Principles and Tools to Ensure Optimal Process Performance (even in times of trouble)

Jenna Tishenkel, Grange Insurance

Aaron Kramer, Sutphen Corporation/ ISE OSU

Matt Haight, Columbus City Schools—Transportation Division/ISE OSU

Normal Times or in Disruption Periods, Integrated Systems Engineering Principles, Methods and Tools help to ensure success and/or survival.

1. Transactional Process Improvement to smooth and improve the flow of fast track claims.
2. Development of Visible Measurement and Management Systems to support Tiered Huddles and drive sustained and improved best in class on-time arrivals for our students.
3. Optimizing Kanbans to ensure significant improvement in flow, waste reduction, and order fulfillment times.

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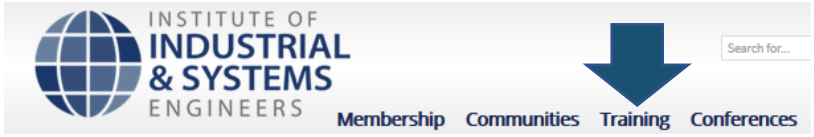
Webinar Logistics

A webinar recording will be made available after the session, follow up e-mail.

Download the presentation **DURING** the Webinar, before it ends!! and request extra handouts after the webinar.

Questions? Type them in the CHAT window and we will answer as time permits.

Follow up questions are welcomed and contact information is provided at the end of the presentation.



And, the Recording and Presentation pdf will be available on IISE's website for IISE members shortly after the webinar date—Training/Webinars/Performance Excellence. ***Membership Has It's Privileges!!***

INSTITUTE OF INDUSTRIAL & SYSTEMS ENGINEERS

Webinars that Matter in Times of Major Disruptions

If you missed these timely, great Webinars, you can go to this link on the IISE Website and get to them.

https://www.iise.org/details.aspx?id=46729

30 Jan 2020: How to Design and Execute **Flow Workshops in Healthcare**—OSU University Hospital East Case Example (Scott Sink and Olivia Vance)

25 Feb 2020: Agile Principles and Methods to **Accelerate Critical Process Innovation** and Improvement—Joan Tafoya and Caitlyn Kenney

19 March 2020: **Creating Cultures** to Support Performance Excellence (crucial foundational element for surviving major disruptions!!) (David Poirier, President IISE)

Engineering Management Systems to Ensure Survival and Success

INSTITUTE OF INDUSTRIAL & SYSTEMS ENGINEERS

And to get to these latest two, same location/link…..

https://www.iise.org/details.aspx?id=46729

Navigating your Business Through the COVID-19 Crisis—7 April

Business Continuity Strategies and Tactics in Periods of Major Disruption—16 April

James A. Tompkins Ph.D.
Chairman, Tompkins International

tompkins

David Poirier, P.E.
CEO The Poirier Group

THE POIRIER GROUP

Engineering Management Systems to Ensure Survival and Success

Storyline for Today

1. This a Real Big, Bad, Black Swan,We are where we are, it is what it is, can't change/control it but can alter how we adjust and respond to it—**Mindset Management**

2. Regardless of your situation and condition, there are some fundamental **Principles and Methods of Integrated Systems Engineering** (and Integrated LeanSigma and Management Systems Engineering) that you need to stay the course with and, in fact, **learn to do better and faster**;

3. Rapidly improving Flow and Quality: Right Things, Right Place, Right Time, Right Amount and Quality, Right Way—Sutphen Case Example;

4. Optimize Learning Time, Get the Kids to School Safely, on time, effectively and Efficiently—Columbus City Schools Transportation Division;

5. Optimizing the Claims Experience to ensure Customer Stickiness—Grange Insurance;

6. Upcoming Webinars that Matter in Times of Major Disruption.

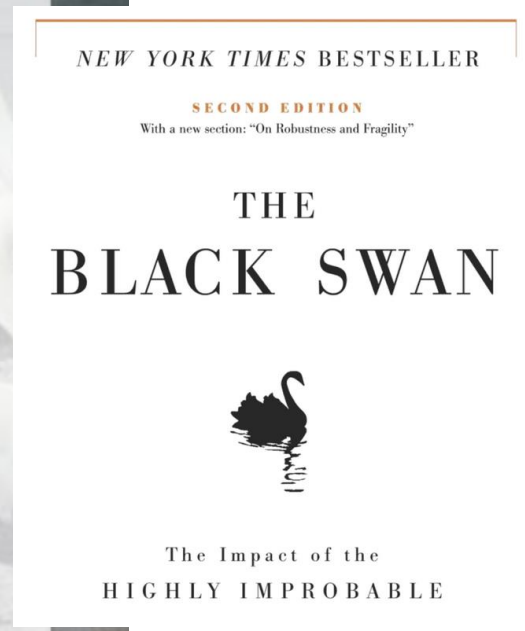
Crisis Disruption

The Black Swan Event

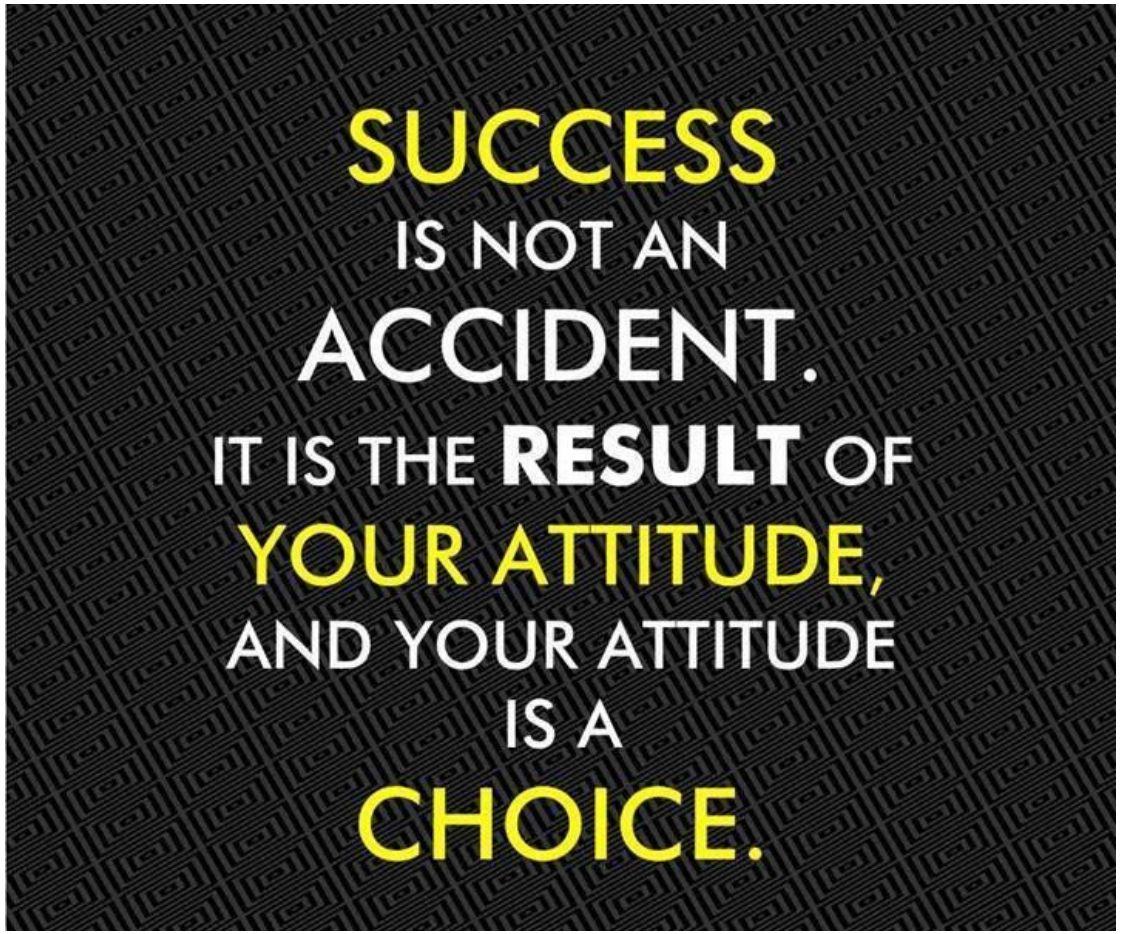
A Black Swan Event:

1. It has **never happened before** or **extremely rarely** (highly improbable events)
2. It **takes people by surprise** as they never imagine such an event occurring
3. It carries a massive **transformational impact**
4. After its first occurrence, the event is **rationalized in hindsight,** as if it could have been expected, even if it could not

Nassim Taleb, 2007



Leading through Disruptions requires a lot of mindset management work….



Walk the Talk…. Practical culture and mindset management leadership

At Effect		At Cause
THOUGHTS, WORDS, DEEDS:	**Strategy and Policy Rapid Deployment**	**THOUGHTS, WORDS, DEEDS:**
Wait and see, Do Nothing		See it, Own it, Solve it, Do it
"Not my job"	**Visible Measurement and Management Systems**	Do-nothing only when/because you know some else 'has it'
Finger-pointing	**Introduce the language and why the concept is important—Pers & Prof Mastery**	Alignment and Accountability
Tell me what to do	**Model and reinforce—internalize and make it part of culture**	Fixing problems fast and well but focused on fixing processes
Ignore/deny	**Focus on communication,coordination, building trust,feedback—Learning Org.**	Contributing to fixing systems
At-blame, at-fault		
Enroll others		
Sabotage		

Disruption Impacts us Differently—Four Conditions/Situations

1. Phoenix (Doom to Tomb)

"It's all over, tipping point for us, liquidate, start over or do something else with your life's energy. (**Phoenix**/Reinvent) we were fragile before this is the killer. What now?"

2. Retrench (Boom or Doom to Hibernate or Tomb)

"This **exposes weaknesses** in our business model, operations, etc. that we have to fix fast! (Preserve, Protect)"

- We didn't see this coming, we're not prepared for this

3. Adapt (Boom or Doom to Boom or Tomb)

"This exposes weaknesses in our business model, operations but we have **strengths and opportunities to capitalize on** but have to be nimble, agile, fast about it—rapid innovation."

4. Thrive (Boom to Boom)

"This is a huge **opportunity** for us but we don't have all the right strengths to capitalize on them. (Re-engineer, innovate, repurpose, reposition, collaboration, etc.)"

Pre-COVID-19 Weak and Strong Businesses: HOW WERE YOU POSITIONED? If you have below, strong. Otherwise weak:

1. Financial Stability: Strong P&L statement, Balance sheet, Valuation, Brand equity, Cash Flow, Liquidity, Credit availability, Net profit margin, etc.

2. Customer-Centric: Great customer satisfaction, high repeat business, strong pipeline of new customers and leadership understanding customers expectations.

3. Planning: Robust and well understood Organization Plan, Strategic Plan, Contingency Plan, Marketing Plan, Customer Acquisition Plan, Budget Plan and Succession Plan.

4. Execution: Clear priorities and accountability, strong metrics and feedback, responsiveness, discipline, maintain deadlines, methodical and decisiveness.

5. Unique Value Proposition: Pervasive across the company a focus on applying core competencies to making customers delighted and ambassadors.

Pre-COVID-19 Weak and Strong Businesses: HOW WERE YOU POSITIONED? If you have below, strong. Otherwise weak:

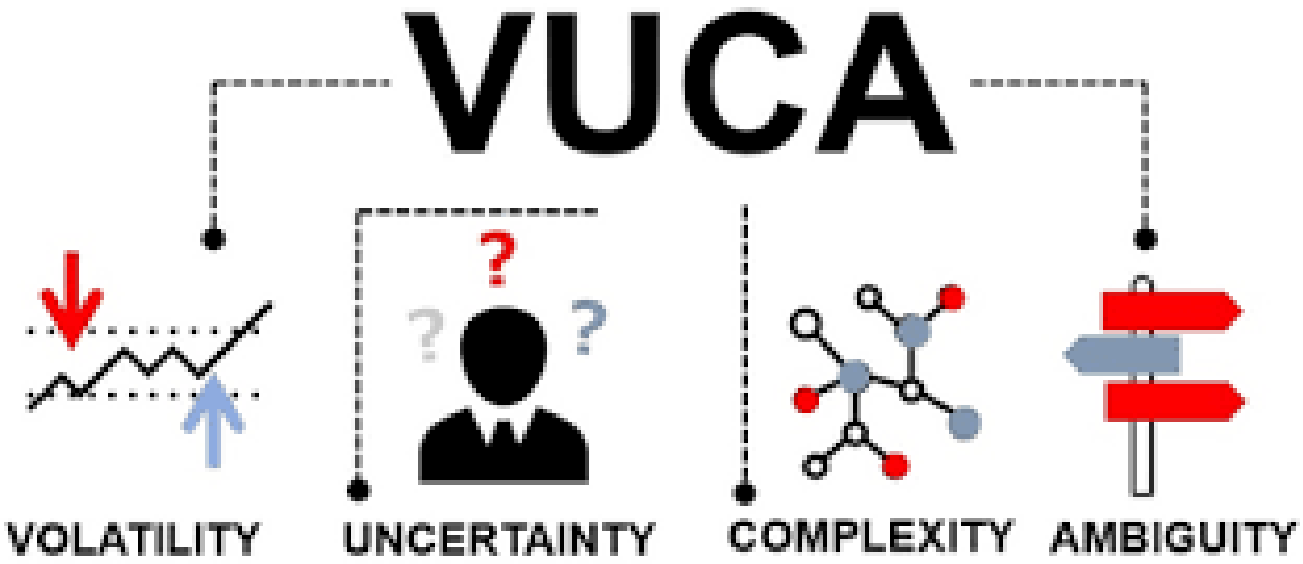
6. Energy: Passion for companies' success, high energy and engagement, collaborative, inspiring, aggressive, optimistic, a sense of urgency and an attitude of "Getting it Done".

