
Designing For *the* Life Cycle

Making Decisions Today that Pay Tomorrow

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See the associated handout for the session exercises

to protect and improve the enterprise



EPPIC Inc.

Achieve Peak Performance

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Session Objectives

At the conclusion of this session you should be able to:

- ▶ **Describe the Design For the Life Cycle Model's 7-Value Variables**
- ▶ **Use the model to determine if your current T&D situation* has meaningful life cycle issues and costs**
- ▶ **Use the model as a jump starter for assessing your own organization's life cycle decisions**
- ▶ **Refine strategies and tactics for improving the life cycle value of the products and interventions you produce**

** This is equally applicable to non-Instructional HPT Interventions*

Session Agenda

1. Session Open
2. Why Bother with **DFLC**?
3. The **DFLC** Model
4. Quick 2-Person Exercise: Assessment of ROI Potential
5. ROI Improvement Strategies & Tactics
6. Quick 2-Person Exercise: Strategies & Tactics Refinement
7. Q&A and Session Close-Evaluations

DFLC = **D**esign **F**or the **L**ife **C**ycle

Why Bother?

For the
Return on Investment
potential!

ROI = Return *minus* Investment, *divided* by Investment

$$\text{ROI} = \frac{\text{R} - \text{I}}{\text{I}}$$

ROI Examples

A \$2M investment leads to a \$6M return

$$(\$6M - \$2M) / \$2M = 200\% \text{ or } 2:1$$

—

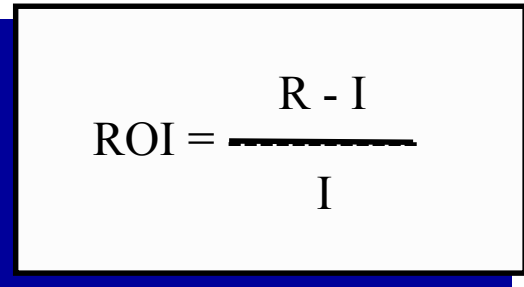
A \$200K investment leads to a \$1M return

$$(\$1M - \$0.2M) / \$0.2M = 400\% \text{ or } 4:1$$

—

A \$.5M investment leads to a \$18M return

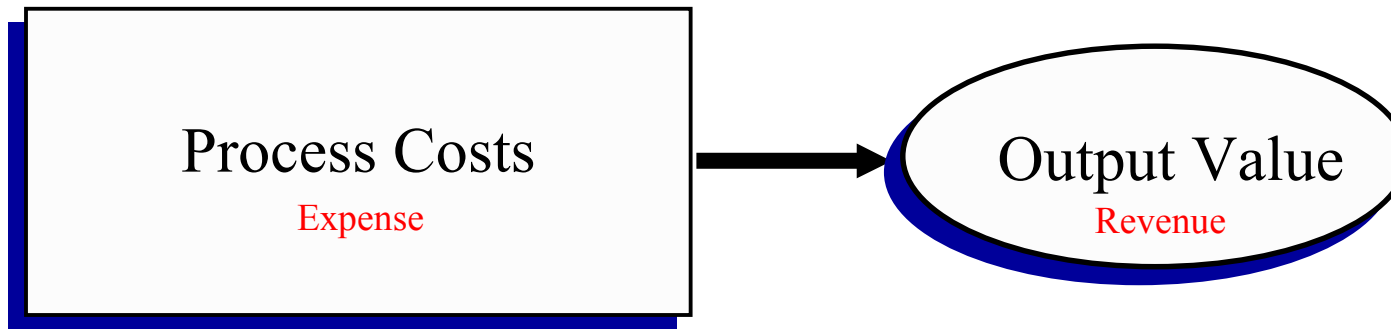
$$(\$18M - \$0.5M) / \$0.5M = 3500\% \text{ or } 35:1$$


$$\text{ROI} = \frac{\text{R} - \text{I}}{\text{I}}$$

ROI = Return

minus **Investment,**
divided **by Investment**

Your Investment & Returns



What are your **total costs** and what are your **total returns**?

- ▶ What is expected?
- ▶ What have you achieved?

