

# NIDUS PARTNERS L.P.

Partnering for Tomorrow's Energy

OPEN INNOVATION – UC BERKELEY

JANUARY 30, 2012

VICTORIA GONZALEZ, MANAGING PARTNER



## FORMATION AND STRUCTURE

# NIDUS FORMATION

- Nidus Center ... a traditional non-profit business incubator created in 2000 in St Louis, MO

*“Change the model deliver results – more start-up companies and more capital” – Nidus Board, 2008*

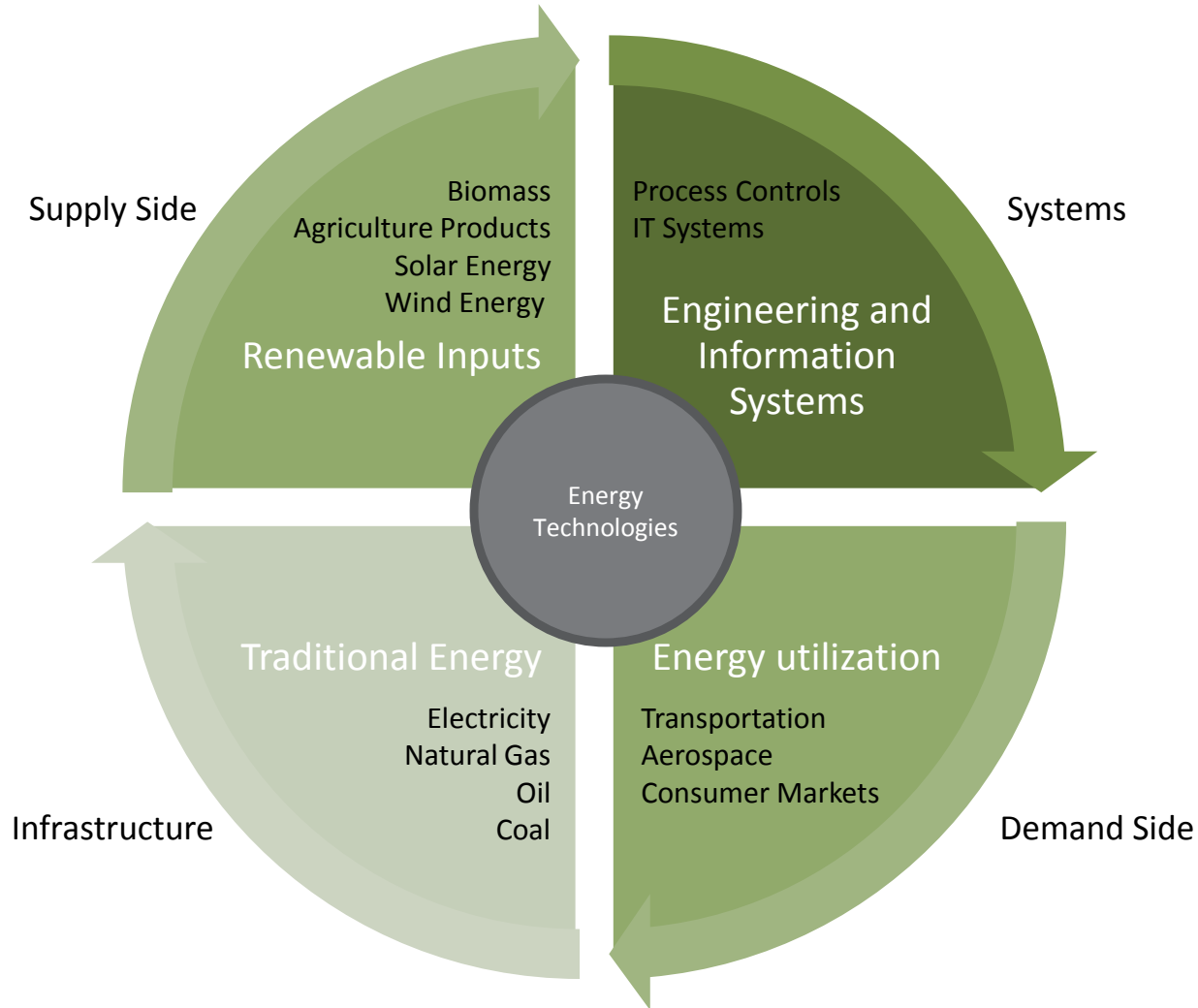
- Who delivers start-up companies and capital – **Entrepreneurs!**
- How do you attract experienced entrepreneurs?
  - ✓ Access to markets - corporations
  - ✓ Access to technology - universities
  - ✓ Access to capital - corporations
- Nidus Partners L.P. was the vehicle to engage corporations

