



CURRICULUM ARCHITECTURE
DESIGN & DEVELOPMENT
INSTITUTE, INC.

ISPI Conference

San Francisco, April 2001

*lean-ISD*SM

ISPI 2001 Conference
Masters Series Presentation

April 11, 2001

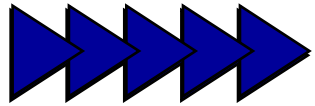
Presented by:

Guy W. Wallace
Partner

CADDI, Inc.

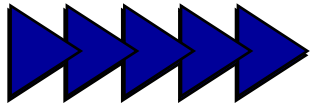
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Preface

John Swinney, our outgoing Society president, asked me to tell our story about the PACTSM Processes for T&D in this masters series . . .

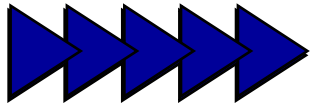


Our Claim

Over the past two decades, my CADDI partner Pete Hybert, I, and others at CADDI have “reduced to practice” many of the prevailing concepts/models/methods of ISD.

lean-ISD via our PACT Processes for T&D

- Ensures a “performance orientation” to all training and development (T&D) content and better posttraining capability to both “know” and “do”
- “Chunks” content to facilitate reuse when appropriate and to reduce both first and life-cycle costs
 - Development
 - Administration/delivery
 - Maintenance



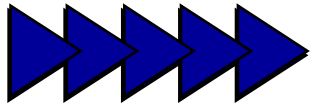
A Little Background

At Wickes Lumber (1979–1981), I

- Learned a derivative approach to ISD from the work of Gilbert and Rummler
- Joined ISPI (Detroit, Michigan chapter)

Next, at Motorola (1981–1982), I

- Had an opportunity to work on two projects with Dr. Geary Rummler
- Was energized by director Bill Wiggenghorn's desire for us to create a Rummler-based training design method

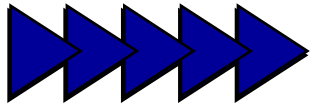


A Little Background *(continued)*

Then at SWI • Svenson & Wallace, Inc. (1982 – 1997), I

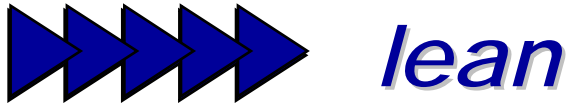
- Focused on ISD versus HPT/TQM
- Developed and evolved the Curriculum Architecture DesignSM (CAD) methodology beginning in 1982
- Developed the Modular Curriculum DevelopmentSM (MCD) methodology (akin to ADDIE) to continue the CAD approach and philosophy and leverage the outputs of CAD as inputs to MCD

At CADDI, we continue to use those approaches today with client projects, and we continue to evolve the approaches

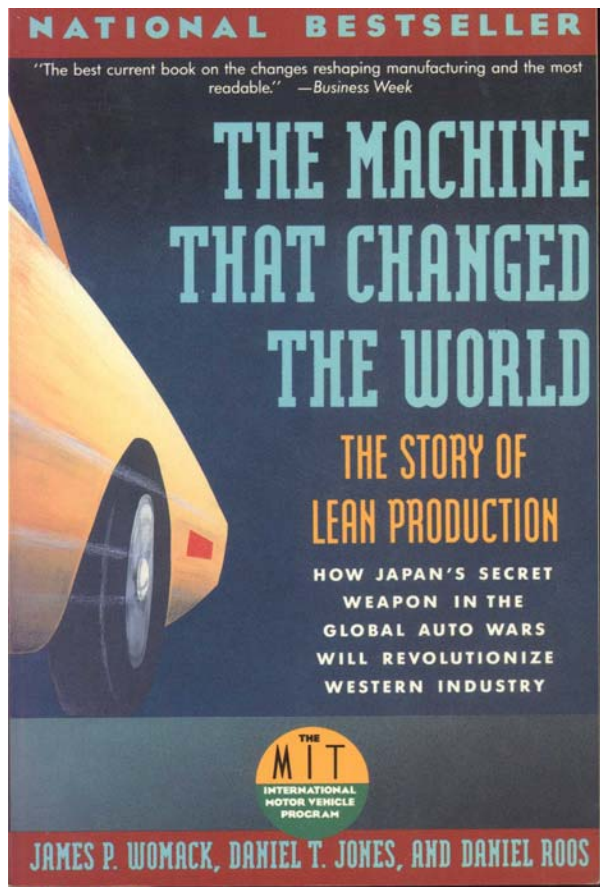


Performance Orientation of PACT Credits

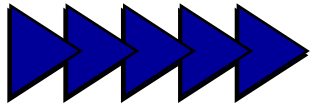
- Geary A. Rummler
- Tom Gilbert
- Many other ISPI gurus and presenters (1979 – today)
- Insights gained from ISD projects with
 - Product managers
 - Design engineers
 - Quality specialists
 - Financial specialists



The concept of “lean” is borrowed from the 1991 book



- “*lean*” is the best of both mass production and craft production
- Principles and attributes of *lean*
 - Teamwork
 - Communication
 - Efficient use of resources and elimination of waste
 - Continuous improvement
- Attributes of a *lean* process/methodology
 - Defined process/steps
 - Defined roles/responsibilities
 - Standard tools/templates
 - Flexible



Instructional Systems Design (ISD)

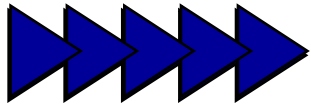
Common ISD Benefits

- More interactivity and/or testing
- More effective instructional process
- Focus on job performance and learning versus content
- Better use of instructional media

Common ISD Complaints

- Takes too long
- Impossible to forecast and manage
- Variable results—depends on the designer
- Each designer uses his/her own process, formats, defaults, etc.

The bottom line: it is difficult to get consistent, reliable results implementing traditional ISD in a corporate training organization



lean-ISD

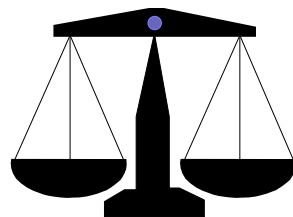
lean applied to ISD should have beneficial impacts on

- Quality of final T&D products
- Cycle time to develop and maintain
- Costs, including first and life-cycle costs, as well as development, administration, delivery, and maintenance costs

