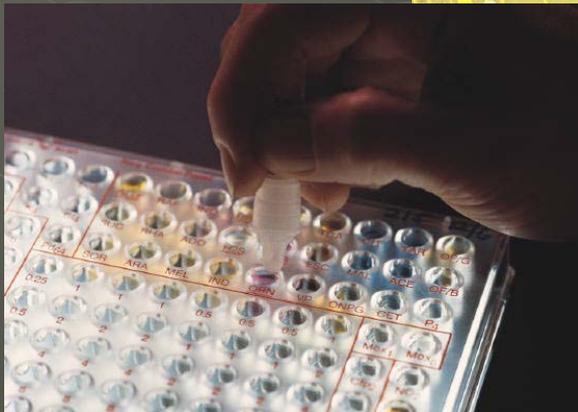


Idaho Science & Technology Leadership Summit

Pre-Event Survey Results

**Idaho National Laboratory
TREETOP TECH
Alturas Analytics, Inc.
Hewlett-Packard
Micron Technology
Telemetric Corporation**



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- Survey Methodology and Response
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- Summary

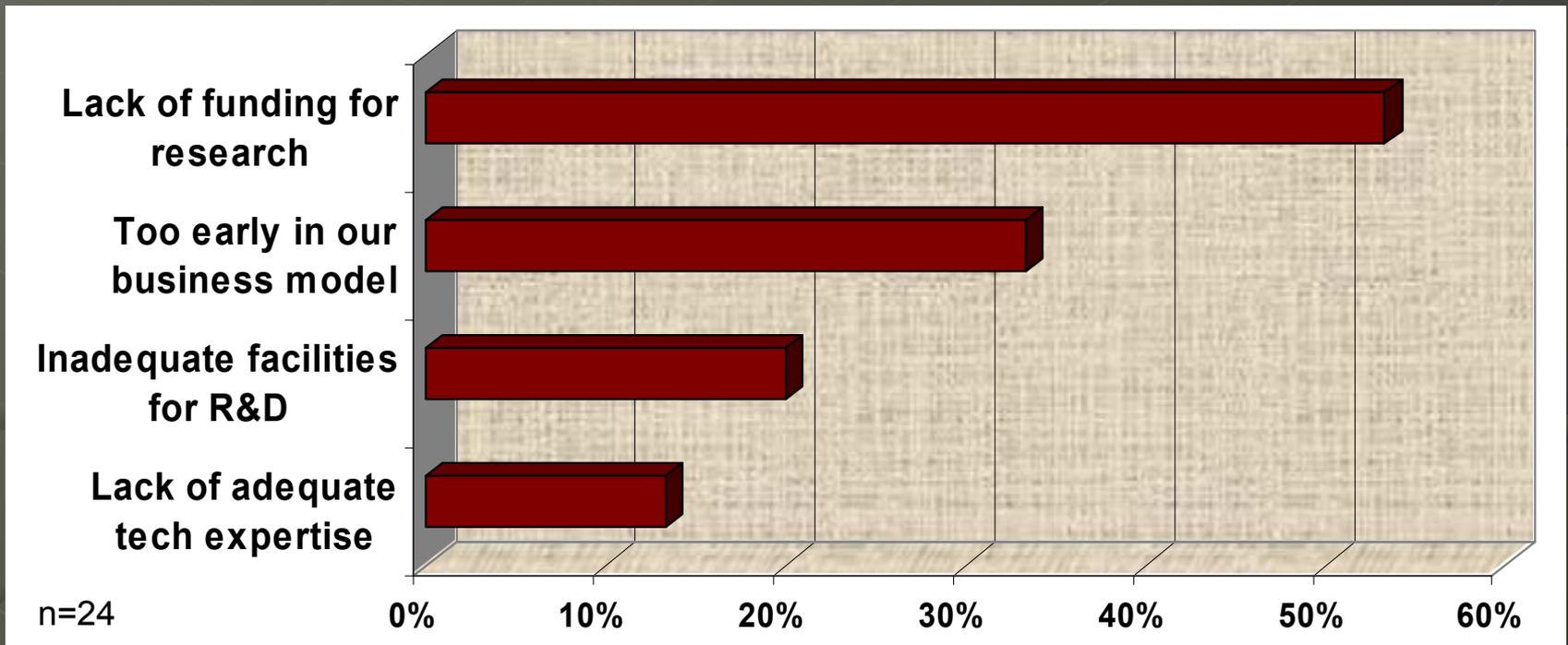
Survey Methodology & Response

- The survey was conducted March 24 to April 5, 2006, using an electronic (online) survey format
- The survey invitation list contained 92 valid addresses representing key Idaho S&T sectors:
 - Power and Energy
 - Ag / Bio Technology
 - Imaging Technology
 - Nanotechnology / New Materials
 - Extra-Core Competencies
- 61 surveys were completed (66.3% response rate)
- 38 respondents indicated that they planned to attend S&T Leadership Summit

R&D Programs

- Organizations with an R&D program: 73.3% (44)
- Organizations with no R&D program: 26.7% (16)

Primary obstacles to an R&D Program:

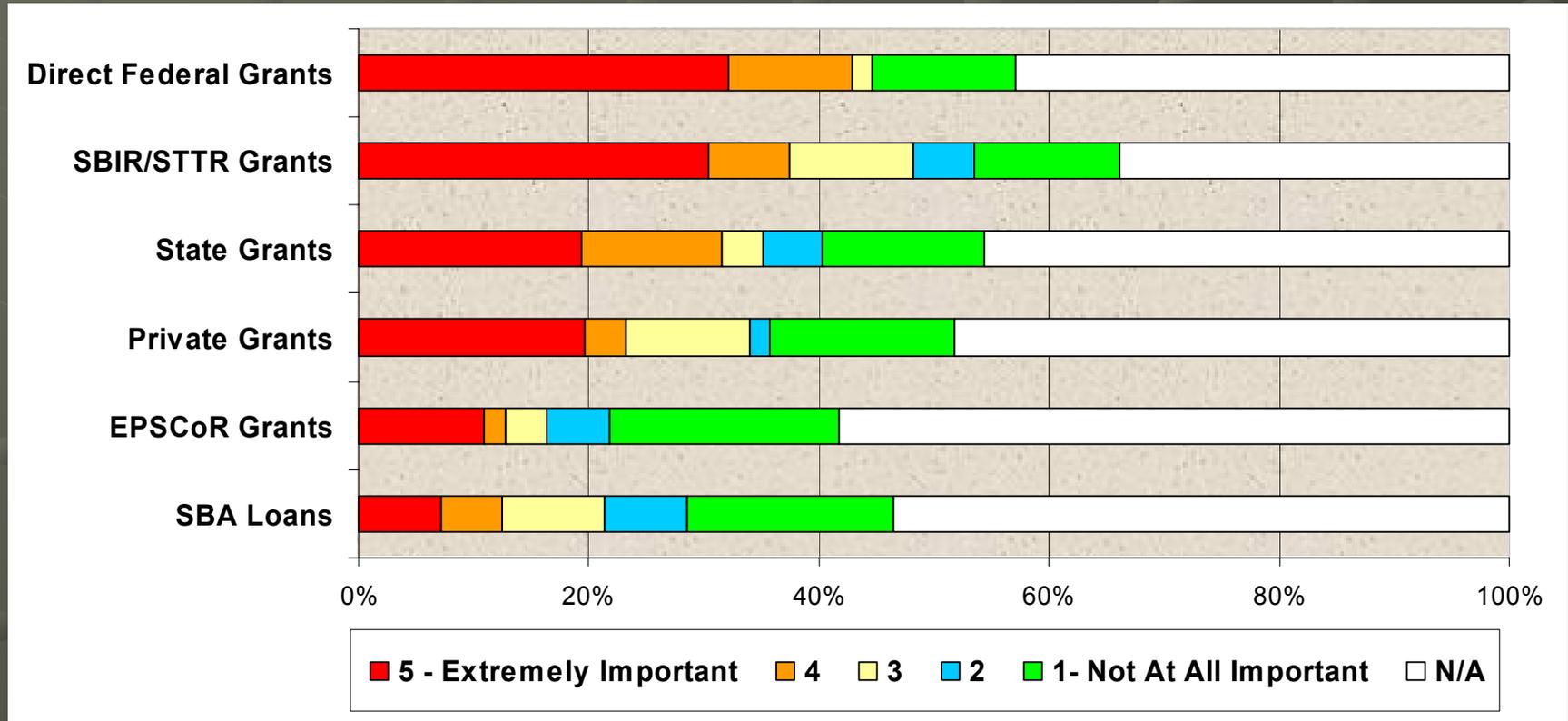


Note: Respondents could select more than one answer.

Importance of Research Funding Sources

(Ranked by % rated “4” or “5”)

- Most important research funding sources for respondents were direct federal grants (43%), SBIR/STTR (38%) and state grants (32%)