# ENGAGING CORPORATIONS

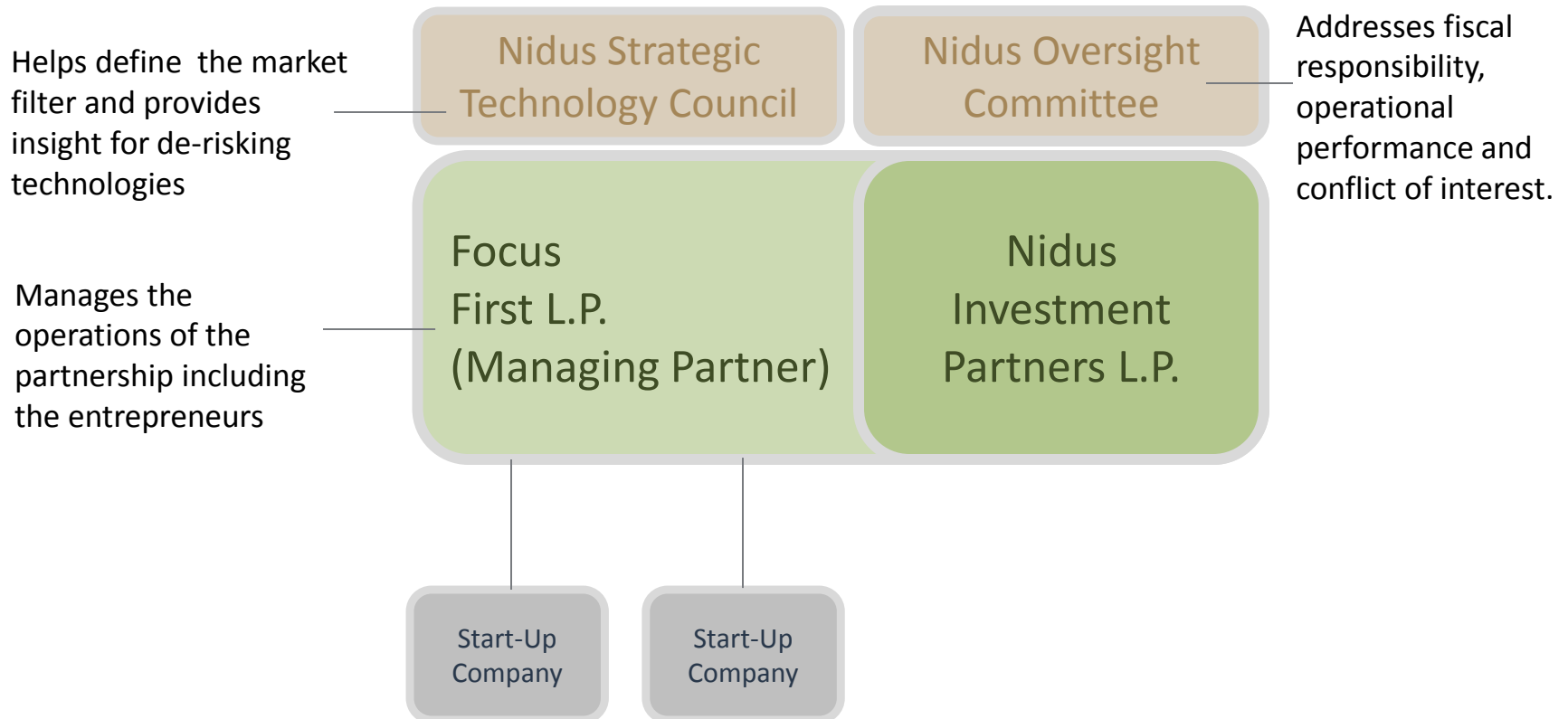
A unique collaboration between proven entrepreneurs and innovative corporations to commercialize renewable, sustainable and transformative energy technologies.

