



Explore how Cargill transformed Enterprise Asset Management User Experience

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83375

About the Speakers

Lance Whittaker

- Agile Lead & Senior Solution Analyst, Cargill
- Working with SAP as user and functional analyst for 18 years. Managed a warehouse facility and production operation for 8 years
- I was on a television trivia contest and won against 25 other contestant

Naveen Rokkam

- Director of Innovations, Mindset
- Been in SAP Innovation space for 12 years. Developed 18 different Technology products. Digital Transformation & User Experience Champion focused on Innovation for Large Scale Enterprises. Staunch believer of leading innovation as an experimental journey.
- Enjoys travelling and meeting new people. Travelled 18 different states in my first 2 years in United States

Key Outcomes/Objectives

- Understand Enterprise Asset Maintenance challenges
- Digital Discovery Process & opportunity to transform
- Use of U15 to collect and store data & drive metrics

Agenda

- Cargill Introduction
- Mindset Introduction
- Cargill & Mindset Journey
- Digital Discovery – Approach & Outcome
- EAM – User Experience Challenges
- Vision from Design Thinking
- Demo: Cloud Hosted UI5 Apps



Meet Cargill

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We live in a world of...



Changing
consumer
values



Advancing
technologies



Geopolitical
uncertainties



Information
everywhere



Connected
all the time



And expectations are headed one way:





Every day:

We serve customers in agriculture, food, financial and industrial, combining years of experience with fresh insights, new technologies and integrated solutions.

**Customers in more than
125 countries**

Every day:

We connect farmers with markets,
customers with ingredients, and
people and animals with the food they
need to *thrive*.

**155,000 employees
in 70 countries**

Every day:

We team up with diverse partners to solve some of the most significant challenges in food and agriculture.

150+ years of experience

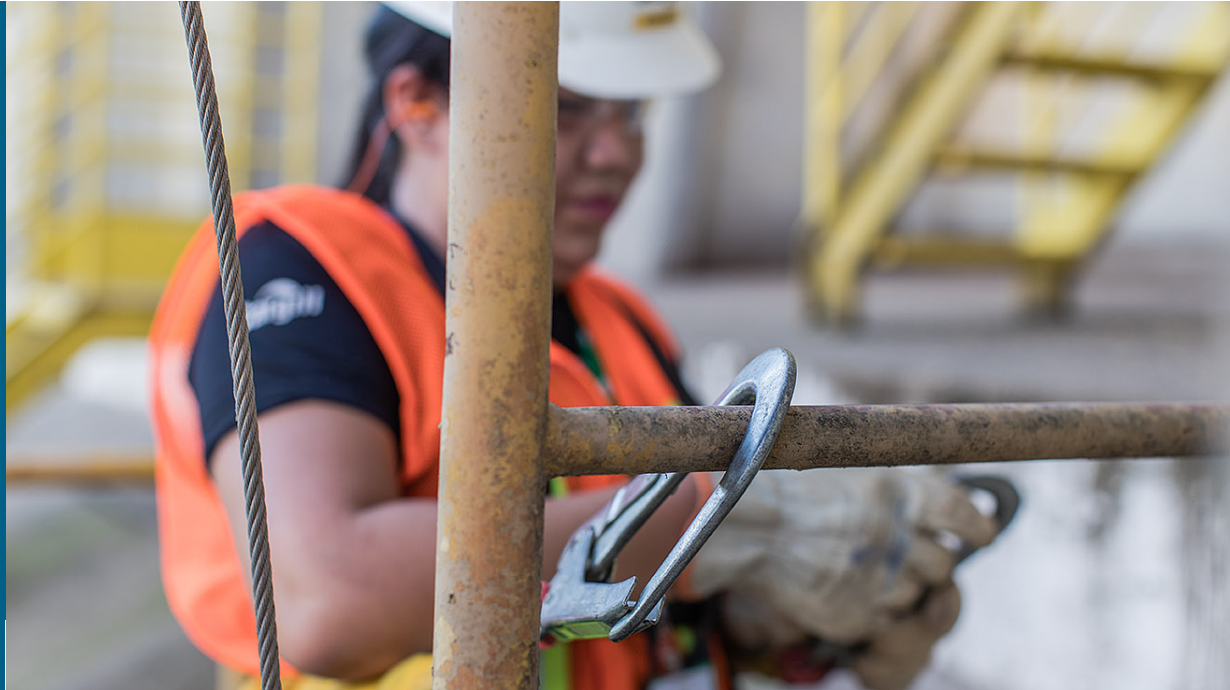
OUR PURPOSE

Nourishing the
world in a safe,
responsible and
sustainable way.



OUR PURPOSE

Nourishing the world in a **safe,** responsible and sustainable way.



Safe: We have a long-standing commitment to safety – for our employees, and for the people and animals who consume our food and feed.

OUR PURPOSE

Nourishing the world in a safe, **responsible** and sustainable way.



Responsible: We are united by a strong set of ethical beliefs – our Guiding Principles. In a world that changes every day, they are the foundation for all that we do.

