New Venture Fair Preparation

Developing Financial Projections

Feb 25, 2016
Agenda

- Financial deliverables for application to the New Venture Fair (April 28)
- Identifying / Quantifying your market
- Building revenue and cost projections
NVF Application Deliverables

- Identify / quantify market opportunity
- Revenue projections for 3 to 5 years
  - Show revenue streams for each market segment
    - # of units sold
    - Price/unit
- Gross profit (and gross margin) projections
  - For hardware: Estimated unit product cost
  - For software: Estimated support costs
What You’ll Need...

- Profile of your business model:
  - Customer segments
  - Clear and compelling value proposition
  - Revenue stream
  - Sales channels / distribution
  - Go to market strategy
  - Competitive landscape / barriers to entry
  - Market size / market penetration assumptions
  - Pricing

- Customer validation of your business model
Steps to Building Your Revenue Projection

1. Identify / quantify your market
   • Total, Servable, Target Markets

2. Determine market penetration estimates
   • Indirect Method – Use % of Target Market
   • Direct Method – Based on market analysis & feedback

3. Determine pricing
   • Based on competitive landscape & value proposition

4. Sensitivity Analysis
   • Understand Revenue sensitivity to changes in units and price
   • Present likely case scenario
Identifying / Quantifying Your Market
Identify / Quantify your Market

- Total Addressable Market (TAM)
  All of the buyer/seller relationships participating in the market

- Served Addressable Market (SAM)
  The segment of the TAM for which your business’ value proposition is strongest

- Target / Obtainable Market (SOM)
  The segment of the SAM with the most direct path to success for your business
Total Addressable Market (TAM)

- **Quantifies** all buyer/seller relationships in your market
- Usually very broad
- Not likely fully attainable by a startup with limited resources
- Important to capture only the market related to your business
Served Addressable Market (SAM)

- The segment of the market to which your value proposition best appeals
- Sharpens the focus on a particular segment of the market
- Theoretically attainable (100% share)
- Minimally attainable by a startup with limited resources
Servable Obtainable Market (SOM) AKA - Target Market

- Further refinement of the Servable Market
- Often a demographic or geographic sub-segment of a market
- Theoretically attainable (100% share)
- Enables focus given limited startup resources

*Your revenue forecast will be based on a percentage of your defined target market!*
Calculating Target Market – Units or $$

Total Addressable Market

Served Addressable Market

Target Market

100%

70%

15%

Your Team’s Revenue $$ will be a % of the Target Market
Example: Company XYZ

Company XYZ makes non-dimmable LED light bulbs

- TAM = worldwide LED lighting market
- SAM = worldwide non-dimmable LED lighting market
- SOM (Target) = US non-dimmable commercial LED lighting market
Example: InTouch Technologies

InTouch makes telemedicine solutions

• TAM = worldwide telemedicine market

• SAM = worldwide telemedicine applications in acute care hospitals

• SOM (Target) = US telemedicine applications in acute care hospitals requiring mobility
How Do We Determine Market Size?

- Published market / industry research
- Educated estimate based on reasonable assumptions
- Market of a like industry with common characteristics
- Ultimately, you want to determine likely annual selling quantities
Importance?

- Quantifies the financial potential of your business
  - Small market size may not generate much interest
- Helps you refine your business model
  - Target market
  - Go to market strategy
  - Focus
  - Its difficult to gain traction in a gigantic market!
A few more thoughts...

- Well-supported, reasonable estimates for market size and market penetration add credibility to your forecasts
- Make citations clear if using published research
- Avoid the “own the market” fallacy:
  - “We’re targeting a $5 million niche and expect to capture 75% of the market.”
- The financial forecast (pro-forma) should tell the story of your business model
- A business model that includes a recurring revenue component is valued higher
Lean Launch: The Business Model Canvas

<table>
<thead>
<tr>
<th>Key Partnerships</th>
<th>Key Activities</th>
<th>Value Propositions</th>
<th>Customer Relationships</th>
<th>Customer Segments</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>7</td>
<td>1</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost Structures</td>
<td>Revenue Streams</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>5B</td>
<td>5A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Business Model Drives Projected Sales

- Repeatedly test to gain understanding and confidence of customer needs/wants and product/market fit
  - Who are customers?
  - What do they need/want? Why will they buy?
  - What are revenue sources? (sales, subscriptions, rentals, pay per use, etc.)
  - What are the sales channels?
  - How much can we charge for each product offering?
  - Will the projected revenue stream cover all costs? (short and long term: will revenue and profit increase materially?)
  - How many units will likely be sold? (market size/share)