Quality



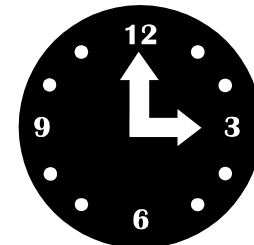
Quantity

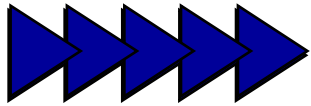


Cost



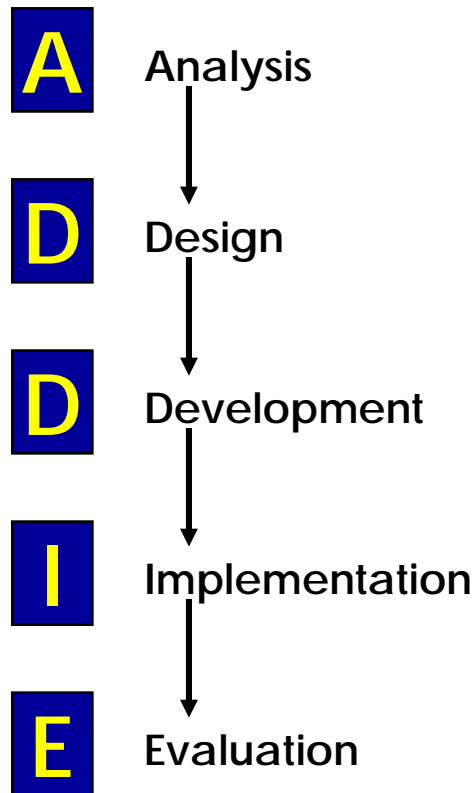
Time



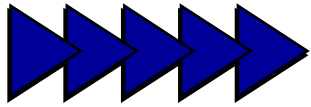


The Traditional ISD Model

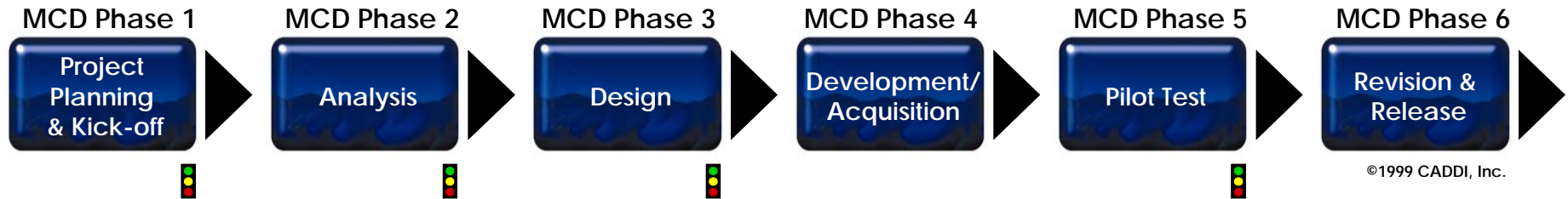
A-D-D-I-E – from the 1940s work of Robert Gagne, Leslie Briggs, Robert Moran, and Robert Branson

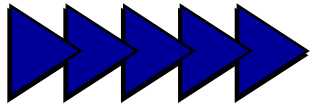


**Incremental
new product
development**



PACT Takes Traditional ISD and Modifies It





PACT Takes Traditional ISD and Modifies It *(continued)*

▶ Three levels of ISD design

CAD
Curriculum
Architecture
Design

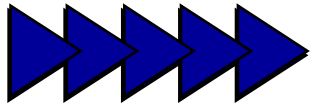
CAD is a gated, systems engineering approach to the T&D product line

MCD
Modular
Curriculum
Development

MCD is a gated, product development process using a modular, platform design approach

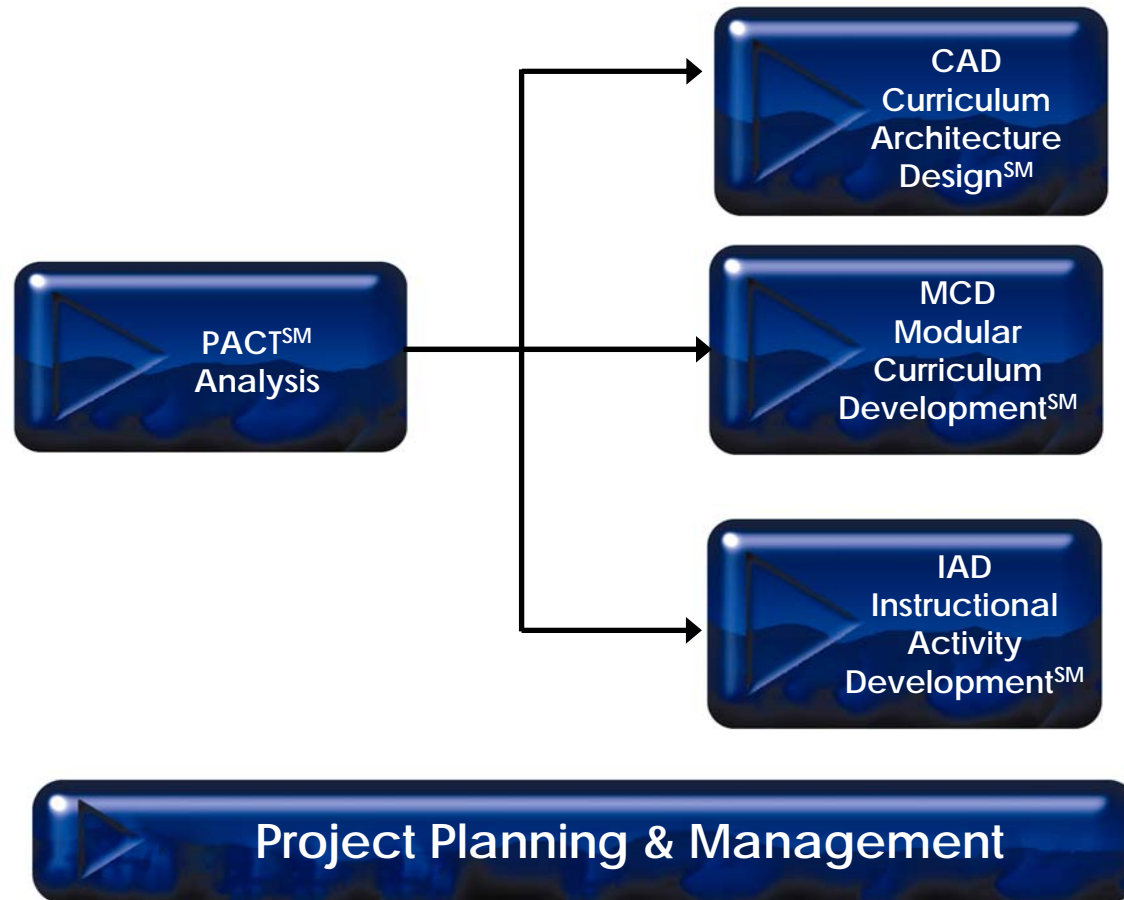
IAD
Instructional
Activity
Development

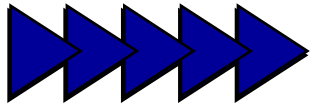
IAD is a gated, product component development process



CADDI's Five ISD Methodology Sets

► The PACT Processes for T&D





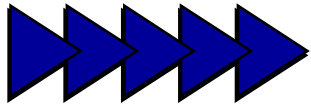
lean-ISD

via the PACT Processes for T&D

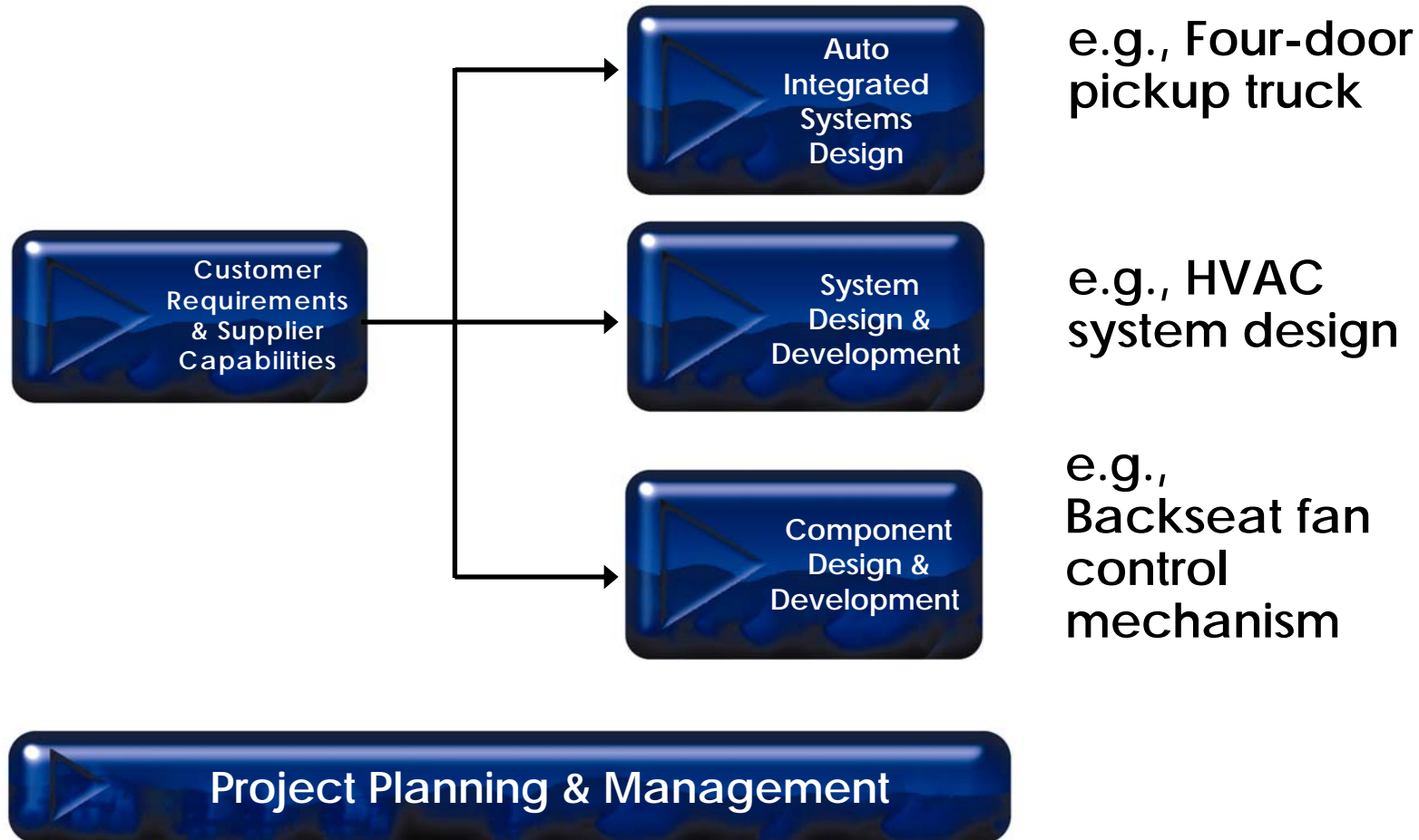
The three levels of design are akin to *systems engineering* of products

