

# AGM Presentation

## ASX: SE1

Ralph Schmitt  
November 30, 2018



# SENSERA KEY ACHIEVEMENTS FOR FY18+

## ▶ SIGNIFICANT REVENUE GROWTH AND CUSTOMER COMMITS

- ▶ FY18 US\$6.35M
- ▶ Multi-year Contracts finalized with Smartbow and Abiomed

## ▶ ACQUISITION TO SUPPORT VERTICAL INTEGRATION AND BUSINESS GROWTH

- ▶ Nanotron Location Aware Technology, revenue and customers

## ▶ LEADERSHIP TEAM ESTABLISHED

- ▶ Hiring of CEO, CFO, VP of Sales and Dir of Operations
- ▶ Two additional seasoned veterans on the Board

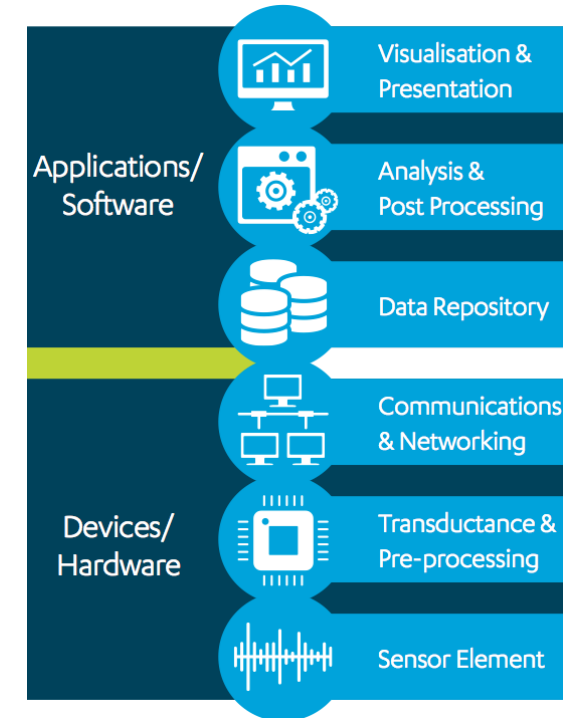
## ▶ BUSINESS OPERATION IMPROVEMENT

- ▶ Fab production and quality (ISO9000 and ISO13485) standards established
- ▶ New supply chain established for Nanotron business
- ▶ \$2.3M Credit Facility for Equipment leasing for the fab

## ▶ BUSINESS DEVELOPMENT

- ▶ Decawave UWB Development and Marketing Agreement
- ▶ Joint Software Development for Data Analytics with Clearblade

Sensera is a leading vertically integrated Wireless Sensor Networks company



# SENSERA IN FY19

## ▶ SIGNIFICANT REVENUE GROWTH SUPPORTING IMPROVED FINANCIALS

- ▶ FY19 >70% growth - FY18 US\$6.35M to FY19 US\$10.5M - \$11.5M
- ▶ Contracts in place to support growth
- ▶ Robust revenue pipeline through Tier 1 channel partners
- ▶ On track to operate on a cash flow positive basis by end of FY19

## ▶ HIGH GROWTH MULTIBILLION \$ UNDERPENETRATED MARKETS

- ▶ Proven commercial adoption in multiple markets -- Medtech, Animal Health and Mining
- ▶ Low technology risk as deployed in 70+ mines and 400+ farms

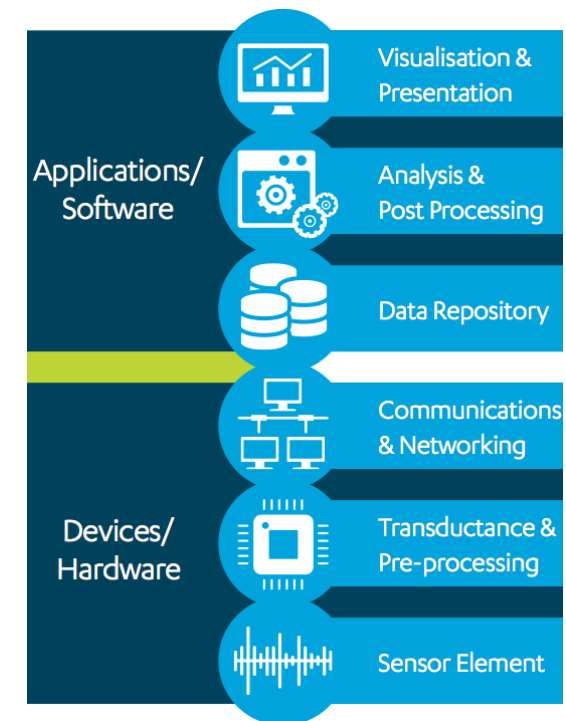
## ▶ TECHNOLOGY LEADERSHIP IN THE IOT SOLUTION VERTICAL

- ▶ Innovative and unique MEMS capability
- ▶ Innovator in precise, real-time wireless location enabled sensors and systems

## ▶ LONGER TERM OPPORTUNITY TO ENHANCE SHAREHOLDER VALUE

- ▶ IoT wireless platform with analytical capability for operation and asset management
- ▶ Move from product sale model (Capex) to solution service model (Opex)

Sensera is a leading vertically integrated Wireless Sensor Networks company



# SENSERA CORPORATE INFORMATION

## CAPITAL STRUCTURE AND VALUATION

Ordinary shares on issue	m	244.3
Share price (29 Nov 18)	A\$/share	0.12
<b>Market capitalisation</b>	<b>A\$m</b>	<b>\$29m</b>
Debt (as at 30 Sep 18)	A\$m	-
Cash <sup>1</sup> (as at 30 Sep 18)	A\$m	\$7.2m
<b>Enterprise Value</b>	<b>A\$m</b>	<b>\$21.8m</b>

## TOP SHAREHOLDERS (17 SEP 18)

Name	Shares Held (m)	% of Shares on Issue
HSBC Custody Nominees (Australia)	13.9	5.7%
Triton Systems, Inc	11.9	4.9%
JP Morgan Nominees Australia	11.1	4.6%
Newburyport Capital	10.0	4.1%
Maple Management	9.7	4.0%
<b>Top 20 Shareholders</b>	<b>113.4</b>	<b>46.4%</b>

