive group, and so that's really given me a broader picture of what those customers need and other customers in our company. Now, what commercial planning does is we work with marketing on changes to the forecast that might be fed into the plan. We also work on new business opportunities that we review and figure out how they can work in our plan. And we also communicate changes back to marketing to help them explain them to our customers.

---

**Brandon Smith**

Good morning. My name is Brandon Smith. Good afternoon that is. We -- I recently joined Norfolk Southern about 3 months ago. I bring to the NS with me 12 years of PSR experience. As AVP of operations planning, our goal is to be the interface with the field, communicating planned changes, plan adherence, and just equally important, is communicating with Christine and David's group on how we can provide growth and efficiency.

---

**David Osborne**

Hi. I'm David Osborne, AVP of Network Planning. My 28-year career with Norfolk Southern and Conrail has been mostly spent in intermodal operations and service design. Network planning and NPO consists of 2 groups: one group is responsible for managing, and moderating, and measuring our network capacity. The second group is the network planning team. They are the TOP21 creators. They are responsible for maintaining and modifying the TOP21 plan as necessary.

---

**John H. Friedmann** - Norfolk Southern Corporation - VP of Network Operations

David, could you tell us how the TOP21 operating plan is different than previous NS operating plans?

---

**David Osborne**

Well, it's an operating plan first off, it's not a train plan. The train plan is just a bunch of train schedules put together. Operating plan, this operating plan, focuses on our terminals, our people, locomotives and the rail lines that are all connected by train plans. This is different, again, because it's one network. It is not an intermodal network layered on top of a merchandise network, on top of an automotive network, with unit trains on top.

---

**John H. Friedmann** - Norfolk Southern Corporation - VP of Network Operations

So tell me why that's important?

---

**David Osborne**

Well, again, optimizing a single network is important. It is opened up in a number of network improvement and potential efficiencies that we're seeing. A simple example is just, we have found that empty automotive multi-levels by putting them into unit trains service, John, has reduced, greatly, train miles, and has also improved the consistency of railcar supply that we provide to our customers.

---

**John H. Friedmann** - Norfolk Southern Corporation - VP of Network Operations

Thanks, David. Brandon, with you being new to NS, can you tell me what excites you the most about your role with NPO?



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

### Brandon Smith

Certainly. Mostly, I'm excited about leading some talented railroaders. Prior to my joining Norfolk Southern, I worked at CNCP, implementing PSR experiences there. Ultimately, those were values and events that really helped me understand how to reorganize an operation from top to bottom. And as we like to say in the Canadian roads, peel you on your back.

Most importantly though, in the last 3 years, I've been part of the rail -- regional and short line world. And I got to see the other side of PSR implementation on the eastern U.S., to be specific. And the lack of communication and process really hindered our relationship as they worked through that. And most importantly, it impacted our customers. If you ask me what I'm excited about the most, it's about teaching and coaching and training the PSR at Norfolk Southern, all while collaboratively taking the time and the care to work with David and Christine's group to promote the growth and efficiency that we're looking for, to really drive home some -- meet the demand of our customers, and essentially, grow the shareholders value.

---

**John H. Friedmann** - Norfolk Southern Corporation - VP of Network Operations

So Brandon, where do you see the biggest opportunity?

### Brandon Smith

Service quality. We had to service the customers, frequently. It's important that we do so because it creates capacity across the network. And that is really where we see our ability to push our product into the field a little bit differently than everybody else, the real capacity dividend that we've talked about, or you've heard others talk about today. The NPO has only been up and running for a short time now. But we have found several opportunities throughout the processes that have given us value to grow the business without having that additional cost, less train miles, less crew costs, less fuel cost. All those things add up.

### Christine Traubel

Hey, Brandon, I'm glad you brought that up. You know as we work with customers and we change over to serving them more frequently, they're also realizing that benefit. So it's actually giving them a plan they can count on every single day. They can get better utilization out of their resources. They know when to expect us, and they are learning that there is value to us collaborating with them on the front end.

---

**John H. Friedmann** - Norfolk Southern Corporation - VP of Network Operations

Good stuff. Christine, can you tell me how Norfolk Southern's focus on the customer, while we're implementing PSR, is unique?

### Christine Traubel

Well, John, I think you hit on it in your question. We're involving the customer from the very first step. You'll hear Jim Squires say that we're not going to sit out growth in this strategic plan. And the fact that we need to grow our business, while implementing PSR, makes involving the customer critical. If we want to establish that and meet our growth objectives, we're going to need to them bring them along the way.

### Brandon Smith

And I'd like to add to that a little bit. A perfect example of this over the last 7 days, we really went in and redesigned the service plan for one of our major Midwest terminals. It was collaborative, with the customers, as well as senior management here. Alan was there. Mike was there. Mike Farrell was there. And previous to that, we had, had conversations around what was going to happen and why. We were explaining why and how. And it really brought them in, to have these open discussions about how we can better each other, both efficiency and on the cost side.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**John H. Friedmann** - Norfolk Southern Corporation - VP of Network Operations

So Christine, it sounds like NPO is a different way of doing business for Norfolk Southern?

**Christine Traubel**

Yes. To me it is. So in my over 20-year career with Norfolk Southern, this is the first time we've created an actual department that combines both commercial and operating expertise. But I would tell you that collaboration does not start within NPO nor does it end there. You've already heard today how we're collaborating between marketing and operation with the use of the cars online team, and with Clean Sheeting. The fact that they're collaborating in the field and collaborating with customers, only builds on the collaboration we have within NPO. All of the information they gather in the field comes in with our business opportunities and with plan changes. So now, when it already comes in, we already have a lot of intel that we can use to build the best operating plan that we can.

**John H. Friedmann** - Norfolk Southern Corporation - VP of Network Operations

Great. I appreciate you 3 coming up and telling about your roles at NPO, and the vision for the organization. Thank you much, and I'll turn it back to Mike.

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Thank you, John. Team, that was great information. Thank you. So we've talked about one of the principles is managing our assets. And locomotives are perhaps the workhorse asset of Norfolk Southern and a central component of our strategic plan to achieve higher profitability, support continued growth, and improve customer service.

Locomotives are a key asset for managing. With that in mind, I've asked Doug Corbin, our Chief Mechanical Officer, to spend a few minutes on our locomotive strategy, to show you how these key assets support and contribute to a superior service product. Doug?

**Doug Corbin**

Thank you, Mike. I'm excited to talk to you today about the transformation of our locomotive fleet. As you'll see in the next few slides, we're doing a pretty tremendous job with our locomotives. I'm going to talk a little bit about the details.

We have, really, 4 initiatives underway to reduce the size of our locomotive fleet. Number one, we're going to run heavier trains, and the way we run heavier trains is through 2 items that is technology, number one. We're going to use distributive power, which means you space locomotives in the middle or at the rear of a train in order to move more freight with the same locomotives. But we're also modernizing our fleet from a primarily DC fleet, which is direct-current propulsion, to an AC fleet, which is alternating-current propulsion.

You've already heard about Clean Sheeting, which will rationalize local activity and pull locomotives out of the fleet that way. And then, as you heard from John, we'll be balancing our flows, locomotives and cars, east and west, north and south. And that will also allow us to pull more assets out, more locomotives out. Through those 4 initiatives, we do intend, over the 3-year strategic plan, to pull over 500 locomotives out of the fleet. And that does not mean that we'll have less pulling power to move our customers' freight, we'll actually have the capacity to absorb more freight.

So the story of the Norfolk Southern locomotive fleet is a little bit about timing. We bought a, primarily, DC fleet beginning in 1994 and running through 2004. These were basically Dash 9 locomotives. We bought about 1,200 of those in that time period. Those locomotives are reaching the end of their life. At the time, we bought DC. It was more economical, and our testing proved that AC was still in its infancy, and wasn't really quite ready for prime time.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

So we invested in one model over, basically, a decade. Those assets are now at the end of their life, and we've got to replace them. So our strategy could have taken 2 paths. We could have bought all new locomotives, with AC technology, or we can convert what we have. What we were replacing in the '90s was a big boost in horsepower, from a 3,000 horsepower up to a 4,400 horsepower. We don't need additional horsepower. What we need is traction, pulling power to the rail. AC technology gives us that.

So of the 2 paths we could have taken, our strategy is to convert locomotives. We'll still probably buy some new locomotives as we go along. We don't want to get separated from the technology that's out there. We want to keep that visible to ourselves. So we'll still buy some new locomotives. But the conversion allows us to, basically, get a new locomotive, with current technology, at about half the capital cost. So that is going to be a big bonus for us. At the same time, the folks providing us with this technology are guaranteeing a reliability. AC reliability is much higher than DC, and we've experienced that with the AC fleets we have to date.

So let's look inside one of these locomotives for just a minute and see what we're doing. So when you look inside the locomotive, the basic mechanical components are sound. The frame, the engine, the mechanical components. And we don't intend on adding more horsepower, what we're adding is tractive effort.

So basically, what you see here, the gray parts, are reused, the engine, which is colored yellow, comes out. It's overhauled. It goes in rebuilt. The blue parts are the secret. This is the AC technology. We put in AC inverters, we put in a modern operator's cab, with computer screens for the operator, and AC traction motors, which you see underneath here, in blue. That's the big improvement.

Computerized control of AC traction technology gives us a huge boost in the amount of freight we can move with locomotive with no additional horsepower. That's the beauty of this program.

We have this 1,200 Dash 9 legacy fleet that we're operating against. We started in 2016 doing these conversions. We've done 190 so far and we've been very pleased with the results. By 2021, at the end of this 3-year plan, we will have 527 locomotives converted from DC to AC. And we'll have more we can convert going forward as needed, depending on where we end up for our locomotive fleet size.

So the percentage of AC locomotives in the fleet is part of the key to being able to reduce the number of locomotives we need. And as you see here, and Jim said earlier, we're going to greatly increase the percentage of AC locomotives in our fleet. These are end-of-year numbers. So at the end of 2018, we had about a 32% AC road fleet, and you will see at the end of the year 2021, we'll be able to grow that to 61%. And our locomotive conversion contracts actually go beyond 2021. So we'll continue the process.

