

Dan Burke

Vice President of Application Development

UPS



Delivering in the Connected Age

Dan Burke, Vice President
Network Planning and Visibility Systems





Three Things

- A Little About Us
- The Connected World
- Delivering in the Connected Age

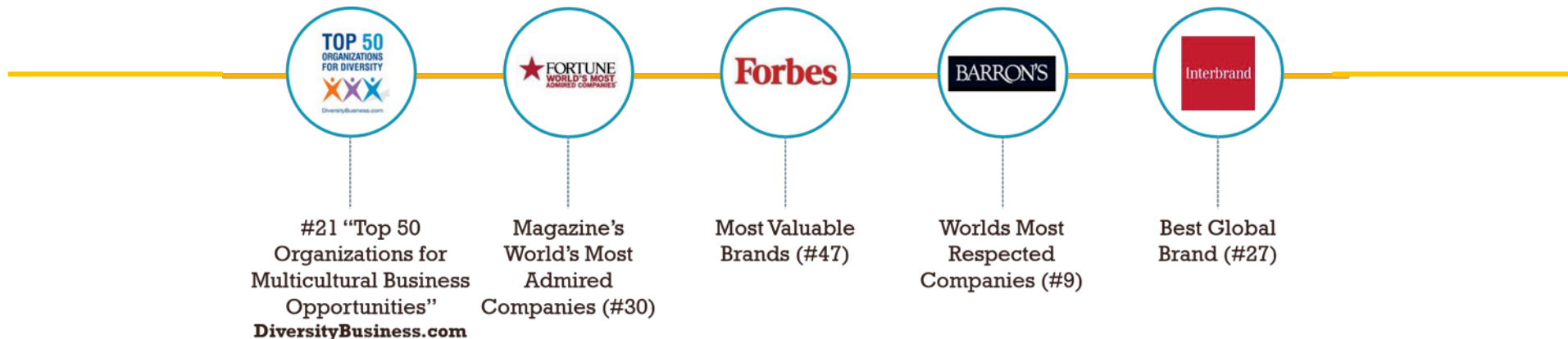


The UPS you may know

We Are: The World's Largest Package Delivery Company

Providing Global Logistic Services in 220 Countries and Territories

A Leading Provider of Specialized Transportation and Logistics Services





UPS Stats - They call us *Big Brown* for a reason

- \$74 Billion in Revenue
- 495,000 Employees (413,000 in the US)
- 5.5 billion packages delivered annually (22 million a day)
- 1,800 operating facilities
- 125,000 ground vehicles
- 592 aircraft





