

Starting a Sustainable Business

Green Energy Summit
March 19, 2011

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CEO SolRayo

Outline

- Sustainability
- Identifying opportunities
 - Solve Problems
 - Work with Trends
- Evaluating opportunities
 - Right for You?
 - Right for Your Customers?
 - Right for Your Market?

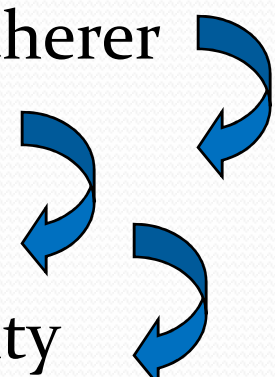


Identify Opportunities

- Solve problems
- Work with trends

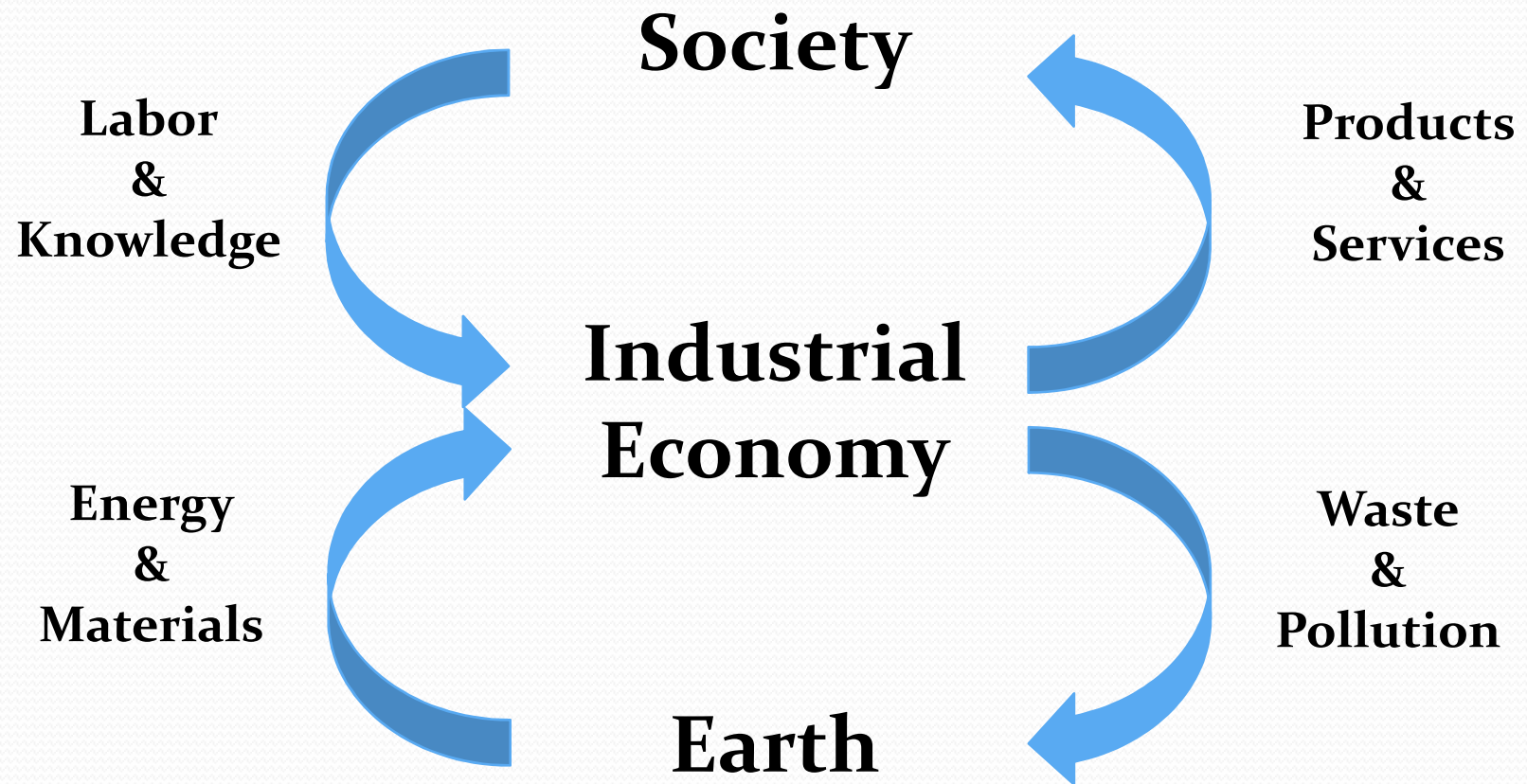
Sustainability is a fundamental transformation of society

