

*PROGRAM EXECUTIVE OFFICE FOR
SIMULATION, TRAINING & INSTRUMENTATION*

Innovation Alignment to Maximize Market Penetration

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The 13th Annual Innovation Convergence

INNOVATION

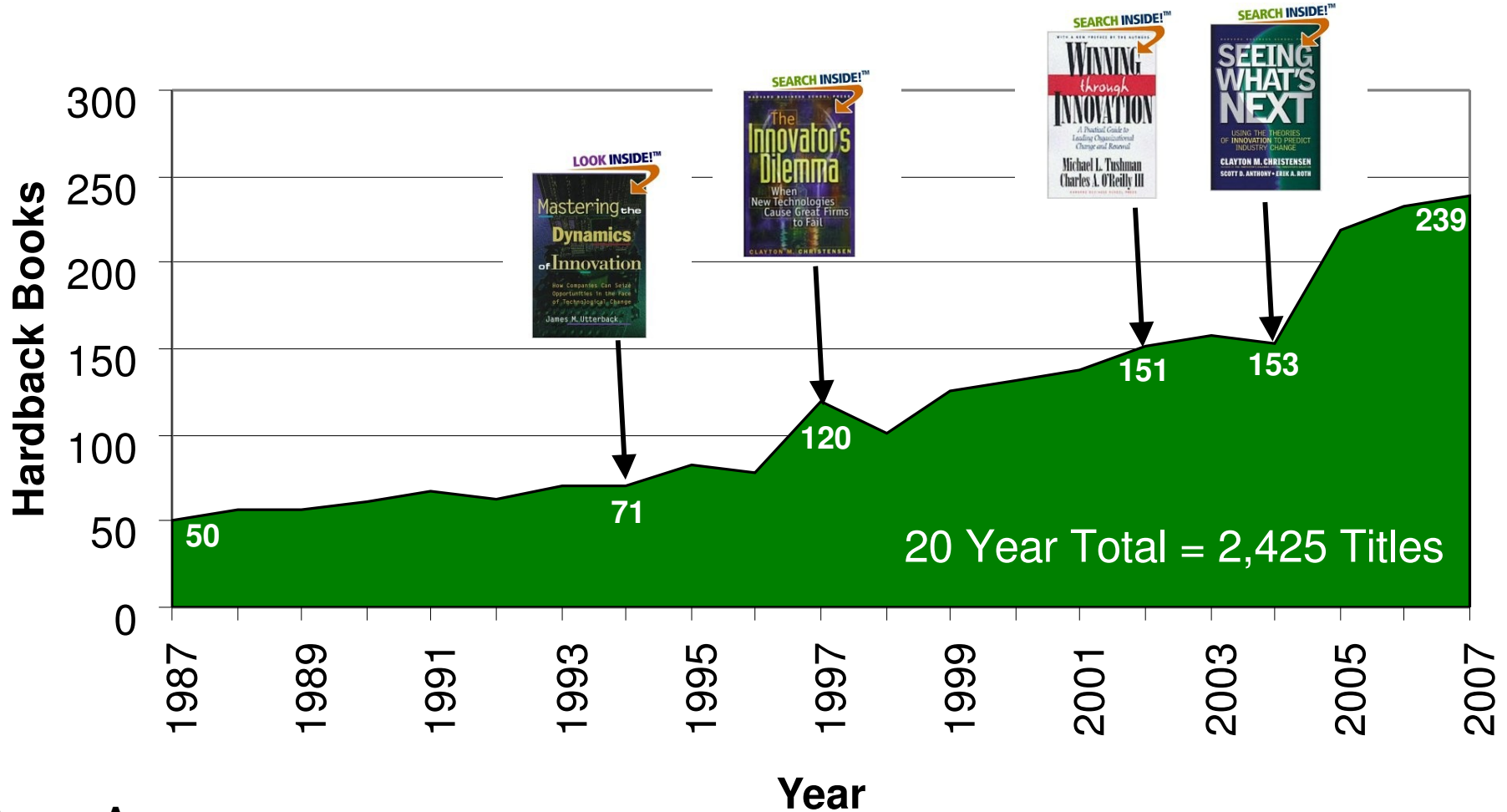
October 15-17, 2007 • Firesky Resort and Spa • Scottsdale, AZ

