Global Resilience Institute
at Northeastern University

Regional Resilience Baseline Assessment

Prepared for the State of Connecticut LTER Region 3

Finalized February 2021

Front and Back Cover:

Hartford skyline on a sunny afternoon. (Ultima_Gaina/Getty Images)

Prepared by

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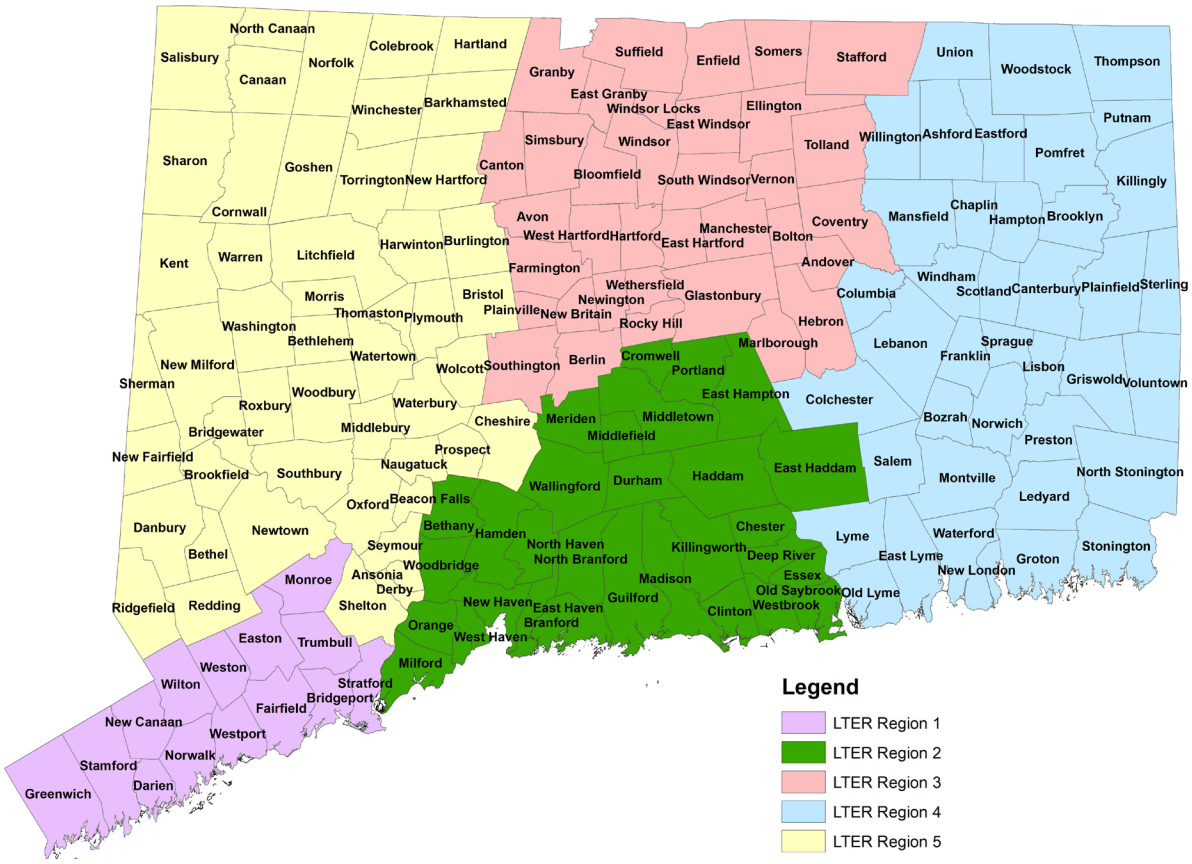
Executive Summary

Beginning in September 2020, researchers from the Global Resilience Institute (GRI) at Northeastern University undertook a baseline resilience assessment of the five Department of Emergency Management and Homeland Security (DEMHS) Regions. In Region 3, Regional Long Term Economic Recovery planning boundaries have been adjusted to be more consistent with Council of Governments boundaries. This effort has been done to support the state's long-term economic recovery process by identifying the core regional challenges and the best opportunities for directing resources and efforts that will leverage each region's unique regional characteristics and strengths. Importantly, the methodology deployed by the research team is tailored to identify system interdependencies and broad areas of convergence where the most favorable resilience, sustainability, and equity outcomes are most likely to be achieved. This helps to position the region and the state to apply for federal disaster assistance and other federal grant that require documentation of how resilience, sustainability, and equity outcomes will be achieved as a condition for successfully securing federal recovery support.



LTER Regions

LTER Region 3 with Hartford and its surrounding municipalities is a diverse region and is home to the seat of Connecticut government, major national financial and insurance hubs, a substantial and diverse manufacturing presence, a thriving healthcare sector and several of the state's Institutions of Higher Education. The effects of the COVID-19 pandemic have been significant, particularly on the region's minority and disadvantaged communities and small businesses. These effects and others will impact the region for years to come. In planning for long-term COVID-19 recovery and economic development, the region must also address important legacy challenges that manifest themselves in a regional low-income core around Hartford and a more affluent outer ring of municipalities. Finding opportunity in the region's strengths and addressing the disparities revealed by the pandemic in a coordinated regional effort will be key to future economic prosperity and growth that is equitable, sustainable, and resilient.

Beginning in October 2020, GRI conducted interviews with local government leaders, industry representatives, business owners, healthcare system managers, educators, infrastructure managers, social service providers, and civic and community organizations across Region 3. These interviews highlighted longstanding challenges of poverty as well as gaps in social services available to support residents, particularly in many of the small urban centers and rural communities of Region 3. Overall, interviewees spoke to the need for focused efforts for addressing the distinctive resilience challenges faced by a larger city like Hartford, and the small cities and rural communities in the capitol region of Connecticut. Six overarching findings relevant to regional economic resilience emerged:

Finding 1: Main Street business (i.e., small to medium local businesses), particularly those businesses that are owned or serve vulnerable populations or locales, have suffered the most serious damage in the pandemic, making a focus on recovery of this business strata critical to the region's long-term economic recovery.

Finding 2: The COVID-19 pandemic has exacerbated inequities associated with inadequate affordable housing in many communities across Region 3.

Finding 3: The digital divide (both in terms of access and user competencies) remains a barrier to equitable and resilient recovery and growth for workers from disadvantaged populations and for small businesses' adaptability, sustainability, and survivability, particularly for those operated by or serving disadvantaged populations.

Finding 4: Manufacturing is a strong pillar in the Region 3 economy. Recovering, maintaining, and expanding the manufacturing base will depend on the region's ability to attract, train, and house a younger skilled workforce.

Finding 5: A resilient healthcare system is vital to the Region 3 economy both as an economic generator and because a healthy society is necessary for economic stability and growth. Improving access to healthcare for all Region 3 residents while ensuring the continued vitality of the healthcare sector will be critical to future economic growth.

Finding 6: COVID-19 disruptions to transportation systems' rhythms and usage illuminated the need for continued investment in the operational sustainability and resilience of the transportation sector to provide it with greater system flexibility and evenness of access, especially for low-income residents and essential workers.

These findings along with the underlying data that informs them provide a baseline for guiding the economic recovery efforts for Region 3 while also achieving long-term economic development

goals. Importantly, to achieve a successful and sustainable resilient outcome, all six must be addressed concurrently. This will require sustaining the exceptional level of collaboration and cooperation which Region 3 stakeholders have demonstrated since the start of the pandemic.

To be clear, this report is but a preliminary step in supporting the creation of a comprehensive regional strategy for resilient economic recovery and development following the COVID-19 pandemic. It represents the first stage of a detailed regional analysis guided by the GRI Integrated Resilience Enhancement Solutions (I-RES). Over a period of 120 days, GRI has mobilized a team of researchers to conduct a high-level assessment of the existing conditions that have been exacerbated by the pandemic within all five LTER regions. This initial basic analysis provides the underpinning that can be used by the Regional Recovery Steering Committees (RRSCs) and associated Councils of Governments for completion of detailed regional strategies using GRI's Resilience Analysis Toolkit and guidance.

The report that follows provides a baseline analysis that:

- Synthesizes resilience indicator data that is informed by community interviews, so as to highlight the critical community functions that have been most impacted by the COVID-19 emergency and which need urgent attention;
- Explicitly includes an examination of equity issues revealed by data and interviews provided by representatives of underrepresented communities at the regional and community levels;
- Leverages existing priorities identified by the State's Economic Development Districts, Councils of Governments, Chambers of Commerce, and local governments to guide considerations for economic recovery planning at the regional level; and
- Shares consideration for action that can guide the economic recovery and resilience-building efforts by key stakeholders at the state, regional, and municipal levels, and by corporate, not-for-profit, and philanthropic leaders.

The significant stakeholder engagement undertaken for the preparation of this report has accomplished something else that is important to the success of economic recovery efforts: It has helped to strengthen collaborations around a shared recognition that the COVID-19 emergency provides an opportunity to bounce forward in ways that address longstanding economic development challenges.

The following is a summary of the considerations that should frame the creation of strategies and actions to ensure equitable and resilient economic recovery and development in Region 3.

- The COVID-19 pandemic, and the pressing need to recover from it, creates an opportunity and necessity for efforts that reexamine regional economic development strategies such as the regional Comprehensive Economic Development Strategy (CEDS) to develop well-coordinated economic development plans and projects to ensure long-term resilient and more equitable economic recovery and development.
- Recovery strategies should take into account the need for continued direct assistance and innovative ways of debt management for small and medium-sized business that will allow them to survive until commercial activity returns to normal patterns.

- Recovery and long-term economic development strategies will be more successful if they include provisions for technical and/or financial assistance that can assist small businesses in pivoting from traditional business models to emerging models that may be more heavily reliant on such things as on-line order processing, alternative delivery systems, and on-line payment applications.
- Some small businesses will not survive. For others, changes to their business models and practices may result in declining worker demand. Long-term economic development strategies should include provisions for re-training workers whose jobs are lost as a result of these business model shifts.
- Given Connecticut's aging population, consideration should be given to regional strategies that can support and attract the types of businesses that will appeal to a younger cohort of worker.
- Consider treating arts and entertainment venues as part of the small business recovery and long-term economic development strategy even where they are not-for-profit organizations. Strengthen collaboration among community organizations, employers, community colleges, 4-year colleges, to create entry-level and career pathway workforce training and education with an emphasis on health-care and advanced manufacturing.
- Local and regional recovery strategies should plan for the medium-term stability of impoverished, low-income, and ALICE families that maintains them in their current housing until the COVID-19 pandemic recovery process is largely accomplished.
- Local and regional recovery strategies should plan for the medium-term stability of small landlords whose income has been restricted by pandemic-caused tenant inability to pay rent and the eviction moratorium.
- Local planning should carefully balance development of more affluent housing with availability of worker affordable housing to ensure that pressures from gentrification and redevelopment do not exacerbate housing pressures for working families and the underhoused.
- A long-term regional economic development strategy should consider public ownership or public subsidy of broadband internet connectivity in areas where the return-on-investment disincentivizes private internet service companies from providing adequate service.
- A medium-term economic recovery strategy should consider publicly insured, low interest loans or short-term subsidies for small business technology upgrades, training, and process improvements.
- Regional recovery and long-term economic development strategies should address robust and systematic workforce training capitalizing on all available assets including public high-school education, community colleges, 4-year institutions of higher education (IHE), and private and not-for-profit training programs. The goal should be to provide both entry-level training and to create learning opportunities that support career pathways.

- While the healthcare industry is likely sufficiently resilient to recover on its own, a regional economic recovery strategy should place some emphasis on ensuring community health centers can provide adequate care in rural areas and in underserved urban neighborhoods.
- A medium-term regional recovery strategy should consider the need to subsidize and maintain public transportation assets adversely affected by the COVID-19 pandemic until ridership returns and stabilizes.
- Regional recovery necessitates improvements in the availability and access to transit services that improved the ability of residents of Region 3 to connect with employment training opportunities, their places of work, and support access to health and other social services. Low-income families continue to need system options that are more flexible in service and access in order to mitigate their having to endure long commute times.
- Consideration should be given to farm-to-table efforts that capitalize on Connecticut's small farms to deepen partnership with the food service industry and to address food insecurity by providing vulnerable residents with access to nutritious and affordable local food.
- Directing technical and financial assistance that allows childcare providers to reopen and stay open will be important to regional recovery.
- Strive to ensure that the public education system is resourced to provide support for vulnerable students across Region 3. It is particularly important to provide extra assistance identifying employment opportunities and/or supporting the efforts of graduating high school students to continue on with higher education.
- In responding to the mental health stresses of the COVID-19 pandemic, support for community healthcare providers and mental health services should be prioritized as a cornerstone for regional recovery.

The ongoing COVID-19 crisis has validated the focused efforts by leaders at all levels to work collaboratively. Connecticut is facing the risk of a significant budget deficit in coming years which makes it critical to aggressively pursue new sources of federal funding and private investment. Federal funding agencies will be seeking scalable and impactful projects that address long-standing equity issues, increase inclusivity in economic development, and build long-term resiliency. The newly established Regional Recovery Steering Committees (RRSCs) are playing an important role in bridging the efforts of State-level economic development planners, the regional Councils of Government (COG), and municipal efforts, so as to enable the most effective community engagement and prioritization of requests for funding.

Table of Contents

Introduction....10

A. Regional Context....12
1. Regional Background....12
2. Population Dynamics....13
3. Regional Economic Drivers....18

B. Economic Environment....19
1. Region 3 LMA Employment Averages....19
2. Region 3 Unemployment....22
3. Impacts on Businesses and Commercial Activities....28

C. Resilience Landscape....33
1. Public Services....33
2. Social Services....37
3. Infrastructure and Physical Systems....41

D. Regional Resilience Areas....48
Resilient Recovery Findings and Considerations....48

Concluding Observations....56

Appendices....57
A. LTER Regions and LMAs....57
B. LTER Regions and COGs....58
C. LTER Regions and Counties....59
D. LTER Regions and DEMHS Regions....60
E. Organizations Interviewed....61

Works Cited....62

Regional Resilience Baseline Assessment

Introduction

Purpose of Report

The Global Resilience Institute's (GRI) Integrated Resilience Enhancement Solution (I-RES) is a research methodology designed to provide public, private, and community stakeholders with information, insights, and analysis that can guide a strategic and highly integrated approach to undertaking economic recovery. The overall objective is to position communities to bounce forward as opposed to simply bouncing back from the COVID-19 emergency. The extended public health crisis along with the economic upheaval associated with this pandemic has highlighted the extent to which longstanding social and income inequities have caused disproportionately adverse effects on Connecticut's most vulnerable populations. If those inequities are not adequately addressed as a part of the state's current recovery efforts, they will become even more pronounced when future disasters, pandemics or other disruptions occur.

In collaboration with a variety of CT emergency management and economic development stakeholders, the I-RES process has been applied to the State of Connecticut to develop resilience baselines for the five Long Term Economic Recovery (LTER) Regions under work funded by the Coronavirus Aid, Relief, and Economic Security (CARES) Act. This report is derived from work undertaken over a 120-day period beginning in September 2020. It has been prepared to support the state of Connecticut's long-term economic recovery process by identifying the core regional challenges and the best opportunities for directing limited resources and undertaking efforts that will leverage each region's unique regional characteristics and strengths.

The I-RES methodology deployed by the GRI research team is tailored to identify system interdependencies and broad areas of convergence where the most favorable resilience, sustainability, and equity outcomes are most likely to be achieved. By doing this, the region and the state are better positioned to apply for federal disaster assistance that requires documentation of how resilience, sustainability, and equity outcomes will be achieved as a condition for successfully securing federal recovery support.

GRI's assessment examines the conditions within each LTER region that can be used to attract federal assistance and investment in resilience-building efforts. This report provides a baseline analysis that:

1. Synthesizes resilience indicator data that is informed by community interviews, so as to highlight the critical community functions that have been most impacted by the COVID-19 emergency and which need urgent attention;

2. Explicitly includes an examination of equity issues revealed by data and interviews provided by representatives of underrepresented communities at the regional and community levels;
3. Leverages existing priorities identified by the State's Economic Development Districts, Councils of Governments, Chambers of Commerce, and local governments to guide considerations for economic recovery planning at the regional level, and
4. Shares consideration for action that can guide the economic recovery and resilience-building efforts by key stakeholders at the state, regional, and municipal levels, and by corporate, not-for-profit, and philanthropic leaders.

Evaluating Community Resilience

GRI's I-RES takes a functional approach to evaluating a community's needs and strengths pertaining to resilience-building. People and organizations receive benefits and services by residing in a chosen community with a functioning government, cultural attractiveness, and robust social and economic activities. By adopting a functional approach, it becomes possible to evaluate how the community's resilience, or a lack thereof, impacts the day-to-day lives of those who live in it. This is done by synthesizing the quantitative and qualitative data on a broad range of functions that are elemental to a community's resilience. The data is collected from both publicly available databases as well as by direct questioning of key stakeholders through community engagement. It is not a detailed system, or systems-of-systems, approach. Such approaches, while critical to experts, are not how communities and their leaders and citizens plan, work, and live. In day-to-day life, people are affected by the functions (i.e., services) provided by their community, from energy and transportation to arts, education, and recreation. The I-RES approach provides an understanding of how resilience strengths and needs manifest themselves in the delivery of these functions under normal conditions and suggests how changes to these functions represented by investment and development may positively or negatively affect the community's resilience. The I-RES does this by assessing three core elements of a community: physical infrastructure, social dynamics, and economic conditions. It examines how community functions are interrelated and interdependent and how these functional connections impact one another, including key points of convergence where resilience factors are reinforcing one another, thus identifying the largest overall opportunities for impact. Such resilience-building also requires solutions at multiple scales, from the individual and family levels to regional levels and beyond.

A. Regional Context

1. Regional Background

For the purposes of this report, LTER Region 3 differs from the Department of Emergency Management and Homeland Security (DEMHS) Region 3. LTER Region 3 includes the municipality of Coventry, and does not include the municipalities of Cromwell, Portland, Middletown, Burlington, Bristol, East Haddam and East Hampton. The municipalities included in this report belong to different counties: 26 municipalities are in Hartford County, and 9 are in Tolland County. While County boundaries are generally not significant in Connecticut from an economic development planning perspective, some of the business and economic data that is collected by the federal government is only available at the county scale and these designations play a role in the allocation of federal funds.[a]

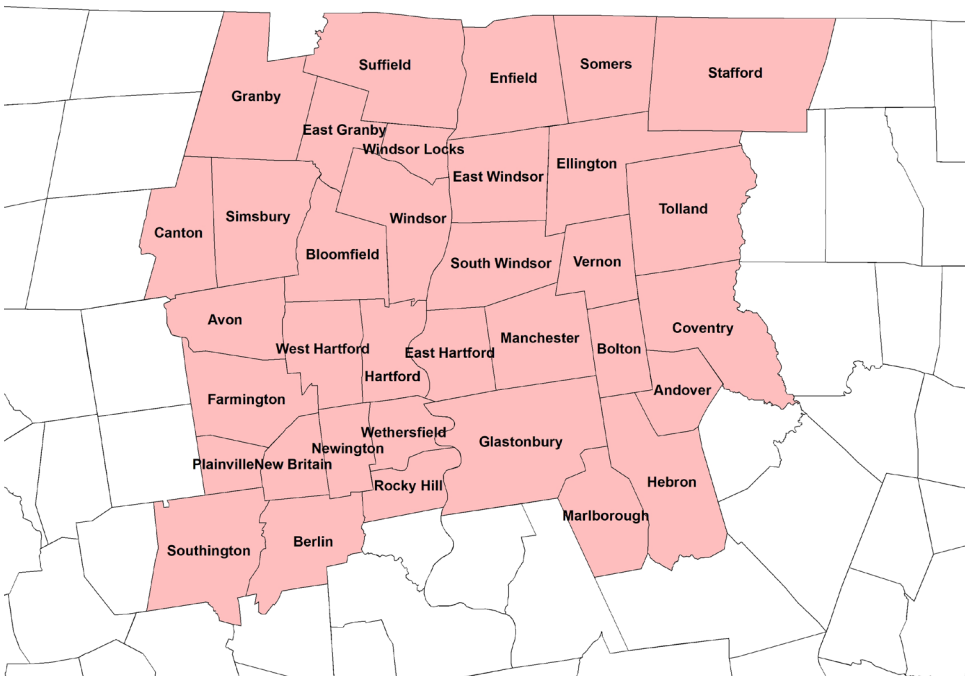


Figure 1: LTER Region 3 comprises 35 municipalities.

a. Data used throughout this report comes from publicly available sources and are aggregated at various organizational levels. Unemployment and DECD Grant data presented in the Economic Environment section are reported at the municipal scale, and Employment and Wage by Industry data are reported according to Labor Market Area. Business revenue and closure data are reported at the county scale. Throughout the report, analysis of demographics, household incomes, industries sectors, food insecurity, housing, education, healthcare, transportation, language use and internet connectivity is based on data that are aggregated at the levels of census tracts, municipalities, and counties. Where data are reported at the county level, it is because this is the finest spatial resolution at which the data are currently available. As the counties referenced in this report contribute a different number of municipalities to the LTER Region, their individual relevance to the overall picture of the Region should be considered by readers.

