



Remarks on Economic Growth

Commission on Fiscal Stability & Economic Growth

Jim Loree | January 31, 2018

Objectives for today's meeting

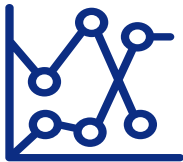


- ❑ Provide a brief recap of key points from my January 8th presentation on CT's competitiveness
- ❑ Revisit our "strawman" vision to restore our state's competitiveness
- ❑ Delve into 2 key issues that we believe are constraining growth and offer solutions
 - Tax policy
 - Workforce skills imbalance
- ❑ Review 2 of 4 targeted growth sectors with preliminary recommendations
 - Advanced manufacturing
 - Small and medium sized businesses
- ❑ Identify 2 additional targeted sectors for inclusion prior to final report
 - Healthcare
 - FinTech

Growth and why it is so important



Competitiveness creates the preconditions for **economic growth**



Economic growth is the increase in **goods and services** an economy produces...



...resulting in rising tax revenues and **creating a supportive environment** for:

- Fiscal sustainability
- High quality of life
- Safety net for the vulnerable

CT has a weak and declining economic growth score

2017 State Economic Growth Competitiveness Indices

1 = best state, 50 worst

- Top 15
- Mid 20
- Bottom 15

| | | Overall Growth | GDP Growth | Growth of Young Population | Net Migration |
|--------------|----------------|----------------|------------|----------------------------|---------------|
| Aspirational | North Carolina | 10 | 14 | 13 | 11 |
| | Texas | 4 | 1 | 15 | 6 |
| | Florida | 3 | 5 | 5 | 2 |
| Neighbors | New Jersey | 37 | 35 | 34 | 38 |
| | Massachusetts | 26 | 33 | 23 | 17 |
| | New York | 32 | 38 | 20 | 41 |
| | Connecticut | 44 | 43 | 37 | 45 |

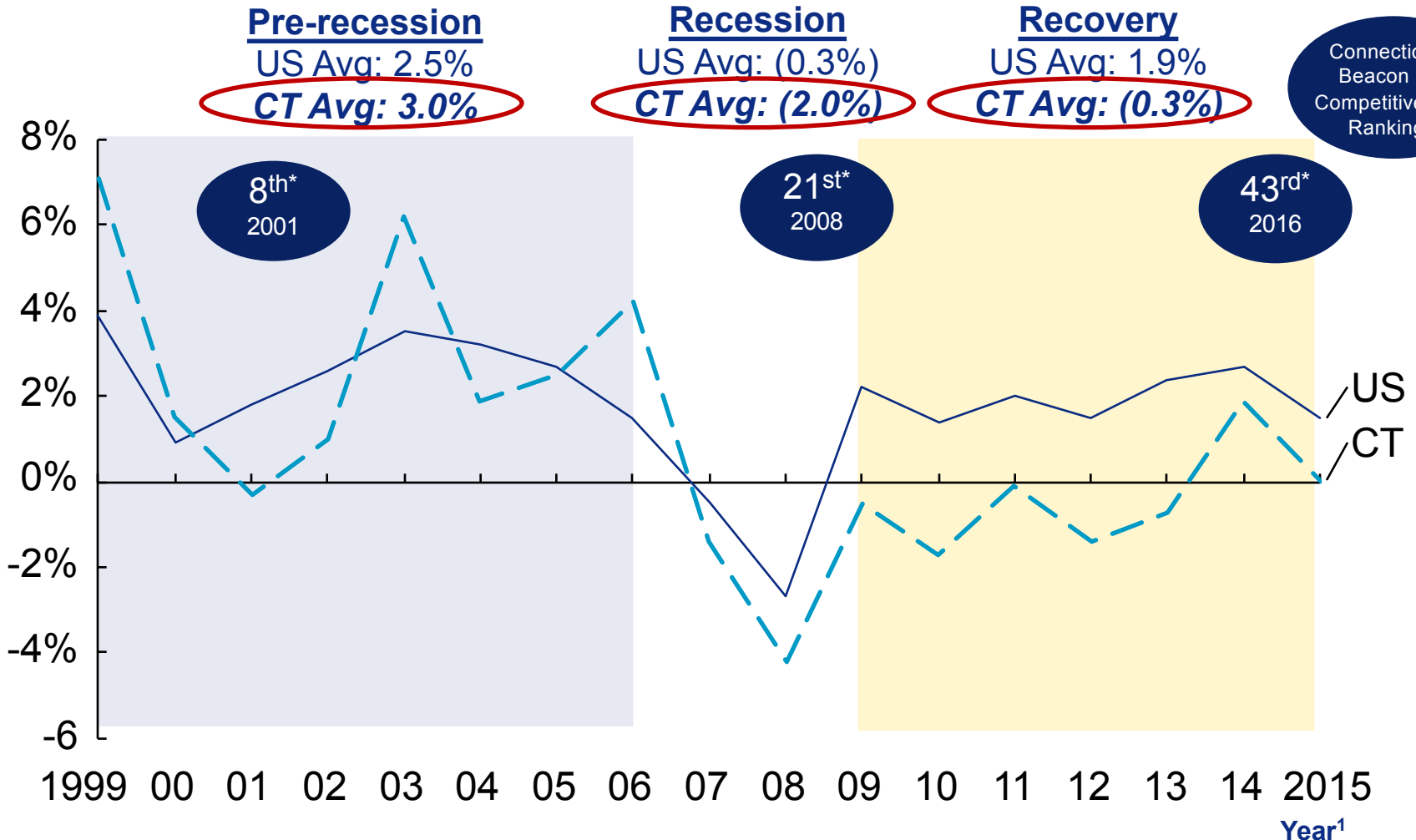
Current CT Beacon Hill competitiveness score is poor, and has dropped significantly in recent years...

2001 – 8th
 2008 – 21st
 2016 – 43rd

Our growth has slowed as our competitiveness has diminished

CT GDP growth rate

% change from preceding period



Connecticut's
Beacon Hill
Competitiveness
Rankings

1 Each year represents the calculation between two years. For example, "1999" was calculated between "1999-2000"

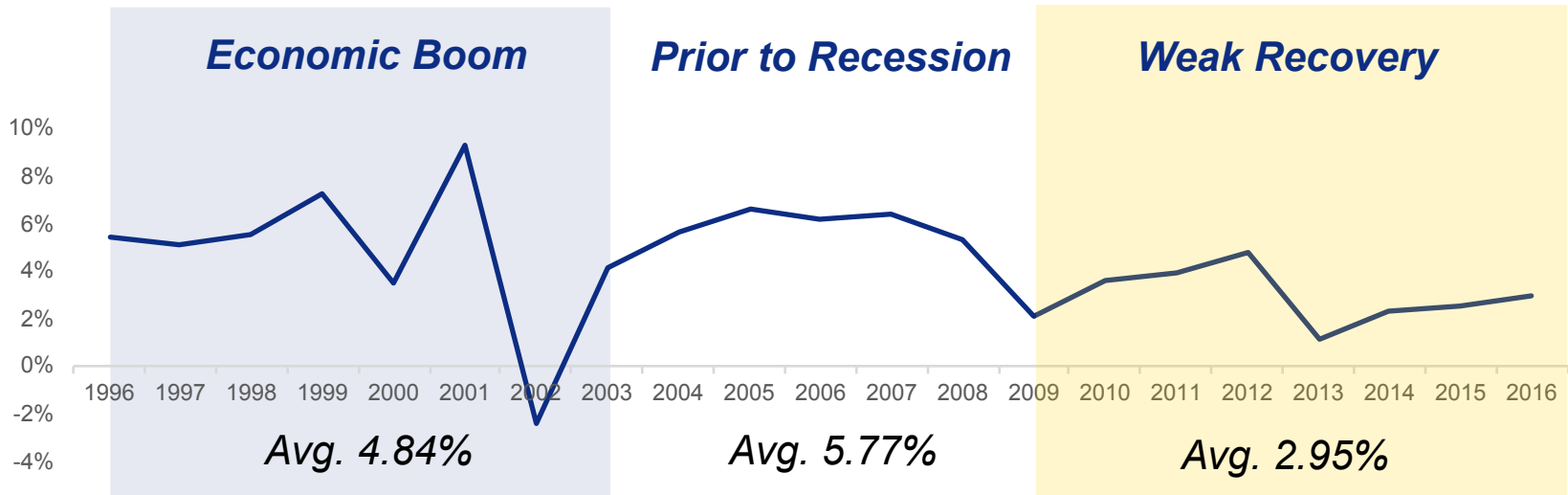
SOURCE: Bureau of Economic Analysis

* Beacon Hill Competitiveness Rankings

Expense growth rates have been reduced significantly, but revenue growth has declined more precipitously

