

22<sup>ND</sup> ANNUAL



22<sup>ND</sup> LCI CONGRESS  
OCTOBER 19-23

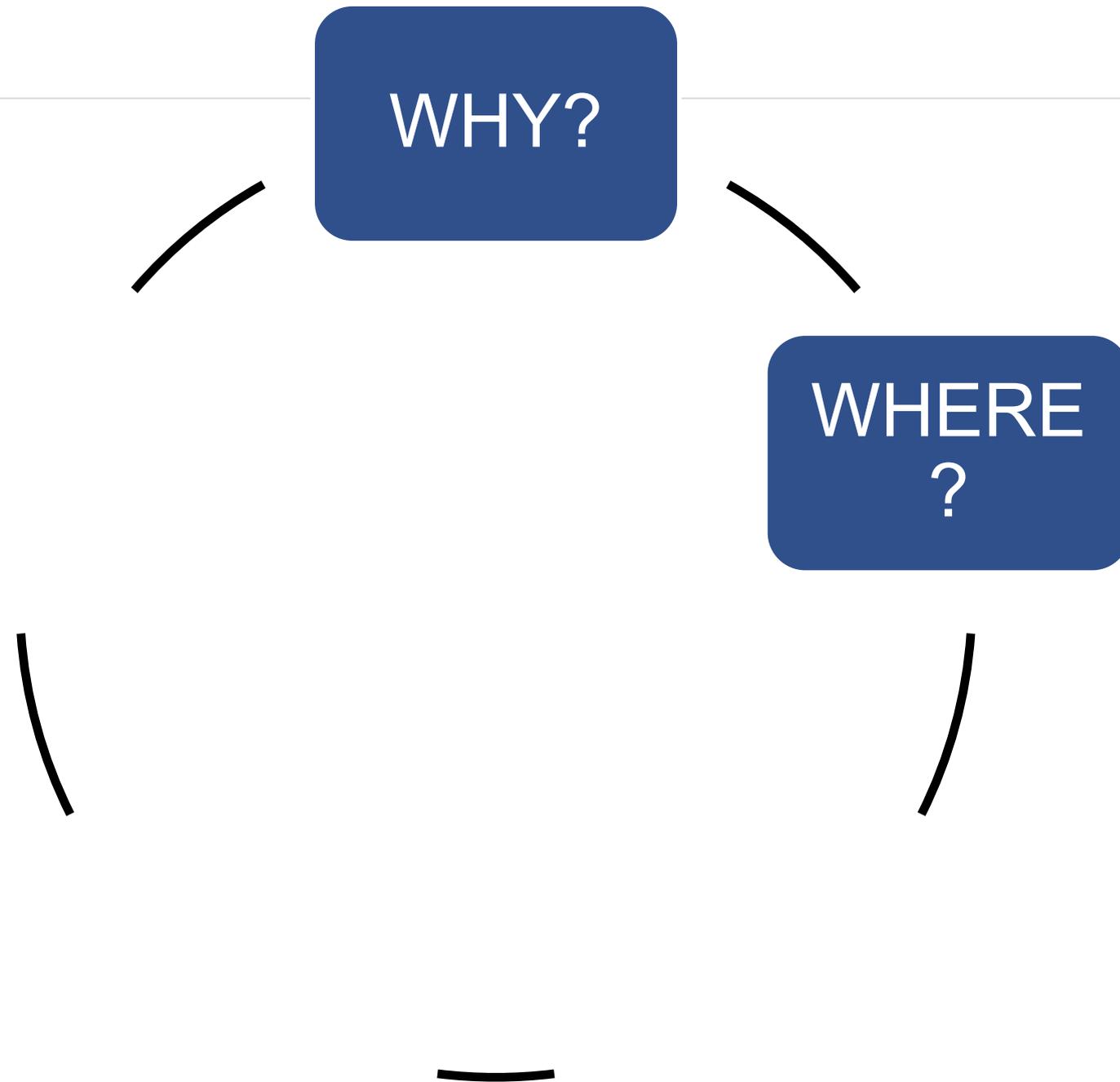
# Optimizing Adoption of New Lean Technology

**Eric Twigg and John Jurewicz**  **Walbridge**

THE ABC'S OF LEAN: TRANSFORMATION THROUGH ACTIONS, BEST PRACTICES AND COACHING

Friday, October 23 @10:50 am

# Agenda



# WHY? - DRIVERS of Lean Technology



# WHY? - DRIVERS of Lean Technology

**Compete**



**Customer**



**Investment**



**Synergy**



# WHERE? - Culture / Environment



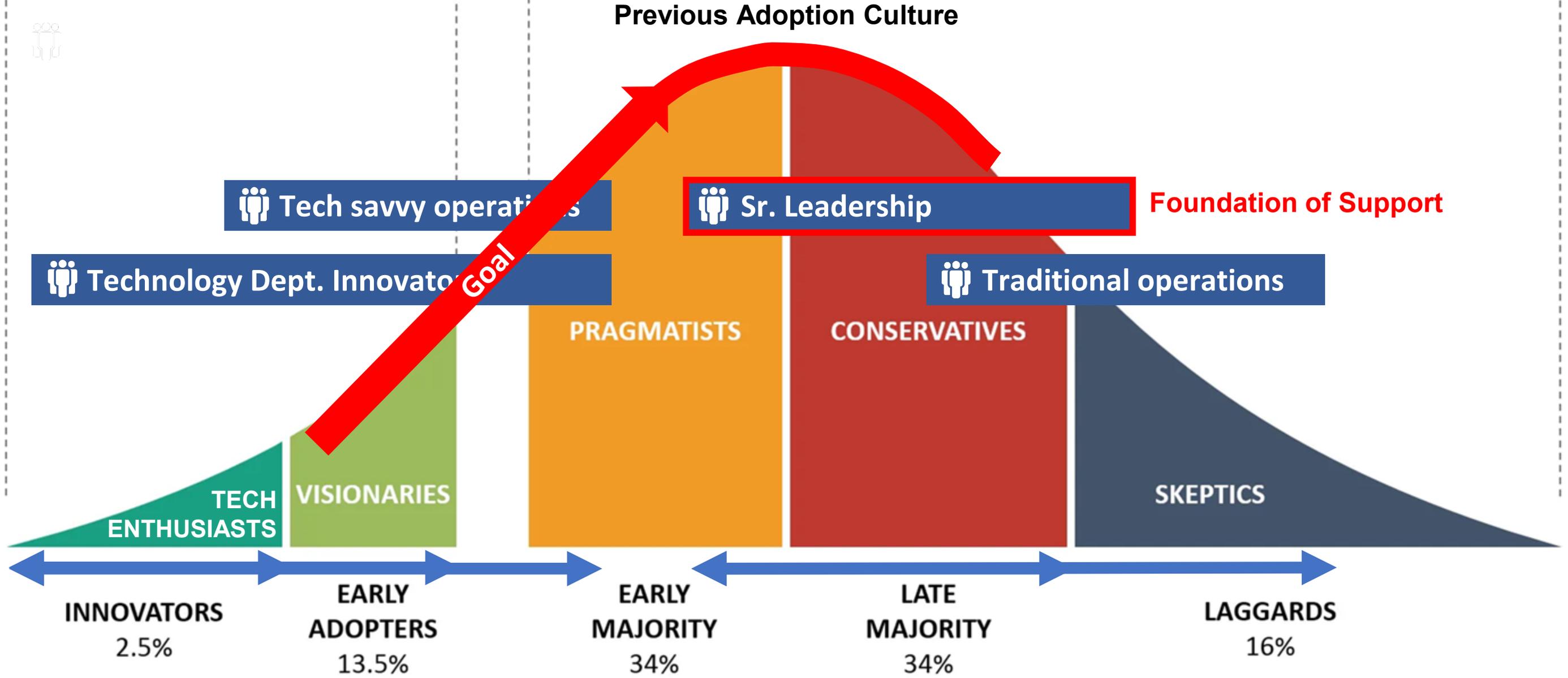
# What is the Lean Technology CULTURE / ENVIRONMENT at your company?

