

**Lean  
Aerospace  
Initiative**



**LESAT Facilitator's  
Workshop**

**Interpreting Maturity Results  
and Setting Action Agendas**  
March 28, 2002

*Presented By:*  
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- **Introduction to study**
- **Classes of Enterprise Using LESAT**
  - **Successful**
  - **Unsuccessful**
- **Acting on results**
- **Presenting Results**
- **3 categories of management feedback control**
- **Perceived cost/benefit of LESAT**
- **Conclusions**

- **10 LESAT beta test sites**
- **Post-assessment interviews/visits**
  - **What data to address**
  - **Presentation of Data**
  - **LESAT-driven action plans**
- **Understand how LESAT is a part of management control**

## ➤ **Successful**

➤ **Business unit**

➤ **Division**

➤ **Program**

➤ **Site**

➤ **P&L**

## ➤ **Unsuccessful**

➤ **Support functions as enterprises**

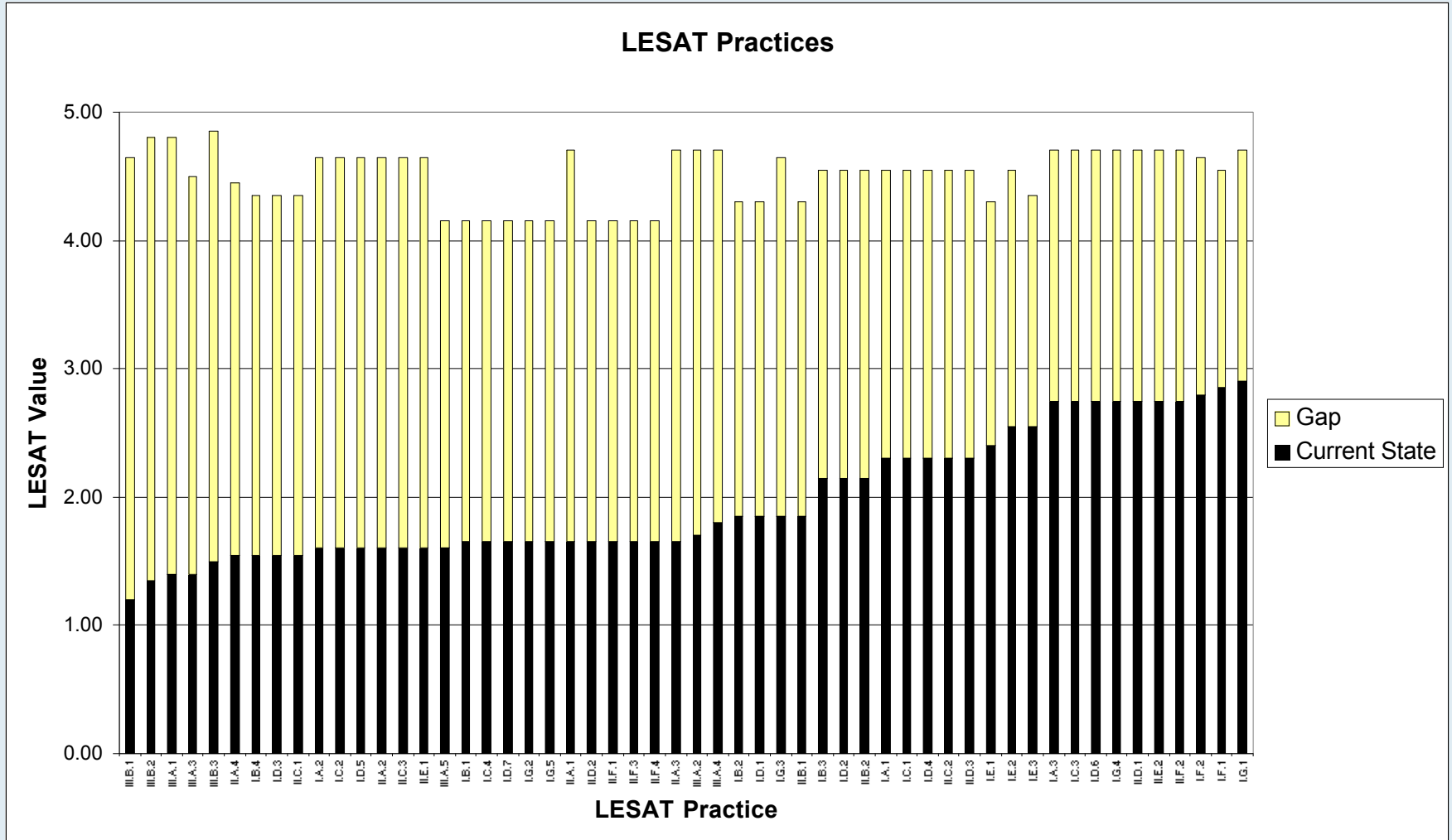
➤ **But Section I of LESAT applicable**

- **Did assessment, no action**
- **Fix numbers to look better to upper management**
- **Arbitrarily mandate 1 point improvement across the board in 1 year**

- **Address practices with lowest maturity**
- **Address practices with largest maturity variability**
- **Address lowest maturity in leadership section first**
- **Cross reference lowest maturity practices to business strategy**
