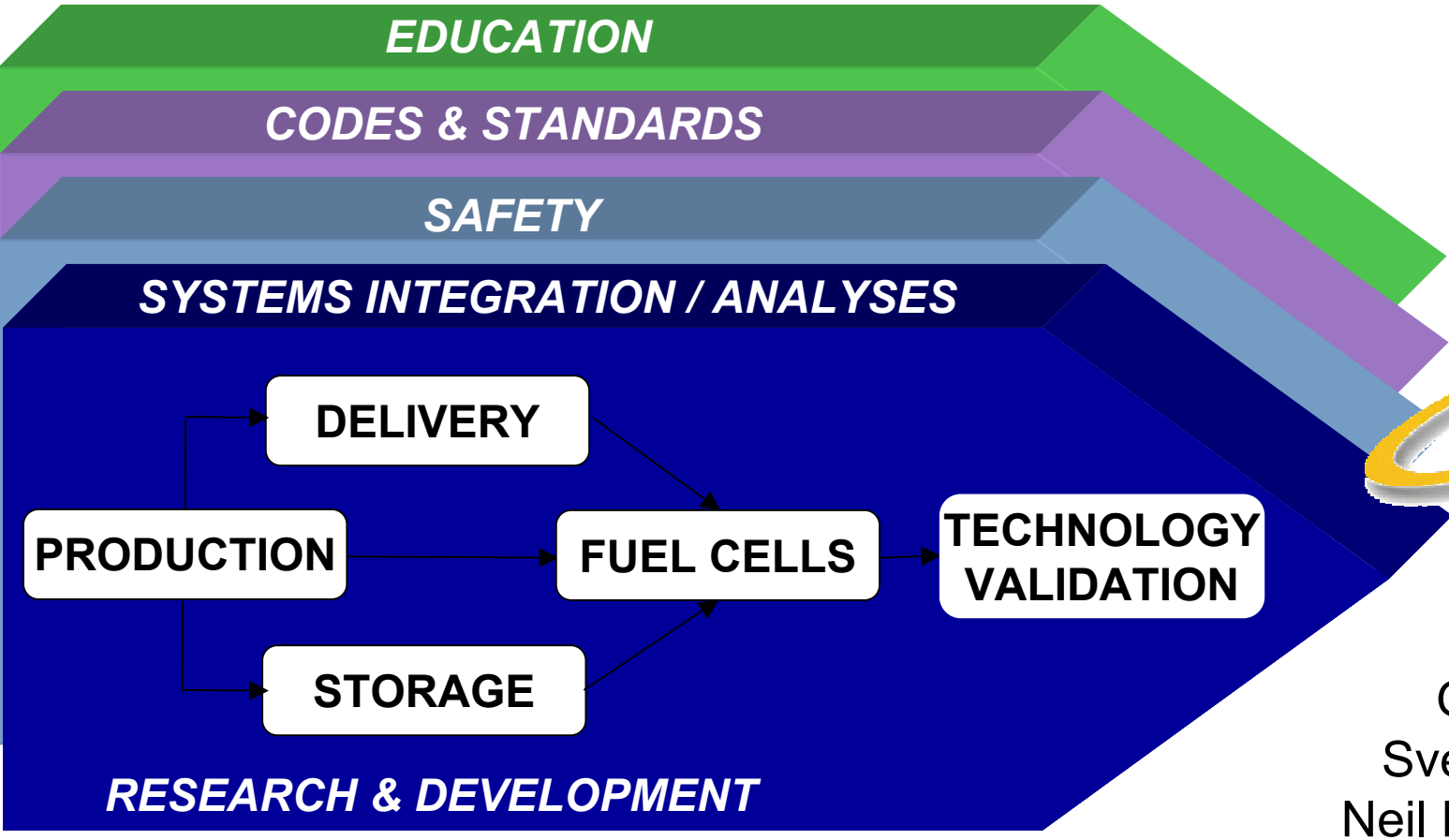
DOE Coordination Meeting



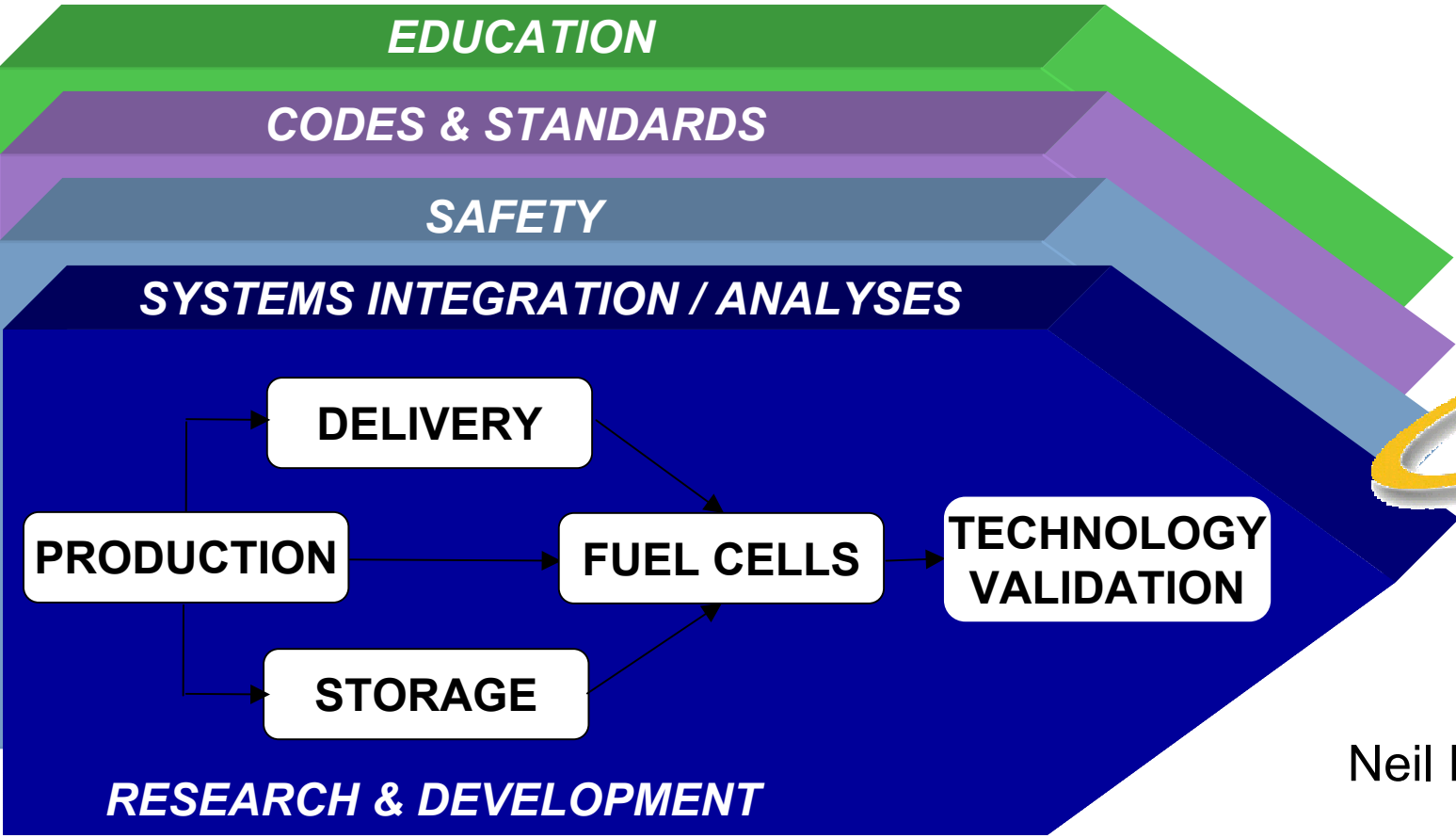
H_2 Economy

George Sverdrup for Neil Rossmeissl

June 3, 2003

Cross-cutting Functions

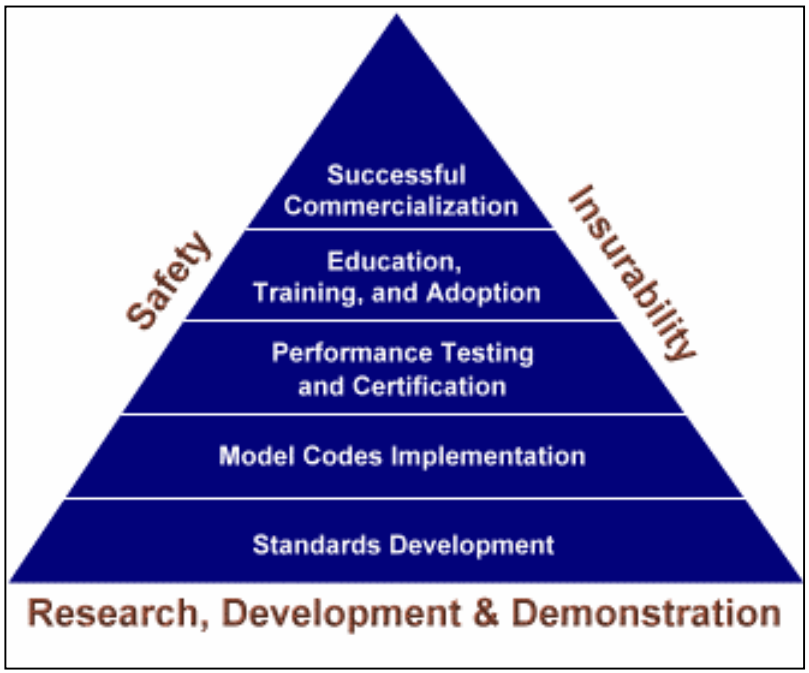
Safety, Codes and Standards



H2 Economy

Neil Rossmeissl

Hydrogen Codes & Standards



Hydrogen Codes & Standards: Goal & Objectives

Goal : Facilitate the creation and adoption of model building codes and equipment standards for hydrogen systems in commercial, residential, and transportation applications. Provide technical resources to harmonize the development of international standards among IEC, ISO, and GRPE.

Objectives

- Complete the drafting of hydrogen building codes for the National Fire Protection Association's (NFPA's) hearing cycle. Facilitate in the adoption of the International Code Council's codes in three key regions: North East, Mid-Atlantic, and Midwest, by 2005;
- Complete the adoption of the International Standards Organization's standards for hydrogen refueling and storage, by 2006;
- Complete and adopt the revised NFPA 55 standard for hydrogen storage with data from Technology Validation projects and the experimental project for underground bulk storage of hydrogen, by 2008;