The total population of LTER Region 3, whose economic development planning is overseen by the Capitol Region Council of Governments, is approximately 930,692 residents.[1] Hartford is the Region's largest city, with a population of 122,105.[2] The City is headquarters for many of the nation's largest insurers and other large corporations, but many of the professionals that they employ reside in adjacent municipalities and commute into Hartford to work. This has generated longstanding social and economic inequities where the residents in neighboring towns around Hartford are largely affluent and white, while the majority of residents in the City of Hartford are lower income and Black and Hispanic. Within Hartford, East Hartford, and West Hartford alone, there are several census tracts which are Designated Opportunity Zones. Manchester, Windsor, and New Britain host Opportunity Zones as well.[3] Private investment projects within these census tracts can be eligible for considerable capital gains tax advantages, a feature which has potential to incentivize development in economically disadvantaged communities.[4]

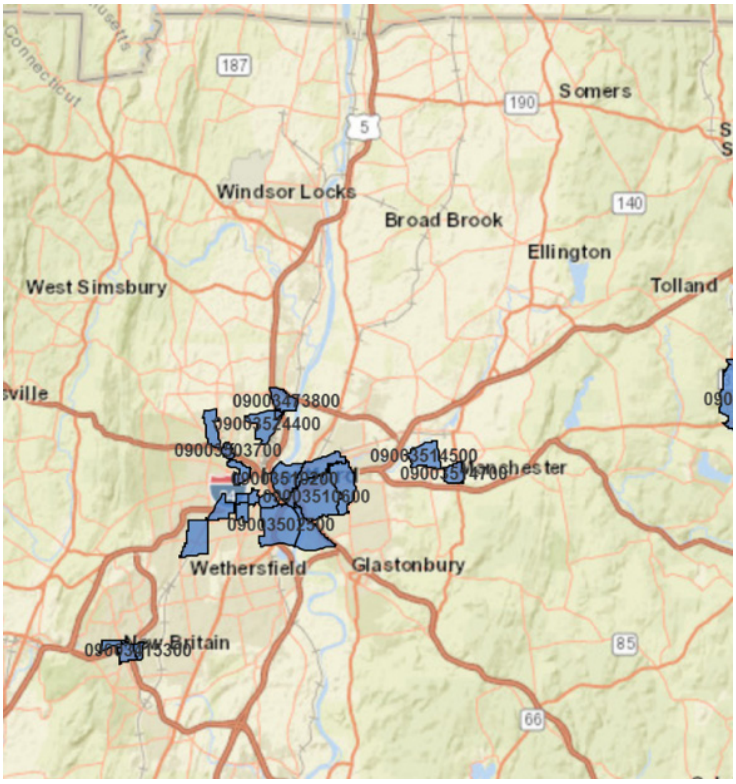


Figure 2: Opportunity Zones in Region 3 (Source: OpportunityDb The Opportunity Zone Database. Opportunity Zone Map)

2. Population Dynamics:

Region 3's population is most dense in the City of Hartford and several towns in the center of the Region which surround the city. These include East and West Hartford, Newington, New Britain, Manchester and Wethersfield. Hartford is the most racially diverse city in the Region; 37% of Hartford residents are Black, 44% are Hispanic. Comparatively, in West Hartford, 6% of residents are Black and 11% are Hispanic, and in East Hartford, 26% of residents are Black and 36% are Hispanic.[5] In addition to these differences in population trends, significant income disparities are apparent in Region 3. Glastonbury is representative of the Region's wealthy suburban municipalities (median household income $116,265), whereas Hartford represents the poor urban core (median household income $34,338).[6] Moreover, census tracts with higher rates of impoverished residents are concentrated in the Region's urban areas, particularly Hartford, East Hartford and New Britain (Figure 10). Together, these statistics indicate suburban and rural areas in Region 3 are home to residents who earn higher incomes, are older, and are less racially diverse than the Region's urban residents.

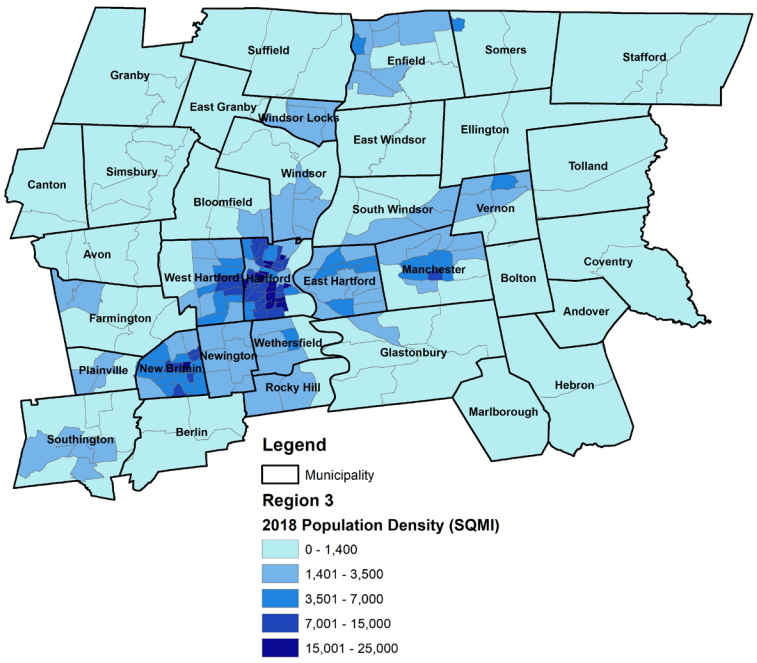


Figure 3: Region 3 Population Density by Census Tract. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

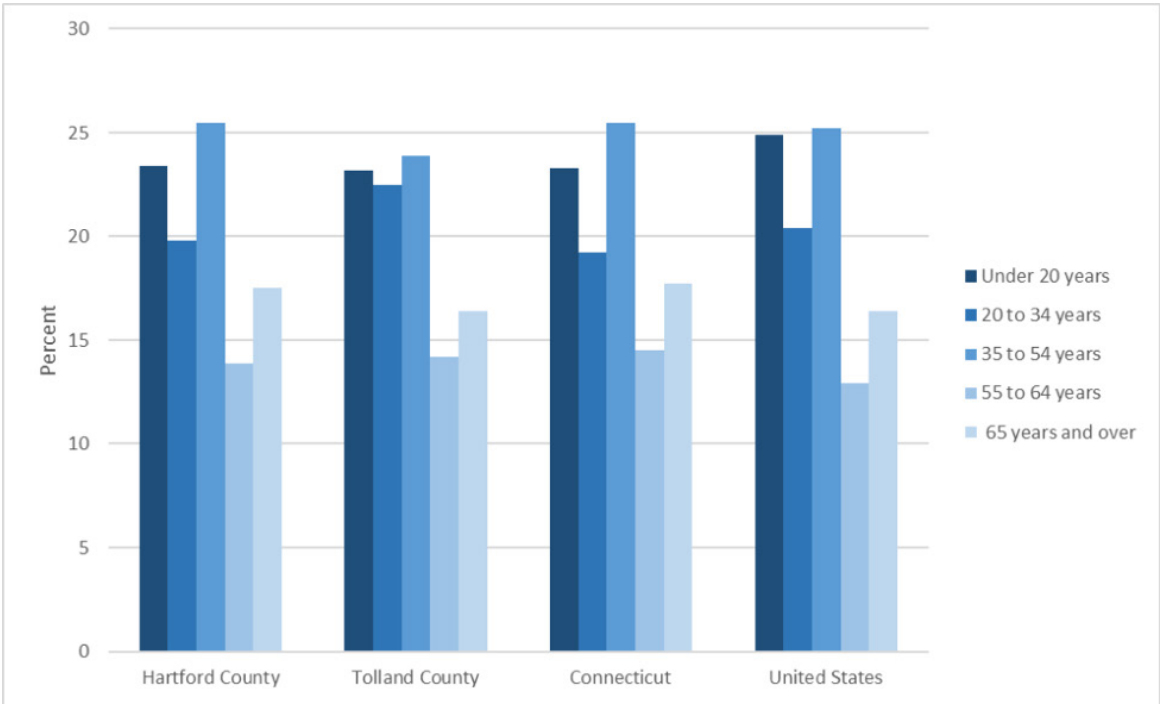


Figure 4: Region 3 Population Age Distribution. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

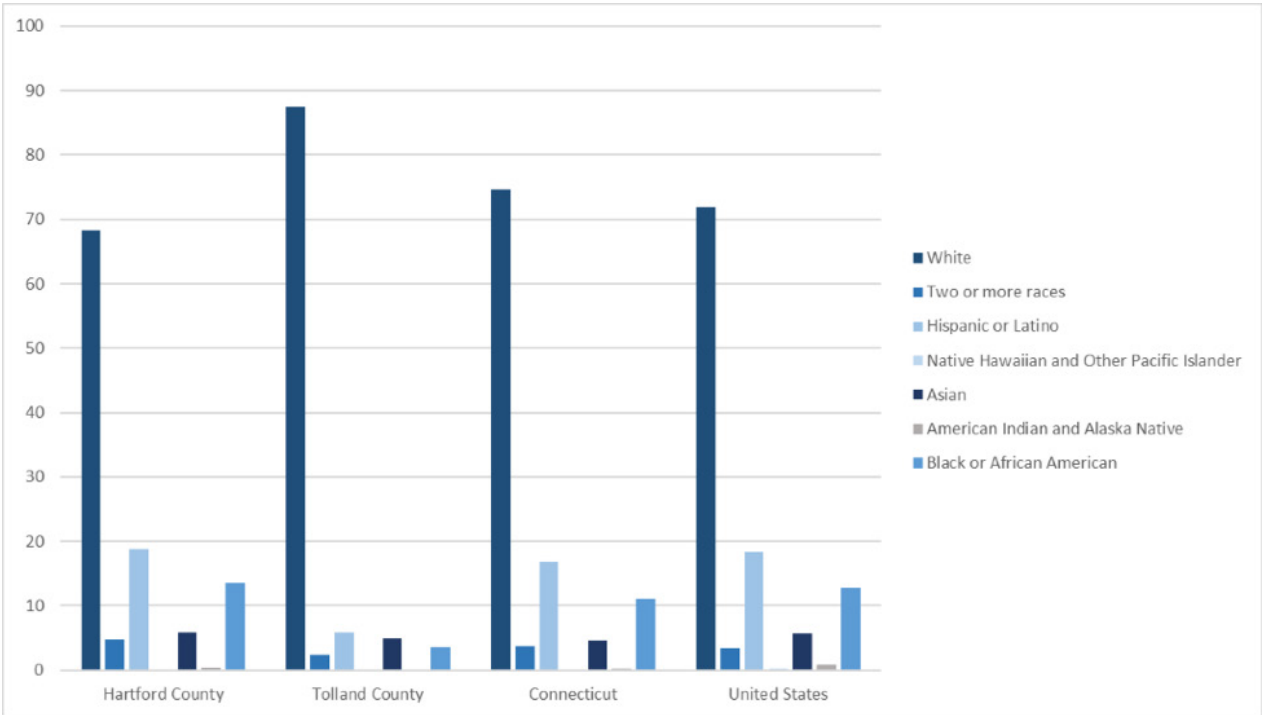


Figure 5: Region 3 Population by Race. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

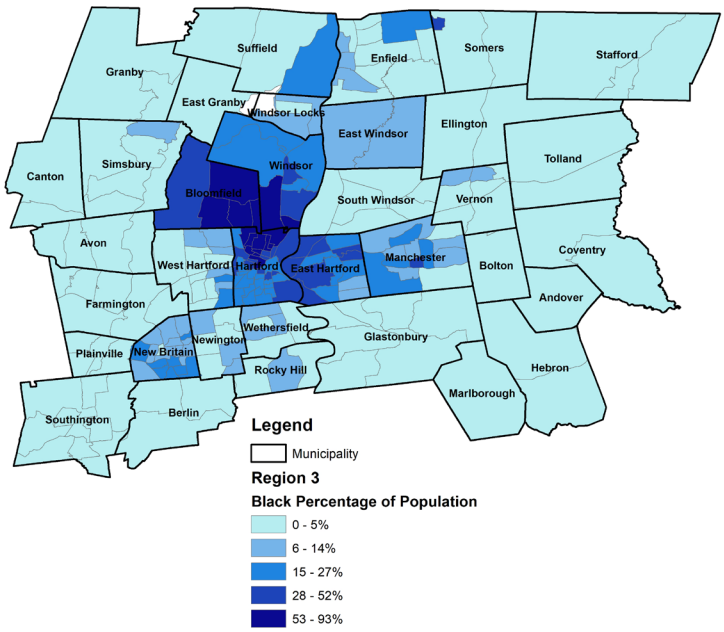


Figure 6: Distribution of Black Residents in Region 3. Note that percentage Black population data should be considered in comparison with population density data (Figure 3). (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

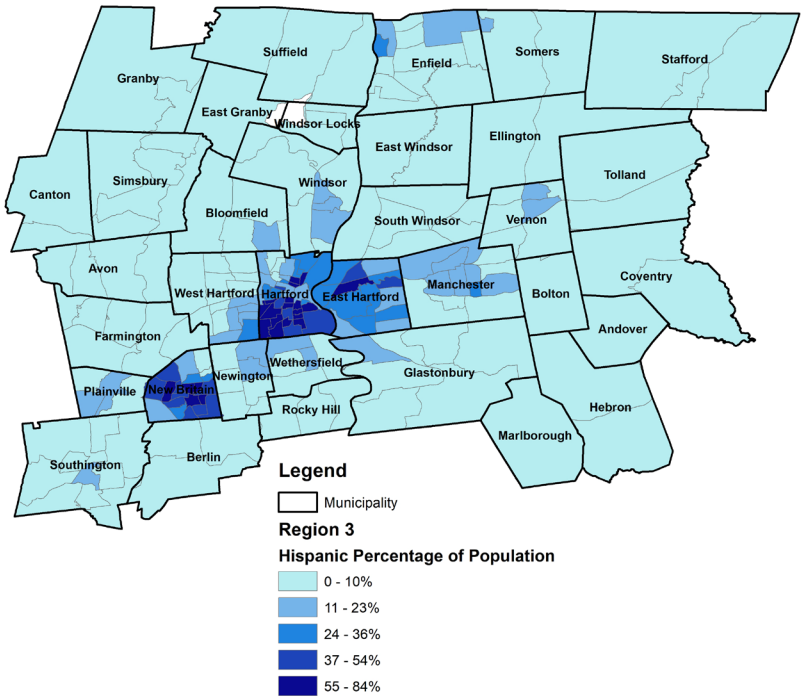


Figure 7: Distribution of Hispanic Residents in Region 3. Note that percentage Hispanic population data should be considered in comparison with population density data (Figure 3). (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

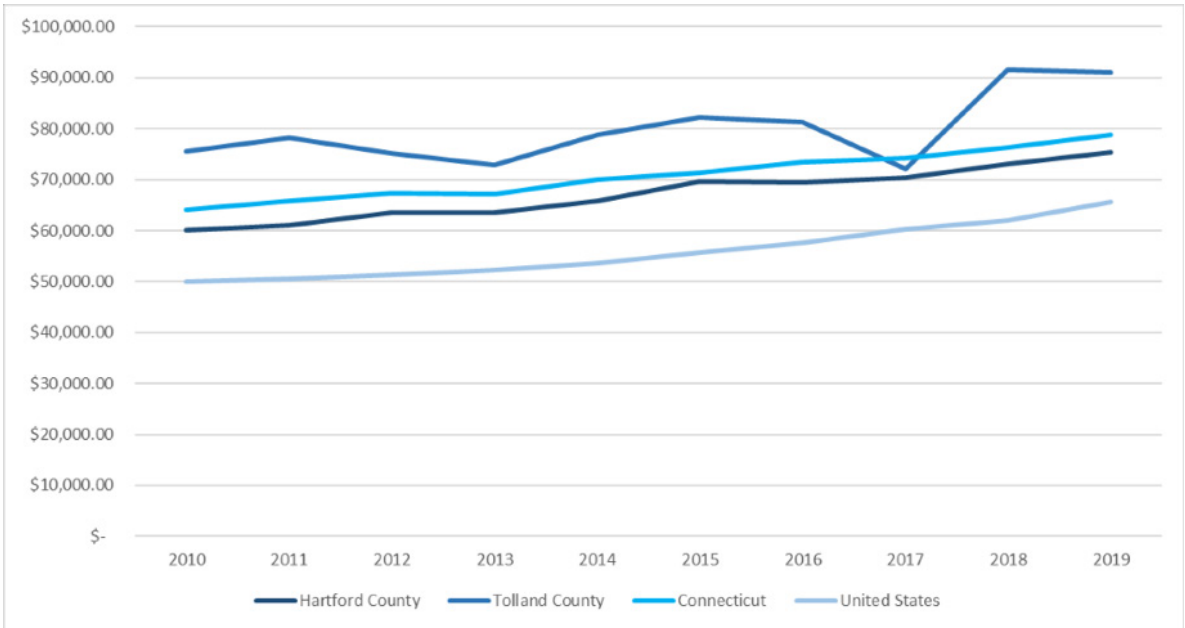


Figure 8: Median Household Income Over Time. (Source: U.S. Census Bureau 2010-2019 1-Year Estimates)

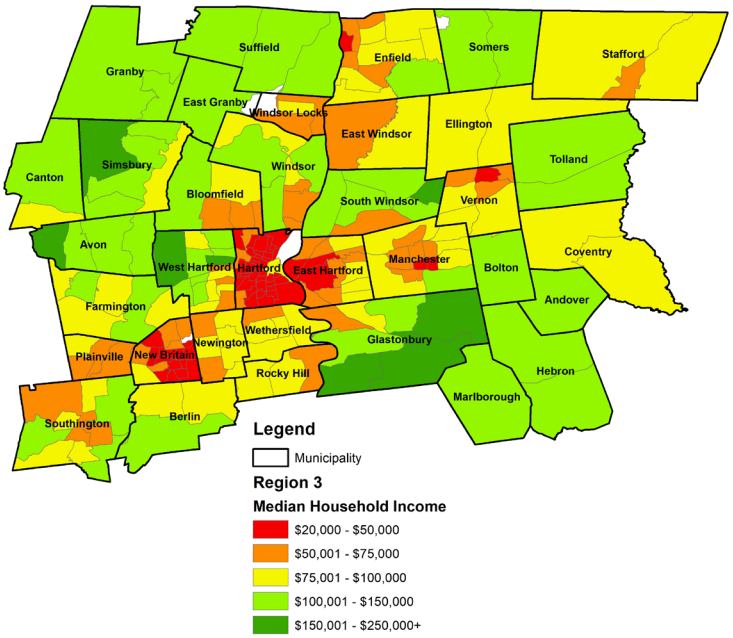


Figure 9: Median Household Income in Region 3 Communities. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

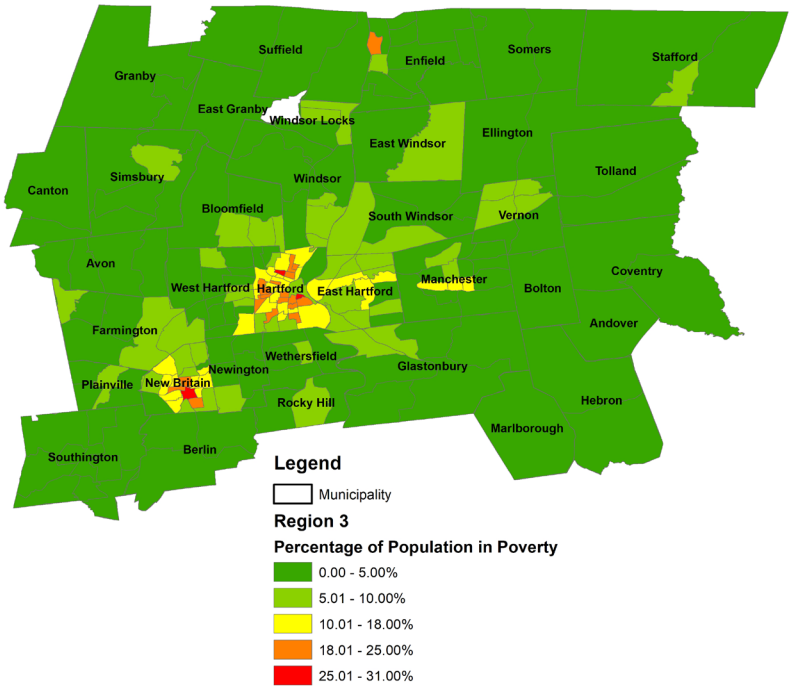


Figure 10: Region 3 Percentage of Population in Poverty. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

3. Regional Economic Drivers:

As the urban center of the Region, Hartford plays an important role in the local economy. The Gross Metro Product (GMP) for the Hartford-West Hartford-East Hartford metropolitan area was $96 billion in 2020. This can be compared to the Bridgeport-Stamford-Norwalk GMP ($83 billion), and the New-Haven-Milford GMP ($51 billion).[7] Popularly known as the "the insurance capital of the world," Hartford is the location for several major insurance companies' headquarters, including Aetna, Hartford Financial Services, The Hartford, and United Healthcare, while Cigna has headquarters in neighboring Bloomfield.[8] Beyond the insurance industry, Stanley Black & Decker Inc. (hardware manufacturing) is headquartered in New Britain, United Technologies (aerospace manufacturing) had its headquarters in Farmington until merging with to form Raytheon Technologies in April 2020, and SS&C Technologies Holdings Inc. (computer software-manufacturing) has headquarters in Windsor.[9] These companies employ thousands of people and contribute significantly to the overall business environment of the Region.[10] The Capitol Region Council of Governments (CRCOG) reports Manufacturing, Finance and Insurance, Health Care & Social Assistance, and Government as its top industries by total employment.[11] The CRCOG's Comprehensive Economic Development Strategy (CEDS) also notes that while the durable manufacturing, finance and insurance industries are densely concentrated in Hartford compared to many other cities in the country, they have also lost workforce in recent years.[12] Additionally, Region 3 has a high concentration of colleges and universities, providing education to more than 31,000 students across 12 higher education institutions.[13] In particular, Central Connecticut State University reports 10,652 enrolled students, making it one of the largest institutions of higher education in the State.[14,15]

B. Economic Environment

The resilience implications of the Region's economic environment can be understood by looking at the type of industries providing the employment, the regions' level of employment/unemployment, and the state of larger business and commercial activity present in the Region. Data for employment by industry sector is gathered according to defined Labor Market Areas (LMAs) which are not precisely congruent with Region 3 as it is defined in this report. Region 3 is dominated by two major Labor Market Areas (LMAs), which are the Hartford-East Hartford-West Hartford LMA (Hartford) and the Enfield LMA (which is classified by Department of Labor as a smaller LMA, and therefore reports limited data as compared to the major LMAs across the state).[16] While the boundaries of the Hartford LMA do not align perfectly with Region 3's municipalities, GRI's research team will deploy a combination of these two LMAs reported data from October 2019 and October 2020 to present the differences in employment (by industry sector) across these two periods.