IMMERSION

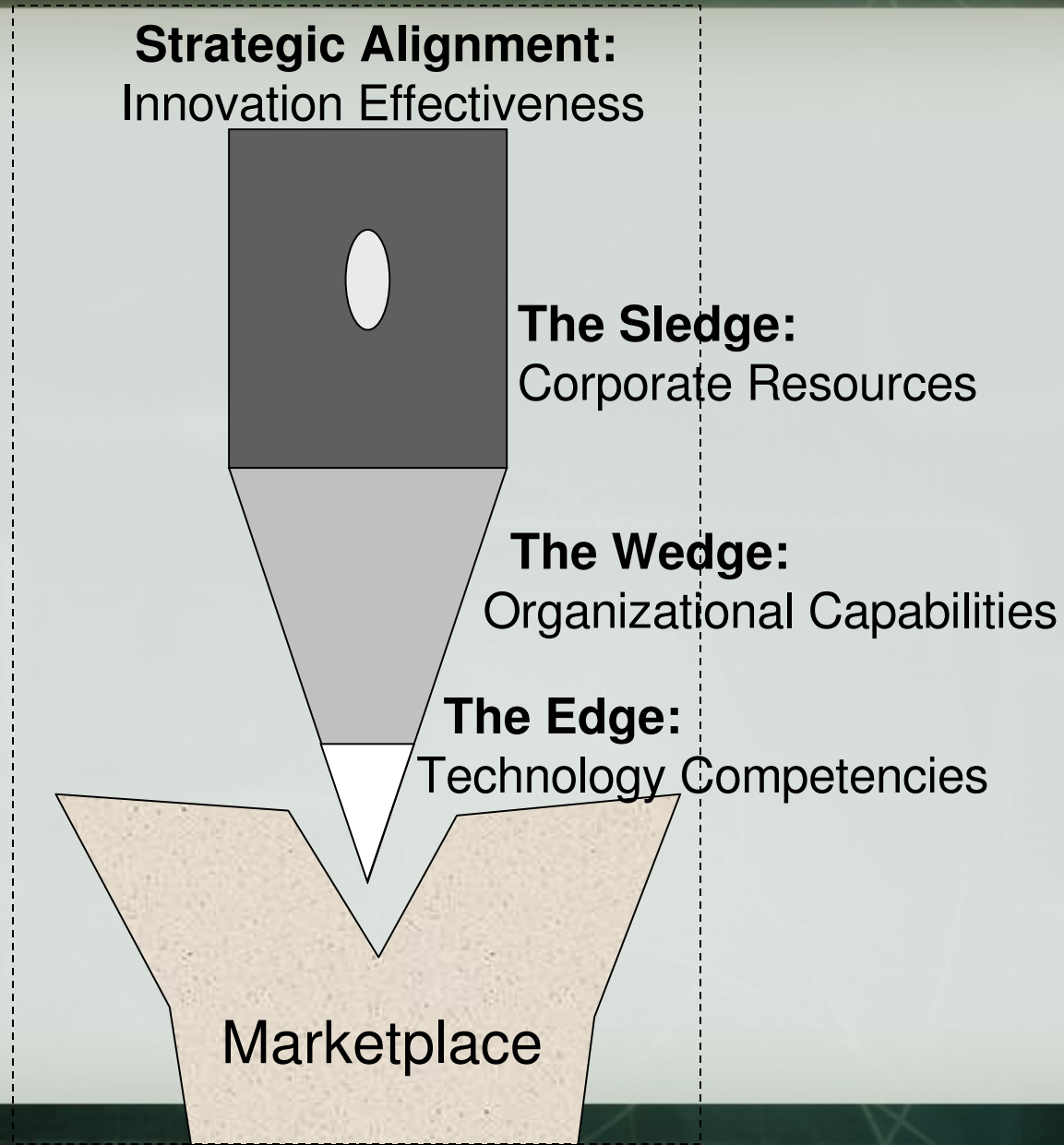
The 360 Degree Innovation Experience

Innovation Madness

Annual Innovation Books Published

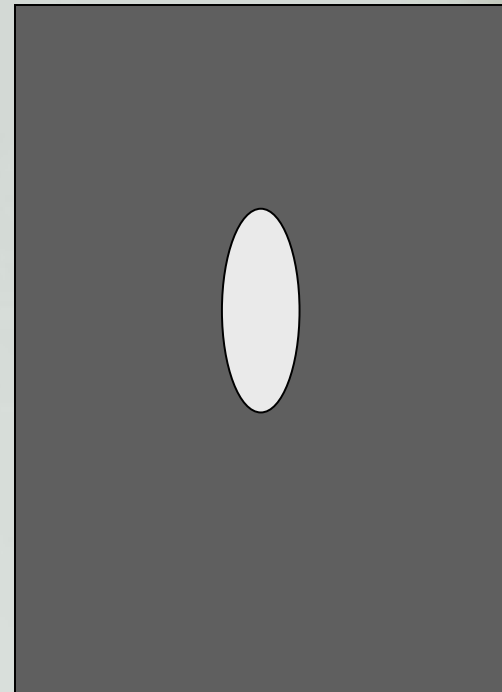


Alignment: The Innovation Axe

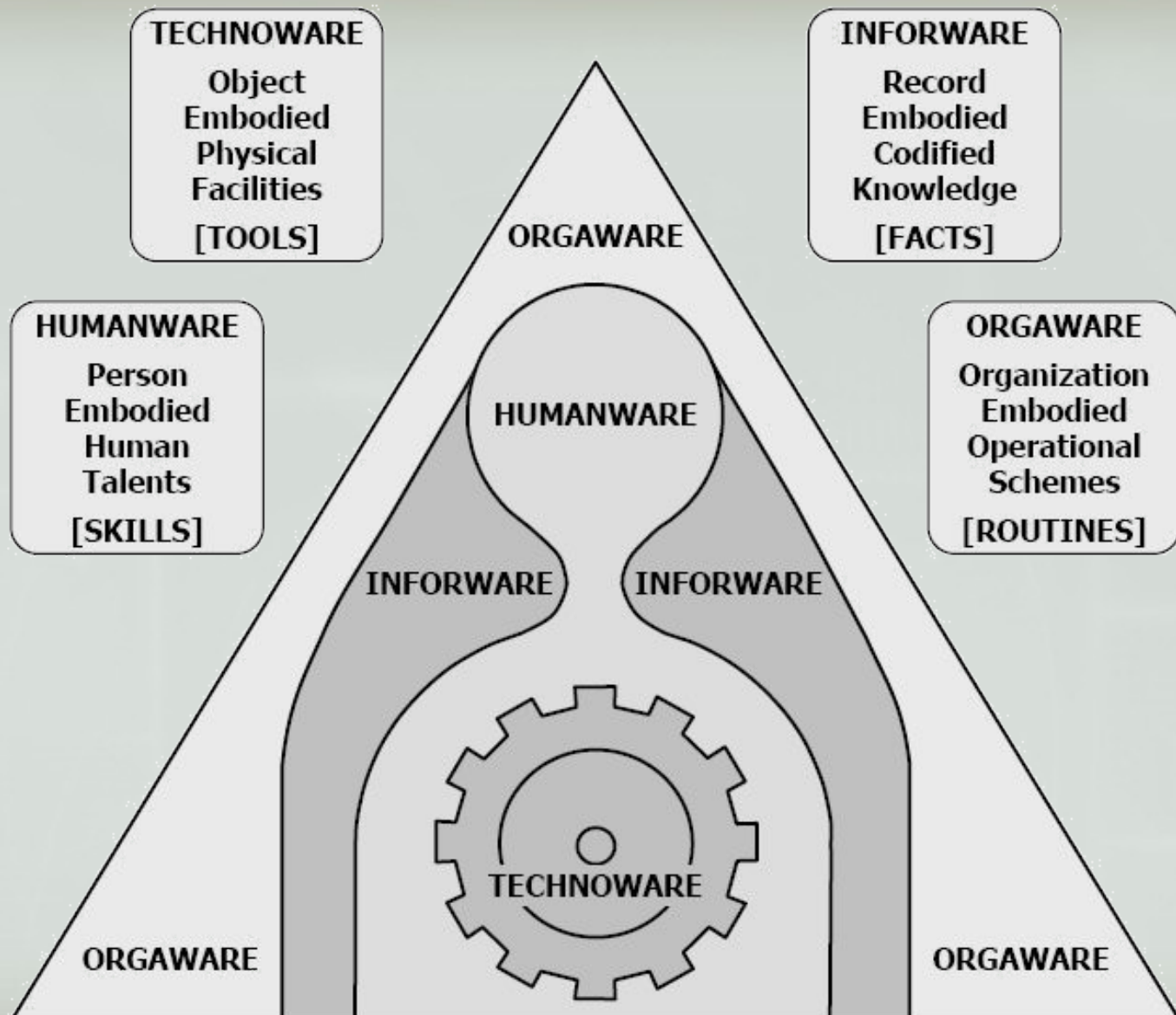


The Sledge: Corporate Resources

- The financial, organizational, and personnel assets that a company can direct and allocate toward tasks of its own choosing.
- Investment dollars
- Research teams
- Organizational structure
- Marketing
- Public relations

