2019 SOUTH EAST ASIA SUGARCANE SUMMIT

JULY 7-10, 2019 | KHAO YAI, THAILAND

75 years AUSTOFT

CASE IH AGRICULTURE

Challenges and Opportunities in Inbound Sugar Supply Chains

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Who is Agtrix?

AGTRIX
Harvest Management Systems

01

Developers and System Integrators in the Sugar industry for over 22 years

02

Solutions that integrate the WHOLE supply chain

03

Successful installations in Australia, Africa, Philippines

Consulting in England and Spain

Challenges

- Rising costs vs lower prices
  - Fuel
  - Wages
- Environmental pressure
  - Reduce carbon footprint
- Workforce availability

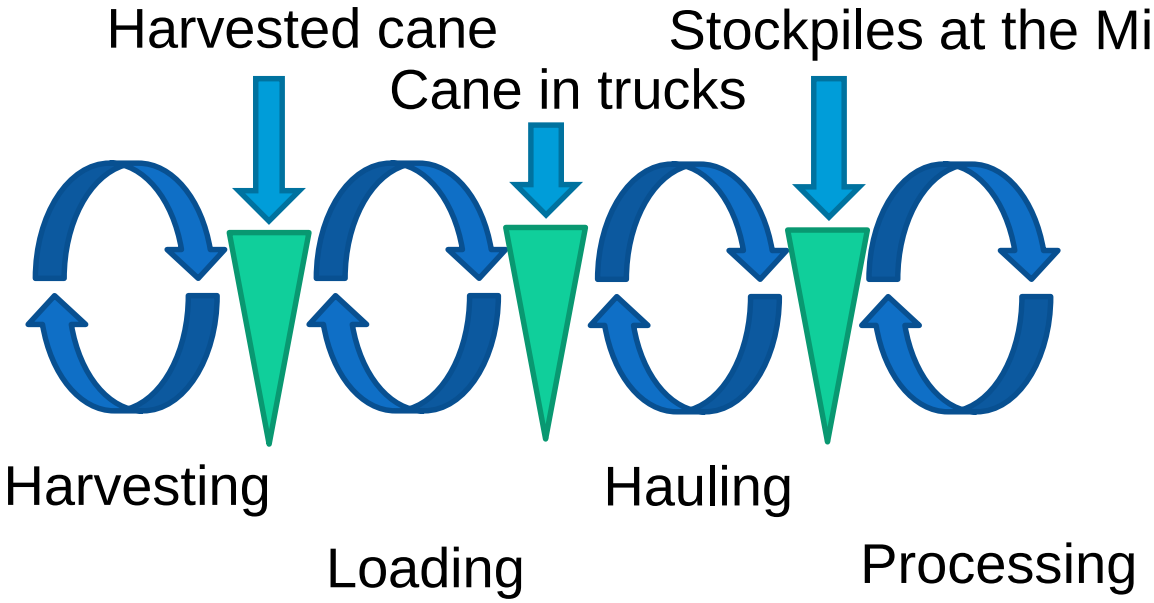
Opportunities

- Machine learning and AI
- Automation and mechanisation
- Integrated supply chains

