

## Global Florida Webinar:

Infrastructure, Economic Development and Supply Chain Innovation March 6, 2018



#### DAN TAPIA

Manager, International Strategy & Policy Florida Chamber of Commerce

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## Special Thanks To Our Partners











Polk County's Economic Development Partnership





## To Submit a Question

Please email aancona@flchamber.com

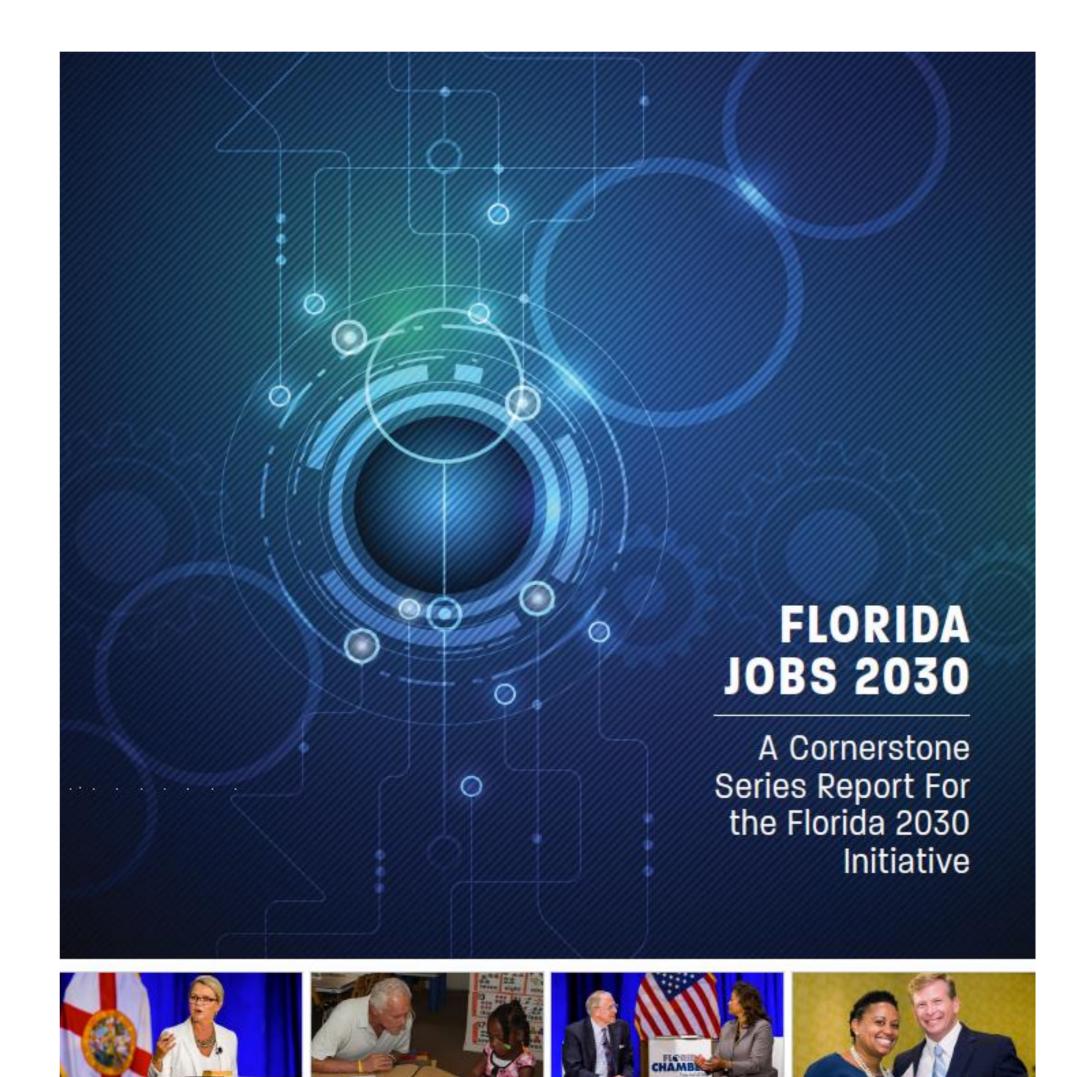


