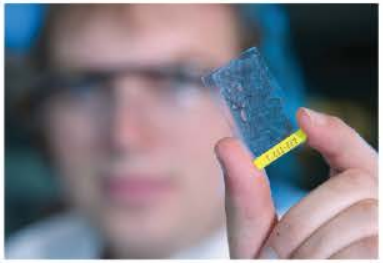

Collaboration

Inspiring

Innovation

Center for Advanced Energy Studies

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CAES Center for Advanced Energy Studies

CAES: a nation-leading center for innovation that leverages university and national laboratory assets to collaboratively advance energy security and economic prosperity by accelerating the pace of basic research and coupling those outcomes to the private sector.

CAES Mission

CAES Center for Advanced Energy Studies

CAES is a public research center where collaboration inspires innovation that fuels energy transitions and economic growth.

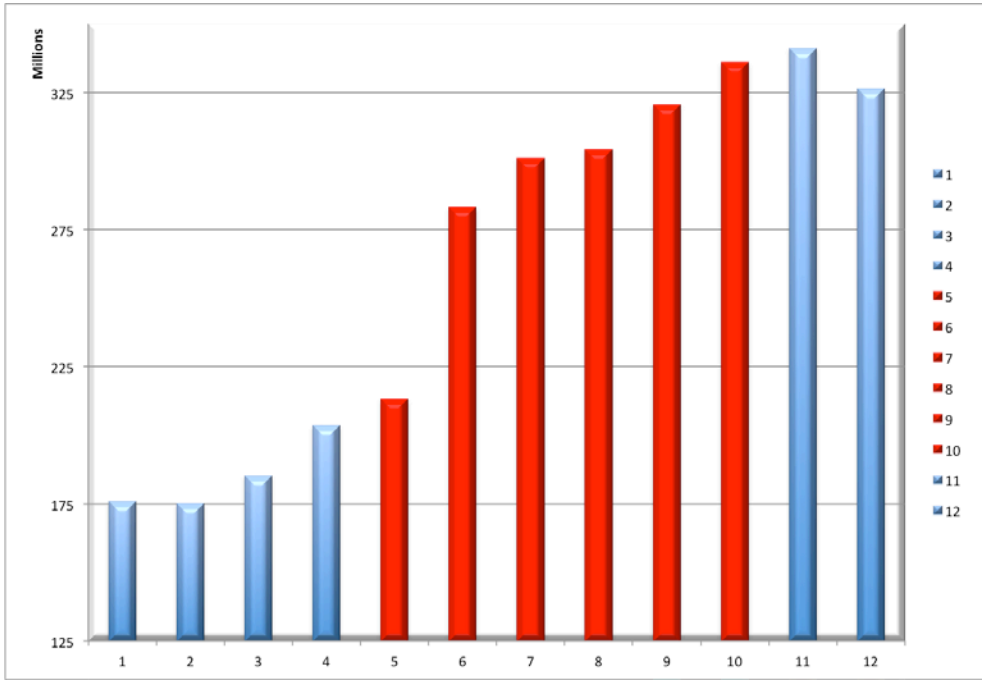
xplore	**Energy & Environmental Research**
Educate	**Energy & Environmental Education**
Engage	**Apply Knowledge to Industry**
Enable	**Energy Transitions & Economic Development**

Industry – University Partnerships
They Work!

Washington State University R&D Expenditures 2004 - 2015

CAES adds the power of ~$600M/year of R&D and a national laboratory.

Exponential Impact !



Industry – University Partnerships
Points to Consider

Companies, and universities, often pursue collaboration in an ad hoc, piecemeal fashion. Driven by individuals rather than corporate & university strategy.

Strategic thinking, and approaches, will strengthen these collaborations and increase the ROI in both directions

Two Key Dimensions for Optimizing Partnerships:

Time horizon for the collaboration

Degree of disclosure for the results

Consider Four Fundamental Models for Successful Engagement and Outcomes

- The ***idea lab***, where companies put aside their desire for secrecy and protection and work with academics to create new options, contacts, and opportunities.
- The ***extended workbench***, where company leadership will work quickly with university partners on proprietary problems and solutions.
- The ***grand challenge***, where both companies and academics work together to establish a new knowledge base that will be shared in the public domain.
- ***Deep exploration***, where the company creates long-term, rich, and deep relationships with universities that, in turn, offer businesses first right of refusal to license the results.