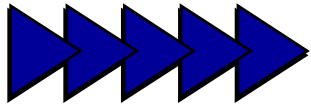
- Car development
- Telecommunications product development
- Software development

Let's look at some examples

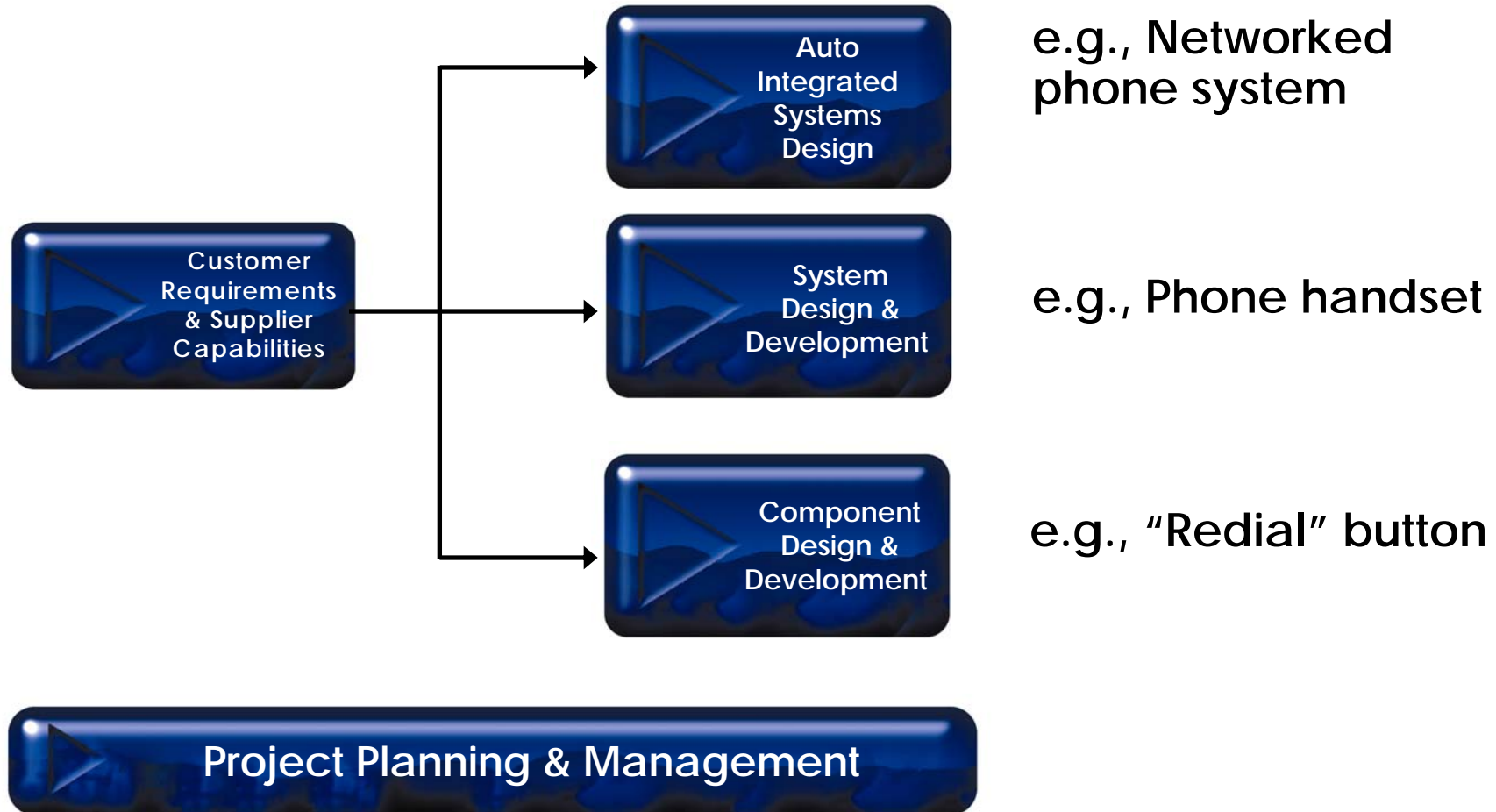


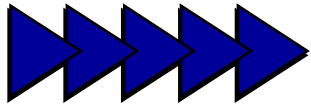
lean Car Development Example



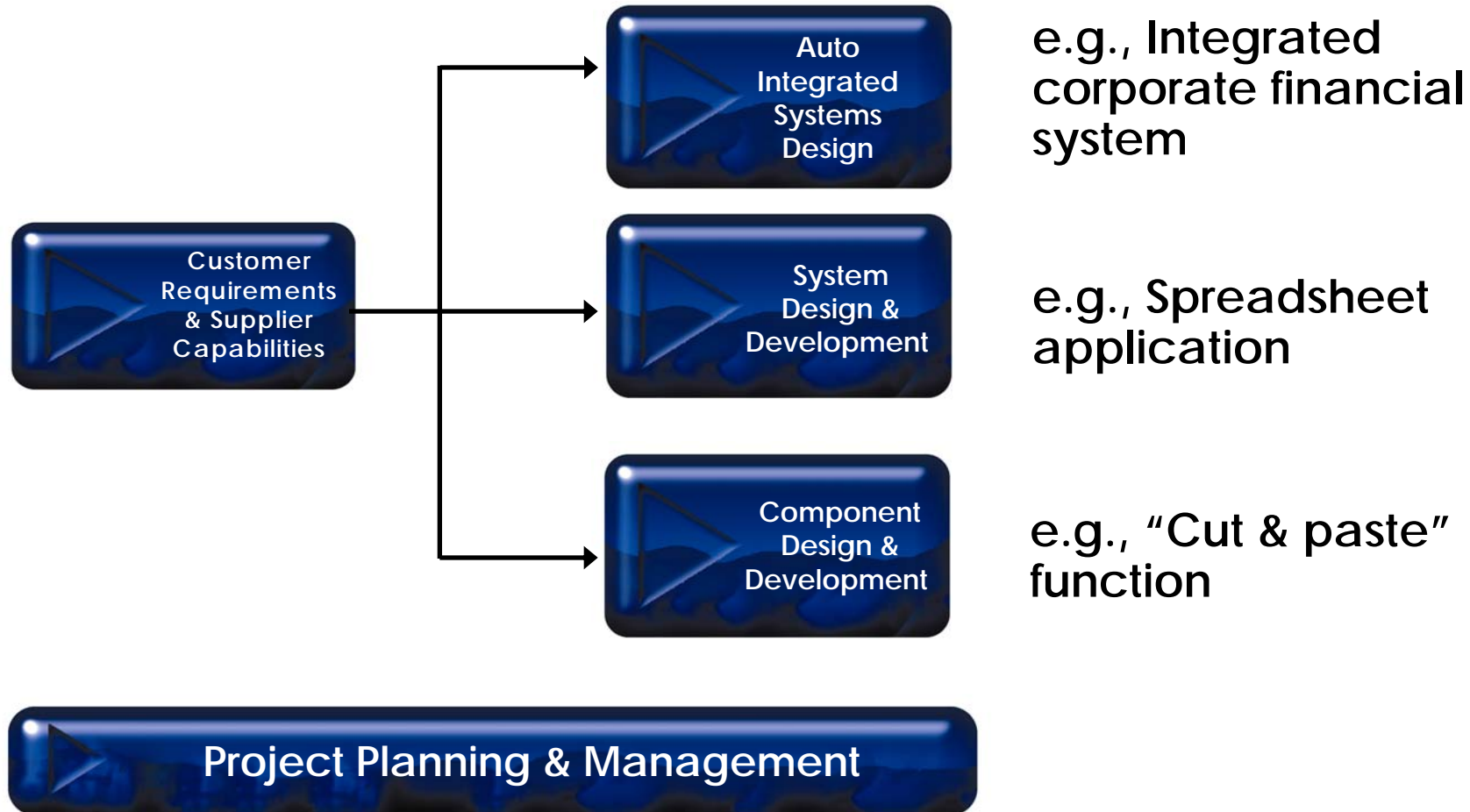


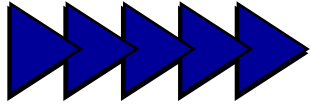
lean Telecommunications Product Development Example





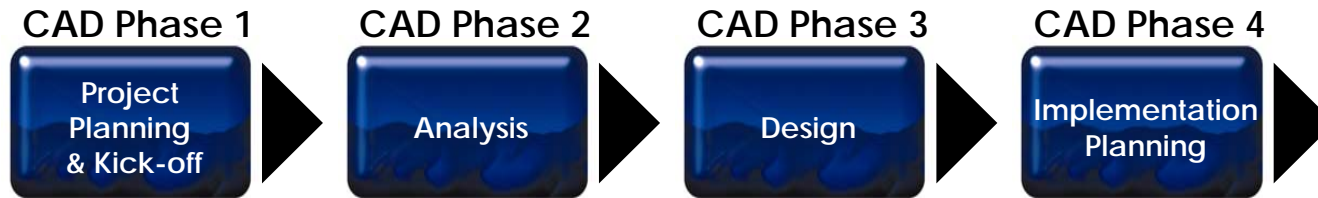
lean Software Development Example