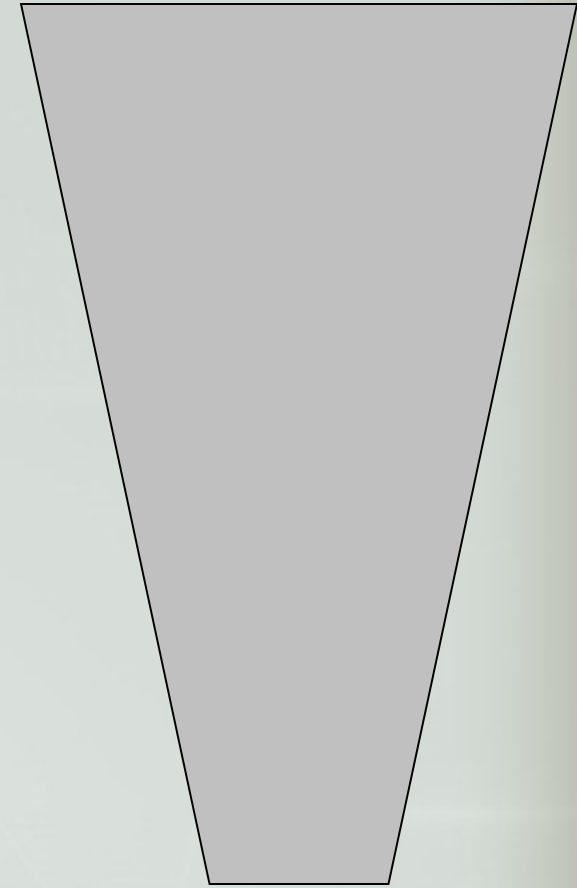


Technology Resources: Sharif



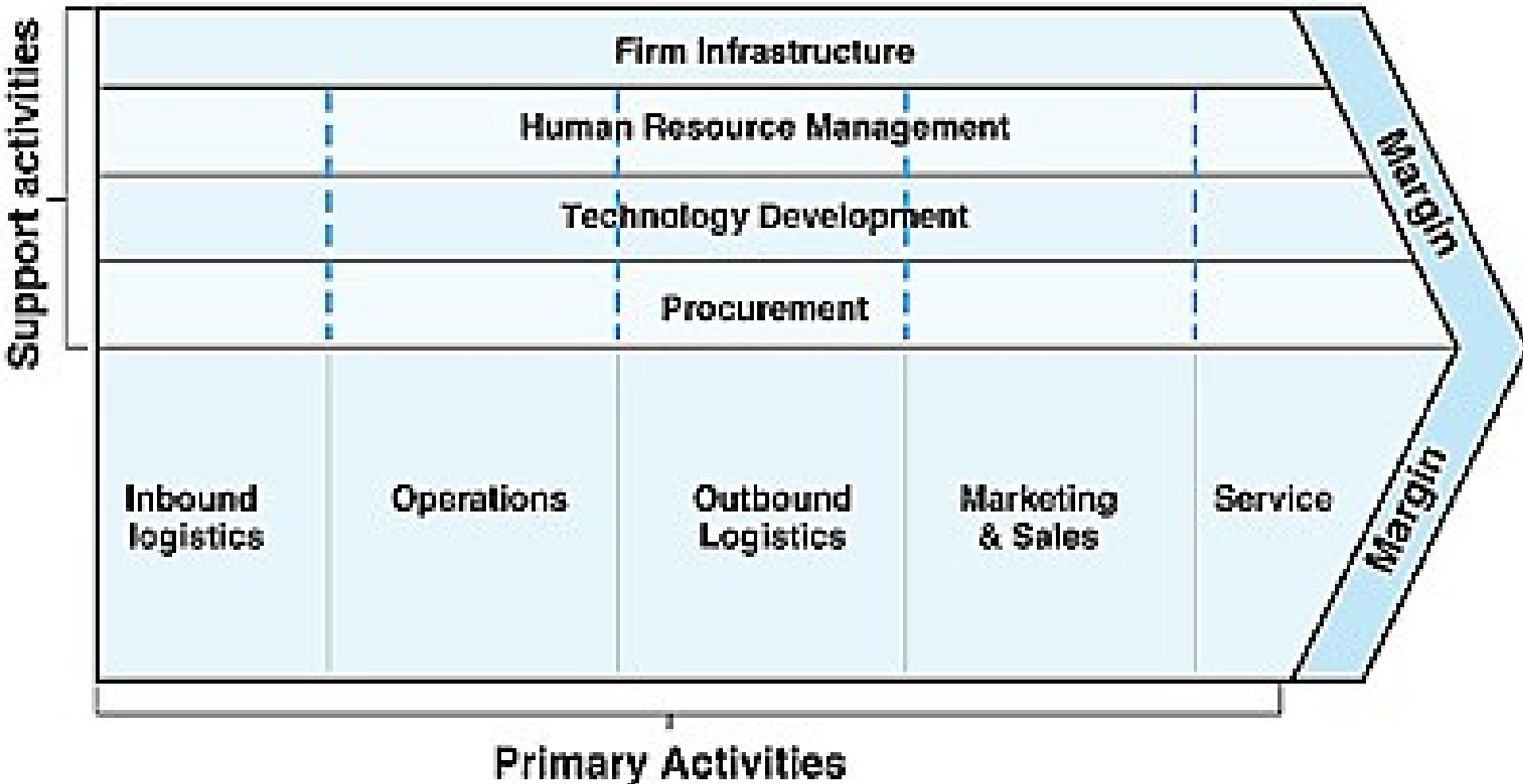
The Wedge: Organizational Capabilities

- Those things that the company can do well repetitively, day in and day out.
- Production, logistics, daily human resource management, and partnerships -- executing these day in and day out, handling the constant stream of issues that threaten to break these systems is an essential capability for the company.
 - (Smith, 2007)



