Fiscal Stability Commission Presentation

Catherine Smith, Commissioner
Connecticut Department of Economic and Community Development

January 8, 2018
Presentation Overview

- **Strategy**
  - Build on Strengths
  - Address Gaps

- **Financial Assistance**
  - Competitive Landscape
  - Non-Financial
  - State Return on Investment

- **Recommendations**
DECD’s Economic Strategy
Economic Development Strategy

- Build on our strengths (talent, location, quality of life)
- Focus on innovation and key business sectors to stimulate biz development, including offshore recruitment
- Focus on talent development
- Streamline governmental processes/regulation
- Address infrastructure issues
- Collaborate with key partners to improve business climate
Connecticut Strengths: At the Center of it All

Within 500 miles of Connecticut, you will find states with 1/3 of the nation’s:

- Population
- Gross Domestic Product
- Total Jobs
- Businesses

Within that same radius, your market potential includes Canadian provinces with:

- 65% of total Canadian jobs
- 65% of total Canadian population
- 61% of total Canadian businesses

Excellent transportation to region and international locations
Connecticut Strengths: Workforce

Not only is our workforce highly educated, it’s highly industrious – ranking #5 in the U.S. for Productivity is the spirit that drives Connecticut business. In terms of gross domestic product, Connecticut ranks higher than several major countries in productivity.

#3 state for employees with advanced degrees
#6 state for scientists and engineers with doctorates

#2 Ranking for economic output per job

National Science Foundation, 2016; U.S. Census Bureau, 2015; CERC calculations
Connecticut Strengths:
World-Class Educational Institutions

CT boasts 40 colleges and universities, ranging from Ivy League to community colleges to world-class research institutions turning out highly educated workers and entrepreneurs.

The State of Connecticut is investing significantly in education
#10 in states ready for growth in the “New Economy”

Connecticut offers the kind of environment that is particularly conducive to growth for companies that are capitalizing on the latest global economic trends.

A world leader in patents

If ranked as a “country,” Connecticut’s volume of patents would place it among the most innovative in the world, ahead of many European and Asian countries.

Connecticut ranks 7th in patents per capita and has 39% more patents than the U.S. average.

In 2015, 2,158 patents were issued in Connecticut and 140,969 were issued in the U.S.
Focus on Key Industry Sectors will Drive our Economy

- Insurance/Financial Services
- Advanced Manufacturing
- Bioscience
- Digital Media
- Technology (Green, Fintech, Biotech)
- Tourism
Manufacturing Strategy: Deeper Dive
In Connecticut, there are a diverse array of 4,500+ manufacturing enterprises – and growing.

Connecticut manufacturers export $15.5 billion each year, representing 94% of the states exports.

Connecticut manufacturers bring in $11.8 billion in defense contracts.

Manufacturing generates nearly 11% of Connecticut’s Gross State Product (GSP).

Every dollar spent in manufacturing adds $1.89 in total economic activity.

Manufacturing directly supports 159,500 employees with an average salary of $95,118.
Highly Skilled & Productive Workforce

- The talent here is highly skilled, very productive, and densely populated with the second highest concentration of aerospace workers in the US.
- Worker productivity is nearly 20% higher than national average.
- 159,000 manufacturing jobs in the state.
- 4,040 machinists in Hartford County.
- CT manufacturing workers earn 50% more ($79,456) compared to the national average of $52,915, making it an expensive but valuable workforce.

<table>
<thead>
<tr>
<th>Industry</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Equipment Manufac.</td>
<td></td>
</tr>
<tr>
<td>Fabricated Metal Product Manufac.</td>
<td></td>
</tr>
<tr>
<td>Machinery Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Computer and Electronic Product</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Electrical Equipment, Appliance,</td>
<td></td>
</tr>
<tr>
<td>Food Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Chemical Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Plastics and Rubber Products Man.</td>
<td></td>
</tr>
<tr>
<td>Printing and Related Support Act</td>
<td></td>
</tr>
<tr>
<td>Primary Metal Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Paper Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Furniture and Related Product Ma.</td>
<td></td>
</tr>
<tr>
<td>Nonmetallic Mineral Product Manu.</td>
<td></td>
</tr>
<tr>
<td>Beverage and Tobacco Product Man.</td>
<td></td>
</tr>
<tr>
<td>Textile Product Mills</td>
<td></td>
</tr>
<tr>
<td>Wood Product Manufacturing</td>
<td></td>
</tr>
<tr>
<td>Textile Mills</td>
<td></td>
</tr>
<tr>
<td>Petroleum and Coal Products Manu.</td>
<td></td>
</tr>
<tr>
<td>Leather and Allied Product Manuf.</td>
<td></td>
</tr>
<tr>
<td>Apparel Manufacturing</td>
<td></td>
</tr>
</tbody>
</table>

