Prioritizing Long Term Fiscal Health

State of Connecticut
Office of Governor Dannel P. Malloy

Responsible Budgeting

[This chapter is a high level summary of budgetary items across various agencies and topics, for more specific information, please see corresponding sections in other relevant chapters]

"We can provide a better education for every child in this state. We can create a 21st century transportation system. We can and will protect our citizens. We can provide peace of mind by providing better access to quality, affordable health care. We can do all of these things, and more, if we have the courage to make the hard decisions we need to make today, and to seize the many opportunities that will shape our future." —Governor Dannel P. Malloy during his Fiscal Year 2012-2013 Biennial Budget Address, February 16, 2011

For decades, Connecticut has mismanaged its finances, amassing a profound fiscal mess. Governor Malloy demonstrated a deep and consistent commitment to balancing budgets, reducing long-term liabilities, and forthrightly taking on the most pressing fiscal challenges facing Connecticut. From 2011-2018, Connecticut faced slow-growing or in some cases shrinking revenues alongside steep increases in costs to support efforts to pay down major unfunded liabilities. In order to confront these challenging realities, the Governor focused on the following:

- Investing in Connecticut, including capital investments, municipal aid and education, support for programs to help our neediest residents, and investments in providing cost effective government services in the future;
- Strictly maintaining the state's commitments to pay down long-term liabilities over time;
- Saving costs by reducing staff, reducing future promised benefits, implementing technology and redesigning government services;
- Balancing the budget every year without relying on one-time measures and gimmicks; and
- Rebuilding the Rainy Day Fund.

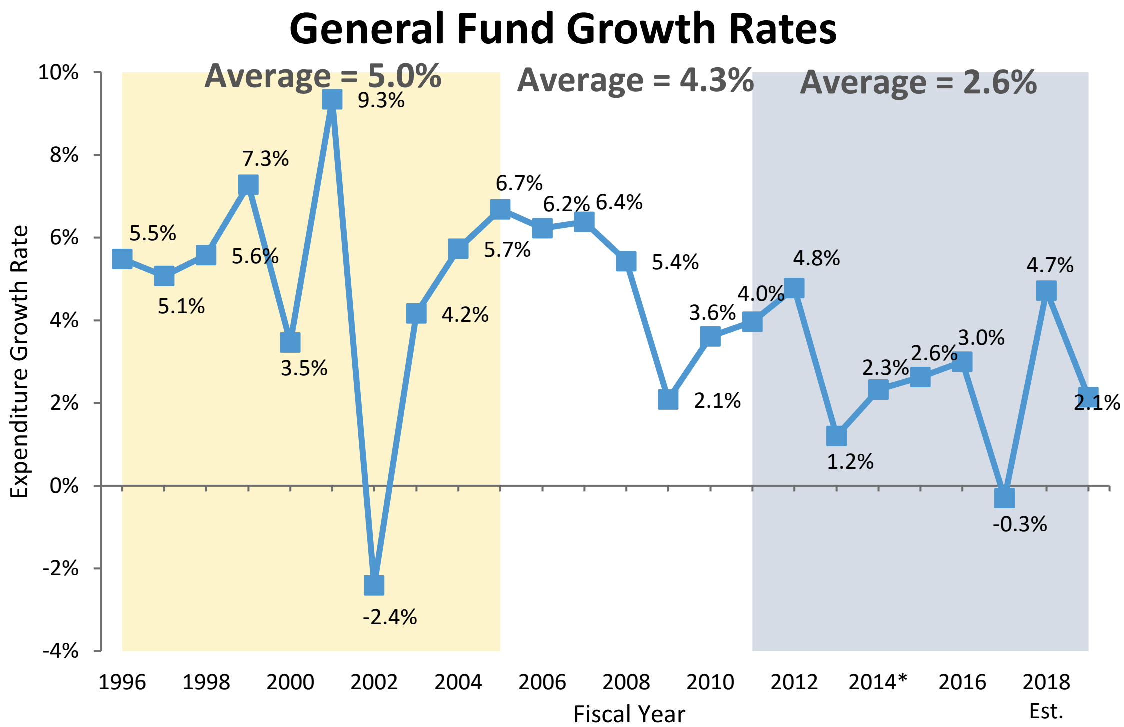
Progress during the Malloy administration:

- Held state spending growth to an annual rate of 2.6 percent, well below growth rates under previous administrations.
- **Secured two historic SEBAC agreements** resulting in $40 billion in state employee concessions, including 5 years of wage freezes, a new hybrid pension tier, higher employee contributions for pensions, health benefits, and retiree benefits.
- **Replenished The Rainy Day Fund**, empty in January 2011, now has a balance of more than $1 billion and **projected to have $2 billion at the end of Fiscal Year 2019.**

- Restructured the state employee pension system, avoiding massive balloon payments in ten years.
- Led the nation in controlling Medicaid cost trends and reducing per person spending by a greater percentage (5.7 percent) than any other state in the country.
- Employed 3,700 fewer workers in the executive branch in 2017 than in 2010, a 13 percent reduction.
- **Municipal aid increased by 28 percent to more than $5 billion** in Fiscal Year 2019.
- Refocused municipal spending in urban centers and pockets of poverty throughout the state.

Investing in Connecticut

Connecticut controlled spending more effectively than in prior decades, holding average spending growth to only 2.6 percent while at the same time fully funding pensions, paying off deficit borrowing from 2009, and making state contributions into a trust fund for retiree benefits. Nevertheless, against this backdrop the state maintained critical government services and supports in important areas.

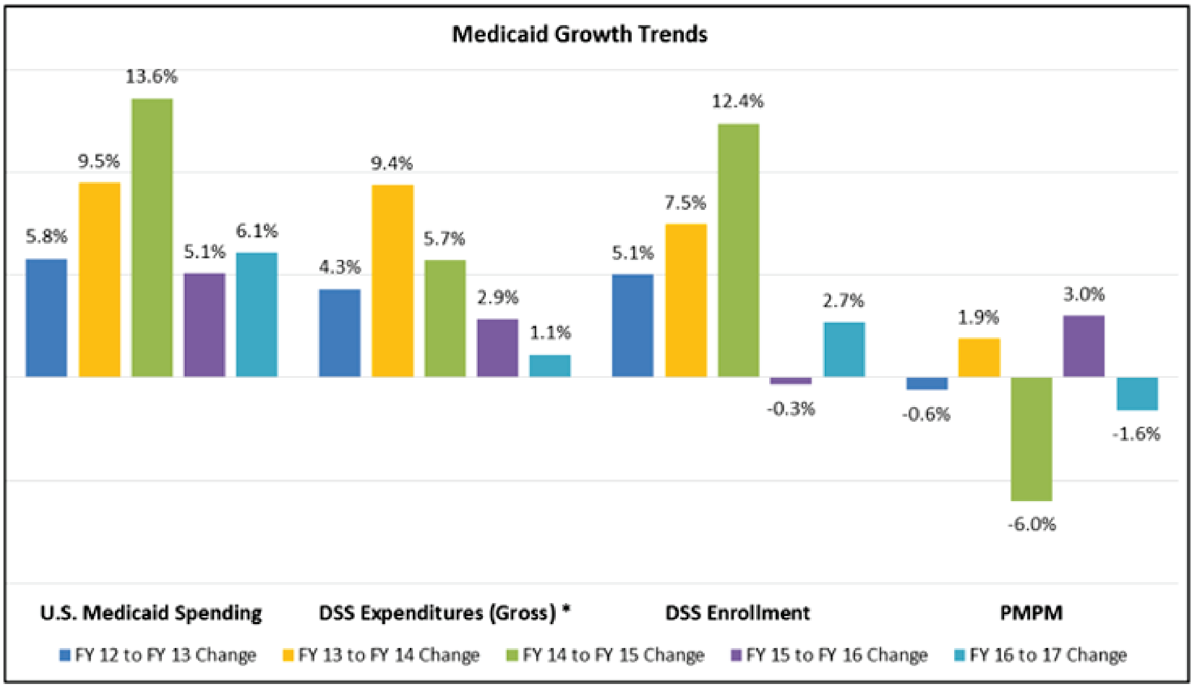


Average represents the compound annual growth rate of each shaded section

*2013 to 2014 growth has been adjusted to reflect the net budgeting of Medicaid.

Controlling Health Care Costs

The state continued to support essential human service programs, especially Medicaid, which provide necessary supports to Connecticut's most vulnerable residents. Between the end of 2010 and July 2018, the number of state residents enrolled increased by nearly 340,000, a 68 percent increase. At the same time, the state streamlined administrative costs while improving care management by restructuring the entire program under a state-of-the-art managed fee-for-service model. *Health Affairs* reported in 2017 that Connecticut led the nation in controlling cost trends on a per enrollee basis between 2010 and 2014, having reduced spending per person by 5.7 percent. Additionally, Connecticut maintained or improved access to care through targeted rate increases, practice transformation initiatives, and business improvements that resulted in timely reimbursement to providers and improved outcomes through enhanced care management. Both nationally and in Connecticut, Medicaid tracked lower than both private health insurance and Medicare in the cost trend



