Future of Wireless: 5G & Small Cell Deployment

Connecticut Energy and Technology Committee Informational Meeting on Telecom

January 24, 2019

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CTIA Represents the U.S. Wireless Industry

Members Include:

- Wireless carriers
- Device manufacturers
- Suppliers
- App companies

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Wireless in Connecticut

- **31,100 JOBS:** The number of jobs the industry supports in Connecticut.
- **$3.3 BILLION:** The amount the industry generates for Connecticut's GDP.
- **3.7 MILLION:** The number of wireless subscriber connections in Connecticut.

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> For decades, the evolution of communications technology has laid the foundation for broad economic growth across the United States benefitting towns and cities large and small.

Accenture Strategy
JANUARY 2017

5G is the Answer to Consumers' Growing Data Usage

4G MADE NETWORKS FASTER AND OUR LIVES EASIER
5G WILL BE A MASSIVE LEAP

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5G Benefits And Wireless Network Investment

IMPROVE COMMUNITIES ACROSS AMERICA

3M
NEW JOBS

$500B
CONTRIBUTION TO GDP

$275B
NEW WIRELESS INVESTMENT

$160B
SMART CITY BENEFITS AND SAVINGS

"How 5G Can Help Municipalities Become Vibrant Smart Cities," Accenture Strategy, Jan 12, 2017, available at: https://newsroom.accenture.com/content/1101/files/Accenture_5G-Municipalities-Become-Smart-Cities.pdf

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5G Economic Benefits: Connecticut

- **Bridgeport**
  - Over 1,350 jobs created
  - $120 million in estimated network investment
  - $223 million in estimated GDP growth
- **New Haven**
  - Over 1,200 jobs created
  - $108 million in estimated network investment
  - Nearly $200 million in estimated GDP growth
- **Stamford**
  - 1,221 jobs created
  - Over $100 million in estimated network investment
  - $199 million in estimated GDP growth
- **Hartford**
  - Over 1,100 jobs created
  - $101 million in estimated network investment
  - Over $185 million in estimated GDP growth
- **Waterbury**
  - Over 1,000 jobs created
  - Nearly $90 million in estimated network investment
  - $165 million in estimated GDP growth
- **Norwalk**
  - Over 830 jobs created
  - $73 million in estimated network investment
  - $136 million in estimated GDP growth

Improving Communities Across America, from small towns to big cities.

✓$275B New Wireless Investment

✓3 Million New American Jobs

✓$500B Contribution to GDP

✓$160B in Smart Community Benefits & Savings
by reducing energy usage, decreasing traffic congestion and reducing fuel costs

Source: https://newsroom.accenture.com/news/new-research-from-accenture-strategy-highlights-economic-and-societal-impact-of-investing-in-5g-infrastructure.htm

Small Cells

WHAT'S NEXT

- **NEW OPPORTUNITIES.** Network can now be extended on common structures like municipal street lights and utility poles

- **~300K.** Number of small cells needed in next 3-4 years

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Small Cells

THE CHALLENGES

- **DENIED ACCESS.** Rules do not contemplate small cells
- **DELAY.** 2+ year process to site a single small cell
- **COST.** Fees that do not correspond to actual cost

TwinCities.com PIONEER PRESS

Supply and demand: City asks T-Mobile for $7,500 after Verizon paid $600

by Frederick Melo
February 2017

"T-Mobile is looking to install 40 pole-top antennas in St. Paul, but the city's consultants are quoting prices that are more than 10 times higher than what Verizon agreed to three years ago."