So how does that drive our financials? Obviously, with fewer locomotives is a smaller fleet. We'll need fewer folks to do the maintenance work, and we will get those out. An AC locomotive will require fewer replacement parts as it's more reliable and operates better. And we need not lose the sight of the fuel consumption advantage. Fewer locomotives burn less fuel because, number one, they don't idle as much because they're turned over and utilized in a quicker fashion. And then by using fewer locomotives, we operate higher in the power range of each locomotive and an engine runs more efficiently higher than its power range. So all 3 of those advantages will help us going forward to pull to control costs.

Lastly, let me talk about how we're integrated with the new network operations center. As I hear Mike Farrell say over and over, it's all about keeping the steel wheels rolling. And that's what we do. We've got 3 groups in our new Network Operations Center here next door, all dedicated to interacting with trains moving over the system. Wayside detection looks at the condition of the train as it passes by, and points out any issues we might have that need correcting. Our locomotive help desk is in constant contact over the radio with engineers out there, running trains. Make sure if they have issues, that we help them overcome. And then our PTC help desk makes sure that we're operating our PTC trains, and also assist engineers and crews with issues that may arise from PTC.

Andy Koch is going to talk more about the other parts you see on the right hand of this chart, but we are fully integrated as one team, with one vision, next-door, in the Network Operations Center. Thank you very much.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

### **Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Thank you, Doug. That's great. So, while we're on the Network Operations Center, we talked about how we centralized our 9-division dispatch operations into Atlanta, you're going to see that at lunchtime, but we thought we'd let you get a little bit of how we're using that Network Operations Center to drive the results at NS.

So I'd like to bring up Andy Koch. He is one of our Senior Director, Train Operations, and manages the Network Operations Center. He's going to give us some updates. Go Andrew.

---

### **Andrew Koch**

Good afternoon, everyone. I'm Andy Koch, one of the Senior Directors of Train Operations and Network Operations Center.

Over the past year, we've taken our 9 dispatch offices and combined them into one network operation center here in Atlanta. It has allowed us to leverage, the talent we had spread across the network into one location. Over each of our 9 divisions, we have a Manager of train operations. That Manager Train Operations is assisted by an Assistant Chief Train Dispatcher.

Those 2 individuals are front-line supervisors for our dispatchers. They manage the day-to-day operations, handling our crews as well as any exceptions of the plan, and getting us back on the plan. Having those Manager Train Operations in one location has helped us with our network fluidity.

For instance, on one of our main routes, North, South routes, between Chattanooga, Tennessee, and Cincinnati Ohio, we used to have 4 calls a day, with 4 divisions coordinating traffic through this corridor.

Now, we're able to address issues with crews, locomotive issues, engineering work in real-time, multiple times, throughout the day. And this has improved our fluidity through this corridor.

We also have 4 corridor superintendents on duty at all times. They assist our manager train operations. Our corridor superintendents oversee 2 divisions. They are mapped similar to the GMs -- excuse me, the General Managers in the field. We have a Northern Region, an Eastern Region, a Southern Region, and a Western Region. They're responsible for moving traffic through that corridor. Additionally, we have a Senior Director, Train Operations, on duty at all time. They oversee the overall health of the entire network, and help coordinate any troubles or any issues that we may be having.

In the Network Operations Center, anything the dispatchers need is within walking distance. As Doug mentioned, we've got our locomotive help desk, our PTC help desk, our wayside detection group. We also have our communications and signals group, and our locomotive power planners. We also have our intermodal service desk, and the unit train group in the office to support us.

This has made a huge difference as the Manager Train Operations used to have to play all these roles with support here in Atlanta. So now, for instance, if a train has stopped for a hot wheel, we're able to instantly communicate with our wayside desk, and figure out what we need to do with that car. We're also able to coordinate with our intermodal service desk to ensure that we protect our customer's freight and get it to the destination.

Every day, in the Network Operations Center, we have a job briefing at the beginning of every shift with our dispatchers. This allows us to set the tone for not only the day, the week, and the month. During this time, we reinforce our core objectives that you heard more about earlier. We also have 4 principles in the Network Operation Center that we cover every day with our dispatchers.

They include running trains on the destination, on time, eliminating reworks, our plan adherence, which is making sure we have the discipline to make our plans set offs and pickups, and running a safe railroad. Every day, we review a scorecard with our dispatchers to letting them know how we performed the previous day.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

We also, during this time, share our cost metrics. We go through our recrew performance for the previous day, where we stand for the month, and how we're doing so far that day. We also take this time to review some leading indicators with our dispatchers. We review our train performance for the day, and how we're trending, as well as any trains that are stopped for more than 4 hours. The job briefings also allow us to share any recent safety concerns, new technologies we may be implementing, and provide positive recognition to the dispatch workforce.

A large part of what we do in the Network Operations Center is managing through metrics. One of the metrics that we use to push our performance is the one you see here, which is our train stopped for more than 4 hours. We have this metric displayed over every Manager Train Operation's workstation. The manager of train operations is responsible for putting a plan in place to get the train moving and back on schedule and back on plan.

We turn it into a competition by acknowledging the divisions that have 0 trains stopped, as well as calling out our worst performers. In the Network Operations Center, we also manage our active train count in real time. This is a good indicator of how fast we're moving, and that we're terminating our trains according to their schedule. Our Manager Train Operations and our Corridor Superintendents also track our recreds in realtime, and we address the districts that are becoming a concern if they are high on their recrew count for the day.

It's been an exciting year for us at Norfolk Southern as we have put the 9 offices into one here in Atlanta. We continue to strive to develop a best-in-class Network Operations Center. I look forward to sharing that with you all here in a few minutes. Thank you all.

---

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Thank you, Andy. I hope you take the time to see the Network Operations Center at lunch. It's pretty impressive.

I expect that what you've seen so far will show you that our strategic plan has a lot of depth, and it has a lot of details, and that this team is really excited about continuing to move our company forward.

Thank you, and I'm going to turn it over to Clay Moore to tell us what our plans are for lunch. Lunch, tours, and coming back. Clay?

---

**Clay Moore** - Norfolk Southern Corporation - Director of IR

Thank you, Mike. Okay. At this time, we're going to break for lunch. We have lunch available that's located just outside the Peach Tree Room for you to enjoy in here. We have arranged for tours of the NOC. Those are going to occur in 10 minute intervals. If you'll look on the back of your badge, you'll see a number, either 1, 2, 3, or 4. Those will be kind of the sequence in terms of which the tours will occur.

The tours will be given by Andy Koch, who you just heard from, or Carl Wilson, who is our General Manager, Network Operations Center. And we also have audio headsets that are -- that will also be provided in there, located just outside the NOC.

So right now, let's break, and we're going to return and begin back in here at promptly 1:30. Thank you. Group 1 will start here, and basically, right now if you want.

(Break)

---

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Okay. Well, welcome back, everyone. We'll kick off with another Q&A session. We'll go for 10 to 15 minutes and then go into the marketing presentations from there. Chris? Yes.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

## QUESTIONS AND ANSWERS

**Christian F. Wetherbee** - Citigroup Inc, Research Division - VP

Chris Wetherbee from Citi. Wanted to ask about the CapEx and maybe drill down a little bit on the locomotive presentation that we [had during the lunch break]. So on the locomotive front, just kind of digging into the spending a little bit. It seems maybe -- I guess I'm a little surprised. It seems a little higher than I would've expected for the pull down in locomotives over the course of the 3-year plan. Can you talk a little bit more about sort of how you think about that? Is there some variability that maybe is volume focused that's within that guidance? Just want to understand that in the context of 16% to 18% CapEx because we oftentimes see that number get pulled down pretty dramatically in the early stages of PSR implementation.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Okay. Let's drill down into the locomotive part of the CapEx specifically, and Cindy, maybe you can kick it off and then I'll ask Mike Wheeler to comment as well.

**Cynthia C. Earhart** - Norfolk Southern Corporation - Executive VP of Finance & CFO

Yes, Chris, as I've said before, about -- for 2019, about 20% of the CapEx budget is focused on locomotives, primarily the conversions, although we've said that we will periodically purchase some new to stay in the market some, and we really see that going forward. We have a long-term contract to do rebuilds even beyond 2021. So that's a little bit about the locomotives.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Yes, because of the rebuild program, we don't get quite the same locomotive holiday or holiday from locomotive spending associated with PSR implementation. Mike?

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, but if you noticed on Doug's slide, I mean, the road fleet is being reduced over that time even though the AC percentage is going up. And that's kind of where a lot of the benefits come as the road fleet is reduced. So that's how we're seeing it. But we've got this commitment to revitalize the fleet, and there's a lot of benefits from a reliability and service standpoint.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

And the good news is we think we've come up with a very cost-effective way to modernize and rejuvenate the fleet.

**Christian F. Wetherbee** - Citigroup Inc, Research Division - VP

Okay. So a little less volume focused, I guess. And then maybe a bigger picture question about the progress towards the 60% OR when you think about sort of in the steps that we're seeing. Again, I guess it depends on what your starting point is for 2018. You guys are using the 65% number that's got the land sale in it. When you think about the progress towards 60%, maybe it seems as a result of that a bit back-end weighted, which maybe is also a touch atypical for what we've seen with the PSR implementation. So if you could talk about maybe how far along you are in the process what we've seen so far? It looks like you've made good progress to date. So just trying to get a sense of maybe where we are for a second, third inning or something further on.

## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Sure. Well, Cindy gave you the guidance of at least 100 basis points improvement in 2019 from that 65.4% reported base, and from there we get to 60% over the full year -- full 3-year period. Cindy, other thoughts on the pace?

**Cynthia C. Earhart** - Norfolk Southern Corporation - Executive VP of Finance & CFO

Yes, I think as I said before, in terms of the productivity at least, it's heavily weighted towards the comp and benefits, which is tied to the employees. And we talked about a 500 reduction by the end of -- end of year to end of year '19 to '18. So you can kind of see that the employee takeout is more on the latter 2 years. So that gives you a little bit of sense of sort of the cadence of it.