OUR PURPOSE

Nourishing the world in a safe, responsible and **sustainable** way.



Sustainable: Today's generation and tomorrow's both need a food system that works. We are building solutions to make that a reality.

OUR VISION

Be the most
trusted partner in
food, agriculture
and nutrition.





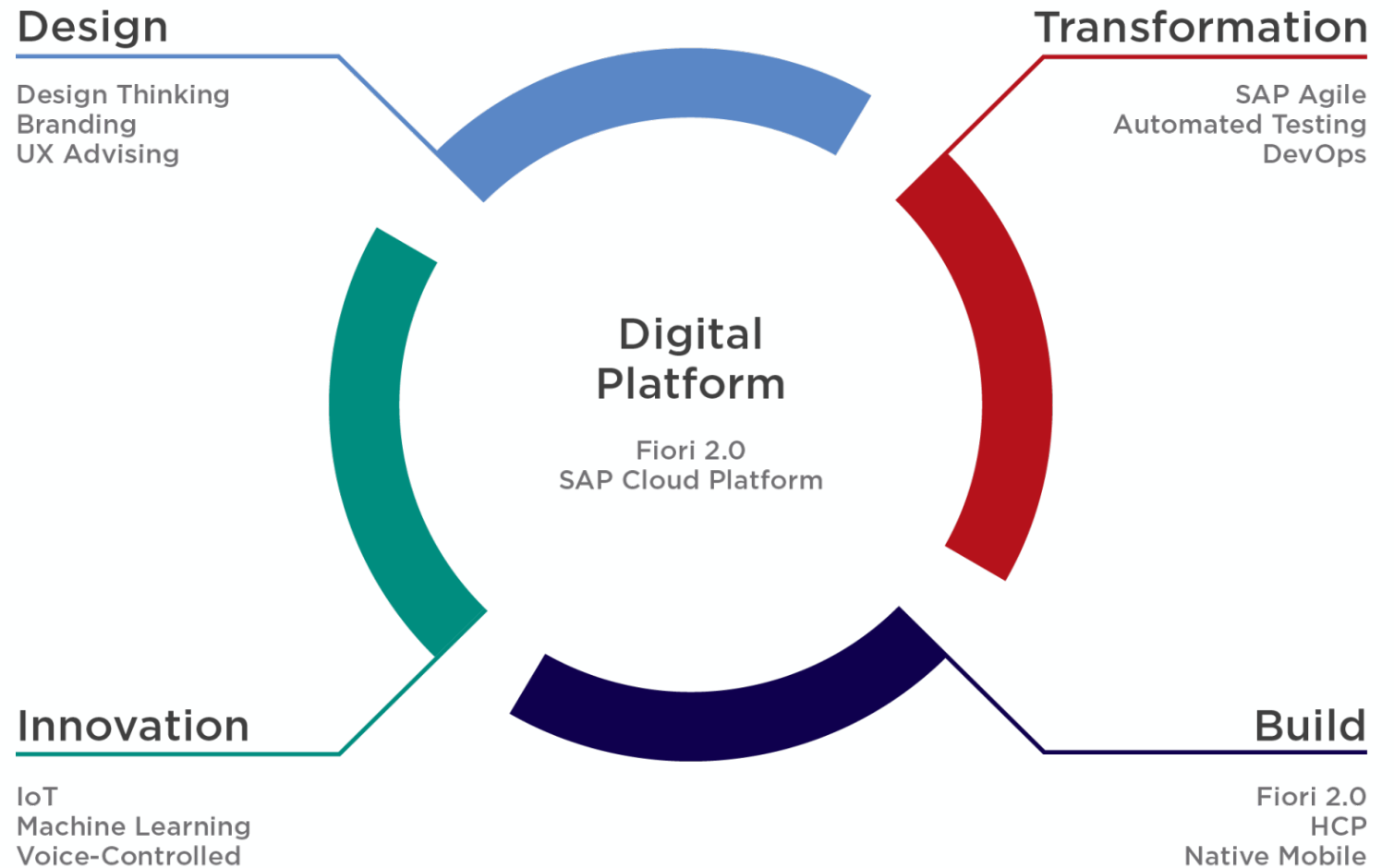
UX / Design Thinking
Focus
SAP Experts
Agile Approach
Fiori Delivery
Intelligent Enterprise

OUR MISSION

At Mindset, our mission is to make employees lives measurably better at work. This is achieved by building remarkable new digital experiences and also by supplying the talent required for the digital enterprise on SAP.