1. Region 3 LMA Employment Averages

	2019 October		
INDUSTRY	**HARTFORD LMA**	**ENFIELD LMA**	**% OF TOTAL NONFARM EMPLOYMENT**
TOTAL NONFARM EMPLOYMENT	588,500	44,500	100.0%
TOTAL PRIVATE	494,100	37,200	83.9%
GOVERNMENT	94,400	7,300	16.1%
Federal Government	5,400	800	1.0%
Local Government	44,400	3,500	7.6%
Industry Sectors			
GOODS PRODUCING	81,400	8,100	14.1%
MANUFACTURING	60,900	6,700	10.7%

PRIVATE SERVICE PROVIDING	412,700	29,100	69.8%
TRADE, TRANSPORTATION, AND UTILITIES	91,200	11,600	16.2%
INFORMATION	9,900	200	1.6%
FINANCIAL ACTIVITIES	56,500	2,700	9.4%
PROFESSIONAL AND BUSINESS SERVICES	73,800	5,100	12.5%
EDUCATION AND HEALTH SERVICES	111,300	4,000	18.2%
Educational Services	14,200	Data N.A.	2.2%
Health Care and Social Assistance	97,100	Data N.A.	15.3%
LEISURE AND HOSPITALITY	47,800	4,100	8.2%
Accommodation and Food Services	40,200	Data N.A.	6.4%
OTHER SERVICES	22,200	1,400	3.7%

Figure 11: Region 3 LMAs (Hartford, Enfield) October 2019 employment averages. (Source: Connecticut Department of Labor (CT DOL) – Current Employment Statistics (CES). Historical Employment Statistics – 1990 to Present. (Accessed December 2020)

Based on this data, Region 3's economy is supported by a diverse workforce and range of employment opportunities.[17] Service-providing industries form the greatest proportion of the employed labor force, with Education and Health Services ranking highest (by number of employees) under this sub-category. Additional employment drivers include several manufacturing businesses (Pratt & Whitney, Stanley Black and Decker), the presence of the State Government in Hartford, Central Connecticut State University, and the insurance businesses headquartered in Hartford (Aetna, United, and Cigna (Bloomfield)).

Change in Region 3 LMA Workers Employed

Conforming to State-wide employment trends, service providing industries experienced a higher relative loss in total employment (as compared to the goods producing sector.[18] The continued reductions in commercial activity and the remote working practices for a large proportion of jobs has reduced demands for accommodation and food services within the region. Additionally, the Region's high number of higher education institutes has caused a major decrease in employment within the educational services sub-sector. Stakeholder interviews by GRI researchers attribute a major portion of this loss to the reduced on-campus activity levels across institutions. The transition to virtual learning and business operations across several sectors in Region 3 has resulted in leisure and hospitality businesses losing the largest share of total employment as compared to the prior years' benchmark.

	Variation (in %) October 2019- October 2020 Total Employment		
INDUSTRY	**HARTFORD LMA**	**ENFIELD LMA**	**COMBINED**
TOTAL NONFARM EMPLOYMENT	-4.7%	-4.0%	-4.7%
TOTAL PRIVATE	-4.8%	-4.3%	-4.8%
GOVERNMENT	-4.5%	-2.7%	-4.3%
Federal Government	7.4%	0.0%	6.5%
Local Government	-4.1%	-2.9%	-4.0%
Industry Sectors			
GOODS PRODUCING	-4.1%	0.0%	-3.7%
MANUFACTURING	-3.1%	0.0%	-2.8%
PRIVATE SERVICE PROVIDING	-4.9%	-5.5%	-5.0%
TRADE, TRANSPORTATION, AND UTILITIES	-2.3%	-3.5%	-2.4%
INFORMATION	-8.1%	0.0%	-7.9%
FINANCIAL ACTIVITIES	-1.4%	-3.7%	-1.5%
PROFESSIONAL AND BUSINESS SERVICES	-2.9%	-7.8%	-3.2%
EDUCATION AND HEALTH SERVICES	-3.3%	-5.0%	-3.4%
Educational Services	-8.5%	Data N.A.	-8.5%*
Health Care and Social Assistance	-2.6%	Data N.A.	-2.6%*
LEISURE AND HOSPITALITY	-20.3%	-12.2%	-19.7%
Accommodation and Food Services	-16.7%	Data N.A.	-16.7%*
OTHER SERVICES	-5.4%	0.0%	-5.1%

**Combined % variations for these values only includes Hartford LMA due to lack of available data from the Enfield LMA.*

Figure 12: Change in Workers Employed (individual and combined) for 2 LMAs within Region 3, October 2019-October 2020. (Source: Connecticut Department of Labor (CT DOL) – Current Employment Statistics (CES). Historical Employment Statistics – 1990 to Present. (Accessed December 2020)

Additional Impacts from Employment Changes

2020 Q2 Wage data by Labor Market Area indicate employment losses within particular industry sectors necessitate increased focus due to equity concerns arising from disparities in wages. While the average quarterly wage for all industries for Q2 2020 across these two LMAs was $16,668, wages for workers in these four sectors was significantly lower:[19]

- Arts, Entertainment, and Recreation: Average Q2 2020 wage $7,661, 54% less than regional average for this period.
- Accommodation and Food Services: Average Q2 2020 wage $5,605, 66% less than regional average for this period.
- Retail Trade: Average Q2 2020 wage $9,287, 44% less than regional average for this period.
- Other Services: Average Q2 2020 wage $11,262, 32% less than regional average for this period.
- The only employment sector to post significant gains (as compared to prior year benchmark) was Federal government in the Hartford LMA, which was a positive development (20% above regional average wage).[20] The overwhelming majority of Region 3's employment sectors exhibit considerable decline for this period, and there will be an increased need for targeted assistance directed at sectors that continue to remain disproportionately affected by the current pandemic.

Since October 2020, a second wave of increasing COVID-19 case rates in Connecticut and associated public health measures to slow the spread of the virus have heavily contributed towards the reversal from the Aug-Oct recovery period for Connecticut's employment rate. For the week ending December 5th, 2020, Connecticut state-level data recorded a 31% increase (unadjusted) in the number of initial claims filed as compared to the previous week, indicating a significant rise in newly unemployed workers across the state.[21] Data through December and into early January 2021 indicate that unemployment claims are on the rise again as the pandemic continues. These state and national trends are concerning developments for regional economies, particularly with the temporary conclusion of Connecticut's Extended Benefits period on December 12th, 2020, which increased the risk levels for unemployed workers across the state. Although the CARES Act Extension has provided a new Federal Pandemic Unemployment Compensation (FPUC) allocation of $300 per week up till the program end date (March 13th, 2021), the brief period between the conclusion of the first extended benefits (mid-December) and the resumption in mid-January has likely added to the financial burdens on individuals and families that have been heavily dependent on unemployment benefits due to loss of livelihood.[22]

2. Region 3 Unemployment

The COVID-19 crisis's economic impacts have been detrimental for communities in Region 3, as demonstrated by the surging unemployment rates reported in August 2020, which was more than 2 months after the first round of restrictions on commercial activities were partially or completely lifted. GRI utilized January 2020 unemployment rates across all municipalities within Region 3 as a benchmark figure to compare against August and October unemployment numbers for 2020. For all municipalities assessed in Region 3, February 2020 unemployment rates closely follow January 2020 unemployment rates. Because

several industry sectors in the Region, including Accommodation and Food Services, experienced some early disruptions in operations as a result of the pandemic, January 2020 data is used as a benchmark for pre-pandemic employment data.

Across Connecticut and the nation, pandemic-related job losses have disproportionately impacted women, racial minorities, and workers who have less than a high school education.[23] Detailed weekly data for initial and continued unemployment filed according to workforce investment area and age, education level, race and other demographic characteristics is available from the Connecticut Department of Labor. It is important to note that the State of Connecticut only processes unemployment claims filed by workers who are employed within the State. Connecticut Department of Labor (DOL) unemployment claims records do not account for unemployment claims filed by workers who are employed out-of-state, and also does not include the unemployed self-employed or those who are ineligible for the State's unemployment system, including federal workers and religious workers.[24]

GRI's analysis of the impacts of the COVID crisis on employment is based upon Local Area Unemployment Statistics (LAUS) monthly employment, unemployment, and labor force data.[25] The unemployment rate and labor force estimates are based on a household survey and measure the work status of the civilian noninstitutional population 16 years old and over residing in Connecticut.[26]

Throughout the pandemic, Connecticut's unemployment rate has been underestimated due to low response rate and misinterpretation of survey questions during the collection of data for the September Current Population Survey (CPS) which is the foundation of the statistical model used to determine all states' unemployment rates.[27] The effect of the CPS misclassification for Connecticut's LAUS unemployment rate has declined since April, 2020 and is now estimated to be in line with the misclassification at the national level.[28] Regional unemployment estimates are best understood in the context of their relative rates by municipality and by sector and their movement over several months rather than observed changes in a single month's value.

Pre-COVID 19 Unemployment Rates

In January 2020, unemployment rates across Region 3 varied by 4.1 percentage points between Hartford (7.1%) and the Glastonbury, Simsbury, and Avon (3.0%).[29] The regional average unemployment for the same period was 4.4%, which was identical to the state average. With an R2 value approaching +0.4, Region 3's municipalities exhibited a stronger correlation between population and unemployment rates, which is evidenced by the average unemployment rate of the five largest municipalities (by population) which were 5.3% for the same period. This is more than a full percentage point higher than the regional average and is 1.4 percentage points higher than the comparable average for the five smallest municipalities (by population) for the same period (3.7%). Within the Region's geography, high unemployment clusters were located around the Hartford cluster (Hartford, East Hartford, West Hartford, Wethersfield, Newington, Manchester), the Eastern Cluster (Ellington, Tolland, Coventry, Bolton, Andover, Hebron, Marlborough), the South-West cluster (Plainville, Southington, Berlin, New Britain), and the North-Central Cluster (Bloomfield, Windsor, South Windsor, East Windsor, Windsor Locks, East Granby). The average unemployment rate (January 2020) for each cluster was higher than the regional average with the exception of the Eastern cluster municipalities which were 0.3% under the regional average. Among the highest populated municipalities (populations greater than 45,000 residents), West-Hartford (3.3%) remained the only community to fall under the regional average.

Covid-19 Impact on Employment

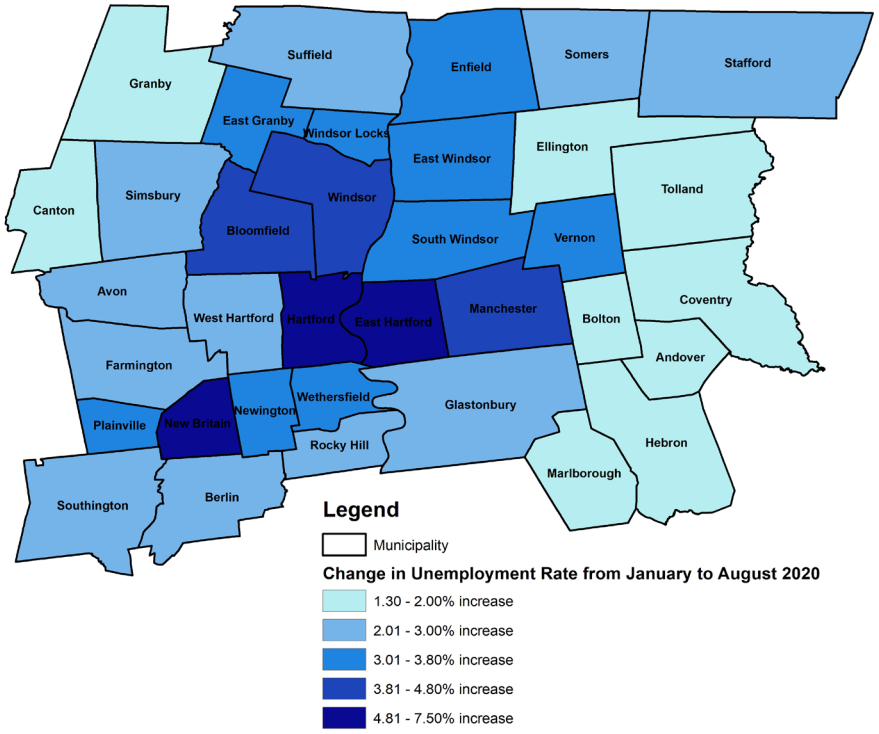


Figure 13: Change in Unemployment Rate from January to August. (Source: Connecticut Department of Labor. Local Area Unemployment Statistics Program. September 2020)

Increases to unemployment rates as a result of the ongoing pandemic were distributed unevenly throughout Region 3, with the largest increases clustered around the Hartford area. Average unemployment rates across Region 3 increased to 8.3% (+4.0) from January-August, with Hartford recording the largest increase of 7.5 percentage points, resting at 14.6% unemployment for the municipality by August 2020.[30] The five largest municipalities increased in unemployment by an average of 5.7 points. This was significantly lower for the smallest municipalities, which recorded an increase of 2.0 points for the same period. Unemployment rates for the Hartford cluster rose by an average of 5.3 points (August 2020 – 10.2%) which was the largest average increase for any cluster within Region 3. Among smaller communities (populations less than 15,000 residents), Windsor Locks (4.9% to 8.4%) and East Granby (3.1% to 6.6%) recorded the highest increases in unemployment (3.5%) for the same period. West Hartford continued to perform better than Regional average rates and other high-population counterparts, with an increase of 3.0% resulting in an August unemployment rate of 6.3%. Bolton recorded the lowest August unemployment rate (4.9%) across Region 3, and Marlborough recorded the lowest increase (+1.3 percentage points) for the January to August period.

2020 Unemployment Rate for Region 3 Municipalities

	TOWN	January	August	October	December
Largest Municipalities	Hartford	7.1	14.6	10.9	12.9
	New Britain	5.9	11.8	8.6	10.5
	West Hartford	3.3	6.3	4.3	5.4
	Manchester	4.1	8.9	6.1	7.8
	East Hartford	5.3	11.2	7.8	10.0
	Mean	5.3	11.0	7.9	9.7
Smallest Municipalities	Hebron	3.8	5.7	3.8	5.6
	Marlborough	3.8	5.1	3.7	6.2
	East Granby	3.1	6.6	4.3	5.7
	Bolton	3.3	4.9	3.1	4.9
	Andover	4.4	6.4	4.4	5.7
	Mean	3.7	5.7	3.8	5.6
Hartford Cluster	**Mean**	5.0	10.2	7.3	9.0
Eastern Cluster	**Mean**	3.7	5.4	3.6	5.4
South West Cluster	**Mean**	4.8	8.9	6.4	8.1
North Central Cluster	**Mean**	4.2	7.9	5.6	7.2
Region 3	***Mean***	***4.4***	***8.3***	***5.8***	***7.5***
State-Wide	**Mean**	4.4	8.2	5.8	7.5

Figure 14: Unemployment Rate (in %) for Municipalities across Region 3. Source: Connecticut Department of Labor. Local Area Unemployment Statistics Program. January 2020)

For the period of August to October 2020, Region 3's municipalities exhibited positive recovery in the employment sector, with an average decrease of 2.5 points bringing the Regional average unemployment rate from 8.3% (August) to 5.8% (October).[31] Somers experienced the largest reduction in unemployment for this period (-4.0), followed by Windsor Locks (-3.9) and East Hartford (-3.5). The average unemployment rate for the largest municipalities reduced to 7.9% (-3.1 points), and the 5 smallest communities (by population) recorded a decrease of 1.9 points for the same period. Among municipal clusters, the Hartford area displayed the strongest recovery (only 2.3 percentage points above January 2020) for this period, while the Eastern cluster communities recorded an average unemployment rate for October (3.6%) that was 0.1 points below January 2020 levels (3.7%) Across Region 3, higher unemployment rates were located in larger population centers for October – the average rate for all municipalities with populations higher

than the regional average (26,660 residents) was 6.8%. In contrast, the average for all municipalities that held population sizes under the regional population average was 4.3%. While this is in line with state-wide trends, the presence of several population centers and the importance of the 'Hartford Ring' to regional economic and demographic dynamics places an increased importance on a collaborative approach towards employment recovery within Region 3 communities. approach towards employment recovery within Region 3 communities.

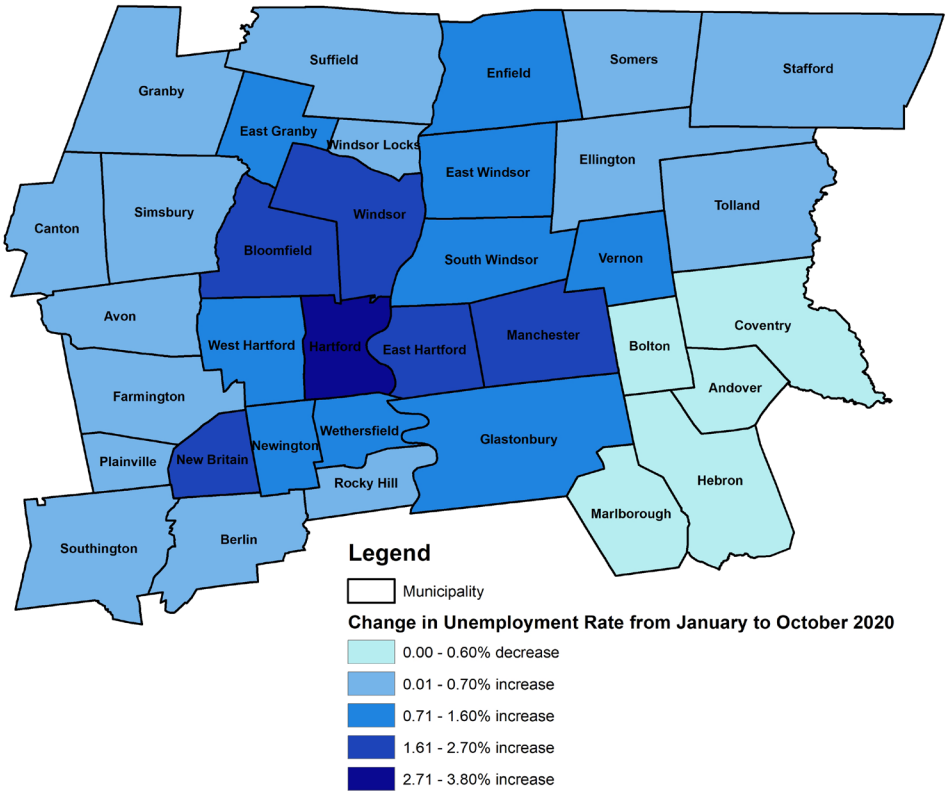


Figure 15: Change in Unemployment from January to October. Source: Connecticut Department of Labor. Local Area Unemployment Statistics Program. November 2020)

The recovery pattern observed in October experienced a reversal by December 2020, where the average unemployment rate across Region 3 increased by 1.7 points for the Oct-Dec period.[32] The only two municipalities to record a decrease in unemployment rate for this period were Suffield (-0.1) and East Windsor (-0.2), which posted reduced rates for December (6.0% and 7.6% respectively) as compared to October levels. The 5 largest municipalities experienced an average increase of 1.8 points, and in a reversal of prior trends, the smallest 5 municipalities experienced an identical increase. With the December average for the smallest municipalities recording an average of 5.6%, the increase from October levels (3.8%) was a concerning development. In absolute values, the 5 largest municipalities recorded a higher average rate for December (9.7%), where Hartford and New Britain recorded the highest December values of 12.9% and 10.5% respectively. The highest increases in unemployment rate for the Oct-Dec period were recorded by Windsor Locks (+3.5 points) and Somers (+3.4 points). Unlike the prior periods, increases to unemployment rates for this period were not correlated to population figures.