A 10:1 return on \$5M investment
requires a return value of \$55M

$$ROI = \frac{R - I}{I}$$

Returns required for ROI Targets

Investment Level

	2:1	5:1	10:1	20:1	50:1	Your Case __:1
\$20m	\$60m	\$120m	\$200m	\$170m	\$1.02m	
\$10m	\$30m	\$60m	\$110m	\$210m	\$510m	
\$5m	\$15m	\$30m	\$55m	\$105m	\$255m	
\$2m	\$6m	\$12m	\$22m	\$42m	\$102m	
\$.5m	\$1.5m	\$3m	\$5.5m	\$10.5m	\$25.5m	
\$.1m	\$.3m	\$.6m	\$1.1m	\$2.1m	\$5.1m	

Improving Returns & Investments

To Improve ROI

▪ Increase
Returns

▪ Decrease
Investment

▪ Or both!

The Enterprise “Returns in the ROI Equation” come from either:

▶ Increased “Valuable Outputs” (Returns)

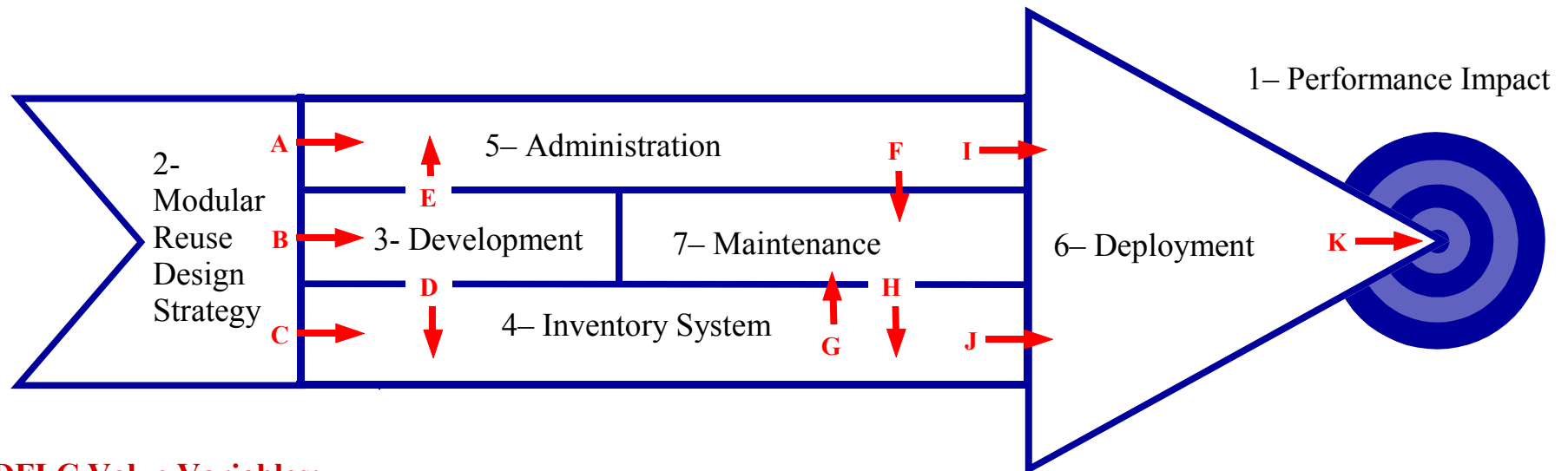
- T&D Customer’s and/or T&D Human Performer’s performance improvement regarding
 - Sales increases (due to price and/or volume increases)
 - Higher speeds, volumes, and “yields”
 - Other?

▶ Reduced Expenses (Investments)

- Human Performer’s performance improvement regarding
 - Higher speeds, volumes, and “yields”
 - Other?
- T&D/learning/knowledge management System improvements regarding
 - Labor expenses
 - Materials, Facilities, Utilities, Services
 - Other?

DFLC Model of 7 Value Variables

DFLC Model Design For the Life Cycle Model of Value Variables and Linkages











DFLC Value Variables:

- | | |
|--|---|
| 1 <input type="checkbox"/> – Performance Impact | 4 <input type="checkbox"/> – Administration |
| 2 <input type="checkbox"/> – Modular Reuse Design Approach | 5 <input type="checkbox"/> – Inventory |
| 3 <input type="checkbox"/> – Development | 6 <input type="checkbox"/> – Deployment |
| | 7 <input type="checkbox"/> – Maintenance |

The DFCL Model

7 Value Variables that Impact ROI of the Design For the Life Cycle:

Increased Return	Decreased Expense
	
	
	
	
	
	
	

- ▶ 1- Performance Impact
- ▶ 2- Reuse
- ▶ 3- Development
- ▶ 4- Inventory
- ▶ 5- Administration
- ▶ 6- Deployment
- ▶ 7- Maintenance

The more complex your situation, the more these variables need attention

1- Performance Impact

DFLC for this “X” – Means

- targeting an improvement in defined metrics, that has improved ROI potential, before starting any effort
- using current or improved systems, processes, tools and templates that help insure the performance impact improvement

Do your products measurably improve the performance of its target audiences and their processes?