Mindset's Deep SAP Skills help Manage & Innovate the Enterprise



CARGILL & MINDSET JOURNEY

Beginning of Fiori Journey

Generalist Approach:

Activate standard SAP Apps in Gateway and start figuring out if they work

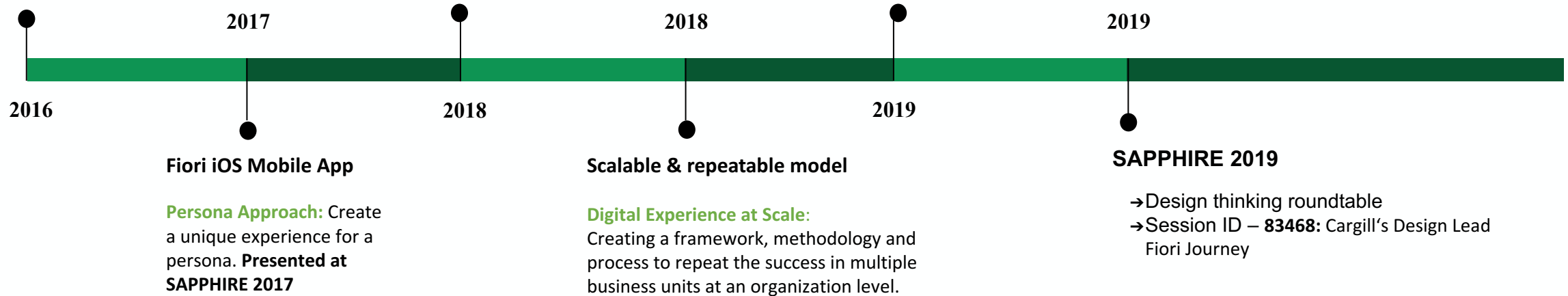
Digital Discovery as a Process

A **new experiment** for rapid innovation and digitization. Creating personalized experiences in a single business unit

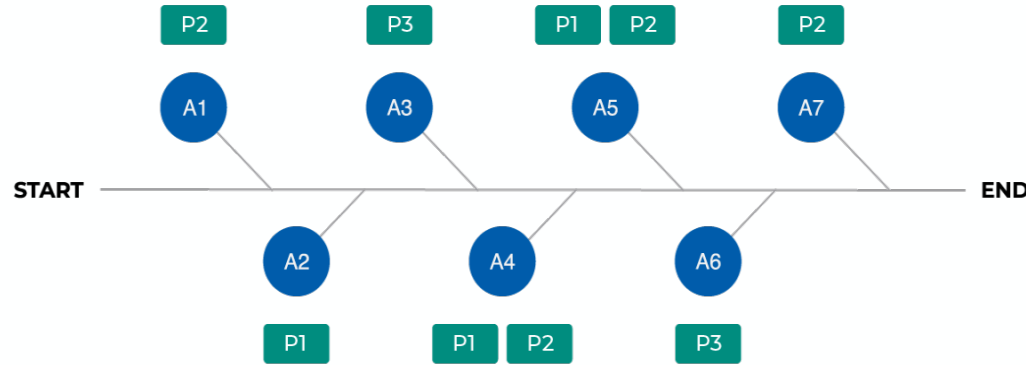
Creating Digital Experiences for the workforce of the future

ASUG – Minnesota:

20+ Fiori Apps across multiple business units, catering users in different geographic locations.