**Allison M. Landry** - Crédit Suisse AG, Research Division - Director

Allison Landry from Crédit Suisse. I wanted to ask a broad question about the strategy in terms of incorporating growth while you're implementing the 5 principles of PSR. Historically, the way we've seen it done is disrupt to redesign the network, shed marginal traffic, put the service in place and then grow. So I guess, are you suggesting that the NS network is already in a place where it really doesn't need to be redesigned like we saw at CNCP, CFX and even UNP? Or is the emphasis on the intermodal growth opportunity sort of holding you back from a full PSR system? Just trying to understand the impetus for having a different strategy.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Let me start where I started this morning, which is on operations and on cost control, the implementation of PSR in order to achieve significantly lower cost structure. That is the beginning. That's how we spent the last few hours talking about everything we're doing in that area. Now we are also going to try to grow even as we implement PSR by maintaining service at a target level. We think we're in a good growth environment, and we are simply not willing to forgo the growth opportunity at this particular point in time. So other thoughts, Alan, on the growth opportunity and how it relates to PSR implantation?

**Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

Yes, Allison, you're going to hear a lot from the marketing team about what we call yield up. And when we talk about yield, that's not RPU. That's margin. And so it does involve shedding marginal business. We've been doing that for a couple of years, and it's really helped our margin profile. We're going to continue to lean into that, but you're going to get a pretty healthy dose of that in the next couple of minutes.

**Allison M. Landry** - Crédit Suisse AG, Research Division - Director

If I could just sneak one other one in on the example that was given about the intermodal train and tacking on some coal cars. How widespread is that across the network in terms of that specific example, just thinking about the speed for intermodal being higher, of course, than coal? And does it impact your ability to appropriately match the horsepower to intermodal versus coal?

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Okay. So commingling of the networks, Mike, where are we today and where are we going to go?

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

So we've got some of that going on in several areas across the network. The example John showed, we've got some of those going on several areas: in the Winston-Salem one, in the one through Knoxville. We've got several up on the northern region as well. So as we're at across a railroad and



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

we find those opportunities, we take advantage of them. More of that is going to happen as we roll out the new operating plan later this summer as well.

---

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

And Mike, do you want to talk about what you're doing with train speeds, about different networks and...

---

**Michael Joseph Wheeler** - *Norfolk Southern Corporation - Executive VP & COO*

Yes, I think that is a great point because it does go back to what Allison asked about. As we take these networks and we start putting them together, a train is going to become a train, right? And there's a lot of thinking among our group that a train is going to become a train. And so one of the things we have done historically, particularly up on the Chicago to East Coast area, we ran our intermodals at 60 miles an hour and our freight trains at 50 miles an hour. Well, as you start commingling the traffic on these trains, a train becomes a train. So back in September, we raised the train speeds for our merchandise trains up to 60 miles an hour. So across the northern region, all trains are 60 miles an hour. Got a lot of good benefit from that. We saw congestion really go down. Since then we've added 35 more districts across the railroad where merchandise now runs the same speed as intermodal. So all our trains are a train and as you blend them and put them together, they'll run at the same speed.

---

**Unidentified Participant**

Okay. So I wanted to drill down a little bit further on the intermodal side. I think we've seen it at your competitor in the east that they've taken a couple rounds of cuts to their intermodal volume and some of the service offerings with the idea that I think that's maybe a tougher business to step up the margin and some of the traffic isn't inherently as good. So I wanted to get your sense of how you think about margin in intermodal. Is there a big step change in profitability? And how much of a service change is necessary as you think about that?

---

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Margin and incremental margin in intermodal both took a big step up last year. It was a very good year for both for intermodal. In terms of -- and we are bullish on 2019, as you'll hear shortly. Now in terms of the network, we already were on a point-to-point network. So we're basically where we need to be with the intermodal network. Now with that said, we will continue to make changes, and we will work on yielding up in the intermodal business in part by calling lines where necessary and rationalizing that network as well.

---

**Alan H. Shaw** - *Norfolk Southern Corporation - Executive VP & CMO*

Absolutely. You're going to hear Jeff Heller, who's our Vice President of Intermodal and Automotive, talk to you about intermodal lane rationalization. That's a component of yield up where we're looking at underperforming lanes, lanes that add complexity, lanes where we might not have the best service product or lanes where we're not generating the best margin and we look for alternative uses for that asset. And as Jim noted, our marginal incremental revenues -- incremental margin, pardon me, in intermodal was very strong last year and was very strong in 2017 as well. This is an ongoing initiative for us. We've been doing it since 2013 and are really, really focused on improving the margins in intermodal.

---

**Brian Patrick Ossenbeck** - *JP Morgan Chase & Co, Research Division - Senior Equity Analyst*

It's Brian Ossenbeck from JPMorgan. Sorry, to your left. Can you give some more background as to how the operating plan was originally formed, which of your peers did you benchmark to and what was the overall process? Because if the top line growth is materialized, like you think it is, through 2021, can you still hit the OR target by leaning heavier on the productivity targets? And to that point, can you just give some more specifics around fuel efficiency? Just because your peer in the east is looking to boost that another 10%. Do you think the AC conversion is enough to narrow that gap?



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Let's start with TOP21. It's a simpler PSR-based operating plan. Now it has antecedents in the original TOP and TOP II plans that we developed in that it's attempting to run a scheduled network across the board. But it's new. It's simpler. Mike, why don't you elaborate a little bit on that? And while you're at it, take the fuel productivity question as well.

**Michael Joseph Wheeler** - Norfolk Southern Corporation - Executive VP & COO

Yes, so on the fuel, you're right, the AC is a big part of fuel, but AC is also driving the train weight. We showed those metrics. Train weight's going to be a big part of that as well as the reduction in the fleet. We also have some technology initiatives that are out there that are helping the fuel plan as well. So there's a lot of initiatives driving down the fuel, and we'll see it go along with the locomotive productivity. It's part and parcel of how those go. On the train plan, we've got an iterative process. We've talked about that. Clean Sheeting is iterative. Mike's team continues to look at those, go back, get better at them, find things we can take. So was the operating plan is iterative. And if we need to, we'll speed that up if there is a change in the business mix.

**Bascome Majors** - Susquehanna Financial Group, LLLP, Research Division - Research Analyst

Bascome Majors from Susquehanna. One for Mike Farrell here. You talked a little bit in your intro about the organization at least initially having, I think you said, one toe in, one foot out of some of the organizational change efforts. What's different today versus maybe if you can give some examples of some of the resistance you may have initially felt coming into this? And as a change agent coming into an organization this large with 2 layers of management between you and the board, what gives you conviction that you're able to do what you want to do to improve the network operations here?

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Good question. Mike?

**Michael A. Farrell** - Norfolk Southern Corporation - SVP of Transportation

The first one, when I talked about one toe in, one foot out, we've seen what happened to a company in the east, our competitor in the east. So we're a little bit more cautious probably than any company I've worked for. We didn't really have a vision what the end needed to look like other than will it work on our network. So we're pretty cautious going into it, and we had to build trust over time to start producing the results. And once we did that, we gained a lot of momentum and everybody was brought in, in a very short period of time. Second question was...

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

How do you keep the change going? How do you maintain the momentum in the field?

**Michael A. Farrell** - Norfolk Southern Corporation - SVP of Transportation

It comes down to accountability, the big thing that we're really pushing is the empowerment of our people. The more that they understand and know the processes and principles at the ground level, the more they're willing to make the changes. If you went to any one of our property, first off, I think you'd be hard-pressed not to find anybody that did not understand the 5 core principles and the 4 key disciplines. If you went to any operation, whether it's engineering, mechanical or transportation, you'll see signs posted in their facilities right now in the 5 core principles and the 4 key disciplines. So it's gotten down to every level of this organization. Everybody -- the energy that we created by knocking down some silos and working together as a team has been pretty remarkable, and they all feel like they're part of the solution instead of part of the problem now.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Alan H. Shaw** - *Norfolk Southern Corporation - Executive VP & CMO*

Mike, I heard you talk about coach, train and teach and how you're building this culture within the operating organization from the ground up as opposed to just dictating it from the top down, which is one of the benefits of you and Mike Wheeler and your teams going out to the Clean Sheeting sessions yard by yard by yard. You're building that muscle memory within operations and that skill set.

**Michael A. Farrell** - *Norfolk Southern Corporation - SVP of Transportation*

Yes, it's a great point, Alan. These Clean Sheeting sessions have gotten bigger and bigger and bigger, and the more people we can bring in, in the Clean Sheeting, the more people are coaching, teaching and training. It's really about teaching tactically so they understand why we do what we did -- do these things so we can lead strategically. And with -- I mean, we're doing these probably 4, 5 times a week right now all over our network, teaching the same principles, the same strategies. We're doing it 9x faster at our 9 regions. We took time in December to teach them at all of our [DTS]. So they're actually all leading the smaller ones. We have a larger group leading the bigger ones. So the change is really rapid, and we're bringing them all together as one. So it's been pretty exciting, pretty tough to keep up -- keep track of some of the changes, but the positive results we've seen had been remarkable.

**Unidentified Participant**

PSR typically tends to be about cutting and efficiencies and just reducing more than adding. So can you just talk about technology and what investments and initiatives you have in the technology side over the next 3 years? Maybe kind of give us more examples of kind of what that does to your tech budget. Also, a question for Mike. I think there's a perception that PSR is a common playbook, that it's just applied at different railroads. I think it's now evident that every rail is doing it differently. So maybe you can talk about just maybe 1 or 2 things that's most different with the PSR that you guys are implementing here at Norfolk versus what you had at CNCP.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Let's take the tech question first. And I'll start by saying that we've worked really hard in 2018 to map our technology spending to our strategic initiatives. So whether it's revenue management systems, customer interface included, or whether it's asset utilization, asset based, we've really tried to prioritize technology investments that sync up with our strategic plan. Maybe, Cindy, just a few comments on that?