- **Integrate improvement actions into Annual Operating Plans (AOP)**
- **Perform annual LESAT, aim for continual (incremental) increase in maturity**

## SECTION 1 - LEAN TRANSFORMATION/LEADERSHIP

TTL LINK	Lean Practice	State	Mean	Variance	Range
<b>I.A Enterprise strategic planning</b>	I.A.1. Integration of lean in strategic planning process	Current	2.3	0.5	3
	I.A.2. Focus on customer value	Current	1.6	0.3	1
	I.A.3. Leveraging the extended enterprise	Current	2.8	0.3	2
<b>I.B Adopt Lean Paradigm</b>	I.B.1. Learning and education in 'lean' for enterprise leaders	Current	1.7	0.3	2
	I.B.2. Senior management commitment	Current	1.9	0.2	2
	I.B.3. Lean enterprise vision	Current	2.2	0.7	3
	I.B.4. A sense of urgency	Current	1.6	0.4	2
<b>I.C Focus on the Value</b>	I.C.1. Understanding the current value stream	Current	2.3	0.5	3
	I.C.2. Enterprise flow	Current	1.6	0.3	1
	I.C.3. Designing the future value stream	Current	2.8	0.3	2
	I.C.4. Performance measures	Current	1.7	0.3	2
<b>I.D Develop lean Structure and Behavior</b>	I.D.1. Enterprise organisational orientation	Current	1.9	0.2	2
	I.D.2. Relationships based on mutual trust	Current	2.2	0.7	3
	I.D.3. Open and timely communications	Current	1.6	0.4	2
	I.D.4. Employee empowerment	Current	2.3	0.5	3
	I.D.5. Incentive alignment	Current	1.6	0.3	1
	I.D.6. Innovation encouragement	Current	2.8	0.3	2
	I.D.7. Lean change agents	Current	1.7	0.3	2