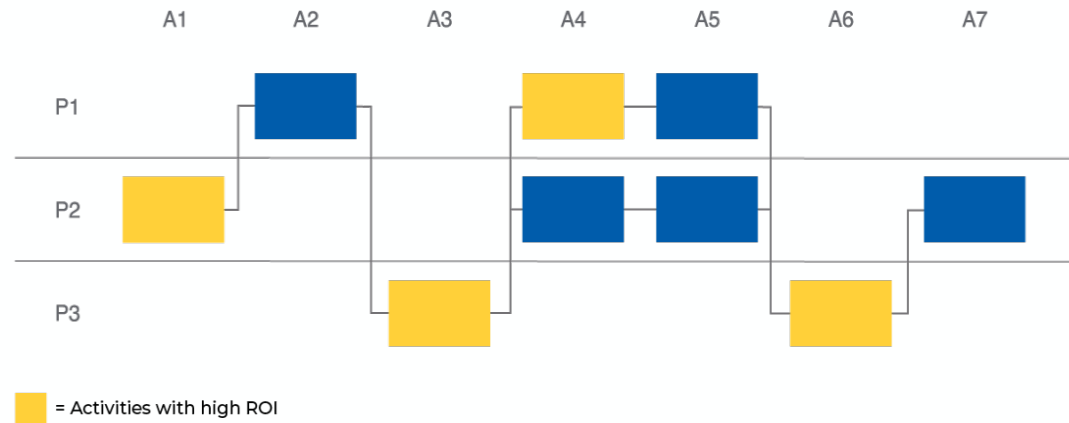


THE APPROACH

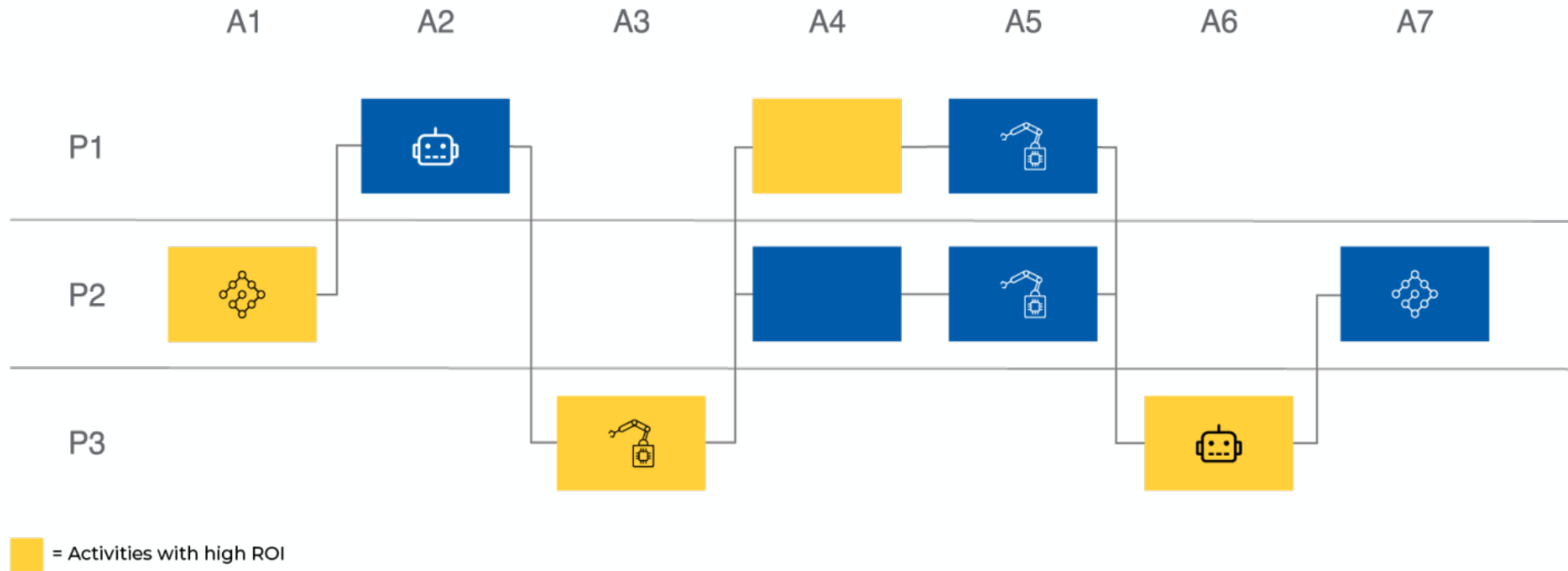


Observe the activities accounting toward an End to End Business Process in an Organization

Transforming into a Journey Map with Users. Identify the Persona with biggest Impact



THE OUTCOME



EAM User Experience Challenges

Criticality Parameter Settings

Asset # 123

(35.00%) Safety Impact

Weighting

(100.00%) Critical Safety Devices

Weighting

(100.00%) Injury Potential

Weighting

(100.00%) Fire/Explosion Potential

Weighting

(100.00%) Loss Potential

Weighting

(100.00%) Safety During Maintenance

Weighting

(100.00%) Environmental Impact

Weighting

(100.00%) Air Emissions

Weighting

(100.00%) Chemical Spills

Weighting

(100.00%) Likelihood of Failure

Weighting

(100.00%) Customer Impact

Weighting

(100.00%) Customer and Quality Impact

(100.00%) Customer Impact

100.00 Critical Customer, would shut the customer down

(100.00%) Product Quality Impact

0.00 No Impact

33.00 Customer Complaint

66.00 Product rejected or discharged

100.00 Product returned

(100.00%) Delivery Impact

0.00 None

33.00 Order Filled < 48 hours Late

66.00 Order filled 6-24 hours late

100.00 Order Cannot be filled or more than 24 hours late

(100.00%) Likelihood of Failure

1.00 None: No failure over the life of the asset

2.00 Low: One failure over the life of the asset

3.00 Medium: One failure in the past 12 months

4.00 High: Multiple failures in the past 12 months

(35.00%) Operational Impact

(100.00%) Spare Availability

0.00 In-line spare

33.00 On-site spare

66.00 Off-site spare

100.00 No spare available/not identified

(100.00%) Maintenance Schedule Compliance

0.00 Mean time to Repair (MTTR) < 2 hours

33.00 MTTR 2 to 4 hours

66.00 MTTR 4 to 8 hours

100.00 MTTR 8 hours

(100.00%) Maintenance Cost

0.00 Cost < \$25,000 USD

33.00 Cost between \$25,000 to \$100,000 USD

66.00 Cost between \$100,000 to \$250,000 USD

100.00 Cost > \$250,000 USD

(100.00%) Production Downtime Severity (Cost)

