



**AUGMENTA**

# *Making farming sustainable and rewarding*

MARCH 2022  
INFORMATION FOR INVESTORS







## UNMET FOOD DEMAND

20% less arable land by 2030,  
+70% crop to feed world by 2050



## UNSUSTAINABLE FARMING PRACTICES

Wasting 90% of pesticide  
and 65% of fertilizer while  
15 billion trees are lost every year

# AGRICULTURE ON THE CUSP OF CHANGE



## UNPREDICTABLE PRICES

25% of global wheat comes from  
Russia and Ukraine  
+100% in fertilizer prices in a year



## UNPRECEDENTED REGULATORY PRESSURE

50% less pesticides and 50% less nutrient  
waste in EU by 2030



# A MASSIVE ADDRESSABLE MARKET

## MACHINERY

**\$55.5 BILLION**

Targeted tractors annual value

**2 MILLION**

New tractors sold annually,  
360 thousand in NA

## AGRICULTURE

**\$2.5 TRILLION**

Targeted Crops Annual value

**3.7 BILLION ACRES**

## SUSTAINABILITY

**\$140 BILLION**

Food Loss from Harvest to Retail

**\$15 BILLION**

Carbon Credit (CO<sub>2</sub>) Market  
by 2030



# TRACTOR AUTONOMY TODAY IS LIKE CAR AUTONOMY 10 YEARS AGO

..and like cars, the  
richest data-set will win



## CARS

Legacy OEMs focused on low hanging features like lane-keeping through radar & lidar



## AG VEHICLES

Legacy OEMs focus on low hanging features like in-farm driving autonomy through GPS

STARTUP-LED DISRUPTION BASED ON EDGE COMPUTING,  
CAMERA-BASED PERCEPTION AND AI



• APTIV •

Aurora



AUGMENTA



agtonomy



Greeneye™  
TECHNOLOGY

bloomfield  
robotics



# FARMERS DO MORE THAN DRIVE



## DRIVING

Low-Skilled Labor



## FARM OPERATION

1.7k Actions / 100 acres  
High-Skilled Labor

There is no true autonomy  
without the automation of all  
farming operations



# PRODUCT



# TRANSFORMING MACHINERY TO NEXT-GEN ROBOTS

## 1 PERCEIVE MULTISPECTRAL MACHINE VISION

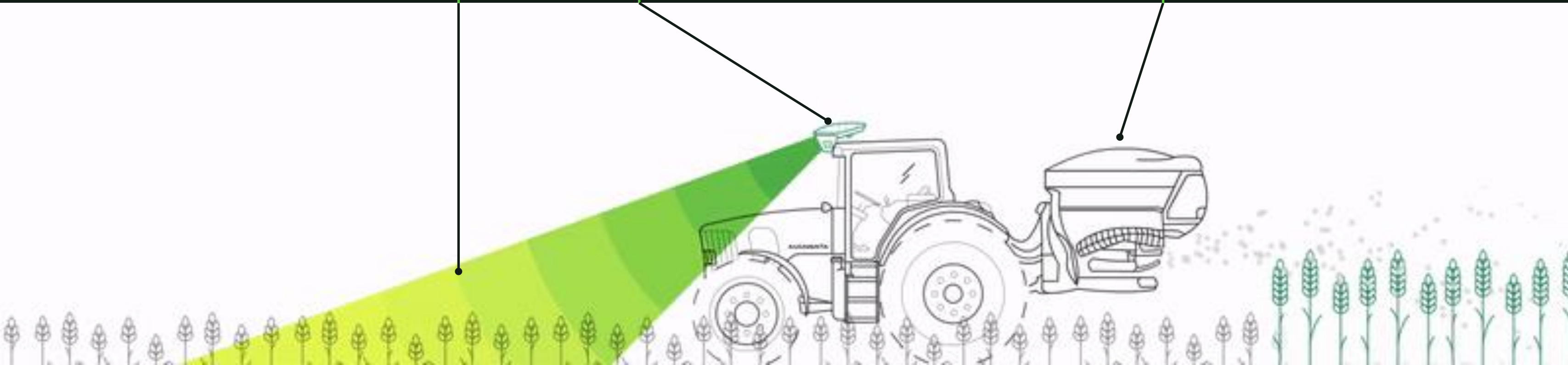
Canopy health, objects,  
patterns and more