Similar in scope to earlier fundamental transitions.

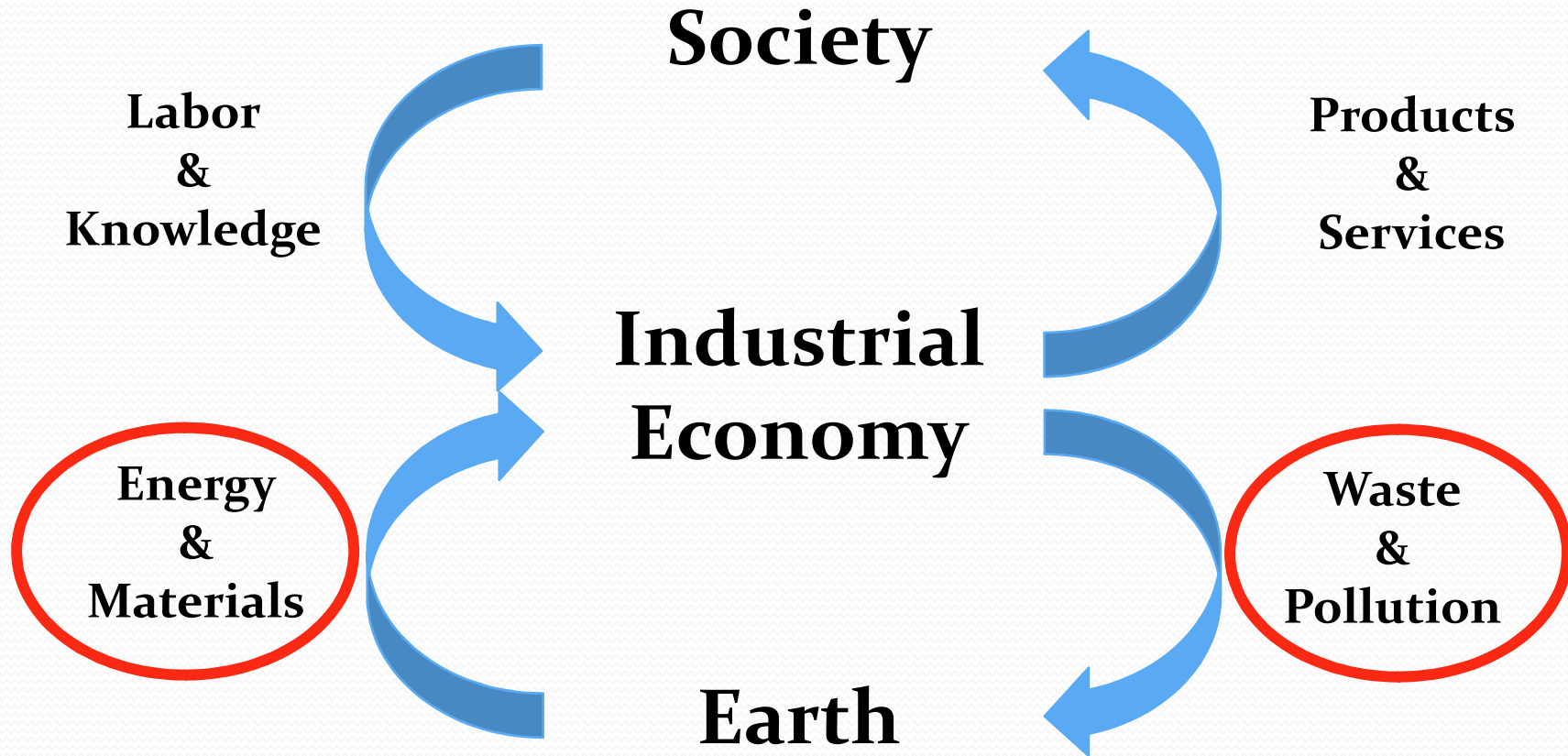
- Hunter/Gatherer
 - Agriculture
 - Industry
 - Sustainability
- 