Manufacturing employment - 2016
Major Advanced Manufacturing Companies

State is home to an exceptional combination of Original Equipment Manufacturing companies (OEMs)

- **UTC/ Pratt and Whitney**: Headquartered in the state since 1925 with all corporate, R&D, and some manufacturing
- **Electric Boat**: Based in CT for 106 years. Ramping up to meet the demand of 2 or perhaps 3 submarines per year; designing the replacement for the Ohio class (Columbia)
- **Lockheed Martin/Sikorsky**: Home of the inventor, Igor Sikorsky, the CT plant has been HQ for the helicopter company since inception (85 years); primary government manufacturing plant
Strategy for Growing Advanced Manufacturing

- Focus on strongest parts of the ecosystem: Aerospace and Shipbuilding

- Secure long-term relationships with the OEMs:
  - UTC agreement of 2014
  - Ongoing support for Electric Boat
  - Lockheed Martin/Sikorsky, 2016

- Ensure a strong and vibrant supply chain

- Build capacity in the universities, colleges and not-for-profits to support robust talent growth and innovation support
Support and Strengthen Supply Chain
Keeping innovation and suppliers close to the OEMs

- Manufacturing Innovation Fund
  - Assists smaller manufacturers in making innovative and strategic investments
  - Focuses on talent development to meet the growth expectations in aerospace and medical devices
  - Programs: voucher, apprenticeship, incumbent worker training

- Manufacturing Assistance Act/Small Business Express
  (loans, forgivable loans, grants, tax credits) to support expansion

- Investments in Training and Education At UConn, Community Colleges, Tech Schools and increasingly at comprehensive high schools to develop the next generation of talent
Created the $75 Million Manufacturing Innovation Fund (MIF) to Support this Industry

- 879 smaller manufacturers assisted in making innovative and strategic investments
- $47 million has been invested since 2014
- Focusing on:
  - talent development
  - supply chain health/growth
  - innovation & technology
  - energy efficiency

www.advancingmanufacturingct.com
<table>
<thead>
<tr>
<th><strong>Incumbent Worker Training (IWT)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>- MIF Investment</strong></td>
<td>$10.5 million</td>
</tr>
<tr>
<td><strong>- Total Commitments to date</strong></td>
<td>$7.3 million</td>
</tr>
<tr>
<td><strong>- # of Companies</strong></td>
<td>306</td>
</tr>
<tr>
<td><strong>- Jobs to be created/retained</strong></td>
<td>3,939</td>
</tr>
<tr>
<td><strong>- Workers trained</strong></td>
<td>7,072</td>
</tr>
<tr>
<td><strong>- Workers receiving an upgrade in position</strong></td>
<td>22%</td>
</tr>
<tr>
<td><strong>- Companies reported an upgrade in skills</strong></td>
<td>78%</td>
</tr>
<tr>
<td><strong>- Companies expecting productivity increases</strong></td>
<td>58%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Pre-Apprentice and Apprentice</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>- MIF Investment</strong></td>
<td>$7.8 million</td>
</tr>
<tr>
<td><strong>- Total Commitments to date</strong></td>
<td>$4 million</td>
</tr>
<tr>
<td><strong>- # of Companies</strong></td>
<td>20</td>
</tr>
<tr>
<td><strong>- # of Registered Apprentices</strong></td>
<td>295</td>
</tr>
<tr>
<td><strong>- # of Registered Pre-apprentices</strong></td>
<td>36</td>
</tr>
<tr>
<td><strong>- # of Related Instruction Providers</strong></td>
<td>10</td>
</tr>
</tbody>
</table>
MIF – Young Talent Development

- **Young Manufacturers Academy** - students learn what goes into producing products in workshops using lean manufacturing, engineering design, and high-tech industry software
  - Total Commitments 2016 $250,000
  - Industry/Education Partners Engaged (FY 16) 15
  - Students Trained 142
  - Program Sites 8

