

# Technical Workforce Issues: Working Towards a Solution

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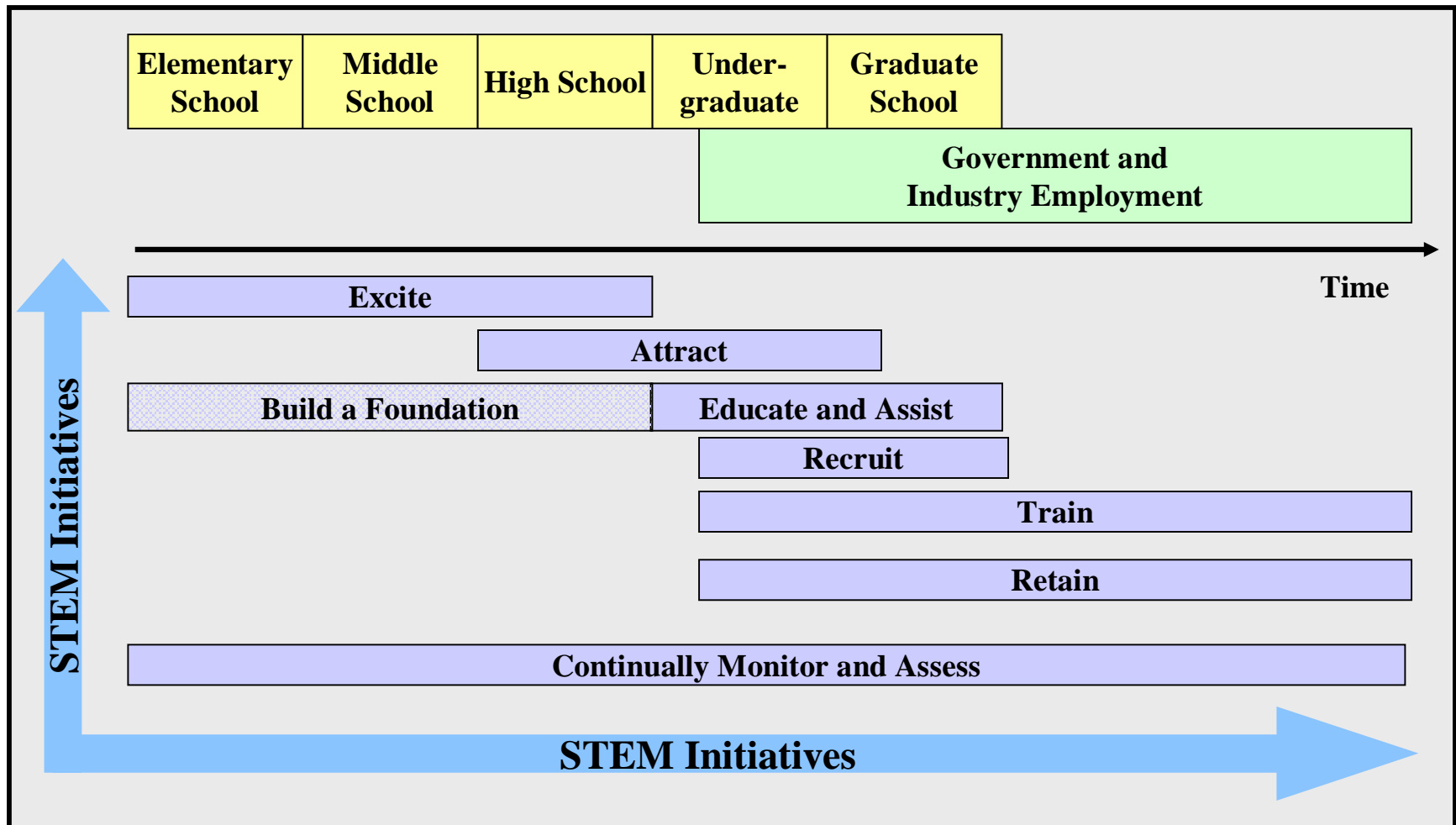
- **Mission**
  - Provide a forum for effective interaction between government, industry, academia and the public at large for the strengthening of the national security Science, Technology Engineering and Mathematics (STEM) workforce,
- **Objectives**
  - Increase NDIA’s chapter, division, affiliate and member company participation in exciting and attracting K-12 students into STEM careers
  - Foster cooperation between federal departments, agencies and industry on STEM workforce development initiatives
  - Support the development of integrated policies around the STEM workforce
  - Establish partnerships to collect and disseminate information and coordinate resources to build a robust STEM workforce of the future.
- **Vision**
  - “It is critical to our National Security to create a continuous and diverse supply of quality, clearable STEM workers in order to sustain our National Security supremacy and economic competitiveness”

# Systems Approach

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- This is really a “Supply Chain” Problem
  - Mismatch between what the national security employers need and what the schools are producing
  - “Old school” fix – find new suppliers or push the problem “down chain”
  - 21<sup>st</sup> Century fix – partner with suppliers and find the key chokepoints and processes that introduce variability or defects into the supply chain
- We must recognize that the problem, while National in scale, has its roots in, and must be fixed at, the local level
  - Department of Education does not control curriculum
  - Department of Labor does not control vocational school standards
  - Universities are (very) independent entities
- This requires two steps
  - A national strategy for tackling the problem
  - Local Action

# Conceptual Framework For STEM Discussions



**Focusing on Specific Phases Clarifies Objectives**

# Conclusions

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- The Perfect Storm is upon us
  - Low supply of clearable, highly skilled workers, engineers and scientists is real
  - Retirements resulting in loss of institutional memory and effective mentors
- Solutions require a broad range of action
  - K-12
  - Vocational and Technical colleges
  - Higher Education
  - Government
  - Industry & Industry Associations
- There are lots of solutions (initiatives) out there, but....
- Full spectrum response required
- Better understanding and coordination of initiatives is key to better utilizing resources and focusing energy on fixing this problem!

"We can't solve problems  
by using the same  
kind of thinking  
we used when we  
created them"

Albert Einstein



Any intelligent fool can make things  
bigger, more complex, and more  
violent. It takes a touch of genius --  
and a lot of courage -- to move in the  
opposite direction

Albert Einstein  
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