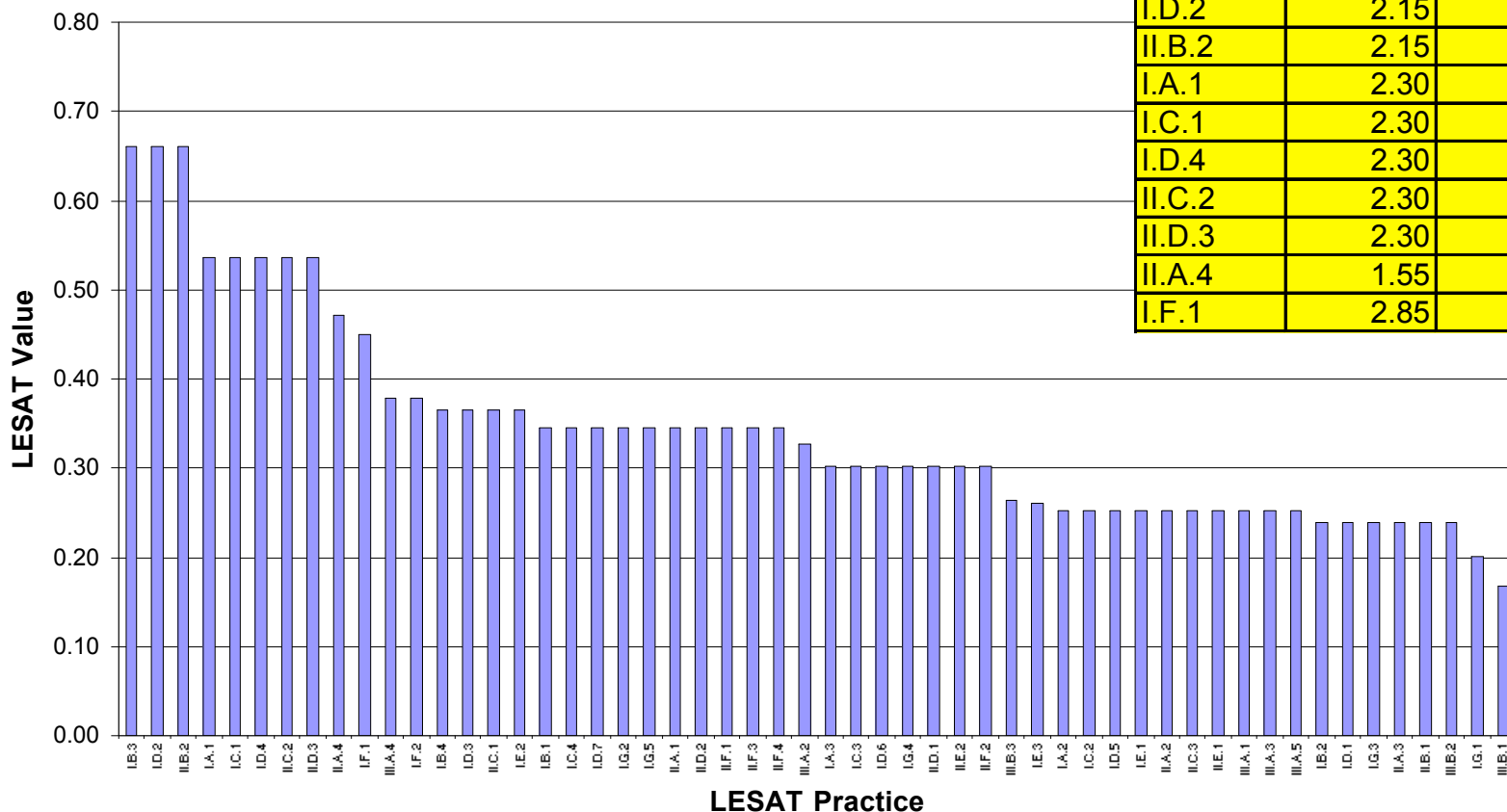


## SECTION 1 - LEAN TRANSFORMATION/LEADERSHIP

TTL LINK	Lean Practice	State	Mean	Variance	Range	TALLY'S				
						Level 1	Level 2	Level 3	Level 4	Level 5
<b>I.A Enterprise strategic planning</b>	I.A.1. Integration of lean in strategic planning process	Current	2.3	0.5	3	2	11	6	1	0
	I.A.2. Focus on customer value	Current	1.6	0.3	1	8	12	0	0	0
	I.A.3. Leveraging the extended enterprise	Current	2.8	0.3	2	0	6	13	1	0
<b>I.B Adopt Lean Paradigm</b>	I.B.1. Learning and education in 'lean' for enterprise leaders	Current	1.7	0.3	2	8	11	1	0	0
	I.B.2. Senior management commitment	Current	1.9	0.2	2	4	15	1	0	0
	I.B.3. Lean enterprise vision	Current	2.2	0.7	3	4	10	5	1	0
	I.B.4. A sense of urgency	Current	1.6	0.4	2	10	9	1	0	0
<b>I.C Focus on the Value</b>	I.C.1. Understanding the current value stream	Current	2.3	0.5	3	2	11	6	1	0
	I.C.2. Enterprise flow	Current	1.6	0.3	1	8	12	0	0	0
	I.C.3. Designing the future value stream	Current	2.8	0.3	2	0	6	13	1	0
	I.C.4. Performance measures	Current	1.7	0.3	2	8	11	1	0	0
<b>I.D Develop lean Structure and Behavior</b>	I.D.1. Enterprise organisational orientation	Current	1.9	0.2	2	4	15	1	0	0
	I.D.2. Relationships based on mutual trust	Current	2.2	0.7	3	4	10	5	1	0
	I.D.3. Open and timely communications	Current	1.6	0.4	2	10	9	1	0	0
	I.D.4. Employee empowerment	Current	2.3	0.5	3	2	11	6	1	0
	I.D.5. Incentive alignment	Current	1.6	0.3	1	8	12	0	0	0
	I.D.6. Innovation encouragement	Current	2.8	0.3	2	0	6	13	1	0
	I.D.7. Lean change agents	Current	1.7	0.3	2	8	11	1	0	0