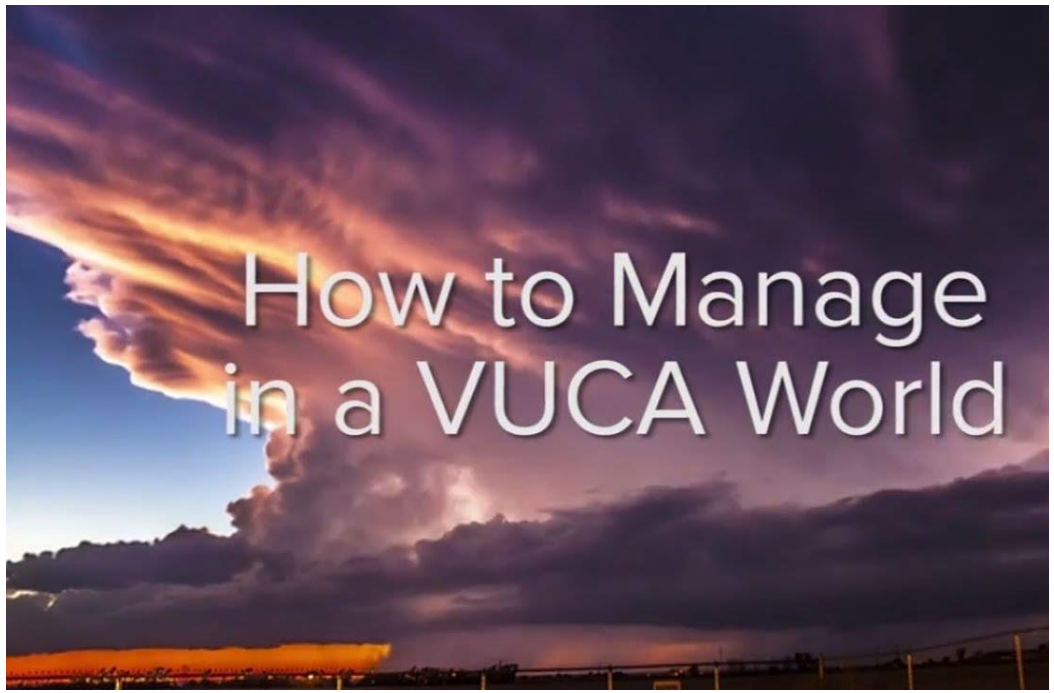
7. Innovation: A spirit of openness and eagerness to get better every day, to improve, to slay all sacred cows and to have a digital path forward.

8. Leadership: A high level of integrity and honesty, candid open communications, perseverance, optimism, adaptable and good judge of people.

9. Teamwork: A keen awareness of the tremendous value and importance of true partnerships with customers, suppliers and staff. Not one or two of these three, but all three.

10. Culture: A progressive culture based upon organizational alignment, respect, profitable growth, intolerance for mediocrity, embracing diversity and having fun.


VUCA
VOLATILITY
UNCERTAINTY
COMPLEXITY
AMBIGUITY


How to Manage
in a VUCA World

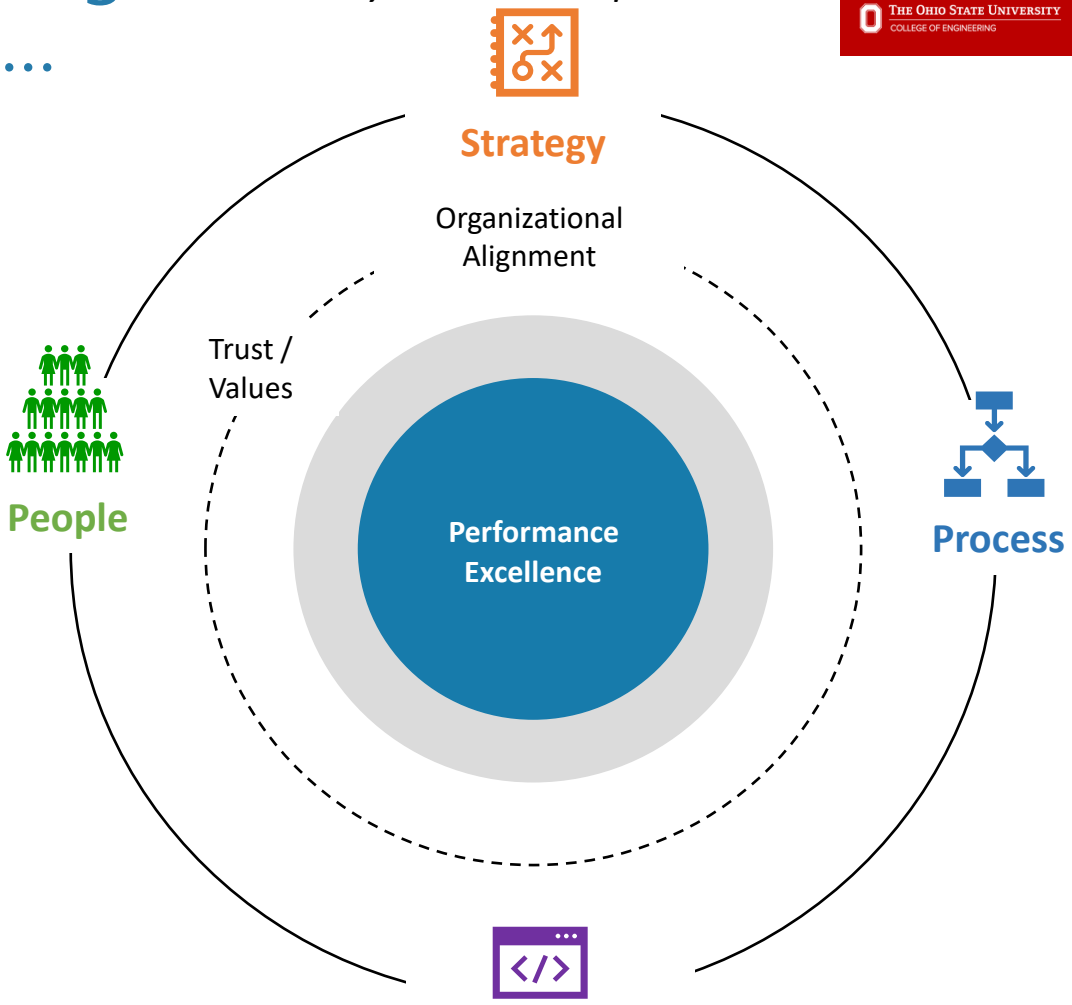
VUCA 2.0

Bill George a senior fellow at Harvard Business School argues that VUCA calls for a leadership response which he calls VUCA 2.0:

1. V, instead of Volatility = Vision
2. U, instead of Uncertainty = Understanding
3. C, instead of Complexity = Courage
4. A, instead of Ambiguity = Adaptability

The Factors to be Managed to Survive and Thrive…

Enhancing the way you think and plan



Changing the way we exchange value with our employees and manage our culture.

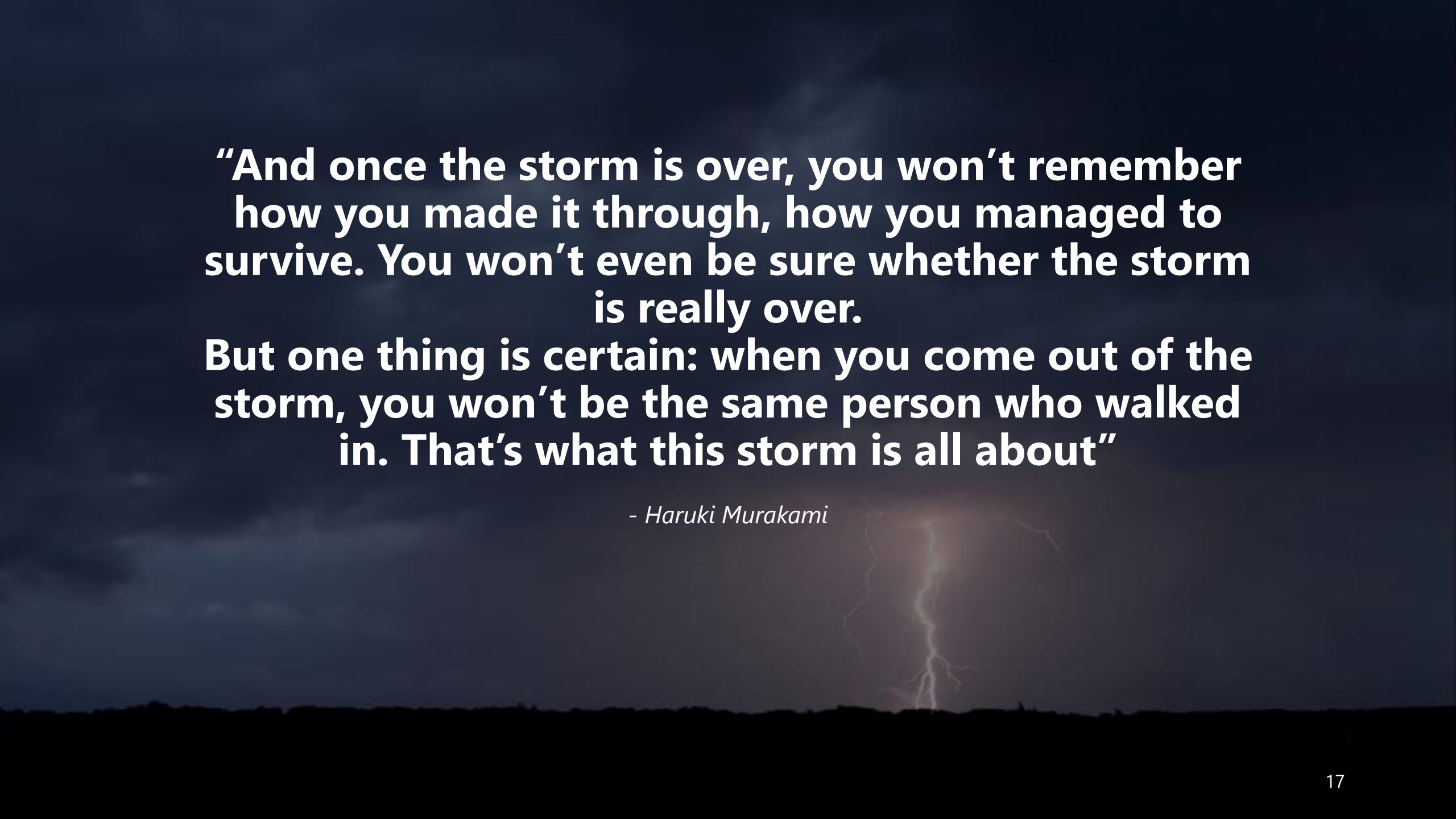
What we do and how we do what we do.

Leveraging hyper-connectivity and the full power of IT Enablement

Five Words that Change the Results you will Achieve as you build your Strategies for Maintaining Business Continuity

Communication	Creating a shared understanding and the necessary **conditions for alignment**
Alignment	Driving the synergy required to rapidly translate **strategy into reality**
Visibility	Creating a clear link between plans, actions and **results that drives accountability**
Accountability	**Taking responsibility** for the results I produce
Discipline	Having the perseverance to **always follow through**

65% of organizations have an agreed upon strategy
14% of employees understand their organizations strategy
<10% of organizations successfully execute


“And once the storm is over, you won’t remember how you made it through, how you managed to survive. You won’t even be sure whether the storm is really over.
But one thing is certain: when you come out of the storm, you won’t be the same person who walked in. That’s what this storm is all about”
- Haruki Murakami

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Sutphen Corporation

Kanban System Optimization for Improved Flow

IISE Webinar

Aaron Kramer

22 April 2020

Sutphen Corporation

is a small manufacturer of fire apparatus in Dublin, Ohio, and has been producing custom fire trucks for customers around the world for over 130 years.

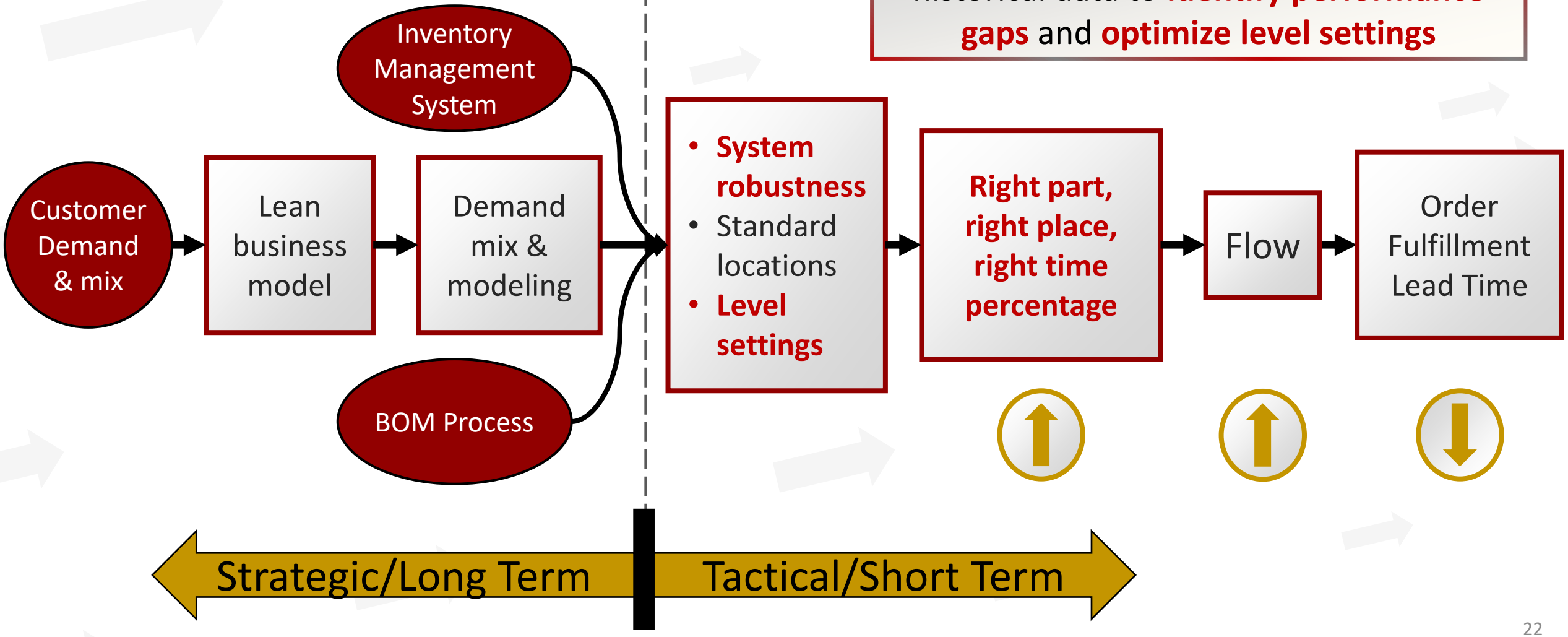
Lean at Sutphen

Sutphen has been making a lean transformation spanning multiple projects over the past eight years to increase flow and reduce waste.