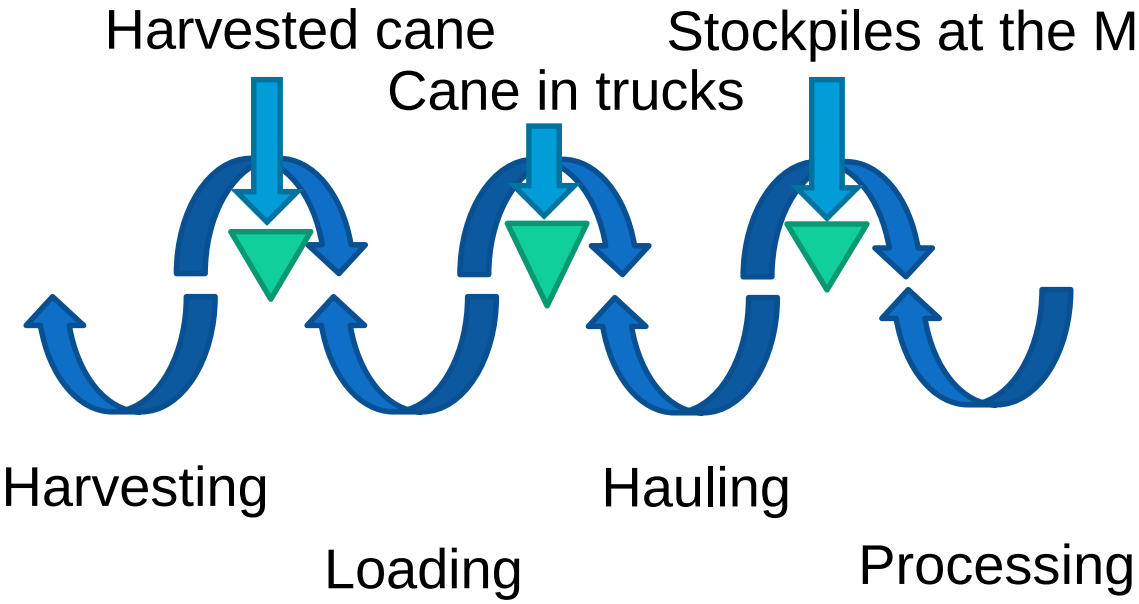
Integrated Supply Chains

- Supply chain stakeholders
  - Harvesters
  - Loaders
  - Hauliers
  - Millers

Traditional Cycle View



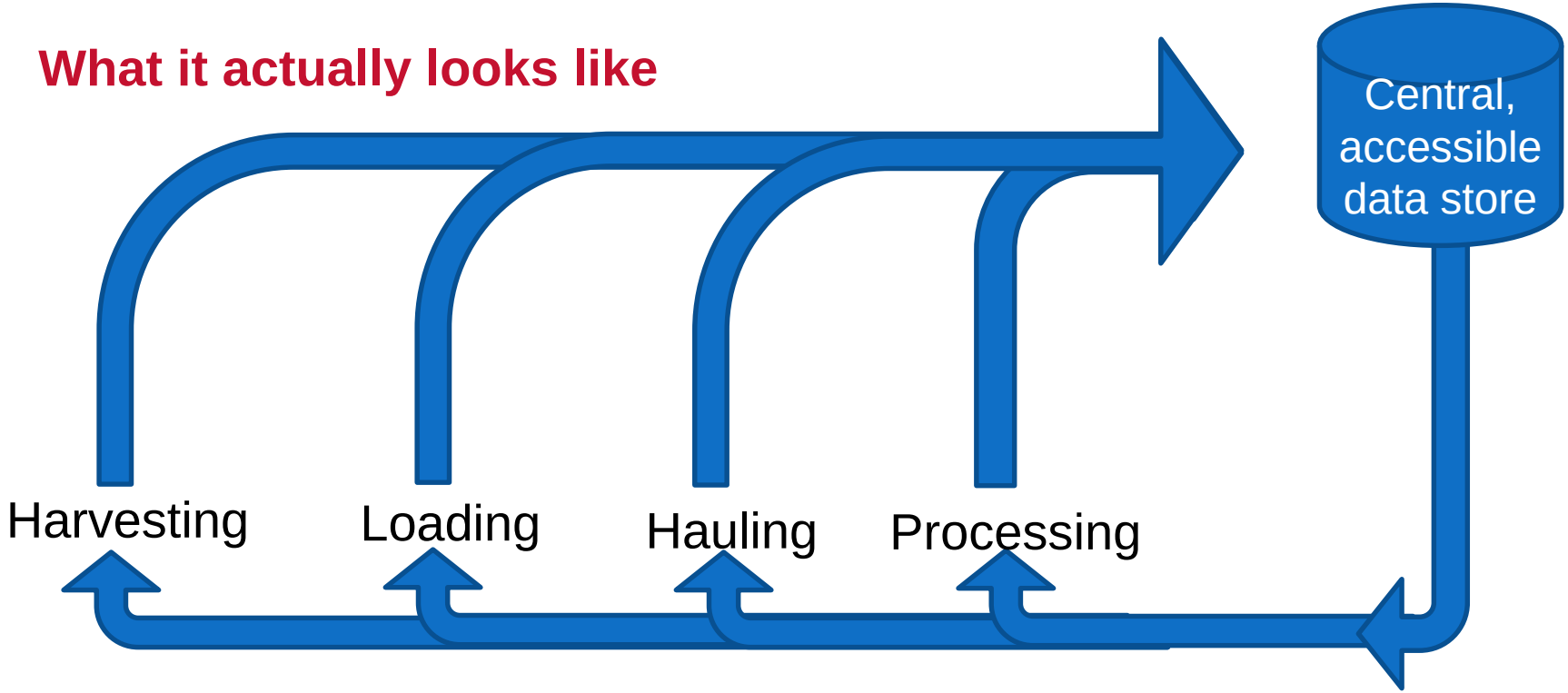
Breaking the barriers



What is required?

