

Big Data Implications for Agriculture

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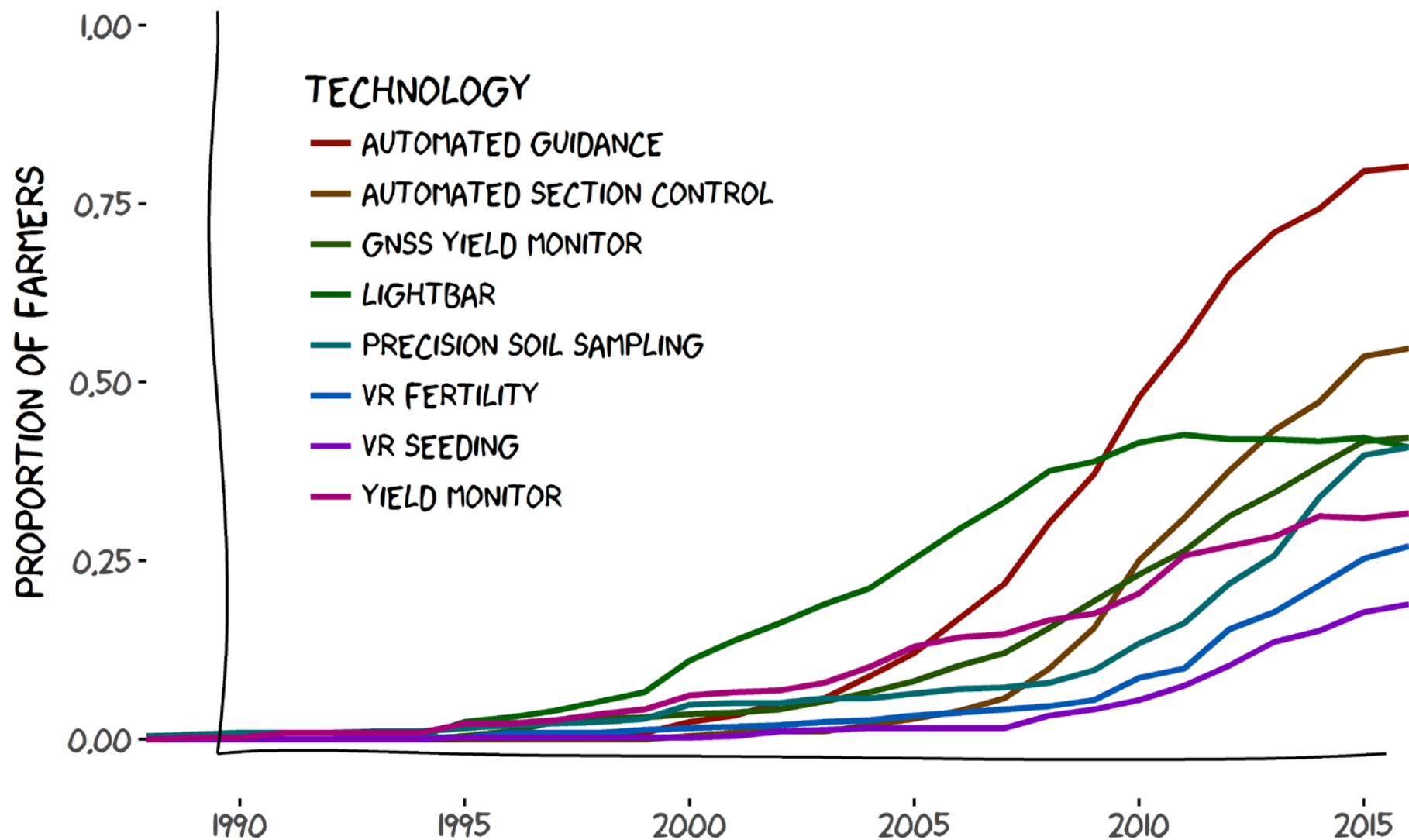