- **Ad hoc** inventory management & ordering — *Pre-2013*
- **Centralized Warehouse** & Kanban System — *2013*
- **IT integration** for data collection — *2015*
- **Consolidation of data** into single database — *2016*
- **Leverage data** to improve Kanban System robustness & optimize level settings — *2020 +*

The Vision for Lean at Sutphen

With the foundation laid, we leveraged historical data to **identify performance gaps** and **optimize level settings**



The Goal

Get more items in the right places, at the right times, in the right amounts

14% of Cards

Problem

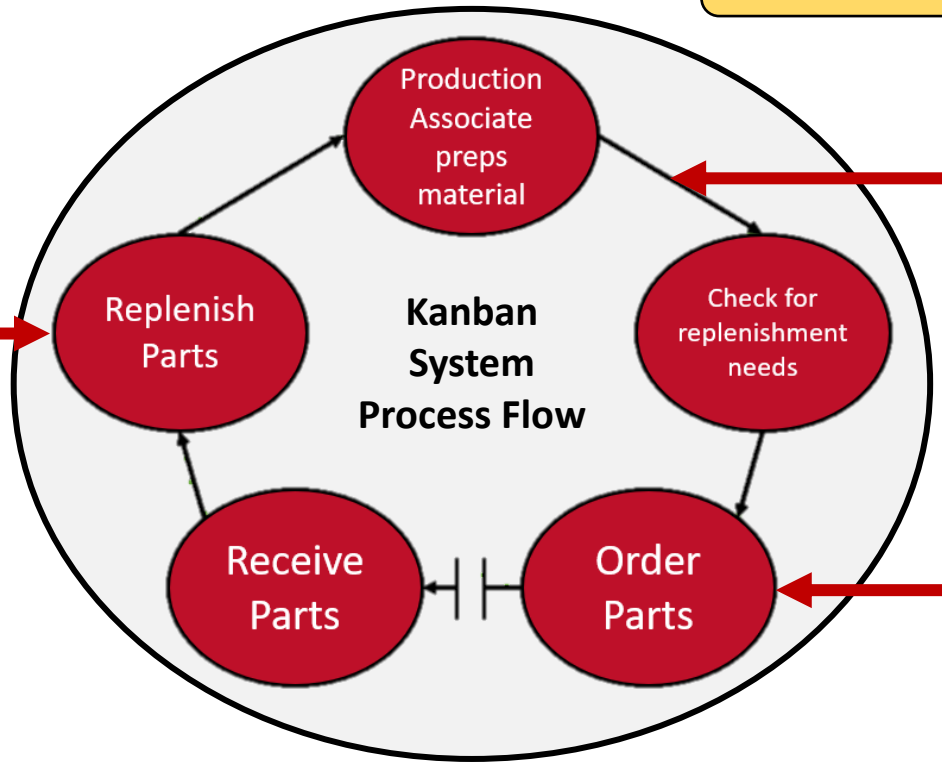
Kanban Cards not flipped after replenishment

→

Production Associates falsely believe that location is on order

→

Stockouts



15% of WH bins empty when reordered

12% of Cards

Problem

Kanban Cards not pulled at Reorder Point (ROP) in Warehouse (WH) and on floor

→

Stockouts

No reliably calculated demand, ROP, or OQ

Problem

ROP and Order Quantity (OQ) are tribal-knowledge based and not optimized

→

Stockouts & Inventory Costs

The Problem

(1) **Performance gaps in the Kanban System**, and
(2) The lack of a **model for demand**

→ **caused stockouts**, which constricted flow and obstructed further Internal Supply Chain improvements **(>$60,000/year opportunity)**

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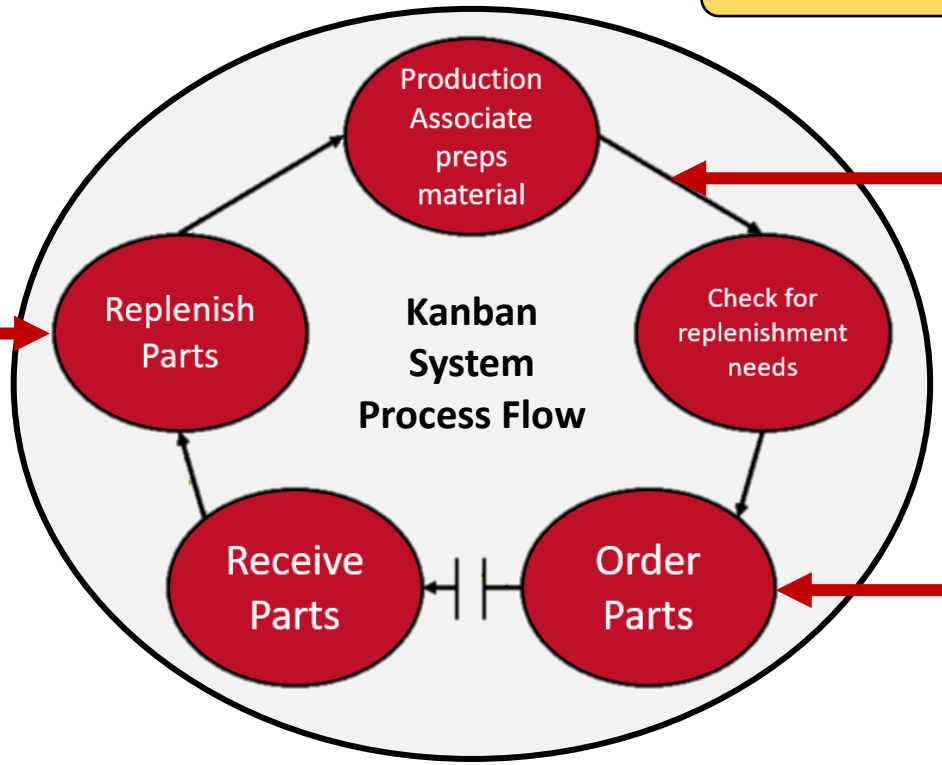

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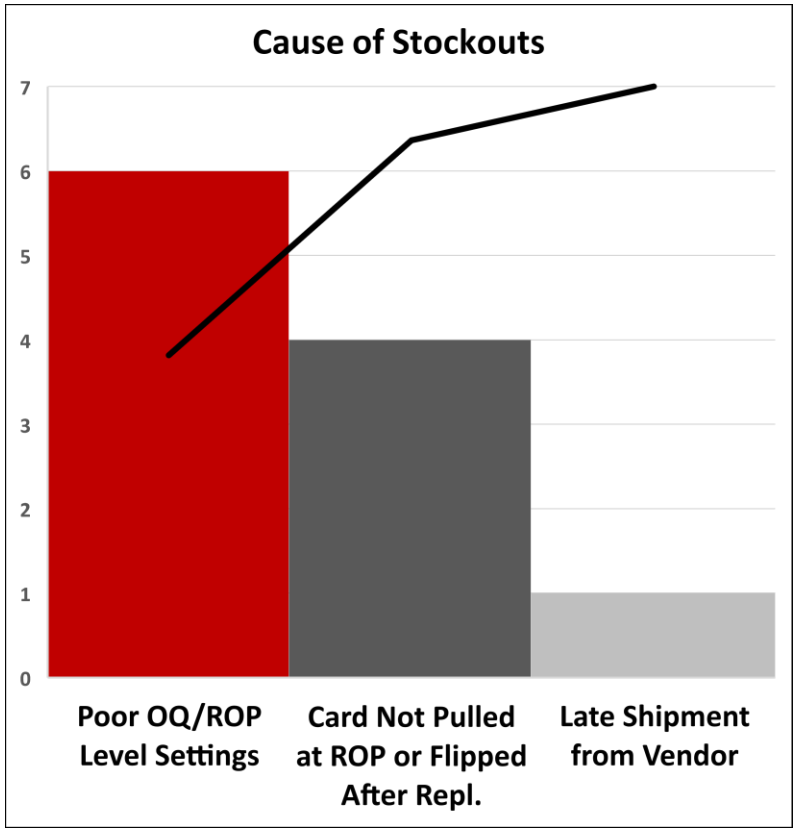

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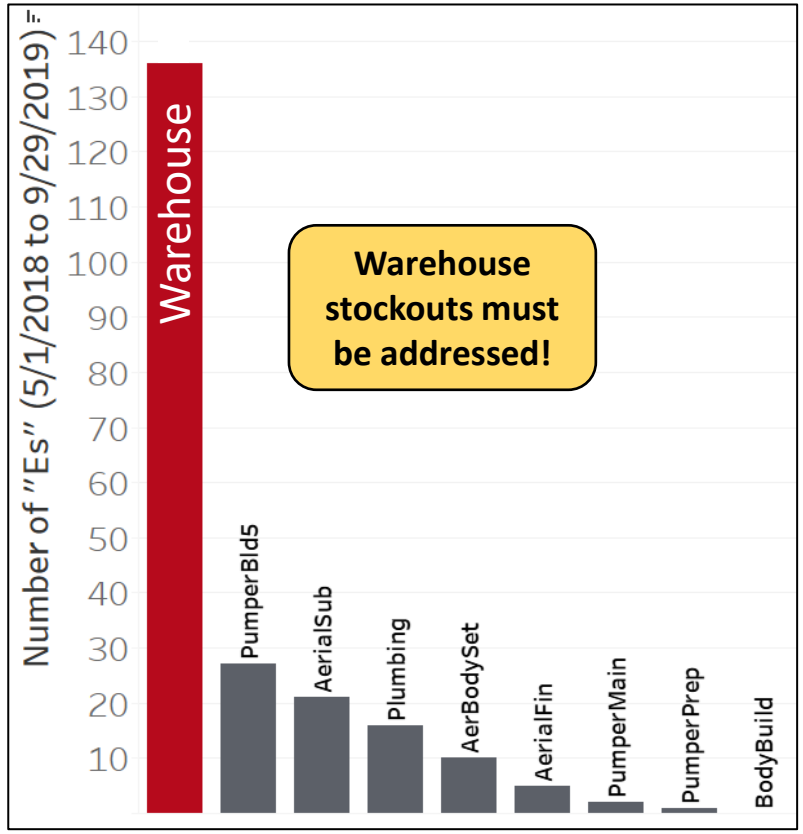

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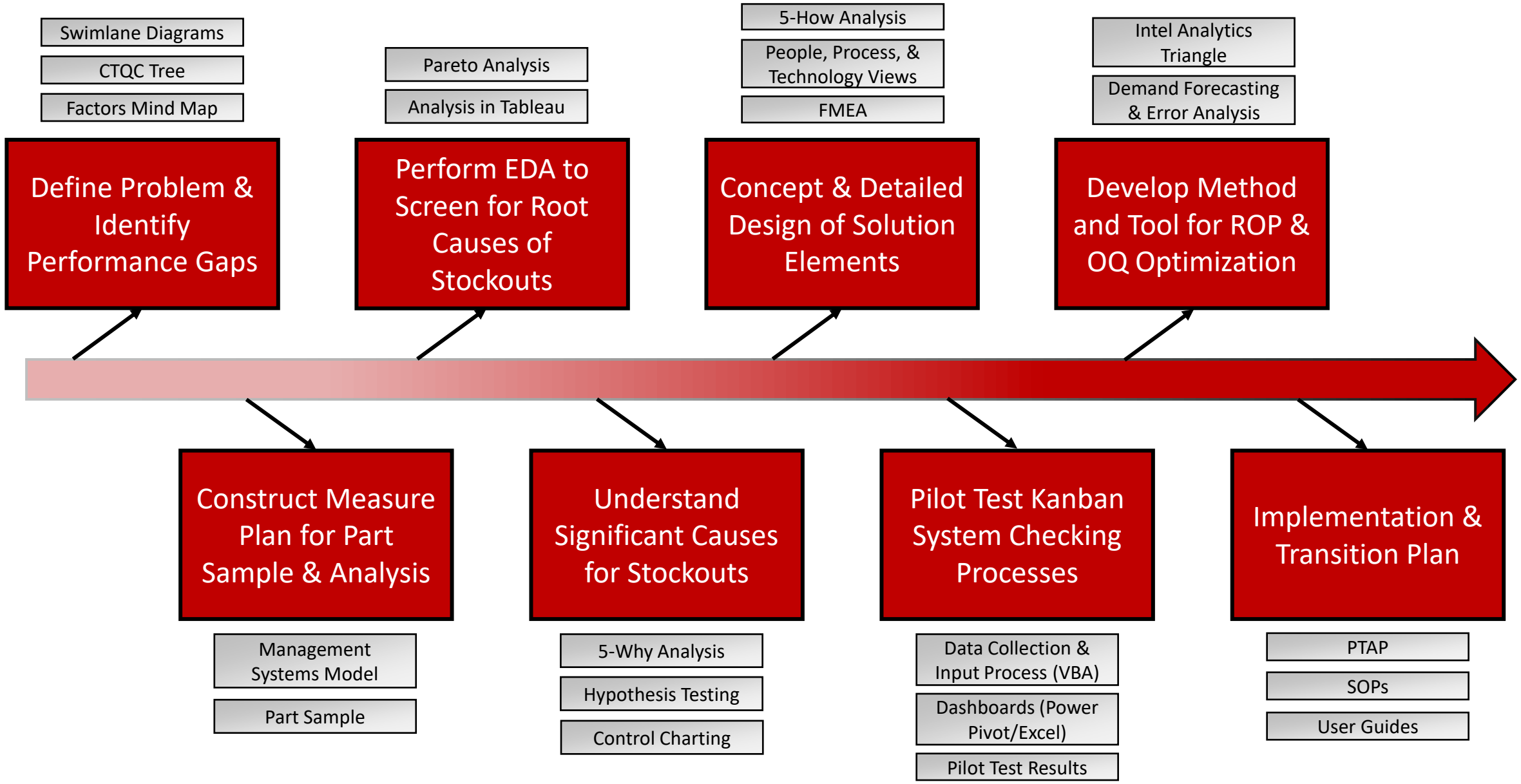

Swimlane Diagrams
CTQC Tree
Factors Mind Map
Define Problem & Identify Performance Gaps
Pareto Analysis
Analysis in Tableau
Perform EDA to Screen for Root Causes of Stockouts
5-How Analysis
People, Process, & Technology Views
FMEA
Concept & Detailed Design of Solution Elements
Intel Analytics Triangle
Demand Forecasting & Error Analysis
Develop Method and Tool for ROP & OQ Optimization
Construct Measure Plan for Part Sample & Analysis
Management Systems Model
Part Sample
Understand Significant Causes for Stockouts
5-Why Analysis
Hypothesis Testing
Control Charting
Pilot Test Kanban System Checking Processes
Data Collection & Input Process (VBA)
Dashboards (Power Pivot/Excel)
Pilot Test Results
Implementation & Transition Plan
PTAP
SOPs
User Guides

Kanban System Checking Processes

Stockouts

- Kanban Cards Not Pulled at ROP in Warehouse
- Kanban Cards Not Flipped After Replenishment
- Kanban Cards Not Pulled at ROP on Floor

Kanban System Checking Process Flow

Data collected through defined processes › Data entered into tool database › Pivot tables & charts generated automatically › Information regularly given to Management › Management acts to align accountable users with ideal processes

Locs./Dept.					
5	Generate Locations for Audit				
PumperPrep	AerBodySet	AerialFin	AerialSub	BodyBuild	Plumbing
HB2111	LA0108	JH0132	FA1204	AB0210	BA0166
HB2205	LA0139	JH0869	FA1502	AB0211	BA0221
HB2229	LJ1203	JI0206	FA4504	AB0223	BA0304
HD2203	LJ1309	JI0805	FB1502	AB0314	BB0114
HD2307	LJ1409	JI0833	FB2404	AB0316	BC0112