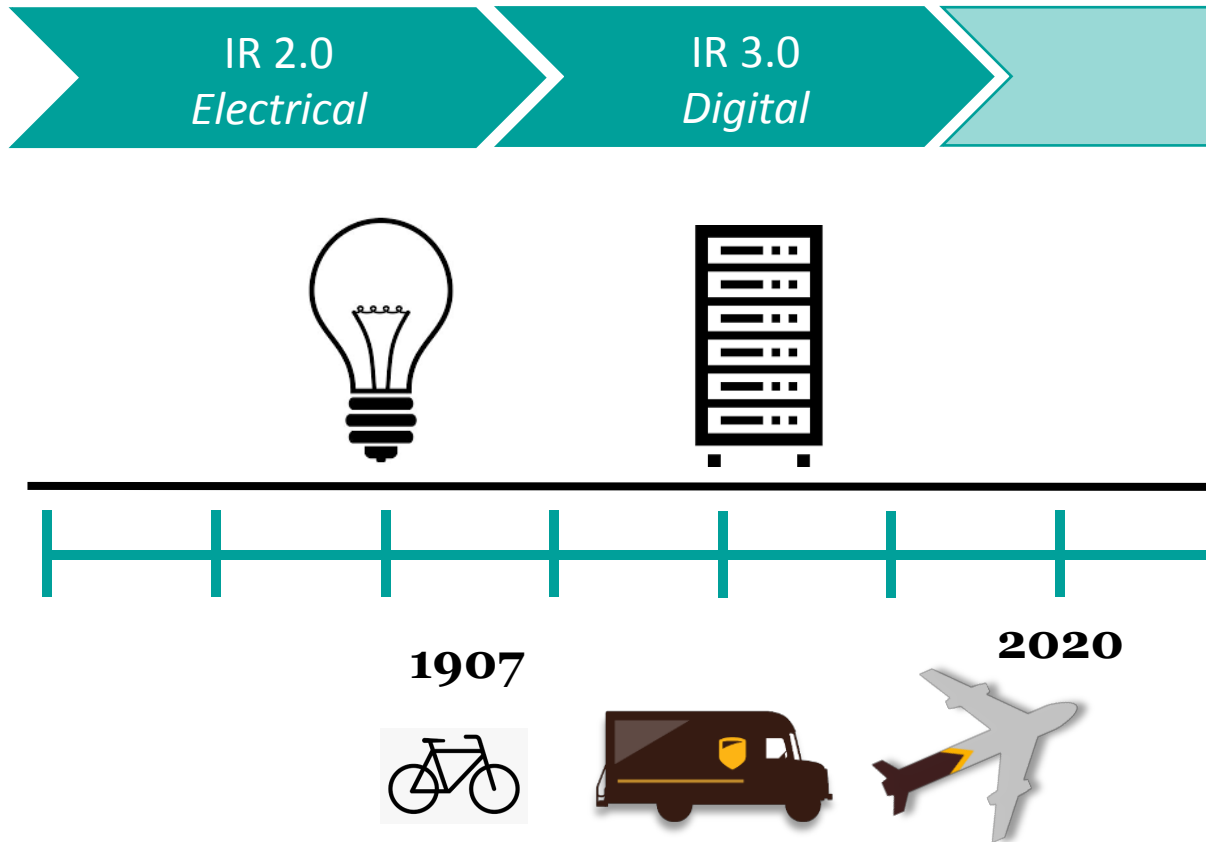
Our Kentucky Home



- Kentucky's Largest Employer
- UPS Airline Headquarters
- Location of the Worldport Super Hub
- Magnet for end-of-runway distribution centers
- Driving eCommerce economic growth in Louisville area



A History of Technology Driven Transformation



- Founded in 1907 in Seattle Washington by Jim Casey as a bicycle messenger service
- Leveraging IR 2.0 innovations like the telephone, electrification, and the automobile transformed into the dominant US common carrier
- Leveraging IR 3.0 innovations like jet travel, computing, and the Internet transformed into the world's premier global logistics provider and e-commerce enabler



So...

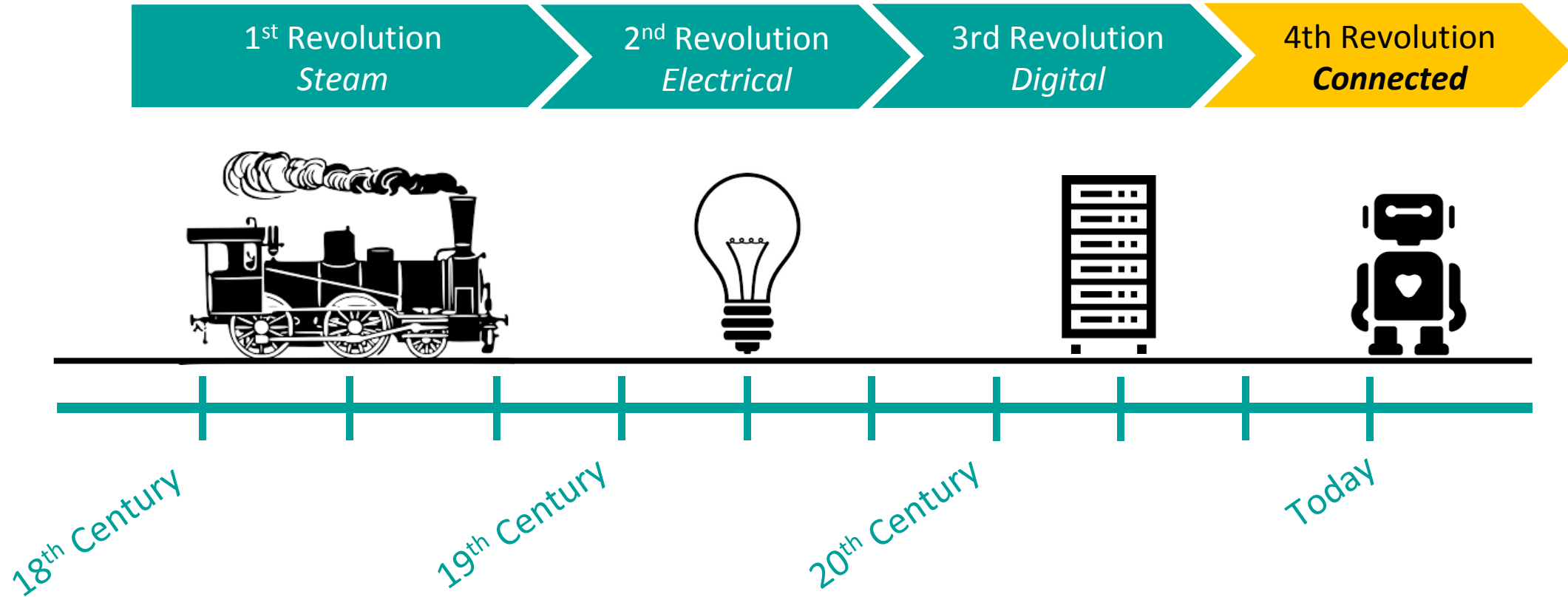
UPS is a 113-year-old Package Delivery Company.

