



Trends in Mechanisation

A manufacturer's perspective

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Agenda

CNH INDUSTRIAL – AN OVERVIEW

NEW HOLLAND – 125 YEARS

INDUSTRY & TECHNOLOGY MEGA TRENDS

FARMING 4.0 – DIGITAL AGRICULTURE

SUMMARY

CNH Industrial – at a glance

A global capital goods company

5. FINANCIAL SERVICES



Global financial services player supporting customers & dealers



4. POWERTRAIN



Global leader in regulated markets



3. COMMERCIAL & SPECIALTY



Market leader in alternative fuels



1. AGRICULTURE



Second largest manufacturer of agricultural equipment



2. CONSTRUCTION

A global player in construction equipment



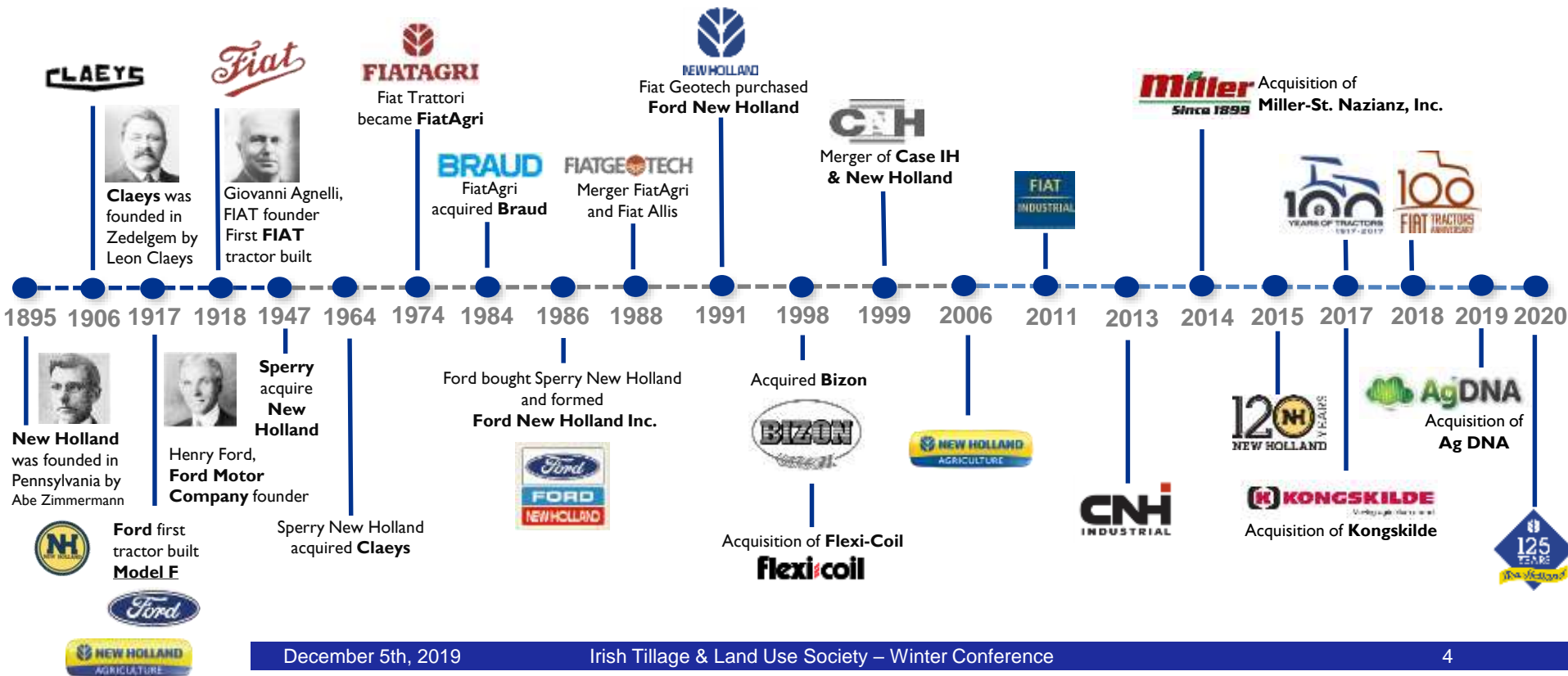
New Holland – 125 years

Founders & Legacy brands

HISTORY

ACQUISITIONS/MERGERS

INTEGRATION



Industry and technology megatrends

Transforming the Capital Goods Sector

DIGITALIZATION

Broad diffusion of digital and connected applications

Connected is the "new normal"

