

A background image of a Purdue University campus. In the foreground, there is a large, modern, abstract fountain with several tall, curved, light-colored stone or concrete structures. Water is spraying from the central part of the fountain. In the background, a large, classical-style building with a red roof and white columns is visible. There are trees with pink blossoms in the foreground and background. A person is riding a bicycle on a path to the right.

# Change, Disruption, and Innovation

Dr. Allan Gray

# Wisdom from Jim Balsillie



<http://www.youtube.com/watch?v=wQRcEObmSRM>

# BlackBerry Stock price



Copyright 2015 by Rita Gunther McGrath

# Business Impacts & Opportunities

## Robotics

**+9% / \$67 billion** global robotics growth and market size by 2025

**10% vs. 45%** est. share of manufacturing performed by robots in 2017 vs 2025

## Logistics and Truck Platooning

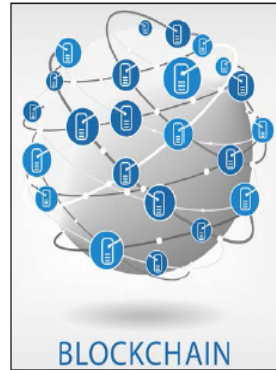
Est. **9%** labor & **15%** fuel savings

Active in large-scale mining, potential for "round the clock" operations

## Bookkeeping

**\$150b** crypto-currency market

Blockchains growing as "shared record-books"



■ BASF



# Who/What Gets the Job Done?



## Market & Technology Readiness by Agricultural Activity

Proof of Concept	Early Semi-Commercial Prototype	Semi-Commercial Trials	Early Commercial Sales	Full Market Launch	Market Penetration	Maturity
	Autonomous agricultural robotic scouts	Manned robotic vegetable & lettuce harvesting/thinning implements		Autonomous agricultural data mapping drones		Autosteer tractors
			Robotic feed pushing in dairy farms			Robotic milking
	Autonomous robotic weeding				Autonomous agricultural spraying drones	
	Autonomous robotic vegetable & lettuce harvesting/thinning					Manned robotic weeding implements
	Robotic fresh fruit picking					