- Nidus' value proposition to corporate partners:
  - Strategic insight from other corporate partners
  - First look at technologies
  - Right of first offer
  - Prospective return on investment.
- Nidus' competitive advantage:
  - Diverse market and technical insight and expertise from corporate partners
  - Market pull versus technology push
  - Experienced entrepreneurs

# POWER OF PARTNERING



# NIDUS STRUCTURE LEVERAGES PEOPLE



## Strategic Technology Council



**Ralph Quatrano, Ph.D.**  
Dean, School of  
Engineering & Applied  
Science  
Washington University



**Richard Axelbaum, Ph.D.**  
Professor, Director  
Consortium for Clean Coal  
Utilization  
Washington University



**Miguel Oliveira, Ph.D.**  
Executive Director  
Global Innovation  
Bunge Limited



**Flavio Galhardo**  
Lead, Global Innovation  
Bunge Limited



**David Fischhoff, Ph.D.**  
VP Technology Strategy  
and Development  
Monsanto Company



**Thomas Schäfer, Ph.D.**  
Sr. Dir. Innovation, Head  
Microbial Biotechnology  
Novozymes A/S, Denmark



**Steen Skjold-Jørgensen, Ph.D.**  
VP Biofuels R&D  
Novozymes North America Inc.



**Martha Schlicher, Ph.D.**  
Bioenergy Technology Lead  
Monsanto Company

## Nidus Board



**Rodney Perry**  
Vice President,  
Bunge North America



**Jerry Steiner**  
EVP Sustainability  
Monsanto Company



**Tom Melzer**  
Managing Dir./Co-Founder  
RiverVest Partners



**Nick Reding**  
Retired Vice Chairman  
Monsanto Company



**Rasmus von Gottberg**  
Vice President, Novozymes

## Nidus Entrepreneurial Team



**Vicki Gonzalez**  
Managing & Founding  
Partner bringing more  
than 25 years of corporate  
and entrepreneurial  
management experience.



**Mich Hein, Ph.D.,** Managing  
& Founding Partner with  
more than 28 years of  
entrepreneurial management  
experience in the plant and  
biological sciences arena.



**Ted Briscoe,** Managing  
Partner with more than 25  
years of entrepreneurial  
management experience in  
building and scaling  
information technology  
companies.

**Duke Leahey**  
Founding Partner bringing more  
than 35 years of entrepreneurial,  
technology licensing and  
intellectual property management  
expertise across many industries.



# OPERATIONS

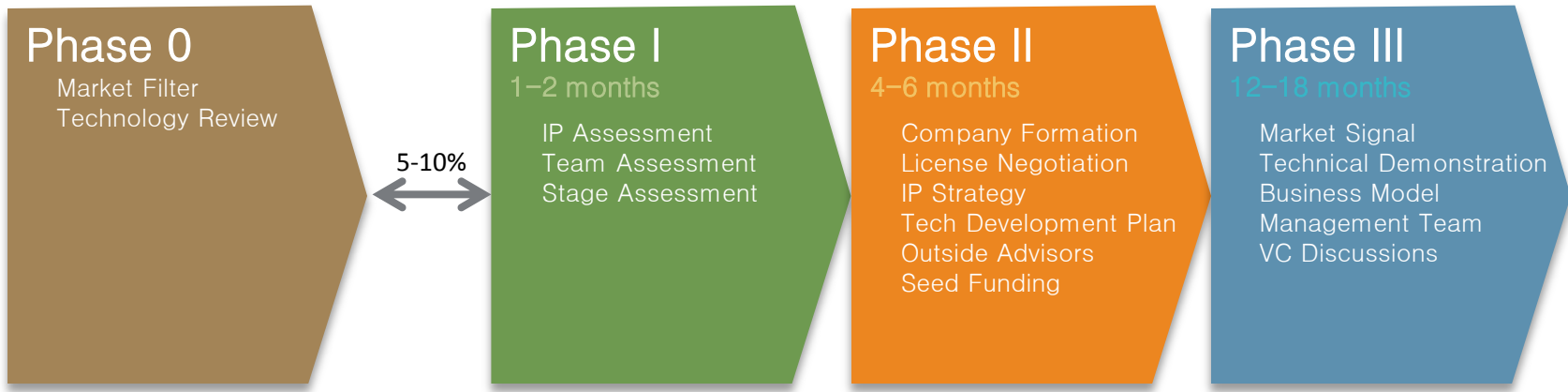
# NIDUS DEAL STAGE

Nidus operates at the very earliest stage of development - identifying technologies at research institutions for investment and commercialization.