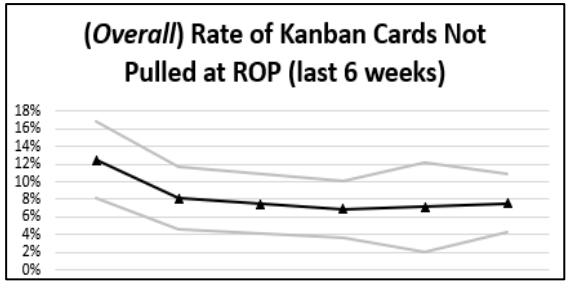
VBA, SQL, & Power Pivot used to generate locations for process & **data collection**

Date	Dept.	# Locations Audited	# Cards Not Pulled at or below ROP	Rate
3/19/20	AerBodySet	12	1	8.3%
3/19/20	AerialFin	10	0	0.0%
3/19/20	AerialSub	10	2	20.0%
3/19/20	BodyBuild	10	0	0.0%
3/19/20	Plumbing	10	2	20.0%
3/19/20	PumperBld5	11	1	9.1%
3/19/20	PumperMain	10	0	0.0%
3/19/20	PumperPrep	14	2	14.3%

Data entered into database

Week	Sum of # Locations Audited	Sum of # Cards Not Pulled at or below ROP	Rate of Cards Not Pulled at ROP
2/1/2020 - 2/7/2020	314	32	10.2%
2/8/2020 - 2/14/2020	160	20	12.5%
2/15/2020 - 2/21/2020	160	13	8.1%
2/22/2020 - 2/28/2020	160	12	7.5%
2/29/2020 - 3/6/2020	160	11	6.9%
3/7/2020 - 3/13/2020	70	5	7.1%
3/14/2020 - 3/20/2020	172	13	7.6%

Pivot table generated & KPIs calculated



Rolling KPI chart generated

Kanban System Checking Processes

Stockouts

- Kanban Cards Not Pulled at ROP in Warehouse → Warehouse stockout rate: **15%** to **4.4%**
- Kanban Cards Not Flipped After Replenishment → Kanban cards not flipped rate: **14%** to **1.9%**
- Kanban Cards Not Pulled at ROP on Floor → Floor cards not pulled rate: **12%** to **7%**

Each is practically & statistically significant

Math Model Tool

Problem

ROP and OQ are **tribal-knowledge based** and **not optimized**

Solution

Use validated historical data to **calculate demand** with high granularity → Use forecasted demand and calculated order lead times and item variability to **calculate optimal OQ and ROP levels**

Filterable | Details Viewable | OQ & ROP Cushioned from Variability | Flexible

Item	Warehouse	Default Location	LT	Annual Forecast	Demand Forecast Conclusion	OQ	ROP	OQ Cost	ROP Cost	Space Per Item (in^3)	Available Space at Location	Space Taken Relative to Available Space at Location	Maximum Space Taken (Space/Item * [ROP+OQ])
10017812	PumperMain	CG0100	15	**37.21**	Flagged	11.00	2.00	$ 105.27	$ 19.14	21	432		273
10013310	PumperMain	CG0101	6	**294.87**	Good	77.00	8.00	$ 1,011.78	$ 105.12	10	432		850
10008492	PumperMain	CG0103	7	**593.92**	Good	167.00	14.00	$ 1,431.19	$ 119.98	1.5	432		271.5
10006779	PumperMain	CG0104	7	**191.97**	Flagged	54.00	5.00	$ 363.42	$ 33.65	6	432		354
10054075	PumperMain	CG0199	2	**74.75**	Good	11.00	3.00	$ 74.69	$ 20.37	14	200		196
10053920	PumperMain	CG0200	2	**69.20**	Good	10.00	3.00	$ 46.40	$ 13.92	10	200		130
10003613	PumperMain	CG0201	2	**21.45**	Good	4.00	1.00	$ 72.44	$ 18.11	30	432		150
10003606	PumperMain	CG0202	2	**18.11**	Good	3.00	1.00	$ 42.87	$ 14.29	80	432		320
10006780	PumperMain	CG0203	2	**23.06**	Flagged	4.00	1.00	$ 67.12	$ 16.78	220	1000		1100
10006787	PumperMain	CG0204	2	**39.63**	Good	6.00	2.00	$ 97.56	$ 32.52	40	432		320
10008503	PumperMain	CG0206	2	**167.25**	Good	24.00	6.00	$ 519.84	$ 129.96	12	432		360
10010390	PumperMain	CG0207	2	**6.52**	Flagged	1.00	1.00	$ 37.86	$ 37.86	48	100		96
10010397	PumperMain	CG0208	2	**156.93**	Good	22.00	5.00	$ 646.36	$ 146.90	15	432		405
10013315	PumperMain	CG0210	2	**33.13**	Flagged	5.00	1.00	$ 231.00	$ 46.20	80	432		480
10003593	PumperMain	CG0211	2	**31.36**	Good	5.00	1.00	$ 34.50	$ 6.90	150	1500		900

Direct Benefits

Contributes to P&L statement in current year

Trips to the Warehouse due to Kanban System issues

$$\frac{\textbf{183 trips}}{\textbf{55 days}} * \frac{365\ \text{days}}{\text{year}} * \frac{20\ \text{minutes}}{\text{trip}} * \frac{1\ \text{hour}}{60\ \text{minutes}} * \frac{\$100}{1\ \text{hour}} = \textbf{\$40,500 per year}^{*}$$

*Supervisors also take trips and people go in pairs, bringing the figure to ~$40,500/year, only accounting for *properly reported* trips

Labor cost impact of shortages on production

$$\frac{\textbf{0.65 new shortages}}{\textbf{day}} * \frac{365\ \text{days}}{\text{year}} * \frac{1\ \text{hour}}{\text{shortage}^{\dagger}} * \frac{\$100}{1\ \text{hour}} = \textbf{\$24,000 per year}$$

†time per shortage figure from previous project (Hannah Miller, 2018); corroborated with interviews

Time reallocated toward production (growing demand → bottleneck)

Conservative Estimate

~$150,000 3-Year NPV

Indirect Benefits

Contributes to Balance Sheet, but not bottom line

Progress toward ideal-state Kanban System for all stock parts

- **Smoother flow (fewer stockouts)**
- **Reduced inventory costs**
- **Increased production capacity**
- Reduced cycle times for material replenishment
- Fewer process errors requiring correction
- Enabled efficient and effective location set-up through iterative 5S program

Other Benefits

Other intangible benefits

Increased buy-in to Kanban System

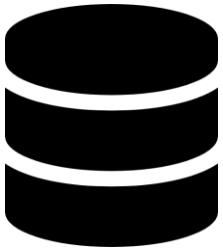
- **Reduced frustration (especially due to improperly set-up bins)**

Improved understanding of current & future demand

- **Data-informed determination of OQ and ROP**
- **Decreased latency in data capture, analysis, and decision-making**
- Increased visibility throughout Kanban System

Key Takeaways

- **Hold the vision**
  - Plan out the end goal and work backward to develop the vision for attaining that goal. This gives a clear roadmap and maintains energy.



- **Leverage the data**
  - In today's world of data analytics and optimization, it's important to use the data that you have and to expand data collection for analysis.

Thank You!

What questions, comments, and feedback do you have?

VISUAL MEASUREMENT INTEGRATION WITH TIERED HUDDLE SYSTEM TO INCREASE SCHOOL BUS ON-TIME ARRIVAL RATE

Project Lead: Matt Haight

Project Sponsors: Steve McElroy, Gary Bright

Project Coach: Dr. Scott Sink

About Matt Haight

EDUCATION

Industrial and Systems Engineering Class of 2020

PROFESSIONAL EXPERIENCE

Industrial Engineering Intern at Walt Disney World

Quality Control – Operations Research Intern

Engineering Intern

UP NEXT…

Incoming Business Technology Analyst

PERSONAL

Hometown *Wadsworth, IL*

Interests: *Sports and outdoor activities*

Promoting sustainability through a student run non-profit I helped found

Columbus City Schools Dep. Of Transportation

52,000 students

210 schools[1]

862 buses

14,000 Routes[2]

95%

Target **On Time Arrival** Rate set by the school board for CCSDoT to achieve

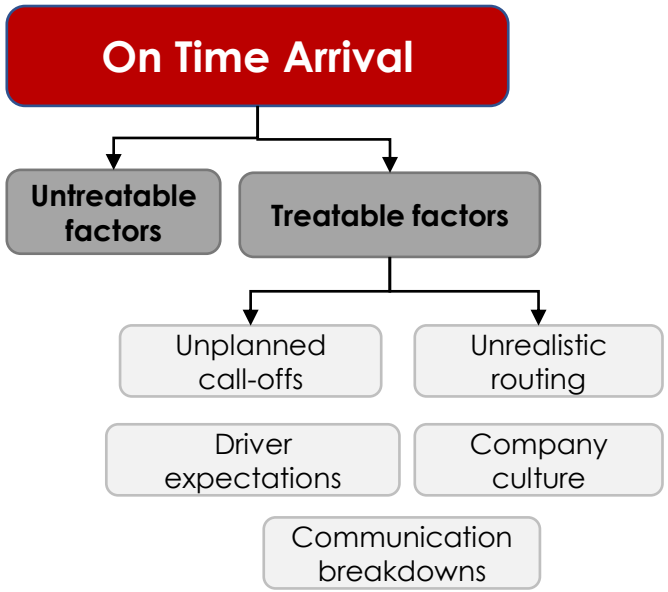
Primary Y: **ON TIME ARRIVAL RATE** arriving within -20 to 15 minutes of the scheduled arrival time

Multigenerational Project: Where We Left Off…

Last Year's Deliverables and Progress

1. **Defined and Measured** On Time Arrival Rate
2. Create a **Central Database** to store OTA contributing KPIs
3. Identified and improved **controllable factors**
4. Published arrival rate on **whiteboards** in each compound weekly

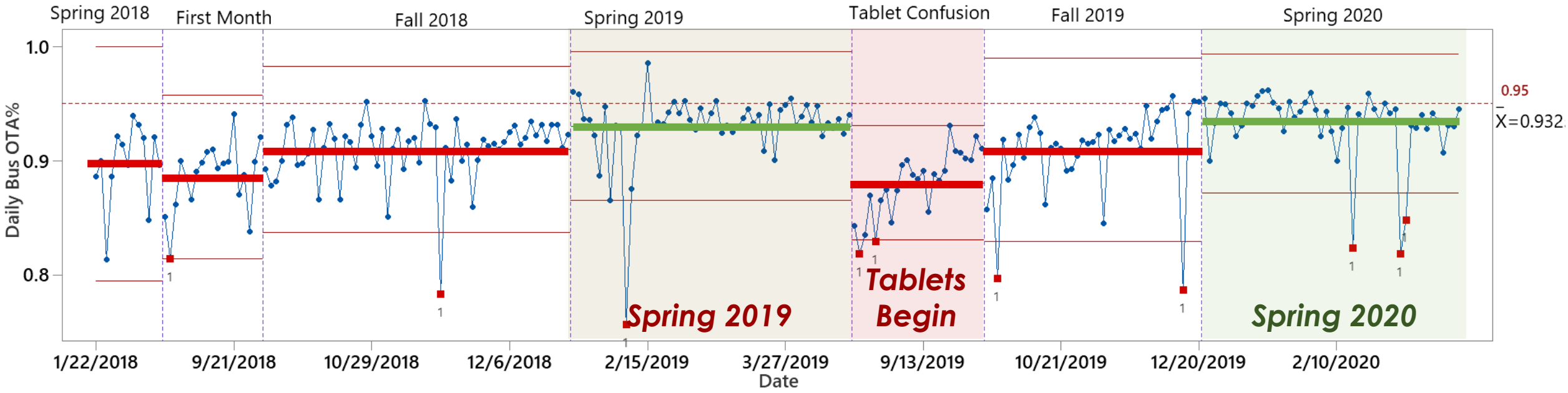
CCS is investing $1.3M into Tyler Technology to better route, track, and report information



[1]CCSDoT is required to serve both public and private
[2]1400 routes every morning and every afternoon

THIS YEAR'S OPPORTUNITY

ON TIME ARRIVAL RUN CHART



*88% OTA over the first 1.5 months of implementing Tyler Drive - **The lowest it's been in 2.5 years!***

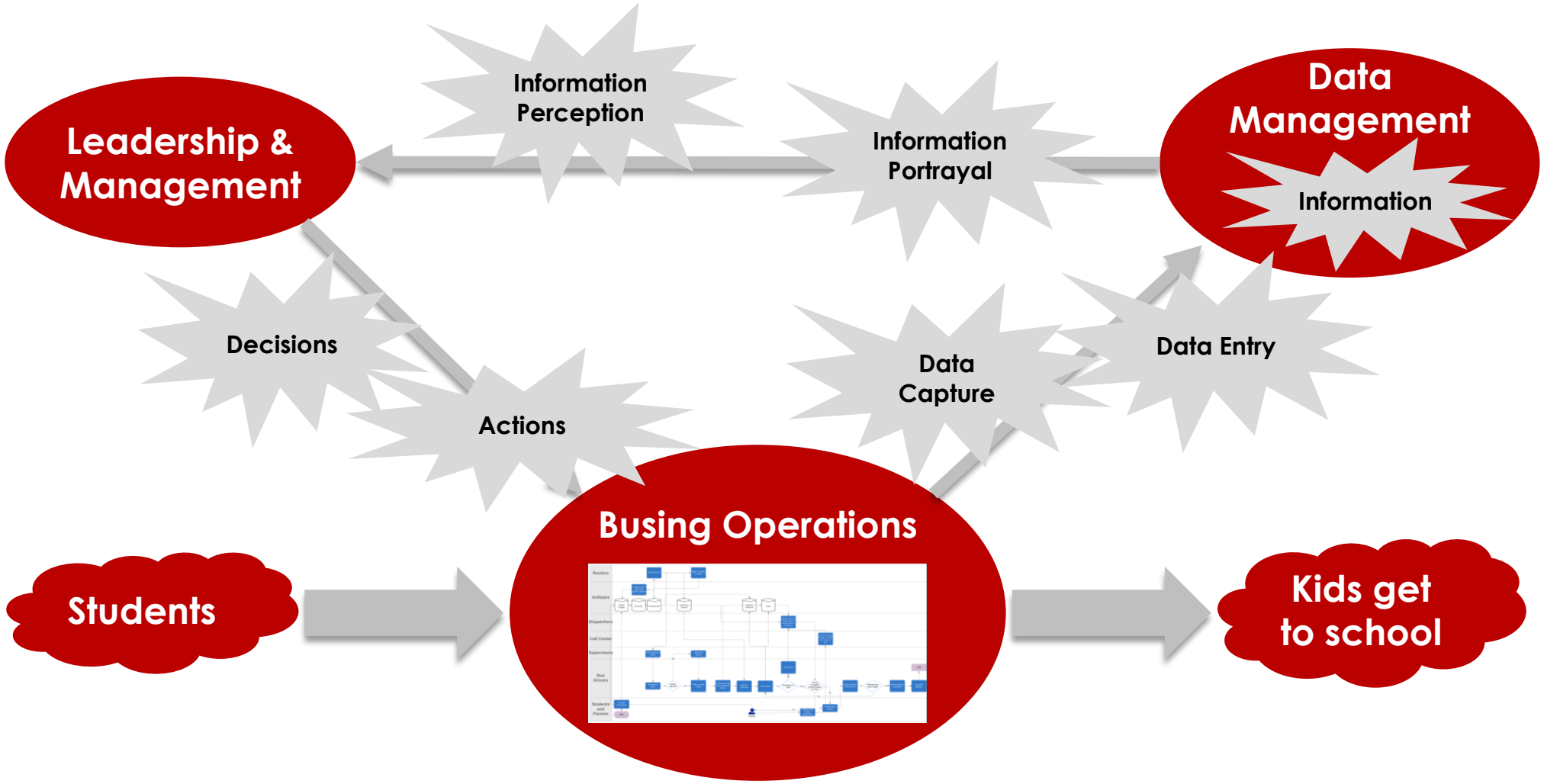
***Significant Improvement** from the fall and last spring!*

