ENHANCE THE SUSTAINABILITY & IMPACT OF YOUR RESEARCH

PRESENTED BY:
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Executive-in-Residence
Program Director, TEC Health Accelerator
KEY MESSAGES

• Increased need to think about IP value creation options/Commercialization Plan

• Examples of business plan tools and where to go

• Valuation of early stage technologies

• Importance of milestone and metrics

• RESULT: THE RIGHT PITCH FOR VALUE

• Use your local innovation system to help
INTRODUCTION

Career roles
H2 Technology Consulting, Inc.
TEC Edmonton
CanBiocin Inc.
Intelligent Imaging Systems, Inc. and Drivewyze, Inc.
Deloitte & Touche Corporate Finance Canada, Inc.
  • Vice President & Director
  • National Biotechnology Deputy Leader
  • Western Canadian Technology Deputy Leader
KPMG LLP

Current board roles
VaxAlta, Inc.
Temple Therapeutics BV (Netherlands)
Telus World of Science Edmonton Foundation
WHO IS TEC?

- Experts helping successfully grow technology-based businesses
- Not-for-Profit Joint Venture
- ~ 60 Staff & Contractors

...We work with companies, entrepreneurs, and inventors
## TEC EDMONTON CLIENT SURVEY
**“INNOVATION SYSTEM CLIENTS DO BETTER”**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Surveyed Clients</td>
<td>74</td>
<td>103</td>
<td>125</td>
<td>128</td>
<td>n/a</td>
</tr>
<tr>
<td>Annual Gross Revenue</td>
<td>$73.4M</td>
<td>$106.2M</td>
<td>$131.8M</td>
<td>$160.7M</td>
<td>$472.1M</td>
</tr>
<tr>
<td>Employment Created</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment grew</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25%, 148 new jobs in 49 clients</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>26%, 245 new jobs in 72 clients</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>25%, 360 new jobs in 82 clients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26%, 364 new jobs in 83 clients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One-Year Survival</td>
<td>n/a</td>
<td>96%</td>
<td>99%</td>
<td>98%</td>
<td>98% average</td>
</tr>
<tr>
<td>Total Sales</td>
<td>$61.5M</td>
<td>$73.3M</td>
<td>$98.7M</td>
<td>$119.8M</td>
<td>$353.3M</td>
</tr>
<tr>
<td>Domestic Sales</td>
<td>$33.8M</td>
<td>$43.3M</td>
<td>$66.9M</td>
<td>$77.3M</td>
<td>$221.3M</td>
</tr>
<tr>
<td>International Sales</td>
<td>$27.7M</td>
<td>$30.0M</td>
<td>$31.8M</td>
<td>$42.5M</td>
<td>$132.0M</td>
</tr>
<tr>
<td>Financing/Funding Raised</td>
<td>$29.6M</td>
<td>$54.9M</td>
<td>$75.7M</td>
<td>$72.2M</td>
<td>$232.4M</td>
</tr>
<tr>
<td>R &amp; D Investment</td>
<td>$17.0M</td>
<td>$30.6M</td>
<td>$38.1M</td>
<td>$56.3M</td>
<td>$142.0M</td>
</tr>
<tr>
<td>Products/Services Launched</td>
<td>58 in 42 clients</td>
<td>122 in 52 clients</td>
<td>145 in 63 clients</td>
<td>141 in 65 clients</td>
<td>466</td>
</tr>
<tr>
<td>Prototypes Developed</td>
<td>135 in 48 clients</td>
<td>155 in 64 clients</td>
<td>174 in 73 clients</td>
<td>212 in 90 clients</td>
<td>676</td>
</tr>
</tbody>
</table>

*In comparison to Industry Canada reported benchmark job growth rates of 1-5% for young entrepreneurial ventures*
WHAT WE ARE NOT COVERING TODAY

• Importance of the science
• Understanding the mechanism of action
• The quality of the team
THE VALUE PROPOSITION PITCH

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604-649-8014

Invention to Innovation

Who are you?
What is the problem?
What is your solution? Technology?
What is your product? Does it work? How do you know?
Clinical relevance? Work flow?
What is your market? Competition? Differentiation?
What is novel? IP?
Business model?
Next steps?
What are you seeking from industry?

