



Lean -ISD

Concept of “lean” from the book:

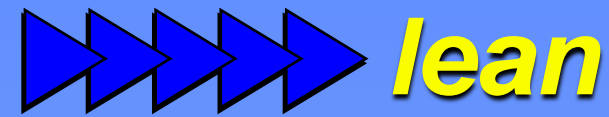
The Machine That Changed the World

by:

James P. Womack

Daniel T. Jones

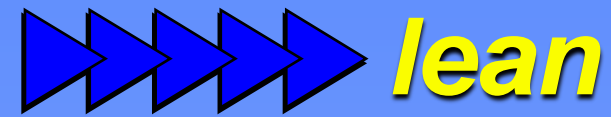
Daniel Roos



Best of both **mass** and **craft** production

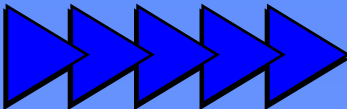
Principles and attributes of **lean**

- 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



ISD

Common Benefits

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

Common Complaints

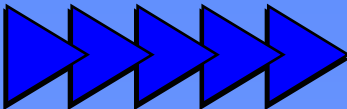
- Takes too long
- Impossible to forecast and manage
- Variable results—depends on the designer
- Each designer uses his/her own process, formats, defaults, etc.

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

lean-ISD

lean applied to ISD would have beneficial impacts on

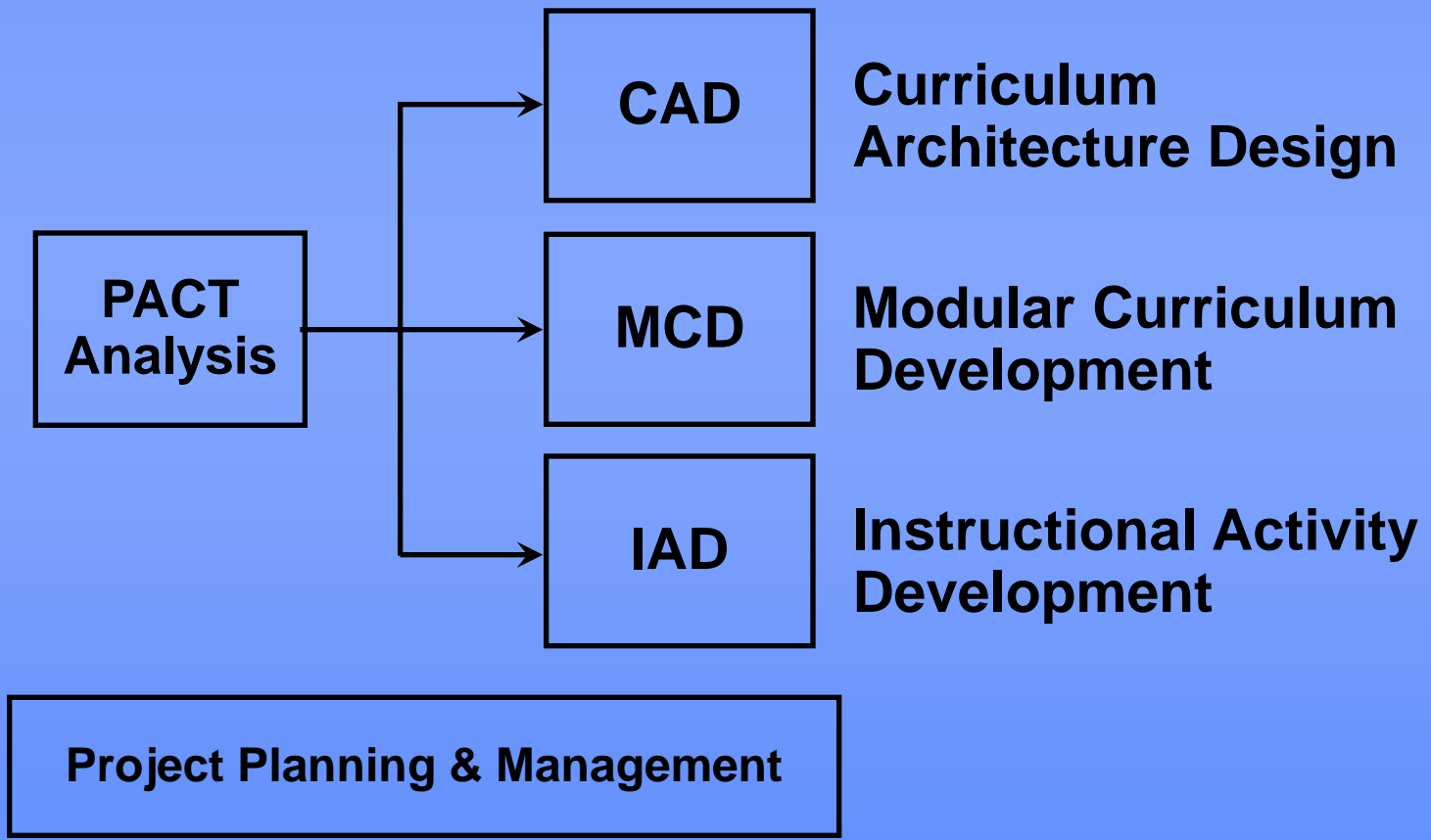
- Quality
- Cycle time
- Cost

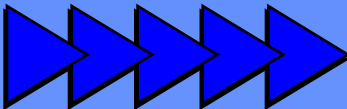


lean-ISD

via the PACTSM Processes for T&D

CADDI's PACT Processes for T&D

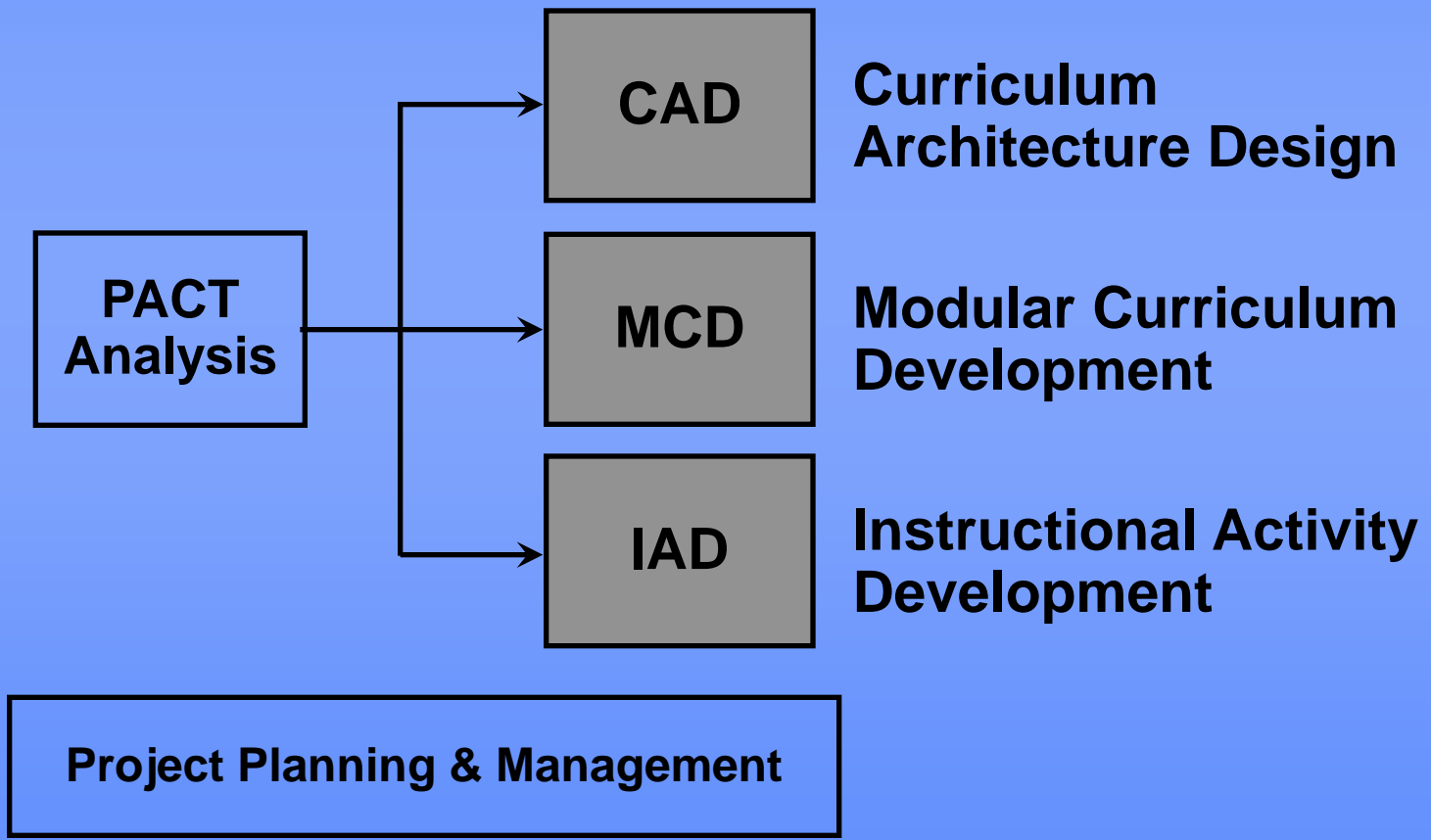


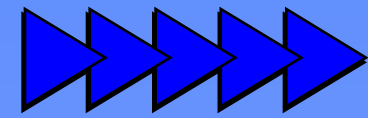


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via the PACTSM Processes for T&D

Three levels of ISD





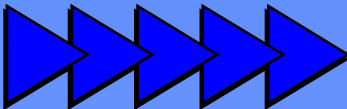
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via the PACTSM Processes for T&D

