



**Inventory Management for Injectable and Solid  
Medications for  
Human & Animals Health and Pharma Manufacturing**

VETrak™ and SMARTray™

Dr. Subodh Das, CEO & Co-Founder  
Fluid Management Systems, Inc.  
Lexington, Kentucky ,USA

# Current Status

1. Incorporated Fluid Management Systems, Inc. in 2010
2. Basic utility US patent # 8,467,981 published , one more provisional and three utility patent applications filed
3. Established customers - swine farms and VET universities  
Discussions under way with animal health product distributors , animal health drug and human pharma manufacturing companies
4. Developed business plan and established management team
5. Demonstrated prototypes for human and animal applications
6. Two commercial units under evaluations at swine farms

# Problem To Be Solved

## **MARKET NEEDS INVENTIONS & INNOVATIONS for:**

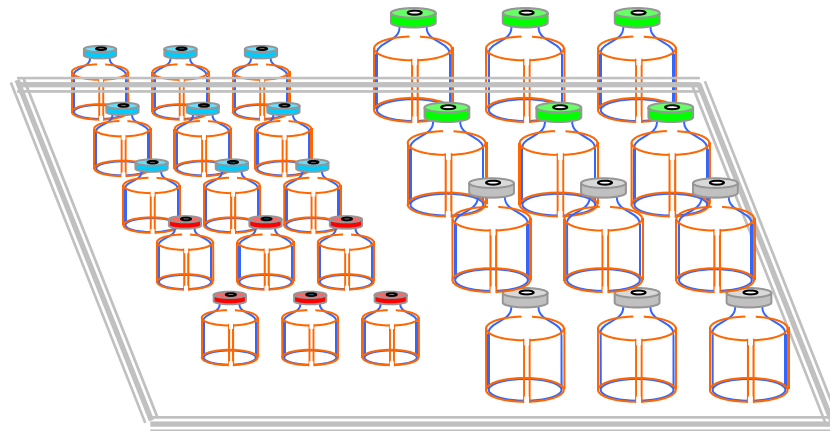
-Remote, Online, Non-Contact Measurement for cost control, traceability and EMR Inventory & Supply Chain Management in

## **MULTI-VIAL SEALED INJECTABLE VACCINES & PHARMACEUTICAL MEDICATIONS for:**

- Human Health
- Animal Health
- Pharma Manufacturing

# FMS Solution

- Create a *smart tray* to hold multiple vials containing liquids
- Monitor each vial in the tray for various parameters known in advance e.g. type of content, date of manufacture etc.
- Measure the amount of liquid and temperature in each vial non-invasively, quickly, highly accurately and economically
- Remotely perform all the above tasks for an array of smart trays located inside a refrigeration unit.



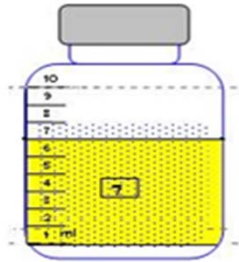
# Proprietary FMS Technology Enables

- Remote Management of Critical , Sensitive , Life Saving and Expensive Fluids Injectable Medical Liquids and Drugs such as Vaccines and Allergy Shots for Human and Animals
- Waste Minimization to Lower Cost and Environmental Footprint
- On-line / Remote Inventory and Supply Chain Management
- Adaptation to Electronic Medical Records ( EMR ) System

**FMS Solution The SMARTray™ has the ability to measure liquid levels in closed vials & manage vial usage.**

Vaccine Tracking System

Shelf	Shelf 1
Tray	Shelf1_Tray1
Vaccine / Medicine	DTaP / Hepatitis B / IPV
Batch No.	1
Vaccine Quantity	10
Remaining Quantity	<input type="button" value="+"/> 3 <input type="button" value="-"/>
Expiry Date	09/30/2012
VFC/Private	Private

