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**CONNECTICUT STATE BOARD OF EDUCATION  
Hartford**

**TO BE PROPOSED:  
June 17, 2020**

**RESOLVED**, That the State Board of Education approves the Connecticut Computer Science Plan and directs the Commissioner to take the necessary action.

Approved by a vote of \_\_\_\_\_, this seventeenth day of June, Two Thousand Twenty.

Signed: \_\_\_\_\_  
Dr. Miguel A. Cardona, Secretary  
State Board of Education

**CONNECTICUT STATE BOARD OF EDUCATION**  
**Hartford**

**TO:** State Board of Education

**FROM:** Dr. Miguel A. Cardona, Commissioner of Education

**DATE:** June 17, 2020

**SUBJECT:** Draft Connecticut Computer Science Plan

**Executive Summary**

**Introduction**

Today's students are part of a world in which technology is evolving rapidly, forging new fields of study, creating new types of jobs, and requiring new sets of skills. Not only must students understand how digital tools can help solve tomorrow's problems, they must also learn how to create these tools.

**History/Background**

In 2014, the Connecticut State Board of Education (Board) approved the formation of a Connecticut State Department of Education (CSDE) Computer Science Advisory Group to ensure access to the digital area through computer science. Since its inception, the Computer Science Advisory Group has worked closely with the CSDE to craft the Board's Computer Science Position Statement (2016), prepare the Connecticut Computer Science Standards for adoption (2018), and create the Computer Science Implementation Guidelines (2018).

The Computer Science Advisory Group completed the Connecticut Computer Science Plan to provide a statewide vision to assist in the coherent implementation of high-quality K–12 computer science instruction and opportunities for all Connecticut K–12 students. The draft Connecticut Computer Science Plan was presented to the Board for review on November 6, 2019.

**Recommendation**

The CSDE presents the Connecticut Computer Science Plan for approval.

**Next-Steps**

The CSDE will continue to work with multiple partners to ensure implementation of computer science goals and strategies.

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# Connecticut Computer Science Plan

The Connecticut State Board of Education (Board) believes that computer science is key to developing and integrating 21st Century Skills (e.g., technology, communication, collaboration, critical thinking, problem solving, innovation, creativity, persistence). The Board further believes that all Connecticut public schools must provide challenging and rigorous programs of study in computer science across all grade levels. As such, in 2014, the Board approved the formation of a Connecticut State Department of Education Computer Science Advisory Group to ensure access to the digital area through computer science. Since its inception, the Computer Science Advisory Group has worked closely with the Connecticut State Department of Education (CSDE) to craft the Board's Computer Science Position Statement (2016), prepare the Connecticut Computer Science Standards for adoption (2018), and create the Computer Science Implementation Guidelines (2018).

In the summer of 2019, the Computer Science Advisory Group completed a draft Connecticut Computer Science Plan to provide a statewide vision to assist in the coherent implementation of K–12 computer science instruction and opportunities for all Connecticut K–12 students to engage in high-quality computer science education. The format of this plan was provided by Code.org as part of the efforts to assist states in broadening computer science access to students. The Draft Connecticut Computer Science Plan defines implementation goals, supports the expansion of teachers' knowledge and skills, proposes policy reforms, and outlines potential costs.

Addressed in the Connecticut Computer Science Plan are key policy and implementation issues related to standards, certification, course pathways, graduation requirements, higher education entrance requirements, and professional learning. Bringing this plan to scale will require a coordinated effort by multiple stakeholders as well as oversight to ensure success.

## COMPTER SCIENCE ADVISORY GROUP MEMBERS

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# 1. Current Landscape and Strategic Goals

## *What is going on in our state, what are our goals, and how close are we to meeting them?*

The development of a state plan benefits from collecting data and administering a survey to understand the current landscape of computer science education in the state. The data is used to inform the overall goals and metrics for the state plan.

### Landscape Report

In this section, the objective is to gather relevant data on the current policy and implementation landscape for K-12 computer science and use them to define the goals and metrics for the state plan. This section includes examples of data that could be collected to determine a baseline for computer science implementation.

