EMERGING TRENDS: TECHNICOLOGY

As technology continues to evolve it changes the way we interact with one another, work, do business, travel, and even how we buy groceries. New and emerging technologies offer the potential for a safer, more efficient transportation system that, more than ever, connects people globally and locally. However, increased reliance on technology brings other challenges to the forefront like a dependence on broadband and electronic infrastructure, cybersecurity, and data privacy.



JUNE 2019

Technology is Offering New Ways of Traveling



Technology is Changing the Way We are Moving Freight

The implementation of **FULL AUTONOMY** throughout the motor carrier freight system could **REDUCE TOTAL OPERATING COSTS** by up to **450%** an estimated savings of at least **585 BILLION**

Amazon's Prime **AIR SERVICE** will use **DRONES** to deliver packages to addresses within a **10 MILE RADIUS** of an Amazon fulfillment center in **30 MINUTES OR LESS**

Advances in **3D PRINTING** could disrupt freight by as much as



Airships stocked with products could act as **AIRBORNE** WAREHOUSE to streamline **DRONE DELIVERY**

Florida is home to **2 SPACEPORTS** that enabled **21 SPACE LAUNCHES** in 2018, with plans for more than **48 SPACE LAUNCHES** per year in the future

UPS is testing DRONES DEPLOYED FROM THE TOPS OF DELIVERY VEHICLES

to navigate the "first-mile/last-mile" between their vehicles and a customer's door; the company estimates this will save up to **\$50 MILLION/YEAR**

Technology is Changing Behaviors

Globally, there are More Floridians More than **WORK FROM THEIR HO** than USE PUBLIC THANSITE the number of for their commute to work of the **TELEMEDICINE** WORLD'S PATIENTS More than POPULATION than just five years ago owns a **OF ALL JOBS COULD SMARTPHONE BE AUTOMATED TODAY** In 2017, using current technologies Up to 85% OF ALL JOBS in 2030 could be in industries or occupations that in the United States • • • DO NOT EXIST TODAY ACCOUNT F Δ for them to access many **E-COMMERCE** accounts for ERGING TECHNOLOGIES of all MANUFACTURIN **/ SO** SHIPMENTS О

Technology is Changing How We Use, Share, and Manage Data

2,500,000,000, 000,000,000 (2.5 QUINTILLION)

BYTES OF DATA are created each day, and the pace is accelerating



By 2020, it is estimated that more than will be generated annually

of Florida households

=:

64%

rural areas

of households in

have access to

В

74YD

:{0

80%

of households in urbanized areas

5G NETWORKS will provide **OX FASTER SPEEDS**

than 4G with more supported devices per square mile and

10X GREATER NETWORK EFFICIENCY



of college students

ONLINE

ONE COURSE

take at least



OFFICE OF POLICY PLANNING

Tallahassee, Florida 32399-0450 850-414-4800 // planning@dot.state.fl.us

www.floridatransportationplan.com

Safety and security

Will new technology introduce new safety and security gaps, placing a greater importance on cybersecurity and data security?



Agile, resilient, and quality transportation infrastructure

How do we adapt our infrastructure to support new technology?



Efficient and reliable mobility

Can technology improve transportation system efficiency and increase mobility?

More transportation choices

How will people without bank accounts access shared vehicles or emerging micromobility options like shared scooters and e-bikes?



Global economic competitiveness

How will technology help Florida's market share for global trade?



Quality places to live, learn, work, and play

How can technology improve access to education and health care?

Environment and energy conservation

How do we prepare for electric vehicles and other alternative fuel sources?

Data sources available at http://floridatransportationplan.com/trends-techsouces.pdf