AUTONOMOUS

Automation enabled by digitalization and robots

Vehicle, process and task automation

SERVITIZATION

Rise of "as a service" offerings in capital goods

Emerging service models

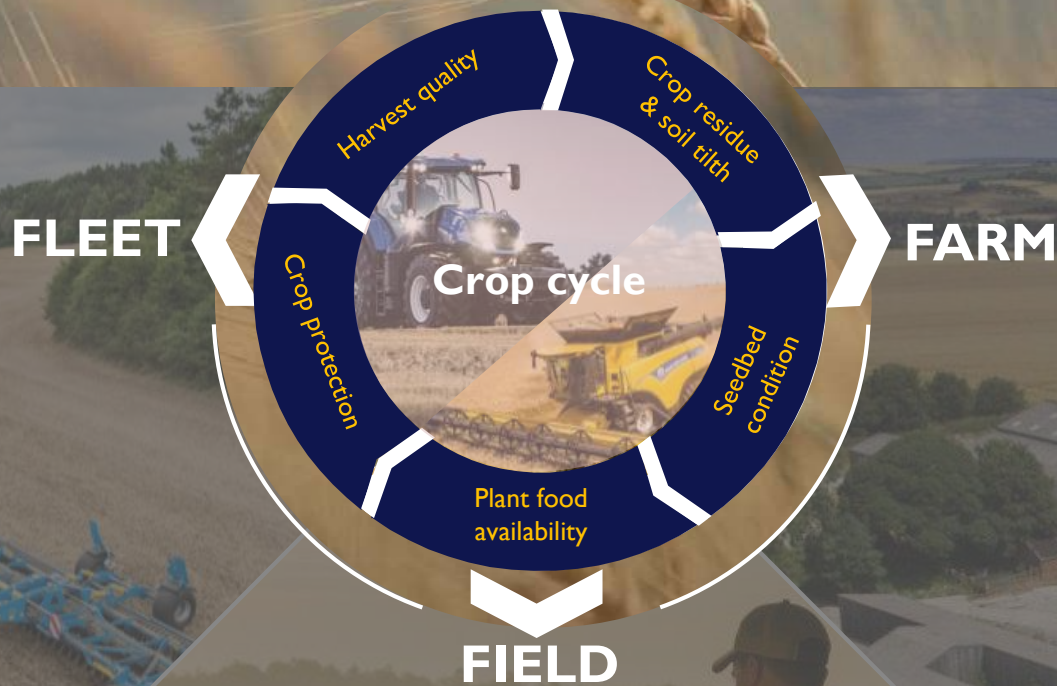
ALTERNATIVE PROPULSION

Tightening emission rules and awareness of climate change

Alternative power sources

Farming 4.0 – Digital Agriculture

Enabling next level productivity across the entire crop production cycle

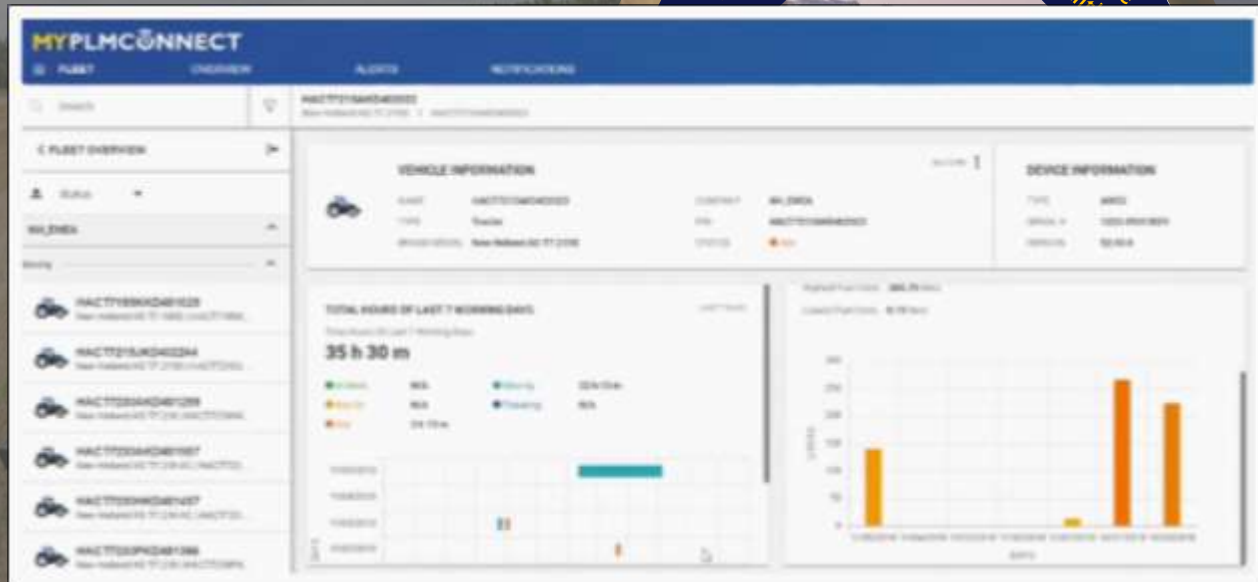


Farming 4.0 – Digital Agriculture

Enabling next level productivity across the entire crop production cycle

Harvest quality

Crop residue & soil tillage



FARM

Operational and agronomic productivity **MYPLMCCONNECT**

- API with agronomy partners
- Cloud based farm management software
- Agronomic decision support applications

»»»» Up to 5% improved economics of operations

Farming 4.0 – Digital Agriculture

Enabling next level productivity across the entire crop production cycle

FLEET

Asset productivity

- Data Connect - OEMs sharing
- Logistics and maintenance optimisation
- Proactive and predictive error resolution

»»»» Up to 30% reduced downtime

Crop cycle

Harvest quality

Crop residue & soil tillage

Crop protection

Seedbed condition

Plant food availability

FARM

Operational and agronomic productivity **MYPLMCONNECT**

- API with agronomy partners
- Cloud based farm management software
- Agronomic decision support applications

»»»» Up to 5% improved economics of operations

FIELD

Process productivity (input & yield)

- VRA, guidance & control systems
 - ISOBUS Class 3 & Smart Planters
- Agronomic sensing & monitoring
 - Drones, Nitrogen Sensors & NIR

