

Enterprise Transition to Lean Roadmap



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Lean Enterprise Implementation Processes and Tools

Implementation Issue

What are the key lean principles and practices?

How do I transform my enterprise to lean?

How do I assess my progress?



Enterprise Tool

Lean Enterprise Model (LEM)

Enterprise Transition to Lean Roadmap (TTL)

Lean Enterprise Self Assessment Tool (LESAT)



LEM Overarching Practices

Human-oriented Practices

- Promote lean leadership at all levels
- Relationships based on mutual trust and commitment
- Make decisions at lowest appropriate level
- Optimize capability and utilization of people
- Continuous focus on the customer
- Nurture a learning environment

Process-oriented Practices

- Assure seamless information flow
- Implement integrated product and process development (IPPD)
- Ensure process capability and maturation
- Maintain challenges to existing processes
- Identify and optimize enterprise flow
- Maintain stability in changing environment



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Lean Transformation Issues

- **Why do most lean transformation activities fail?**
- **What are the key success factors in implementing lean enterprise wide?**
- **How can we better assure that lean will impact bottom line results?**
- **Are there certain activities that are ideally performed before others?**
- **What is the role of senior leadership in assuring success?**

Issues Motivated Development of Enterprise
Transition to Lean Roadmap

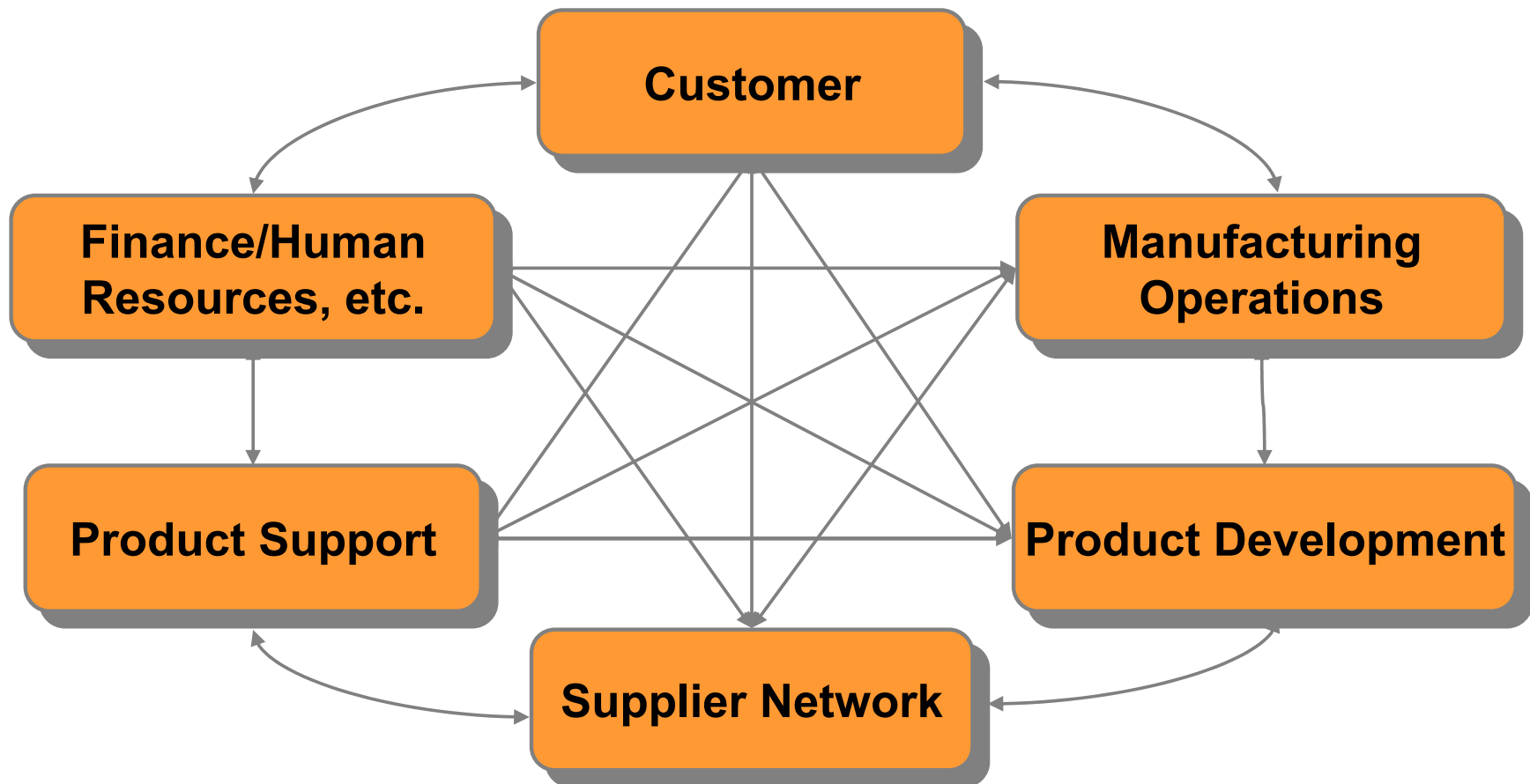


Key Principles of Change Management Apply to Lean Transformation

- **Strategic Alignment**
- **Management Commitment**
- **Sense of Urgency**
- **Stakeholder Involvement**
- **Organizational Structure**
- **Goals and Objectives**
- **Transformation Plan**
- **Monitoring and Nurturing**



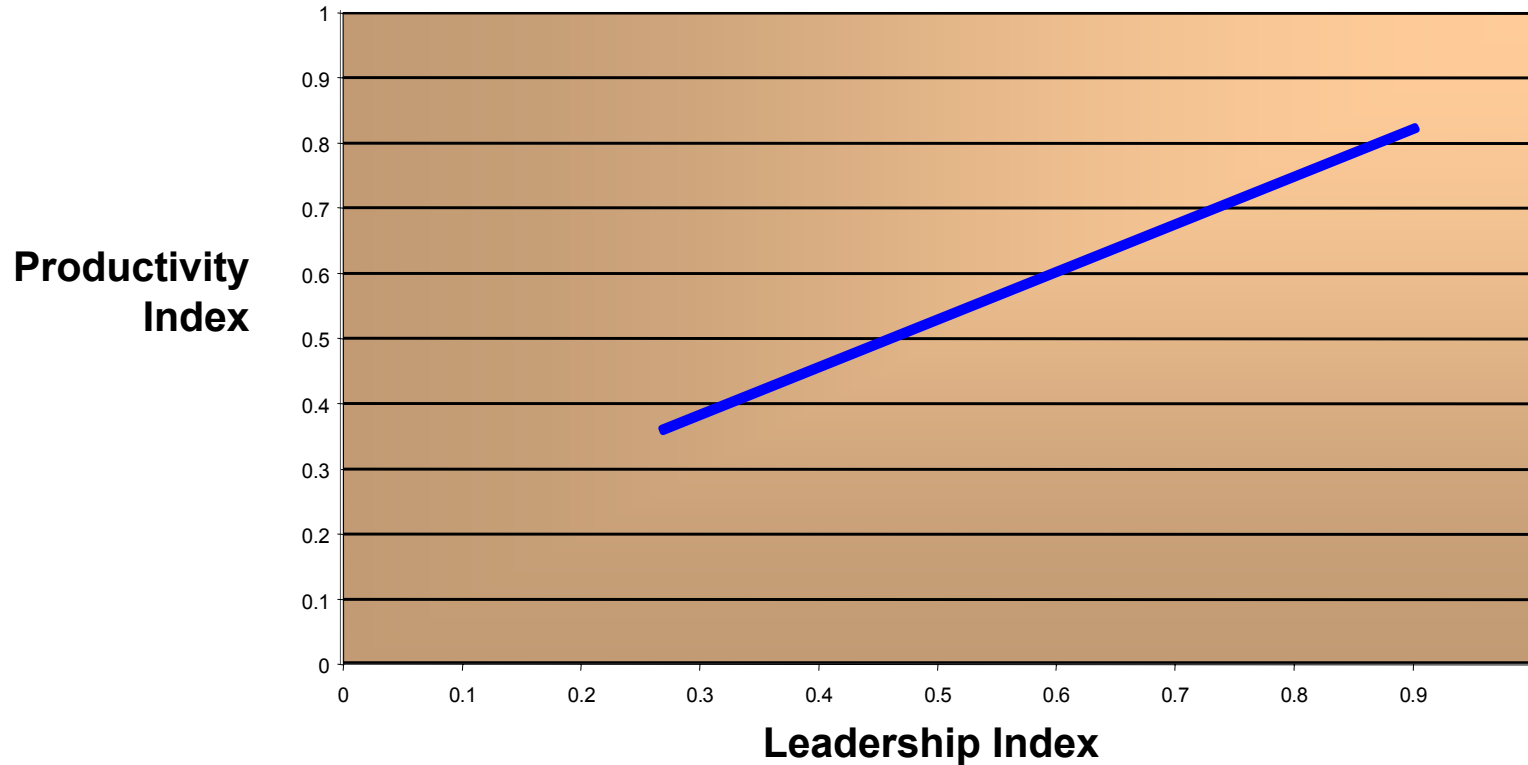
Lean Transformation Requires an Enterprise Approach





