



Local 514

Leaning LEAN
at
AMERICAN AIRLINES

Lean Flight Initiative
2nd Annual Plenary Conference
Dublin, Ireland

One Great Maintenance Base



330 Acres with 3 Million Square Feet of Facilities



Economic Value



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- The Base employs **7,135 People**, impacting an additional **12,486 Jobs** in the local communities
- The Base has an annual **\$ 2.5 Billion** impact to the local economies

Source: Tulsa Chamber of Commerce



TULSA Aircraft Maintenance



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MD80



A300



B737



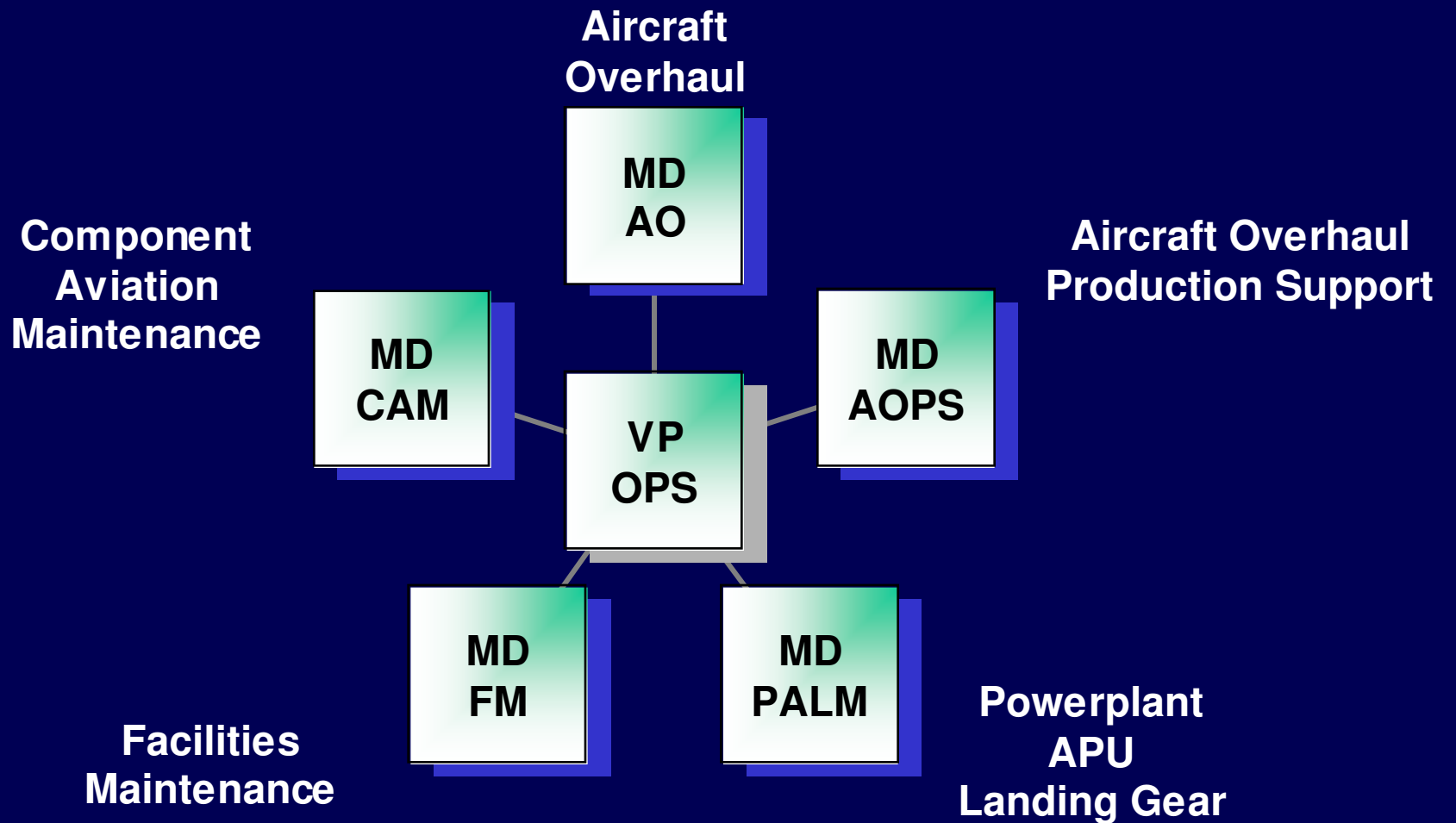
B757





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TULE Operation

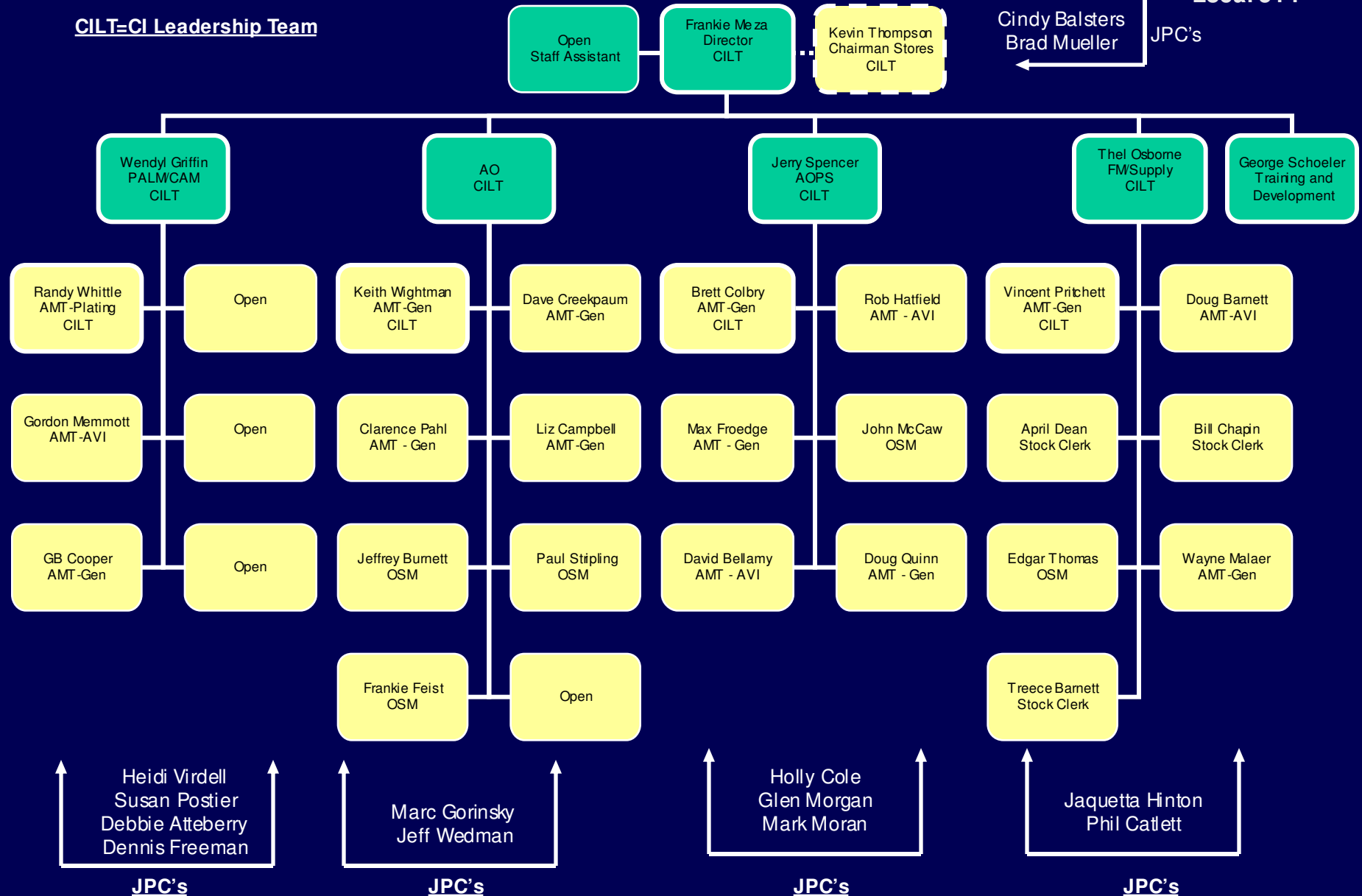




TULE Continuous Improvement

CILT=CI Leadership Team

Local 514
 Cindy Balsters
 Brad Mueller
 JPC's



JPC's

JPC's

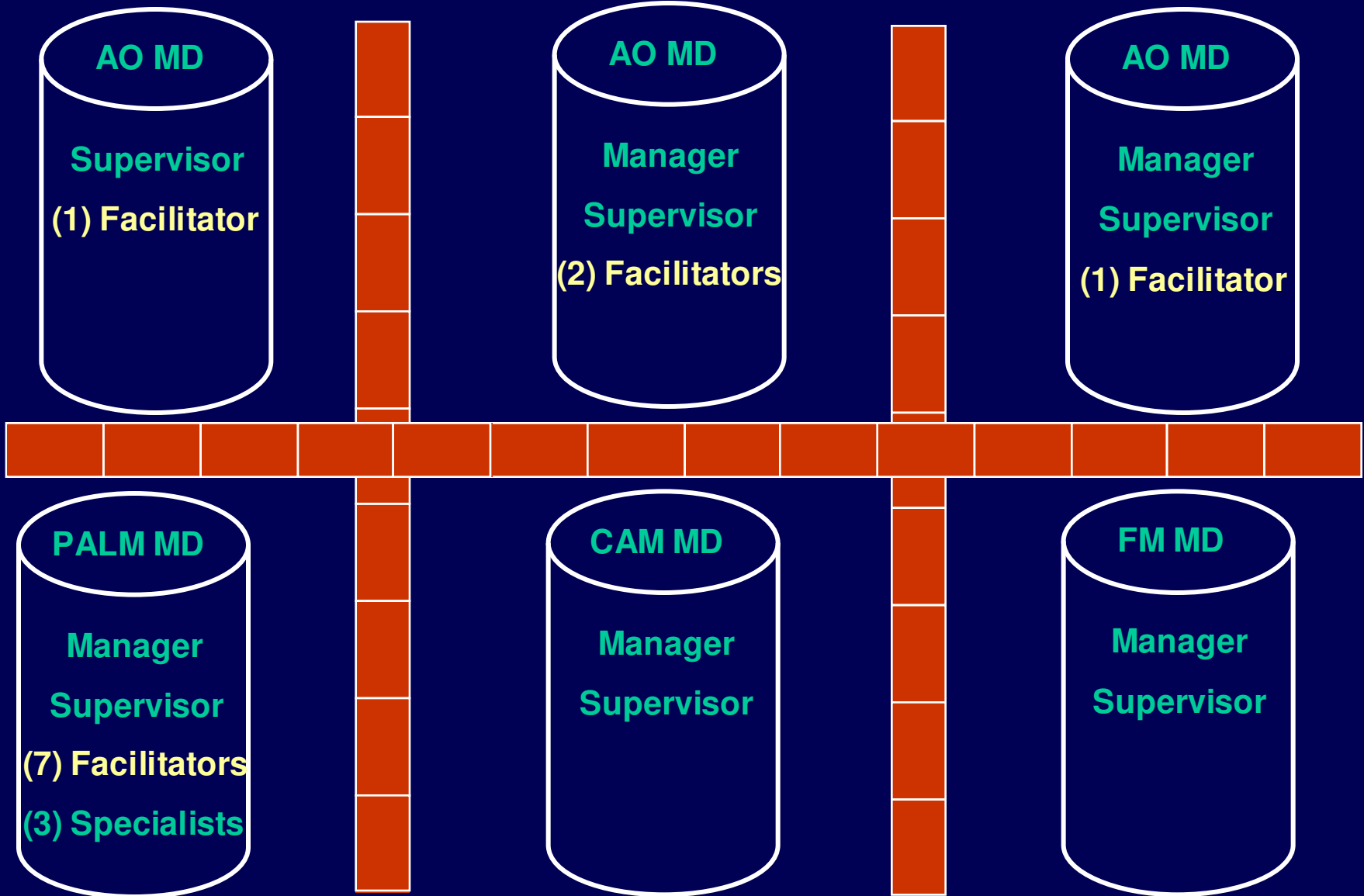
JPC's

JPC's



CI in 2004

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CI in 2004

- The Good
 - There was activity!
- The Not So Good
 - No standardization
 - Lack of Union Buy-In
 - Training
 - Silos