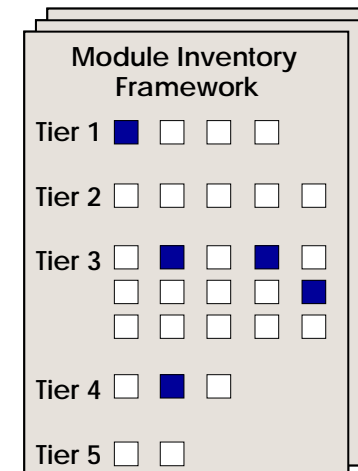
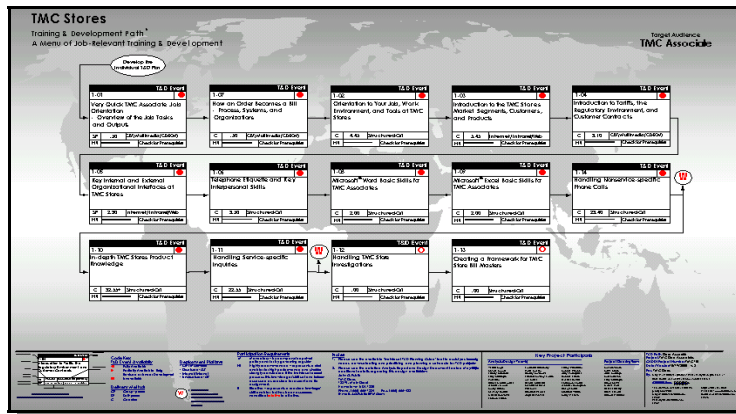
PACT Processes for T&D

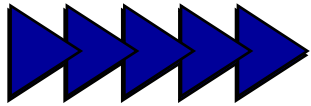
Curriculum Architecture Design (CAD)



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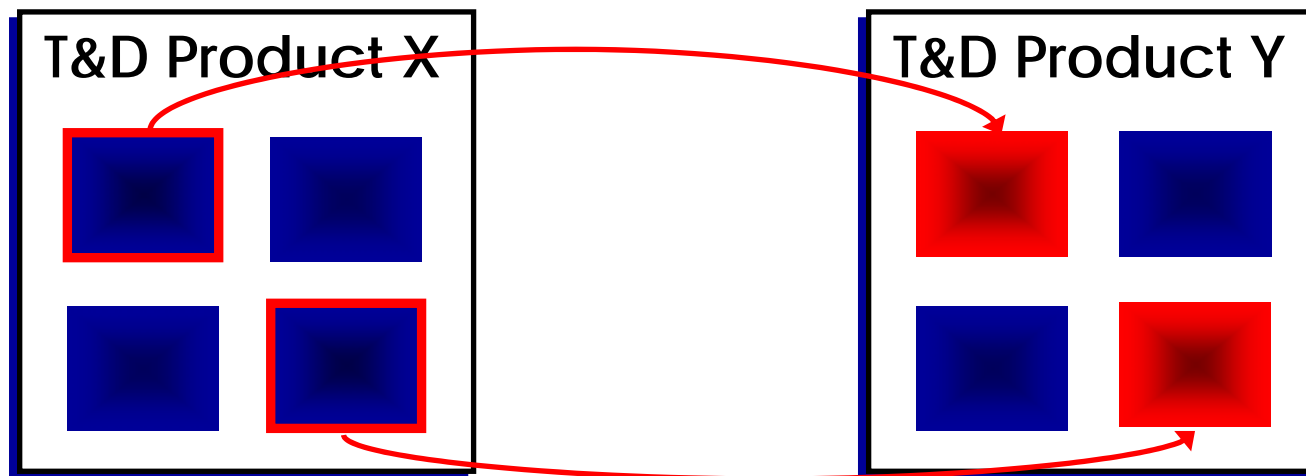
CAD projects produce a “systems engineering” set of specifications for a performance-based curriculum, composed of shareable and unique modules. CAD is the architectural design component of our *lean-ISD* methodology set within PACT.