EARLY MARKET

THE CHASM

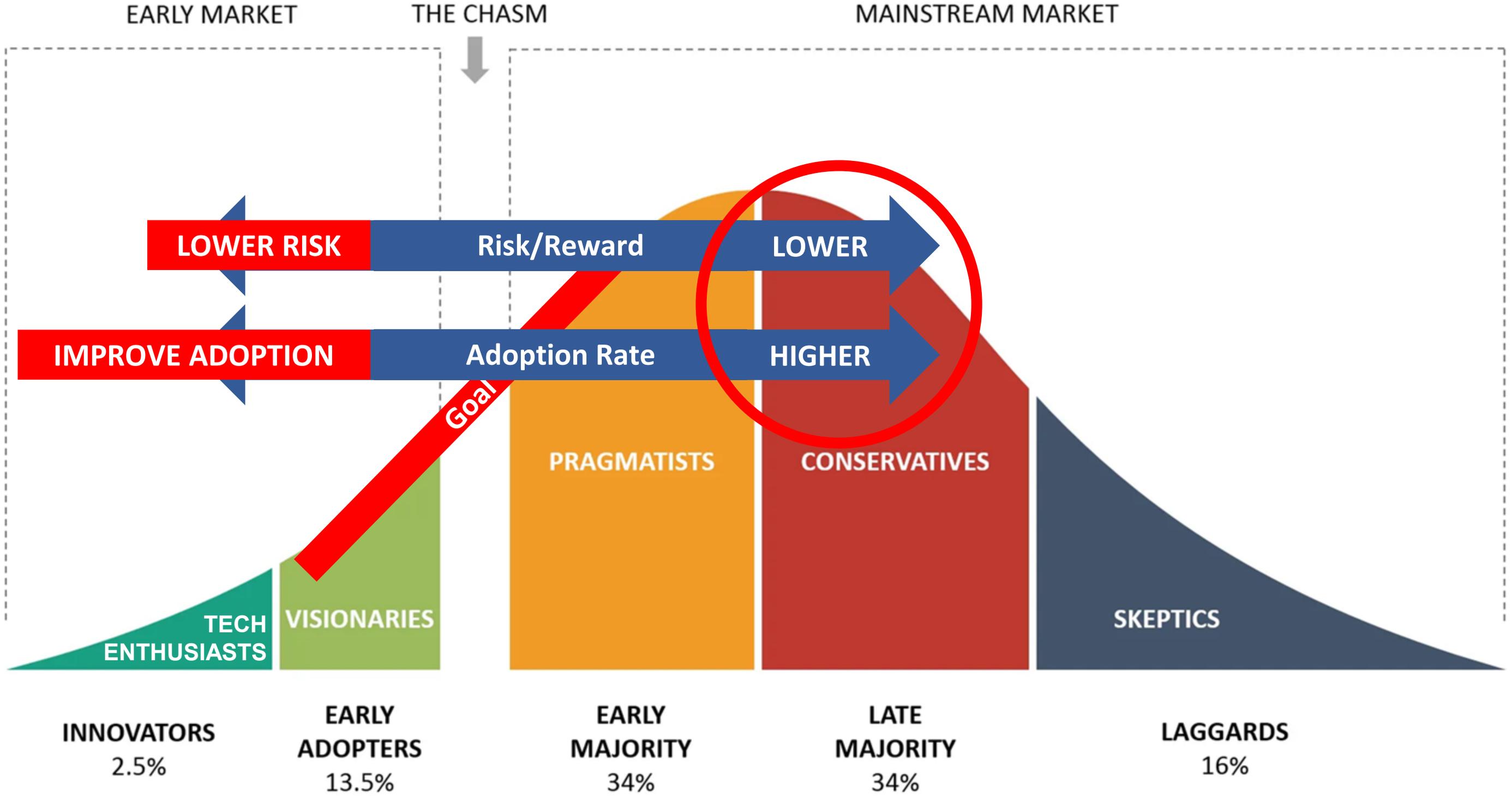
MAINSTREAM MARKET

 Legend: Walbridge Distribution on curve



Technology Adoption Lifecycle

# What is the Lean Technology CULTURE / ENVIRONMENT at your company?



Technology Adoption Lifecycle

# HOW and WHAT? – Optimize Adoption



# HOW and WHAT? – Optimize Adoption



## A3 Thinking Process

1. Less DISRUPTIVE CHANGE
2. ADD VALUE for operations
3. Higher ADOPTION RATE
4. Lower RISK
5. Higher REWARD (earlier)
6. Leverage LESSONS LEARNED

**A3 Decision Capture**

**Project Name:** SMART Workplace / Buildings -Walbridge HQ

**Subject:** Flocscape Phase II Full Deployment

**Date:** Prepared By: jchj urewicz, Eric Twigg  
Collaborators: Cynthia Weaver, Marjann Wilkins

**Background (describe the issue):** Walbridge desires to be a leader in design and build of SMART Buildings. Employee Engagement is a key goal of a SMART Building design and a key driver of employee productivity.

