



**Colorado STEM - Compute Colorado Task Force
Commons on Champa at 1245 Champa St, Denver, CO 80204
November 5-6, 2015**

AGENDA

Meeting Purpose

The Colorado Education Initiative (CEI), the Colorado Technology Association (CTA), and the National Center for Women & Technology are convening this education and technology task force — Compute Colorado — to initiate the development of a strategy for increasing the number and diversity of Colorado students prepared to compete for high-demand, high-wage technology jobs.

Meeting Outcomes

This meeting will result in a prioritized set of actions to position K-12 as a leader in increasing the number and diversity of Colorado students excited and prepared to compete for in-demand technology jobs. This initial strategy development process will be released as a part of Computer Science Education Week December 7-13, 2015.

Meeting Attendees

Colorado school district leaders, educators, state industry executives, and national experts.

Agenda-At-A-Glance

Thursday November 5

- 10:30-10:45** Welcome and Meeting Objectives
- 10:45-11:15** Overview of Colorado STEM
- 11:15-12:00** Participant Introductions
- 12:00-12:15** Colorado’s State and Local Landscape and Context
- 12:15-12:45** Networking Lunch
- 12:45-1:15** Colorado’s Computer Science Challenge and Opportunity
- 1:15-1:45** What the Data Say
- 1:45-2:00** Break
- 2:00-2:45** Examples of Promising Work and a Conversation with Mass CAN
- 2:45-4:00** Small Group Discussion - What Would Work/Not Work for Colorado
- 4:00-4:15** Popcorn Report Out
- 4:15-4:30** Colorado’s Pipeline in a Picture - Setting the Sandbox and Brainstorming the Strategies
- 4:30-4:45** Close and Set-Up for Tomorrow

Friday November 6

- 8:30-9:00** Networking Breakfast
- 9:00-10:00** Facilitated Brainstorming - Aligning the K-12 Pipeline to Meet the Demand
- 10:00-11:45** Breakouts to Refine Strategies
- 11:45-12:15** Break and Grab Lunch
- 12:15-2:15** Bringing it All Together - Compiling Strategies across K-12 by Partner
- 2:15-3:15** Prioritization Activity and Reflection
- 3:15-3:30** Close and Next Steps



Detailed Agenda

Thursday November 5

10:30-10:45 **Welcome and Meeting Objectives**
Wendy Nkomo, Executive Director, Colorado Technology Association Foundation

10:45-11:15 **History and Context of Colorado STEM**
Robin Hubbard, Chief Operating Officer, Gill Foundation
Angela Baber, STEM Director, The Colorado Education Initiative

11:15-12:00 **Participant Introductions**
Jaren Smith, Math Content Specialist, The Colorado Education Initiative

12:00-12:15 **Colorado’s State and Local Landscape and Context**
Stephanie Veck, Director, Colorado Workforce Development Council

12:15-12:45 **Networking Lunch**

12:45-1:15 **Colorado’s Computer Science Challenge and Opportunity**
Alison Derbenwick Miller, Vice President, Oracle Academy
Janice Cuny, Computer Education Program Officer, National Science Foundation

This session is intended to paint a clear picture of the challenges and opportunities for industry and education partners in Colorado in terms of the computer science talent pipeline. Industry partners will share the challenges they face in Colorado in recruiting talent to fill in-demand tech sector jobs, and the economic implications of these challenges. Education partners will share the challenges they face in increasing access to quality computer science and computational thinking content, courses, and experiences.

1:15-1:45 **What the Data Say**
Lauren E. Victor, Ph.D., Talent Development Research and Policy Analyst, Colorado Department of Higher Education
Gretchen Morgan, Executive Director, Innovation and Choice, Colorado Department of Education (tentative)

After developing a better understanding of the challenges faced by industry and education, experts will present data on the state of supply and demand for high-demand tech-sector jobs in Colorado.

1:45-2:00 **Break**

2:00-2:45 **Examples of Promising Work and a Conversation with Mass CAN**
Gail Chapman, Director of National Outreach, Exploring Computer Science
Jim Stanton, Executive Director and Senior Project Manager, MassCAN
Janice Cuny, Computer Education Program Officer, The National Science Foundation



Gail Chapman will frame the session by sharing a high-level overview of related work across the country and will introduce our Massachusetts partner, Jim Stanton. Jim will share Massachusetts' process to develop a state strategy to increase the number and diversity of students prepared to enter computer science. Janice Cuny will wrap up the session with an overview of available assets and resources to advance this work.