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IDEA LAB

Building relationships and attracting potential customers

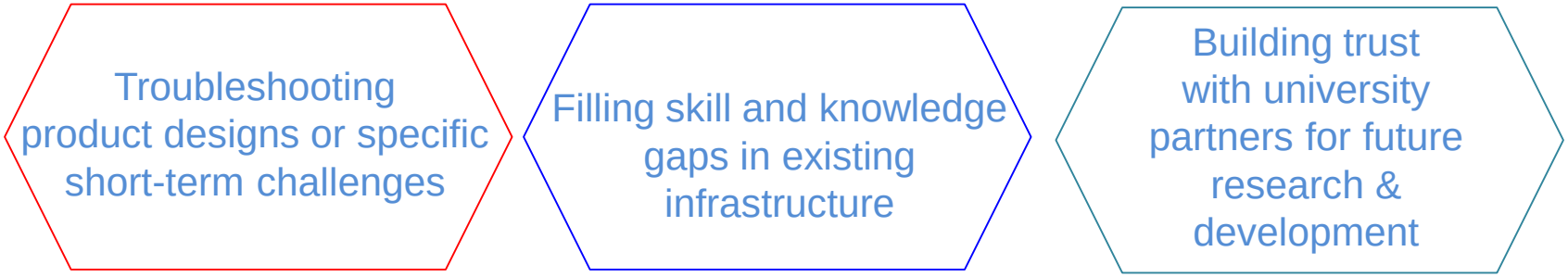
Short-term, low risk projects

Explore new ideas and approaches

Idea Labs act as introductory intersections between businesses and academia, helping companies to find the people whose specialties and ways of working suit their own, and are ideal for companies that want to test the waters of academic collaboration while minimizing risk.

Researchers work on short-term projects specific to the challenges of the partnering company, and are invited to publish if desired. Student interns are often engaged in these projects.

EXTENDED WORKBENCH



An academic working on an Extended Workbench might be thought of as a subcontracted trouble-shooter, solving those problems that fall beyond a company's in-house expertise. This gives businesses the benefit of additional insight on short-term, highly specific problems.

These agreements are usually carried out confidentially, so academic partners have limited opportunity to publish their findings, but can serve as building blocks to deeper forms of collaboration.

GRAND CHALLENGE

Finding solutions to fundamental problems facing an industry

Shaping the direction of thought and innovation

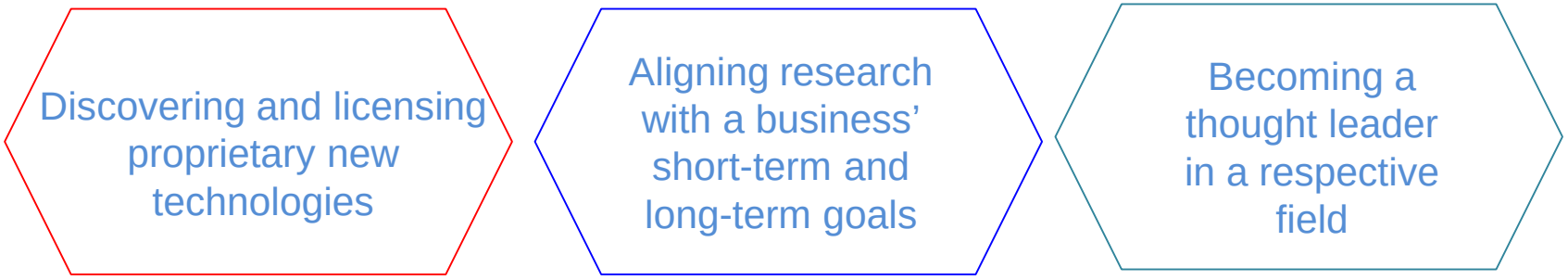
Identifying new areas of research to pursue

The Big Challenge turns academics loose to develop *game changing* technologies and approaches. These are often the breakthroughs necessary for an industry's long-term sustainability.

Public Funding – Where the aims of the research would benefit society at large, they may also be able to leverage public, federal, or third sector funding – partially offsetting the sponsors' often limited investment pools.

Even competing companies can collaborate for shared resources for the benefit of the wider industry.

DEEP EXPLORATION



An intense model of collaboration, Deep Exploration sees business and academia working together closely, confidentially, and harmoniously. Business set up research centers dedicated to pursuing knowledge which is closely tied to their objectives. When done properly, it ensures a business is not only at the cutting edge of its field…
it is the cutting edge.

CAES Center for Advanced Energy Studies

Our DNA

Regional leadership for global impact

Univer
of Ida

BOISE STATE