**Cynthia C. Earhart** - *Norfolk Southern Corporation - Executive VP of Finance & CFO*

Yes, I would maybe take our technology investments and first of all, I'll tell you that we invested more than we've ever invested in 2018 there in technology and we invested more -- we're planning on investing more than that in 2019. Obviously, PTC is a big part of it. But there's really 3 areas, I would say: customer service. You're going to hear more about that this afternoon and how we interface with our customers, which is really good for them but also helps us on a productivity basis as well. I would say also the second piece being things that we're doing to really leverage PTC, getting PTC up is #1 priority, make sure it's working and it's working effectively on the railroad. But then the second part is how do we take advantage of it? Because it gives us really a platform to just do a lot of things we haven't been able to do before. So we're working on that sort of behind the scenes as well. So once we get PTC, we can start leveraging it even more. And then the third thing I would say is just the overall productivity of our employees and our assets. You'll also hear this afternoon a little bit about a new system that we're putting in our intermodal terminals, which will help our productivity within those terminals. It also has the customer aspect to it. So we're -- we really believe that our investments in technology are going to pay off in all those areas, not just within this planned period, but beyond. So we're excited about that.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Okay. And lastly, PSR, I'm going to ask Mike, versus at other railroads where you've worked.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Michael A. Farrell** - *Norfolk Southern Corporation - SVP of Transportation*

Probably the collaboration of the people, to be honest with you. I mean, we were a very siloed organization. You heard me say that in our presentation, but it didn't take us long to knock down some of the barriers and be transparent. We have initiatives like the COLT team where we put the operating, the service -- the customer service and the marketing together to work together as one. And these initiatives have really knocked down some barriers to bring us at the ground level. I mean, some of the initiatives, I wish you guys could have been out with us at [Forrest] here about a month ago. We had went from -- most of our customers are 2- and 3-day week service. Sometimes 5, but we moved into a 6- and 7-day week operation. We got rid of the clutter. We got rid of double, triple handling the cars. It was slowing down our network. It was creating us more work. And what we did is we gave this team an initiative to go to 6 and 7 days a week. And about a month ago, they all came in with all 9 of their divisions, all united, talking about how they were improving the service, what they're going to do to sustain it and be consistent both day in and day out. And it was just remarkable from where we were 18 months ago to where they are today. You would think, when you talk to them, that it was their plan, it was their idea. It's now their mission. They've done a great job.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Okay. Thanks, everybody. With that, let's break and get back into the presentations.

(Break)

## PRESENTATION

**Clay Moore** - *Norfolk Southern Corporation - Director of IR*

All right. Next, we are going to hear from Alan Shaw, our Executive Vice President and Chief Marketing Officer, who is going to talk to you all about how Norfolk Southern is reimagining growth.

**Alan H. Shaw** - *Norfolk Southern Corporation - Executive VP & CMO*

Thank you, Clay. Good afternoon. I'm glad that you're here with us. Hopefully what you're picking up is the excitement at Norfolk Southern. It's a very exciting time.

Joining me today are Jeff Heller, our Vice President, Intermodal and Automotive; Ed Elkins, our Vice President, Industrial Products; David Lawson, our Vice President, Coal; and Karol Lawrence, our Vice President, Customer Service. And what you're going to hear from my colleagues and I is the excitement and determination around driving margin and revenue growth at Norfolk Southern.

The entire marketing division is energized by specific initiatives that underpin our strategic plan, and we're very confident in our ability to deliver the results. The collaboration between marketing and operations and our customers is already proving successful at delivering an efficient and reliable service product that provides a platform for growth for our customers and helps them compete in the global market. Our margin growth initiatives are strengthened by high-quality service product and technology initiatives to deliver a best-in-class consumer-oriented customer experience. And lastly, our overall strategic plan aligns very well with the structural strengths of our franchise and the markets we serve.

We serve a majority of consumer activity, manufacturing and energy consumption in the United States. Almost 60% of the personal consumption of goods in the U.S. falls within our network and an estimated 50 million truck shipments a year in excess of 500 miles touch our network, prime opportunities for highway to rail conversion.

Norfolk Southern has the most powerful intermodal franchise in the East. It's laid on top of tremendous growth opportunities from the perspective of consumer and truck activity. We've had the foresight to push for a robust intermodal network, and these investments and are core to our strategy

## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

are driving benefits for our shareholders and our customers. It has laid the foundation for a booming intermodal franchise, which is married to the consumption part of the U.S. economy which drives over 2/3 of U.S. GDP.

We have a diverse merchandise franchise with broad exposure to a growing industrial economy. It too is rich with opportunities to take business off the highway. In 2018, we delivered year-over-year -- pardon me, record revenue and revenue per unit in our merchandise network. And the fracking revolution, which has been disrupted to our coal franchise, certainly offers opportunities within the manufacturing sector, particularly for those industries in which energy plays a relatively high proportion of input costs. We have a balanced coal franchise with an outstanding market approach, which has allowed Norfolk Southern to exceed industry norms in this area even as we managed through volatility and uncertainty in both the utility and export markets.

And our reach extends beyond the physical boundaries of our network. Our short line, our port and airline partnerships extend our network and our opportunities well beyond our tracks. We have confidence in our customers. We've got confidence in our franchise. The markets we serve, our geographic footprint and our prudent investments to strengthen our franchise are well aligned with the opportunities provided by the U.S. economy and our margin strategy. And this margin strategy is defined by initiatives that you've heard about, that's yield up. When we talk about yield up, we're talking about margin improvement. And it's testing the limits of market-based pricing based on the benefits that our network, our approach and our platform for growth delivers to our customers.

We're allocating assets to opportunities with higher use, and we're collaborating with our customers to creating more efficient and more reliable service product, reducing network complexity. As we simplify our network, we're creating a service product the market values. This is a service product that we can execute every single day while managing our assets and controlling our costs. We're steadfast in pricing to the value of our product and intently focused on initiatives to improve both price and service. In 2018, Norfolk Southern delivered the best year-over-year increase in price in the last 7 years and are encouraged by the improving product quality that we have and are confident this momentum will continue.

In 2018, we delivered record revenue both intermodal and merchandise while improving the margin profile in all 3 of our business units. And our growth is both balanced and consistent, and in fact, all 3 of our business units has delivered year-over-year revenue growth for at least 8 consecutive quarters. And looking forward, we're securing the knowledge that our improving product and efforts to enhance the customer experience will further supplement Norfolk Southern's competitive advantage.

Under Jim's leadership, marketing and operations have collaborated on the opportunities presented by our network, our product and our customers, and we've developed the specific initiatives that drive the 3-year plan.

We're going to grow and we're going to grow profitably with an emphasis on margin and price. We are projecting a 5% compound annual growth rate in our revenue over the next 3 years. We anticipate intermodal revenues will grow more, merchandise revenue will exceed this amount and coal revenues will decline modestly over the course of the next 3 years.

And our outlook is informed by customer expectations and calibrated with an econometric forecast model using multiple independent economic indicators. Confidence levels are relatively high. Unemployment is near a 49-year low, and the recent jobs report surprised to the upside. Wage rates are increasing, although not at inflationary rates.

Purchasing Managers Index rebounded last month, and the forecast for industrial production is continued growth over the next 3 years. E-commerce sales increased 13% in 2018 and are projected to grow at a 9% clip over the next couple of years.

This is an ideal situation for Norfolk Southern, with a robust and powerful intermodal franchise already in the ground and a proven track record of success in this arena. All of these indicators are consistent with a healthy business sector, and I'll read it to take is that it augurs well for the growth component of our strategy.

We're staying abreast of the economic uncertainty and calibrating and recalibrating our outlook based on the latest data flow, providing the NPO with the foresight to adjust our operating plan and our resource deployment as necessary.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

Our ability to adjust our plan and the discipline to do it is proven, and we've demonstrated it. Shortly after releasing our last strategic plan, we were faced with a freight recession. And as our revenues declined by 6% in 2016, Norfolk Southern quickly adjusted our plan, and we delivered year-over-year improvements in OR for 4 consecutive quarters in 2016. And in fact, we've now delivered year-over-year improvement in OR for 12 consecutive quarters.

Each of the business unit leaders will be up here shortly, and they'll give you their insight into the economic and market forces that educate our outlook. But no matter the economic environment, Norfolk Southern can compete with truck. We've got a great franchise and an inherent cost advantage.

Our intermodal revenues -- our intermodal growth has consistently exceeded that of truck growth, consumer spending and North American intermodal volumes. With a superior, customer focused, consumer-oriented approach layered on top of a highly reliable service product, we can deliver a truck-like, highly competitive product into the market, and we've got the network capacity to absorb that growth. In a moment, Karol Lawrence, our Vice President of Customer Service, will be up here, and she's going to talk to you about the technology initiatives that we have that are aligned with and support our margin growth strategy.

The service improvements we're seeing are a result of a new approach to operations: a new organization, including the NPO, and these cross-functional initiatives you keep hearing about to improve our efficiency and our service. These include the Cars On Line Team and Clean Sheeting.

Customers are engaged in this as well. And you heard a lot of commentary about the recent Clean Sheeting session in which one of our top customers came in and collaborated with Norfolk Southern on methods to improve efficiency and service for both of us.

And in fact, we're re-engineering and optimizing that customer interface. That collaboration is key. And customers are seeing the results. You can see it. You can see the results. You can see it in the public service metrics that are reported weekly. You can see it in the improvement in volumes since mid-December when our velocity improved and we started generating that capacity that allowed us to handle more of our customer's growth. And you can see it in the reduction in cars online even as volumes have increased.

This collaboration is powerful. And we can use that freed up capacity, i.e. that capacity dividend that we've been talking about, and apply it to opportunities with higher yields, consistent with the principles of yield up. We can also utilize it for our industry-leading industrial development efforts to attract new business investment to Norfolk Southern's lines.

The willingness of our customers to invest in business expansion on Norfolk Southern highlights their confidence in the economy and the sustainability of Norfolk Southern's plan.

Now each of the business units' leaders will come up and give you their perspective on the specific initiatives they have within their franchises to drive margin improvement. And with that, it is my pleasure to introduce you to Jeff Heller, our Vice President of Intermodal & Automotive. Jeff, your revenues were up 18% last year, so you get to go first.

---

### **Jeffrey S. Heller** - Norfolk Southern Corporation - VP of Intermodal & Automotive

Thank you, Alan, and good afternoon. I'm excited to provide you with an overview of our intermodal and automotive franchises, which produced all-time record revenue of \$3.9 billion in 2018.

Through targeted investment, we've built the most powerful intermodal franchise in the East. Similarly, with best-in-class industrial development and a solid commercial plan, we've built the most powerful automotive franchise, which is the largest originator of finished automobiles in North America.

Our automotive franchise serves 26 assembly plants and 35 distribution facilities, and our business continues to grow, as demonstrated by the recent announcement of the new Mazda/Toyota plant in Huntsville, Alabama, which is due to commence production in 2021, and the expansion of the Volkswagen plant in Chattanooga, Tennessee.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

Through the strength of our intermodal franchise, we've achieved over 60% market share in the East. Our corridor strategy established the foundation for growth and differentiates NS from its competitors by creating capacity and the ability to adapt to changes in cargo flows.