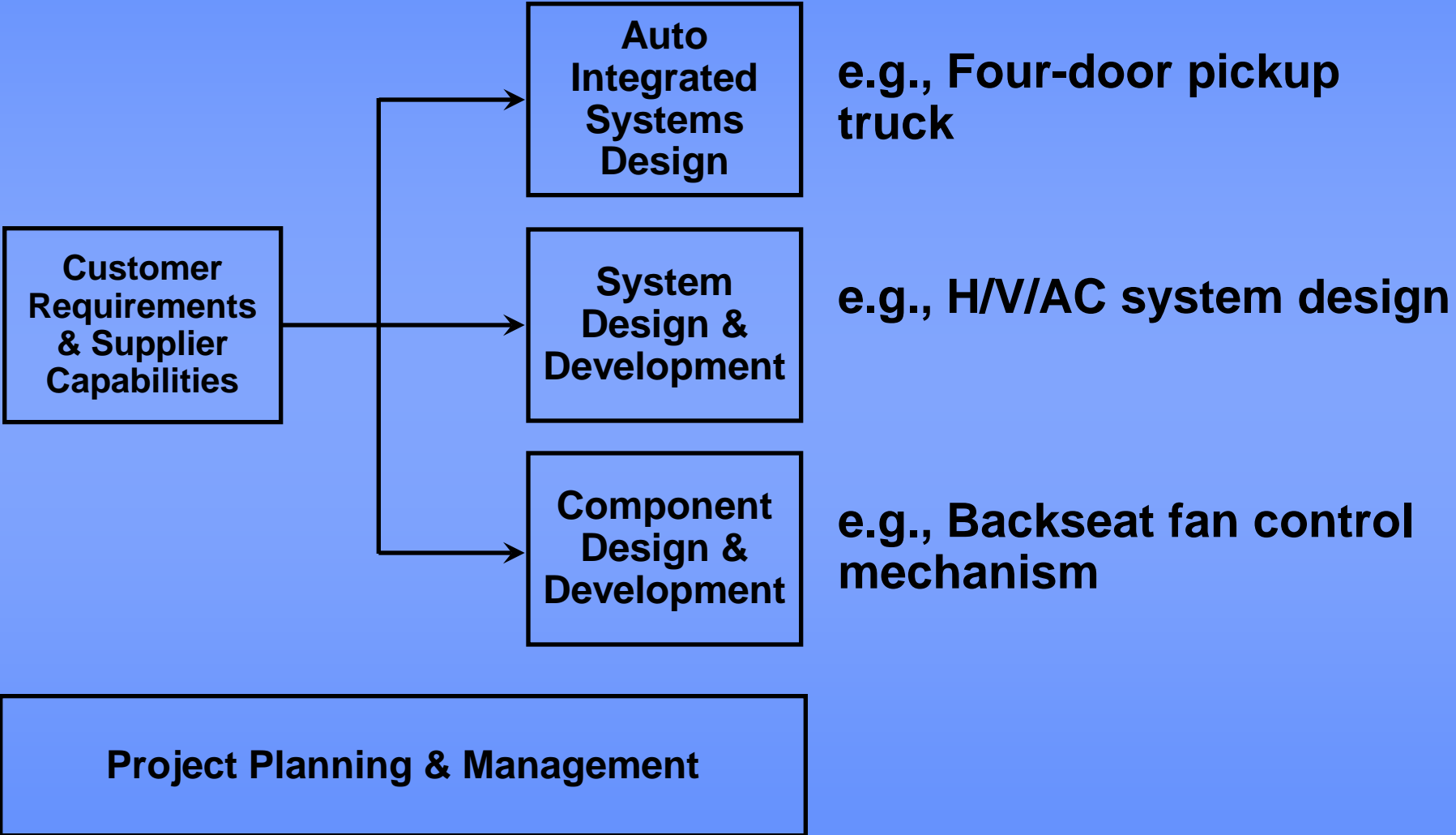
Akin to systems engineering of products

- **Car development**
- **Telecommunications product development**
- **Software development**

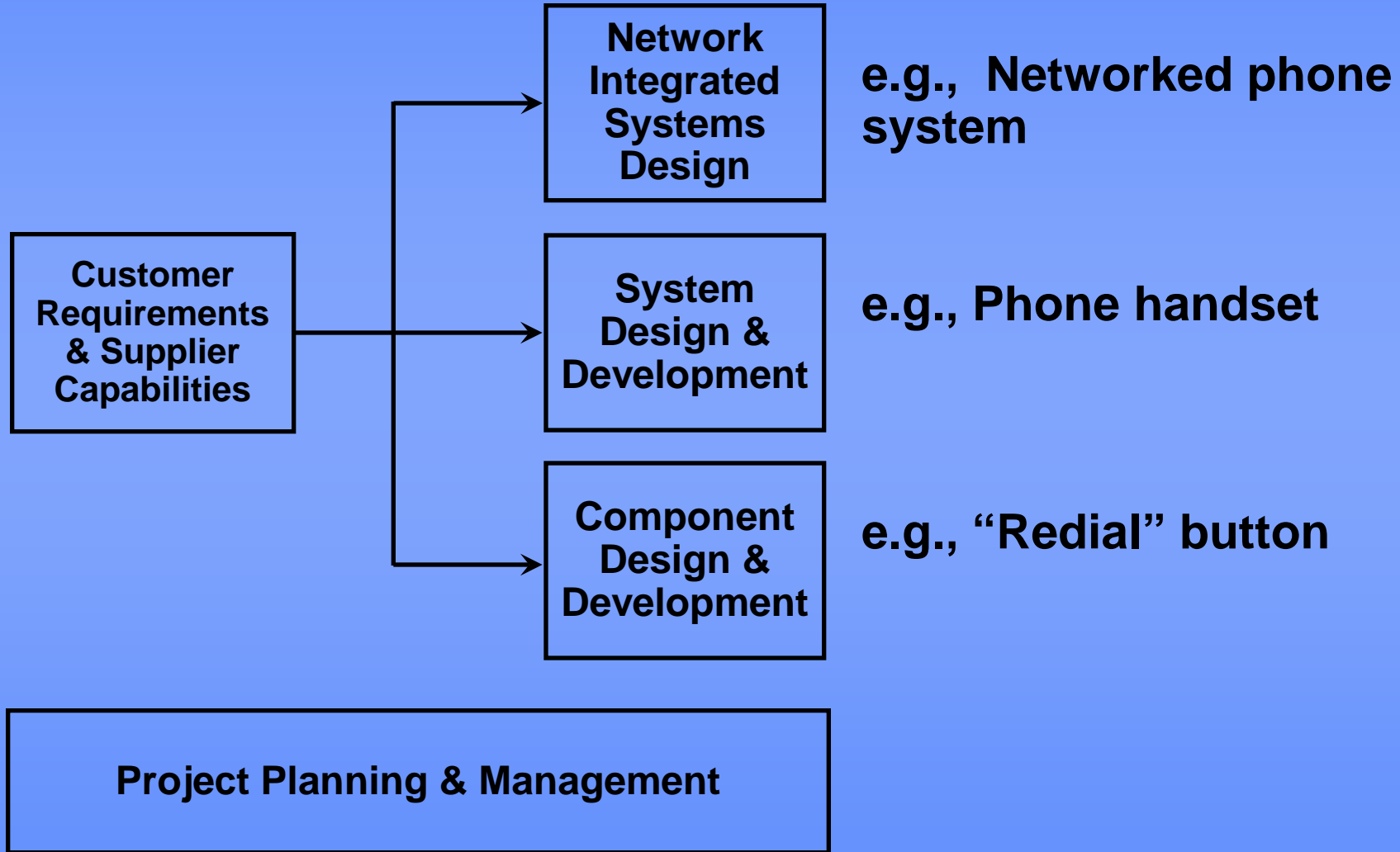
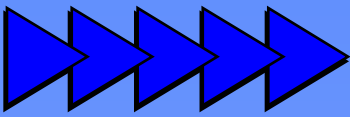
Let's look at some examples