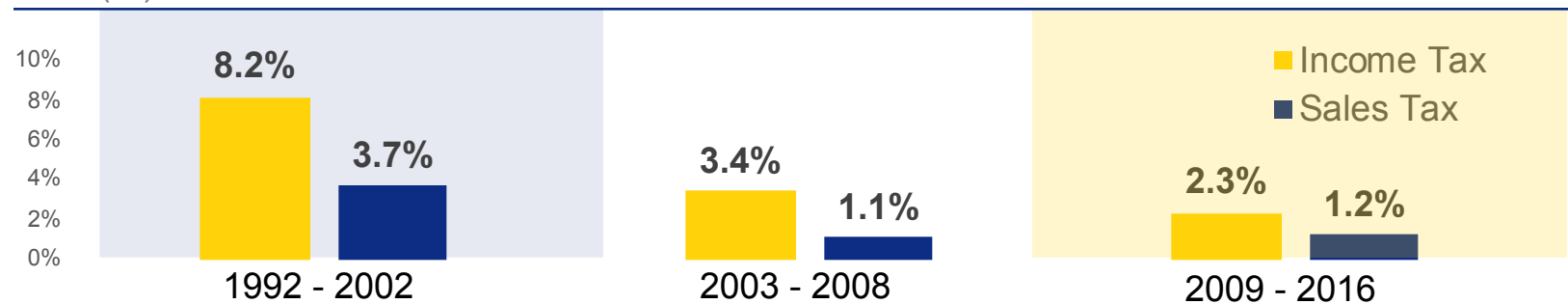
Expenditure Growth, 1996 - 2016 (General Fund)

Rate (%)



Average Annual Tax Revenue Growth Rates

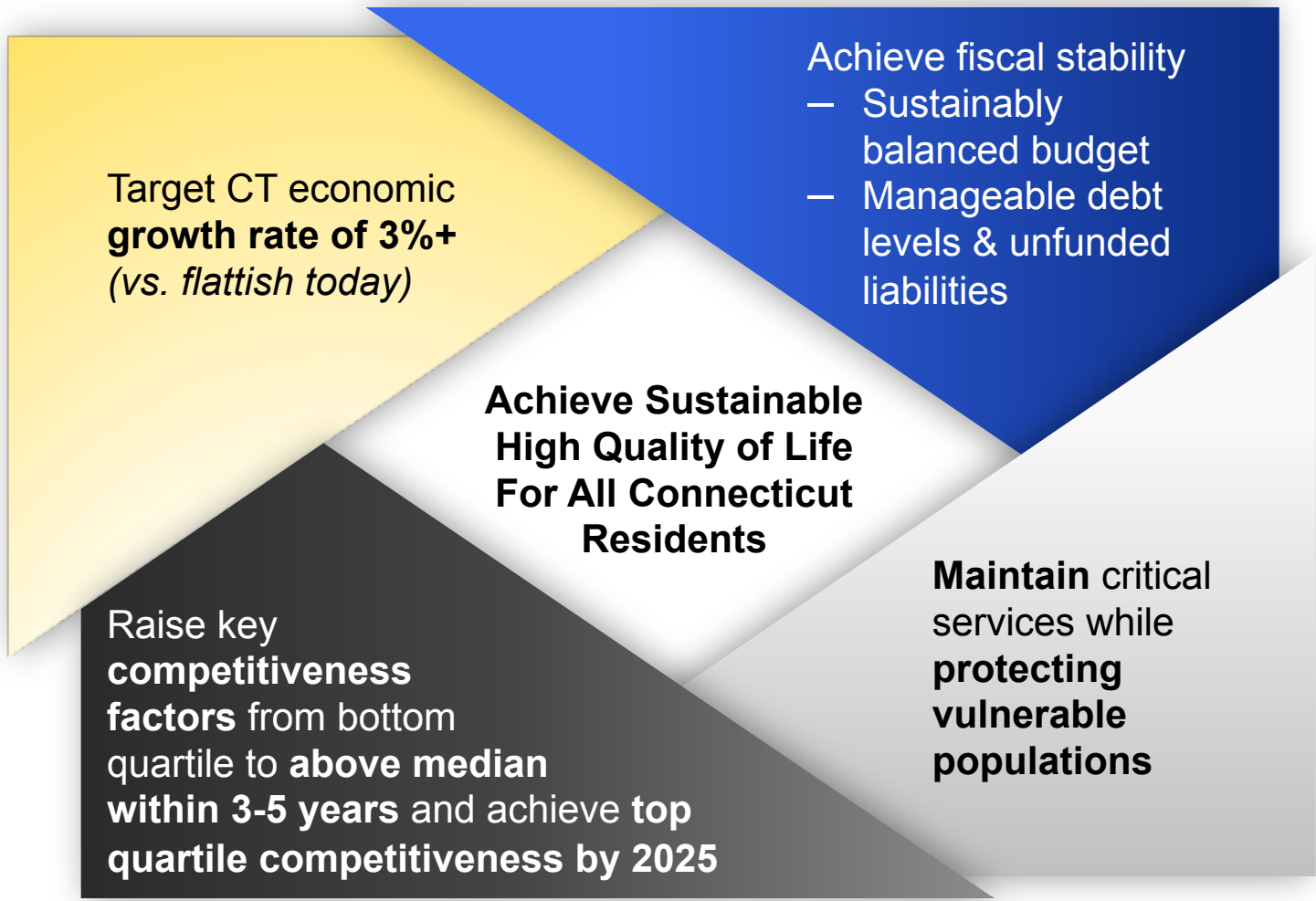
Rate (%)



Cost cutting alone not sufficient... must also restore growth

RECAP: A “strawman” vision for CT competitiveness

A long-term vision is required to propel our state back to greatness...

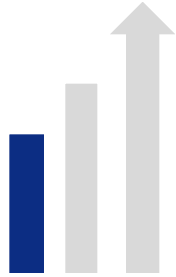


Commission will recommend short-term, medium-term and long-term actions that will enable improved competitiveness and higher growth

Example of a possible time-phased, pro-growth approach...

Short-term steps to restore confidence:

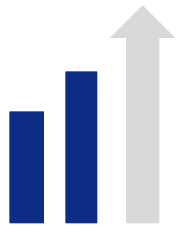
Now



- Balance budget (combination of revenue and cost initiatives)
- Restore and secure transportation fund (gas tax increase)
- Devise a strategy to shore up unfunded liability situation to non-crisis levels to buy time for a long term fix
- Implement pro-growth policy
 - Agree on phase in tax policy recommendations
 - Develop a package of targeted economic growth initiatives

Medium-term plan to build for the future:

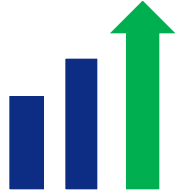
1-3 years



- Continue to maintain budget discipline as growth rates increase
- Transition secured transportation revenues to longer term solution (tolling)
- Devise joint long term fix to shore up unfunded liabilities for the future
- Work with cities to ensure their fiscal stability
- Deal with workforce imbalances

Long-term commitment to ensure continued stability:

3-10 years



- Enact devised joint plan on unfunded liabilities
- Maintain and enhance key pro-growth policy changes as growth intensifies
- Double down on key growth drivers within the state to attract new companies and talent base

A long-term view with short-term actions necessary to restore growth

Topics for today's discussion

CT has a growth problem which arises from a lack of competitiveness vis-à-vis other states

Growth has been, on average, modestly negative since '09, underlying causes include:

- Unstable fiscal situation
 - Severe pension underfunding
 - Difficulty balancing biennial budget
 - Accelerating population outmigration
- Weak, challenged urban core
- Aging, underfunded infrastructure

Covered in
other
Commission
workstreams

- Lack of a pro-growth tax policy
- Workforce skills imbalance
- Economic growth initiatives have been overwhelmed by above structural issues – represent a fresh opportunity to refocus and recharge efforts

Topics for
today's
discussion

Tax policy is a key lever in restoring growth



Tax Policy Update

Total state and local taxes vs. peers

Total State And Local Taxes vs. Aspirational States

% of total income ('16)

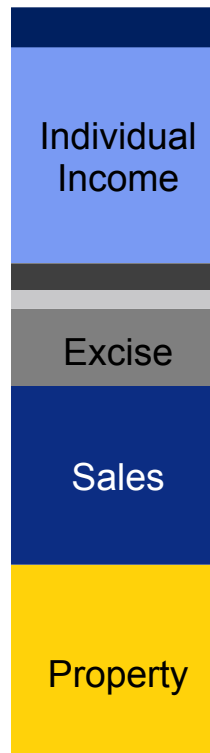
- License/Fees
- Unemployment Ins.
- Corporate