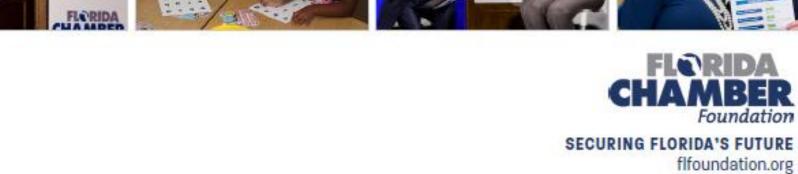
### Agenda

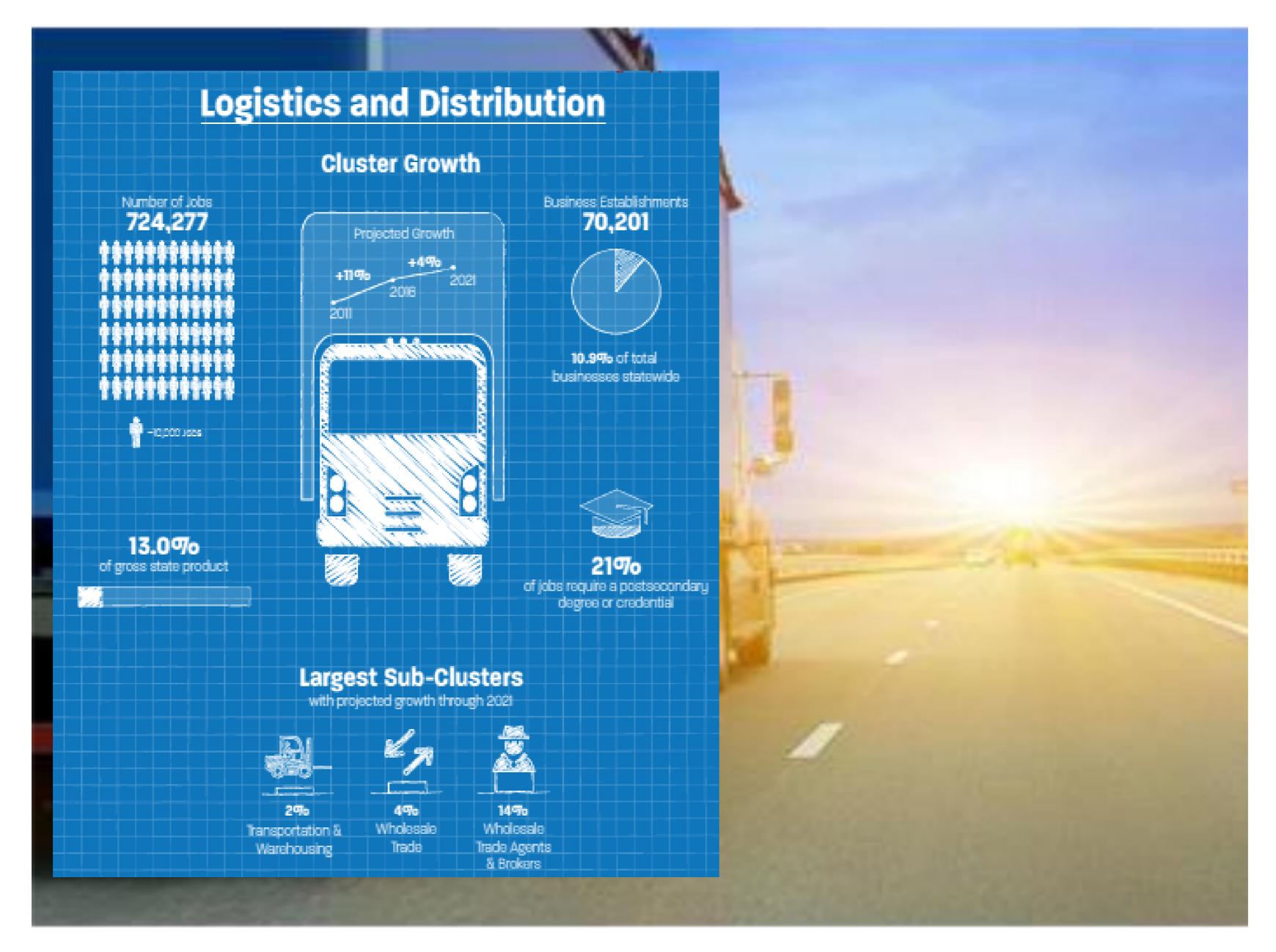
- I. Welcome | Dan Tapia, Manager, International Policy & Strategy, Florida Chamber of Commerce
- II. Guest Speakers:
  - Michael Morgan, Partner, McDermott, Will & Emory
  - Ed Mortimer, Executive Director, Transportation Infrastructure, US Chamber of Commerce
- **III.** Audience Comments
- IV. Adjourn















