SenseHub Poultry

Expertise Conference 2023

Nick Munce

Commercial Lead

SenseHub® POULTRY

MSD Animal Health Technology Solutions

SenseHub® Poultry

SenseHub Poultry collects real-time data that is fundamental to bird health, welfare and performance allowing broiler producers to make informed decisions on-farm

Temperature

Humidity

Carbon Dioxide

Lux
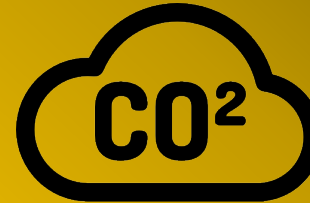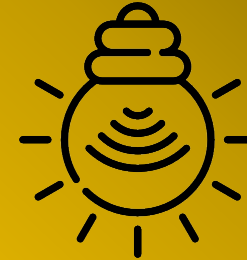
Air Pressure

Water Consumption

Weight
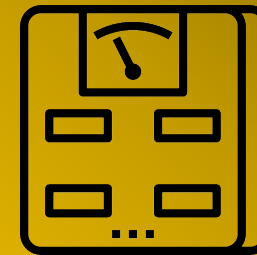
Traditional House

➤ Low sensor coverage

➤ Manual data integration

➤ Few parameters and data points

➤ Manual performance analysis

➤ Farmer Know How
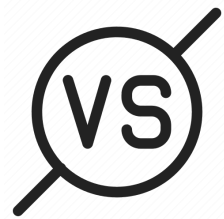
SenseHub Poultry

➤ Full house coverage by zone

➤ Automated data integration

➤ Live data for many parameters

(C°, HR%, CO2, Lux, Air Pressure, Water and Weight)

➤ Tools for easy analysis from any device

➤ Infrastructure for machine learning

SenseHub POULTRY

MSD Animal Health

Sense Node

➢ Records Temperature & Humidity

➢ Data is collected every 15 minutes

➢ Battery life is 3 years

➢ Can be left in poultry house during cleaning

➢ Clipped onto feeder lines using carabiner with tag

➢ 1 Sense Node x 1000 birds

Sense Node+

➢ Records Temperature, Humidity, Co2, LUX and Atmospheric Pressure

➢ Data is collected every 15 minutes

➢ Clipped onto feeder lines using carabiner with tag

➢ Battery life is 90 days –   charged after each crop

➢ Battery levels are visible on the user interface and should be checked regularly

➢ Once charged the device is returned to the same location within each house

➢ Must be removed from poultry house prior to farm cleaning

➢ 1 Sense Node+ x10,000 birds

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MSD Animal Health

Water Sense +

➤ Records water flow

➤ Collects data every hour and sends hourly data every 6 hours

➤ Long lasting battery life – Circa 15 Years

➤ Can be placed on drinker lines or main water line into house or one per water line
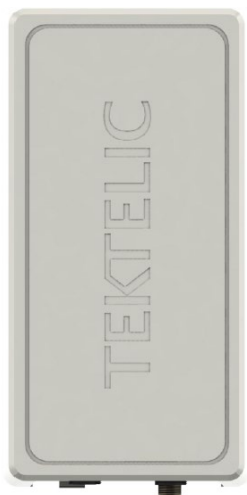
Weigh Sense +

