How to Train an Enterprise of Systems Engineers

WHIRLPOOL CORPORATION

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OUR SCALE AND REACH CREATE GROWTH OPPORTUNITIES

$21B Annual sales

70 Manufacturing and R&D centers

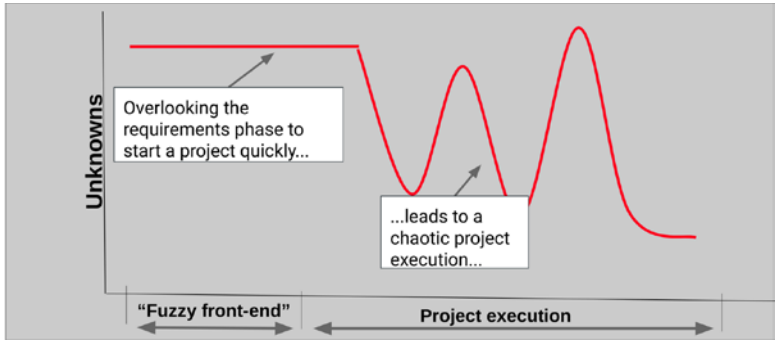
92K Employees worldwide

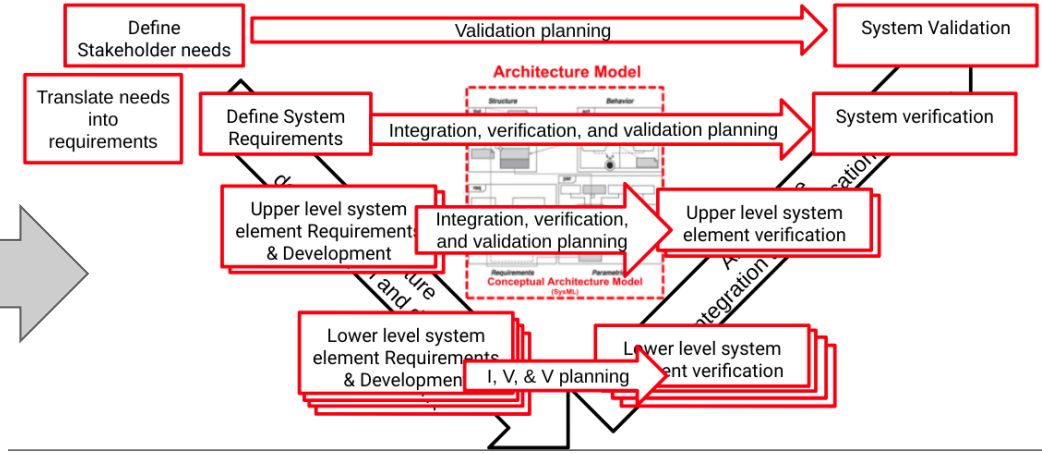
“Systems Engineering training within your organization can be **effective** given the right **tailoring**, **education**, **practice**, and **follow-up support**”