#### MICHAEL MORGAN

Partner, McDermott, Will & Emory



McDermott Will&Emery

## Blockchain Applications for Supply Chain Management

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#### Introduction to Blockchain

- It is decentralized, distributed ledger technology for Internetconnected computers to keep a collective bookkeeping.
- Network notes have a complete copy of the ledger, so everyone has access.

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 A transacting party only needs to update his own ledger and then the transaction details (e.g., the sendor's public key) can be broadcast to everyone.



### Five Key Steps – Step One



There is some sort of a transaction, such as:

- Movement within a supply chain (e.g., any prescription drug, automobile)
- A transfer of bitcoin or other token of value

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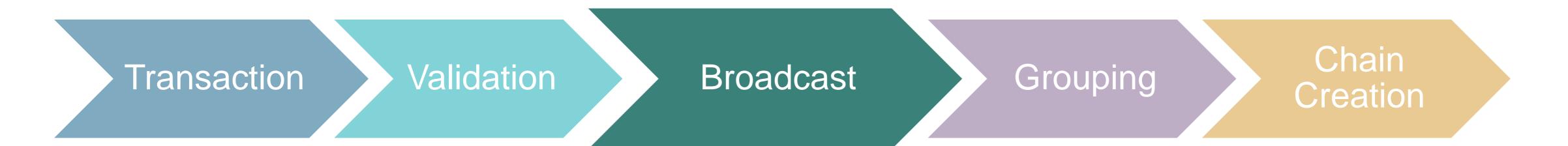
- A transfer of property (e.g., a house)
- A compilation of information (e.g., information relevant to customs)

### Five Key Steps – Step Two

Transaction Validation Broadcast Grouping Chain Creation

- The parties must validate the transaction with digital signatures to prove that the transaction was initiated by the true owner.
- This is typically done using public key infrastructure, or PKI, a secure form of encryption.

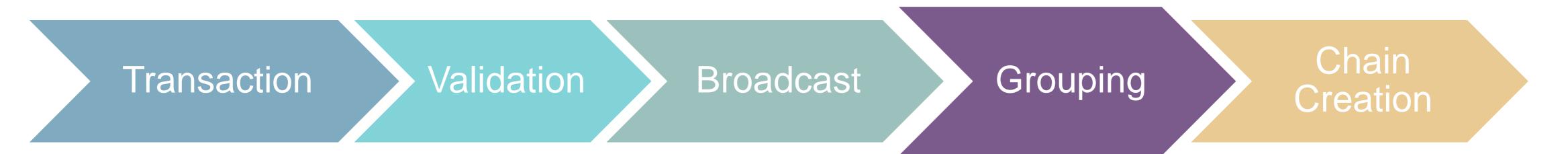
## Five Key Steps – Step Three



Transactions are broadcast to the network.



## Five Key Steps – Step Four



#### Transactions are grouped into a block:

- Miners compete in a mathematical contest to solve a math problem using the digital data in the new block (i.e., they try to generate a SHA-256 hash that starts with many zeros).
- Hard to win but easy to tell who won. The math won't work if the ledger is changed in the slightest.

## Five Key Steps – Step Five



The new block is added to all prior blocks, creating a chain:

- The answer to the math problem is used as an input for the next block.
- So, any change to any prior block changes the hashes for all later blocks, i.e., has a domino effect down the chain.