Source: Jennifer Hamilton, Johnson & Johnson
INTELLECTUAL PROPERTY

- **Patent**: Idea or invention
- **Copyright**: Specific expression of an idea
- **Trademark**: Name or symbol
- **Trade Secret**: Confidential information
- **Industrial Design**
- **Integrated Circuit Topography**
- **Plant Breeder’s Rights**
IP VALUE CREATION OPTIONS

• Publish
• Keep as a trade secret
• Option agreement
• License agreement to another company
  • Field of Use
  • Geographic territory
  • Exclusive or non-exclusive
  • Royalty bearing or royalty-free
• License agreement to your inventor co. (spin-off)
• Sale or assignment of the IP
WHY PLAN?

- If you have a intellectual property that may have commercial potential, make a plan

Technology concepts and ideas

Coherent approach

Current state of research

Demonstrable value creation strategy
BUSINESS PLAN OUTLINE

- Executive Summary
- Company Overview
- Product or Service Description
- Market Analysis
- Competitive Analysis
- Marketing Plan
- Operations Plan
- Financial Plan
BUSINESS PLAN SEGMENTS

- Executive Summary
- Company Overview
  - Mission and Vision
  - Management Team
  - Company History
- Product or Service Description
  - Product or Service Description
  - Current Status of Product
  - Value Proposition
- Market Analysis
  - Market Size
  - Market Trends and Drivers
  - Addressable Market Segment
  - Key Market Participants / Players
- Competitive Analysis
  - Direct and Indirect Competitors
  - Feature Comparison of Key Competitors
- SWOT Analysis
- Operations
  - Business Model
  - Human Resource Strategy
  - Implementation Milestones
  - Product Development Schedules
  - Risk and Risk Mitigation Strategy
- Marketing Plan
  - Product
  - Price
  - Place
  - Promotion
- Financials
  - Cost to Execute
  - Revenue Model
  - Breakeven and Return on Investment
  - Sales Forecast
  - Exit Strategy
BUSINESS PLAN TOOLS

- There are lots of business planning tools available to help focus your planning

- What is your product?
- Is there a market need?
- Who are your customers?
- What is the market size?
- What is your LTSCDA?
- Who are your competitors?
- Is this financially viable?
VALUE PROPOSITION DESIGN TOOL

Product

Benefits
Features

Experience

Customer

Wants
Fears
Needs
Substitutes

Company:
Product:

Source: https://strategyzer.com/books/value-proposition-design?_ga=1.37144160.198804220.1447295400
PORTER’S FIVE FORCES

Threat of New Entry
- Time and cost of entry
- Specialist knowledge
- Economies of scale
- Cost advantages
- Technology protection
- Barriers to entry

Competitive Rivalry
- Number of competitors
- Quality differences
- Other differences
- Switching costs
- Customer loyalty

Supplier Power
- Number of suppliers
- Size of suppliers
- Uniqueness of service
- Your ability to substitute
- Cost of changing

Buyer Power
- Number of customers
- Size of each order
- Differences between competitors
- Price sensitivity
- Ability to substitute
- Cost of changing

Threat of Substitution
- Substitute performance
- Cost of change

Source: https://www.mindtools.com/media/Diagrams/porters-five-forces-1-new.jpg
## SWOT Analysis

<table>
<thead>
<tr>
<th>Internal Factors</th>
<th>Helpful</th>
<th>Harmful</th>
</tr>
</thead>
</table>
| **Strengths**    | - What do you do better than anyone else?  
                  - What advantages does your company or product have?  
                  - Match your strengths to customer needs |
| **Weaknesses**   | - What do you not do well or not as well as competitors  
                  - What disadvantages does your company or product have?  
                  - Avoid market segments where you are weak  
                  - Develop plan to address weaknesses that are important to customer needs |

<table>
<thead>
<tr>
<th>External Factors</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
</table>
| **Opportunities**| - New trends, regulations, technologies present opportunities?  
                  - Which ones are the largest, easiest to capture and most immediate?  
                  - What can you change to capture new or larger opportunities? |
| **Threats**      | - Competitive threats  
                  - Business environment/economy  
                  - Currency fluctuations  
                  - Regulations/embargoes  
                  - What can you do to mitigate these? |
MARKET PLANNING PROCESS