See: John Ikerd, University of Missouri

The Industrial Economy served us well for generations.



Problem: The Industrial economy assumed the earth had infinite capacity.



Basic Fact: Earth not growing.



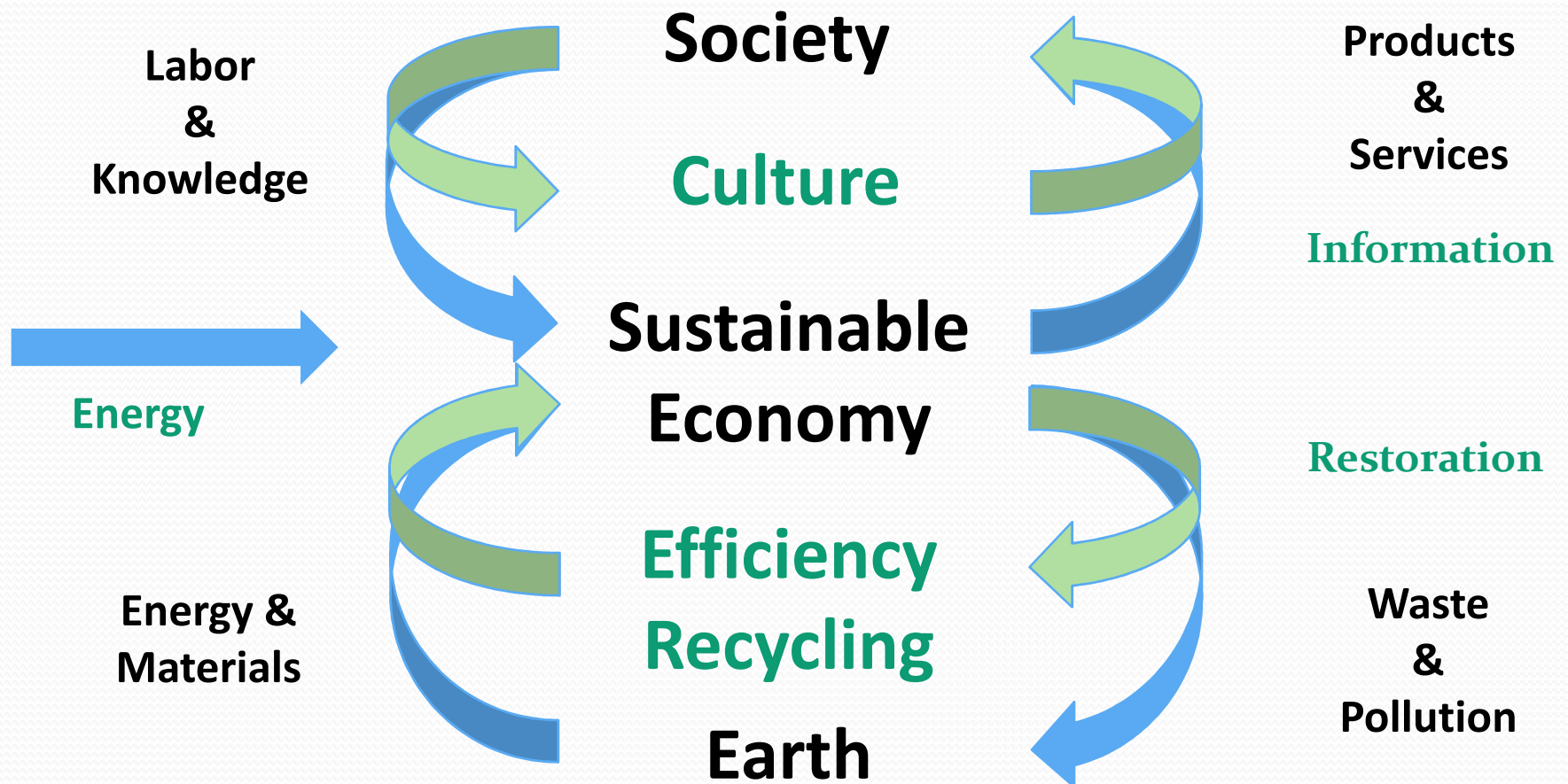


How to continue to grow the Economy on a finite Earth?

- Develop a Sustainable Economy.
- A Sustainable Economy meets both present and future needs.
- A Sustainable Economy is the only economy that can continue to grow forever.

Sustainable Economy

Must meet both present and future needs.





Trends to work with.

- Restoring your base: Organic Farming, Local Movement
- Increasing efficiency: lighting, insulation, smart grid, engines, vehicles, electrical appliances.
- Renewable energy: growing 20-50%/yr.
- Social media: Enormous growth in cultural interaction, largely outside of the economy.



Recap:

Solve problems, work with trends.

- People pay to have their problem solved.
- It's better to begin by focusing on the problem you're solving.
- Then identify trends you can work with.

Sustainable Business Model

Must maintain your base.



Customers buy benefits, not features

Features:

- Size
- Weight
- Speed
- Efficiency
- Cost
- Capacity

Benefits:

- Easy to store
- Easy to carry
- Gets the job done quickly
- Easy to use
- Affordable
- A good fit

Customer profile

If you don't know who your customer is your business will fail.

- John or Jane or both? _____
- Age: _____
- Three biggest frustrations:
 - _____
 - _____
 - _____
- Wakes up worrying about:
 - _____
 - _____
- Top three wishes are:
 - _____
 - _____
 - _____
- The event that probably got her/him interested in my product or service was:
 - _____
 - _____
- He/she will research solutions and purchases using:
 - _____
 - _____
 - _____
- For she/he to buy from me they need to believe:
 - _____
 - _____
 - _____

What are you selling?

- Price
- Quality
- Service
- Selection
- Convenience
- Reputation/Quality
- Comfort/Enjoyment



Map out your market

- How big is it? (\$/year, units/year)
- Where is it located? (Region, Online, Rural, Urban, etc.)
- How fast is it growing? (%/year)

Free Real Time Market Research

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Tools

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<input type="checkbox"/> Keyword	Competition	Global Monthly Searches ?	Estimated Avg. CPC
<input type="checkbox"/> ☆ solar	<div style="width: 50%;"></div>	16,600,000	\$1.17
<input type="checkbox"/> ☆ solar panel	<div style="width: 30%;"></div>	1,500,000	\$0.99
<input type="checkbox"/> ☆ solar system	<div style="width: 20%;"></div>	1,220,000	\$0.54
<input type="checkbox"/> ☆ solar panels	<div style="width: 40%;"></div>	1,000,000	\$2.25
<input type="checkbox"/> ☆ solar energy	<div style="width: 30%;"></div>	823,000	\$1.14
<input type="checkbox"/> ☆ energy solar	<div style="width: 30%;"></div>	823,000	\$0.00
<input type="checkbox"/> ☆ solar power	<div style="width: 30%;"></div>	823,000	\$1.19
<input type="checkbox"/> ☆ solar water	<div style="width: 30%;"></div>	368,000	\$1.14



What are your competitive strengths in this market?

- New products?
- New features? (Which deliver new benefits)
- New benefits from existing features?
- New technology?
- Changing the rules of the game? (Social media)
- Changing customer taste?