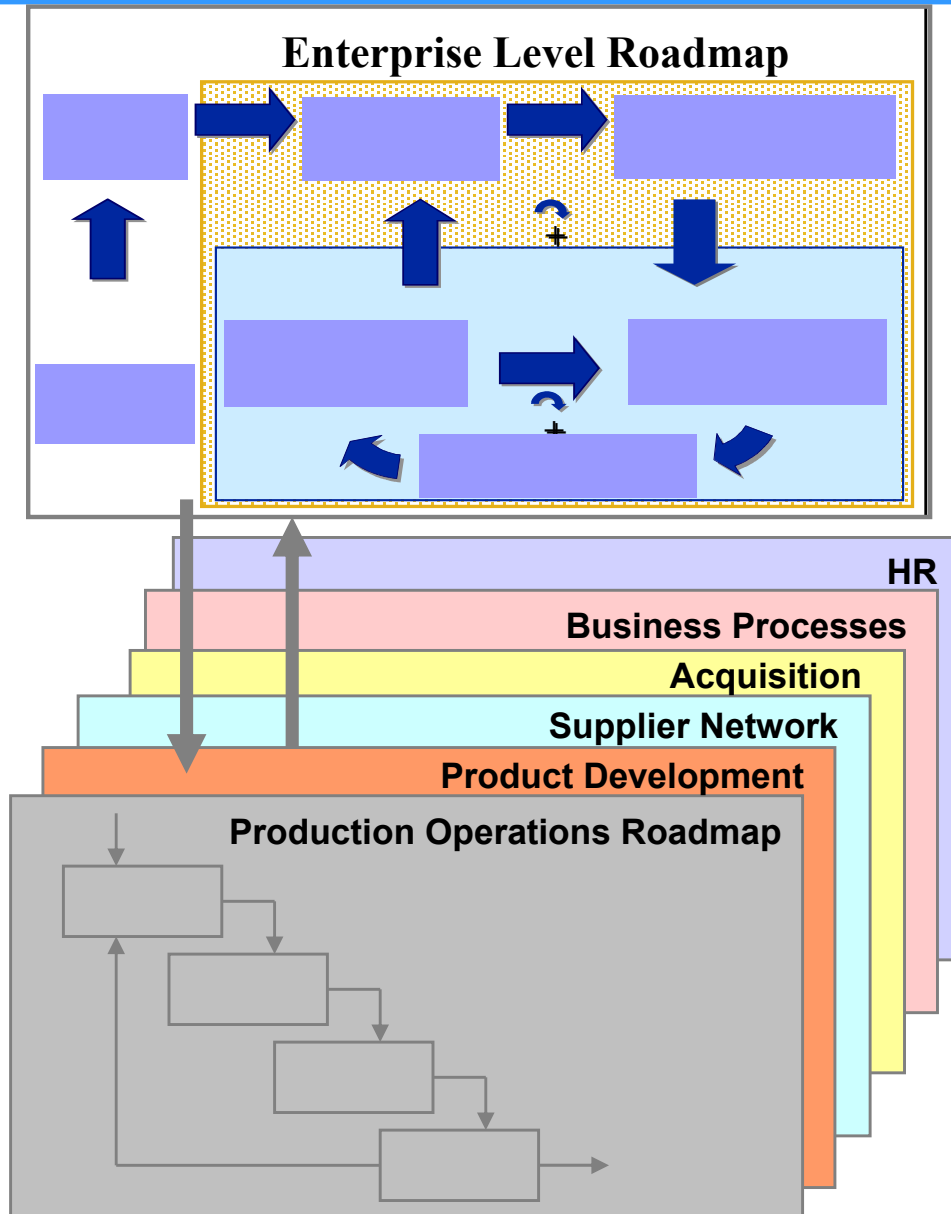
Enterprise Leadership is Key Element of Success

LAI Aerospace Organizations



Source: D. Tonaszuck, MIT Master's Thesis, January 2000

Transition to Lean Module Concept



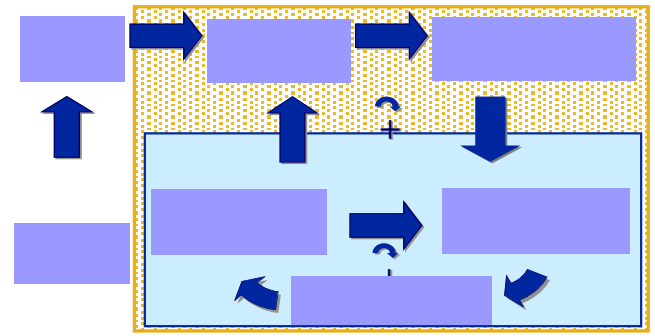
- Priorities
- Sequence
- Key Enablers
- “How-To’s”
- Change Mgmt. Principles

**Transition to
Lean Plan**

Enterprise Level Roadmap Conceptual Framework

What is the Enterprise Level Transition-To-Lean Model ?

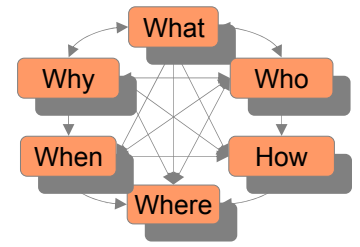
Begins with a description of a Top Level Flow of primary activities referred to as "The Roadmap"



- Focus on the Value Stream**
- Map Value Stream
 - Internalize Vision
 - Set Goals & Metrics
 - Identify & Involve Key Stakeholders

Then, provides descriptions of key tasks required within each primary activity

Finally, leads discussion of issues, enablers, barriers, case studies & reference material relevant to each task in a common structured framework