TRAINING AN ENTERPRISE OF SYSTEMS ENGINEERS

- How to start
- Training context
- Training overview

WHERE WE ARE --> WHERE WE WANT TO BE





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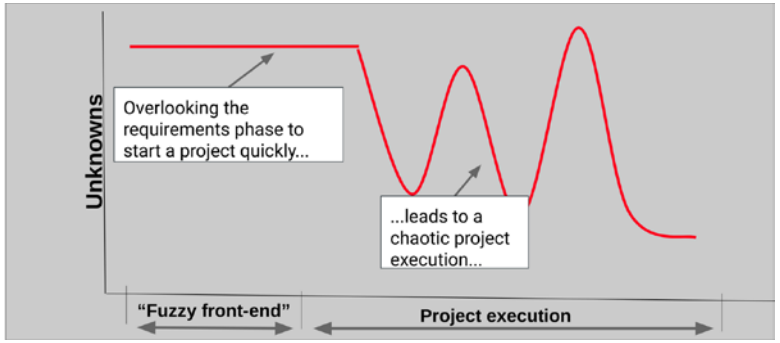
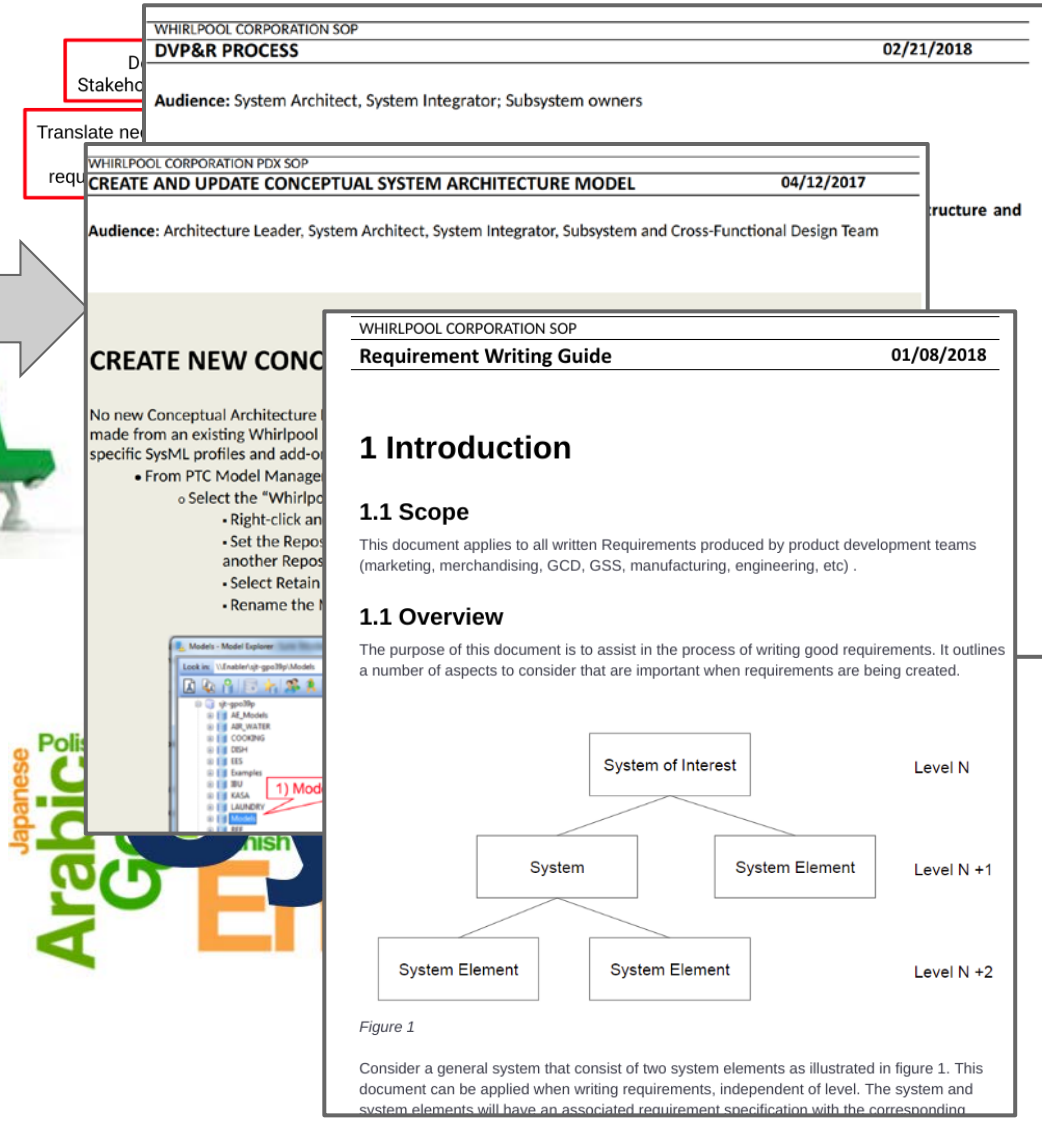