- Tools enabling real-time communication across sectors
- Scheduling needs to consider:
  - Harvester progress
  - Stock availability
  - Mill capacity vs hauling capacity

What it actually looks like



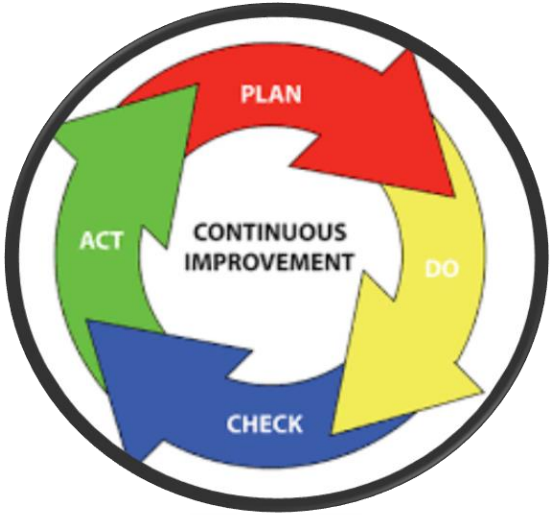
The result

	Mill A	Mill B	Mill C	Totals/ Averages
Crop (tons harvested sugarcane)	832,535	1,133,968	676,671	2,643,174
Av Paddock Size (ha)	1.8	1.6	2.1	1.8
Av Row Length (m)	230	250	300	260
Harvesters	8	12	8	28
Harvest tons sugarcane per harvester	104,067	94,497	84,584	94,383
Prime Movers	11	15	8	33
Total haulage per truck	77,087	75,598	90,223	80,969
Factory crush rate per day (tcd)	4,110	4,881	3,288	12,280
Avg deliveries of cane per hour	9	12	8	10
Average deliveries per truck per day	17	14	19	17

Benchmarking and visualisation

If you can't measure it,
you can't improve it

~ Peter Druker



Knowledge is power

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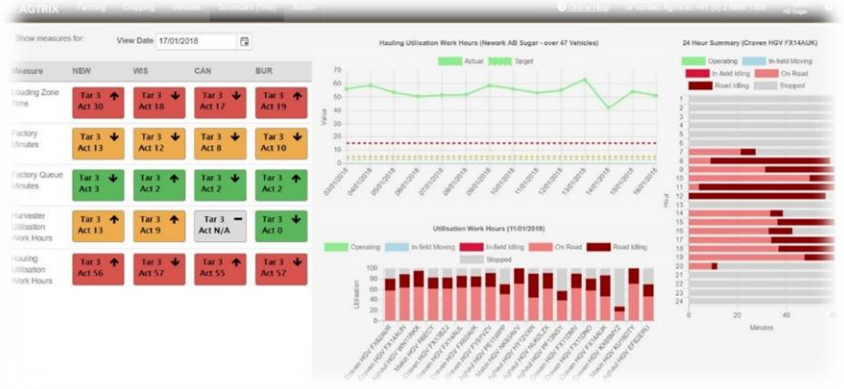
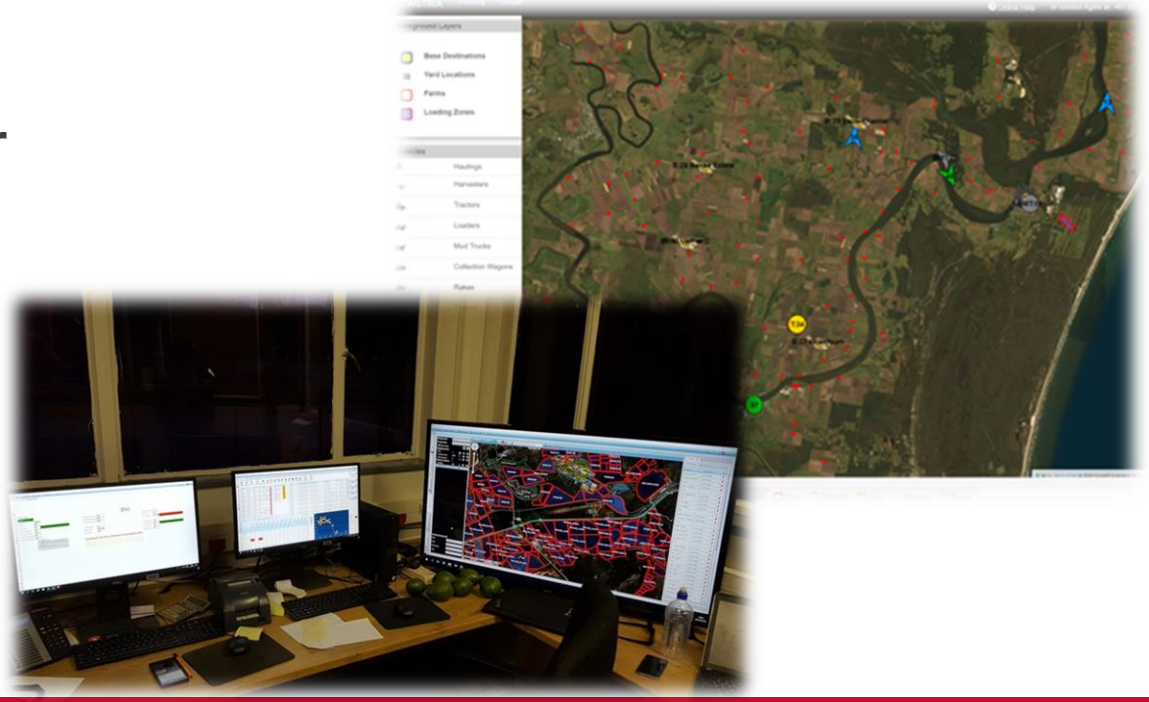