Capabilities: Porter

The Generic Value Chain

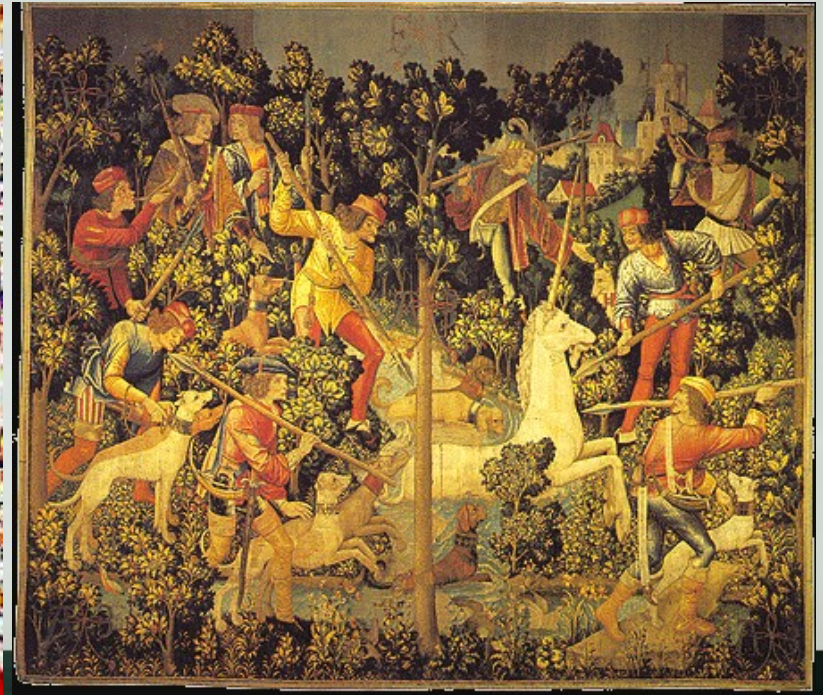


Capabilities ... Daily Execution



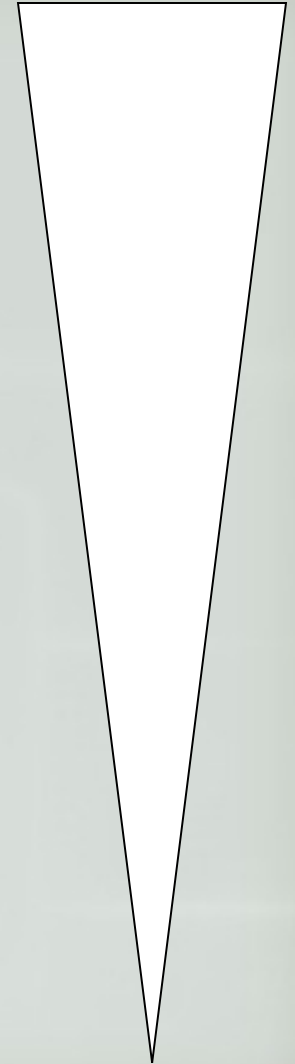
Competencies: Prahalad & Hamel

- “A core competence is a tapestry, woven from the threads of distinct skills and technologies. ... Many companies have had difficulty blending the multiple streams of science or technology that comprise their heritage into new, higher-order competencies”
 - (Hamel and Prahalad, 1994).