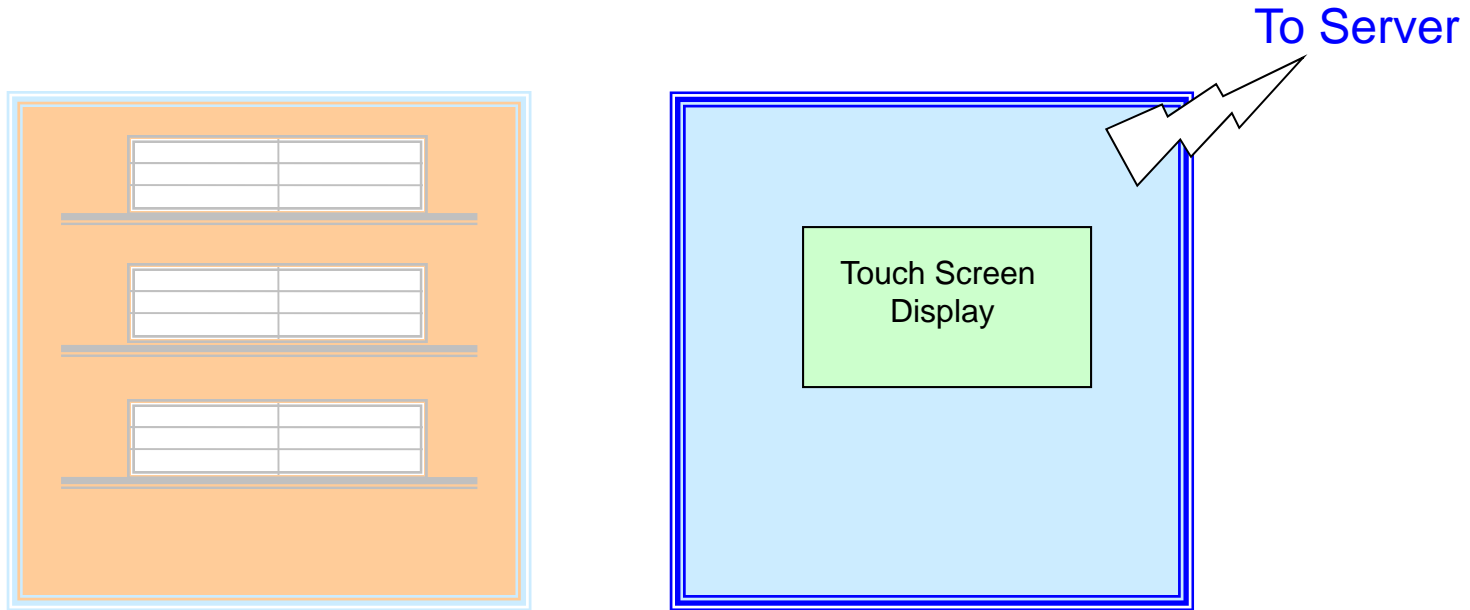


FMS, Inc.

2/11/2011



# FMS Solution



**Smart trays  
inside refrigerator**

**Display on front  
door of refrigerator**

Link between inside and outside of refrigerator

# Product Applications

For hospitals, clinics and animal feeding operations:

- Digitizing inventory management of injectable and solid medications
- Improving human and animal practice management by enhancing traceability
- Cutting costs and enhancing quality control during drug manufacturing

# Intellectual Property

- US utility patent # 8,467,981 published - “Non-Invasive Liquid Level Sensing System and Method”
- Assigned to Fluid Management Systems, Inc.
- Trademark: VETrak™ for animal application
- Applied for 1 more provisional and 3 more utility patent applications filed