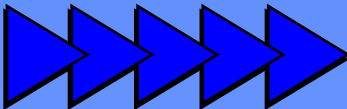


lean-Car Development

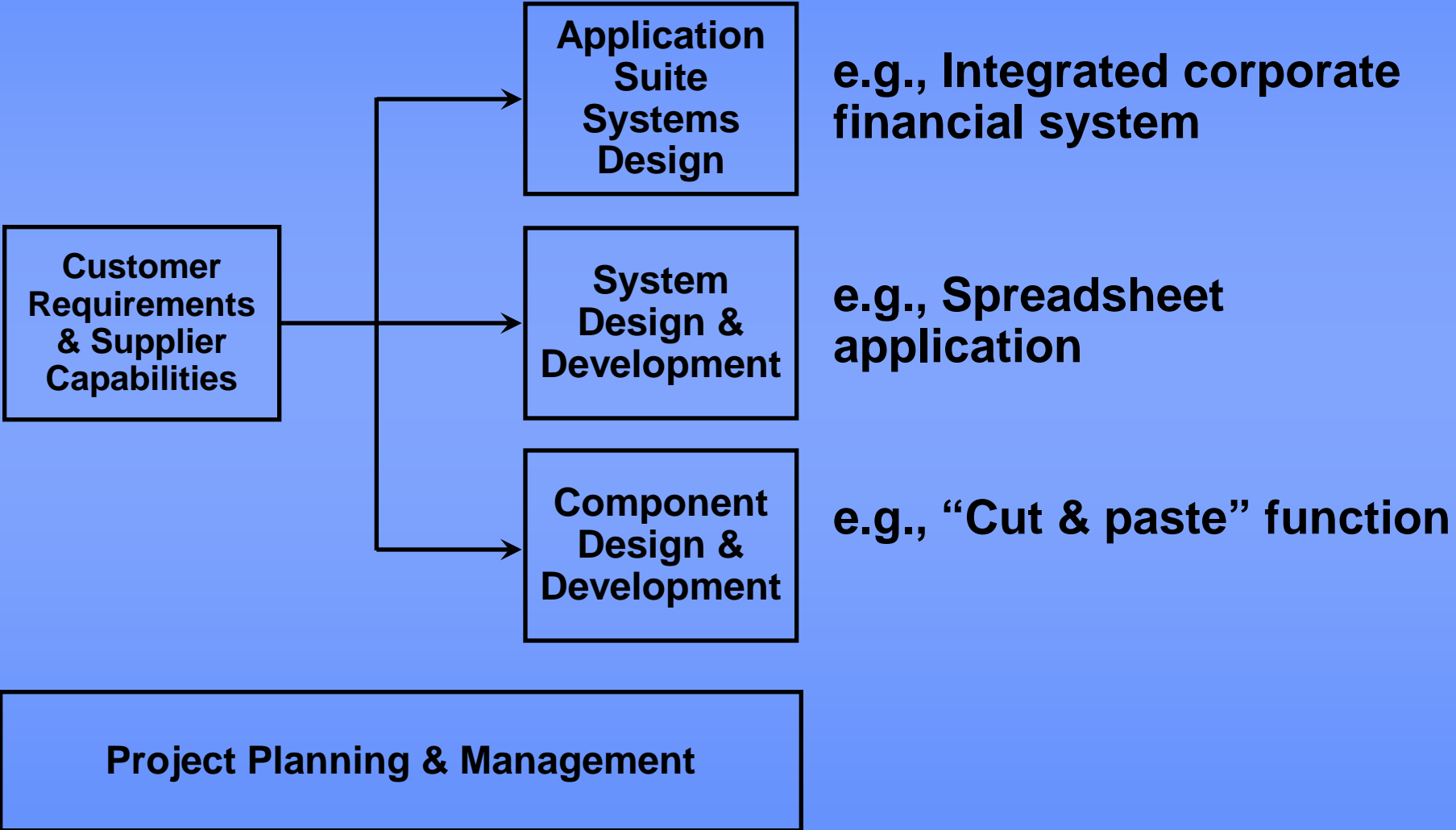


lean-Telecommunications Product Development





lean-Software Development

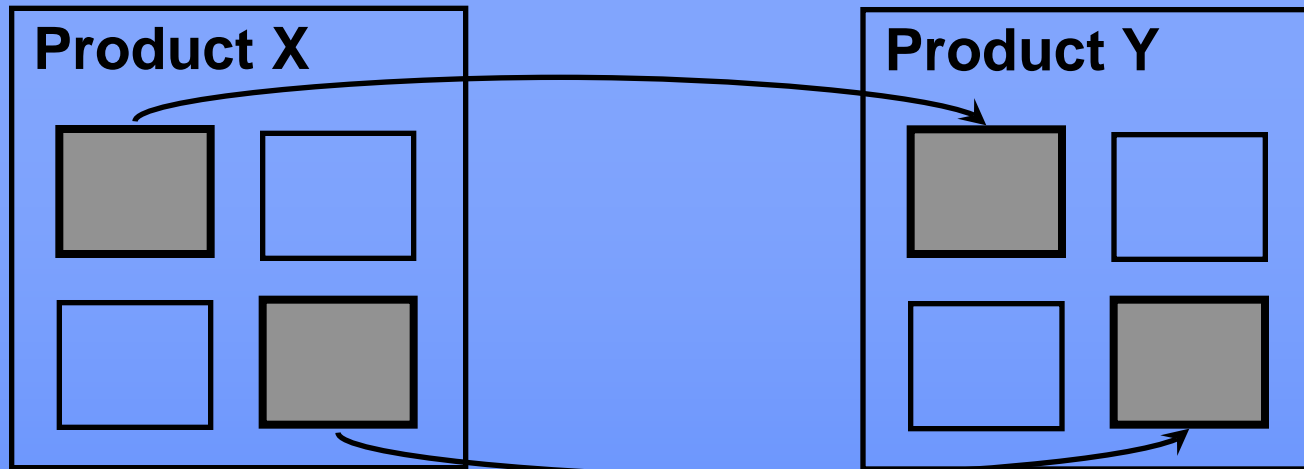


CAD - Curriculum Architecture Design

Macrolevel ISD analysis and design

Systems analysis and systems engineering design of the T&D product line

- Modular design product line

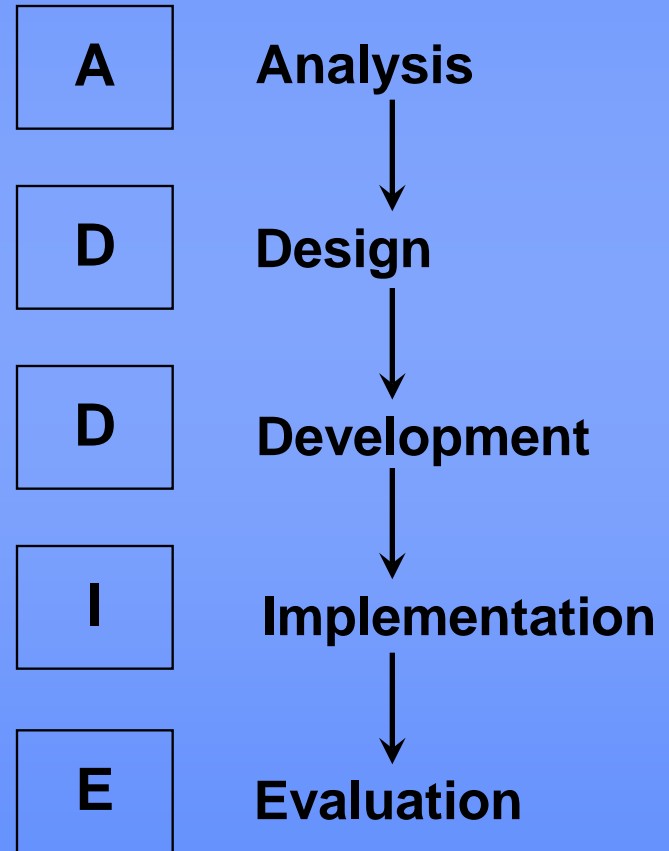


CAD assists in a reuse strategy for modules/chunks of T&D content

