How to Transition to the Commercial Sector

Jenny C. Servo, Ph.D.
“The process of developing markets and producing and delivering products or services for sale (whether by the originating party or by others)..... commercialization includes both government and non-government markets.”

– National Science Foundation SBIR Solicitation
• Professional Services firm - Rochester, NY

• Worked with over 3400 SBIR/STTR firms
  • Department of Energy, EPA, Navy, NSF, NIH, NIST
  • Phase 2 - Commercialization Assistance Program (CAP)
    • Transition Assistance Program (TAP)
    • Phase 1 - Commercialization Planning Program (CP²)

• 50% receive private sector investment
  • 12-18 months of completing Commercialization Assistance program (CAP)
• Not defined in solicitations......but alluded to
  – “....your company’s strategy for converting your proposed SBIR research into a product or non-R&D service with widespread commercial use -- including private sector and/or military markets.”
  – DoD SBIR solicitation
• The series of financing options that a company entertains to move its technology from concept to the marketplace

<table>
<thead>
<tr>
<th>Milestone</th>
<th>How Funded?</th>
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</thead>
<tbody>
<tr>
<td>Concept development</td>
<td>Phase I SBIR</td>
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<tr>
<td>Business case analysis</td>
<td>G&amp;A</td>
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<tr>
<td>Prototype development</td>
<td>Phase II SBIR</td>
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<tr>
<td>Intellectual property protection</td>
<td>Retained earnings</td>
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<tr>
<td>Beta testing</td>
<td>Corporate partner</td>
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<tr>
<td>U/L approval</td>
<td>Retained earnings</td>
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<tr>
<td>Test market introduction</td>
<td>Equity investment</td>
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<tr>
<td>Marketing</td>
<td>???</td>
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<tr>
<td>Scale-up of Production</td>
<td>???</td>
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</tbody>
</table>
Roadmap to Financing Options

- **Sweat equity**
  - Founders
  - On Spec
- **Science for Hire**
  - Federal
  - Corporations
- **Debt**
  - Family, friends
  - Personal credit
  - Fed, State loans
- **Equity**
- **Profit**

**Licensing Partnerships / IP sale**

**Referral network**
- Accountants
- Attorneys
- Successful entrepreneurs, etc.

**Additional resources**
- Business angels
- Venture Capital
- Corporations
- Investment banker
All require a Return on Investment!

MILESTONE

SOURCE OF $

ROI?

Beta Testing

U/L Approval

Test marketing

Corporate partner

Retained earnings

• Venture capital &
• Corporate partner

All must benefit financially, commensurate with risk and their expectations
Strategy selection process

• Iterative ..... build and test
• Articulate at the outset and
• Revisit
  • as you collect additional market data
  • as you develop the business case
  • during negotiations with partner/investor
Factors effecting commercialization strategy

- Mission
- Vision
- Business philosophy
- Your current situation
- Customer requirements of supplier
- Window of opportunity
- Competitors
Mission

- Business functions
- Products and technologies
- Markets served
- Sustainable competitive advantage
“Soarrell Medical Systems develops, produces, markets, and supports proprietary, patient-oriented software, biometric smart cards and readers which interface with computerized patient record (CPR) systems. We offer outstanding customer support and share the financial risk with medical practitioners. We are dedicated to making it easier for physicians in private practice to spend more time providing quality care.”
Elements of Vision

• 5-years out
  • Financial goals - revenue goals, profit margin goals
  • Market goals - customers served, market niche, geographic region, market share
  • Products and services
  • Image - How will you be perceived by customers, competitors, employees, community
# Typology of Visions

<table>
<thead>
<tr>
<th></th>
<th>Revenue</th>
<th>Employees</th>
<th>Purpose</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Life-Style</strong></td>
<td>$2 million</td>
<td>30-40</td>
<td>Support owners</td>
<td>Private</td>
</tr>
<tr>
<td><strong>Foundation</strong></td>
<td>$10 – 30 million</td>
<td>40-400</td>
<td>Start new industry</td>
<td>Private</td>
</tr>
<tr>
<td><strong>High Potential</strong></td>
<td>$20 – 30 million</td>
<td>500+</td>
<td>Growth &amp; value</td>
<td>Go public</td>
</tr>
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Business Philosophy

- I don’t want to give to control
- I want to try it all
- I want to enjoy myself
- I don’t care who gets rich
Current situation

- Financial health
- Sustainable competitive advantage
- Stage of product/technology development
- Management
- Market readiness
- Risk: technology, market, management
• **Positioning to**
  • Take advantage of a window of opportunity
  • Broaden a customer base
  • Expand services
Customer requirements of suppliers

- Financial stability
- Platform interface issues
- Quality - ISO, CE certified
- Continuous improvements
- Quantities and delivery schedules
- Customer support
Sample strategy - Licensing

- **Vision**: Life-style company
- **Philosophy**: Do what I enjoy
- **Financing methods**
  - Start-up
  - Concept development
  - Intellectual property
  - Application development
  - Production
  - Sweat equity
  - SBIR
  - Retained earnings
  - Licensee
  - Licensee
### Strategy - Strategic alliance

- **Vision**: Foundation company (R&D and manufacturing)
- **Philosophy**: Conservative
- **Financing methods**
  
<table>
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<th>Start-up</th>
<th>Sweat equity</th>
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<td>Concept development</td>
<td>SBIR</td>
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<td>Retained earnings</td>
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<tr>
<td>Prototype development</td>
<td>SBIR</td>
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<tr>
<td>Production scale up</td>
<td>Equity investor, converted to debt</td>
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<tr>
<td>Marketing/sales</td>
<td>Strategic alliance</td>
</tr>
</tbody>
</table>
• **Vision:** High potential venture

• **Philosophy:** Rich is good

• **Financing options**
  - Concept development  Sweat equity
  - Prototype development  Science for hire
  - Production introduction  Private placement
  - Market penetration  Debt financing from equity investors
Sample Strategy - IPO

- **Vision:** High potential venture
- **Philosophy:** I want to try it all
- **Financing options**
  - Concept development: Federal funding
  - Prototype development: Seed financing from angels
  - Market test: Retained earnings
  - Market introduction: Equity - Fortune 500 company
  - Scale-up: Second round financing from VC
  - New facility: Private placement
  - Expansion: Line of credit, profits
  - Market penetration: IPO
Combination of strategies

- Life-style firm
- Parent company
- Spin-off
- High potential venture
Financing Options as a Function of Application & Resources Required

- **Spin-off**
- **Joint venture**
- **Equity investment**

- **Joint R&D**
- **Licensing**
- **Strategic alliance**
- **Equity investment**

- **Bootstrap**
- **Angel investment**
- **Debt financing**

- **Partnerships**
- **Licensing**
- **Angel investment**

Application & Resources Required:
- **A lot**
- **$**
- **REQUIRED**

Applications:
- **Few**
- **Many**
How -To

• Management must
  – Focus on growth of company, not just on completing the R&D
  – Understand the implications of pursuing a specific strategy
    • Licensing: attention to IP, contract law, relationships, audits
    • Angels: ROI, share control
  – Set aside time for this role, hire
  – Be measured on the extent to which