PRIMARY OBJECTIVE

- *CCSDoT was not fully prepared or structured to **integrate this new technology with their people and processes***
- *Develop a **visual measurement system** to better capture and analyze data into meaningful insights*
- ***Increase communication** of information to allow for more agile and data-driven problem solving*

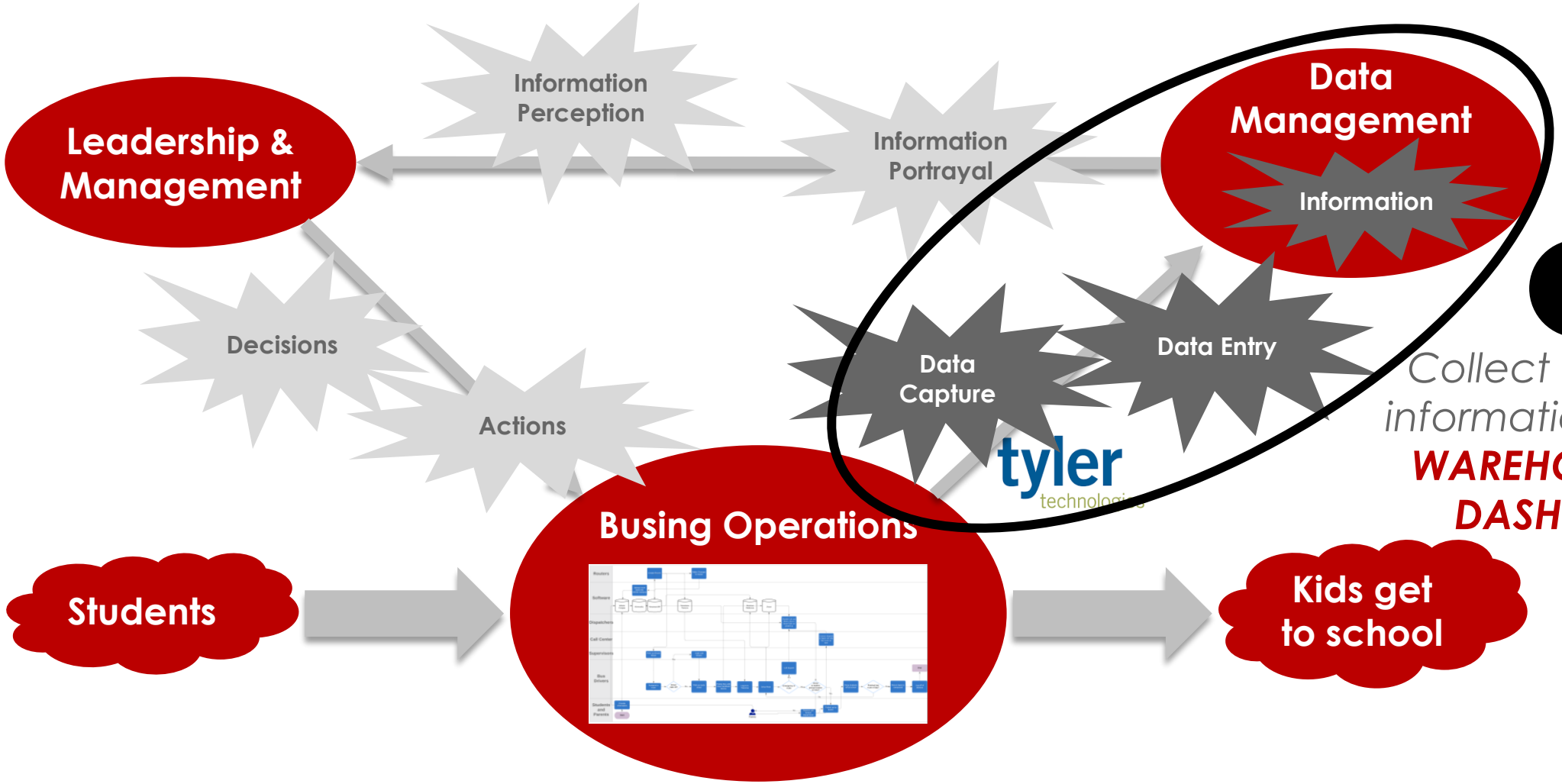
PRIMARY SOLUTION ELEMENTS

Integration of Management Systems Model



PRIMARY SOLUTION ELEMENTS

Integration of Management Systems Model



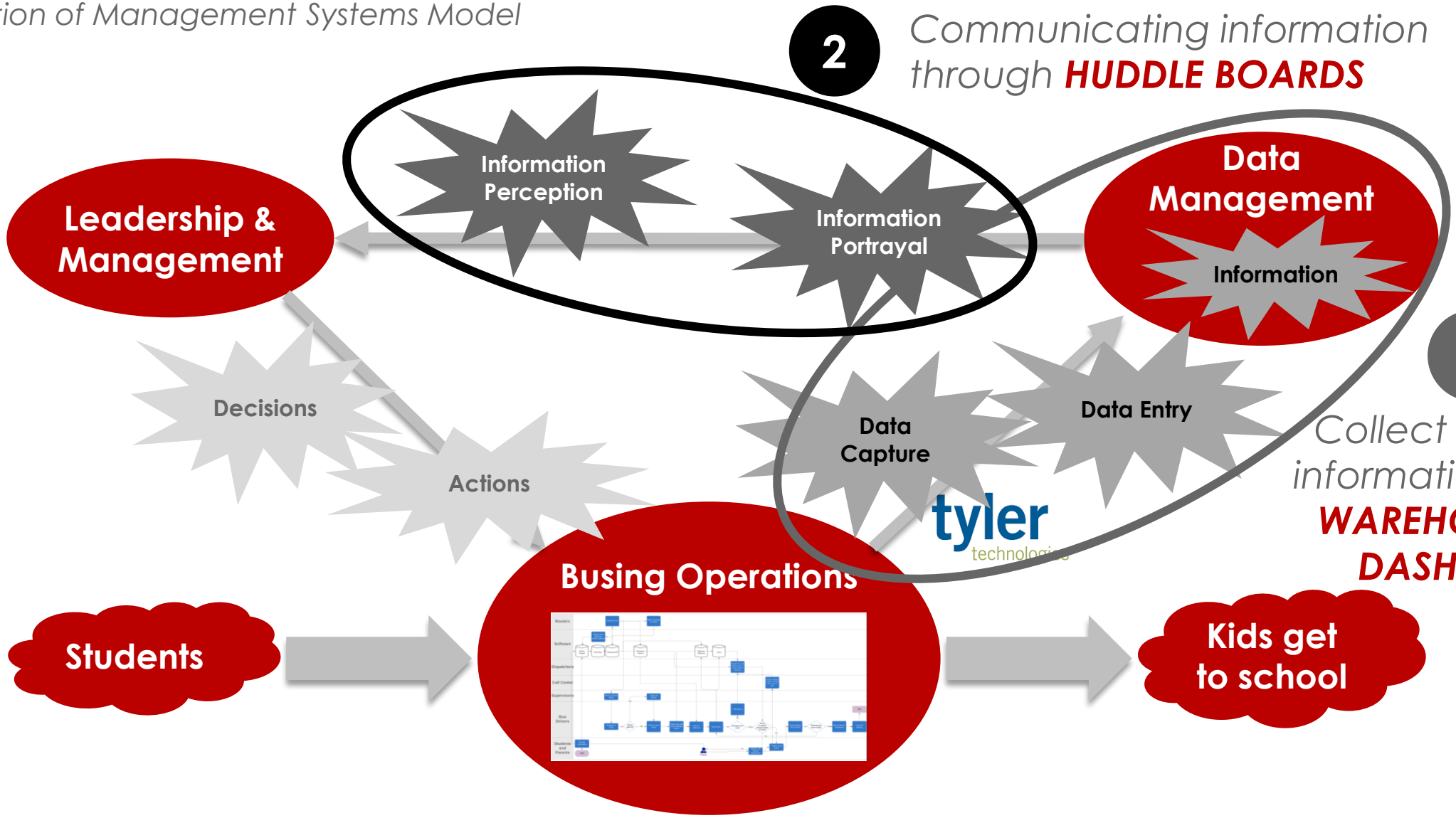
1

Collect and store information in ***DATA WAREHOUSE*** and ***DASHBOARD***

Utilized Houses of Quality to help guide the design process for these solution elements

PRIMARY SOLUTION ELEMENTS

Integration of Management Systems Model



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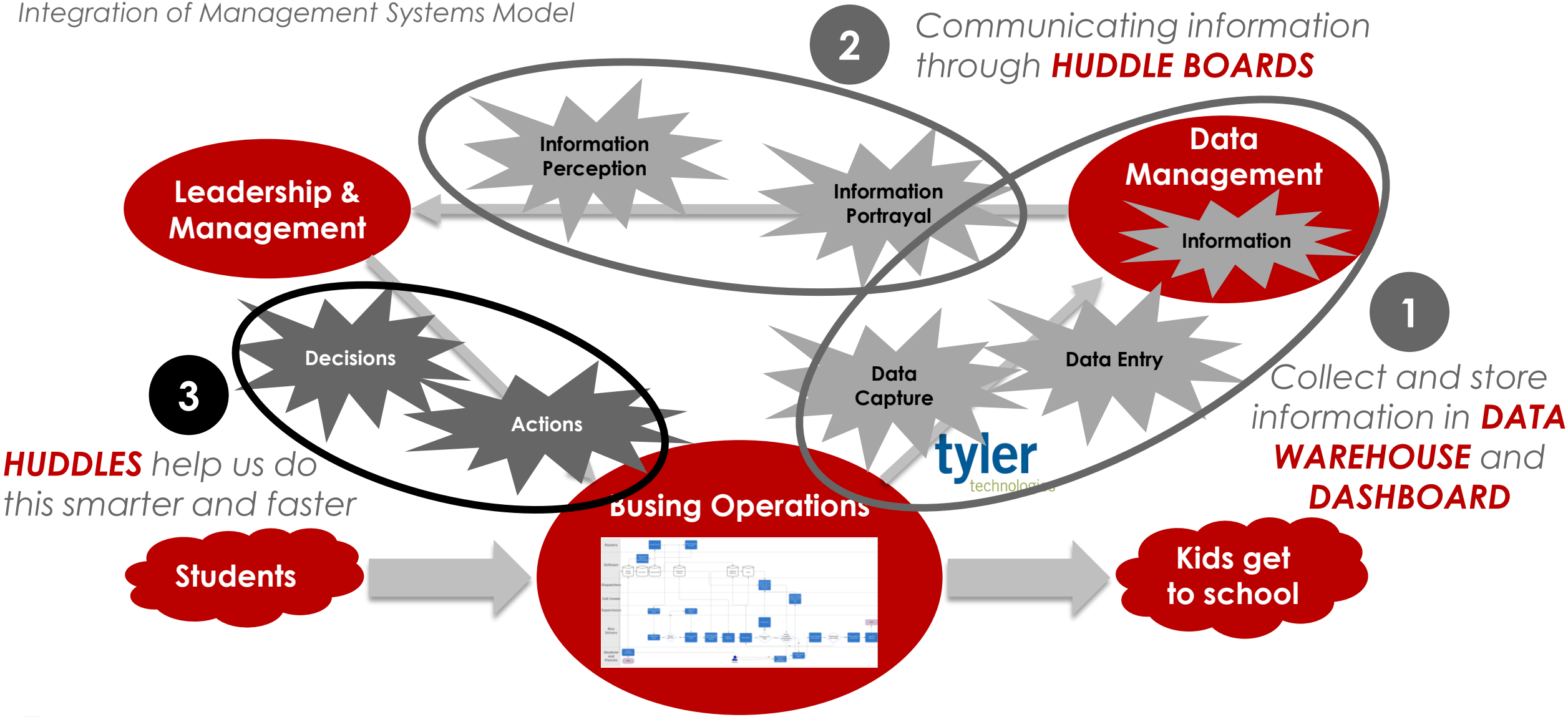
PRIMARY SOLUTION ELEMENTS

Integration of Management Systems Model



Utilized Houses of Quality to help guide the design process for these solution elements

ENHANCED DATABASES TO INCREASE DATA ACCESSABILITY

*State of the business in **August 2018***

Dispatch

Call Center

Operations Managers

MINIMAL INFORMATION WAS SHARED OR UTILIZED!