Changes to Unemployment Rate Across Calendar Year 2020

	TOWN	Variance (Jan-Aug)	Variance (Aug - Oct)	Variance (Oct-Dec)	Variance (Jan-Dec)
Largest Municipalities	Hartford	7.5	-3.7	2.0	5.8
	New Britain	5.9	-3.1	1.9	4.6
	West Hartford	3.0	-2.0	1.1	2.1
	Manchester	4.8	-2.8	1.7	3.7
	East Hartford	6.0	-3.4	2.2	4.8
	Mean	**5.7**	**-3.1**	**1.8**	**4.4**
Smallest Municipalities	Hebron	1.9	-1.9	1.8	1.7
	Marlborough	1.3	-1.4	2.5	2.3
	East Granby	3.5	-2.3	1.5	2.6
	Bolton	1.6	-1.8	1.8	1.6
	Andover	2.1	-2.1	1.3	1.3
	Mean	**2.0**	**-1.9**	**1.8**	**1.9**
Hartford Cluster	**Mean**	5.3	-3.0	1.7	4.0
Eastern Cluster	**Mean**	1.7	-1.8	1.8	1.7
South West Cluster	**Mean**	4.1	-2.5	1.8	3.3
North Central Cluster	**Mean**	3.7	-2.3	1.6	3.0
Region 3	***Mean***	***4.0***	***-2.5***	***1.7***	***3.1***
State-Wide	**Mean**	3.7	-2.4	1.7	3.1

Note – Table lists changes to unemployment rate across various Region 3 municipalities and clusters across CY20. Positive values correspond to net increase in unemployment for listed column period.

Color Legend - Values in Red indicate unemployment rate variance worse than the Region 3 average for the same period. Values in Green indicate unemployment rate variance better than the Region 3 average for the same period. Values in Black indicate identical unemployment rate variance to Region 3 average for the same period.

Figure 16: Variance in Unemployment Rate (in %) for Municipalities across Region 3. Source: Connecticut Department of Labor. Local Area Unemployment Statistics Program. January 2020)

At the end of the calendar year, every municipality across Region 3 had recorded an increase in unemployment rate as compared to pre-pandemic (January 2020) levels. The regional average increase was +2.6 points, with Andover recording the lowest increase (+1.3 points) and Hartford recording the highest increase (+5.8 points) for the same period.[33] The average increase for the 5 largest municipalities (+4.2 points) was significantly higher than the corresponding increase for the 5 smallest municipalities (+1.9 points). However, it must be noted that this higher level of decrease (for larger municipalities) is

due to the proportionally higher increase for the Jan-Aug period. The smaller municipalities experienced reduced increased for the initial period of the pandemic, and therefore recorded (comparatively) smaller reductions during the Aug-Oct period. Across the year (Jan-Dec period), increases to unemployment rate positively corresponded with population size for Region 3 municipalities (R^2 = 0.57). The gains experienced in the employment market for the Aug-Dec recovery period have been erased by December 2020, with the regional average unemployment resting at 0.6 points lower than August 2020 levels. All 35 municipalities across Region 3 experienced a net increase in unemployment through 2020, which is an indicator of the current pandemic's devastating effects on the Regional economy.

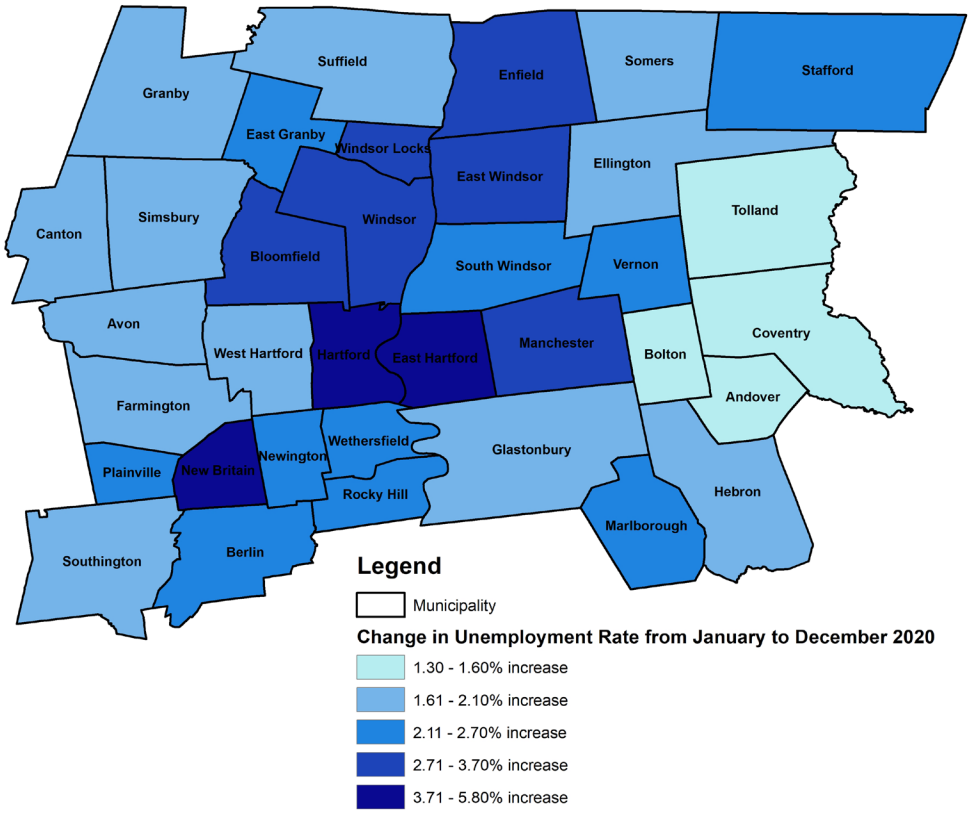


Figure 17: Change in Unemployment from January to December. Source: Connecticut Department of Labor. Local Area Unemployment Statistics Program. January 2021)

3. Impacts on Businesses and Commercial Activities

Through the assistance of Connecticut's Office of Policy and Management and the Department of Economic and Community Development, GRI researchers acquired a preliminary breakdown of the total applications received under the CT Cares Small Business Grant Program. There was a considerable demand among small business owners for this $5,000 grant, with approximately 18,000 applications received by DECD (state-wide).[34] In the analysis of this dataset, GRI encountered data entry issues, with missing/incorrect locations creating several inconsistencies. Due to these technical difficulties, the following analysis does not include every single application filed under the grant program.

DECD CT Cares Grant Program Applicant Data

Industry Sector	Region 3 Applications	% of Total Applications (Region 3)	% of Total Applications (Statewide)
Accommodation and Food Services	525	11.1%	26.7%
Agriculture, Forestry, Fishing, and Hunting	29	0.6%	19.3%
Arts, Entertainment, and Recreation	346	7.3%	25.8%
Construction	325	6.9%	27.8%
Educational Services	141	3.0%	25.8%
Finance and Insurance	96	2.0%	31.4%
Healthcare and Social Assistance	341	7.2%	29.0%
Information	46	1.0%	28.0%
Manufacturing	127	2.7%	27.5%
Other	771	16.3%	26.4%
Other Services	840	17.7%	31.4%
Professional, Scientific, and Technical Services	364	7.7%	28.8%
Real Estate, Rental, and Leasing	213	4.5%	30.3%
Retail Trade	363	7.7%	27.2%
Transportation and Warehousing	110	2.3%	31.0%
Utilities	3	0.1%	16.7%
Wholesale Trade	101	2.1%	28.5%
Total	4741	100.0%	28.0%

Figure 18: DECD CT Cares Grant Program Applicant data for Region 3. Note - Table does not include complete application data due to missing/incorrect location entries. (Source: Office of Policy and Management/Department of Economic Community Development)

Among all DECD grant applicants from Region 3, small businesses belonging to the categories of Accommodation and Food Services, Arts, Entertainment, and Recreation, Other Services, and Retail Trade formed approximately 44% of all applicants.[35] This high proportion of service providing businesses in this application pool is in alignment with the uneven economic and financial effects of the current pandemic, where businesses that relied heavily or exclusively on in-person operations with consumers

have faced severe limitations and challenges. Through stakeholder interviews by GRI researchers with key representatives from the economic and business sectors in the region, GRI has compiled the following information:

- Small businesses, particularly those owned by minority communities or possessing limited revenue/cash reserves, were most heavily impacted by the initial onset of the pandemic. Several businesses were closed for 3–6-month periods across the region. This had major impacts on the long-term survival of these establishments.
- A large number of small businesses lacked the necessary knowledge and technical infrastructure needed for a transition to online delivery/ordering systems (where applicable), which was a major factor in successfully adapting to the realities of the pandemic's effects on consumer behavior. Stakeholders revealed that for establishments recording less than 70% in revenue (compared to pre-pandemic figures), breaking even was highly challenging, and the investment needed to pivot to online delivery systems was a financial impossibility.
- The immediate capital needs of small businesses were met to some degree by the PPP program, but a clear and urgent need for secondary capital infusion was communicated to GRI researchers. Stakeholders were concerned about the ability of small businesses to effectively apply for and utilize the funding available through the Consolidated Appropriations Act (which includes increased funding for SBA programs). Improved communication of application requirements and eligibility criteria, along with digital literacy, were two highlighted areas that would be effective in assisting small business owners.
- The state's recovery stage was set back to Phase 2 levels in the first week of November. This created major challenges for restaurants and other in-person businesses which had to deal with the revenue effects of having limited customers under the state regulations. While this step was necessitated by the rapid rise in COVID-19 cases during this period, the detrimental effects it posed to business health across the region (and state) were significant.

DECD estimates that among all applicants under the CT Cares Grant, there was an average of 3 full time employees for each small business.[36] Using this figure, a conservative estimate can be created of approximately 6,222 employees are working in small businesses that applied for the DECD grant, classified under Accommodation and Food Services, Arts, Entertainment and Recreation, Retail Trade and Other Services. While this number only forms a small proportion of the 555,419 total jobs under nonfarm employment between the Hartford and Enfield LMAs (June 2020), wage data about workers in these industries is an area of concern. DECD received approximately 2,074 applications from these 4 sectors across all municipalities across Region 3 indicating a high level of need for financial assistance among small businesses classified under these sectors. As indicated above, the lower average wages for employees at these businesses leaves them in a state of increased vulnerability to the follow-on effects of unemployment (including homelessness, food insecurity, and loss of healthcare coverage). Stakeholders emphasized a clear and visible need for increased support to small businesses in the region through capital infusion that can be freely utilized in covering operational expenses and reducing the chances of loss of employment for these workers. Every applicant to the DECD grant program must meet the eligibility requirement of reporting at least 20% reduction in annual revenues through September 2020 (as compared to the same period for 2019).[37] As small businesses operate at narrow margins and do not possess extensive cash reserves to cover temporary losses, the 4,741 applications (and 2,074 from the 4 highlighted sectors)

indicates a high level of financial distress among the small business community in Region 3. The continued distress experienced by small businesses is further displayed through data published by Womply and the Opportunity Insights Economic Tracker. The following graph outlines the average revenues for small businesses in Hartford and Tolland counties (which overlap the majority of Region 3's geography).

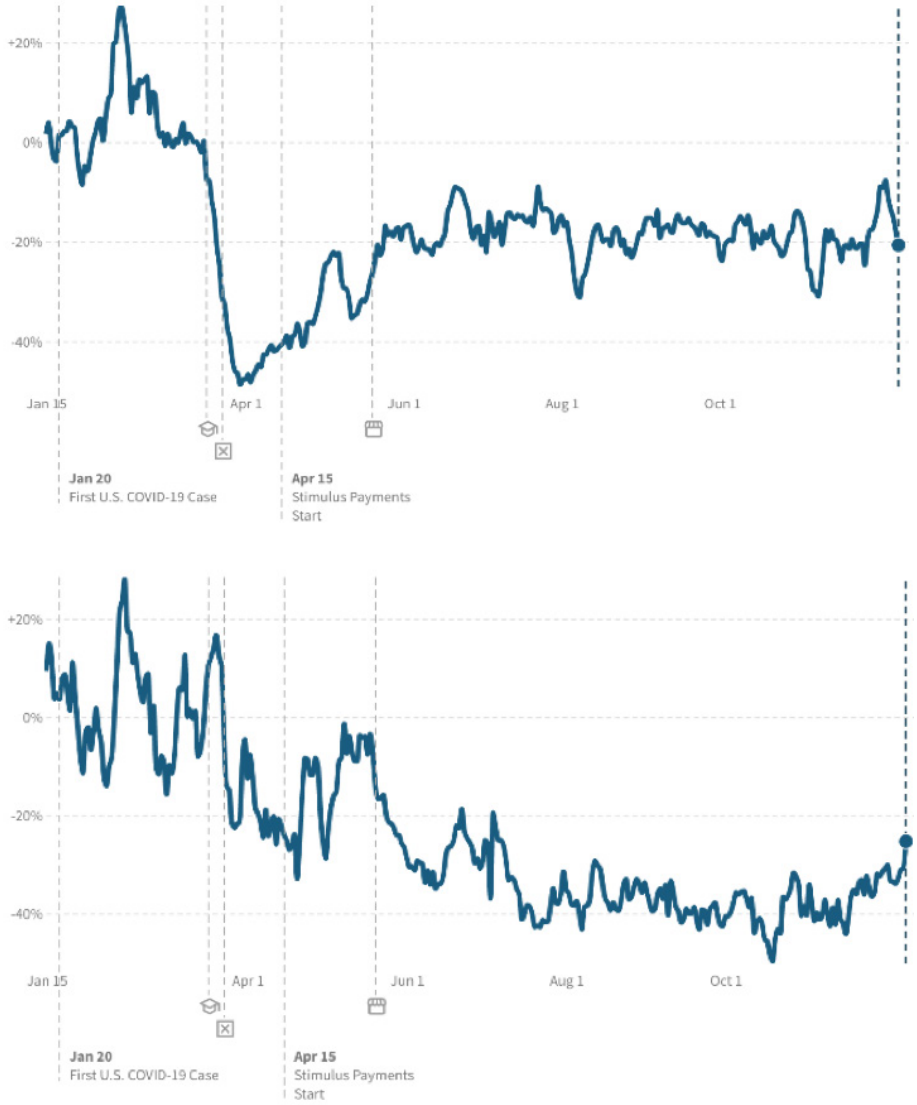


Figure 19: Percent Change in Small Business Revenue, indexed to January 4th, 2020 and seasonally adjusted. Top Graph – Hartford County. Bottom Graph – Tolland County. (Source: Data published by Womply and Opportunity Insights (Accessed January 2020))

Hartford and Tolland counties recorded a 20.7% and 25.3% decline in total small business revenue as of December 9th when compared to the January 4th benchmark, which was significantly better than the state-wide total of 39.2% decline for small business revenues. Despite the promising numbers for revenues, the percentage change to the number of open small businesses (as compared to January 2020) helps form a more nuanced understanding of the COVID-19 pandemic's economic impacts).

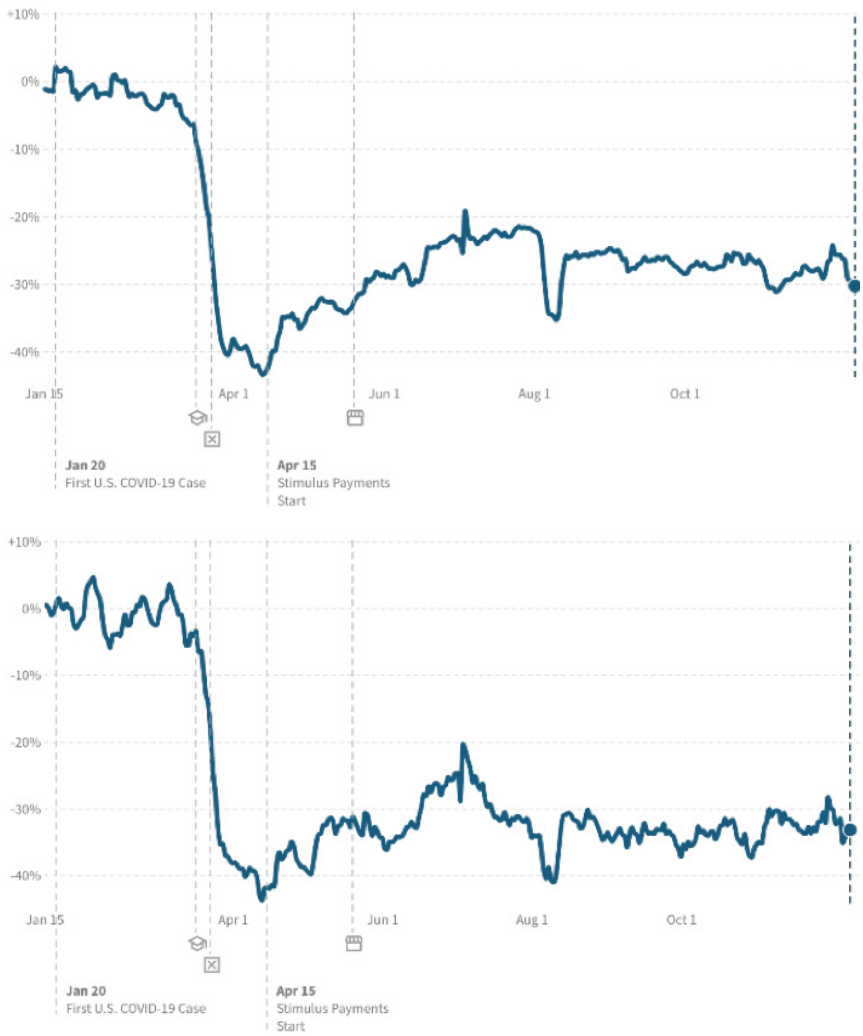


Figure 20: Percent Change in Small Businesses Open, indexed to January 2020 and seasonally adjusted. Top Graph – Hartford County. Bottom Graph – Tolland County. (Source: Data published by Affinity Solutions and Opportunity Insights (Accessed January 2020))

While revenues performed higher than state totals for this period, the percentage of open businesses was more in alignment with the rest of Connecticut. Hartford County recorded a decrease of 30.3% open businesses and Tolland County a decrease of 33.2% open businesses. Across the state, the number of open small businesses recorded a 36.8% decline as compared to January 2020, indicating that the two Region 3 counties did not perform significantly better than state averages in this category. Based on stakeholder interviews, a potential factor that explains the disparity between revenue and open businesses for these two counties is the high break-even margins needed to successfully operate a small business in this region. A high number of businesses with 3 or fewer employees experienced severe challenges in maintaining operations through revenue declines as is reflected in the data published by Affinity Solutions. Further business closures will create major hurdles and long-term challenges for the development of Region 3's economy and will also increase the risk factor for increased numbers of unemployed residents. Stakeholders across the region emphasized the importance of PPP loans in sustaining businesses through the early and middle stages of the past year, and the continued trend of revenue decreases experienced by small businesses provides support for the necessity of additional financial assistance for the business community.

C. Resilience Landscape

1. Public Services

Public K-12 Education

Public schools throughout Region 3 have largely had to focus their efforts on adapting to COVID specific issues rather than planning the education portion of the school year. Stakeholders pointed towards a need for centralized and cohesive leadership when it comes to providing resources, testing, data collection, and overall planning, as there is currently no state-wide strategy for each school district to follow. This has led to disparities across towns, as each municipality is dependent on its own ability to pass a budget that will allow for increased resources in schools. In East Hartford, a large, urban school district, administrators and students were largely unprepared to transition to remote learning beginning back in March 2020. The school district lacks the technology and access to broadband to be fully online and has since found it challenging to engage students and reenergize faculty members. Since September 2020, schools within the town have had short-term and interim closings as positive cases increased. However, in the Granby public school system - operating in a more rural town - there has yet to be a positive case within the district and administrators have been able to undertake contact tracing successfully. Stakeholders across the region explained that while PPE money is available to attempt to close the gap across towns, the real trouble comes from trying to pass school budgets in areas that cannot afford an increase. They expressed a need for increased federal and state funds to promote urban centers and workforce development as a way to better each school system.

Higher Education

Region 3's 12 institutions of higher education provide academic services to more than 31,000 students. One of these institutions, Goodwin University, also houses several public magnet schools and childcare centers on its campus. Stakeholders from Goodwin University shared that the constant changes in schedules and instructions due to the pandemic have taken a toll on teachers and have made it challenging to find fill-in or replacement employees. Enrollment at Goodwin has decreased by 10% compared to last school year, in part due to long-term barriers to higher education accessibility; the pandemic has exacerbated previous barriers such as housing insecurity, unemployment, lack of childcare, and the high cost of education. All of these factors compound and make it difficult for individuals to invest in pursuing higher education, especially during this time of economic uncertainty. Recent years' trends have shown more growth in vocational school enrollment than 4-year colleges, likely indicating the cost of higher education as a key barrier as many residents see receiving vocational training as a better near-term return on their investment. Moving forward, higher education will need to find ways to become accessible for more people in order to combat recent enrollment declines. As seen in Figure 21, residents of Tolland

and Hartford counties report higher rates of Bachelors and Masters degrees than the national averages. However, when comparing each of these counties, Hartford County residents report lower degree rates than Tolland County residents. While a complete analysis of these disparities is beyond the scope of this report, they are likely tied to longstanding economic inequities in Connecticut's urban communities and can be used to inform the specific allocation of resources used to recover and develop the regional economy in an equitable way.