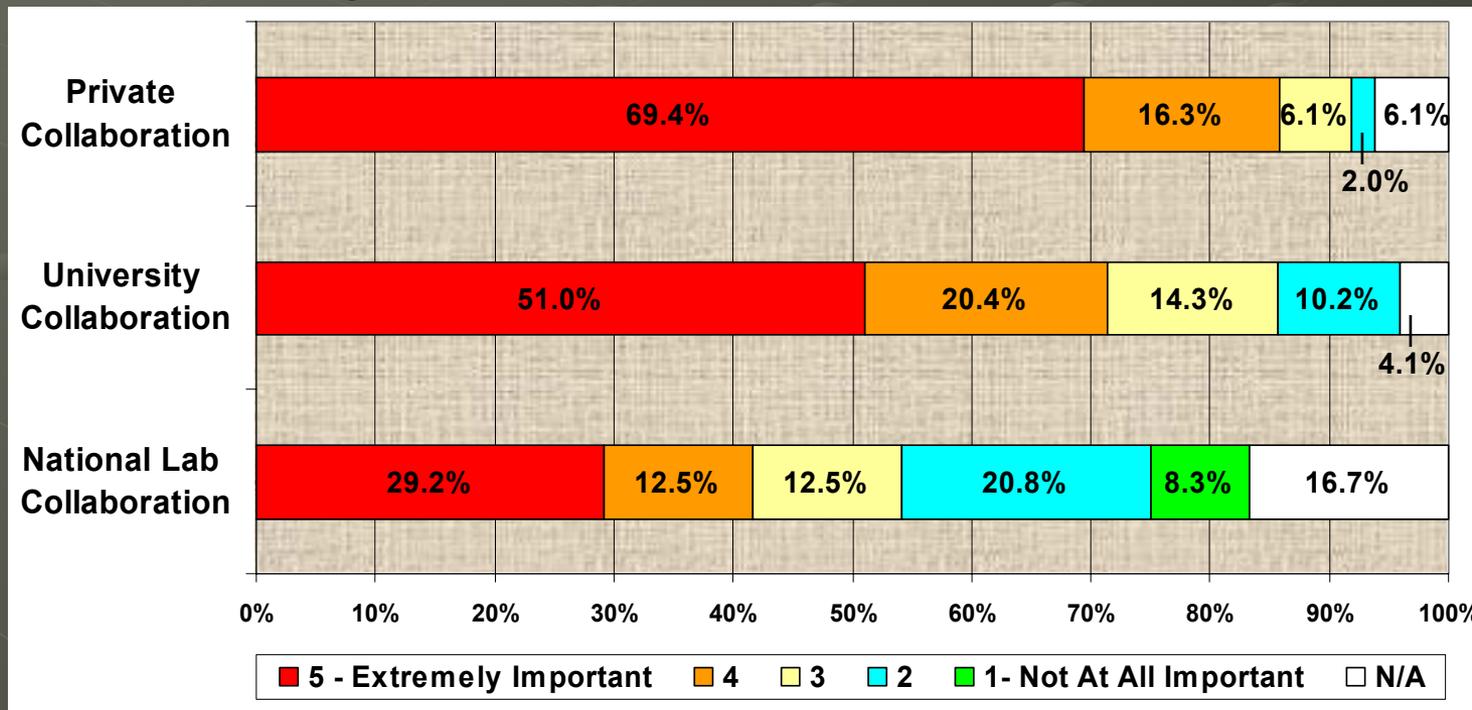


Partnerships and Collaboration for Research and/or Product Development

- Companies that have collaborated: 82.8% (48)
- Companies that have not collaborated: 17.2% (10)

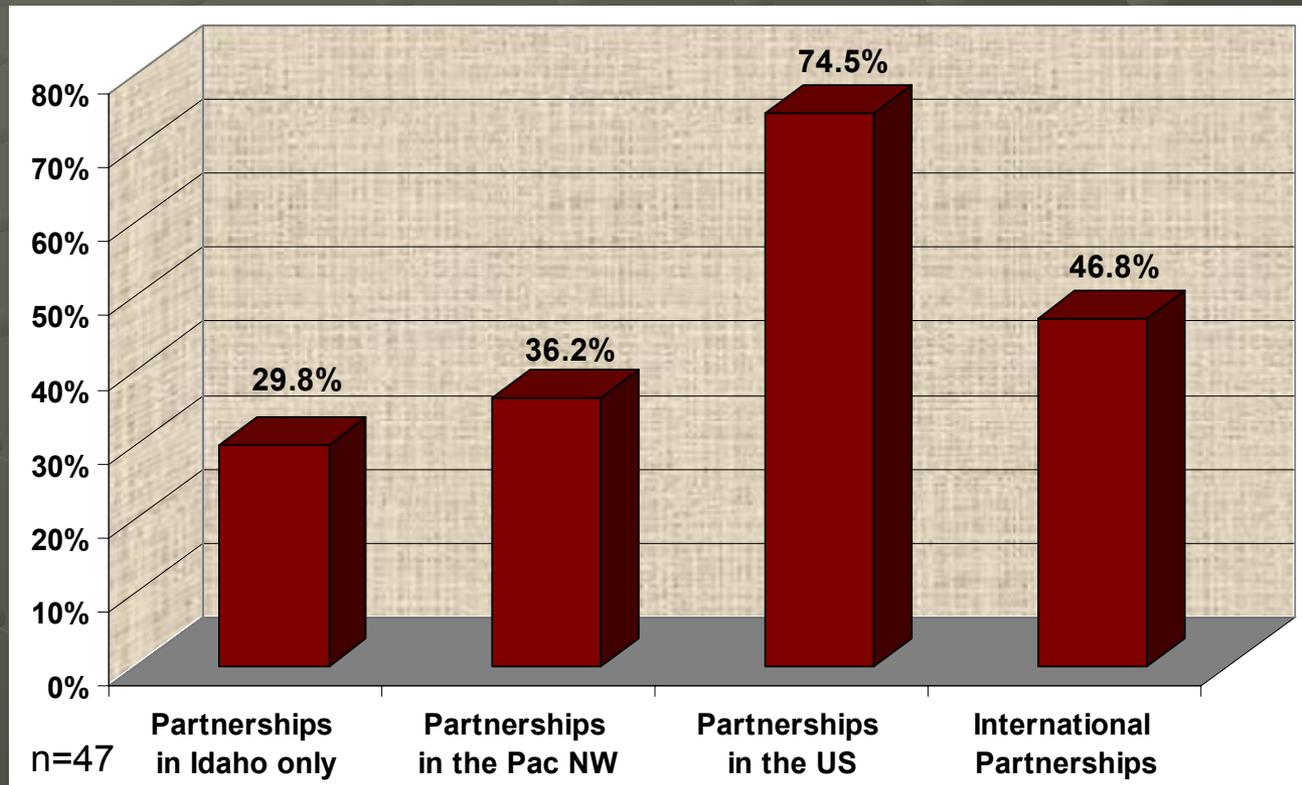
Importance of Collaborations:

% "4" or "5"