MCD - Modular Curriculum Development

Midlevel analysis and design

Akin to the ADDIE Model, also known as the “big block diagram,” from the work of Robert Gagne, Leslie Briggs, Robert Moran, and Robert Branson



IAD - Instructional Activity Development

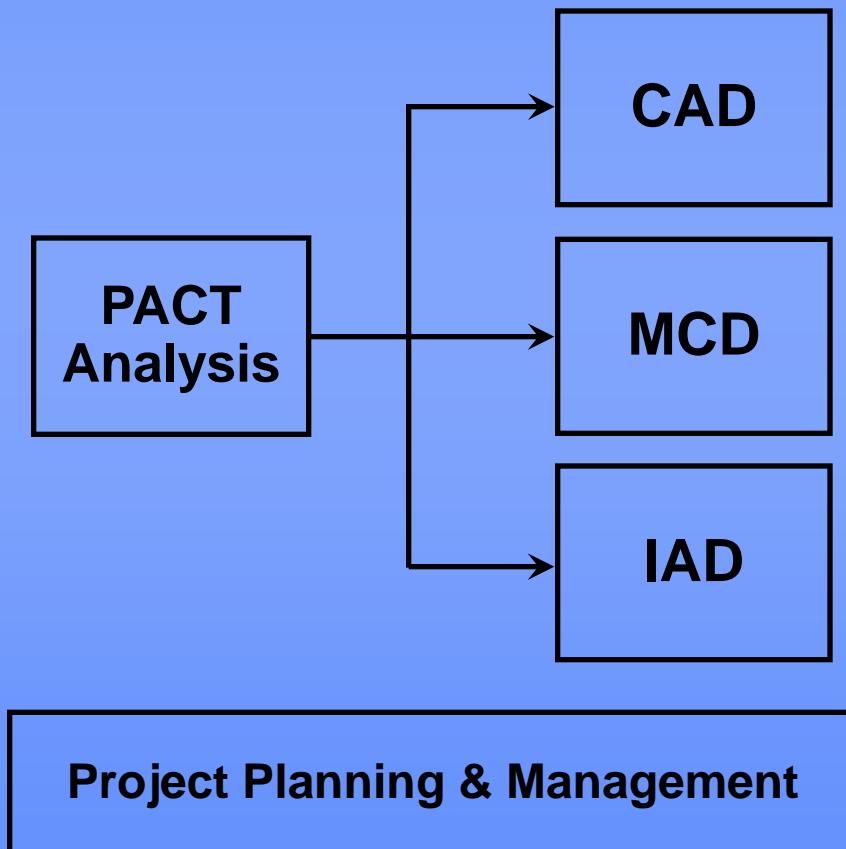
Microlevel analysis and design

Development of typical instructional elements or activities, such as

- **Simulation exercises**
- **Performance tests**
- **Structured, on-the-job training**
- **Demonstrations**
- **Case studies**
- **Etc.**