0.00 Cost < \$25,000

33.00 Loss between \$25,000 and \$100,000

66.00 Loss between \$100,000 and \$250,000

100.00 Loss > \$250,000

(100.00%) Production Impact

0.00 Process Downtime < 4 hours

33.00 Process Downtime between 4 and 8 hours

66.00 Process Downtime between 8 and 12 hours

100.00 Process Downtime > 12 hours

(100.00%) Production Rate Impact

0.00 Rate loss < 10%

33.00 Rate loss between 10 and 30% of capacity

66.00 Rate loss between 30 and 50% of capacity

100.00 Rate loss > 50% of capacity

(100.00%) Likelihood of Failure

1.00 None: No failures over the life of the asset

2.00 Low: One failure over the life of the asset

3.00 Medium: One failure in the past 12 months

4.00 High: Multiple failures in the past 12 months

(10.00%) Customer and Quality Impact

(100.00%) Customer Impact

0.00 No Impact

33.00 Customer served by multiple sites

Genert

(10.00%) Critical Safety Devices

(100.00%) Injury Potential

(100.00%) Fire/Explosion Potential

(100.00%) Loss Potential

(100.00%) Safety During Maintenance

(100.00%) Environmental Impact

(100.00%) Air Emissions

(100.00%) Chemical Spills

(100.00%) Likelihood of Failure

(100.00%) Customer Impact

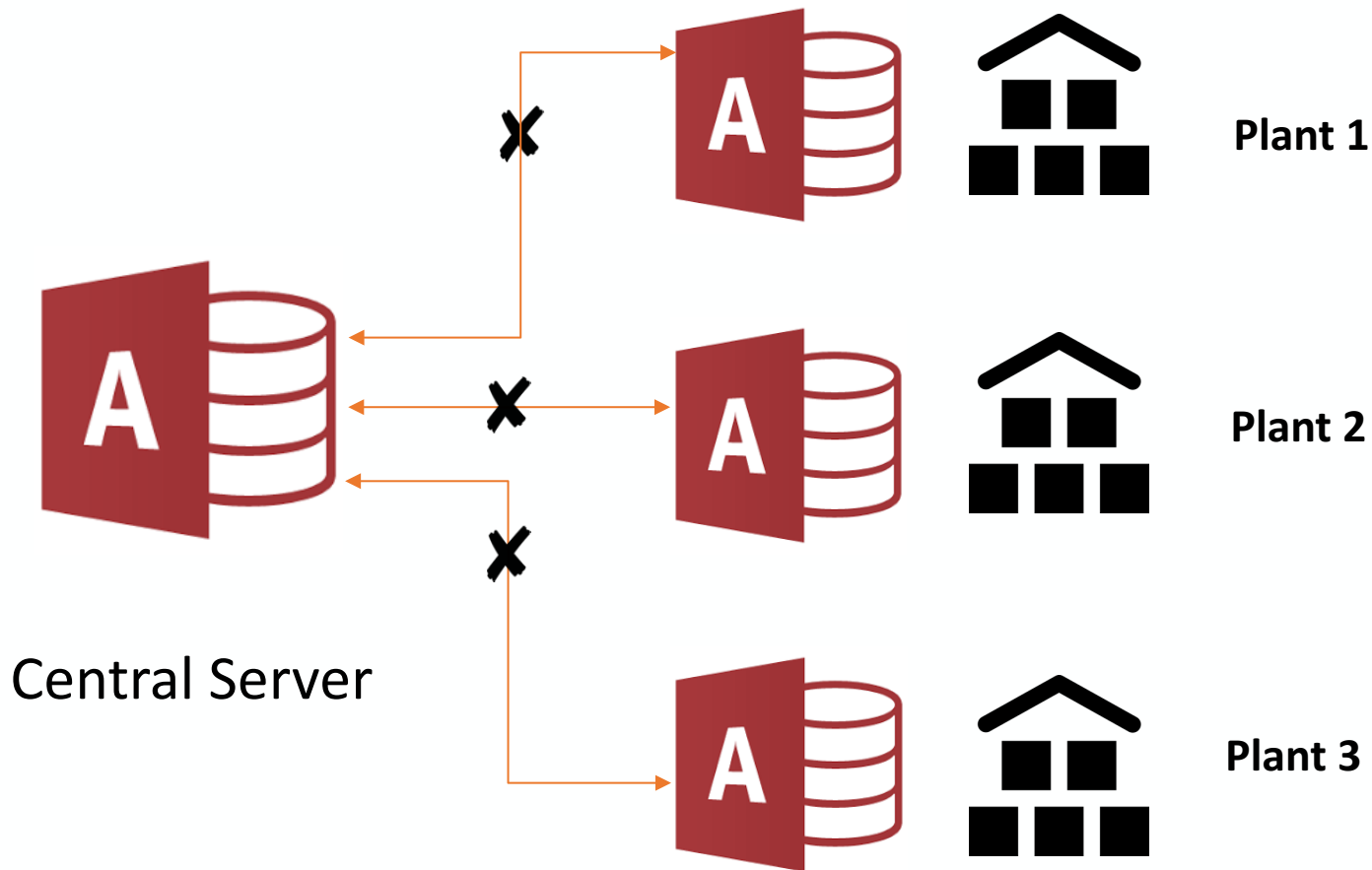


Local DB on User Laptop in Each Plant

Challenges:

- Manual process of entering data using Pen & Paper at each plant
- Updating the information in local access DB on a user Laptop
- Loss of information
- Data traceability issues
- Distorted User Experience

EAM User Experience Challenges

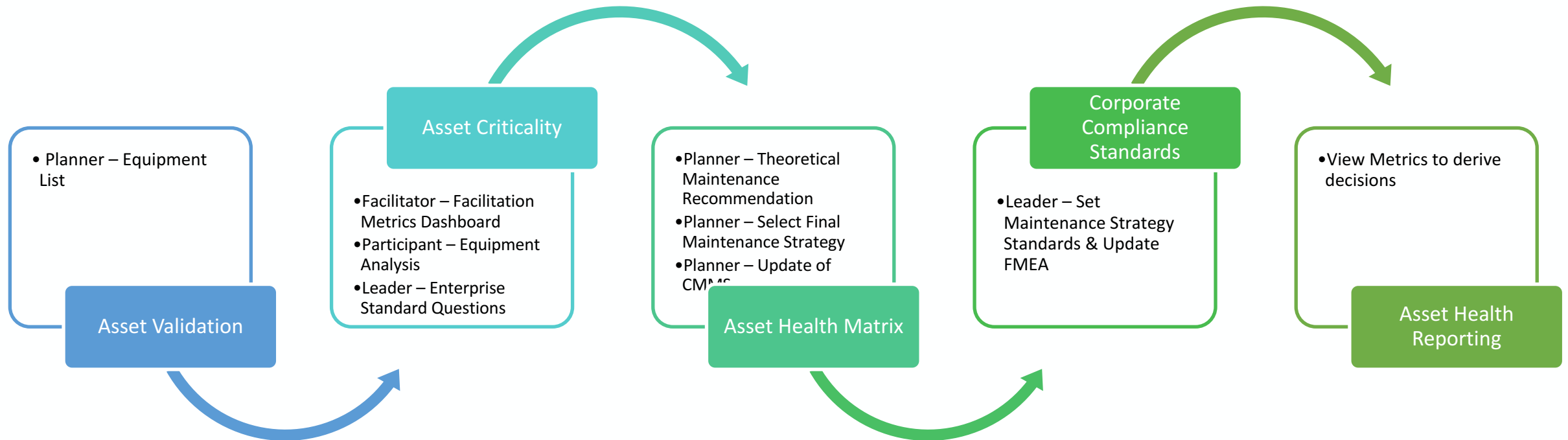


Challenges:

- No Synchronization of the local Access DB to a central instance
- Data Integrity issues
- Distorted User Experience
- Issues with Data Conflicts
- Data traceability Issues
- Loss of opportunity to perform data analysis and drive metrics

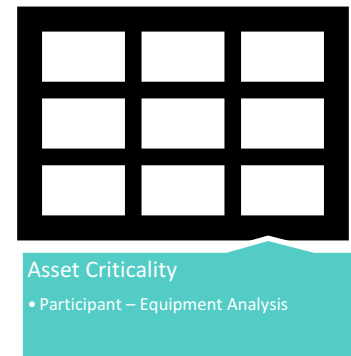
Digital Discovery – Persona / Activity

Each phase of the Asset Health Evaluation Process has specific user experience activities that need to be addressed by persona



Vision

Create a starting for the users to access multiple experiences in congruence with existing experiences in Cargill today.



Design Thinking – Low Res

Tile 1:

Image 1: {

Image 2: {

Image 3: {

EQUIPMENT LIST

ASSET VARIATIONS

Enterprise: Technology: Plant:

CREATE UPLOAD

CMMS Equipment Number:

CMMS Equipment Description:

Corporate Asset Number:

Equipment Class:

Commit Cancel

EQUIPMENT ANALYSIS

① Safety Impact — ② Environmental Impact — ③ Customer and Quality Impact — ④

1. Safety Impact

Question	Answer	Comments
1. Critical Safety Devices	<input type="radio"/> (3%) None	<div>Search</div> <div></div> <div></div> <div>(3.4)</div>
2. Injury Potential →	<input type="radio"/> (33%) Potential for medical	
3. Fire/Explosion Potential	<input type="radio"/> (66%) Potential for lost time	
	<input type="radio"/> (100%) Potential for serious injury/death	

NEXT

Tile 4:

Image 4.1 {

ENTERPRISE STANDARD QUESTIONS

Enterprise: Technology:

Category (6) + EDIT

Name of Category	Weightage (%)
Safety Impact	30 >
Environmental Impact	10 >
Customer and Quality Impact	10 >
Operational Impact	35 >
Food Safety Impact	10 >
Total	95/100