WHIRLPOOL CORPORATION SOP
DVP&R PROCESS 02/21/2018

Audience: System Architect, System Integrator; Subsystem owners

WHIRLPOOL CORPORATION PDX SOP
CREATE AND UPDATE CONCEPTUAL SYSTEM ARCHITECTURE MODEL 04/12/2017

Audience: Architecture Leader, System Architect, System Integrator, Subsystem and Cross-Functional Design Team

WHIRLPOOL CORPORATION SOP
Requirement Writing Guide 01/08/2018

1 Introduction

1.1 Scope

This document applies to all written Requirements produced by product development teams (marketing, merchandising, GCD, GSS, manufacturing, engineering, etc) .

1.1 Overview

The purpose of this document is to assist in the process of writing good requirements. It outlines a number of aspects to consider that are important when requirements are being created.

Figure 1

Consider a general system that consist of two system elements as illustrated in figure 1. This document can be applied when writing requirements, independent of level. The system and system elements will have an associated requirement specification with the corresponding

HOW TO START?

WE ASKED: WHAT SHOULD BE OUR OVERALL STRATEGY?

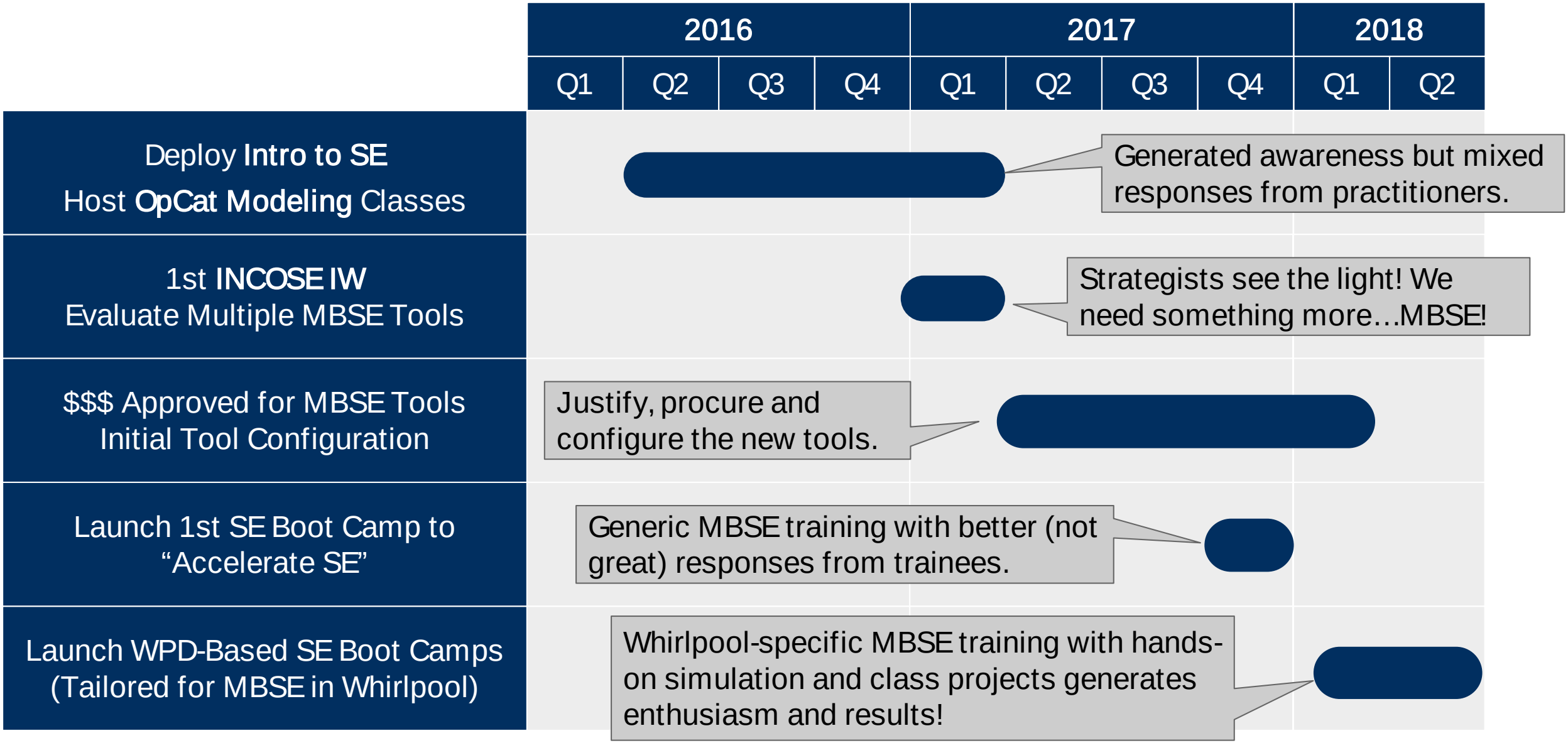
Existing Constraints

Cross-Industry Organizations

Company Benchmarking

Universities

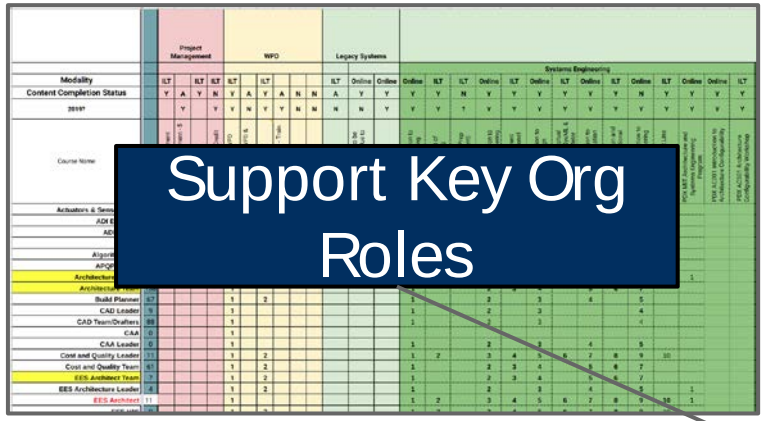
HOW DID WE GET STARTED AND TRACTION?