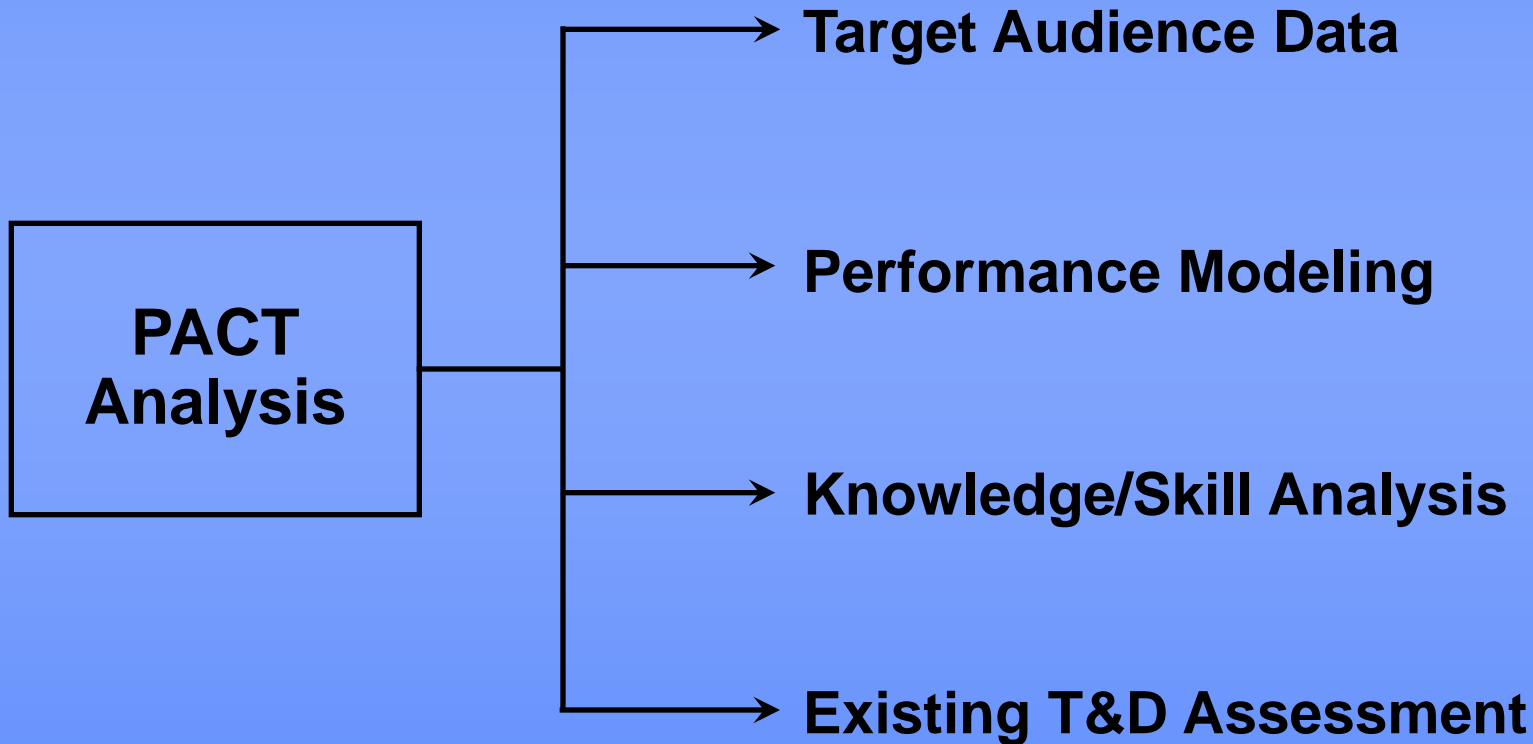
PACT Processes for T&D Analysis

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



Analysis

Four types of ISD Analysis



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

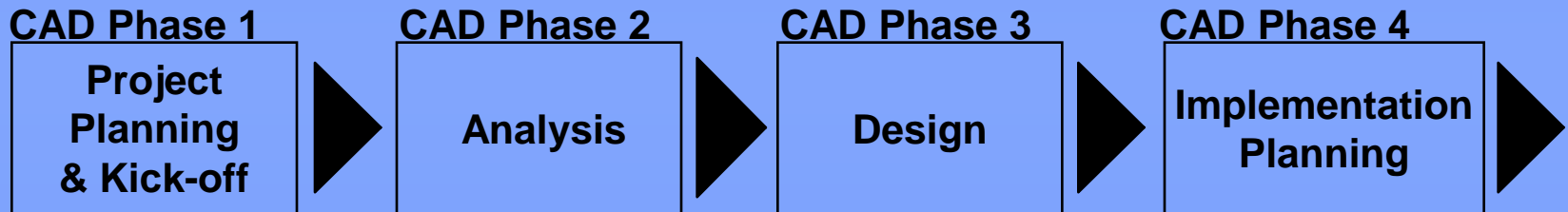
Planning and communications tools and templates

- **Systematic engagement of customers and stakeholders**
 - The right people doing the right things at the right time
- **Interview guides**
- **Project Plan templates**
 - CAD
 - MCD
 - IAD
- **PST gate review meeting presentations**