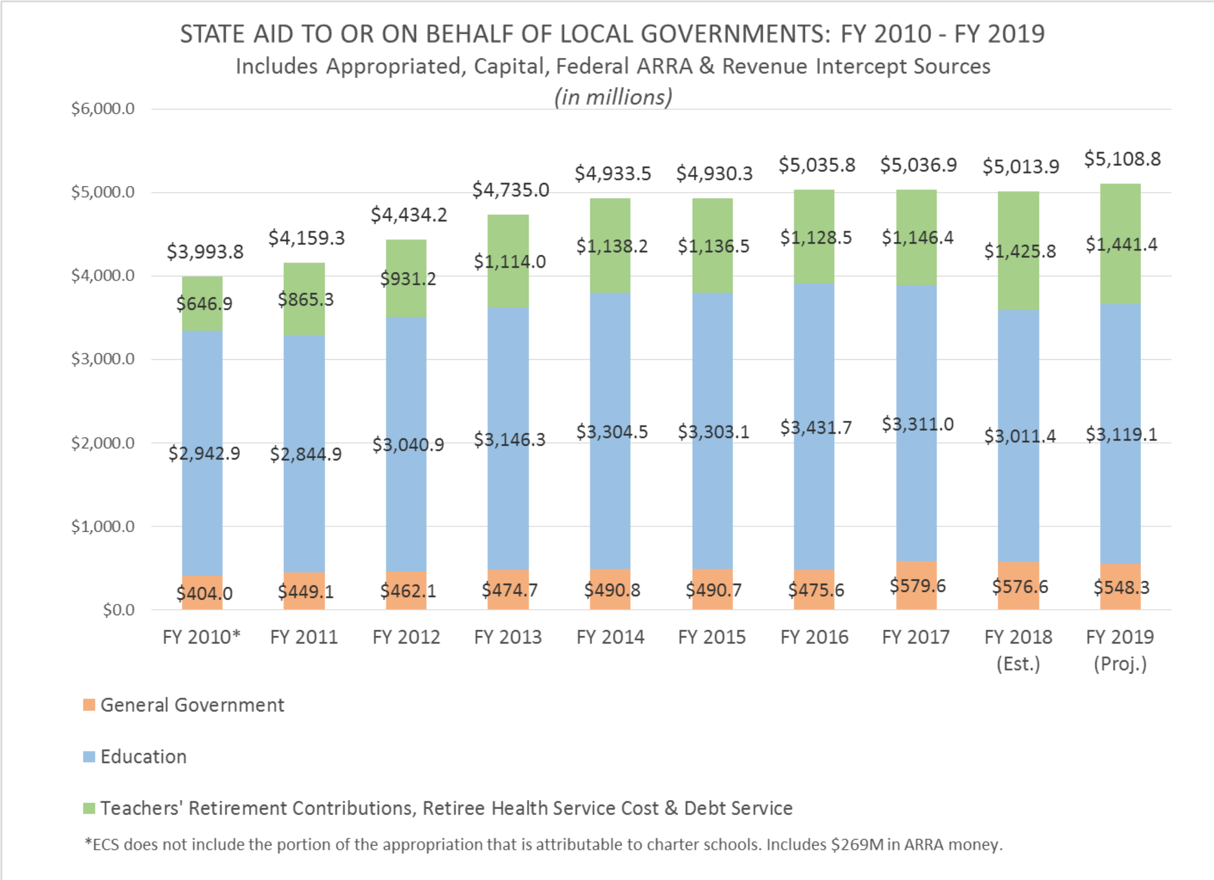
As of February 2018

comparisons. Furthermore, for Fiscal Year 2017, Medicaid expenditures in the Department of Social Services grew by only 1.1 percent.

As a result of the state's rebalancing initiative, more than 4,700 people moved from nursing home or other institutional care to community-based services under Money Follows the Person (MFP). With a Medicaid nursing home population of around 15,000, this is a significant shift to a more cost-effective and more humane model of care.

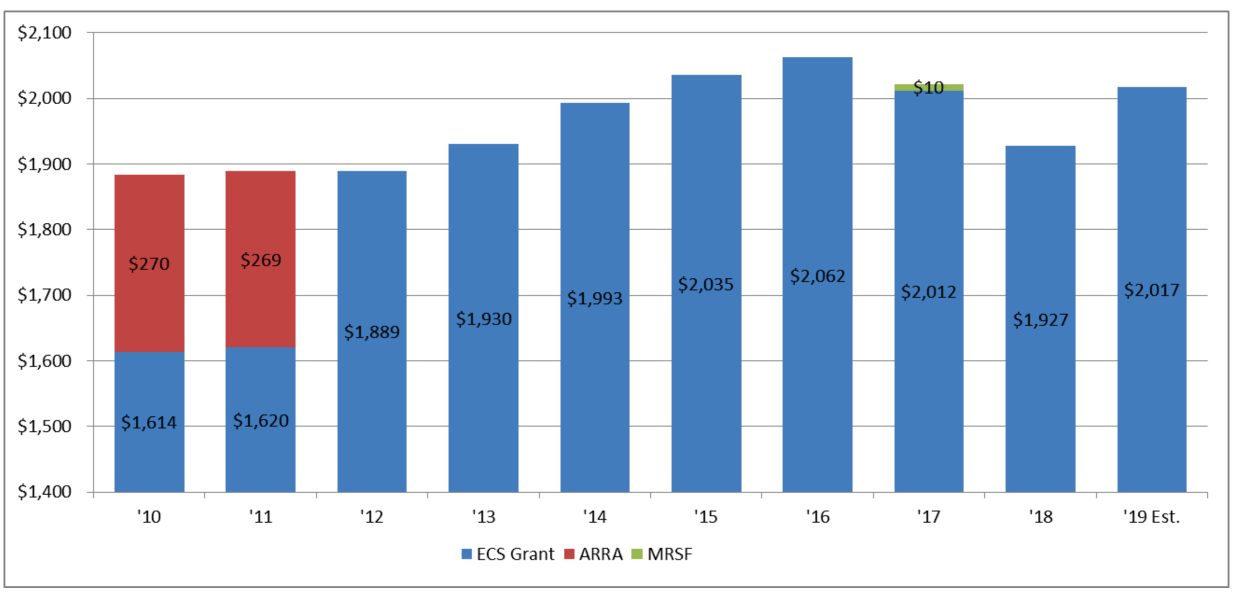
Municipal Aid

Municipal aid and education support are another area where the Malloy administration maintained and enhanced strong state support for critical governmental functions. Overall municipal aid from all sources increased by 28 percent between 2010 and 2018, despite difficult fiscal conditions throughout the period.



A significant driver of the increased municipal aid is the state's commitment to funding the Teachers' Retirement System. However, operating support for local schools, known as the ECS grant, also rose during the period by more than 7 percent, as shown below:

Growth of Education Cost Sharing Grants to Connecticut Municipalities



Capital spending also increased under the Malloy administration. A major component of the new borrowing, $2 billion out of $5.3 billion in new debt, is related to transportation investment. Other areas with major new investment include school construction, affordable housing development, technology implementation, and economic and urban development.

The state increased revenue for the State Transportation Fund (STF) while preventing the transfer of funds designated for transportation to be utilized to supplement the general fund. The administration focused on the long-term sustainability of the STF by adding revenue sources and ensuring a constitutional lockbox was included in the 2018 ballot. Additionally, the state also sustained or expanded investments in areas including early childhood education, workforce development, energy and environmental protection, child welfare, and higher education. Of course, all of these investments came in the context of balanced budgets and living within the resources available.

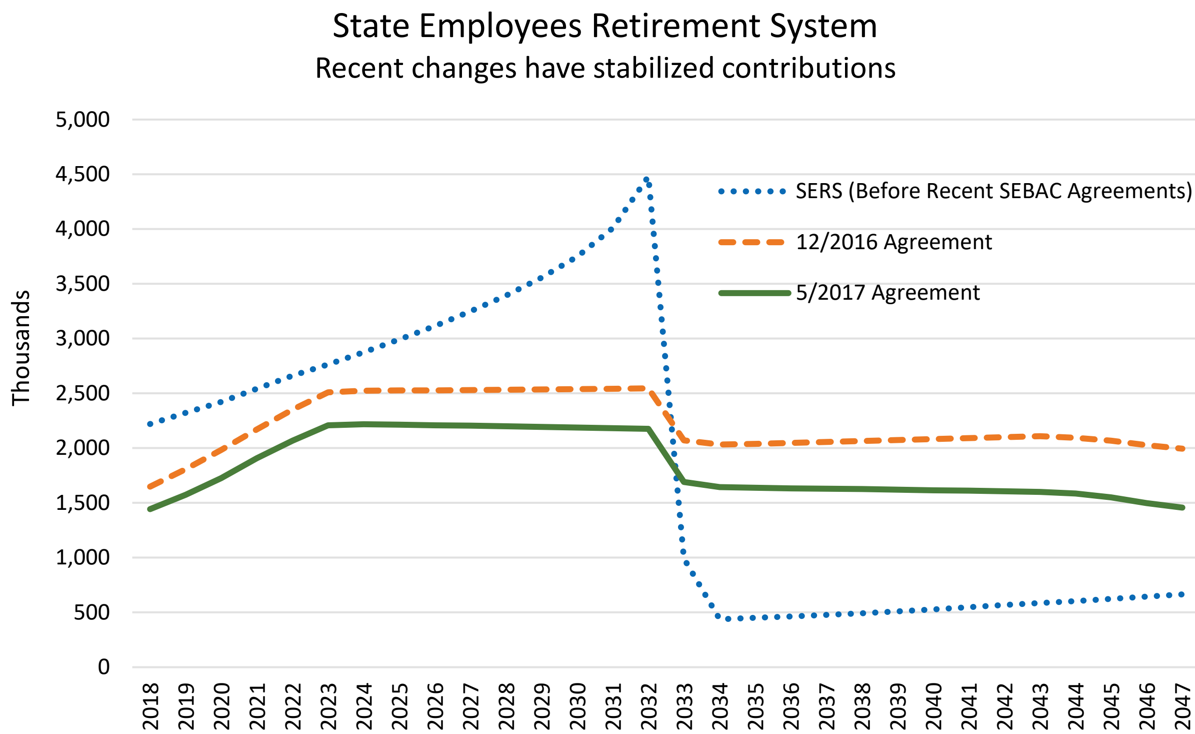
Paying Down Long-Term Liabilities

The State Employee Retirement (SERS) and Teachers' Retirement systems (TRS) suffer from years of insufficient contributions by the state, returns on investments less than the assumed rate of returns, and faulty actuarial assumptions. As of June 2018, there were unfunded liabilities of $33.5 billion in Connecticut's two pension systems — about $20.4 billion for SERS and $13.1 billion for TRS.

It took the state decades to amass these billions of dollars of unfunded liabilities and it will take decades of difficult budgetary choices and commitments by generations of taxpayers to pay off these debts. Governor Malloy made and kept these commitments throughout his terms in office.

The administration's approach to pension liability was to pay at least the full state contribution each year, to ensure that our actuarial assumptions are accurate, and to avoid disastrous early retirement plans, pension holidays, or unrealistic assumptions. Fortunately, the state is currently on this path for SERS due to the reforms included in SEBAC 2011, the elimination of the SEBAC 4 and 5 contribution adjustments in 2014, SEBAC 2017, and the SERS restructuring changes of December 2016. These agreements have not only reduced the cost of pension benefits for the state going forward, but they also ensure the pension funding method is actuarially sound and does not put state taxpayers at risk of fiscal catastrophe.