## SHARE PRICE / VOLUME HISTORY (A\$; MILLIONS)

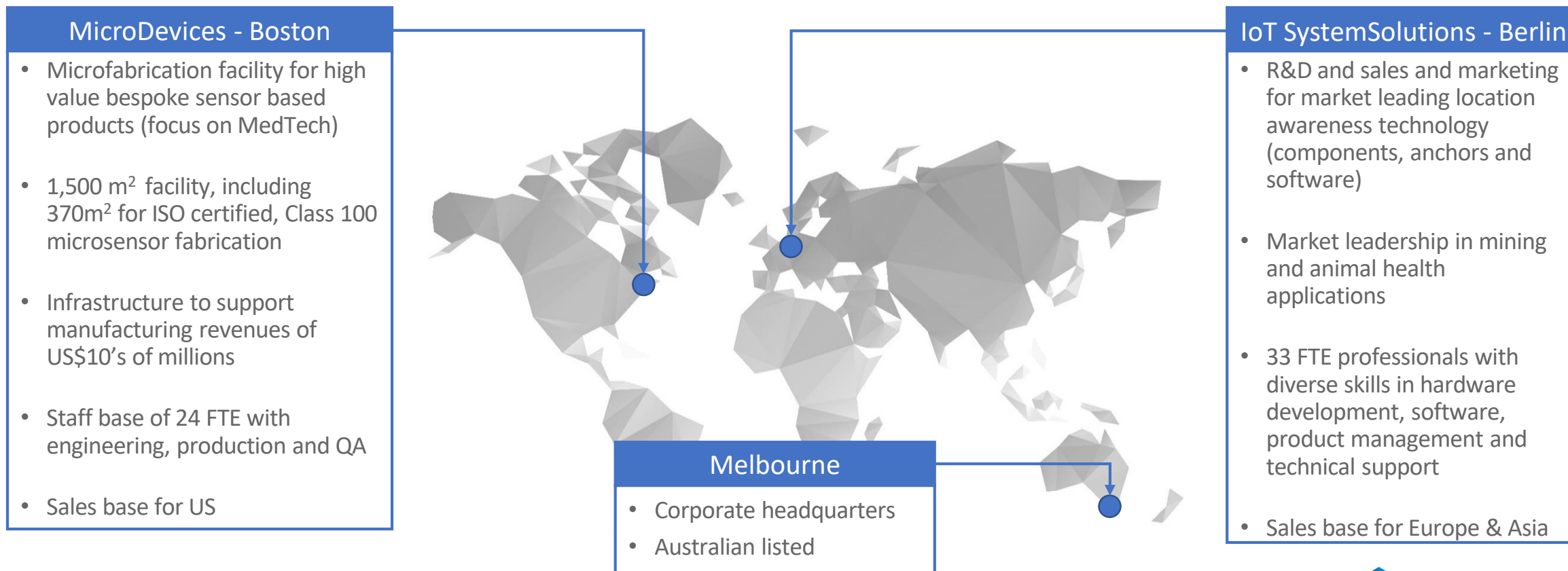


## BOARD OF DIRECTORS AND KEY EXECUTIVES

Name	Position
Ralph Schmitt	CEO and Managing Director
Allan Brackin	Independent Non-Executive Chairman
Matthew Morgan	Non-Executive Director
George Lauro	Non-Executive Director
Jonathan Tooth	Non-Executive Director
Camillo Martino	Non-Executive Director
David Garrison	Chief Financial Officer

# GLOBAL IOT SOLUTION PROVIDER

Sensera designs and manufactures platform hardware and software from unique structures as MicroElectroMechanical Systems (MEMS) and sensors, to wireless networked systems, that when combined drive an entire IOT platform solution.



# DIFFERENTIATED POSITIONS IN A FEW KEY MARKETS

## MEDTECH



**\$1B MEMS TAM**  
**9% AGR**

## MINING



**\$3B Location TAM**  
**7% AGR**

## ANIMAL HEALTH



**\$7B Animal TAM**  
**11 % AGR**



# MICRODEVICES: MEMS AND SENSORS

## MEMS - MICRO ELECTRONIC MECHANICAL SYSTEMS

The physical bridge between the mechanical and electrical world = Critical Component of all Sensors

### ▶ TECHNOLOGICALLY STRONG IN MICROFLUIDICS AND OPTICAL MEMS

- ▶ 11 Customers in Microfluidics
- ▶ 3 Customers in Optical

### ▶ KEY FY18 ACHIEVEMENTS

- ▶ Multiple Customers from prototype to volume
- ▶ Adding critical tools to bring process in-house
- ▶ Micro-assembly capabilities

### ▶ KEY FY19 MILESTONES

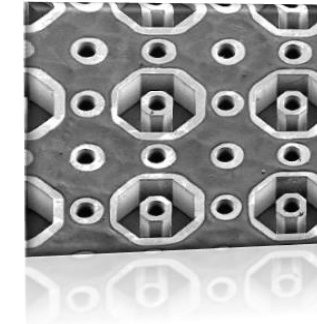
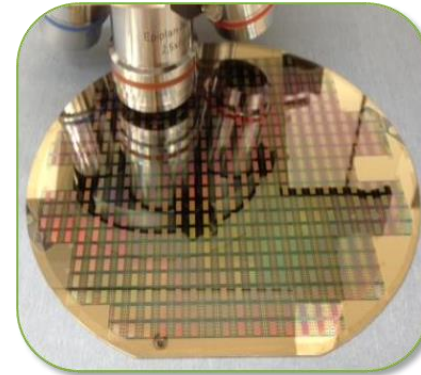
- ▶ ISO 13485 Medical Certification
- ▶ New capabilities added to the fab i.e. Plating +
- ▶ Deliver complete Sensors in volume
- ▶ First Sensera internally built sensor



# MICRODEVICES: MOVING UP THE VALUE CHAIN

## FY18 MEMS for Sensors

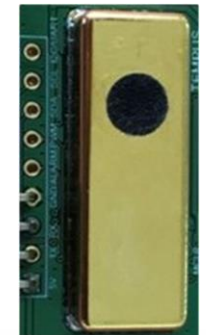
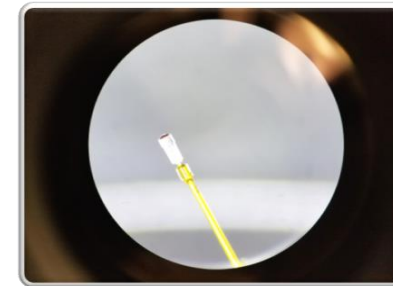
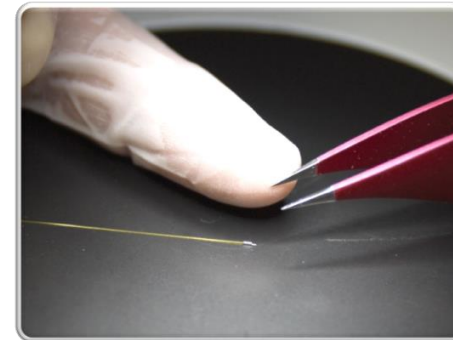
Custom and Unique Subcomponent



