LYNX Forward
Reimagining LYNX for Central Florida
Florida Section ITE & ITS Florida
Annual Meeting - November 2, 2017
Our Partners
Agenda

1. LYNX Overview & Technology Projects
2. LYNX Forward
3. TDP Public Outreach
4. Forward Goals
5. Data Analysis
6. Route Optimization Study
## LYNX Overview

**LYNX FORWARD** will explore the current transit system and seek to identify improvements for its 10-year Transit Development Plan. Additionally, through the Route Optimization Study, LYNX will seek out opportunities to refocus and enhance regional mobility.

- **300** Buses
- **2,500** Sq. Mile Service Area
- **77** Bus Routes
- **85,000** Rides provided each weekday

### CURRENT TRANSIT SERVICES:

<table>
<thead>
<tr>
<th>LINK (Fixed Route)</th>
<th>LYMMO</th>
<th>FASTLINK</th>
<th>NEIGHBORLINK</th>
<th>XPRESS LINK</th>
<th>KIGHTLYNX</th>
<th>ACCESS LYNX</th>
<th>ROAD RANGERS</th>
<th>VANPOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fare-Free Downtown Orlando Circulators</td>
<td>Limited Stop Commuter Bus Service on select corridors</td>
<td>On-Demand Service for select areas connecting to destinations and LYNX bus service</td>
<td>Downtown Kissimmee to Sand Lake Sunrail Station express bus</td>
<td>Weekend evening service for UCF Orlando area students to Downtown</td>
<td>Door-to-door service for persons with disabilities</td>
<td>Roadside assistance program to assist disabled vehicles on I-4</td>
<td>Carpool with colleagues or neighbors using LYNX provided vans</td>
<td></td>
</tr>
</tbody>
</table>
LYNX Technology Projects

- Fixed-Route Wi-Fi
- Fixed-Route Real-Time Information
- NeighborLink Real-Time & Reservations
- Mobile Fare Payment
- Transit Signal Priority
- See & Say
FORWARD Guiding Principles

**IMAGINE**
- Economic Development
- Sustainability
- Quality of Life

**INNOVATE**
- Technology
- Bike & Rideshare Integration
- On-Demand Service

**CONNECT**
- Public/Private Partnerships
- Strategic Network
- Intermodal Connections
- Communication

**ARRIVE**
- Transportation Provider of Choice
- Efficient
- Reliable
- Safe
**TDP Public Outreach**

### Outreach Events
- 4 Grassroots Events
- 3 LYNX Superstops
- Online Public Survey
- 3 Public Workshops
- 30 Face-to-Face Stakeholder Interviews
- Mid-level manager online interviews

### What We Have Heard
- Frequent Service, Direct Connections, Reliable Schedules

### Upcoming ROS Activities
- 4 Grassroots Events: Viva Osceola, Sanford Alive After 5, Winter Park Farmers Market
- Super Stops: Poinciana, Seminole Center, Florida Mall