Our 5 primary corridors allow us to expand intermodal, automotive and merchandise with minimal future investment. The Heartland Corridor between the ports of Hampton Roads and Chicago support the continuing shift of international business from West Coast ports to East Coast ports. The Meridian Speedway connects the ports and distribution centers of Southern California with the Southeast, 2 of the fastest-growing regions and population centers in the country. The Crescent Corridor connects the Southeast with the densely populated Northeast markets and represents the single largest opportunity for truck-to-rail conversions. And the Premier Corridor provides additional capacity and is the shortest, most direct, most competitive -- truck-competitive route between Chicago, Eastern Pennsylvania and Northern New Jersey. And finally, the PanAm Southern Corridor connects our local and interline markets in Chicago with the population centers in upstate New York and New England. Now we're focused on driving profitable growth over these corridors, and we will continue to look for opportunities to yield up as this strategy reduces capital spend, improves service and, at the same time, boosts margins. Our success with this approach is demonstrated by our continued margin growth over the last several years.

In a few minutes, Ed will review the strong revenue forecast we are anticipating for merchandise, which also includes automotive. But we're expecting even stronger growth in our intermodal franchise with a compound annual growth rate of 10% over the term of the plan.

Let's take a look at some of the industry indicators that support this plan.

We expect the truck market to remain under pressure, accelerating continued truck-to-rail conversions. International loadings are projected to increase over the term of the plan and U.S. light vehicle production is expected to have steady growth in the near term.

It's important to note that our automotive revenue is driven by our robust price plan.

Over the last 9 years, Norfolk Southern's conventional intermodal growth has outpaced that of U.S. truck loadings. With rail intermodal only comprising about 10% of total U.S. freight shipments, we've really only begun to scratch the surface on truck-to-rail conversions, particularly in the East.

With pressures on the long-haul truck segments, such as highway congestion and increased regulations, we'll continue to serve as catalyst for intermodal growth. With increased e-commerce, tight truck capacity and consumer spending, NS intermodal is well positioned to continue this growth trajectory.

Looking forward, significant opportunity remains where the populations are the most dense, namely east of the Mississippi and well within the Norfolk Southern network. We'll continue to invest in markets with significant growth opportunity such as Chicago, Atlanta and the Northeast. A critical element of our investment -- this will be a critical element of our investment strategy as we continue to shift away from the greenfield sites and be more focused on equipment and expansions, which are justified by our high-value growth plan and the incremental margin improvement we plan to achieve.

2018 was a remarkable year, and we're leveraging that momentum into 2019. We expect this growth to continue as feedback from our customers and the market indicators still support a favorable environment for both intermodal and automotive volume and, importantly, pricing. FTR forecasts a 4% increase in domestic loadings with a 3% in international loadings. U.S. light vehicle production is expected to be up slightly versus last year, so we expect 2019 to be another positive year for our franchise.

Our international portfolio, which continues to benefit from shifts to East Coast ports, is expanding to accommodate the larger vessels. Our East Coast volume has steadily increased over time, accelerated by the Panama Canal, the raising of the Bayonne Bridge in New Jersey and the increased use of Suez services to access markets in Southeast Asia. In 2018, 75% of our international business moved through East Coast ports.

The strength of our franchise aligns more closely with our channel partners, who share our focus on profitable growth. New services that expand the NS footprint, enhance customer alignment and drive higher margin growth are also key components of our plan. Examples include the new



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

global container terminal in Bayonne, New Jersey, where we have on-dock access; a joint venture with Georgia Ports Authority to develop an inland port in Gainesville, Georgia; the Upstate Express Corridor in which we're leveraging the use of public money in collaboration with the South Carolina ports to add capacity for both our intermodal and automotive franchises; and the previously mentioned Toyota/Mazda plant in Huntsville, Alabama and the expansion of the Volkswagen plant in Chattanooga, Tennessee.

You've seen our targets for sustained growth, and here are some of the initiatives that support this aggressive but achievable plan. Further, we're adjusting our schedules to drive service consistency and expand our capacity dividend for future growth. An example is the fact that we're driving improved efficiency of our interline services by increasing the amount of traffic using steel wheel interchange, particularly in the critical Chicago Gateway.

Next, in keeping with the principles of PSR, we continually simplify our network through lane rationalization, further refining our point-to-point network. This strategy has been successful over the past years and will continue to give us more operational flexibility while improving the value of our business. An imperative with this process is that marketing and operations remain aligned so we can continue to focus on our network and financial goals.

Finally, we're strengthening the accessorial and business rules to improve asset utilization and align with our efficiency goals. Our revised storage and free time policies are just examples.

All of these initiatives are designed to support our objective of improving margin through productivity and price and helping us yield up.

We have a proven track record of success. We will continue to drive our business and drive results profitably, just as we have year-over-year. We achieved double-digit revenue increase in 2017, followed by even stronger growth in 2018. And we are building off that momentum as we go into 2019 and beyond.

We will continue to leverage the rapidly changing and competitive business environment to meet our robust yield strategy objectives, driving improved service to customers through more efficient operations.

We're excited about this plan and the opportunities ahead, and we are confident in our ability to execute it.

Thank you for your time and your attention, and I'd now like to introduce my colleague and our Vice President of Industrial Products, Ed Elkins.

---

### Ed Elkins

How do my colors look?

---

### Jeffrey S. Heller - Norfolk Southern Corporation - VP of Intermodal & Automotive

Good.

---

### Ed Elkins

I'm proud to follow Jeff. He's a great leader with a really good plan for intermodal. I'm also proud to be part of Alan's team. He's building a great team of leaders throughout industrial products, throughout intermodal, throughout coal. And I'm proud to be part of that team.

I'm here to talk about our industrial products business and how the outlook for us, our goals and our initiatives align with the strategic plan. Okay?

In 2018, our industrial products business delivered \$5.8 billion in revenue for the company. \$5.8 billion.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

Our business is comprised of 4 major groups: agriculture, metals and construction, forest and consumer products and chemicals that also includes crude oil as well as petrochemicals.

I'm going to talk about our franchise and how it relates to our network. It's very important.

Our network, you've heard a lot about. Our franchise in industrial products is very diverse and balanced.

That diversity represents a few things for us. First is industry sector diversity. We're -- we represent really a broad survey of critical industrial activity across North America. Everything from the farmland to the dinner table, from the mine to the foundry and from the foundry to the job site, we're embedded inside of those supply chains.

Secondly is geographic diversity. You've already heard we have almost 20,000 miles of main line. We service 22 states. My business, industrial products, services 5,000 -- more than 5,000 industries locally. 5,000.

A unique extension of our geographic diversity is through our access, unparalleled, to more than 250 short line railroads in the East. We view this as a source of strength for both our franchise and our network.

So you've heard a little bit about the franchise. You've heard quite a bit about the network. Let me tell you what my group is going to deliver with these tools that they've given us.

Using our strategic plan, coupled with our franchise and the Norfolk Southern network, we will deliver 5% annual compounded growth in our merchandise business unit over the course of our plan. 5% on a compound basis. It's a strong plan. We also expect modest volume growth during the period, all right? That's informed and confirmed by a few industry -- few key industry indicators, including the industrial production index as well as the plastics index. This is aggressive plan -- an aggressive plan. It's also an achievable plan because of the plan we're putting together and what those details are.

So let me walk you through how our plan rolls out.

All right, we've spent the last several months making sure that our goals, our initiatives and our market approach are aligned with our strategy. There are 4 key tenets here. These 4 key tenets will deliver sustainable growth over the long term but also sustainable margin growth in the short term.

Those 4 key tenets are -- and we'll start with improving productivity. You've heard a lot about it today. Heard a lot. The commercial team is deeply engaged in these, I'll highlight, too, you've already heard about. One of the COLT teams, led by commercial leaders working in concert with their operational counterparts. It's incredibly important that we reduce the number of cars online and reduce congestion in our customers' pipelines. We're bought in on it. As Mike said, we're accountable for it, okay?

Secondly, the dramatic increase in our local service frequency is incredibly important as well. Let me just pause for a second and just speak plain to you.

No one at Norfolk Southern intends for a single carload of customers' freight to sit in our yard when it could be at their dock. That's what serving your customer means, and that's what we're committed to.

We talked about enhancing flexibility. We need to be light on our feet. We have to be nimble in the marketplace to take advantage of opportunities. So we're engaging in shorter-term commercial contracts with our customers.

We're also expanding the use of public pricing that's available to all our customers that is both commercially competitive and flexible, okay?



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

Securing commitments is another piece of this. Securing commitments means as we enter into engagements or opportunities that require a longer-term commitment, we want to ensure that our resource commitments are paired up with volume and price commitments from our customers. We're managing our assets. I know you've heard that before today.

Lastly, testing the market. It's incumbent upon us, it's our responsibility to test the market every single day in terms of both price and operational efficiency. It is our responsibility to critically examine every carload of traffic on Norfolk Southern and ensure that it matches our strategic plan in terms of its operating characteristics and its margin profile.

Let me drill into that a little bit more because there's more to it.

To assist us in examining each carload, we've built this comparative framework model that we're employing, which includes evaluation not only of our current business but also every opportunity. And we do this on a continual and simultaneous basis, all right? This framework allows us to prescribe and then deploy the key drivers of yield improvement for industrial products: price on the one hand and productivity improvement on the other.

By diligently applying this very disciplined approach to all our business, we will ensure that our assets are competing for and securing their highest, best and most profitable opportunity, all right? This is sort of new in terms of that x axis, which is the relative effort piece, and so I want to explain what that means.

What does relative effort mean? We have a bias toward low relative effort. Here's how I evaluate it. Am I high velocity? Am I low circuitry? Do I require fewer touches by Norfolk Southern crews? Do I require fewer touches by a locomotive? I don't really care about length of haul. Do I require less yard space? If all those things are true, if I'm loaded well, I am low relative effort, all right? This drives some powerful behavior not only for the operations team but also for the commercial team. It drives behavior in a couple of different ways. First, everybody on the commercial side has Christine Traubel's team on speed dial in the NPO. We're working every day to work out those inefficiencies that we identify in every piece of freight on Norfolk Southern. The second thing that it makes you do if you're a commercial manager is you raise your hand, you want to go to Clean Sheeting a lot. We encourage it. We think it's great. It also means that you're either on a COLT team, trying to get on a COLT team or just got off a COLT team, all right? It is powerful in terms of behavior as well as outcome.