## FY19 Sensors (MEMS + Control)

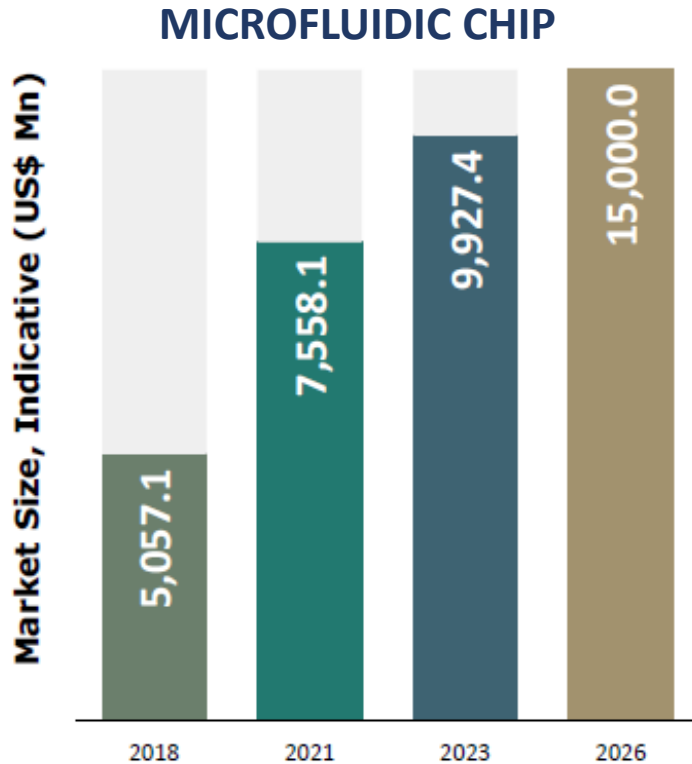
Micro-assembly for Complete Sensor  
Standard Product: Multiple Gas Sensor

Example: Abiomed Sensor





# MICROFLUIDIC CHIP GROWTH AND APPLICATIONS



- ▶ **SENSERA PROVIDES THE MEMS COMPONENT TO A \$5B MICROFLUIDIC CHIP MARKET**
  - ▶ Microfluidic MEMS market at \$1B
  - ▶ Currently providing custom solutions to 11 customers
- ▶ **MICROCHANNELS ARE ETCHED INTO SILICON OR GLASS AND INTEGRATED WITH MEASURING AND SENSING COMPONENTS**
  - ▶ The pattern is dependent of function and application
- ▶ **KEY APPLICATIONS**
  - ▶ Drug Delivery, Organ-on-a-Chip, Lab-on-a-Chip, Genetic Discovery, Point-of-Care Diagnostics, Cell Biology



# MICROFLUIDIC BASED SOLUTIONS



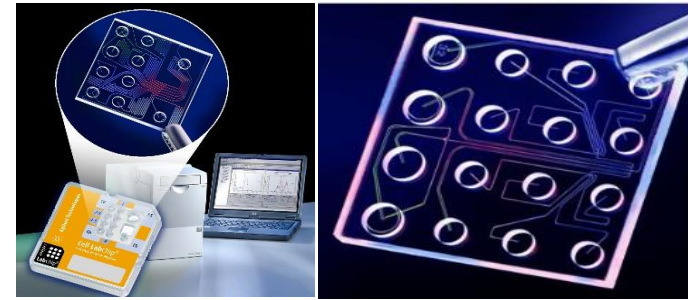
## Artificial Lung Device

The goal of this microfluidic device project is an artificial lung as a fully implantable device that will provide blood oxygenation for human patients.



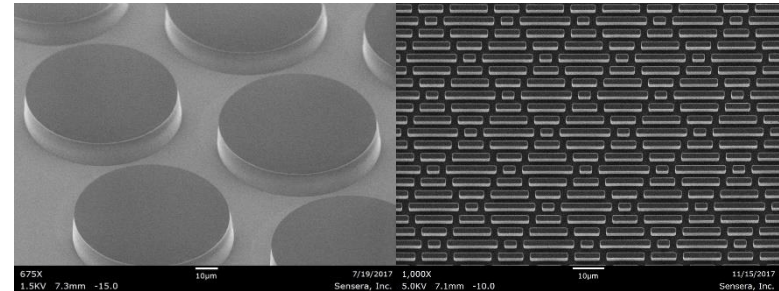
## Point-of-Care Diagnostic Devices

These devices use microchannels that are coupled with chambers and reagents in order to detect and measure specific biomarkers.



## Lab-on-a-Chip

These devices are used for rapid and sensitive investigation of nucleic acid samples, DNA and RNA, and proteins. Due to an electric field, proteins, DNA and RNA migrate along a separation channel and are measured by a detector.



## Cell Separation Devices

These devices use different channel geometries and features, i.e. pillars, to separate cells based on physical properties such as size.