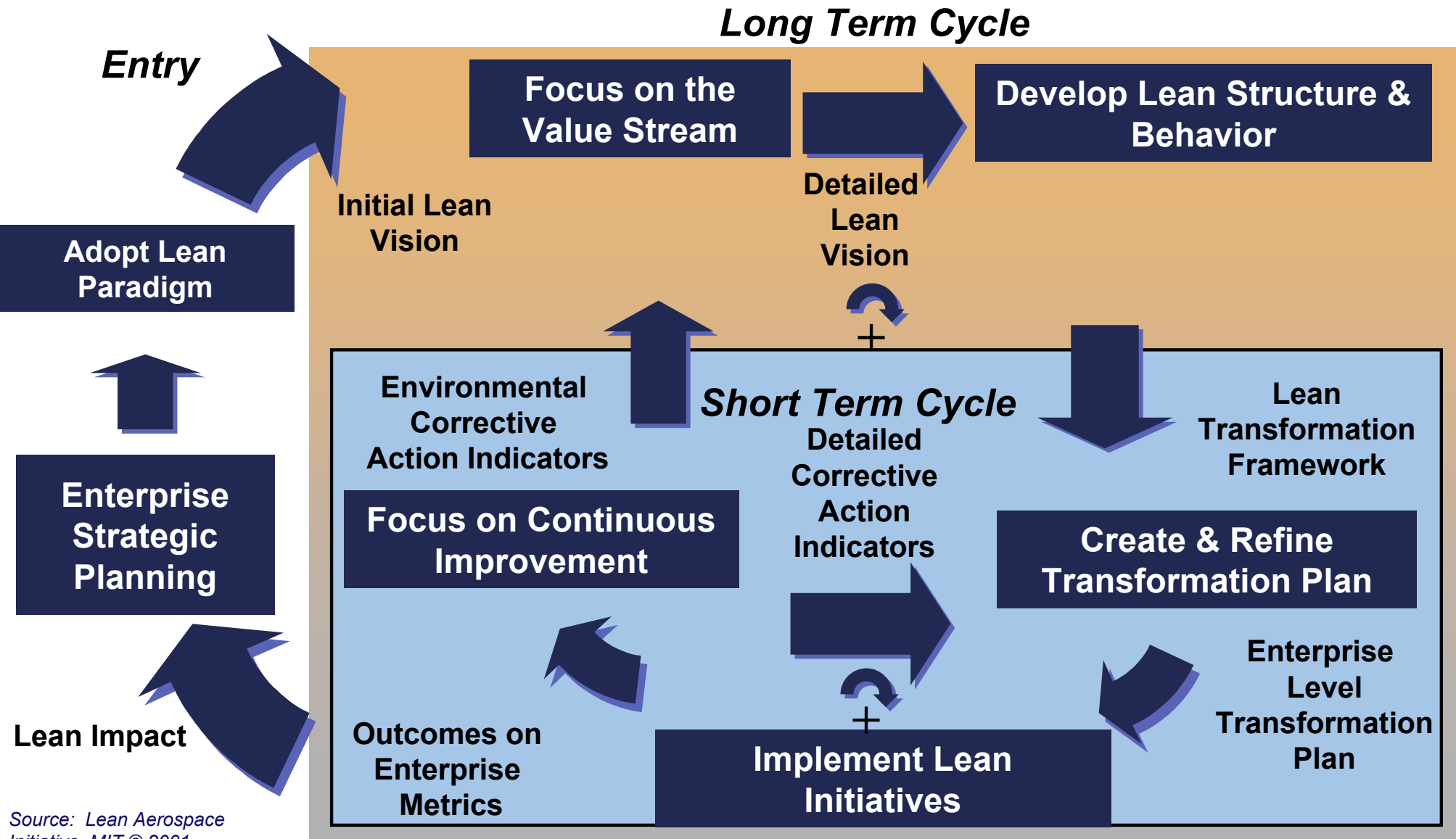
Enterprise Level Roadmap Conceptual Framework

What Does the Enterprise Level TTL Model Provide?

- **A robust path that Enterprise Leaders can follow to transition their organizations to a new plateau of “leanness”**
- **Efficient and effective tool that will improve the quality of thinking and awareness of Enterprise Leaders on the challenge of transitioning their organization**
- **Framework for cultural, organizational & change management considerations**
- **Guidance in making the transition process, itself, a ‘lean’ process**



Enterprise Level Roadmap



Source: Lean Aerospace Initiative, MIT © 2001





Enterprise Level Roadmap

Long Term Cycle

Entry

Adopt Lean Paradigm

Enterprise Strategic Planning

Lean Impact

Focus on the Value Stream

Develop Lean Structure & Behavior

Initial Lean Vision

Detailed Lean Vision

Environmental Corrective Action Indicators

Short Term Cycle

Lean Transformation Framework

Focus on Continuous Improvement

Detailed Corrective Action Indicators

Create & Refine Transformation Plan

Outcomes on Enterprise Metrics

Implement Lean Initiatives

Enterprise Level Transformation Plan

Source: Lean Aerospace Initiative, MIT © 2001



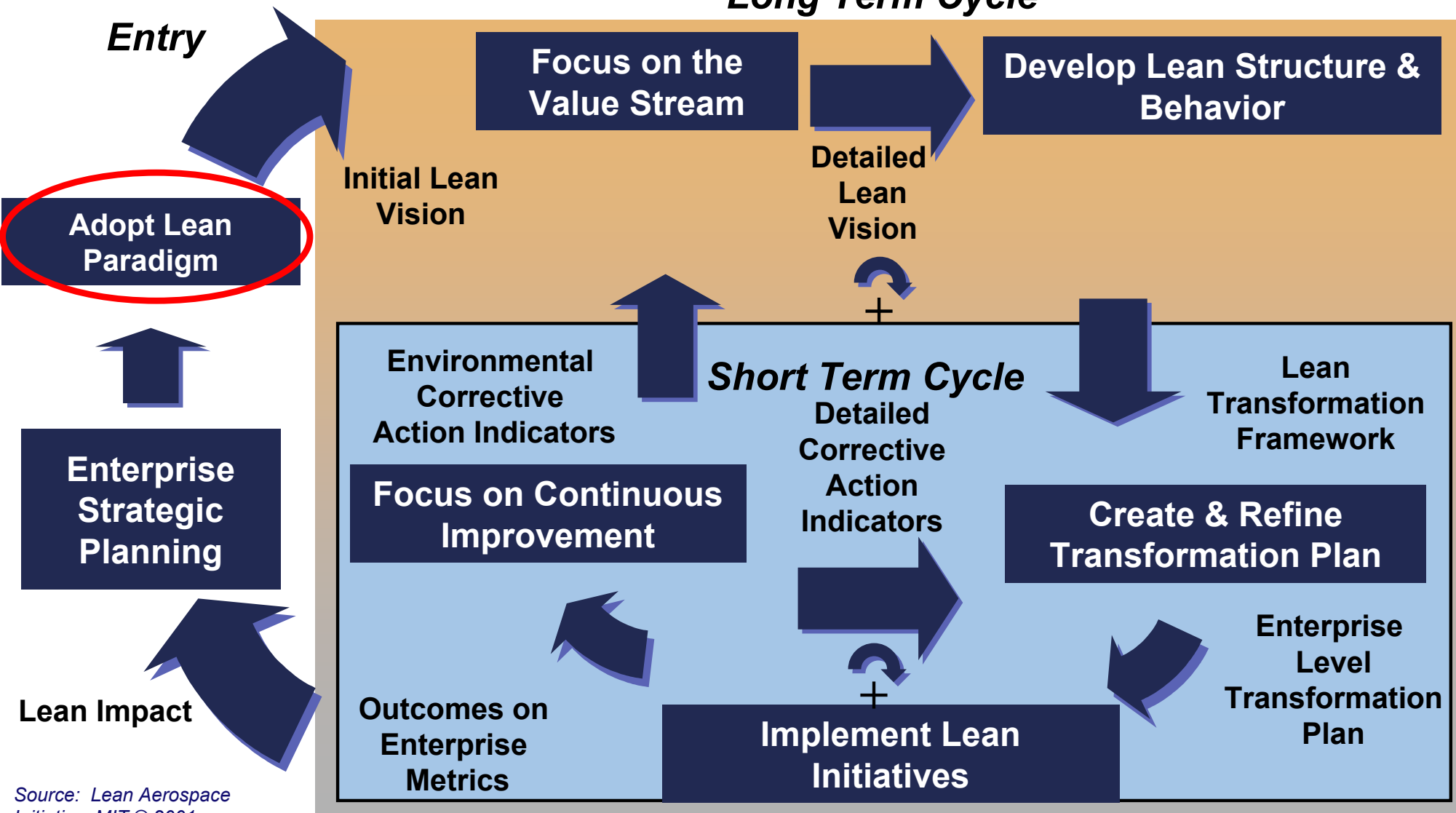
Enterprise Strategic Planning

- **Create the Business Case for Lean**
- **Focus on Customer Value**
- **Include Lean in Strategic Planning**
- **Leverage the Extended Enterprise**