- **CT Dream It. Do It. initiative** - campaign to create a positive image of today’s manufacturing to support the future workforce pipeline
  - Total Commitments in 2016 $266,523
  - # of Students (FY 16) 1,732
  - # of Schools Represented 62
  - # of Towns Represented 33
  - # of Related Instruction Providers 10
# MIF - Supply Chain Health/Growth & Energy Efficiency

## Supply Chain Health/Growth - Voucher Program:
Vouchers, ranging from $5,000 to $50,000, for the purchase of specialized expertise that will help improve operations (e.g., equipment purchase, LEAN, compliance)

- MIF Investment: $15 million
- Total Commitments to date: $14.4 million
- # of Companies: 436
- Jobs to be created/retained: 749 (643 full time) (106 part time)
- Total Value of Projects: $55 million
- Applicants to Distressed Communities: 28%
- Gross Margin improvement: 2.2%
- Products Exported Increase: 1.2%

## Energy Efficiency – Energy on the Line:
Fully finances the upgrading of a manufacturing facility’s energy efficiency, through the C-Pace Program

- MIF Investment: $800,000
- Total Commitments to date: $248,530
- # of Companies: 10
- Total Value of Projects Initiated: $4,086,953
MIF - Innovation & Technology

- **Advanced Composites**
  - MIF Investment: $5,000,000
  - Total Commitments to date: $2,900,000
  - # of Companies: 2

- **High Rate Additive Manufacturing Machining**
  - MIF Investment: $600,000
  - Total Commitments to date: $440,000

- **RADE 2 Manufacturing Innovation**
  - MIF Investment: $450,000
  - # of Companies: 68
  - Project implemented: 28
  - Equipment Hours: 1,805
  - Types of Projects: 3D, x-ray scans
### In addition - DECD Financial Assistance for Business Growth in Manufacturing

<table>
<thead>
<tr>
<th>Program</th>
<th># of Companies</th>
<th>DECD $</th>
<th>Jobs Retained</th>
<th>Jobs Created</th>
<th>Total Jobs C&amp;R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Business Express</td>
<td>423</td>
<td>$80,165,351</td>
<td>8,222</td>
<td>2007</td>
<td>10,229</td>
</tr>
<tr>
<td>MAA</td>
<td>81</td>
<td>$225,004,689</td>
<td>19,636</td>
<td>4,289</td>
<td>23,925</td>
</tr>
<tr>
<td>First Five</td>
<td>4</td>
<td>$109,100,000</td>
<td>2,317</td>
<td>1,008</td>
<td>3,325</td>
</tr>
<tr>
<td>TOTAL</td>
<td>508</td>
<td>$414,270,040</td>
<td>30,175</td>
<td>7,304</td>
<td>37,479</td>
</tr>
</tbody>
</table>

- DECD financial assistance programs have aided over 500 companies as they invest and grow their businesses – about 20% of EXP and about 45% of MAA funding.

### Export Support

- Also provide Export assistance through partnership with the federal STEP grant. 404 eligible small CT businesses have participated. STEP may be used for a variety of export activities including trade shows, trade missions, marketing and internationalization, U.S. Department of Commerce services (Gold Key, International Partner Search, International Company Profile), export training opportunities, and export B2B matchmaking.
  - CT has spent $1.05 million in federal funds for STEP approved export activities.
  - CT companies receiving STEP assistance report anticipated export sales from various events including:
    - Hannover Messe: $5,469,000
    - Medica: $1,950,000
    - General Assistance Export Fund: $90,032,146

- The Farnborough and Paris Air Shows - Since 2006, $422 million is reported as anticipated sales by the sub-exhibitors in our booth.
Education Investments Focused on Manufacturing

- Academia, i.e. UCONN, Board of Regents for Higher Education, Connecticut Conference of Independent colleges, CT Technical High School System are critical to building the workforce of the future.

- Community Colleges have more than doubled the output of manufacturing graduates in the past 5 years.

- Tech schools are producing hundreds of potential manufacturing workers during the day, and training in their facilities at night.