# IOT SYSTEM SOLUTIONS (nanotron)

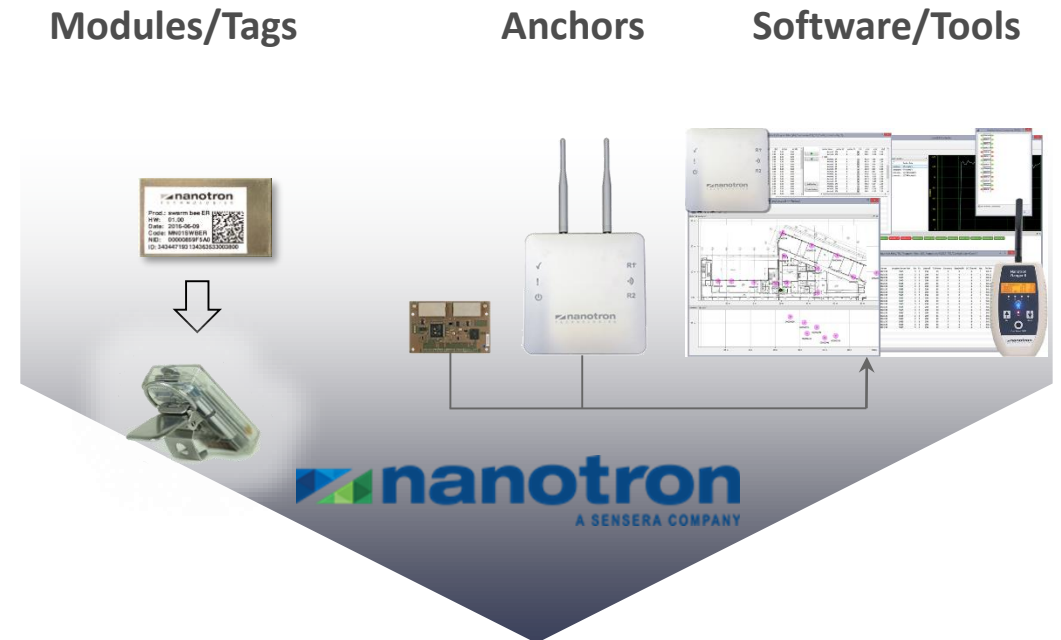
## EVERY SENSOR NEEDS TO FIRST KNOW ITS LOCATION

### ▶ LOCATION AWARE SENSORS

- ▶ Application specific Tags based on our chips and RF Modules currently built by System Integrators
- ▶ Anchors or Wallpoints based on our design complete the wireless platform

### ▶ WHY DO WE WIN

- ▶ The location is very precise (Centimeters)
- ▶ We operate indoors / underground = harsh and difficult environments
- ▶ Operates wirelessly over large distance with minimal infrastructure
- ▶ When combined with other sensors drives unique solutions

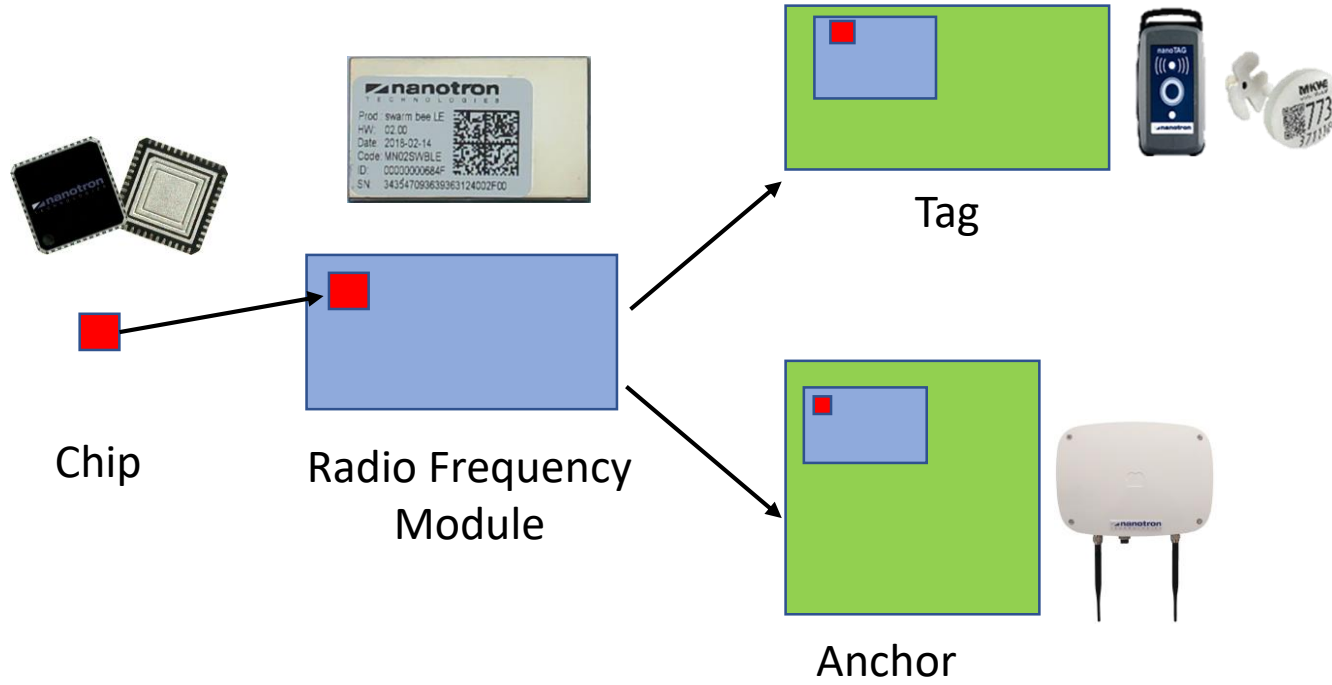


= Wireless IOT Platform

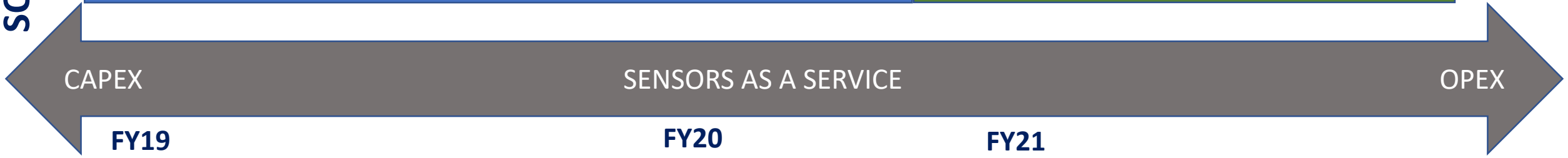
# BUSINESS MODEL ENHANCEMENT

HARDWARE

SOFTWARE



- IOT SYSTEM SOLUTIONS DELIVERS**
- Analytics
  - Artificial Intelligence



**FY19**

- Hardware: Chip, Modules and Anchors
- Software: Location

**FY20**

- Hardware + Tags
- Software + Analytics

**FY21**

- Business Intelligence
- Automation



# FY19: THE ANATOMY OF A TAG

THE INSTRUMENT FOR KNOWING WHERE AND WHEN

## SPECIALIZED TAGS



Radio Frequency Module

### Sensor Fusion

Contextual Information by Adding Sensor "Intelligence" to the Tag

### Application Specific Tags

Location: Chirp or Ultra Wideband (UWB)  
Sensors : Gyro, Accelerometer → Gas

## THE WORLDS MOST DEPLOYED TAG



### Mobile Phone = Commodity Tag

Location: GPS, WIFI or Bluetooth  
Sensors : Gyro, Accelerometer



# GO-TO-MARKET FOR LOCATION BASED SENSORS

	Animal Health	Mining	Industrial	Healthcare
Sensera Sells	Chips Anchors	RF Modules Anchors	RF Modules Anchors	Tags Anchors
Wireless IOT Platform				
Model	System Integrator + Distribution Partner	System Integrator + Direct Sales	System Integrator + Direct Sales	System Integrator

