

NEXT SESSION

STRENGTHENING THE NUCLEAR SECURITY ENTERPRISE WITH ORGANIZATIONAL AGILITY

Ty Deschamp

Assistant Deputy Associate Administrator for Infrastructure Lifecycle Management,
National Nuclear Security Administration (NNSA)

**This session will be
recorded.**

University of Maryland
Project Management
Symposium



PROJECT MANAGEMENT
CENTER FOR EXCELLENCE

A.J. CLARK SCHOOL OF ENGINEERING
Civil & Environmental Engineering Department





Special Thanks

The "Federal Programs Track" was developed in collaboration with the Federal Program and Project Management Community of Practice

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Strengthening the Nuclear Security Enterprise with Organizational Agility

Ty Deschamp

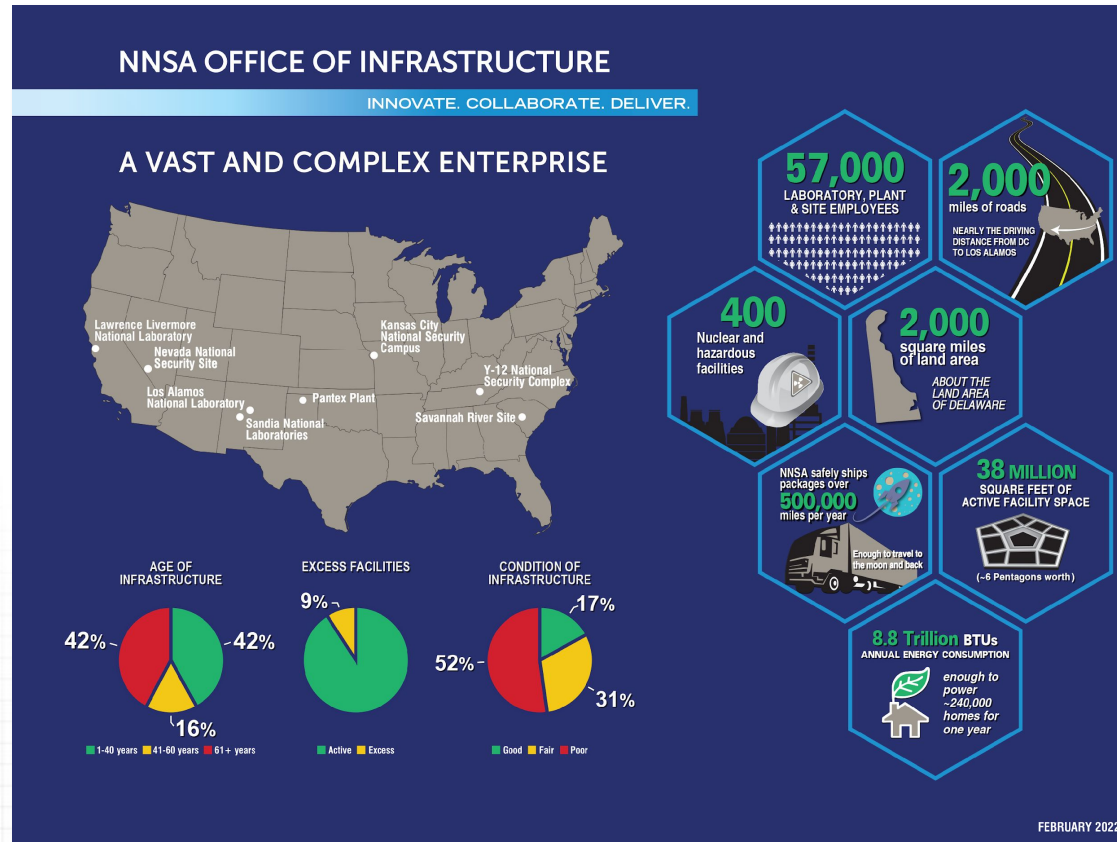
2023 Project Management Symposium



National Nuclear Security Administration (NNSA)



Nuclear Security Enterprise Challenges



Top Infrastructure Challenges

- Age, Condition & Capacity
- Delivery Speed & Agility
- Vendor Base/Supply Chain

We must also continue revitalizing our infrastructure, both by reestablishing capabilities lost after the Cold War and modernizing facilities that have degraded over the last 30 years. - NNSA Strategic Vision (2022)

Infrastructure Vision

**Anticipate tomorrow's nuclear and national security challenges
and deliver timely, innovative solutions**



SNL Emergency Operations Center

Delivering our Vision

- We must go beyond the frontier that we know
- Mitigate climate change
- Modern, flexible, resilient nuclear complex
- Leverage improvements in manufacturing, construction, and other technologies
- Revitalize infrastructure by reestablishing capabilities lost after the Cold War and modernizing facilities that have degraded during the last 30 years