## 2 ANALYZE REAL "REAL-TIME" PROCESSING

Edge computing and AI translate  
images to agronomic insight

## 3 CONTROL AUTOMATING FARM OPERATIONS

By connecting to the "brain" of  
the machine and controlling it







# IMPROVING FARMERS LIVES



**150% ROI  
IN A YEAR**

8% net farm profit\* through input savings and productivity increase



**AUTONOMY  
FOR ALL**

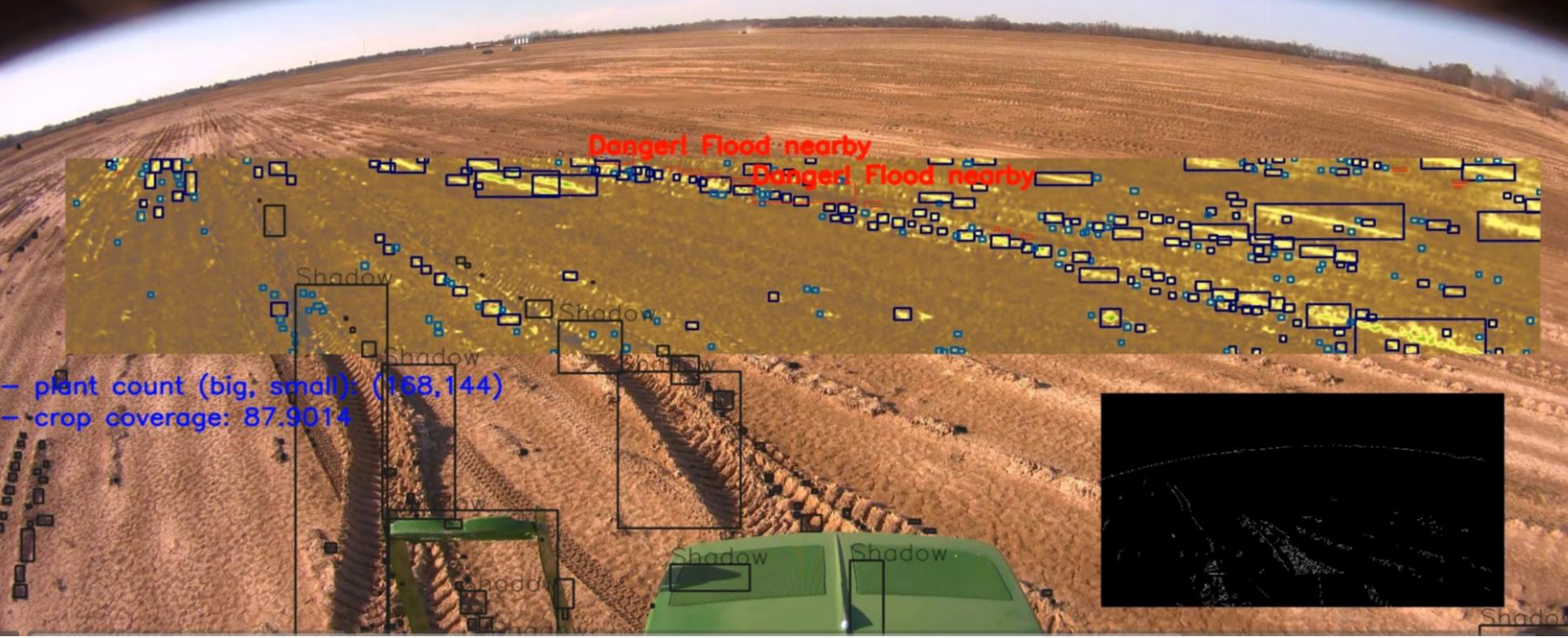
Retrofit kit, OEM agnostic, installed in minutes, affordable