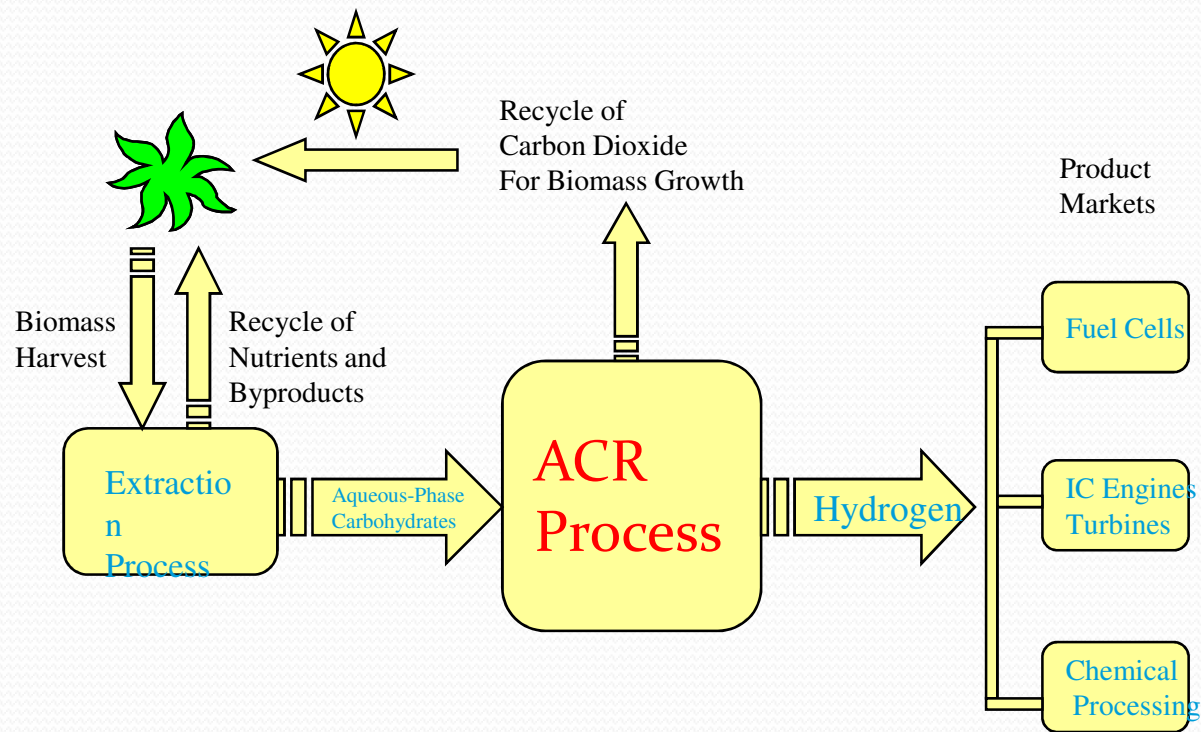
Find the right niche:

This will make or break your business

- Which market segment are you in?
- Who is your competition in this niche?
- Who are your customers in this niche?
- Is it small enough?
- Is it big enough?