 - Unhealthy Competition



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Lack of Union Buy-In

Negative Connotations

Not A Contractual
Position

No Defined Roles
And Responsibilities

Grievances

Hand Picking
By Management

Wrong People for the Job





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Selection Process

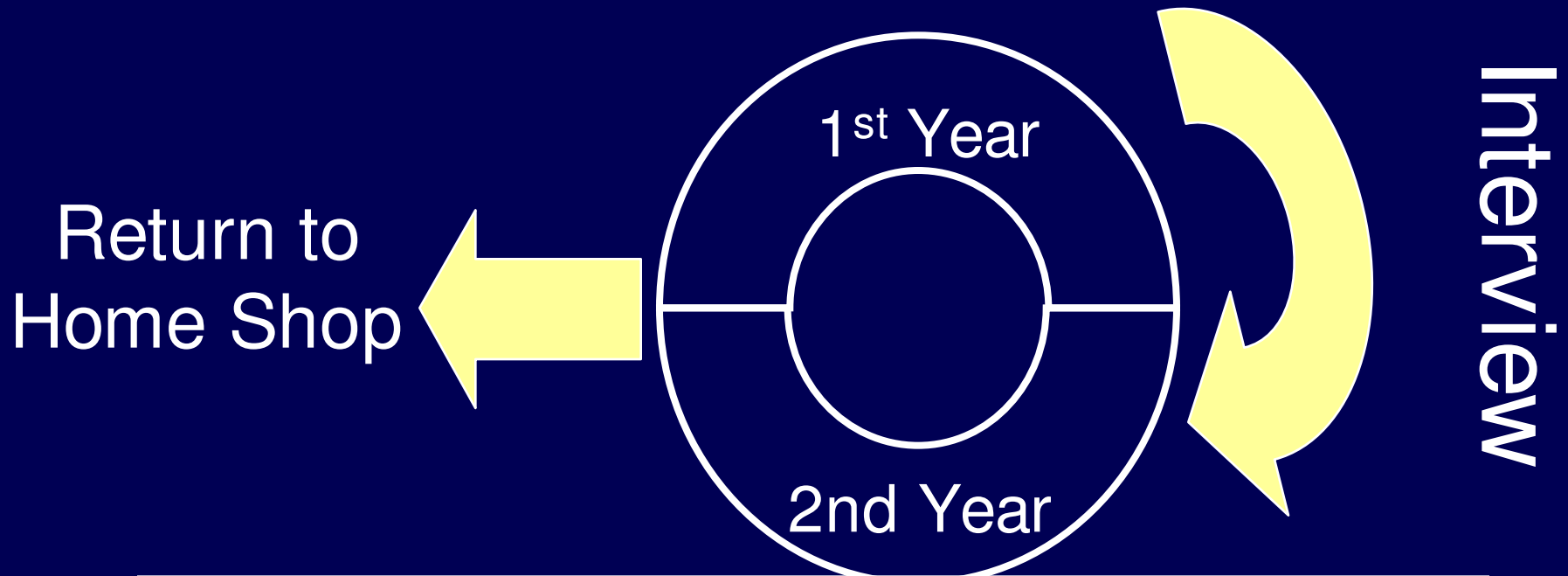
- Joint Interview Panel
- Most Qualified Senior
 - Numerical Score Based on Desired Qualities
 - Written Communication
 - Panel Questions
 - Presentation - Teaching Ability
 - Select based on Senior Qualified