Enterprise Level Roadmap

Long Term Cycle



Source: Lean Aerospace Initiative, MIT © 2001

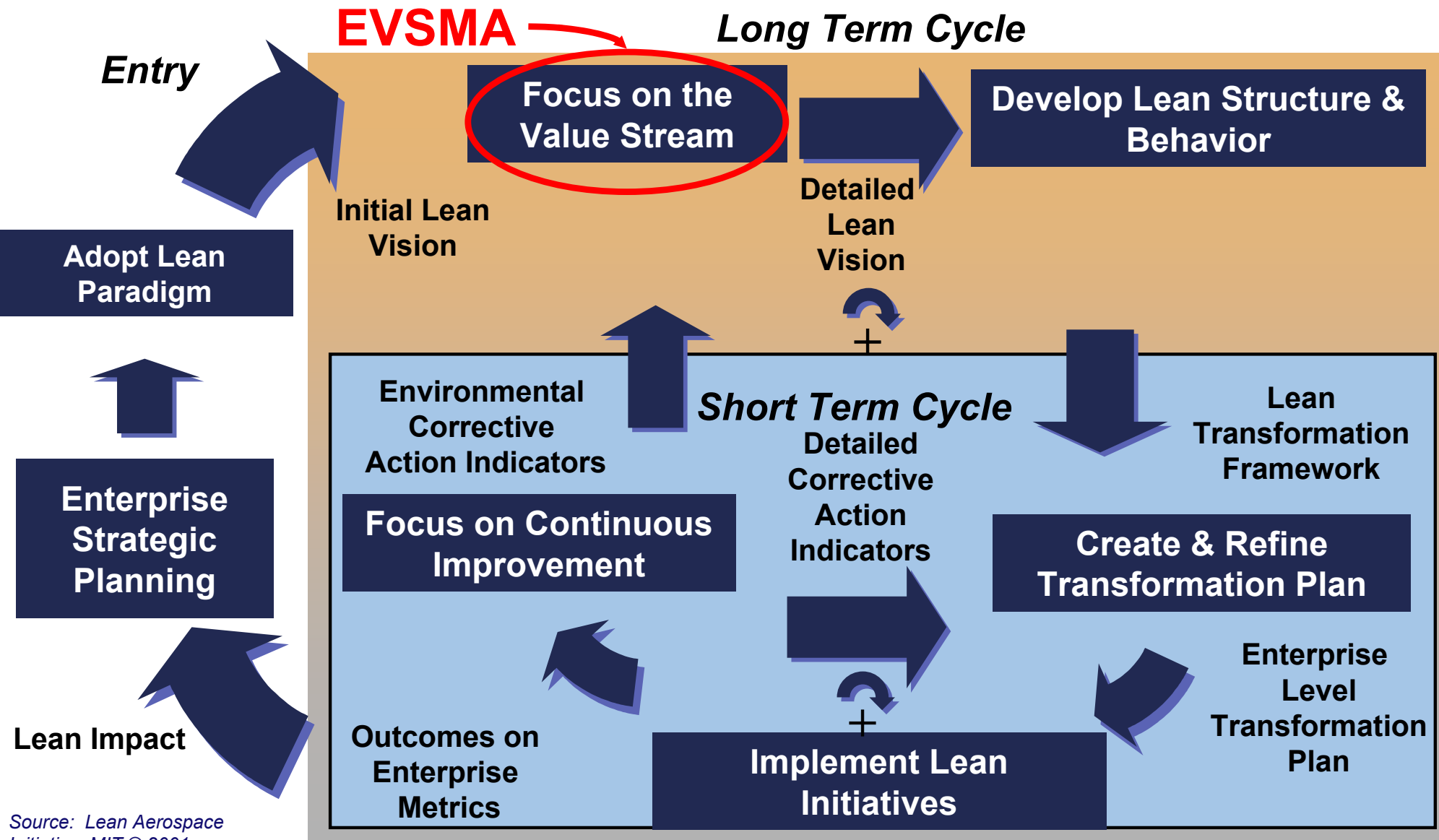


Adopt Lean Paradigm

- **Build Vision**
- **Convey Urgency**
- **Foster Lean Learning**
- **Make the Commitment**
- **Obtain Senior Management Buy-in**



Enterprise Level Roadmap



Source: Lean Aerospace Initiative, MIT © 2001



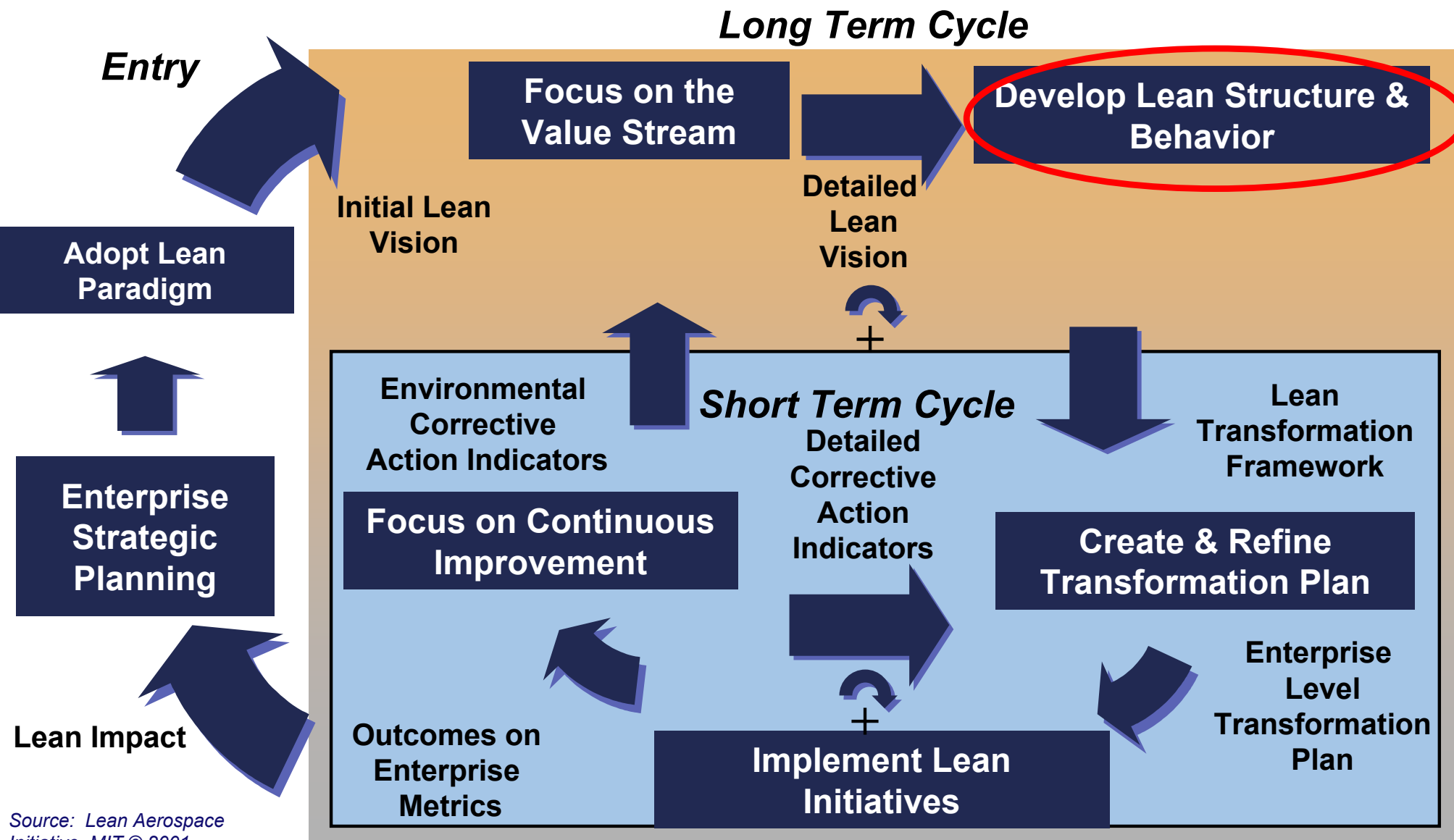


Focus On The Value Stream

- **Map Value Stream**
- **Internalize Vision**
- **Set Goals & Metrics**
- **Identify & Involve Key Stakeholders**