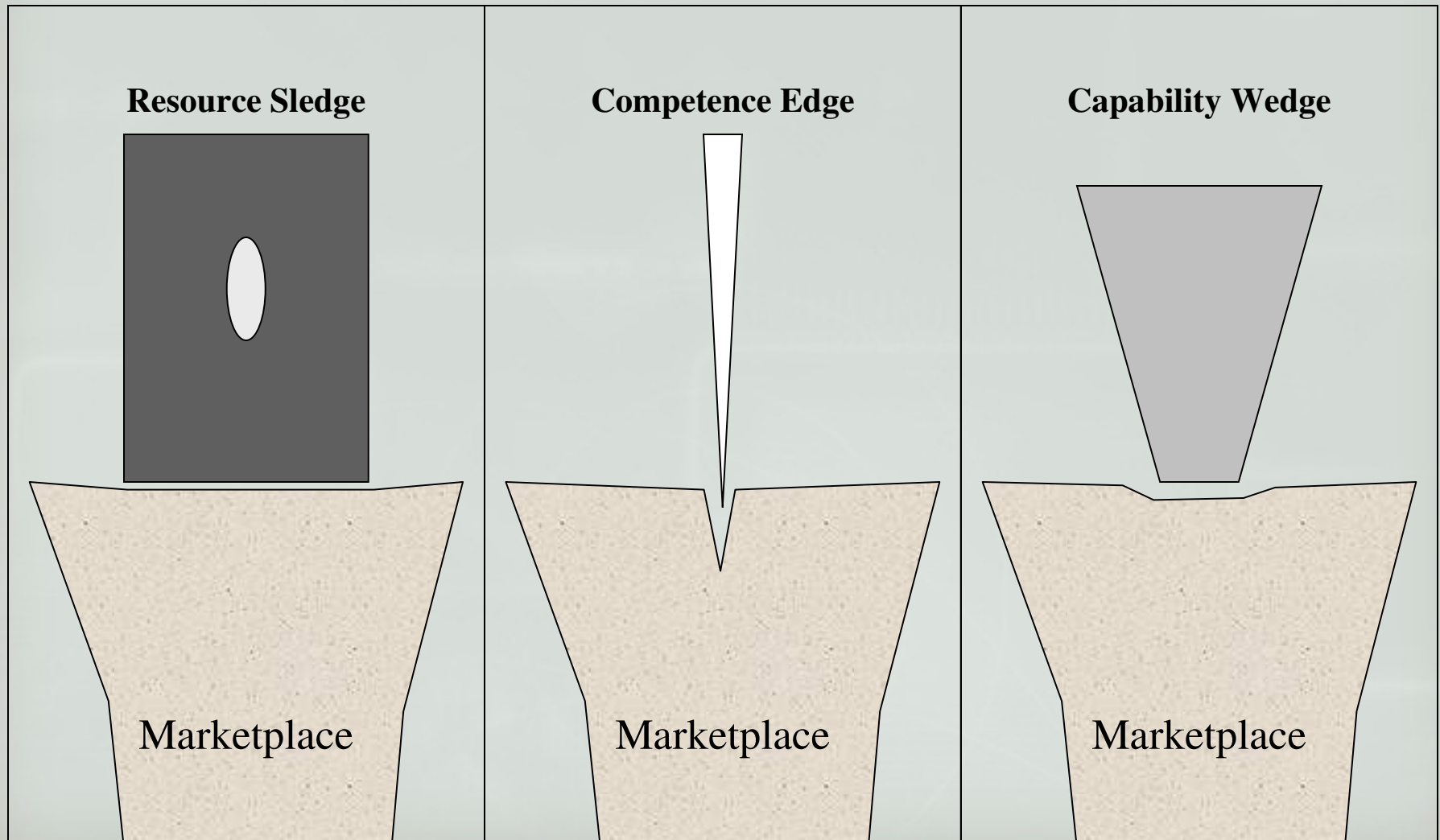


The Edge: Technological Competencies

- A company's ability to improve continuously.
- Investments in R&D are one traditional method of continuous improvement.
- To remain relevant and valuable, competencies must be renewed and changed. They must be able to make "significant contributions to perceived customer benefits".
 - (Smith, 2007)