\*Corresponding to a net profit of \$20-\$40K for a 1000 wheat acre farmer

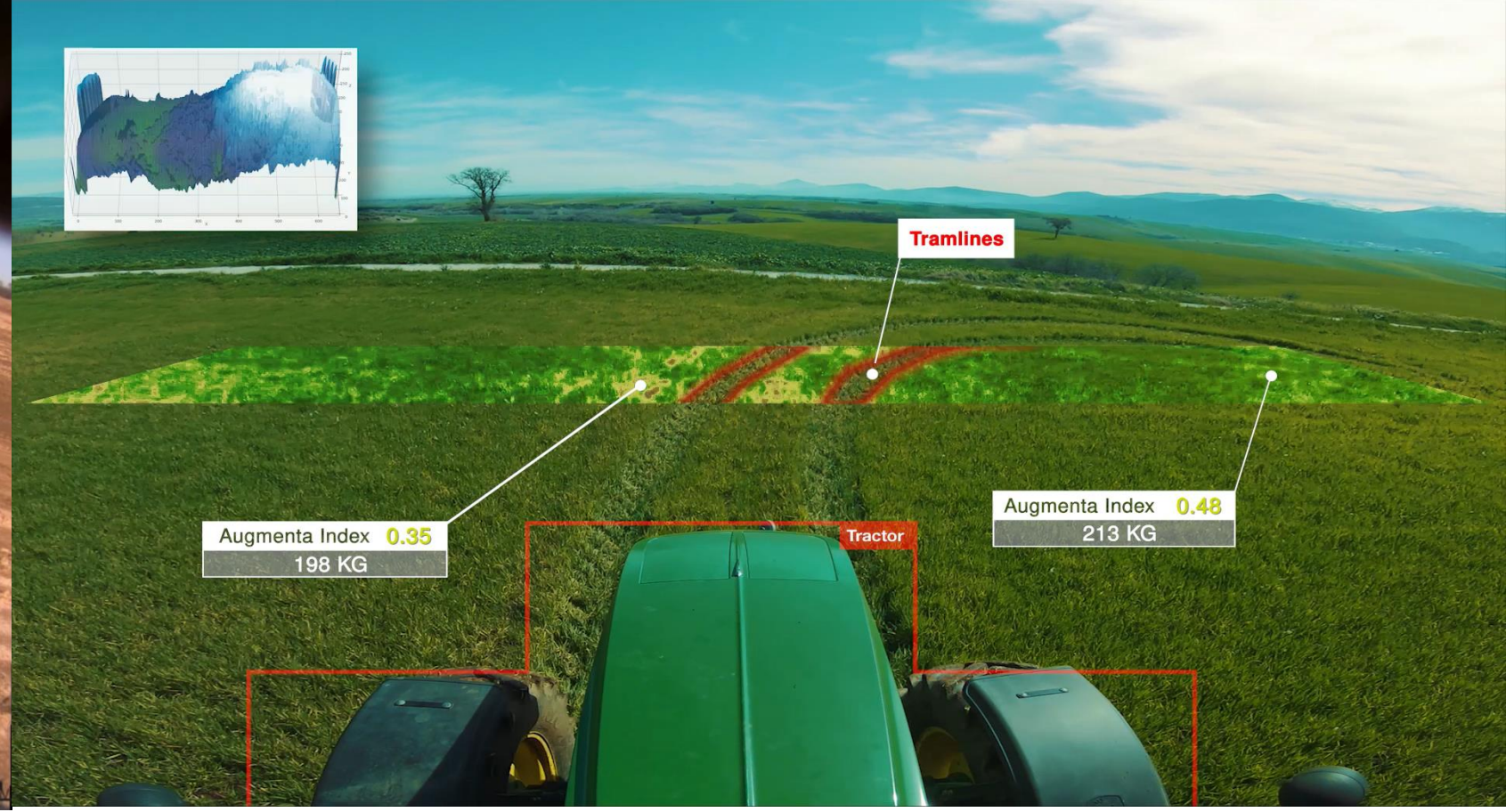


weather conditions: Clear Sky  
 heading: 306.912  
 gps: (34.41649,-91.66699)  
 speed: 5.854mph  
 environmental conditions:  
 ( i:16432, r:17924, g:32753, b:17884)

