Technology Fits In
Global Agricultural Sustainability and How Current and Future Ethanol
ICM’s Mission

To provide innovative technologies, solutions and services to sustain agriculture and advance renewable energy, including food and feed technologies that will increase the supply of world protein.

More than 260+ employees
Privately-held company headquartered in Colwich, Kansas, USA
Founded in 1995 with an industry history dating back to 1970’s

Industry-leading Engineers, Plant Operators, Scientists, and Project Managers
ICM-Designed Ethanol Plants

A Typical ICM-Designed Ethanol Plant at a U.S. Location
60% of the U.S. market

Where Are We: North America
Generation 1: Technology Line of Sight

- Other primary products
- Co-location advantages for
- Co-product diversification
- Same steel in the ground
- Increased throughput with
- Increased value per bushel
Good News for Food and Fuel
More Good News
More Corn on Less Land
Fallow land - 2007/2008

Under-utilized land
Energy Consumption, Human Health & Well-Being are linked
NO countries have both high HDI and low energy use.

Energy Consumption, Human Health & Well Being are Linked.
Where Are We: Internationally
The energy of innovation:

Distribution

Storage

Processing

Production

Energy access is needed for food security

Preventable post-harvest losses steal 30-70% of food from rural smallholders.

Energy access improves the yield of each step in the food supply value chain.
Replacing charcoal with ethanol

FOR DEVELOPED COUNTRIES
ETHANOL IS NOT JUST FOR TRANSPORT AND NOT JUST
The World Health Organization reports 2 million early deaths per year from indoor air pollution.

Indoor charcoal smoke = 2 packs of cigarettes per day.

The Household Energy Market Sub-Saharan Africa

Is Deep...
Design, Hardware and Start-Up Support

ICM and Novozymes Provides Ethanol Plant Implementation in Progress

Mozambique

Cleanstar

novozymes
Our customers love it

Fuel spent drives rural development

Eliminates indoor air pollution

Saves time and money versus charcoal

Cleanstar’s commercial strategy in Africa
Our processes and logistics infrastructure maximizes operating efficiency, flexibility and traceability.

- Customers to commercial direct distribution
- Warehouses in Maputo and Beira
- Shops in Maputo
- Cookstoves & fuel

- Shared infrastructure
- Process lines
- Fuel, diesel fuel and food
- Parallel ethonal cooking
- Berera corridor in Bando
- 2 bio-processing plant off
- 5 community processing centres
- Equipment for technical support
- Supply inputs & close to Berera
- 5 communities in central Mozambique
- 1000 distributed
- 1000 smallholder farms
- 2ha each
- 5x200ha company
- (2ha each)

Our processes and logistics infrastructure maximizes operating efficiency, flexibility and traceability.
Growth Energy -- www.growthenergy.org
Urban Air Initiative -- urbanairinitiative.com
ICM -- icminc.com

Helpful websites:
(316) 977 - 6177
CEO
Dave Vander Griend
Contact:

Thank you!