

# The world's food production needs to increase by 70% by the year 2050 in order to feed the growing population



Global Access

1 in 9 people are undernourished

65% Reduce poverty for 65% of the world's poor who live in rural areas and work in farming

70% More food needed by 2050



Sustainability

70% of global water resources are needed for agriculture

24% of global greenhouse emissions come from agriculture

251T Liters of water to be saved by 2030 by implementing smart agriculture



Economic Growth

30% of global workers are employed by the agriculture industry

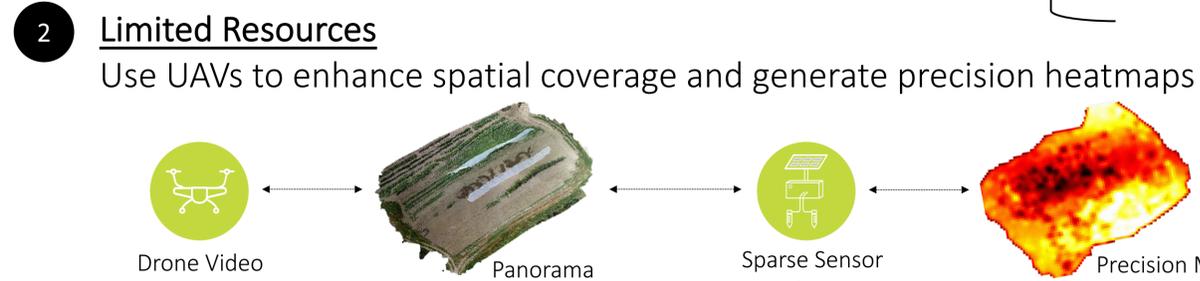
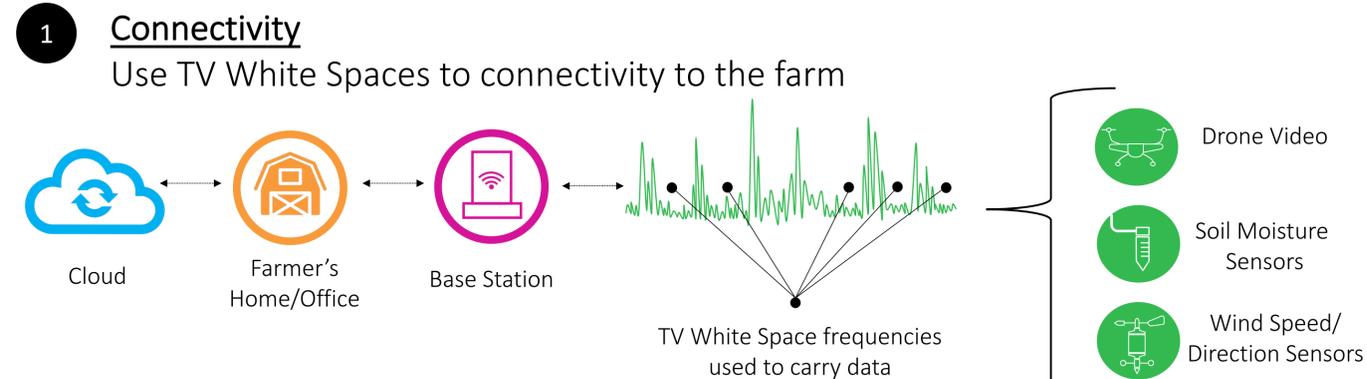
10-30% agriculture contributes to 10% of global GDP and up to 30% in low income countries

\$4.8T global agriculture revenue

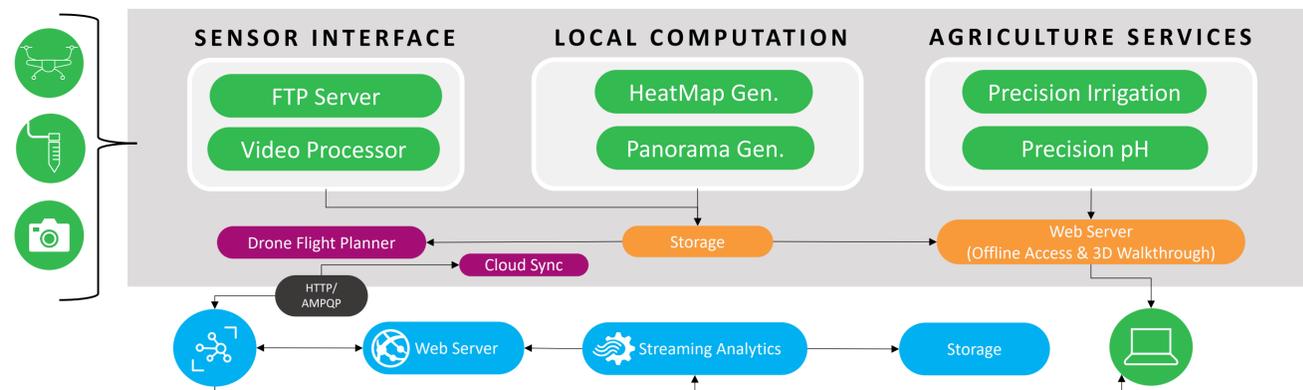
## Data-Driven Agriculture

- Improves yield
- Reduces cost
- Ensures sustainability

## FarmBeats: AI and IoT for Data-Driven Agriculture



**3 Slow Cloud Connectivity**  
The FarmBeats Gateway runs on the Edge and performs local computation



## Deployment & Results

- Deployed **worldwide** (US, Europe, Asia)
- Farm size ranging from **5-15000 acres**
- FarmBeats can accurately expand coverage by orders of magnitude using a **sparse** sensor deployment
- Has been used to minimize spraying by **80%** and result in cost savings of **15%**



Water puddle



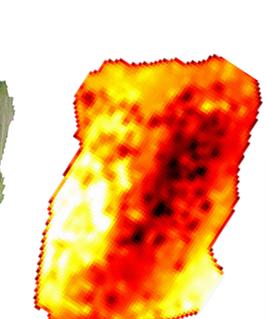
Cow excreta



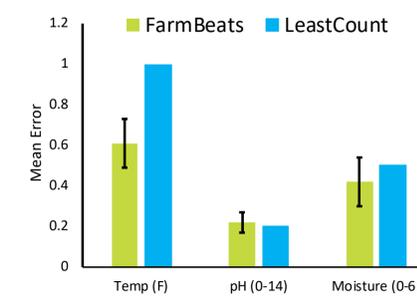
Cow herd



Stray cow



Precision Heatmap



## Challenges

- No Internet connectivity
- No power available on the farm
- Slow connectivity at the nearest Internet source
- Precision mapping with few sensors