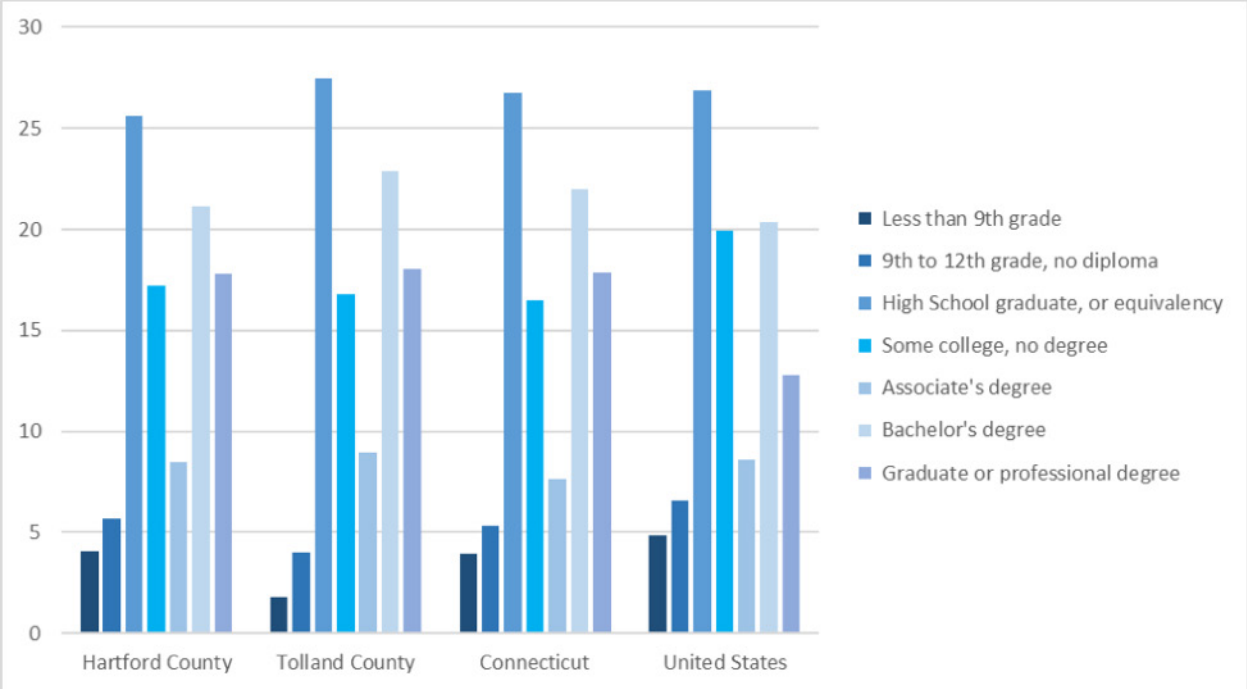


Figure 21: Educational Attainment Distribution Across Population 25 years and Over (Source: U.S. Census Bureau 2019 American Community Survey)

Workforce Development

While the number of advanced manufacturing jobs available has decreased in recent times, Region 3 stakeholders expressed concern over an emerging trend of accelerated retirement in the existing workforce. This trend is likely to be exacerbated by the pandemic and will create a need for more skilled workers that are ready to replace those who leave the workforce. Stakeholders view this as an opportunity to promote training programs aimed at the state's younger residents. However, there are barriers to workforce development that have prevented many people from accessing programs, especially during the pandemic. Previous efforts to create pipelines for middle-skilled labor were closely tied to community colleges, many of which are now struggling financially and experiencing lower enrollments. Other workforce development programs are reliant on public schools to prepare students for jobs after high school and encourage them to seek internships and externships. With most schools operating with remote or hybrid learning since the start of the pandemic, training programs have had limited ability to engage with students. There are also longstanding barriers to workforce development that need to be overcome. Stakeholders shared that the most significant barrier to workforce education is cost, though unemployment and childcare also act to prevent individuals from seeking development opportunities. As shown in Figure 22, the cities of Hartford and New Britain have the highest percentage of adult population without a high school diploma. These cities are also home to the highest percentages of low-income and minority individuals who are more likely to experience these barriers that have likely been heightened by the pandemic.

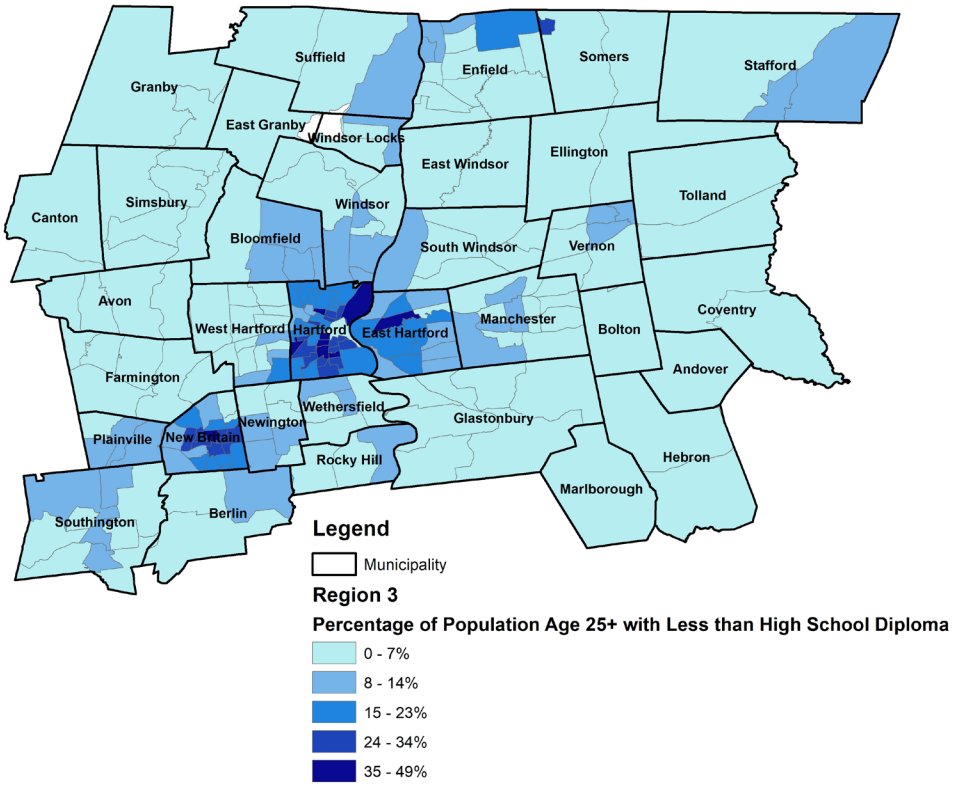


Figure 22: Percentage of Population Aged 25 and above With Less than High School Diploma (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

Childcare

Adequate childcare availability for working families is essential to the viability of businesses in every sector. As the pandemic has forced many schools to move to remote learning and restricted the operations of childcare centers, parents who cannot work from home have been left struggling to find adequate childcare options. At the same time, childcare programs are seeing low enrollment as many other families keep their children home. This has made it challenging for these programs to remain open and available to those who need them. Early in the pandemic, the state stepped in to pay for childcare enrollment in state-funded programs, allowing them to continue running almost near normal. Still many families were not able to use these state-funded childcare options because of transportation issues or because they decided not to send their children based on their concerns about the risk of COVID exposure. Similarly, engagement with stakeholders revealed that childcare programs in wealthy suburban communities and privately funded programs have also been able to remain open and functioning with little need for assistance. However, there is a stark divide in experience as large urban communities across the state are struggling to afford and utilize adequate childcare services. In cities such as Hartford and New Britain, many families are out of work and can no longer afford even the copay associated with a childcare program. This challenge is one that has only been exacerbated by the pandemic – in previous years it is estimated that 94% of parents of color in Connecticut could not afford full-time infant childcare.[38] Low-income and essential workers are also more likely to work non-traditional hours and face a longer commute to work, leaving them with fewer childcare center options. It will be important to address the barriers to childcare as businesses and schools look to reopen moving forward.

Transportation Services

Region 3 transportation services have seen a significant drop in ridership since the start of the pandemic, as many people are now working from home and traveling less. Similar to statewide and national trends, transportation revenue has decreased and potentially is jeopardizing future development plans. Limited revenue in Connecticut's Special Transportation Fund (STF) has resulted in the removal of critical transit projects from the Department of Transportation's Capital Plan for FFY2021-2025. One such removal is Phase 3b of the CT*rail* Hartford Line project, which includes critical double-tracking and related improvements north of Hartford. Double-tracking along the Hartford Line is required for commuter-level rail service between New Haven and Springfield, and it is a crucial step towards offering increased rail service from Hartford to Boston. While rail ridership has decreased, stakeholders revealed that local bus ridership has not dropped as significantly, as many essential workers rely on bus transportation to get to work. Hartford is home to many residents who are essential workers, and as shown in Figure 23, many of these city's residents are highly reliant on functional public transit in order to access their employment and other resources. While the state transit system cut express service in order to address decreased ridership during the pandemic, local services continue to run at a regular schedule as transportation officials recognize its importance for essential workers.

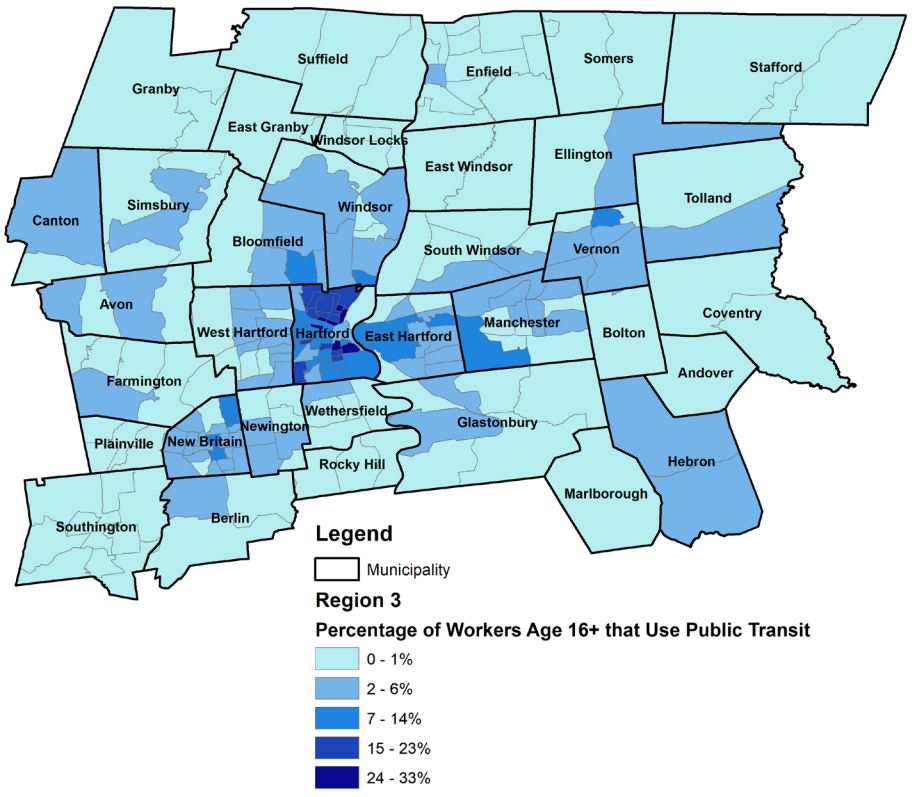


Figure 23: Percentage of Workers Age 16 and Up that Use Public Transit to Get to Work. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

2. Social Services

Housing Services

Many residents who rent their homes are facing significant financial challenges. Across the Region, renters in low-income communities, renters with disabilities, elderly renters, and BIPOC renters are confronting a mounting risk of housing insecurity. Across the Region, 32,520 residents have called 211 in the last year to seek resources for housing and shelter. Of those who called about rent assistance specifically, 34% of call requests were unmet by available resources.[39] At the time of the writing of this report, Hartford has led every other city in Connecticut in number of evictions during the pandemic (458 evictions), despite an eviction moratorium being in place. Eviction's impact the housing options available for residents in the future, as landlords often decline to rent to them, making it extremely difficult to find housing.

There are longstanding issues surrounding the housing market that have exacerbated the current challenges. Prior to the pandemic, 34.5% of Hartford County households were cost-burdened by their rent, meaning 30% or more of their income was being used for housing payments.[40] This elevates the risk for renters going into the economic distress over the course of the pandemic. Stakeholders report that communities of color and individuals with disabilities have traditionally faced the most severe housing discrimination (tied to historic redlining), prompting these same communities to face current difficulty paying their rent. Roughly 30% of renters in the Region are white and 60% are people of color. According to stakeholders, these most vulnerable residents have also traditionally been challenged by higher rates of eviction. In order to reduce the economic impact of the pandemic, short-term and long-term housing security will need to be prioritized, especially for low-income communities and communities of color. Further, as seen in Figure 24, census tracts in Hartford report particularly high rates of renter-occupied housing, indicating that rent-relief programs and resources should take this dynamic into account.

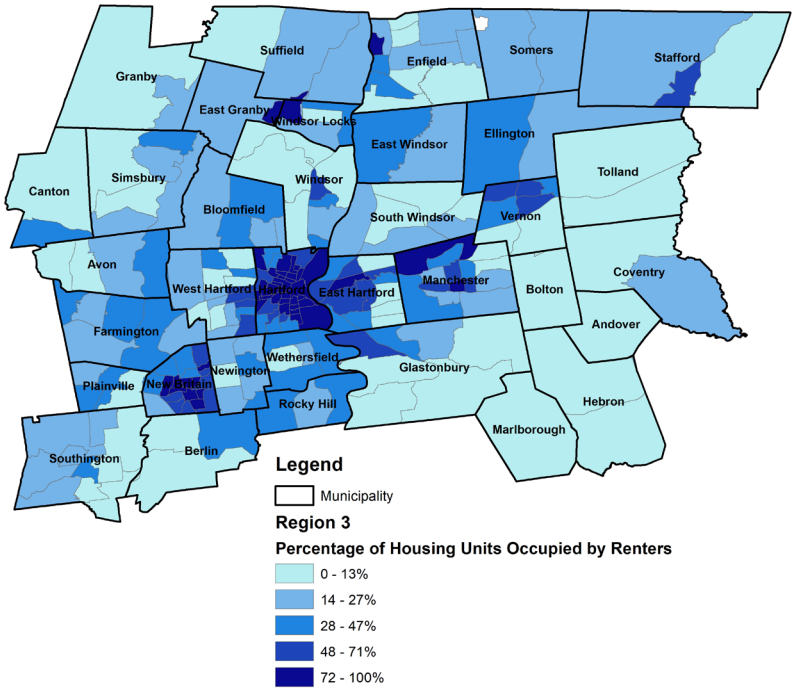


Figure 24: Percentage of Housing Units Occupied by Renters. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

Food Security Services

Stakeholders in Region 3 regard food insecurity as one of the most pressing concerns for their communities. Food banks have seen a drastic increase in demand since the start of the pandemic; one food distributor reported that their client base went from 90 families to 260 families as a result of the pandemic. Moreover, a stakeholder representing a food bank that serves Hartford and Tolland counties reported a 75% increase in demand at the beginning of the pandemic, and in September their client base was still growing by about 15%. Though the amount of food distributed by this organization has increased by 32%, there is still an unmet need in the community. The increased demand, coupled with a higher demand for groceries, has led to a shift in the way foodbanks are receiving their food. The food industry typically donates 75% of the food that stocks the pantry, but recently foodbanks have had to buy more on their own. The change in dynamics is not sustainable and presents an even more daunting challenging for foodbanks that are not set up to receive monetary donations for food purchases. Foodbanks also have a shortage of food storage. This makes it challenging for the foodbanks to store enough food to meet the expansion in demand. As seen in Figure 25, New Britain and Hartford standout out as some of the most food insecure cities in the State. More specially, Figure 26 demonstrates that census tracts in Hartford, East Hartford and New Britain report some of the highest rates of households receiving Supplemental Nutrition Assistance Program (SNAP) benefits, though there are several other communities throughout the Region which demonstrate reliance on SNAP benefits as well. For some residents, food insecurity is based on lack of financial security, while for others, as shown in Figure 27, food insecurity is complicated by physical distance from grocery stores and the resultant inaccessibility.

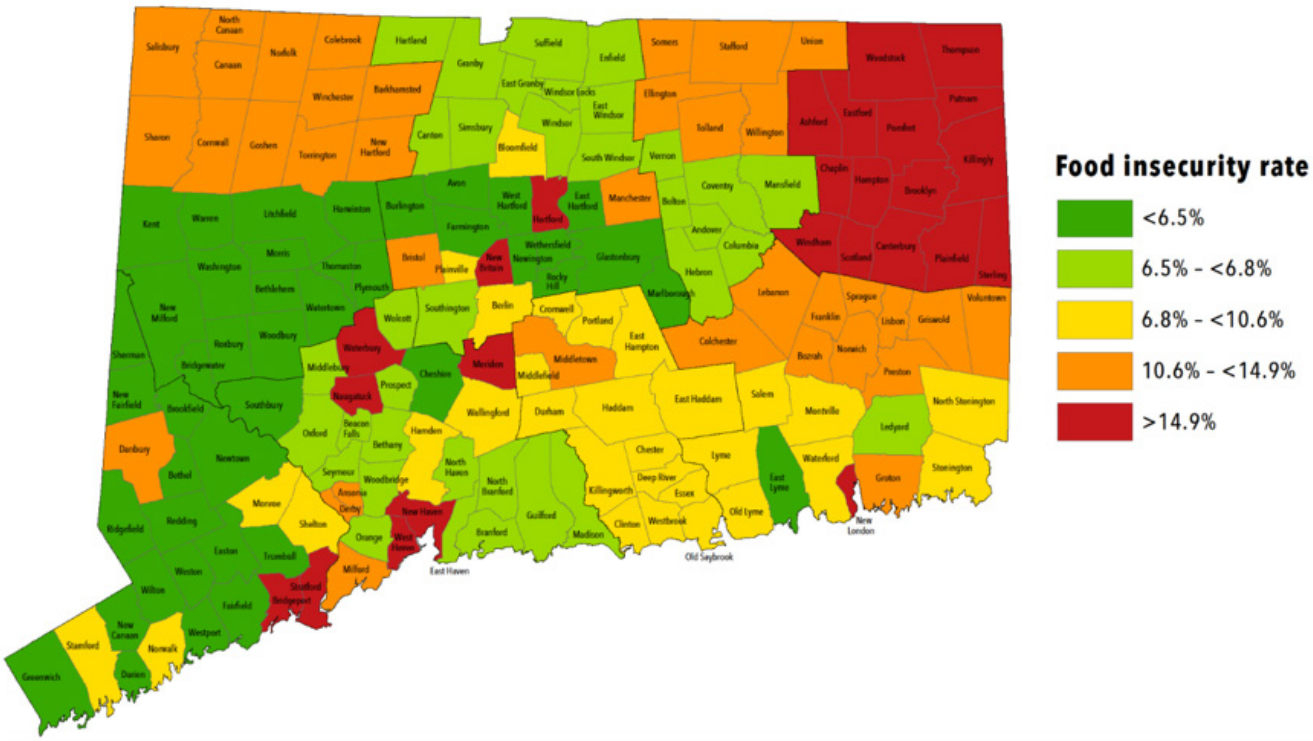


Figure 25: Statewide Food Insecurity (Source: Zwick Center for Food and Resource Policy. Food Insecurity and Obesity Incidence Across Connecticut)

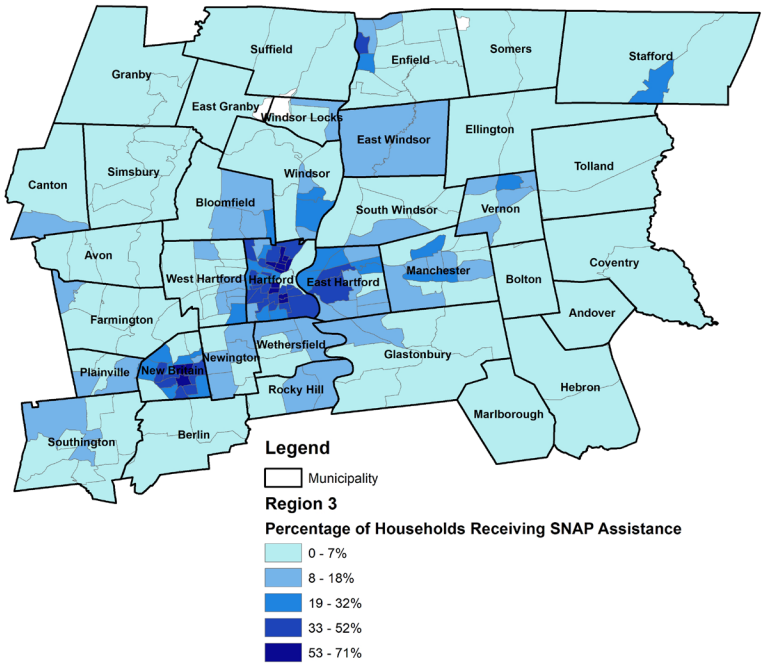


Figure 26: Percentage of Households Receiving SNAP Assistance by Census Tract. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

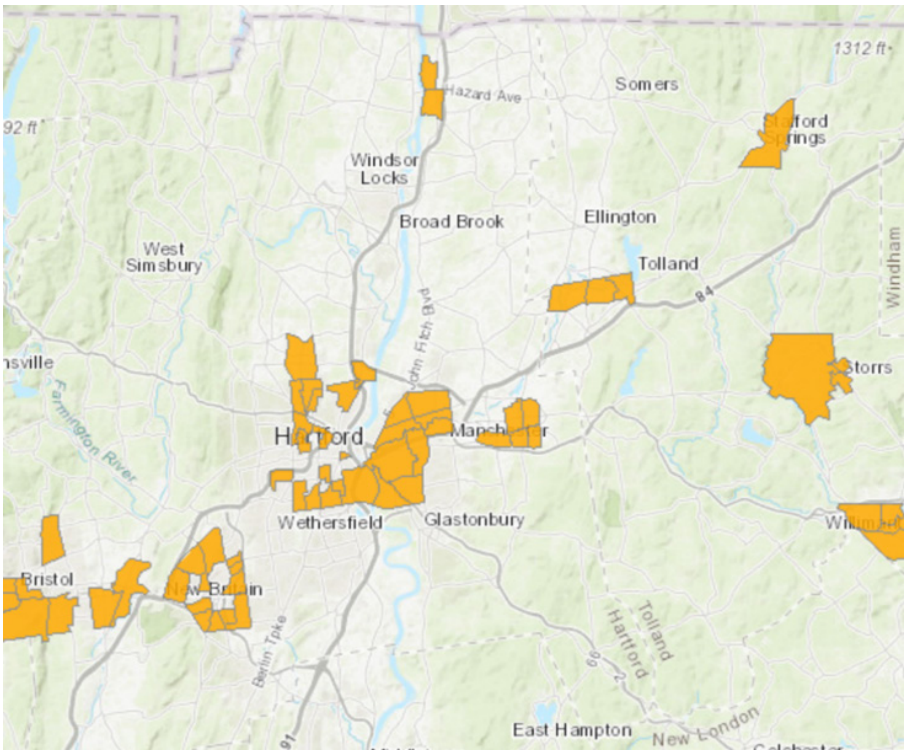


Figure 27: Low-income census tracts where a significant number or share of residents is more than ½ mile (urban) or 10 miles (rural) from the nearest supermarket. (Source: USDA Economic Research Service. Food Access Research Atlas)

Inequities and Impacts to Social Cohesion

Across the board, stakeholders have emphasized that communities which have faced economic distress in the past have been the hardest hit by the current economic conditions introduced by the pandemic. The elderly, disabled, low-income, and BIPOC communities are some of the most adversely affected by businesses closures, unemployment, food insecurity, and housing insecurity. For some of these populations, there has been a trend of living in inter-generational settings instead of finding subsidized housing options. However, this can create conditions which are detrimental to public health, especially when elderly residents are living with younger family members who work essential jobs. Other residents are struggling with accessing the routine health and community services with which they have established relationships. Stakeholders note that this has been particularly detrimental to BIPOC and immigrant communities especially where trusted translation resources are a key to accessing economic empowerment. As seen in Figure 28, translation services and resource opportunities are most essential in Hartford and New Britain, though these services also should be available across the Region. Stakeholders also note that many vulnerable communities lack the financial means to prepare for disruptions in their lives. Families that lack the means to buy groceries on a regular basis are not capable of setting set aside food in case of emergency. Mutual aid organizations have been the most effective at addressing the concerns of the most financially vulnerable groups in Region 3. Stakeholders note that this speaks to a larger theme that local, pre-established networks have been able to take advantage of social capital in a way that state-wide rapid response programs are often ill-equipped to do.

