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# Amsterdam Food Produce Show and Conference The Future of Food Provisions

## Four scenario's for the future of the Agri-Food Industry

Peter Hoijtink



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*Strictly private and confidential*

# Introducing...



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## **Peter Hoijtink – AgriFood Leader PwC Europe**

Peter leads PwC Europe's Food and Agri Industry team and is an experienced strategy consultant to the Agri-Food industry

Peter has a background in the CPG industry (Unilever and Grolsch) and is working in the food and agri industry since graduation from the University of Twente

He has worked on a range of projects that include Corporate Strategy Development, Market Assessment, Market Entry Strategy, Pricing & Revenue Management, Sales & Commercial Effectiveness and Operating Model design

# How will the future look like?

**Abundance...**



**...or shortages...?**





The Agri-Food industry is in a state of flux and it is unclear how it will evolve, but scenario's could provide guidance on this unsure future

# This presentation does not give an answer, but merely directional guidance and clear suggestions on required capabilities

## Key messages

- The Agri-Food industry is **in a state of flux** and it is unclear how it will evolve
- We have developed **four possible scenarios** on the 5-10 year future of Agri-Food
- We at PwC Strategy& believe that successful strategies must be underpinned by a system of **distinctive capabilities**
- The scenario's provide guidance on **capabilities that are required to be successful in the future**
- In all scenario's, **Ag-Tech plays a key role**: building up capabilities in this area will be crucial for success
- In most scenario's, **internationalization play an important role**, in the “positive” scenario's also **innovation and new business models**
- Established players and new entrants implement options to **monetize on the digitization of Agriculture**
- **Are you building up capabilities** for the future?



# Volatility of prices and margins, consumer trust and concerns, protectionist behaviour, industry consolidation and globalisation are all drivers of change

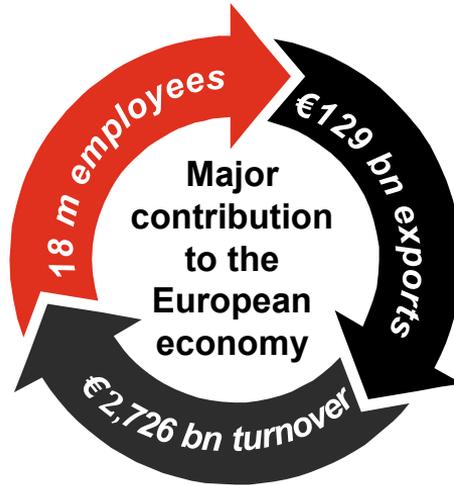
## Several drivers of change can be seen in the Agri-Food industry

### *Volatility of prices and margins*

- Increased demand
- Adverse weather
- Financial speculation
- Agricultural trade restrictions

### *Growing imports and exports*

- More globalized demand and supply
- Emerging nations of increasing importance



### *Consolidation*

- M&A activity on a global scale
- High deal activity from sovereign wealth funds

### *Consumer trust and concerns*

- Close to an all time low, but stabilizing across multiple markets
- Obesitas and health concern are increasing

### *Protectionism vs. free markets*

- Common Agricultural Policy
- CETA
- TTiP
- TPP

# These drivers of change originate in five megatrends that have a profound effect on our industry and daily lives

## Megatrends

**Demographic and social change**



- More mouths to feed
- Western dietary habits adopted globally
- Millennial concern for sustainability

**Rapid urbanisation**



- Fight for land and deforestation
- Logistical issues – food in/waste out
- Low self-sufficiency ratio for urban areas

**Shift in global economic power**



- New opportunities and risks for incumbents
- Added supply chain complexity
- Compliance with multi-jurisdictional regulation complexity

**Climate change and resource scarcity**



- Not enough food available, food supply less reliable
- Water and energy shortages
- Impacts food quality and price

**Technological breakthroughs**

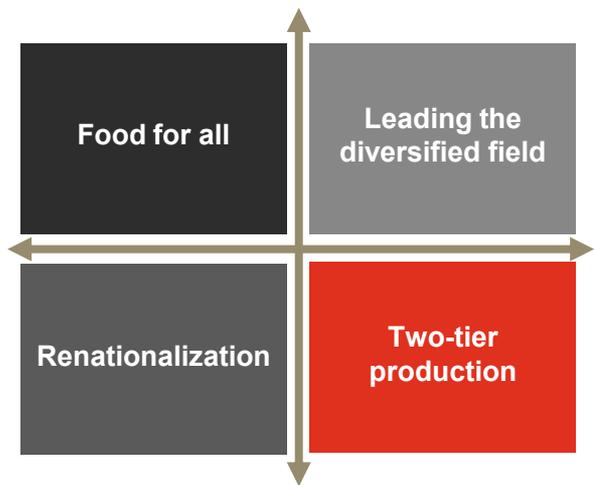


- Mitigating effects of global warming
- Using less resources, reduced space required for farming
- Increasing food quality and reduce price

# Four scenarios on the 5-10 year future of Agri-Food are generated, all with their specific characteristics

Agri-Food companies harness tech to overcome climate change and resource scarcity challenges

Current Western eating habits spread across the planet



Individualised and sustainably sourced food becomes mainstream



Climate change has a significant impact on the Agri-Food industry

What ever the scenario, signs are all over the news....