Location of Partnerships & Collaborations

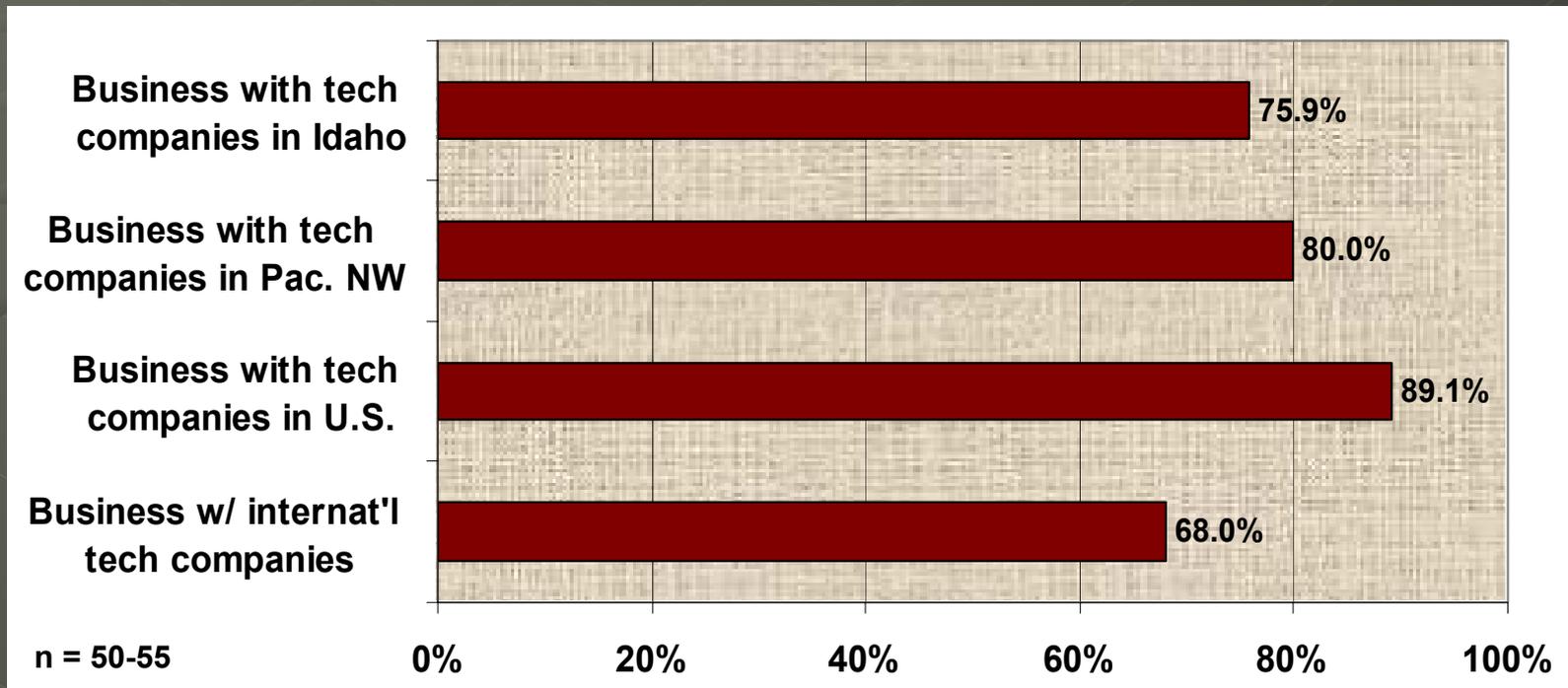
- Three-quarters of respondents who engage in partnerships or collaborations do so nationally, and nearly half do so internationally



Note: Respondents could select more than one answer.

Business with Other Tech Companies

- Nearly 90% of Idaho S&T companies do business of some kind with other tech companies in the U.S., three-quarters with other Idaho tech companies, and more than two-thirds with international companies



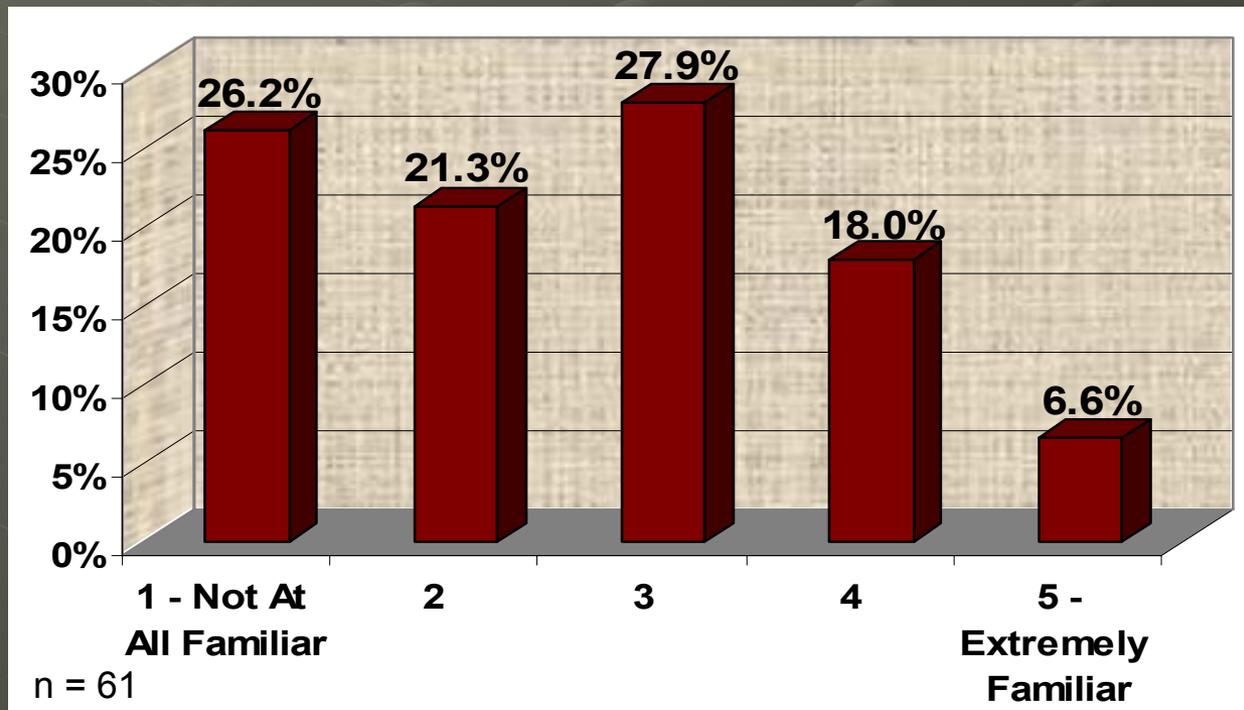
Note: Respondents could select more than one answer.

