The Strength of a Unique Franchise

Union Pacific
2017 Fast Facts

- $19.8 billion in freight revenue
- Operations in 23 states
- 32K route miles
- 10K customers
- 64K freight cars
- ~40% traffic interchanged with foreign carriers
- ~40% international business
The Southeast is Important to Our Business

Supporting Growth:
+ Population
+ Business
+ National & Global Trade

*Source: National Population Projections, University of Virginia
Raising the Bar in Safety
PTC: How it Works

Using GPS, PTC evaluates train’s Distance from end of authority limits.

Warning given if engineer doesn’t slow train.

PTC triggers brakes in engineer doesn’t brake to stop short of limits.

BRAKING IN PROGRESS
Rail Industry Update: Positive Train Control (PTC)

As of December 2017:

• 78% of Required Locomotives Equipped with PTC

• PTC Installed on More than 72% of Required Track Segments

• 97% Required Radio Towers Installed

• 87% of Required Employees Trained on PTC

• 56% of Required Route Miles Implemented PTC

Source: AAR.org, Positive Train Control Update
~$3.3 Billion
2018 Capital Plan

60% $1,970 M Infrastructure Replacement

14% $460 M Locomotives & Equipment

14% $445 M Capacity & Commercial Facilities

7% $240 M Technology & Other

5% $160 M Positive Train Control (PTC)

Includes cash capital, leases and other non-cash capital.
Regional Capacity & Infrastructure Improvements

2009-2017

Construction and timing of these projects is dependent upon business conditions and is subject to internal approval. Network capacity projects are not specifically designated for sole use by any given customer and is not a guarantee of future performance improvement.
Union Pacific is Positioned for Growth

Brazos Yard Project

$550MM Capital Investment is Largest in 155 Year History
Brazos
Once-In-A-Generation Facility

- **Initial Capacity:**
  1,200-1,300 cars per day
  40 bowl tracks

- **Future Capacity:**
  2,300 cars per day
  70 bowl tracks

- **Construction Timeline:**
  1Q2018 through 2020
Long Term Economic Drivers

U.S. Population
(in millions)

2015  2020  2025  2030

12% Increase

Population GROWTH
Continued market RECOVERY
Highway CONVERSIONS
Global TRADE

Source: Census Bureau 2015 National Population
US Exports of Synthetic Resins

North American Exports of Polyethylene Double by 2022

China Absorbs Half of Export Growth

China Exports Supported by Dallas to Dock Solution

*Source: IHS Markit, Analysts Expect Resin Exports to Ramp Up in 2018, Bonney 2.8.18
2018 Volume Outlook

**Agricultural Products**
- Ethanol Exports
- Food and Refrigerated
  - Grain

**Energy**
- Frac Sand
- Natural Gas Prices
  - Continued Coal Headwinds

**Industrial**
- Plastics
- Construction Products
- Industrial Production

**Premium**
- Over the Road Conversions
- International Intermodal
  - Automotive Sales
Industrial Team

- Forest Products
- Plastics
- Specialized
- Industrial Chemicals
- Soda Ash
- Metals
- Construction

Serving 70+ Diverse Markets

- 2,300+ Shippers
- 5,400+ Receivers
- 75% Manifest / 25% Unit Train

All numbers are reflective of 2017 FY Volume
Excellent Customer Experience
Focus Areas

**Shopping**
Simplifying the shopping experience
Example – Multi-modal pricing via UP Website

**Shipping**
Delivering solutions to resolve issues quickly
Example – Mobile Work Order

**Technology**
Providing new and innovative technology solutions
Example – Smart ETA
Dedication to Serve
UP Technology Enhancements

• UP Mobile Work Order
  – Real time reporting of pick-up and deliveries
  – Standardize communication for changes in local service
  – Supports customer day-to-day decisions
Dedication to Serve
UP Technology Enhancements

• Customer Notifications
  – Service Scheduled For Today
  – You Are Next
  – No Service Today

• Shipment Management
SmartETA
ETA Prediction with Machine Learning

GPS DATA

MACHINE LEARNING

SMART ETA

ETA Accuracy
Current vs SmartETA

+/− 6h
+/− 3h
+/− 0h

Origin 3 Days 2 Days 1 Day 12H 8H 4H 1H Dest

Current SmartETA

+/− 30 minutes

VS.

CURRENT

+/− 4 Hours
Key Takeaways
Winning in the Transportation Marketplace

Continued Focus On:

• Consistent & Reliable Service
• Service Plan Flexibility
• Excellent Customer Experience
• Delivering Value