



ROGO

Let's talk business -
How to optimize for efficiency & value creation

What & How

Value & Efficiency for more clients

**1. Make
Win/Wins**

**2. Eliminate
Waste**

**3. Drive
Accountability**

Rogo Case Study + 7 Habits Thinking

Rogo Overview

**Our robotic soil
sampling services**

**eliminate 10-20%
sampling error**

**and increase ROI of soil
fertility inputs**

Rogo Traction

**Robot Service
Sold Out**

**AgFunder
Award - 3000
farmers**

**\$200K Ag-
Celerator Award**

**30+
customers**

0% churn

**50K paid
acres**

Rogo Plan

Today: IN, IL, OH

**1-5 Years: Midwest,
then North America**

5+ Years: Global

1. Make Win/Win's

What is a win/win?

**Agreement between 2 parties
with:**

Desired Results

What (not how)
and at what
quality.

Guidelines

limits on how it
can get done. try
to minimize.

Accountability

what the reporting
mechanism is...
more later

General Win/Win Examples

Customers

on soil sampling
logistics mgmt.

Farmers can be
reasonable - Farmer
Rick example.

Employees

Usually laziness on
what manager wants.

Process (How) docs
create waste.

Soil Sampling - Results vs Methods

Desired Results

Depth

Location

Timing

**Should be
Focus**

Methods

Use an Ipad

Use a hand-probe

“Precision Ag”

“Grid Sampling”

2. Eliminate Waste

What is waste - according to TPS / Lean?



DEFECTS

Waste from a product or service failure to meet customer expectations



OVERPRODUCTION

Waste from making more product than customers demand



WAITING

Waste from time spent waiting for the next process step to occur



UNUSED TALENT

Wastes due to underutilization of people's talents, skills, and knowledge



TRANSPORTATION

Wasted time, resources, and costs when unnecessarily moving products and materials