Print

Design Thinking – Equipment Validation

Equipment Validation

Create

Upload

Enterprise

Protein and Salt

Technology

Salt

Plant

Watkins Glen

Tool

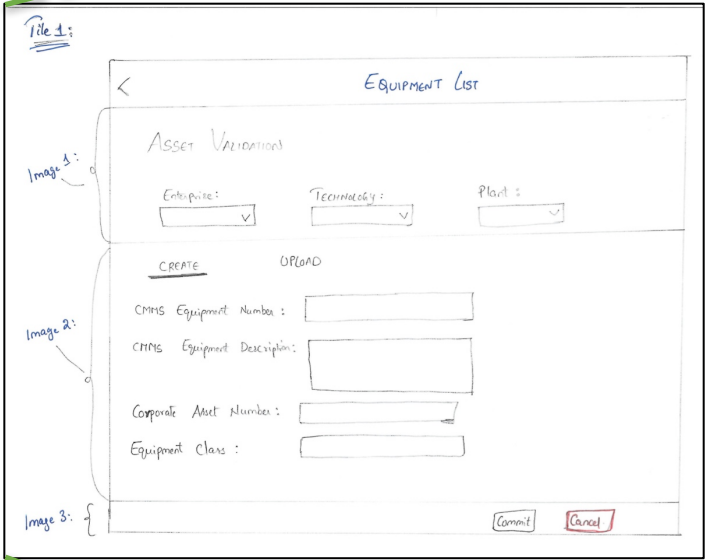
Assets

Create

Edit

Delete

	Asset	Asset Description	Asset Type	CAF Code	Last Changed Date	Department	Process	Line
<input type="checkbox"/>	1243	BOND GRANULATOR M8FM02	MILL, GRINDER		Mar 29, 2019	627EQUIP	8PRESSES	XXXX
<input type="checkbox"/>	1291	BOILER SUMP PUMP	PUMP, DIAPHRAGM		Mar 29, 2019	690EQUIP	4PUMPS	XXXX
<input type="checkbox"/>	1310	BOILER FEED WATER PUMP	PUMP, CENTRIFUGAL		Mar 29, 2019	690EQUIP	4PUMPS	XXXX
<input type="checkbox"/>	168	#1 INJECTION PUMP (NORTH)	PUMP, CENTRIFUGAL		Mar 29, 2019	690EQUIP	4PUMPS	XXXX
<input type="checkbox"/>	252	EAST PLANT PRESSURE PUMP	PUMP, CENTRIFUGAL		Mar 29, 2019	690EQUIP	4PUMPS	XXXX
<input type="checkbox"/>	254	WEST PLANT PRESSURE PUMP	PUMP, CENTRIFUGAL		Mar 29, 2019	690EQUIP	4PUMPS	XXXX
<input type="checkbox"/>	268	M3SC01 BIG BLUE BAG HOUSE DISCH CONV	CONVEYOR, SCREW		Mar 29, 2019	660EQUIP	3CONV	XXXX
<input type="checkbox"/>	760	#3 INJECTION PUMP (CENTER)	PUMP, CENTRIFUGAL		Mar 29, 2019	690EQUIP	4PUMPS	XXXX
<input type="checkbox"/>	830	FLAKE BIN #9	TANK, NON FERROMAGNETIC		Mar 29, 2019	635EQUIP	9BINS	XXXX
<input type="checkbox"/>	838	FLAKE BIN #1 - 12 TON CAPACITY	TANK, NON FERROMAGNETIC		Mar 29, 2019	635EQUIP	9BINS	XXXX



Design Thinking – Criticality Analysis



Asset Criticality Analysis

Enterprise

Protein and Salt

Technology

Salt

Tool

19-SALT Crit Rnkg Tool

Advanced Search

1325 Assets

To be Started

14

Partial

3

Completed


1308


Assets					
Asset	Description	Plant	Progress	Score	Date
1243	BOND GRANULATOR M8FM02	Watkins Glen	100%	79	Mar 29, 2019
1291	BOILER SUMP PUMP	Watkins Glen	100%	25	Mar 29, 2019
1310	BOILER FEED WATER PUMP	Watkins Glen	100%	121	Mar 29, 2019
168	#1 INJECTION PUMP (NORTH)	Watkins Glen	100%	97	Mar 29, 2019
252	EAST PLANT PRESSURE PUMP	Watkins Glen	100%	88	Mar 29, 2019
254	WEST PLANT PRESSURE PUMP	Watkins Glen	100%	88	Mar 29, 2019
268	M3SC01 BIG BLUE BAG HOUSE DISCH CONV	Watkins Glen	100%	53	Mar 29, 2019
760	#3 INJECTION PUMP (CENTER)	Watkins Glen	100%	97	Mar 29, 2019
830	FLAKE BIN #9	Watkins Glen	100%	99	Mar 29, 2019


Start


Application Overview


Launch Pad


Equipment Validation


Asset Criticality Analysis


Criticality Tool Parameters Management


Criticality Analysis Reports


Criticality Data Migration

Criticality Score Calculation

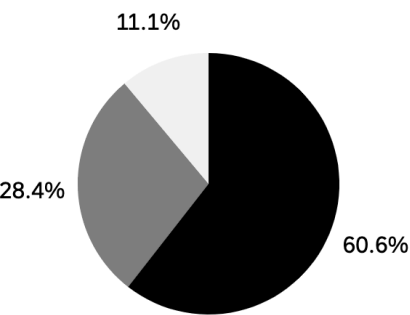
Equipment Criticality Questions: Category

