How Venture Capitalists Assess Healthcare Information Technology Business Plans

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The Substance

Key Issues

- The Market
- The Management
- The Method
- The Money
- The Metrics
Venture Capital Deal Flow

Business Plans Received

Projects Evaluated

Projects Funded
Key Triage Factors

- Management Pedigree
- Deal Source
- Process Management
- Customer Validation
- Adherence to Plan
Key Focus Areas

- Major Risk Factors
- Obvious Show Stoppers
- Better, Faster, Cheaper, or Brave New World
Major Risk Factors

- Technological
- Market
- Regulatory
- Operational
Market

**Macro**
- Size
- Growth Rate
- Concentration
- Barriers to Enter

**Micro**
- Economics (Pricing, Operating Margins)
- Customers
- Segmentation
Methodology

- Business Model
- Value Proposition
- Distribution Strategy
- Competitive Differentiation
- Growth Strategy
- Technology
Management

- Vision
- Experience (Quality, Quantity, Relevancy)
- Education
- Track Record
- Capability
Money

- Financial Strategy
- Capital Requirements
- Structure
- Valuation
- Liquidity Path
- Use of Proceeds
Numbers

- Income Statement
  - Revenue Projections ($, Units, Average Sale Price)
  - Expense Projections (Head Count, Salary Level, Corporate Overhead)
  - Margins (Gross, Operating)

- Balance Sheet
  - Cash
  - Accounts Receivable
  - Inventory
  - Goodwill/Intangibles
  - Debt
  - Liabilities
Cash Flow

- Operating
- Financing

Budget

Capitalization Table

- Investors
- Management
- Option Pool
The Process

- Business Plan Review
- Management Presentation
- Site Visit(s)
- References
- Competitive Analysis
- Financial Analysis
- Corporate Review
- The Deal
Business Plan Review

- Form
- Substance
- Vision
- Business Model
- Marketing Plan
- Technology Plan
- Financial Plan
<table>
<thead>
<tr>
<th>What We/They say…</th>
<th>and What We/They Really Mean…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition Strategy</td>
<td>the current products have no market</td>
</tr>
<tr>
<td>Adverse Customer Selection</td>
<td>existing customers can’t stand the product; no positive customer references</td>
</tr>
<tr>
<td>Basically on plan</td>
<td>revenue shortfall of 25 percent</td>
</tr>
<tr>
<td>Dotcom business model</td>
<td>potentially bigger fools have been identified</td>
</tr>
<tr>
<td>Considerably ahead of plan</td>
<td>hit plan in one of the last three months</td>
</tr>
<tr>
<td>Currently revisiting the budget</td>
<td>financial plan is in total chaos</td>
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<tr>
<td>Cyclical industry</td>
<td>posted a huge loss last year</td>
</tr>
<tr>
<td>Entrepreneurial CEO</td>
<td>totally uncontrollable, bordering on maniacal</td>
</tr>
<tr>
<td>Funding Interruption</td>
<td>existing investors tapped out and unwilling to provide additional funding</td>
</tr>
<tr>
<td>Ingredients are there</td>
<td>given two years we might find a workable strategy</td>
</tr>
<tr>
<td>Investing heavily in R&amp;D</td>
<td>trying desperately to catch the competition</td>
</tr>
<tr>
<td>Limited downside</td>
<td>it can’t get much worse</td>
</tr>
<tr>
<td>What We/They say…</td>
<td>and What We/They Really Mean…</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Long selling cycle</td>
<td>yet to find a customer who likes the product</td>
</tr>
<tr>
<td>On a manufacturing learning curve</td>
<td>can’t make the product with positive margins</td>
</tr>
<tr>
<td>Possibility of a slight shortfall</td>
<td>a revenue shortfall of 50 percent</td>
</tr>
<tr>
<td>Repositioning the business</td>
<td>multimillion-dollar investment recently written off</td>
</tr>
<tr>
<td>Somewhat below the plan</td>
<td>revenue shortfall of 75 percent</td>
</tr>
<tr>
<td>Too early to tell</td>
<td>results to date have been grim</td>
</tr>
<tr>
<td>Turnaround opportunity</td>
<td>lost cause</td>
</tr>
<tr>
<td>Unique</td>
<td>no more than six competitors</td>
</tr>
<tr>
<td>Upgrading the management team</td>
<td>the organization is in complete disarray</td>
</tr>
<tr>
<td>Window of opportunity</td>
<td>without more money, the company is dead</td>
</tr>
<tr>
<td>Work closely with the management</td>
<td>talk to them on the phone once a month</td>
</tr>
</tbody>
</table>
Pipeline Qualification

- **Suspect:** A potential Prospect
- **Prospect:** A Suspect with whom contact has been made
- **Qualified Prospect:** A potential Customer with budget actively seeking a solution
- **Customer:** A contractually committed financially viable client
Technology Review