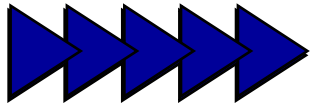


Curriculum Architecture Design (CAD) *(continued)*

- Macrolevel ISD analysis and design
- Systems analysis and systems engineering design of the T&D product line
 - Modular design product line



**CAD assists in a reuse strategy for
modules/chunks of T&D content**



PACT Processes for T&D

Modular Curriculum Development (MCD)

MCD Phase 1

Project Planning & Kick-off

MCD Phase 2

Analysis

MCD Phase 3

Design

MCD Phase 4

Development/ Acquisition

MCD Phase 5

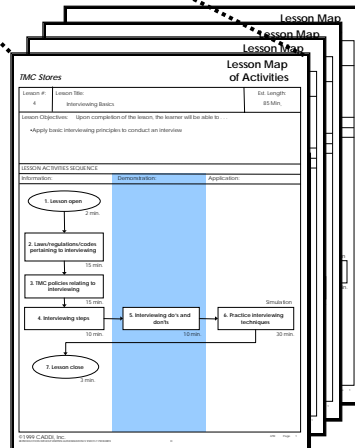
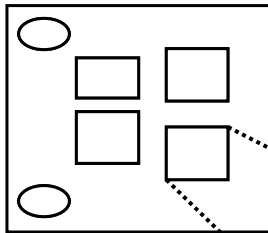
Pilot Test

MCD Phase 6

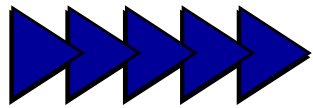
Revision & Release

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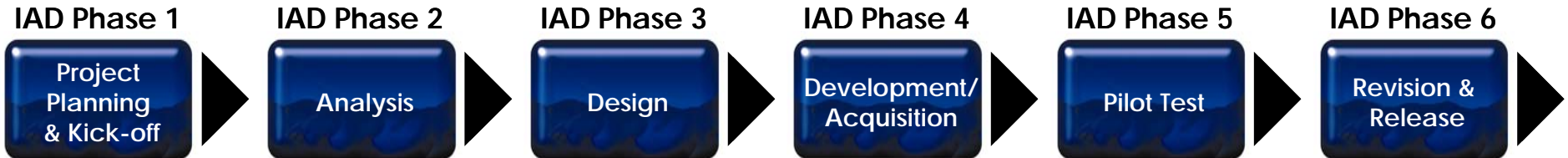
Event Map of Lessons



MCD projects produce performance-based training. MCD, like ADDIE-type ISD approaches, is the product development component of our *lean*-ISD methodology set within PACT.



Instructional Activity Development (IAD)

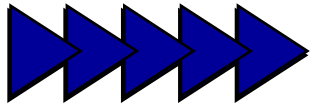


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IAD produces

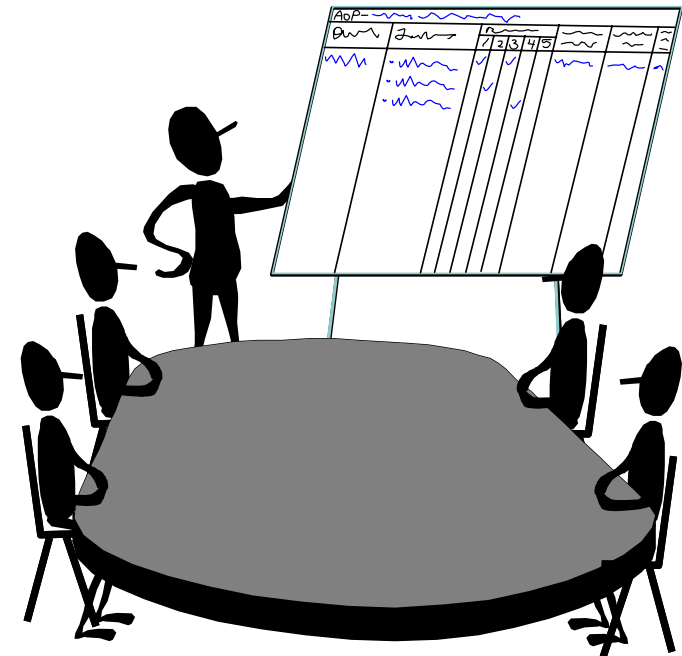
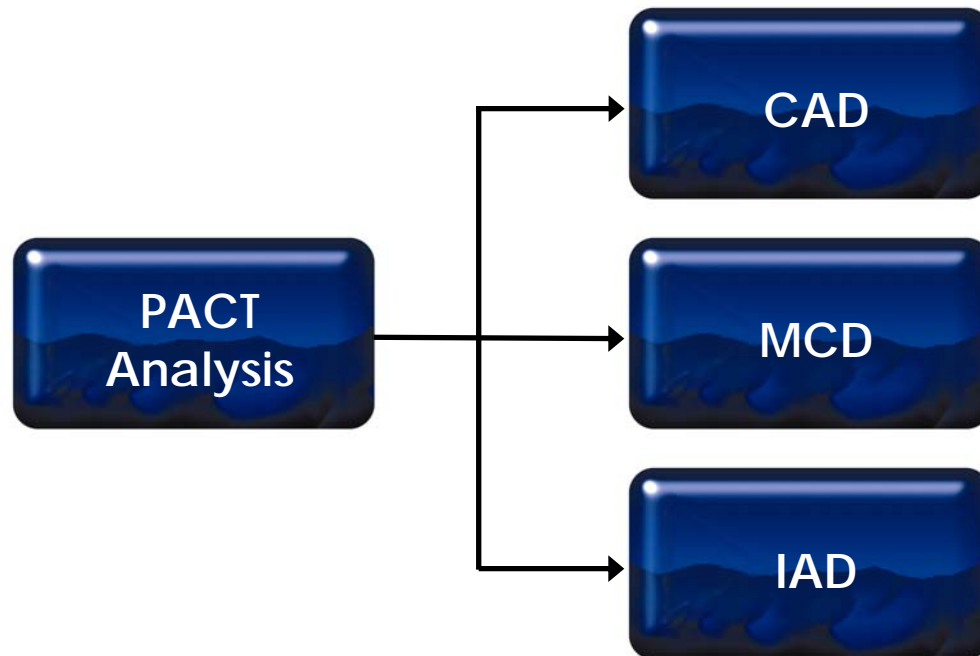
- ▶ Performance/job aids
- ▶ Case studies
- ▶ Performance demonstrations
- ▶ Simulation exercise
- ▶ Performance tests
- ▶ Knowledge tests
- ▶ Etc.

**Sometimes the immediate solution is partial
compared to the long-term solution**

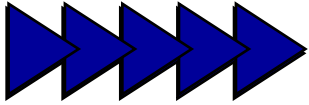


PACT Processes for T&D Analysis

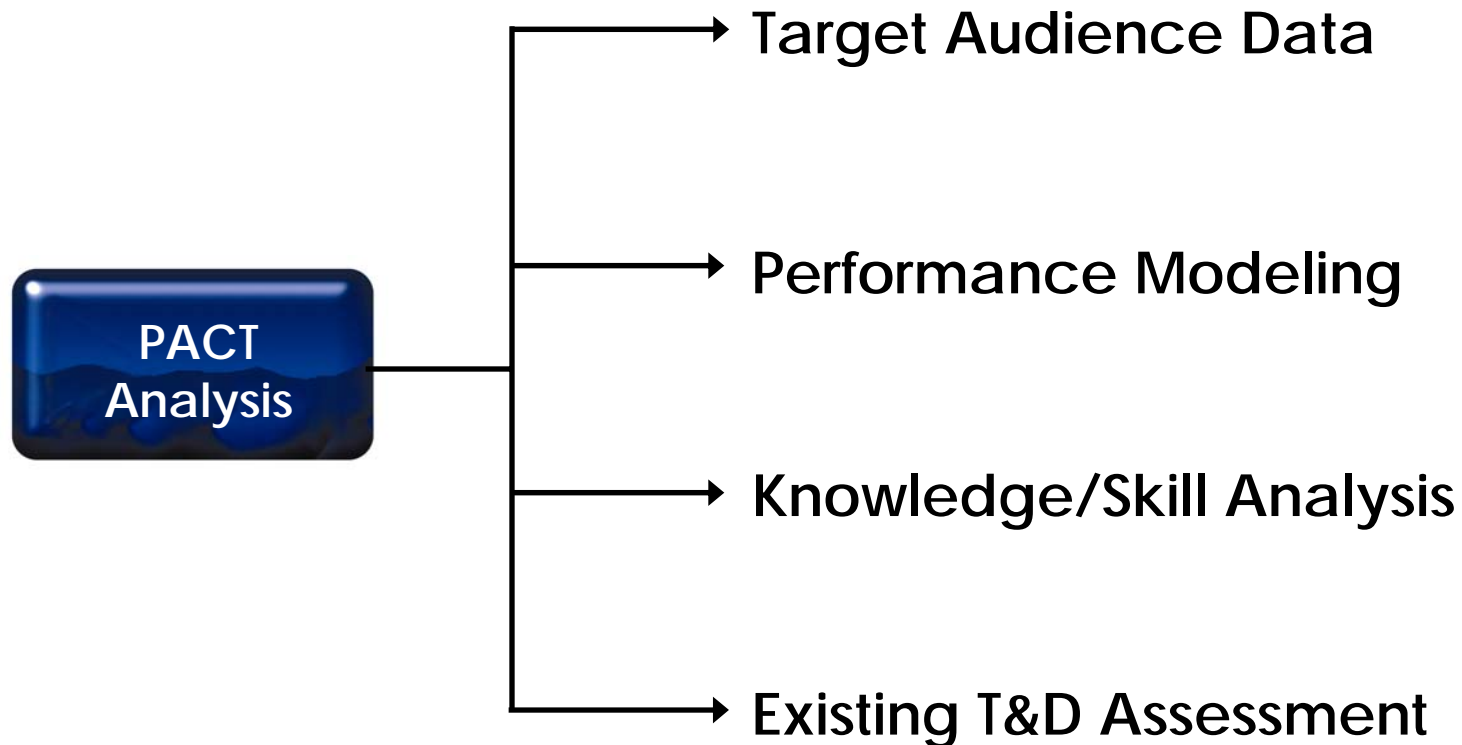
Similar front-end analyses for each PACT Process for T&D