2:45-4:00 **Small Group Discussion - What Would Work/Not Work for Colorado?**

Angela Baber, STEM Director, The Colorado Education Initiative

Participants will brainstorm what approaches could work for Colorado and how to prioritize and execute these approaches. This is intended to be a brainstorming session to unearth ideas. Refinement will happen on Friday.

- **Table 1:** Facilitated by Jaren Smith, Math Content Specialist, The Colorado Education Initiative
- **Table 2:** Facilitated by Greg Hesse, Director, The Colorado Education Initiative
- **Table 3:** Facilitated by Wendy Nkomo, Executive Director, Colorado Technology Association Foundation
- **Table 4:** Facilitated by Emily Smith, Project Assistant, The Colorado Education Initiative
- **Table 5:** Facilitated by Angela Baber, STEM Director, The Colorado Education Initiative
- **Table 6:** Facilitated by: Casey Macaulay, Project Coordinator, The Colorado Education Initiative

Questions for small group discussion include the following:

- What are the benefits for Colorado students, educators, postsecondary institutions, companies, and community partners in dramatically increasing the number and diversity of Colorado students prepared and excited to fill in-demand computer science and tech sector jobs?
- From your perspective, what barriers must be overcome to advance meaningful strategies aligned to the goal of dramatically increasing the number and diversity of Colorado students prepared and excited to fill in-demand computer science and tech sector jobs?
- What assets already exist to support this work?
- How do we define quality programs, and how do we align those programs and make them accessible to all Colorado learners?
- Who are the local and state change agents who need to be engaged to support this work to achieve success, and how and when do they need to be engaged?
- How do we manage shifts in technology and content delivery?
- Other thoughts, contributions, concerns?

4:00-4:15 **Popcorn Report Out**

Group Facilitators



4:15-4:30 **Colorado’s Pipeline in a Picture - Setting the Sandbox and Brainstorming the Strategies**
Angela Baber, STEM Director, The Colorado Education Initiative

A visual one page representation of Colorado’s education pipeline K-12 mapped to Colorado tech sector industry demand will be presented. Participants will use this 1-page document to set priorities along the K-12 continuum to better align K-12 with industry demand on Friday.

4:30-4:45 **Close and Set-Up for Tomorrow**
Angela Baber, STEM Director, The Colorado Education Initiative

Friday November 6

8:30-9:00 **Networking Breakfast**

9:00-10:00 **Facilitated Brainstorming - Aligning the K-12 Pipeline to Meet the Demand**
Wendy Nkomo, Executive Director, Colorado Technology Association Foundation

This session will allow participants to share thoughts on when, where, and what K-12 education strategies and interventions should occur to better align K-12 with industry demand and to support more students, particularly underrepresented populations of students, with access to computational thinking and computer science.

10:00-11:45 **Breakouts to Refine Strategies**
Angela Baber, STEM Director, The Colorado Education Initiative

Participants will break into groups by role to further refine and build out priorities.

- **Table 1 – K-12 Strategies:** Facilitated by Jaren Smith, Math Content Specialist, The Colorado Education Initiative
- **Table 2 – K-12 Strategies:** Facilitated by Greg Hessee, Director, The Colorado Education Initiative
- **Table 3 – Industry Strategies:** Facilitated by Wendy Nkomo, Executive Director, Colorado Technology Association Foundation
- **Table 4 – Community Partner Strategies:** Facilitated by Emily Smith, Project Assistant, The Colorado Education Initiative
- **Table 5 – District and School Board Strategies:** Facilitated by Angela Baber, STEM Director, The Colorado Education Initiative
- **Table 6 – State Leader Strategies:** Facilitated by Gretchen Morgan, Executive Director, Innovation and Choice, Colorado Department of Education

11:45-12:15 **Break and Grab Lunch**

12:15-2:15 **Bringing it All Together - Compiling Strategies across K-12 by Partner**
Angela Baber, STEM Director, The Colorado Education Initiative
Jaren Smith, Math Content Specialist, The Colorado Education Initiative

Participants will begin to map strategies through a facilitated mapping exercise.



2:15-3:15 **Prioritization Activity and Reflection**

Angela Baber, STEM Director, The Colorado Education Initiative
Jim Stanton, Executive Director and Senior Project Manager, MassCAN
Janice Cuny, Computer Education Program Officer, The National Science Foundation

Participants will vote on and prioritize strategies. National partners will facilitate a discussion to identify red flags, gaps, or lessons learned to better inform the prioritization of strategies.

3:15-3:30 **Close and Next Steps**