Lowering the assumed rate of return and structural changes to the amortization assumptions and methods created a smoother and more predictable payment schedule for the state's annual contribution. These changes helped avoid the spiking annual contributions the state faced in the late 2020s and early 2030s that could have eclipsed $5 billion per year and would have required significant tax increases or major expenditure cuts. Further, the new system allows for market shocks to be more easily absorbed, as those are amortized over 25-year periods rather than requiring that they be addressed all at once at the end of a fixed period. The state now projects a far more stable and predictable future with a peak contribution of $2.2 billion. [See more in Pensions and Benefits chapter on page 79]

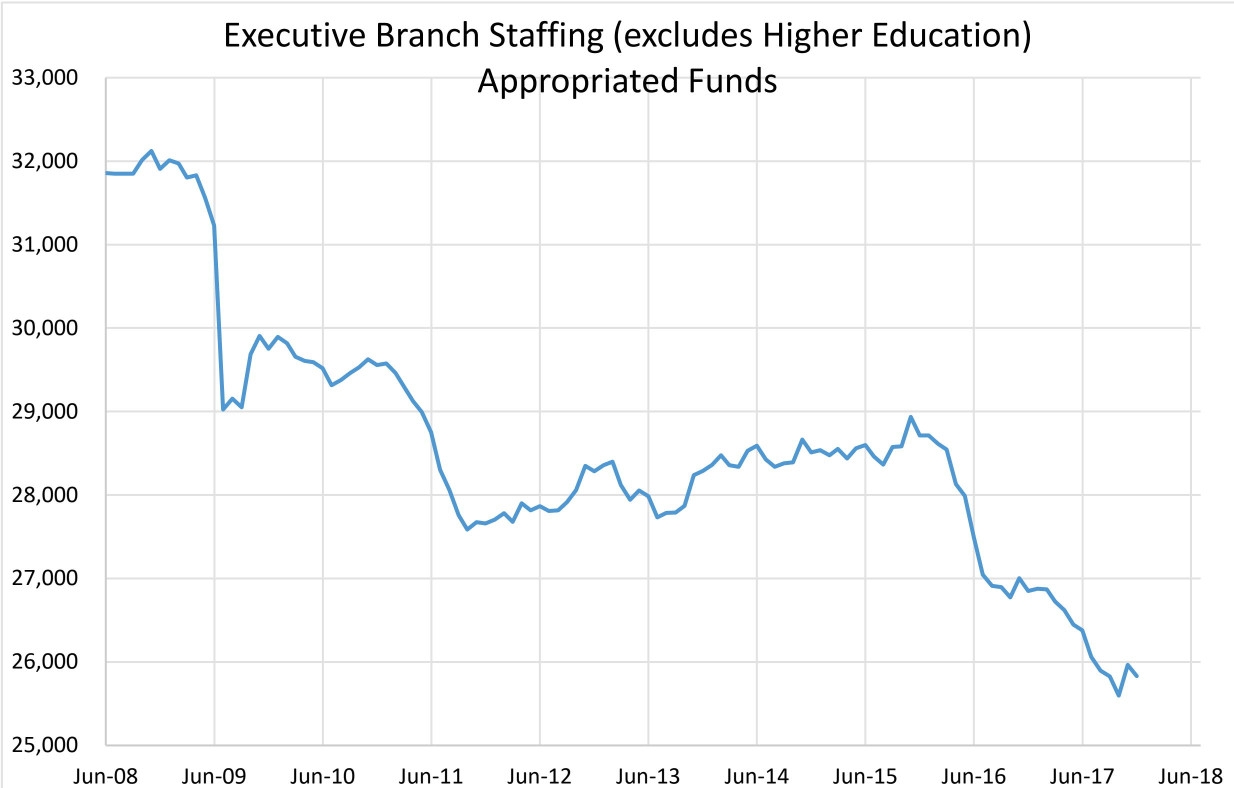


Note: The December 2016 agreement made changes to actuarial methods and assumptions, including a reduction in the assumed rate of investment return and revisions to the amortization period for portions of unfunded liability. The May 2017 agreement restructured wages and pension and healthcare benefits

Without reform, the TRS still faces the same uncertain future of state contributions that could cripple the state's budget unless action is taken quickly to stabilize the system by adopting a new and more progressive amortization model. Presently, TRS' amortization schedule would require that nearly all of its unfunded liability be paid by 2032, thereby forcing the state to meet the normal cost plus pay $13.1 billion in unfunded liability in 13 years. The TRS assumed rate of return remains at eight percent, and while investment returns were above that for 2017, historical averages indicate the assumed rate of return over the course of several years is likely to be less than eight percent, which will increase the amount of unfunded liability each year the state falls short.

Reduced State Staffing

Underlying all of these changes is the dramatic reduction in the number of state employees in the executive branch of state government. At the end of calendar year 2017, there were 25,830 permanent full-time employees being paid from appropriated funds in the executive branch (excluding higher education). That is 3,726, or 12.6 percent, fewer than the number at the end of calendar year 2010. To take a longer perspective, this means the executive branch is its smallest since the 1950s, adjusted to reflect the per capita population in the state. This trend is the result of aggressive action



The number of state employees in Connecticut's executive branch sharply declined during the Malloy administration, dropping by 12.6 percent between 2011 and 2019 and bringing the executive branch to its lowest staffing levels in decades.

by the Malloy administration to achieve productivity enabled attrition, as well as some minimal number of layoffs that occurred from time to time. This attrition enabled the state to achieve significant budget savings, and has been a major component of savings achieved under both concession agreements with state employees.

Concessions from State Workers

The state achieved the most significant concessions from state employees in generations, amounting to more than $40 billion in savings between 2010 and 2040. These concessions included major changes to pensions, healthcare, wages, human resource administration, longevity, and other post-employment benefits. These changes were achieved at the bargaining table, respectful of the collective bargaining process and in ways that seek to benefit the state while imposing the least possible harm to both employees and residents of the state who consume public services.

A review of these changes clearly demonstrates that the SEBAC agreements in 2011 and in 2017 had a major favorable budget impact on the state, and that had those agreements not been struck, Connecticut would be facing structural deficits that dwarf those faced today. Those two agreements:

- Resulted in wage freezes for five of the eight years from FY 2012 through FY 2019;

- Significantly increased employee contributions for pensions, employee healthcare, and retiree healthcare;
- Extended the minimum retirement age, increased early retirement penalties, and reduced future cost of living adjustments for existing employees; and
- Established austere new pension tiers for new employees — the normal cost of the defined benefit portion of the tier 4 pension plan is only 2.19 percent of salary for normal duty employees and just 0.72 percent for hazardous duty employees.

The 2017 SEBAC agreement also positively impacted the state's Other Post-Employment Benefits (OPEB) liability. Prior to the agreement, the state's liability was anticipated to increase by $1.78 billion in 2017 to a total of $20.9 billion, but, as a result of the agreement, the net OPEB liability actually decreased to $17.4 billion.

Saving Costs while Implementing Technology and Redesigning Government Services

Connecticut state government has made enormous strides in the last seven years as agencies have redesigned services, implemented new technology, and found ways to be more responsive to the public even though reduced budgets have demanded ever-decreasing staff levels. At the same time, the financial relationship between the state and its employees has undergone seismic change, with two major concession agreements dramatically reducing the costs of new employees compared to those hired during previous eras.

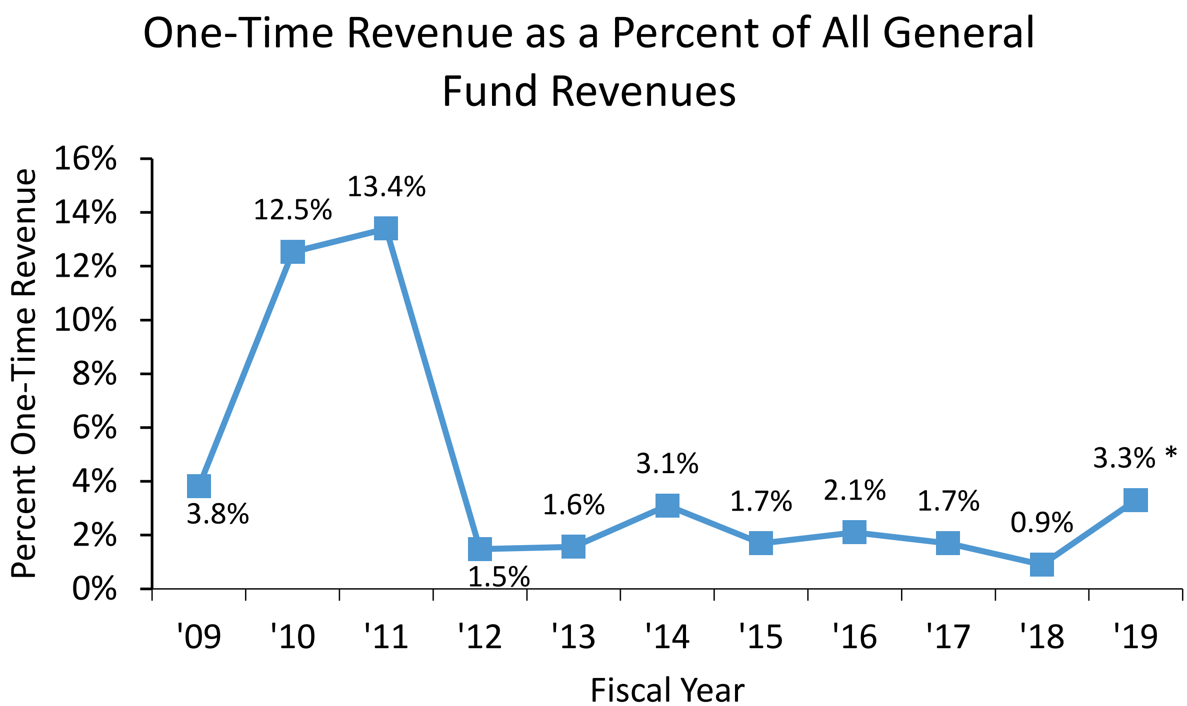
In addition to modernizing the relationship between the state and its employees, Governor Malloy oversaw a major renewal of the technology that state agencies rely on to provide responsive, cost-effective services. Over the last seven years, agencies have upgraded systems, implemented new technologies, enhanced security, and added new data centers to ensure business continuity.

The implementation of new technology was paired with business process improvement (BPI) under the Governor's Lean initiative, LeanCT. Since its inception in 2013, LeanCT actively encouraged participation in BPI by more than 40 executive branch agencies, and more than 3,000 state employees (roughly ten percent) were trained to use Lean tools and principles to improve service delivery. As a result, hundreds of processes were analyzed and streamlined using the Lean methodology.