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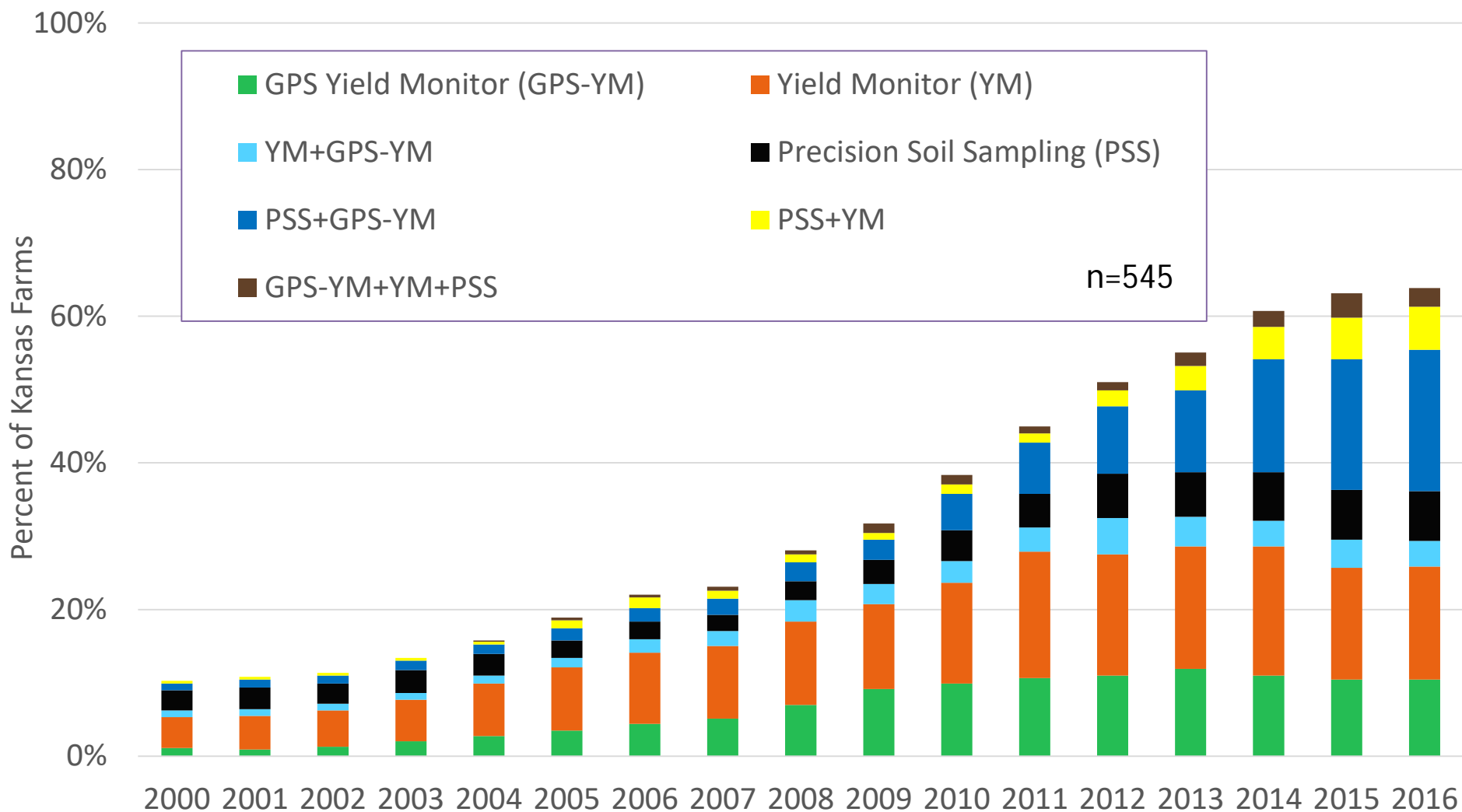
#PrecisionAg #BigData #FarmData