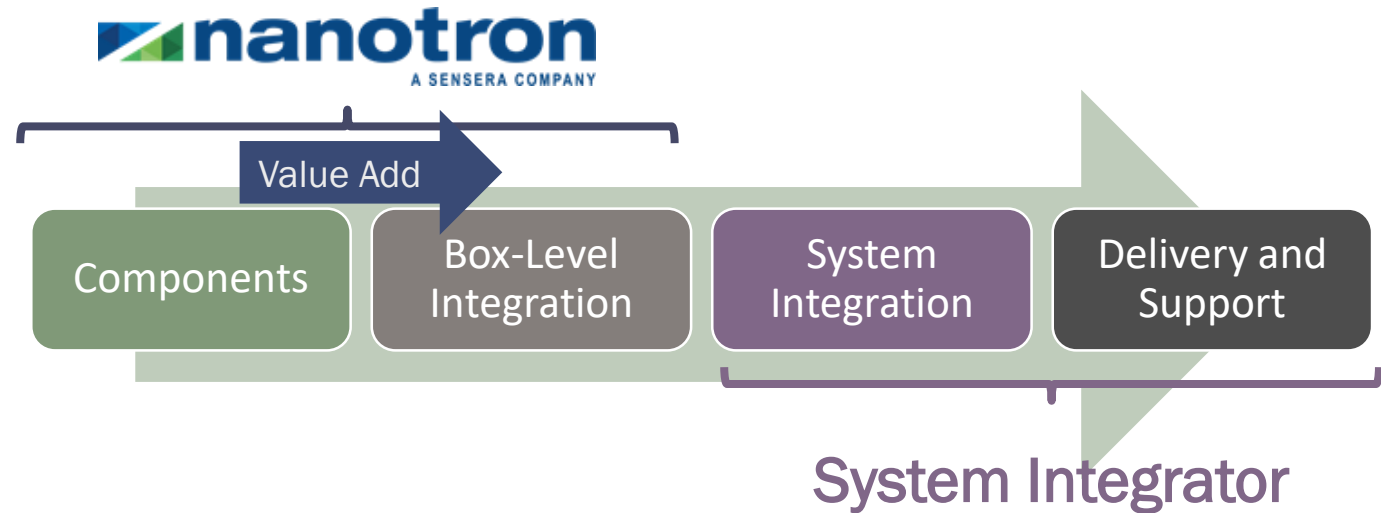
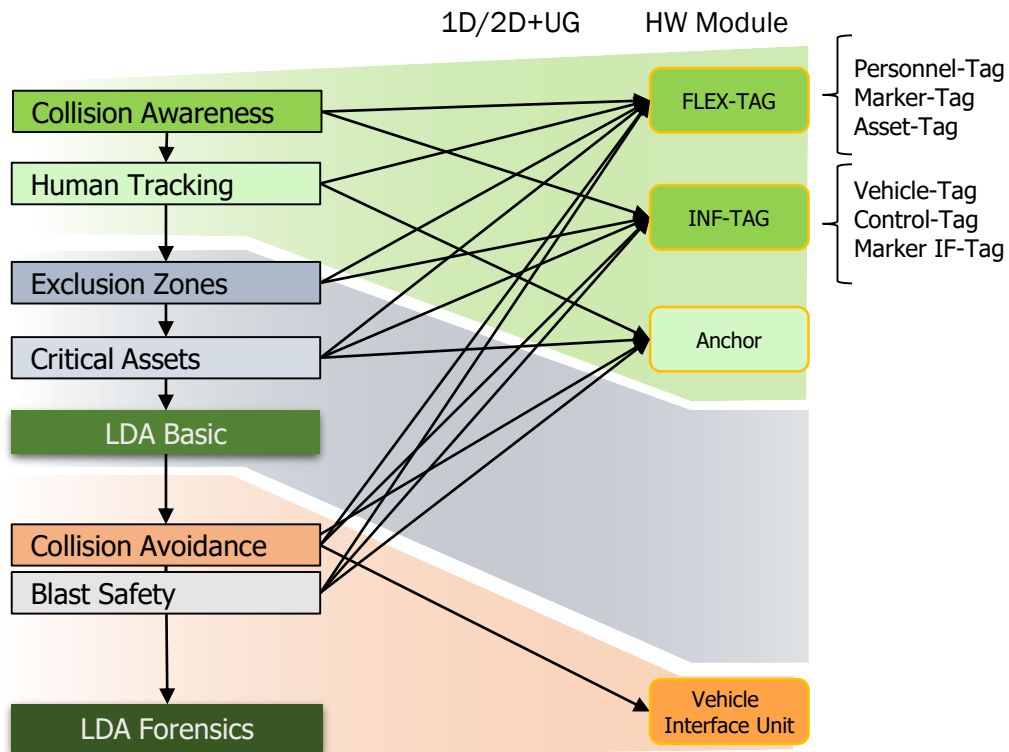


► Industrial and Healthcare open new opportunities to produce more of the solution and model change

# MINING BUSINESS MODEL SHIFT

## DIRECT TO MINE GTM CHANGE DRIVING OUR PRODUCT ROADMAP

### MINING APPLICATIONS AND HARDWARE



# FY19 OUTLOOK

## ▶ RAMP FY19 REVENUES SIGNIFICANTLY

- ▶ Meet contractual demand for existing animal health, mining and Medtech customers
- ▶ Ensure robust and cost-effective supply chain

## ▶ OPERATING CASH FLOW POSITIVE BY THE END OF FY19

- ▶ Revenue and profit growth ahead of opex
- ▶ Prudent spending whilst meeting existing demand and filling the pipeline