# AG TECH: 100+ TECHNOLOGY COMPANIES CHANGING THE FARM

## FARM MANAGEMENT SOFTWARE



## NEXT GEN FARMS



## ANIMAL DATA



## SMART IRRIGATION



## PLANT DATA/ANALYSIS



## PRECISION AGRICULTURE AND PREDICTIVE ANALYTICS



## MARKETPLACES



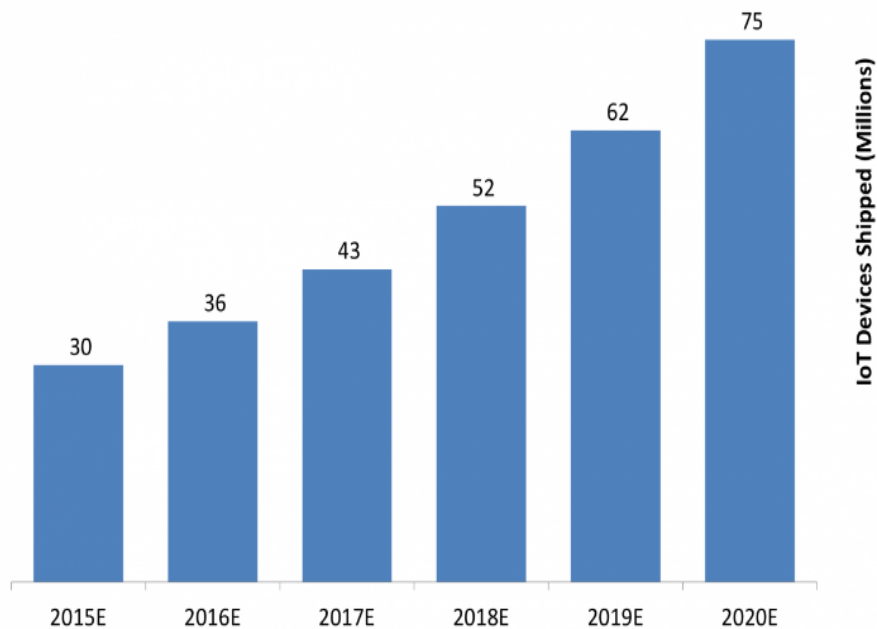
## ROBOTICS AND DRONES



## SENSORS



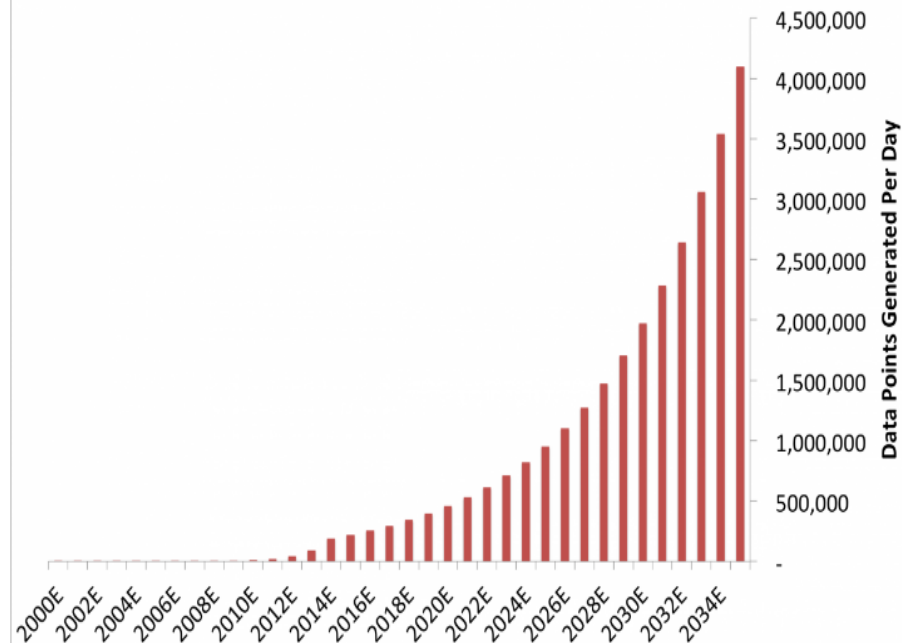
**Estimated Agricultural IoT Device Shipments**  
*Global*