Self Motivated – Trainable – Open Minded



Administrative Guidelines – The Rotation

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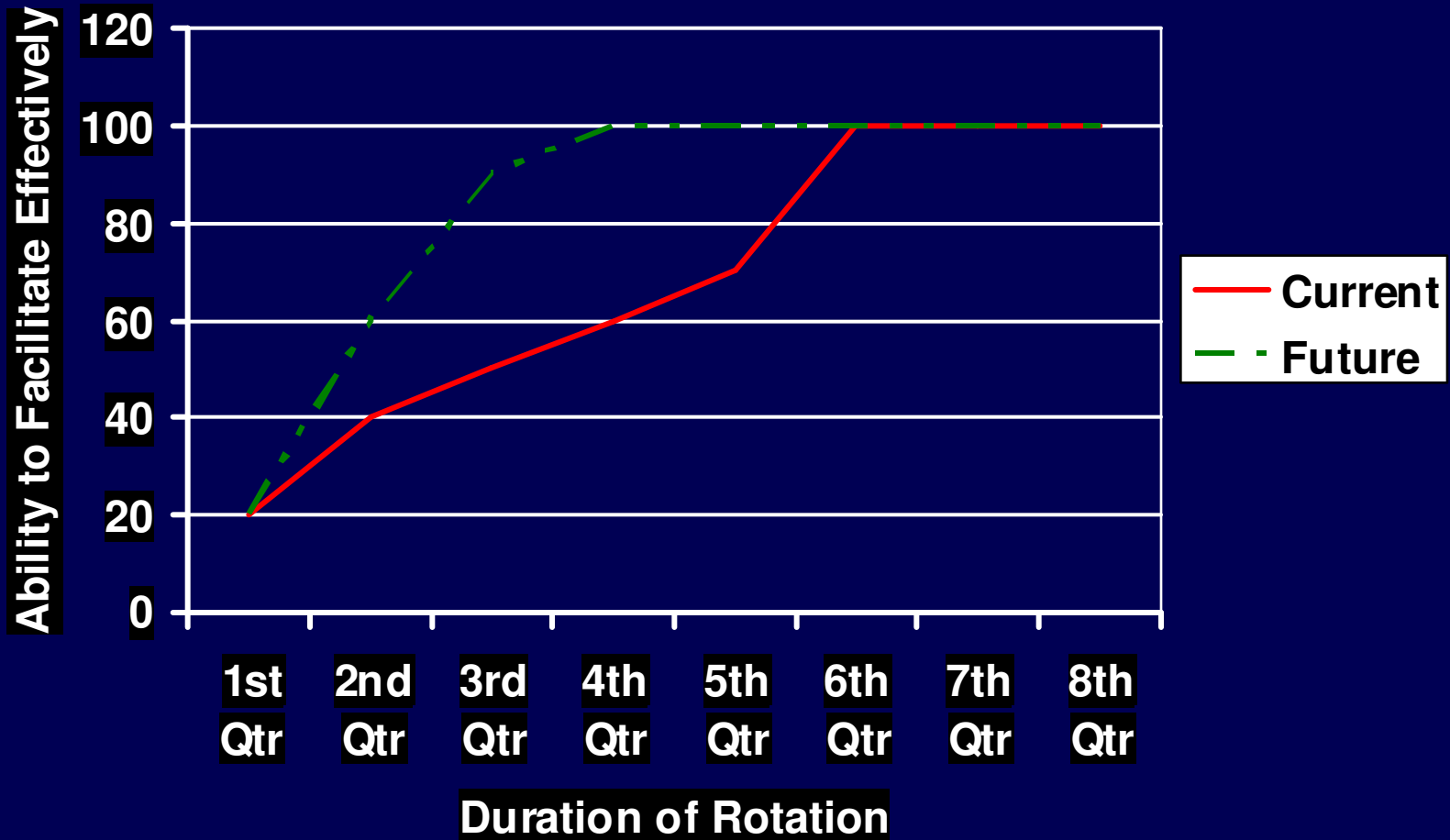


CI Management Team



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CI Facilitator Learning Curve