LeanCT and the IT Capital Investment Program work closely to identify opportunities for inter-agency collaboration, common technology needs throughout state government, and best practices across the system. In combination, these approaches allowed state agencies to freeze and reduce budgetary needs while maintaining and improving service levels to state residents. [For more information on LeanCT and the IT Capital Investments Program please see the Government Efficiency chapter on page 86]

Balancing the Budget Every Year Without Relying on One-Time Measures and Gimmicks

The State of Connecticut certainly faced a difficult period since the great recession of 2008, with slow growth, a precipitous decline in the financial services sector that fed earlier prosperity in the state, and the inevitable reckoning of our unfunded pension liabilities. Nevertheless, since its first budget proposal for Fiscal Year 2012, this administration made every attempt to balance the state budget each year without relying on deficit funding, misleading revenue forecasts, one time measures, and gimmickry.



* Reflects the bipartisan budget agreement. Governor proposed budget included 1.0% one-time revenues.

The Malloy administration focused on long-term improvement to the state's finances through:

- Measures to pay down and constrain future growth in unfunded liabilities;
- Long-term concessions achieved through collective bargaining; and
- Economic development strategies aimed at securing long-term, enforceable commitments from our most vital industries.

At the same time, the administration presented and advocated for balanced budgets that rely on straightforward, recurring measures.

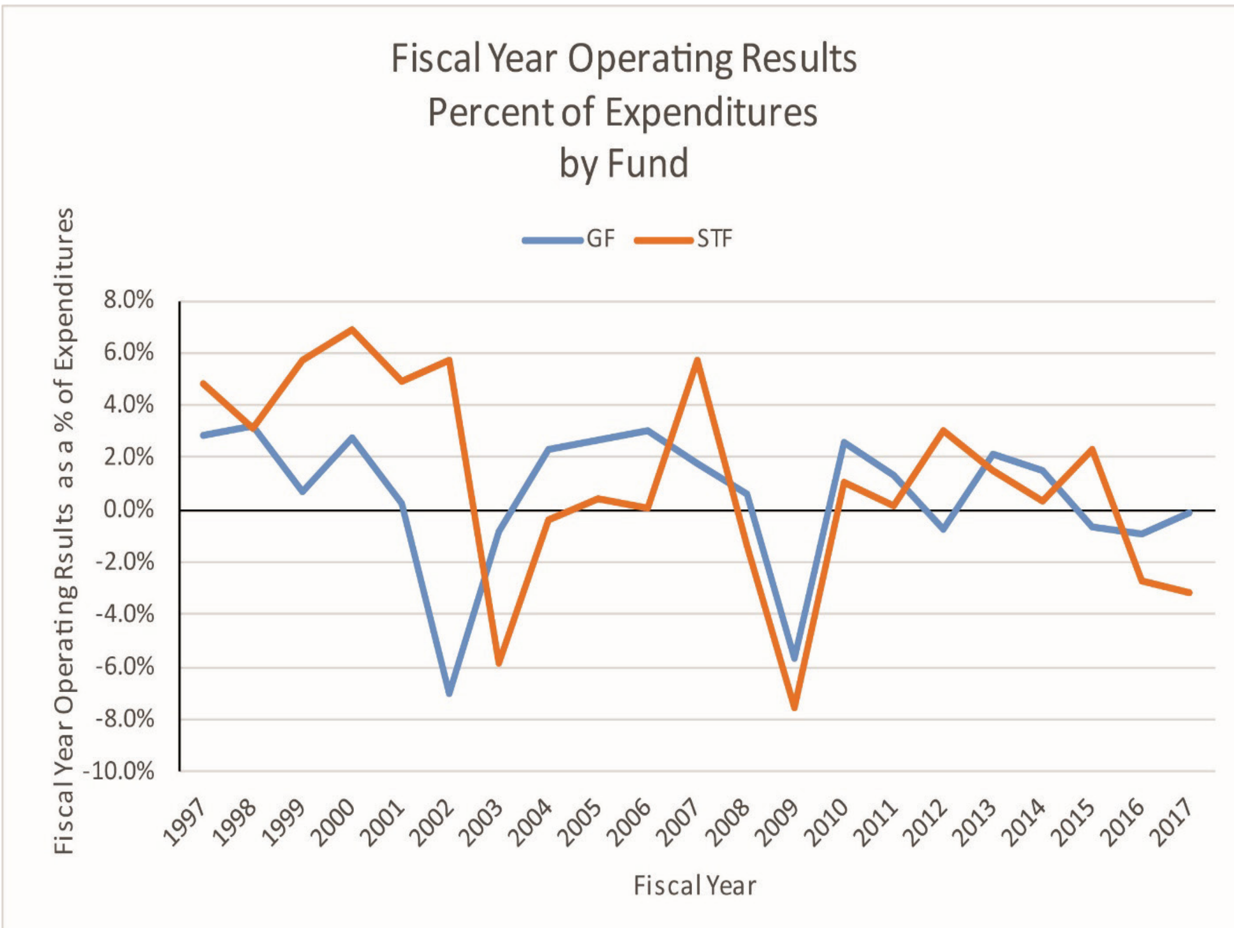
Budget Reserve Fund

The budget reserve fund (BRF), sometimes known as the "rainy day fund," was created in 1979 in order to manage the negative impact of the economic cycle on the state budget. Resources of the BRF have been available through three recessions.

Recent legislative changes should boost the budget reserve fund over time. Public Act 17-2[44] of the June Special Session implemented a volatility cap which directs any estimated and final personal income tax payments above $3.15 billion to the budget reserve fund. Public Act 18-81[45] subsequently indexed the volatility cap to the five-year compound annual growth rate in personal income. A legislative supermajority is required to change this cap.

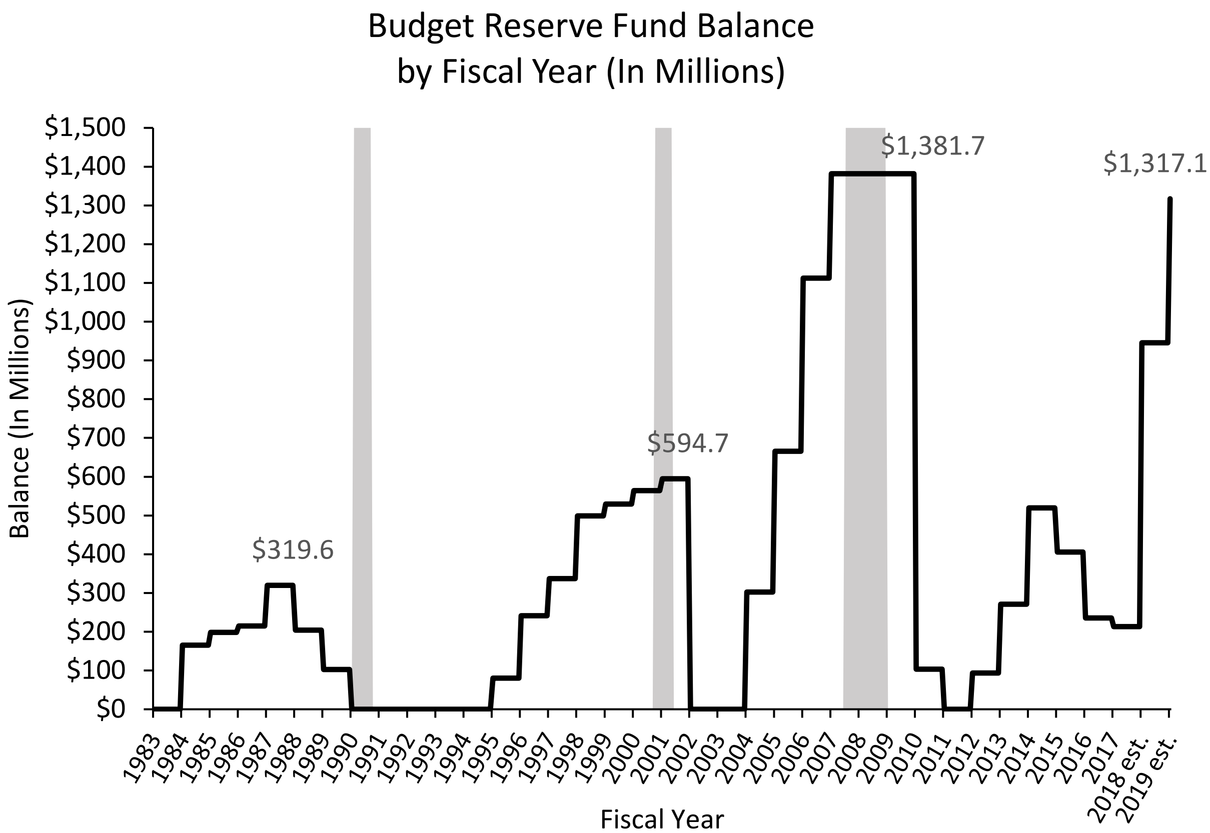
As a consequence of these changes, the estimated level of resources in the rainy day fund at the end of Fiscal Year 2019 is projected to be $2 billion, the largest amount **ever** in the rainy day fund.

While the maximum balance of the budget reserve fund is currently set at 15 percent of General Fund appropriations, the highest level of funding attained was 8.5 percent of appropriations at the end of FY 2007 (note that the BRF cap was 10 percent of appropriations at that time). As illustrated by the graph below, the scale of deficits that have ocurred during earlier recessions have approached 8 percent in a single year, even after deficit mitigation measures have been taken.



Connecticut has struggled to build a robust Budget Reserve Fund, as recent economic recessions have been larger in scale than the cash reserves accumulated during upswings, thereby drawing down the entire balance of the fund.

The resources of the budget reserve fund have been insufficient to manage the impact of each of the last three recessions. As the graph below shows, the state drew down the entire balance of the budget reserve fund during each of the last three recessions.



Gray areas represent national recessions per the National Bureau of Economic Research (NBER).

In the past, prior administrations also resorted to borrowing by issuing Economic Recovery Notes in order to cover expenses to close end of year budget gaps when there were not sufficient resources in the Budget Reserve Fund. Since the rainy day fund was created, Economic Recovery Notes were issued to address shortfalls for the following years:

- In FY 1991 - $965.7 million;
- In FY 2002 - $222.0 million;
- In FY 2003 - $97.7 million; and
- In FY 2009 - $915.8 million.

Despite severe and prolonged fiscal challenges, Governor Malloy fully paid off the 2009 Economic Recovery Notes and also managed the budget throughout two terms without borrowing to pay for operating expenses.