412 Total Surveys

141 Comments
# One Size Does Not Fit All

## Regional Transit Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
<th>Seated Capacity (per Vehicle)</th>
<th>Service and Frequency</th>
<th>Regular Fare</th>
<th>Regular Monthly User Cost</th>
<th>Typical Operating Cost (per vehicle)</th>
<th>Typical Capital Cost (per vehicle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SunRail</td>
<td>Commuter rail operated by the Central Florida Commuter Rail Commission</td>
<td>75 to 190</td>
<td>30 minutes (Mon - Fri)</td>
<td>$$</td>
<td>$56 - $112 (with pass)</td>
<td>$550 - $650/hr</td>
<td>$14 to $18 million</td>
</tr>
<tr>
<td>Train to Plane</td>
<td>Sand Lake SunRail Station to Orlando International Airport express bus</td>
<td>40 to 60</td>
<td>30 minutes (Mon - Fri)</td>
<td>$</td>
<td>$50 (with pass)</td>
<td>$90 - $130/hr</td>
<td>$500,000 to $1,000,000</td>
</tr>
<tr>
<td>Xpress Bus Service</td>
<td>Downtown Kissimmee to Sand Lake SunRail Station express bus</td>
<td>40 to 60</td>
<td>Mon - Fri (Six trips/day)</td>
<td>$$</td>
<td>$50 (with pass)</td>
<td>$90 - $130/hr</td>
<td>$500,000 to $1,000,000</td>
</tr>
<tr>
<td>FastLink</td>
<td>Limited stop commuter bus service on select corridors</td>
<td>40 to 60</td>
<td>60 mins (Mon - Sat)</td>
<td>$</td>
<td>$50 (with pass)</td>
<td>$90 - $130/hr</td>
<td>$500,000 to $1,000,000</td>
</tr>
<tr>
<td>Disney Direct</td>
<td>Limited stop direct service for employees</td>
<td>40 to 60</td>
<td>Select trips</td>
<td>$</td>
<td>$50 (with pass)</td>
<td>$90 - $130/hr</td>
<td>$500,000 to $1,000,000</td>
</tr>
<tr>
<td>Fixed Route Bus</td>
<td>Local bus service with more frequent stops</td>
<td>40 to 60</td>
<td>30 - 60 mins (except on Sun)</td>
<td>$</td>
<td>$50 (with pass)</td>
<td>$90 - $130/hr</td>
<td>$500,000 to $1,000,000</td>
</tr>
</tbody>
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# One Size Does Not Fit All

## NEIGHBORHOOD/DISTRICT TRANSIT SERVICES

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<tr>
<td>LYMMO</td>
<td>Downtown Orlando Bus Rapid Transit (BRT) circulator with dedicated lanes</td>
<td>30</td>
<td>5 - 20 minutes</td>
<td>Free</td>
<td>Free</td>
<td>$90 - $130/hr</td>
<td>$700,000 to $800,000</td>
</tr>
<tr>
<td>KnightLYNX</td>
<td>Service for UCF students to Downtown Orlando</td>
<td>40</td>
<td>75 mins (Fri &amp; Sat nights)</td>
<td>$50 (with pass)</td>
<td>$50 (with pass)</td>
<td>$90 - $130/hr</td>
<td>$500,000 to $1,000,000</td>
</tr>
<tr>
<td>NeighborLink</td>
<td>On-demand for select areas connecting to destinations and Fixed Route bus</td>
<td>14</td>
<td>2 hrs before reservation</td>
<td>$2 one ride; $4.50 all day</td>
<td>$50 (with pass)</td>
<td>$40 - $50/hr</td>
<td>$175,000 to $200,000</td>
</tr>
</tbody>
</table>

