

FARMING REIMAGINED



@SeeDotRun @TrentMeyerAg



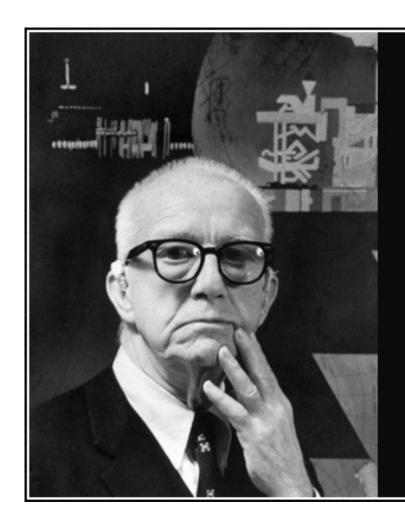
@seedotrunautonomous



SeeDotRun

www.SeeDotRun.com





You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.

— R. Buckminster Fuller —

AZ QUOTES



How has Broadacre Farming Changed?

- Large seeders
- Auto-steer
- auto lift headland turns 📦
- auto zone specific seed and/or fertilizer rates & overlap control



- auto meter rate calibration by load cell data
- Smart fill, auto packing force
- 600+ HP tractors
- Remote monitoring and support



Is bigger really better??

- Compaction
- Fill times
- Wide turning radius
- Road transport, approaches
- Partial passes
- One issue = shut down all operations
- High value seeding systems with trade issues
- Highly paid farm labour essentially "sitting"
- Ballast (see compaction)
- Fill times



Is bigger really better??

No driver Next step?





Key objectives to reign in these ineffiencies

- Smaller, more nimble units
 - Get more acres out of irregularly shaped fields
 - Lower horse-power requirements per acre
 - Win-Win: lower investment, higher degree of functionality, lower trade losses
- Autonomous, remotely monitored
 - Lower labour costs
 - Shift of focus for owner/operators (business, agronomy, lifestyle)



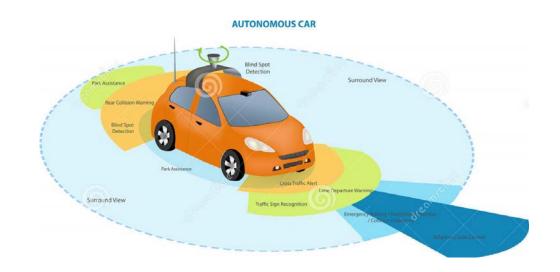
Does the Operator Need to Be in the Cab?





Can we learn from Autonomous Cars?

- Machine Learning
- Artificial Intelligence
- 25K US cars 2018
- 100K US cars 2020
- Decreased costs





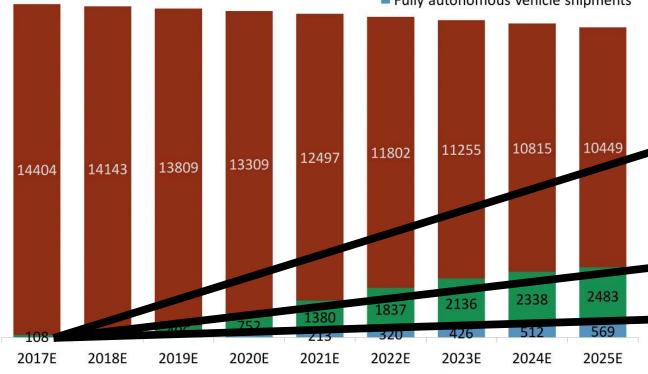
FORECAST: Vehicle Shipments By Type

US, 2017-2025, Thousands

■ Traditional vehicle shipments

■ Semi-autonomous vehicle shipments

■ Fully autonomous vehicle shipments



Source: BI Intelligence Estimates, 2017

Source: Business Insider Sept 2017

BI INTELLIGENCE



How much safer is autonomous?

Implement in a field following a farmer-pre-approved path plan with no go zones, path specific steering, fully loaded with monitors and sensors, fast load trailers

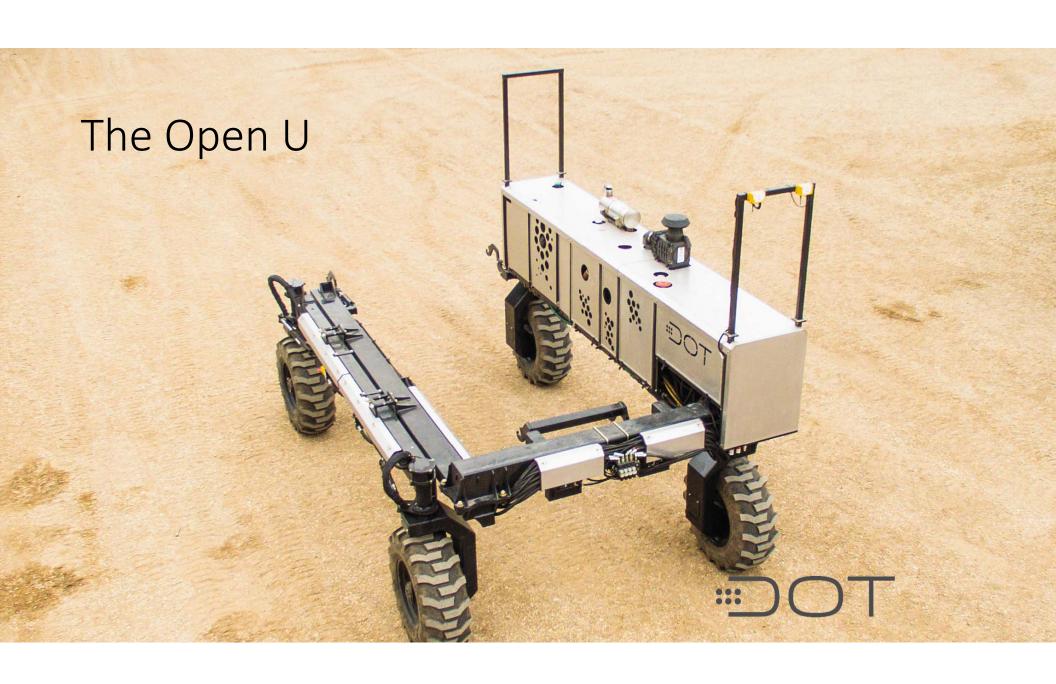
VS....