Are your efforts targeted, or blanketed, for new product development and product/service deployment within your marketplace?

Do enterprise leaders select targets for your efforts and measure your success?

If you successfully addressed this, what level of return might this result in?

Return Potential: High Medium Low Zero

2- Modular Reuse Design

DFLC for this “X” – Means

- defining, requiring, and enabling an object/modular design strategy, process and tools to appropriately “reuse” content chunks to speed development, reduce costs and provide for common-ality across your product/service line

Are your products based on a modular, building block, reuse design strategy? Does your system force reuse, or does it combine “reusable objects” with “unique objects”?

What level of content overlap currently exists? What % of your total product line could be shared?

If you successfully addressed this, what level of return might this result in?

Return Potential: High Medium Low Zero

3- Development Process

DFLC for this “X” – Means

- using a common development process* (per product deployment method/media type)to ensure speed, performance impact, and lowered life cycle cost

* Project Planning, Analysis, Design, Development, Pilot-Test, Revisions & Release

Do you have a common “new product development process” (i.e.: ADDIE) used by all developers?

Do you have a common development process that uses rules and tools/templates to facilitate performance impact, as well as process speed, content accuracy and completeness; or is it “just bureaucratic”?

Does your design reflect the real performance situation requirements? Are your products pilot-tested before general release?

If you successfully addressed this, what level of return might this result in?

Return Potential: High Medium Low Zero

4- Inventory System

DFLC for this “X” – Means

- creating and enabling an inventory system for “final products” and “content chunks” where the “chunking rules/guidelines” recognize content that is:
 - ▶ **core** (everyone), **shareable** (more than 1) and **unique** (only 1 target audience)

Is your systems’ “master content” “inventoried” centrally, for controlled access and management?

Does the inventory logic sync with the Modular Reuse design strategy and systems?

If you successfully addressed this, what level of return might this result in?

Return Potential: High Medium Low Zero

5- Administration System

DFLC for this “X” – Means

- producing easy to use administration systems from both the customer and supplier perspectives, and meaningful to the enterprise (performance-based)

Are your strategic and operations efforts being driven by the appropriate enterprise stakeholders?

Is it easy for the “consumer” to identify which of your products are appropriate for them in their situation?

Is it easy to process transactions and update records and generate meaningful reports?

If you successfully addressed this, what level of return might this result in?

Return Potential: High Medium Low Zero

6- Deployment System

DFLC for this “X” – Means

- designing in an object/modular manner, for the most cost effective delivery method, while meeting the performance impact objectives

Are products deployed in an appropriate manner to achieve the objectives and achieve the forecasted ROI?

Are you using the appropriate blend of self-paced, group paced, and coached methods?

If you successfully addressed this, what level of return might this result in?

Return Potential: High Medium Low Zero

7- Maintenance Processes

DFLC for this “X” – Means

- using a common maintenance process* (per product deployment method/media type)to ensure speed, performance impact, and lowered life cycle cost

* Project Planning, Analysis, Design, Development, Pilot-Test, Revisions & Release

Do you have a common “existing product maintenance process” used by all maintenance developers?

Do you have a common maintenance process that uses rules and tools/templates to facilitate performance impact, as well as process speed, content accuracy and completeness; or is it “just bureaucratic”?