The Ford DOT HUB will be a SMART Building. To change Ford's perception of Walbridge as just a "construction company", we hosted Ford's Global IoT team at the WINLAB for a SMART Building Innovation Showcase. Flocscape, a leading Employee Engagement solution, was the key highlight. This was a \$15k investment for Proof of Concept.

(6) Innovation Station Ideas were submitted for improving Meeting Space use/ protocol. A OT team led by Pete Dargatzis identified numerous areas for improvement. Flocscape provides a solution to all but (1) need. SEE SECTION #2 and #3

**The long term goal is improving Walbridge employee engagement and productivity.**

**Approved by:** Walbridge IT, Other Stakeholders

**Approved Date:**

**Pending:** 1) detailed analysis of (3) us based solutions 2) confirm flocscape technical issues are solved (battery drain, timeout, panel wiring, sensor density) 3) confirm viability of colleague finder for visible/invisible employee engagement 4) confirm amount of it support vs value of benefits

**Current Condition + Goal:**

- Minimize time spent on finding a room for instant meetings
- Help people use all meeting rooms in the building. Not only the one closest to you.
- Avoid aculture where employees book rooms and do not use them.
- Search where an unknown person's office is
- Seat fapersons by their desk.
- Make it easy to find guest desks
- Help new employees find their way in the office.
- Get very accurate desk and room utilization data for future decision to optimize office space.
- An easy tool for failure reporting equipment in the office.
- Get a modern tool for corporate announcements and fast push messages to individuals
- Create a modern digital feeling in the office for employees and customers

**The long term goal is improving Walbridge employee engagement and productivity.**

**A3 Number:** Tech Agenda #2

**Cost Schedule Impact:**

- First year total \$20k (50% discount)
- Install and program \$10k
- Training cost?
- IT to be - is this all the costs?
- IT to insert ongoing support costs
- Second year and beyond is negotiable

**3) Analysis of Options:** Flocscape with Yonzi and Senion sensors is the technology that was installed and tested for the Proof of Concept. Other systems were reviewed that do a portion of what Flocscape does, but none do all the same features. See comparison chart of features and costs attached.

For indoor positioning and colleague finder, Mit is another option to Senion (the Flocscape tech solution) but not as accurate for locating people and is not recommended (tested on 2nd floor)

**4) Recommendations + Execution Plan + Follow up**

**HOLD FOR ANALYSIS OF US BASED SOLUTIONS:** Research and (6) implement a solution of Flocscape for 2nd and 3rd floors. Includes: colleague finder, 1:1 conference room booking and (8) desk reservations.

(1) year agreement, confirm benefits and determine future needs.

- After launch, Flocscape company has no access to outlook.

- IT support for Room panel connectivity and integration with outlook IBD. (ET note: what does this mean?)

- Reliability and performance of IoT network not yet solved.

- IT to insert SECURITY ANALYSIS/ RISKS

- IT to insert unresolved technical issues

**a) Cost of resources to fully implement and train?**

- Support needed includes installation of ten room panels and programming of 1,000 BLE beacons (\$1,000,000) and labor to perform setup/integration with office 365 outlook (Bruce Dai @ 10 hours)

**b) Tangible cost savings and benefits?**

- Better utilization of meetings rooms. End available and right room/ resource quickly, also releases rooms booked but not used, eliminate need to "hoard" rooms.
- Streamline Workplace. People spend extra time searching for each other and booking meeting rooms. Ericson and Steel case estimated to be 15 minutes per employee per day. For 100 Walbridge staff (half of HD) equals \$24k monthly savings (100\*15min\*20days\*\$75/0.5hr). c) Tangible benefits?
- Increase ability to attract new/young talent with modern digital workplace
- Support Walbridge SMART Buildings innovation campaign/ LG 2020 Event

**d) What is Return on Investment?**

- See above. \$1.2 to \$24k staff labor/burden savings per month

**Total Investment Cost:**

Hardware	
Software	
License	
Annual Fee	
Internal Labor	\$ 10,000
Internal Material	
Total	
Over (5) years	
Training	
Ongoing IT Support	

**Total Return:**

**DIRECT:** \$24k monthly OH available for growth. For 65 Walbridge staff (half of HD) equals (65\*1.5min\*20days\*\$75/60min)

**INDIRECT:**

- Increase ability to attract new/young talent with modern digital workplace
- Support Walbridge SMART Buildings innovation campaign/ LG 2020 Event
- Create a positive, innovative image during customer visits
- Capture analytics on room usage for optimizing effectiveness

**SMART Building expected EMPLOYEE benefits:**

- 1) productivity
- 2) wellbeing
- 3) appeal to new talent
- 4) employee loyalty.

**CASE STUDIES:**

Eriksen has calculated that they can save 15 minutes a day per employee and also 20% space.

Cor has come to the conclusion that it is possible to reduce the office space by 30% with no negative effect on employee satisfaction. "The workspace is a large and rising cost for many businesses, especially for those renting office spaces in central business districts and nearby suburbs. From a experience most businesses can cut these costs by up to 30% by optimizing the use of their workspaces and at the same time increase both employees satisfaction and work force productivity. (http://www.smartoffice.com/smart-office-utilization)

Microsoft. <https://www.zdnet.com/article/optimizing-the-smart-office-a-manage-of-technology-and-people>

Steel case <https://www.steelcase.com/content/uploads/2015/01/threestdy-collaboration-white-paper-v26.pdf>