NNSA Infrastructure Approach



TEAMWORK

Develop successful
Partnerships



AGILITY

Anticipate challenges, act
with urgency, and create
innovative solutions

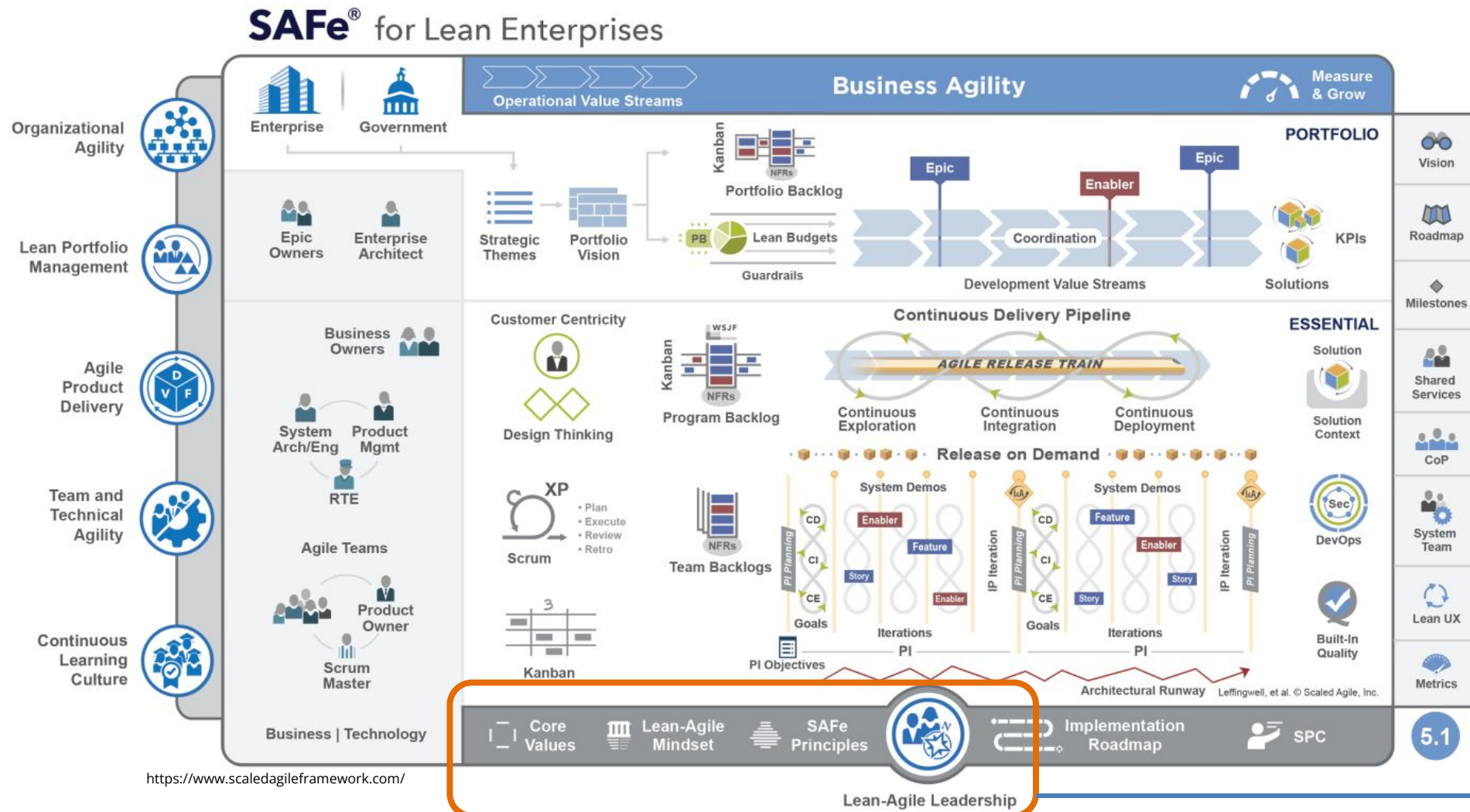


VALUE

Deliver timely,
meaningful, and
dependable results

DELIVER WORLD-CLASS INFRASTRUCTURE, QUICKLY

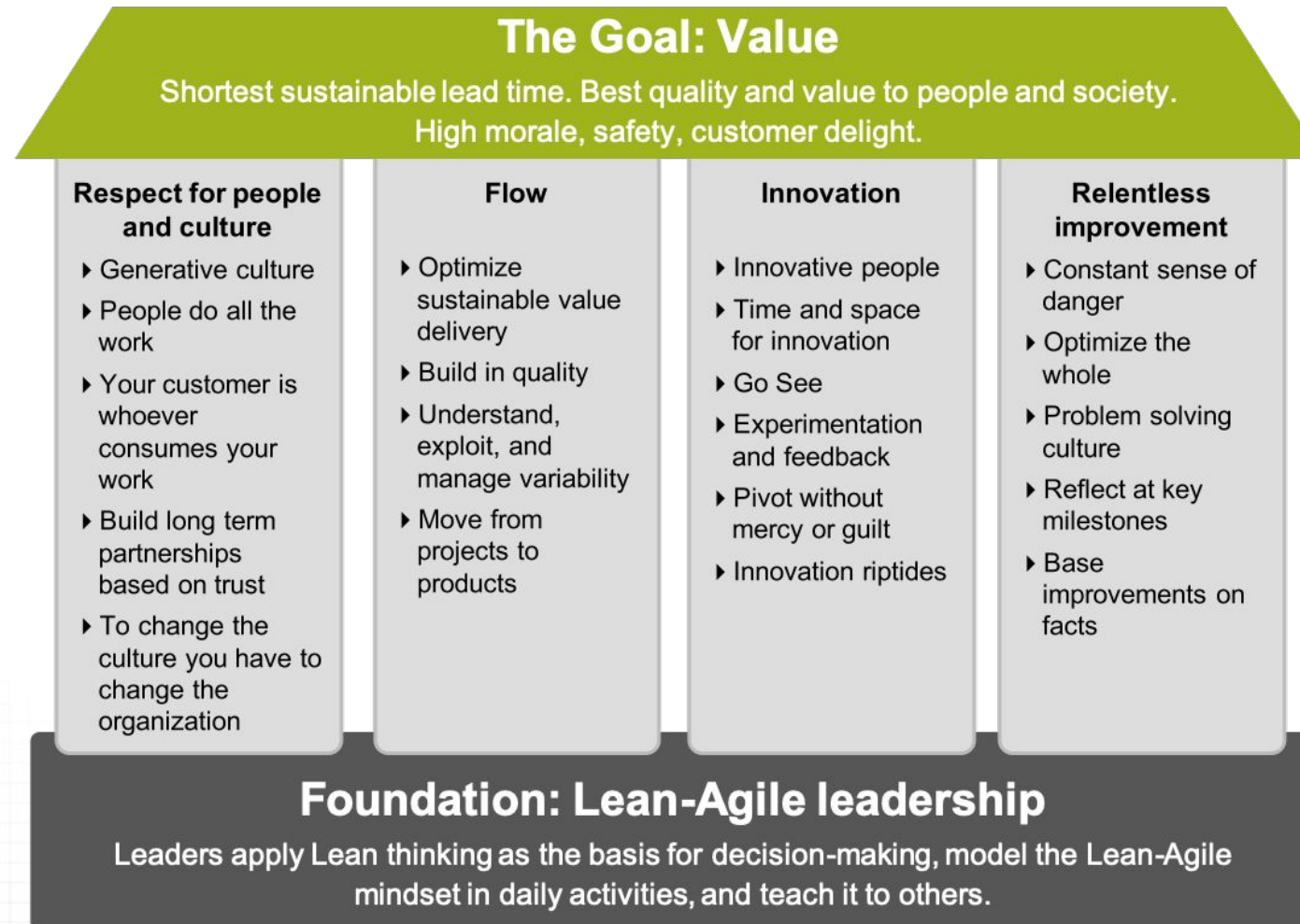
Scaled Agile Framework (SAFe)