## Blockchain – Where the Money is Flowing

#### Over \$2B in startup funding in past three years.

- Most large tech and financial companies fund investments. Key sectors:
  - Business Sector: supply chain management (e.g., life sciences, RFIDenabled payment mechanisms), smart contracts, medical records
  - Financial: money transfers, trading, dividend payments, remittances, escrows, speculation
  - Other Digital Assets: identity and credentials, smart property



#### Blockchain – Pros

- Decentralized
  - No trusted central entity is needed (e.g., central bank, national land registry), thus saving costs
  - Good for peer-to-peer dealings where rules/behaviors can be coded (e.g., smart contracts)
- Distributed
  - Contributes to security and resiliency
- Tamper Proof/Immutable
  - Not vulnerable to ransomware
- Transparency advantages
  - Auditable and available (e.g., baptism records)

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#### Blockchain for Supply Chain

#### The Problem

- Inefficiencies in the global supply chain (e.g., cost of trade documentation and administering a shipment can sometimes be comparable to the shipping costs)
- Complex web of communications between players, including manufacturers, carriers/shippers/truckers/rail, forwarders, multiple government authorities, consignees, and ports/terminals
  - Some of which are still paper based
  - Results in costly, inefficient, and often incorrect information.

#### The Promise of Blockchain

- Efficient communication because communication with the blockchain dramatically reduces peer-topeer communication and lowers costs
- Secure, fast access to documentation that cannot be changed and is a "single source of truth"



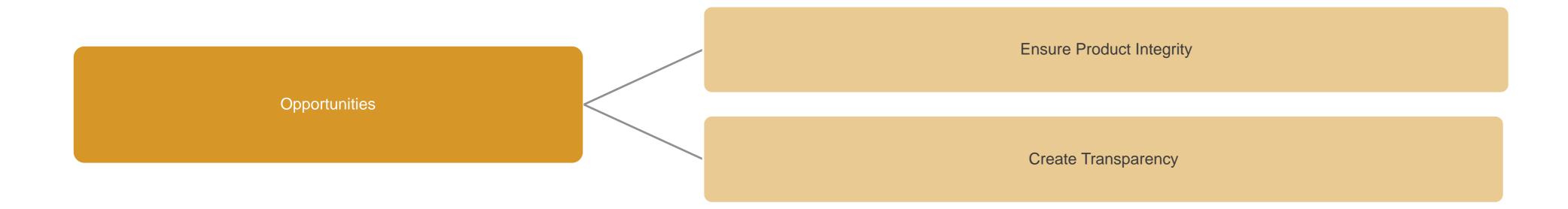
### Blockchain for Supply Chain

#### The Benefits

- Companies/Shippers Improved supply chain with greater predictability, early warning of issues/delays, transparency, and potentially reduced inventory costs.
- Carriers Up to date information about supply chain events, better collaboration with ports/terminals
- Ports/Terminals Up to date information about supply chain events that facilitates improved planning



## Practical Application: Pharmaceutical Supply Chain



#### Drug Supply Chain Security Act:

- Creates an electronic, interoperable system to identify and trace prescription drugs
  - From manufacturer to pharmacy
- Requires identification and tracing
- Requires verification, detection, response, notification, and recordkeeping activities

# Practical Application: Pharmaceutical Supply Chain, Con't.

- Potential blockchain applications:
  - Enable serialization
  - Product and inventory management
  - Conduct targeted recalls, market withdrawals, and safety alerts
- Challenge:
  - The possibility that everyone has to plug-in

#### Financial Services Applications





## Legal/Regulatory Questions

- Legal status of Blockchain (e.g., jurisdiction, applicable law, remedies for breach of smart contracts, admissibility of information on the ledger, use of ledger to prove ownership of assets)
- Inclusion in KYC, AML, and CFT directives
- Legal issues with electronic signatures
- Applicability of money transfer licensing requirements

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- Privacy challenges (e.g., how to enforce EU right to be forgotten or US rights to delete, whether addition of information to Blockchain triggers cross-border data protection schemes)
- Recognition of Blockchain as a valid means to create legal instruments (e.g., derivatives or bonds)