More Work to Do

The last eight years have been a major rebuilding project for Connecticut's budget and finances. There have been a number of notable achievements, such as putting the State Employees Retirement System on a more affordable and sustainable track, eliminating inefficiencies, reducing the size and scope of state government, and limiting one-time revenues, but we need to maintain these best practices and continue to do more. We must address the funding challenges in the Teachers' Retirement System by re-amortizing the unfunded liability, reducing the investment return assumption, and reviewing the cost share and benefits of the system. There will be costs and criticism associated, but it must happen to avoid large and unaffordable spikes in the employer share of those pension payments. Further, we need to avoid gimmicks and borrowing and only rely on recurring measures to balance the budget while continuing to rebuild the Budget Reserve Fund in order to weather the inevitable next recession.

These are not the only challenges ahead, as the next administration will need to plan for the extraordinary attrition that will likely occur as we approach 2022, by which time it is projected that as many as half of current state employees will elect to retire because of COLA changes that take effect then under the SEBAC 2017 agreement. This will create opportunities for attrition savings, but will also endanger service levels if not addressed.

The remaining and unexpected hurdles ahead will be difficult, but are not insurmountable, as long as there is an honest and reasoned reckoning of the cost of state government moving forward and what revenue and expenditures are required to make this great state even better.

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[44] Public Act: 17-2 June Special Session: An Act Concerning the State Budget for the Biennium ending June 30, 2019

[45] Public Act 18-81: An Act Concerning Revisions to the State Budget for Fiscal Year 2019 and Deficiency Appropriations for Fiscal Year 2018

Long Term Fiscal Health: Pensions & Benefits

"This agreement was created to help put our state's finances on a path toward stability and predictability, which we need to create confidence and growth. That is why so many applauded the plan and urged its ratification when we announced it — including the business community and national credit rating agencies. It is a responsible approach that puts us in line with other states and strengthens confidence in the state's ability to resolve the funded liability." — Governor Dannel P. Malloy on legislative approval of a newly negotiated pension agreement with the state employee unions, February 1, 2017

Connecticut was an early adopter of offering pension benefits to state employees and local teachers, with the State Employees Retirement System (SERS) and the Teachers Retirement System (TRS) in place since at least 1939. These pensions reflect the promises the state made to workers, promises of the state to keep. However, since inception, and for eight decades since, the systems have been beset by problems; as they have been starved by insufficient employer and employee contributions, unrealistic actuarial assumptions caused the unfunded liability to balloon, and the underlying assets' performance in the investment markets has been stifled by inadequate funding policies, limited access to certain equities, cash-on-hand requirements, and volatility in the marketplace. As a result, Connecticut has two of the worst funded pension systems in the country, with an unfunded liability of more than $20 billion for SERS and more than $13 billion for TRS.

But, we are finally moving in the right direction, particularly with critical steps taken by Governor Malloy.

Progress during the Malloy administration:

- **Negotiated three separate agreements with state employees that created a sustainable and affordable State Employee Retirement System** with increased employee and employer contributions, more realistic market assumptions, and new amortization methodology.
- **Paid the full actuarially required payment each and every year from 2011-2018.**
- Avoided protracted legal battles with beneficiaries and current employees by ensuring past benefit guarantees remain in place and that all changes to the SERS system have been done in coordination with the state employees.
- Put the state on a sustainable path forward to resolve the unfunded share in a responsible and reasonable manner, while simultaneously taking the necessary steps to install new practices to limit the potential for growth in the unfunded liability.

Facing Connecticut's Challenges

Connecticut's State Employee Retirement System (SERS) and Teachers' Retirement System (TRS) have been flawed since their inception, when the state moved forward with systems that were not pre-funded and would operate on pay-as-you-go bases. It was not until 1971 that the state moved to pre-funding SERS benefits, but by that time, the unfunded liability had already grown to $712 million. The state did not begin pre-funding TRS until 1979. Consequently, even with 20 years of attempts at prefunding, the SERS funding was only 52 percent and the unfunded liability continued to grow — eclipsing $2.7 billion. Then, in the 1990s and 2000s, during periods of both economic boom and bust, the unfunded liability ballooned due to the adoption of impractical amortization and funding scheme and failure to pay the full employer contribution. Over these many decades, legacy costs from the lack of pre-funding, insufficient contributions, returns on investments less than the assumed rate, and other untenable actuarial assumptions have created an unfunded liability of nearly $33.4 billion- about $20.4 billion for SERS and $13.1 billion for TRS.

In the case of SERS, despite leaning on current state employees with increased contributions and less generous potential benefits, the system has taken decades to amass billions of dollars of liabilities and will likely need decades of difficult budgetary choices and commitments by generations of taxpayers to resolve the entirety of this problem. Despite the political rhetoric and facile promises, there are not easy solutions to the unfunded liability; it will not be solved by dissolving the SEBAC agreement or making statutory changes. If the State of Connecticut stopped offering retirement plans to state employees entirely, regardless of whether the plans are defined benefit or defined contribution, we would still need to resolve the unfunded liability- which is amortized to cost the state between $1.3 billion to $2.0 billion per year through Fiscal Year 2047- a full workforce generation from now.

The problems facing TRS are that of a system that has been dragged down by ineffectual amortization methodology and unrealistic rate of return assumption. Further, proposals to change the system have been stymied by the covenant attached to pension obligation bonds issued in 2008, which has been interpreted by bond counsel to preclude changes to the methodology for calculating the employer share. In addition, the local governments, who negotiate and pay the teacher salaries, vehemently opposed making employer contribution, forcing teachers and the state to bear the entire burden of the cost and risk of the system. In 2017, as part of his biennial budget proposal, Governor Malloy proposed lowering the assumed rate of return to 6.9 percent, adopting the same amortization methodology as SERS (level dollar, new amortization periods for market returns), which would have drastically reduced future required contributions to the fund and given the state the budget stability it needs moving forward. Those same changes were proposed again in 2018, but not adopted by the legislature in the bipartisan budget agreement.

According to data assembled by the Center for Retirement Research at Boston College as part of a study of Connecticut's pension system, the difference between the amount Connecticut should have paid to SERS to prevent growth in the unfunded liability from 1985 to 2014 and the amount calculated using an unsustainable methodology was just over $4.1 billion. This problem was further compounded by the fact that the full payment of the employer share were not made, which added another $3.1 billion of unfunded liability over the same 30 year span. The story is much the same for TRS, as the delta between the amounts the state should have paid and what was calculated added $4.5 billion to the system's funding woes. Then, without the political courage to make the payment for the full employer share, another $1.6 billion was added to the unfunded share. Thus, over the course of three decades, our state's use of unrealistic actuarial assumptions to calculate the amount of the employer share and then the unwillingness to make that full payment has left Connecticut with an additional $13.3 billion in unfunded liability across both systems.

Instituting Change

During his eight years in office, Governor Malloy achieved the most significant concessions from state employees in generations. In addition to employing fewer workers, the state made major changes to pensions, healthcare, wages, human resource administration, longevity, and other post-employment benefits. These changes were achieved at the bargaining table, respectful of the collective bargaining process and in ways that sought to benefit the state, while imposing the least possible harm to both employees and residents of the state who consume public services.

A review of these changes clearly demonstrates that the SEBAC agreements in 2011 and in 2017 have had a major favorable budget impact on the state, and that had those agreements not been struck Connecticut would be facing structural deficits that dwarf those faced today. Those two agreements:

- Resulted in wage freezes for five of the eight years from FY 2012 and FY 2019;
- Significantly increased employee contributions for pensions, employee healthcare, and retiree healthcare;
- Extended the minimum retirement age, increased early retirement penalties, and reduced future cost of living adjustments for existing employees; and
- Established new pension tiers with affordable benefits for new employees - the normal cost of the defined benefit portion of the tier 4 pension plan is only 2.19 percent of salary for normal duty employees and just 0.72 percent for hazardous duty employees.

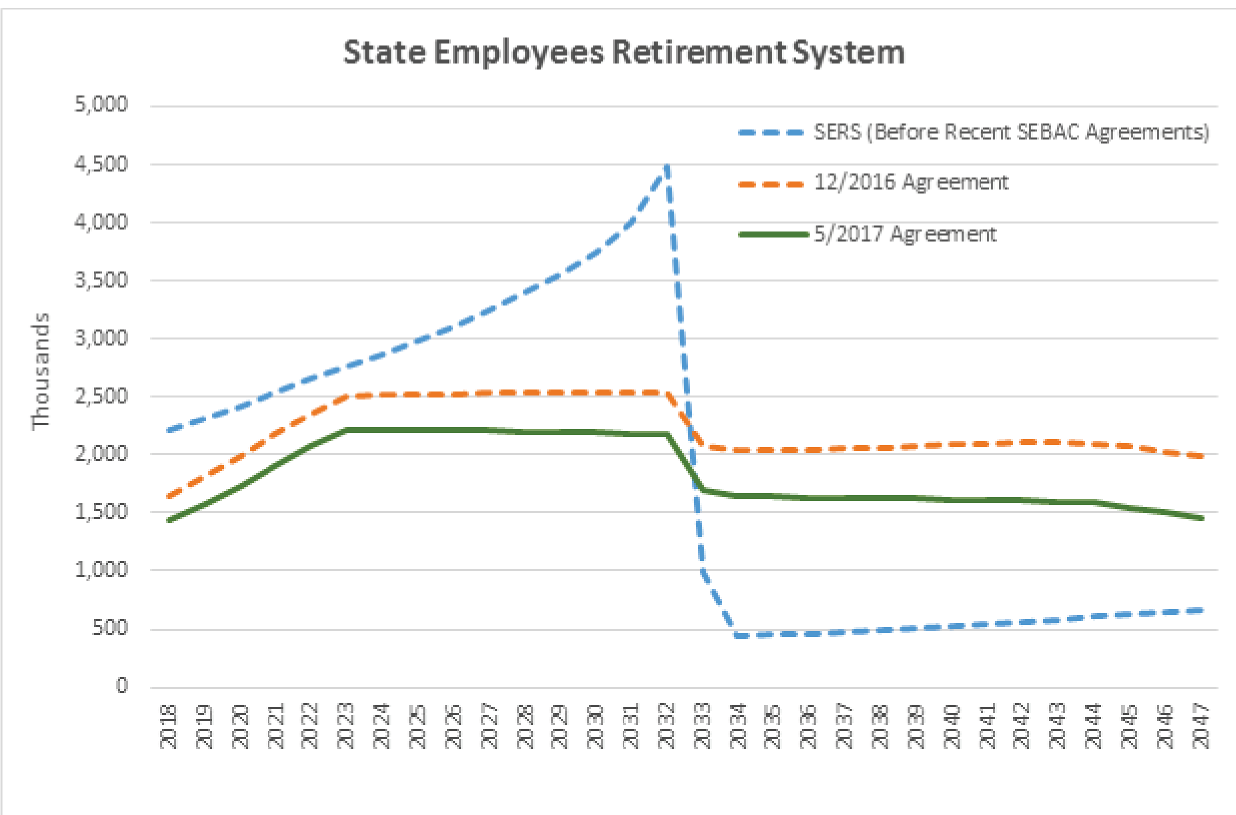
Various features of the two agreements are shown in the following chart:

	SEBAC 2011	SEBAC 2017
Pension Changes		
Employee Contributions		Increased by 1.5% of salary for all tiers in FY 2018 and an additional 0.5% in FY 2020.