Landscape Report					
Goals					
1. Measure the current state of computer science education to inform goals.					
Strategies	Start/End	Responsible Party/Partners	Progress		Specific Evidence of Success or Completion
			Planning	Acting	
Landscape Report	August 2018	ECEP Alliance state leaders		Done	<a href="#">Publicly available report</a>
Obtain Code.org CT data for CT.	February 2019	Code.org and CSDE		Done	Email correspondences <a href="#">Code.org State Fact Sheet</a>
Cross-reference NCES code.org codes with EdSight to get an accurate picture of trends in CS in CT	April 2019	CSDE		Done	<a href="#">Excel spreadsheet of</a>

					<a href="#">trend data</a>
Survey CT Superintendents to get baseline information about CS offerings.	April 2019	CAPPS		Done	<a href="#">Report of Survey results</a>
Using the NCES codes obtain demographics of students enrolled in CS courses.	May 2019	Performance Office		X	Data on # of courses, enrollment, and demographics
Identify workforce needs related to computer science by region in Connecticut.	Fall 2019	Department of Labor		X	Regional data will be available to stakeholders
Compare the demographics of the students enrolled in CS Courses with the overall demographics of the school and state to identify the gap.	August 2019	CSDE		X	Comparison data organized in a spreadsheet
Update guidance provided to districts in regards to course reporting to ensure that the data in EdSight is a true picture of CS in Connecticut.	March 2020	Performance Office and Jennifer Michalek	X		Publicly available guidance document

## Strategic Goals

In this section, the strategic goals for Connecticut are identified by defining the overarching vision, goals, and timeline.

<b>Strategic Goals</b>
<p><b>Overarching Vision Statement for Computer Science Education</b>          By 2024, all K-12 schools in Connecticut will offer computer science instruction aligned to the state approved standards and have a qualified computer science teacher to deliver this instruction. Computer science permeates all facets of the modern world. As a result, Connecticut envisions a future in which students:</p>

<ul style="list-style-type: none"> <li>critically engage with computer science topics;</li> <li>develop as learners, users, and creators of computer science knowledge and artifacts; and</li> <li>understand the role of computing in the world around them.</li> </ul>					
Goal(s)	Related Subsection of Plan	Start/End	Responsible Party/Partners	Progress	
				Planning	Acting
Implement K-12 computer science standards with fidelity at all grade bands.	Curriculum and Courses	June 2018	CSDE, LEAs, Professional Learning Partners. CTCSTA		X
Establish certification pathways for in-service and pre-service teachers. 1. Establish full certification endorsement for computer science. Create cross-endorsement options for currently certified teachers.	Teacher Pipeline	Spring 2019/July 2020	CSDE		X
Establish at least one teacher who is teaching high-quality computer science courses in every school in Connecticut: 1. Establish at least one teacher who is teaching high-quality computer science courses in every high school. 2. Establish at least one teacher who is teaching computer science or integrated computer science courses at each elementary and middle school.	Teacher Pipeline	Summer 2019	LEA, Professional Learning Partners, Higher Ed	X	
Increase the percentage of students in underrepresented groups enrolling in secondary computer science courses: 1. By 2025, reduce by half the gap in the number of female students enrolled in secondary computer science courses.	Diversity	Fall 2019/Fall 2025	CSDE, LEAs, Higher Ed and Partner organizations	X	



<ol style="list-style-type: none"> <li>2. By 2025, reduce by half the gap in the number of high-need students enrolled in secondary computer science courses.</li> <li>3. By 2025, reduce by half the gap in the number of racial minority students enrolled in secondary computer science courses.</li> <li>4. By 2025, increase by 20% the number of students enrolled in AP level computer science courses.</li> <li>5. By 2025, have a more diverse representation in the teachers teaching computer science courses.</li> </ol>					
<p>Allow Computer Science credits to count as part of the STEM requirement for graduation.</p>	Curriculum and Courses	Fall 2019	CSDE, LEAs		X
<p>Message computer science education effectively across all stakeholder groups in Connecticut.</p>	Outreach	Fall 2019	CTCSTA, CSDE, Governor's Office	X	
<p>Provide opportunities for feedback to improve CS efforts in the state.</p>	Outreach	Fall 2019	CSDE, LEAs	X	
<p>Secure funding at the federal, state and local level to support implementation of the state plan.</p> <ol style="list-style-type: none"> <li>1. Secure federal, state, philanthropic and local industry/business funding to advance computer science education statewide.</li> <li>2. Coordinate a collaborative funding stream to ensure effective implementation of the computer science state plan.</li> </ol>	Funding	Fall 2019	Business/Industry Partners, Connecticut State Agencies, CSDE		X