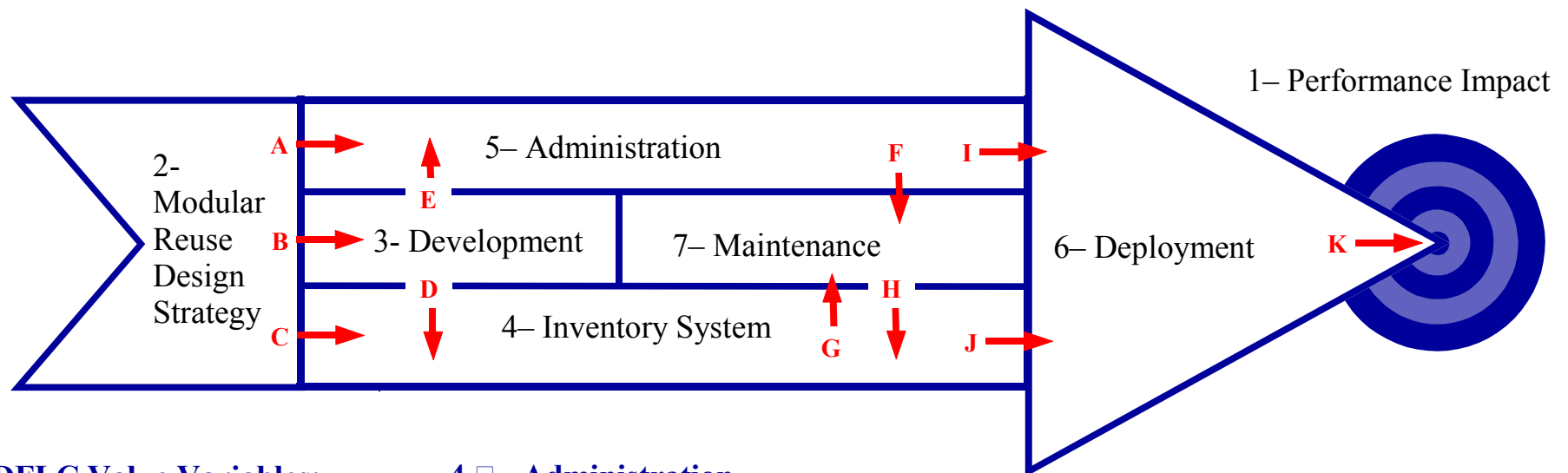
Does your design reflect the real performance situation requirements? Are your products pilot-tested before general release?

If you successfully addressed this, what level of return might this result in?

Return Potential: High Medium Low Zero

DFLC Model of 7 Value Variables

DFLC Model Design For the Life Cycle Model of Value Variables and Linkages



DFLC Value Variables:

1 □ – Performance Impact

2 □ – Modular Reuse Design Approach

3 □ – Development

4 □ – Administration

5 □ – Inventory

6 □ – Deployment

7 □ – Maintenance

Variable Values Linkages

- A-** drives product and component configuration for administration: scheduling, ordering, tracking, reporting, etc.
- B-** drives product and component configuration for development rules, tools and templates
- C-** drives product and component configuration for inventory system (SKU scheme)
- D-** initially populates the inventory for access for administration, deployment and maintenance, and is a development source for “by design” reuse
- E-** source for administration: scheduling, ordering, tracking, reporting, etc.
- F-** drives the maintenance schedule
- G-** source for masters for maintenance and version control
- H-** re-populates the inventory
- I-** schedules, registers/places orders for product/services
- J-** source for content deployment
- K-** leverages post-deployment performance impact

more **Complex**

If:

Many Target Audiences

Dispersed Target Audiences

Many Products/Services

Large Staff to handle the many P/S for the many Target Audiences

Dispersed Staff

more **Simple**

If:

Fewer Target Audiences

Centralized Target Audiences

Fewer Products/Services

Small Staff to handle the fewer P/S for the fewer Target Audiences

Centralized Staff

Audience Survey

Your situation is:

distinct
**Target
Audiences**

- 1
- 2-5
- 6-10
- 10-20
- 20+
- 50+

distinct
**Products &
Services**

- 1
- 2-5
- 6-10
- 10-20
- 20+
- 50+

size
**of the
Staff**

- 1
- 2-5
- 6-10
- 10-20
- 20+
- 50+

Pair up per the facilitator's directions

- ▶ Take 5 minutes to discuss one person's situation- and talk them through an initial assessment of the 7 Value variables and be prepared to represent their "case"
- ▶ Take 5 minutes to discuss the other person's situation- and talk them through an initial assessment of the 7 Value variables and be prepared to represent their "case"

**Mark on your *saddle-stitched* handout;
save the second copy for use post-Conference!**

Debrief and Q&A

2 Person Exercise

Debrief:

- ▶ Did the 7 Value Variables help you sort through potential ROI opportunities?
- ▶ Where are your “customers” ROI opportunities?
- ▶ What are the potential levels of “return”? H-M-L

Q&A

What is the Situational Impact to the DFCL Value Variables?

