

Commercial Poultry in South Africa

Water and Air quality monitoring & analysis



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Omniolytics



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About Omniolytics

Poultry Industry – South Africa

- Overview
- Project Objectives
- Industry Challenges

OmnioFarm

- Overview
- Demo

IoT MVP

- Hardware Challenges
- Support

The Journey



Sustainable farming is about meeting the needs of South Africans today and in the future.

-WWF, Facts and Trends South Africa

Omniolytics ("OMNI"- all, "IO"- input/output, "LYTICS"- analytics)

- **Tech Startup established in South Africa in 2017**
- **Experience: IT/Telecoms in SA and the UK**
- **Industry Focus: Agriculture - Emerging and Commercial Poultry Farming**
- **Product: OmnioFarm**

- **Largest sector** of the **agricultural industry** in SA
- Valued at **€3.01 billion**
- **Net importers** of chicken... “Industry in distress” - *SAPA Broiler Organisation Committee Chairperson’s Report 2017*
- Revenue loss of **€62.5 million** – HPAI Outbreak, 2017
- “investment in technology”- Dept of Trade and Industry
- **ICT and big data** to provide farm managers with tools for improving farm management – Farmer’s Weekly, May 2016

PROJECT OBJECTIVES



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Improve Animal
Welfare



Reduce Mortality
Rates



Improve Growth
Rates (FCRs)



Connect the Value-
Chain

- **Monitoring** farm conditions in **real- time anywhere** at **anytime**
- Limited **capability** to **detect** unfavourable conditions
- Understanding **anomalies**, problem **root causes** and enabling **preventative** measures
- **Knowledge** and **expertise** to improve **efficiency**
- **Sharing information** across the value-chain

Digitise conditions at source



**Enable monitoring, thresholds,
notifications and record capture
via the web**

**Identify anomalies, root causes
and predict problems**



**Enable best practice
frameworks and secure
information sharing**



OMNIOFARM OVERVIEW



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Improve Animal
Welfare



Reduce Mortality
Rates



Improve Growth
Rates (FCRs)



Connect the Value-
Chain

Access Broiler House Conditions Using Dashboards in Real-Time over the Internet

Integrate and Analyse Contextual Data Sources

Manage Performance using Best Practice, Anomaly Detection, Historic and Predictive Analytics

Connect Value-Chain Stakeholders on a Secure Digital Platform

DEMO



- **Sensor Availability**
- **Cost**
- **Sensor Build Quality**
- **Device Configuration and Management**
- **Support**