## 2. Diversity

### *How will we ensure that all students have access to and are engaged in K-12 computer science?*

The result of equitable access should be computer science classrooms that are diverse in terms of race, gender, disability, socioeconomic status, and English language proficiency. This section contains the strategies for broadening participation in computing.

<b>Diversity</b>					
<b>Goals</b>					
<ol style="list-style-type: none"> <li>1. By 2025, reduce by half the gap in the number of female students enrolled in secondary computer science courses.</li> <li>2. By 2025, reduce by half the gap in the number of high-need students enrolled in secondary computer science courses.</li> <li>3. By 2025, reduce by half the gap in the number of racial minority students enrolled in secondary computer science courses.</li> <li>4. By 2025, increase by 20% the number of students enrolled in AP level computer science courses.</li> <li>5. By 2025, have a more diverse representation in the teachers teaching computer science courses.</li> </ol>					
<b>Strategies</b>	<b>Start/End</b>	<b>Responsible Party/Partners</b>	<b>Progress</b>		<b>Specific Evidence of Success or Completion</b>
			<b>Planning</b>	<b>Acting</b>	
Advertise and/or sponsor CS events, trainings, competitions that have a focus on underrepresented student populations.	Ongoing	Supporting Community Partners (non and for profit), RESC, CSDE, Professional Associations, Higher Education, Community Colleges Curriculum		X	Increased participation of underrepresented student populations.

		Providers, DOL			
Identify opportunities and build partnerships with state diversity and equity initiatives to implement the state plan.	Ongoing	Supporting Community Partners, Districts, State Agencies	X		Establishment of partnerships that promote diversity in CS education.
Broaden recruitment efforts for computer science professional learning and cross endorsement.	Ongoing	CSDE, Professional Organizations, RESC, Professional Learning partners		X	Increased participation in professional learning activities, especially in underrepresented districts; more cross endorsements attained.
Determine baseline demographic data of teachers currently teaching computer science.	August 2019	CSDE	X		Spreadsheet with demographic data organized
Identify the gap in statewide demographics and the current percentage of underrepresented populations enrolling in secondary computer science courses.	August 2019	CSDE, Landscape study leads	X		Spreadsheet with the demographic data organized
Establish a CS4CT coordination team including representatives from stakeholders including but not limited to CSDE, Higher Education, Public Education, Professional Learning Partners, Business/Industry	Spring 2020	CSDE, Higher Education, Professional Learning Partners, Business/Industry	X		Coordinated efforts for all stakeholders by a steering group to ensure successful implementation

					and reevaluation of the state plan.
Develop a plan to address diversity by RESC region based upon the gap data for students and teachers and workforce needs for the regions.	Spring 2020	RESCs, CSDE, CsforCT	X		Actionable plan developed and implemented for each RESC region.
Provide training focused on recruiting underrepresented populations for district administrators and school counselors.	Summer 2020	NCWIT, CAPSS, CAS, CSforAll	X		Increased participation of underrepresented student populations; more CS course offerings.
Provide guidance to districts on how to incorporate computer science into student success plans.	Fall 2020	CSDE	X		Guidance document that leads to increased awareness will result in increased enrollment in CS courses at the high school.
Utilize the metrics and tools from the ECEP Alliance to measure and expand diversity	Contingent upon availability of metrics and tools	CSDE, ECEP state leads	X		More accurate data to measure diversity gains in CS over time

### 3. Teacher Pipeline

#### *Where will the computer science teachers come from?*

Connecticut can address the teacher pipeline in three ways: professional learning for existing teachers, certification for ensuring qualified teachers are teaching computer science courses, and the development of preservice preparation programs to maintain a supply of teachers over the long term.