An autonomous semi driving the Phoenix freeway... with humans operating other machines on the road.

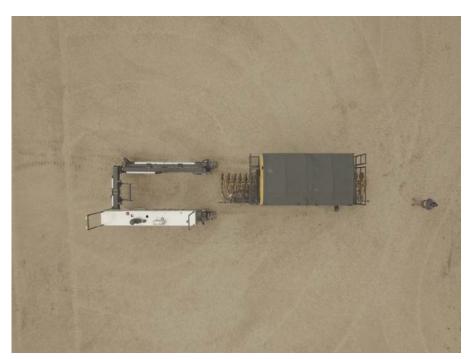


Why Norbert? Why SeedMaster roots?





Vision of the future – the Open U







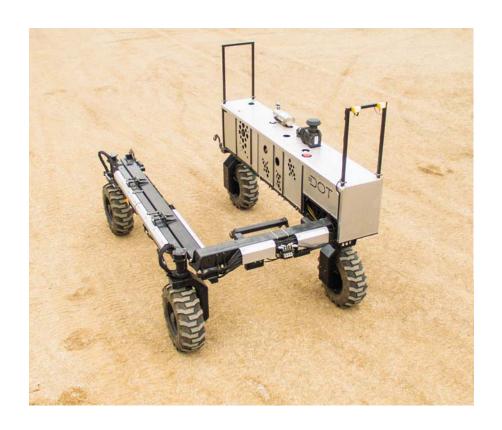
Specification of DOT

- 12 ft. 4 in. (3.76 m) transport width
- 18 ft. 2 in. (5.53 m) working width
- 11 ft. 2 in. (3.4 m) height
- Dry weight 9,000 lbs. (4,082 kg)
- Engine specifications
 - Cummins QSB4.5 Tier4 Final 4.5 L Turbo Charged Diesel 174 HP @ 2,500 RPM 466 lb-ft @1,500 RPM
- Two tire options including 12 in. wide for in-crop, 21" for other activities





What can DOT do?



Disclosure of Technologies and Functions that can b	e Adapted to DOT or DOT Ready Implements											Publication date												Versi	Version										
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DOT Ready™ Implements

- DOT ready implement providers openly invited to collaborate
- Licensed for safety and compatibility
- Information transfer for compatibility of electronics, structural and hydraulics



Manual Control Potential



The Tesla Model?



Regained Efficiency – Standardization

- Training is standardized
- Familiar and streamlined replacement parts
- Reimagined parts delivery and support
- Data collection more detailed and standardized for all equipment



Easily scalable to farm size

- 1 = 1,500 to 3,000 acres
- 5 = 10,000 to 15,000 acres
- 10 = 25,000 to 30,000 acres
- Limited trade-in required moving forward
- More options for implements (smaller, more of them)



Used Equipment Valuation

- Current inefficiencies
- Multi-Industry ready platform
- A farm NEVER grows out of a unit size, it only outgrows unit numbers



General Economic Benefits

- Lower capital costs with power platform and implements
- Lower fuel usage
- Lower labour
- Higher levels of precision farming
- Better data collection linking all operations
- More timely completion of jobs
- Longer safe operating hours



Lifestyle Benefits?

- Accessibility
- Length of career
- Family
- Rural hi-tech jobs

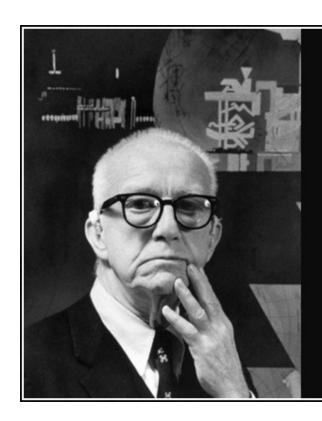
Overcoming Resistance

"Tractors have no chance to compete with horses, unless they can raise a young tractor every second or third year"

Sask Farmer, Public Service Monthly, November 1923

Jim Hale Twitter (@farmerjim79)



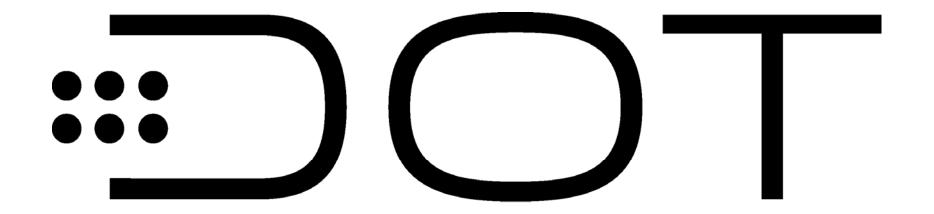


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