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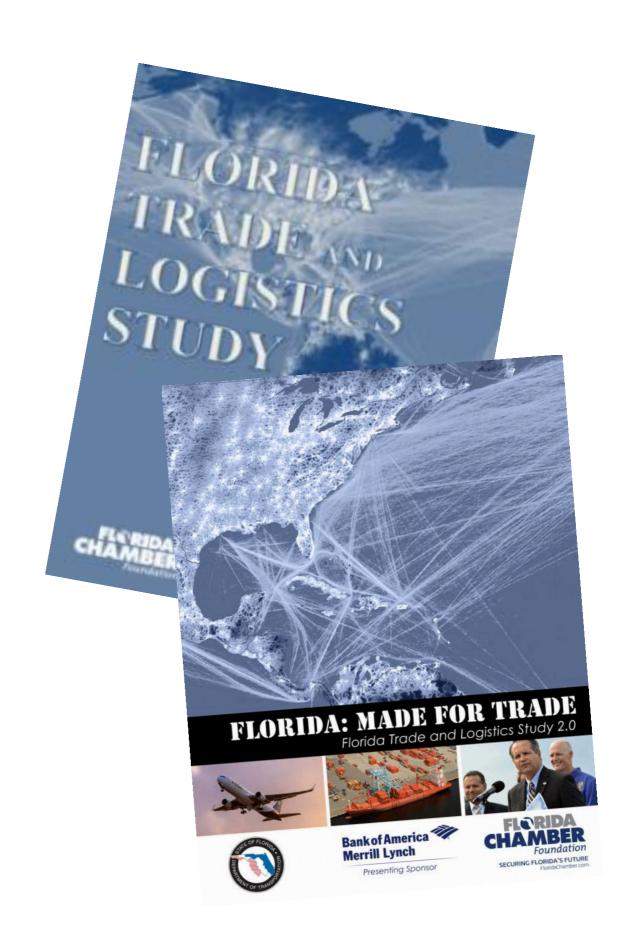
#### Florida Trade and Logistics Studies

#### Phase I (2010)

- Document existing and project future trade flows
- Recommend strategies for Florida to compete globally

#### **Phase II (2013)**

- Establish the business case for trade
- Identify opportunities and provide recommendations
- Regional implementation and support