Let me pivot for just a second, talk about commodities because they do have substantial influence on our markets and our market opportunities.

Commodities are the products that go inside our railcars a lot of times. But commodity price changes drive opportunity and risk for Norfolk Southern. It can be simply the price change or demand change in the commodity that does it. For example, scrap metal, where the higher the price, generally the more demand there is for transportation of it. It can be more complex. It could be a substitute commodity in the same market or it could be a geographic difference in the same commodity. When I think of this, I think of crude oil as an example of that. Or it could be the derivative demand occurring from one commodity's importance or growth that drives demand for another commodity. I think of the relationship between natural gas prices and demand and frac sand. You layer on top of that tariffs, governmental actions, trade wars. These all have substantial impact on our markets than the volatility of those prices, and we can't do anything about any of that stuff. But what we can do is this: stay very close to our markets, build teams of market experts that understand the relationship between commodities and prices. We're doing that. We have a very strong team that's managing this stuff around the clock to ensure that we're capitalizing and managing opportunities as they arise.

Let's talk about 2018 -- or '19 and beyond.

You've heard from Jeff, you've heard from Alan we're in a strong truck market, all right? With an improved service product that you've heard about this morning, we will deliver very strong pricing throughout 2019 across all 4 of our major groups, all right? In fact, my goal is to deliver price that's ahead of anything we've delivered in recent years, all right? We're going to make sure we capture the value of our product.

We also anticipate growth -- strong growth in our metals market as well as continued growth in our chemicals markets, including plastic. Now over the long term, volume increases in steel, lumber, aggregates and plastics will probably be partially offset by declines in natural gas liquids and in crude oil due to increased pipeline activity.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

I'm pretty much done. But there's one last thing I do want to make sure that comes across with clarity.

Industrial products will meet its goal for the strategic plan. And we'll do it with strong, competitive pricing, we'll do it with enhanced productivity for ourselves and for our customers, all on the back of an improved service product that's being rolled out even as we speak. We have the right team. We have a great team. We have the right plan to execute our yield up strategy. By enhancing the value of supply chains that use Norfolk Southern, we're going to build long-term value for ourselves, for our customers and for our shareholders.

I appreciate your time and your attention today. Now I'd like to introduce, frankly, another market expert, a man who has managed not only the markets that I've just talked about, but he's going to talk to you about the markets he's managing now, Mr. David Lawson, our Vice President of Coal.

---

**David T. Lawson** - *Norfolk Southern Corporation - VP of Coal*

Thanks, Ed.

---

**Ed Elkins**

You're welcome.

---

**David T. Lawson** - *Norfolk Southern Corporation - VP of Coal*

Thank you.

Coal generated \$1.8 billion in revenue last year. Norfolk Southern has a great coal franchise. I'm excited to share with you our business outlook and then plan initiatives.

The strength, flexibility and access of our network to the Central App, Northern App, Illinois and Powder River coal basins continues to provide ongoing opportunities for our domestic and export markets. We continue to provide ongoing transportation solutions to our customers in part through our unique river access including our own Wheelersburg, Ohio coal terminal and the Great Lakes through our Sandusky, Ohio coal terminal.

Norfolk Southern's position and reach within the domestic metallurgical markets is vast and comprehensive. We serve 100% of the operational blast furnaces within the U.S. and we're -- about 98% of all coke production. We also serve 70 of the generating stations in the U.S. -- in the Eastern U.S. markets.

Norfolk Southern's coal franchise is a balanced portfolio of utility, export and domestic met coals. Utility and export represent roughly 60% and 25%, respectively, of our volume.

Our plan assumes a revenue decline of 2% CAGR over the term of the plan. Our plan CAGR is in line with independent third-party forecast groups such as oil trading, energy venture analysis and the government's own Energy Information Administration that range from flat to a negative 5% CAGR.

Now we all recognize that coal markets can be highly volatile, driven by U.S. and global economies, seaborne pricing, natural gas prices and even the weather. Our plan recognizes this and deals with innovative contracts and productivity initiatives. Our plan assumes that natural gas follows a forward curve and announced plant retirements on NS of less than 1 million tons.

Now we recognize the challenges of trying to forecast the coal markets. We take a little bit of comfort in knowing that based on our last strategic plan, our actual results were within 1/2 of 1% of our forecast.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

Utilities within our market have been operating between 45% and 55% of their stated capacities, which provides significant upside opportunity for us when market conditions allow. As this slide shows, coal is projected to continue to be a viable fuel source in the U.S. electric generation story for years to come.

Now the fundamental shift of coal from a baseload fuel source to a load-following fuel source caused us to reevaluate the structures, incentives and asset alignment of our utility contracts. I can tell you that we have increased shareholder value by creatively reengineering over 50% of our contracts -- utility contracts to incent more deliveries of coal by rail, better managed variability and take advantage of price when market conditions allow.

Last year, roughly 70% of the NS-served utilities outpaced the market performance of their respective coal plants. By leveraging our relationships with our customers -- by leveraging the relationships of our customers, along with our ability to assess market conditions, such as power prices, grid position, we've been able to model and analyze this batch economics at not only the plant level but down to the unit level.

International coal supply continues to be constrained as a result of a lack of capital investment and production discipline, which should keep -- which should support prices and keep U.S. coals competitive in the seaborne market.

Lamberts Point continues to be the premier coal loading facility in terms of its capacity and blend capabilities. We've rolled out a new reservation system this year that will help enhance the value of Lamberts Point. Customers have already committed tons to us this year that will help us better align the demands of the market to our resources. Now our reservation system contemplates from quarter-to-quarter spot opportunities, which we plan to take advantage of, for those customers who are either unwilling or unable to make commitments.

Our focus is and has always been our margin. This focus will help us continue to drive for our yield up strategies, which will propel us into achieving our business plan.

Thank you. I'd now like to introduce Karol Lawrence, Vice President of Customer Service, who will help share with you how NS is leveraging our technologies to drive world-class digital solutions for our customers so that they may better reimagine their experiences with NS. Karol?

---

### **Karol Lawrence**

Thanks, David. It's a pleasure for me to be part of the Norfolk Southern growth team.

As Jeff, David and Ed have been discussing, our business is changing. Additionally, the way that customers view their supply chain partners is also changing. It's not new information for us. In our customer surveys, we've heard that we need to provide better information and options. We need to make it seamless and simple to do business with Norfolk Southern.

In response to those surveys, we launched an effort to improve our customer experience. Many of the projects we started under that effort are now available for our customers, and there's many more coming soon.

We started our effort by talking to our customers, big and small, across all our lines of business, about what they perceived was best-in-class customer service.

The answers were interesting. They didn't compare us to other railroads or even the other truck companies. They compared us to features like the way UPS or FedEx can trace your last-mile delivery, or the multichannel soft-service options that a Southwest Airlines or a Delta Air Lines have, or even the consistency of customer experience of a company like Publix. It was clear that we needed to reimagine the way we viewed customer service.

Step 1 was to create an online customer portal that would provide customers with all the features and functions that they needed to manage their business day-to-day. Our new portal, AccessNS, which was released last year, provides our customers with clear visibility to their shipments throughout the entire pipeline. The information is all easy to understand and in a format similar to what they might see if they were checking on



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

their flight or tracking a package. They can also transact business with Norfolk Southern in that same easy and intuitive way. Asking for new rates, ordering [MT] equipment, diverting shipments and routes, ordering re-leasing cars, submitting shipping instructions or validating charges prior to billing are all available functions.

But it's not just a website, it's a new way of interacting with our customers. We want our customers to have the best information possible about their business no matter what channel they approach Norfolk Southern with. So if they call our customer service center and speak to a representative, they're going to get the same information and options that they would get if they went on AccessNS.

Additionally, our customers are increasingly not office bound. As businesses look for efficiencies in their operations, the same person who's responsible for the supply chain might also be responsible for manufacturing. There are people on the move, and we've gone mobile as well. In the same way we approach the portal, we designed the mobile app to be industry leading and highly intuitive.

Trax is available for all our customers right now on their favorite app store.

Behind the scenes, we're also looking at our internal processes as well. We've developed new, more efficient pricing technologies that allow us to quickly respond to business opportunities, making us more competitive against other modes.

We've also implemented a state-of-the-art CRM system so that our customer service representatives are efficient and accurate, eliminating redundant tasks or things that don't add value to the customer.

And we're not finished yet. Now we have a solid platform where we can quickly build new features and functions to refine the customer need or changes in business conditions. It also allows us to think about other opportunities where we can add value to customers.

This has led us to start to think about predictive analytics. As we mentioned earlier, one of the best practices our customers desired was this ability to trace last-mile shipments. There, our customers are managing their inventories days and weeks in advance. To effectively manage their business, they need to know what will or won't show up each day. And to better manage that business, the shorter the time frame is on their service windows, the better they can manage. Just like when you call the cable repair man, it's great to know he's going to arrive on Tuesday, but infinitely better to know that he's going to arrive between 2 and 4 in the afternoon.

Though we manage our local operations to a schedule, the volume of work and the number of customers we serve each day is variable. Using predictive analytics, we're working to refine our customer service window to tighter and tighter time frames, and automatically notifying customers when their shipment is going to arrive. This allows our customers to be more efficient, reduce their safety stock and their labor cost. This adds value to the service that we provide. It also allows Norfolk Southern to better plan our resources, making the most out of our assets and people.

Just as most have been talking how we're changing the experience around train service, but we've also been investing in terminal operations, both our intermodal and automotive terminals.

Storage capacity remains constrained. If a driver has to spend 30 minutes driving around the terminal looking for a shipment or waiting in line at the in-gate or out-gate process, that's all time that he or she could spend taking on another load that day.

NS offers ExpressNS, which is a mobile app designed to reduce the amount of time that a truck will spend on our intermodal terminals. A driver will have their shipping instructions sent to their phone previously validated through NS systems. He can speed through that in-gate process using specially designed ExpressNS entrances and a QR code on his phone. No need to check in with a gate clerk or go through an inspection. That then presents him with a map of the facility and GPS directions that take him right to his parking spot or load. Once he's got his shipment and he's acknowledged he's ready to go, a new QR code is presented on his phone that allows him to speed back out the gate and his J1 receipt is sent to his phone for payment.