Or is it?



The Fourth Industrial Revolution is Underway

We are at the beginning of a period of profound technical, business, and societal change





The Connected Smart World

Today...

- **The Internet of Things and the API Economy are connecting everything**
- **Data Analytics and Machine Learning are transforming business decision making**
- **Natural Language Processing and AI are leading to wide spread automation**



The Digital Revolution has given way to the Connected Age



Connected Age Trends

Common Now	By 2025 (Emerging now)	By 2050
• Personal Digital Presence	• Implantable Technologies	• Designer Beings
• Connected Wearable Devices	• Autonomous Vehicles	• Neurotechnologies
• Ubiquitous Computing	• AI and Decision Making	
• Pocket Supercomputer	• AI Perform White-Collar Jobs	
• Cloud Storage for Everyone	• Robotics and Services	
• The Internet of Things	• Smart Cities	
• The Connected Home	• Sharing Economy	
• Big Data for Decisions	• Government and Blockchain	
• Bitcoin and Blockchain	• 3D Printing and Manufacturing	
• Wearable Visual Interfaces	• 3D Printing and Human Health	
• AI Analysis and Prediction	• 3D Printing and Consumer Products	



Today's Connected Expectations

Common Now

- Personal Digital Presence
- Connected Wearable Devices
- Ubiquitous Computing
- Pocket Supercomputer
- Cloud Storage for Everyone
- The Internet of Things
- The Connected Home
- Big Data for Decisions
- Bitcoin and Blockchain
- Wearable Visual Interfaces



- **Vast Selection**
- **Optimized Information and Analysis**
- **Secure Payment**
- ***Fast Delivery***
- **Flawless Service**
- **Low Cost**



All Commerce in a Connected World is eCommerce

- Vast Selection
- Optimized Information and Analysis
- Secure Payment
- *Fast Delivery*
- Flawless Service
- Low Cost



- **Global B2C eCommerce sales exceeded \$3 trillion in 2019**
- **eCommerce will account for 20% of all retail by 2025**
- **Connected technologies accelerate (and disrupt) the entire order-to-cash cycle**
- **Global B2B eCommerce is growing 5-6 times as fast as B2C (exceeding \$12.2 trillion in 2019)**



**Can any company
be just a package
delivery company
today?**

**Or a trucking
company?**

**Or an airline
company?**

**Or a healthcare
company?**

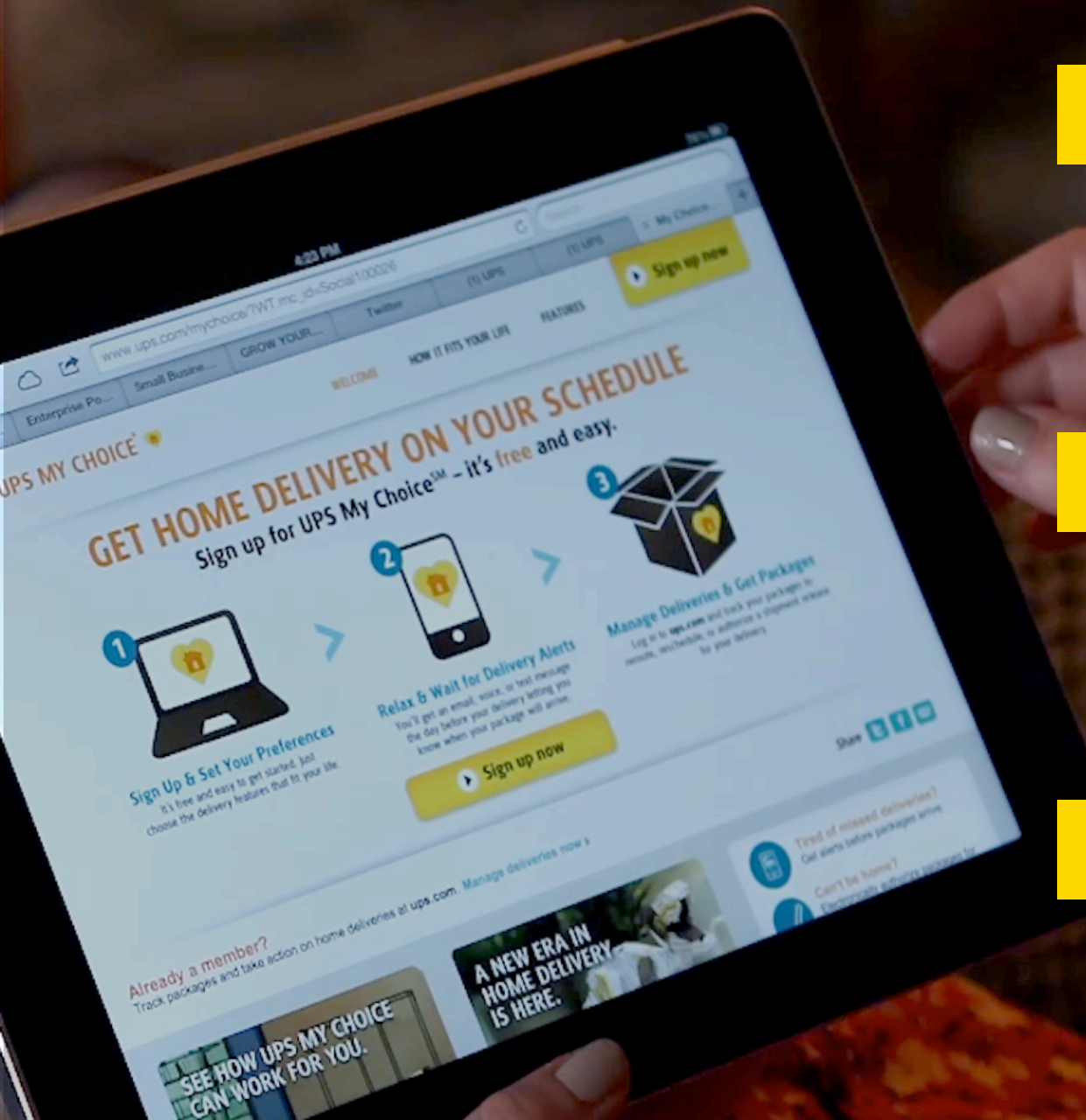
**All Companies Are Technology
Companies Now**



