

# **RISING STARTUPS**

**SMART FARMING INNOVATIONS AND SOLUTIONS  
THAT ARE CHANGING THE GAME**



A close-up photograph of a human hand holding a small, realistic globe of the Earth. The globe shows the Americas, with North and South America clearly visible. The hand is positioned at the bottom left, with fingers gently gripping the globe. The background is dark, making the blue and green of the globe stand out. Overlaid on the center of the globe is a semi-transparent grey rectangular box containing the text 'WHAT'S HAPPENING?' in white, bold, sans-serif capital letters.

**WHAT'S HAPPENING?**

# GROWING POPULATION

1980 – 4.5 B

1990 – 5.3 B

2017 – 7.5 B

2030 – 8.5 B

2050 – 9.7 B





# URBANIZATION

2014: 54%  
2050: >70%





# CLIMATE CHANGE

**FOOD SYSTEM IMPACTS 30%  
IT'S ALSO ITS FIRST VICTIM**





# AGRICULTURE

*“Conventional agriculture has never succeeded in feeding the world, and it's never produced anything good to eat. For the future, we need to look toward alternatives.”* DAN BARBER





# MILLENNIALS + TECHNOLOGY

AGTECH  
BIG DATA& AI  
BLOCKCHAIN  
INTERNET OF THINGS

[illegible]





# 2017 TOP TRENDS

A graphic featuring the letters 'AI' in a bold, dark blue font, set against a light blue background with a subtle pattern of overlapping squares and lines.

# AI

Artificial intelligence has a wide variety of uses for agriculture including for use in crop monitoring and viability tracking, analyzing data from farm sensors, helping to reduce labor demands, and even providing chatbots specifically for farmers.



AI





Drones save farmers time and money alike. They can be used to monitor and inspect crops. Drones which harness AI and machine vision are able to move autonomously and observe the land around them have many work-reducing pros for farmers

# DRONES

Drones constitute a vital device of the Precision agriculture ecosystem. The regulatory landscape associated with the usage of drones is undergoing an evolution with policy makers wither upgrading the regulatory frameworks or establishing new ones.



# ROBOTICS

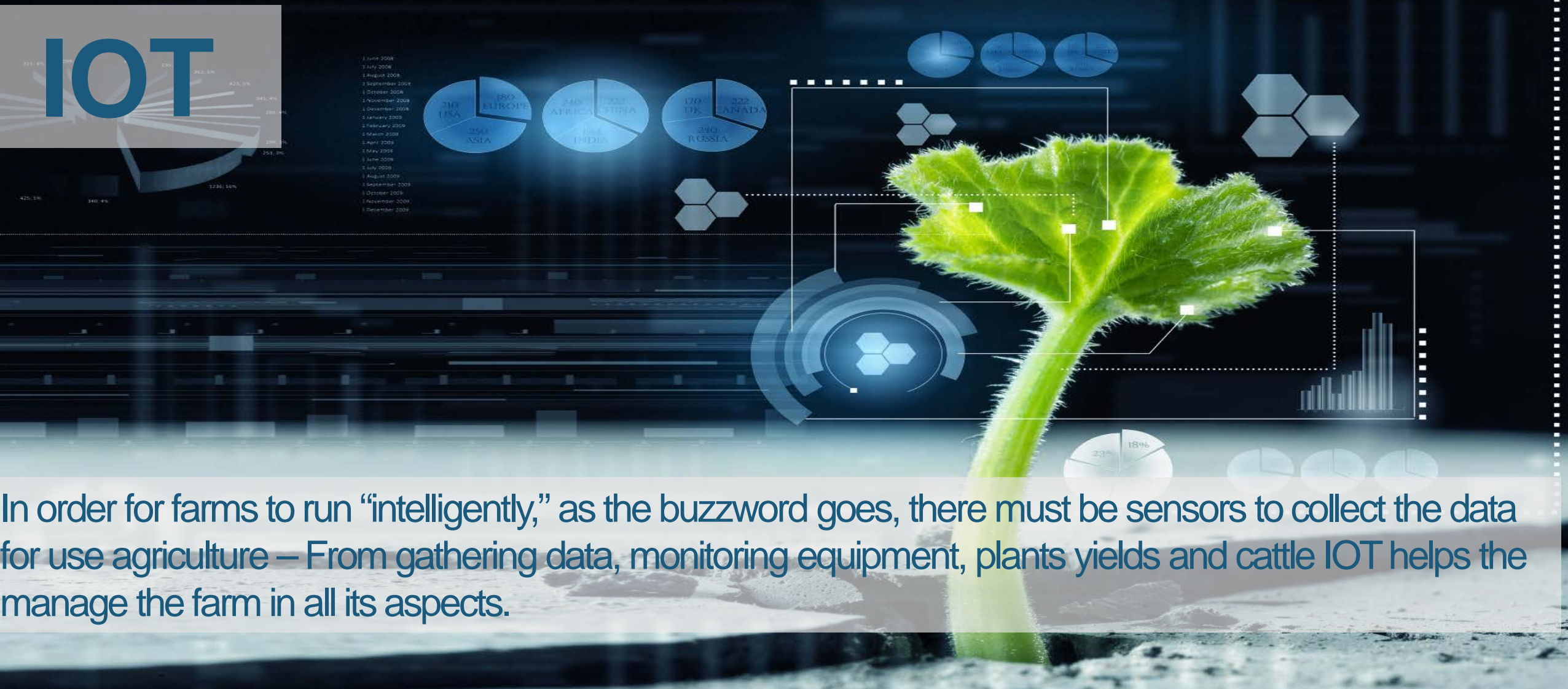
Robots can provide labor that can be cheaper and more effective than traditional methods. For example, automated robotic lettuce thinners, pesticide sprayers, and self-driving tractors can reduce the need for human labor while completing the necessary tasks with greater accuracy and efficiency.



