To increase the number and diversity of students from the K-16 educational pipeline to computing-intensive degrees by supporting state-level computing education reforms.

**Objective**

Building a LEGO WeDo model at Cool Girls middle school summer camp at Georgia Tech

**Goals & Activities**

**PARTNERSHIPS:** Developing partnerships to implement and expand computing pathway infrastructure and activities in states

- Among states: built a cohort of state leaders in California, Massachusetts, Georgia, South Carolina, Alabama, Indiana, and Puerto Rico to share interventions and strategies.
- In California: ECEP works with the Alliance for California Computing Education for Schools and Students (ACCESS), code.org, Exploring Computer Science (ECS), community colleges, and others.
- In South Carolina: ECEP works with IT-oLogy, the Univ. of South Carolina, and helped establish the SC Steering Committee (SCSC).

**PATHWAYS:** Facilitating expanding and supportive computing education pathways at the state level

- In Massachusetts, ECEP is helping to establish K12 CS standards and improving college transfer in CS.
- In California, ECEP/ACCESS hosted a Transfer Pathway Summit and worked toward getting AP CS-A to count toward college admission.
- In Georgia, ECEP worked to improve transfer between two- and four-year college degree programs. Two new high school computing pathways both include CS Principles. Math and science teachers (in addition to business teachers) can now teach CS.

Building a LEGO WeDo model at Cool Girls middle school summer camp at Georgia Tech

Creating a musical pickle at a high school summer camp at Georgia Tech
**INTERVENTIONS:** Identifying and developing interventions in the teaching and learning of computing  
- Project Rise Up 4 CS, supported also by a Google RISE grant, helped 55 African-American students in Georgia and Maryland prepare for the AP CS-A exam. Both states had a record number of students pass the exam in 2014.  
- Computing camps at six sites in California, Massachusetts, and South Carolina were supported with seed funds, training, and evaluation. More than 250 students attended the camps and showed significant increases in attitudes toward computing. All sites plan to continue the camps.  
- Four South Carolina teachers attended ECS professional development to prepare to lead future ECS professional development in their state.  
- Artbotics developed web-based curriculum materials for expansions to LEGO Mindstorms platforms; 80 educators and 52 students participated in Artbotics workshops last year.

**MODELS:** Defining and sharing models to drive change and providing frameworks for evaluation  
- Generated conversations around state-level changes in CS education at state and national conferences (SIGCSE, CSTA, NCWIT Summit).  
- Developed “How to change a state 1.0”—a four-step model.  
- Initiated seed funding (mini grants) for partner and associate states in 2015.

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<thead>
<tr>
<th>How to change a state (1.0)</th>
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<tbody>
<tr>
<td>1. Find your leaders and change agents</td>
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<td>2. Understand your state’s computing education landscape and identify key issues/policies for change</td>
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<td>3. Gather and organize your allies</td>
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<td>4. Get initial funding to support change</td>
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How to collaborate  
ECEP welcomes leaders initiating state-level computing education reforms to contribute to and learn from our growing community. Browse our website (www.ECEPAlliance.org) for ideas and resources.

Once you have an identified leader(s), a steering committee of stakeholders, and identified priorities, contact us about becoming an ECEP associate state (and possibly eligible for minigrant funding) by emailing ECEPAlliance@gmail.com.

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