Virent Energy Systems

Initial Niche: Conversion of Biomass to Hydrogen



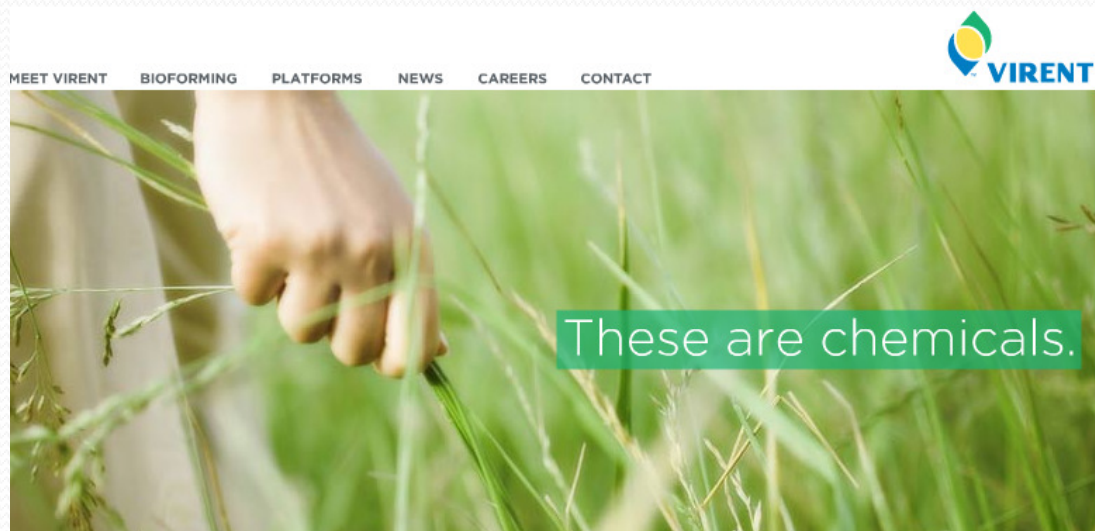
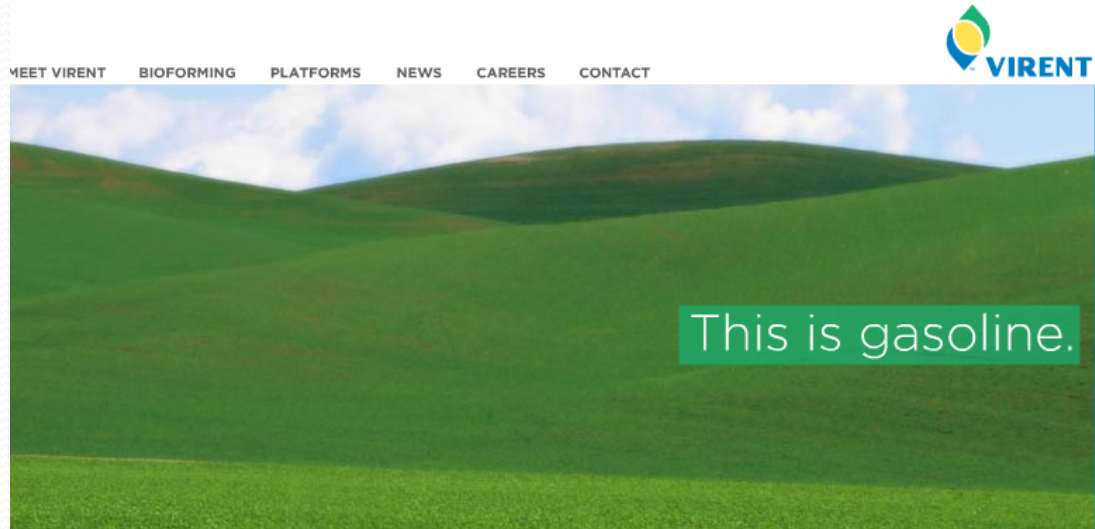


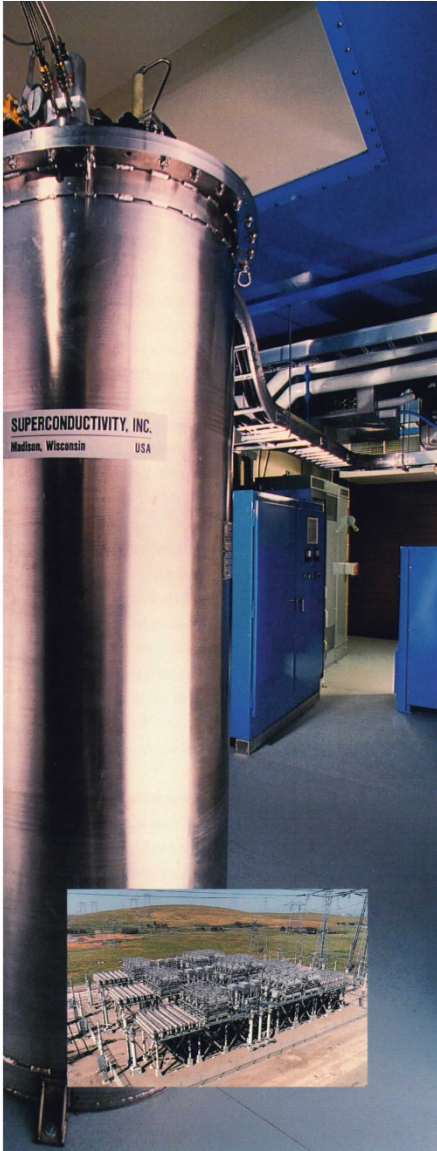
Changes affecting Virent's business.