# Market Drivers and Regulations

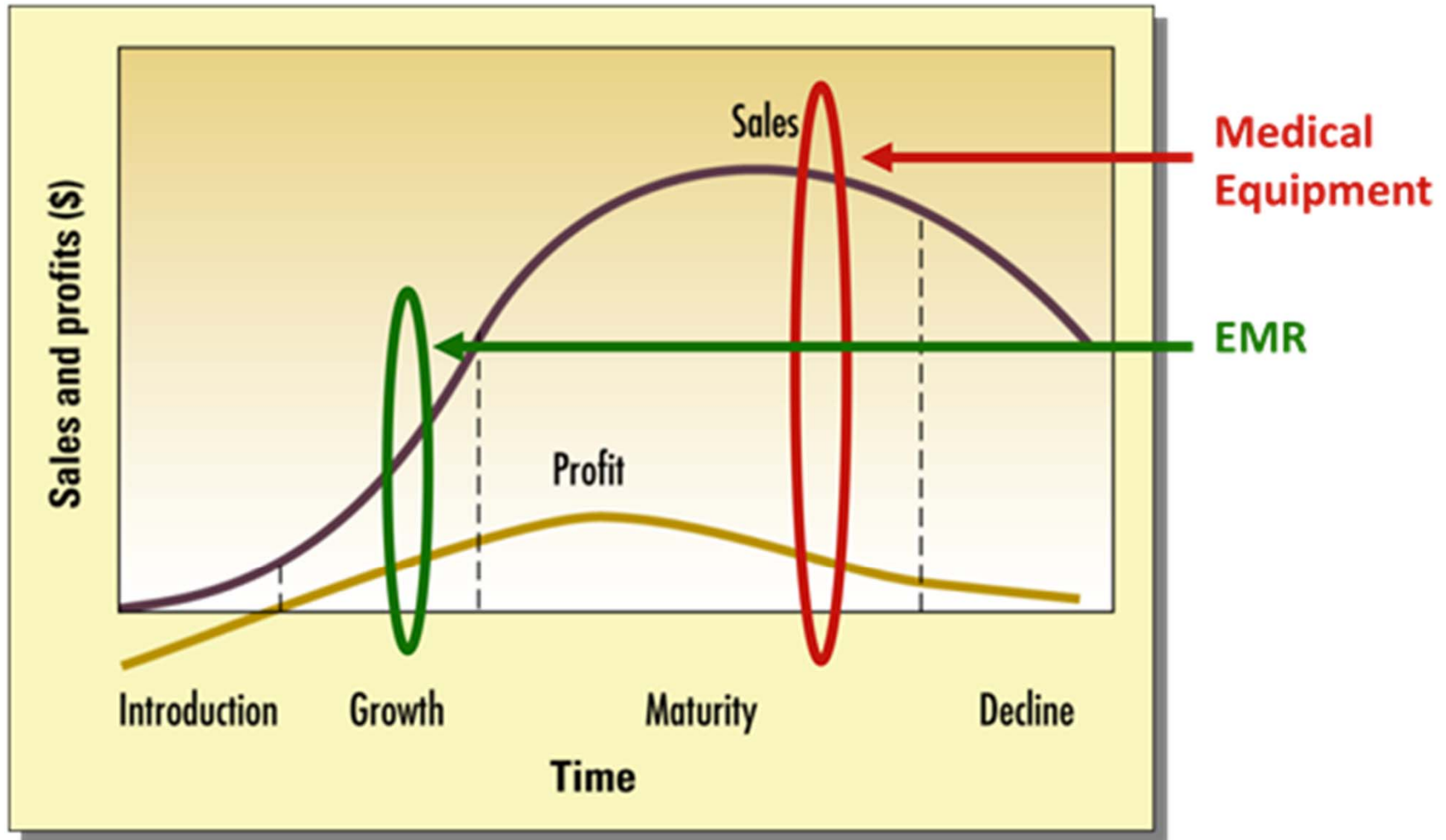
FMS features aligned with key market drivers & support human regulatory requirements

- Electronic Medical Records (EMR): \$14 billion in 2009 , 19% CAGR. ARRA incentives of \$44,000 per provider-2011 (ARRA), Penalties by 2015
- Specialty EMR:
- RFID and Bar Coding:
- Expiration and Open Date:
- Lot Number Tracking:
- Vaccine For Children (VFC):
- Pharmacies: Required for USP 797 and CSP Regulations