THE JOURNEY



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2016
IoT Intro



2017
PoC Agreed (SA)



2018
Sensors Acquired



2018
Funding & Support



2019
Partnerships & Opportunities



University of
Hertfordshire **UH**





Thank you

Getting IQRF into the project

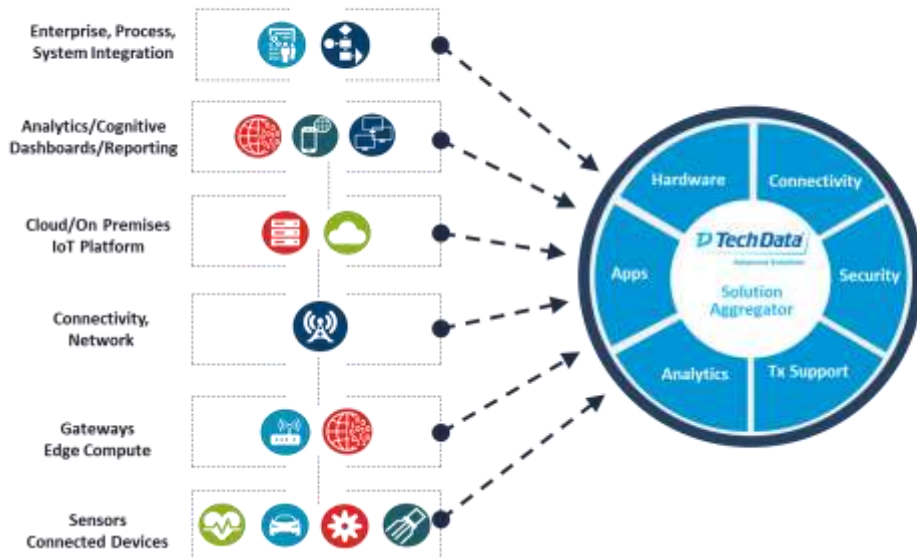


The IoT & Analytics Solution Aggregator



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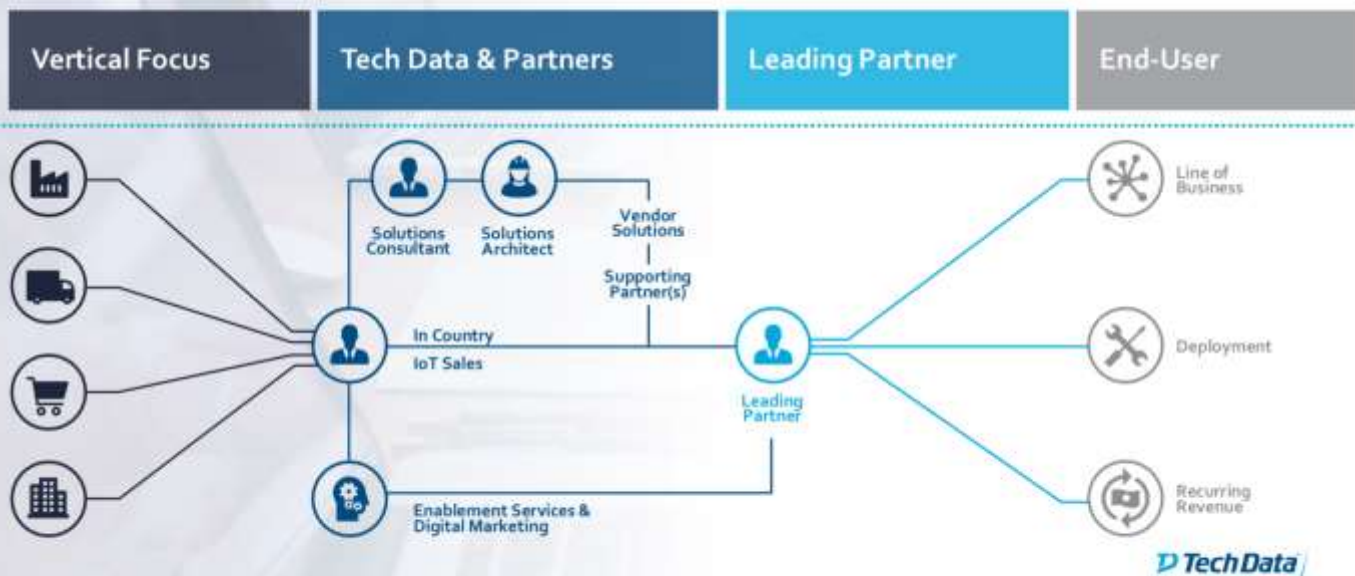
Complex Ecosystem



Made Simple



Supporting partners with Go To Market



Broilerhouse Management

Solution Benefits

- Improved Animal welfare
- Reduced mortality rates
- Improved growth rates
- Connected Value Chain
- Frugal Innovation
- Standards Compliance



Solution

The Poultry industry is the largest sector of the South African Agriculture Industry. Valued at 3.01 Billion Euros.

The impact of the HPAI outbreak in 2017 was a loss of 62.5 Million Euros.

This innovative solution from OmnioFarm will give early warnings of any future outbreaks, and provide the information in real time to the farm operators.

Frugal Innovation is something that must be adopted, doing more with less, using high technology to achieve the right outcomes.

Sensors



Edge Infrastructure



IOT Platform



Data Analytics
Machine learning



Dashboards/Visualisation



How Can Tech Data Help ?

Tech Data can offer the below services to support your IoT opportunity:

- Business Outcome Planning
- IoT Proof of Value Initiatives
- IoT Architecture Definition
- Customer App Development
- IoT Security and Integration
- IoT Hardware/Software Implementation.
- IoT Managed Services
- BI/Analytics Consultancy
- Data Integration Services

Conversation Starters



Are you meeting all the standards required to provide value add stock ? How do you gather and prepare the required audits ?



How do you manage the operations of your farms and the health and condition of your livestock ?



How challenging is it to get a real time view of the performance of your estate ?