- Flood
- Shadow
- weeds <= 1 inch
- Weeds > 1 inch



- plant count (big, small): (168,144)  
 - crop coverage: 87.9014



Augmenta Index **0.35**  
198 KG

Augmenta Index **0.48**  
213 KG

# AUTOMATION AS A SERVICE



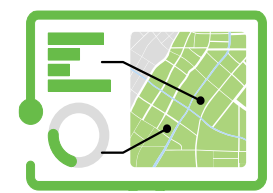
## AI-DRIVEN AUTOMATED & OPTIMIZED OPERATIONS

Fertilization, pesticide and fungicide spraying, harvesting\*, tilling\*, driving\*\*



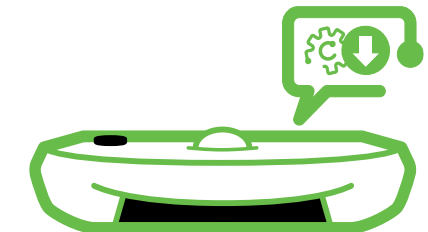
## "GOOGLE MAPS" FOR FARMS

Online and Offline 2.5D farm perception, 4K farm images, 6mm/pixel resolution



## NEXT GEN ANALYTICS

Real-time canopy health maps, Carbon analytics, Yield & quality prediction\*.

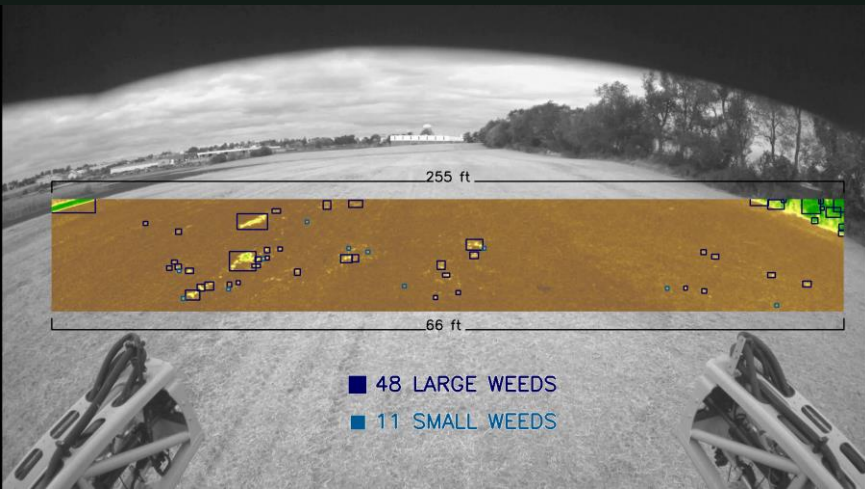
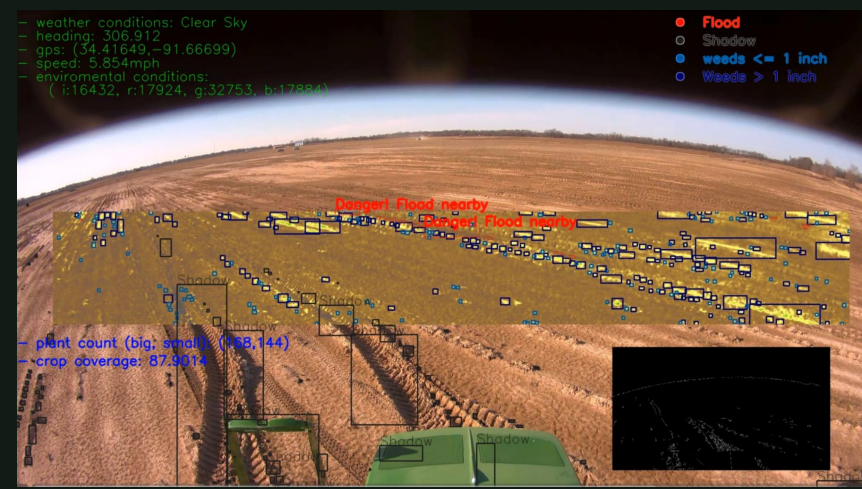


## SAME HARDWARE MORE OPERATIONS

Short and frequent release cycles, OTA updates

\*Available in 2023, \*\*Available in 2025





# UNPARALLELED PERCEPTION

## RGB COMPUTER VISION

- Object detection
- Path Planning
- Stereo perception (crop height etc.)
- Farm elevation
- SLAM