Enterprise Level Roadmap



Source: Lean Aerospace Initiative, MIT © 2001



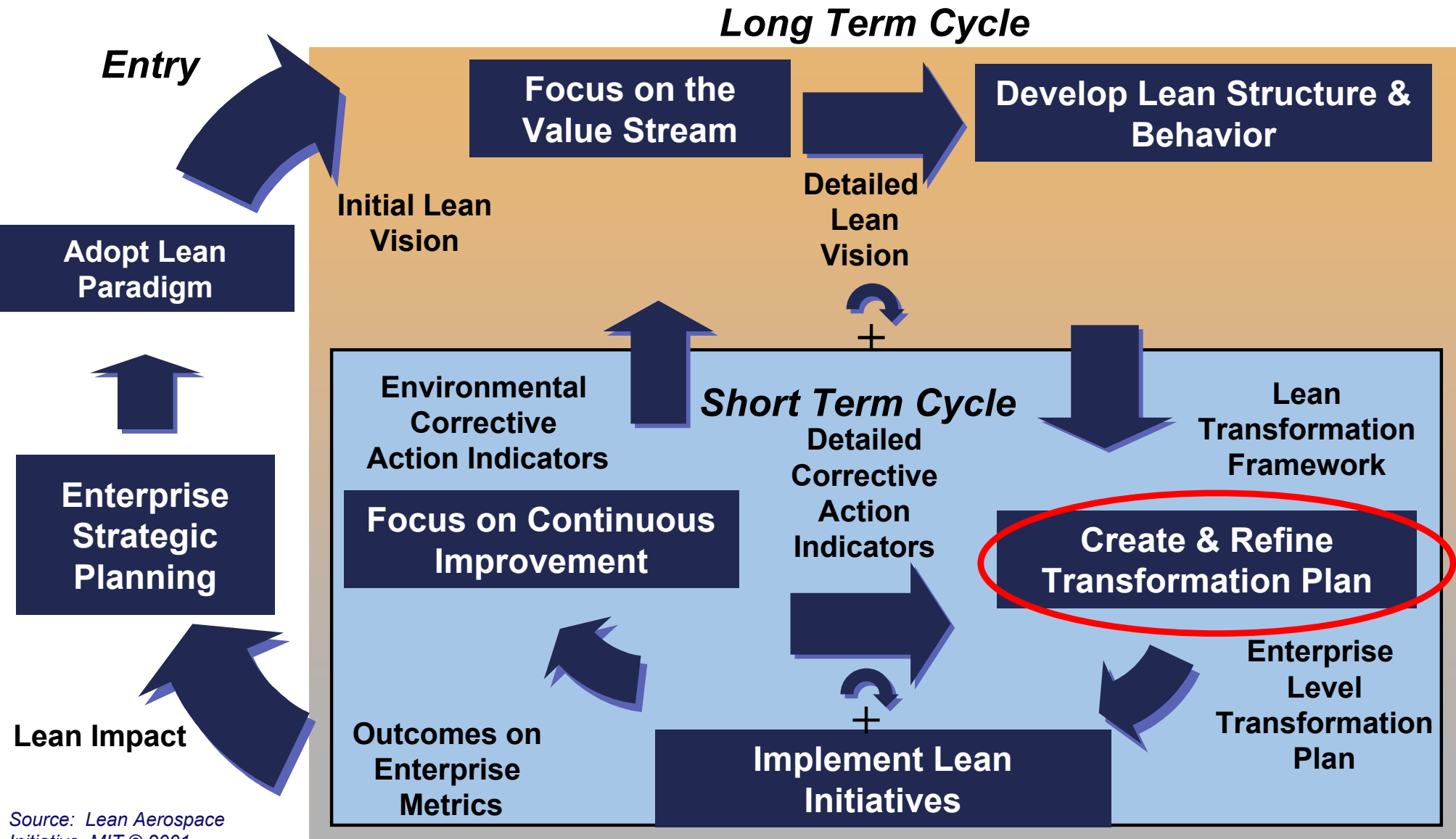


Develop Lean Structure And Behavior

- **Organize for Lean Implementation**
- **Identify & Empower Change Agents**
- **Align Incentives**
- **Adapt Structure & Systems**



Enterprise Level Roadmap



Source: Lean Aerospace Initiative, MIT © 2001

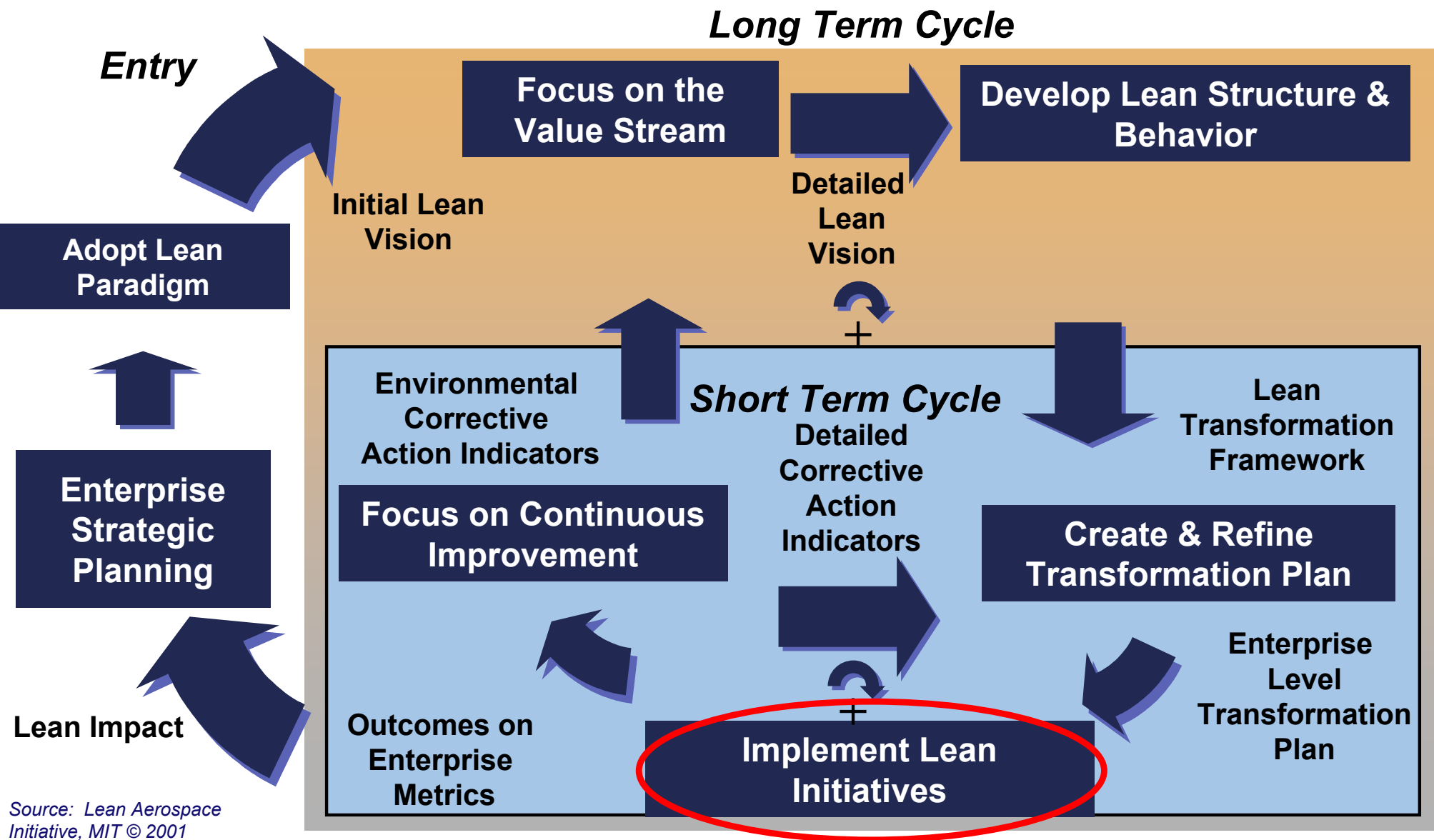


Create & Refine Transformation Plan

- **Identify & Prioritize Activities**
- **Commit Resources**
- **Provide Education & Training**