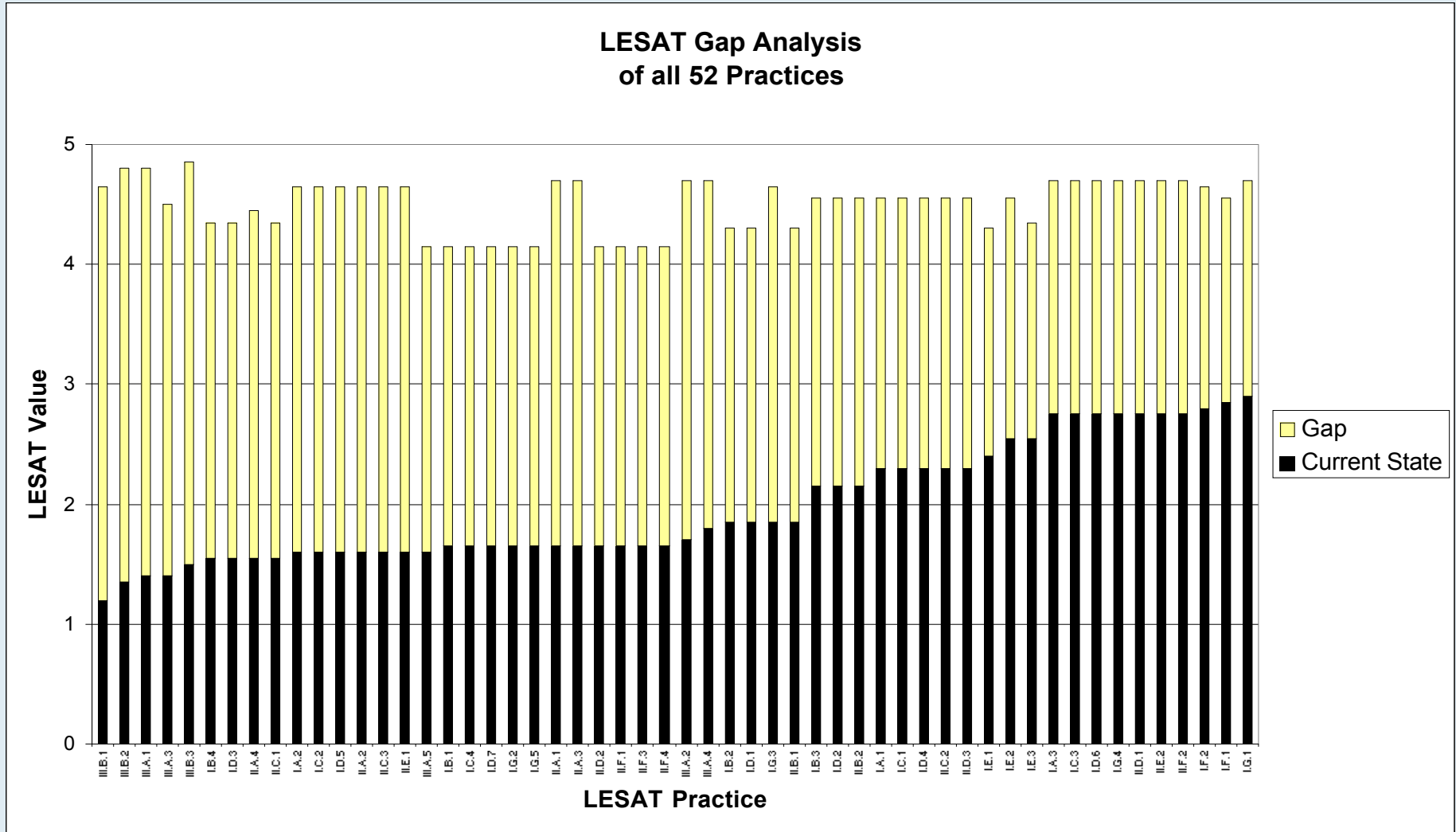
# Address Practices with Largest Variability