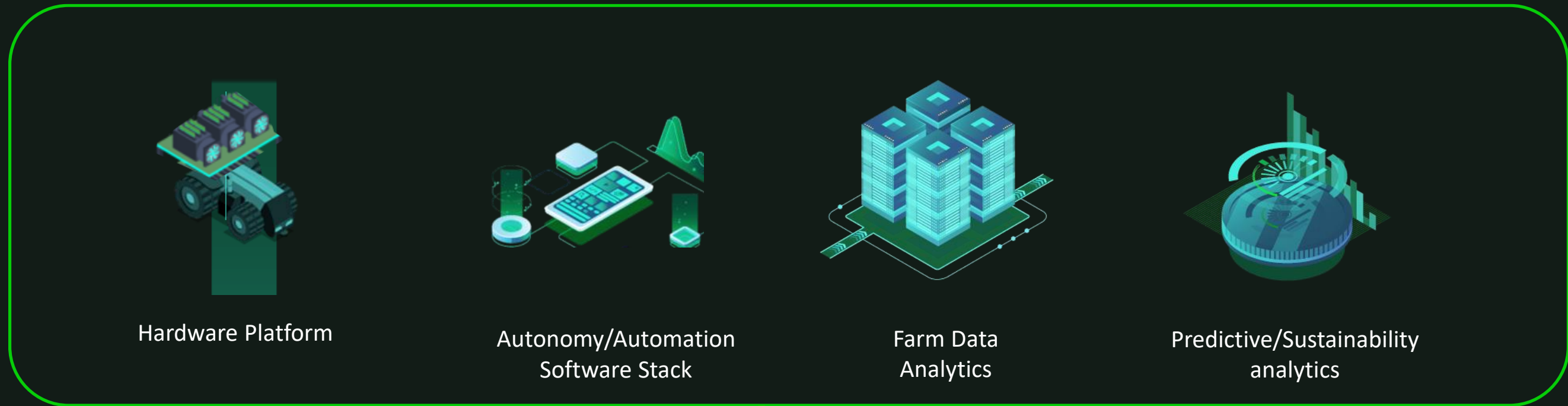


## MULTISPECTRAL COMPUTER VISION

- Patented real-time camera calibration for noise cancellation (sun position & intensity)
- Canopy status (nitrogen deficiency, disease and more)
- Biomass indices
- Crop count
- Weed Detection
- Soil water content