Enterprise Level Roadmap



Source: Lean Aerospace Initiative, MIT © 2001



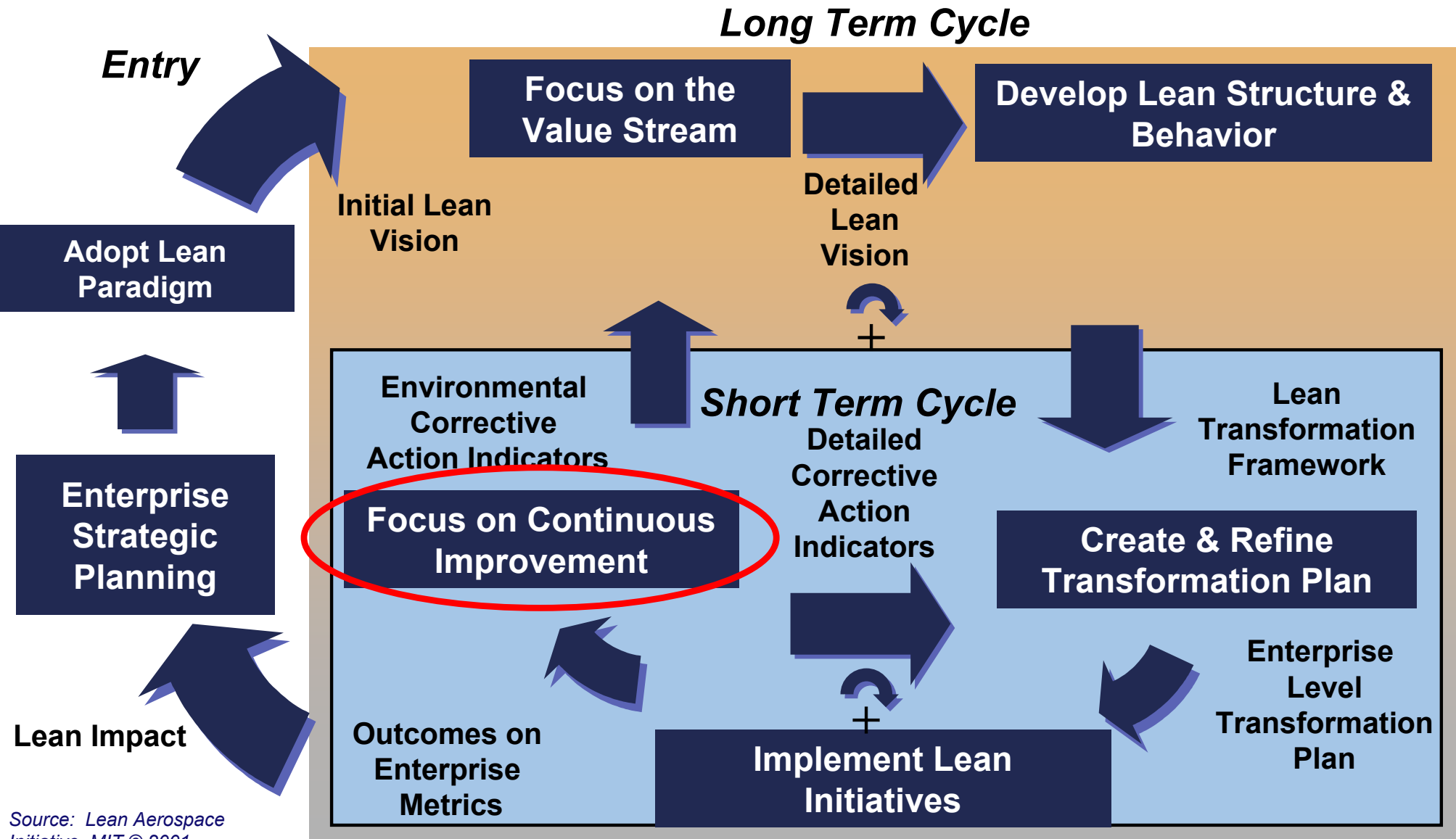


Implement Lean Initiatives

- **Develop Detailed Plans**
- **Implement Lean Activities**



Enterprise Level Roadmap



Source: Lean Aerospace Initiative, MIT © 2001





Focus On Continuous Improvement

- **Monitor Lean Progress**
- **Nurture the Process**
- **Refine the Plan**
- **Capture and Adopt New Knowledge**



Enterprise Transition to Lean Roadmap

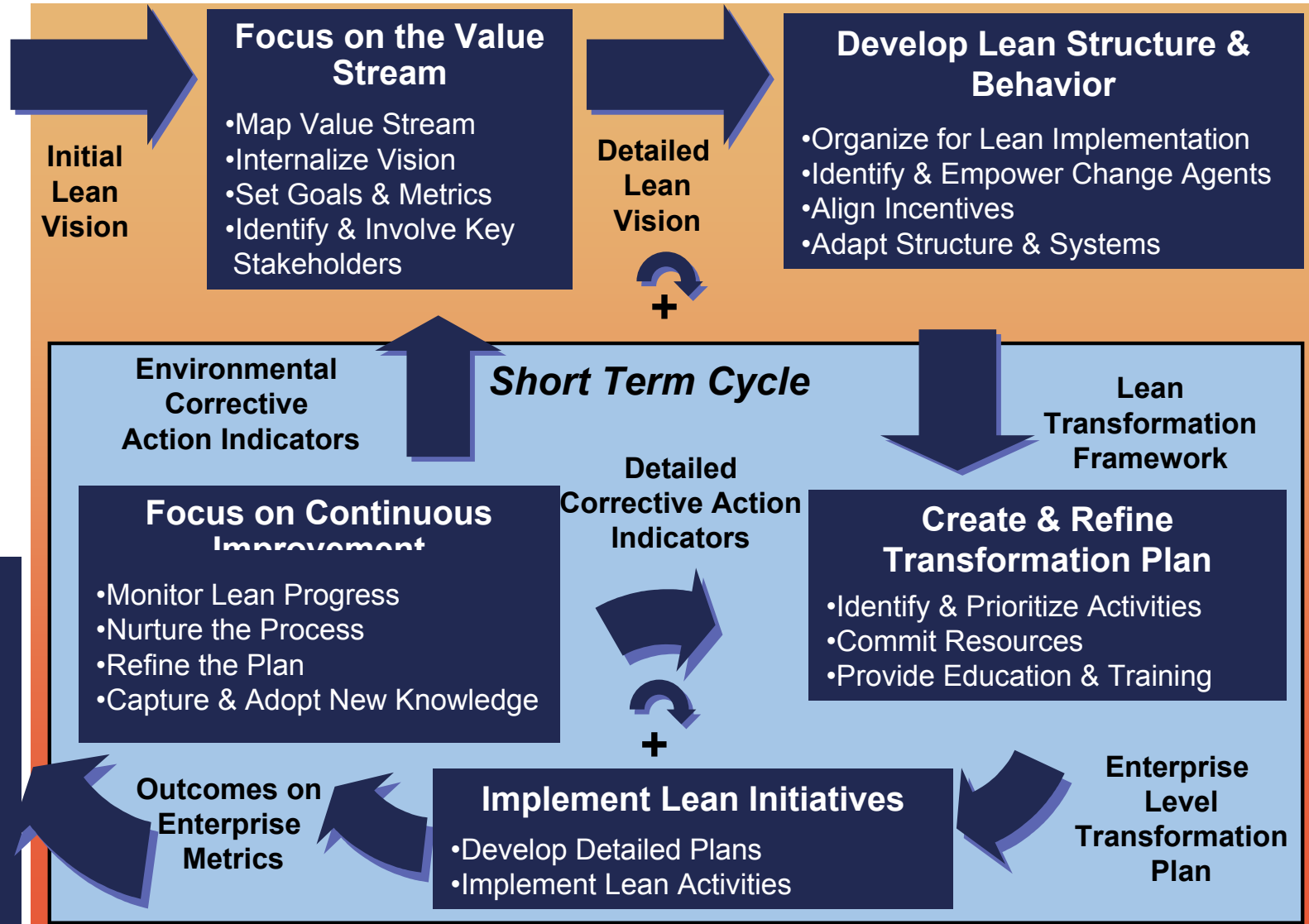
Adopt Lean Paradigm

- Build Vision
- Convey Urgency
- Foster Lean Learning
- Make the Commitment
- Obtain Senior Mgmt. Buy-in