## ▶ CLOSE ON PARTNERSHIPS FOR KEY CAPABILITIES

- ▶ Software infrastructure and applications
- ▶ Expansion of RF capabilities
- ▶ Movement to full solution provider

US\$	Expected FY19	FY19 vs. FY18	Comments
Revenue	\$10.5M - \$11.5M	+70%	<ul style="list-style-type: none"><li>▪ Location - SmartBow contract and mining growth</li><li>▪ Microdevices - Abiomed contract and multiple customer ramps</li></ul>
Op Ex	\$11.5M - \$12.5M	+10%	<ul style="list-style-type: none"><li>▪ R&amp;D: Further chip and software dev.</li><li>▪ GTM* staff increases</li></ul>
Profit/Loss	(\$5.5M - \$6.0M)	-50%	<ul style="list-style-type: none"><li>▪ End of FY19 expect to be operating at cash flow positive</li></ul>

\*Go to market

# F19 REVENUE AND BEYOND – BUILDING THE PIPELINE

## ▶ FY19 REVENUE FORECAST = \$10.5M - \$11.5M

- ▶ Existing Customers = 85%
  - ▶ Of which Contracted Customers is 62% of total
- ▶ New Customers = 15%

## ▶ FY20 REVENUE PREVIEW

- ▶ Current New Business Pipeline is 5X the FY18 Pipeline
  - ▶ Pipeline of 41 Customers worth \$19M/Year (Yield TBD)
  - ▶ Additional 32 Customers with validated opportunities worth \$21M/Year
- ▶ 20%+ Increase on F19 Contracts

# SUMMARY

## ▶ ATTRACTIVE FY19 AND FY20 GROWTH TRAJECTORY

- ▶ Existing book of business; plus established contracts (SMARTBOW and Abiomed)
- ▶ Sales FY19 vs FY18 >70%
- ▶ Cash flow positive late FY19

## ▶ DIFFERENTIATED AND DEFENSIBLE TECHNOLOGY

- ▶ Develop hardware further with new sensor IP
- ▶ Add software to offer complete data analytics
- ▶ Emerge with higher recurring revenue from a hosted solution

## ▶ INVESTMENT IN GO-TO-MARKET (GTM)

- ▶ Proven Products = Lower technology risk
- ▶ Team built to leverage technology adoption through investment in Go to Market

## ▶ COMPELLING STOCK VALUATION

- ▶ < 2x FY19 revenue





# CONTACTS

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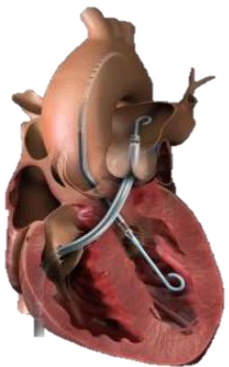
# APPENDICES

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# LEAD MARKET: MEDTECH

- Provide R&D and bespoke manufacturing service. Class 100, 1,000 and 10,000 cleanrooms for wafer processing and fiber optic and electro-optical micro assembly
- Commercialized **Microfluidics** devices (microstructures that capture fluids and analyze liquids) and **organ-on-a-chip** (enable test on devices instead of animals)
- Example win: Abiomed **Impella® heart pump** -- FDA approved April 2018

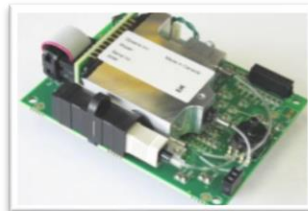
Percutaneous heart pump



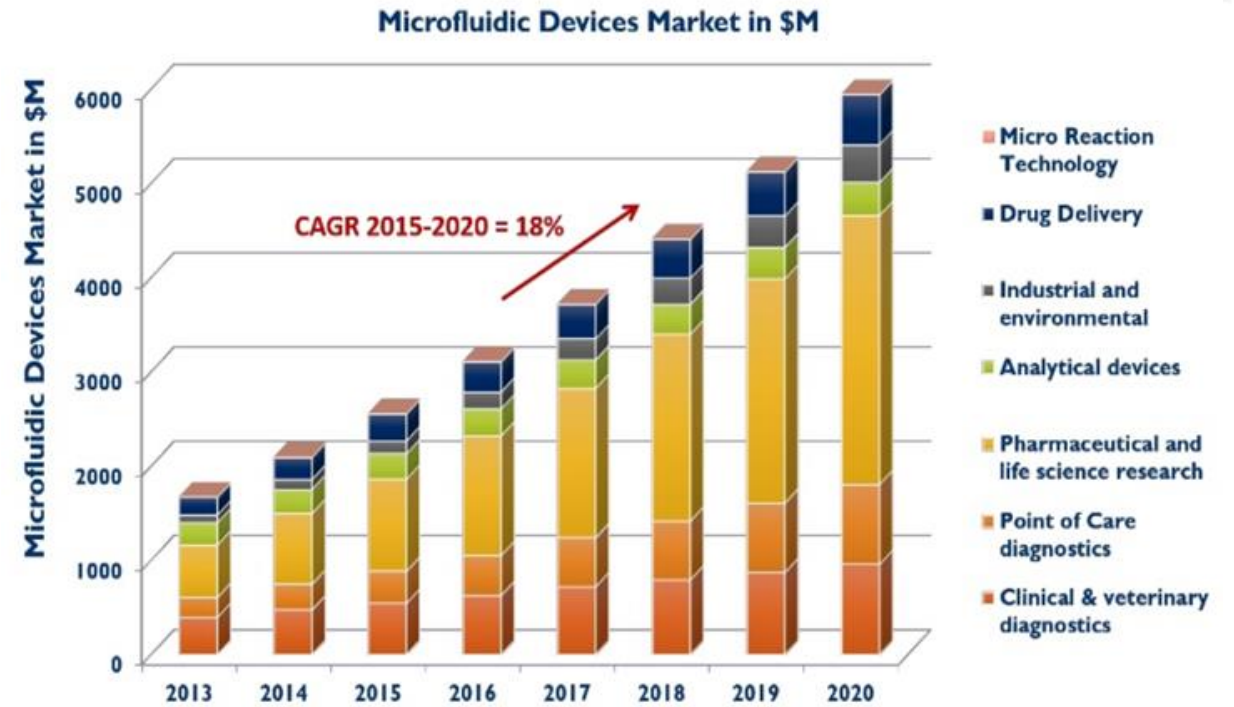
Impella Controller



Sensera Optical Bench



Sensera Optical Fiber/Sensor Attach



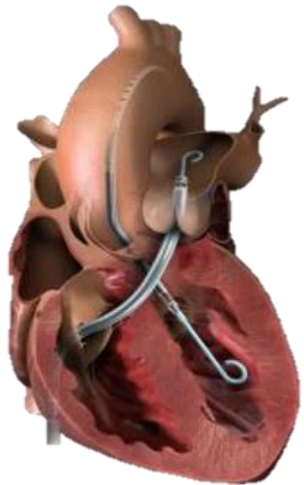
**Microfluidics Device Market SAM \$4B in 2018**

