Turning Data into Dollars

E-agriculture Solutions Forum
Nanjing, China
17th November 2018
We are Ridder

- Founded 1953
- Family business
- +75 Countries
- +340 Employees
- Made in Holland
- Horticulture to the bone
- +1,000,000 Drive Systems
- Helping you grow your way
Developments in Data

Data-driven Megatrends in Human Society
Business Intelligence
Internet of Things
Artificial Intelligence
Robotics
Because Who Likes picking leafs?
Data Driven Horticulture

- Data driven crop control
- Data driven operations
- Data driven financials

Today, tomorrow and in the future
Data Driven Crop Control

Today

• Implementation of GH technology such as climate control systems and water management tools: the foundation of data driven crop control.

• Integrate multiple greenhouse technology systems (water and climate) into one dashboard.

• Data Driven crop control starts with a human (the grower) that first of all needs to understand how plants work.
Data Driven Crop Control

Tomorrow

- Implementation of next generation GH technology
- Mobile sensors, dedicated software and applications to collect crop, climate and cultivation data
- Measure with 80/20 principle
- Communication between various systems
- Learn and understand how to read and actually USE all that data
- Challenge: Uniform registration and data collection throughout entire greenhouse
Data Driven Crop Control

Future

- Introduction of green finger algorithms
- Cultivation models
- Artificial Intelligence comes into play
- Understand the evolution of AI before you set your expectations

1. AI will safeguard the cultivation process
2. AI will advise how to steer the cultivation process
3. AI will make autonomous decision to optimize cultivation process

- Challenge: Trust AI. Don’t see it as a threat.
Data Driven
Daily Operations

Ridder

Helping you grow your way
Data Driven Daily Operations

Today

• Labor management systems to track labor, hours, production, quality and award bonuses; a key source of data
• Data crucial to control and provide insight over operational processes.
• From greenhouse to pack house; a lot of operational data output from current systems; need for integration into one dashboard.
Data Driven Daily Operations

Tomorrow

- Connection: Integration of all operational data into one dashboard with crop data
- Overview over multiple greenhouses, sites and locations
- Implementation of next generation registration and data-driven tools to improve day-to-day operations.
- Yield prediction tools
- Planning tools to optimize labor, production and overall operations.
- Crop scouting and production indexing tools
- Challenge: Uniformity in sensors and camera / registration technology
Future

• Introduction of data-driven robotics
• Robots can estimate, plan and harvest production based on hard data
• Data will add brainpower to robotics
• Challenge: We will still need to understand and master data ourselves.
Data Driven Financials

Today

- Integration of financial systems in greenhouse business
- Payroll, ERP, HR Software, CRM
- Exchange information between multiple systems
Data Driven Financials

Tomorrow

- Introduce Business Intelligence
- This is where everything comes together: Crop + Operational + Financial Data into one dashboard
- Real-time insight into both production and financials
- Manage company from cost/SKU perspective instead of cost/m2 perspective
- Challenge: Every body in the company, organization and management team must be on the same page
Data Driven Financials

Future

• Close the circle with rest of the chain

• Data exchange with BI platforms from chain partners (traders, retail and suppliers)

• Interaction between data of consumer (retail) and crop data (grower), enabling optimal anticipation on market trends

• Challenge: The Sky is the limit. How far can we go? How far do we need to go?
Challenges in Horticulture
Are you ready to turn Data into Dollars RMB?
WE ARE!