Benefits Changes	Minimum COLA reduced from 2.5% to 2.0% for individuals who retire after 9/2/2011. Doubled the reduction penalty for early retirement: from 3% per year to 6% per year. Age requirement for normal retirement increased by 3 years.	Minimum COLA reduced from 2% to 0% for employees who retire after 6/30/2022. Delayed receipt of first COLA after retirement.
New Pension Tier	Tier 3 established for employees hired after 7/1/2011. Includes change from 3-year to 5-year final wage smoothing, and a minimum retirement age for hazardous duty employees with less than 25 years of service.	Tier 4 established for employees hired after 7/1/2017. Tier 4 is a hybrid defined benefit / defined contribution plan which includes an employee contribution that is 3% higher than tier 3, a multiplier for defined benefit benefits that is more than 7% lower than tier 3, eliminates the breakpoint, and limits the amount of pension that can be derived from overtime. The defined contribution portion includes a state contribution of 1% and a minimum employee contribution of 1%.
Other Pension Plans		Makes changes to the Higher Education Alternative Retirement Plan, including an increase in the employee contribution and a decrease in the state's contribution to the plan.
Employee Wage Changes		
Wage Freeze	Two-year wage freeze: FY 2012 and FY 2013.	Three-year wage freeze: FY 2017, 2018, and 2019.
Other Wage Provisions		3 furlough days in FY 2018 for most bargaining units. One-time payments (generally $2,000) in FY 2019.
Longevity	Elimination of the October 2011 longevity payment for capped bargaining units and elimination of longevity for new employees.	Deferral of April 2018 longevity payment until FY 2019.

Healthcare Changes		
Benefits	Increased emergency room (ER) co-pay to $35	Increased ER copay to $250, increased utilization management, and established a tiered network.
Premium Cost Sharing		Phased-in approximate 25% increase in active employee's share of premium costs.
OPEB	All employees to contribute 3% to Other Post-Employment Benefits Fund for 10 years. Increased the amount of state service necessary for retiree healthcare from 10 years to 15 years.	New employees contribute to OPEB fund for 15 years. All retirees are transitioned to a Medicare Advantage plan. Increase in retiree share of premium costs for employees who retire after 10/1/2017 and again in 2022.

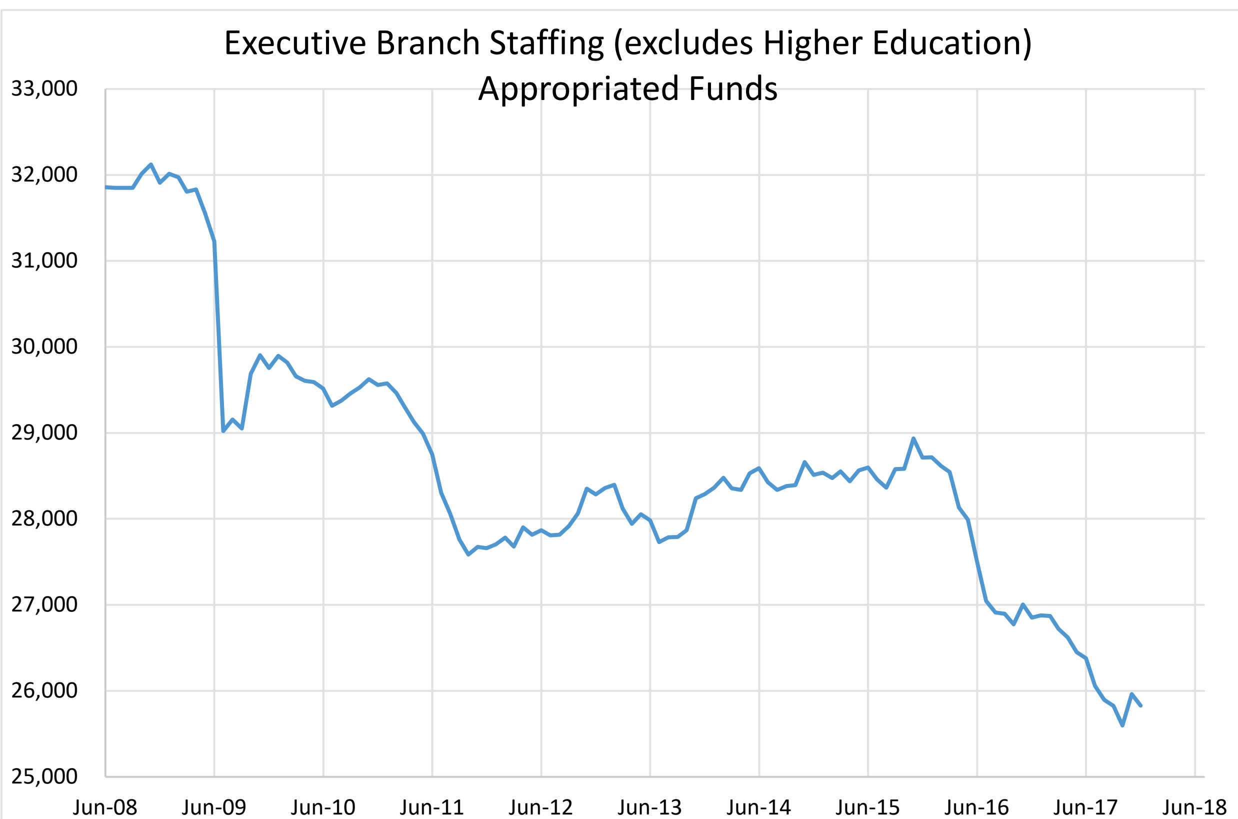
The agreement in late 2016 that lowered the assumed rate of return and made structural changes to the amortization assumptions and methods created a smoother and more predictable payment schedule for the state's annual contribution. These changes helped avoid the spiking annual contributions the state would have faced in the late 2020s and early 2030s that could have eclipsed $5



and $6 billion per year and would have required significant tax increases or major expenditure cuts. Further, the new system allows for market shocks to be more easily absorbed, as those are amortized over 25 year periods rather than requiring that they be spread over fewer years at the end of a fixed period. We now project a far more stable and predictable future with a peak contribution of $2.2 billion.

Connecticut State government made enormous strides as agencies have redesigned services, implemented new technology, and found ways to be more responsive to the public even though reduced budgets have demanded ever-decreasing staff levels. At the same time, the financial relationship between the state and its employees underwent seismic change, with two major concession agreements dramatically reducing the costs of new employees compared to those hired during previous eras.

Underlying all of these changes was the dramatic reduction in the number of state employees in the executive branch of state government. At the end of calendar year 2017, there were 25,830 permanent full-time employees being paid from appropriated funds in the executive branch (excluding higher education). That is 3,726, or 12.6 percent fewer than the number at the end of calendar year 2010. To take a longer perspective, this means that in 2018 executive branch agencies had fewer staff than any time since the 1950s, adjusted for population change. This trend was the result of aggressive action by the state to achieve attrition, as well as some minimal number of layoffs that occurred from time to time. This attrition enabled the state to achieve significant budget savings, and was a major component of savings achieved under both concession agreements with state employees.



More Work to Do

The state has made promises to state workers and teachers over many years without setting aside enough money to pay for those promises. Those promises are important to keep. Earned pensions are considered a property right under Connecticut law. Moreover, we should keep the promises made to those who taught our children, cared for our sick, and protected our residents until they retired, simply because it is moral and right. The challenge that we face now and will continue to face is how to keep those promises while still meeting the needs of the state and its taxpayers.

We must continue to pay at least the full state contribution each year, based on sound actuarial assumptions. That means Connecticut should not be tempted by pension holidays, early retirement incentives or other gimmicks that are too good to be true.

With respect to the SERS system, which has been significantly restructured over the last eight years, the state must continue to look closely at the results and the funding policies in place. The new requirement for annual stress testing provides a way for the state to monitor and mitigate risks in the system on a routine basis so that changes can be made to ensure that our long-term effort to reach full funding is successful, and that once there the system remains healthy.

The Teachers' Retirement System faces more urgent needs. The current law requires that the state use actuarial methods that push repayment of unfunded liabilities out into the future, while demanding that the full repayment be complete by 2032. This could result in unaffordable pension payments over the next decade, and could ultimately threaten the solvency of the plan. Changes to this system are complicated by bond covenants related to the 2008 pension obligation bonds issued to shore up the TRS.

The state must resolve the legal questions around the bond covenant and develop a new funding policy for TRS. That policy must include lower, more reasonable assumptions about investment returns, more conservative methods of paying down unfunded liability, and more time to achieve full funding. A funding plan that does not allow for affordable contributions will lead to underfunding and ultimately failure of the system. There are, however, solutions that will create tough but affordable payments, and ensure the viability of the pension plan. The state must act on these in the coming years, or the solutions available will be even harsher.

The state must consider sharing its responsibilities as plan sponsor for TRS with local governments who employ teachers, set staffing levels, and negotiate salaries. Even if this cost-sharing only applies to ongoing costs and not unfunded liability, it will create a more resilient system that can better ensure retirement for Connecticut teachers in the future.

Finally, the state should continue to find new ways to constrain costs of its employee and retiree health plans. Building on the successes of the Health Enhancement Program, the new State Medicare Advantage Plan, and other advances, the state should strive to make continuous improvements in the cost effectiveness of its health offerings.

State of Connecticut
Office of Governor Dannel P. Malloy

Government Efficiency & Modernization

"State government must be leaner and more efficient while still being responsive to residents. This is the beginning of a new way of doing the state's business, one that will certainly lead to cost savings for taxpayers, but as importantly, will make it easier for citizens and businesses to work with government. State agencies are not immune from the same decisions being made in corporations and households across the state — doing more with less — and this step will ultimately give us a leaner, more efficient Connecticut." — Governor Dannel P. Malloy outlining plans to significantly reduce the number of state agencies, June 30, 2011.