➢ Records bird weight and bird jumps

➢ Sends data every 10 minutes

➢ Battery life is one crop cycle, needs to be recharged after every crop

➢ Can be placed anywhere on poultry house floor

➢ Must be removed from poultry house prior to farm cleaning

➢ 1 Scale x 10,000 birds
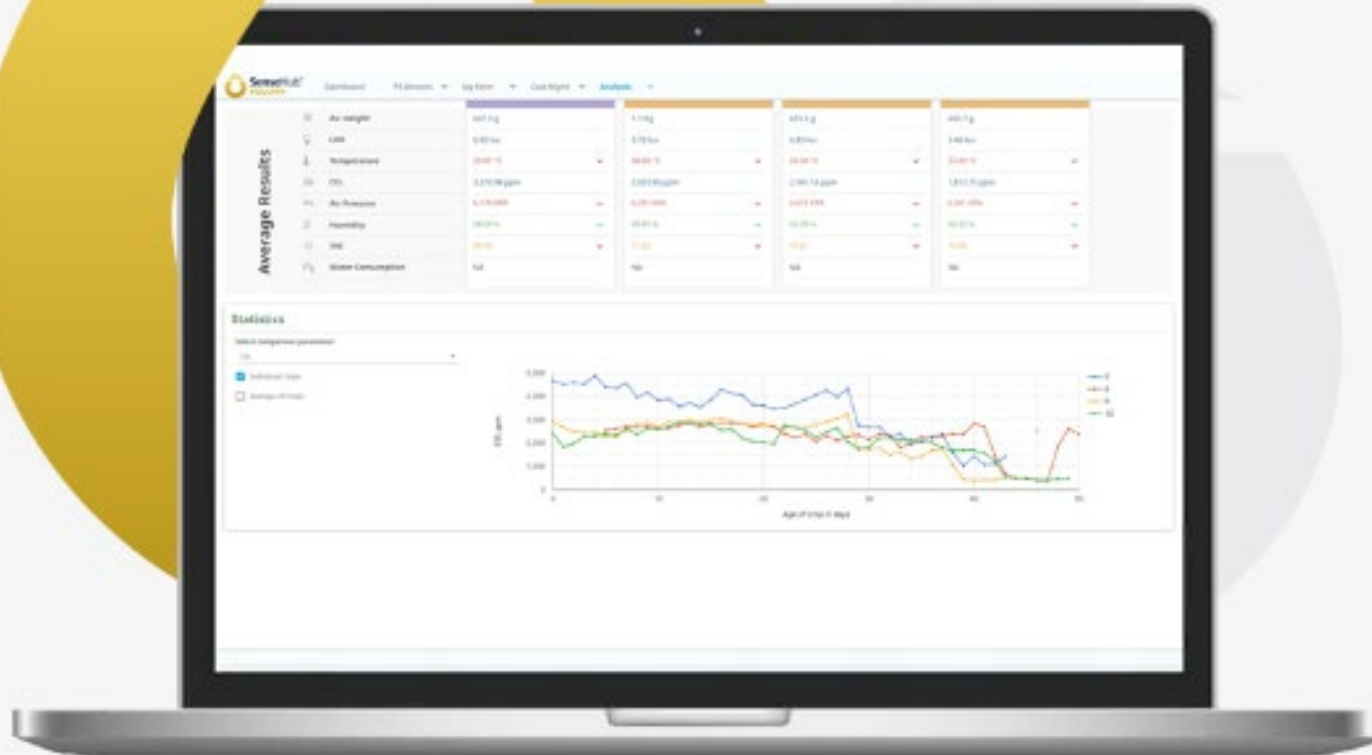

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MSD Animal Health

Gateway

➤ Optimize coverage and capacity with a cost-effective and extremely compact LoRaWAN gateway

➤ Quick and easy deployment

➤ Plug-and-play installation

➤ Lower site operational cost

➤ Fully integrated with the broad eco-system of LoRa network servers and sensors

➤ 1 Gateway x farm

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MSD Animal Health

SenseHub Poultry SW

➢The data collected is translated into visual reports, graphs and KPIs available in the SenseHub Poultry SW

➢Data is displayed per all houses available to provide a full picture to farmers

➢To ensure proper data calculation, users must enter basic crop information and report mortality data

Flock Cycle – How it works in practice

One Crop Cycle = 35-80days

NEW CHICKS

Farmer Starts a new Crop in SenseHub Poultry
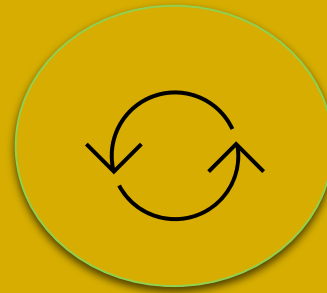
DATA MONITORING

The farm is monitored by the sensors, the data is collated by the gateway and displayed in the SenseHub Poultry software