**LESAT Variance Analysis  
of all 52 Practices**



Lean Practice	Current State	Gap	Variance
I.B.3	2.15	2.40	0.66
I.D.2	2.15	2.40	0.66
II.B.2	2.15	2.40	0.66
I.A.1	2.30	2.25	0.54
I.C.1	2.30	2.25	0.54
I.D.4	2.30	2.25	0.54
II.C.2	2.30	2.25	0.54
II.D.3	2.30	2.25	0.54
II.A.4	1.55	2.90	0.47
I.F.1	2.85	1.70	0.45

Series1

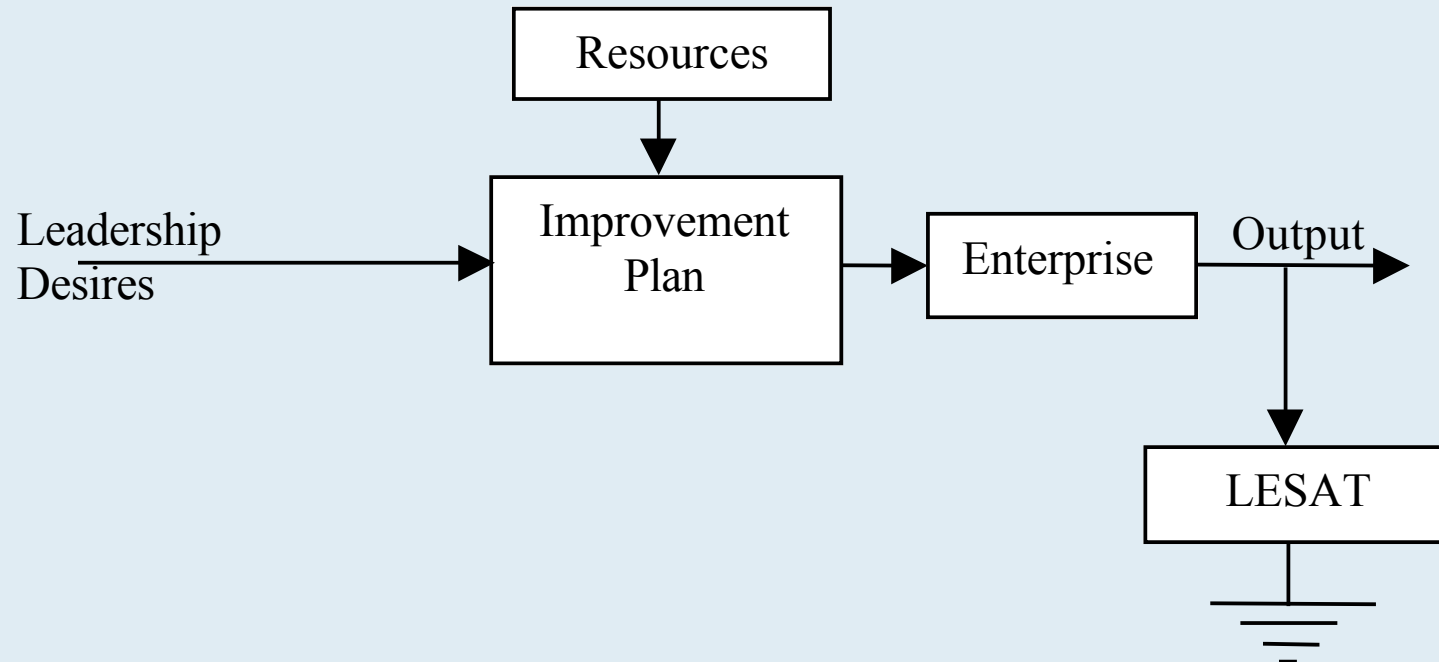


- **III.B.1 - Process Standardization**
- **III.B.2 - Common Tools and Systems**
- **III.A.1 - Financial System Supports Lean Transformation**
- **III.A.3 - Promulgate the Learning Organization**
- **III.B.3 - Variation Reduction**
- **I.B.4 - A Sense of Urgency**
- **I.D.3 - Open and Timely Communications**
- **II.A.4 - Allocate Resources for Program Development Efforts**
- **II.C.1 - Incorporate Customer Value Into Design of Products and Processes**
- **I.A.2 - Focus on Customer Value**
- **I.C.2 - Enterprise Flow**
- **I.D.5 - Incentive Alignment**