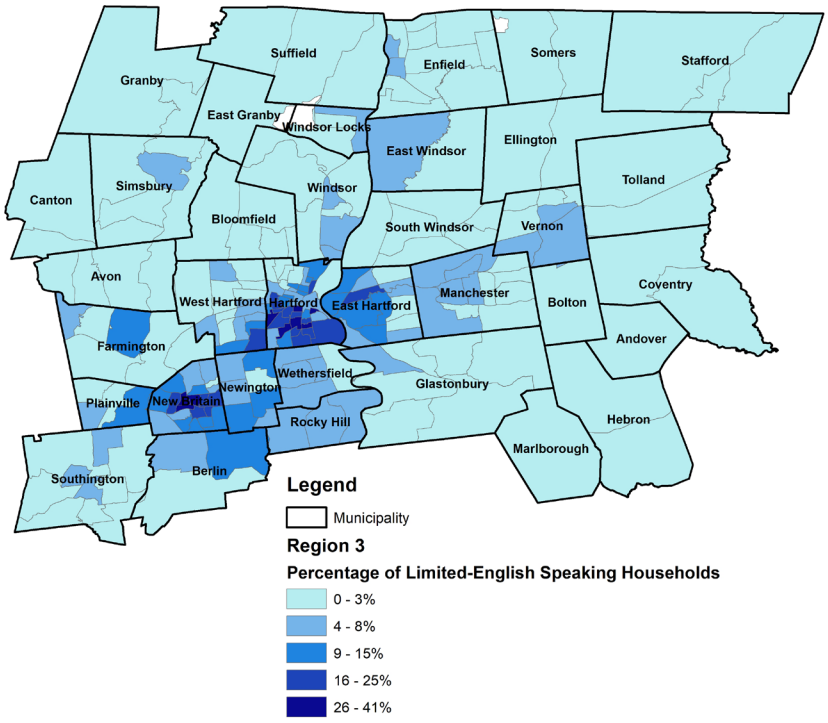


Figure 28: Percentage of Limited-English Speaking Households. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

3. Infrastructure and Physical Systems

Broadband Infrastructure

One of the most critical twenty-first century infrastructures is the internet and high-speed broadband access to it. Effective use of this critical resource relies both on the availability of physical infrastructure and user access to it. Region 3 enjoys good broadband coverage by multiple providers (Figure 29). However, there are issues surrounding the availability of physical broadband infrastructure in some rural areas and stakeholders in the region see a need to revitalize the residential networks which are not currently equipped to handle the bandwidth demands associated with the large-scale move to remote working and virtual education. With the likely persistence of a reliance on online content, services, and learning, stakeholders believe that the shortcomings of the current residential broadband networks will persist. The long-term need is improvement in the fiber-based networks to support a lasting increase in bandwidth capacity.

The presence of physical broadband infrastructure does not mean that all residents will have the tools and resources to take advantage of it. Like many other aspects of Region 3, access and connection to internet and broadband services divide according to the prevailing inequities within the region. More affluent residents enjoy consistent and effective access; but less economically stable census tracts have relatively high rates of households without internet access (Figure 30). In Hartford and New Britain in particular, there is a significant digital divide. Most of these areas with low rates of internet access are home to lower income and disadvantaged families and individuals who cannot afford internet connected devices.

Lack of access to this critical infrastructure has impacts on economic recovery and development that affect both the present and the future. For today's student, the lack of access is already affecting academic performance and the social engagement of children and young people. Stakeholders report that participation in remote learning and attendance in online, afterschool homework-help programs have drastically decreased because of lack of in-home access. The State of Connecticut and Hartford were able to distribute thousands of devices and Wi-Fi hot spots to students in need through CARES Act funding, but they are concerned that the number of students without consistent connectivity will foster conditions for knowledge gaps that negatively impact students as they progress through school and transition to the workforce. For residents already in the workforce, absence of a dependable internet connection limits job prospects and potential for workforce development. Both data and

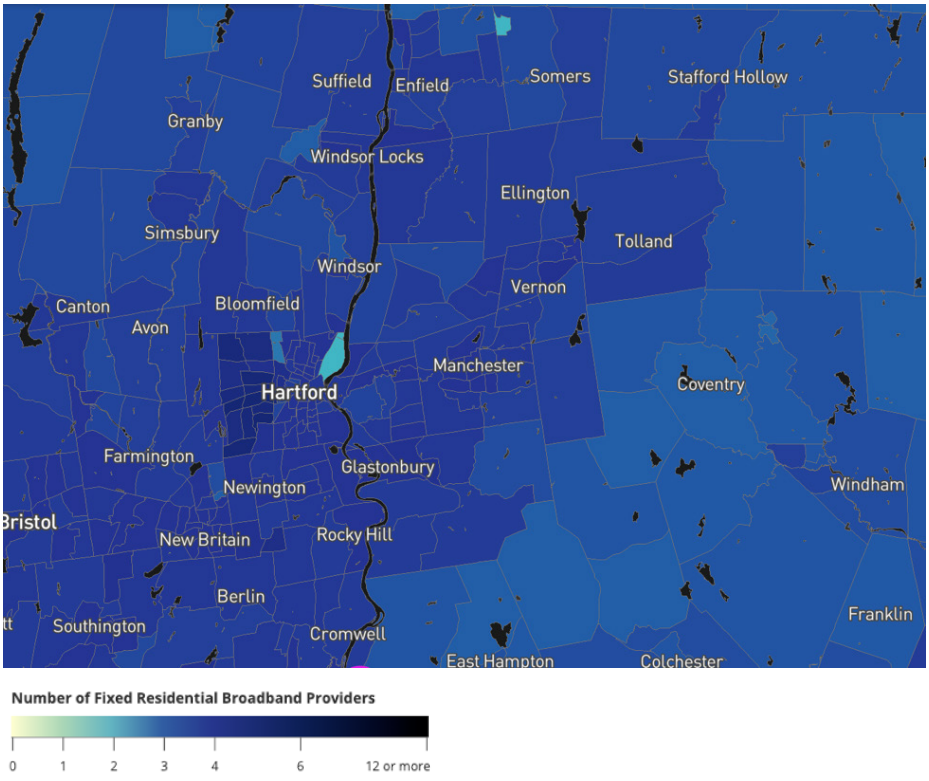


Figure 29: Internet Service Provider Density. (Source: Federal Communications Commission. Fixed Broadband Deployment)

stakeholder engagement reveal that low income and impoverished residents face challenges in obtaining internet connected devices or services. While it is clear that not all job training and job search needs can be solved through use of the internet, the disparity in access to internet connected devices will deepen inequities in employment opportunity for these residents.

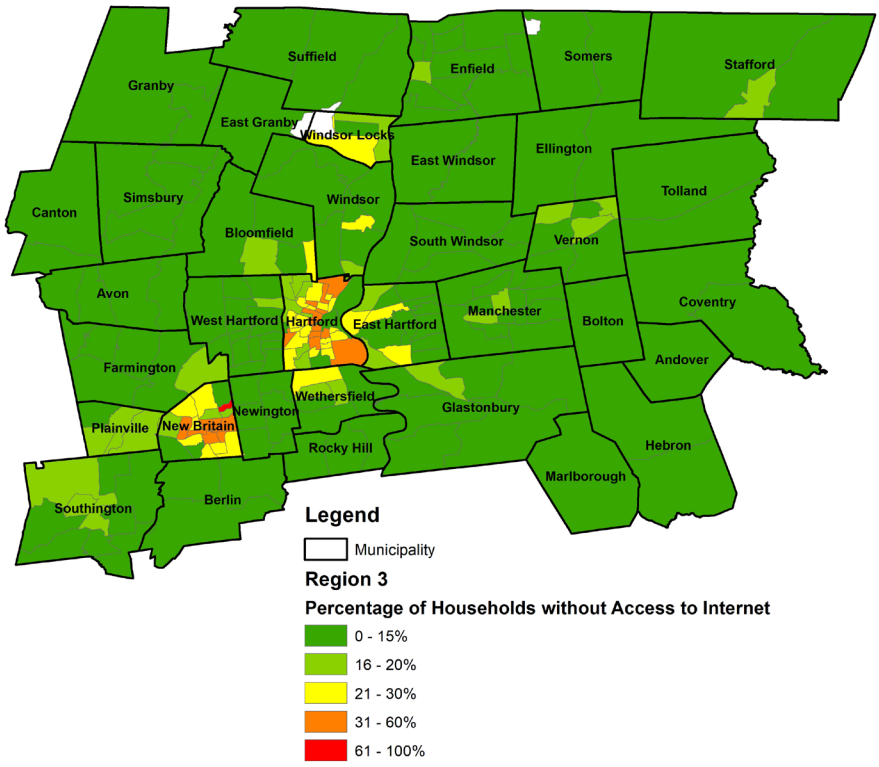


Figure 30: Percentage of Households without access to internet. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

Healthcare Infrastructure

The City of Hartford and its neighboring communities have several acute-care hospitals. These include Hartford Hospital, Connecticut Children's Medical Center, St. Francis Hospital and Medical Center in Hartford, UConn John Dempsey Hospital in Farmington, Manchester Memorial Hospital in Manchester, the Hospital of Central Connecticut in New Britain, and Rockville General Hospital in Vernon. As seen in Figure 32, there are several Community Health Centers in the area as well, including East Hartford Community Healthcare in East Hartford, Community Health Services in Hartford, and Charter Oak Health Center in Hartford.[41] These Centers are outpatient clinics that receive federal grant funding through Section 330 of the Public Health Service Act. Compared to other Regions of the state, the Greater Hartford area has a significant concentration of both acute care and community healthcare facilities. While the Hartford Healthcare system has not had to lay off employees as a result of financial constraints tied to the pandemic, other healthcare institutions in the area have experienced employment cuts. Stakeholders note that

layoffs typically affect administrative staff as opposed to medical staff. As the outbreak of the coronavirus continues to put financial strain on healthcare institutions, stakeholders worry that the unpredictability of the funding from the federal government will cause worsened economic conditions for the Region's healthcare systems.

The continued investment in public health resources will be especially important in the communities indicated in Figure 33, where reliance on public health insurance is higher than in other communities. Moreover, analysis from DataHaven demonstrates that income, along with other determinants, in the Greater Hartford area plays a consequential role in the expected lifespan of residents. Those who live in urban areas, such as Hartford and New Britain, have dramatically shorter life expectancy (up to 19 years) when compared to residents in some of the area's most wealthy communities.[42] This reveals that despite the healthcare infrastructure in the area, a complex network of factors has translated into vast disparities in health outcomes. These low-income and disadvantaged communities will need to be prioritized in order to lay the foundation for resilient economic recovery.

Figure 31: Statewide Acute Care Healthcare Hospitals. (Source: CT Data, CT Acute Care Hospitals Map)

Note: "Acute care hospital is defined as a short-term hospital that has facilities, medical staff and all necessary personnel to provide diagnosis, care and treatment of a wide range of acute conditions, including injuries."[43]

Figure 32: Statewide Community Health Centers. (Source: Connecticut State Department of Health, Community Health Centers)

Note: "Community Health Centers are nonprofit, health care practices located in medically underserved areas that provide high quality, primary health care in a culturally appropriate manner to anyone seeking care."[44]

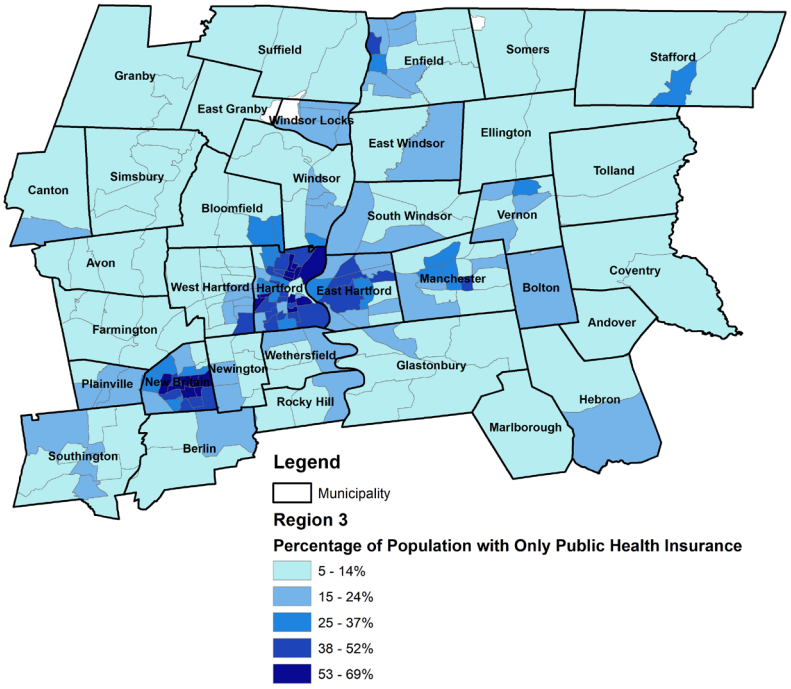


Figure 33: Percentage of Population with Only Public Health Insurance. (Source: U.S. Census Bureau 2018 American Community Survey 5-year Estimates)

Transportation Infrastructure

Region 3, and particularly the Greater Hartford Area, has significant transportation infrastructure. Interstates 91 and 84 run through Hartford, and much of the area's economic development follows the physical path of these highways. Residents of the city's suburbs rely on these roads for access to jobs in Hartford; a stakeholder from East Granby estimated that out of approximately 5,200 residents in the town, 2,500 commute to jobs located in nearby towns or Hartford. Stakeholders believe that increases to transportation funding structures can serve as a valuable source of jobs, in addition to improving transit systems which will help residents when there is a return to typical or increased commuting patterns.

Connecticut's Special Transportation Fund is one of the funding sources for the Connecticut Department of Transportation. In recent years, the Fund has not been able to provide the necessary financial support to support the Department of Transportation's operating costs. Stakeholders regard this budget shortfall as a putting the Department of Transportation "in crisis". In the time since the pandemic began, the revenue collected by the Department of Transportation from the Department of Motor Vehicles and from oil surcharges has decreased. Both of these factors, long-term and short-term, have placed intense financial constraints on the transportation services that the Department is able to provide. Stakeholders shared that the long-term viability of funding sources is of concern for them, especially as funding pertains to projects which focus on infrastructure reinforcement and development. Stakeholders also note that many of the Region's towns are too small to utilize bonds as an effective funding mechanism, and there is a lack of diversity in funding instruments available to Connecticut's municipalities to fund transportation projects. These dynamics make Region 3 and the state very dependent on federal funding for future infrastructure development.

Housing Infrastructure

The current state of housing infrastructure in the Greater Hartford area is linked to the legacy of redlining. As outlined above, Hartford residents are more racially diverse and report earning lower incomes than residents of the city's outer suburbs. According to DataHaven, current zoning laws limit the degree of housing density and multi-family units in some of the wealthier suburbs of Hartford, making it difficult to increase the number of affordable housing units in the area, and resulting in the persistence of discriminatory housing practices.[45] In Hartford's "inner ring" (13 towns most closely surrounding Hartford) 75% of recently built housing units were multi-family buildings, whereas just 40% of the housing units in Hartford's "outer ring" (23 towns outside of the inner ring) were multi-family. In addition, Hartford residents are much more likely to rent their homes rather than own them and are also more likely to receive governmental assistance with housing costs. Roughly 39% of Hartford households receive government housing assistance (compared to 11% state-wide and 7% in neighboring West Hartford). Across Greater Hartford, just 41% of Black households and 32% of Latino households own their housing, compared to 77% of white households. This data shows that low-income communities and communities of color in Hartford tend to have different experiences with the type, price, and location of housing they have practical access to. This, in turn, impacts resident's access to well-resourced schools, public transit, and job opportunities. Moreover, as demonstrated in Figure 34, much of the Region 3 housing stock at-large is aging as is Connecticut's in general. This can lead to high heating and cooling costs for homes occupied by renters and owners alike, as well as expensive maintenance costs. Long-term investments like developing affordable housing in well-resourced communities should be taken into serious consideration for Region 3's equitable and resilient economic recovery.

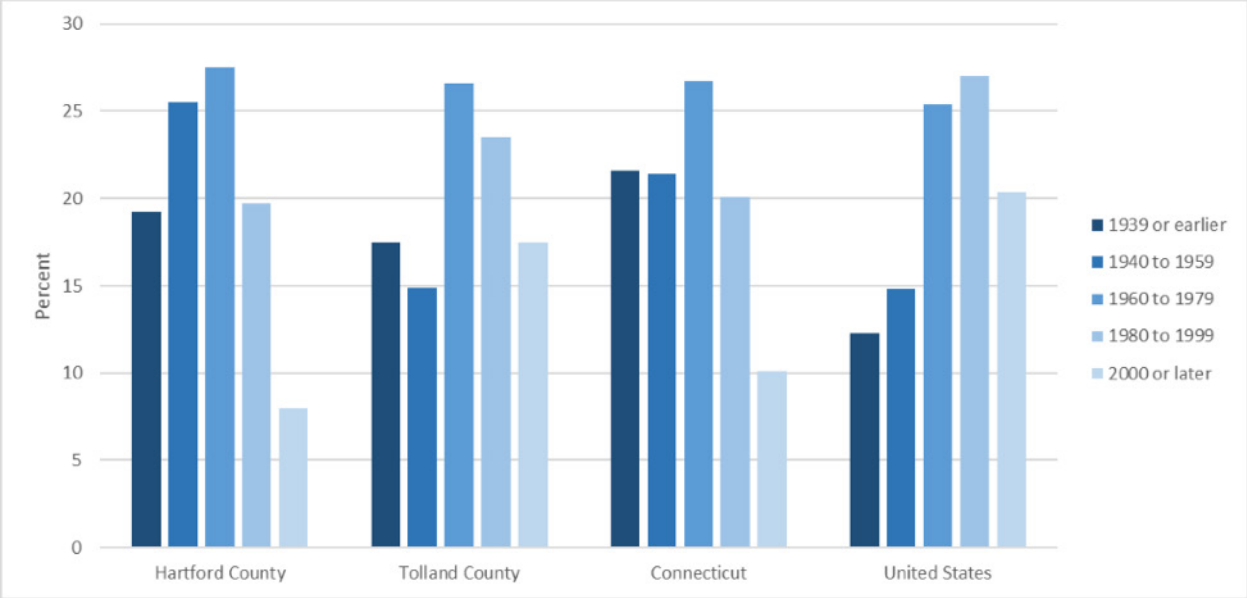


Figure 34: Age Distribution of Housing Units. (Source: United States U.S. Census Bureau, American Community Survey 2019 Estimates)

Water Infrastructure

The City of Hartford is vulnerable to flooding which poses a risk to the vitality of its business sector and many of its most economically distressed communities. The City is located directly along the Connecticut River and has a relatively high percent of low-lying land cover that does not easily absorb rainwater. Currently, the river is controlled by a network of infrastructure including a levee that the US Army Corps of Engineers has described as "aging and in need of repair." Hartford Mayor Luke Bronin noted that a failure of the levee system has the potential to cause a "catastrophe" for central Connecticut. Interstates 84 and 91, as well as 25% of Hartford's land area and 20% of its grand list could be jeopardized by a levee breech event.[46] The Hartford Central Business District, which hosts industry that drives economic growth across the State, and Hartford's Promise Zone, an area which has exceedingly high levels of unemployment, food insecurity and low educational attainment, are some of the most at-risk flooding areas. Moreover, the Metropolitan District Hartford Water Pollution Control Facility, which manages water and sewer service for 12 municipalities in the greater Hartford area, is also vulnerable to flooding events.[47] The utility recently upgraded its facilities with a $200 million expansion project. As Hartford is at the core of Region 3's economy, the region's residents and businesses should share a common commitment to ensuring that the City's water infrastructure is adequately protected from the flood risk associated with extreme weather that climate change is increasing in both frequency and intensity.