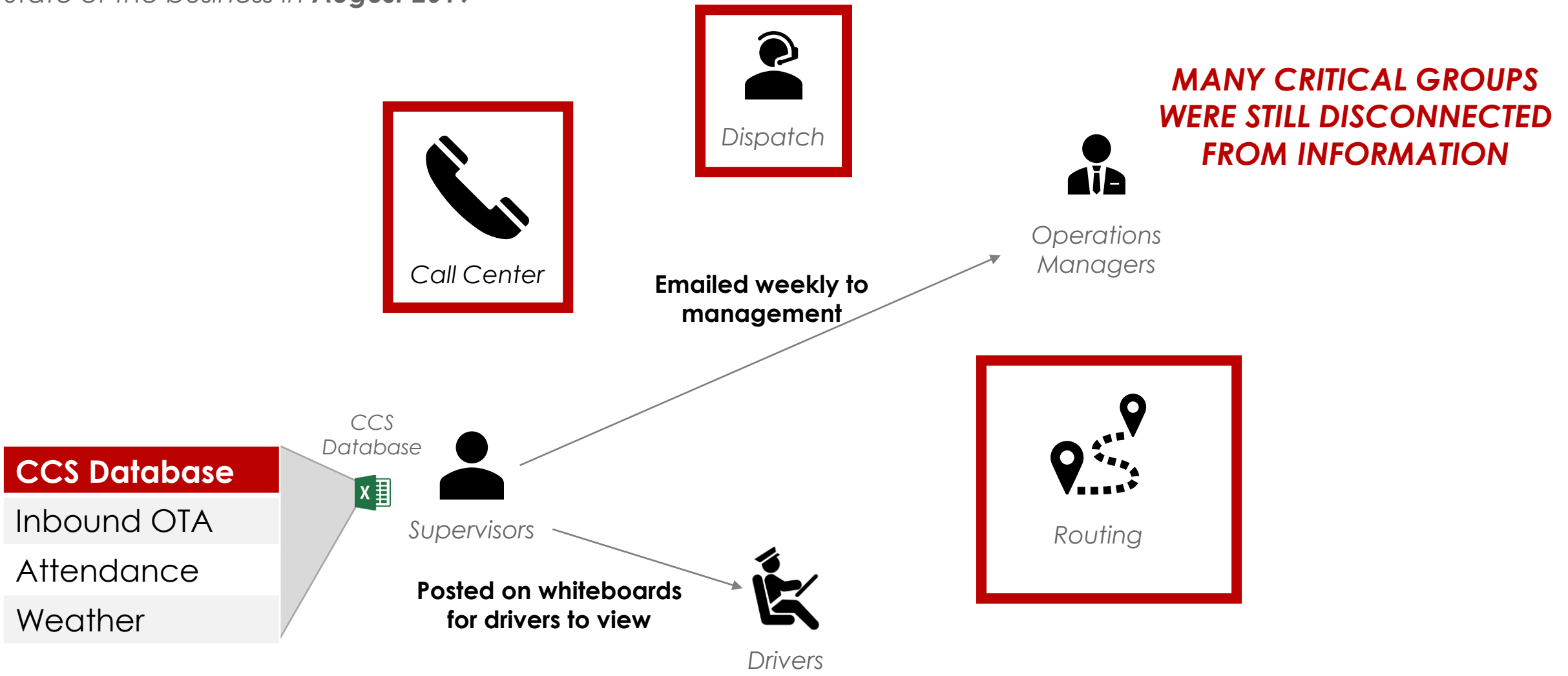
Supervisors

Routing

Drivers

ENHANCED DATABASES TO INCREASE DATA ACCESSABILITY

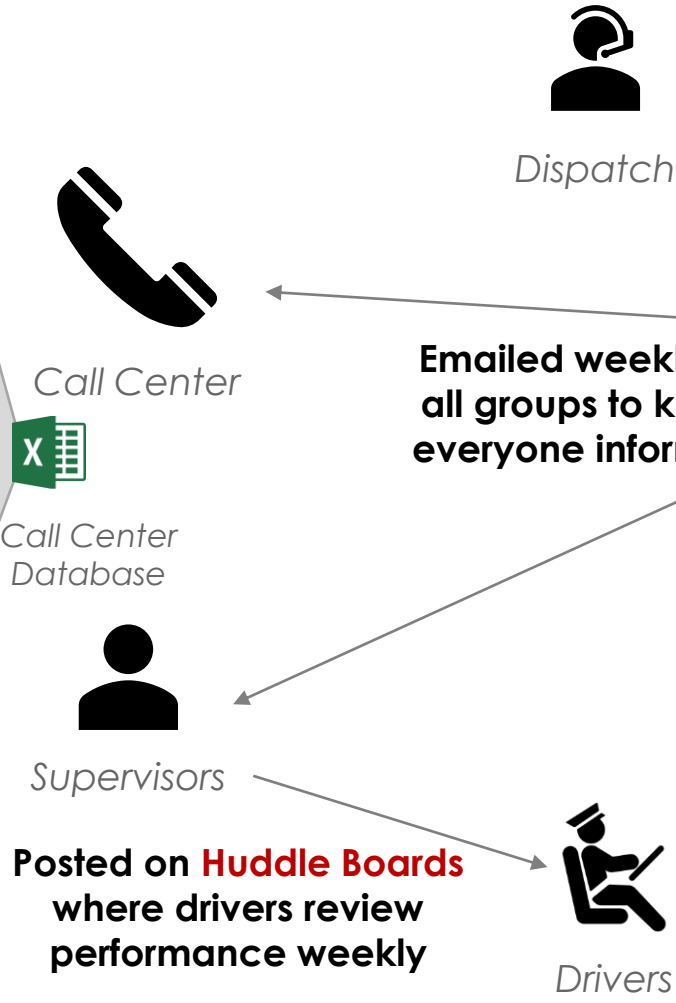
*State of the business in **August 2019***



ENHANCED DATABASES TO INCREASE DATA ACCESSABILITY

*State of the business in **March 2020***

Call Center Database
Agents Staffed
Average Daily Availability
% Time Available
Call Talk Time
Call Hold Time
Call Wait Time
Presented Calls
Answered Calls
Calls Entered into Cherwell
Call Categories
OTA



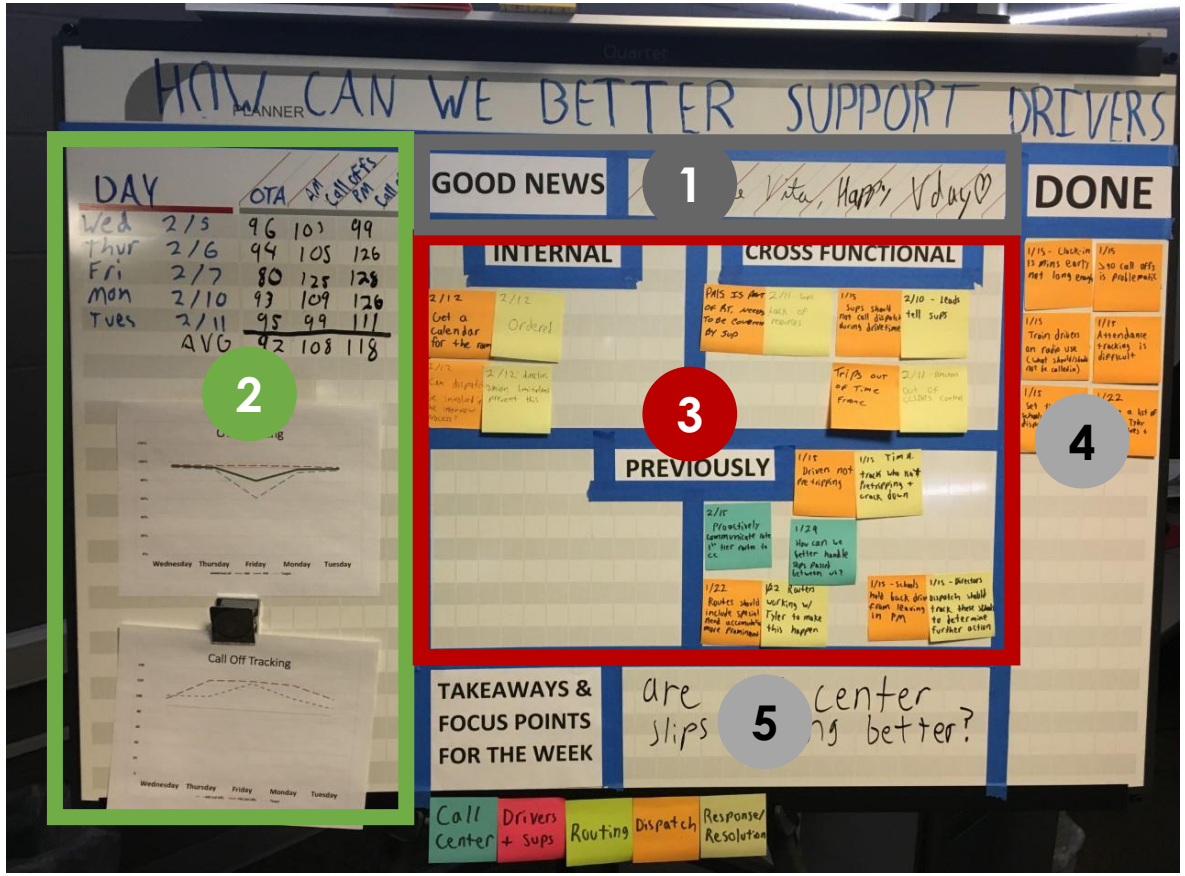
CCS Database
OTA
Routes Tracked
Attendance
Missing Pretrips
Weather
Special Cause
Cherwell Cases >3 Days
Route Changes

Routers Database
Routes Changed
Left to Route
OTA
Call Offs
Special Cause

More information is tracked and shared through KPIs and visuals

HUDDLE BOARDS

Provide a visual measurement and accountability system to optimize meeting efficiency



1. Review good news over the week to **Encourage Participation!** *(Change Management)*

2. Analyze **Visual Measurement System**

- *Data Driven*
- *Relevant KPIs to business and group objectives*

3. Visual Agenda of discussion topics

- *Increase communication within groups and cross-functionally*
- *"Sticky note" accountability system*

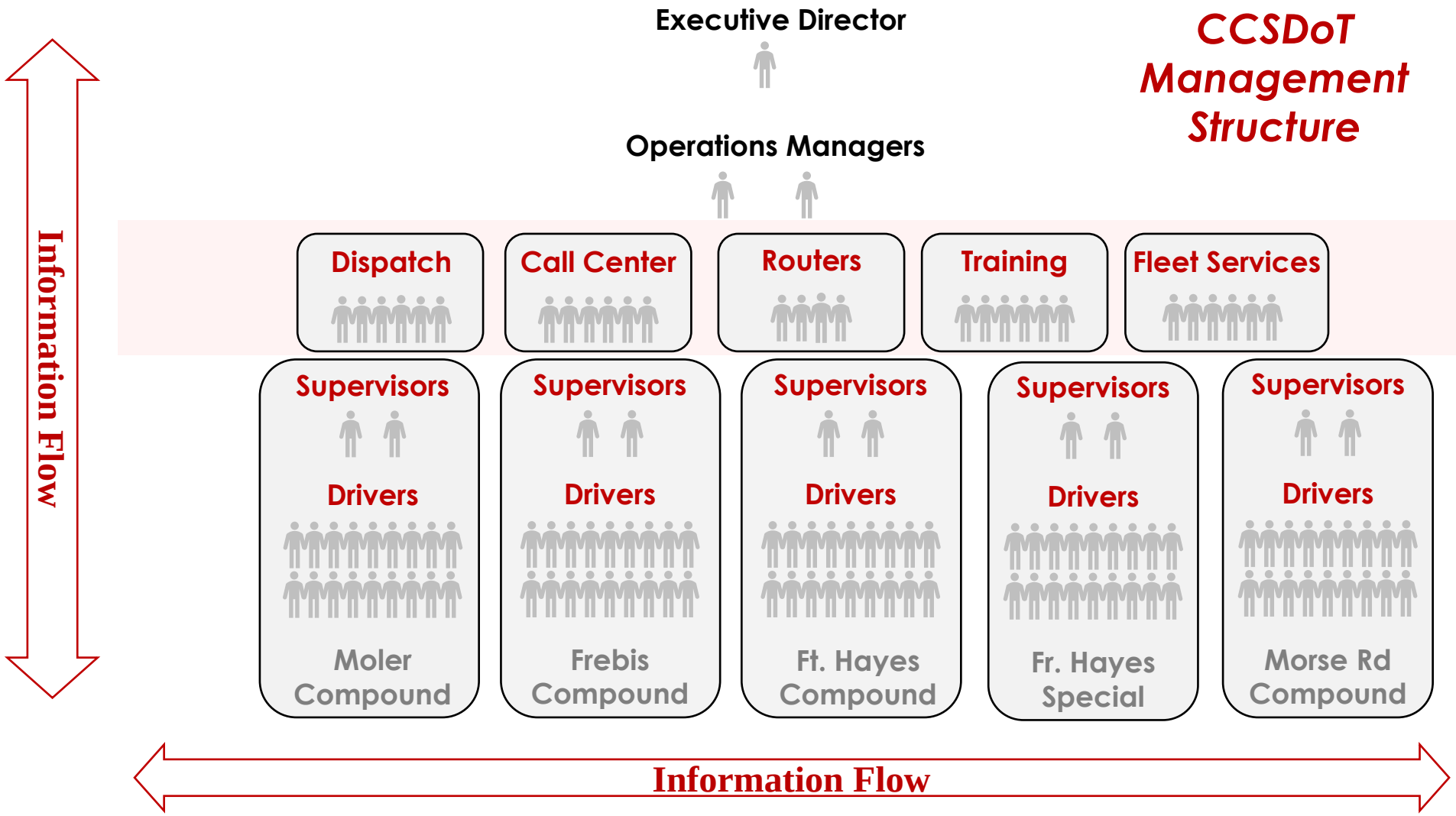
4. Log resolved issues

5. Review Key focus areas going forward

Huddle boards are used in huddle meetings

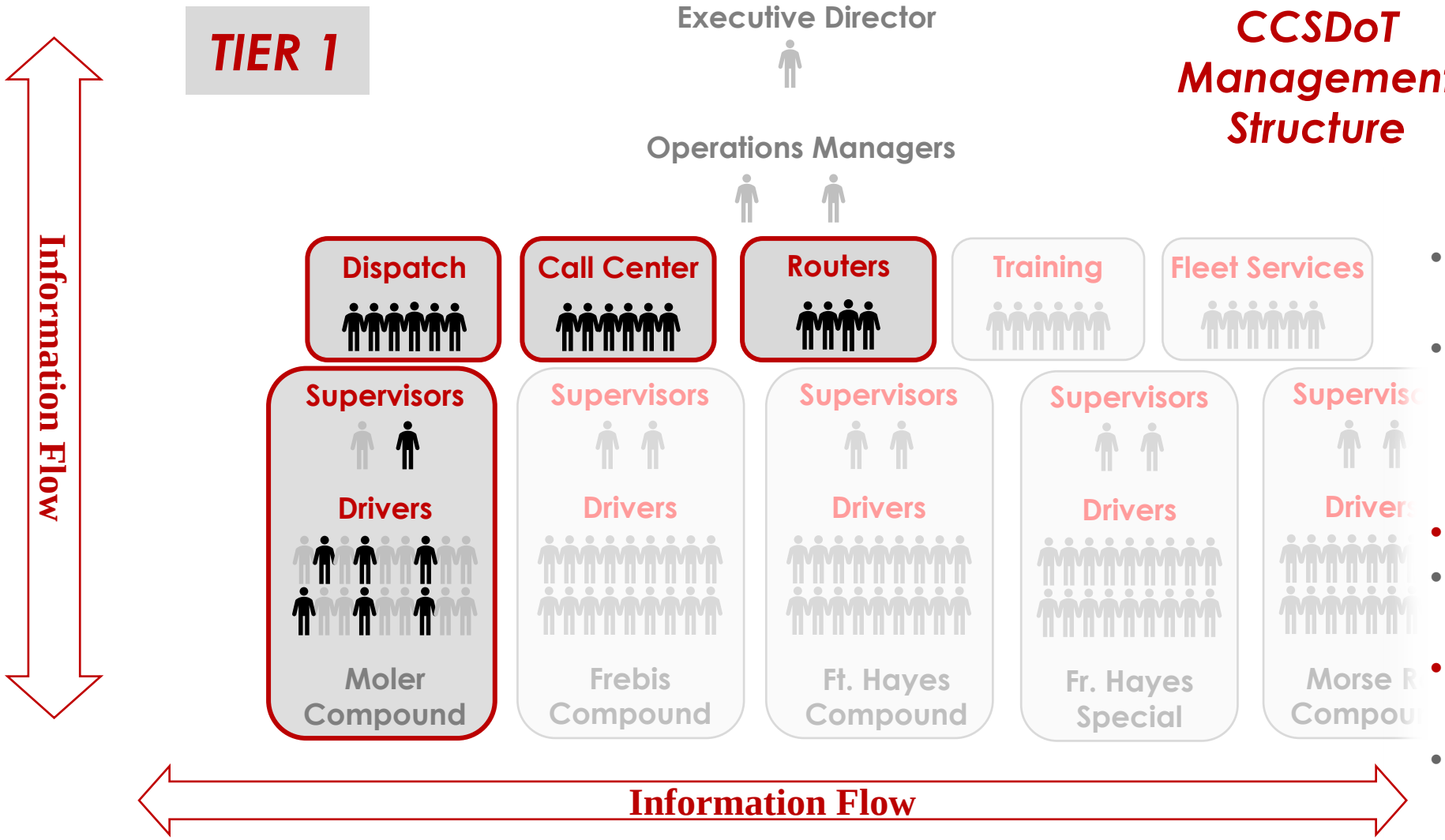
TIERED HUDDLE SYSTEM

March 2020



TIERED HUDDLE SYSTEM

March 2020



What

- *Weekly meetings among functional group members*
- *Random group of drivers are pulled each week*