- May be multiple revenue streams / customer segments
- May be multiple pricing mechanisms
- As your business model evolves, so should your forecasts
# Data Sources

<table>
<thead>
<tr>
<th>Data Compendia</th>
<th>Consultancies</th>
<th>Consultancies URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIA World Factbook</td>
<td>Accenture</td>
<td><a href="http://www.accenture.com">http://www.accenture.com</a></td>
</tr>
<tr>
<td>NationMaster</td>
<td>Booz Allen</td>
<td><a href="http://www.boozallen.com">http://www.boozallen.com</a></td>
</tr>
<tr>
<td>Wikipedia</td>
<td>Deloitte</td>
<td><a href="http://www.deloitte.com">http://www.deloitte.com</a></td>
</tr>
<tr>
<td><strong>Government</strong></td>
<td>Forrester</td>
<td><a href="http://www.forrester.com">http://www.forrester.com</a></td>
</tr>
<tr>
<td>Bureau of the Census</td>
<td>IBM</td>
<td><a href="http://www.ibm.com">http://www.ibm.com</a></td>
</tr>
<tr>
<td>U.S. Energy Information Administration</td>
<td>PwC</td>
<td><a href="http://www.pwc.com">http://www.pwc.com</a></td>
</tr>
<tr>
<td><strong>Business</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Economist</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Universities**

**Industry Groups**
# Products Units and Pricing – Exercise 1

<table>
<thead>
<tr>
<th>Product</th>
<th>Selling Price</th>
<th>Unit Sales</th>
<th>Selling Price</th>
<th>Unit Sales</th>
<th>Selling Price</th>
<th>Unit Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal Financial Planning &amp;Budgeting App</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>1.99</td>
<td>10,000</td>
<td>1.99</td>
<td>50,000</td>
<td>1.99</td>
<td>300,000</td>
</tr>
<tr>
<td>Premium</td>
<td>2.99</td>
<td>5,000</td>
<td>2.99</td>
<td>25,000</td>
<td>2.99</td>
<td>150,000</td>
</tr>
<tr>
<td>Extra Tools</td>
<td>5.99</td>
<td>3,000</td>
<td>5.99</td>
<td>15,000</td>
<td>5.99</td>
<td>90,000</td>
</tr>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Business Financial Planning &amp; Budgeting App</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>49.99</td>
<td>5,000</td>
<td>55.00</td>
<td>9,000</td>
<td>60.00</td>
<td>16,100</td>
</tr>
<tr>
<td>Premium</td>
<td>150.00</td>
<td>6,000</td>
<td>175.00</td>
<td>10,500</td>
<td>200.00</td>
<td>18,800</td>
</tr>
<tr>
<td>Extra Tools</td>
<td>250.00</td>
<td>4,500</td>
<td>300.00</td>
<td>9,000</td>
<td>500.00</td>
<td>16,200</td>
</tr>
</tbody>
</table>
## Monthly Projected Revenue

*(not needed for NVF application)*

### Revenue Buildup - Year 1

<table>
<thead>
<tr>
<th>Product A - Personal</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit Sales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Segment I</td>
<td>250</td>
<td>300</td>
<td>360</td>
<td>432</td>
<td>518</td>
<td>622</td>
<td>746</td>
<td>896</td>
<td>1,075</td>
<td>1,290</td>
<td>1,548</td>
<td>1,963</td>
<td>10,000</td>
</tr>
<tr>
<td>Segment II</td>
<td>125</td>
<td>150</td>
<td>180</td>
<td>216</td>
<td>259</td>
<td>311</td>
<td>373</td>
<td>448</td>
<td>537</td>
<td>645</td>
<td>774</td>
<td>981</td>
<td>5,000</td>
</tr>
<tr>
<td>Segment III</td>
<td>75</td>
<td>90</td>
<td>108</td>
<td>130</td>
<td>156</td>
<td>187</td>
<td>224</td>
<td>269</td>
<td>322</td>
<td>387</td>
<td>464</td>
<td>588</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>Product A Total Units</strong></td>
<td>450</td>
<td>540</td>
<td>648</td>
<td>778</td>
<td>933</td>
<td>1,120</td>
<td>1,344</td>
<td>1,612</td>
<td>1,935</td>
<td>2,322</td>
<td>2,786</td>
<td>3,532</td>
<td>18,000</td>
</tr>
<tr>
<td><strong>Average Unit Sales Price</strong></td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
<td>1.99</td>
</tr>
<tr>
<td><strong>Product A Sales $</strong></td>
<td>1,321</td>
<td>1,585</td>
<td>1,902</td>
<td>2,282</td>
<td>2,738</td>
<td>3,286</td>
<td>3,943</td>
<td>4,732</td>
<td>5,678</td>
<td>6,813</td>
<td>8,176</td>
<td>10,362</td>
<td>52,810</td>
</tr>
</tbody>
</table>