Collaboration



Process and Flow



Removal of Waste



Plan | Value Generation

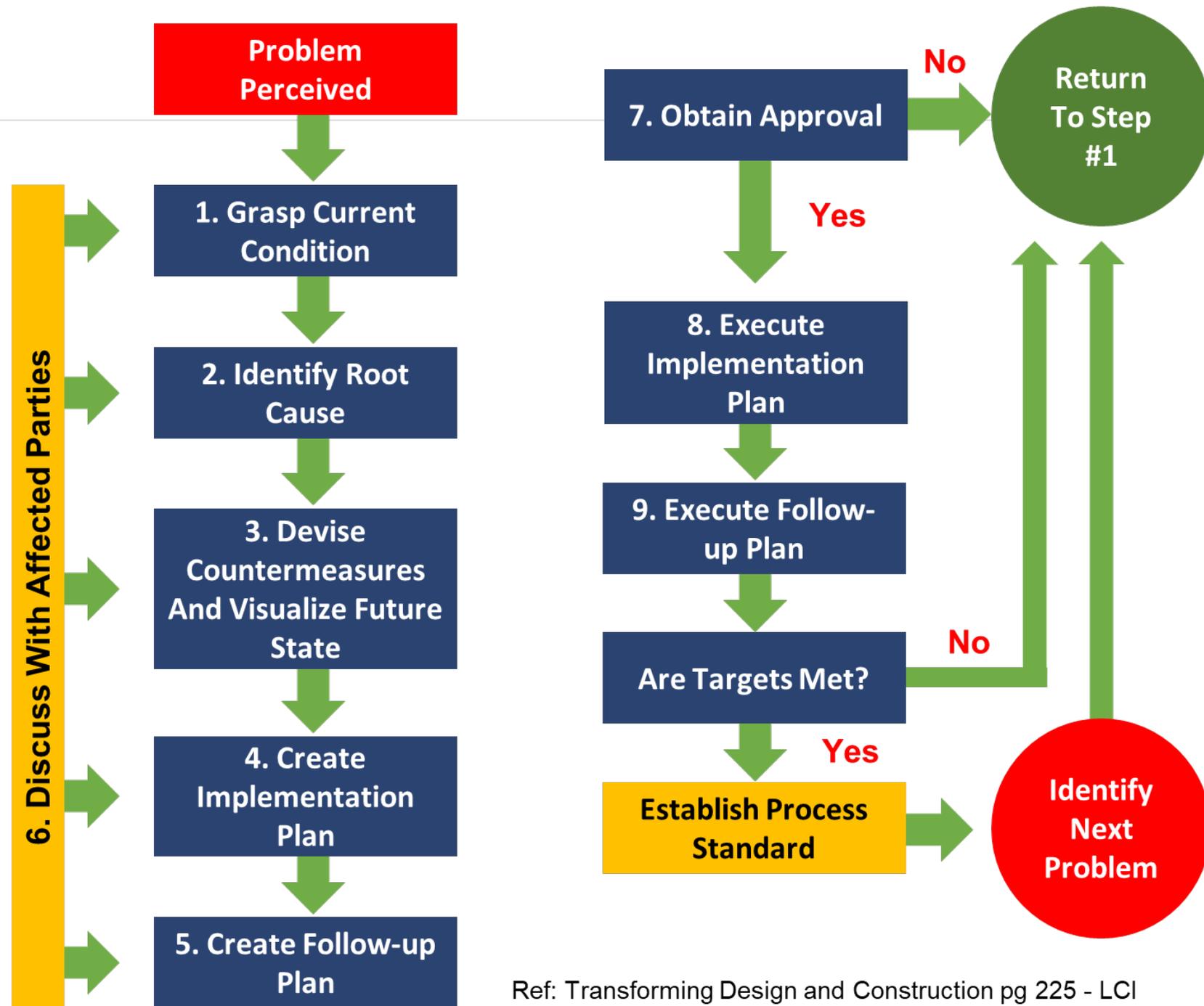


Respect for people | Team



Optimize the Whole

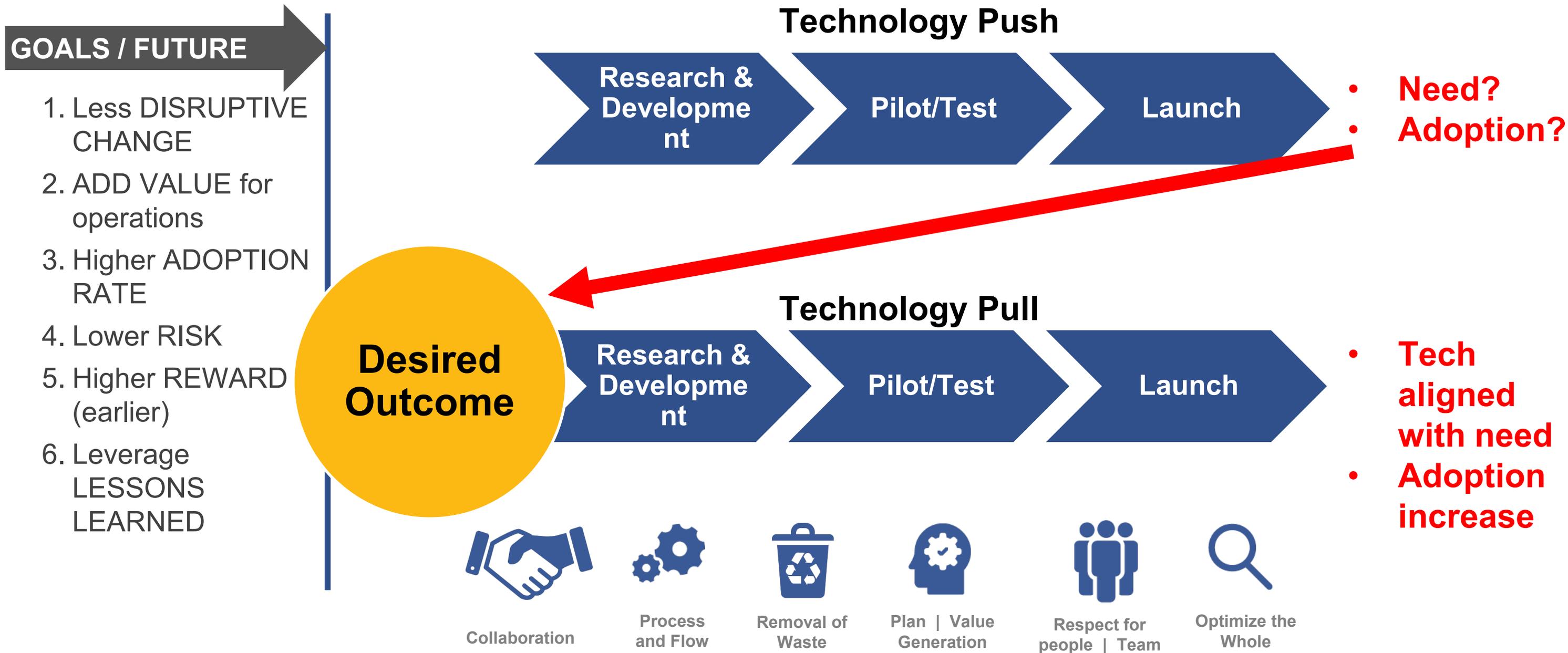
# PROBLEM SOLVING – A3 PROCESS



Ref: Transforming Design and Construction pg 225 - LCI



# HOW and WHAT? – Optimize Adoption



# Workflow impact on a typical day

## GOALS / FUTURE

1. Less DISRUPTIVE CHANGE
2. ADD VALUE for operations
3. Higher ADOPTION RATE
4. Lower RISK
5. Higher REWARD (earlier)
6. Leverage LESSONS LEARNED

7 AM	UPDATED: Employee Health Questionnaire
8	Enter Safety Observation 200021- GM DHam-BET- Factory ZERO- Da
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10	Pre-Installation Pit Infills WinLab Trailer/ Teams Meeting Sanchez, Jorge Jr
11	GM DHam Factory Zero- BET- GK MSR Review
12 PM	GM DHam Factory Zero- BET- UPI MSR Re [External] DHAM 1964361 MCE Electrical - Liq Skype Meeting Whitman, Emily
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3	RECONSTRUCT
4	Organize/store emails into sub folders

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## When is there time to learn and deploy new solutions?