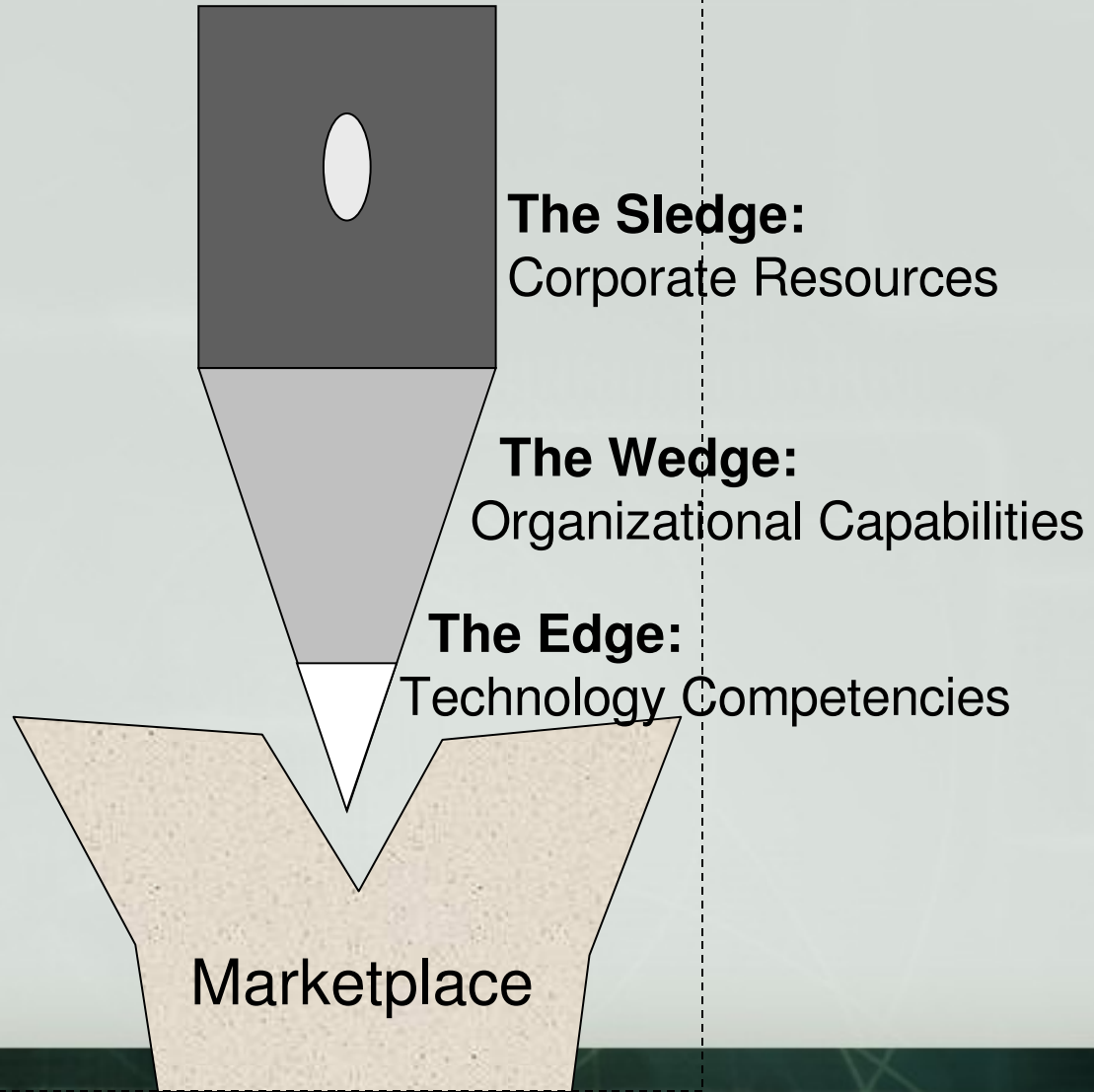


Alone ... Failure

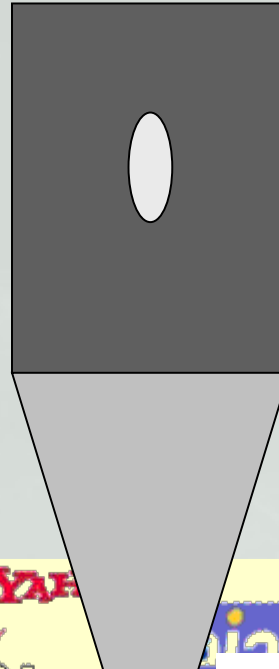


Together ... Powerful

Strategic Alignment:
Innovation Effectiveness



Strategic Alignment: Internet Search



The Sledge:

IPO Revenue spent on research and IT Centers

The Wedge:

AdWords advertising

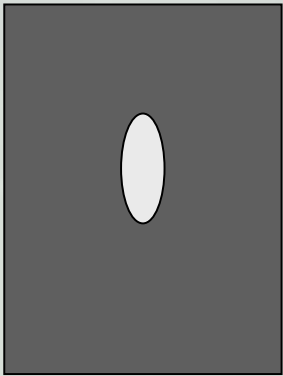
The Edge:

Search Engine



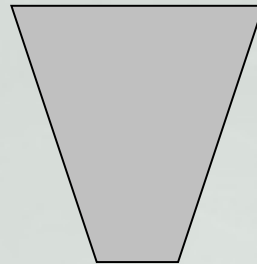
Strategic Alignment: Innovation Effectiveness

The Sledge: Resources



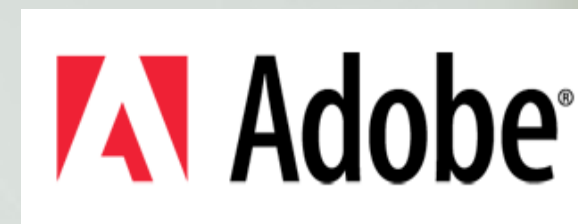
Computer
Hardware

The Wedge: Capabilities



Paper
Documents

The Edge: Competencies



Digital
Documents

Strategy

Identify major strategy required to capture a market.

- Extender (Cost, Decline, Substitute)
- Exploiter (Quality, Mature, Diffuse)
- Follower (Features, Grow, Syndicate)
- Leader (Image, Emerge, Innovation)

Competencies

Unique expertise and specializations that give an organization an innovation advantage over competitors. The ability to do something strategic, original, and valuable to the market.

Capabilities

Operational ability to create products, maintain and optimize a business, and handle the daily issues associated with production, distribution, and marketing of innovative products.

Resources

Assets available or accessible to serve the selected strategy. Corporate competencies and capabilities draw on these resources to create innovative products, meet current customer needs, and feed internal operations.

Resource Availability and Allocation.

Access to R&D funding, deep technical skills, unique competences. Higher quality resources than competitors have.

Envision the Future. Use expertise to overcome the limitations of ignorance and the inertia of tradition. Create effective tools for solving new problems in new ways.

Improve on the Past. Use experience and scientific management to improve the efficiency of the organization in doing what it has already been doing.

Resources Category. Leverage natural, intermediate, and created resources to provide products and services.

Understand Competitors' Strategies.

Collect competitive intelligence, analyze and predict competitor actions, identify external technical and industry forces first.

Infoware + Orgaware. Organize information and organization to create something unique. Equip organization to apply techno and humanware to productize the new knowledge.

Techoware + Humanware. Apply techno and human assets to solve the business operations problems associated with creating a competitive product.

Identify Breadth and Depth. These dimensions determine the competitive advantage of the company and the "height" of barriers to entry for competitors.

Leverage Technological Environment.

Conduct accurate technology forecasting, identify relevance of new tech, target accessible and valuable opportunities.

Seek Solutions. Focus R&D on unsolved problems that have a significant ROI. Create an organization that has a schedule for productizing new knowledge/R&D.

Master Complexity. Design an organization that can handle the complexity of production. Overcome the intimidation of large problems by decomposing into manageable pieces.

External Dependencies. Partnerships are required where breadth or depth are missing. Establish these without compromising competitive advantages of the company.

Control Structural & Cultural Context.

Manage R&D, transfer tech to production, build effective NPD teams, instill values and rewards to drive personal and team behaviors.

Synthesis. Organize information and knowledge to reveal new possibilities for solutions and products. Search inductively for answers to "What if?" questions.

Problem Solving. Face the daily challenges of production. Capture, categorize, decompose, analyze, and solve problems systematically, efficiently, and repeatedly.