### Product B - Business

<table>
<thead>
<tr>
<th><strong>Unit Sales</strong></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment I</td>
<td>125</td>
<td>150</td>
<td>180</td>
<td>216</td>
<td>259</td>
<td>311</td>
<td>373</td>
<td>448</td>
<td>537</td>
<td>645</td>
<td>774</td>
<td>981</td>
<td>5,000</td>
</tr>
<tr>
<td>Segment II</td>
<td>150</td>
<td>180</td>
<td>216</td>
<td>259</td>
<td>311</td>
<td>373</td>
<td>448</td>
<td>537</td>
<td>645</td>
<td>774</td>
<td>929</td>
<td>1,220</td>
<td>6,042</td>
</tr>
<tr>
<td>Segment III</td>
<td>113</td>
<td>135</td>
<td>162</td>
<td>194</td>
<td>233</td>
<td>280</td>
<td>336</td>
<td>403</td>
<td>484</td>
<td>580</td>
<td>697</td>
<td>915</td>
<td>4,532</td>
</tr>
<tr>
<td><strong>Product B Total Units</strong></td>
<td>388</td>
<td>465</td>
<td>558</td>
<td>670</td>
<td>804</td>
<td>1,157</td>
<td>1,388</td>
<td>1,666</td>
<td>1,999</td>
<td>2,399</td>
<td>3,115</td>
<td>15,573</td>
<td></td>
</tr>
<tr>
<td>Segment I</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Segment II</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td><strong>Product B Sales $</strong></td>
<td>56,874</td>
<td>68,249</td>
<td>81,898</td>
<td>98,278</td>
<td>117,933</td>
<td>141,520</td>
<td>169,824</td>
<td>203,789</td>
<td>244,547</td>
<td>293,456</td>
<td>352,147</td>
<td>460,676</td>
<td>2,289,100</td>
</tr>
</tbody>
</table>

### All Products Sales $  
| 58,194 | 69,833 | 83,800 | 100,560 | 120,672 | 144,806 | 173,767 | 208,521 | 250,225 | 300,270 | 360,323 | 471,038 | 2,342,000 |
# 3 Year Revenue Summary – Required

**UCSB TMP - New Venture Competition**

**Finance Series**

**Sales Revenue Forecast**

<table>
<thead>
<tr>
<th>Year</th>
<th>Products</th>
<th>Units Sold</th>
<th>Gross Sales Revenue</th>
<th>Less: Fees/Commissions</th>
<th>Net Sales Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>18,000</td>
<td>52,800</td>
<td>1,300</td>
<td>51,500</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>15,500</td>
<td>2,289,100</td>
<td>80,100</td>
<td>2,209,000</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>33,501</strong></td>
<td><strong>2,341,900</strong></td>
<td><strong>81,400</strong></td>
<td><strong>2,260,500</strong></td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>90,000</td>
<td>264,000</td>
<td>6,600</td>
<td>257,400</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>28,500</td>
<td>4,966,500</td>
<td>173,800</td>
<td>4,792,700</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>118,500</strong></td>
<td><strong>5,230,500</strong></td>
<td><strong>180,400</strong></td>
<td><strong>5,050,100</strong></td>
</tr>
<tr>
<td>3</td>
<td>A</td>
<td>540,000</td>
<td>1,584,000</td>
<td>39,600</td>
<td>1,544,400</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>51,100</td>
<td>12,733,800</td>
<td>445,700</td>
<td>12,288,100</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>591,100</strong></td>
<td><strong>14,317,800</strong></td>
<td><strong>485,300</strong></td>
<td><strong>13,832,500</strong></td>
</tr>
</tbody>
</table>
InTouch Business Model

