Creating High-value Business Opportunities from Advanced Research

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Business Model

Invest in the foundational work
- Create new capabilities, demonstrate proof-of-concept, and shape for commercial opportunities

Develop complimentary applications with industry clients
- Applications identified by PARC, by client or jointly
- Often involve novel designs for specific application

Build expertise, shape commercial concepts (Internal R&D, government contracts)
Cornerstone for high-value innovation
Get close to the market as early as possible

Examples at PARC

- Field studies
- Visiting Technologists
- Working with entrepreneurs
- Entrepreneurs-in-residence
- Industry interviews
- Speaker series and reading groups
- Consultants
- Experiences with clients

Not just Business Development’s job

- Researchers involved in, often driving, the discovery processes
Getting close to the market

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SolFocus Relationship

A new model for business engagement

- Partner with strong entrepreneurs
- Understand business/technical problem
- Invent & file patents
- License technology for equity and royalties
- Incubate the new company inside PARC
- Ongoing research in return for additional equity

A range of benefits to the PARC community

- Excitement of a fast-moving, growing business (2 to 60 employees)
- Access to VCs through participation on SolFocus Board of Directors
- Opportunity to engage partners of SolFocus for other projects
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Rapidly Increase Domain Knowledge...

Visiting Solar Energy Technologist

Steve Shea
Previously Director of R&D at BP Solar

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PARC Copyright 2008
PARC Innovation for Silicon PV Front Gridline

Existing Screen-Printed Gridlines
Fired Aspect Ratio = 1:10

Parc Gridlines
~50 µm x ~50 µm
Fired Aspect Ratio = 1:1

Opportunity: Net Efficiency
Increase of 6% Relative at Similar Manufacturing Cost
New Business Creation

- DOE Solar America Initiative Funding with BP Solar
- Developing a commercial tool and optimized materials
- Planning to spin out a PARC company to commercialize
The drive to openness

Working with large corporations
  • An emerging market with its own set of challenges

Growth targets demand accelerating innovation
  • And the proof sources for Open Innovation are too strong to ignore

More companies focused on bringing the outside in
  • Acquisitions – work with venture community
  • In-licensing – other companies, independent labs, universities
  • Co-development – small businesses, independent labs
  • Joint research – suppliers, customers, competitors, ...
  • And more ...

Shifting focus – from looking for technology to looking for business opportunities
Moving a company up-market

Client
- Japanese semiconductor materials company

Need
- Wanted to move up-market into device business

Technology Platform
- Device engineering capability plus technology portfolio

Output
- Transfer of specs and setup of all device manufacturing equipment, operating devices, technology transfer to R and D, business unit, engineers resident at PARC for 3 months

Next Step
- Working on novel device configurations

Value Creation
- Company acquires platform for entering new market
Enabling a new platform

Client
• Leading computer server manufacturer

Need
• Specialized multichip packaging technology platform for next generation servers

Starting point
• Two month feasibility study of novel compliant packaging system
  • Moved on to advanced development and prototyping

Output
• Closely coordinated phases leading rapidly to manufacturing.

Next Step
• Transfer to third-party manufacturing partner
Opportunities and challenge

Companies are demanding

- It’s a business decision
- Need more than just the idea
- Organizational dynamics always come into play

Models are still emerging for how to engage

- Shopping lists and catalogs
- vs. strong collaborative engagements

Why do it? Best opportunity for significant impact.
Excuse the bad news...

*Internal (and external) technologists have a bad reputation in Open Innovation*
CEO’s Most Significant Sources of Innovative Ideas
IBM 2006 Global CEO Survey

- Employees
- Business partners
- Customers
- Consultants
- Competitors
- Associations, trade shows, conference boards
- Internal sales and service units
- Internal R&D
- Academia

Note: Respondents could select up to three choices.

R&D Managers’ Motivations for Outsourcing
Research & Technology Management Magazine

- Improved R&D Cost Effectiveness
- Increased Competitiveness
- Global R&D Infrastructure
- Increased Overall R&D Capabilities
- Building New Markets
- Global R&D Teamwork
- Offshore Manufacturing Support
- Increased R&D Productivity
- Faster Response Time
- 24/7 R&D Capabilities
- Customer Support
- Increased Innovativeness
- More overall flexibility
“Your internal researchers are absolutely, positively the last people you want evaluating external opportunities.”

» Speaker at workshop,

Technology Sourcing for Faster Innovation
They obviously haven’t thought about …

You know, we could do the same thing …

We did something like that a few years ago, and …
Profile of a missed opportunity
Connecting from the outside

Not for the faint of heart

“Don’t bring in solutions looking for problems to solve.”

Time and attention are a business person’s most precious resources

Must show them a credible an opportunity
From inside a company

Focus on the need to be addressed

Look for the complements

• What else will your company bring to the table?

Help create paths for success

• Can you eliminate uncertainty from what you already know?

• Help your business people make the connections

Don’t go it alone

NOTE: These can be career-defining moves
Open Innovation is a powerful accelerator –
It’s not going away

Critical issue is finding protectable opportunities in the intersection

Requires an open mindset within and across companies
Questions