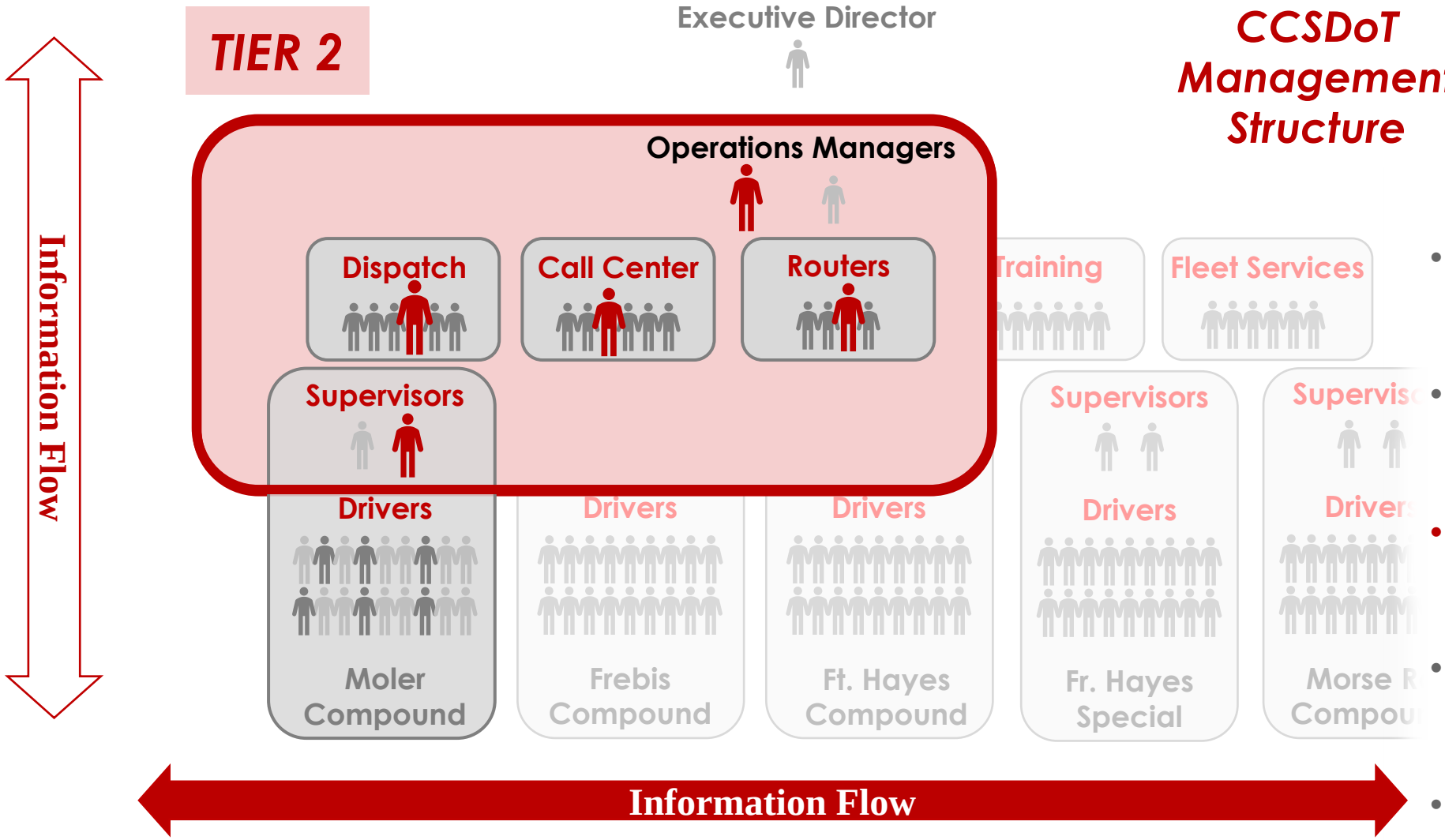
BENEFITS

- ***Standardize work***
- *Discuss relevant **KPIs** to the group and the business*
- ***Bring Issues to Light** that had been pushed off*
- *Propose and address improvement opportunities*

**4 meetings every week (with 1 or 2 misses each) for 8 weeks prior to COVID-19*

TIERED HUDDLE SYSTEM

March 2020



CCSDoT Management Structure

What

- *1 Lead from each Tier 1 huddle and an Operations Manager*
- *Weekly*

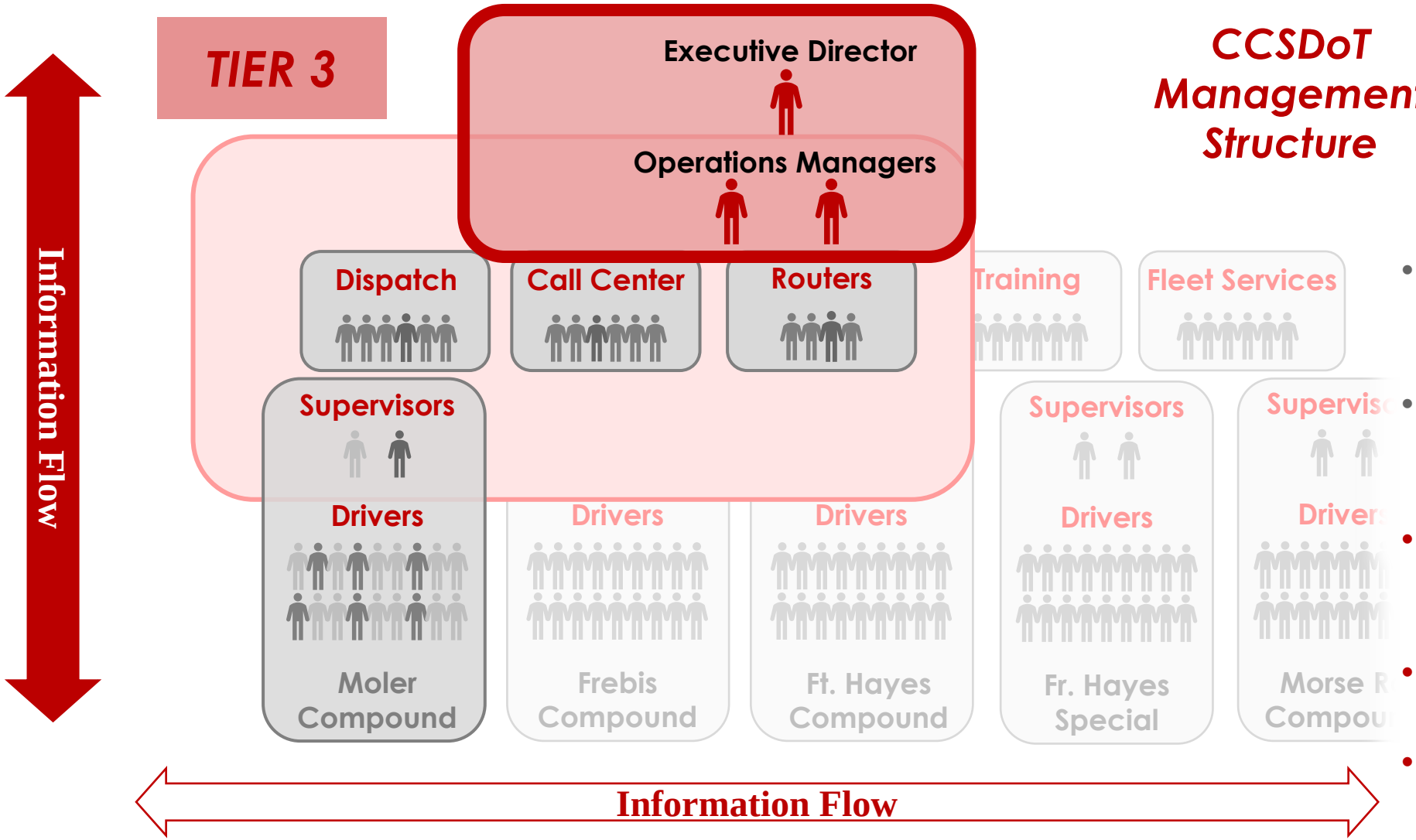
BENEFITS

- ***Increased communication and Information Flow Between Groups***
- *Better understand the reasoning the decision making of others*
- *Discuss **escalated** Tier 1 huddle topics*

**4 meetings every week (with 1 or 2 misses each) for 7 weeks prior to COVID-19*

TIERED HUDDLE SYSTEM

March 2020



CCSDoT Management Structure

What

- *Top leaders at CCS and individual responsible for all things Tyler Drive*
- *Weekly*

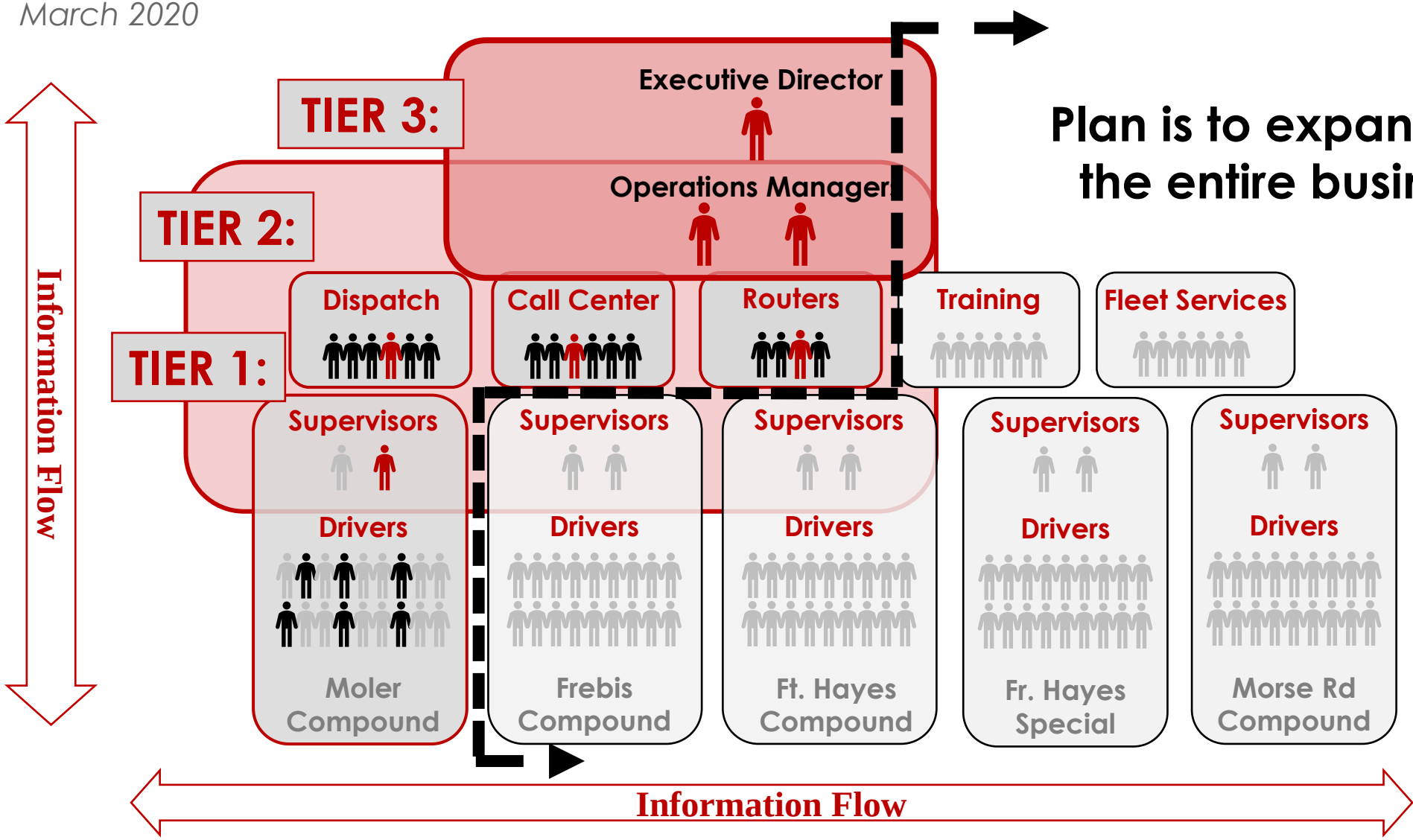
BENEFITS

- ***Vertical Flow of Information** to and from upper leadership*
- ***Stay Connected** with the end-to-end business*
- ***Highest Level Management Decisions** on escalated topics*