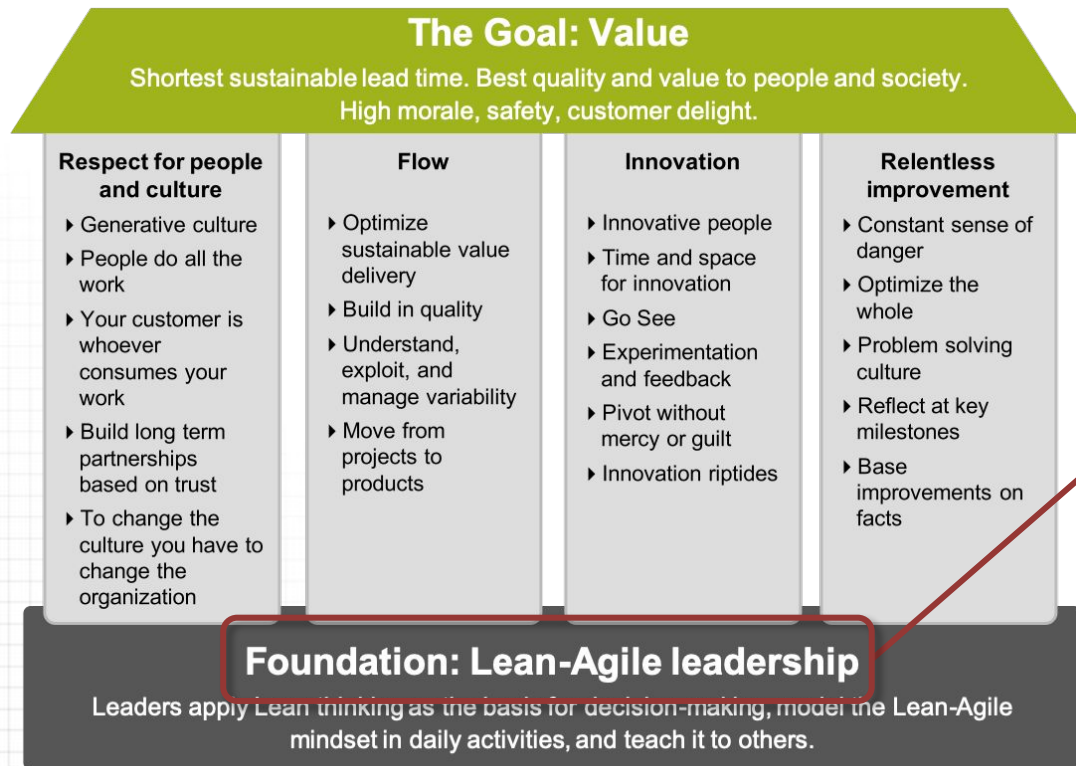
SAFe Fundamentals

- Core Values
- Lean-Agile Mindset
- Principles
- Lean-Agile Leadership

SAFe: House of Lean



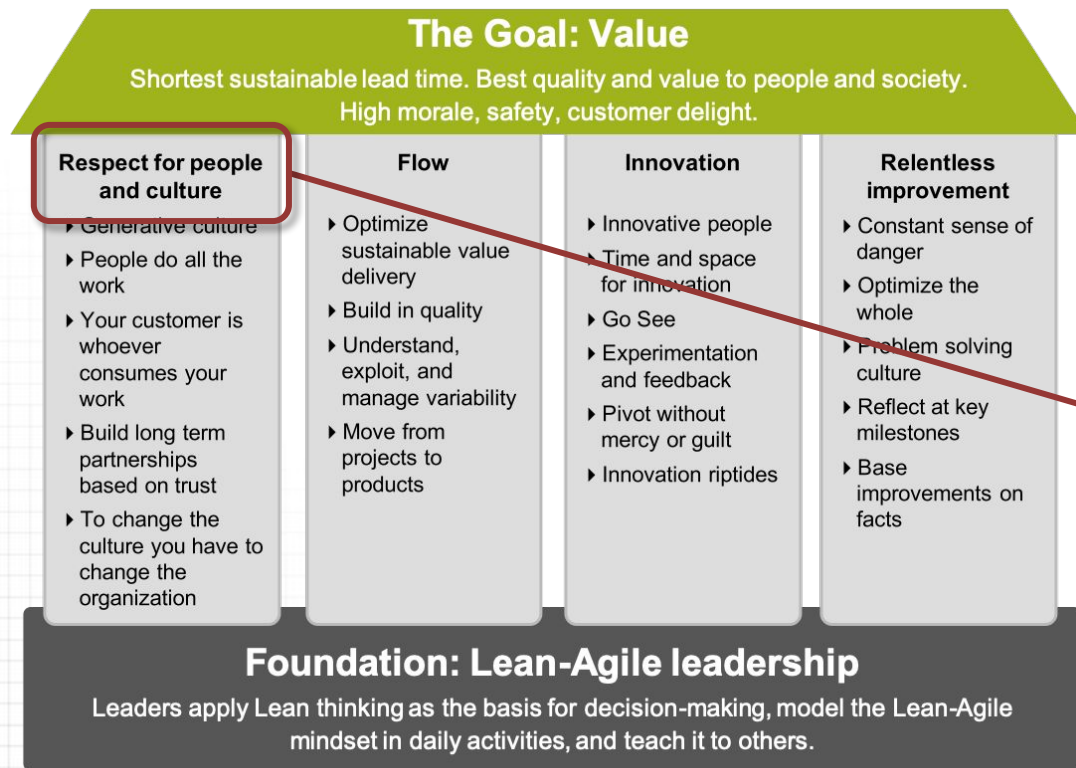
Lean Agile Leadership



Built our Foundation

- Executive Buy-In
- Focused on Fundamentals of Lean-Agile Leadership
- Trained Staff
- Tailored Training to Audience

