Precision Agriculture
Top 5 Customer requirements for Precision Farming Solutions

Customer Requirements

- One complete solution for:
  - Guidance
  - Documentation
  - Data Management
  - Automation/Machine Control
  - Connectivity (cab to cab & cab to farm)
  - Rate Control
  - Automatic Section/Row Control

- A system that feels integrated that can control multiple OEM equipment

- Dedicated customer support and training

- Knowledgeable dealer as advisor and counselor

- Access to accurate and up-to-date information
What determines your adoption Precision Ag?

- This topic is determined by the operation and answering key questions
  - Who is the operation/farm?
  - What is the operation’s core business?
  - What are the operation’s resources?
  - What is the vision of the operation?
Data Management
Data Management

- Data vs. Information
- Data has been generated for years:
  - Yield
  - Tractor
  - Soil test
  - Soil type
  - Satellite
  - Equipment
- What has been done with that data?
As Simple as Using a Yield Monitor to Check Crop Moisture...
As Simple as Using a Lightbar to “Count” Rows and Make the Turn Quicker...
Precision Soil Sampling to Learn From Past Management Practices and Crop Removals
Yield Mapping to Quantify Good/Bad Areas of the Field/Farm
Variable Rate Application for More Efficient Use of Inputs

Home Farm - Home 1
Muriate of Potash 62% Application Rate

Ib/ae  ae
153 - 163  0.35
160 - 172  0.47
172 - 182  3.54
182 - 191  6.07
191 - 200  7.25
200 - 210  9.96
210 - 219  4.15
219 - 229  3.53
229 - 238  3.31
Field Boundary
Data Management

- Has that data been turned into decision making information?
  - Yield Maps – Printed and put into a book
  - Soils data – may look at soil type to buy seed
  - Equipment - Look at info on terminal or post display
Complete data collection and analysis

Wisconsin Farm - P1
Profit/Loss

- Customer: Valley View Farms, Inc.
- Phone: 1-309-546-2022
- Address: 1175 70th Avenue NW
  Crosby, IL 62059
- Farm Name: Wisconsin Farm
- Activity Plan: Profit/Loss - Profit/Loss
- Task Area: 44.80 (ac)
- Minimum: -438.13 (S/A)
- Maximum: 356.88 (S/A)
- Average: 202.95 (S/A)

2002 Corn
2003 Soybeans
2004 Corn
2005 Soybeans

Fuel Consumption
HOW WOULD YOU PLANT THIS FIELD?

Interior
Boarders (24.5 m)
Greatest AFC occurs when the field is planted within 5° of E-W.
Manual vs. Automatic Boom Control

- Season 1: 12.4% over-application
- Season 2: 6.2% over-application
- 6.2% reduction in coverage area

Scenario 2: Spray Boom (24.76 m) with 5 Control Sections

Scenario 3: Spray Boom (24.76 m) with 7 Control Sections

Total Overlap Area = 13.7 m²

Total Overlap Area = 14.7 m²
Automatic Section Control

Manual Control
  - Overlaps (blue)
  - Skips (red)

Automatic Section Control
  - Overlaps reduced (blue)
  - Skips eliminated
Precision Ag Today

- Growing with technology
  - Guidance is the norm and entry level
  - Adding Rate Control (VR) & Section Control functionality

- Recognition of technology potential
  - Enable them to alter or implement new crop management practices
  - Use PA technology beyond initial intentions
Recent Precision Ag Survey

- Over 85% of Precision Ag Practitioners indicated their operation has been more profitable.
  - Average input savings per acre
    - $19/ac for corn
    - $18.50/ac for soybeans
    - Up to $39/ac for cotton
  - Fertilizer savings $4 to $13 per acre depending on crop.
- Top benefits
  - Ability to apply chemicals and fertilizer where needed
  - Greater profitability due to lower input costs
  - Identification of poor producing areas of their fields.