Source: BI Intelligence Estimates, 2015

BI INTELLIGENCE

**Estimated Amount Of Data Generated By The**  
**Average Farm Per Day**

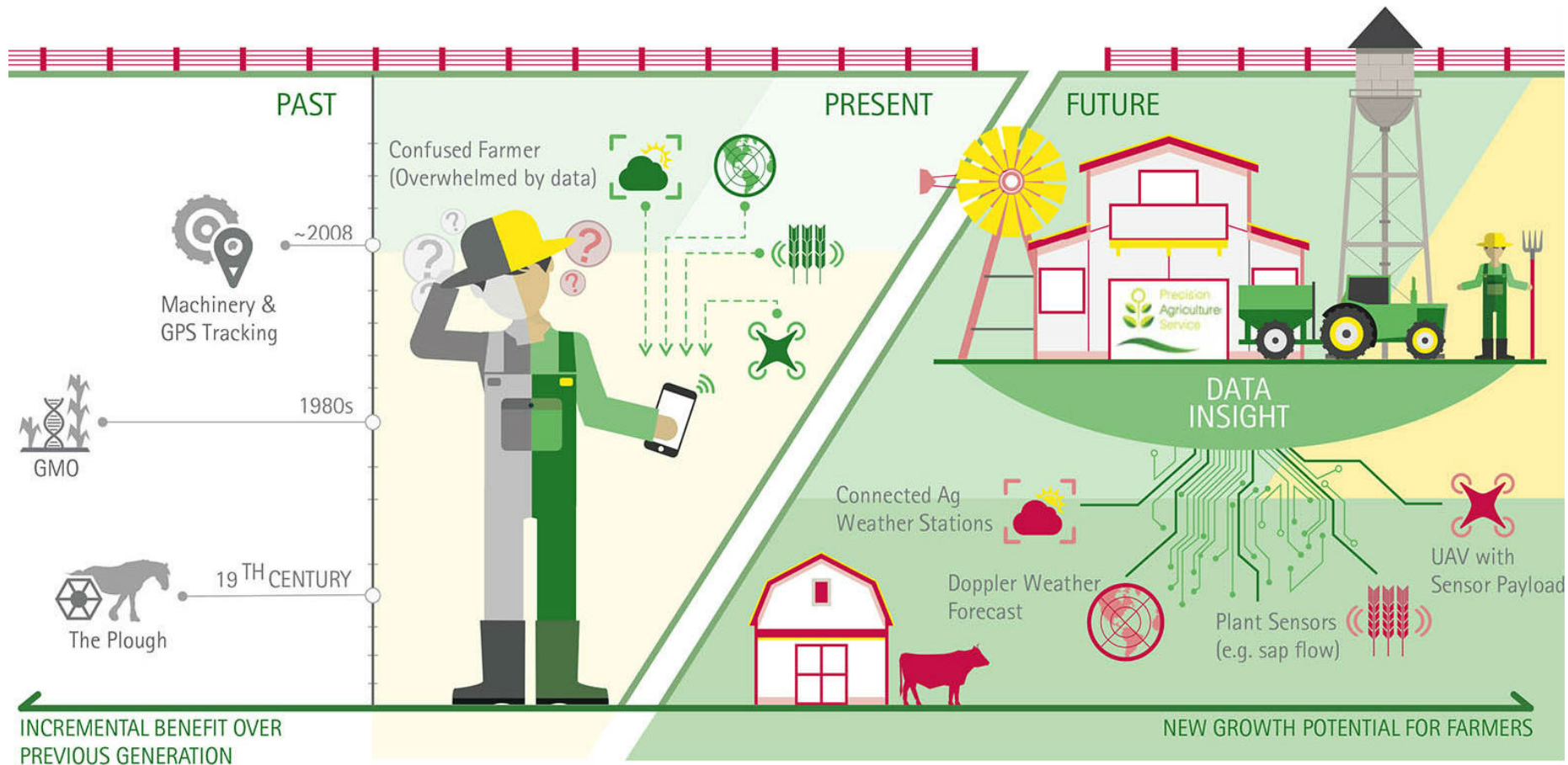


Source: OnFarm, BI Intelligence Estimates, 2015

BI INTELLIGENCE



# What is Your Arena (new players/competitors/partners)?



<p><b>Week 7/8</b></p> <p>April 9</p> <p>April 16</p>	<p>Topic: Change, Disruption and Innovation</p> <ul style="list-style-type: none"> <li>• View: Overview Lecture for this Module</li> <li>• Read: Grant (text) Chapter 8, "Industry Evolution and Strategic Change", pages 206-235 (29 pages)</li> <li>• Read: Grant (text) Chapter 9, "Technology-Based Industries and the Management of Innovation", pages 242-255 (13 pages; this is only the first part of the chapter. The second part is worth reading but may not be as applicable for this module's deliverable)</li> <li>• Read: Amit and Zott, "Creating Value Through Business Model Innovation." MIT Sloan Management Review, 53(3) Spring 2012. (7 pages)</li> <li>• Read: Mrkides and Oyon, "What to Do Against Disruptive Business Models." MIT Sloan Management Review -- in "Top 10 Lessons on the New Business of Innovation (Winter 2011): pages 42-48. (6 pages)</li> <li>• Read: Johnson, Christensen, and Kagermann, "Reinventing Your Business Model." Harvard Business Review (December 2008) pages 51-59. (9 pages)</li> </ul> <p><b>Case Analysis Assignment #4:</b></p> <p>#4: Agricultural Input Supply Industry Case Analysis (Instructions)</p> <p>TEAM Case Analysis due midnight, Wed 4/18-----<a href="#">Submit case analysis here</a></p> <p>INDIVIDUAL Critique due midnight, Fri 4/20-----<a href="#">Link to Discussion Forum #4</a></p> <p>Discuss through midnight, Mon 4/23</p> <p><a href="#">Rate each team member's contributions to the case analysis and group work on the Disruption Case.</a> </p>
---	--