The rapidly changing pace of technology provides significant opportunities to transform how government provides services. Connecticut undertook initiatives to modernize the relationship between the state and its employees, Governor Malloy oversaw a major renewal of the technology state agencies rely on to provide responsive, cost-effective services. The state upgraded systems, implemented new technologies, enhanced security, and added new data centers to ensure business continuity.

Progress during the Malloy administration:

- Established the IT Capital Investment Program and **invested nearly $376 million** to make state government more efficient and user-friendly.
- Established the LeanCT program to improve process and make the state more efficient and customer-focused.
- Expanded transparency and access to government data by **modernizing the network of state websites.**
- Made all state regulations easily accessible to the public online.
- **Consolidated 81 state agencies to a total of 47 in 2018**.
- Modernized newly acquired and existing state facilities in excess of 1 million square feet while reducing the use of leased space.

LeanCT

In March 2013, a directive was issued to all state agencies to begin utilizing project management tools and process improvement methodologies such as LEAN to become more efficient and customer-focused. Since its inception, LeanCT has continually assisted state agencies achieve progress on process efficiencies, improve service to the individuals they serve and support, and maintain high levels of quality.

Through the LeanCT initiative, more than 3,000 state employees, and nearly 200 nonprofit provider staff members were trained to use Lean tools and principles to improve service delivery. LeanCT actively encourages participation in process improvement initiatives by more than 40 Executive branch agencies, several nonprofit provider agencies, municipal leaders, and the Legislative and Judicial branches of state government. As a result, hundreds of processes were analyzed and streamlined. LeanCT has empowered employees to eliminate waste, remove redundant steps, and add standardization across programmatic, agency, and even, industry lines. In a survey of state agencies in 2018, respondents reported that they had successfully utilized Lean to mitigate the impacts of staff and/or budget reductions between 2013 and 2018.

Through its work and accomplishments, LeanCT assisted the State of Connecticut in becoming a national leader in its efforts to align people, process and technology, to enable service delivery in the most cost efficient and effective manner. In 2017, Connecticut was honored as a leader in the Lean Government field, as a recipient of the 2017 Bright Idea Award by Harvard University's Ash Center for Democratic Governance and Innovation at the Harvard Kennedy School. Connecticut was also the recipient of a 2017 Bright Idea Award for its modernized regulations website. In 2015, LeanCT was highlighted as a national model for Lean Government Practices by Gemba Academy and in 2017, Connecticut was featured in *GovTech* online publication for the state's use of Lean tools prior to process automation.[46]

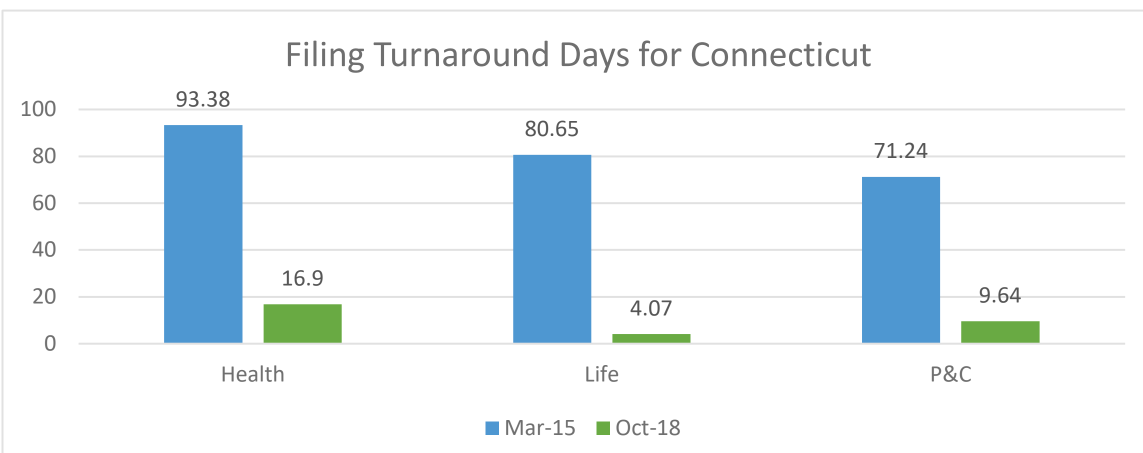
Process improvement methodologies, including Lean, is now a critical part of Connecticut's management process and entrenched in the culture. One of the most significant shifts in this regard was evidenced by the coordination between the LeanCT program and the IT Capital Investment Program. Through this collaboration, it became commonplace for an agency to use process improvement techniques to streamline their workflow *prior* to requesting funding from the IT Investment Fund for a technological solution. While this may seem like an obvious course of action, it was a significant cultural shift in the way agencies approached the use of IT to improve business outcomes. The two programs work closely to identify opportunities for inter-agency collaboration, common technology needs throughout state government, and best practices across the system, while promoting the concept of improving any process prior to automation, and supporting state agencies in their implementation of this philosophy.

Highlight: Connecticut Insurance Department

Beginning in 2015, the Connecticut Insurance Department (CID) undertook a number of Lean initiatives to improve its efficiency and effectiveness. These initiatives have further enhanced Connecticut's reputation as a domicile of choice for insurance companies.

Results achieved include the following:

- Financial Regulation moved to a software platform that allows for easy sharing of information between in-house examiners at the Department and the field examiners on-site at the companies.
- The actuarial unit increased the use of in-house expertise to manage outside consultants used for financial exams. That approach allowed the unit to cut a carrier's cost nearly in half for a financial exam.
- The Department recently implemented changes to its process for licensing out-of-state companies applying for admittance to write business in Connecticut. The improved process has meaningfully reduced the waiting time for the review and decision on applications and further progress is expected this year.
- Licensee service improvements for the more than 230,000 agents, brokers, adjusters and bail bonds agents were created through online applications and renewal notices, phone system improvements, an on-line payment portal and an improved communication on the Department website. These initiatives made the CID more user friendly for licensee and reduced redirection of questions, and saved postage, paper and internal production costs.
- Product filing review in the Life and Health and Property and Casualty Divisions are within 30 days, which is the regulatory best practice standard. A more than four year backlog of more than 700 property and casualty filings was eliminated in 2017.



The Insurance Department dramatically improved processing times for review of filings in its Health, Life, and Property and Casualty Divisions.

Highlight: Connecticut Department of Motor Vehicles

In 2011, the state Department of Motor Vehicles (DMV) was seen as an unwieldy bureaucracy whose operations forced long-wait times on customers and showed no major signs of change to meet 21st Century demands for quicker, more efficient, and online services. Aging computer systems, outdated policies, and unnecessary paperwork created hurdles customers often faced for many routine tasks.

The Governor ordered steps to cut red tape, reduce wait times, improve online customer services and search for innovative ways for modernize service delivery for customers. Chief among the major changes that followed was the reconstruction of a more than 40-year-old computer system for registering vehicles. In a strategic approach, coupled with other technology improvements and streamlining behind-the-scenes bureaucracy, all these improvements focused on putting the customer first.

Additional accomplishments brought about this modernization include:

- Wait times in offices dropped by a seasonally adjusted 55 percent after using data-driven analysis (2016 compared to 2015). Wait times are also posted online and updated every five minutes.
- A 36 percent reduction in phone center customer wait times.
- A significant drop in return trips to DMV because of missing paperwork resulting in about 90 percent of customers served at a window complete their transaction.
- Developed the agency's first mobile application, Connecticut DMV Mobile that features DMV wait times and locations, online services, practice learner's permit tests and ability to schedule a learner's permit knowledge test.
- Digitized and automated voter registration at the DMV.

IT Capital Investment Program

The IT Capital Investment Program was established in 2012 to counter years of neglect and make strategic investments to upgrade technology and create systems across agencies that make state government more efficient and user-friendly.

The challenge for Connecticut was the high cost to fix or upgrade all of its technology systems on an individual basis. That's why the IT Capital Investment Program leveraged its investments in technology by taking an enterprise-wide approach wherever possible and focused on creating systems that are interoperable and involve shared services and applications.

Prior to establishment of the IT Capital Investment Program, the Center for Digital Government (CDG), the longest-running examination of technology use in state government, ranked Connecticut in the lowest third among states in IT leadership, service delivery, citizen engagement, innovation and collaboration. Investments in technology were less than 1 percent of operating expenses, while experts recommend that best practice enterprises in both the public and private sector spend an average of 4.1 percent.[47] Between fiscal years 2013 and 2019, the IT Capital Investment Program has worked with authorized funding of $376 million to invest across nearly all functions of government.[48] In 2014, Connecticut achieved one of the biggest improvements in the CDG Survey.[49]

Other noteworthy projects that are a direct result of the Capital IT Investment Program include:

- The state modernized the hiring process by implementing JobAps, a state-of-the-art job application and recruitment system, which eliminated approximately $40,000 in annual paper, supplies, and testing venue expenses.
- Unemployment Insurance modernization with self-service capabilities which is expected to result in approximately 44,457 less hours of Department of Labor staff time per year spent processing transactions on behalf of claimants and employers.
- The Department of Revenue Services (DRS) automated its document management process reducing paper storage by more than 60 percent. Previously, it could take 10 weeks or more to get taxpayer information back from external data capture vendors, but now it is available in real time.

Human Service Improvements

Connecticut positioned itself as a national leader for its efforts to align people, process, and technology to enable service delivery in the most cost efficient and effective manner.

In particular, through the IT Capital Investment Program, the state funded 75 improvement projects across all areas of state government.

Perhaps no agency saw more dramatic results than the Department of Social Services (DSS), which made vital upgrades to its processes and nearly *three-decade-old* systems. Importantly, DSS was able to use their funding from the IT Capital Investment to leverage a 90 percent match — nearly $300 million — from the federal government.

Through the program:

- DSS implemented business processes to streamline service delivery to residents. Previously, more than 95 percent of DSS customers left a regional office without having completed their business. After the implementation of new business processes, fewer than 15 percent of customers needed to return or return or make additional contact with the agency to complete their intended transaction.
- Online customer portals were created allowing 245,369 residents to apply for benefits online, rather than through the mail or an in-person visit. As of June 2018, nearly 250,000 residents had created online accounts, allowing them to submit and obtain information without staff intervention.
- More than 20 million documents were digitized, eliminating vast amounts of paper documents awaiting processing.

In addition to the overall success of the department's service delivery, the Supplemental Nutrition Assistance Program (SNAP) saw a tremendous improvement. For decades, SNAP was a problem spot for the state, by federal standards, and Connecticut was in real danger of being assessed millions of dollars in financial penalties. The program ranked 41st and 44th nationally in key administrative accuracy measures. Timeliness in granting benefits was 53rd nationally, below all other states and territories operating SNAP programs. Staff at the Department of Social Services were working hard under a deluge of paper applications that had risen greatly with the Great Recession, but processing and infrastructure deficiencies were undercutting their efforts.