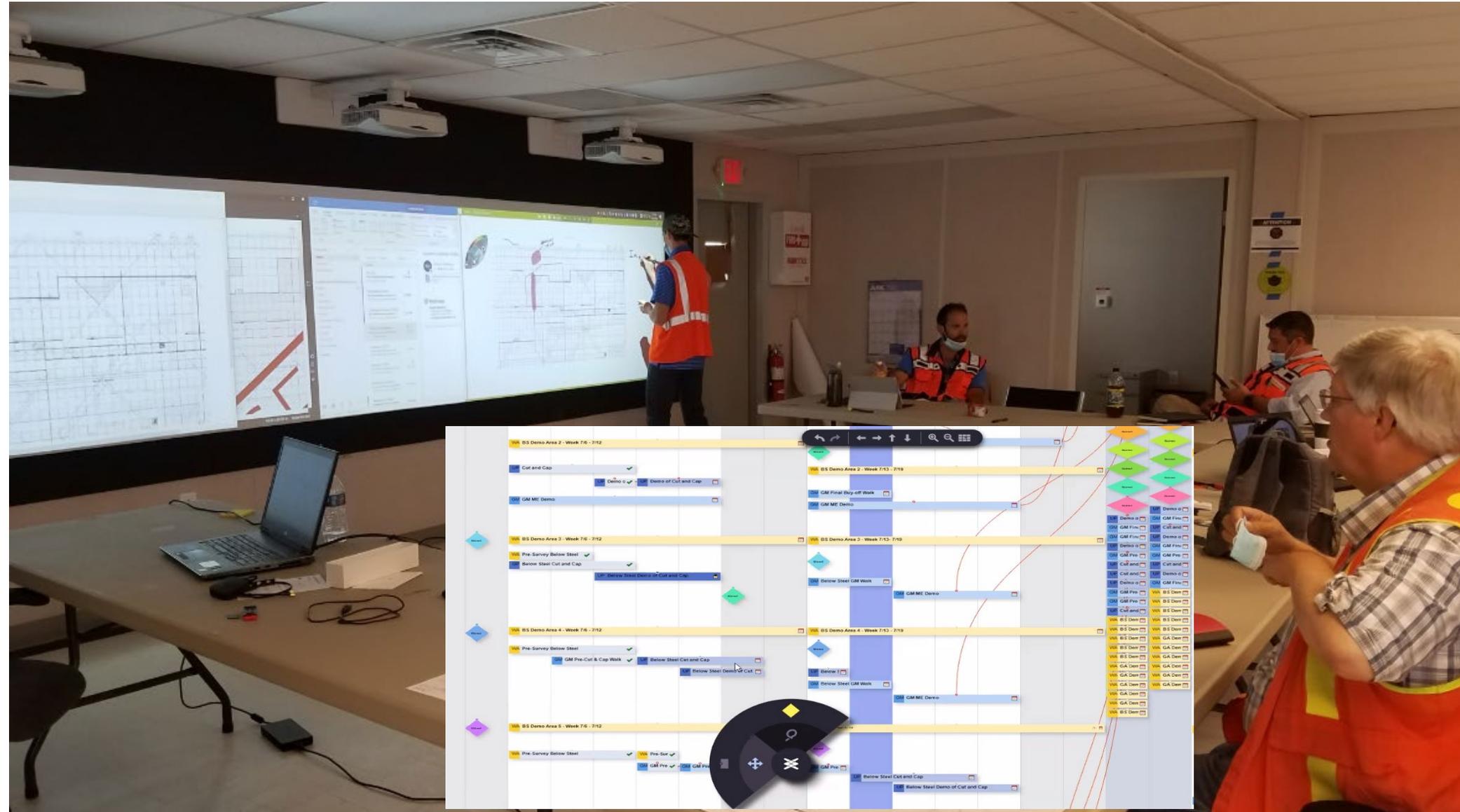


Process and Flow

# Workflow impact on a typical day

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Process and Flow

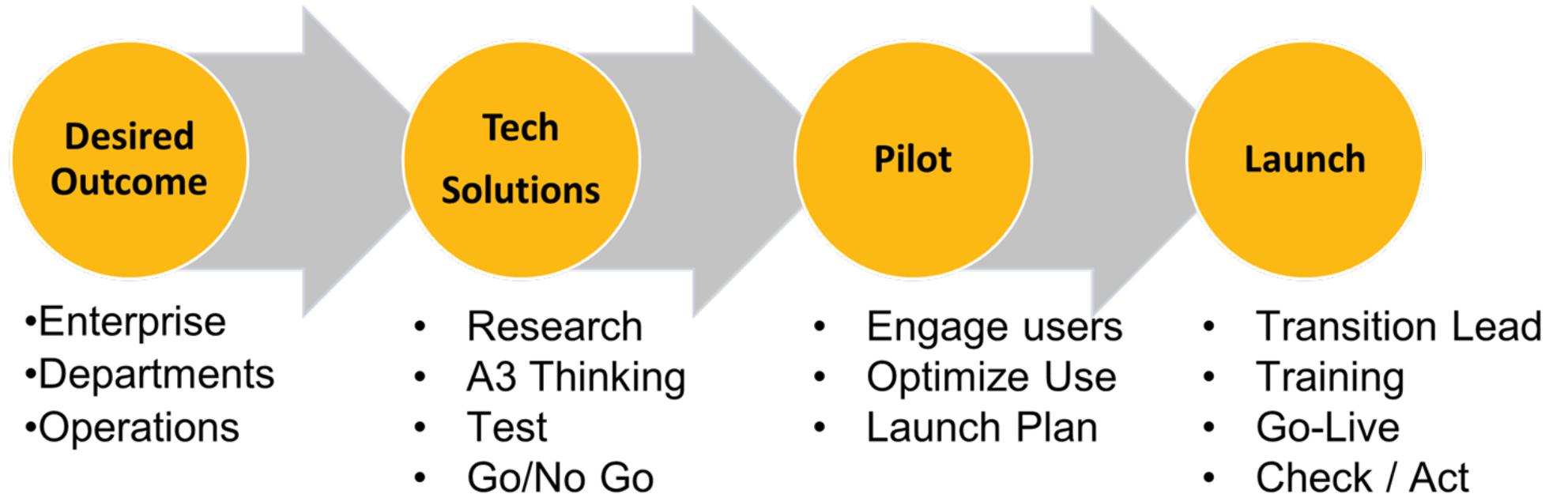
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## Pre-Launch