Gated Project Phases

Each PACT Process has a gated process model

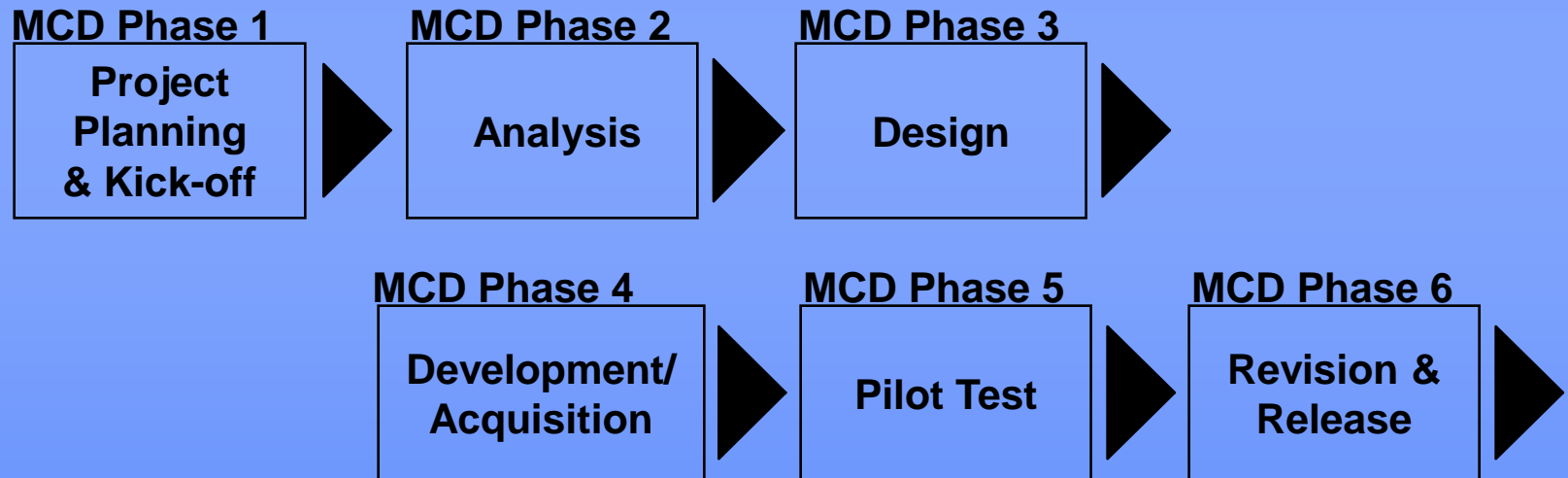
- Gates are key customer/stakeholder review/approval/decision points



Gated Project Phases

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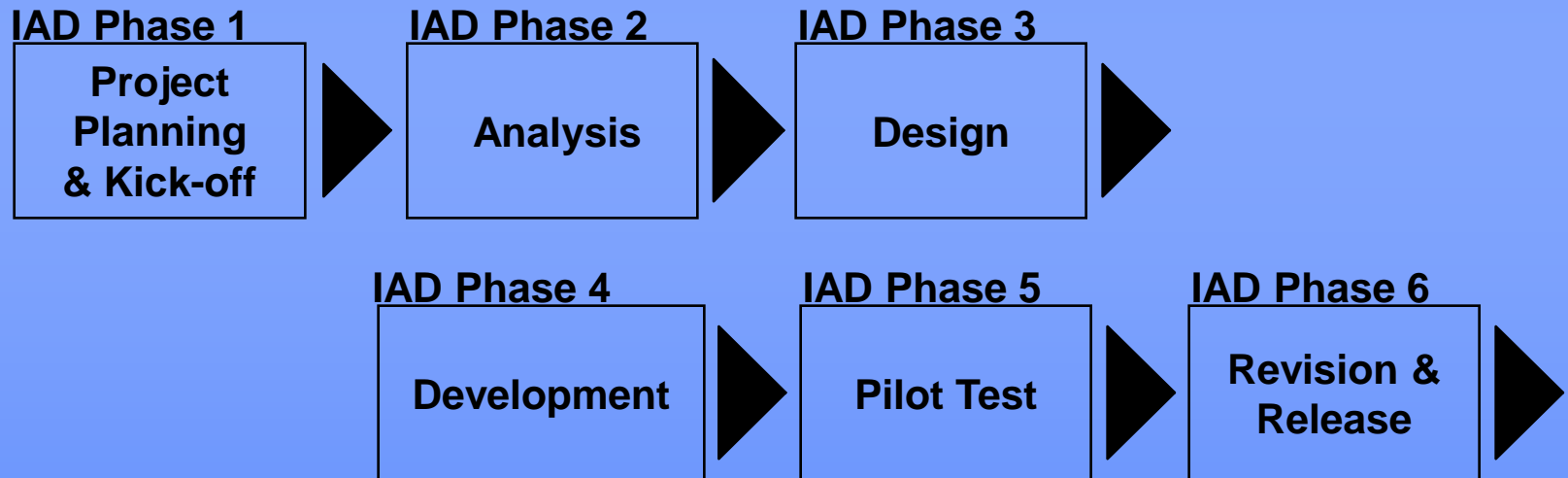
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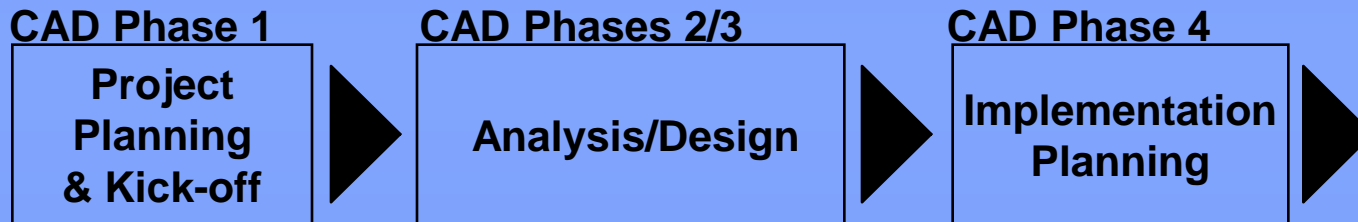
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Gated Project Phases