### Connecticut Technical High School System (CHTSS) Manufacturing Cluster Program Students

<table>
<thead>
<tr>
<th>Program</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Design &amp; Engineering Technology</td>
<td>505</td>
</tr>
<tr>
<td>Precision Machining</td>
<td>803</td>
</tr>
<tr>
<td>Welding &amp; Metal Fabrication</td>
<td>90</td>
</tr>
<tr>
<td>Automated Manufacturing</td>
<td>47</td>
</tr>
<tr>
<td>Mechatronics</td>
<td>89</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1534</strong></td>
</tr>
</tbody>
</table>

### Connecticut Community Colleges: Manufacturing Education Program Students

<table>
<thead>
<tr>
<th>College</th>
<th>2016</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asnuntuck</td>
<td>388</td>
<td>154</td>
</tr>
<tr>
<td>Housatonic</td>
<td>116</td>
<td>55</td>
</tr>
<tr>
<td>Manchester</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Middlesex</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Naugatuck</td>
<td>109</td>
<td>57</td>
</tr>
<tr>
<td>Quinebaug</td>
<td>36</td>
<td>52</td>
</tr>
<tr>
<td>Three Rivers</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>789</strong></td>
<td><strong>318</strong></td>
</tr>
</tbody>
</table>

22
In Addition -- UCONN is Training More Students and Investing with Industry

- UConn School of Engineering has increased enrollment by 70%
- Tech Park brings industry together to do R&D as indicated below

<table>
<thead>
<tr>
<th>Industry Partner</th>
<th>Center</th>
<th>Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThermoFisher Scientific</td>
<td>Thermo Fisher Scientific Center of Excellence</td>
<td>$25 Million</td>
</tr>
<tr>
<td>Eversource Energy</td>
<td>Eversource Energy Center</td>
<td>$9 Million</td>
</tr>
<tr>
<td>General Electric</td>
<td>GE Advanced Technology Initiative</td>
<td>$7.5 Million</td>
</tr>
<tr>
<td>United Technologies</td>
<td>UTC Institute for Advanced Systems Engineering</td>
<td>$10 Million</td>
</tr>
<tr>
<td>Pratt &amp; Whitney</td>
<td>Additive Manufacturing Innovation Center in partnership with Pratt &amp; Whitney</td>
<td>$7.5 Million</td>
</tr>
<tr>
<td>Fraunhofer USA</td>
<td>Fraunhofer Center for Energy Innovation</td>
<td>$7.2 Million</td>
</tr>
<tr>
<td>COMCAST</td>
<td>COMCAST Center for Security Innovation</td>
<td>$6 Million</td>
</tr>
<tr>
<td>Synchrony Financial</td>
<td>Synchrony Financial Center of Excellence in Cybersecurity</td>
<td>$2.2 Million</td>
</tr>
</tbody>
</table>
In Addition: Ecosystem Partners Add Significant Value

- **Aerospace Components Manufacturers (ACM):** ACM is a regional network of 114 CT and southwestern MA-based aerospace companies. Works with regional, national and international experts to ensure continuous improvement of members’ products.

- **Other Business and Manufacturing Associations:**
  - CCAT
  - CONNStep
  - New Haven Manufacturers Association
  - Smaller Manufacturers Association of CT
  - Connecticut Tooling and Machining Association
  - Eastern Advanced Manufacturing Manufacturing Alliance
  - CBIA
  - Metal Manufacturers' Education and Training Alliance (METAL)
Our Manufacturing Strategy is Working …

...But continued investment will be critical to sustained job growth

- Jobs on the increase after 25 years of decline:
  - EB hiring 4,000+ in 15 years
  - Pratt & Whitney hiring as many as 8,000 in next decade
  - Sikorsky growing jobs to 8,000 and increasing investment in supply chain
  - ACM members hired over 1,000 in 2017

- CT designated as an Investing in Manufacturing Communities Partnership (IMCP) for aerospace and shipbuilding

- Cross-New England Aerospace and Defense Cluster underway
#1 in insurance employees across the U.S.

#1 in the U.S. in insurance payroll

Financial Services & Insurance Strategy: Deeper Dive
The Insurance sector generates nearly 9% of Connecticut's Gross State Product (GSP).

The Insurance Industry supports 58,705 employees with an average wage of more than $85,466.

For every new job the insurance industry adds, 1.92 jobs are added to the Connecticut economy.

Connecticut ranks #3 in the world in U.S. equity assets under management.