Wisconsin Agribusiness Classic

Madison, WI

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COLLEGE OF
**AGRICULTURE &
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DEPARTMENT OF AGRICULTURAL AND
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FARM DATA: OWNERSHIP AND PROTECTIONS

EXECUTIVE SUMMARY

The issue of farm data has been a contentious point of debate with respect to ownership rights and impacts when access rights are misappropriated. One of the leading questions farmers ask deals with the protections provided to farm data. Although no specific laws or precedence exists, the possibility of trade secret is examined and ramifications for damages discussed. Farm management examples are provided to emphasize the potential outcomes of each possible recourse for misappropriating farm data.

- Self
- Neighboring farmer
- Retailer
- Manufacturer
- Government
- Extremists



- Privacy not a new idea
- “Security” & “privacy”
 - Prevent others accessing data
 - Prevent data becoming corrupted
 - Prevent data loss



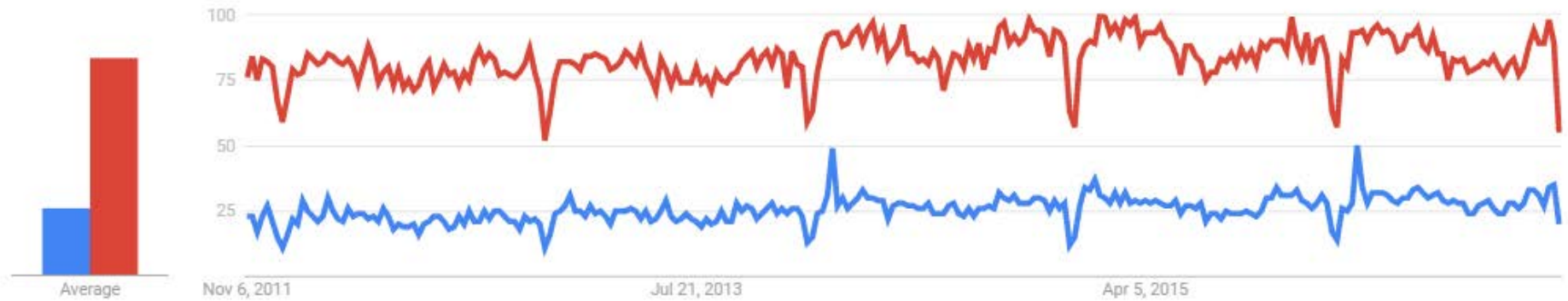
● data privacy
Search term

● data security
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+ Add comparison

Worldwide ▼ Past 5 years ▼ All categories ▼ Web Search ▼

Interest over time ?



● data privacy
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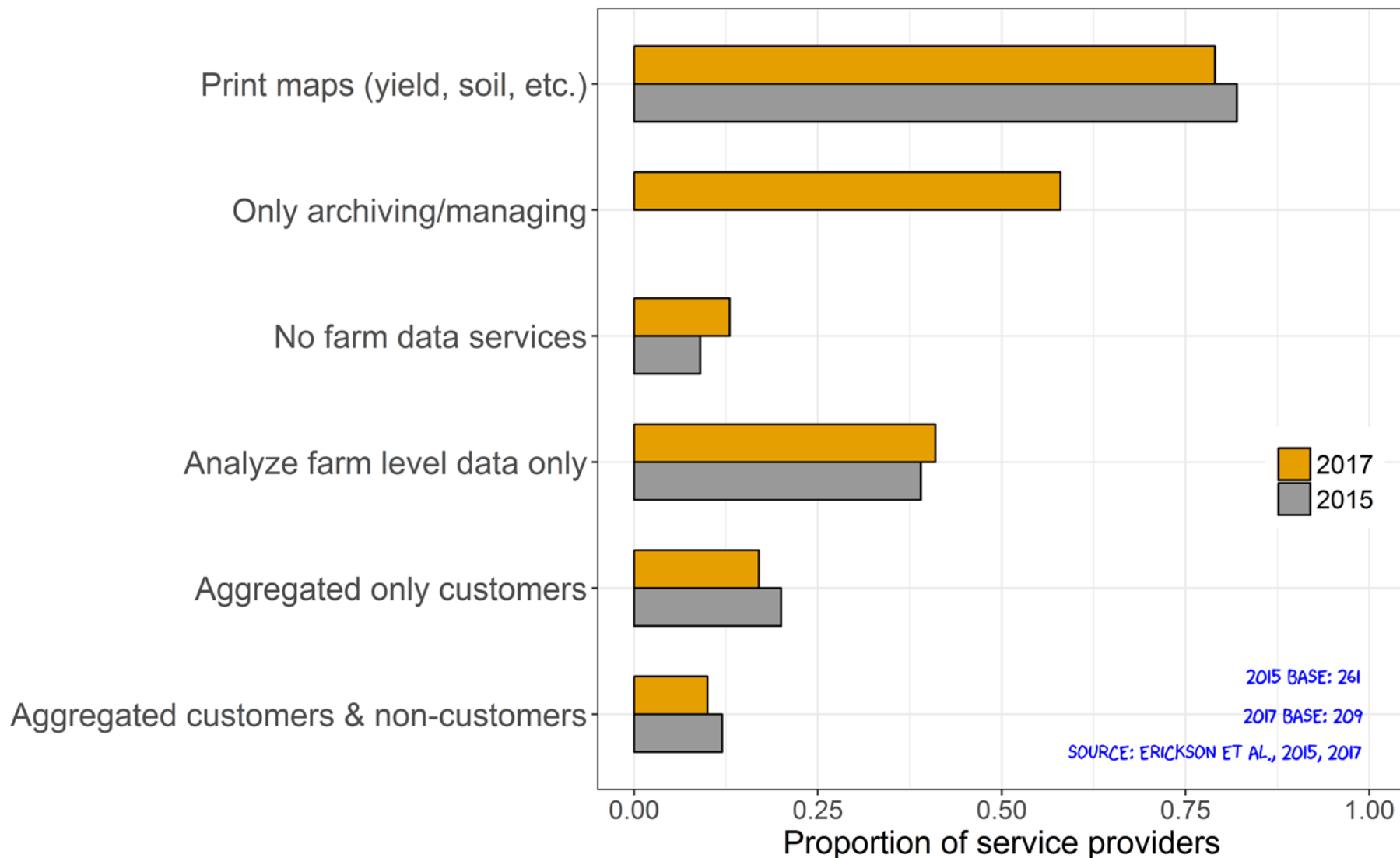
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Interest over time ?