High Hazard Process

Enterprise: Protein and Salt Technology: Salt Weightage: 35 Max Score: 420

Questions			Answers	
Name	Weightage	IS Probability	White - 0	NO
Is this Asset within the boundary of a High Hazard	100		Black - 100	YES

Risk / Severity



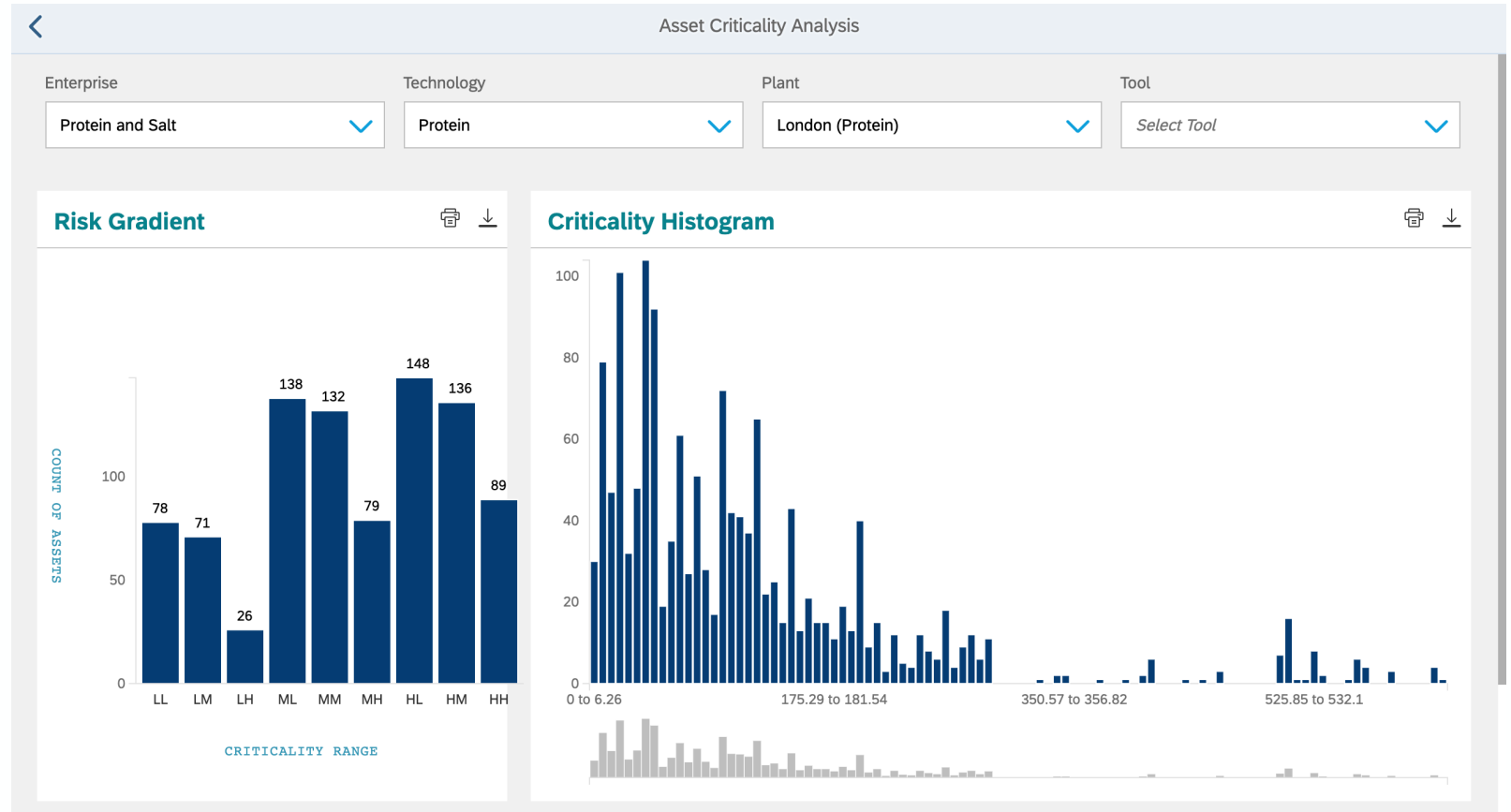
Metrics

Criticality Assessment Probability

	Severity		
	Low	Medium	High
	Low - Low (78)	Low - Medium (71)	Low - High (26)
	Medium - Low (138)	Medium - Medium (132)	Medium - High (79)
Probability	High - Low (148)	High - Medium (136)	High - High (89)

Resulting User Experience

- An Interactive Web Tool for the organization with increased User Experience
- Ability for multiple resources to engage with data platform
- Improved real time reporting
- Real time data synchronization



Demo Time



Contact Us

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>

Q&A

For questions after this session, contact us at Chris_Hein@cargill.com, Lance_Whittaker@cargill.com, and Naveen@mindsetconsulting.com.

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