Connecticut ranks #2 in the world for large hedge funds, managing $1 billion or more.
Insurance Business Environment

- Key strength of the state is the depth of talent in insurance with strengths in legal, accounting, actuarial and data analytics

- M&A activity over the past 20 years has reduced the number of firms headquartered in the state and number of employed in insurance has declined slightly since the great recession

- Need to ensure other large insurers remain in the state and support their innovation and data analytic needs

- Continued excellence in the Insurance Department (which regulates companies domiciled here) helps make CT a good place to situate an insurance entity
The Insurance and Financial Services Cluster

Connecticut’s Insurance and Financial Services Cluster (IFS) based in Hartford

- Established in 2003
- Designed to foster collaboration between business, academia and state government
- Comprised of 32 companies in Connecticut’s insurance and financial service sectors

Cluster strategy is based upon work already begun by IFS
IFS Cluster Strategy has invested in Talent Development

A one-week camp that provides students the opportunity to learn about the actuarial profession inside a local company.

May 2017, CT IFS launched the inaugural Banking Boot Camp with four bank sponsors and partners the Connecticut Department of Banking and Connecticut Bankers Association.

A public, college preparatory school for high school students, grades 9-12, who are interested in pursuing careers in the insurance and financial services industries.
Investment Fund Industry is Growing in CT

Connecticut is home to over 400 private investment funds, managing over $750 billion in assets

Key Stats

<table>
<thead>
<tr>
<th></th>
<th>Number of Hedge Fund Managers</th>
<th>Number of Hedge Funds</th>
<th>Number of Hedge Fund Investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>214</td>
<td>984</td>
<td>102</td>
</tr>
<tr>
<td>U.S.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Investor Universes

<table>
<thead>
<tr>
<th></th>
<th>Connecticut</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Hedge Fund Investors</td>
<td>102</td>
<td>3,271</td>
</tr>
<tr>
<td>Average Allocation to Hedge Funds (As a % of AUM)</td>
<td>12.80%</td>
<td>14.60%</td>
</tr>
<tr>
<td>Average No. of Hedge Funds in Portfolio</td>
<td>22-24</td>
<td>11-12</td>
</tr>
<tr>
<td>Average AUM</td>
<td>$5.7bn</td>
<td>$7.4bn</td>
</tr>
<tr>
<td>Typical Investment Size</td>
<td>$18-36mn</td>
<td>$14-38mn</td>
</tr>
</tbody>
</table>

Connecticut-Based Hedge Fund Investors by Type

- Fund of Hedge Funds Manager: 25%
- Endowment Plan: 17%
- Private Sector Pension Fund: 16%
- Wealth Manager: 12%
- Family Office: 11%
- Public Pension Fund: 7%
- Insurance Company: 4%
- Asset Manager: 3%
- Other: 7%

Strategy Preferences of Connecticut-Based Hedge Fund Investors

- Foreign Exchange: 8%
- Statistical Arbitrage: 13%
- Long Bias: 16%
- Equity Market Neutral: 22%
- Convertible Arbitrage: 24%
- Fixed Income Arbitrage: 29%
- Risk/Merger Arbitrage: 31%
- Relative Value Arbitrage: 33%
- Long/Short Credit: 36%
- Fixed Income: 39%
- Macro: 45%
- Long/Short Equity: 84%
Recent Cluster Activity is Focused on Innovation and Fintech

An accelerator which will focus on leveraging existing and emerging technology
- To change delivery of insurance products
- To improve claims management
- Managing regulatory requirements
- For innovating new insurance products
- To help insureds proactively reduce risk
- To increase the speed and scale of the industry

Co-working space with a focus on nurturing small businesses, start-ups, innovators, and entrepreneurs in the greater Hartford area. Insurtech will be located here

Connecticut Innovations $5 million program designed to attract new ventures to the state from across the globe with a focus on
- Fintech
- Insurtech
- Digital Health
- Internet of Things

In addition to funding, winners will obtain access to a critical network of customers, investors, mentors and talent.
Other Strategic Investments to Build Upon Strengths
Build Talent in Expected High Growth Clusters