# DRONES & ROBOTICS









# IOT



ARABLE



Connecterra



FarmersEdge™



FieldIn

cropx



Centaur



FARMOBILE





# CELLULAR AGRICULTURE

A pair of hands wearing white gloves is shown in a laboratory setting. One hand holds a white petri dish containing a circular, red, textured sample that resembles a slice of meat. The other hand holds a metal scalpel, positioned near the sample. The background is a clean, white surface.

Cellular agriculture uses bioscience to create common agricultural goods such as meat, milk, and eggs without the need of their related animals.

Lab-grown meats, milks, etc. have benefits such as the absence of bacteria and disease as well as ethical benefits

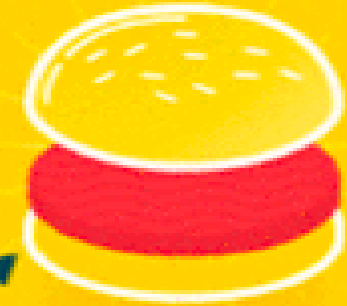
**Perfect Day**



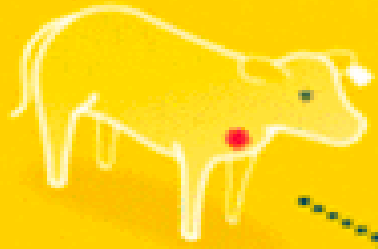
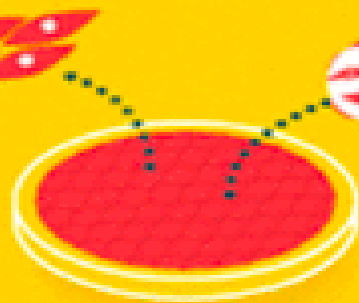
Clara Foods



SuperMeat



 **mosameat**  
THE MEAT REVOLUTION



MEMPHIS  
MEATS





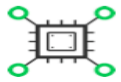
# BLOCKCHAIN

# LET'S TAKE A CLOSER LOOK



## **Ag Biotechnology**

On-farm inputs for crop & animal ag including genetics, soil microbiome, breeding, animal health



## **Farm Management Software, Sensing & IoT**

Ag data capturing devices, decision support software, big data analytics



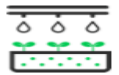
## **Farm Robotics, Mechanization & Equipment**

On-farm machinery, automation, drone manufacturers, grow equipment



## **Bioenergy & Biomaterials**

Non-food extraction & processing, feedstock technology, green-chemistry, cannabis pharmaceuticals



## **Novel Farming Systems**

Indoor farms, aquaculture, insect, algae & microbe production



## **Agribusiness Marketplaces**

Commodities trading platforms, online input procurement, equipment leasing



## **Midstream Technologies**

Food safety & traceability tech, logistics & transport, processing tech, shelf-life enhancement



## **Innovative Food**

Plant-based meat, cultured meat & dairy, novel ingredients, nutraceuticals or innovative supplements



## **In-Store Retail & Restaurant Tech**

Shelf-stacking robots, 3D food printers, POS systems, food waste monitoring IoT



## **eGrocery**

On-demand grocery delivery, including farm-to-consumer marketplaces and specialty providers



## **Restaurant Marketplaces**

Online tech platforms delivering food from a wide range of vendors



## **Online Restaurants and Meal Kits**

Prepared meal delivery, often based on specialty diets, or pre-portioned ingredient kits to cook at home



## **Home & Cooking Tech**

Smart kitchen appliances, nutrition technologies, food testing devices



## **Miscellaneous**

e.g. cultured leather, land management tech, financial services for farmers



## FARM MANAGEMENT SOFTWARE



## PRECISION AGRICULTURE AND PREDICTIVE ANALYTICS



## NEXT GEN FARMS



## ANIMAL DATA



## MARKETPLACES



## ROBOTICS AND DRONES



## SENSORS



## SMART IRRIGATION



CBINSIGHTS






# GLOBAL EQUITY FUNDING SINCE 2013:

1.5B ACROSS 453 DEALS

WILL ARRIVE TO 18+B 5YRS



# “BIG DEALS”

COMPANY	AMOUNT/ROUND	YEAR
	200 M SERIES B	2017
	100 M SERIES C	2016
	41.1 M UNATTRIBUTED	2016
	40.5 M SERIES D	2017
	40 M SERIES B	2017

# CONCLUSIONS

*“The world will need to produce 70% more food in 2050 than it did in 2006 in order to feed the growing population of the Earth, according to the UN Food and Agriculture Organization. To meet this demand, farmers and agricultural companies are turning to the Internet of Things for analytics and greater production capabilities.” — [Business Insider](#)*





**GRAZIE**