Respect for People and Culture



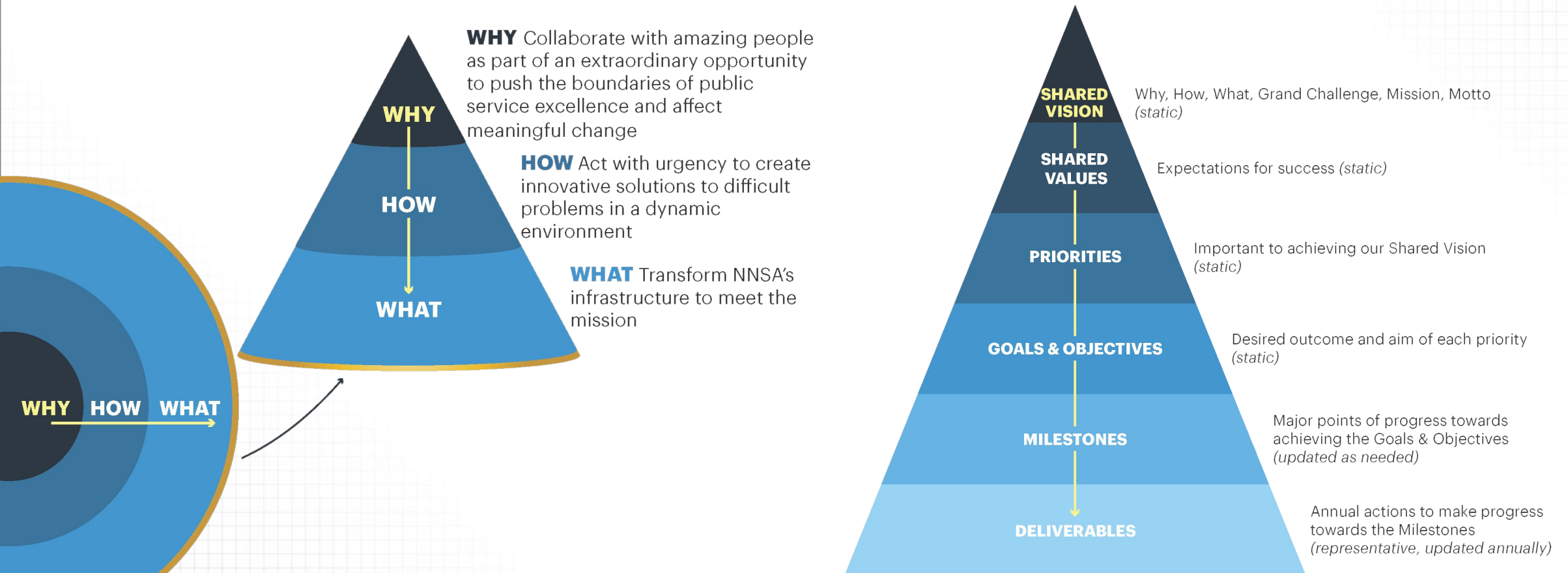
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Focused on People

- Developed Strategic Planning Framework
- Established Strength Based Culture
- Created Cross Functional Teams

Strategic Planning Framework

START WITH WHY



*Adopted from Simon Sinek's Golden Circle

Honoring our History, Building our Future

Strength Based Culture

Employees who receive strengths-based development:

**7 - 23%
More**

Employee Engagement

**8 - 18%
Increased**

Performance

**20 - 73%
Lower**

Attrition

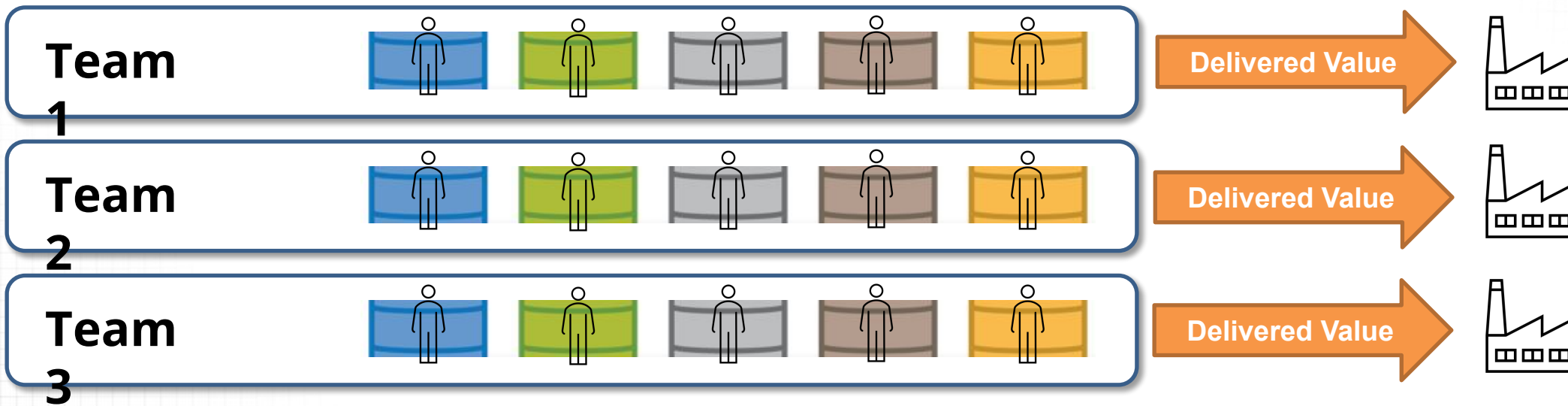
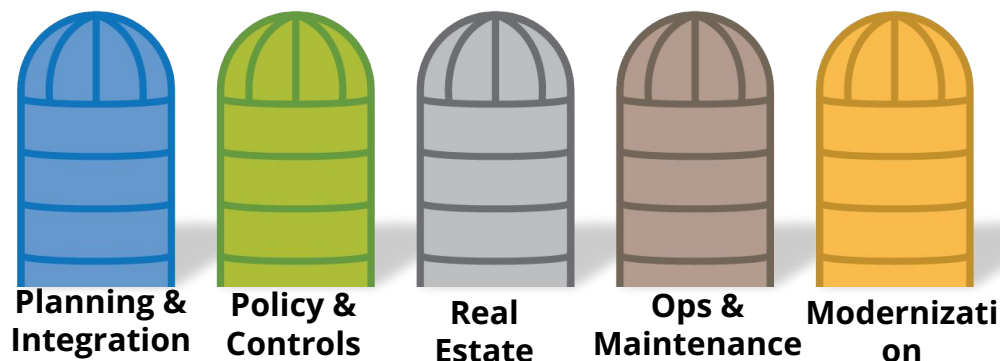
GALLUP STRENGTHSFINDER APPROACH:

- Individual Clifton Strengthfinder Assessments
- “Best of Me” Discussions
- Team Grids
- Gallup Strengths Coaches Network