## SPECIALTY TRANSIT SERVICES

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
<th>Seated Capacity (per Vehicle)</th>
<th>Service and Frequency</th>
<th>Regular Fare</th>
<th>Regular Monthly User Cost</th>
<th>Typical Operating Cost (per vehicle)</th>
<th>Typical Capital Cost (per vehicle)</th>
</tr>
</thead>
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<tr>
<td>ACCESSLYNX</td>
<td>Door-to-door service for eligible customers that can’t use regular service</td>
<td>14</td>
<td>Day before reservation</td>
<td>$4 to $7/trip</td>
<td>$50 (with pass)</td>
<td>$35 - $100/hr</td>
<td>$50,000 to $80,000</td>
</tr>
<tr>
<td>VanPool</td>
<td>Carpool with colleagues or neighbors using LYNX provided vans</td>
<td>7 - 15</td>
<td>Van rental from LYNX</td>
<td>N/A</td>
<td>$40 - $100 (with pass)</td>
<td>$400 - $690/month</td>
<td>$35,000 to $40,000</td>
</tr>
</tbody>
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<tr>
<td><strong>PRIVATE TRANSPORTATION SERVICES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Personal Auto</strong></td>
<td>Individual Car</td>
<td>2 – 7</td>
<td>Available</td>
<td>N/A</td>
<td>$$$$$$$ $500 - $800</td>
<td>$0.535/mile</td>
<td>$15,000 +</td>
</tr>
<tr>
<td><strong>BikeShare (Juice)</strong></td>
<td>24/7 bike rental from stations</td>
<td>1</td>
<td>On-demand (station based)</td>
<td>$$ $8/hr; $15 - $20/mo; $59/yr.</td>
<td>$ $5 - $20</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Taxi</strong></td>
<td>On-Demand</td>
<td>3-7</td>
<td>On-demand request</td>
<td>$$$$$$ $2.50 - $3/mile</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Bicycle</strong></td>
<td>Personal owned bicycle</td>
<td>1</td>
<td>Available</td>
<td>Free</td>
<td>Free</td>
<td>$5/month</td>
<td>$250 - $800</td>
</tr>
<tr>
<td><strong>Rideshare (Uber/Lyft)</strong></td>
<td>On-Demand</td>
<td>3-7</td>
<td>On-demand request</td>
<td>$$$$$$ $5.25 minimum/trip</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Carshare (Zipcar)</strong></td>
<td>24/7 car rental from stations</td>
<td>3-5</td>
<td>Available at specific locations</td>
<td>$$$$$ $9 - $10/hour</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Walking</strong></td>
<td>Individual Mobility</td>
<td>1</td>
<td>Available</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
LYNX FORWARD Goals

1. Promote economic competitiveness, sustainability, and quality of life

2. Advance an equitable, dynamic, and performance driven transit system

3. Deliver a seamless network of transportation services for the region

4. Enhance customer experience and communications
Baseline & Future Conditions

Data Review Included

- Population
- Employment
- Land Use
- Demographics
- Commute Patterns
- Regional Transit Trends
- Roadway Conditions
Regional Activity Center Patterns

Mobile Cellular Data

Onboard O-D Survey
Route Optimization Study Purpose

1. Meet **future mobility needs** through new and improved mobility services

2. Allocate resources in the most **effective and efficient** manner possible

3. Improve regional **connectivity to SunRail**

4. Continue to serve existing riders while **gaining new riders**

5. **Serve new markets** with focused and specialized service delivery models and integration with complementary modes (e.g. rideshare and bikeshare)
Regional Challenges/Opportunities

• Increasing congestion
• Aging population
• Low Wages
• Changing travel patterns
• Shared-Use Mobility (TNCs, bike & car sharing)
• Low fuel prices
• Low interest rates and longer auto financing terms
• Transit supportive land use
**Route Optimization Study**

1. Meet future mobility needs through new and improved mobility services
2. Allocate resources in the most effective and efficient manner possible
3. Improve regional connectivity to SunRail
4. Continue to serve existing riders while gaining new riders
5. Serve new markets with focused and specialized service delivery models and integration with complementary modes (e.g., rideshare and bikeshare)

**Application of Service Types:**
- High Frequency Major Corridor Service
- Limited Stop Corridor Service
- Regional Express Service
- Park & Ride Express Service
- Primary & Secondary Local Bus Service
- Neighborhood/Activity Center Circulator
- On-Demand/Flex Route Service

**Definition of Service Levels:**
- Service Days
- Service Hours
- Span of Services
Why do this Study?

• Declining ridership
• Outdated route structure (20 years of tweaking service)
• Tremendous population and employment growth
• Unserved / under served travel markets (e.g., Disney)
• Non-competitive travel times
• Competition from new modes of travel (e.g., Uber/LYFT)
Who has done this?