How is UPS

Transforming for IR 4.0

Delivering in the Connected
Age



1

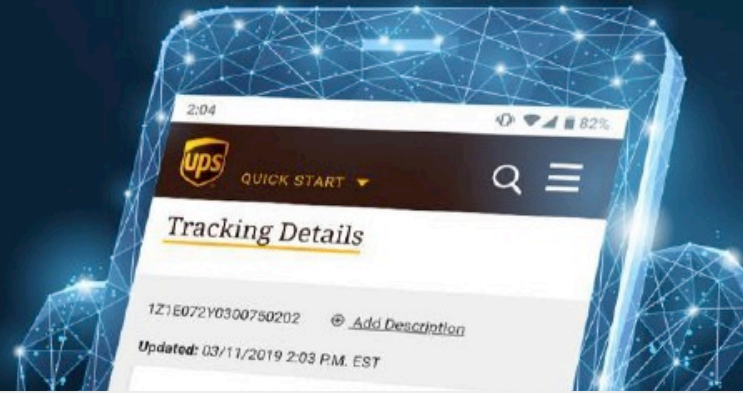
**Leading with
Technology**

2

**Building the Smart
Logistics Network**

3

**Leaning into the
Future**



1 Leading With Technology





Information Technology Priorities at UPS

- Cybersecurity
- Data Analytics and Optimization
- Connected Development (IoT)
- Block Chain Digital Ledger
- Customer Enablement
- Facility and Process Efficiencies
- Solutions Agility

UPS Invests over \$1.5 Billion Annually in Information Technology



UPS Information Technology Centers

Over 7,000 UPS IT employees and consultants building solutions around the world

United States

- Mahwah, New Jersey
- Parsippany, New Jersey
- Louisville, Kentucky
- Timonium, Maryland
- Alpharetta, Georgia
- Atlanta, Georgia
- Ann Arbor, Michigan
- Richmond, Virginia
- Tulsa, Oklahoma
- San Diego, California
- Seattle, Washington
- Portland, Oregon
- Augusta, Georgia

Latin America

- Guadalajara, Mexico
- Agua Calientes, Mexico
- Monterey, Mexico

Europe

- Dusseldorf, Germany
- Cologne, Germany
- Eindhoven, Netherlands
- London, England
- Brussels, Belgium
- Warsaw, Poland
- Prague, Czech Republic
- Istanbul, Turkey