Results courtesy of Precision Ag Institute
# Average Savings for PA Technologies

<table>
<thead>
<tr>
<th>Technology</th>
<th>Percent Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS-based Guidance</td>
<td>10%</td>
</tr>
<tr>
<td>Variable-Rate Application</td>
<td>7%</td>
</tr>
<tr>
<td>Automatic Section Control (ASC)</td>
<td>5%</td>
</tr>
<tr>
<td><strong>TOTAL AVERAGE</strong></td>
<td><strong>22%</strong></td>
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*NOTE: Data based upon Auburn studies. Savings could be higher or lower depending upon many production factors.*
So what has changed in the last 3 years?
Wireless Revolution

- AT&T had a 30,000% increase in data usage from 2009 to 2012. Verizon also had similar growth.
- The smartphone revolution began with the iPhone and has forced the upgrade of the Cell technology from 2G to 3G to 4G and now LTE.

This leads to easy data transfer through cloud based computing. Products like Slingshot and AGJunction allow easy data transfer.
Connecting your farm enterprise like never before
Introducing the fused farm
What challenges face today’s professional farmer?

- More partners and service providers
- Regulations and reporting
- Distance between farms are increasing
- Uptime and continuous operation
- Farm input costs
- Climate volatility
- More Advanced Equipment
- Capital investments increasing
- Labor pool is less skilled and available

Connecting Stationary farm assets

Connecting your farm enterprise like never before
Fuse Technologies brings a promise that connects products together like never before.

It is a commitment to customers to provide solutions that optimize, coordinate and seamlessly connect their equipment and their farm. It demonstrates that by giving growers the right tools, solutions and support, they can farm smarter.

Our goal is to make sure that our solutions enable your seeds and yields to grow, year after year.
Fuse™ Technologies – Overview

- Always Running... Optimized
- Right place, Right time... Coordinated
- Connecting the Crop Cycle... Seamlessly
On & Off Board Technologies

AGCO’s current and future “On and Off Board Technologies” give you greater visibility and coordinated connectivity across your operations. This allows you to optimize all your farm equipment – resulting in higher yields, reduced input costs and greater profits.
AGCO’s AgCommand

- Equipment and asset tracking
- Machine history
- Usage and Performance reports
- Vehicle alerts
- Scheduled maintenance alerts
- View live weather radar
- Turn-by-turn directions from your current location to machines
- Mobile
AgCommand – Raven Slingshot API Connection

- Vehicle location on AgCommand At A Glance page
- Vehicle History Report
- Raven Slingshot/Viper Pro Data Viewing within AgCommand
- Transfer Raven logged data to AgCommand website
AGCO Dealer Network

One of the world’s most extensive dealer networks gives you global access and support – any time, any place.

Our AGCO dealers are committed to ensuring that your expectations for product uptime and performance are exceeded.
Support & Training

At AGCO, we believe that our technology is only as good as the people behind it. Global customer support and leading-edge product training for AGCO dealers means you get the expertise and answers when you need them to run your operation more efficiently.
Service Providers

Fuse Technologies will enable you to **seamlessly** connect with preferred service providers and enjoy the freedom and convenience to continue working with your trusted local business partners.
AGCO’s vision of providing “High-tech Solutions for Professional Farmers Feeding the World” lives in the market through an offering of brands and products, each working to satisfy a unique customer requirement.

Behind these brands and superior machines stand the AGCO employees and dealers delivering a commitment to innovation and quality of work.

You can count on AGCO for the latest technology to get the job done more efficiently and more productively.
Sustainability & Technology Adoption

Fuse Technologies is about more than increasing efficiency and growing profits; it serves the future and security of agriculture. By introducing and supporting new precision farming techniques, farmers today are:

- Feeding a world population
- Promoting long-term soil health
- Increasing the availability of clean water
- Preserving the health of farming communities
- Reducing waste

AGCO’s Fuse Technologies rises to these challenges.
Connecting your farm enterprise like never before

Combine 3 Needs to Unload – Location Field 1

Tractor 2 Can Unload Combine 3 – Need Fuel – Location Field 4

Bin 2 Full – Fill Bin 3 – 16% Moisture on Bin 1

Fuel to Tractor 2 Location Field 4

Field 6 Rate Data Inbound

Grain Truck 5 – Fill Bin 3

Secure Data

Mixed Fleet

Your Choices
Questions?