#### Professional Learning

The purpose of providing professional learning for teachers of other subjects is to leverage the existing pool of teachers and provide a short-term approach for increasing the number of computer science opportunities in schools.

Professional Learning					
Goals					
<ol style="list-style-type: none"> <li>1. Establish at least one teacher who is teaching high-quality computer science courses in every high school.</li> <li>2. Establish at least one teacher who is teaching computer science or integrated computer science courses at each elementary and middle school.</li> </ol>					
Strategies	Start/End	Responsible Party/Partners	Progress		Specific Evidence of Success or Completion
			Planning	Acting	
Post relevant professional learning offerings, including online and in-person opportunities on the CSDE, related professional organizations' websites and utilize the CSDE computer science listserv to advertise professional learning opportunities, particularly those	Summer 2019	SDE, Professional Associations, Higher Education		X	Increased attendance at the professional learning events.

that are focuses on broadening participation of underrepresented populations.					
Provide incentives and/or recognition to districts and/or teachers for participating in CS professional learning.	Summer 2019	Professional learning providers, CSDE, districts, private industry, community partners		X	Increased teacher and district participation across the state.
Secure professional learning funding for all levels.	Fall 2019	State agencies, Community based educational partners, Business/industry		X	Establishment of a CS education account. Funding is available so no teacher is denied professional learning that is needed. Utilizing Perkins V funds to support professional learning for Career and Technical Education implementation of CS pathway in the Information Technology cluster.
Identify high-quality professional learning at each grade band.	Fall 2019 /Spring 2021	CSDE, Professional Learning Partners,	X		Document detailing high-quality professional learning aligned to standards by grade

					band that is posted on appropriate websites and shared with listservs. Increase in the number of teachers participating in CS professional learning.
Develop in-depth professional learning about the progression of the CS Standards and host trainings across the state.	Fall 2020/ Spring 2021	CSDE, Current CS Educators, RESCs	X		Trainings are available and held across the state.
Provide recognition to public and private industry that contribute to computer science professional learning for teachers.	Spring 2020	Business and Industry, Community Partners, Professional Organizations, State agencies	X		Posting on websites and highlighting participation in programs.
Provide incentives to institutes of higher education to develop and provide in-depth computer science professional learning aligned to cross-endorsement requirements to in-service teachers.	Spring 2020	Board of Regents, OHE	X		Existence of professional learning opportunities for in-service teachers.

## Certification and Licensure

In this section, the steps towards a certification system that includes short-term steps to allow existing teachers to add a CS endorsement quickly, as well as long-term steps such as full certification pathways are identified.

<b>Certification and Licensure</b>					
<b>Goals</b>					
<ol style="list-style-type: none"> <li>1. Establish full certification endorsement for computer science.</li> <li>2. Create cross-endorsement options for currently certified teachers.</li> </ol>					
<b>Strategies</b>	<b>Start/End</b>	<b>Responsible Party/Partners</b>	<b>Progress</b>		<b>Specific Evidence of Success or Completion</b>
			<b>Planning</b>	<b>Acting</b>	
Determine necessary coursework to obtain a cross endorsement in CS.	September 2019	CSDE		X	Requirements for cross endorsement will be public and guidance will be provided about related coursework.
Adopt a subject content exam and determine the passing cut score based on the multi-state standard to allow a passing score to qualify a currently certified teacher for a CS cross endorsement.	July 2020	CSDE, SBE		X	Connecticut teachers obtaining cross-endorsement by meeting the satisfactory score on the approved subject area assessment.
Develop, approve and offer an alternate route to certification program for computer science.	Fall 2020	RESC, IHE, CSDE Program Approval		X	Increase in the number of teachers certified in



					computer science as a result of successful completion of an approved alternative route program.
Explore micro-credential options for computer science teachers.	Fall 2020	CSDE, micro-credential providers	X		Increase the number of in-service teachers cross endorsed in computer science.
Target computer science efforts towards teachers who hold certifications in areas that are difficult to find employment.	Fall 2020	CSDE, Higher Education	X		Increase in the number of computer science teachers, K-12 and higher employment rates of certified teachers.