Asia

- Chennai, India
- Pune, India
- Kochi, India
- Singapore



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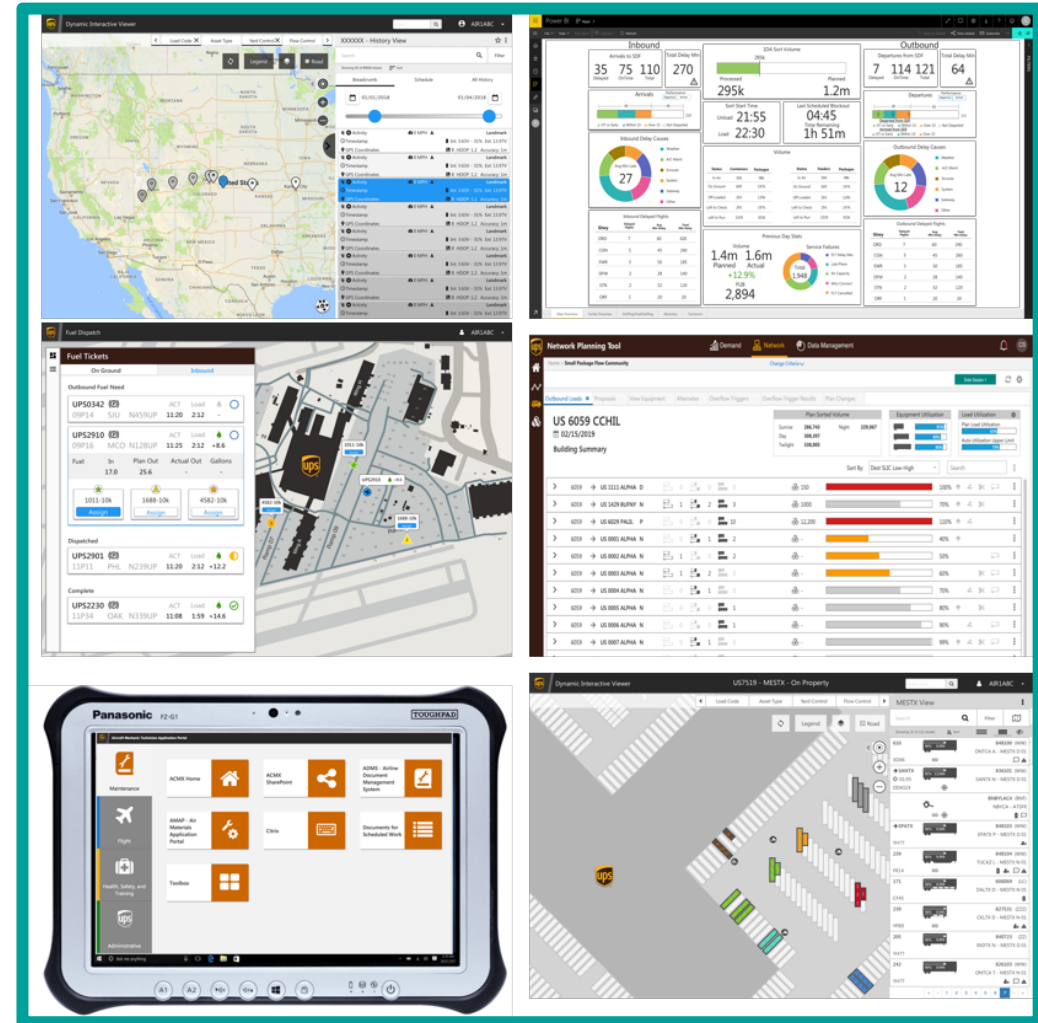
- Chennai, India

1,000 UPS IT professionals in Louisville developing our Transportation, Airline, and Cybersecurity Systems



Systems Developed Here in Louisville

- Network Planning and Optimization
- Dispatch and Route Management
- Connected Tractor Trailer
- Airline Operations and Management
- Sortation Facility Management
- Operations Visibility
- Cybersecurity Analysis