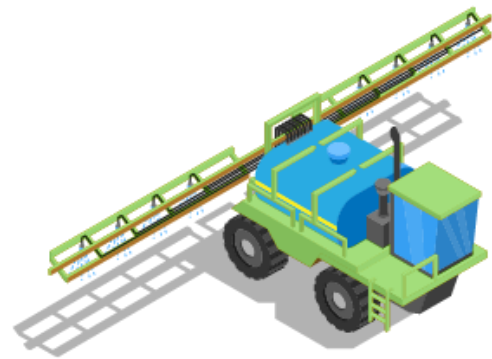
# 360° TECHNOLOGY STACK



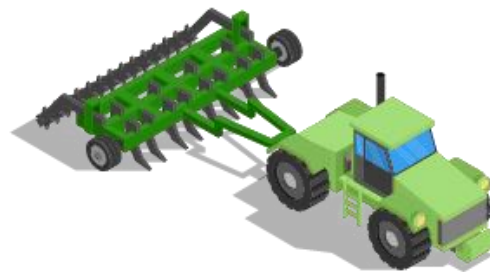
Ag ATVs



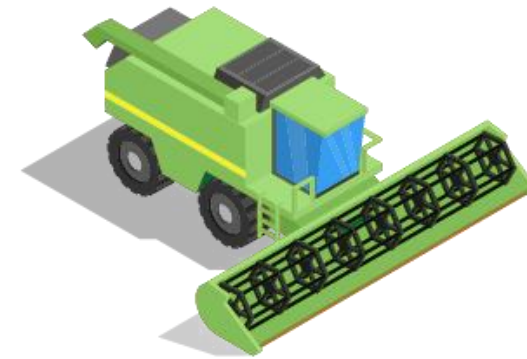
Sprayer



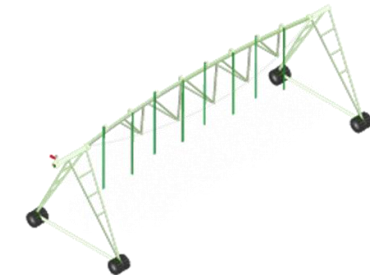
Tractor



Harvester



Pivot





# 14 CROPS IN 25 COUNTRIES



**POTATOES**  
IRELAND



**SOYBEAN**  
USA



**ONION**  
NETHERLANDS



**PASTURE LAND**  
SOUTH AFRICA



**TULIPS**  
NETHERLANDS



**SUNFLOWER**  
UKRAINE



**SUGARBEETS**  
NETHERLANDS



**GRAPES**  
FRANCE



# VARIABLE CONDITIONS



**SNOW**



**SUNNY DAY**



**STRIPED CROP**



**TREELINES IN FIELD**



**SUNSET**



**SHADOWS**

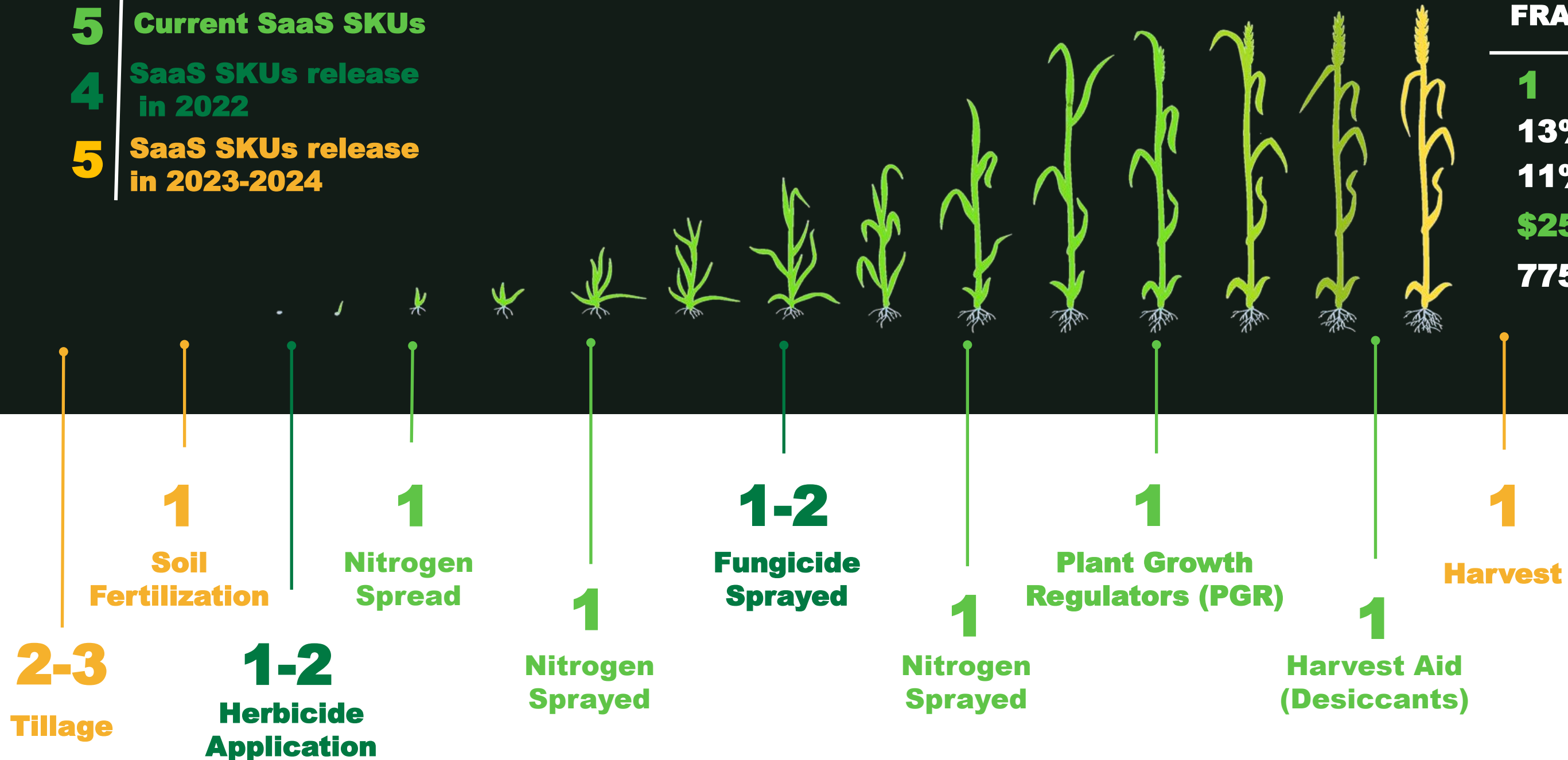


# AUTOMATION THROUGHOUT CROP LIFE CYCLE

TRACTOR PASSES	SAAS ROADMAP
5	Current SaaS SKUs
4	SaaS SKUs release in 2022
5	SaaS SKUs release in 2023-2024


## WHEAT CASE STUDY : FRAHMS FARM (KS, US)

- 1** Nitrogen Spray
- 13%** Savings on N
- 11%** Yield Increase
- \$25K** Profit Gain
- 775** Acres





# MULTI-SKU USAGE BASED SUBSCRIPTION

<b>ONE-OFF HARDWARE OFFERING</b> MSRP \$13k	<b>AUGMENTA MANTIS</b> 	SCOUTING ● REC	<b>Crop Scouting:</b> Free of charge. Active and Passive Scanning. 4K available.
		VIRTUALVRA ● REC	<b>Virtual Application Maps:</b> Free of charge. Supported operations simulation + Reports.
<b>ANNUAL SAAS OFFERINGS</b>	<b>AUGMENTA</b> •LIVE VRA	•LIVE VRA NPK	<b>Variable Nitrogen and Foliar Fertilizers Automation:</b> Price of \$2/planted acre, ROI: 8-15% savings, 2-12% yield increase