Decision to Pursue Enterprise Transformation

Enterprise Strategic Planning

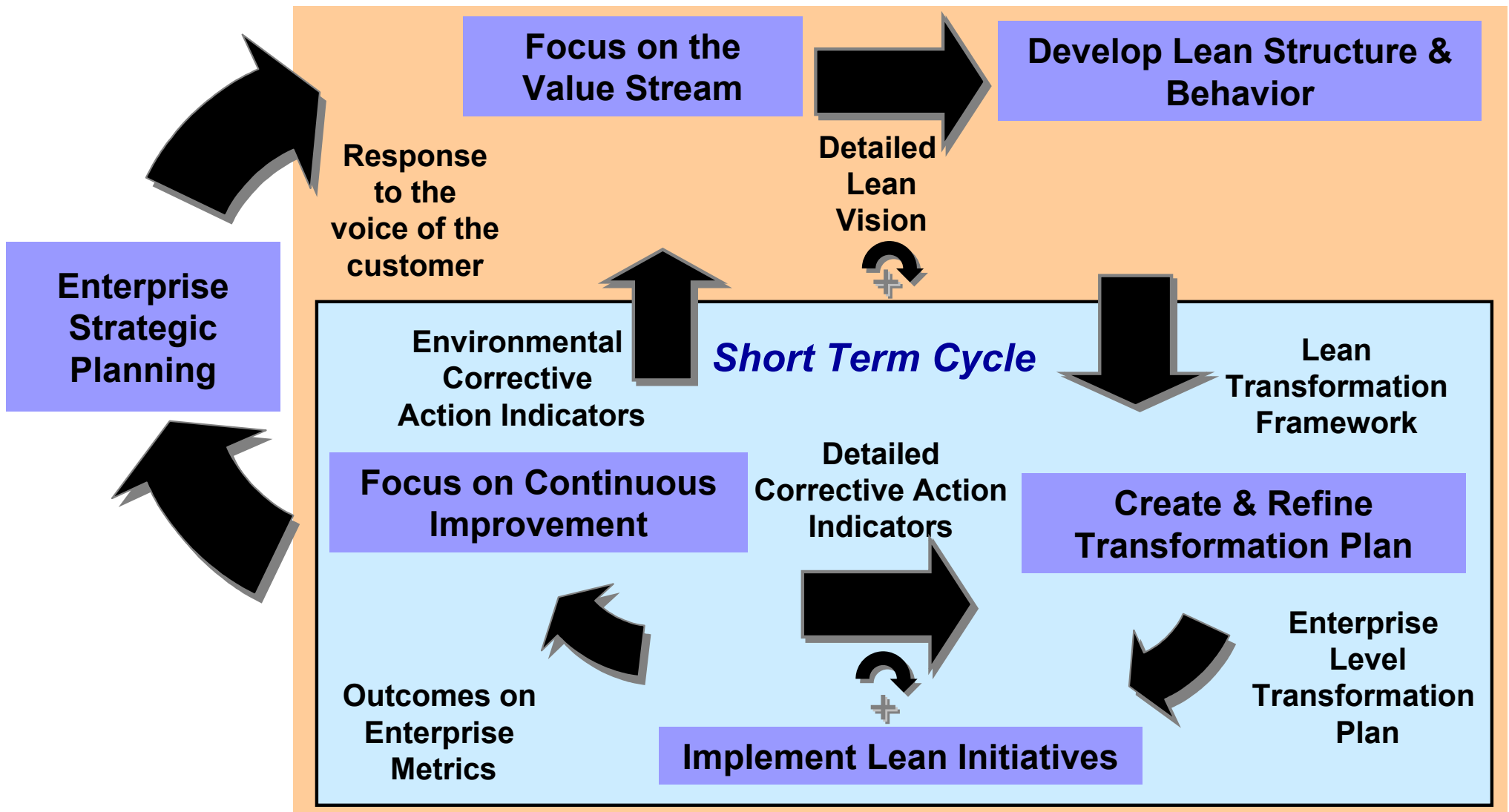
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- Leverage the Extended Enterprise