Obstacles to Doing More Business with Other Idaho Tech Companies

- Limited opportunities due to specialized products, scale
- Lack of awareness about other tech companies in Idaho
- Lack of related companies
- Lack of companies with right skills/expertise, or with specialized high tech equipment
- Lack of capital resources, funding, VC expertise
- Remote location
- Collaboration is time-consuming, often bogs down
- Regulations (unspecified)
- Conflict of interest, or incompatible research ideas
- Lack of technological infrastructure (re. biotech)

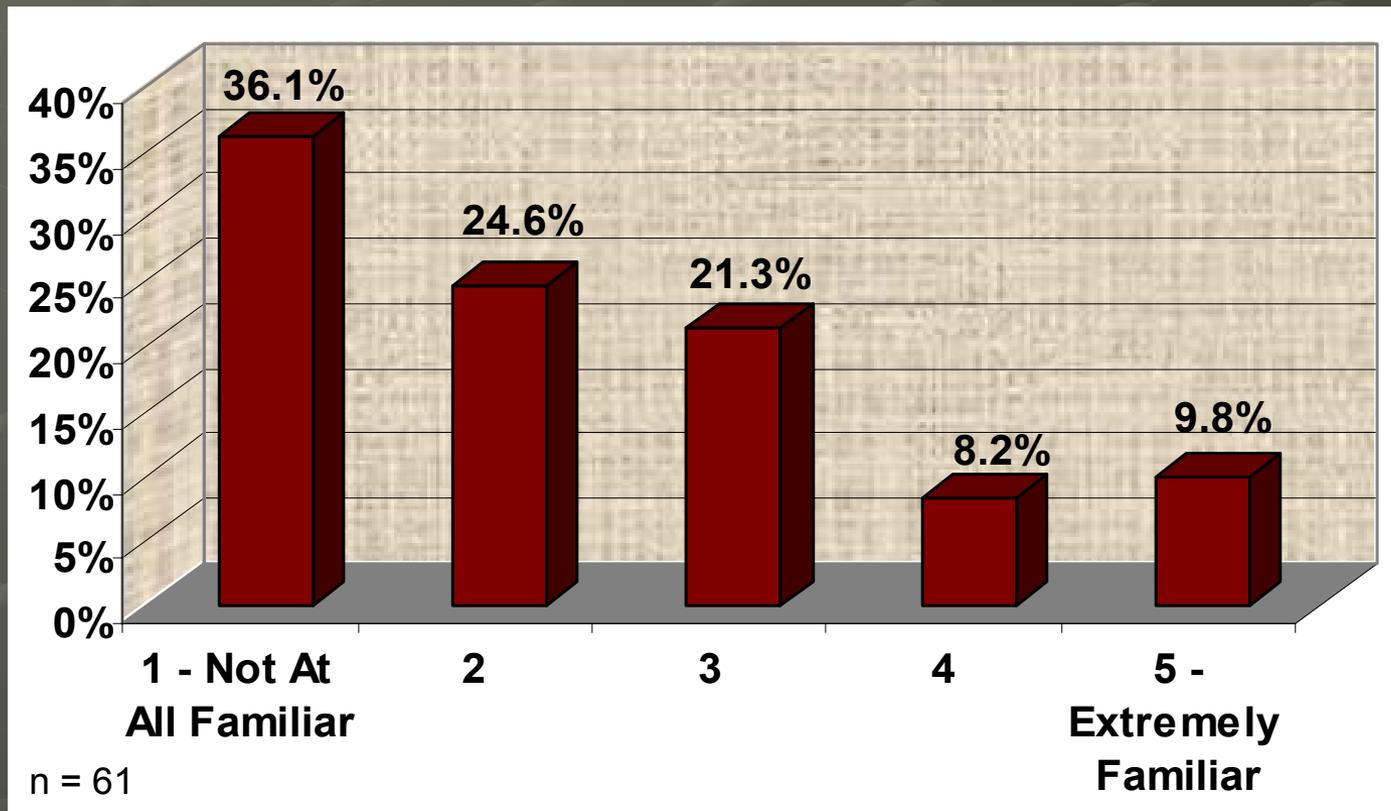
Familiarity with Idaho Science & Technology Advisory Council

- About 1-in-4 respondents were familiar with the STAC
- Nearly half indicated that they were unfamiliar with the STAC