Power Infrastructure

Many municipalities in Region 3 receive their electric power from Eversource. This utility manages services for customers across the greater New England area, including residents of 149 municipalities in Connecticut. In recent years, Connecticut has been in the path of several major storms which have knocked out power for residents for up to two weeks. Outages have the potential to affect low-income communities more severely. Without access to back-up generators, residents are unable to keep food and medicines refrigerated and keep their homes at a safe temperature to prevent exposure to extreme heat or

cold. Moreover, outages can directly impact commercial activity for small and locally owned businesses. In early August 2020, Hurricane Isaias caused extensive damage to Eversource's infrastructure and service. The utility was then placed under investigation by the State's Public Utilities Regulatory Authority in order to assess if Eversource had the necessary resources and investments to service its customers. The power infrastructure in Connecticut remains vulnerable to future storms, and long-term investments in the state's power infrastructure is important to assuring the financial security of both residential and commercial customers.

In response to the pandemic, Eversource has allowed customers to create a custom payment plan for accumulating payments. The cost of energy is high in the State of Connecticut, with the average residential rate for the State is 23.67 cents per Kilowatt hour, making it second only to Hawaii as the most expensive state in the nation for electricity.[48] This factor contributes to the high cost of living that is particularly challenging for the state's most vulnerable residents. In the last year, residents from Hartford and Tolland Counties made 133,647 calls to Connecticut's 211 line regarding assistance with paying utility bills. More specifically, Hartford County residents are more likely to call seeking assistance with utility bills than residents in any other county in the state.[49] High utility costs and inconsistent service during bad weather can also discourage businesses from locating in Connecticut.

D. Regional Resilience Areas

Post-COVID Economic Recovery and Resilient Economic Development

COVID-19 is a disaster unlike any in the past century. Most disasters faced by communities are kinetic (hurricanes, fires, earthquakes, and storms), primarily disrupting physical structures and infrastructures. The COVID-19 pandemic's primary impacts are human-centric: lives, businesses, jobs, debts, families, and communities. It has amplified disparities and inequalities that have long existed, and which constitute the principal barriers to recovery and growth. In many cases, it is by addressing those conditions that the greatest progress in recovery and economic development can be facilitated. In short, this emergency has blurred the lines among the immediate response to the disaster, the mid-term actions to recover the society and the economy, and the long-term strategies to "bounce forward." This translates into the need to address both the effects of the pandemic and the legacy conditions that may serve to inhibit future economic growth.

Previously, these legacy conditions that compromise Region 3's resilience might have been addressed through individual actions targeting the specific social "deficit" or economic "weakness." Post-COVID, the conditions underlying these findings and considerations must be dealt with through an integrated, concerted approach that simultaneously addresses structural barriers, maximizes combined resources, and stimulates opportunity and innovation – for residents and organizations of all size and character. Importantly, this must be done at a regional scale.

This report is designed as preliminary assessment from which specific recommendations, initiatives, or actions can ultimately be drafted. The goal of the resilience-based analysis undertaken by the GRI research team is to clarify the critical broad considerations that must be foundational to developing a recovery strategy and implementation efforts that will be developed in follow-on work with Region's municipalities and the Capitol Region Council of Governments (CRCOG). The considerations for recovery are clustered according to the core regional resilience findings that they most directly address.

Resilient Recovery Findings and Considerations

Finding 1: Main Street business (i.e., small to medium local businesses), particularly those businesses that are owned or serve vulnerable populations or locales, have suffered the most serious damage in the pandemic, making a focus on recovery of this business strata critical to the region's long-term economic recovery.

Main Street businesses anchor the economic and social life of a community. With limited cash reserves, many of these businesses entered the pandemic with little wherewithal to survive the extended disruptions associated with COVID-19 public health measures. The Accommodation and Food Services, Arts, Entertainment and Recreation, Other Services and Retail Trade sectors have been most seriously impacted, with these businesses dominating the regional applications for the Connecticut CARES Small Business

Grant Program. Business closures for up to 6 months were not uncommon following the onset of the pandemic and many have been required to limit activities once again during the second wave that began the fall of 2020. Just how many businesses will end up permanently shuttered is still not yet clear, but the numbers are expected to be significant. For those businesses still struggling to survive, they will need to obtain the knowledge and access to technology that enables them to pivot to on-line or delivery models.

The workers who have lost their jobs because of these business closures have limited options for reemployment in the sectors they had worked in. Many are low-wage, minimum-skilled workers who will find it challenging to compete for jobs in new sectors. Disproportionately, they are people of color or members of other disadvantaged communities. Beyond the devastating personal and family challenges they face, their loss of employment has serious cascading effects on the region's economy with potentially adverse effects on housing and rental property, retail sales, social services, and health outcomes. Recovery of the small and medium business strata will, therefore, be essential for achieving an equitable recovery of the region's economy and its long-term growth.

Consideration 1.1

Recovery strategies should take full advantage of the First Draw and Second Draw Paycheck Protection Program (PPP) loans and the SBA's COVID-19 Economic Injury Disaster Loans (EIDL). Mobilizing outreach efforts and application support should prioritize efforts to reach minority-owned or language-challenged small businesses.

Consideration 1.2

Recovery and long-term economic development strategies will be more successful if they include provisions for technical and/or financial assistance that can assist small businesses in pivoting from traditional business models to emerging models that may be more heavily reliant on such things as on-line order processing, alternative delivery systems, and on-line payment applications. Small businesses, particularly those in minority-owned and language-challenged communities, may find it difficult to keep pace with the demands of the digital economy. The challenges include the need to acquire new technical skills, access to technology, and financial capacity to purchase necessary equipment.

Consideration 1.3

Some small businesses will not survive. For others, changes to their business models and practices may result in declining worker demand. Long-term economic development strategies will need to include provisions for re-training workers whose jobs are lost as a result of these business model shifts. Workforce retraining plans that support the re-directing of workers to new careers will need to be adapted to support the lower-skilled workers who have been most dramatically impacted by the COVID-19 emergency. This translates into the need to subsidize the costs of training, providing income support for those undergoing training, and assistance with transportation and childcare. Meeting this challenge will be key to ensuring that those who have been most impacted do not end up permanently out of the workforce.

Consideration 1.4

Given Connecticut's aging population, consideration should be given to regional strategies that can support and attract the types of businesses that will appeal to a younger cohort of worker. The region's high concentration of colleges and universities also provide "Kendell Square-like" conditions to generate new business. Opportunity Zones adjacent to institutions of higher education provide significant tax incentives that can be leveraged to create small business "incubators" that will retain Connecticut's youth and attract new young workers from outside the region. These and other considerations for attracting younger workers should be a significant part of the detailed regional economic development process incorporating municipal needs and plans into a comprehensive regional recovery strategy.

Consideration 1.5

Consider treating arts and entertainment venues as part of the small business recovery and long-term economic development strategy even where they are not-for-profit organizations. Like small businesses, these organizations constitute a part of the economic foundation of any community. Local theaters, museums, and music venues that create economic activity may be not-for-profits entities, but they employ a workforce and attract customers for themselves and surrounding businesses. Along with small businesses in the hospitality sector, many have been devastated by the closures and restrictions of the pandemic. Full advantage should be taken of the SBA's Shuttered Venue Operators Grant program by providing outreach and assistance in preparing applications. It will be important to explicitly include non-profit arts and entertainment entities in new municipal and regional economic development plans reflecting the value these organizations provide to the vitality of local economies. In addition, plans for incorporating the large venues within the area such as the XL Center and Dunkin Park must be a part of a comprehensive regional economic recovery plan.

Finding 2: The COVID-19 pandemic has exacerbated inequities associated with inadequate affordable housing in many communities in Region 3.

The urban areas within Region 3 continue to struggle with overcoming the post-World War II legacy of housing discrimination and racial red-lining and middle-class white flight to nearby suburbs. There remains a chronic affordable housing shortage that is magnified by restrictions on multi-family housing construction in many suburban communities. For much of Hartford and the inner ring of municipalities, the housing stock is generally older and poorer while property tax rates are higher than in suburban communities and by national standards. The economic disruptions associated with the COVID-19 emergency is leading to high unemployment among renters and the resultant delinquency in making rental payments. Eviction moratoriums are providing a stopgap that mitigates the risk of homelessness during a pandemic but is not a long-term solution. For small property owners in particular, the rent crisis is not a one-sided problem. Many of these small property owners struggle to make mortgage payments when rents go unpaid.

The legacy and COVID-19 impact on housing in Connecticut may be one of the most significant drains on economic recovery in the next few years for which there are no simple solutions. In most inner-ring Region 3 communities, there is little or no room for new development. Municipal budgets already face strains as lower-value housing stocks in many inner-ring municipalities impose higher costs (infrastructure and social) on scarce resources, but generate less tax revenue. The result is that resident owners in less affluent, inner-city communities bear a disproportionate share of the economic burden of maintaining the aged infrastructure of neighborhoods. Well-intentioned efforts to attract corporations by offering large tax incentives can end up creating additional burdens on local infrastructure without a commensurate generation of tax revenue to meet those burdens, especially if most of the employees end up living in neighboring communities. These development pressures also tend to push Asset Limited, Income Constrained Employed (ALICE) and disadvantaged residents into the lower-cost, less desirable neighborhoods that require long commutes to work and more limited access to business opportunities. In more affluent communities, restrictions on multi-family rental property limits the ability of these communities to address regional housing shortages or contribute positively to the supply of affordable worker housing.

It is not yet evident that the outflow of professionals from cities like New York or Boston will end up reversing once the COVID-19 emergency is over. However, the outflow of relatively affluent city dwellers that is now occurring is having an effect on housing availability and on pricing in many of Connecticut's suburban communities. Should that trend continue as corporations make remote work more mainstream, the likely consequence will be to add more pressure on an already tight housing market that makes housing less affordable for young families and prohibitive for renters looking to purchase a home.

Consideration 2.1

Local and regional recovery strategies should plan to support medium-term stability of impoverished, low-income, and ALICE families that maintains them in their current housing until the COVID-19 pandemic recovery process is largely accomplished. Support for housing stability to prevent significant population shifts, overcrowding in marginal housing, and homelessness is critical to economic recovery. Assistance to limit or moderate potential massive evictions until the economy can provide short-term relief that prevents workforce displacement and additional burdens on all social services from education to healthcare. This time should be used to engage in significant outreach to guide rent-burdened families on accessing workforce development opportunities as well as making full use of available federal and state housing assistance programs and their rights under these programs.

Consideration 2.2

Regional recovery strategies must plan to support mid-term stability of small landlords whose income has been restricted by pandemic-caused tenant inability to pay rent and eviction moratorium. Many landlords are small operators with one or a few rental properties. They hold mortgages, are responsible for utilities, taxes, and repairs. They depend on the constant flow of rent payments to key up with their financial obligations. Strategies should acknowledge these realities in ways that do not unduly disadvantage these small landlords to include providing subsidies to cover a portion of unpaid rent.

Consideration 2.3

Local planning should carefully balance development of more affluent housing with availability of worker affordable housing to ensure that pressures from gentrification and redevelopment do not exacerbate housing pressures for working families and the underhoused.

Regional long-term economic development strategies should capitalize on the potential for worker transition from urban areas of the northeast into Region 3 by creating a regional strategy for constructing more affordable housing. Just as the potential for work-from-home workers moving into the region has the potential for gentrification challenges, it also constitutes an opportunity for attracting a younger and more diverse cohort. This group can not only assist in recovering and growing the economy as consumers and taxpayers but also can begin to address the nascent challenges of an older, retiring manufacturing workforce. Affordable housing that advances greater equity in Connecticut has been a longstanding challenge. Plans for pandemic recovery should address this issue head-on.

Finding 3: The digital divide (both in terms of access and user competencies) remains a barrier to equitable and resilient recovery and growth -- for workers from disadvantaged populations and for small businesses' adaptability, sustainability, and survivability, particularly for those operated by or serving disadvantaged populations.

The COVID-19 pandemic forced individuals, families, businesses, and organizations into reliance on the internet in new and unprecedented ways. In the process, it exposed gaps in access that had and can continue to have major adverse impacts on resilient economic recovery and development. There are several reasons for these gaps. A region, urban neighborhood or rural area may lack access to highspeed broadband internet connectivity because the infrastructure is simply not present or not robust enough to accommodate the demands placed on it. Alternatively, the infrastructure may be in place, but individuals or businesses may not be able to afford the access or to purchase the equipment needed to provide connectivity. Or some individuals because of language capability or age, may not be able to bridge the language or technology divide necessary to effectively use internet services. Any of these three can lead to isolation from modern services, commerce, or healthcare.

Many small businesses particularly minority businesses with limited cash flow or cash reserves were not able to pivot to on-line business because of internet technology challenges. For businesses where a move to online commerce is possible, challenges frequently arose because the business was not large or well-connected enough, did not have and could not procure the requisite equipment or software or did not have the technical or language skills to make the transition. Even if these businesses were able to sustain themselves at some level of operation during the pandemic, the rapid transitions to new on-line business models or supply chains in some sectors leave them susceptible to being left behind when the COVID-19 emergency is over.

Unequal access to on-line education, particularly at the K-12 level, resulted in educational achievement gaps for low-income, minority and disadvantaged students. Despite heroic efforts by school officials in all Region 3 cities and towns, the unevenness of internet connectivity and the need for at- home supervision to support distance learning have resulted in identifiable disparities in learning that will persist for years and has the potential to adversely affect the imperative to have a well-educated, trained workforce that can directly contribute to the economy.

The COVID-19 emergency has also made the internet an increasing prerequisite to accessing healthcare. While the reliance on tele-medicine may become less pronounced once the pandemic has passed, the use of the internet will remain central to healthcare delivery. Without secure, reliable broadband access, those most needing access to healthcare -- seniors, low-income workers, and disadvantaged individuals – may be least able to do so.

Consideration 3.1

A long-term regional economic development strategy should consider public ownership or public subsidy of broadband internet connectivity in areas where the return-on-investment disincentivizes private internet service companies from providing adequate service. Despite years of build-out, less-affluent neighborhoods in urban areas and wide swaths of rural areas remain unserved or underserved by private internet service providers. Meanwhile, the pandemic has accelerated reliance on connectivity to the internet across all societal strata for access to the most basic services. If not managed correctly, the roll-out of 5G networks has the potential to exacerbate the problem. Poor connectivity in these chronically underserved areas, frequently populated by communities of color and language-challenged groups, will amplify existing inequities in commerce, education, and healthcare.

Consideration 3.2

A medium-term economic recovery strategy should consider publicly insured, low interest loans or short-term subsidies for small business technology upgrades, training, and process improvements. Many small businesses were unable to pivot to alternative internet-based, business models required by COVID-19 pandemic closures because of costs and/or technical illiteracy. A regional strategy that assists in overcoming these challenges could be particularly helpful in reestablishing Main Street businesses and fueling the economic recovery.

Finding 4: Manufacturing is a strong pillar in the Region 3 economy. Recovering, maintaining, and expanding the manufacturing base will depend on the region's ability to attract, train, and house a younger skilled workforce.

Manufacturing within the region has demonstrated considerable resilience to this pandemic. While advanced, non-defense manufacturing was severely affected by the slowdown in the national economy in 2020, it is poised for a solid recovery in 2021 as companies re-assess their overseas supply chain vulnerabilities. The strength of that recovery and the potential to expand the manufacturing base will depend on the region's ability to maintain a steady pipeline of workers with modern, highly technical skills. Region 3, like many parts of the nation, is said to be facing a "silver tsunami" as the pandemic has

accelerated the pace of older workers who will be aging-out of the workforce. The replacements for these older workers will face different requirements as advanced manufacturing with its emphasis on higher skills and technical competence replaces the older more manual processes. Attracting this quality workforce is more complex than simply establishing worker training program. Leveraging the Region's robust community college system and 4-year institutions to create career pipelines that can produce the requisite numbers of educated and skilled workers will ensure the region retains the ability to attract new companies and support the retention and growth of established firms.

Consideration 4.1

Regional recovery and long-term economic development strategies should address robust and systematic workforce training capitalizing on all available assets including public high-school education, community colleges, 4-year institutions of higher education (IHE), and private and not-for-profit training programs. To ensure a trained workforce nothing should be off-the-table. Manufacturing "4.0" will require a more skilled and trained workforce. Institutions of higher education have an important role to play, but for the best outcome, there should be a regional strategy that links formal, in-class courses, on-line skills training, internships and apprenticeships, and on-the-job experience to provide career pathways that support life-long learning. In addition to advanced manufacturing, construction, and healthcare are requiring a more skilled workforce. A regional strategy that focuses on providing new skills to match employment opportunities for displaced workers while addressing the need to replace retiring workers will position the economy for success in the years ahead.

Consideration 4.2

Regional long-term economic development strategies should recognize the need and create a regional plan for affordable worker housing. For manufacturing to recover and expand, affordable workforce housing is critical. Given the challenges of available space, community restrictions and construction costs, meeting this need will require a coordinated regional plan adapted to municipal realities. It will have to balance where space is available, where jobs are likely to be created or vacated, and the political realities of independent municipalities. It will also have to be adapted to the existing transportation infrastructure and emerging workforce preferences. There are probably no other economic development challenges that call out louder for regional strategies than affordable workforce housing and training.

Finding 5: A resilient healthcare system is vital to the Region 3 economy both as an economic generator and because a healthy society is necessary for economic stability and growth. Improving access to health care for all Region 3 residents while ensuring the continued vitality of the healthcare sector will be critical to future economic growth.

The healthcare industry and its related fields are major economic generators for Region 3 comprising over 15% of the region's economy. The pandemic caused severe disruption to the industry particularly by limiting or eliminating many of the major revenue-generating services for long periods and inducing considerable uncertainty in the public about the wisdom and safety of routine visits and elective procedures. While actual layoff of employees in the major providers was minimal, some clinics and other outpatient facilities were adversely impacted. There are also indicators of healthcare workers leaving for other employment because of the unparalleled stresses caused by the pandemic. Ensuring that the healthcare sector returns to full capacity including a highly skilled, trained workforce especially in rural areas is necessary to service a growing economy.

As with much of the nation, Region 3 has a sizable population segment that is uninsured and underserved. This population tends to be concentrated in the inner cities among communities of color and in rural areas with lower income and fewer servicing facilities. Ensuring full and equitable healthcare coverage for all Connecticut residents is both a societal responsibility and an economic necessity. A healthy workforce is basic to a healthy economy.

Consideration 5.1

While the healthcare industry is likely sufficiently resilient to recover on its own, a regional economic recovery strategy should place emphasis on ensuring community health centers can provide adequate healthcare throughout the entire region. The pandemic furthered the strains on all healthcare providers particularly those in rural areas and in practices serving underserved urban areas that were severely affected by the pandemic. A regional economic recovery plan must address this issue. Additionally, the strains on the healthcare systems caused by the influx of pandemic patients have caused historically underserved communities of immigrants and people of color to be further adversely affected. While no regional economic recovery or development strategy can make up for the lack of national health policy, finding ways to work with public health officials and the private health sector particularly in rural areas and in underserved communities is key to ensure a healthy workforce and community.

Consideration 5.2

As with manufacturing, and other sectors, a long-term economic development strategy must address robust and systematic workforce training.

Finding 6: COVID-19 disruptions to transportation systems' rhythms and usage illuminated the need for continued investment in the operational sustainability and resilience of the transportation sector to provide it with greater system flexibility and evenness of access, especially for low-income residents and essential workers.

Funding to support a rapidly aging critical transportation infrastructure has been severely limited by decreases in public funding over the past decade. State revenues, largely from gasoline and automobile taxes, are in decline as has financing transportation projects with bonds. Municipalities do not have the authority to levy income or sales taxes to overcome state shortfalls. Many smaller towns do not have the bonding capacity to carry-our major transportation capital projects within their jurisdictions. These factors have led to reliance on federal funding which has not be consistently available in recent years. As a result, maintenance has been deferred on existing roads and bridges and plans for expansions to existing systems have been put on hold or abandoned altogether. While there has been some progress in Region 3 toward consolidated planning for transportation improvements, planning remains largely fragmented among the various municipalities which inevitable reduces the potential for undertaking synergistic projects.