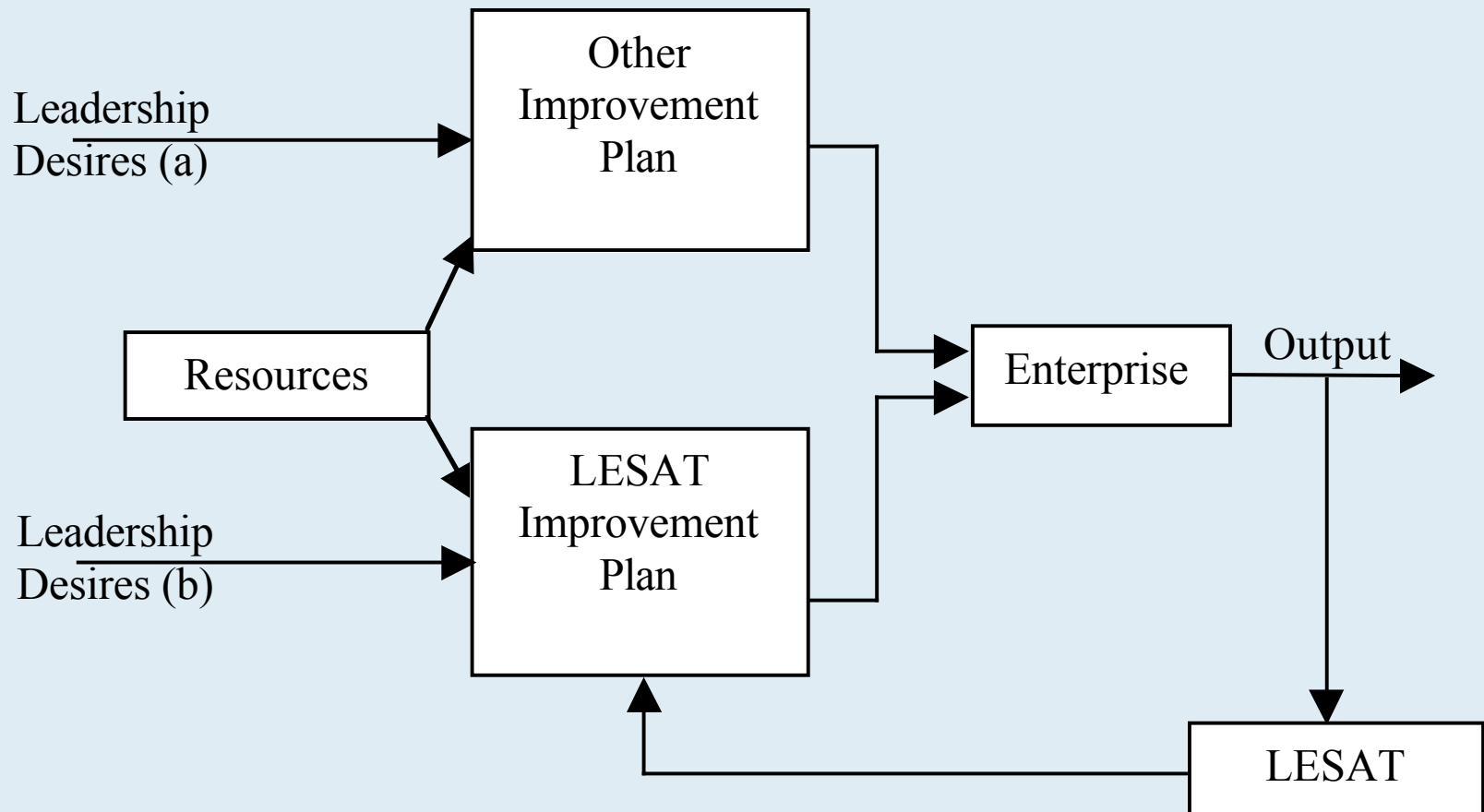
<b>Lean Practice</b>	<b>Current State</b>	<b>Gap</b>
III.B.1	1.2	3.45
III.B.2	1.35	3.45
III.A.1	1.4	3.4
III.A.3	1.4	3.1
III.B.3	1.5	3.35
I.B.4	1.55	2.8
I.D.3	1.55	2.8
II.A.4	1.55	2.9
II.C.1	1.55	2.8
I.A.2	1.6	3.05
I.C.2	1.6	3.05
I.D.5	1.6	3.05
II.A.2	1.6	3.05
II.C.3	1.6	3.05
II.E.1	1.6	3.05
III.A.5	1.6	2.55