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

The drivers really appreciate this efficiency, which can translate into them choosing our terminal as opposed to other work that they can pick up that day. This is beneficial to our customers, and needless to say, it improves our throughput, which means it effectively expands our terminal capacity.

We're currently developing a similar technology for our auto facilities as well. Behind that system, we're also investing in other technology to make our terminals operate as efficiently as possible.

We've installed GPS systems on our cranes and hostlers, which allow us to know what work is being done and where, and keep a highly accurate inventory of what's in our terminal. We're also investing in cranes that can automate some of the labor-intensive loading and unloading that we do each day.

There's a whole lot we can do in this space, and we've just started to scratch the surface of the benefits. More efficient operations allow us to continue to expand our intermodal business, without -- with less capital investment, getting the most out of the assets that we have in the ground today.

This is the capacity dividend we've been talking about all day. Not only are we focused on keeping the steel wheels turning, we're also keeping the rubber tires rolling. So why are these efforts part of our strategic plan?

It's because NS understands that making our customers more efficient and improving our customer experience has a direct impact on the top line and the bottom line.

Norfolk Southern's creating a completely reimagined customer experience for the customers we have today and the ones we'll have tomorrow. Alan?

---

### **Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

Thank you, Karol. Karol's our VP of Customer Service, and she is in our operations division. Her team and her efforts are critical components of the growth team further highlighting the alignment between operations and marketing on driving margin improvement.

We're encouraged by the signals we're getting from the economy, the feedback from our customers and the results that we're seeing as we implement the initiatives in our strategic plan.

At Norfolk Southern, we've got the demonstrated ability to grow. In 2017, we grew our revenue by 7%, we followed that up with a 9% growth rate in 2018, while delivering the best year-over-year pricing increases in the last 7 years.

And we're off to a great start in 2019. We're going to grow. And we're going to grow our margins. And we're investing in that growth by putting our quality service product out there and pricing at levels that generate strong returns.

Marketing embraces the changes to our operating plans because we know it's going to benefit the vast majority of our customers. And we're collaborating with our customers, they're engaged in this process. We understand and we recognize that for some of our customers, these operating plan changes will not fit their current supply chain model.

Now hopefully, what you've heard today is the alignment between marketing and operations. The initiatives that you've heard about, intermodal lane rationalization, market segmentation through operating parameters, the reservation system for our export coal franchise, the NPO, the Cars On Line Team and Clean Sheeting, highlight our mutual dedication to this plan.

Marketing and operations have put together a very solid plan for strong margin growth. And I'm very confident in the ability of marketing and operations to deliver the results.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

With that, I thank you for your time, and now Jim and his executive team will come up, be happy to answer your questions.

## QUESTIONS AND ANSWERS

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Okay. We'll have one final 10- to 15-minute Q&A period, and then I'll make a few concluding remarks. We'll get you on your way by 3:00. [Tony].

**Justin Trennon Long** - *Stephens Inc., Research Division - MD*

Justin Long with Stephens. Jim, maybe to start with one for you. You made the comment earlier about wanting to capitalize in the current growth environment, and it seems like you're fairly positive about the economy. But if we do see a moderation in the economic backdrop, if the trucking cycle gets worse as we progress over the next years, could that potentially pull forward the timing of the Top21 implementation? And does that make Top21 easier to implement? And then maybe Alan, a follow-up for you on intermodal, that 10% revenue growth is pretty optimistic and encouraging. Could you comment on the mix between volume and RPU that's embedded within that?

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Justin, let me go back to where I started again this morning, this plan is about operational improvement. That is the foundation of this plan. We recognize the need for cost control, for greater efficiency and all the ways we've talked about this morning. We have a strong revenue growth plan as well in the expectation that we will be able to deliver on yield up in a favorable macro environment. If the macro environment changes, we will pivot, we will adjust, just as we did in 2016, when we had a freight downturn, we were able to adjust, and again, in 2017 and 2018 when growth surged. Alan, talk a bit -- a little bit more about the revenue side of it.

**Alan H. Shaw** - *Norfolk Southern Corporation - Executive VP & CMO*

Justin, it is -- we do have a strong pricing plan in our intermodal franchise. And you hear our channel partners talk about the ability to continue to price into the intermodal network. We've got a great network. We grew our revenues by 11% in 2017 in the intermodal franchise, and 18% in 2018, even while yielding up and rationalizing some of the lanes. The focus has always been a push in margin, and we're delivering that.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Ken.

**Kenneth Scott Hoexter** - *BofA Merrill Lynch, Research Division - MD and Co-Head of the Industrials*

It's Ken Hoexter from Merrill. Just on the -- Jeff, on the intermodal, let me start off with an intermodal question and add just a bigger picture one after that. But just it always seem like you had a better network, intermodal network, given your scale in the East. But you talked about lane rationalization, I just want to understand what that means to you compared to what we've seen your peer do on -- and use a -- they used to run it -- intermodal as a stand-alone network, so they had a lot of work to do. But you talked a bit about lane rationalization, so maybe if we could just get a little -- I meant -- I guess, Alan, he's not up there, but I guess, Alan, if you want to talk about that, what your thoughts on that?



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Sure. Well, as I said earlier, Ken, we start out with a solid point-to-point network. A triangular network, that is high density and suits our purposes, our growth purposes well. Alan, what are we doing to further rationalize that network?

**Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

We do have the most powerful intermodal franchise in the East. And we are continuing to refine it, pruning around the edges, taking out network complexity. If there are lanes that aren't generating a high-enough margin and we can utilize those assets, whether it's chassis or boxes or terminal capacity elsewhere, we'll do it. And we're working with operations, so that we can develop a consistent and reliable service plan because that's ultimately what you're selling into the intermodal franchises, consistency, reliability and capacity. And we're pricing up into that. And as I talked about before, incremental margins with intermodal have grown steadily and impressively over the last couple of years.

**Kenneth Scott Hoexter** - BofA Merrill Lynch, Research Division - MD and Co-Head of the Industrials

And I guess, if I could just follow up with a bigger picture one. You've talked a lot about Clean Sheeting versus precision railroading. And I guess, I just want to take a step back just to make sure I understand the difference of what you're trying to say, because we always hear that PSR is you have to run it for the railroad, not for the customer. Obviously, you talked a lot about how you want to shape it for the customer today, work with them and then build up. So is there a point of conflict where you can't necessarily meet the needs of running an on-time scheduled railroad given that you're kind of trying to work for the customer resolution?

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Ken, I wouldn't describe it as Clean Sheeting versus precision railroading, it's Clean Sheeting as precision railroading. These are techniques straight from the PSR playbook. Now will there ever be a time when our network, our new and improved network with TOP21 and Clean Sheeting fully implemented does not meet the needs of a given customer? Yes, certainly. We are seeking to run a consistent, reliable service that optimizes the network and meets most customers' needs.

**Turan Quettawala** - Scotiabank Global Banking and Markets, Research Division - Director, Transportation and Aerospace, Equity Research

Turan Quettawala from Scotia Bank. I had a question on NS's revenue and the OR cadence that you're talking about. If I look at the momentum that you called out coming into 2019, it seems like they'll replicate into probably front-end loaded, whereas the OR cadence seems to be a bit more back-end loaded. Maybe you can talk a little bit about why that's happening because the revenue should potentially help the OR faster? Maybe using that one [survey], if you could just talk a little bit about that?

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Okay. Alan, why don't you take the revenue piece to that. What's the revenue cadence in the plan?

**Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

Yes. We're continuing to push for opportunities in the intermodal and in the merchandise network. We are anticipating headwinds within our coal revenues this year as a result of a potential decline of seaborne coking coal prices. If they remain elevated, there's more upside to that. We're continuing to push in price. And as Ed talked about, we are looking at contract duration so we can approach pricing more frequently and more in line with what's happening in the market.



FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Cindy's talked about the expense side of the operating ratio cadence. Cindy, go back over that. Any further thoughts on cadence from the expense side and overall OR?

**Cynthia C. Earhart** - *Norfolk Southern Corporation - Executive VP of Finance & CFO*

Yes. Well, we certainly talked about the headcount reductions, 500 at year-end comparison and then a total of 3,000 on, like, 2021. I guess, what I would say about that is, that we've also talked earlier today about developing the plan and executing the plan and ensuring we're able to execute it consistently before we take the resources out. And I think that plays some into it as well. But obviously, we're going to continue to push hard as we can on both the revenue side as well as the productivity.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

There's a question here to the left.

**Unidentified Participant**

Deutsche Bank. I've just one question on the yield up initiative with respect to the incentive structure of the guys that are actually negotiating or executing on the yield up. Can you just talk about how that's changed on the ground? And then with respect to the senior management team, the incentive structure for the at least 65 by 2020, I think, was predicated on OR and service. Has that changed at all? And there was also some caveats in there in terms of accelerating additional incentives for acceleration of the plan. Want to see if that's changed or anything to mention there with respect to the new target?

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Incentive compensation structure is tied tightly to delivery of long-range plan results, of the new strategic plan results. So it's operating ratio improvement, as outlined here. It's operating income growth. And on the long-term piece, it's return on capital. So we are incented based on performance under the strategic plan given the goals that we have outlined today. And that's something that our Board of Directors felt very strongly about put in place. With the new strategic plan in place, we want you to deliver. And if you do, you'll be paid. And in terms of the marketing forces and their incentive structures. They are members of the management team, their incentive bonus is exactly the same as ours, it's tied to their bottom line company results.

**Cherilyn Radbourne** - *TD Securities Equity Research - Analyst*

Cherilyn Radbourne from TD Securities. I think the comment was made very early on something about the organization being one toe in and one toe out on PSR. Can you just kind of talk about some of the key tipping points that really cemented your commitment to the idea that this is the way to go?

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Sure. Mike, you talked about that earlier. So what were some of the key pivot points for you when you felt the culture changing and you felt the momentum really picking up?

FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Michael A. Farrell** - Norfolk Southern Corporation - SVP of Transportation

Well, we have been through a few terminals in the South on this railroad. And as soon as we went up to the Northeast, we started Alabama, Conway, Enola. And really, the dividend that we gained, the capacity we created was actually remarkable. Talk a little bit about Enola, they just hit their 500th train in a row on-time. I called them about 3 weeks ago to wish them a great job on their 300th train on-time, and as I was talking to the superintendent, he had said, "It wasn't me, it was the team." Everybody's holding everybody accountable. Accountable -- all the yard crews accountable, the yard crews is holding the train crews accountable, train crews are holding the yard masters accountable, and in order to make this really work, it has to be developed at that level. We can tell people so many things, but if we don't get the collaboration from below, it's pretty tough to challenge. So they hit over their 500th train in a row.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

[Tony].

**Unidentified Participant**

I've got 2. Alan, can you talk -- or anybody, can you talk about short line collaboration and/or possibly creation out of there? What's happening with the short line? So often in this process, do they have to do more work for you to pre-block and whatnot? So wondering about that. And then I also wondered about your return on capital goals, and where you are now?

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Alan, why don't you take the short line piece of that?

**Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

You heard Brandon Smith earlier, right? Brandon Smith, PSR principles on the Canadian roads, also spent time working for short line, right. And so he understands what this does to the short line industry. One of the strengths of our network is our alignment with over 250 short lines. And in fact, right after this, Mike McClellan and Ed Elkins and I are going to go visit at a short line conference we've got at the Forrest this evening. We're collaborating with them. They want to grow just as much as we do. And so they know that putting a truck-light product out there allows them to grow and improve in service. And so that's what we're collaborating with them on. Our goals are aligned. And the Clean Sheeting and the coal team, your short line folks are actively involved in this. There, the short -- there, the Clean Sheeting -- there's the short line involved, they're ahead of it, they're talking to the short line. That team's actively engaged in the Clean Sheeting and the coal teams.

**Unidentified Participant**

CSX is creating -- or our segment are going to create short lines out of this process. As they rationalize their network, have you guys thought about creating segments that you would put up for sale? And I have that ROIC question for Cindy.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

[Tony], we've done a lot of that in the past. And there may be opportunities going forward. I think there will always be opportunities to do smaller short line deals, and where that makes sense, we'll do it. But no, we do not see large-scale short line opportunities in our network today. Now, going to your return on capital piece. Look, both sides matter. I've talked about this a lot before. Profit margin, capital turnover, both parts of that equation are vital. With the type of operating ratio improvements we're targeting in this plan, we should see a significant improvement in the profit margin piece of return on capital. Similarly, capital turnover. That's vitally important too, we want to be very mindful of the additional capital that we're retaining in the organization. As we grow revenue on that more stable base of capital, we'll see that part of the equation improve as well.

FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**Bascome Majors** - *Susquehanna Financial Group, LLLP, Research Division - Research Analyst*

Bascome Majors, Susquehanna over here. Jim, you've acknowledged NS wasn't delivering its full potential. You went out, you brought in some outside help to help you close that gap. Today, you went public with an aggressive set of targets and a plan to achieve them over the next 3 years. Can you talk about the board discussions on keeping management accountable for these targets over the next 3 years? What are we going to see in next month's proxy that's new or incremental to last year's proxy when it comes to management targets, long-term incentives, that sort of thing?

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Well, we -- the board is holding us accountable and you are holding us accountable. Our customers are holding us accountable for results under this plan. And we know that, we feel that. And we're going to drive for success in the plan that we've outlined today. The structure of long-term compensation, as will be set forth in the proxy statement, is not fundamentally changed. It's all about delivering results. And a larger part of our compensation will be tied to delivery of strategic plan results as outlined today.

**Bascome Majors** - *Susquehanna Financial Group, LLLP, Research Division - Research Analyst*

And Cindy, could you just put a finer point to the leverage target you laid out, exactly how you're calculating that, just so people understand?

**Cynthia C. Earhart** - *Norfolk Southern Corporation - Executive VP of Finance & CFO*

Well, we've said that we're targeting an adjusted debt-to-EBITDA of 2.4 to 2.5, which is sort of the middle of the BBB+, Baa1 range. And that's sort of where we want to try to be. I mean, I'll just point out, as you know I'm sure, the calculation for the adjusted debt-to-EBITDA, the rating agencies will do some adjustments. They'll adjust for pension, they'll do some adjustments for operating leases, they'll do adjustments for net discount on debt, which actually is one area where we have a fairly significant amount due to all the debt restructuring that we've done the last few years. So that's where we're trying to target. And -- so that's what we're looking at going forward.

**Bascome Majors** - *Susquehanna Financial Group, LLLP, Research Division - Research Analyst*

Gross debt or net debt?

**Cynthia C. Earhart** - *Norfolk Southern Corporation - Executive VP of Finance & CFO*

Sorry?

**Bascome Majors** - *Susquehanna Financial Group, LLLP, Research Division - Research Analyst*

Gross or net debt?

**Cynthia C. Earhart** - *Norfolk Southern Corporation - Executive VP of Finance & CFO*

Net.

**James A. Squires** - *Norfolk Southern Corporation - Chairman, President & CEO*

Yes, David?

FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

**David Scott Vernon** - Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst

David Vernon with Bernstein. Cindy, could you talk a little bit about how we should expect the headcount to be coming out? 500, I think as mentioned the first quarter is going to be up and then we should be down 500, and then down 3,000. Is that going to require any sort of onetime cost along the way? Or is this going to be managed through attrition? And then as you think about the CapEx budget kind of looking at 17% or so of sales, is there anything associated specifically with this plan that will come out outside of things like PTC and stuff like that over time that we should be thinking about from a modeling standpoint?

**Cynthia C. Earhart** - Norfolk Southern Corporation - Executive VP of Finance & CFO

In terms of how we're going to be taking headcount out, we will be taking headcount out. You saw the -- the biggest measure that we're looking at is T&E productivity. That's the biggest area. Now having said that, we plan on taking headcount out in other areas over time as we continue to push on productivity. And that's non-agreement headcount, non-T&E headcount. And we believe that we'll take that out by attrition as we go forward.

**David Scott Vernon** - Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst

All right. And then -- and maybe, Alan, just as a follow-up, as you think about the 10% revenue growth in intermodal, do you have enough capital equipment to drive that growth right now? Or you're going to be relying more on your third-party channel partners to be bringing the chassis and the equipment to bear to kind of drive that growth?

**Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

So we will invest in chassis and containers this year. We have pivoted on our intermodal investment strategy from greenfield to expansion of existing terminals. And yield up is a critical component of this ability to drive margin and revenue growth. We're looking with a very intense eye at any opportunities. Any business that isn't generating the right types of returns is something that we can look to trade up those assets to something with a higher return. That's what we've been doing.

**David Scott Vernon** - Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst

(inaudible)

**Alan H. Shaw** - Norfolk Southern Corporation - Executive VP & CMO

Oh, the box, we're going to invest in boxes this year and in chassis this year. And you heard our channel partners, they're very optimistic about growth in the intermodal space going forward. We're aligned.

**James A. Squires** - Norfolk Southern Corporation - Chairman, President & CEO

Well, thank you for all your questions. I'd like to wrap it up now so we can get you on your way. If you have follow-up questions, we'd be delighted to follow up with you at any time. Give us a call. Clay will follow up, and we're happy to, as well. Thank you.

I'll just make a few concluding remarks, and then we'll go. So thank you to all of you and to everyone who joined us for our 2019 Investor Day.

Today, you heard from leaders all across our company who are committed to reimagining Norfolk Southern. I started out by reflecting on the progress we've made over the last 3 years, and that progress has given us confidence we can fulfill the goals in our new strategic plan. The plan is



## FEBRUARY 11, 2019 / 3:00PM, NSC - Norfolk Southern Corp Investor and Financial Analyst Conference

based on specific initiatives, which you heard about today. Clean Sheeting; TOP21, which will consolidate trains, reduce circuitry, improve service and drive down cost.

Instead of running 4 networks, we will run 1. And we've already seen the early returns. As I said earlier, this isn't just a plan for shareholder value, we will deliver, it's a plan we are delivering.

We break through on yielding up, our strategy for growing the top line and margin. Price to the value of our service, direct railroads, railroad assets to their most valuable use, understand at all times the cost of service and ensure all services are executable. But the commitment doesn't stop with operations. Openness to new ideas and accountability will be the hallmarks of new culture throughout NS.

So in closing, our strategy is right for Norfolk Southern. And as shareholders now and in the long term, we're excited about what lies ahead. We have the team in place and the plan in place to deliver the results you expect.

I appreciate everyone's time and attention here today, and look forward to keeping you apprised of our progress as we reimagine Norfolk Southern. Thank you.

### DISCLAIMER

Thomson Reuters reserves the right to make changes to documents, content, or other information on this web site without obligation to notify any person of such changes.

In the conference calls upon which Event Transcripts are based, companies may make projections or other forward-looking statements regarding a variety of items. Such forward-looking statements are based upon current expectations and involve risks and uncertainties. Actual results may differ materially from those stated in any forward-looking statement based on a number of important factors and risks, which are more specifically identified in the companies' most recent SEC filings. Although the companies may indicate and believe that the assumptions underlying the forward-looking statements are reasonable, any of the assumptions could prove inaccurate or incorrect and, therefore, there can be no assurance that the results contemplated in the forward-looking statements will be realized.

THE INFORMATION CONTAINED IN EVENT TRANSCRIPTS IS A TEXTUAL REPRESENTATION OF THE APPLICABLE COMPANY'S CONFERENCE CALL AND WHILE EFFORTS ARE MADE TO PROVIDE AN ACCURATE TRANSCRIPTION, THERE MAY BE MATERIAL ERRORS, OMISSIONS, OR INACCURACIES IN THE REPORTING OF THE SUBSTANCE OF THE CONFERENCE CALLS. IN NO WAY DOES THOMSON REUTERS OR THE APPLICABLE COMPANY ASSUME ANY RESPONSIBILITY FOR ANY INVESTMENT OR OTHER DECISIONS MADE BASED UPON THE INFORMATION PROVIDED ON THIS WEB SITE OR IN ANY EVENT TRANSCRIPT. USERS ARE ADVISED TO REVIEW THE APPLICABLE COMPANY'S CONFERENCE CALL ITSELF AND THE APPLICABLE COMPANY'S SEC FILINGS BEFORE MAKING ANY INVESTMENT OR OTHER DECISIONS.

©2019, Thomson Reuters. All Rights Reserved.