Elements of an Investor Pitch

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Energy 203: Stanford Energy Ventures
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My Background

- Venture Capital
  - Tesla
  - Solazyme
  - BrightSource
  - MiaSolé
- Government
  - U.S. Department of Energy
  - ARPA-E
- Company Executive and Advisor
  - Soligent
  - GE
  - Sunfolding
  - Ubiquiti Networks
  - Diamond Foundry
What are investors looking for?

The three most important aspects:

- **Market**  
  Big market ($1B+), growing fast (>10%+ p.a.)  
  On trend – “tailwinds, not headwinds”  
  Right timing – at inflection point

- **Technology**  
  10X better, faster, cheaper  
  “Disruptive”, not incremental  
  IP or other barriers vs. competition

- **Team**  
  Serial entrepreneurs with track record of success  
  (Often founding team is technologists not entrepreneurs, but ideally have track record of commercializing)

→ Potential for $100M revenues by Year 5 (and $1B valuation possible)
The Investor Pitch – context

• Tell a story
  • What’s the “through line”?
  • One main point per slide

• Know your audience
  • Where are they in their learning curve?

For in-person presentations:
• Listen and learn
  • Listen closely to questions
  • Use the opportunity to learn

• Build a relationship
• Grow your network
Different types of pitch for different stages of investor interest:

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<tr>
<th>Stage</th>
<th>Pitch Type</th>
<th>Duration/Details</th>
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<tr>
<td>First Contact</td>
<td>Elevator Pitch (60 secs)</td>
<td>(“In a world where…”)</td>
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<tr>
<td>Possible Interest</td>
<td>Teaser / Executive Summary (1-2 pages)</td>
<td>Overview Presentation (8-12 slides)</td>
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<td>Declared Interest</td>
<td>Detailed Presentation (~20 slides)</td>
<td>(In person vs. by e-mail)</td>
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<td>Due Diligence</td>
<td>“Data Room”</td>
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(1) Overview
- Company Overview: Big, exciting – but clearly defined – vision
- The Problem: Critical market need / pain point

(2) Technology
- The Solution: Technology that’s 10X better, faster, cheaper
- The Product: Clear, compelling customer value proposition
- Competition & Differentiation: Highly differentiated / unique vs. the competitors

(3) Market
- Market: $1B+, fast-growing market
- Market Traction: Demonstrated traction with customers, partners, validators
- Go-To-Market Plan: Clear plan and method of acquiring customers
(4) Team
- Management Team: Experienced entrepreneurs with a track record of success
  (Or founding team with solid technology experience)

(5) Financials
- Economics: 50%+ gross margins
- Financial Projections: $100M revenues and cash flow positive by Year 5
- Funding: Appropriate level of funding for the right uses
- Milestones: Clear timeline and plan; clear outcomes and risk reduction path
- Exit & Returns: Potential for investor to earn 10-20X returns
Sample Company

SkyCool Systems

Sustainable cooling for a warming planet
Company Overview

Our vision: Improve the efficiency of all cooling & refrigeration systems

$372B spent on cooling electricity costs annually
The Problem

**Critical market need / pain point?**

Cooling and Refrigeration are a Central Part of the Energy & Climate Challenge

- **15%** of electricity used globally is for air conditioning and refrigeration
- **10x** growth in electricity used for cooling by 2050, driven by increased use in developing world
- **1 Gigaton** of CO₂ emissions emitted annually worldwide due to cooling systems (10% of global CO₂ emissions)

**Refrigeration** is a Major Pain-Point for Our First Customers: Supermarket Owners

- **60%** of electricity used in a supermarket is for refrigeration
- **$200K/yr** electricity costs
- **24/7** refrigeration systems are on all day, year round
- **1%** profit margin
- Same as energy costs!

Regulatory standards (CA Title 24) & Sustainability goals
The Solution

Is the technology/solution 10X better, faster, cheaper?

- Technology overview
- Technology development status and plan
- IP – FTO and ability to block

Common Issues:
- Incremental improvement
- Too early: “science project” (TRL 0-1)
The Solution

Nanoscale photonics for sky cooling

Core Technology: Zero Electricity Cooling Panel That Sends Heat to the Cold of Space

-454°F

Reflects Sunlight

90°F

Emits Infrared Thermal Radiation

Cools up to 20°F below air temp. simply by being exposed to the sky (even under direct sunlight)

Groundbreaking research led by company founders at Stanford University & published in Nature
The Solution

Nanoscale photonics for sky cooling

Sky cooling was not possible during the day until now

Reflect Sunlight

Radiate Heat

Sun:
1000 W/m²

Thermal Radiation to the Sky:
50-150 W/m²

Solar absorption by the sky facing surface overwhelmed any cooling effect during the day
Does the product have a clear, compelling customer value proposition?

• “Product-Market Fit”
• Customer Value Proposition
• One focus, with upside opportunities
  – “Platform technology” vs. “one-hit wonder”
  – “Insurance”

• Common Issues:
  – Not clear on specific target customers and value proposition
  – Change is required in customer behavior, process, value chain
  – Long payback time (> 2 years)
The Product

Our Product: Fluid Cooling Panels

Cools fluids such as water up to 20°F below air temperature

Prototypes in testing since 9/2015 at Stanford University

Validated / Peer-Reviewed:
Nature publication (2014)
ASHRAE publication (2016)
PNNL (DOE) Third-Party Study - No. 24904 (2015)

Intellectual property: Two broad composition of matter patents that cover this approach to cooling (negotiating an exclusive license)
SkyCool’s Value Proposition for Supermarket Owners

For a median U.S. supermarket, typically 40,000 ft\(^2\), our installation will cover 20% of the roof (8,000 ft\(^2\)) at a net installed cost to the customer of $112K.