Aspirational States

Connecticut



North Carolina



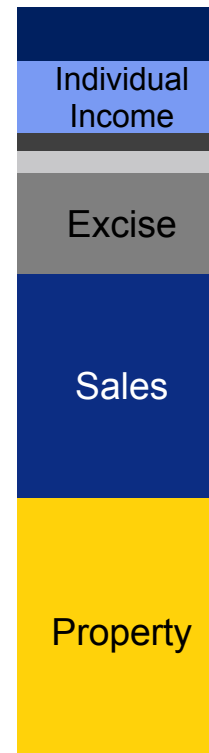
Florida



Texas



Aspirational States Avg



US Avg



We are currently modeling a tax policy proposal

Principles

- Equitable
- Competitive & growth-oriented
- Simple and transparent
- Attracts and retains:
 - High income individuals
 - Small & medium sized businesses
 - STEM graduates
 - Entrepreneurs and other job creators
- Protects the vulnerable

Objectives

- Achieve more balance among revenue streams
 - Similar to neighbor states
- Impact on revenue
 - Short-term → slightly positive
 - Medium-term → neutral to positive
 - Long-term → very positive

Preliminary Considerations

- Shift mix of revenue to more closely resemble aspirational states
 - Lower the individual income tax rate (phase in)
 - Sales tax
 - Broaden base
 - Increase rate
 - Higher license fees / revenue
 - Eliminate / reduce gift & estate tax
 - At a minimum, align with new Federal structure
- Other changes under review
 - Eliminate biannual \$250 business excise tax
 - Modest payroll tax
 - Gas tax increase / tolling (lockbox)



Workforce Update

Snapshot of Connecticut's workforce



Educated population

State ranks **5th nationally** for population with a Bachelor's degree or higher



Shrinking talent pool

Talent pool is expected to **lose more than 150,000 working age adults** over the next decade



Insufficient graduates

CT ranks **28th for new graduates per capita** and share of new STEM degrees



Low graduate retention

Just **32% of students** who attended a CT college or university **worked in state after graduation**



Out-migration

The state is experiencing an **outflow of well paid professionals**, and out-migrants earned \$30k more per year on average than in-migrants in 2016



Labor supply imbalance

Labor **supply and demand are imbalanced**, e.g., 13 healthcare positions per unemployed worker, 13 unemployed construction workers per job opening

SOURCE: US Census, Moody's Analytics, National Center for Education Statistics, Economic Modeling Specialists International (EMSI), Internal Revenue Service (2015-2016), Career Builder, U.S. Department of Labor

Leveraging Connecticut's strengths

We have some great strengths...

US News Rankings

- #4** Education
- #8** Crime & Corrections
- #12** Healthcare

Beacon Hill Institute

- #5** Technology
- #9** Openness
- #10** Security
- #14** Human Resources

CNBC

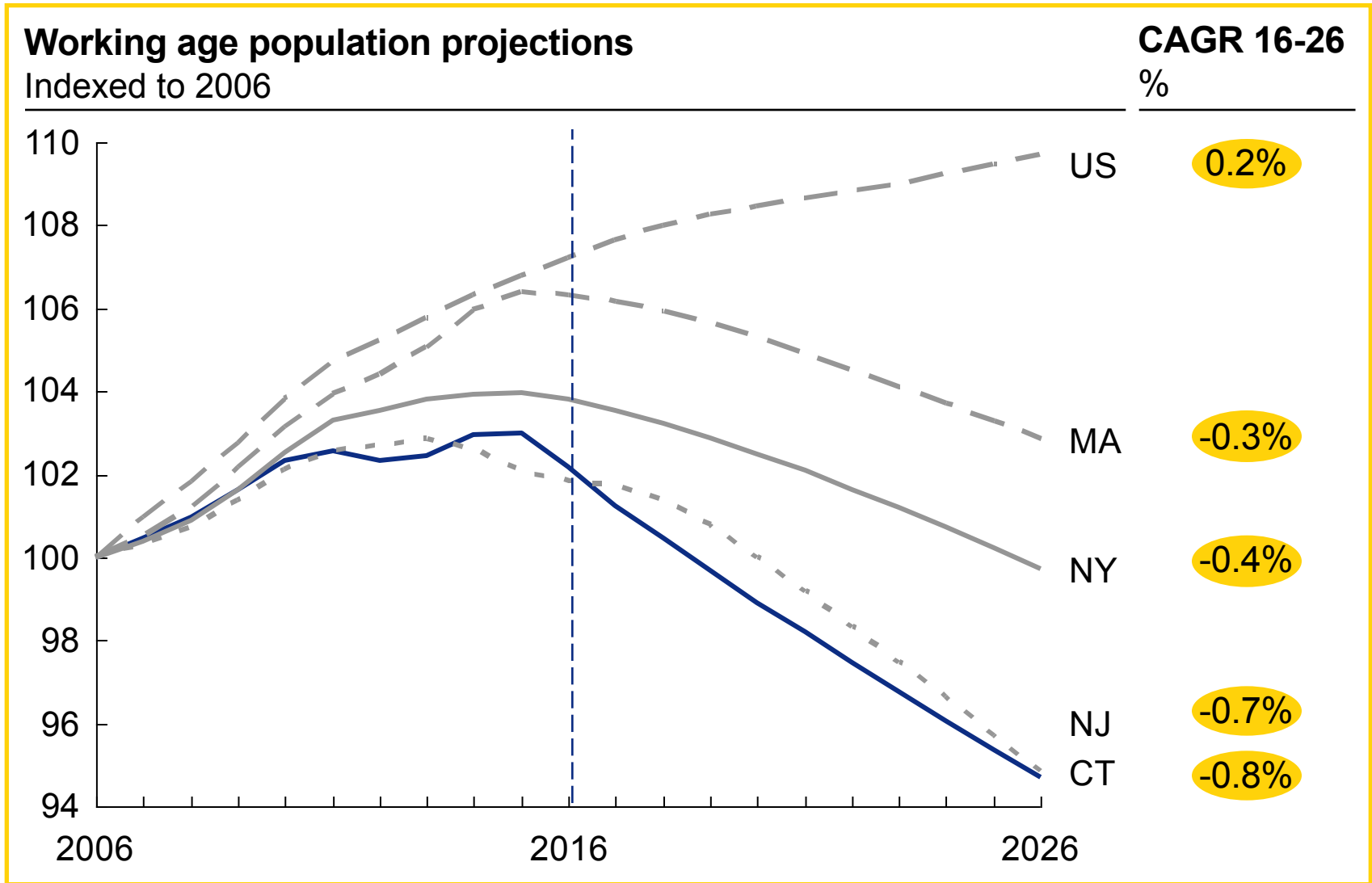
- #3** Education
- #7** Workforce
- #13** Technology & Innovation