- Complete U.S. adoption of a Global Technical Regulation (GTR) for hydrogen fuel cell vehicles under the Global Regulation on Pollution and Efficiency Program, by 2010.

Hydrogen Codes & Standards: Key Milestones

Milestone	Description	Date (FY)
3	Collaborate with ICC and NFPA to develop first-order continuing education for code officials.	3Q, 2004
4	Establish a coordination plan with education sub-program activity to run workshops for state and local officials.	3Q, 2004
11	Initiate negotiations with critical Standard Development Organizations and develop draft generic licensing agreement and estimate of costs.	4Q, 2003
24	With industry and code officials, develop templates of commercially viable footprints for fueling stations that incorporate underground and above ground storage of liquid and gaseous hydrogen.	1Q, 2004
30	Implement analytical and experimental program to support the submittal of a comprehensive vehicular safety standard as a regulation.	4Q, 2005
32	Implement research program to support five new technical committees for the key critical standards including fueling interface, power block, and fuel storage.	4Q, 2006

Hydrogen Safety

Neil Rossmeissl

Hydrogen Safety: Goal & Objectives

Goal : Develop and implement the practices and procedures that will ensure safety in the operation, handling and use of hydrogen and hydrogen systems for all DOE funded projects.

Objectives

- Draft a comprehensive safety plan to be completed in collaboration with industry. The plan will initiate the research necessary to fill safety information gaps and enable the formation of a Safety Review Panel, by 2004;
- Integrate safety procedures into all DOE project funding procurements. This will ensure that all projects that involve the production, handling, storage, and use of hydrogen incorporate project safety requirements into the procurements, by 2005;
- Publish a handbook of Best Management Practices for Safety. The Handbook will be a “living” document that will provide guidance for ensuring safety in future hydrogen endeavors, by 2010.

Hydrogen Safety: Key Milestones

Milestone	Description	Date (FY)
2	Develop in collaboration with NASA, DOT, Commerce, a search protocol on component and system safety.	1Q, 2004
12	Assemble panel of experts in hydrogen safety to provide expert technical guidance to funded projects.	4Q, 2003
17	Identify areas of additional study and research for failure modes scenarios.	3Q, 2004
21	Gather and review data to support the inclusion of hydrogen safety in procurements.	4Q, 2003
31	Establish annual review criteria for safety.	4Q, 2004