Technology

- Architecture (web-enabled or web-centric) thick versus thin client
- Operating System
- Relational Database
- Application Code
- Development Environment
Technology Review (continued)

Resources

Budget
   » Cap Ex
   » Development
   » Operating
   » Maintenance

Staff
   » External
   » Internal
Technology Review (continued)

- Track Record
  - Finance
  - Development
  - Experience
Technology Review (continued)

- Function
  - Publish
  - Interact
  - Transact
  - Transform
Technology Review (continued)

- **Development Semantics**
  - **Pre-alpha**
    » A concept in someone’s mind
  - **Alpha**
    » Works only in development laboratory
  - **Beta**
    » Installed in production environment, partial feature/function complete
  - **First Customer Release**
    » Debugged, defined feature/function shipping to paying customers
Management Presentation

- Articulation
- Cogent Strategy
Site Visit

- Headquarters
- Outlets
- First Impression
- Organizational Culture
References

- Management: Former employer(s), bosses, peers, direct reports, board members, advisors, competitors, analysts

- Customers: Current, former, prospective

- Company: Auditor, legal, bank, investors
Competitive Analysis

- Market Share
- Mind Share
- Momentum
- Differentiation
- Buyer Motivation - Painkiller or Vitamin?
- Sales Cycle
- Pricing
Pricing

- Traditional
  - Software License Fee
  - Annual Maintenance

- Emerging
  - Subscription
  - Transaction Based
Valley of Death

- Gross Margin
- Average Sale Price

< $1.5K  $250K
ASP Pricing Model

Financial Barrier To Adoption

Organization Size/Financial Resources

Market
Financial Analysis

- Actual vs. Plan
- Sales Pipeline
- Leverage (Operating, Financial)
- Competition (Margin, R&D, Distribution, ASP, Corporate)
- Valuation
- Return ($, IRR)
Corporate Review

- Audit and Management Letter
- Legal (Lawsuits, Licensing, Agreements, Distribution Agreements, Employee Agreements, Employee Benefits, Shareholder Agreements, Stock Options, Financing Agreements, Stock Ledger, Customer Contracts, etc.)
- Regulatory (Licenses, FDA, Environmental)
- Intellectual Property (Patents, Copyrights, Trademarks)
- Insurance (Liability, Key Man, D&O, E&O)
- Leases (Real Estate, Capital Equipment)
The Deal

- Term Sheet
- Legal Representation
- Document Preparation
- Closing
- Post-Closing Review
Tips

Dos:

- Conduct site visits of corporate and regional offices’ arrive early
- Tour with junior (non-management) staff
- Meet with worker bees
- See production environment
- Ask lots of questions
Tips

Don’ts:
- Mistake development for production
- Visit only corporate site and staff
- Discuss anything in elevators or bathrooms
- Leave your files unattended
- Sign the visitor log
- Lead the witness
- Volunteer competitive information
- Breach moral/written obligation of confidentiality
Human Capital Assessment
Venture Techniques

- Art Critic
- Sponge
- Prosecutor
- Airline Captain
Management Orientation

- Missionary
- Mercenary
# Management Attributes

<table>
<thead>
<tr>
<th>STAGE</th>
<th>FOCUS</th>
<th>KEY ATTRIBUTES</th>
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<tbody>
<tr>
<td>Start-up</td>
<td>Development</td>
<td>Passion, Vision</td>
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<tr>
<td>Early</td>
<td>Entry/Pilot</td>
<td>Persistence, Tenacity</td>
</tr>
<tr>
<td>Expansion</td>
<td>Adoption</td>
<td>Process, Systems</td>
</tr>
<tr>
<td>Late</td>
<td>Penetration</td>
<td>Profits</td>
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</table>
Health Care Drivers

- Aging Demographics
- Scientific Innovation
- Consumerism
- Cost Escalation
Health Care I/T

Market

SizePolicy: Healthcare $1.7T (13.8% GDP) 7% CAGR
Healthcare IT $25B; 12% CAGR

Entities: Health Plans (500)
Hospitals (5,000)
Nursing Homes (20,000)
MDs (650,000)
RNs (2,200,000) est.
Stimulus Bill

- Funding: $20B
- Recipients: Hospitals/MD’s
- Purpose: EHR Adoption
- Mechanism: Add on to fee service payments
Health Care I/T

FOCUS

Clinical

Administrative

Financial

FUNCTION

Data Capture

Transaction Processing

Data Base

Decision Support
Health Care I/T

- High Potential Opportunities
  - Pharmaceutical Services
    - E-detailing
    - Clinical trial management (Phase Forward)
  - Clinical Systems
    - Electronic medical record
    - Image management (EMed Technologies)
    - Medication management
    - Remote physiological monitoring
  - Employee Benefits
    - Consumer driven
  - Supply Chain Management
    - Exchanges
Health Care I/T