INVENTORY

Wastes resulting from excess products and materials that aren't processed



MOTION

Wasted time and effort related to unnecessary movements by people

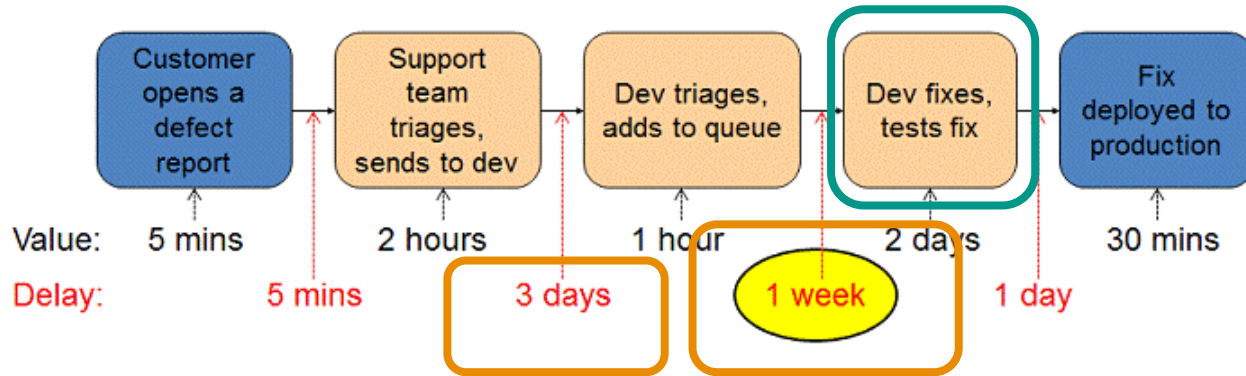


EXTRA-PROCESSING

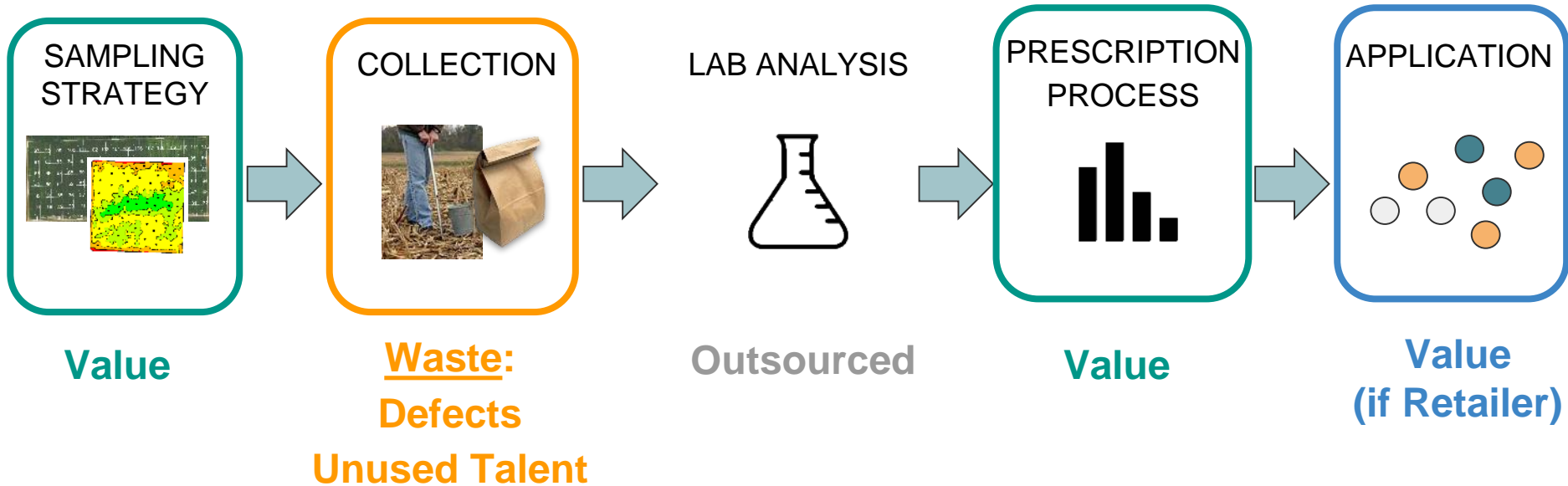
Wastes related to more work or higher quality than is required

Tool: Value Stream Mapping (VSM)

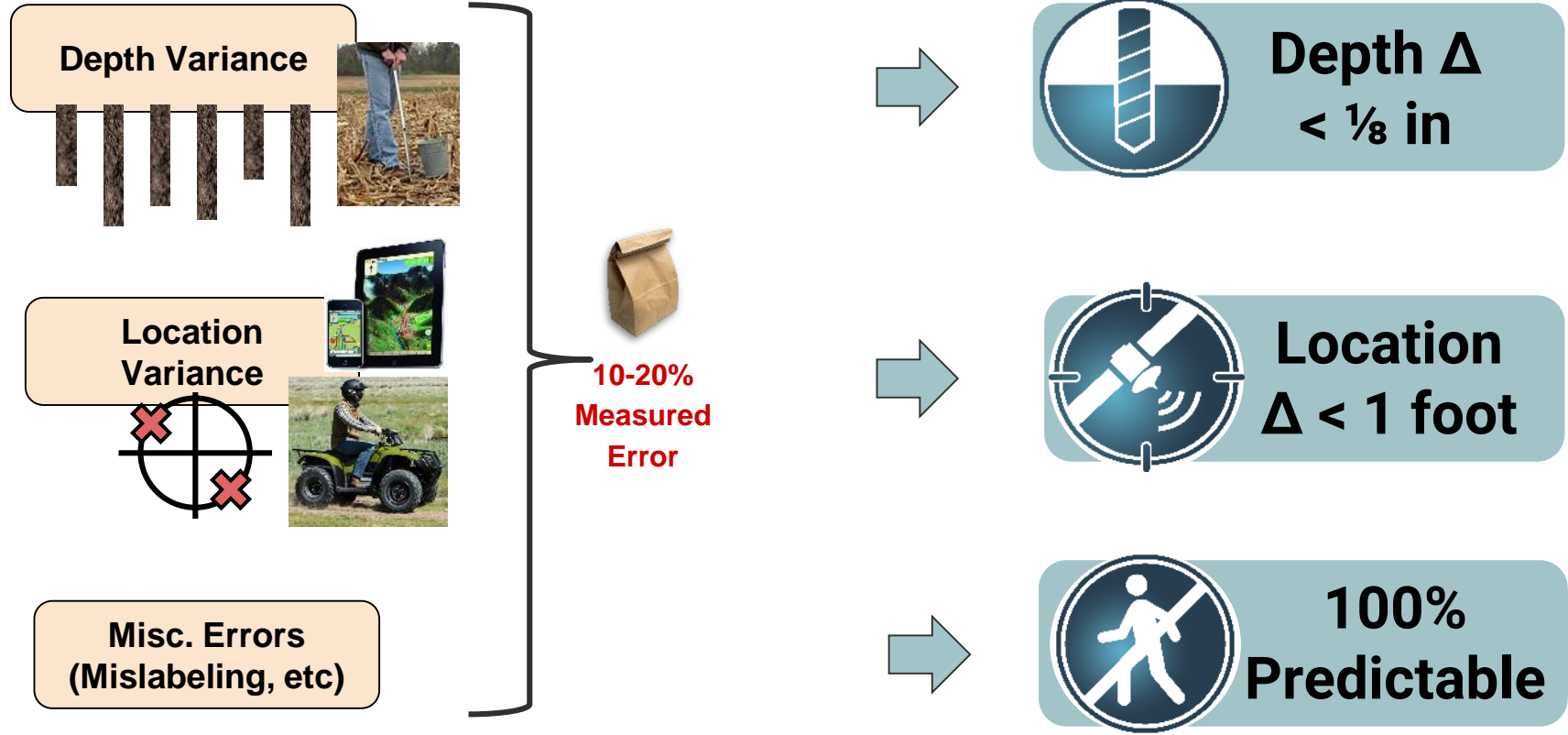
Process Flow - with value + waste highlighted