- **Gated process** to orient and align expectations
- Meet the team where they are at for READINESS –Lev 1, 2, 3
- Acknowledge and plan for “time scarcity” and stress level and workload at project – “mental bandwidth” – a team/project might not work for pilot or early launch



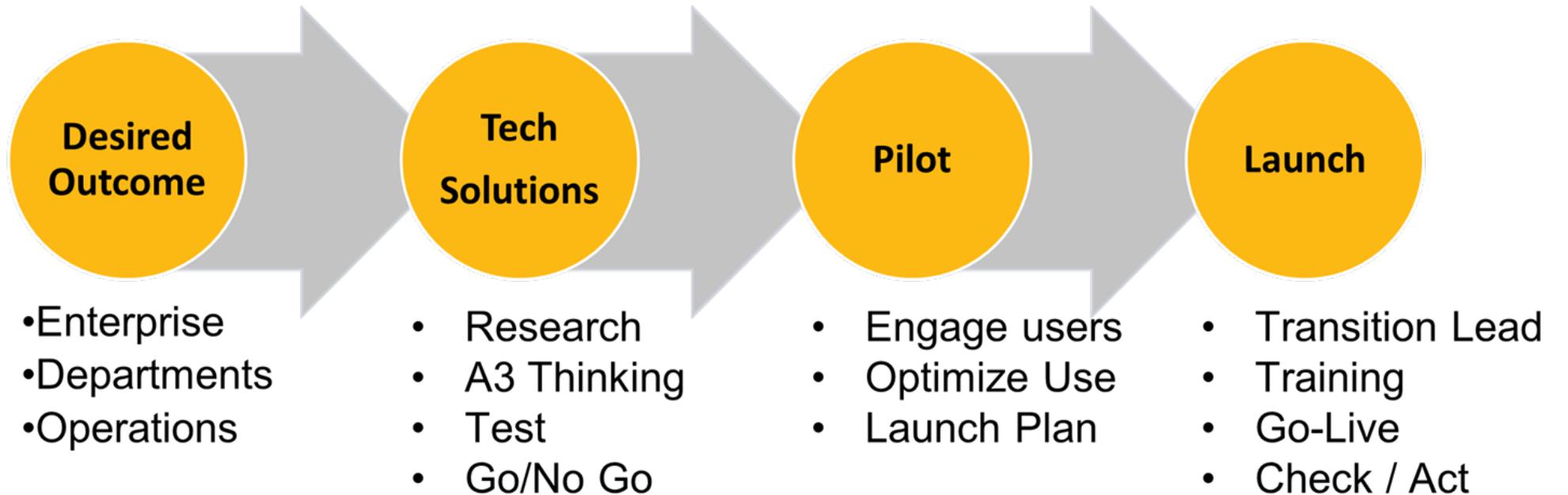
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## Post Launch

- Shoulder to shoulder support
- Engage user group – weekly lessons learned
- User manual – living document – User Group
- Regular check-ins on progress and share success stories
- Nurture your early adopters



# WHEN? – Technology Agenda



# Technology Agenda

## Tech C



- Potential breakthrough
- Industry shift
- Watch / follow
- Potential partnership
- Competitive exclusivity