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CI Facilitator Training

2004

4-Day Lean Class

1-Day Lean Class

2005

4-Day Lean Class

1-Day Lean Class

Boeing Consulting

Boeing Tours

Facilitator Training

Certification Training

2006

4-Day Lean Class

1-Day Lean Class

Boeing Consulting

Boeing Tours

Facilitator Training

Certification Training

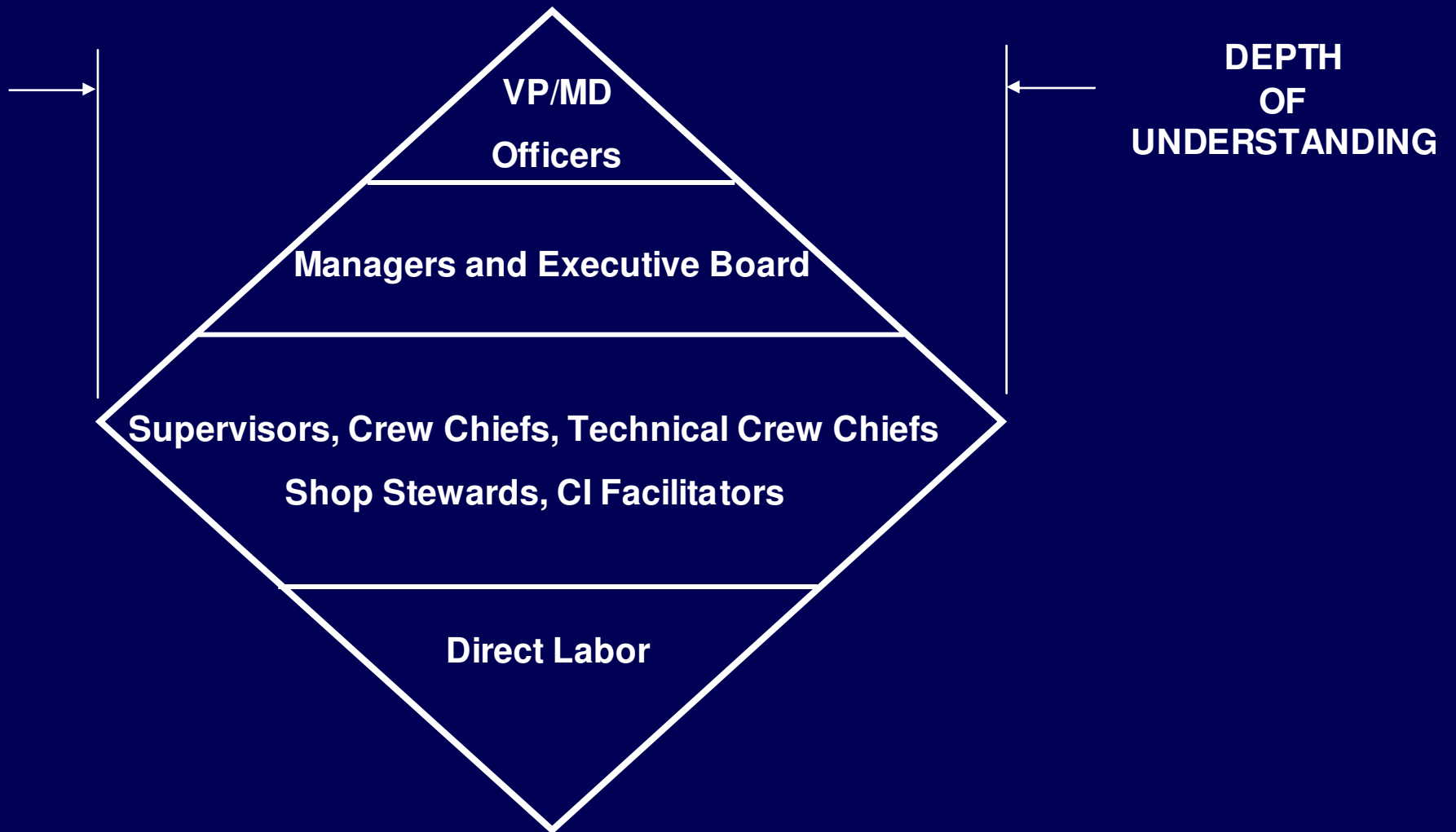
Working Together

Leader Skills



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Training Model





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Training

2007 – Internal to CI

Working and Learning Together

Team Based Training

Facilitation Skills

Lean Fundamentals

Computer Skills

Lean Certification

Event Process

Boeing VSIP

Leaning CI

2007 – External to CI

Lean 101 for Maintenance

Boeing VSIP

Measurable Management

Lean Certification

Benchmarking

4-Day Workshop

Working and Learning

Together



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Understanding Change



How Do You Deliver?

How Do You Receive?



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Leaning CI

Teaches Facilitators How to Facilitate

**Teaches the Organization What it Feels Like
to Be Changed**

Teaches the Struggles of Implementation

Teaches the Struggle of Sustaining

Teaches the Struggle of Measuring

QUICKENS THE LEARNING CURVE!



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Leaning CI – The Charter

- **PURPOSE**
 - By working together, develop a strategy to build a foundation/structure to develop and support CI Facilitators
- **KEY CUSTOMERS**
 - CI Facilitators
 - CI Organization