Customer Challenges

Lack of real time operational visibility

Poor client experience / collaboration in the supply chain

Growing Animal Welfare and Green requirements

High cost of auditing to meet standards – manual tasks

High maintenance costs due to lack of predictability



Target Audience

Business stakeholders:

VP Ops, Logistics Manager, Operations Manager, Maintenance Manager, COO, CFO



IT stakeholders:

CIO, VP/director of IT, CTO

Key things to listen for

- Market Competition
- Compliance risk
- Ethical market demands
- Audit and Billing discrepancies
- Process inefficiencies - predictability
- Supply chain visibility



Services Opportunities

- Sensors, provisioning
- Network Implementation/Configuration
- Data/API Integration
- BI/Analytics Consulting/Delivery
- Application Development
- Managed Services

Supporting Vendors



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Team and proposal





Project specification

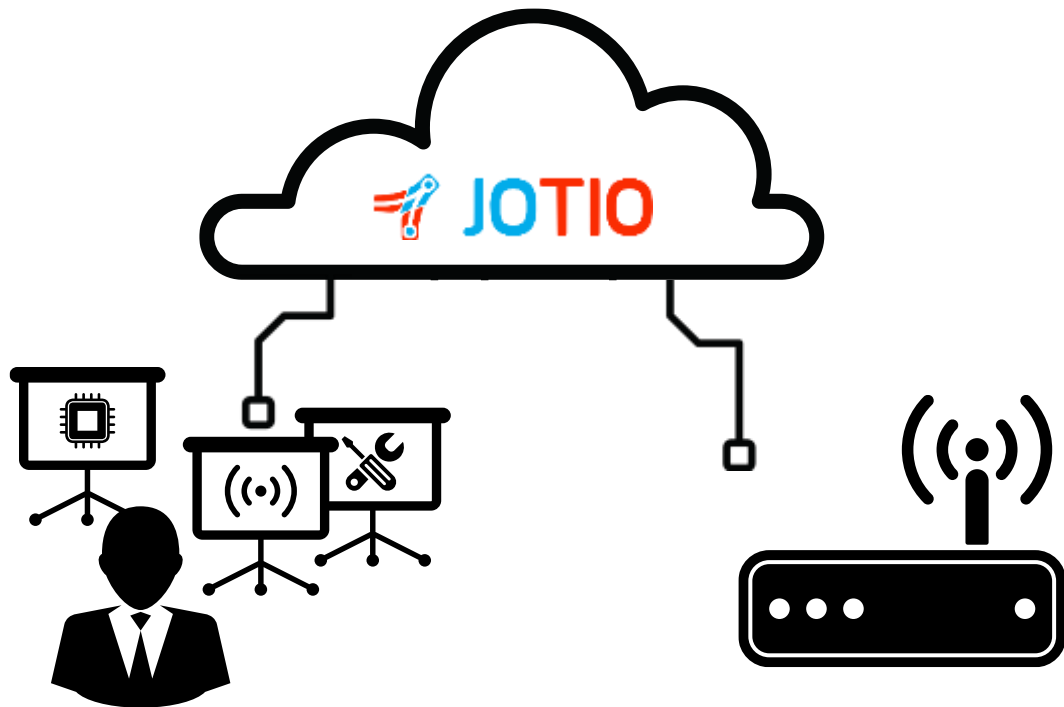
Project proposal

Building up a team

Project kick-off

Sensors development





IoT DESIGN & CONSULTATION

JOTIO HARDWARE

Water Quality Sensors:

- Temperature
- Oxidation Reduction Potential (ORP)
- pH

Air Quality Sensors:

- Temperature
- Ammonia
- Relative Humidity
- Carbon Dioxide
- Atmospheric Pressure



Each device includes:

- IQRF Transceiver
- Battery & Battery management
- RGB led for UI
- Magnet UI control
- Ventilation system
- Real time clock
- IQRF Smart Connect



Sensors manufacturing



Jan Vašta
Sales Director, MICRORISC

MICRORISC

... ENABLING FUTURE INNOVATION®

Making smart things since 1992

Inception of IQRF technology

Founding member of IQRF Alliance

Focused on inovative development and manufactory



...

Consulting and co-developing the HW and IQRF integration

HW manufactory

Product certification



INCREASING our production capacities



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Thank you

Panel



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