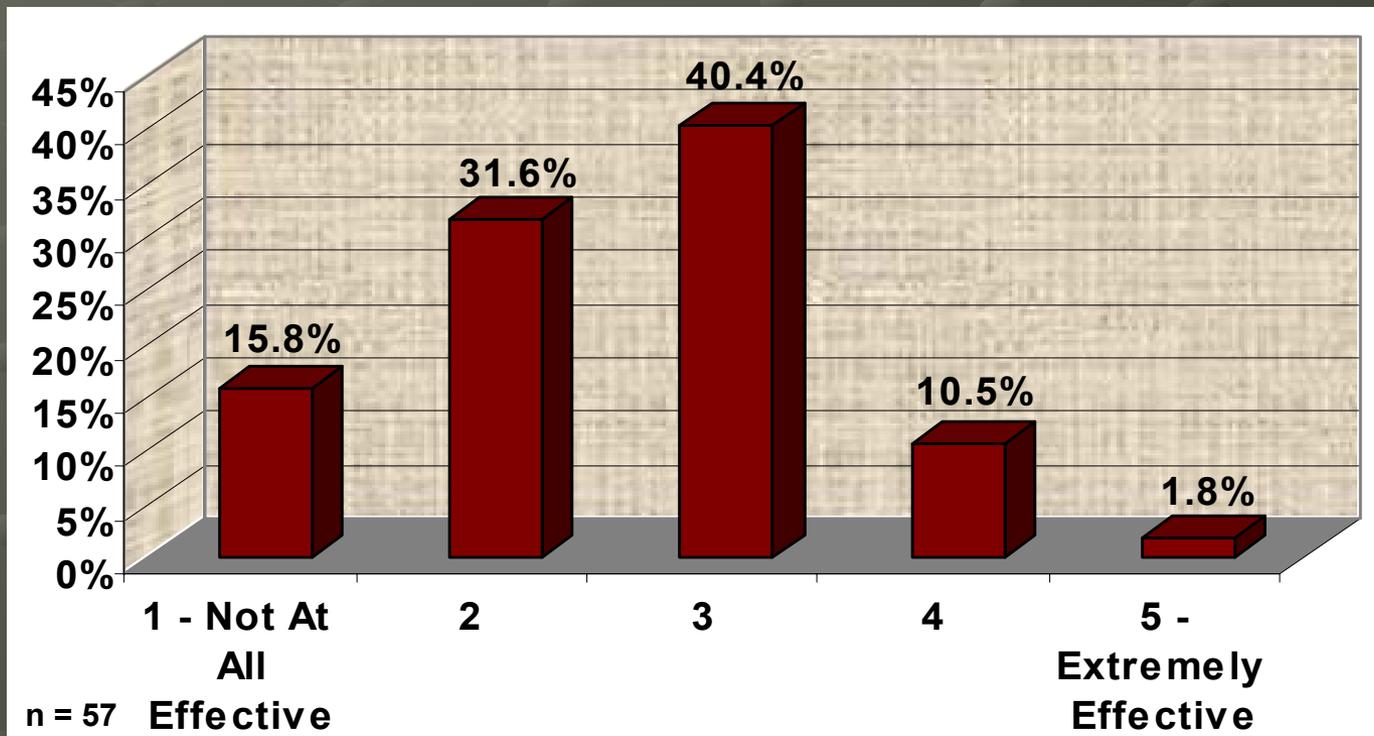
Familiarity with Idaho S&T Strategic Plan

- 61% were unfamiliar with the S&T Strategic Plan
- 18% of respondents were familiar with the Plan



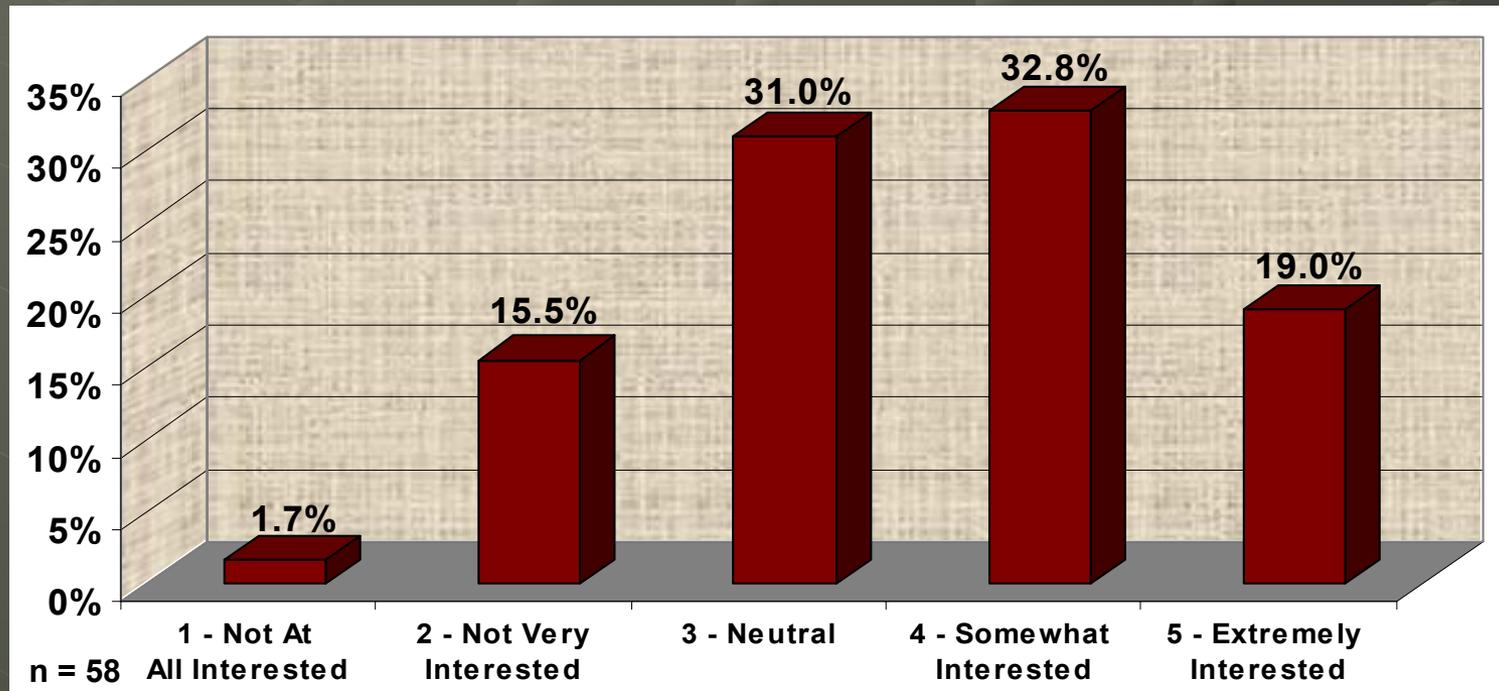
Representation of Company's Interests or Needs in Idaho

- Nearly half of respondents (47.4%) believe that their company's interests or needs are not being effectively represented in Idaho



Interest in S&T Trade Association or Issue Advocacy Group

- About half of respondents (51.7%) expressed interest in participating in an S&T trade association or issue advocacy group