- **Create LLC to license technology**
- **Invest seed funding for de-risking**
- **Manage risk with a team of experienced entrepreneurs**
- **Early market review by corporate partners – Strategic Technology Council**

# Nidus Technology Review



## Pipeline

## Portfolio

### Phase 0

### Phase I

### Phase II

### Phase III

- CO2 to methane
- Wastewater treatment
- Freiezo
- MesoNet Weather
- Li-ion battery
- Energy efficient valve
- Reactive distillation
- Nanowires
- Thermaquatica
- Midwest Energy Group
- Living Earth



- Electrochaea LLC
- Six Convert LLC
- Xtend Energy LLC
- AeroValve LLC

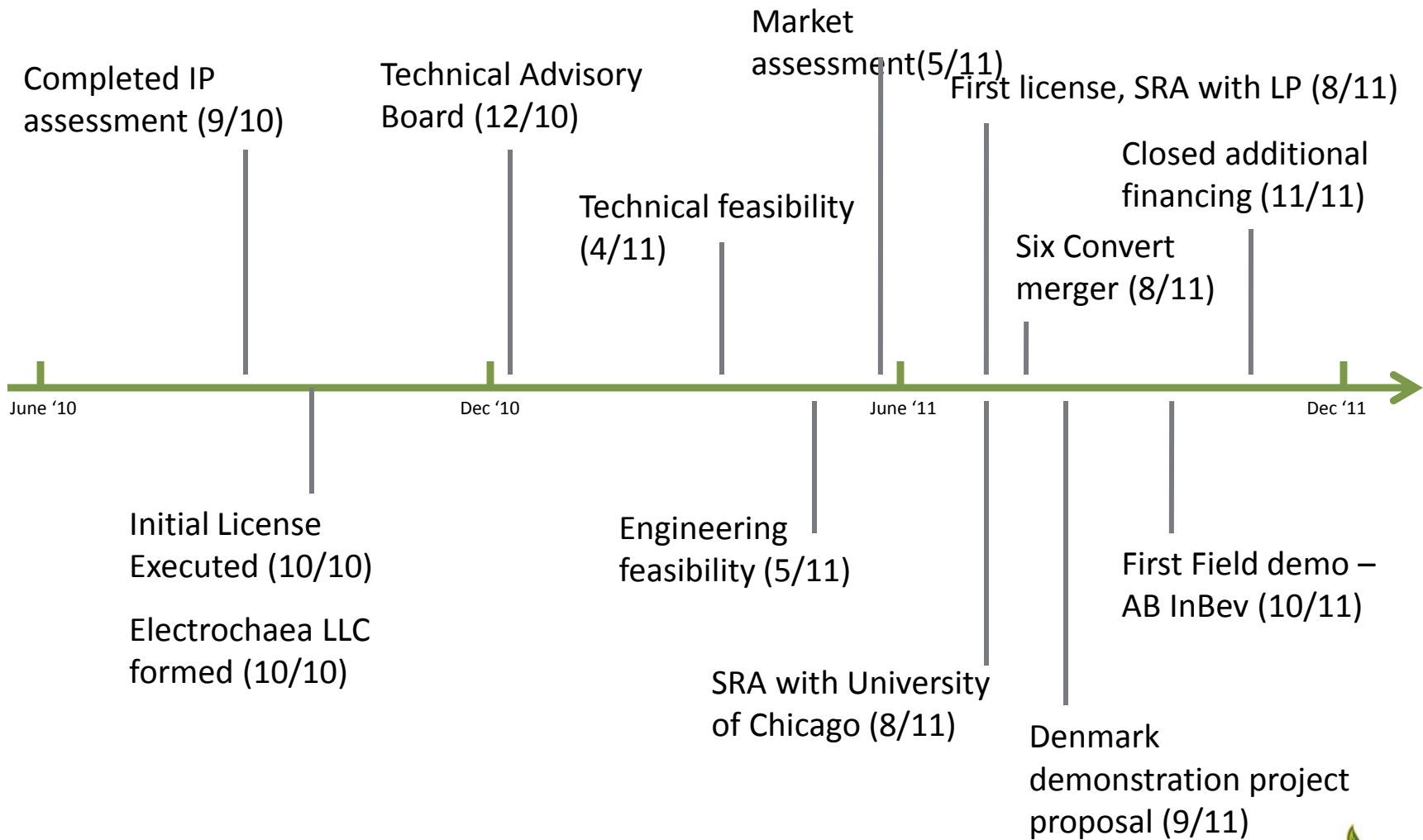
- Electrochaea LLC
- Xtend Energy LLC

## Overview

- Proprietary biological catalyst converts power and CO<sub>2</sub> into renewable natural gas (RNG)
- Can convert CO<sub>2</sub> or upgrade biogas into RNG
- Value proposition = RNG as energy storage for constrained or low cost and renewable electricity; secondary value from carbon recycling, power regulation and oxygen production

