

Workforce Challenges...

Addressing Availability and Skill Shortages

Shell Oil Company

May 5, 2005



Who Participated?

API 2004 Workforce Challenges Survey

22 Companies

Oil Service

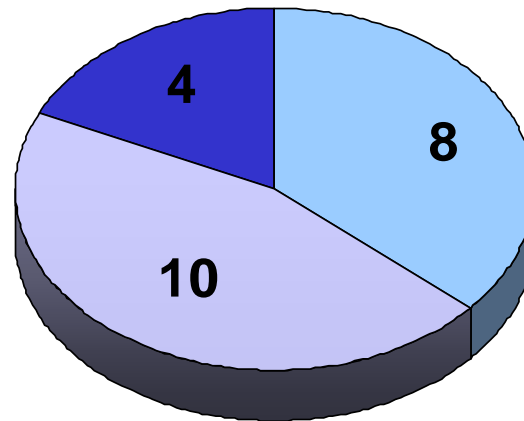
- Baker Hughes
- Halliburton
- Schlumberger
- Varco

Integrated

- Amerada Hess
- BP p.l.c.
- ChevronTexaco
- ConocoPhillips
- Marathon Ashland Petroleum
- Marathon Oil Company
- Murphy Oil Company
- Shell Oil Company

Independent

- Anadarko Petroleum Company
- Apache Corporation
- Burlington Resources
- Devon Energy Corp
- EOG Resources
- Occidental Petroleum Corp
- Sunoco, Inc.
- Tesoro Petroleum Company
- Unocal Corporation
- Valero Energy



What Did We Learn?

API 2004 Workforce Challenges Survey

Top 6 Workforce Issues

(Scale: 1=Not at all, 2=Low, 3=Medium, 4=High, 5=Extremely High)

Issues	Average Score
Age Demographics	4.5
Recruiting Challenges	4.1
Skill Pool Management	3.9
Attraction & Awareness of Youth to Energy Industry	3.6
Image of the Energy Industry	3.6
Technical Skills / Competency Gaps	3.6

Oil and Gas industry is facing multiple workforce challenges around talent unlike anything we have seen before



What Did We Learn?

API 2004 Workforce Challenges Survey

Task Force Comment:

- Other industries are seeking many of the same skills
- The business challenge is knowledge transfer and building skills in the next 5 years
- Oil and Gas industry image adds to the challenge
- Education system is not in alignment – math and science gap in secondary schools

These comments reinforce the need to take both short-term and long-term actions.



API 2004 Workforce Challenges Survey:

Hiring Needs and Demographics by 2009

	Staffing Shortages
Engineers and Geosciences <i>(includes Analysts or Technologists)</i>	38%
Operations, Maintenance and Instrumentation/Electrical	28%
HSE Professionals	26%

Act now to develop the talent pipeline to avoid critical shortages in the next 5 to 10 years .



Workforce Challenges

Alan Greenspan – semi-annual report to Congress Feb 12, 2005

The supply of skilled workers, especially those with advanced skills, has been unable to keep up with demand for such workers, while at the same time demand for less skilled workers is declining. Such a situation can have a negative impact on the economy as a whole.

He urged the boosting of elementary and secondary schooling, especially in *math, science* and language communication.

The issues transcend the energy industry



Workforce Challenges

Solutions Will Require Partnering With Various Stakeholders



- Industry
- School System
- Government
- Community



Workforce Challenges – Shell Activities

Engineering/Geoscience

- Sponsoring specific university programs
 - to attract and retain students in engineering
 - to build support for energy careers
- Redesigned Shell scholarship program to focus on technical disciplines
- Striving to create a diverse talent pipeline