Forbes

- #5** Quality Of Life

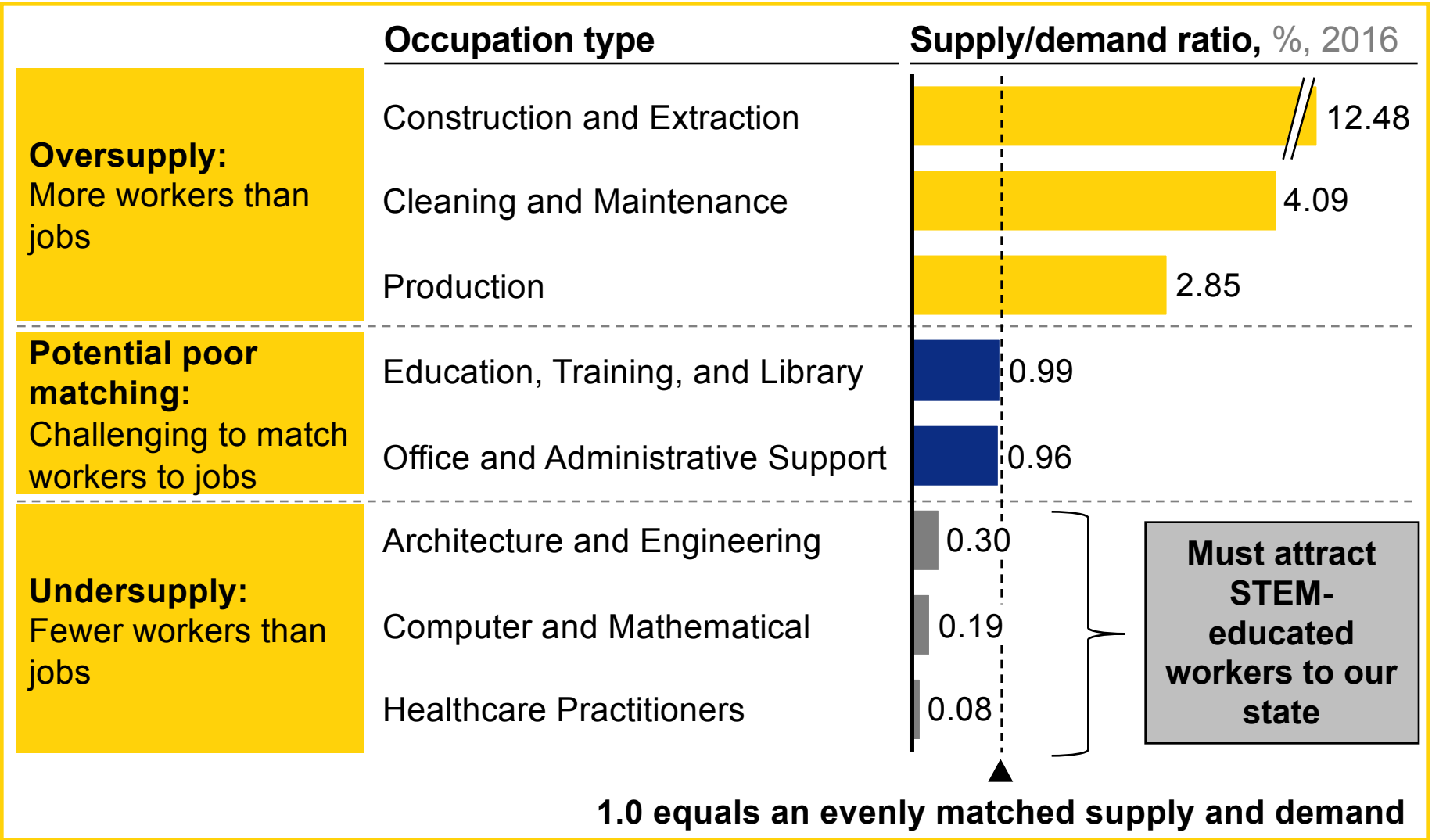
We are a safe state with high quality of life, talented workforce and excellent healthcare/education

Aging workforce leading to shrinking CT workforce



Demographics working against us — must bring more talent into CT

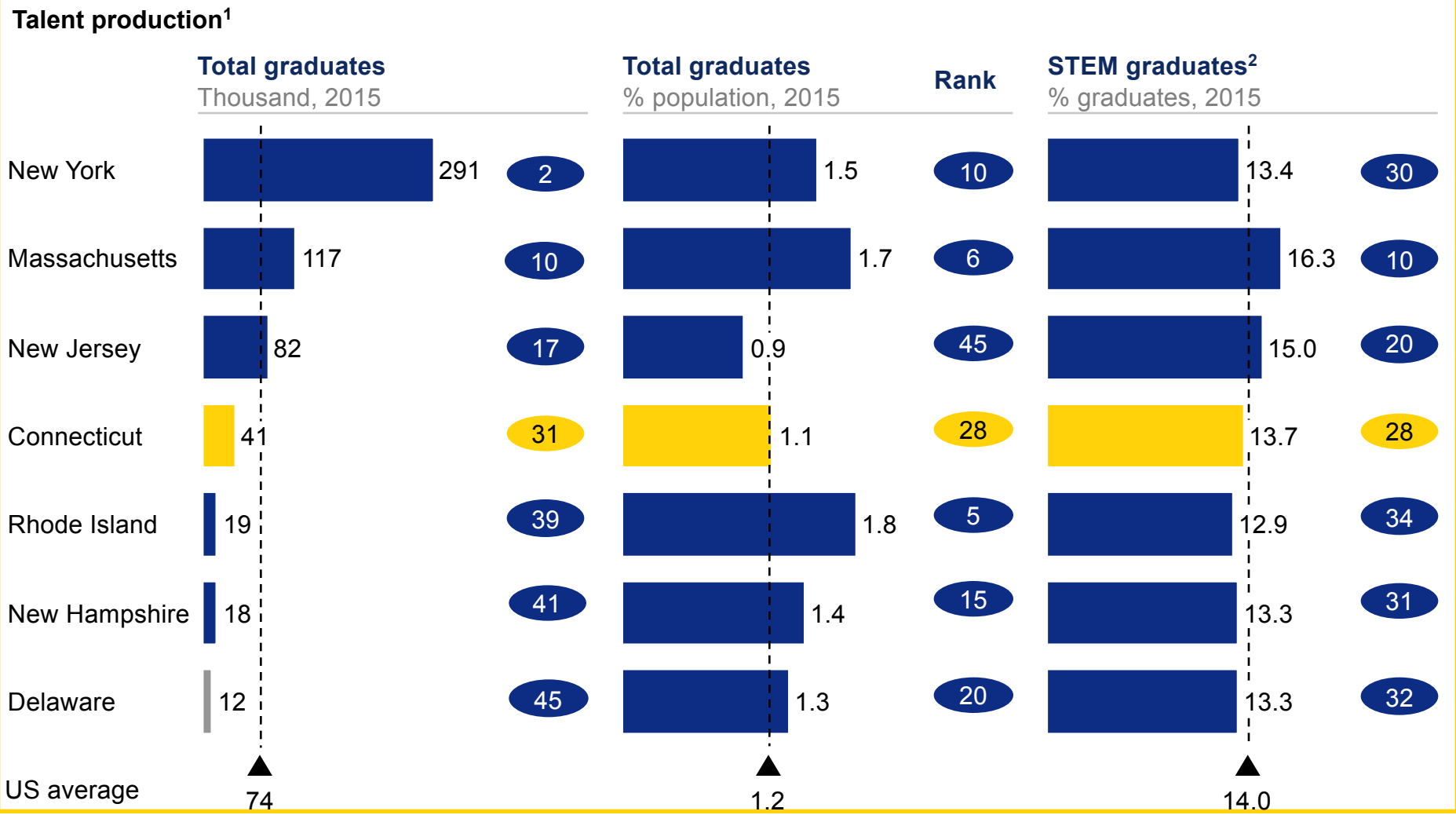
Skill mismatch in Connecticut's labor market