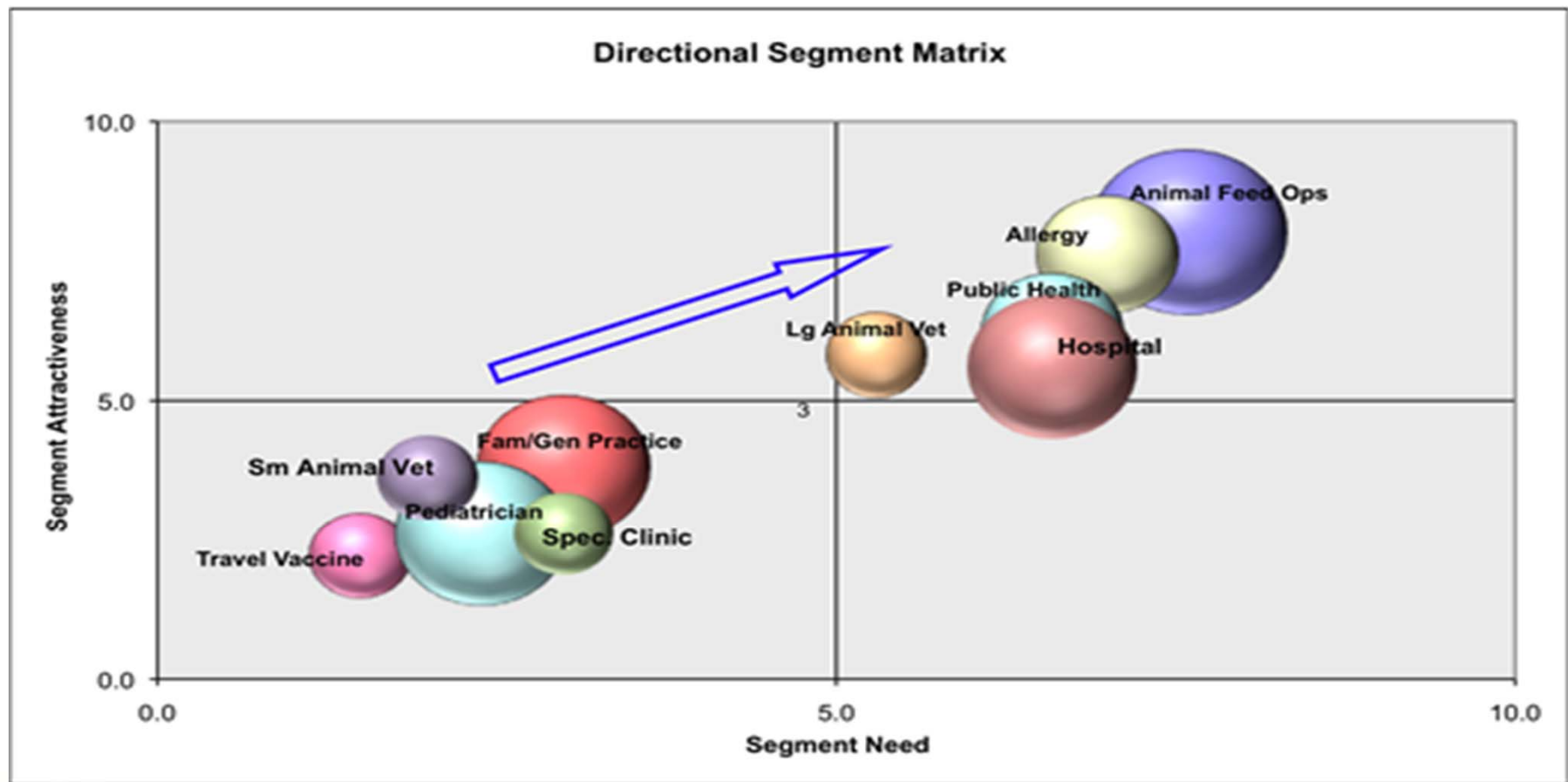
# FMS Market - Field Interviews

- Veterinarians: 65,000 (15,000 large animal)
- Animal Feeding Operations (AFO): 450,000
- Allergists: 5,600
- Hospitals: 5,800
- Public & Community Health Centers: 2,000 +
- Pediatricians: 58,000
- Family & General Practice Physicians: 92,000