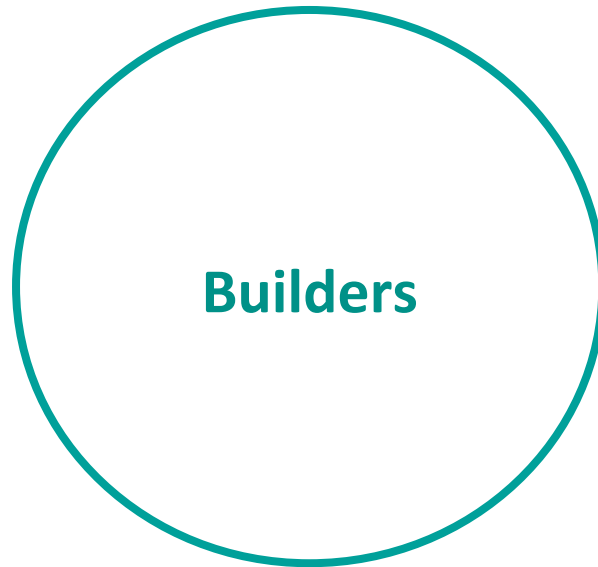




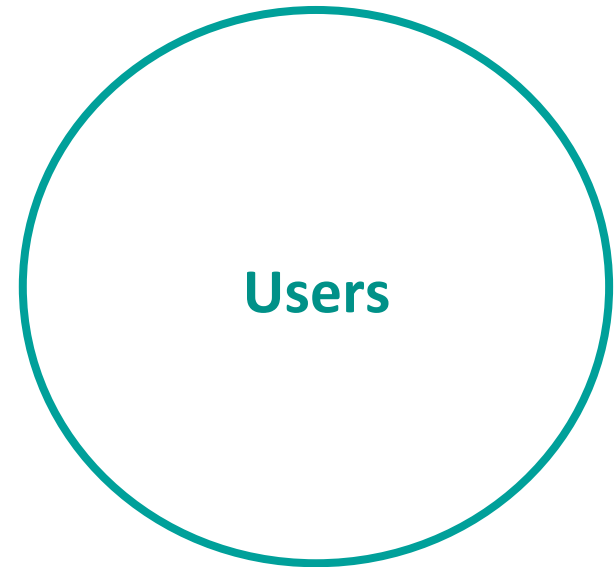
Traditional Technology Roles



Subject Matter Experts



**IT Developers
Engineers
Cybersecurity Experts**

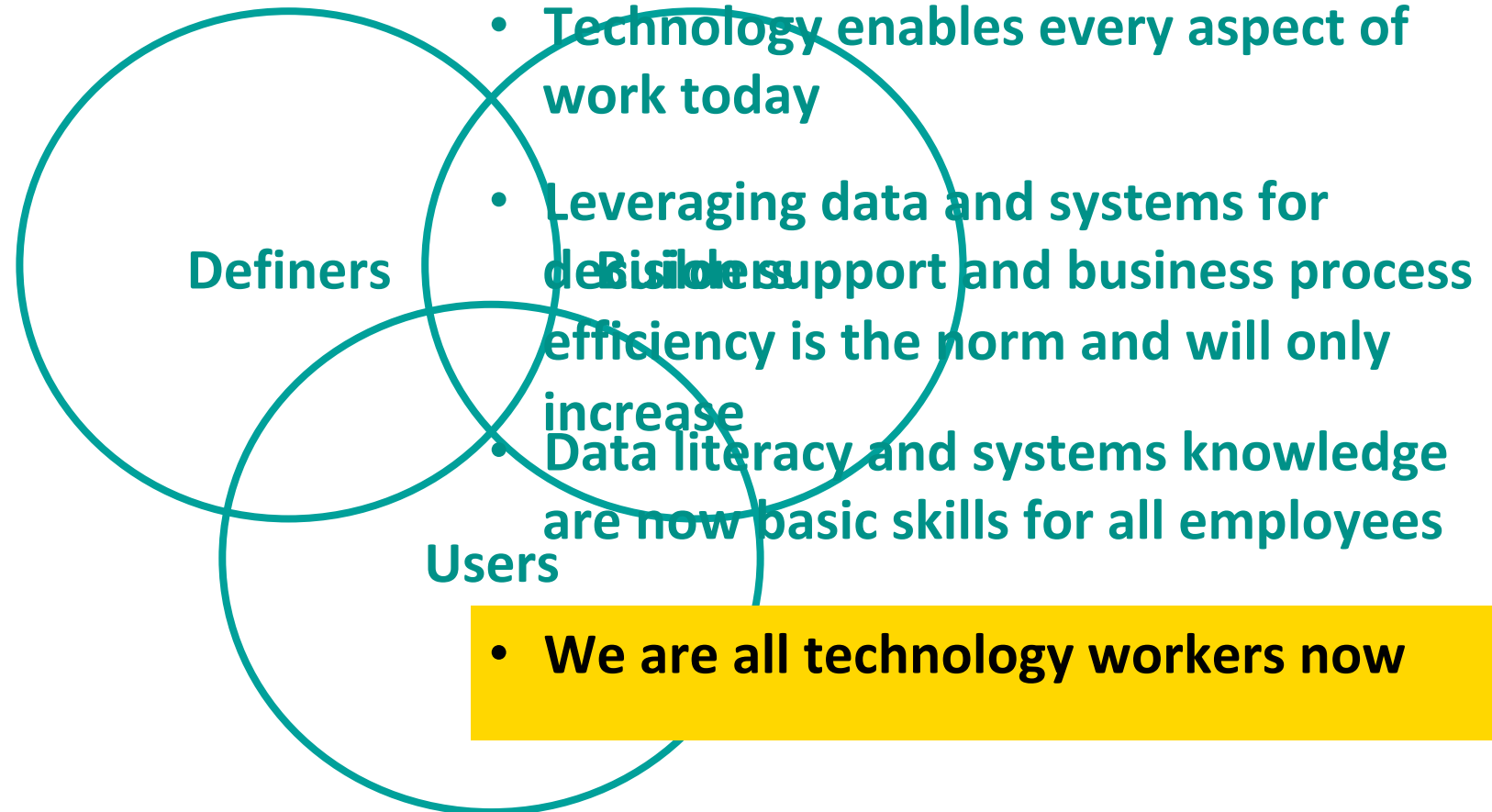


Workers and Consumers



Fusing Business and Technology Roles

Delivering in the Connected Age requires fusing traditional business and technology roles