225 MWh  
Electricity Saved Annually

$30K  
Cost Savings*

$3M  
Sales equivalent

Payback  
< 4 years

IRR  
19%

Lifetime NPV  
$240K (20 years)

*Excludes utility incentives, 0.13$/kWh
Technology and product are highly differentiated / unique?

• Who are the competitors?
• Why is your tech/offering different, better?

→ Demonstrate a thoughtful understanding of the competition

• Common Issues:
  – “No competitors”
  – Dismissive of competitors
  – “Me too”
Competition & Differentiation

Competitive Landscape

Evaporative Cooling
High water usage, expensive maintenance for fouling & complexity - SkyCool is a closed loop without the maintenance & water costs

Thermal Storage
Thermal storage shifts loads - SkyCool improves efficiency throughout the day

Photovoltaics
SkyCool saves more energy and more money per roof unit area for refrigeration, which needs electricity 24/7
$1B+, fast-growing market?

- What’s the target market?
- Addressable market size? Growth rates?
- Entry market vs. future market segments?
- Does this market support a $1B+ company?

Common Issues:
- Lack of clarity on target market segments / true addressable market
Large Markets Ripe for Disruption

- **Commercial Refrigeration**
  - $33B market
  - 9.1% CAGR

- **Data Center Cooling**
  - $12B market
  - 13.6% CAGR

- **Commercial Building A/C**
  - $50B market
  - 7% CAGR
Go-To-Market Plan

Clear way to acquire customers?

• Which customers / market segments, in what order?

• Three key factors:
  • How reach customers
  • Customer acquisition cost (CAC)
  • Sales cycle

• Distribution partners, channel partners?

• Business Model? (What are you selling, to whom, and how do you get paid?)

• Common Issues:
  • Direct sales – “reinventing the wheel”
  • Long sales cycle (6 months +)
Go-To-Market Plan

Business Model: Panel System Sales

To reach our end-customers, we will sell our panels through existing commercial refrigeration system integrator sales channels:

Long-term vision: Finance purchases cost through Energy Savings Performance Contracts (ESPC) to reduce first-costs to customers and grow our market share.
Already showing progress with customers, partners, and validators?

• Show “market traction”
  • Funding partners (seed investors, government funders)
  • Customers and sales pipeline
  • Technology development partners
  • Other partners: Distribution partners, Channel partners, Strategic partners
  • Competitions and Prizes

• Common Issues:
  • No evidence of customer or partner interest
Current Funding & Status

- **$640K Award**
  - ARPA-E (U.S. DOE)

- **$30K Tech Transfer Award 2016**
  - TomKatCenter for Sustainable Energy

- **$15K**
  - Member of Fall 2016 Cohort at TUMML

- **$5K FLoW**
  - CleanTech Business Plan Competition (2nd Place)

- **Urban Clean Energy Prize 2016**

- **$15K**
  - Member of Fall 2016 Cohort at Accelerator

- **Flow**
  - First Look West

- **CORPS**

- **Market Traction**

- Two dominant players in supermarket refrigeration are strongly interested in testing our system. Leading supermarket chains evaluating our performance for potential pilot tests.

- Pursuing pilot opportunities: utility-supported test on a regional supermarket; competing to be in MarketZero - CEC-supported zero net energy supermarket in SF

- Engaged with a leading Bay Area Tech Company to assess utilization in a Data Center Application (secondary beachhead market opportunity)

- Finalist for PRIME Coalition’s 2016 funding cycle
50%+ gross margins?

- Unit Costs
  - Cost of your product / service – based on detailed cost model, supplier quotes?
- ASPs and Gross Margins
  - 50% typical for tech hardware / 85% for software, biotech
- Cost reduction path?

- Common issues:
  - Low margins (e.g., 20%) delay cash flow breakeven and reduce exit multiples
  - *Negative* gross margins / difficult cost reduction path
  - Dominant tech cost reduction
Financial Projections

$100M revenues and cash flow positive by Year 5?

• 5-year P&L projections
  • Bottom-up vs Top-down revenue projections (the 1% fallacy)
• Headcount projections
• Timing to cash flow breakeven
• Capital investment needed until cash flow breakeven
Funding

**Appropriate level of funding, for the right uses?**

- Funding history
- Capital needs – target amount to raise
- Use of funds / Success milestones
  - Technology development – e.g., field beta trials
    - Fastest time to market / MVP / market and customer feedback?
  - Market/Commercial development – acquiring customers, partners
  - Team development – Key Hires
- Common Issues:
  - Raising too much or too little to get to next set of milestones
  - Capital-intensive business model
Milestones

**Company Plan**

- **2017**
  - Complete cooling system efficiency improvement demonstrations and prepare for first customer pilots
  - Secure first pilot opportunities and solidify customer leads in early-entry market (commercial refrigeration)
  - First sales commitments

- **2018-2019**
  - Deploy first pilot demonstrations in target market (supermarket refrigeration)
  - Establish sales channel/OEM agreements
  - Hit $1M in revenue from first 10-20 installations by end of 2019
  - Pilot technology for expansion in broader space cooling market

- **2020-**
  - Scale to broader cooling market, grow to $100M/year
  - Secure strategic partnerships with cooling system manufacturers
  - Exit opportunities: Partnership or acquisition by major HVAC/refrigeration manufacturer, or solar manufacturer (as a complementary technology)
Exit & Returns

**Potential for investors to earn 10-20X return?**

- Exit examples
  - Exit types: IPO? Acquisition? Licensing?
  - Comparable company exit valuations
- Return multiple
  - Exit valuation based on comparables – using projected EBITDA in year 5
  - Return Multiple vs capital invested

Common Issues:
- No M&A or IPO activity in sector
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