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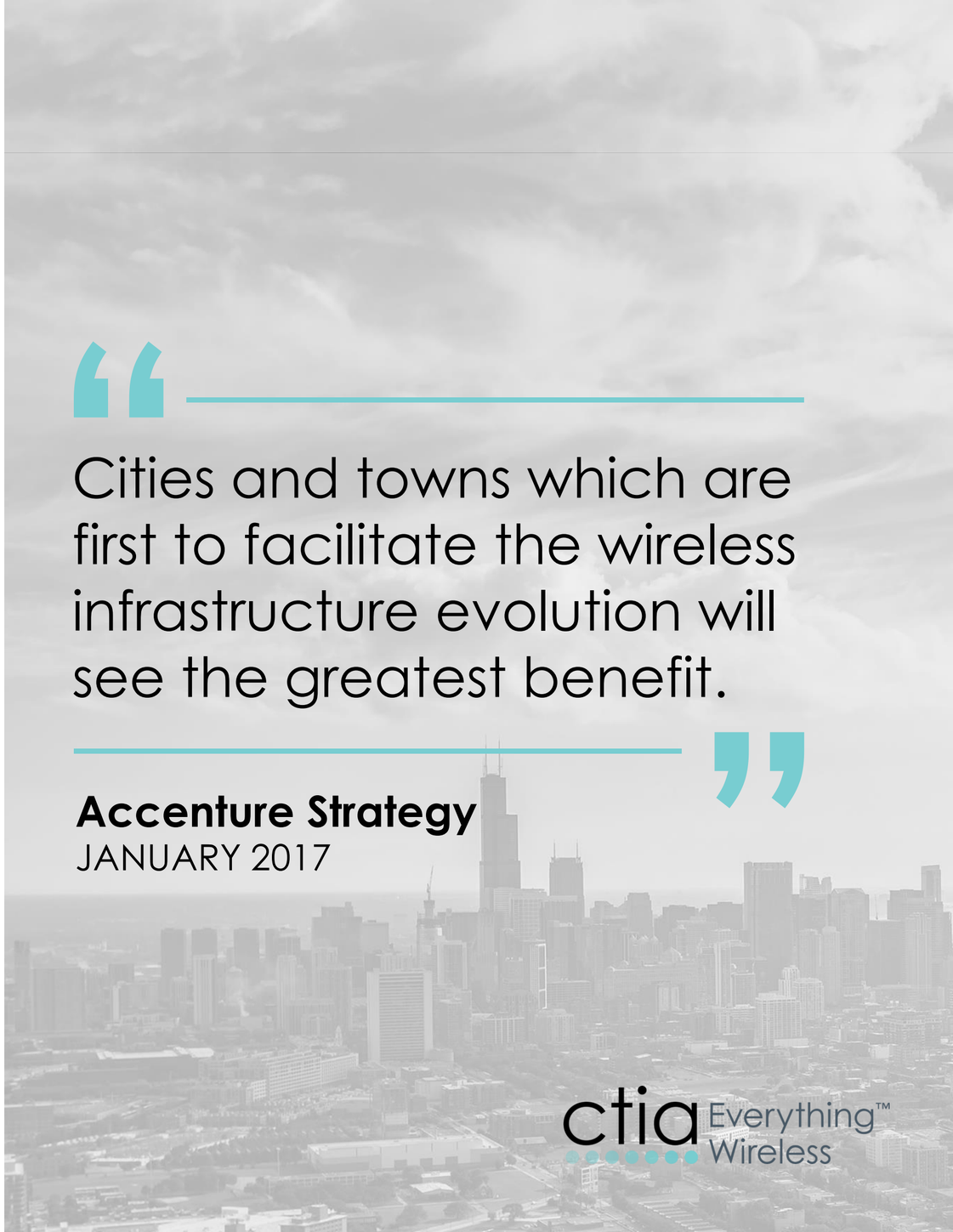
New Networks, New Rules

- **ACCESS.** Improved access to municipal facilities and rights of way
- **REDUCED COSTS.** Reasonable cost-based fees for new 5G deployments
- **MODERNIZED PROCEDURES.** Improved timelines and more uniform standards



> Cities and towns which are first to facilitate the wireless infrastructure evolution will see the greatest benefit.