**4 meetings every week (with 1 or 2 misses each) for 6 weeks prior to COVID-19*

TIERED HUDDLE SYSTEM

March 2020



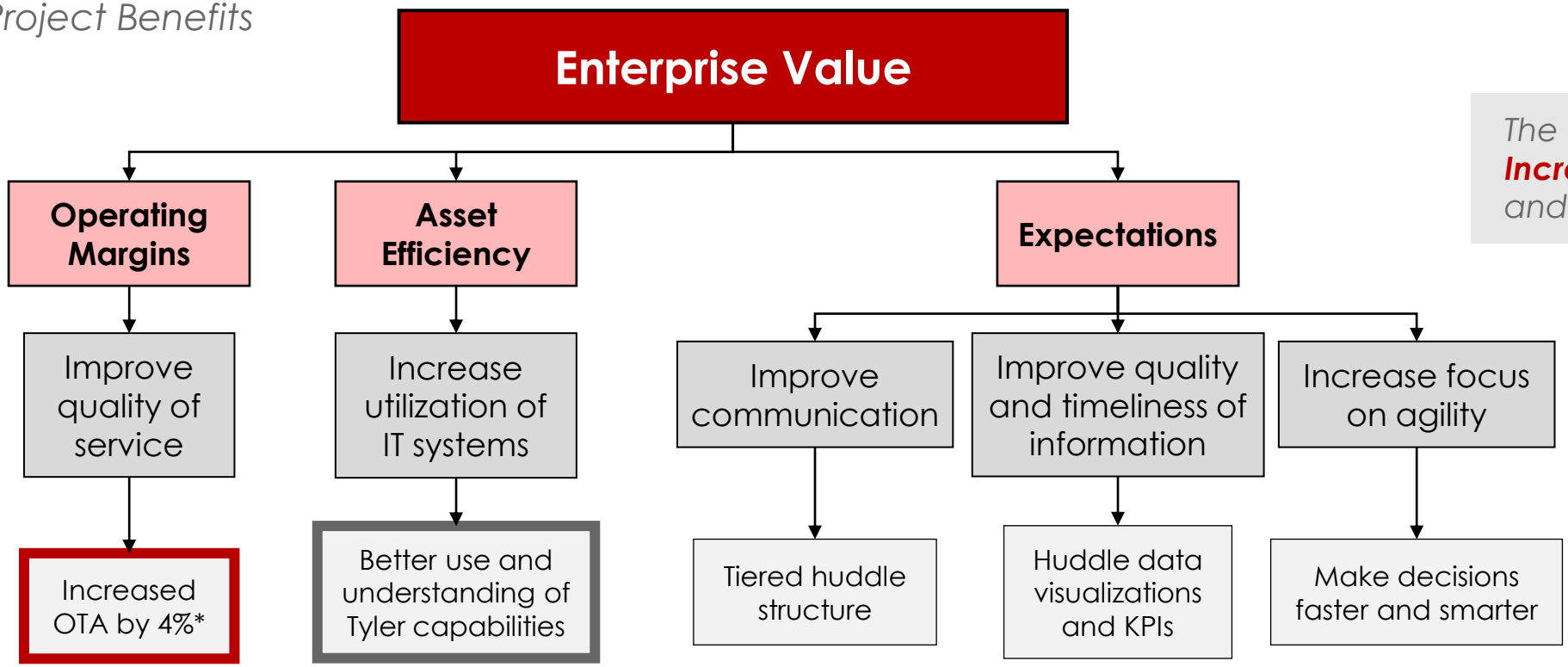
Plan is to expand this system to the entire business next year

WHY

- *Participants at all levels have **Expressed Enthusiasm** with the increased levels of communication!*
- *Further establishing and growing this huddle structure will have **Increasing Long Term Benefits***

BUSINESS CASE

Project Benefits



*The value has potential to **Significantly Increase Over Time** through expansion and continued frequency*

Other & Intangible Benefits

Indirect Benefit: *Increased the utilization of data capture and analytics capabilities of the $1.35M Tyler Technology investment to improve Process Maturity.*

Direct Benefit: *The direct benefit of this project was a **5% increase in OTA but also a more stable, predictable, Mature Process.***

**August/September avg AM OTA: 88%, March OTA: 93%*

Questions?

Any lingering thoughts?

Thank You for your time!

Grange Insurance:

CLAIMS PROCESSING OPTIMIZATION

Jenna Tishenkel

April 22nd, 2020

AUTO + HOME + LIFE + BUSINESS

Grange Insurance

GRANGE INSURANCE HAS BEEN SERVING OUR POLICYHOLDERS FOR 80+ YEARS.

Our mission is to provide peace of mind and protection during life's unexpected events.

Many of these unexpected events transform into insurance claims – one of our most critical transactional processes.

THE CLAIMS EXPERIENCE IS A POWERFUL TRIGGER FOR SWITCHING CARRIERS

…AND THE MOST IMPORTANT FACTOR – ACCORDING TO ACCENTURE – IS SPEED OF SETTLEMENT.

August 2019:

The Fast Track team existed to handle *low-complexity, auto claims in a streamlined, faster time period*

- Claim complexity is measured by the number of transactions required to resolve the claim

FUTURE STATE VISION

Fast Track will maintain optimized workflows in preparation for future automation of claims handling.

THE CLAIMS EXPERIENCE IS A POWERFUL TRIGGER FOR SWITCHING CARRIERS

IF YOU REPORTED A MINOR, LESS-COMPLEX AUTO CLAIM IN AUGUST OF LAST YEAR…

You call **Loss Reporting** to file a claim	Your minor, less-complex auto claim is assigned to **Fast Track**	**Fast Track adjuster** calls you back to set up how to get your vehicle inspected	You get your vehicle inspected and receive an estimate	**An appraiser** reviews estimate and issues you payment

How long you expect the process to take: **5 DAYS**

How long the process actually takes: **8 DAYS**

OUR END GOAL IS TO OPTIMIZE WORKFLOWS TO CREATE A BETTER CUSTOMER EXPERIENCE

Implement optimized workflows to **decrease resolution time and increase Fast Track capacity by reducing claim complexity.** This will position us for **success in future automation of claims handling.**

HOW DID WE ACHIEVE OUR GOAL?

Assessed **current state** and **surveyed reps to identify key input**

1. Method of inspection (MOI) service to estimate damages

Identified what matters to our customer: **fast resolution**

- Resolution time must be 5 days or less.

Identified **statistically significant** relationship between MOI service and resolution time

- Resolution time is **less when service is set up when you first report your claim** rather than when your handling adjuster calls you back.

Developed **service priority model** to identify optimal services

- Model was used to restrict available services at Loss Reporting

Loss Reporting: The call center you are directed to when first reporting a claim.

Implemented **Solution Element**

- Every claim reported by you, the insured, will have the **method of inspection service to estimate damages set up at Loss Reporting instead of by your adjuster.**

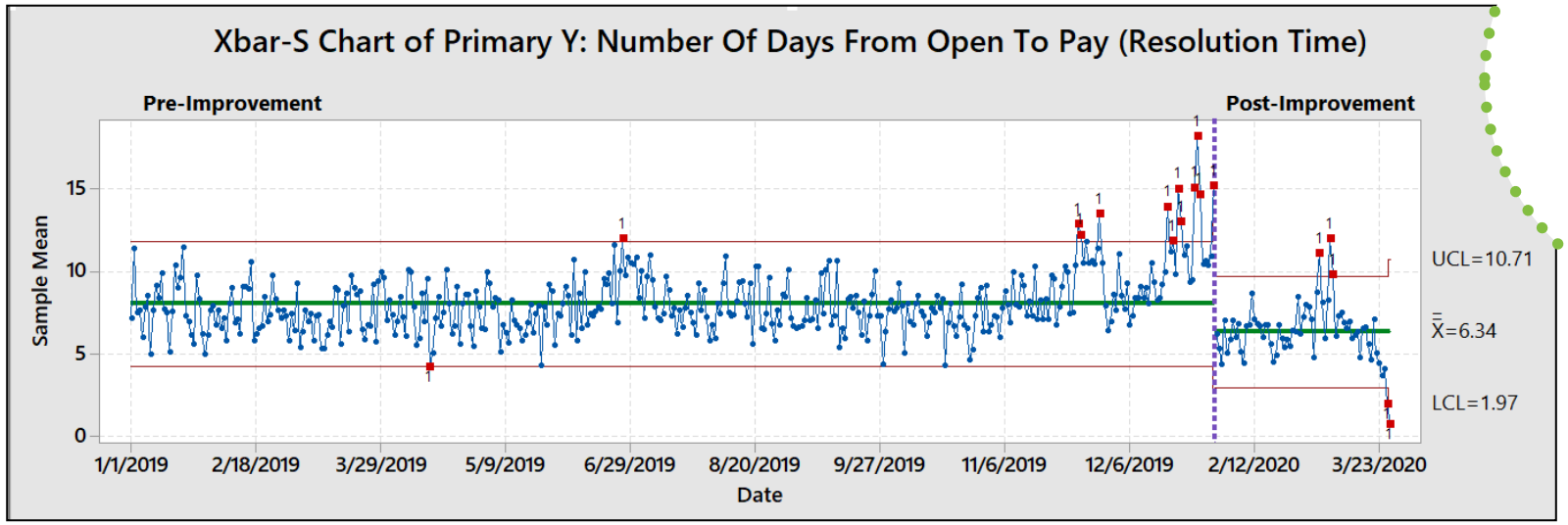
IMPROVED STATE: THE IMPROVED CLAIMS HANDLING EXPERIENCE

IN APRIL, THE FAST TRACK TEAM *IS:*			
Handling **low-complexity** auto claims	Operating at a **33% increase** in capacity prior to automation	Resolving claims **1.7 days faster**	Capable of transitioning to **automation of claims handling**

KEY OUTPUT RESULTS

AVERAGE RESOLUTION TIME:

8 DAYS → 6.34 DAYS



$270K

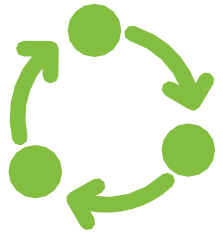
Savings

FAST TRACK DAILY CAPACITY:

5.58 CLAIMS A REP PER DAY → 7.43 CLAIMS A REP PER DAY

- ✓ **78% reduction** in claims handling time when a service is set up at Loss Reporting

INDIRECT AND INTANGIBLE BENEFITS

Analysis has been completed for transitioning to automation of claims handling ✓ Future requirements hours saved	
Customer satisfaction and NPS projected to increase ✓ Faster settlement = Higher satisfaction	
Demonstrated that automation of claims handling is a capability ✓ Grange can transition to a “Forward-Leaning Carrier”	

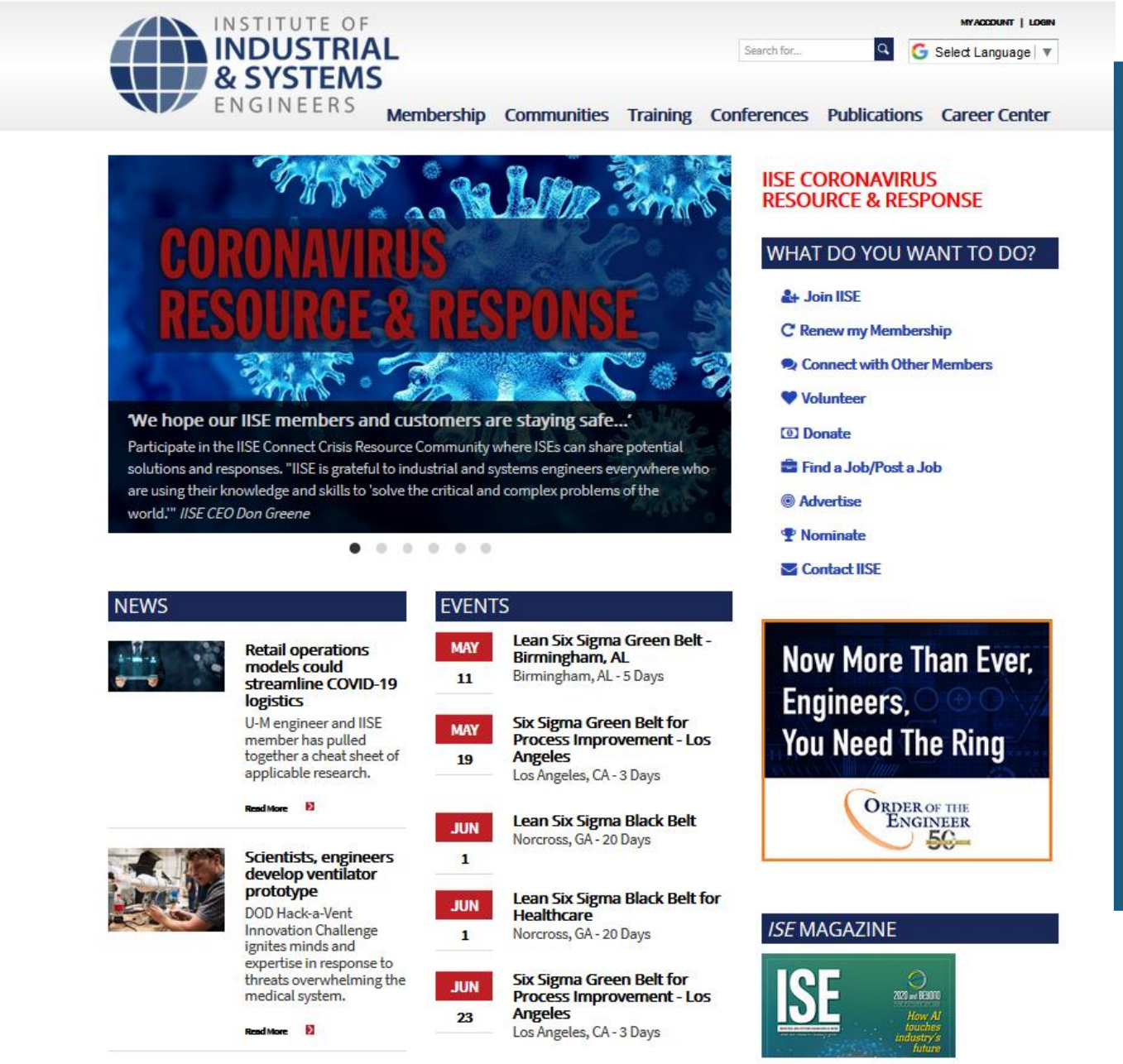
***AVP*, Claims**

“This is *much larger than just Fast Track*. We have seen a positive impact across our *entire* Auto claims unit with *faster resolution times*.”

THANK YOU!

QUESTIONS?

Thanks to IISE for Hosting



IISE is THE Professional Society for Integrated Systems Engineers.

There are well over 250,000 practicing ISE's.

You can be assured that the vast majority of those are deployed to do exactly the types of things we have shared today.

Membership Has Privileges

Don’t Miss our Upcoming Webinars:

Upcoming Webinars

Rapid (AGILE) Deployment and Execution of Integrated Systems Engineering Principles and Methods in times of major Disruption 12 May

Registration URL
https://attendee.gotowebinar.com/register/2846205001888129038

The Role of Data and Information (Engineered Management Systems) in Periods of Major Disruption 19 May

Registration URL
https://attendee.gotowebinar.com/register/7750037857013457675

Thank You!

Contact for More Info if you'd like:

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