Public transportation which is critical to much of the commuting workforce has been particularly hard hit by the COVID-19 pandemic. Sustaining and modernizing this vital link for front-line workers who are not able to work remotely is a current and future economic necessity. With the projected rise in remote work for much of the workforce, good connections to the major cities of the northeast region remains critical for Region 3 particularly if it wants to attract former urban dwellers into its towns. Maintenance of existing infrastructure and modernization of high-speed connection between Region 3 and the major cities of the northeast requires a significant economic investment that will provide significant long-term returns.

Consideration 6.1

A mid-term regional recovery strategy should consider the need to subsidize and maintain public transportation assets adversely affected by the COVID-19 pandemic until ridership returns and stabilizes. Public transportation is important to maintaining a vibrant economy and can be critical to large parts of the workforce. Without reliable public busses and trains, low-income and underserved residents end up isolated from jobs and services. While the COVID-19 pandemic severely limited the operations and ridership of public forms of transportation, maintaining those services will be key to economic recovery, especially for those who are most vulnerable and have been most adversely impacted.

Consideration 6.2

Regional recovery necessitates improvements in the availability and access to local transit services that improved the ability of residents of Region 3 to connect with employment training opportunities, their places of work, and support access to health and other social services. Low-income families continue to need system options that are more flexible in service and access in order to mitigate their having to endure long commute times.

In addition to the 6 primary findings addressed above, there are other chronic and COVID-19-caused social factors that affect Region 3 that should be considered when developing a regional resilient recovery and economic development strategy. These include:

- Food insecurity: Access to adequate healthy food will remain a challenge especially for immigrant and communities of color. The effects of the COVID-19 pandemic have been disproportionately distributed and have affected communities of color, immigrants, and disadvantaged individuals severely. In no area has this been more apparent than in food insecurity. Any regional economic recovery strategy must consider the devastating impacts of hunger. Effective subsidies and free food distribution programs should be continued and expanded where necessary. Eligibility rules should be presumed or streamlined to ensure that food reaches those who need it effectively. Federal, state, and municipal agencies should be prepared to support the provision and distribution of food until the effects of the pandemic have dissipated. Consideration should be given to farm-to-table efforts that capitalize on Connecticut's small farms to deepen partnership with the food service industry and to address food insecurity by providing vulnerable residents with access to nutritious and affordable local food.
- Childcare: The centrality of childcare to a vibrant and efficient workforce has been made clear during this COVID-19 crisis. Childcare has been one of the central crises of the COVID-19 pandemic. The effects of closed schools and childcare centers have affected all sectors of the workforce but disproportionately women. As the pandemic dissipates and schools reopen, it is likely that childcare will continue to be a major constraint on growing the workforce. Many small childcare providers have gone out of business and will not return. Loss of income during the crisis may leave lower-income families without the resources to pay for after-school care. The likelihood of women being denied return to the workforce for years is high. These issues will affect and must be addressed in any economic recovery and development strategy. Directing technical and financial assistance that allows childcare providers to reopen and stay open will be important to regional recovery.
- Public Education: It will be important to ensure that the public education system is resourced to provide support for vulnerable students across Region 3. It is particularly important to provide extra assistance identifying employment opportunities and/or supporting the efforts of graduating high school students to continue with higher education.
- Mental Health: In responding to the mental health stresses of the COVID-19 pandemic, support for community healthcare providers and mental health services should be prioritized as a cornerstone for regional recovery.

Concluding Observations

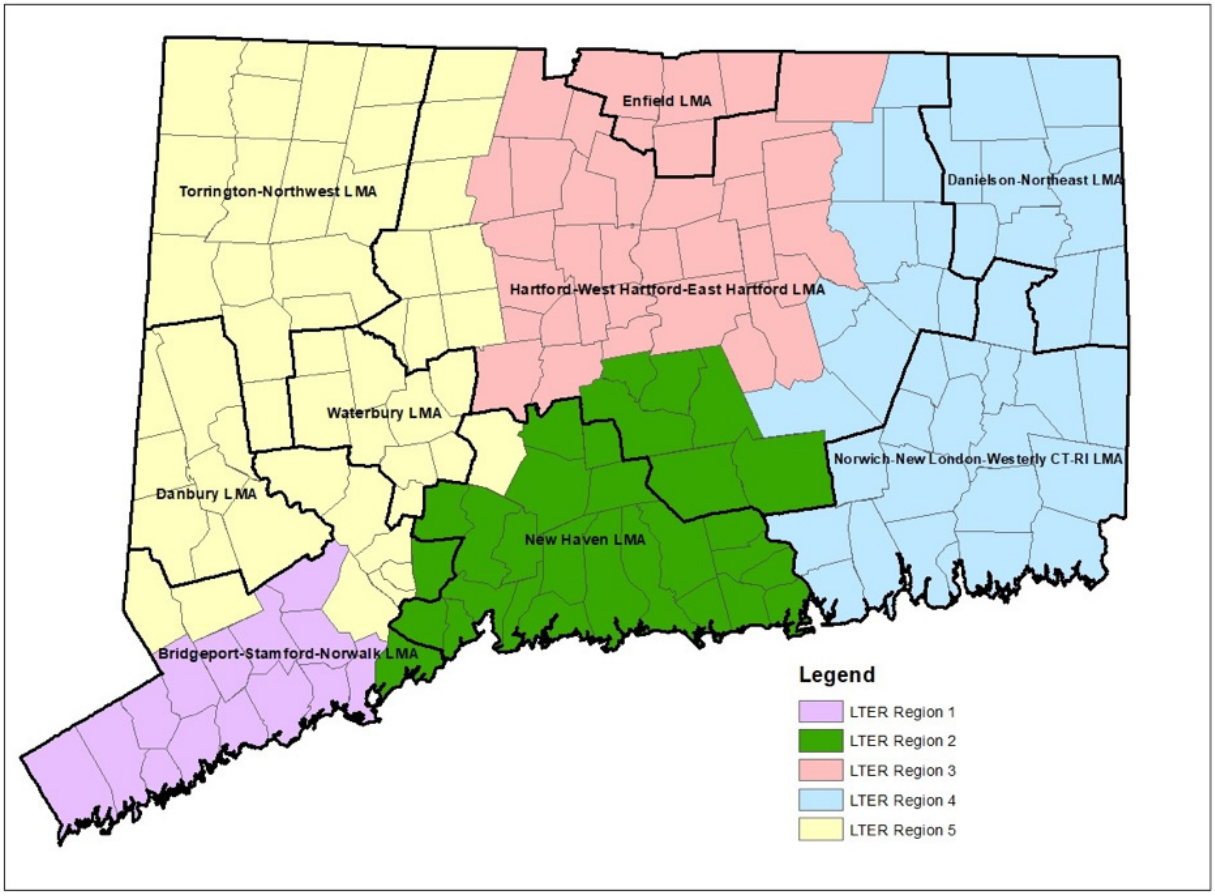
The new Biden Administration is poised to deploy a $2-3 trillion between its response to the COVID emergency and the investment it is seeking to make in infrastructure projects. The next two years could be a historic opportunity for states to receive federal funding on a level that has not been available since the 1960s. Assembling ambitious regional plans that are supported by the documentation that outlines why they are needed and how they will advance greater equity and resilience will be key to securing a significant amount of federal assistance. The goal of this report has been to serve as both a starting point and a catalyst for Region 3 and the State of Connecticut to take advantage of this once-in-a-lifetime opportunity to achieve its longstanding economic development goals.

Managing COVID-19 effects so as to "bounce forward" instead of simply trying to bounce back will be best accomplished at the regional level. A regional view can accelerate opportunity by recognizing that development in one municipality can spur complimentary development in another. For example, if one community expands manufacturing, the other can capitalize on the need to provide worker housing, retail, and amenities. A regional view can also identify incipient challenges such as when rising property values in one community is causing lower-income populations to leave, placing stress on another already economically distressed community that exacerbates inequities. In all instances, combining regional understanding with the capacity and shared commitment to coordinate action is the most successful way to spur growth and ameliorate problems.

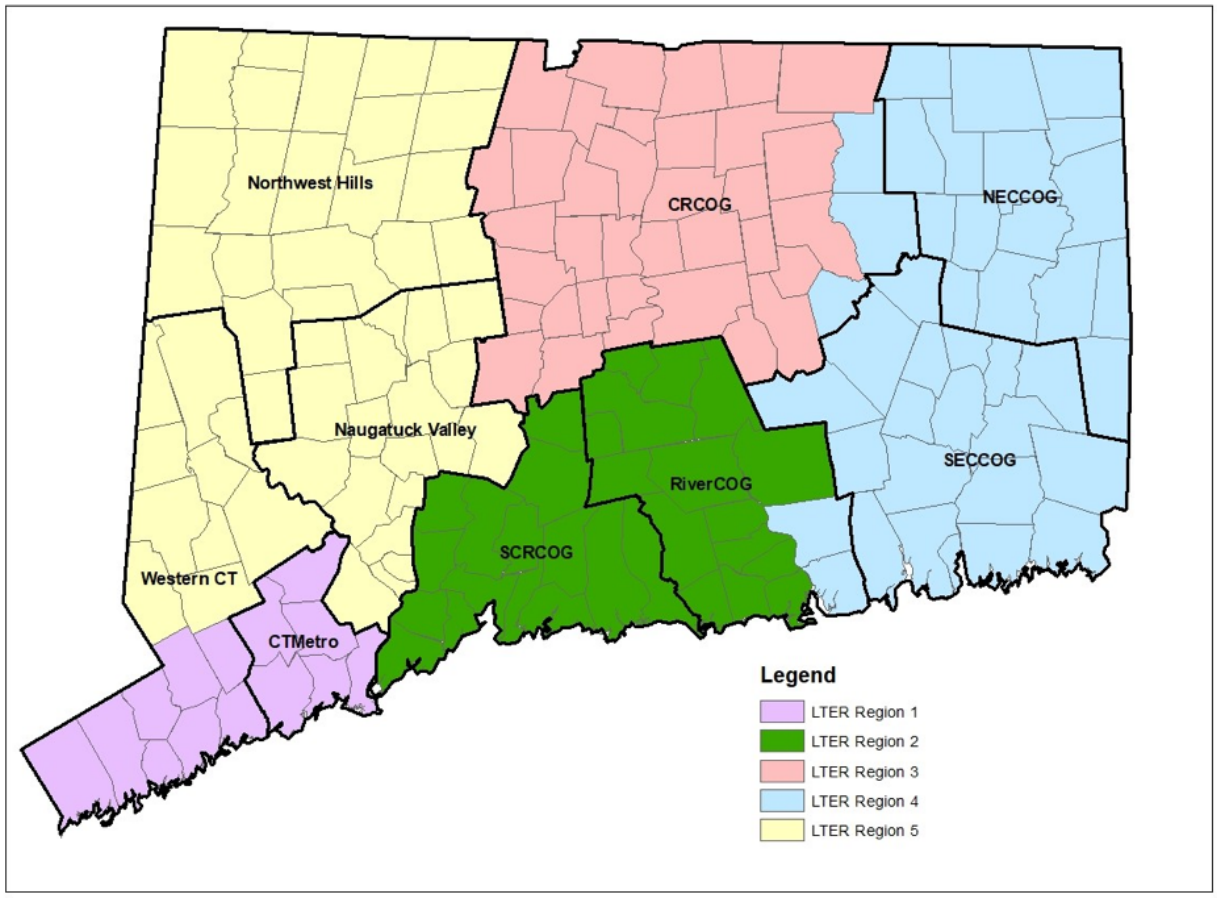
The COVID-19 pandemic and the pressing need to recover from it creates an ideal opportunity to reexamine regional economic development strategies such as the regional Comprehensive Economic Development Strategies (CEDS) and develop well-coordinated economic development plans and projects to ensure long term resilient economic recovery and development that is more equitable and sustainable. The reexamination of plans and strategies should seek to understand the assets, plans and programs that currently exist in the various regional municipalities and how these can be leveraged to support a regional recovery and economic development strategy. Each municipality within the region has strengths and challenges and it is the interrelationships among those strengths and challenges that provide the most significant opportunities for economic development. No municipality is an island and few municipal infrastructures (physical, economic, or social) truly stop at the municipal boundaries. Mapping these interrelationships and gaining a deep understanding of what communities want and, equally importantly, what they will accept, is key to finding the paths to synchronize strategies, plans and resources. This type of well-coordinated planning creates the class of large-scale, long-term plans that are most attractive to not just federal agency funders, but to private investors as well.

Appendices

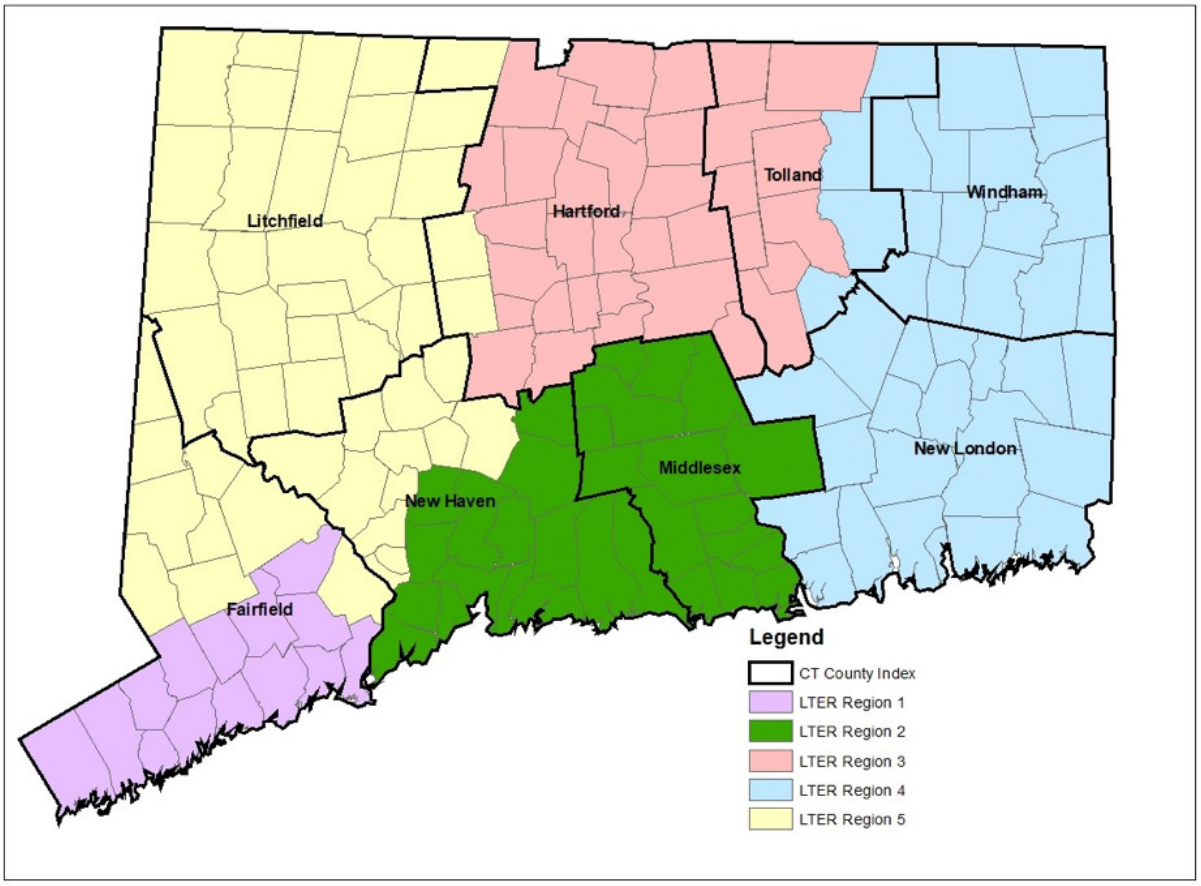
A. LTER Regions and LMAs



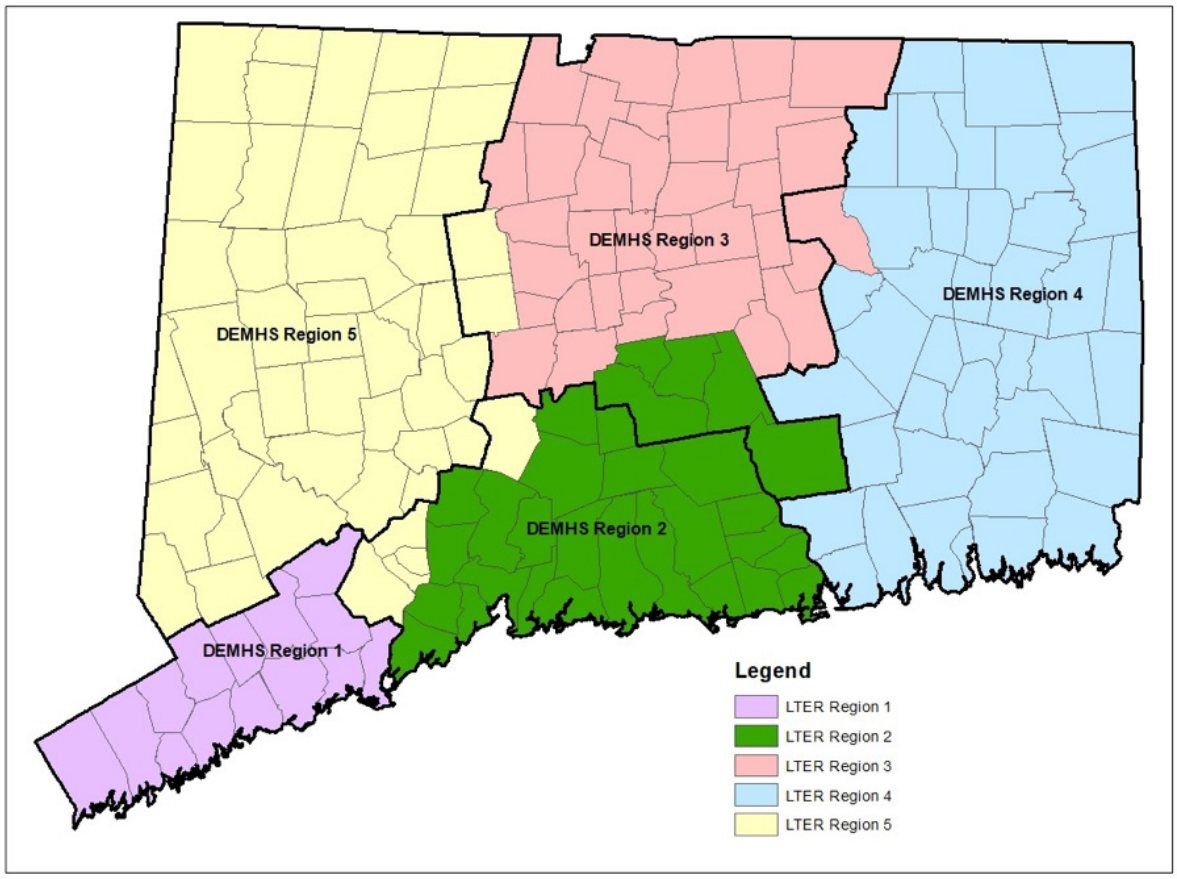
B. LTER Regions and COGs



C. LTER Regions and Counties



D. LTER Regions and DEMHS Regions



E. Organizations Interviewed

Region	Organizations Interviewed
LTER Region 3	Capital Workforce Partners
	Capital Region Council of Governments
	Connecticut Education Network (CEN)
	Connecticut Energy Marketers Association
	Connecticut Fair Housing Center
	Connecticut Health Foundation
	Connecticut Voices for Children
	East Hartford Public Schools
	End Hunger CT
	Foodshare
	Goodwin University
	Granby Public Schools
	Hartford
	Hartford HealthCare
	Hartford HealthCare (HHC)
	Hartford Mayor's Office
	Liberty Bank Foundation
	New Britain Housing Authority
	Russell Phillips & Associates (RPA)
	Salvation Army
	Spanish American Merchants Association (SAMA)
	The Connecticut Conference of Independent Colleges
	Tourism/Hospitality/Faith Leader
	Town of Coventry
	Town of East Granby
	Town of Windsor

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About The Global Resilience Institute

Based at Northeastern University in Boston, MA, the Global Resilience Institute's (GRI) research and educational mission is to develop and deploy practical and innovative tools, applications, and skills that drive social and technical changes, which strengthen the capacity of individuals, communities, systems, and networks to adapt to an increasingly turbulent world. Launched in 2017, GRI is the world's first university-wide institute to respond to the resilience imperative. Today, GRI undertakes multi-disciplinary resilience research and education efforts that draw on the latest findings from network science, health sciences, coastal and urban sustainability, engineering, cybersecurity and privacy, social and behavioral sciences, public policy, urban affairs, business, law, game design, architecture, and geospatial analysis. GRI works in close partnership with industry, government, communities, and non-governmental organizations, as well as engages in external outreach to inform, empower, and scale bottom-up efforts that contribute to individual and collective resilience.

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Founded in 1898, Northeastern is a global research university and the recognized leader in experience-driven lifelong learning. Our world-renowned experiential approach empowers our students, faculty, alumni, and partners to create impact far beyond the confines of discipline, degree, and campus. Our locations—in Boston; Charlotte, North Carolina; the San Francisco Bay Area; Seattle; Toronto; and the Massachusetts communities of Burlington and Nahant—are nodes in our growing global university system. Through this network, we expand opportunities for flexible, student-centered learning and collaborative, solutions-focused research. Northeastern's comprehensive array of undergraduate and graduate programs—on-campus, online, and in hybrid formats—lead to degrees through the doctorate in nine colleges and schools. Among these, we offer more than 140 multi-discipline majors and degrees designed to prepare students for purposeful lives and careers.

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