Growing Technology Skills in Louisville

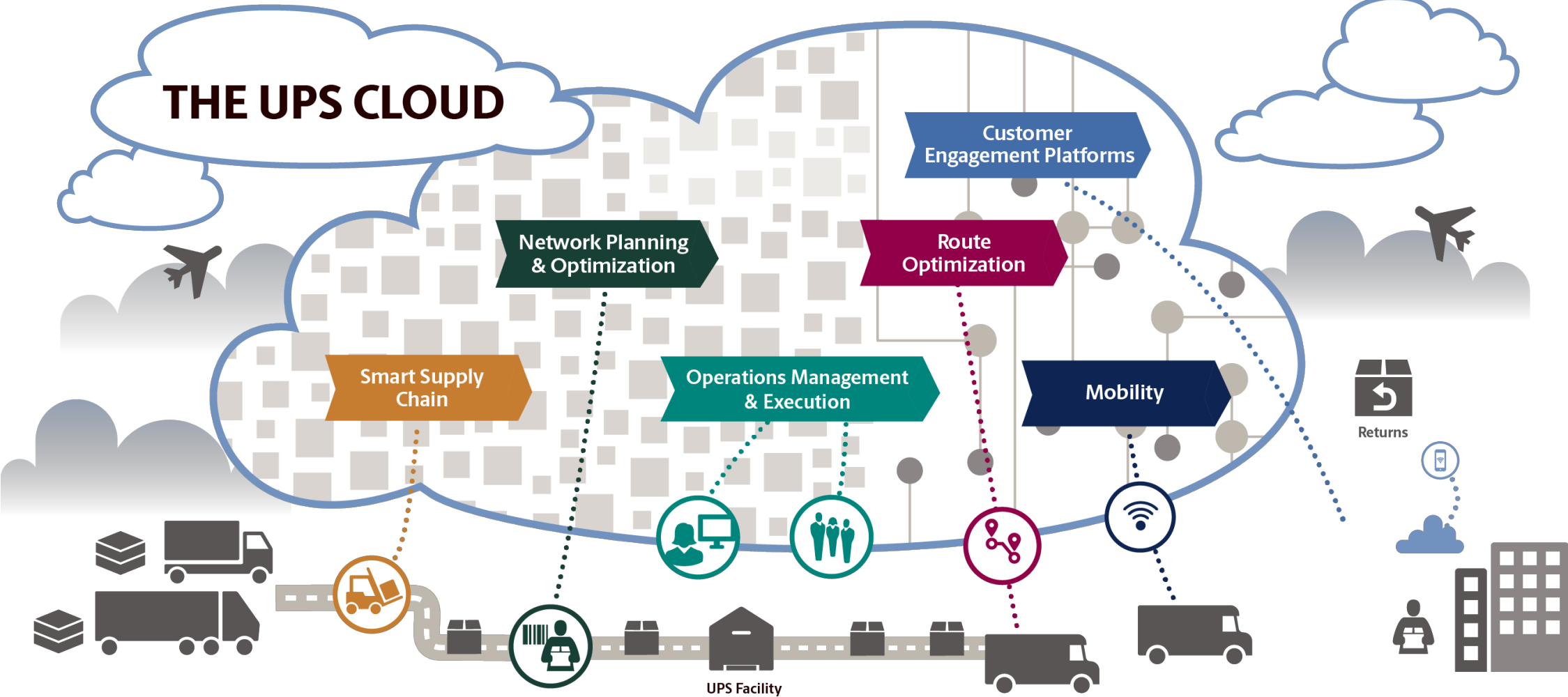
- Metro College Program
- Community Technology Programs
 - Hour of Code
 - Primary School Outreach
- University Partnerships
- Technology Event Sponsorships
 - Women in Technology
 - Vex Robotics
 - CodePaLOUsa



An aerial night photograph of a city, showing a dense grid of streets and illuminated buildings. A white rectangular box is overlaid on the center of the image, containing the text. The background is a dark teal color with a yellow vertical bar on the left side.