- Data is intangible and irreplaceable
 - “non-rival”



- Community Participation: Value to Farmer vs Network
- Value of primary use < value of secondary use

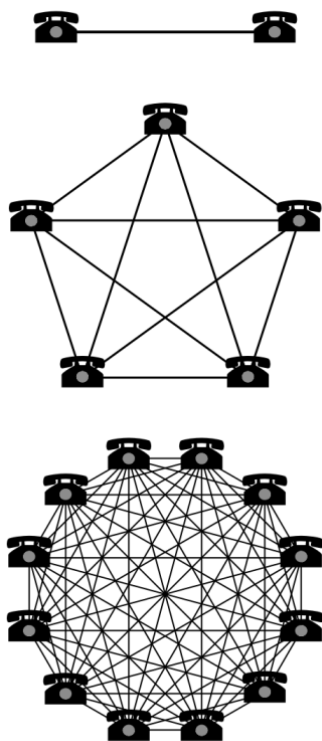


Image credit: Fox Photos/Getty Images

Are value of secondary uses > primary uses?

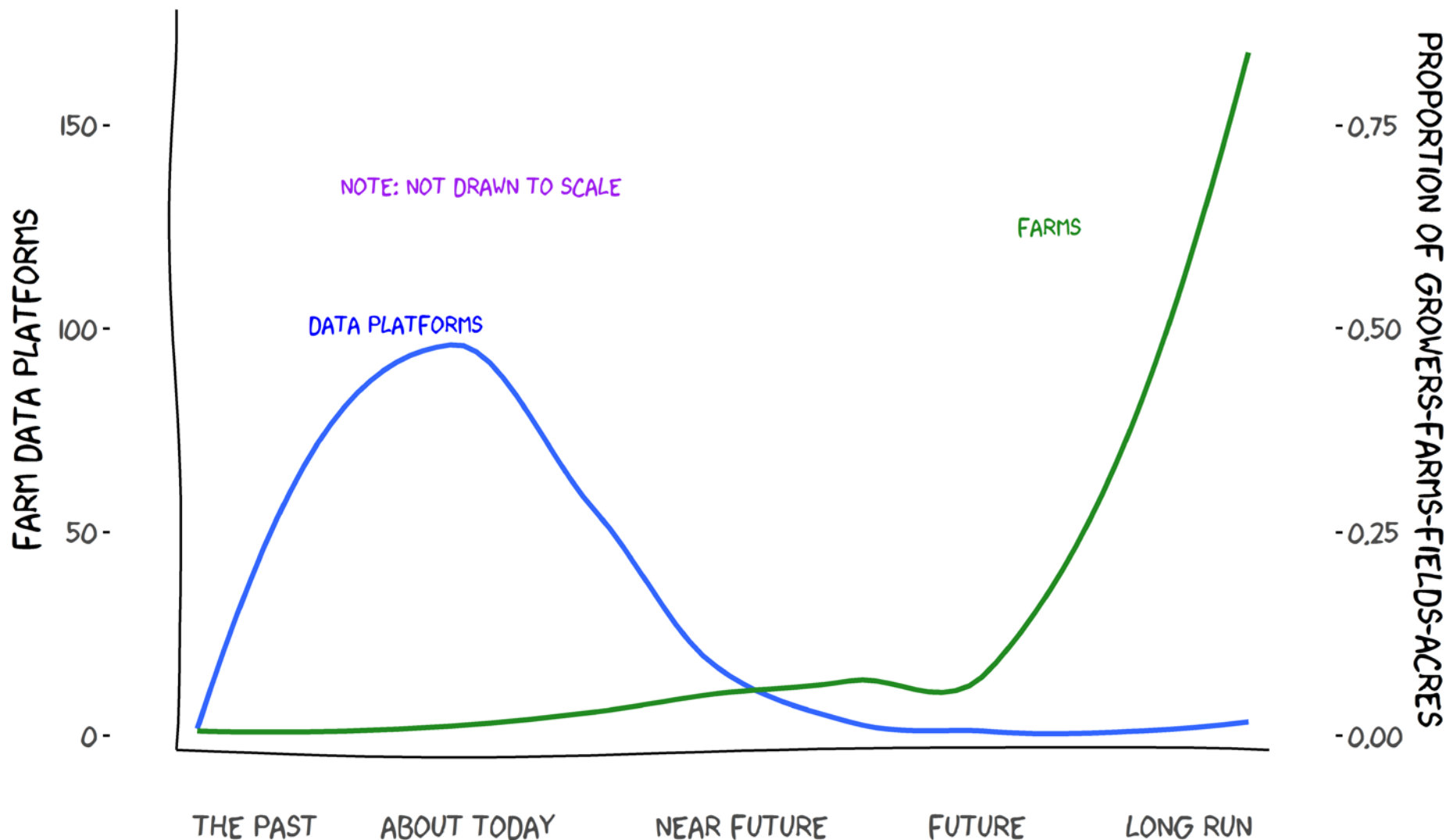
Data	Primary Use	Secondary Use
Yield monitor data	Documenting yields On-farm trials Splitting crop shares	GxExM analyses Discriminatory pricing
Soil sample data	Fertilizer decisions	Regional compliance Algorithm development
Scouting	Spray decisions	Regional analytics Early alerts
As-applied fertility	On-farm trials Compliance	Algorithm development