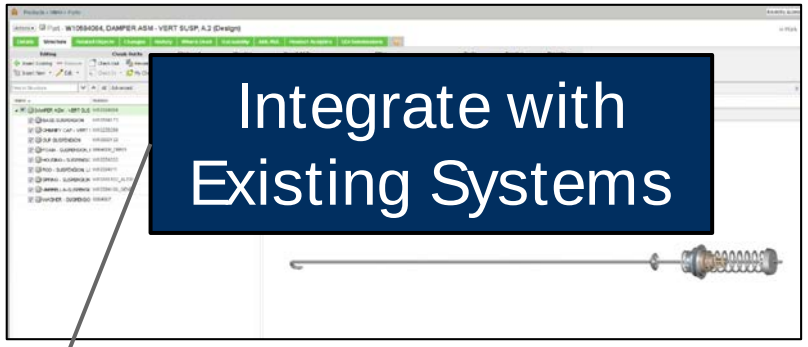
TRAINING CONTEXT

TRAINING INPUTS & INTERFACES

Whirlpool CORPORATION

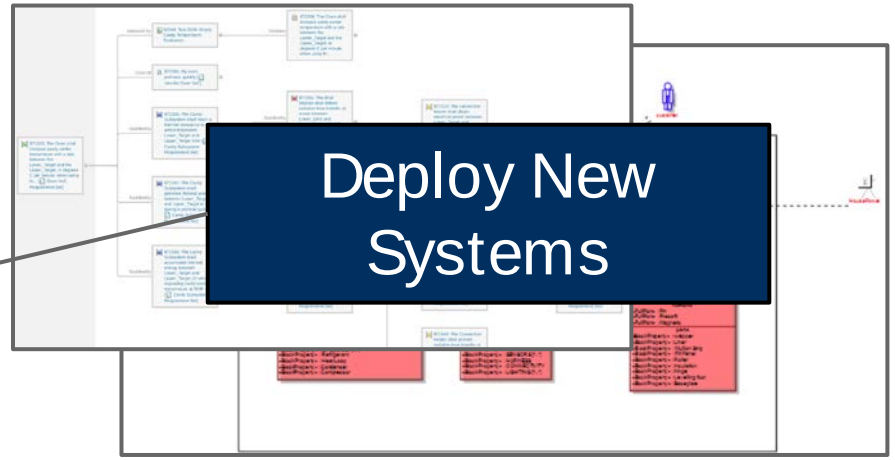


Support Key Org Roles

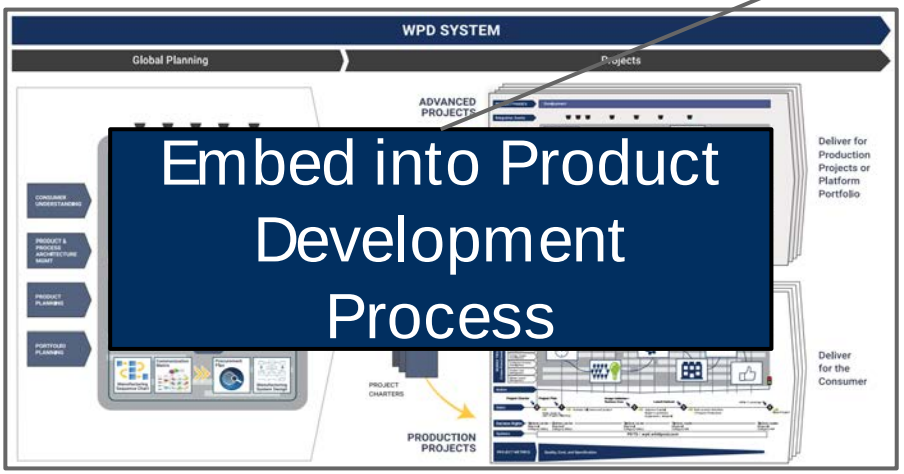


Integrate with Existing Systems

SE Training content



Deploy New Systems