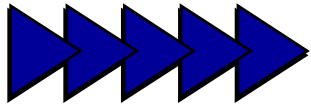


Project Planning & Management



Four types of ISD analyses

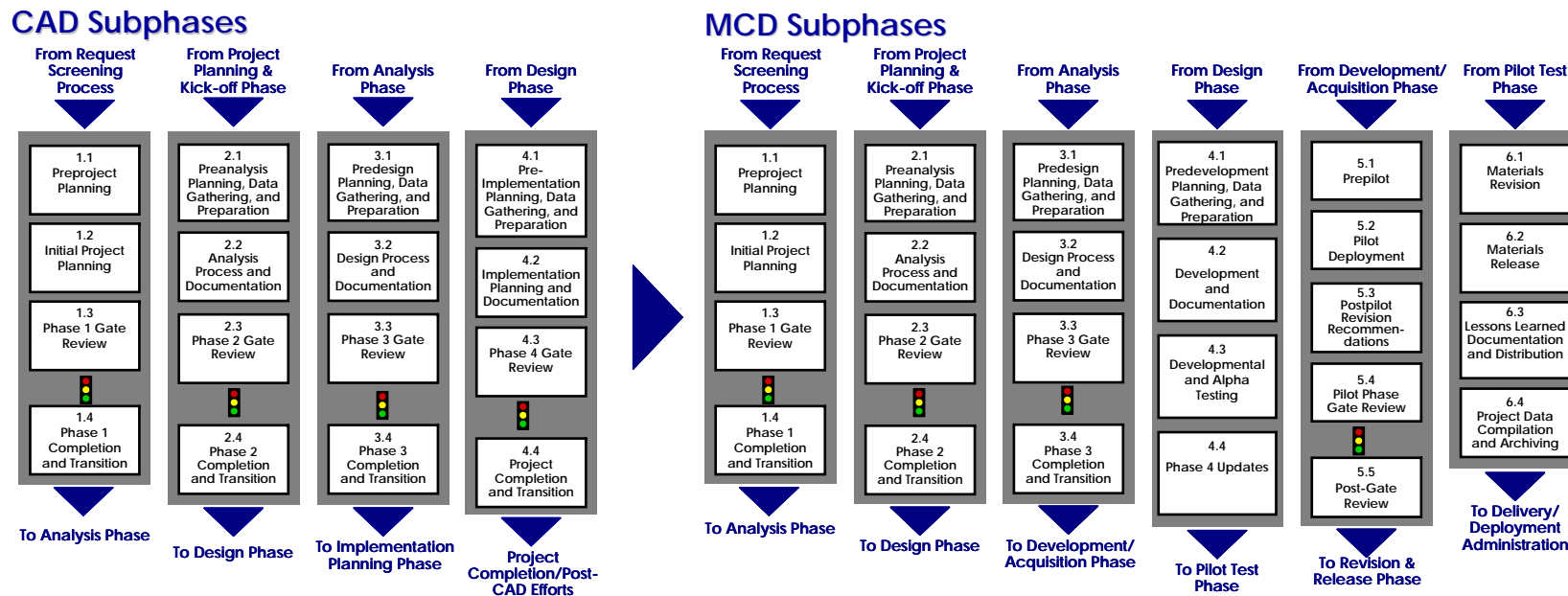


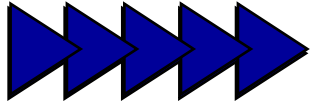


Project Planning & Management

PACT embraces

- Structured processes
- Predefined roles and responsibilities
- Detailed planning
- Continuous communications
- Customer control of content/supplier control of process





Project Planning & Management

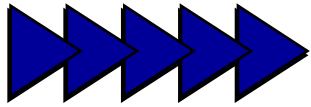
(continued)

Planning and communications tools and templates help with systematic engagement of customers and stakeholders

- The right people doing the right things at the right time

Tools/templates include

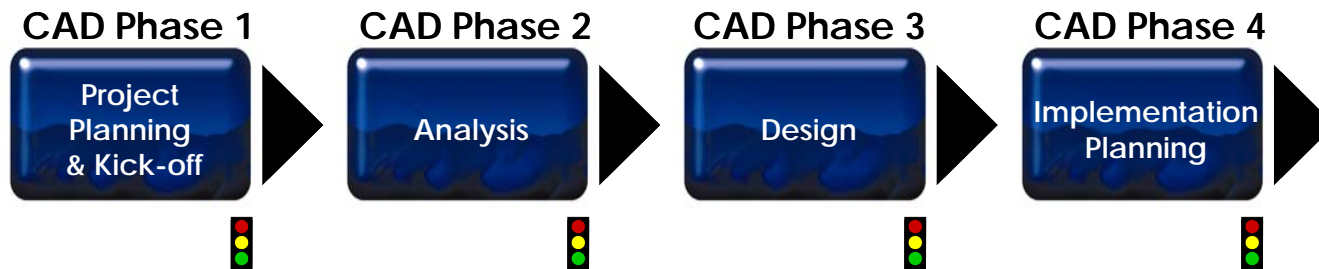
- Interview guides
- Project Plan templates
- Analysis Report templates
- CAD Design Document templates
- MCD Design Document templates
- Pilot Report
- PST gate review meeting presentations



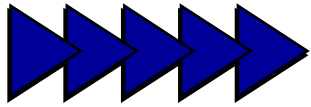
Gated Project Phases

CAD projects have a gated process model

- Gates are key customer/stakeholder review/approval/decision points (🚦)