Skills mismatch issue must be addressed

Talent production by state

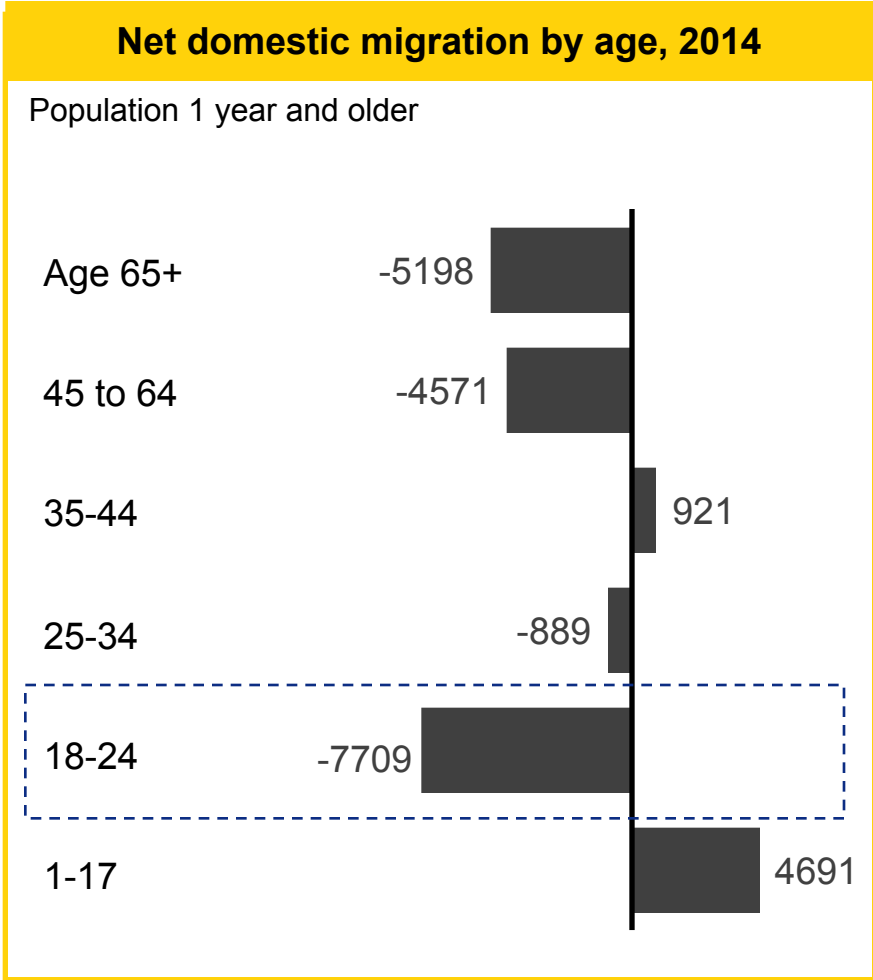
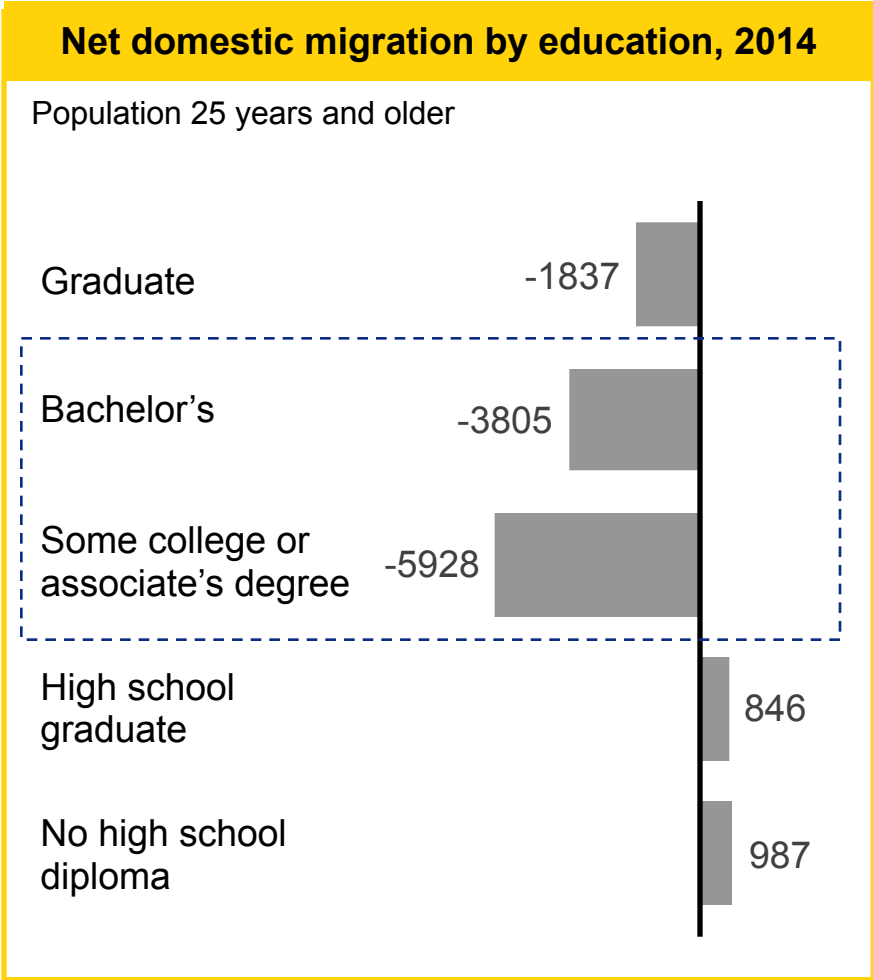
CT is near median for new graduates per capita and share of STEM degrees



...but, just 32% remain in state post graduation

¹ Degree graduates of 2 and 4 year institutions
² CIP codes 11, 14, 15, 26, 27, 40, and 41 used for STEM analysis
 SOURCE: National Center for Education Statistics

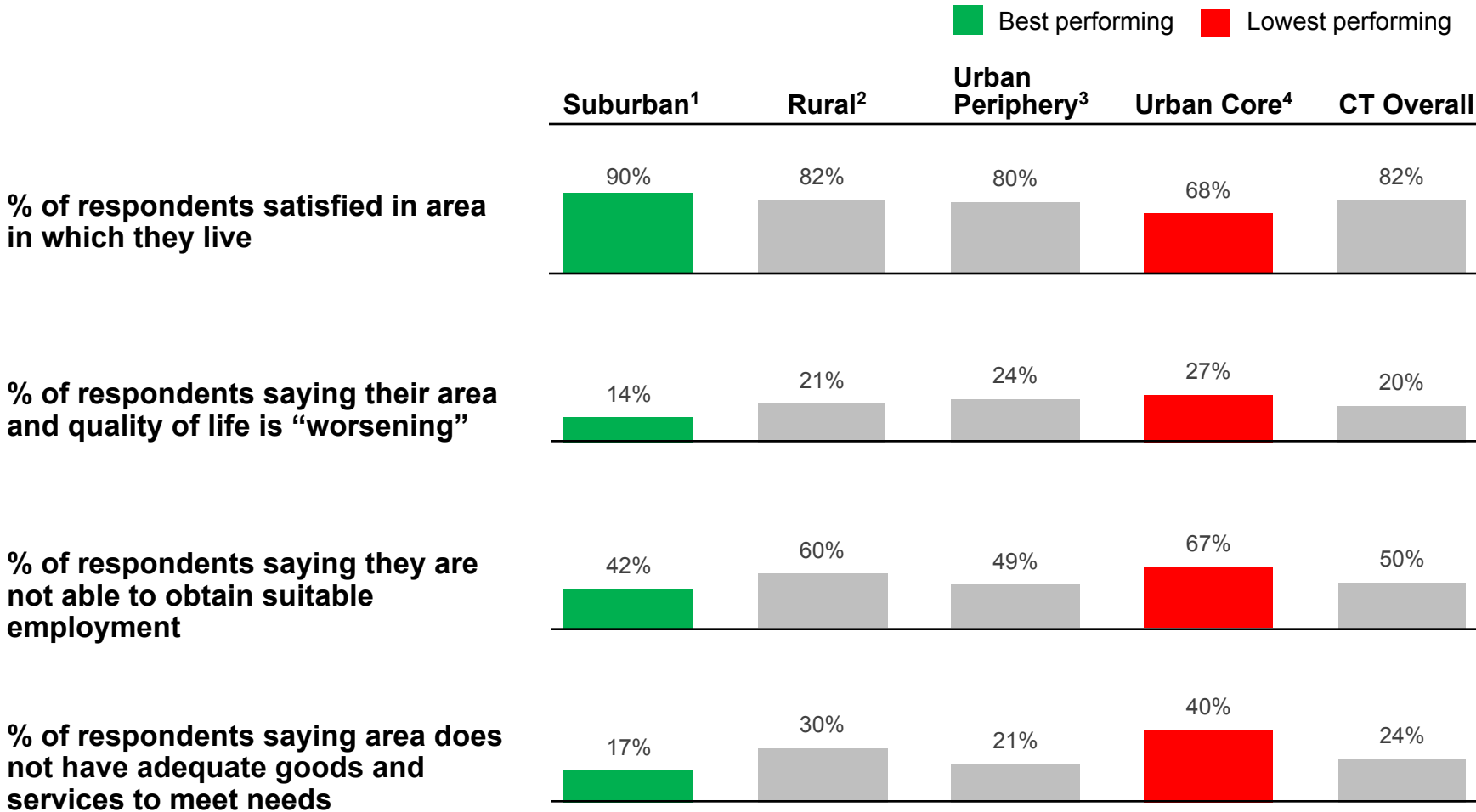
Connecticut is losing young and educated people



Educated millennials struggle to see the CT value proposition...

- Not interested in the suburbs yet
- Urban cores generally not appealing
- CT not viewed as an entrepreneurial center of excellence

Connecticut's urban cores underperform rest of state in livability



Note: Survey based on 16,219 responses- 28% suburban, 13% rural residents, 38% urban periphery, 17% urban core residents, 5% "wealthy". 1 includes locations such as North Haven and Granby located near larger urban centers. 2 includes locations such as Putnam and Sharon located farther from an urban core. 3 includes locations such as Norwalk and East Haven located around urban cores.

Workforce development: Potential initiatives under consideration



Strategically expand and align degrees from higher education institutions with high-need skills of the regional business community

- Tighten connectivity between all state-funded institutions and business leaders

Establish a new tech campus in Connecticut through a competitive bidding process among top-tier universities

- Target N.Y.C Roosevelt Island model in a major CT urban center

Create a joint task force of educators and business executives that use a **data-driven approach to determine the most in-demand skills**

Create tax incentive to **attract early career STEM talent**

- For STEM graduates living and working in CT within 10 years of graduation, credit 100% of CT income tax due on up to first \$100k of AGI, if funds utilized to pay student loans

Public/private cooperation essential to make these initiatives successful

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Growth Initiatives

Growth initiatives

Today's Focus

Growth workstream will produce recommendations for...