»»»» Up to 20% improved field productivity

AGXTEND

Smart, Connected Equipment

The Foundation for Farming 4.0 and beyond

Next gen. technology platform

New cab, armrest & display to improve operator handling

Connectivity enabling remote services to maximize uptime

Multiple integrated cameras to enhance safety & improve ease of operation

Advanced precision farming functions to increase operational efficiency

10%+ productivity improvement

Combine automation platform

Intelligent control to minimize losses

Automatically adjusted flow control to maximize throughput

Automation improving operator conditions and machine output

Strategies to automate performance and crop quality

10-20% productivity improvement

Beyond Farming 4.0

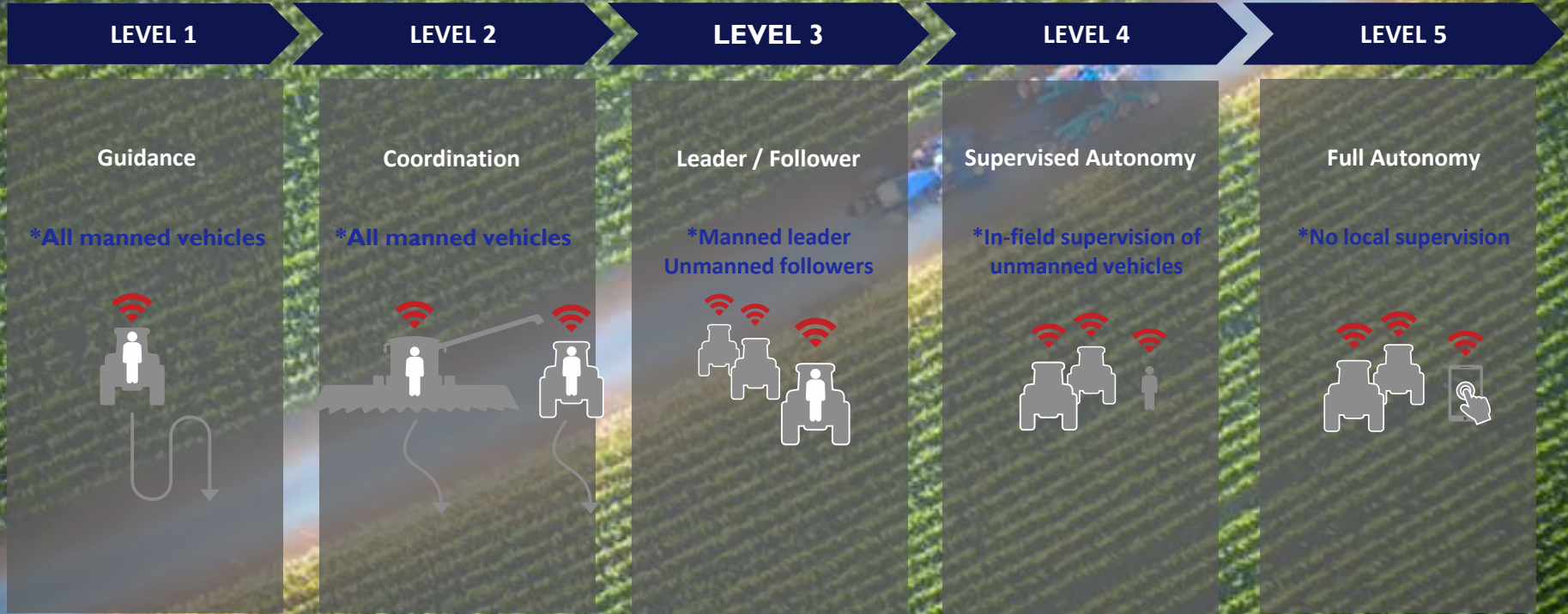
Trends to consider – Utilisation of the data flows



- Evolutions in Automation, Robotics & Autonomy
- Large Increase in IoT (Internet of Things) Sensors
- Real-time analytics enabled by Artificial Intelligence and Machine Learning
- Closer connection of Grower to Consumer
- Shorten the supply chain – demand closer to production
- Linking customer preference to actions on the farm

Autonomous Agriculture

The journey to autonomy



Servitization

Purchasing an 'outcome' instead of a 'product'

Servitization is enabled by:

- Internet of Things (IOT) & Big Data
- Sensors & modems on assets
- Interpretation of data to drive efficiency

Servitization is delivered by:

- Focusing on customer needs
- Increasing asset utilization
- Lowering the Total Cost of Ownership