**Strategy Goal**

- Increase STEM Education
- Add Manufacturing Talent

**Selected Outcomes**

- *Next Generation CT*—targeted $1 billion investment in STEM disciplines at UConn
- 2011 Jobs Bills authorized $20M to expand existing and develop new manufacturing programs in community colleges; Federal grant of $30 million used to upgrade 3 more schools
- “300 Jobs, 300 Days” at Community Colleges pairing graduates with manufacturing jobs. Exceeded goal!!!!
- Manufacturing Innovation Fund programs aimed at developing future pipeline of talent serves 879 companies
- Launched Tech Talent Fund to enhance tech talent
- CT public schools have doubled Computer Science graduates in last few years
CTNext’s programs (Technology Talent Bridge, Innovation Places, Entrepreneur Learner’s Permit, Entrepreneurs-in-Residence, accelerators and co-working spaces) have supported more than 1,900 members and entrepreneurs.

CTNext entrepreneur support system provides access to talent, space, expertise, services, and capital. Recent projects:

- Innovation Places – An effort to weave together entrepreneurship support and relationship-building with physical planning and development
- Entrepreneur Learner’s Permit - Encourages entrepreneurship and job growth in our state
- Tech Talent Bridge – Helps companies connect with students in tech fields
<table>
<thead>
<tr>
<th>Strategy Goal</th>
<th>Selected Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>More R&amp;D Capacity at UConn</td>
<td>• Dramatically increased engineers/engineering faculty at UConn; number of students up 70%</td>
</tr>
<tr>
<td>Expand CI’s Investment Capacity</td>
<td>• $1.5B construction investment in <em>Next Generation CT</em> at UConn to build new classrooms/labs and buy new equipment</td>
</tr>
<tr>
<td></td>
<td>• Connecticut Innovations completed nearly 120 early stage company deals in fiscal year 2017, with $38.4 million of investment</td>
</tr>
<tr>
<td></td>
<td>• Connecticut Bioscience Innovation Fund provides funds to early stage companies, and nonprofits building commercialization infrastructure. Since inception and through June 30, 2017, the fund has invested approximately $24 million in companies and projects</td>
</tr>
</tbody>
</table>
Infrastructure Investments Started, but More to be Done

### Comprehensive Energy Policy

- **Comprehensive Energy Strategy** (strategy for all residential, commercial, and industrial energy issues) was introduced by Malloy administration in 2015.

- In collaboration with New England States, it intended to help state have cleaner, less costly and more consistent access to energy.

- Progress has been stymied by changes in administration in other states and other issues.

### Selected Outcomes

<table>
<thead>
<tr>
<th>Strategy Goal</th>
<th>Selected Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comprehensive Energy Strategy</strong></td>
<td>- CT Green Bank (CGB) provides low-cost financing programs to support efficiency and renewable energy, including C-PACE and Energy on the Line.</td>
</tr>
<tr>
<td></td>
<td>- Full financing of solar, fuel cells or other alternatives to help reduce cost of energy in the state</td>
</tr>
<tr>
<td></td>
<td>- In 6 year history, CGB has installed more than 230 MW of clean renewable energy systems, helping reduce carbon by 3.7M tons (the equivalent of 37,000 cars); created almost 13,000 jobs; and leveraged $900 million private sector funds.</td>
</tr>
<tr>
<td></td>
<td>- Harvard 2017 Innovations in American Government Award</td>
</tr>
<tr>
<td></td>
<td>- Recent budget crippled funding by cutting 50%</td>
</tr>
</tbody>
</table>
Infrastructure Investments Started, but More to be Done

**Strategy Goal**

- State has funded development in cities and towns along MetroNorth and new light rail from New Haven-Springfield to develop retail, housing and other transit-oriented development

- Governor’s Let’sGoCT outlines a 30-year transportation upgrade which includes bridges, design work for widening I-95 between Stamford and Bridgeport, and New Haven line improvements

- Lock box for transportation finally approved

- However, little funding has been provided and Special Transportation Fund is running out of funding

- Transportation cited as critical to many businesses.

- While high in overall access to broadband, CT must continue to invest in fast connectivity

**Selected Outcomes**
Due to exit of high profile companies and fiscal stability concerns, the state suffers from a poor reputation for business growth.

Limited funding exists for marketing (2107 includes $6.4 million of which 80+% is allocated to tourism, leaving $1 million for economic development outreach).

State has reduced regulation (over 1000 pages of regulation eliminated) and permitting processes (agencies have “leaned” their processes), but still perceived as being difficult to do business.