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JANUARY 2017

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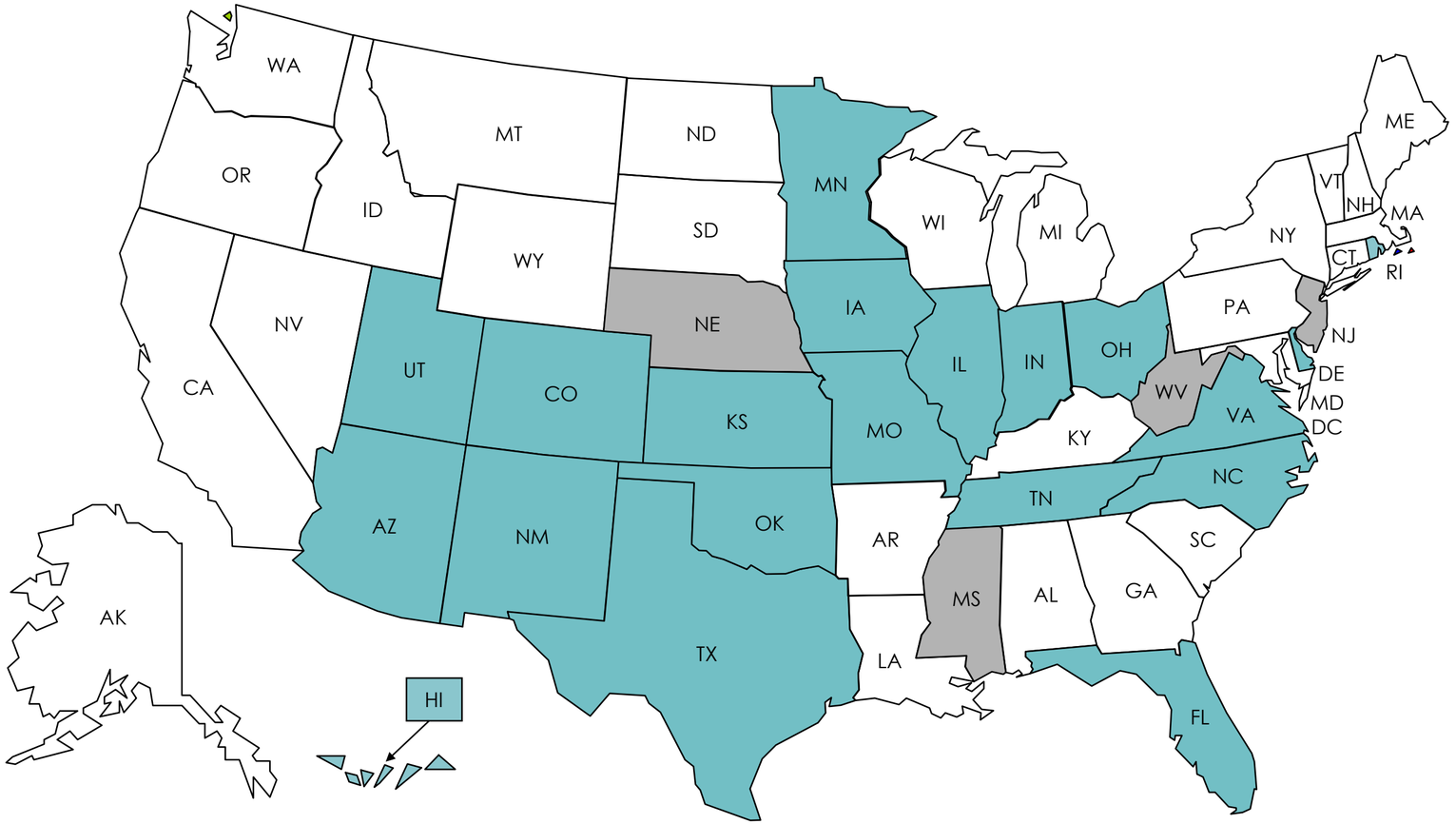
State Small Cell Legislative Activity



Key

Enacted Small Cell Legislation

Pending Small Cell Legislation (as of 1/22/19)