## Preservice Programs

This section contains the steps for promoting new preservice programs at institutions of higher education. Long term sustainability of a teacher pipeline for computer science teachers requires a supply of new teachers graduating from preservice programs with the ability to teach computer science, whether they were part of a dedicated program for computer science or computer science was integrated into another preservice track.

<b>Preservice Programs</b>
<b>Goals</b> <ol style="list-style-type: none"> <li>1. Integrate computer science education into all elementary teacher-prep programs.</li> <li>2. Develop computer science preservice programs for secondary educators at the institutions of higher education in the state.</li> </ol>

Strategies	Start/End	Responsible Party/Potential Partners	Progress		Specific Evidence of Success or Completion
			Planning	Acting	
Present at the quarterly meeting with Deans of institute of higher education the CS movement, including details on certification pathways and opportunities for directing students to teach.	Fall 2019	CSDE, Higher Education		X	Meeting documented in the agenda. Increase in the number of Institutes of Higher Education that understand and offer programs leading to computer science education.
Create a full certification pathway by developing requirements to guide initial computer science certification for preservice teachers.	July 2020	Higher Education, CSDE		X	Increase in teachers being certified in computer science from pre-service programs.
Include computer science as part of all teacher preparation programs as appropriate for grade-level and subject content.	Fall 2020	Board of Regents, Higher Education, CSDE		X	Adjustment to current pre-service course offerings
Provide incentives to institutes of higher education to create pre-service teacher prep programs leading to Connecticut certification.	Fall 2020	CSDE, Higher Education	X		Increase in the number of Institutes of Higher Education that offer pre-service programs.
Provide incentives for CS Majors who commit to teaching computer science for a set number of years.	Fall 2021	State Agencies, Higher Education, LEAs	X		There will be an increase in the number of CS Majors obtaining

					certification to teach at the secondary level.
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## 4. Curriculum and Courses

***What courses will teachers be teaching? What curriculum best aligns with the computer science goals in your state?***

Standards are an essential component of a larger education plan and provide a foundation with which to align the other components, such as curriculum, instruction, and policies such as graduation requirements. The expectation that all students learn computer science can be supported by allowing computer science to satisfy a core graduation requirement. The development and selection of curriculum and courses plays a significant role in the access and equity movement in computer science education.

### Standards

Standards allow curriculum to be created and selected based on a coherent vision of computer science education that sets learning goals for all students, from kindergarten to high school graduation.

<b>Standards</b>					
<b>Goals</b> 1. Adopt computer science standards K-12 for inclusion in all schools in Connecticut.					
Strategies	Start/End	Responsible Party/Partners	Progress		Specific Evidence of Success or Completion
			Planning	Acting	
Adopt computer science standards.	June 2018	SBE		Done	State Board of Education

					Resolution
Provide guidance to districts on how to effectively implement the adopted standards.	June 2018	CSDE		Done	Implementation guide posted on the CS page of the CSDE website.
Prepare a crosswalk document that shows the integration of the CS standards with other standards including but not limited to Connecticut Core Standards, NGSS, ISTE and the National School Library Standards.	January 2020/January 2021	CSDE	X		Publicly available crosswalk document
Provide professional learning on the standards. Professional learning should be specific to grade level and content domain.	Summer 2020	CSDE, Community partners, Professional learning providers	X		Sign-in sheets from professional learning opportunities and increased implementation of the standards.

## Curriculum

This section contains the process of planning the development and selection of curriculum and courses.