- Technology
 - Fuel cell vehicles -> Hybrids
 - Fuel cell cost and performance
- Political Popularity: Hydrogen -> Biofuels

Virent's Niche:

Fuel and Chemicals from biomass





An entire SSD system that can store several megawatts of power fits in one semitrailer or can be installed in your plant.

Large power users are dangerously vulnerable to temporary power disturbances

Today's distribution circuit technology minimizes the possibility of long-term power outages, and provides great efficiencies. However, it leads to minor but frequent power disturbances. This trend is actually increasing because of the longer distribution circuits and lower system impedances now in use. In fact, almost 9 out of 10 power disturbances are short-term voltage sags and momentary outages.

If you use electronic equipment or have recently automated your critical processes, this poses a major problem to you. Your electronics can fail when exposed even to brief variations in electrical power quality! The result can be shutdowns, lost production time, damage to products and equipment, large repair costs, and significant safety and environmental hazards.

Now there's reliable protection for large critical-process loads

New superconductor technology offers secure, reliable protection against temporary power disturbances. The superconducting magnetic energy storage system (SSD_s) developed by Superconductivity, Inc. offers many powerful advantages:

- Vast power storage capabilities.
- High-speed energy release.
- Precise, automated electronic control.
- Dramatically increased safety and reliability.
- Reduced space and maintenance requirements.
- Significantly lower operation costs.
- Greater mobility and flexibility.
- A useful life of at least 20 years.

To find out more about this breakthrough technology and other power quality solutions, call ABB at (919) 856-2392.



ABB Power T&D Company Inc.
Power Systems Division

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Raleigh, NC 27606 USA

Telephone 919 856 2392
Fax 919 856 2414



Superconductivity, Inc.

2114 Eagle Drive
Middleton, WI 53562 USA

Telephone 608 831 5773
Fax 608 831 5793

Superconductivity, Inc.

- Market: Power Quality
- Product: Industrial UPS

Superconductivity, Inc. ->

- Shifted product line to power electronics.
- Products: Wind Farm Power Electronics, Grid Stability Power Electronics



Dynamic Reactive Power Compensation

Utilizing State of the Art Power Electronics Technology

The American Superconductor (AMSC) dynamic VAR (Volt Ampere Reactive) system is a powerful, cost-effective solution that dynamically stabilizes and regulates voltage on power transmission grids and industrial operations. Utilizing AMSC's proprietary PowerModule™ power electronic converters, D-VAR® systems detect and instantaneously compensate for voltage disturbances by injecting leading or lagging reactive power at key points on transmission and distribution grids. Each D-VAR solution is customized to meet specific customer needs and includes inherent flexibility to accommodate changing grid conditions.



D-VAR systems are highly scalable and mobile solutions that allow utilities to install them in their power grid at locations that need the greatest amount of VAR support.

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Welcome to AMSC Windtec

Since its founding in 1995, AMSC Windtec GmbH has become the leading engineering company involved in developing complete electrical and mechanical systems for wind turbine applications. AMSC Windtec GmbH is a wholly-owned subsidiary of American Superconductor (AMSC) and is part of the Power Systems business.

New Product! Introducing AMSC's newest PowerModule™ power converter designed specifically for wind turbines.

Revisit Key Questions

- Who is your market?
 - Who do you help? Your Niche?
- What is their main problem?
- How do you help solve their problem?
 - What benefits do you provide to your customers?

None of this is about you or your product.
It is all about your customers.