Puerto Rico

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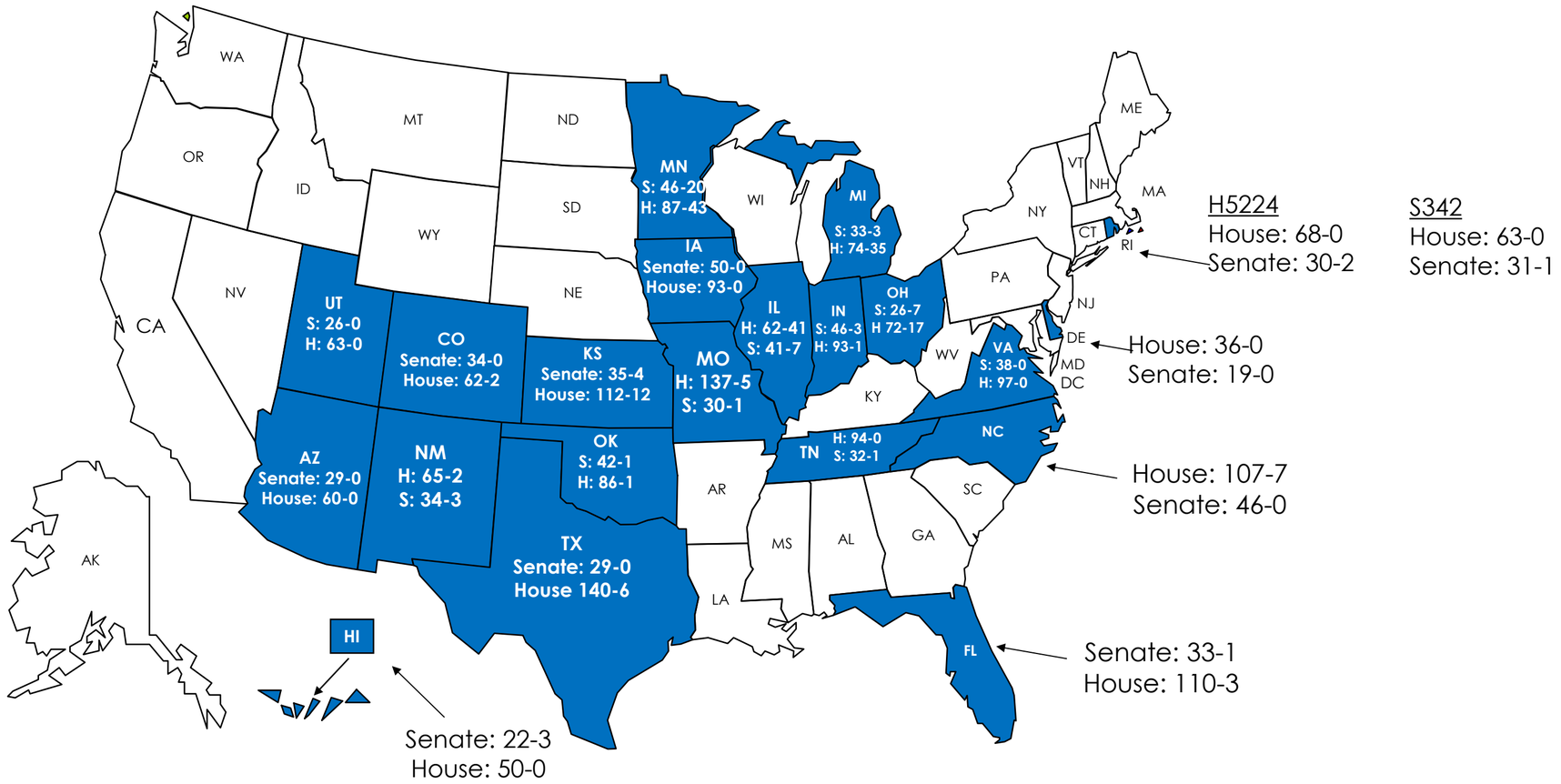
Small Cell Legislation: Nonpartisan Issue



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FCC Recent Action: State and Local Siting Order

- In September 2018, the FCC adopted its Declaratory Ruling and Third Report and Order ("Order"). Effective January 14, 2019, the Order:
- Establishes presumptively reasonable fees:
  - $270 for all reoccurring fees;
  - Non-recurring fees at: $500 for the first five applications; $100 thereafter; $1,000 for fees for a new pole intended to support a small wireless facility
- Establishes new shot clocks for small wireless facilities that mirror timelines already met by states and localities across the country: 60-days for collocation and 90-days for new builds
- Requires aesthetic requirements to be reasonable, objective, nondiscriminatory and published in advance

FCC State and Local Siting Order

- The Order does not remove local oversight over the permitting process, including safety and design standards. Municipalities retain the right to deny an application that does not meet objective, reasonable, nondiscriminatory and transparent requirements.

- The Order does not allow the placement of small cell wireless facilities without input from a municipality.

- The Order retains requirements that wireless providers must obtain any needed permits and/or lease agreements in each locality.

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States Operationalizing the FCC Order

States play a role in operationalizing the provisions of the FCC Order:

- **Permitted Use:** The “permitted use” construct provides for an administrative review for small cell applications.
  - This construct ensures that states and localities will be able to abide by the review timelines set forth by the Order.
  - Permitted use also ensures timely deployment of small cells by not subjecting small cell applications to zoning review/hearings.
  - 20 states have enacted this provision to ensure timely deployment.
- **Deemed Granted Remedy:** Ensures that inaction by local government does not stall deployment.
  - 20 states have enacted this provision to ensure timely deployment to their citizens.