Source: Gallup Strengthfinder Research Data

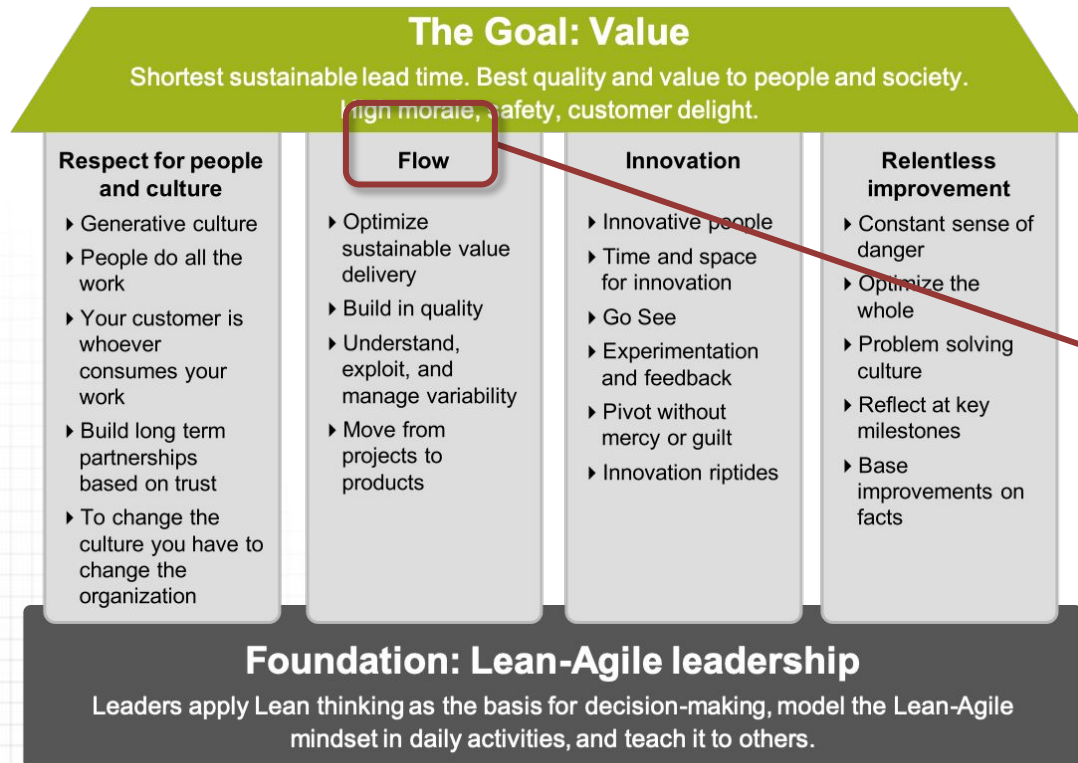
Cross-Functional Teams

Organizational Silos provide **DEPTH** of experience



Cross Functional Teams provide **BREADTH** of experience

Flow



Increased Flow

- Repeatable Processes
- Streamlined Criteria
- Standardized Designs

Increasing Flow



Enhanced Minor Construction & Commercial Standards (EMC²) Pilot

Construct non-complex projects <\$50M faster



Standardized Acquisition & Recapitalization (STAR)

Leverage standardized designs & requirements



Supply Chain Collaboration

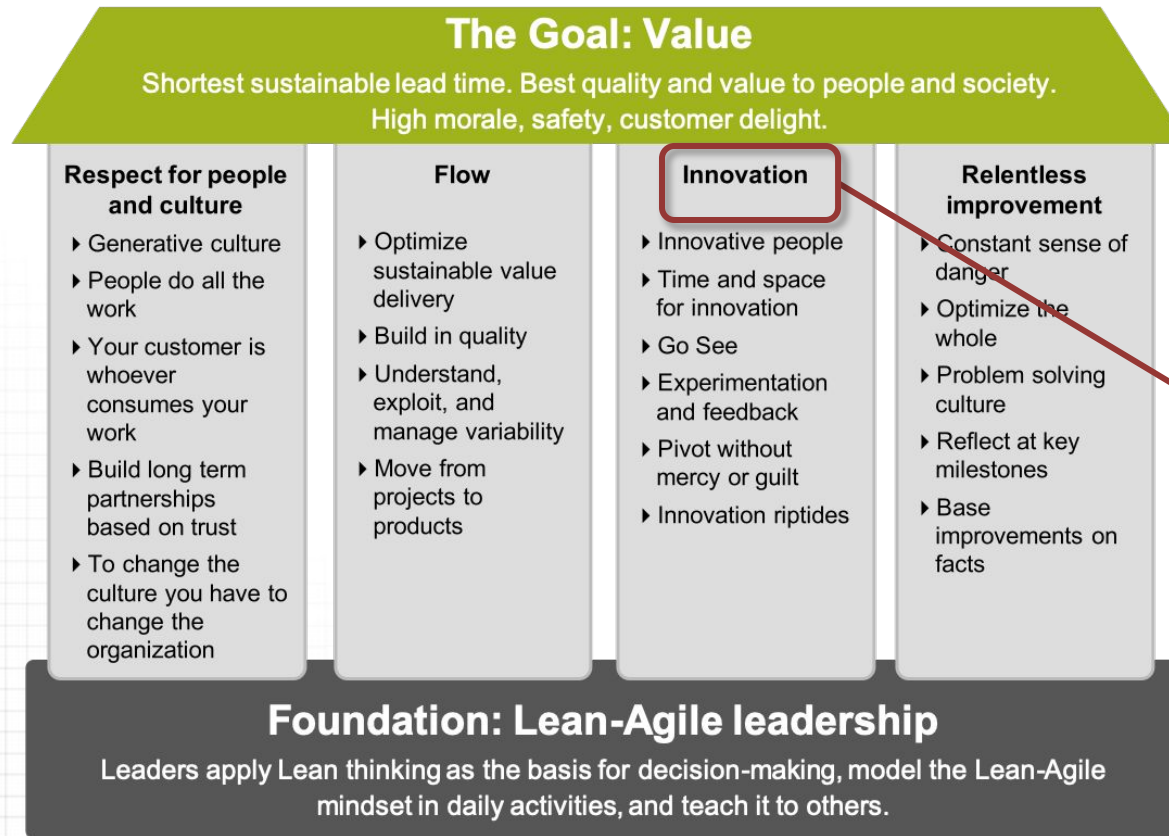
Leverage NNSA's purchasing power



Purchases

Use existing authorities to acquire land/facilities

Innovation



- ## Encourage Innovation
- Lean Startup Mindset
 - Embrace MVP

Lean Startup Mindset

Lean Startup - 5 Guiding Principles

- 1 **Entrepreneurs are Everywhere**
- 2 **Entrepreneurship is Management**
- 3 **Innovative Accounting**
- 4 **Validated Learning**
- 5 **Build-Measure-Learn (MVP)**



