

Partnerships, Clusters, Networks – National View

Partnerships: Building a New
Foundation for Innovation

NSF Workshop

June 18, 2001

Nature of the Marketplace

- Explosive Change – e-business
 - Entirely new business models
 - E-business opportunity - \$600B by 2003
 - I/T growth – 11%, e-business portion – 22%
 - 2000- Marketplace valued trajectory over current, 2001 - .com implosion reviving old fashioned focus – profit, ROI, earnings
- Company/entrepreneur response
 - Accelerate growth – partnerships
 - Ex – IBM/Cisco, IBM/Siebel, SAP
 - Ex – Damascus Alliance – copper process

Innovation Focus

- Technology
 - Generate new ideas/products
 - Patent leadership - #1 in US, 2886 patents '00
 - Beats HP, Intel, Sun, Microsoft, Cisco, Dell, Oracle, EMC COMBINED
 - Speed innovations into products – “Blue Gene”
- Not technology alone
 - Go to market, attract people
 - Structure relationships w/customers, suppliers, partners

IBM Research

- Worldwide – NY, Austin, Almaden, Santa Teresa, Beijing, Tokyo, Delhi, Haifa, Zurich
- 2 Nobel prizes
- \$6.0 Billion in R&D in 2000, 7% of revenue
 - 15-20% basic, very exploratory
 - Value – Technology company at core, provides portfolio balance, access to ideas
- Research partnerships important
 - Integration – vendors, customers, colleagues, teaming critical, access to unique skills, people
 - R, D, E & manufacturing integration

Drivers for Partnerships

- Marketplace Changes
 - Increasing competition, velocity of change
 - Shorter product cycles, Web years
 - 50% hardware revenue-new products, product mix
- Success depends on Speed
 - Need technology to the marketplace quickly
 - 3 partnership types: govt-ind, ind-ind, ind-univ
- Critical factors
 - Reduce cost, risk, provide access to tech
 - Enable new research
 - Increase speed to market

Partnerships, continued

- Better training of students
 - Relevant multidisciplinary research problems
 - Trained in team environment
- Small and large company synergy
 - Small companies value
 - Access to large co's as partner, customers
 - Large company program management skills
 - Large companies value
 - Niche expertise
 - Unique talent

Role of Government

- Govt linkage/partnership pgms provide conduit to the marketplace
- Govt plays a unique role in partnerships
 - Neutral ground for tech dev, base platforms
 - Base tech/de facto ind standards/ mktplace advantage
 - Consortium pgms stimulate tech diffusion
- Govt can fund fundamental research which will not be performed by industry
 - Primary govt/ind roles different, complementary
 - Govt – fundamental, exploratory research
 - Industry – closer to market, 2, 3-5 years out

Government/Univ/Industry Partnerships – Lessons Learned

- Very challenging problems – technical, structural, cultural
- Joint goals critical
 - Sustainable business model is key to industry
 - Stimulate technology along natural trendline
- Must have mutual value, strategic synergy
 - Human factors, complementary skills, cultures
 - Need agreement on measurements – profitability, tech dev, ind or thought leadership, policy lead
- Connections start w/senior execs, but need reinforcement throughout the organization

Challenges

- Need stable, multiyear govt funding
- New Model Emerging – e –Business Transformation
 - Marketplace speed vs government speed
 - Transforming govt/ind relationship from vendor/customer to partner/collaborator
 - New roles, understandings
- Govt must race to move above the e-line
 - IT product cycles vs govt procurement cycle
 - Talent shortage

Future Directions

- Evolving nature of govt/ind joint projects reflects limits and experiences of parties
 - Priv sector moving about e-line more rapidly
 - Govt culture re risk taking, turf, critical missions
 - Tech globalization vs foreign access to tech
- Govt role (may be) reduced/focused on basic research
 - Ind/univ partnerships increase, ex Deep Computing Institute, MARCO
 - Industry only projects/alliances increase in importance
 - Blue Gene
 - IBM-Dell, IBM-Cisco strategic alliances
- Fundamentals for partnerships remain sound