www.FlChamber.com/international



#### www.theFloridaScorecard.com



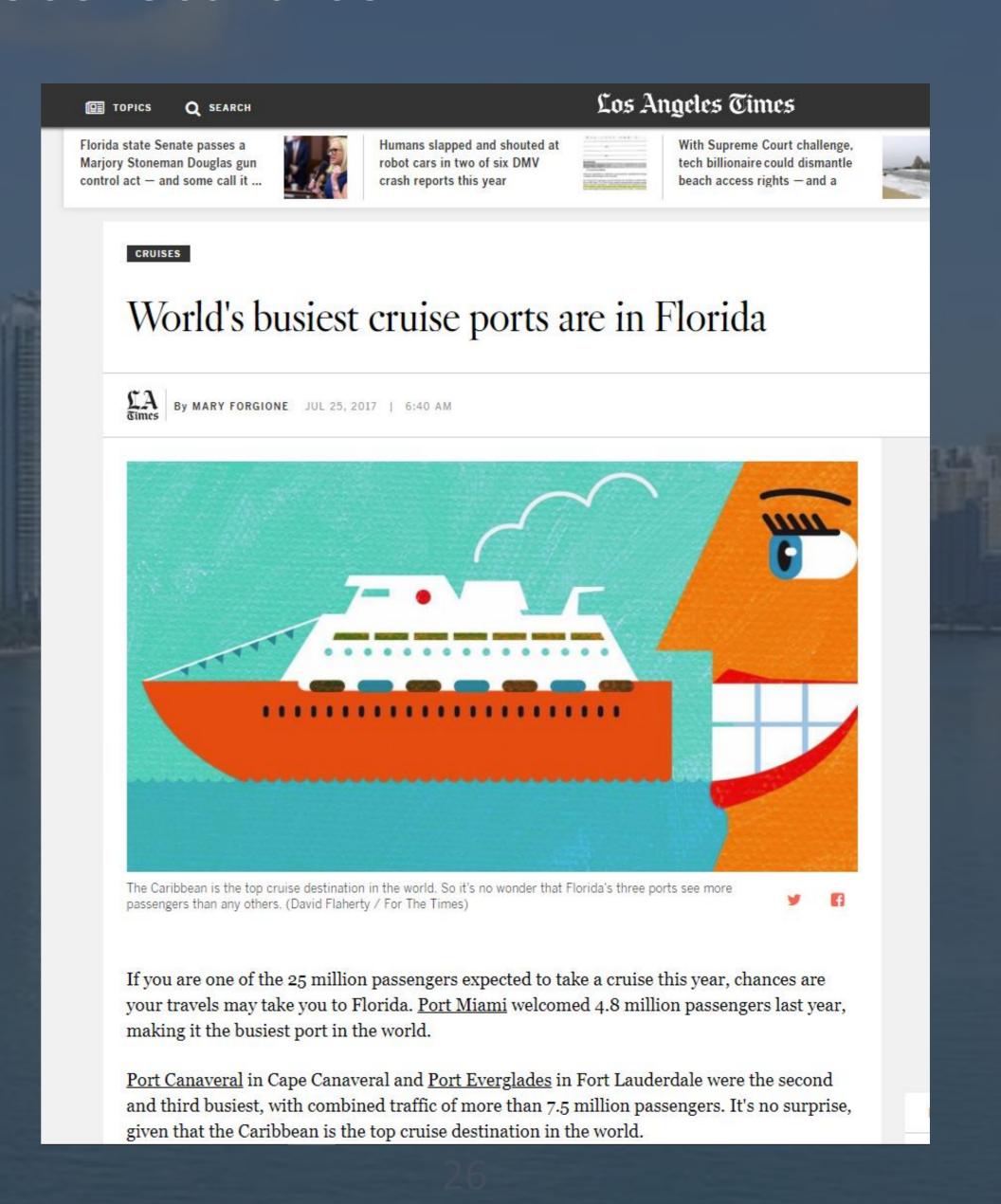
## STATE OF FLORIDA VISITORS

STIL.

Billion Visitor Spending

12.4 Million Visitors







#### **ED MORTIMER**

Executive Director, Transportation Infrastructure
US Chamber of Commerce





# Infrastructure Modernization Outlook

Ed Mortimer, Executive Director Transportation Infrastructure

#### Infrastructure Modernization

- President Trump ran on a platform of rebuilding America's infrastructure.
- In May 2017, the Administration released six principles for infrastructure bill.
- Congress held hearings but no further action without Administration's proposal.



#### Chamber's Four Point Infrastructure Modernization Plan

http://letsrebuildamerica.com/

- Increasing the federal fuel user fee by 25 cents for surface transportation projects
- Implementing a multi-faceted approach for leveraging more public and private resources
- Streamlining the permitting process at the federal, state, and local level
- Expanding the American workforce through work-based learning and immigration reform



## Administration's Proposal



- Plan would include \$200 billion in new federal investment over 10 years to leverage \$1.5 trillion in projects:
  - \$100 billion would be made available for an incentives program for states and municipalities
  - \$50 billion would be allocated for rural projects through block grants to governors
  - \$20 billion would be dedicated for a "transformative projects program" for futuristic contrivances
  - \$20 billion would be used to enhance federal credit programs and broaden the use of private activity bonds



## Administration's Proposal

- \$10 billion would back the creation of a Capital Financing
- USDOT Secretary Elaine Chao testifying on Capitol Hill about plan
- President Trump and other cabinet officials will travel country to see plan.



#### Infrastructure Bill Outlook

- House and Senate beginning hearings
- Expect House and Senate bills drafted in late Spring.
- Bill moves through House and Senate before August Recess.
- House-Senate Conference comes to agreement on bill at year end.



#### **Contact Information**

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## Questions?



#### **Upcoming Events**

- March 27<sup>th</sup>, 2018- Trade & Logistics Institute Meeting- Miami, FL
- May 1<sup>st</sup>, 2018- Global Florida Webinar
- May 2<sup>nd</sup>, 2018- Less Poverty, Through More Prosperity Summit-Orlando, FL
- May 14-16- Board of Director's Washington D.C. Fly-In
- June 12, 2018- Education Summit-Tampa, FL
- September 26, 2018- Future of Florida Forum- Orlando, FL



#### CONTACT US

#### Get in touch

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