Barriers to Idaho S&T Development

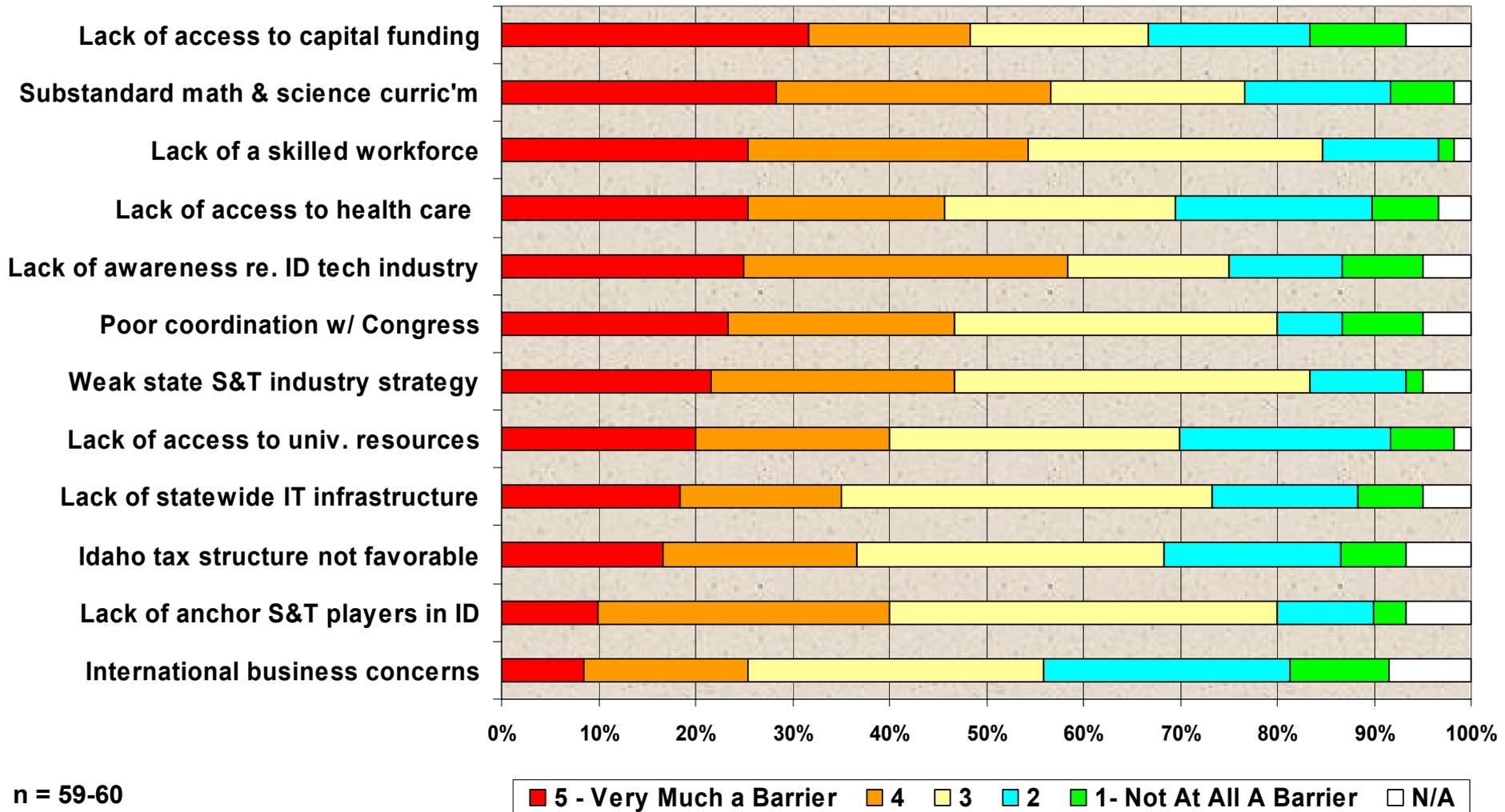
Ranked by Mean Score

(1=Not a Barrier, 5=Very Much a Barrier)

Lack of a skilled workforce	3.6552
Weak State S&T industry strategy	3.5789
Lack of awareness outside ID re. ID's tech industry	3.5789
Substandard math & science curriculum in schools	3.5763
Poor coordination with Idaho Congressional delegation on S&T issues	3.4912
Lack of access to capital funding	3.4643
Lack of access to reasonably-priced health care	3.3860
Lack of "anchor" &/or mid-sized S&T players in ID	3.3571
Lack of statewide IT infrastructure	3.2632
Lack of access to university S&T resources	3.2542
Idaho tax structure not favorable to S&T	3.2321
International business concerns	2.8704

Barriers to S&T Development

Ranked by % rated "5" (Very much a barrier)



Percent of Respondents who Ranked Items as Barriers

Barriers* to S&T Development in Idaho:

58.3%	Lack of awareness outside ID re. ID's S&T industry
56.6%	Substandard science & math curriculum in schools
54.2%	Lack of a skilled workforce
48.4%	Lack of access to capital funding
46.7%	Weak state S&T industry strategy
46.6%	Industry's relationship with Congress'l delegation
45.7%	Lack of access to reasonably-priced health care
40.0%	Lack of access to university research facilities
40.0%	Lack of "anchor" and/or mid-sized S&T players
36.7%	Idaho's tax structure is unfavorable to S&T industry
35.0%	Lack of statewide IT infrastructure

* scored 4 or 5 out of 5, where 5=Very much a barrier, 3=Neutral, 1=Not a Barrier

Other Obstacles to S&T Development

● Education-related:

- Need to instill entrepreneurial attitude, work ethic
- Lack of support for graduate level education, scholarships, Centers of Excellence
- Need statewide network of community colleges to provide training; evaluate tech training programs
- Low quality of students/skills from Idaho schools
- Competition/duplication between universities
- Too Ada County/BSU centric: lack of opportunities in other parts of state
- PE requirement for engineering professors
- Lack of funding for education in Idaho