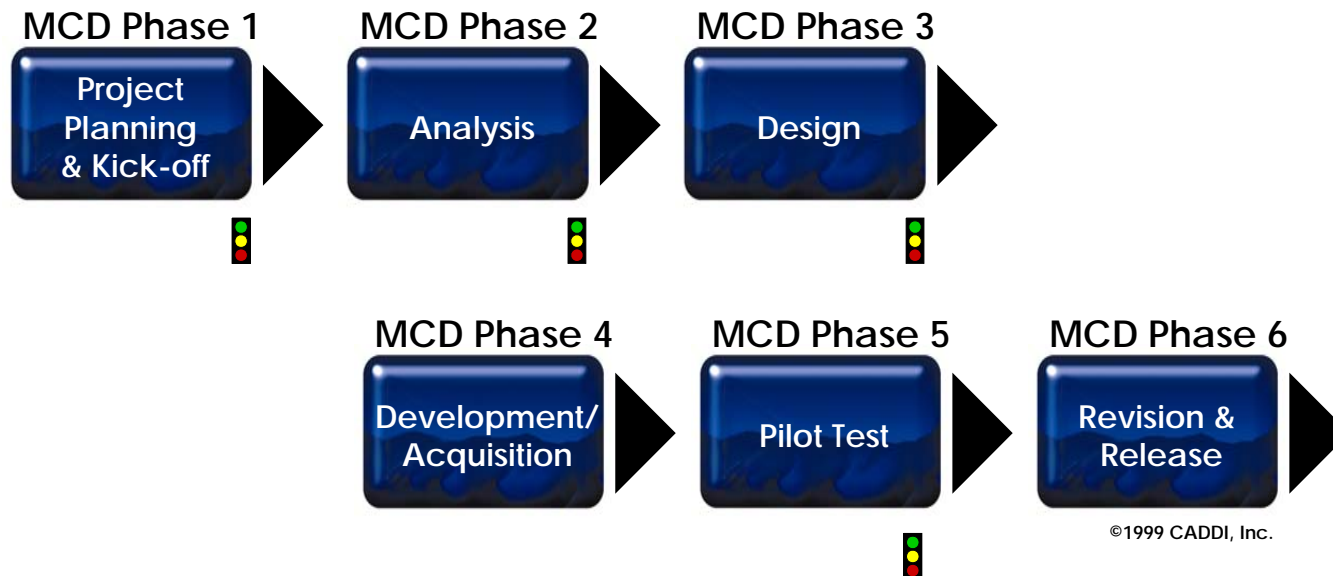
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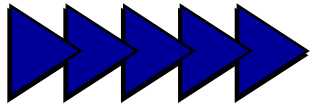


Gated Project Phases *(continued)*

MCD projects have a gated process model

- Gates are key customer/stakeholder review/approval/decision points (🚦)

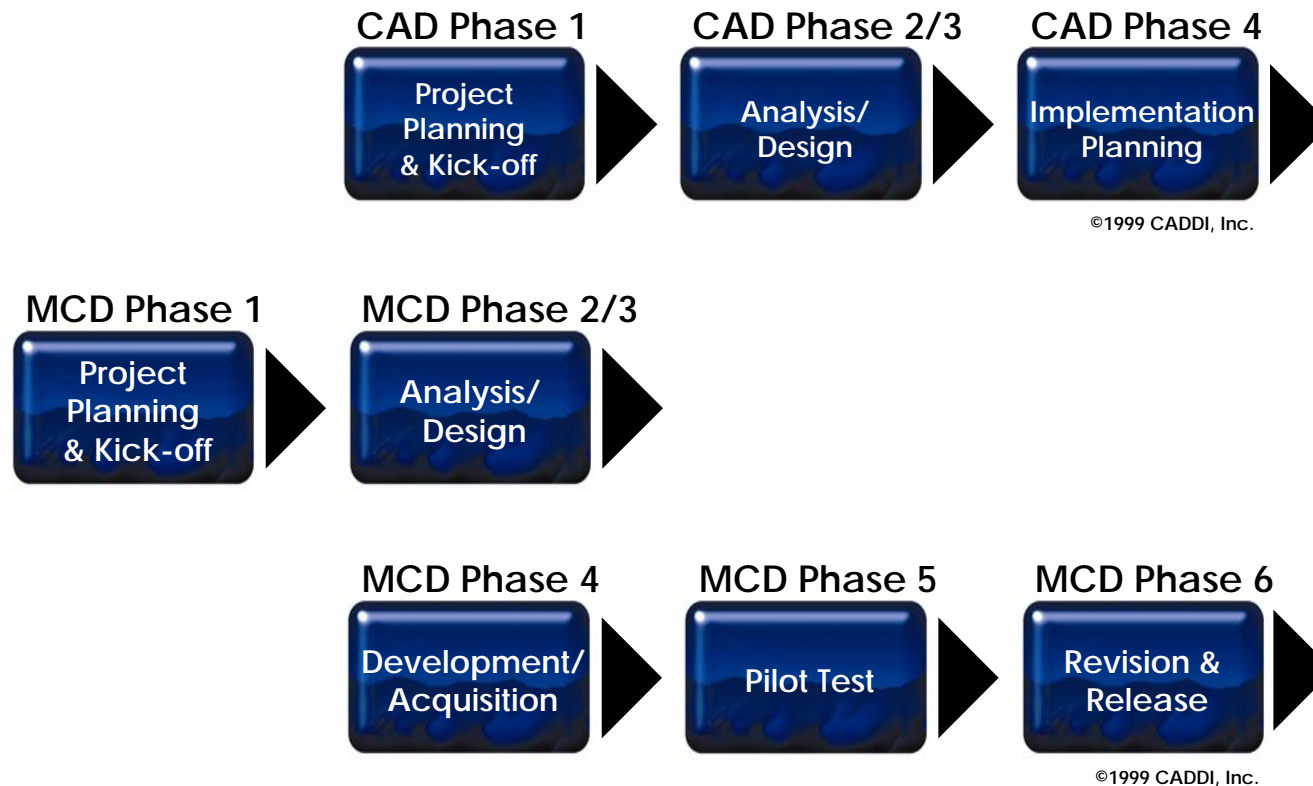


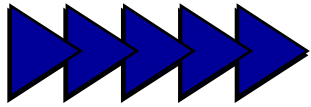


Gated Project Phases *(continued)*

Each PACT Process is the starting point for situational adjustment/adaptation

- Phase combinations are possible



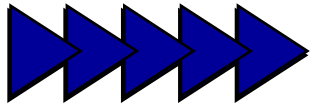


Teams and Roles/Responsibilities

Typical Teams — CAD



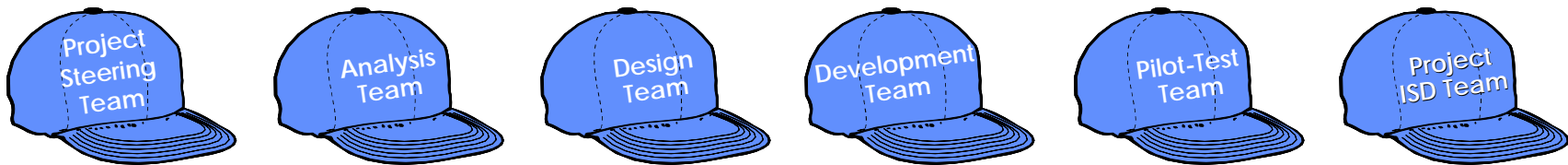
- Project Steering Team: Owns the project
- Analysis/Design Teams: Provide real-world input and critique
- Implementation Planning Team: Prioritizes T&D gaps
- ISD Team: Facilitates the CAD methodology and project



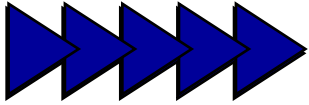
Teams and Roles/Responsibilities

(continued)

Typical Teams — MCD and IAD



- **Development Team:** Provides input to development efforts
- **Pilot-Test Team:** Tests T&D for
 - Completeness, accuracy, and appropriateness
 - Effectiveness/performance impact



Tools and Templates

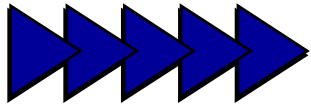
Project Planning & Management

Templates

- Project Plan
- Proposal
- Project Steering Team review presentations
- Invitation and confirmation letters
- Analysis Report
- Design Documents
- Implementation Plans
- Pilot Report

Tools and Go-by's

- Stakeholder/Customer Interview Guide
- Project Plan
- Proposal
- Analysis Report
- Design Documents
- Implementation Plans
- Pilot Report