Population growth has stalled (up 500 last year with over 10,000 departures in prior 3 years); misperception on where change is occurring

- Over 5 years, the proportion of 20 somethings increased more than any other state, up from 12.5% to 13.1%
- Percentage of families living below poverty level fell from 8% to 6.8% (nationwide is about 10%)
- Share of households making at least $200,000 rose from 10.3% to 11.1%

High costs remain an issue: Higher cost of talent not always seen as higher value.
DECD’s Business Support and Incentives
DECD Toolbox

Financial support for:
- Growth
- Capital Investment
- Tailor-made

Tax Incentives
- Credits
- Abatements

Technical Assistance
- Expertise
- Research
- Partnerships

Financing
- Loans
- Forgivable Loans
- Grants

Tax Abatements for:
- Targeted Cities
- Growth
- Capital Investment

Technical Assistance for:
- Innovation support
- Introductions and partnerships
- R&D
- Mentoring
Use of Incentives is Tied to Strategy

- **For larger companies**, focused on
  - Key business sectors
  - Out of state recruitment
  - Offshore Foreign Direct Investment
    (targeted in selected countries)

- Tailor each transaction (within statutory requirements) to meet specific business needs

- **For small business**: goal is to ensure companies – with a focus on our “Main Street” businesses – have access to growth capital, partnering with banks

- EXP is more standardized, but still underwritten
Small Business Express Program (EXP)

Matching grants of up to $100,000, or loans/forgivable loans in amounts up to $300,000

- To date, 1,874 companies have been provided more than $304 million in financial assistance to create 7,727 jobs and retain 20,558
- All industries are represented – including manufacturing, healthcare and bioscience, business and financial services, construction, and main street retail
- Volume has slowed as bank activity has increased
- Emphasizing partnership with banks
- Renewed focus opportunities:
  - Minority Business Owners
  - Incorporating arts into projects
  - Leveraging EXP to attract innovative and tech companies from out of state

Companies Assisted Through EXP
Manufacturing Assistance Act (MAA)

Provides milestone-driven loans and grants for mid to large-sized companies growing jobs and building their business in CT.

- Since 2011, MAA has assisted 156 companies with over $413 million in assistance in exchange to retain 39,318 jobs and pledge to create 8,408 in the state’s largest urban centers, suburban towns, and small rural communities.

![MAA Dollars By Industry Chart]

- Manufacturing: 44.3%
- Professional Services: 14.0%
- Financial Services: 10.4%
- Wholesale: 9.3%
- Information: 7.1%
- Administrative: 6.0%
- Retail Trade: 4.9%
- All Others: 3.8%
First Five Plus

- Encourages business expansion, relocation and job creation for large-scale companies that create 200 jobs within 2 years or invest $25M and create 200 jobs within 5 years

- Success to date:
  - 15 projects to date
  - Provided $321M in direct state assistance, leveraging $1.7B
  - 13,526 jobs to be retained and 5,674 to 9,280 jobs to be created

Calculations done based on companies meeting their minimum job requirements
Tax Incentives

Enterprise Zones

Tax Abatements
- 5-year, up to 80% on property taxes
- 25% credit of state corporate taxes attributable to participation in a certified project

Tax Credits
- Urban and Industrial Sites Reinvestment Tax Credit
- Angel Investor Tax Credit

Tax Exemptions
- Sales and Use Tax
- Manufacturing Property
- Corporate Sales
DECD assistance packages require an ROI analysis as we view ourselves as stewards of taxpayer funds.

We evaluate both the direct and indirect cost and benefits of the programs on a deal by deal basis.

The primary industry model, REMI, uses experience from over 40 years of economic outcomes to model expected future results of investments and growth in specific industries:

- Inputs: state assistance; company’s investment; new employment; industry sector impacted
- Outputs: expected impact on state revenue, GDP, annual loss/gain

Overall our portfolio is creating value:
- 1,816 companies are growing 18,012 jobs with 72,799 jobs retained
- Creating 107% of the expected jobs
- Leveraging $2.7 billion
- Delivering on commitments
### DECD Investment Analysis

- **DECD requires a positive ROI on direct company returns**
- **Our ROI is generated on new income, sales and use taxes and interest payments; minimum acceptable return is the principle plus our cost of capital**