- **A laser focus on sectors that will be more productive than a “peanut butter spread” approach**
 - Leverage Connecticut’s strengths
 - Target Sectors
 - Advanced manufacturing
 - Healthcare
 - FinTech
 - Small and medium sized business (SMB)
- **Targeted sectors to be cross-referenced to cities initiative**
 - Healthcare → Hartford/New Haven corridor
 - FinTech → Hartford/Stamford
 - Advanced manufacturing → Statewide with Hartford as the epicenter
 - SMB → Statewide
- **Public investment methodologies and allocations**
- **Business incubation strategies**
- **Opportunities to foster greater public/private collaboration and joint growth initiatives**



Target Sector: Advanced Manufacturing

Large companies hiring & investment targets for the next decade



Electric Boat

- Ramping up to meet the demand of 2 or perhaps 3 attack submarines per year; plans to hire 14,000 net new workers by 2030



Lockheed Martin/ Sikorsky

- Maintaining headquarters and building CH-53K helicopter in CT, and spending \$6.5B+ with local suppliers and \$1.5B+ in local capital expenditures through 2032



UTC/ Pratt and Whitney

- Investing up to \$500M in capital improvements over 5 years (incl. new Pratt HQ), and maintain Pratt headquarters in CT for 15 years afterwards



Stanley Black & Decker

- Building out Industry 4.0 Center of Excellence; applying data and IoT in manufacturing facilities
- Opening an additive manufacturing incubator in Hartford in partnership with Techstars
- Evaluating an Industry 4.0 national labor retraining center – looking to partner with an educational institution

Advanced manufacturing: Strengths and Challenges



STRENGTHS

- **Technically skilled workforce** which can leverage Industry 4.0 as an advantage
- **Distinctive aerospace and defense hub** (industry-leading manufacturers, robust talent base and supply chain)
- **Strong growth over the next decade** (headquartering and investment agreements with Sikorsky and UTC)
- **Committed community of public and private partners** (government agencies, associations, public initiatives)

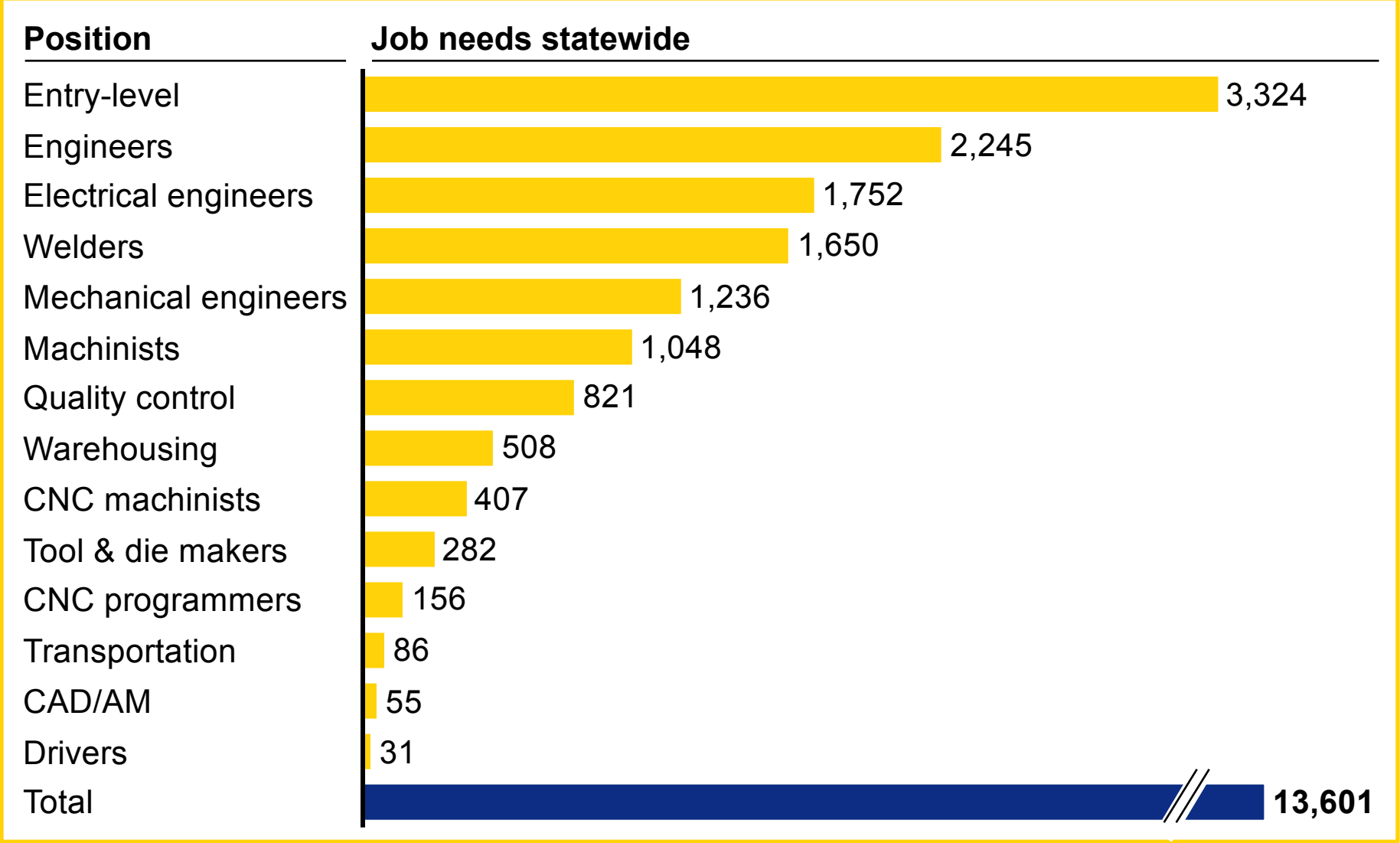
CHALLENGES



- **High cost, high value** added workforce
- **Insufficient talent pipeline** (local talent pool not sufficient to meet expected in-state growth)
- **Skills mismatch** (manufacturing needs are changing for both digital “Industry 4.0” and in traditional manufacturing jobs)
- **Increased competition** (domestic and international suppliers are competing on lower costs)

CT manufacturers expect to hire ~13,500 workers in 2018

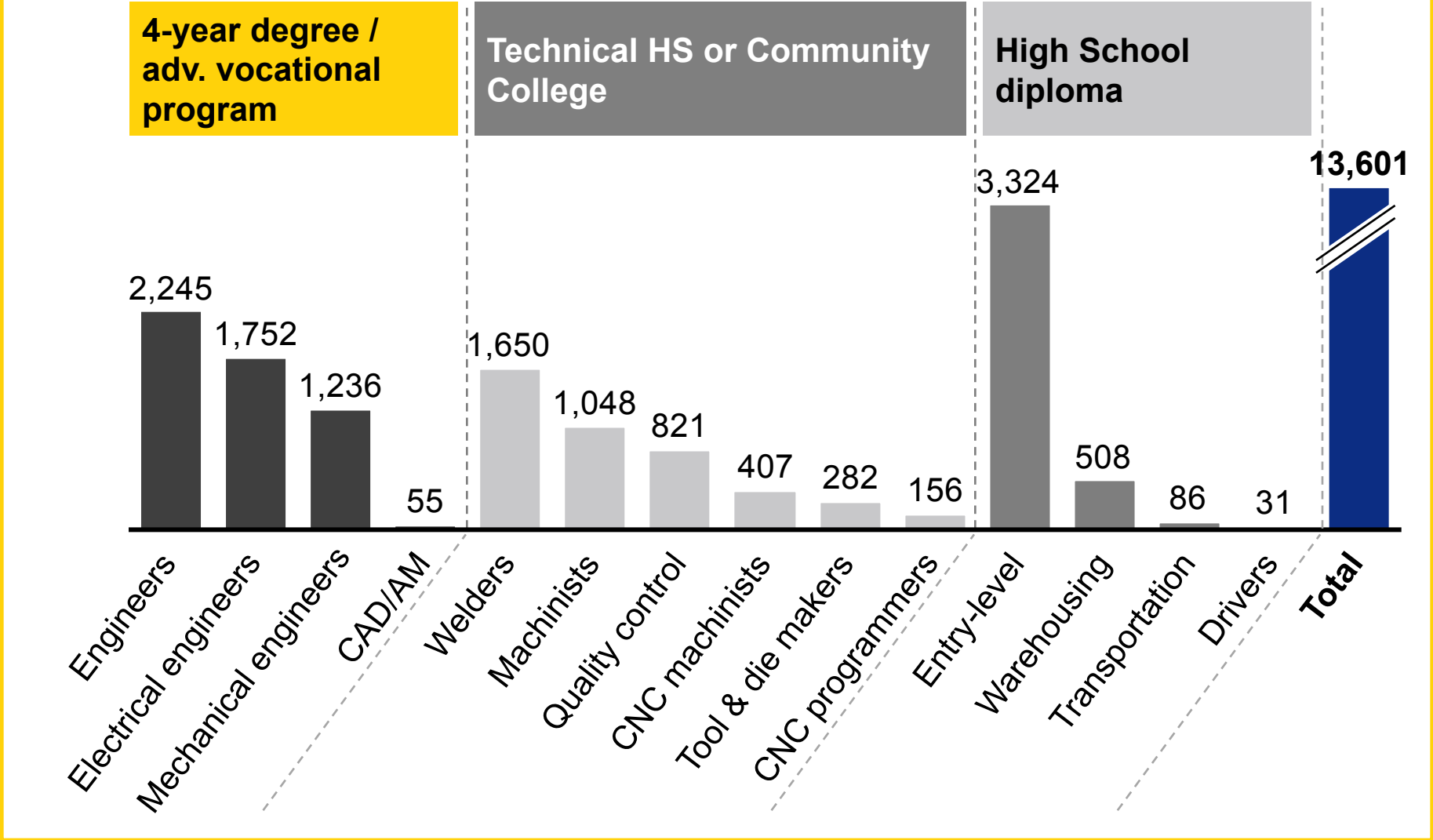
Demand for skilled workers in CT manufacturing by the end of 2018