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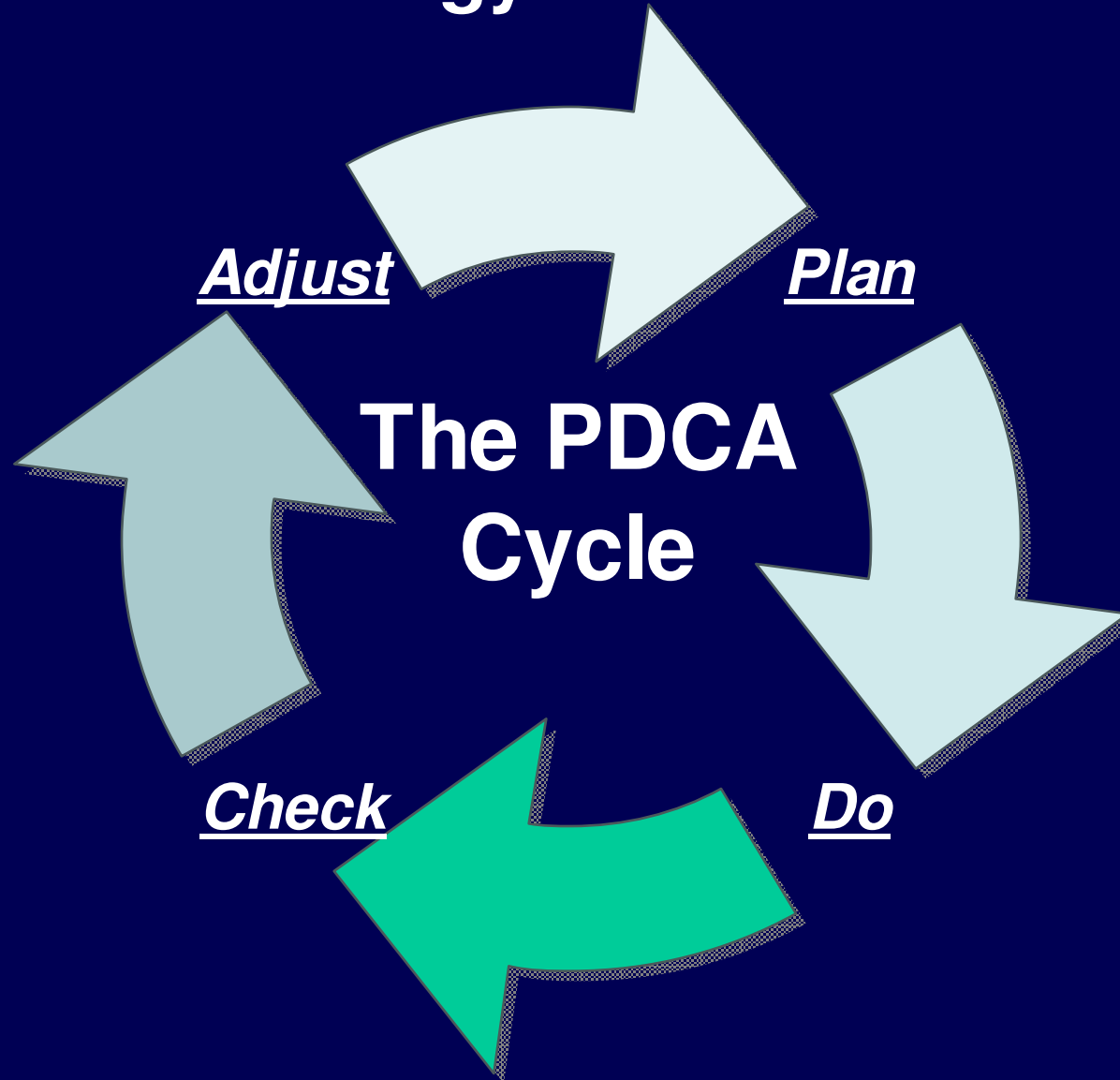
Leaning CI – The Charter

- KEY RESULT AREAS
 - Clearly defined roles and responsibilities
 - Standardized work processes
 - Implement strategy
 - Strengthen internal relationships
 - Establish metrics
 - Understand expectations
 - Adopt and live the CI Philosophy
 - Develop world class facilitators
 - Generate revenue



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PDCA - Our Strategy For The Future