Applying MVP to NNSA Infrastructure

Cost & Commitment Forecasting

Started manually in spreadsheets prior to adding incremental features to Program Management System

Real Property Asset Management (RPAM) Guide

Published document with certain sections in progress or not yet defined

Snapshot+

Started with a small set of data points to prove usefulness, built momentum, and incorporated feedback

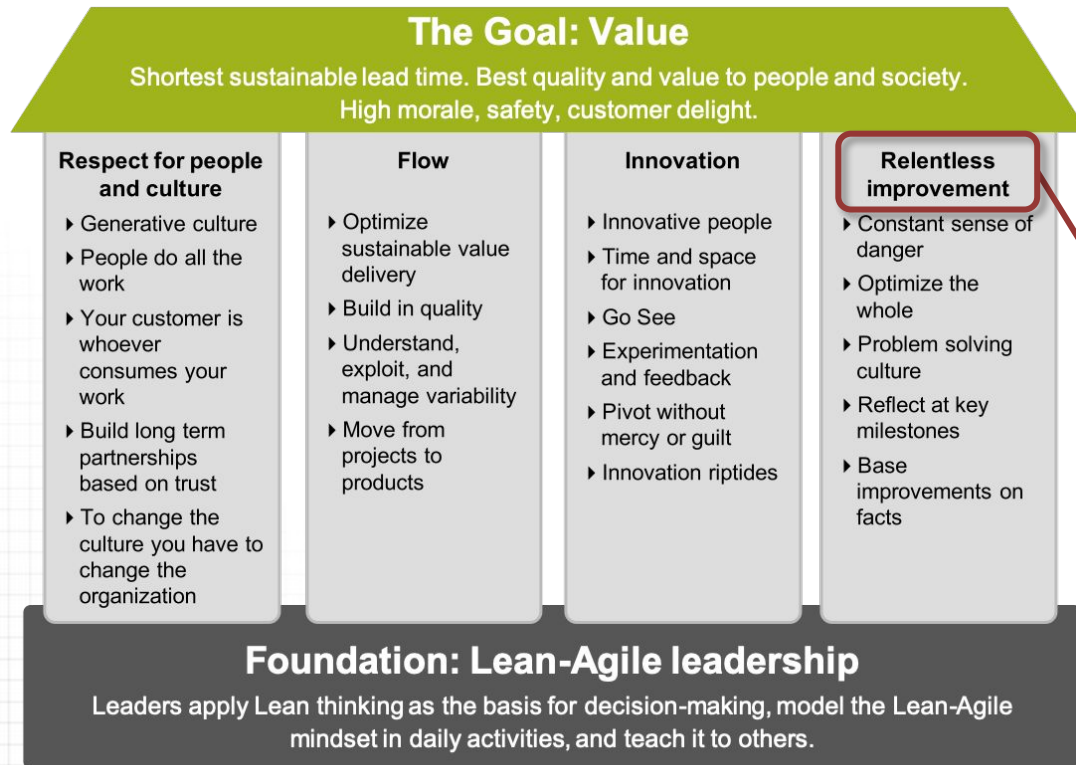
Line Item Construction Planning

Began by using existing planning data rather than requesting a new data set, later filled in gaps