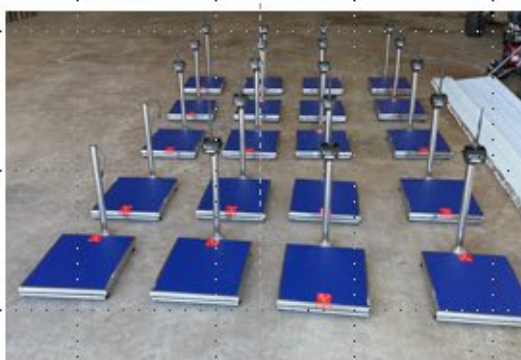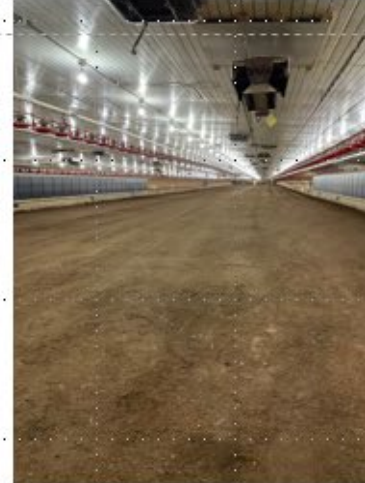Farmer records manually flock information, mortality data and events
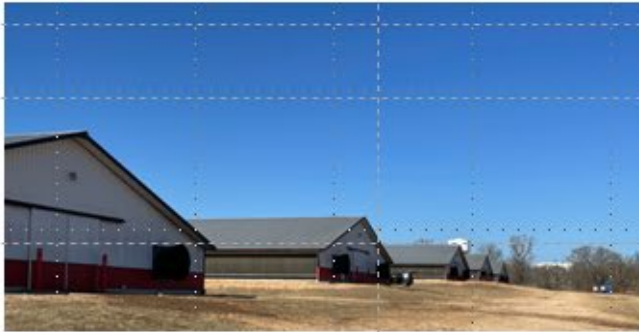
ANALYSIS

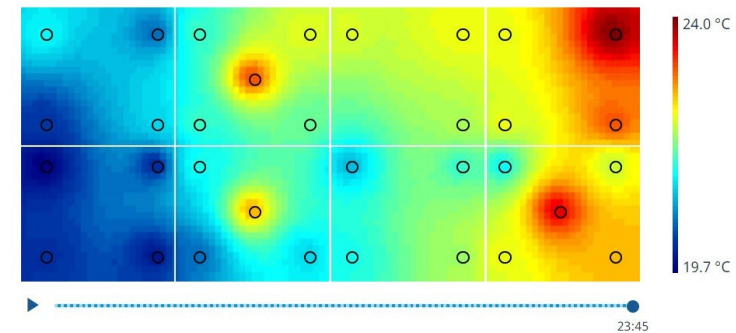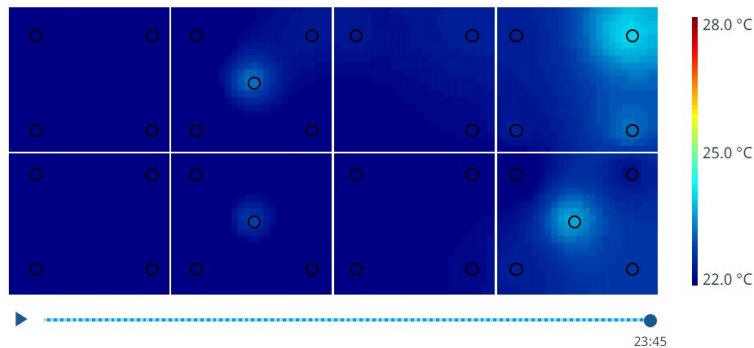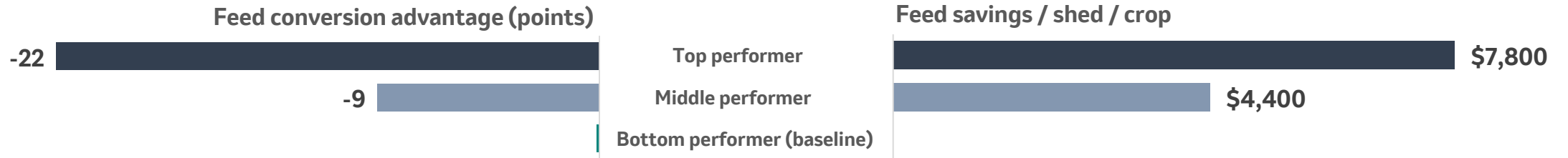Advanced analysis can be performed by SenseHub Poultry Specialists

END OF CROP

Farmer ends the crop

Farm & sensors are cleaned by the farmer

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Installation 4 x 55k Bird Capacity Houses

Understanding Scale of Variance – 8 Farms 200K Birds

Feed conversion advantage (points)

-22	Top performer
-9	Middle performer
	Bottom performer (baseline)

Feed savings / shed / crop

Top performer	$7,800
Middle performer	$4,400

- Performance differences driven by environmental management

- Potential feed savings up to **~$ 40,000 per year** (considering ~5 crops/year)