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Leaning CI - Strategy

Involvement • Quality • Knowledge

Embed a LEAN Culture to ELIMINATE Waste

Targets

Event Savings = \$10m

Training Demand = Increase by 25%

ROI (Facilitators) = Increase 10 %

Event Activity = Increase 50 %

Leadership

Education

CI Event / Activity

Communication

Profitability

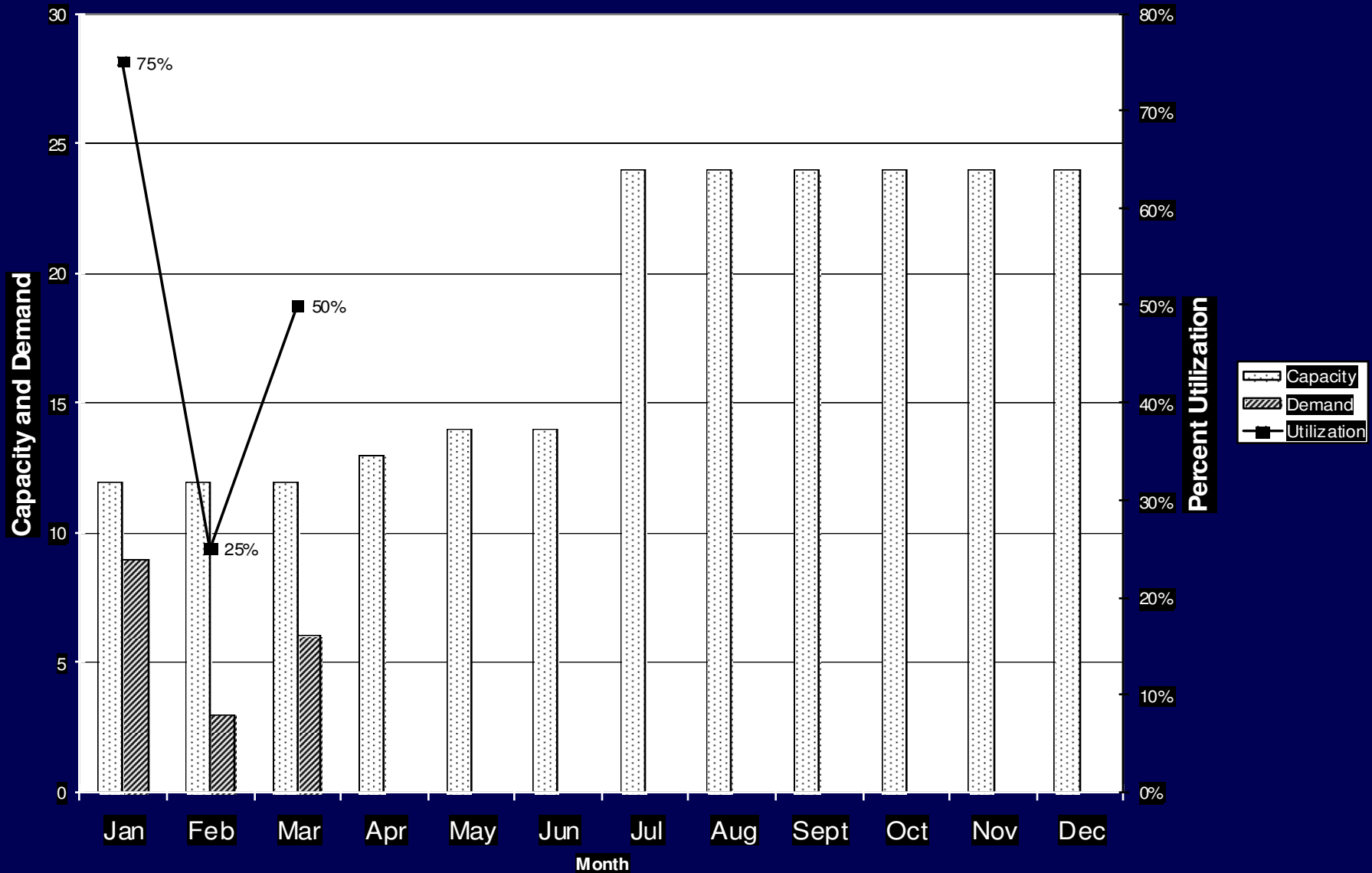
Team Member Satisfaction

Customer Satisfaction



TULE CI Facilitator Utilization and Event Activity

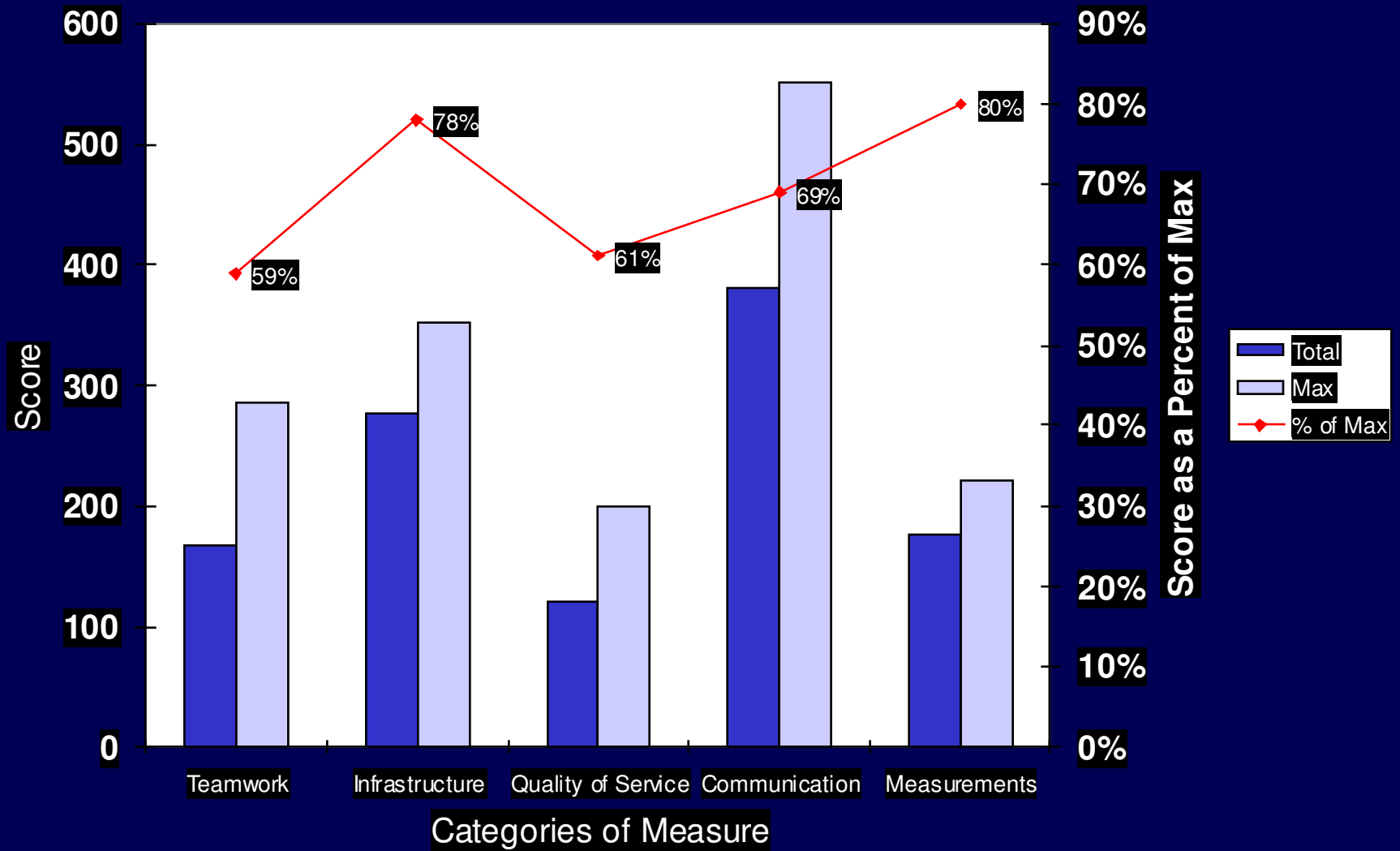
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CI Internal Diagnosis Results - Team Member Satisfaction