		•LIVE VRA PGR	<b>Variable PGR Automation:</b> Price of \$0.5/planted acre, ROI: 10-20% savings, 5-10% yield increase
		•LIVE VRA DEFOL	<b>Variable Harvest Aid-Defoliants Automation:</b> Price of \$0.5/planted acre, ROI: 10-25% savings
		•LIVE VRA FUNG	<b>Q2 2022 Fungicide Real-time VRA:</b> Price of \$1/planted acre, ROI: 8-30% savings, 1% yield increase
	<b>AUGMENTA ADD ONS</b>	•LIVE COB HERB	<b>Q2 2022 Spot-Spraying of Glyphosate*:</b> Price of \$3/planted acre, ROI: 40-75% savings

\*Pre-season herbicide spraying (Green on Brown)



# NOTABLE CUSTOMERS



**USA**  
Top3 tractor OEM in the world

*"It is really easy to operate for the farmer, who doesn't need special knowledge"*  
Markus Balleis  
Product Manager



**Canada**  
AgTech Provider & top3 crop inputs retailer company

*"The most powerful, 100% autonomous real time VRA"*  
Tyler Gullen  
Agronomy Manager



**Czech Republic**  
Machinery Dealer

*"Disruptive technology with impeccable support"*  
Jaroslav Kos  
Precision Ag Specialist

*"The Augmenta System has an Artificial Intelligence that works - it really saves [inputs] compared to other systems,"* Ahmet Korhan Yuzbasioglu, TeknoKurgu, Turkey.



# 47 CUSTOMERS IN 25 COUNTRIES

 CANADA (2)

  
  
 USA (11)

  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
EMEA (27)

 LATAM (4)





 AUSTRALIA (3)