■ Barriers to Adoption
  ✷ Structural
    » Fragmentation
    » Decision process
  ✷ Economic
    » Cost benefit ROI -- Increased revenue
      Reduced time
      Reduced cost
    » Macro – reimbursement
    » Micro – margins
Health Care I/T

- Barriers to Adoption (continued)
  - Operational
    » Work flow integration
  - Technological
    » Legacy system integration
    » Standards: Articulation Compliance
  - Regulatory
    » HIPPA
  - Adoption rate
    » Crossing the Chasm
Innovation Adoption – Life Cycle

Market Penetration

Time

Early Adoption
Chasm
Late Adopters
Adoption

- **Drivers**
  - Economic
  - Regulatory
  - Psychological
  - Demand

- **Enablers**
  - Financial
  - Regulatory
  - Technological
  - Standards
Disruptive Technology

Technology Paradigm Shift:

- Moore’s Law (Speed/Cost Inverse Relationship)
- Metcalfe’s Law (Network Effective)
# Technology Evolution - Network

<table>
<thead>
<tr>
<th></th>
<th>1960s</th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
<th>2000s</th>
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</thead>
<tbody>
<tr>
<td><strong>Architecture</strong></td>
<td>Proprietary (SNA)</td>
<td>Non-proprietary-packet (TCP/IP)</td>
<td>Academic</td>
<td>Government</td>
<td>Commercial</td>
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<tr>
<td>Speed</td>
<td>KB</td>
<td>MB</td>
<td>GB</td>
<td></td>
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<tr>
<td>Connectivity</td>
<td>Wired</td>
<td>Copper</td>
<td>Fiber</td>
<td>Wireless-Analog</td>
<td>Digital</td>
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<tr>
<td></td>
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<td></td>
<td>Analog</td>
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<td></td>
<td></td>
<td>Digital</td>
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<td></td>
<td></td>
<td></td>
<td>Optical</td>
<td></td>
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<tr>
<td></td>
<td>Voice</td>
<td>Data</td>
<td></td>
<td>Graphic-Static</td>
<td>Dynamic</td>
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# Technology Evolution - Hardware

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<tbody>
<tr>
<td></td>
<td>Mainframe</td>
<td>Mini</td>
<td>PC</td>
<td>Laptop</td>
<td>PDA</td>
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<td></td>
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<td>Workstation</td>
<td>Server</td>
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<table>
<thead>
<tr>
<th>Storage</th>
<th>1960s</th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
<th>2000s</th>
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<tbody>
<tr>
<td>Media</td>
<td>Disc</td>
<td>Floppy, 5 ¼</td>
<td>3 ½</td>
<td>CD</td>
<td>RAID</td>
</tr>
<tr>
<td>Capacity</td>
<td>Mag Tape</td>
<td>MB</td>
<td>GB</td>
<td>TB</td>
<td>Fiber Channel</td>
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<tr>
<td>I/O</td>
<td>KB</td>
<td>MB</td>
<td>GB</td>
<td>SCSI</td>
<td>Fiber Channel</td>
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<table>
<thead>
<tr>
<th>Processor</th>
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<th>1980s</th>
<th>1990s</th>
<th>2000s</th>
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<tbody>
<tr>
<td>Architecture Type</td>
<td>4 bit</td>
<td>8 bit</td>
<td>16 bit</td>
<td>32 bit</td>
<td>64 bit</td>
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<tr>
<td>Speed Type</td>
<td>MHz</td>
<td>GHz</td>
<td>CMOS</td>
<td>CMOS</td>
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<tr>
<td>Type</td>
<td>IC</td>
<td>Micro RAM</td>
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**SV Life Sciences**
## Technology Evolution - Software

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<th>1980s</th>
<th>1990s</th>
<th>2000s</th>
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</thead>
<tbody>
<tr>
<td><strong>Language</strong></td>
<td>Proprietary</td>
<td>Machine Assembler</td>
<td>Compiled 1st 2nd 3rd</td>
<td>Object-Oriented (C, VB)</td>
<td>Open Source</td>
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<tr>
<td><strong>Code</strong></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td><strong>Intra-operative</strong></td>
<td></td>
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<tr>
<td><strong>Architecture</strong></td>
<td>Mainframe Mini</td>
<td>Client Server 2 Tier 3 Tier</td>
<td>Web nTier</td>
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<td></td>
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<tr>
<td><strong>Content</strong></td>
<td>Text</td>
<td>Graphics Voice</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Input</strong></td>
<td>Character Punch Card Mag Tape</td>
<td>Graphic Floppy CD</td>
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<tr>
<td><strong>Ownership</strong></td>
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<tr>
<td><strong>Structure</strong></td>
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<tr>
<td><strong>Database</strong></td>
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</tr>
<tr>
<td><strong>Platform</strong></td>
<td>Machine Specific</td>
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<td>Intra-operative (Java)</td>
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