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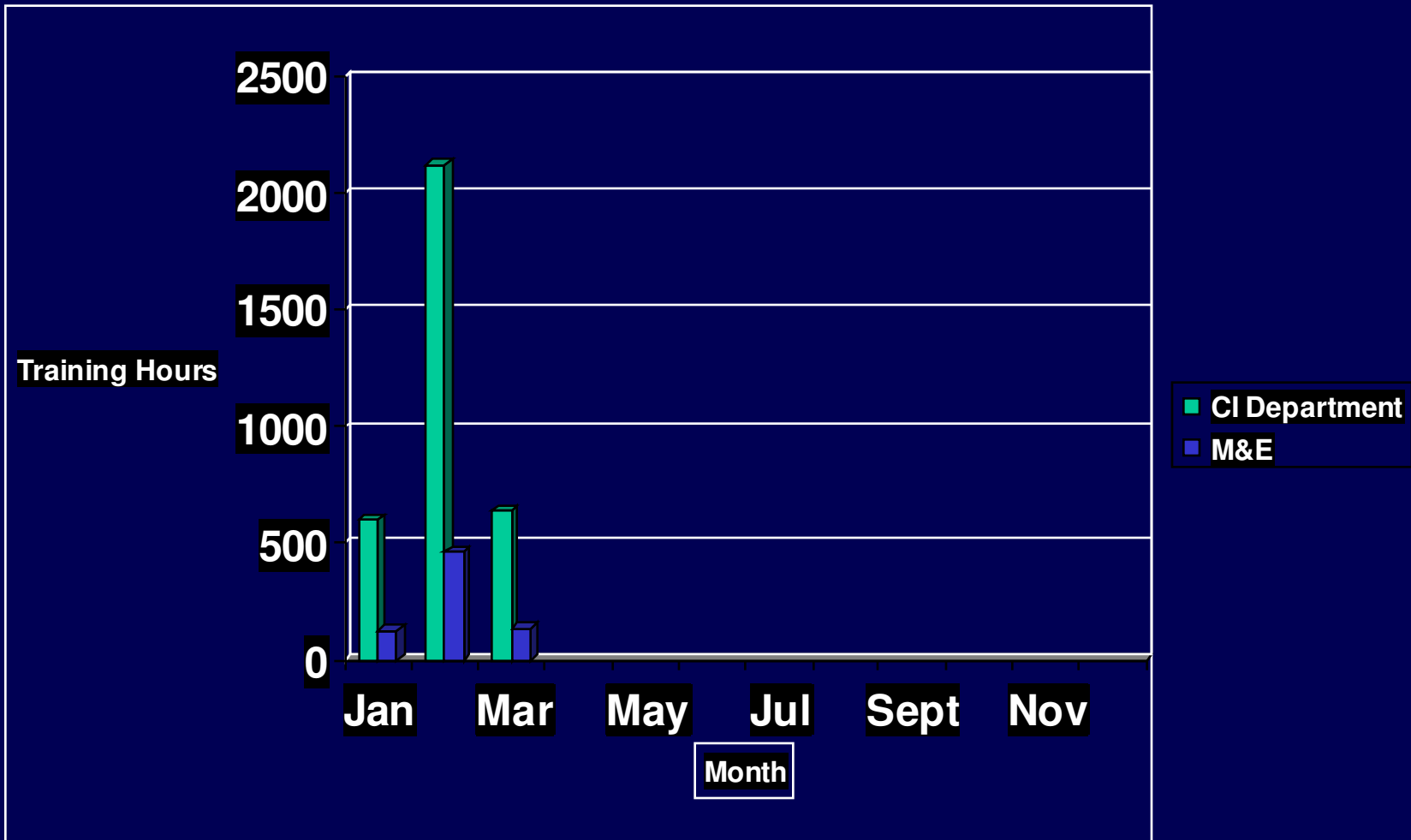




CI Training - 2007



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Living the Philosophy – World Class Facilitators Standardized Work Processes



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CONTINUOUS IMPROVEMENT EXECUTIVE SUMMARY

Event Title		CI Supplies Standardization	
Event Driver	Event Goals	Solutions	Results
<p>Due to the rotation, people from the shops move to the office. They often don't understand how to obtain supplies. The CIOffices were constantly running out of supplies. The Director sometimes had to leave base to go shopping.</p>	<p>Standardize the office supplies, including equipment, in each area using supplies that are procurable through standard supply channels and implement a kanban system.</p>	<p>Standardized inventory, min/max levels, visual controls, usage tracking, kanban</p>	<p>Reduced 10,244 feet of monthly travel, 37% reduction in inventory, learned the basics of a kanban system, learned how difficult it is to implement, standardized equipment</p>
Before		After	
			



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Lessons Learned

- The importance of union support
- Employee Involvement is crucial within a Lean Office
- Learning by implementing Lean within the Lean Office is “Priceless”
- Expecting from yourself what you expect from others is KEY
- A 2 year rotation is not ideal, but is certainly do-able



American Airlines 1948



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