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Devonshire Poultry Case Study
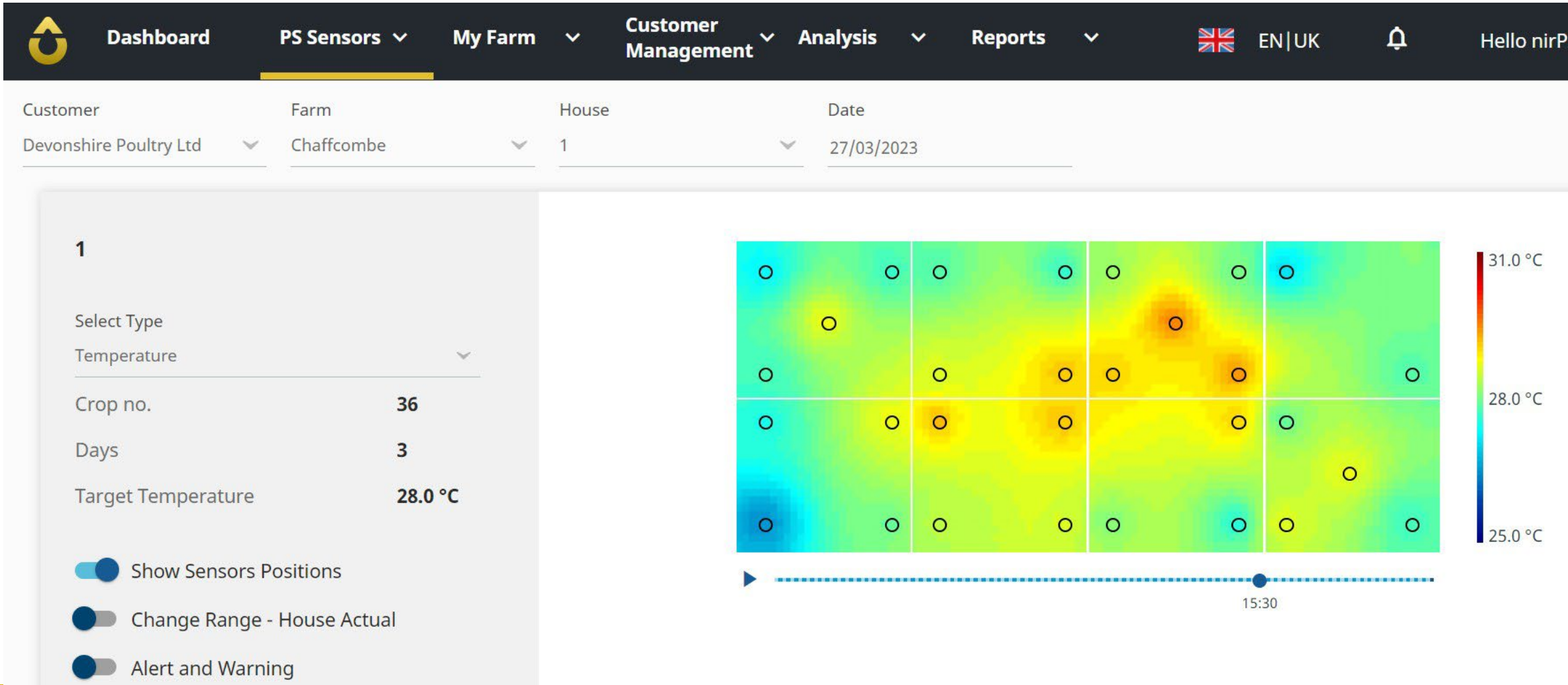
SenseHub – A Solutions Approach

- Continual accurate and secure data acquisition

- Traceability

- Objective analysis

- Feedback and drill down to solutions to health and welfare issues

- Independent objective assessment of health and welfare parameters

- Ability to use different algorithms for different standards on the same flock/ farm and or integrator

    - (i.e. variation in stocking density requirements or the use of windows for natural daylight)

Health & Welfare Indices – UK Project

There are tested algorithms developed by specialised poultry vets and data analysts for 2 classes, health and welfare. Within each class there are specific parameters analysed daily. Each parameter is scored daily from real time data.

The final aggregate score at processing for each class enables accurate objective assessment that the flock meets the required criteria.

- **Health**

  - Variation in daily water consumption

  - Variation in daily weight gain

- **Welfare**

- CO_2 levels (code of practice)

- Daily Dark Period (code of practice)

- Stocking Density (code of practice)

Thank You

Any Questions?

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POULTRY