- **Category 1 - Open Loop Assessment**
- **Category 2 - Dissociated Assessment, Closed Loop Control**
- **Category 3 - Integrated Strategy and Assessment, Closed-Loop Control**

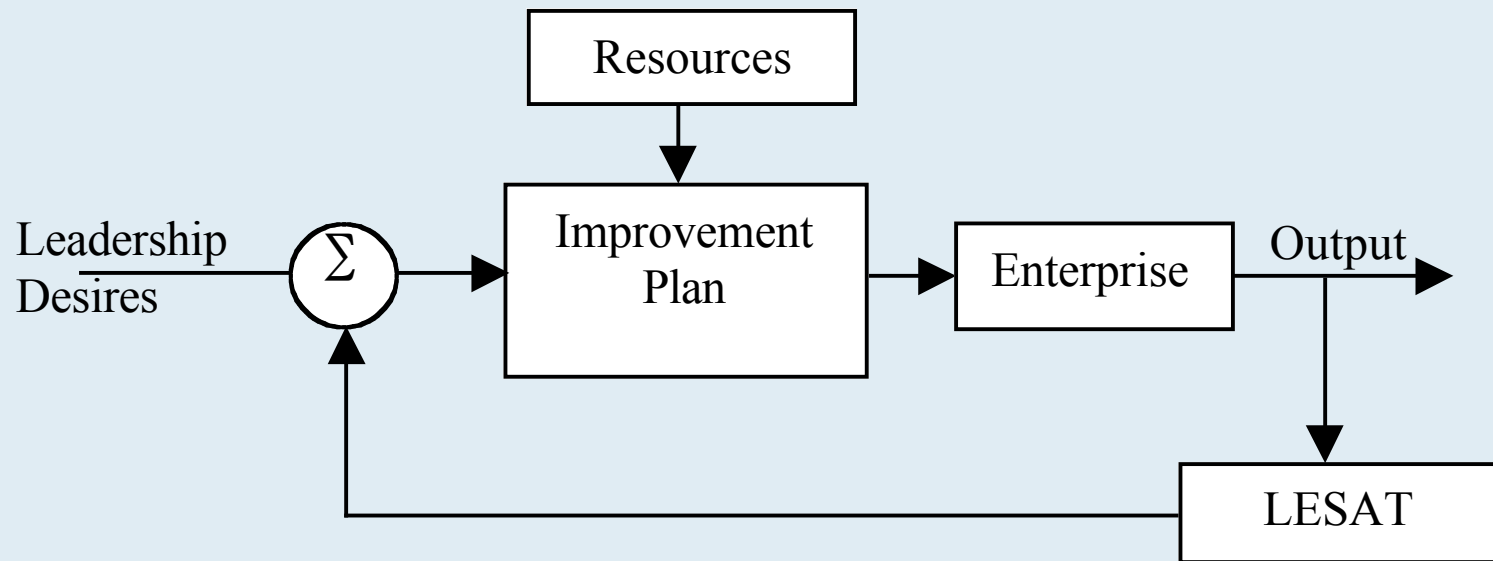
## ➤ Category 1 - Open Loop Assessment



## ➤ Category 2 - Dissociated Assessment, Closed Loop Control



## ➤ Category 3 - Integrated Strategy and Assessment, Closed-Loop Control





## ➤ **Pros**

- **Assessment process as valuable as results**
- **Increased executive communication**
- **Creation of common vocabulary**
- **Identify and support those who need education**
- **Open identification of enterprise-level issues**
- **Clear picture of maturity of enterprise**
- **Next level of maturity obvious**

## ➤ **Cons**

- **4-6 hours for intro session, rating, and report-out**
- **Additional resources to conduct the assessment and deal with logistics and data**
- **Migration actions to next maturity level is unclear**
- **Starting point of improvement efforts is unclear**
- **Coordinating executives is difficult**

- Transformation is a continuous process that takes years
- LESAT acts as a “sensor” for closed-loop lean enterprise management control
- LESAT users fall into 3 categories of enterprise management
  - Open Loop
  - Non-integrated closed-Loop
  - Fully Integrated Closed-Loop
- Significant investment of time deemed worthwhile
- Increases understanding of the lean enterprise
- Sustainable transformation successes will be closely linked to Category 3 enterprises



## Contact Information

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