Need 1 field

Need many fields

- Able to collect data from across numerous rivals
 - All members of each segment
 - No competitor in the ag space
- Must be seen as ‘friendly’
- There will be *very few* data repositories
 - Maybe by ‘region’
 - Some data layers may be held separately
- May have never heard their name

Life cycle of farm data industry



Who's driving the ag data bus?



By **Chris Bennett**
Farm Journal
Technology and Issues Editor

Big data is more than a buzzword—farmers are harvesting data from machine telematics, yield monitors and input decisions, to name a few sources. There's value in the data for the farmer to turn around and make decisions, and numerous companies are vying for the information as well.

"It seems like 100 companies are in contention, but that number will fall to 10, then to five and probably down to one," predicts

Ag Data: Who is Driving the Bus?
OCTOBER 4, 2017

Questions to ask prospective data companies:

1. How many growers/farms/fields/acres in data community?
2. What community analytics conducted will benefit my farm?
3. What data quality control standards are being used?

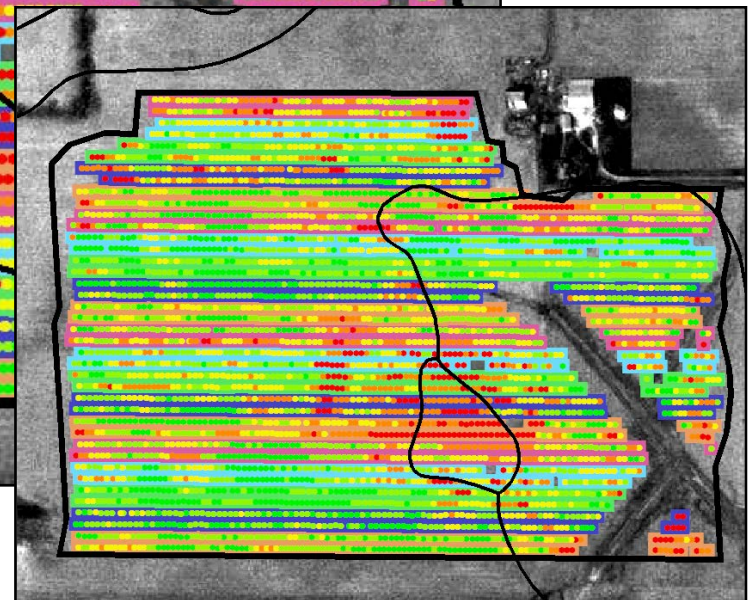
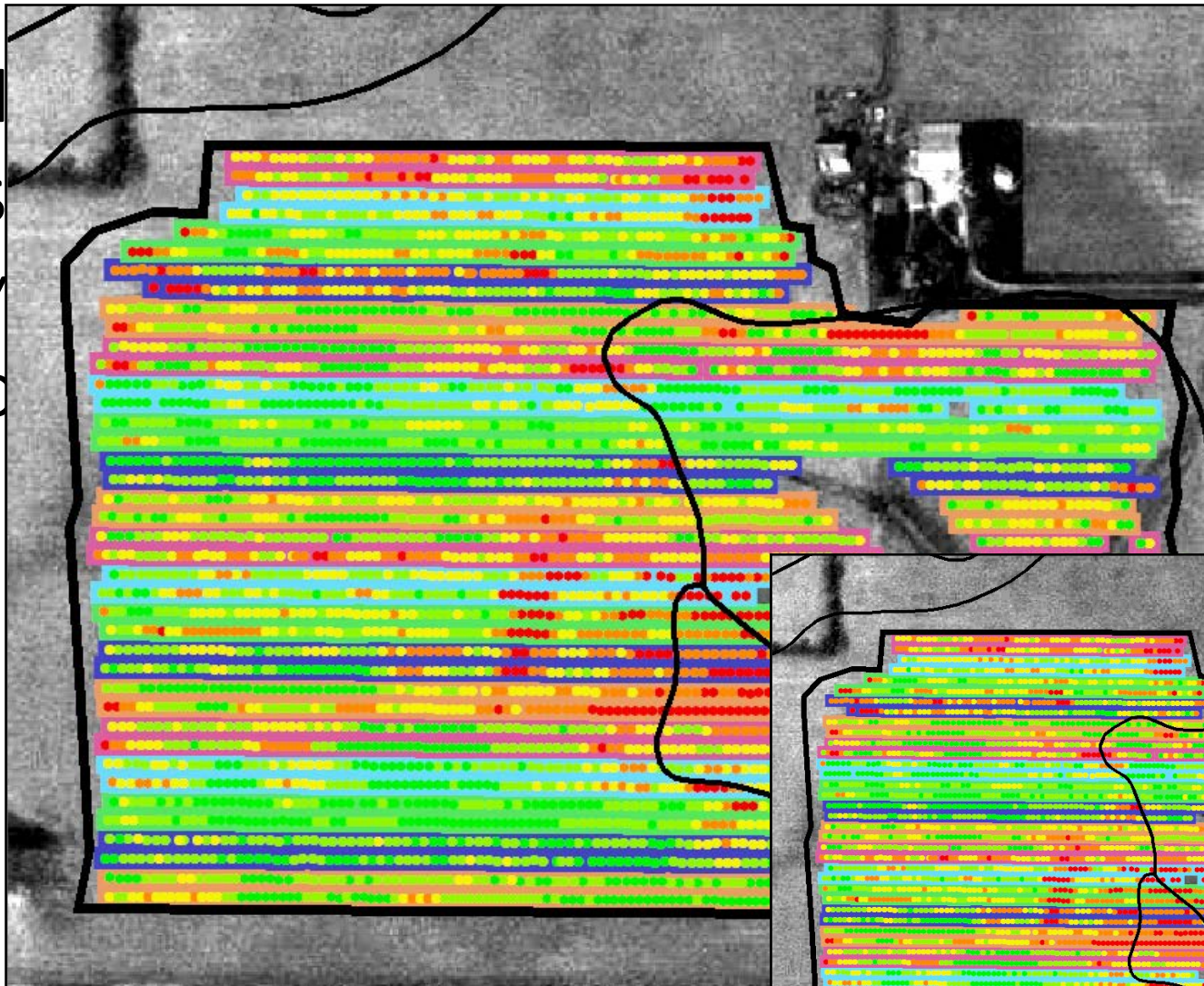
Source: Chris Bennett, Ag Data: Who is Driving the Bus? October 4, 2017

- Yield

– S

– Y

– D





- Wireless infrastructure impacts farmland values
- Collect data this even if you do not use it
- Secondary uses recognized as valuable
 - If yield monitor malfunctions, harvester stops for repair
- Data quality viewed as important
 - Small data at the grower:farm:field level
 - Big data at the community level
- Rec: if you do not see a clear benefit outweighing the cost, wait.
- Going off grid not sustainable

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