## Trump rejects May's post-Brexit agriculture deal with EU

US expected to drive hard bargain as UK assumes its own WTO obligations



© Bloomberg



**Trump withdraws from Trans-Pacific**  
*The Guardian, January 2017*



**McDonald's to double number of China restaurants**  
*FT, August 2017*



**China's latest food scandal: 'leftovers, industrial salt' used to make fake-branded food**  
*SCMP, January 2017*



**Arla launches branded organic milk in the middle east**  
*Company website*

# If we look at the four scenario's and translate this to food processors, every scenario provides guidance around required capabilities...

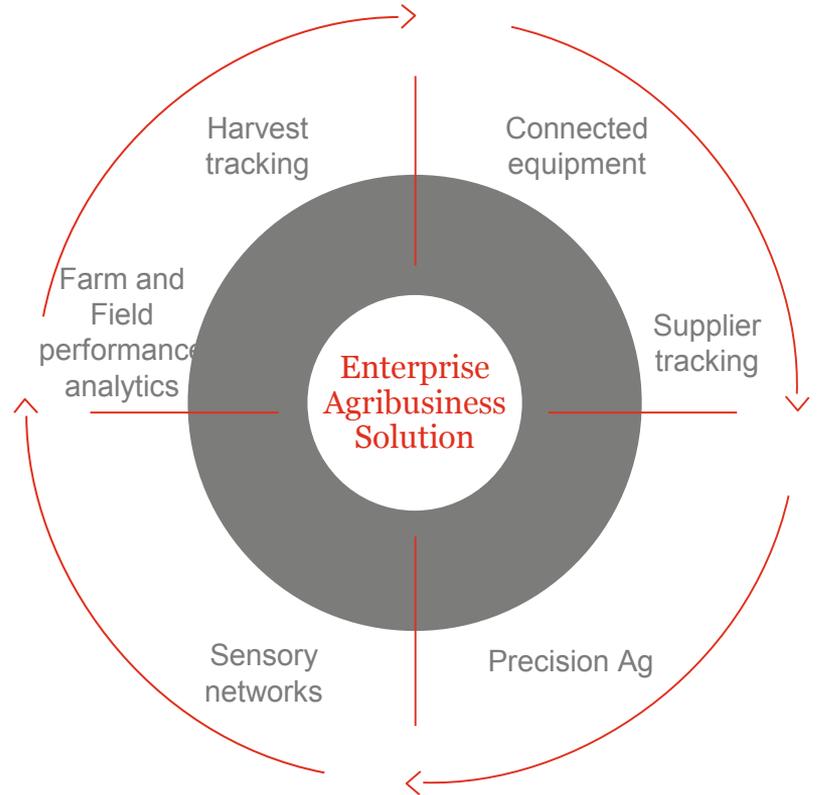
		Effects on Food processing companies	Required Capabilities
<b>Food for all</b>		<ul style="list-style-type: none"> <li>• Large companies will thrive and expand</li> <li>• Focus on yield improvement and efficiency</li> <li>• Abundance reduces margins</li> </ul>	<ul style="list-style-type: none"> <li>• Ag-Tech to improve yield and production</li> <li>• Producing and marketing for global markets</li> </ul>
<b>Leading the diversified field</b>		<ul style="list-style-type: none"> <li>• Companies will be more fragmented and have more offerings</li> <li>• Shorter, sustainable supply chains</li> </ul>	<ul style="list-style-type: none"> <li>• Product, production and business model innovation</li> <li>• Ag-Tech to increase sustainable production/ sourcing and transparency</li> </ul>
<b>Two tier production</b>		<ul style="list-style-type: none"> <li>• Smaller players offering sustainably sourced food</li> <li>• Larger companies offering commodities</li> </ul>	<ul style="list-style-type: none"> <li>• All of the above depending on positioning</li> <li>• Matching supply- and demand (trading)</li> </ul>
<b>Renationalisation</b>		<ul style="list-style-type: none"> <li>• Global trade hampered by restrictions</li> <li>• Large players form/join conglomerates to create (regional) scale and protection</li> </ul>	<ul style="list-style-type: none"> <li>• Public relations</li> <li>• Ag-Tech to improve yield and production</li> <li>• Alliance management</li> </ul>

# ...although productivity gains with Ag-Tech play a big role in all four scenario's

## Convergence of Technology: Mobile, IoT, Analytics and the Cloud

The next level of productivity gains on the farm will be made possible by interoperability of mobile, sensors, high speed data, images and cloud

This “Ag 2.0” investment sets the foundation for the future machine learning and farming robotics capabilities



# We foresee specifically three key area's that will play a determining role in the future

## Three key Ag-Tech developments



**Data driven farming – Precision farming, predictive modeling, farms in the cloud/ farm management**



**Rise of smart agricultural robots – Autonomous robots, swarm robots, human-robotic augmentation**



**Intensification of food transparency– Traceability from “farm to fork”**

### 3 Transparency “from farm to fork” can be delivered by customized blockchain technology, for instance the PwC / arc-net solution

# The PwC / arc-net solution

The first **safe and authentic** solution with independent validation to prevent the food fraud problem and create value



#### Blockchain Technology

Utilises new Blockchain Technology to identify, capture and analyse data across the food supply chain “Farm to Fork” with embedded Security to protect data



#### UUID

Create Universal Unique Identifier (UUID) for every package



#### RoPO

The blockchain requires a Registry of Pre-approved Organisations (RoPO) to reduce risk and create trusted data exchange



#### Big Data Analytics

Utilises Big Data and Data Analytics to create new Insights on how to Optimise Supply Chain Process



And what about your company?

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Are you building up capabilities for  
the future?

# Coming back to our key messages

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ANY  
QUESTIONS

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# Thank you!

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