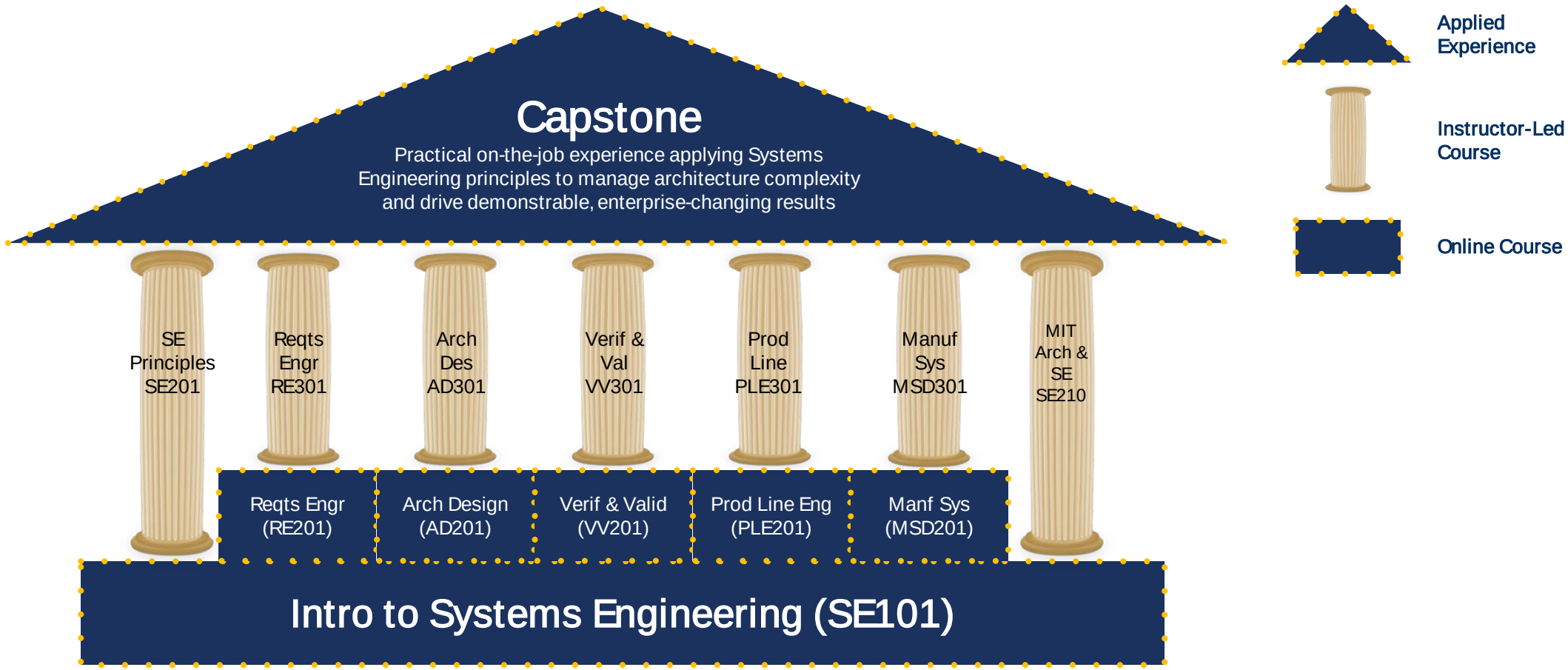
Embed into Product Development Process

Provide Hands-On Training

Improve Metrics

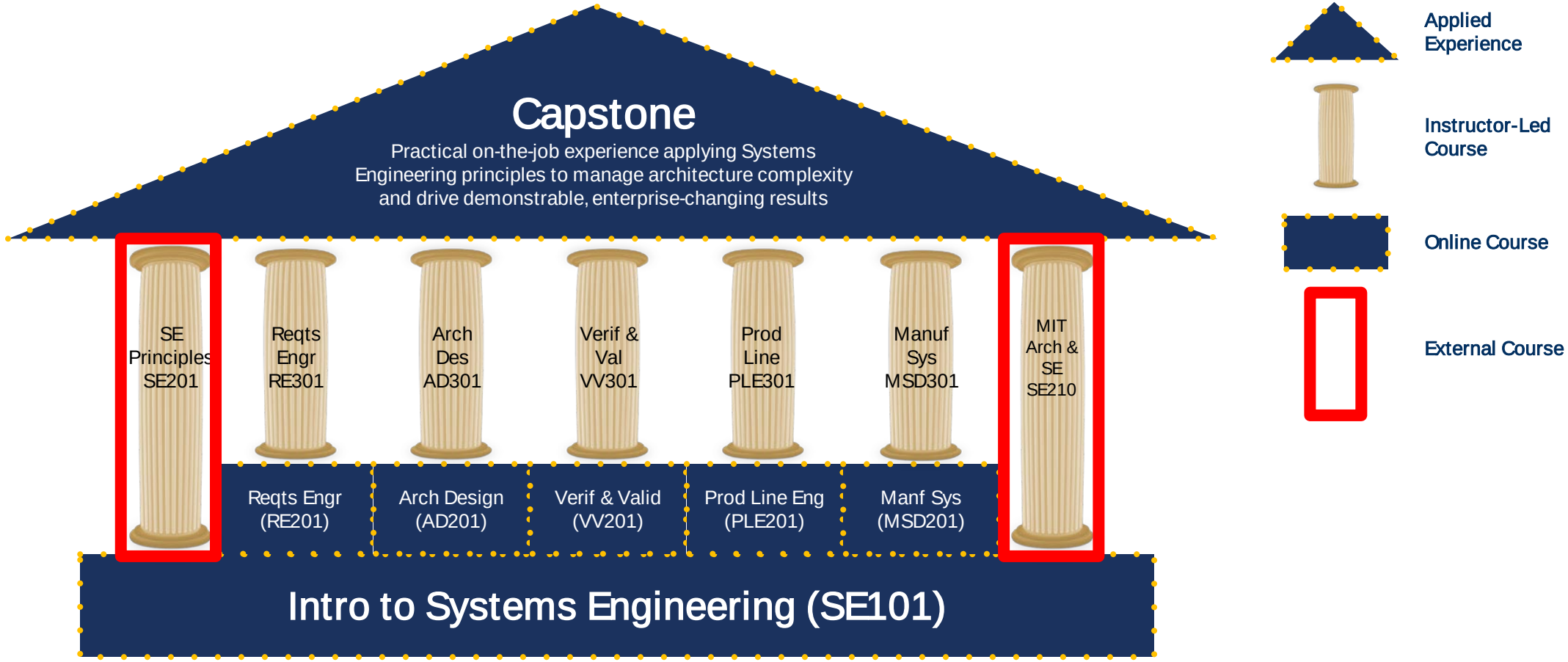
TRAINING OVERVIEW

TRAINING IS TAILORED TO OUR ORGANIZATION…



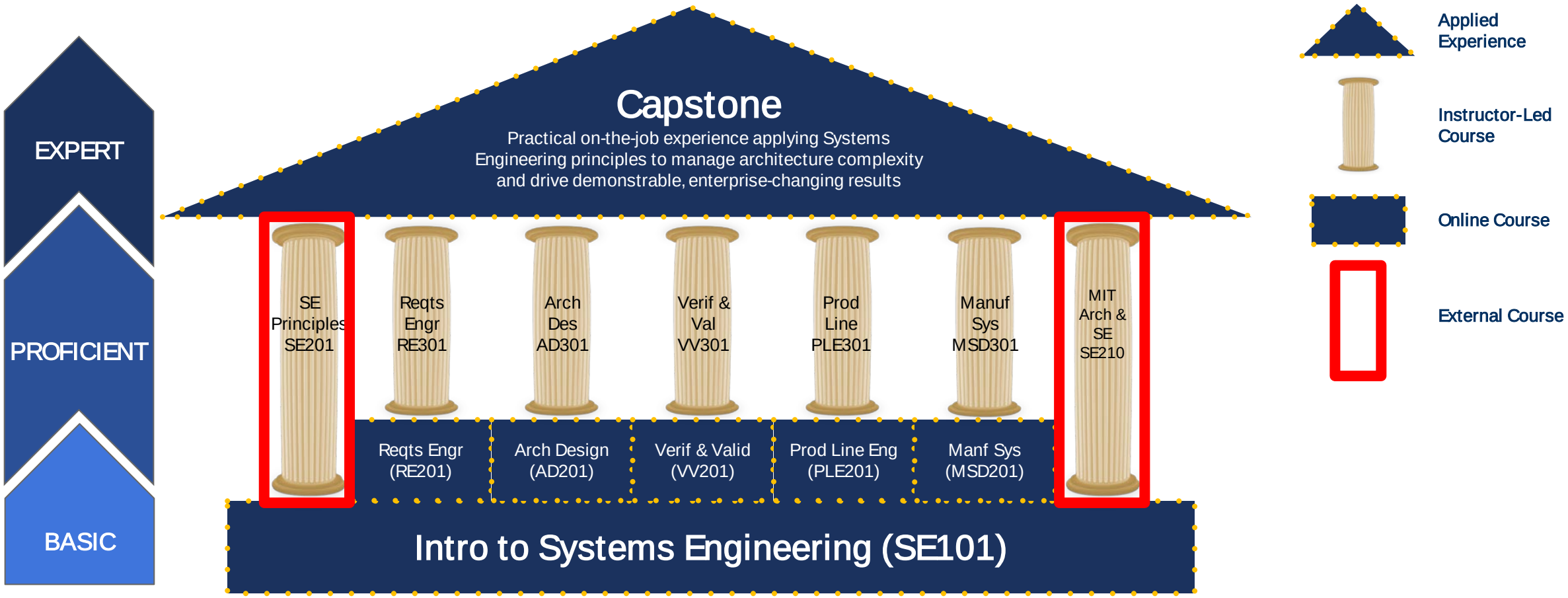