- ✓ 3-year multimillion \$ supply agreement

# ABIOMED ENGAGEMENT

## Percutaneous heart pump technologies

Pump



Impella CP®

The Impella® heart pump pulls blood from the left ventricle through an inlet area near the tip and expels blood from the catheter into the ascending aorta offering hemodynamic support to the heart and organs including the brain and kidneys.

## Impella Console Automated Controller



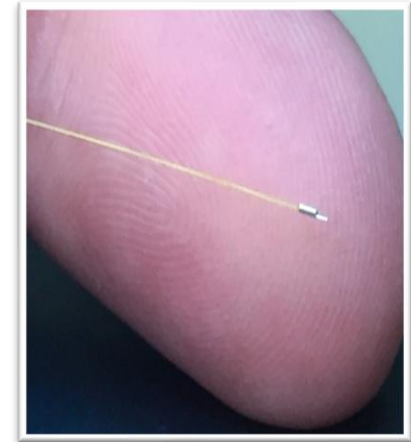
**“Abiomed Receives FDA Approval for Impella CP® with SmartAssist™ and Optical Sensor”  
April 2, 2018**

## Sensera Products Sold



1. Optical Bench converts optical sensor read out to electronic pressure value

## 2. Optical sensor/fiber attach



Inserts into catheter

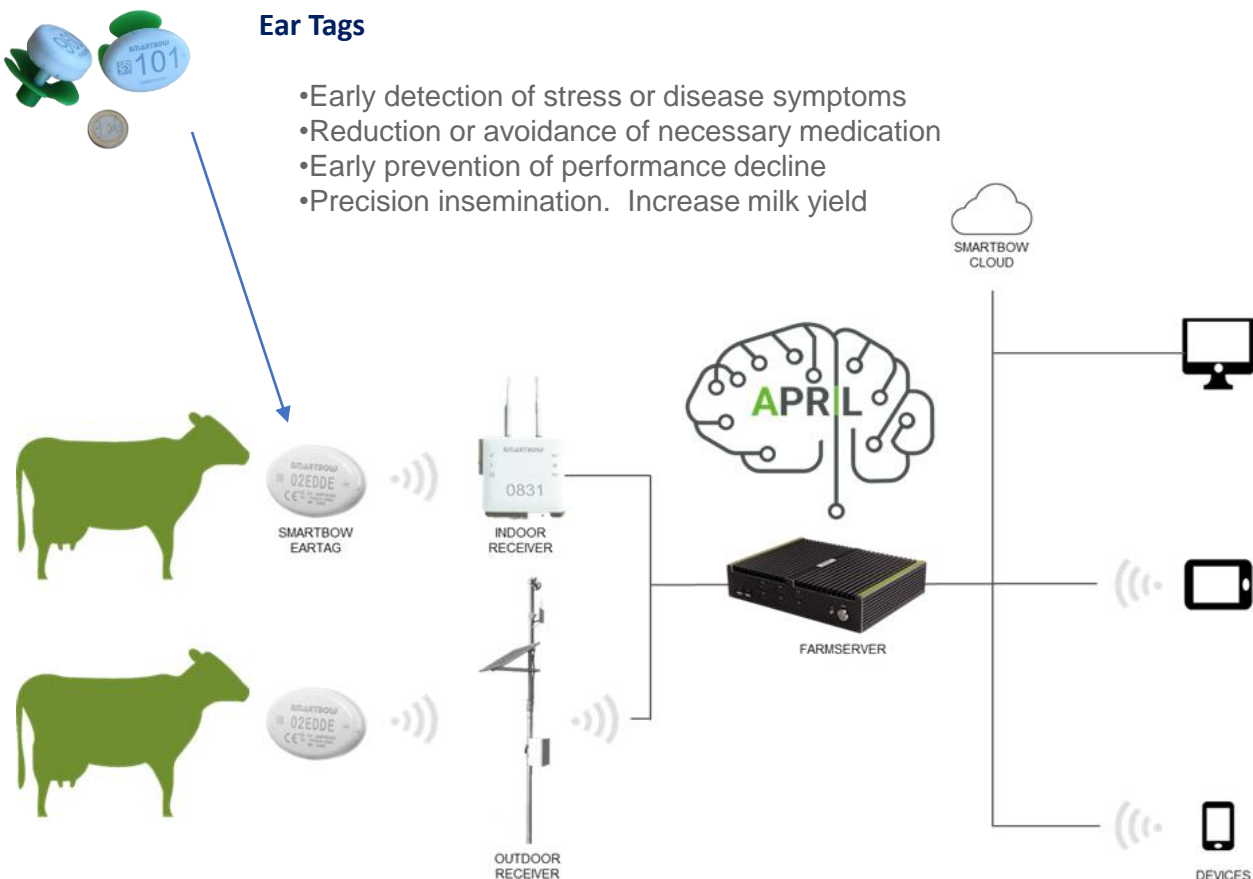
Optical Sensor allows placement w/o imaging for faster set up and more accurate positioning simplifying patient management for physicians, cath lab staff and ICU staff.