Resource Stability. Degree to which essential resources are owned by the company, host nation, customer, or individual employee. Structure to retain resources.

Develop Strategic Management Capacity.

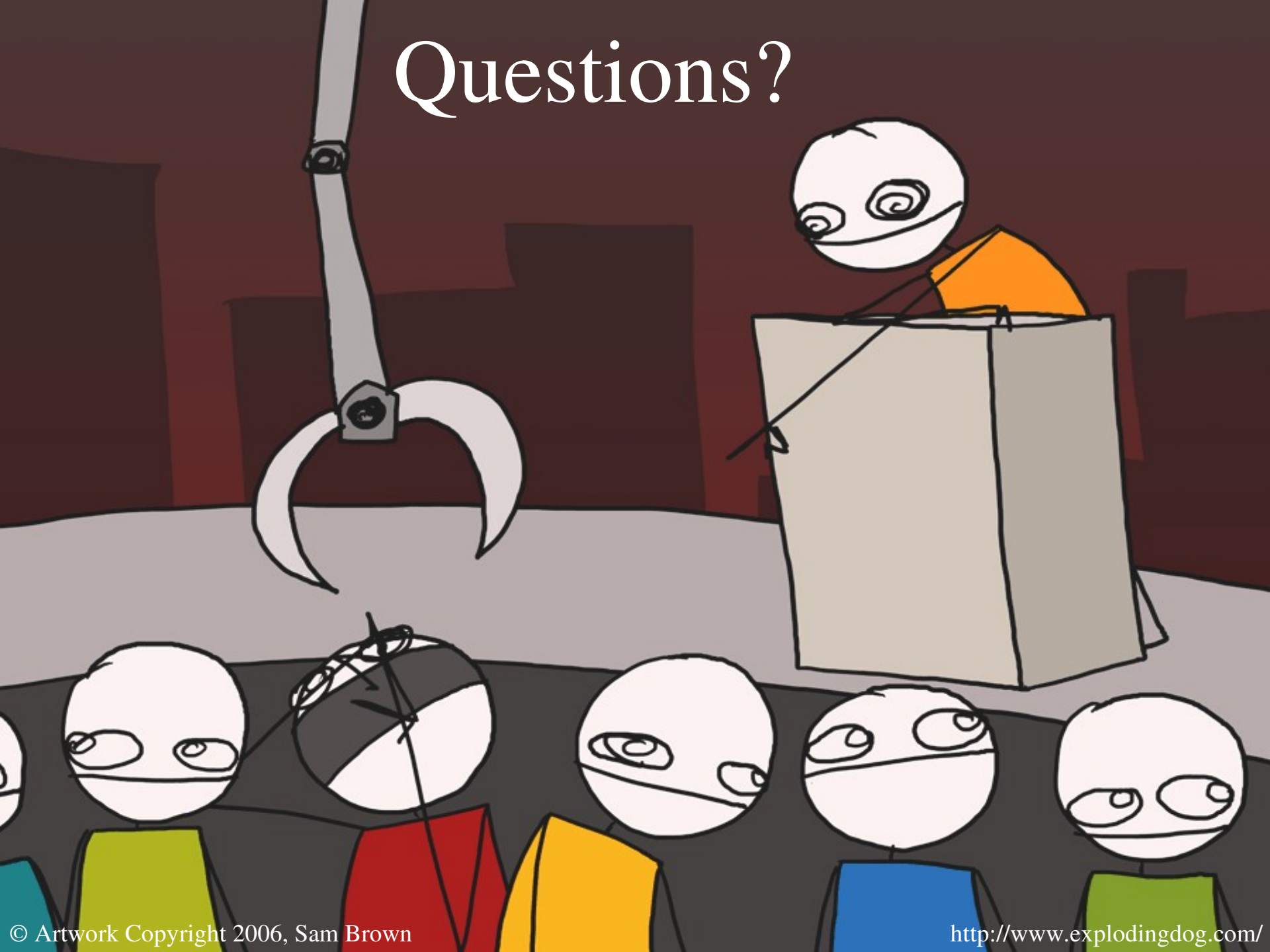
Define strategy, assess importance of entrepren. initiatives, align with core capabilities, elevate product champions, reward successes.

Flexibility. Do not let competence create boundaries around R&D exploration or expertise. Allow expertise and competencies to broaden opportunities, not narrow them.

Stimulate Entrepreneurialism.

Encourage innovative perspectives on operational problems. Reward new solutions to old problems.

Questions?



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Bio: Roger Smith



Dr. Roger Smith is the Chief Technology Officer for U.S. Army Simulation, Training and Instrumentation. He is focused on bringing innovative technologies into Army training and testing systems and events. His organization awards over \$2.5 billion dollars in government contracts each year. Prior to this position he served as a Group CTO at L3 Communications and VP of Technology at BTG Inc. He has published over 100 papers on management, innovation, simulation, and computer gaming. He has been a lecturer at the University of Virginia, Georgia Tech, University of Texas, Texas Tech, University of Central Florida, and Florida Institute of Technology. He holds a Doctorate in Management and a Doctorate in Computer Science.