#### Project Details

- **Company Name:** Sample
- **Project Location:** Anytown, CT
- **Project Manager:** Retained
- **Prepared By:** Mark Prisloe
- **Date:** 2/4/2015
- **Total Project Costs:** $10MM

#### Estimated Direct Impact

<table>
<thead>
<tr>
<th>Year</th>
<th>COSTS TO CT ($000's):</th>
<th>ESTIMATED RETURNS/BENEFITS TO CT:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STATE INVESTMENT (DECD, CII, DOH)</td>
<td>CORPORATE TAXES</td>
</tr>
<tr>
<td></td>
<td>OTHER STATE INVESTMENT (i.e. DEEP, DOI)</td>
<td>PAYROLL TAXES</td>
</tr>
<tr>
<td></td>
<td>COST OF FUNDS (cost to bond, P&amp;I, link to line 24 in &quot;Incentives&quot; tab)</td>
<td>SALES TAXES (project &amp; end user)</td>
</tr>
<tr>
<td></td>
<td>COST OF TAX ABATEMENTS/CREDITS</td>
<td>PMTS OF P &amp;/or I ON LOAN (based on loan terms)</td>
</tr>
<tr>
<td></td>
<td>FEES PAID TO DEPARTMENT</td>
<td></td>
</tr>
</tbody>
</table>

#### Construction Related Benefits

| Year | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

#### Net Cash Flows

| Year | 1,026 | 404 | 305 | 319 | 330 | 340 | 352 | 364 | 378 | 393 |

#### Direct Re:

- **Net Cash Flows:** $890, 267, 168, 183, 193, 204, 216, 228, 241, 257
- **Cum Cash Flow:** (2,729), (1,702), (1,298), (993), (674), (344), (4), 348, 712, 1,090, 1,483

#### Conclusions of Analysis:

- **Payback Period (Yrs):** 6.02 YEARS
- **Net Present Value ($000's):** $2,485
Why Provide Financial Incentives? Why “pick winners”?

- We compete everyday with other states for company retention, expansion and job growth
  - Connecticut companies are approached regularly by states who commission reps to lure businesses to their state; we must compete and use incentives to retain and support company growth in Connecticut
  - Site Finders set up competitive bidding processes between states for new company expansions

- Investing with companies makes sense if it keeps them growing in the state AND if we can get a positive ROI

- We are focused on international recruitment (foreign direct investment) and incentives can help defray the cost of their move

- Disciplined approach is required – i.e. walk away from transactions that don’t pencil
### McKinsey’s Preliminary Data for Incentives Deals for 2017

#### Overview of Incentives Deals
Data for incentives deals from 2017

<table>
<thead>
<tr>
<th>State</th>
<th>Total deals No.</th>
<th>Total incentives USD m</th>
<th>Sum of Capex USD m</th>
<th>Total Jobs No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td>226</td>
<td>1,011</td>
<td>8,338</td>
<td>133,724</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>225</td>
<td>76</td>
<td>854</td>
<td>13,189</td>
</tr>
<tr>
<td>North Carolina</td>
<td>126</td>
<td>257</td>
<td>4,062</td>
<td>16,135</td>
</tr>
<tr>
<td>Connecticut</td>
<td>114</td>
<td>101</td>
<td>505</td>
<td>6,149</td>
</tr>
<tr>
<td>New Jersey</td>
<td>68</td>
<td>1,115</td>
<td>1,418</td>
<td>17,661</td>
</tr>
<tr>
<td>Florida</td>
<td>36</td>
<td>31</td>
<td>355</td>
<td>4,987</td>
</tr>
<tr>
<td>Texas</td>
<td>30</td>
<td>1,296</td>
<td>10,345</td>
<td>17,935</td>
</tr>
<tr>
<td>South Carolina</td>
<td>24</td>
<td>18</td>
<td>1,649</td>
<td>7,191</td>
</tr>
</tbody>
</table>

83% of jobs under CT deals were new, high compared to MA (45%) and NJ (42%)

1 Different types of incentives include: tax, grant subsidy, loan/credit, non-financial, other/not-specified

Other Selected Metrics we Track

Data from CT DOL & Bureau of Economic Analysis
CATHERINE SMITH
Commissioner
Connecticut Department of Economic & Community Development

T: 860.500.2310
C: 860.801.4254
catherine.smith@ct.gov