Data accuracy and trust

- Human error
- Machine derived data



Automating data collection

- Systems in machinery
- RFID

IOT

- Provides real-time automated feedback
  - Per device cost still prohibitive at scale
  - More widely used in Agriculture
  - Real-time, end-to-end visibility and control
  - Big data analytics

HBP

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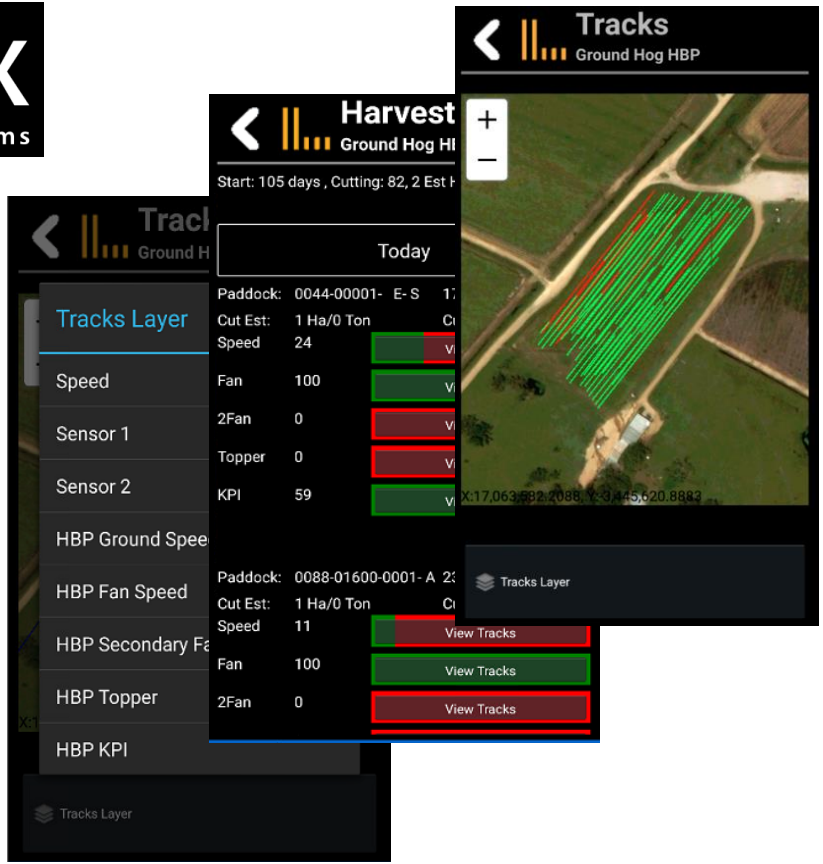
Tracking Harvester efficiency

- time cutting vs turning vs stopped
- ground speed
- primary fan speed
- topper and secondary fan on off



In Review

- Integrated supply chains have been proven in production to
  - address current concerns
  - take opportunities available
- Need to measure through benchmarking and visualisation
- Accurate and trusteed data is required for improvement
- Data collection needs to be automated