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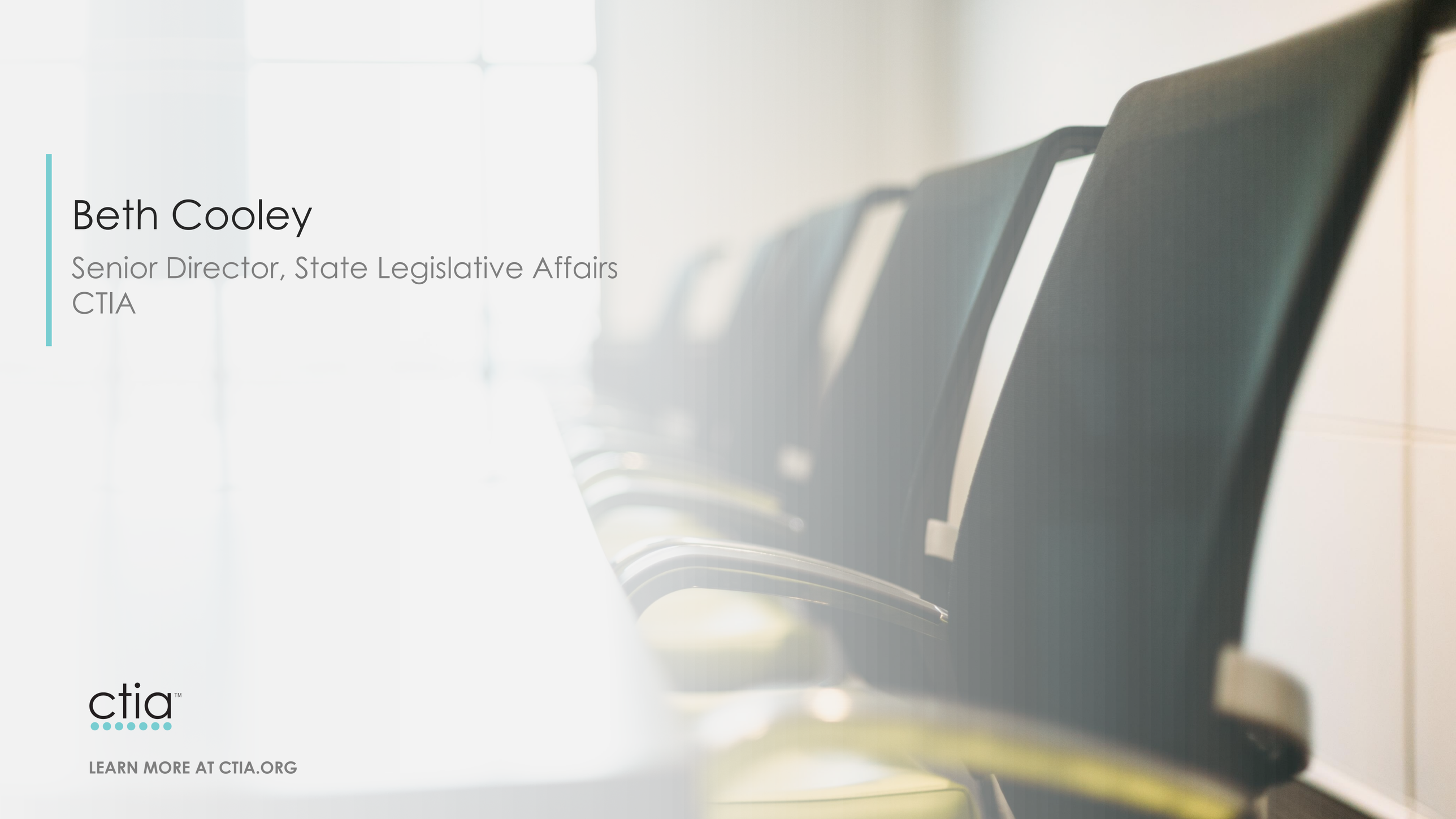
Beth Cooley

Senior Director, State Legislative Affairs
CTIA



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