<b>Curriculum</b>				
<b>Goals</b> 1. Implement computer science standards through aligned curriculum with fidelity.				
<b>Strategies</b>	<b>Start/End</b>	<b>Responsible</b>	<b>Progress</b>	<b>Specific Evidence</b>

		<b>Party/Partners</b>	<b>Planning</b>	<b>Acting</b>	<b>of Success or Completion</b>
Share information pertaining to CTE pathways in the Information Technology Cluster which includes CS courses.	Spring 2019/Fall 2019	CSDE		X	Career Cluster, Career Pathway, and Program of Study document
Implement early college experience credit courses in CS at the high school in partnership with community and state institutes of higher education.	Fall 2019	Higher Education, LEAs		X	Increase in college computer science credit awarded in Connecticut High Schools
Share aligned curricular resources, both embedded and stand alone, that are available at each grade level and within various contents.	January 2020	CSDE, CTCSTA	X		Posted resources on the CSDE computer science web page.
Offer regional SCRIPT training for districts to develop a computer science implementation plan.	Summer 2020	CSDE, Community Partners, CSforAll	X		District implementation plans will provide an increase in students having access to and taking part in CS courses.

## Graduation Requirements

This section contains the strategies that will be used to enable computer science to count as a core graduation requirement under the requirements that call for 9 credits in science, technology, engineering, and math.

<b>Graduation Requirements</b>
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<b>Goals</b>					
1. Allow Computer Science credits to count as part of the STEM requirement for graduation.					
<b>Strategies</b>	<b>Start/End</b>	<b>Responsible Party/Partners</b>	<b>Progress</b>		<b>Specific Evidence of Success or Completion</b>
			<b>Planning</b>	<b>Acting</b>	
Send guidance letter to districts about enabling standards aligned computer science courses to fulfill one of the 9 required STEM credits.	Fall 2019	CSDE	X		Local graduation requirements will be updated so that CS fulfills a graduation requirement.
Collaborate with higher education to allow computer science to satisfy an admissions requirement	Summer 2021	LEAs, CSDE, Higher Education, CTCSTA	X		Computer science is permitted to be used as an admission requirement in all CT institutes of higher education.

## 5. Outreach

***How will people know about the plan to offer computer science to all students and provide input/feedback?***

Effective implementation of the statewide computer science initiative requires proactive communication using a variety of methods at the state, district, and school level. Students, educators, administrators, community members, and industry leaders must have open channels of communication to ask questions and provide feedback. This section explains Connecticut's outreach plan.

<b>Outreach</b>					
<b>Goals</b>					
<ol style="list-style-type: none"> <li>1. Create uniform, coherent, and coordinated messaging for a diversity of audiences</li> <li>2. Establish opportunities to obtain feedback from stakeholders and to measure effectiveness of implementation</li> </ol>					
<b>Strategies</b>	<b>Start/End</b>	<b>Responsible Party/Partners</b>	<b>Progress</b>		<b>Specific Evidence of Success or Completion</b>
			<b>Planning</b>	<b>Acting</b>	
Maintain the computer science page on the CSDE Web site to provide information relevant to computer science education across the state.	July 2019	CSDE		X	Updated and relevant information posted on the computer science page of the CSDE website.
Draft and finalize general messaging around goals, benefits, and calls to action of statewide plan.	Fall 2019	Governor's Office, CSDE	X		Messaging briefs documenting general messaging, benefits, and calls to action that can be used to develop audience specific materials.
Create materials that persuasively present general messaging across multiple channels and multiple audiences.	January 2020	Communications, CSDE, CS4CT	X		<ul style="list-style-type: none"> <li>• Postings on CSDE, CTCSTA, and other related websites</li> <li>• Social Media Accounts and Tags</li> </ul>

					<ul style="list-style-type: none"> <li>• One-Page Handout for talking points</li> <li>• Press releases</li> <li>• Video Spots for Web and TV</li> </ul>
Establish and track the impact of outreach and communication activities to drive future outreach planning.	Spring 2020	Communications, CS4CT, CSDE	X		<ul style="list-style-type: none"> <li>• Defined success and impact measures</li> <li>• Impact report including activities and progress of impact as defined by the measures</li> </ul>
Develop standard presentation materials and slide deck to meet the needs of various audiences.	Spring 2020	CSDE, CS4CT	X		<ul style="list-style-type: none"> <li>• PowerPoint slide deck and related presentation materials that can be customizable to specific audiences</li> </ul>
Establish, follow, and track a schedule of coordinated outreach efforts across formats and media.	Winter 2020	Communications, CS4CT, community partners	X		<ul style="list-style-type: none"> <li>• Media Purchasing Plan</li> </ul>