Impact of Complex---Simple

- Size – of your Target Audiences
- Dispersement – of your Target Audiences
- Number – Products and Services
- Staff size
- Staff Dispersement

- ▶ 1- Performance Impact
- ▶ 2- Reuse
- ▶ 3- Development
- ▶ 4- Inventory
- ▶ 5- Administration
- ▶ 6- Deployment
- ▶ 7- Maintenance

Design For the Life Cycle “Xs”

An engineered product in a sophisticated enterprise today is designed to:

- ▶ meet the customers’ functional requirements and uses
- ▶ meet or exceed customer expectations
- ▶ is robust to use and misuse (within limits)
- ▶ is designed for lowering the “total costs to produce” over it’s entire life cycle

The Strategies & Tactics for Improving the “Xs” include:

- 1. Performance Impact**
- 2. Modular Reuse**
- 3. Development**
- 4. Inventory**
- 5. Administration**
- 6. Deployment**
- 7. Maintenance**

1- Performance Impact

Establish better alignment to your enterprise at 3 levels:

- ▶ **Enterprise - with Governance & Advisory System**
- ▶ **Program - with the Advisory Groups**
- ▶ **Project - with Project Teams of target population *master performers* and *subject-matter-experts***

Model Ideal Performance and derive the enablers, and then conduct a gap analysis - with your customer's master performers

Involve top “Master Performers” in key development efforts, not just “subject-matter-experts”

If you addressed this, what level of investment might this take?

2- Reuse

Define the “Dewey-decimal system-type” rules for modular design for core, shareable and unique content to facilitate greater reuse with greater performance impact

Assess all initial designs and developed products for conformance to these rules

Assess all initial designs and developed products for probable impact to performance

If you addressed this, what level of investment might this take?

3- Development

Define a set of “common processes” for a modular approach new product development (project planning, analysis, design, development, test, and release), for various deployment methods and media, that conforms to the Modular Reuse Design Approach

Build “e” tools and templates and necessary training to facilitate the use and quality of the processes

Monitor adherence to the process for key metrics (without micro-managing)

If you addressed this, what level of investment might this take?

4- Inventory

Build an easily accessible (but with adequate controls), “e” inventory system for development, administration, deployment, and maintenance purposes of the product and component (modules/objects) levels of content

Control versions and updating centrally at the product and component (modules/objects) levels

If you addressed this, what level of investment might this take?

5- Administration

Install an “e” administrative system for

- ▶ Communications & Marketing
- ▶ Scheduling
- ▶ Registration
- ▶ Ordering
- ▶ Progress & Completion Tracking
- ▶ Evaluations
- ▶ Governance & Advisory System support
- ▶ Program and Project Management & Budgeting Planning
- ▶ Project Schedule and Budget Tracking
- ▶ Reporting
- ▶ Etc.

If you addressed this, what level of investment might this take?

6- Deployment

Use a triple-blended approach to deployment (in design strategies)

▶ **Self-Paced**

- paper or “e”

▶ **Group-Paced**

- face-to-face or “e”/virtual

▶ **Individually Coached/Mentored**

- face-to-face or “e”/virtual

If you addressed this, what level of investment might this take?

7- Maintenance

Define a set of “common maintenance processes” for the modular reuse design approach (including project planning, analysis, design update, development/ maintenance, test, and release-back-into-inventory), for each of the various deployment methods and media in use

Use the “e” tools and templates from Development to facilitate the quality of the processes and products

If you addressed this, what level of investment might this take?

2 Person Exercise

Pair up per the facilitator's directions

- ▶ Take 5 minutes to discuss one person's situation- and talk them through the "adoption or adaptation" of one or more of the Strategies & Tactics address their top 2 Value Variables
 - and be prepared to represent their "case"
- ▶ Take 5 minutes to discuss the other person's situation- and talk them through the "adoption or adaptation" of one or more of the Strategies & Tactics that address their top 2 Value Variables
 - and be prepared to represent their "case"