Operations

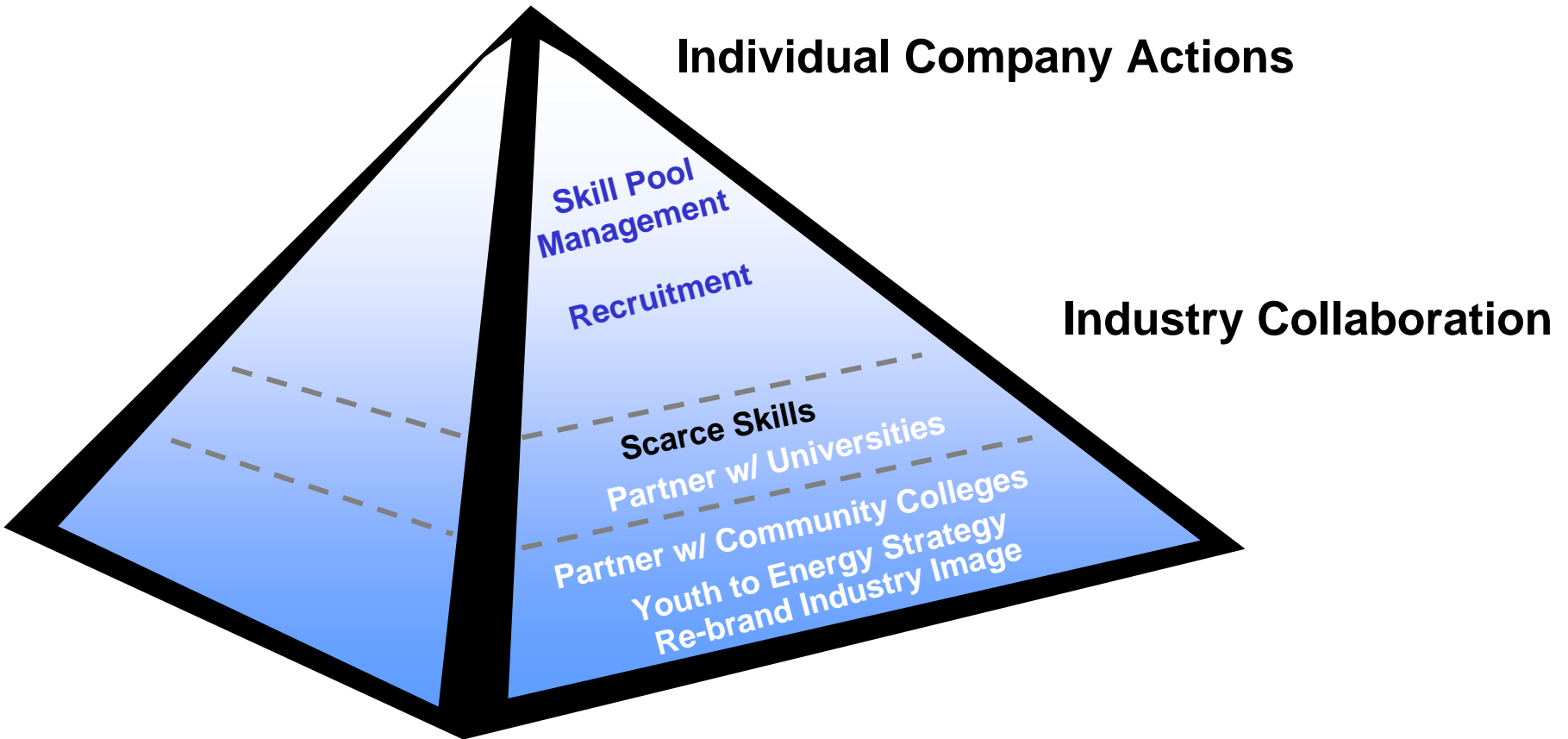
- Partnering with community/technical colleges and the public workforce system
 - to support process technology 2yr degree programs
 - to expand courses in areas such as instrumentation and EP operations

General

- Supporting various math/science programs for middle/high school students
- Chair the API Workforce Task Force



Workforce Challenges - Collaborative Actions



What can each of us do to:

Bring diverse future talent to our industry?

Contribute to industry collaborative efforts?