## Tech B



- Solves desired outcome
- Shows value
- Competitive advantage

## Tech A



- Solves critical need
- Adding value
- Competitive necessity



# ACT? - Lessons Learned



# LESSONS LEARNED ROADMAP



## Culture / Environnement

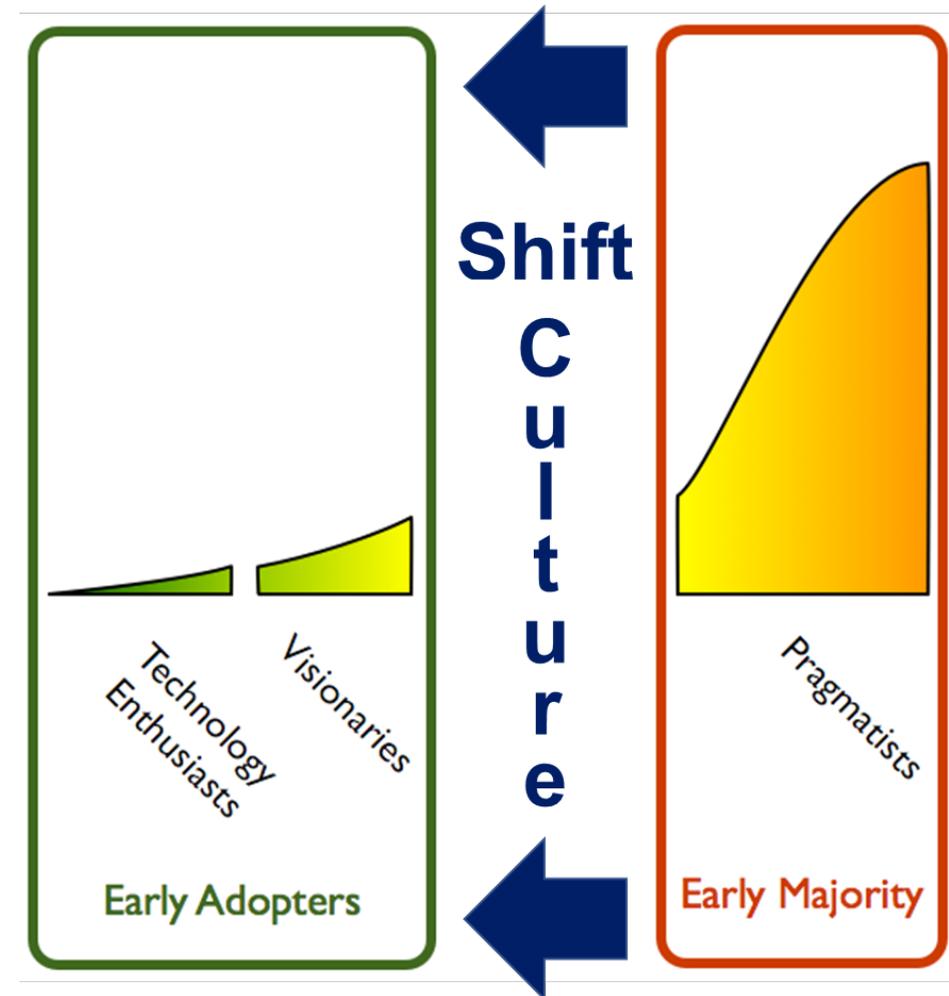
### Planning



### Early Engagement



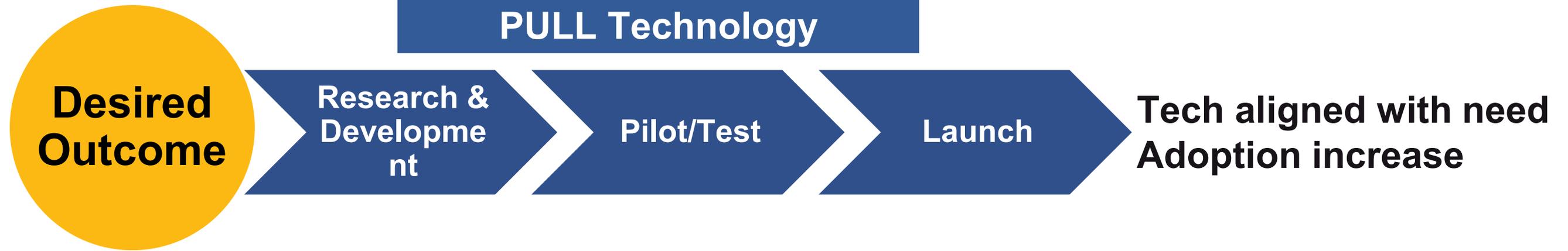
New Tech - Single Accountability



# LESSONS LEARNED ROADMAP

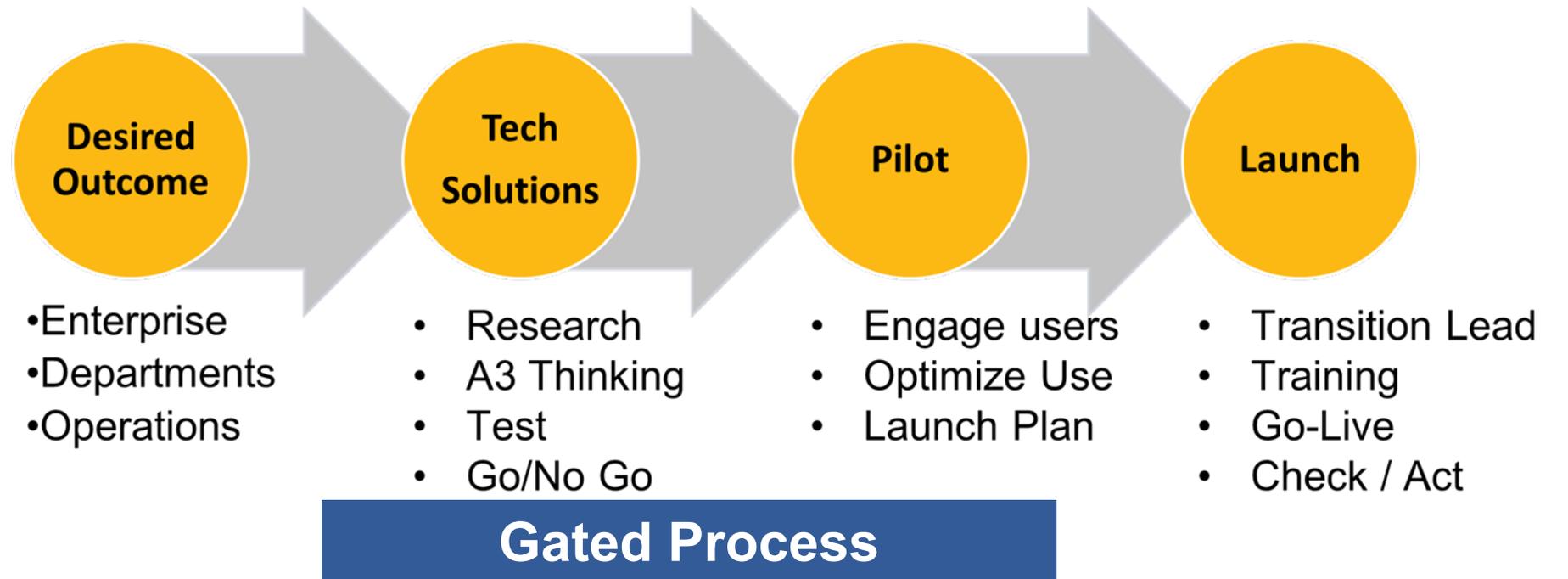


## PLAN (Pre-Launch)



**Workflow Analysis**

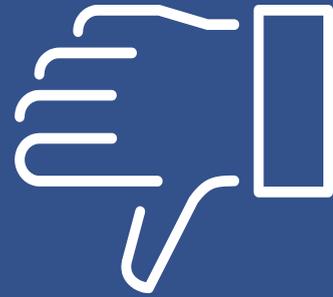
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# LESSONS LEARNED ROADMAP

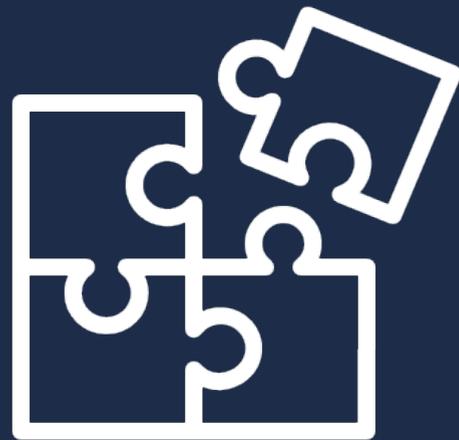
## DO (Launch)

**Show Stoppers**



**Stress on Team**

**Right Staff**



**Mental Bandwidth**



**Lean the Process**



**Collaborate or Partner with Tech Provider**



**Living Users Manual**



**Continuously Improve**



**Meet twice Monthly**



**User Group**

**Training**

# LESSONS LEARNED ROADMAP

## ✓ CHECK (Utilize) and ADJUST / ACT (Improve)

**Technology Leader**

Champion from Project Team

Shoulder to Shoulder



Technology meeting expectations?