Soil Fertility Mgmt. - VSM



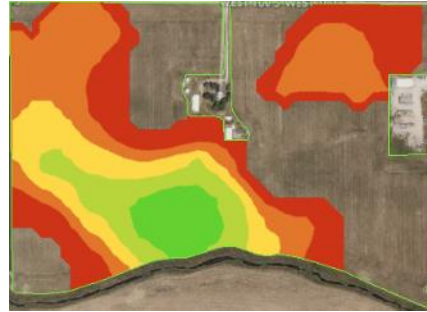
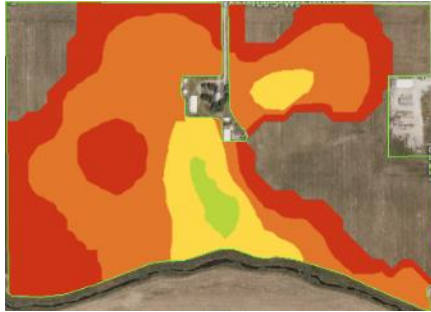
Sample Collection - Defects & Solutions



Location Accuracy Matters - Study

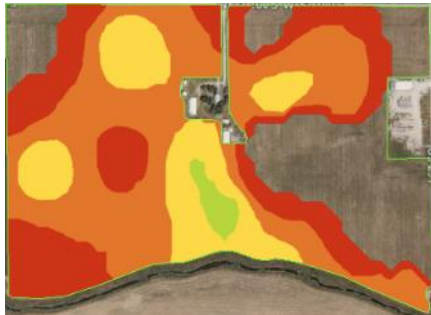
Sampled A-points twice, then moved points 25 ft off to create B-points.

A



B – 25 ft off

A



**25% of lime in
different spot!
25% error**

The Solution: Autonomous Robotic Soil Sampling



**Exact
Depth**

Patent-Pending
High-Speed Self-Cleaning
Auger.



**Right
Location**

Advanced GPS +
Navigation Algorithms.



4x Productive

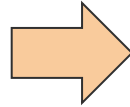


**Version
4**

SOLD AS A SERVICE

Grower ROI

Human Collection



Bad Soil Bag



20% Measured Error

Conservative
Error 10%



Fertilizer
\$50 / acre



Fertilize 3x
per sample



Profit Gain
\$15 / acre

Profit Gain
\$15 / acre



Max Added Price of
Service
\$ 2 / acre



7 X ROI

3. Drive Accountability

What is accountability?

**Objective, Transparent,
Consistent
Reporting of Results**

Make it visible

**What gets measured,
gets improved.**

Good Examples

Yield Monitor

Planting Monitor

**Monthly
Financial
Statement**

Bad Examples

Feelings

“Blip” Reporting

**Methods vs
Results**

Soil Sampling Bad Examples

Spying

Protocol

**Human
Estimation**

Soil Sampling Accountability

**Reported
location & depth
of every sample core**

No more mystery.