## Key Accomplishments

- License Agreement/SRA with Nidus LP
- SRA with University of Chicago and PI
- Accelerated 'Greentech' patent application office action
- Completed first field demonstration at AB InBev
- Raised \$880K convertible debt
- Applied for \$2.3MM Danish energy grant to support field demonstration





## Overview

- Proprietary electrochemical synthesis process for lithium-ion battery cathodes licensed from Washington University
- Optimized for high-energy manganese rich chemistry developed by Argonne National Laboratory for PHEV market
- Value proposition = enhanced performance, consistent materials at scale, and lower cost process

## Key Accomplishments

- Closed initial financing round of \$630k ( \$390k cash + \$240k services)
- Executed Sponsored Research Agreement with Washington University and Argonne National Laboratory
- Website completed



Initial Presentation  
(2/11)

IP Option secured  
(4/11)

X-tend Energy  
formed (4/11)

Additional IP added  
to license (7/11)

Closed seed  
financing round  
(9/11)

June '10

Dec '10

June '11

Dec '11

Technical feasibility  
at ANL (6/11)

Initial License  
Executed (5/11)

SRA with  
Washington  
University (8/11)

SRA with Argonne  
(8/11)

# AeroValve

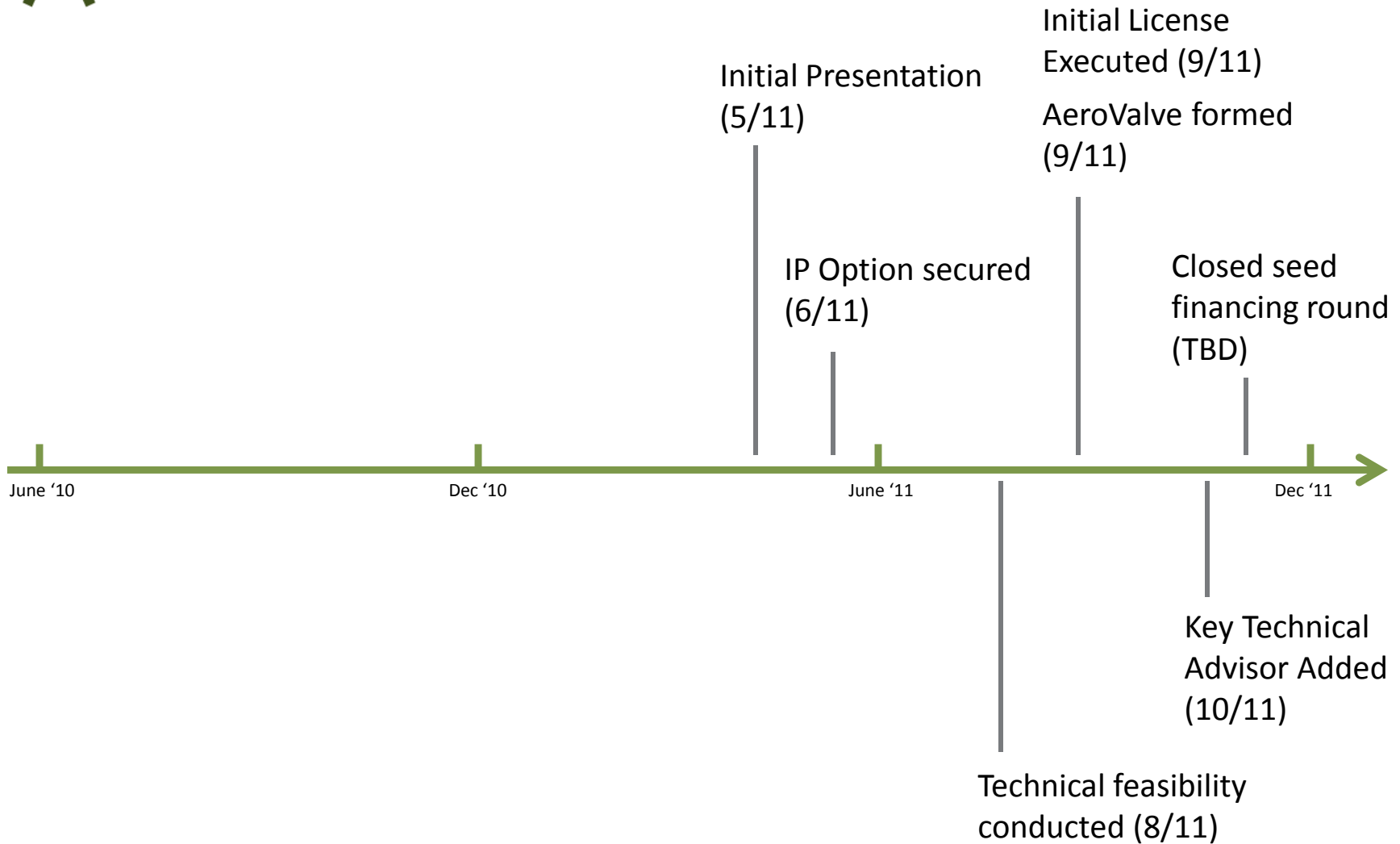
## Overview

- Proprietary pneumatic solenoid valve design licensed from Vanderbilt University
- Technical design and optimization focused on a plug and play design to replace existing market
- Value proposition = 20% reduction in compressed air use = ↓ electricity

## Key Accomplishments

- No-cost option with Vanderbilt  
Independent technical feasibility at CAB Fluid Controls
- Exercised option
- I6 Grant submitted
- Hans Zobel, Key advisor recruited
- Licensing terms agreed upon with Vanderbilt
- NSF Phase I SBIR grant submitted

# AeroValve



## RESOURCES AND DEAL STRUCTURE

# Nidus Entrepreneurs

- Nidus Entrepreneur-in-Residence Program
  - \* Monthly retainer based on experience, time and risk profile
  - \* Finders fee for new technologies – 5% of founders units
  - \* Earned units based on participation in derisking
  - \* Entrepreneur rolls out of Nidus with Series A funding
- Current Entrepreneurs-in-Residence