Regular Check-Ins



**Reinforce the Vision**



Nurture Early Adopters



Quarterly Breakout

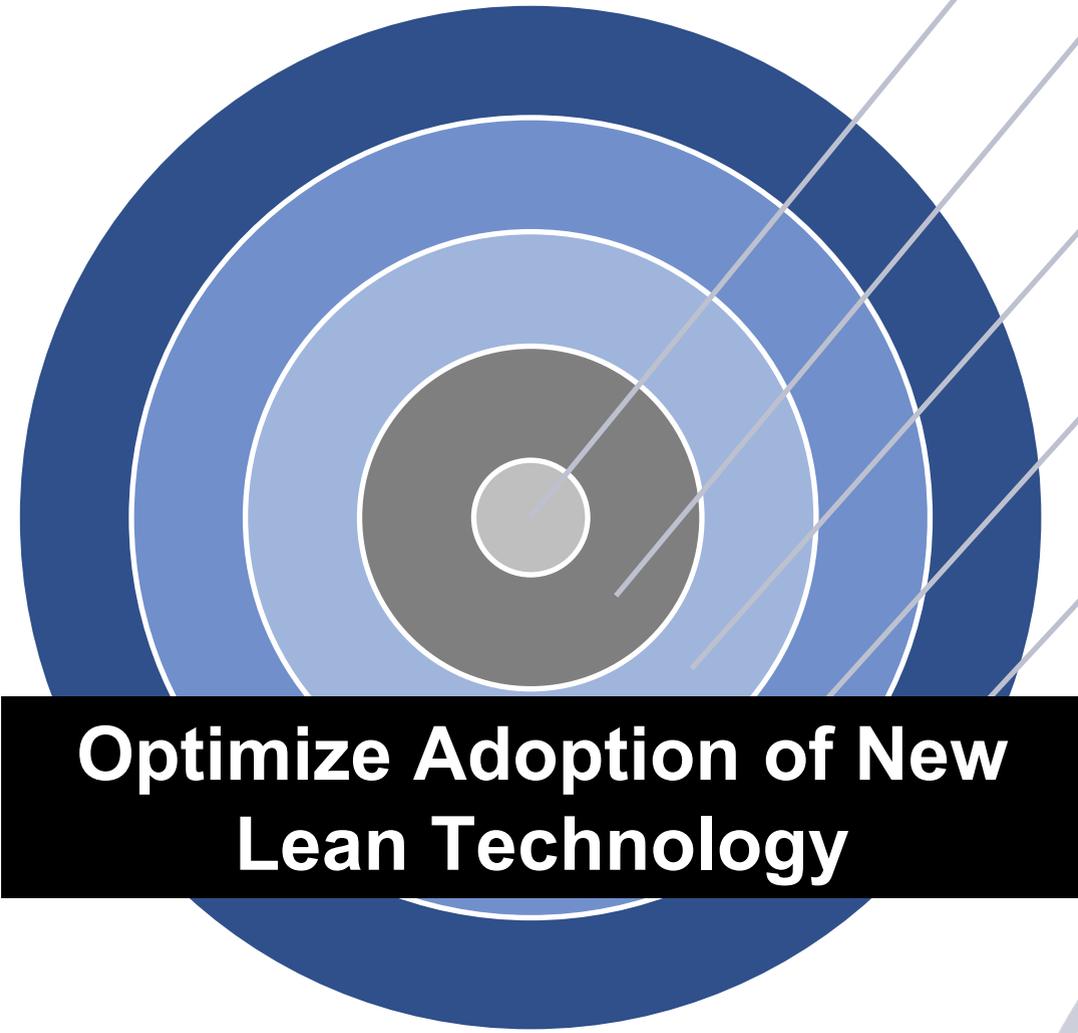
Become Leading Tech go-to SME for Customers



# Key Takeaways



# Key Takeaways



Annual Technology Agenda / Budget

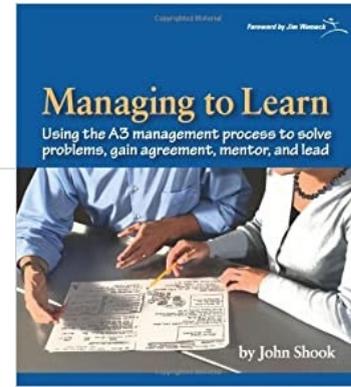
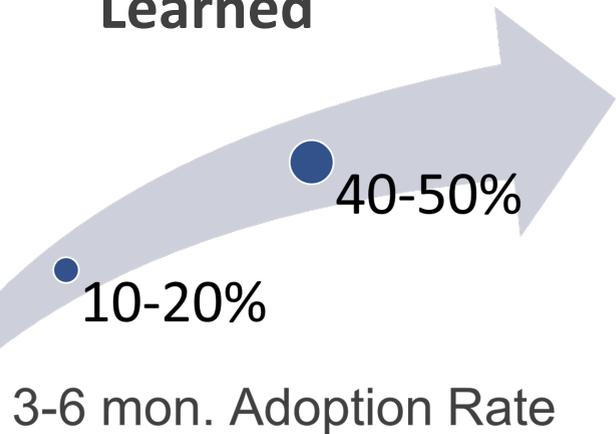
PULL Technology Process – A3 Analysis

Now, Near, Far Prioritization

Gated Process

Leverage Lessons Learned

**Optimize Adoption of New Lean Technology**



**Managing to Learn: Using the A3 Management Process to Solve Problems, Gain Agreement, Mentor and Lead**  
by [John Shook](#)

**Excel A3 Template and Questions**

Leverage Lessons Learned Through Failure And Growth	
OLD (variable results)	NEW (consistent results)
<b>Culture / Environment Technology Adoption Lifecycle</b>	
<b>Dominant Culture</b> - Pragmatists/Conservatives - Early/Late Majority	<b>SHIFT EARLIER:</b> - Tech Enthusiasts/Visionaries - Innovator/Early Adopters
<b>Reacting</b> - Limited annual plan - No investment / testing budget - Ad hoc investment	<b>Planning</b> - Annual Technology Agenda - Directional budget - Focus on desired outcomes
Reactive or "PUSH" technology process	Proactive and "PULL" technology process
Distributed accountability and reactive priorities	Single accountability for Now, Near, Far Technology Agenda and PRIORITIES

**Lessons Learned Roadmap**



# Q & A



# Contact Us

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# Walbridge