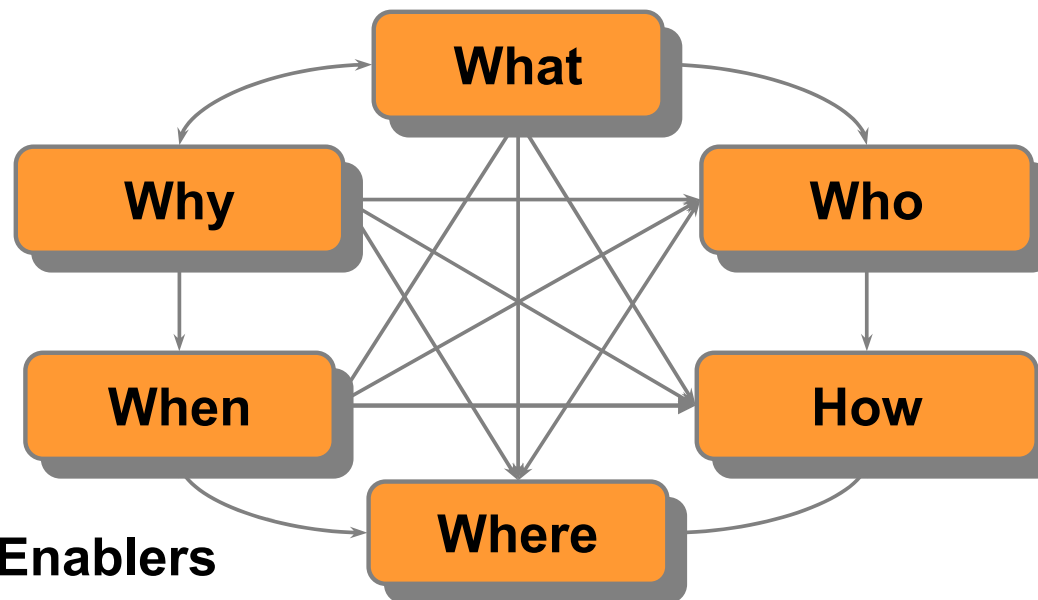
Enterprise Level Roadmap

The On-going Lean Enterprise



Common Discussion Framework Is Used

- Discussion of issues
- Six Interdependent Elements of Implementation

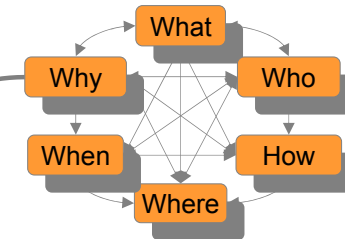


- Enablers
- Barriers
- Related Case Studies
- Further Reference Material

'Drilling Down' to an Example of TTL's Content

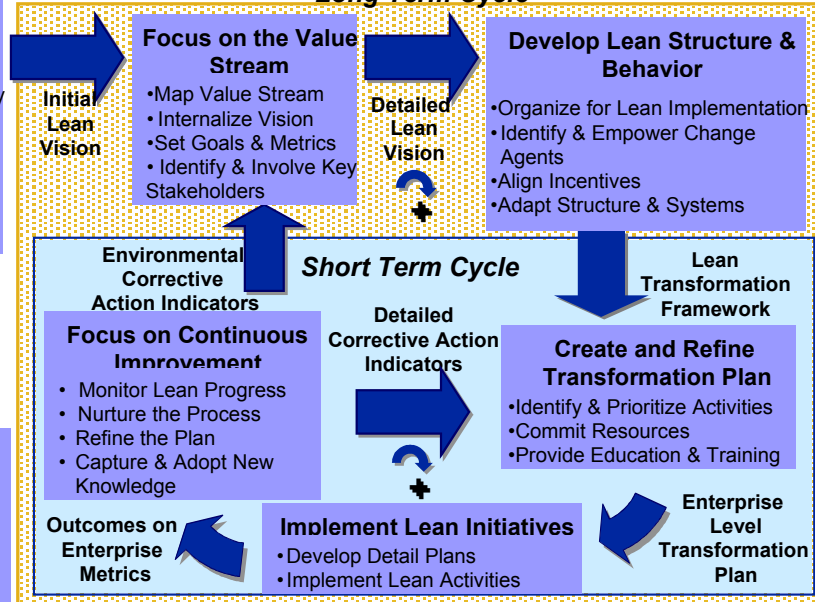
The Discussion Outline

- Discussion of issue
- Six Interdependent Elements of Implementation



- Enablers
- Barriers
- Related Case Studies
- Further Reference Material

Long Term Cycle



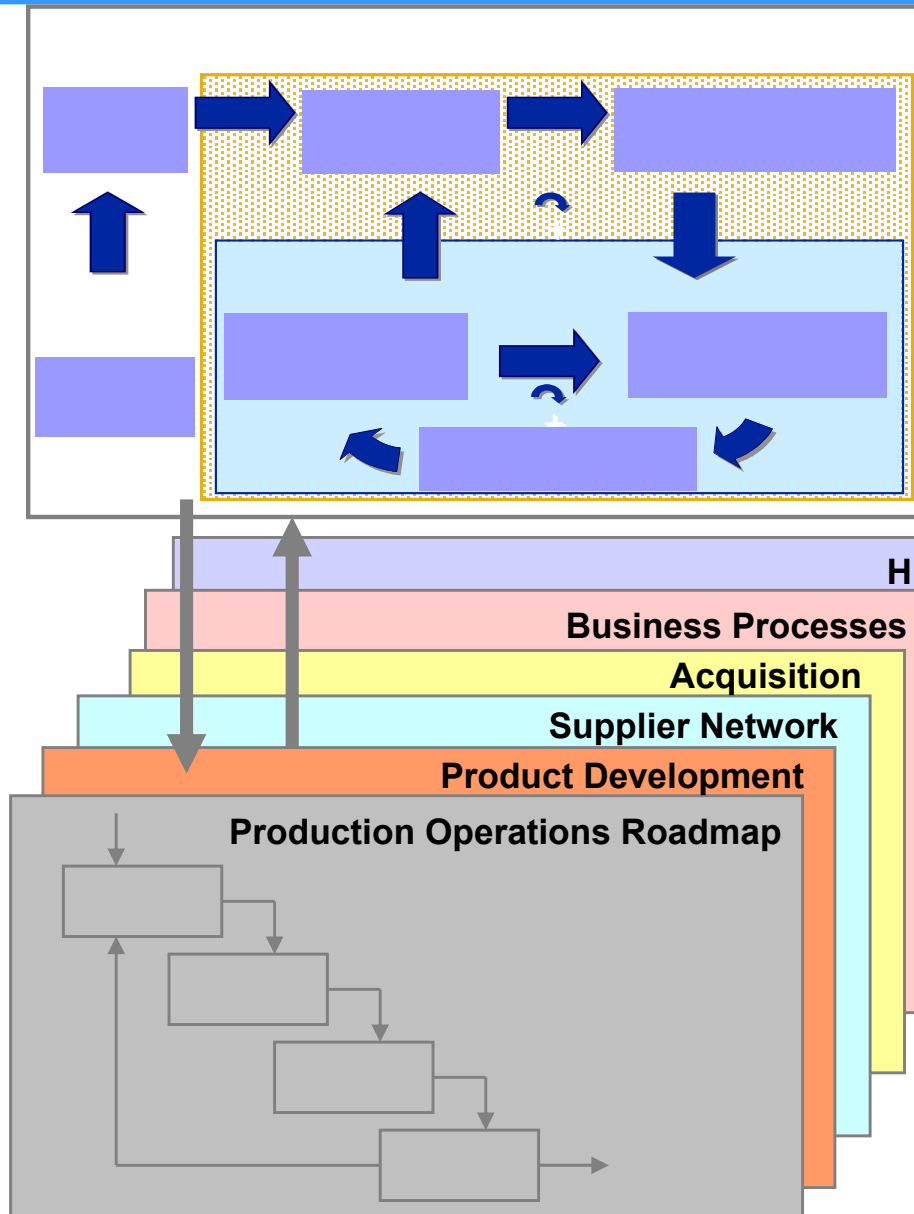
Issues surrounding the task of "Build Vision" during the activity of "Adopting the Lean Paradigm"



Benefits of Enterprise TTL Roadmap

- **Facilitates enterprise focus**
- **Provides “sequence” for enterprise transformation**
- **Increases understanding of “what went wrong” in previous transformation attempts**
- **Focuses on people/leadership issues**
- **Provides an organizing framework for enterprise-wide transition**

Transition to Lean Module Concept



- Priorities
- Sequence
- Key Enablers
 - “How-To’s”
- Change Mgmt. Principles

**Transition to
Lean Plan**



Production Operations Transition-To-Lean Roadmap

Supply Chain/External Environment

- Legal
- Environmental

- Government Req'd. Systems (MMAS, EVMS, etc.)

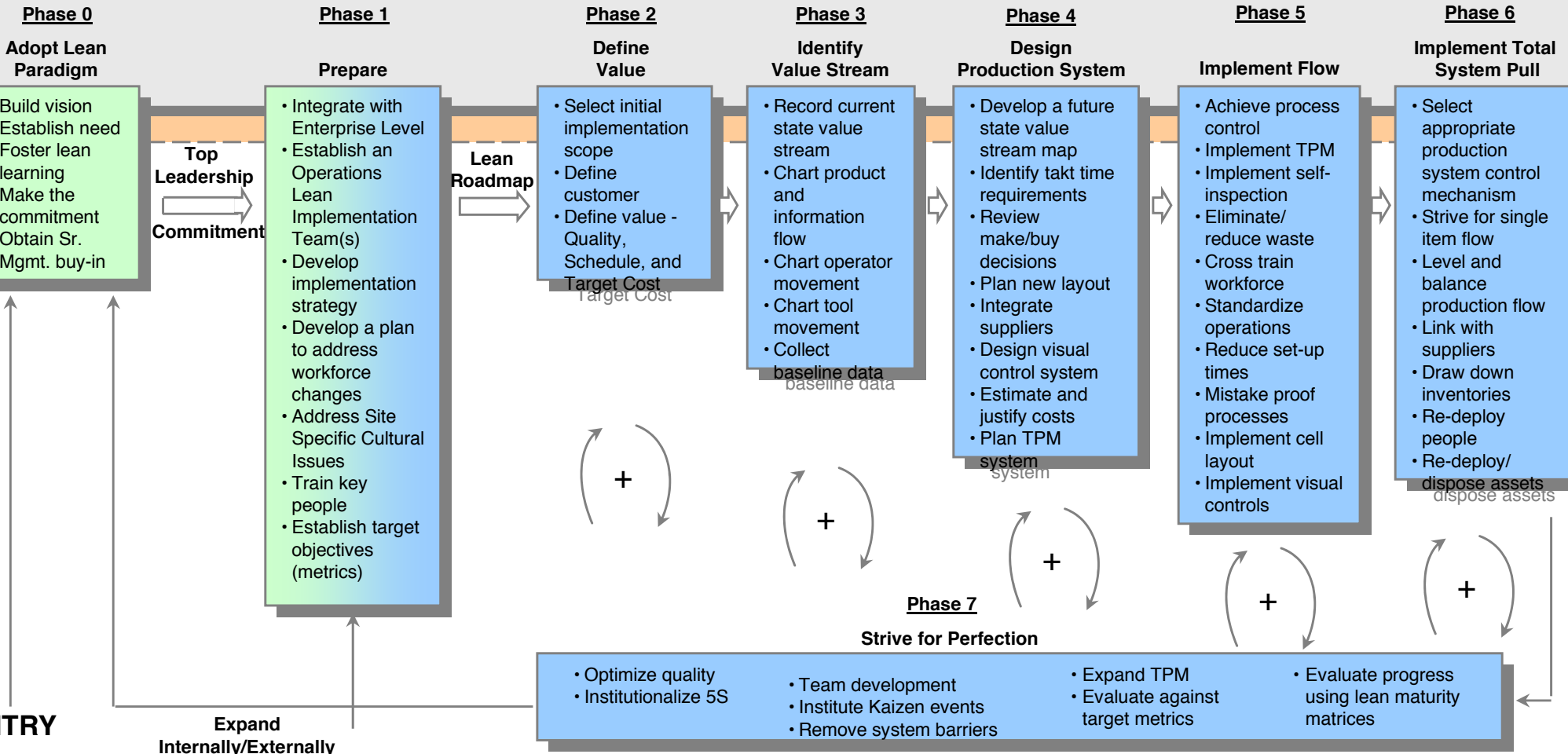
Enterprise / Production System Interface

- Financial
- Information

- Procurement
- Engineering

- Quality
- Safety

- Training and Human Resources
- Workforce/Management Partnership



IMPROVED COMPETITIVE POSITION