



Turning Data into Dollars

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Helping you grow
your way



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Made in **Holland**



Founded
1953



Family




Horticulture
to the bone

We are **Ridder**



+340
Employees



+ 1.000.000
Drive Systems

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Developments in Data

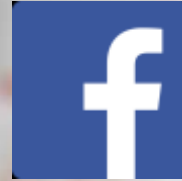


Data-driven Megatrends in Human Society

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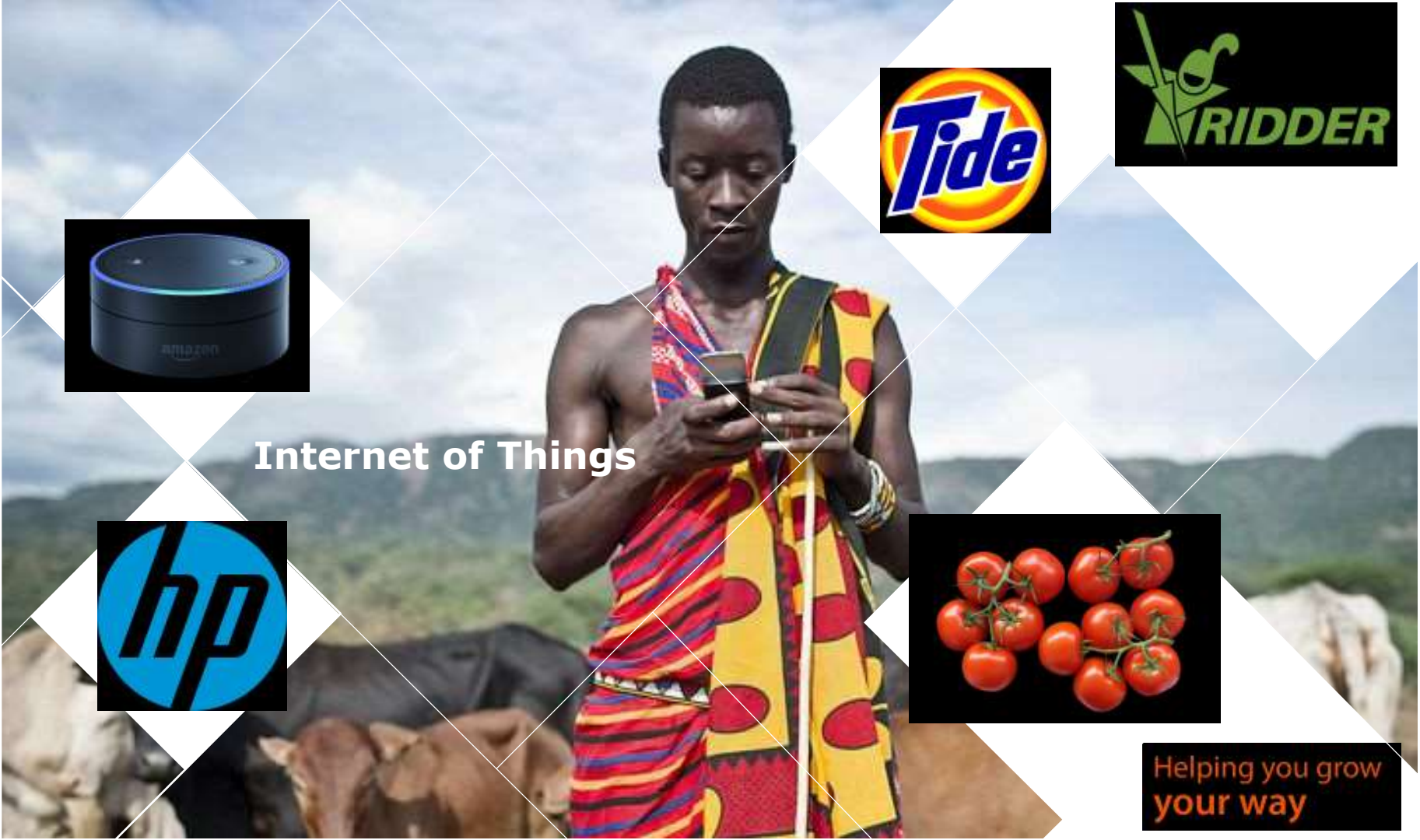
NETFLIX



Business Intelligence



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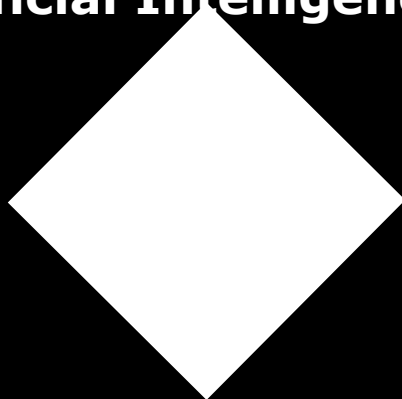
Internet of Things



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Artificial Intelligence





Autonomous Vehicles



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Robotics

Because Who Likes picking leafs?



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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.**



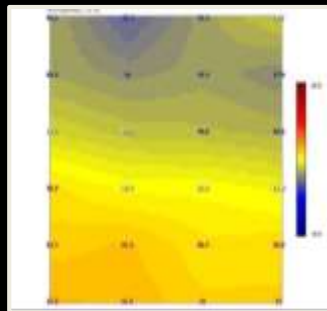
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Data Driven Crop Control



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**



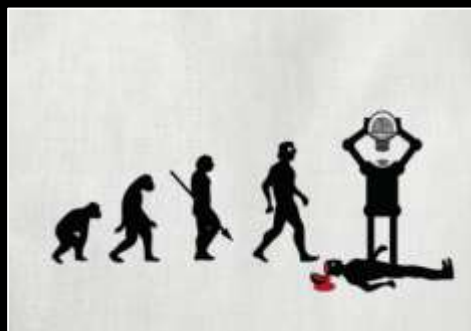
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Data Driven Crop Control



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.**



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Data Driven Daily Operations



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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.



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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



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Data Driven Daily Operations



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.**



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Data Driven Financials



Today

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



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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**



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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?**



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Challenges in Horticulture

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Profit

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Are you ready to
Turn **Data**
into
~~Dollars~~ **RMB**?



Seed



Eat



WE ARE!

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