ProtoSTAR

Piloted at 3 sites using standard office design to prove concept

Relentless Improvement



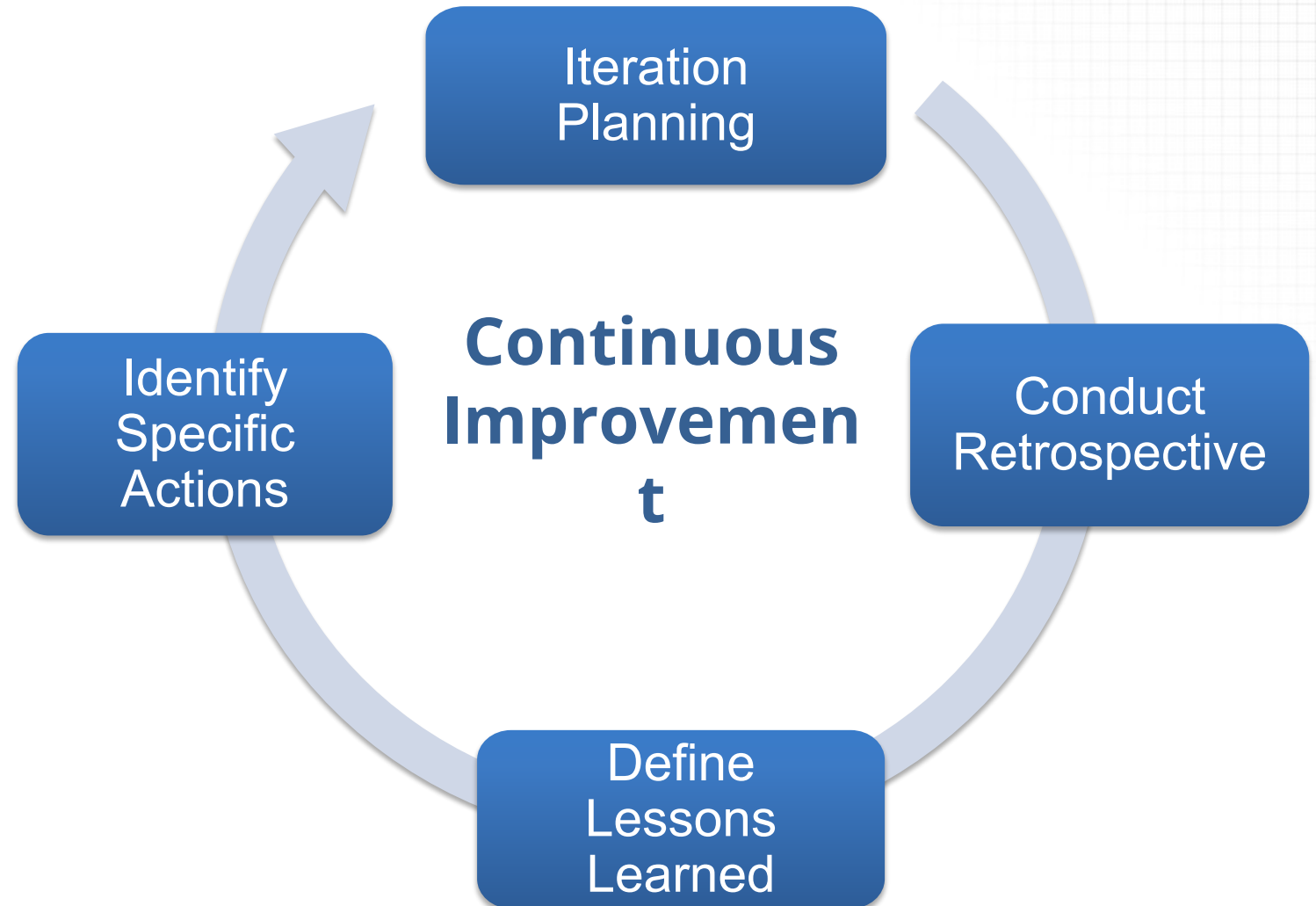
Continuous Improvement

- Retrospectives
- Lean Agile Center of Excellence (LACE)
- Measure progress

Retrospectives

We conduct retrospectives for major initiatives to determine:

- What is working well?
- What is not working well?
- How we can improve going forward?



Lean Agile Center of Excellence (LACE)

The LACE Team is a grassroots effort to help expand lean-agile principles throughout the organization

LACE Goals

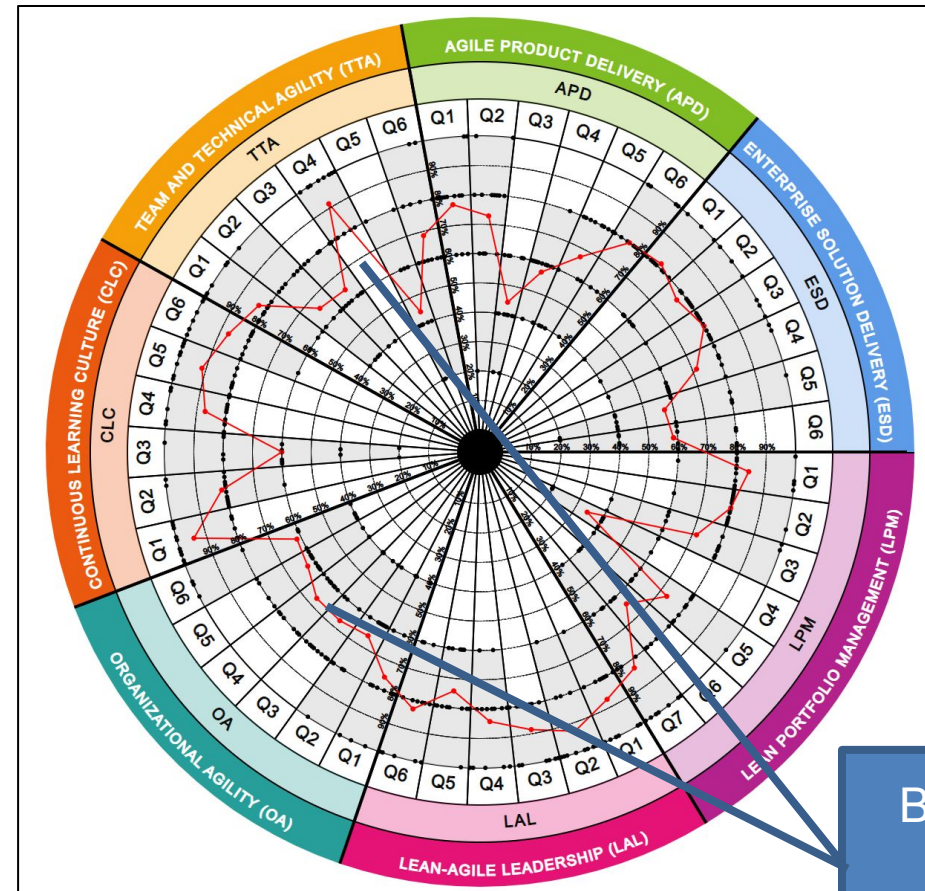
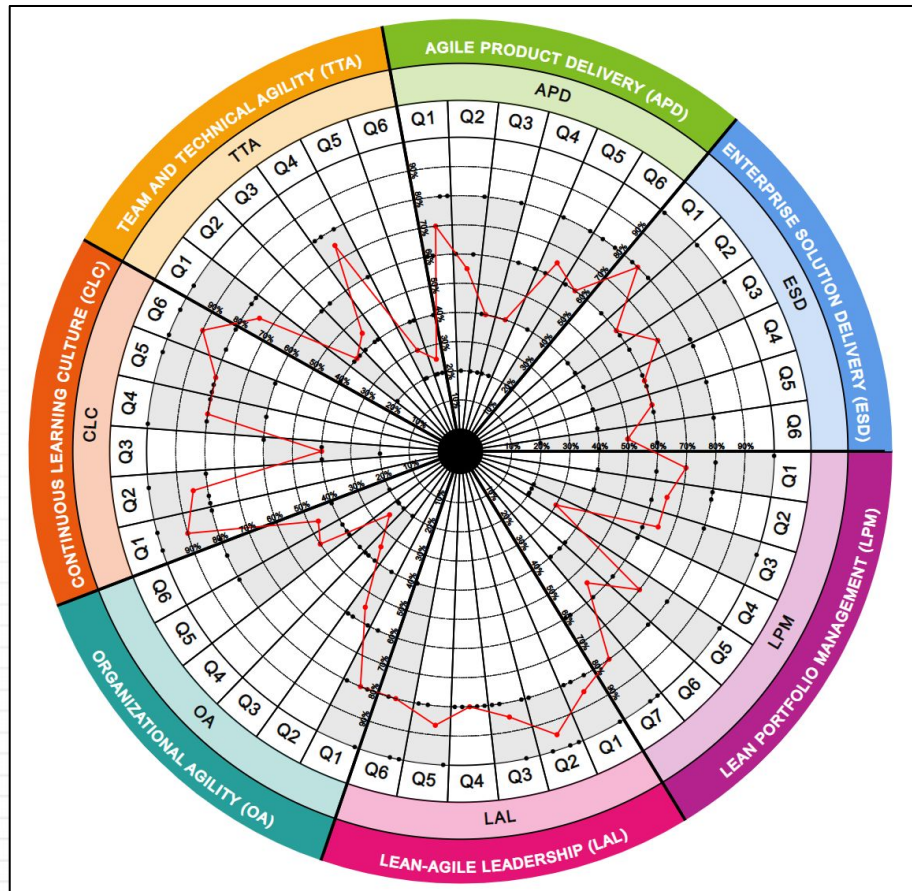
1. Form and expand a guiding coalition across the organization
2. Work with Teams to implement Lean-Agile
3. Provide knowledge, expertise, & training
4. Facilitate the implementation of Lean-Agile in the organization
5. Compile and share Lean-Agile resources
6. Regularly measure progress and refine actions and schedule using Lean-Agile planning approach