- **Jacksonville, FL** (Route Optimization Initiative: December 2014)
- **Houston, TX** (Reimaging Implemented: August 2015)
- **Dallas, TX** (COA Completed 2015, phased over years)
- **Columbus OH** (Transit System Redesign – May 2017)
- **Richmond, VA** (Planned for end of 2017)
- **Indianapolis, IN** (Phased in with BRT Lines over few years)
- **Santa Clara Valley, CA** (Next Network – FY18/FY19)
- **Portland, OR**
- **Omaha, NE**
- **West Palm Beach, FL** (just started)
Have they been Successful?

• Jacksonville (JTA)
  – 1st Year – 5.4% (bus)
  – 2nd Year – -1.5% (bus)

• Houston (RTA)
  – 1st Year - +6.3% systemwide, only 1.2% on bus
  – 2nd year flat
Types of ROS Recommendations

• Increased service frequency on the core network routes
• New faster transit routes and services
• Eliminate poor performing routes and route segments
• Implement alternative service models
  – Demand response and on-call service
  – Contract service trips through private operators
  – Maximize use of Shared-Use Mobility services such as TNCs, Bike-Share & Car-Share services (“Network of Mobility Services”)
Innovation is Changing the Flexible Transit Space

Technology Is Improving Viability of Flex Services Across Modes

- Mobile applications for integrating trip planning, booking (“e-hailing”), and ticketing
- Algorithm-based dispatching and dynamic routing improves efficiency and reduces customer booking window

Flexible Transit Services

- Semi-Fixed Route
- Zonal / Anchored On-Demand
- Fully On-Demand
  - Flexible Route Segments
  - Demand Response Connector
  - Vanpool
  - Route Deviation
  - Zone Route
  - Private Shuttles / Microtransit
  - Point Deviation
  - Taxi / TNC / Dial-a-Ride

New On-Demand Service Delivery Models

“Ridesplitting”: On-Demand Ridesharing / Vanpools

Microtransit

Ridesourcing / TNCs

Central Florida Regional Transportation Authority
Implementation Challenges

- LYNX Staff & Board Support through implementation
- Jurisdictional support
- Community support
- Funding constraints
- Multiple funding partners
- Service equity
- Passenger facility needs
- Fleet vehicle / maintenance facility needs
Transit Oriented Design

• Great transit networks require good design
  – Safety
  – Comfort
  – Convenience
  – Awareness of and sensitivity to Operator’s needs

• Involve your transit agency early and often through project life cycle
  – Roadway and intersection design
  – Development review
# Project Schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Management</strong></td>
<td><strong>N/A</strong></td>
<td><strong>N/A</strong></td>
</tr>
<tr>
<td><strong>Public Involvement</strong></td>
<td><strong>JUL</strong></td>
<td><strong>JUL DEC</strong></td>
</tr>
<tr>
<td>Update Goals, Objectives and Service Guidelines</td>
<td><strong>SEP</strong></td>
<td><strong>JAN</strong></td>
</tr>
<tr>
<td>Assessment of Baseline Conditions</td>
<td><strong>AUG NOV</strong></td>
<td><strong>FEB MAR</strong></td>
</tr>
<tr>
<td>Assessment of Existing Transit Service</td>
<td><strong>SEP</strong></td>
<td><strong>JAN</strong></td>
</tr>
<tr>
<td>Evaluate Demand &amp; Mobility Needs</td>
<td><strong>AUG</strong></td>
<td><strong>JAN</strong></td>
</tr>
<tr>
<td>Perform Situation Appraisal</td>
<td><strong>JUL</strong></td>
<td><strong>FEB</strong></td>
</tr>
<tr>
<td>Prepare 2018 10-Year Major Update</td>
<td><strong>SEP OCT</strong></td>
<td><strong>MAR APR</strong></td>
</tr>
<tr>
<td>Route Optimization Study</td>
<td><strong>SEP</strong></td>
<td><strong>MAR APR</strong></td>
</tr>
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*Subject to change*
Questions & Contact Information

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(407) 254-6078

LYNXFORWARD.COM