Hosted Applications
Monthly license fee per application

SureConnect™
Connectivity Service
Up to $1,250 monthly fee

ControlStation™
$2,800 Purchase

Up to $5,250 / month

Up to $2,800 / month or
$35K Purchase

RP-7™

Software License Fee

OEM Equipment Sale

daVinci Connect™

VisitOR1™
InTouch Business Model & Revenue Forecasting

• Hardware sales / rental
  – Upfront cost or monthly rental
  – Renewal rates for rentals

• Connectivity service
  – Average contract period
  – Renewal / churn rate

• Hosted applications
  – Monthly / annual subscription rates
  – Renewal / Churn rate assumptions

• Technical support / extended warranties
NVF Application Deliverables (repeat)

- Identify / quantify market opportunity
- Revenue projections for 3 to 5 years
  - Show revenue streams for each market segment and aggregate
    - # of units sold
    - Price/unit
- Gross profit (and gross margin) projections
  - For hardware: Estimated unit product cost
  - For software: Estimated support costs
What You’ll Need*... (repeat)

- Profile of your business model:
  - Customer segments
  - Clear and compelling value proposition
  - Revenue stream
  - Sales channels / distribution
  - Go to market strategy
  - Competitive landscape / barriers to entry
  - Market size / market penetration assumptions
  - Pricing

- Customer validation of your business model

* Bring this if you need help and want to come to office hours
Summary – NV Fair Prep Finance Seminar

- Customer value proposition and the business model is at the heart of Financial Planning
- It determines the revenue potential and the required marketing (and operating) plans, and the cost structure necessary to succeed
- By the NV Fair, you should have well-reasoned, supportable revenue projections
- Projected revenues and financial statements are useful tools for assessing profitability, revenue and cost sensitivities, cash flow, and the firm’s economic viability
- Projecting costs, net income and cash flow and financing requirements will be covered in detail after the NV Fair
QUESTIONS?
The Financial Planning Process: Operating / Financial

- **Sales forecast**
  - Gain Customer Interest (2%)
  - Demo (15%)
  - Quote (50%)
  - Receive Purchase Order (100%)

- **Production plans**
  - Lead Times
  - Raw Material Requirements
  - Direct Labor
  - Factory Overhead

- **Operating expense**
  - HR needs
  - Facility Costs
  - Legal & Accounting
  - Supplies, etc.

- **Pro Forma**
  - Income Statement
  - Cash Budget
  - Balance Sheet
## Required for NVC Finals

### 3 Year Summary Income Statement Projections

#### UCSB TMP - New Venture Competition Pro-Forma Income Statements

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>2,260,500</td>
<td>5,050,100</td>
<td>13,832,500</td>
</tr>
<tr>
<td>Less: Cost of Goods Sold</td>
<td>1,147,500</td>
<td>2,468,000</td>
<td>6,457,400</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>1,113,000</td>
<td>2,582,100</td>
<td>7,375,100</td>
</tr>
</tbody>
</table>

#### Less: Operating expenses

<table>
<thead>
<tr>
<th>Expense</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>General and Admin Expense</td>
<td>162,000</td>
<td>326,600</td>
<td>840,400</td>
</tr>
<tr>
<td>Selling Expense</td>
<td>212,000</td>
<td>459,700</td>
<td>1,353,300</td>
</tr>
<tr>
<td>Depreciation Expense</td>
<td>54,000</td>
<td>108,000</td>
<td>432,000</td>
</tr>
<tr>
<td>Research &amp; Development Expense</td>
<td>300,000</td>
<td>525,000</td>
<td>1,312,500</td>
</tr>
<tr>
<td><strong>Total Operating Expenses</strong></td>
<td>728,000</td>
<td>1,419,300</td>
<td>3,938,200</td>
</tr>
</tbody>
</table>

#### Operating Profit/Loss

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Profit/Loss</td>
<td>385,000</td>
<td>1,162,800</td>
<td>3,436,900</td>
</tr>
</tbody>
</table>

#### Net Income/(Loss) Before Taxes

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income/(Loss) Before Taxes</td>
<td>385,000</td>
<td>1,162,800</td>
<td>3,436,900</td>
</tr>
<tr>
<td>Less: (Tax Expense)/Benefit</td>
<td>-115,470</td>
<td>-348,840</td>
<td>-1,031,020</td>
</tr>
<tr>
<td><strong>Net Income/(Loss)</strong></td>
<td>$269,530</td>
<td>$813,960</td>
<td>$2,405,880</td>
</tr>
</tbody>
</table>