Measure Progress

2021



2023



- Conducted Business Agility Assessments to measure factors
- Defined prioritized actions to improve organizational agility

Biggest Increases
were in Team &
Organizational Agility



Evaluate Session



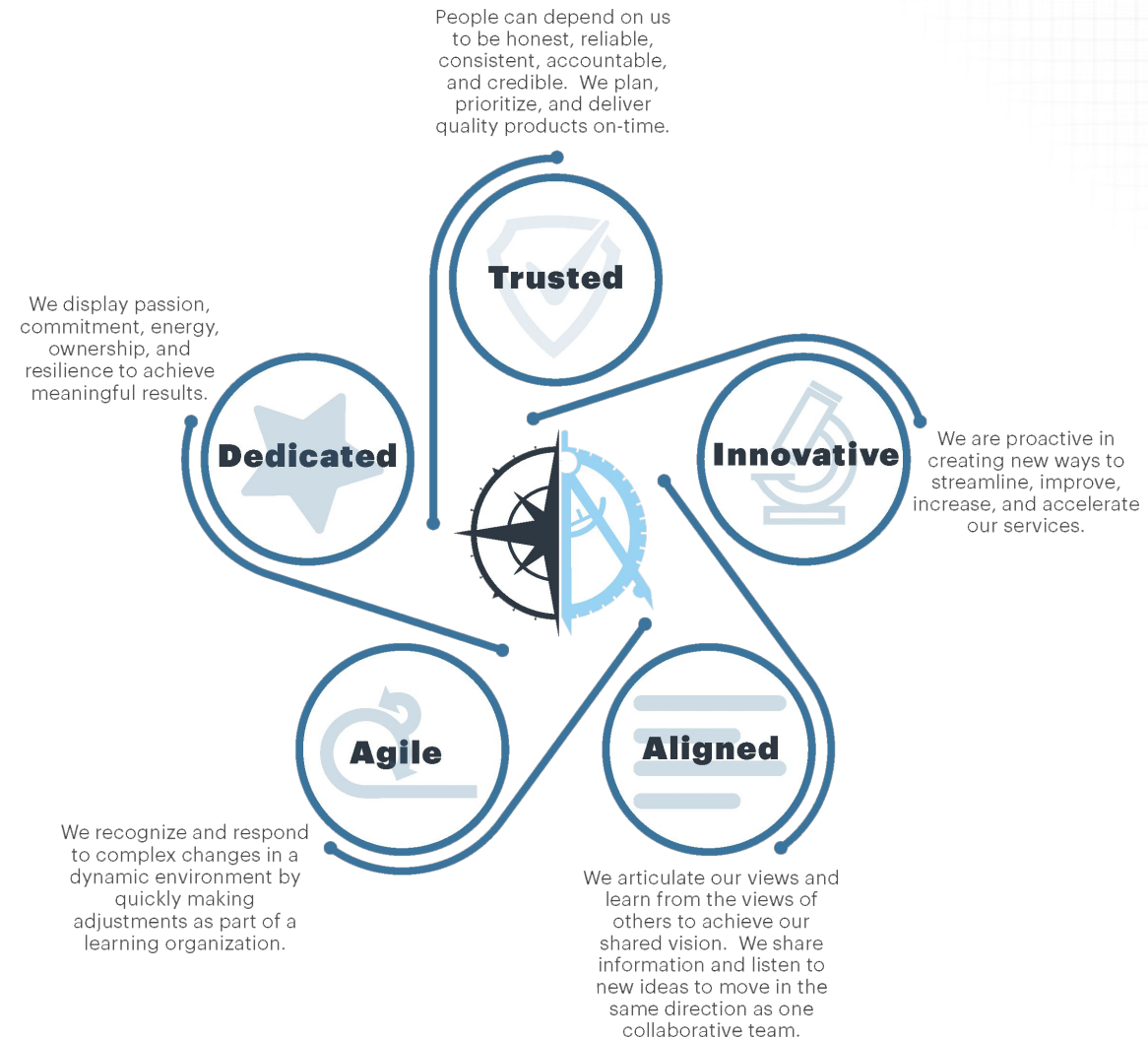


BACKUP

Shared Values

Our Attributes for Success

Our Shared Values are the principles and characteristics that define how we conduct ourselves every day. We are guided by our Shared Values in all work that we do.



Lean-Agile Principles in Practice

#1 Take an economic view

#2 Apply systems thinking

#3 Assume variability; preserve options

#4 Build incrementally with fast, integrated learning cycles

#5 Base milestones on objective evaluation of working systems

#6 Visualize and limit WIP, reduce batch sizes, and manage queue lengths

#7 Apply cadence, synchronize with cross-domain planning

#8 Unlock the intrinsic motivation of knowledge workers

#9 Decentralize decision-making

#10 Organize around value



**Instituting Lean-Agile
Principles into Infrastructure
Planning**

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Infrastructure Planning

PORTFOLIO-LEVEL

- Balance workloads across projects, sites, programs
- Always Be Constructing (ABC)
- Sequence investments for maximum value
- Stable, predictable, repeatable, and attainable

PROJECT-LEVEL

- Breakdown requirements into smaller pieces
- Minimum Viable Product (MVP)
- Prioritize projects based on mission urgency
- Deliver projects via time-phased campus strategy
- Inspect, learn, and adapt