The Environment:
- Government and Regulatory
- Consumer Trends
- Demographics

Customer Needs:
- Define needs of demographic groups
- Determine group size
- Determine ease of selling to group

The Product:
- Effectiveness
- Ease of Purchase
- Price
- Ease of Use

Competing Products:
- Same criteria as “Product”
- Look at “traditional” competitors
- Look at “non-traditional” competitors

Segmentation:
- Group customers by like “Needs”
- Prioritize segments by size and ease

Differentiation:
- State areas of “capability” and “incapability”
- Determine need to counter “incapability”

Strengths/Weaknesses / Opportunities/Threats:
- Match Strengths to Customer Needs and prioritize Customer targets
- Determine significance of Competitor threats and develop plan.
- Develop budgets and resources for target segments.

Product Development Strategy:
- Product Lifecycle
- Technology Adoption Profile
- Stages of Product Development
- Stage-Gate® Process
THE 4 P’S OF HEALTH TECHNOLOGY CO

• Patient
• Prescriber/Practitioners
• Procurement
• Payers
GROWTH WHEEL TOOL

BUSINESS CONCEPT
- Business Idea
- Product Portfolio
- Revenue Model
- Customer Portfolio
- Market Position
- Ownership and Board
- Employees
- Partnerships
- Business Processes
- Legal Issues

OPERATIONS
- Facilities
- IT Systems
- Production and Deliveries
- Funding
- Financials
- Branding
- Sales and Service
- Communications and PR

CUSTOMER RELATIONS
- Networking
- Marketing
The VRIO model assesses the value, rarity, imitability, and organization of a firm's resources and capabilities to determine competitive advantage. The summary of the model is as follows:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>NO</td>
<td></td>
<td></td>
<td>Competitive Disadvantage</td>
</tr>
<tr>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
<td>Competitive Equality</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td>Short-Term Competitive Advantage</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>NO</td>
<td>Unused Competitive Advantage</td>
</tr>
<tr>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>Long-Term Competitive Advantage</td>
</tr>
</tbody>
</table>

GE-MCKINSEY 9-BOX MATRIX

Source: http://mckinsey.com and www.showest.com
HOW IP IS NOT VALUED

Source: https://www.linkedin.com/pulse/cash-king-8-tips-optimizing-your-startup-financing-strategy-dunlap
MILESTONE BASED VALUATION

Valuation

Revenue & Growth driven

Milestone

Milestone

Milestone

Time

Source: https://www.linkedin.com/pulse/cash-king-8-tips-optimizing-your-startup-financing-strategy-dunlap
IMPORTANCE OF URGENCY

Cumulative Cash Flow

Zero

Time
"Planning without action is futile, action without planning is fatal." — Cornelius Fitchner
CORPORATE TIMELINE AND MILESTONES

• “A goal without a plan is just a wish.” - Larry Elder

Source: Dr. Geoffrey Vince, Chairman Biomedical Engineering, Cleveland Clinic
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Source: Jennifer Hamilton, Johnson & Johnson
GSK PITCH TEMPLATE SUGGESTIONS

- **Therapeutic hypothesis** – coherent and supportable hypothesis that technology will produce an effect expected to be of therapeutic or diagnostic benefit
- **Product defined** – Specific product or service identified
- **Product status and enabling expertise** – current project status, PI know-how, collaborators, IP protection or status
- **Tractability** – development plan to a product can be defined, knowledge suggests that a product can be generated, plans for commercialization
- **Requirement for partner contribution** – Partner capability that will help progress the project, what is the ask, how will the proceeds be used
KEY MESSAGES

• Increased need to think about IP value creation options/Commercialization Plan

• Examples of business plan tools and where to go

• Valuation of early stage technologies

• Importance of milestone and metrics

• RESULT: THE RIGHT PITCH FOR VALUE

• Use your local innovation system to help
evolving ideas

THANK YOU!

Connect with us:
www.TECedmonton.com

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