Clean Energy Leader

Part of our drive to sustainable agriculture



2006



CLEAN ENERGY LEADER® STRATEGY LAUNCHED

2009



**NH2™ HYDROGEN TRACTOR AND
ENERGY INDEPENDENT FARM**

2013

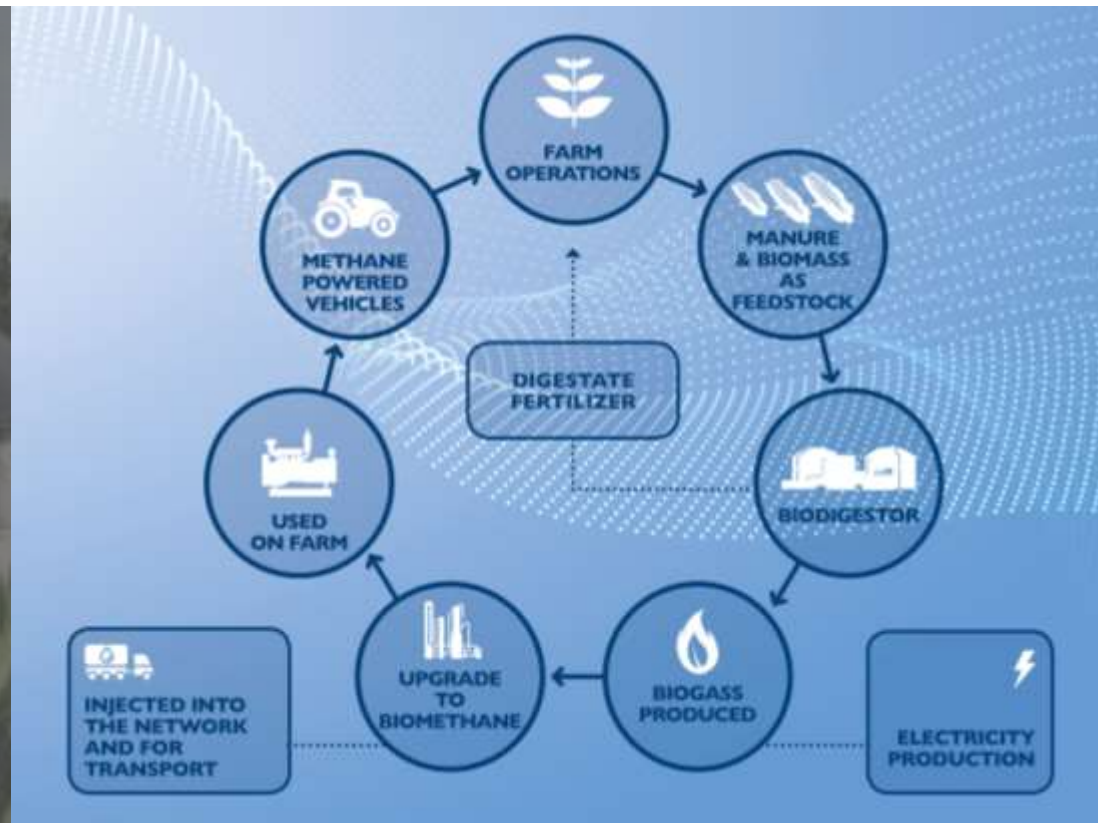


METHANE T6 DEVELOPMENT WORK COMMENCES

2017



FUTURISTIC METHANE CONCEPT UNVEILED



Alternative Propulsion - T6. Methane Power

Running on Natural Gas vs. Diesel



-99% PARTICULATE MATTER

-10% CO_2

NATURAL GAS

-80% TO -180% CO_2

BIOGAS

-80% OVERALL EMISSIONS

-30% RUNNING COSTS

SAME POWER - 180 HP

SAME TORQUE - 740 NM

SAME DURABILITY

SAME SERVICE INTERVALS

Summary

Trends in mechanisation

1. CONNECTED IS THE NEW NORMAL

2. INCREASE IN IOT SENSORS

3. ANALYTICS IS KEY

4. AUTONOMOUS INTEGRATION

5. LONG TERM SHIFT FROM DIESEL

Go raibh míle maith agat