Other Obstacles to S&T Development

● Leadership-related:

- Legislators at state/federal levels lack vision and awareness about science & technology
- Need to broaden base of STAC (scientists, engineers, faculty)
- Lack of S&T champion in Idaho Legislative and Executive branches – need S&T expertise/experience in leadership
- Lack of State support/funding for S&T effort
- No real State S&T plan, or accountability for implementing it

Other Obstacles to S&T Dev't

● Infrastructure-related:

- Lack of telecom network for education
- Lack of public-private partnerships for broadband deployment
- Lack of air service
- Lack of customers within Idaho



Other Obstacles to S&T Dev't

● Business Development & Tech Transfer-related:

- No meaningful support for growing new tech companies, small business assistance
- Focus on stealing companies from other states is waste of money – should spend resources on growing Idaho companies
- Difficult to navigate “process”: finding right resources at right time (who to call)
- Poor collaboration between education institutions and private sector
- Lack of effective means and funding for tech transfer from public to private sectors

Other Obstacles to S&T Dev't

○ Miscellaneous:

- Need SBIR/STTR grant proposal assistance
- Remote location (\$1,500 surcharge per trip for manufacturer to service equipment)
- Lack of firms doing R&D in environmental field
- Lack of understanding about what is happening in other parts of Idaho, other states, world
- Developing partnerships with other Idaho firms
- Off-shoring of R&D and tech development

Possible Industry Actions, apart from Government, to Advance S&T in Idaho

● Education-related:

- Participate in K-12 and college/university science/math programs: volunteer instruction, job shadowing, recognition, mentoring, internships
- Address problem of industry not being welcomed by teachers and principals (“don’t want help”)
- Create education network: connect rural education and government with urban areas
- Promote S&T education at all levels; promote teaching kids to think, not just regurgitate information for tests
- Scholarships/fellowships to keep brightest kids in Idaho universities

Possible Industry Actions, apart from Government, to Advance S&T in Idaho

● Research and Finance-related:

- Push to develop more NSF Partnerships for Innovation with universities; joint ventures w/ university researchers
- Increase Idaho's participation in SBIR
- Combine energies of INL and university system, make them more accessible to industry
- Share expensive lab equipment that universities are safe guarding (SEM, TEM, AFM, RAMAN, etc.)
- Enhance university research programs
- Encourage/fund more basic science research -- import high quality scientists
- Address IP issues to facilitate public-private partnerships, research grants, incentives for commercialization
- Set up private research institutes; build a privately funded public access research facility
- Improve access to venture capital

Possible Industry Actions, apart from Government, to Advance S&T in Idaho

● Business Development-related:

- Industry can support special clusters of activity and 'think tank' activities with universities and other key companies
- Invest in leading edge process development
- Grow businesses consistent with free market principles: partnerships and collaboration will take place where mutual benefit can occur among parties involved
- Facilitate private sector start up, entrepren'l environment
- Form joint recruiting initiatives to interest qualified candidates in Idaho
- Joint promotion of the industry outside the state

Possible Industry Actions, apart from Government, to Advance S&T in Idaho

● Networking and Advocacy-related:

- Technology associations, cooperative group to act in our behalf
- Facilitate awareness about others' capabilities, opportunities to meet each other
- Regular seminars, forums, conventions, expositions
- Develop entrepreneurial networks; networking within state
- Encourage Idaho state government to take significant action to advance S&T in Idaho
- Collaborate to benchmark best practices from other states to build a case for more support from Idaho gov't
- Lobby for basic S&T infrastructure: ultra high speed broadband for univ/lab R&D, better health care choices for small startups, tax concessions for venture capital investments, improved reorganization of Idaho universities

Respondent Interest in Leading or Participating in Industry Actions

- Respondents interested in participating: 66%
- Respondents not interested: 34%

n = 61



Summary

- ¾ of respondents' companies have R&D programs
 - #1 obstacle for others is lack of funding
 - Most important sources of research funding are federal (direct grants, SBIR/STTR) – may see future declines?
- Collaboration and partnerships are important to 80+% of companies, so networking opportunities and directory of Idaho tech companies are critical
 - INL and universities are important partners, but accessibility issues need to be addressed
 - Most companies engaging in national/international collaborations or partnerships for research and/or product development

Summary (cont'd)

- Nearly half of respondents were unfamiliar with the Idaho STAC, and nearly 2/3 with the Idaho S&T Strategic Plan, so more outreach is needed
- Half of respondents are interested in an S&T trade association or advocacy group to represent needs
- Key barriers to S&T development in Idaho are:
 - Workforce skills/education in math and science
 - Weak state S&T strategy (related to lack of awareness about Strategic Plan), expertise among state leadership
 - Awareness outside Idaho about Idaho's S&T industry
 - Lack of access to capital, small business assistance
 - Affordable health care for workers; IT infrastructure
 - Lack of collaboration b/n universities/INL & business

Summary (cont'd)

- Actions that industry can take to advance S&T:
 - Greater participation in K-12 and higher education, incl. volunteering, internships, scholarships, etc.
 - Encourage more public-private research partnerships and joint ventures, address IP issues re. tech transfer
 - Push for more accessibility and flexibility of university resources (equipment, IP, etc.)
 - Advocate for more resources to assist small businesses (SBIR, VC, entrepreneurship training, etc.)
 - Create trade association or advocacy group, provide opportunities for networking and awareness building
 - Promote S&T in Idaho, lobby for infrastructure and industry support

Questions?

S&T Summit Planning Committee:

- Ray Barnes, Idaho National Lab
- Nancy Bergmann, Idaho National Lab
- Brian Dickens, Idaho Commerce & Labor
- Rick Ritter, Idaho TechConnect
- Hank Artis, Idaho TechConnect
- Bill Sellers, Idaho TechConnect

Thank you!

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