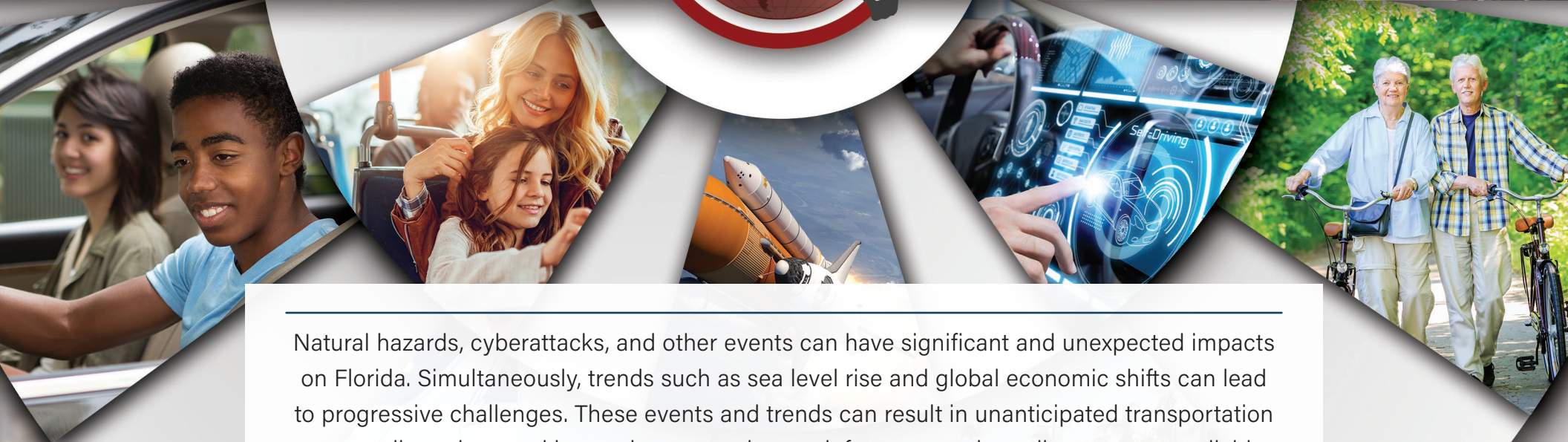


# EMERGING TRENDS: RESILIENCE



Natural hazards, cyberattacks, and other events can have significant and unexpected impacts on Florida. Simultaneously, trends such as sea level rise and global economic shifts can lead to progressive challenges. These events and trends can result in unanticipated transportation system disruptions and increasing constraints on infrastructure, impeding access to reliable mobility. The impact on the lives of residents and visitors and the flow of business and trade can be extensive. It is critical to prepare Florida's transportation system to be adaptive in the face of these events and trends. Planning for resilience leverages our understanding of potential hazards to mitigate risk, make wiser investment decisions, and provide more reliable transportation. Many partners play an important role in shaping the collective efforts to make Florida's transportation system resilient.

**OCTOBER  
2019**





Florida is the 3rd most populated U.S. state, and our population is expected to increase nearly 30% to 27 million by 2045. To plan for a resilient transportation future, we need to understand important trends and conditions today.

What Natural Hazards Impact Our Transportation System?

Nearly **170 COASTAL COMMUNITIES** in the U.S. are projected to experience **FLOODING** more than **26 TIMES PER YEAR** by 2035

In 2018, **GLOBAL MEAN SEA LEVEL** was **3.2 INCHES ABOVE** the 1993 average

Since 2000, **TIDAL FLOODING** across Florida has **INCREASED BY 352%**

Florida is among the **TOP 10 STATES MOST IMPACTED BY WILDFIRES**

What Types Of Extreme Weather Can Affect The Mobility Of Floridians?

The amount of **PRECIPITATION** during heavy rainstorms has **INCREASED BY 27%** in the Southeast over the last 60 years

By mid-century, the Southeast is expected to experience up to **50 MORE DAYS** per year of temperatures exceeding **90 DEGREES**

Florida has been impacted by **40% OF ALL U.S. HURRICANES**

Approximately **6 MILLION PEOPLE EVACUATED** during Hurricane Irma, **THE LARGEST EVACUATION IN U.S. HISTORY**

How Can Florida's Transportation System Be Resilient To Evolving Economic Trends?

The increasing **GLOBAL INTEGRATION** of Florida's economy means our **TRADE, TOURISM, & OTHER INDUSTRIES** can be impacted by recessions, instability, and supply chain disruptions around the world

**LONG-HAUL FREIGHT** is expected to **INCREASE 40%** by 2040

According to the Florida Chamber Foundation, the likelihood of a **RECESSION WITHIN 9 MONTHS** has been **INCREASING** since May of 2019

There is an estimated **\$1.2 TRILLION NATIONAL GAP** in **TRANSPORTATION INFRASTRUCTURE NEEDS** through 2050, even before considering climate impacts

How Is Transportation Infrastructure Vulnerable To Hazards & Threats?

Nationally, the **TOTAL ANNUAL DAMAGES** from **TEMPERATURE & PRECIPITATION-RELATED** damages to paved roads are estimated at up to **\$20 BILLION**

In 2017, a **CYBERATTACK** at CSX's Jacksonville headquarters **SHUT DOWN RAILROAD SIGNALING, DISPATCHING, & OTHER SYSTEMS** across 23 states

**INLAND FLOODING** threatens as many as **4,600 BRIDGES ACROSS THE U.S.** and is anticipated to result in average annual **DAMAGES OF UP TO \$1.4 BILLION** by 2050

**3 MAJOR FLORIDA AIRPORTS** have at least one runway that is vulnerable to **MODERATE TO HIGH STORM SURGE**



### **Safety and security**

How can we plan and prepare for hurricanes, wildfires, and other disasters to ensure the safety of Florida's residents?



### **Agile, resilient, and quality transportation infrastructure**

Can we design and build transportation facilities that withstand and quickly recover from flooding and winds?



### **Efficient and reliable mobility**

How will unexpected changes in fuel costs, construction costs, and transportation funding affect our ability to travel?



### **More transportation choices**

Can we improve emergency evacuation if we have more options for travel?



### **Global economic competitiveness**

What role can Florida's transportation system play in strengthening our state during times of unexpected economic change?



### **Quality places to live, learn, work, and play**

How can we plan transportation that helps Florida communities be more resilient in the face of hazards and threats?



### **Environment and energy conservation**

How will the growing use of electric vehicles change the way we prepare for evacuations in the future?



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