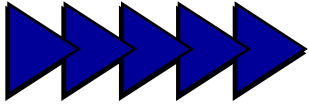
Analysis

Word Processing Templates

- Analysis Team kick-off presentation
- Target Audience Data
- Performance Model
- Knowledge/Skill Matrix
- Existing T&D Assessment
- Analysis Review Team presentations
- Project Steering Team analysis review presentation

Tools and Go-by's

- Analysis Report sections
- Analysis database



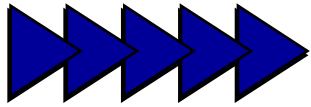
Design

Word Processing Templates

- Design Team kick-off presentation
- Event Definitions
- Event Specs and Maps
- Module Specs and Maps
- Lesson Specs and Maps
- Activity Specs
- Design Review Team presentation
- Project Steering Team design review presentation

Tools and Go-by's

- Design Document sections
- Design database



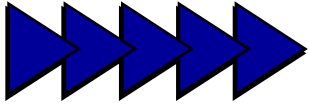
Development

Word Processing Templates

- Lesson media “shells”
- Exercise templates
 - Various
- Evaluation templates
 - End of event
 - End of lesson
 - Debriefing guides

Tools and Go-by's

- Facilitator Guide
- Participant Guide
- Administrator Guide

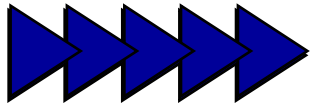


lean-ISD via the PACT Processes for T&D

Business Benefits of PACT Processes

Customer/Stakeholder	Supplier	Learner
<ul style="list-style-type: none">• Project is visible and predictable in terms of<ul style="list-style-type: none">– T&D quality– Investment and returns– Project tasks and schedule• Provides managerial review and control points	<ul style="list-style-type: none">• Puts ISD suppliers in control of instructional integrity within the parameters set by the customer• Templates and tools enable detailed project planning and communications with the customer	<ul style="list-style-type: none">• T&D is performance oriented and will have a positive impact on learner's ability to perform• Modular structure provides flexibility for learner participation

Ensures voice of the customer and voice of the supplier in ISD projects

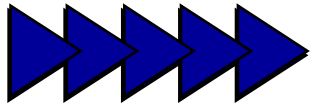


Key Credits and Thanks

- Geary A. Rummler
- Tom Gilbert
- Bill Wiggernhorn
- Ray Svenson

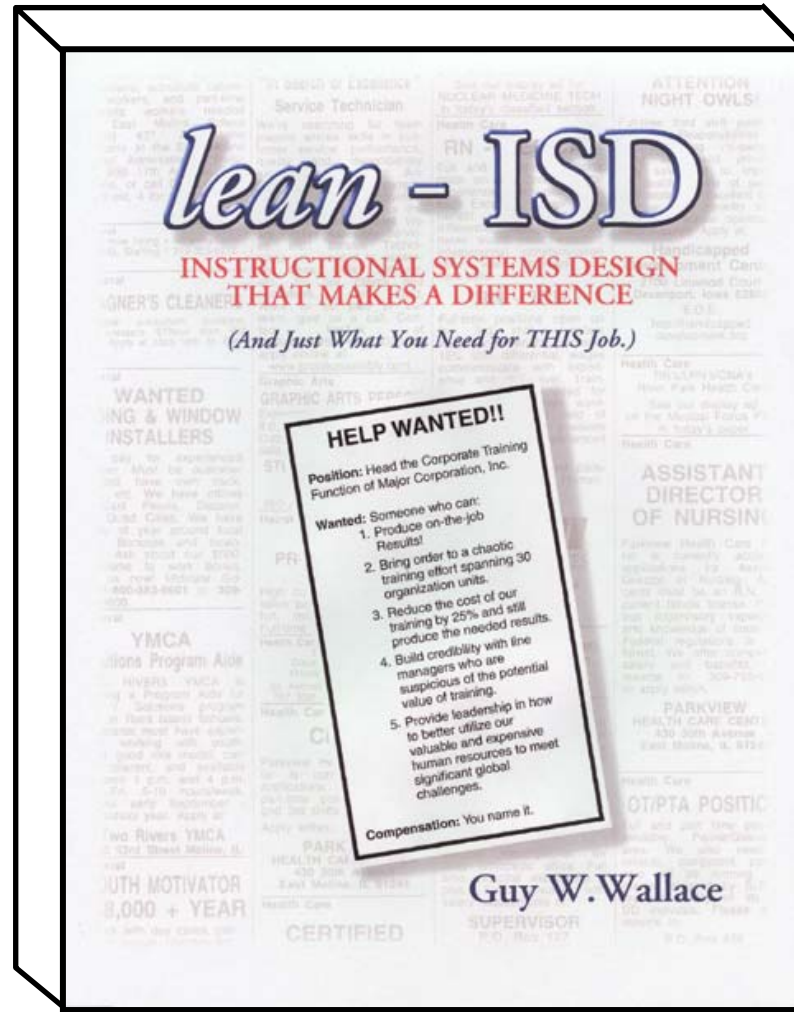
... and to all those who taught me within the context of an ISD project

... and to ISPI for being a key learning forum for me since 1979

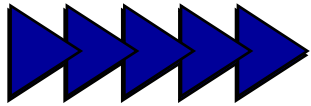


Reference

CADDI's book



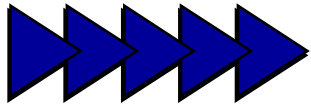
*Book cover design by
Dr. G.A. Rummler*



Quotes from Rummler and Lane

Geary A. Rummler from the **Performance Design Lab** says, "If you want to ground your fantasy of a 'corporate university' with the reality of a sound 'engineering' approach to instructional systems that will provide results, you should learn about the CADDI system. If you are the leader of, or a serious participant in, the design and implementation of a large-scale corporate curriculum, then this book is for you. This system could be the difference between achieving bottom-line results with your training or being just another 'little red school house.' "

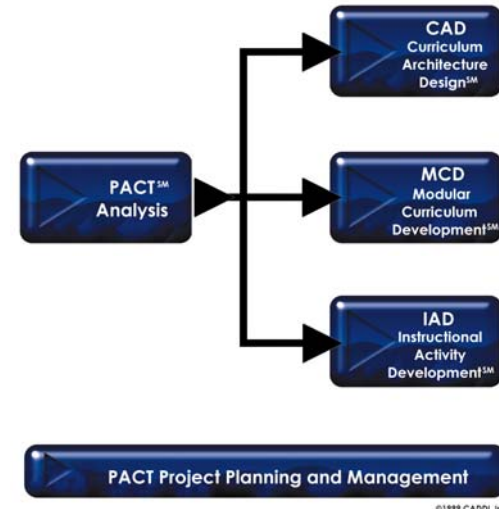
Miki Lane, senior partner at **MVM The Communications Group** says, "*lean*-ISD takes all of the theory, books, courses, and pseudo job aids that are currently on the market about Instructional Systems Design and blows them out of the water. Previous 'systems' approach books showed a lot of big boxes and diagrams that would supposedly help the reader become proficient in the design process. Here is a book that actually includes all of the information that fell through the cracks of other ISD training materials and shows you the way to actually get from one step to another. Guy adds all of the caveats and tips he has learned in more than 20 years of ISD practice and sprinkles them as job aids and stories throughout the book. However, the most critical part of the book for me was that Guy included the project and people management elements of ISD in the book. Too often, ISD models and materials forget that we are working with real people in getting the work done. This book helps explain and illustrate best practices in ensuring success in ISD projects."

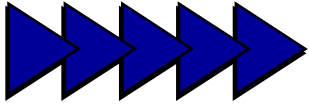


lean-ISD Summary

The PACT Processes for T&D include

- A blend of the best of both *craft* and *mass* production approaches, applied to ISD
 - Common process
 - Gated process models
 - Use of teams
 - Use of tools and templates
- Multilevel design hierarchy used to ensure platform, modular, integrated ISD





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Thank You!