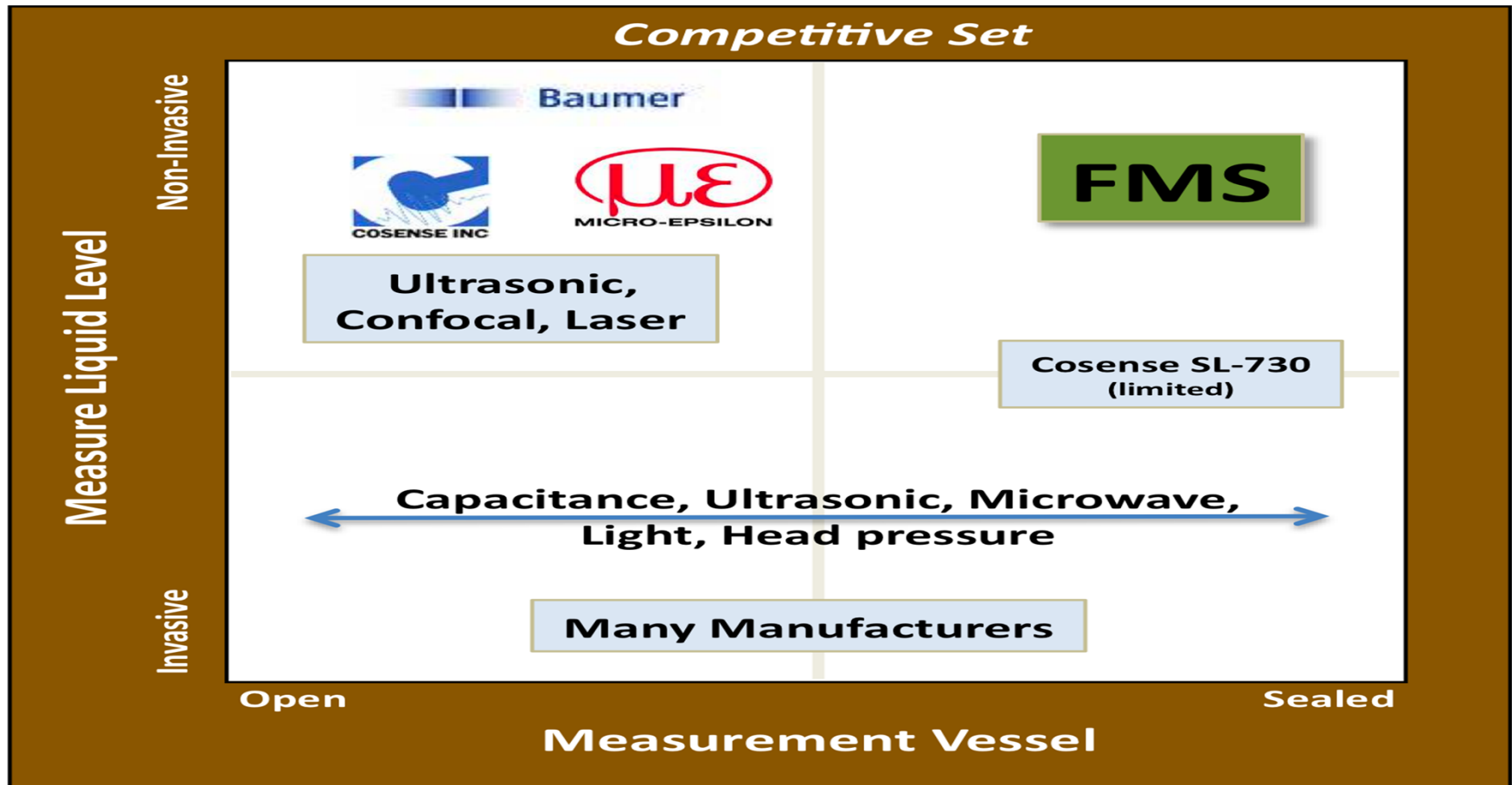
# SMARTray™ is a New Product in an Established Market



# Large animal feed & veterinary operations, hospital, public health facilities , larger physicians practices and clinics - attractive segments



# FMS differentiated from other commercial liquid level measuring systems



# Management Team

Proven Management team's start-up business experience & technical expertise

## **Current Management Team**

- Dr. Subodh Das; CEO and Co-Founder- Fund raising and business development
- Mr. Ajay Das; COO and Co-Founder – Manufacturing and software
- Dr. Somnath Mukherjee; CTO and Co-Founder – Hardware and IP development
- Mimi Roper, Director of Marketing – Customers and Investor relations

# Advisory Board

## Advisory Board Members Provides Strong Base

Dr. Joseph Connor, President , Carthage Veterinary Services , Illinois  
Global Expert in Swine Veterinary Science

Dr. Y. Javid , Owner , Pediatric Patient Care , California  
Early Adapter in EMR and Compatible Vaccine Tracking Systems

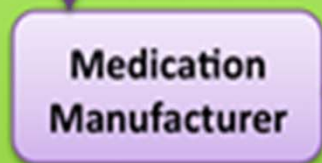
Dr. Steven Kaiser , Partner with Strategic Insight, Louisville, Kentucky  
Expert in New Business Development and Marketing Systems

# Consumption Chain

## Phase 1



## Phase 2



SMARTray™ filled  
With Medication





# Path Forward

- Evaluate commercial units for swine farms
- Pursue large animal sectors ( bovine and equine)
- Explore applications in human health
- Explore application in pharma manufacturing
- Raise funds
- Pursue 4 filed patents applications
- Attend trade shows and initiate marketing campaign
- Initiate manufacturing and shipment