



## Summary of Ongoing Work on Possible Legislative Concepts for 2009-2011

October 30, 2007

The OPAS Steering Committee held a work session on October 23, 2007. The members present reviewed and discussed information from previous sessions as well as a recent strategy summary from the AeA. After this discussion, the group went through a nominating and voting process to identify the highest priority ideas for additional follow up. The following summaries were developed during the session and subsequently edited:

**Problem:** Oregon does not and will not have enough well-prepared college freshman pursuing engineering and applied science education unless forceful corrective action is taken.

**Scope:** OPAS is focusing its work on changes at the pre-college level.

**Solution Space:** Increase participation and success in pre-college engineering and applied science education and career exploration.

- This work relates to other areas where much improvement is needed including strengthening overall math and science preparation. While these efforts are critical to the success of ETIC's strategy, they are not sufficient and others with greater expertise are pursuing them.
- Implementation must emphasize the inclusion of underserved and underrepresented groups.

**Legislative Concepts:** The following were identified as the highest priority candidates for consideration as Legislative Concepts for the Oregon Legislative Session in 2009 or pursuing by other means.

## Candidate Concepts:

- **Concept 1: Create a STEM center to provide an infrastructure for continuing the work of strengthening Science, Technology, Engineering and Math education.**
  - Reference: Recent grants by National Governor’s Association. See <http://opas.ous.edu/Committees/Resources/Articles/NGARelease07-02-07.pdf>
  - Should include a program for engaging businesses in our vision, mission, and implementation.
  - Some existing STEM centers focus on education reform through teacher professional development. Some offer lab facilities and some offer STEM experiences to students.
  - Other possible models include regional hubs for connecting to local resources such as businesses or informal education organizations.
  - Future RFP funding and tracking could reside here.
  - Pro: STEM Center approach may represent a “best practice” for educational improvement.
  - Pro: STEM Center may provide forum for collaboration with those outside the pre-engineering & applied science community.
  - Con: The four letters in STEM imply a great deal of breadth, which may defocus the OPAS strategy.
  
- **Concept 2: Fund K12 implementation of pre-engineering and applied science programs with incentives for business involvement.**
  - Programs must have curricular, professional development, and assessment pieces.
  - Curricula and pedagogy should emphasize hands-on, applied practice.
  - Curricula should emphasize academic rigor to support university-bound engineering candidates.
  - Project Lead the Way represents one model but others should be considered.
  - Solution must address the need to reach more girls and underrepresented groups.
  
- **Concept 3: Fund programs that help students successfully make the transition from high school to college.**
  - Summer bridge programs are one model.
  - Successful programs probably need to start in middle and high school to help students understand and believe that college is part of their future.
  
- **Concept 4: Grow competitive grant programs to fund the implementation of OPAS goals and strategies.**
  - Should attempt to produce maximum results for money invested while assuring diversity in multiple dimensions
    - Economic background
    - Ethnicity
    - Geography
    - Gender
  - May want to establish subcategories for allocation that assure funding of the various aspects of the OPAS strategy.



## Criteria for Prioritizing Legislative Concepts 2009-2011

- How well does this choice **align with the vision, mission and strategies**?
  - See [OPAS Summary of Strategy, August 2007](#)
- What is the **breadth of impact** of this choice? How many students would be affected?
- What is the **depth of impact** of this concept?
- Will this concept have **short-term or long-term impact**? In either case, are the benefits lasting?
- Does it reinforce or enhance rigorous application of math, science, critical thinking and problem solving?
- Is this concept a **prerequisite** of one of our high-priority strategies?
  - [OPAS Summary of Strategy, August 2007](#)
- Are there **methods other than legislation** that could achieve the same results with fewer resources? E.g. Collaborative effort with other groups, policy action by an existing board, private or federal funding, grass roots efforts. (If so, what can OPAS do to further these collaborations or endorse others' efforts?)
- How well does this match the **expertise, connections, and passions** of members?
- **How likely** is it that we can get this concept turned into a bill and get it passed? Does it align with the work of education or workforce boards? Do we have ideas about who might endorse it?
- What is the **sequence / roadmap** of steps for success over long term?