# 150% ROI IN A YEAR



8% average savings in crop inputs



Consistent yield increase from +2% to +12%



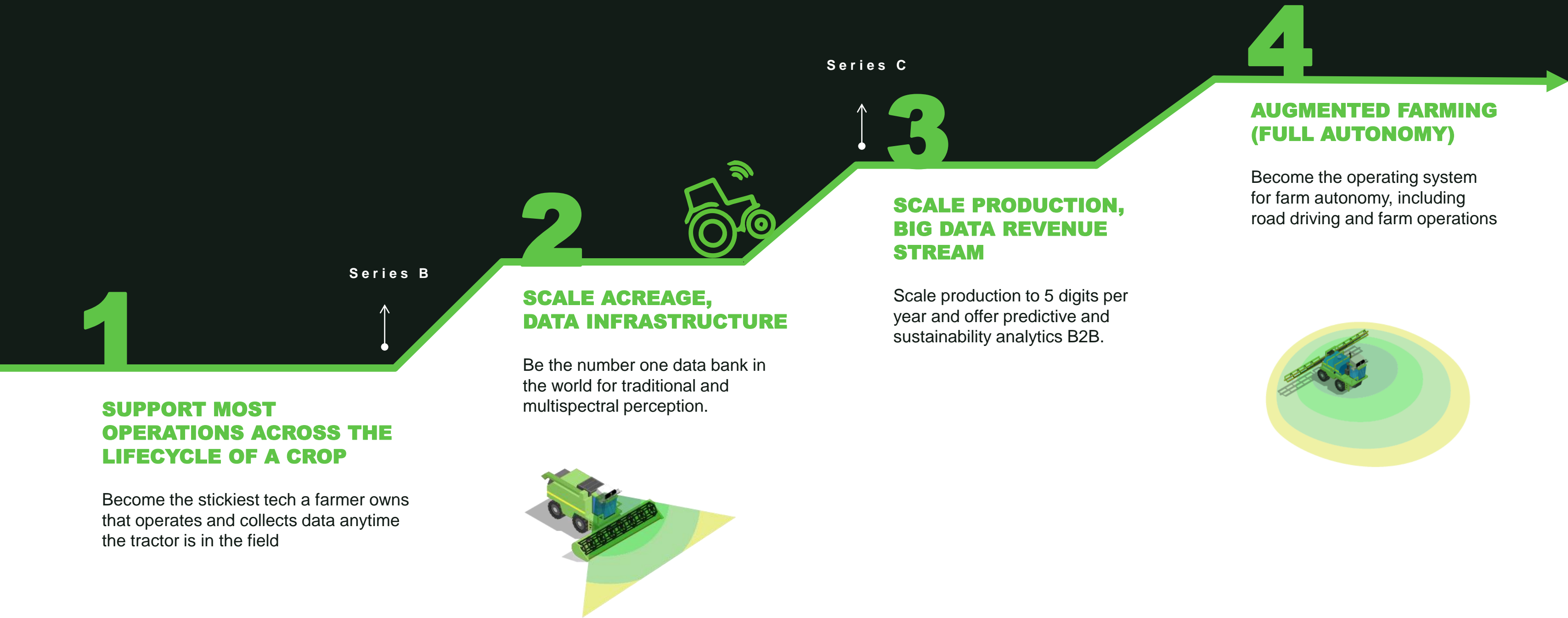
ROI in less than a year, farm bottom-line +8% or \$20k-\$40k\*



\*1000 acre wheat US farmer



# GRAND PLAN





# RAISING \$XXM

## TO BECOME THE CATALYST FOR SUSTAINABLE FARMING WORLDWIDE

→ By **FY2024**



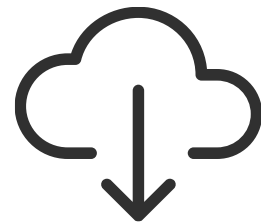
**\$44M**

Annual Revenue



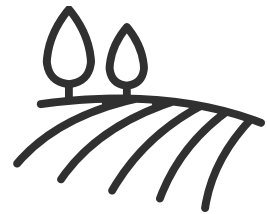
**>75%**

Gross Margin



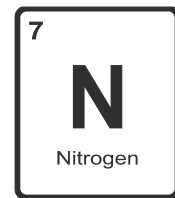
**700TB**

Annotated Field data



**1.7M**

Acres under Management



**125K**

Less tonnes of chemical fertilizer in soil



**760K**

Less kg of pesticides in soil

**\$11m**

Raised by



**\$3.75m in the bank**



**“ Making farming sustainable, and rewarding. ”**

**George Varvarelis**  
**Founder & CEO**

[george@augmenta.ag](mailto:george@augmenta.ag)



**AUGMENTA**