# LEAD MARKET: ANIMAL HEALTH

- Exclusive provider of core technology to SMARTBOW GmbH/Zoetis Eartag LIFE product. Sensera is installed and live in hundreds of farms today

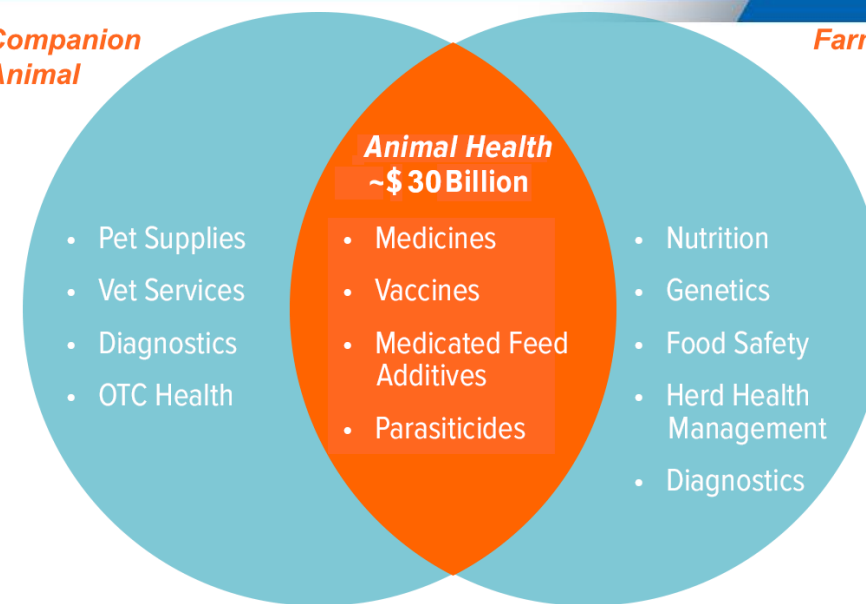
## Ear Tags

- Early detection of stress or disease symptoms
- Reduction or avoidance of necessary medication
- Early prevention of performance decline
- Precision insemination. Increase milk yield



Companion Animal

Farm Animal



CAGR 4.5% 2018-2024

Source: Zoetis, Zion Market Research

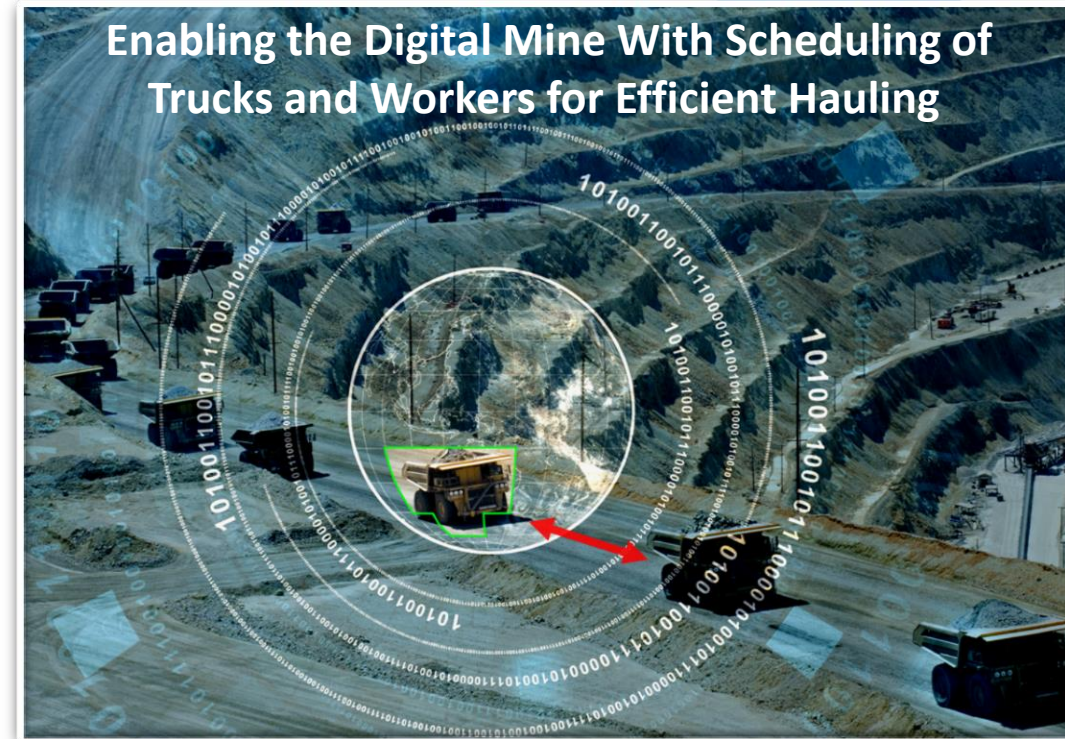
## Current Serviceable Addressable Market (dairy cows)

- US\$3.8B
- US\$0.8B in tags
- US\$3B in location awareness anchors and software



# LEAD MARKET: MINE SAFETY AND PRODUCTIVITY

- Provide real-time high accuracy positioning for **Collision Avoidance System (CAS)** and **Tracking** of people and assets in harsh environment. Save lives and cost. Driving the Digital Mine thru improve equipment efficiency and automation.
- Installed and live in over 70 mines worldwide. Expanding to open cut mines and railway safety.
- Example wins: **Turkey Park Thermic Mine** 2,360 miners, 10km tunnels, 4 excavation blocks. **Mexico Tizapa Silver Mine** 650 miners, NOM-023-STPS-2012 compliance



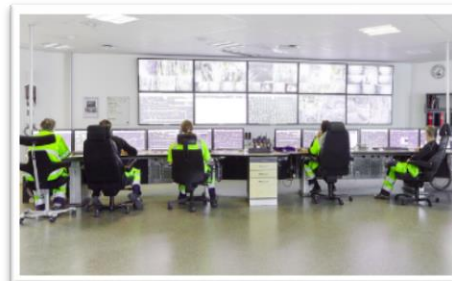
Tags provided upon entering the mine



Readers connected through mine network to central control room



Automatic monitoring of asset movement and safety incidents



## Current TAM

- US\$3Bn
- 62K sites
- 10M miners

## Current SAM

- US\$0.5Bn
- Underground coal and hard rock

# PARK THERMIC MINE COMPLEX IN TURKEY

This implementation is one of the most advanced systems of its type anywhere in the world



“Mechanized mining has been the driving force for cost savings through automation and process optimization as well as fulfilling the most critical moral responsibility we have of proving better protection and safety for the mine workers in their daily working environment.”

**Michal Szebista**, Project Lead at the Park Thermic Coal Mine and Member of the Board of ATUT.

Mining Company: Ciner Group  
System Integrator: Atut



Following a major disaster in 2014 the Turkish government mandated human tracking at coal mines.

Benefits of the Park Thermic Real-time tracking:

- Tracking 2,360 miners
- Scalability: Tens of km of tunnels and four excavation blocks
- 24/7 operation, no interruption