SOURCE: CBIA – 2017 Survey of Connecticut Manufacturing Workforce Needs

Demand for new manufacturing workers spans education levels

Expected hiring need of manufacturing workers in 2018

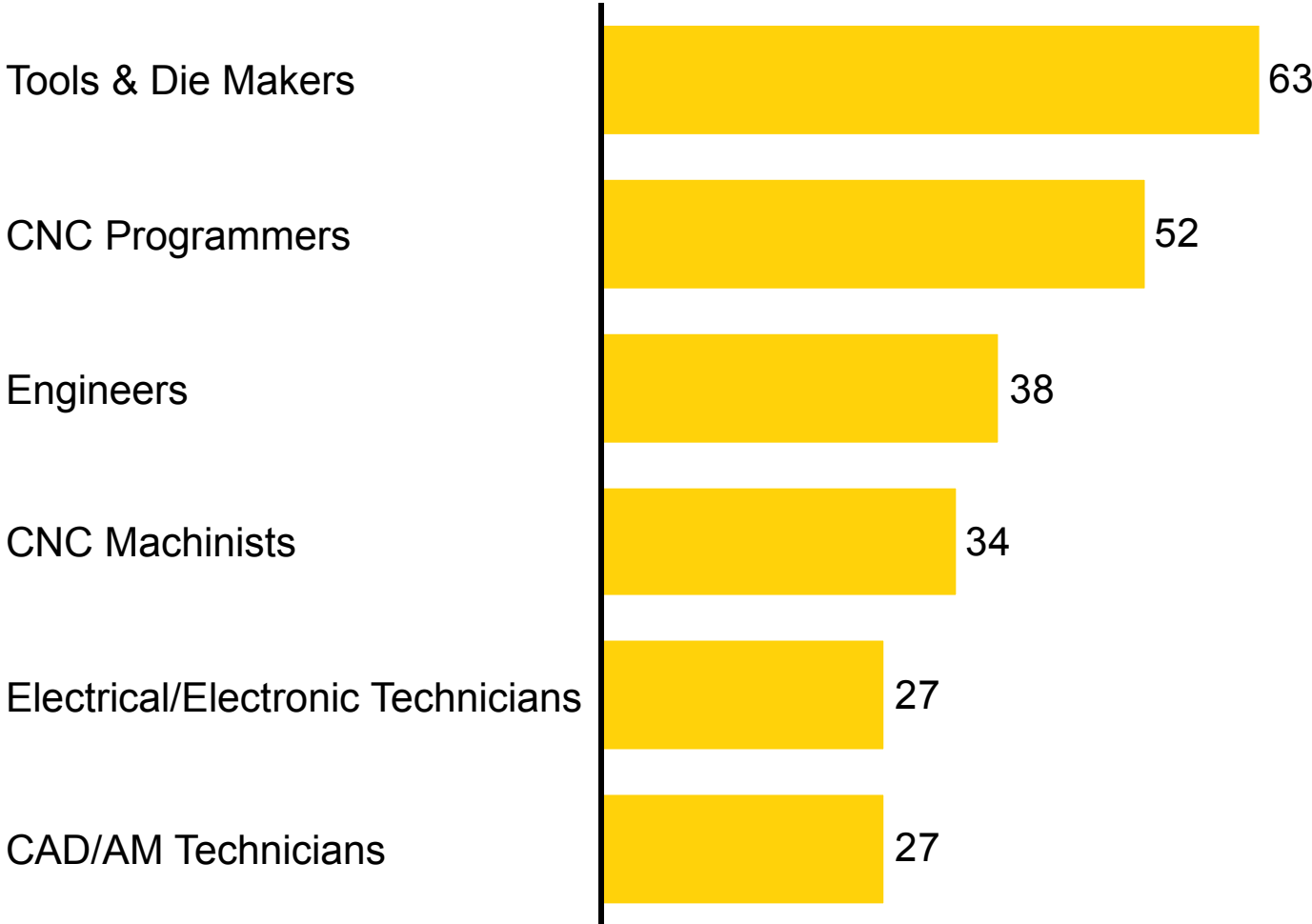


SOURCE: CBIA – 2017 Survey of Connecticut Manufacturing Workforce Needs

Companies are having difficulty filling manufacturing jobs

Most difficult manufacturing jobs to fill

% of companies who rated "5" on a 1 to 5 scale of difficulty to fill



The opportunity ahead for advanced manufacturing

Vision

To Make CT a top 5 state for Industry 4.0 skills, research, training and expertise with Hartford as the epicenter

- The vision builds upon CT's heritage as the innovation and ingenuity leader for US manufacturing back in the mid to late 1800's and leverages the current strength of our manufacturing base

Preliminary Recommendations

- Embrace the vision / address the workforce issues
- Assemble task force of business, academic and regional economic development leaders to define the specific programs and initiatives to include:
 - Hartford urban core improvement necessary to attract talent
 - Creating a “Mass Challenge” type incubator for Industry 4.0
 - Various public, public/private and private programs to pursue the vision
 - Expand and re-orient programs at community colleges to support the initiative, including worker retraining
 - Re-brand Connecticut manufacturing

**Target Sector: Small & Medium Sized
Businesses**

Snapshot of Connecticut's small and medium enterprises



Larger, older companies

Large companies (500+ employees) **make up 51% of employment** and old firms (21+ years) **make up 45% of employment**



Trailing entrepreneurship

The state is a **leader in innovation** (7th most patents per capita), and has a reasonable supply of funding (14th in venture deal volume per capita), however **ranks 37th in share of firms younger than 5 years**



Low business survival rate

Connecticut **ranks 32nd among states for company survival of 5+ and 10+ years**, and many of its small businesses **have not recovered the jobs lost in the recession**