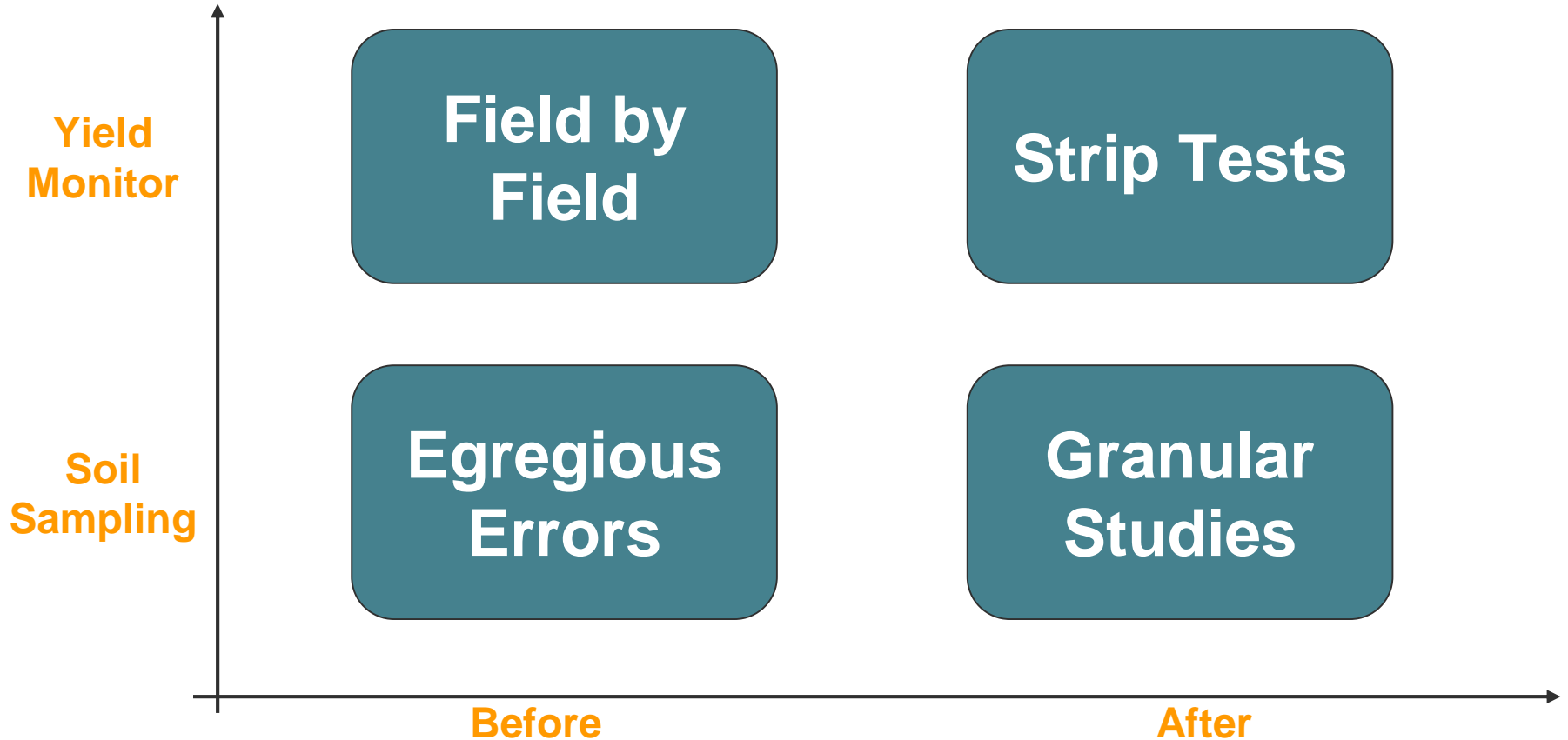
The Value of Soil Sampling Accountability

**Done As
Prescribed**

**Root Cause
Quickly**

**Build
Customer
Trust**

Comparison to the Yield Monitor



Long-Term Benefits of Accountability

You can only study, what you can measure.

**Sample
Placement**

**Depth
Decisions**

**Fertility
Innovation**

Business Summary

Value & Efficiency for more clients

**1. Make
Win/Wins**

**2. Eliminate
Waste**

**3. Drive
Accountability**

What not how.

Value Stream
Mapping

Make it visible

Rogo Summary

**1. Make
Win/Wins**

Focus on Accuracy & Trust

**2. Eliminate
Waste**

**Eliminate 10-20% error
“defects”**

**3. Drive
Accountability**

**Make the next generation of
fertility mgmt. possible**

THANK YOU



ROGO

BOOTH # 31

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