  - \* Jeff Fornero Ph.D., Matt Martin Ph.D. - **Electrochaea**
  - \* Will Moller – **X-tend Energy**
  - \* Bia Thomas Ph.D. – **AeroValve**
  - \* John McAlister Ph.D., Mike Berezo, Mike Ott
- Strategic Partner Resources
  - \* Thomas Schroder - Electrochaea

## Example Deal Structure

- Nidus is company founder and negotiates license
  - University shares in equity and royalty – combined ~10%
  - IP costs typically reimbursed over time
- Nidus provides development plan with milestones
  - Legal agreements
  - Intellectual property strategy
  - Initial seed funding
  - Non-dilutive capital
  - Technical development
  - Identification of first target market
- Nidus is acting management team with lead/CEO
  - Consulting agreement with PI as appropriate
- University has board observation rights

## Typical Capitalization and Debt Table at 6 months

Entity	Convertible Notes			Founders Units		Seed Investment			Fully Diluted Post \$\$\$		Fully Diluted w/Options	
	Principal	Interest	Discount	Units	%	Dollars	Units	%	Units	%	Units	%
Focus First (Founders)				75,000	75.00%						75,000	60.00%
University (Founders)				20,000	20.00%						20,000	16.00%
Entrepreneur				5,000	5.00%						5,000	4.00%
Focus First A (Nidus Capital)	\$100,000	10%	25%									
Focus First B (Nidus Service)	\$107,618	10%	25%									
Advisors	\$24,699	10%	25%									
Inventor/PI	\$24,698	10%	25%									
<b>Totals</b>	<b>\$257,015</b>			<b>100,000</b>	<b>100.00%</b>	<b>\$0</b>	<b>-</b>	<b>0.00%</b>	<b>-</b>	<b>0.00%</b>	<b>100,000</b>	<b>80.00%</b>
Equity Incentive Plan/Reserved Units											25,000	20.00%
University											8,500	6.80%
Focus First											4,000	3.20%
Inventor/PI											8,500	6.80%
Entrepreneur											4,000	3.20%
<b>Totals</b>				<b>100,000</b>	<b>100.00%</b>	<b>\$0</b>	<b>-</b>	<b>0.00%</b>	<b>-</b>	<b>0.00%</b>	<b>125,000</b>	<b>100.00%</b>

Founders Units and Equity Incentive Units are common units

Convertible notes accrue interest and discount over time: annual interest rate 10% and annual discount rate of 25%

Convertible notes convert to preferred units

Vesting of incentive options based on defined milestones

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