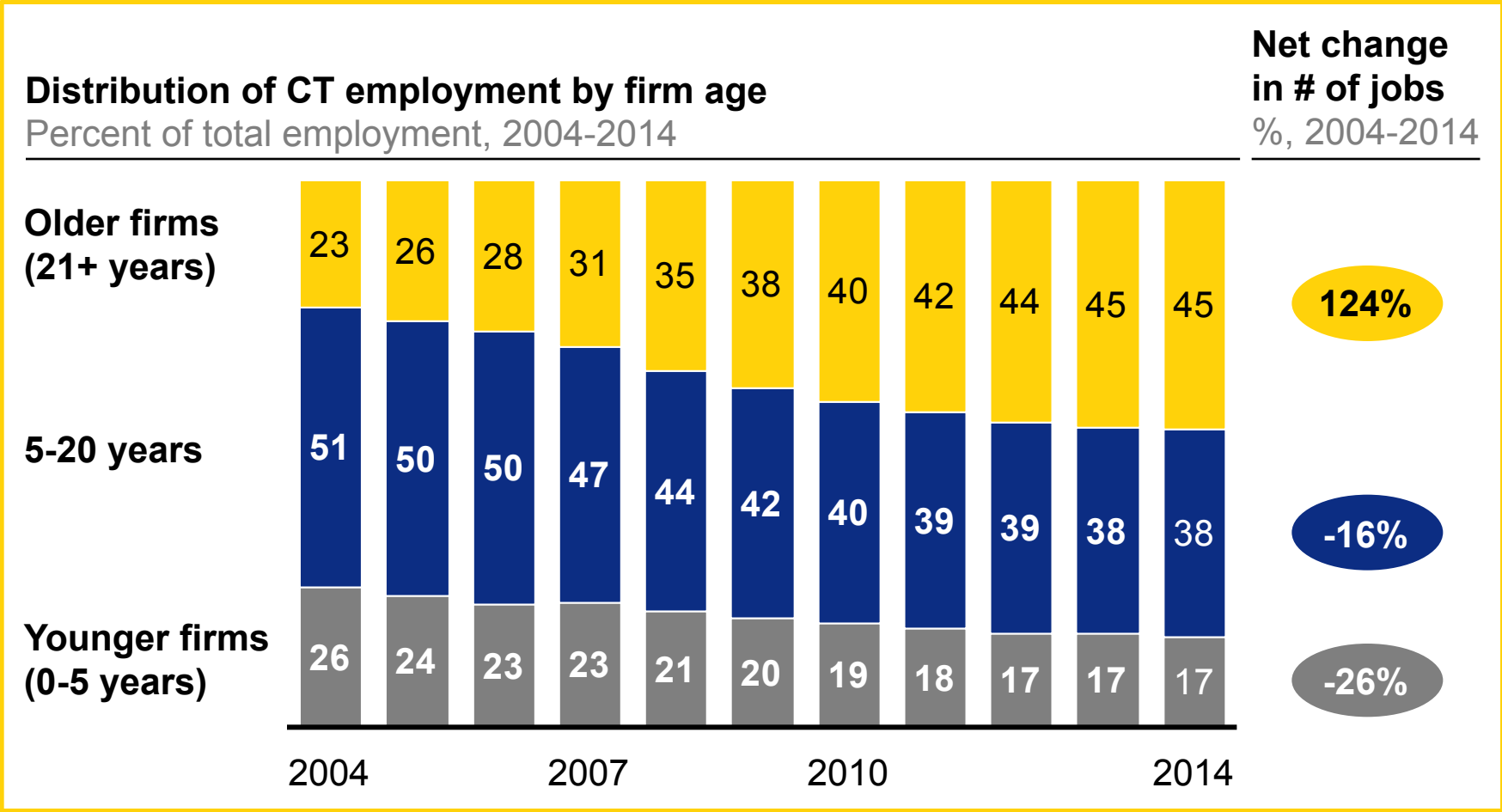


Small business challenges

High cost of living, uncertainty of legislation and high state business taxes are hampering growth says the small and medium businesses recently surveyed

SOURCE: US Census, Moody's Analytics, National Center for Education Statistics, Economic Modeling Specialists International (EMSI), Internal Revenue Service (2015-2016), Career Builder, U.S. Department of Labor

Share of employment in small businesses over time



NOTE: Excludes employment data for companies where firm age data is unknown (~15-25% of total employment for each state)

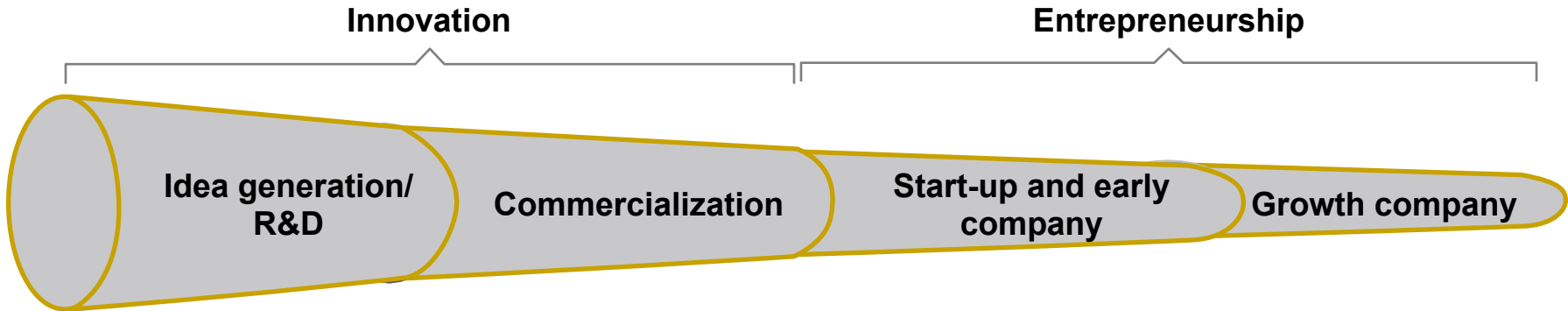
SOURCE: U.S. Census: Business Dynamics Statistics

Strong foundation of innovation, but lacking in growth

CT state rank in US

Top 15 # Middle 15 # Bottom 20

Connecticut's performance across the innovation and entrepreneurship pipeline



- Total R&D investments (including academic & business) as a % of GDP¹ **7**
- Small Business Innovation Research funding per capita² **19**

- Patents approved per capita⁸ **8**

- VC funding as a % of GDP³ **24**
- Percent of adults per month starting a business⁴ **31**
- 0-5 year firms as % of total⁵ **37**

- PE investments as % of GDP⁶ **26**
- Survival rate of new establishments after 10 years² **32**
- Small business lending per employee⁷ **37**

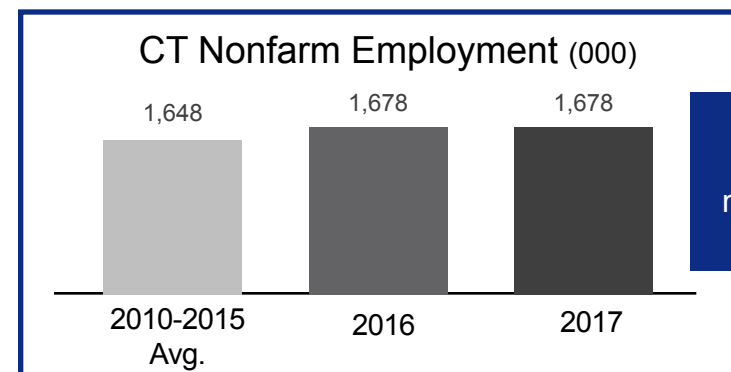
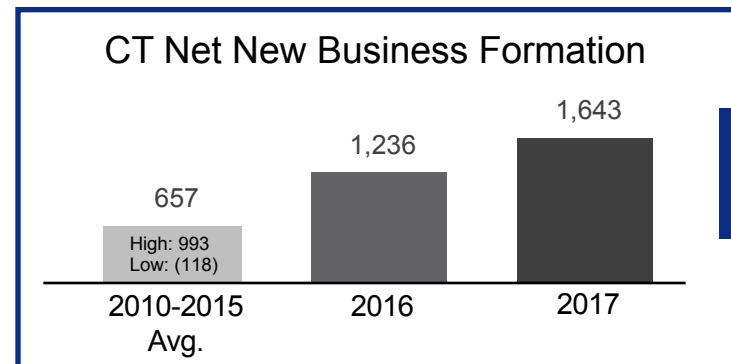
1 National Science Foundation, 2016
 3 National Venture Capital Association/PwC 2017
 5 Longitudinal Business Database, U.S. Census Bureau, 2014
 7 U.S. Small Business Administration, 2015

2 Small Business Administration, U.S. Census Bureau, 2013
 4 Kaufmann Entrepreneurship Index, 2017
 6 Pitchbook, 2017
 8 US Patent and Trademark Office, 2015

New business formation

CT Department of Economic Development has a myriad of programs to **support new business formation** which have begun to make excellent progress...

| Sample Programs | Type |
|--|-----------------------|
| <ul style="list-style-type: none"> Small Business Express | Matching grants/loans |
| <ul style="list-style-type: none"> Manufacturing Assistance Act | Grants/loans |
| <ul style="list-style-type: none"> First Five Plus | Financial assistance |
| <ul style="list-style-type: none"> Connecticut Innovations | Seed money |



Implications:

- Programs appear to be successful
- Some employment lag is to be expected
- Need to set aggressive goals for new business formation

Levers to drive new business formation

DECD should take the leadership and set a bold vision for CT entrepreneurialism while engaging the business, VC and academic communities

1. Garner public/private support for innovation incubators including:

- Aggressive, yet achievable goals
- Appropriate urban settings
- Strong ties to educational institutions/research
- Several innovation communities sponsored by VCs/Corporations
 - Examples: Insuretech, Stanley/Techstars, CT's version of Mass Challenge

2. Create joint task force to ensure the resiliency and retention of small businesses

- Understand the barriers and friction that small businesses face regarding government actions and regulations; make it as supportive and frictionless as possible

3. Work with legislators to consider a set of incentives to encourage formation and retention of small businesses

- Corporate tax holidays until revenue > \$5 Million
- One time job creation credits of \$5,000 for jobs paying > \$50,000
- Elimination of \$250 bi-annual business excise tax