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

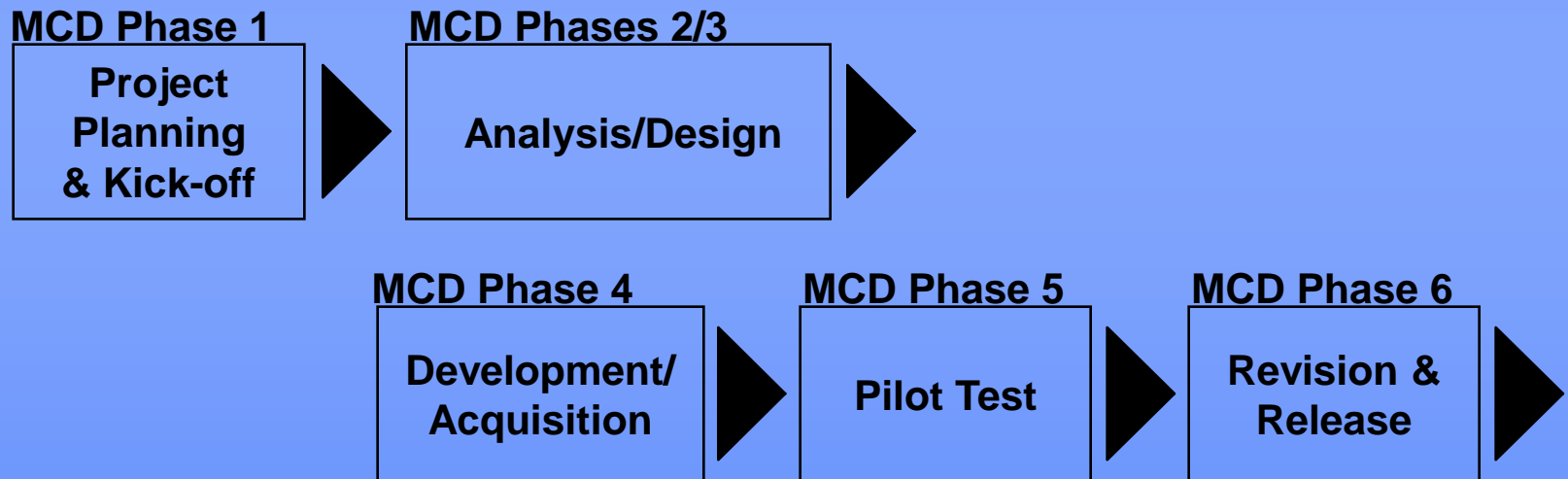
- Phase combinations are possible



Gated Project Phases

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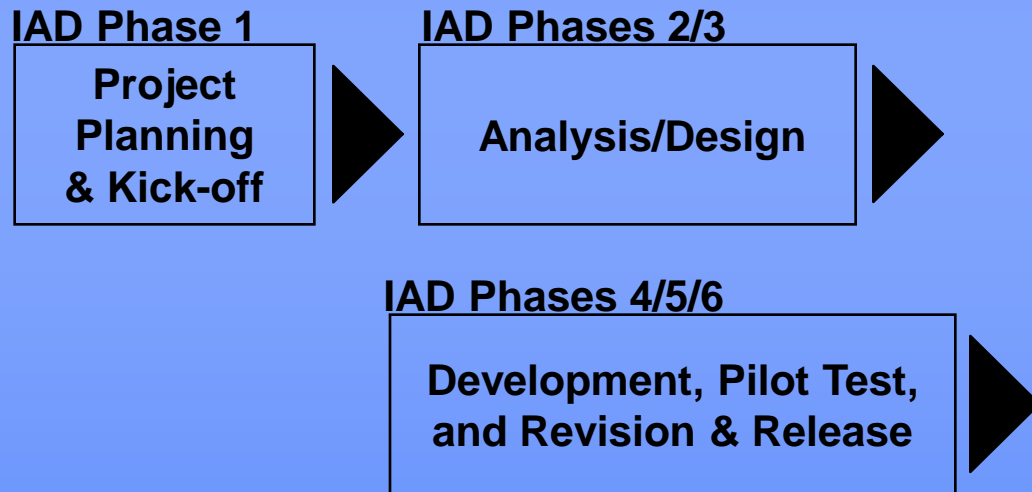
- Phase combinations are possible



Gated Project Phases

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

- Phase combinations are possible



Teams & Roles/Responsibilities

Typical Teams — CAD



Project Steering Team



Analysis Team



Design Team



Implementation Planning Team

Teams & Roles/Responsibilities

Typical Teams — MCD



Project Steering Team



Analysis Team



Design Team



Development Team



Pilot Test Team

Teams & Roles/Responsibilities

Typical Teams — IAD



Project Steering Team



Analysis Team



Design Team



Development Team



Pilot Test Team

Tools and Templates

Project Planning & Management

Word Processing Templates

- **Project Plan**
- **Proposal**
- **Project Steering Team Review Presentations**
- **Invitation and Confirmation Letters**

Tools and Go-by's

- **Stakeholder/Customer Interview Guide**
- **Project Plan**
- **Proposal**

Tools and Templates

Analysis

Word Processing Templates

- Target Audience Data
- Performance Model
- Knowledge/Skill Matrix
- Existing T&D Assessment
- Analysis Team Kick-off Presentation
- Project Steering Team Review Presentation

Tools and Go-by's

- Analysis Report
- Analysis Database

Tools and Templates

Design

Word Processing Templates

- Event Specs and Maps
- Module Specs and Maps
- Lesson Specs and Maps
- Activity Specs
- Project Steering Team Review Presentation
- Design Team Kick-off Presentation

Tools and Go-by's

- Design Document
- Design Database

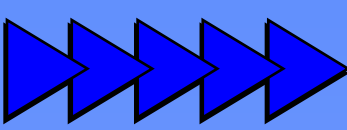
Tools and Templates

Development

Word Processing Templates

Tools and Go-by's

Business Benefits



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

lean-ISD Summary

- 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

Standard, but flexible processes and methodologies for ISD