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Debrief and Q&A

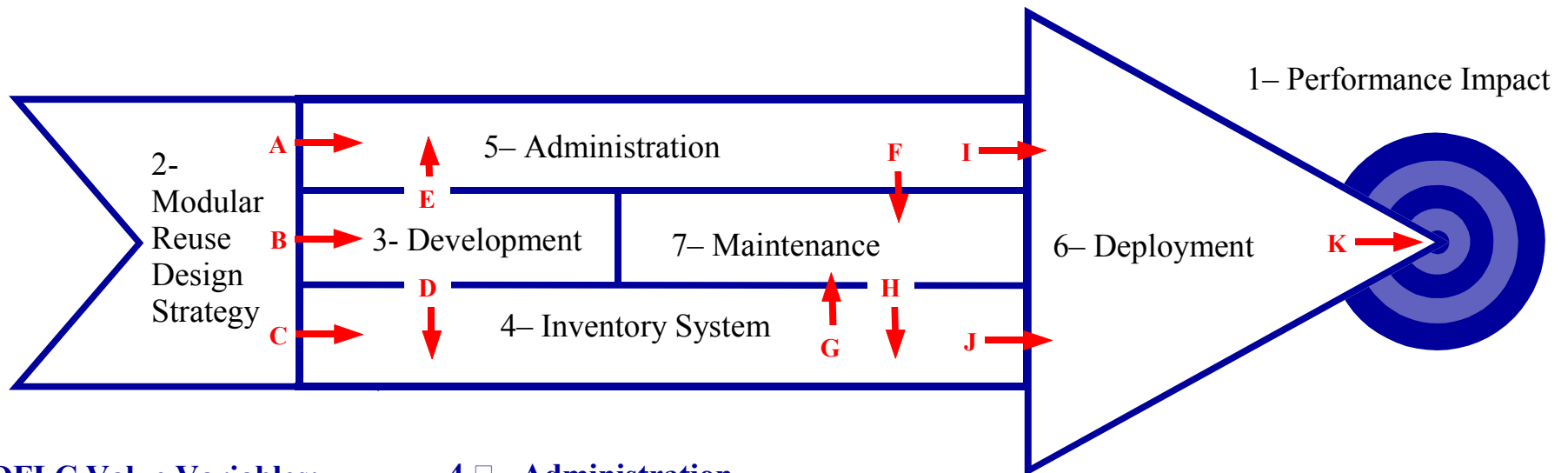
2 Person Exercise

Debrief:

- ▶ **Did the 7 Value Variables help you sort through potential ROI improvement strategies & tactics?**
- ▶ **Where are your “customers” highest leverage improvement strategies & tactics?**
- ▶ **What are the potential levels of “investment” of the improvement strategies & tactics relative to the “returns? H-M-L**

Q&A

7 DFCL Value Variables



DFLC Value Variables:

1 □ – Performance Impact

2 □ – Modular Reuse Design Approach

3 □ – Development

4 □ – Administration

5 □ – Inventory

6 □ – Deployment

7 □ – Maintenance

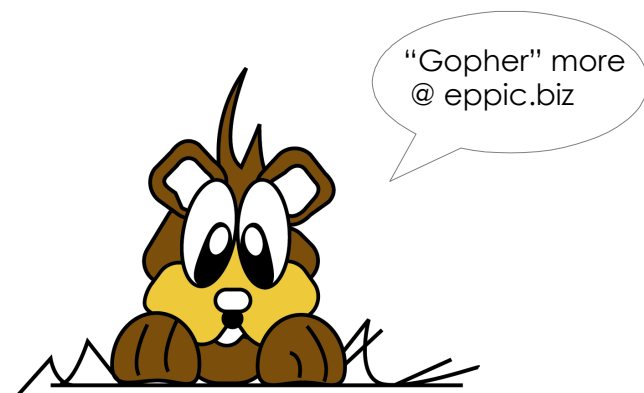
Questions? Comments?

Q & A

Additional readings and an assessment tool are available on the EPPIC Web site

- ▶ **Targeting EPPI – Enterprise Process Performance ImprovementSM**
 - ▶ *lean-ISD* via the PACT Processes for T&D
 - ▶ *lean-ISD* White Paper
 - ▶ **Performance Modeling for *lean-ISD*SM**
- Plus many other relevant articles*

<http://www.eppic.biz>



Objectives Review

Our post-session objectives for you included, ability to:

- ▶ **Describe the Design For the Life Cycle Model's 7-Value Variables**
- ▶ **Use the model to determine if your current T&D situation has meaningful life cycle issues and costs**
- ▶ **Use the model as a jump starter for assessing your own organization's life cycle decisions**
- ▶ **Refine strategies and tactics for improving the life cycle value of the products and interventions you produce**

Thank you!

and

Please complete the ISPI Evaluation

Guy W. Wallace, CPT



Guy W. Wallace, CPT

Guy W. Wallace has been in the T&D field since 1979 and an ISD consultant since 1982. His clients over the years have included 32 of the Fortune 500, plus NASA, BP, Novacor, and Siemens.

He has analyzed and designed/ developed training and development for almost every type of business function and process.

He is the author of three books, more than 40 articles, and has presented more than 40 times at international conferences and local chapters of ISPI, ASTD, at IEEE, Lakewood Conferences and the Conference on Nuclear Training and Education.

He has served on the ISPI Board of Directors as the Treasurer (1999–2001) and will become the president of ISPI in April 2003.

His biography is listed in Marquis Who's Who in America.

Facilitator Contact Information

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