					<ul style="list-style-type: none"> <li>• Shared Schedule of Presentations</li> <li>• Log of Activity</li> </ul>
Obtain feedback from stakeholders for review, response, and action based on feedback provided.	Winter 2020	Communications team	X		<ul style="list-style-type: none"> <li>• Web and print feedback forms and/or surveys</li> <li>• Updates to the state plan as needed</li> </ul>
Conduct focus groups with key leadership organizations, including CABE, CAPSS, and CAS as well as teacher unions to solicit feedback on the state plan.	Winter 2020	CSDE, CS4CT, Governor's Office	X		Feedback from focus group meetings

## 6. Funding

### *How will we pay for this effort?*

Funding is required to achieve many of the goals in a plan. Approaches and uses of funding can differ over the short term and long term of implementing K-12 computer science. In the short term, dedicated funding for computer science should be allocated and the funding should emphasize the professional learning of existing teachers for the purpose of building an initial teacher force. Funding priority should be given to districts in which a demonstrable effort will be made to engage underrepresented groups. In the long term, states should secure sustained funding streams to support a system of high-quality computer science education. This section explains the plan to secure funding to support the execution of the state plan.

<b>Funding</b>
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<b>Goals</b>					
1. Secure federal, state, philanthropic and local industry/business funding to advance computer science education statewide. 2. Coordinate a collaborative funding stream to ensure effective implementation of the computer science state plan.					
<b>Strategies</b>	<b>Start/End</b>	<b>Responsible Party/Partners</b>	<b>Progress</b>		<b>Specific Evidence of Success or Completion</b>
			<b>Planning</b>	<b>Acting</b>	
Establish avenues for philanthropic funds to be able to be used to support computer science implementation.	Summer 2019	Advocacy Group, Appropriate entities to apply for grants		X	Funding for computer science initiatives.
Partner with researchers and apply for NSF and DoEd grants to support computer science implementation.	Summer 2019	Higher Education, CSDE, LEAs, Community partners		X	A multi-year NSF or DoEd grant.
Work with the Connecticut's Department of Economic and Community Development to set aside funding and in-kind support for the advancement of computer science education.	Fall 2019	DECD, Advocacy Group		X	A line item in the economic development budget for K-12 computer science initiatives.
Provide guidance to districts on establishing a CTE pathway for computer science that can be supported with the use of Perkins funds.	Fall 2019	CSDE		X	Computer science pathways established in secondary schools.
Work with the Connecticut General Assembly and the Governor's office to propose a bill to fund computer science education.	January 2020/May 2020	Advocacy Group, Legislative Leaders, Community Partners,		X	A bill signed by the governor providing ongoing funding for computer science initiatives.

		Business/Industry Partners			
Utilize VISTA volunteers to increase human capital to support computer science initiatives.	Summer 2020	AmeriCorps VISTA, CSforCT	X		Increased number of trainers for computer science implementation
Work with Connecticut Department of Labor (CT-DOL) to include computer science education training in funding opportunities	Fall 2020	Regional Workforce Development Boards, DOL, CSDE	X		Computer Science included as a priority for the Regional Workforce Development Boards.
Establish avenues for corporate support including funding and in-kind donations to be able to be used to support computer science implementation.	Fall 2020	Advocacy Group, Industry Organizations and Companies	X		Funding and staff for computer science initiatives
Obtained free or reduce rate services from vendors of curriculum and training.	Winter 2020	CSDE, Vendors	X		Free or reduced rates compared to public offerings
Work with Connecticut's ESSA planning committee to include computer science funding in Title I, II, or IV.	Contingent upon timeline for ESSA review	CSDE	X		Computer Science included as a priority in the state's ESSA plan.