2 Building the **Smart Logistics Network**

GLOBAL SMART LOGISTICS NETWORK

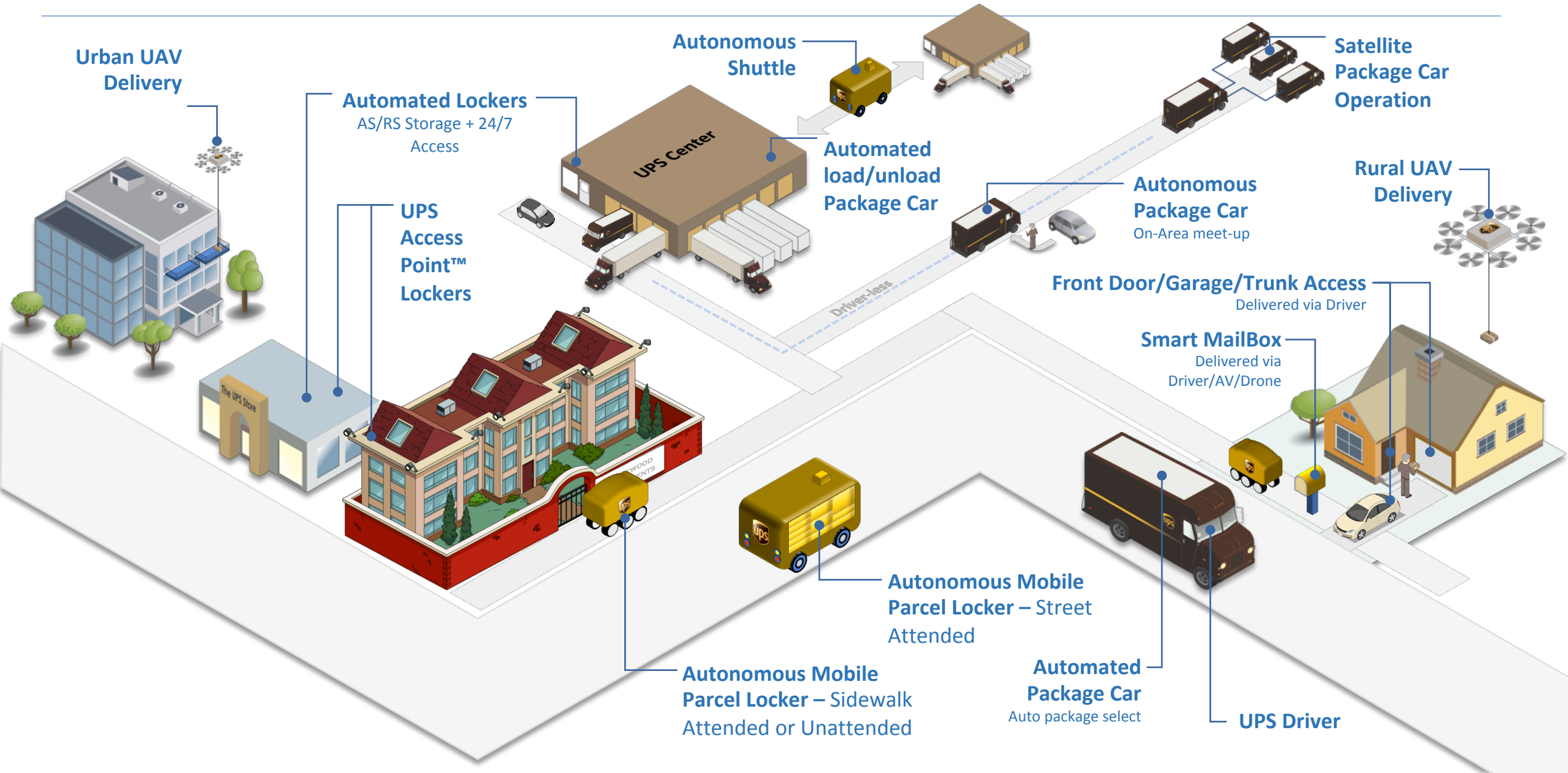




3 Leaning Into The Future



The Connected Age Vision





Drones

- **Aviation history**
- **First FAA-certified drone airline**
- **Revenue deliveries**
- **Initially focused on healthcare applications**

- **Future:**
- **Larger scale drones**
- **Home deliveries**







Smart Vehicles

- **Connected**
- **Safe**
- **Sustainable**





Smart Vehicle Initiatives

- **TuSimple Partnership**
- **Arrival Electric Investment**
- **Waymo Vehicle Testing**
- **Tesla Tractor Orders**



Technology Enhances People





A 113 -year old Technology Company

Transforming for the Fourth Industrial Revolution

Delivering in the Connected Age

Leading with Technology

Building the Smart Logistics Network

Leaning Into the Future



Thank You