Flash forward to 2018, DSS is operating a very different SNAP program. Performance measures now rank Connecticut fifth best out of 53 states and territories in application processing timeliness, completing a rapid and unprecedented rise from last in 2011, 2012 and 2013. In fact, DSS now expedites benefits to the neediest households in 1.5 days on average, well below the seven-day federal requirement. Administrative accuracy measures have also substantially improved. The Department's payment error rate is below the national average of 6.3 percent and continues a trend of significant improvement since 2013. About 375,000 low-income residents — including more than 138,000 children- were receiving assistance to put food on the table and make ends meet in 2018. And more than $52 million in federal revenue is pumped into Connecticut's food economy each month.

Through process improvement and prudent investments in technology, and dedication from DSS employees, the state:

- Launched "ConneCT" in July 2013, a business modernization project which replaced piles of paper on individual workers' desks with electronically scanned documents available to any worker in the state. There are no paper case files to misplace, and clients can be served by any eligibility worker in the state.
- Developed online applications, renewals and change reporting to streamline customer access and staff workflow.
- Replaced outdated local phone systems with a centralized modern phone system. Clients can now call one number and be served by eligibility workers statewide, clients can also get most information about their benefits at the push of a button, on-line, or via phone unassisted, 24/7. More than 2.5 million calls have been processed since the July 2013 launch of ConneCT.

Open Data

Connecticut has become a pioneering leader in making data available to the people of Connecticut. In fact, the state's efforts related to Open Data were nationally recognized on multiple occasions in the past eight years.

With Executive Order No. 39[50], Governor Malloy created the Connecticut Open Data Portal to serve as an online portal where data collected across all state government agencies would be shared with the public. Between February 2014 and June 2018, Connecticut made huge strides in increasing public access to important government datasets. In this time, state agencies released more than 630 datasets consisting of more than 110 million rows of data. The state's Open Data Portal[51] was accessed more than eight million times by June 2018.

Data from the site has been used to:

- Develop a tool that can predict the likelihood of drug overdoses, helping first responders and hospitals ensure they are prepared in advance;
- Help families make informed decisions when selecting day or summer camps by making Office of Early Childhood inspection results of child care facilities available to 211; and

- Create a more efficient municipal permitting system for both local officials and those seeking permits by data made available from the state's licensing system.

To ensure this important work continues, Executive Order 39 was codified, establishing a coordinated strategy to manage and treat data as a strategic asset. Public Act 18-175[52] enabled OPM to establish policies and principles to ensure the state's data is more effectively managed and used to support a more effective government.

Technology Improvements

Criminal Justice Systems

Continued investment in criminal justice reforms is one of the hallmarks of the Malloy administration with substantial results. In support of these initiatives, the state completed nine releases of the Criminal Information Sharing System (CISS) into production. CISS is a comprehensive, state-wide Criminal Justice Information System (CJIS) technology established to facilitate electronic information exchange between stakeholders having any cognizance over matters relating to law enforcement and criminal justice.

CISS includes modern search capability of CJIS data and real-time workflow of actionable information.

During this time, multiple state and local agencies collaborated to replace the aging and outdated 911 system with a state of the art Next Generation 911 system. This system handled 2 million 911 calls statewide in 2017. This new system includes many new features designed to improve citizen and first responder safety, including the automatic rerouting of calls for Public-Safety Answering Point (PSAP) outage and call overflow conditions, and Text-to-911 capabilities.

Partnering with Local Government

The state also prioritized technology partnerships with local government. The state expanded its research and education network (CEN) to include municipalities for high-speed broadband access. In the last two years (2016-2018), the state expanded connectivity from 70 to more than 100 municipalities, and expanded access to the state's libraries, bringing the total number of fiber connected libraries to 136 (out of 193). This investment reflects the critical role libraries play in improving digital literacy and helping to provide greater access to technology resources across the entire state.

The Connecticut Commission for Educational Technology applied an innovative solution for the problem of keeping our students' data protected. Instead of having more than 1,000 schools independently vet and negotiate terms of service agreements — at an indirect cost to districts of more than 80,000 staff hours statewide - the State implemented a hub to allow software providers to digitally sign the Connecticut Student Data Privacy Pledge. In Year one alone, the initiative has resulted in a 7,000 percent return on investment, with a 25 percent quarterly increase in usage since its launch.

Additional evidence of the sharing of state resources to improve capabilities, at lower cost, was the introduction of Distributed Denial of Service protections to the CEN. CEN added this capability in 2017 and has mitigated more than 200 attacks in this fiscal year alone. No school, library or town could afford this protection on their own, but by leveraging the network, all participants have been protected from this growing cyber risk.

Improved and Efficient State IT Infrastructure

Connecticut moved from a primary data center facility costing the state more than $6 million per year to an innovative public-private arrangement resulting in the reuse of an existing private data center. Along the way, the state consolidated 275 physical servers to 50 physical servers providing hardware, software and power savings.

The State of Connecticut Judicial Branch moved into the State's Groton Data Center in 2016. They originally requested $25 million in funding to build out and move to a new data center. Utilizing this method, they reduced capital needs by $16 million.

Finally, the State moved from an older-style disaster recovery approach to a joint agreement between Connecticut and Massachusetts to utilize the Springfield data center facility. This change allows the State to have real-time data backup and critical system resiliency and introduced a flexible computing model that prepared the state to use cloud resources all at a lower price.

Modernizing of the State Website

Prior to 2011, the State of Connecticut's official website, which acts as a portal to every agency in state government, used outdated 1990's web technology and residents still could not perform many basic interactions online.

By late 2011, the state began a modernization process and complete redesign of its online presence in an effort to increase usability, convenience, transparency, and access for its visitors. The state accomplished this by using a self-funded plan under a unique public-private partnership that allows the portal to be developed and operated without tax dollars.

Designed for use on computers, tablets, and mobile devices, the state's new website was completely redesigned to prioritize the features and services that residents most frequently access. State agencies now have the ability to increase the number of interactive, online transactions that residents can complete over the internet, eliminating the need in many cases to use old-fashioned paper forms. The number of available services that can be completed online continues to grow on a regular basis to this day.

Online Publishing of State Regulations

For decades, the only way members of the public could obtain copies of state agency regulations was through hard copy documents available through commercial legal material providers. Records on individual regulations were kept in hard copy by the agency writing the regulations. Prior to 2011, Connecticut had become one of the only states in the nation that did not have its agency regulations available to the public over the internet.

Upon taking office, Governor Malloy directed his staff to work with state agencies on a project to make all state regulations easily accessible to the public online. Then in 2012, a law codifying into state statute that all regulations must be published on the internet to ensure that this transparency effort continues was passed.[53]

Today, Connecticut has a state regulations website[54], which was awarded the 2017 Bright Idea Award by Kennedy School's competition. Connecticut was also the recipient of a 2017 Bright Idea Award for LeanCT. Funding for the regulations project was provided through the IT Capital Investment Program and is an example of the Program's impact on successfully implementing technology projects across multiple state agencies.

Not only does the website make available all agency regulations over the internet for the first time ever, but it also provides several interactive features, such as allowing users to easily search terms to find regulations and use search filtering to find information faster. In addition, members of the public can read regulations that have been proposed by an agency but not yet adopted, and a chronological record is kept of each proposed regulation as they proceed through that process. After a proposed regulation has been drafted and becomes open for public comment, users are able to submit a comment directly through the website, and can also read other users' comments. An alert feature allows the public to sign up for email notifications when agencies post information to the database, providing the public with greater ability to monitor regulations.

Modernization of State Facilities

Another key initiative was to reduce the costs associated with leasing space for state agencies, as well as to maximize the utilization of state owned space. With an emphasis on efficiency, both leased space and state owned space allocations were reduced resulting in space standards more aligned with the private sector, thereby reducing overall costs.

The state successfully reduced leased space from approximately 3.12 million square feet in 2011, to approximately 2.5 million square feet planned by 2019, resulting in a reduction in leased costs from approximately $63.5 million to $53 million annually. Equally important, through this endeavor the state acquired and modernized more than 1,000,000 square feet of new space, as well as more than 350,000 square feet of existing state space. This vision resulted in the relocation of more than 3,000 state employees and students to downtown Hartford and the establishment of modernized facilities to use for decades into the future.

From the onset, the administration encouraged the ownership or leasing of modern buildings to replace obsolete facilities, thereby achieving cost and energy efficiencies, maximizing delivery of services to the public, increasing utilization of mass transportation, and providing a comfortable and space-efficient work environment. Additionally, a transparent, all-encompassing inventory of state owned and leased real property was created.[55]

More Work to Do

State government must continue to modernize its approach to the delivery of services. In order to do this in the most cost effective manner there must be continued coordination of employee effort, sharing of information, and upgrades of outdated technology. As the world continuously changes, so must Connecticut's approach to delivering quality services and supports to our residents.

The state should become more effective by finalizing the State Data Plan and complete agency inventories of high value data, as required by Public Act No. 18-175.[56] Further, the next administration should coordinate efforts between the IT Capital Investment Program and the final State Data Plan to enhance standardization and integration of data systems and data management practices across all executive branch agencies.

As the culture has begun to change in state agencies, Connecticut should continue to promote process improvement principles and activities throughout state government, focusing on customer value, performance outcomes, and process efficiencies. Our work in this area is far from over, and must be encouraged to continue in the future. Focusing on improved service delivery, efficiency, and modernization is the only way to move Connecticut forward. Of critical importance, Connecticut must continue to invest in the IT Capital Investment Program. Several projects are underway and require continued funding. The next administration should sustain budget authorization commitments in Fiscal Year 2020 and Fiscal Year 2021 at $50 million per fiscal year. This will ensure critical projects at the Department of Administrative Services, Department of Revenue Services, Department of Labor, Department of Emergency Services and Public Protection, Department of Social Services, and Department of Children and Families move forward, improving the way the state services its residents and reducing the cost to deliver those services.

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[46] GovTech Online: Technology is a Tool, Not a Solutions in Connecticut's Journey to LEAN
[47] The Gartner Group IT Key Metrics Data
[48] CT Open Data: IT Capital Investment Program by Function of Government
[49] Government Technology: Which States Have the Best Technology? Digital States Survey 2014
[50] Governor Malloy Executive Order No. 39 creating a state open data portal.
[51] https://data.ct.gov
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[54] Connecticut eRegulations System: Portal to Connecticut Regulations
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