The Clean Technology Startup Management Flight Simulator

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Teaching Purpose
Used in the MIT Sloan course “Sustainability Lab” during the Spring 2009 semester to learn:

1. What are the dynamics of clean technology startups and how can their odds of success be improved?
   - Long sales cycles
   - Engineering vs. sales force focus
   - Valley of death

2. How can different ownership structures affect employee behavior and firm performance?
   - Traditional external funding (e.g., VC financing)
   - Employee ownership (partial or full)

Game Scenario
- You are the CEO of a startup specializing in energy efficiency systems facing competition from the existing dominant incumbent.
- You have developed a superb technology that may cost more than the existing technology up front, but saves energy costs in the long run dependent upon carbon taxes.
- You need to promote your product to customers through your own sales force, while keeping up product development by hiring, motivating and retaining engineers.
- You have initial founder funding of $1 million to grow the company successfully.

Overall Model Framework

Causal Loop Diagram: Job Attractiveness

Causal Loop Diagram: Overall Model

Causal Loop Diagram: Scenario Settings

Causal Loop Diagram: Quarterly Income Statement

Causal Loop Diagram: Product Attractiveness

Causal Loop Diagram: Shares Outstanding

Causal Loop Diagram: Cash Flow

Causal Loop Diagram: Sales

Causal Loop Diagram: Human Resources