CURRICULUM IS A MIX OF ONLINE AND INSTRUCTOR-LED COURSES

…TO SUPPORT OUR UNIQUE NEEDS …



EXTERNAL TRAINING BRINGS AN OUTSIDE PERSPECTIVE AND ADDS CREDIBILITY

…AND BUILD CAPABILITIES

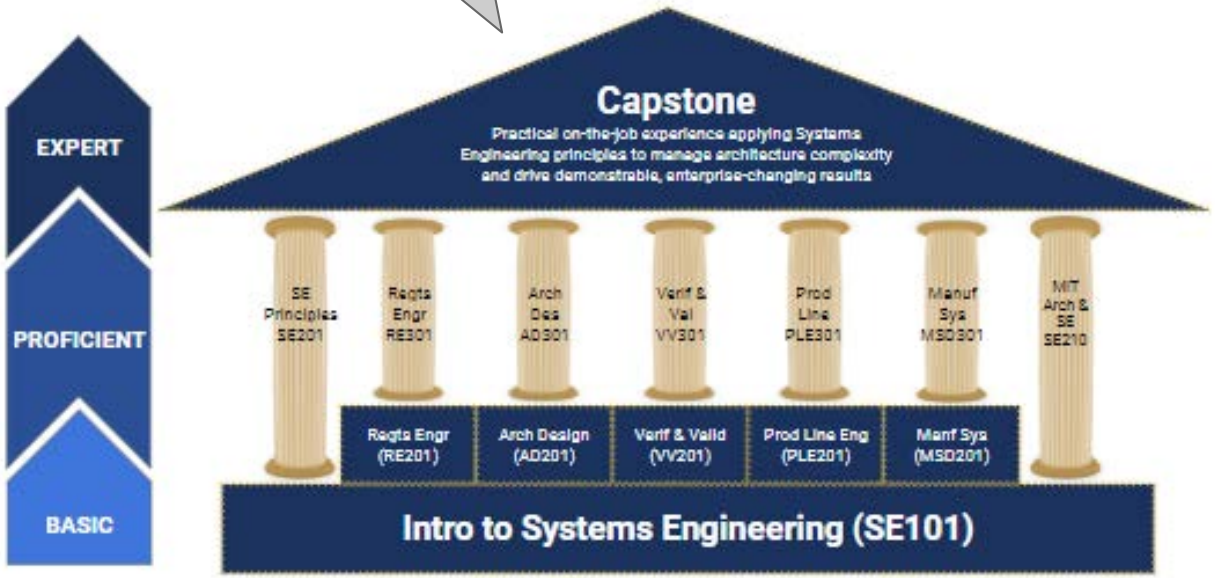


TIERED STRUCTURE ENABLES MODULAR APPROACH THAT SUPPORTS MANY ROLES

EXPERT ROLES ARE MORE THAN TRAINING

Demonstrated success applying the methods and using the tools

Supported by certification status (CSEP or ESEP level) and recognition in industry



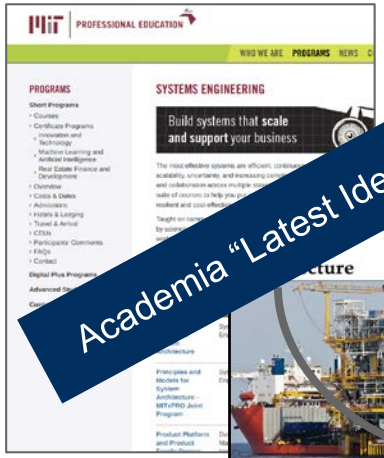
+

9 CSEPs
+ 5 in process

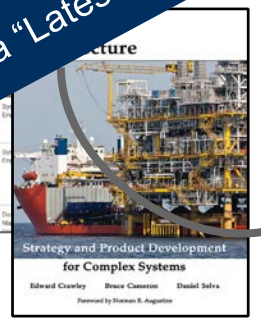
SO WHAT DID WE DO?

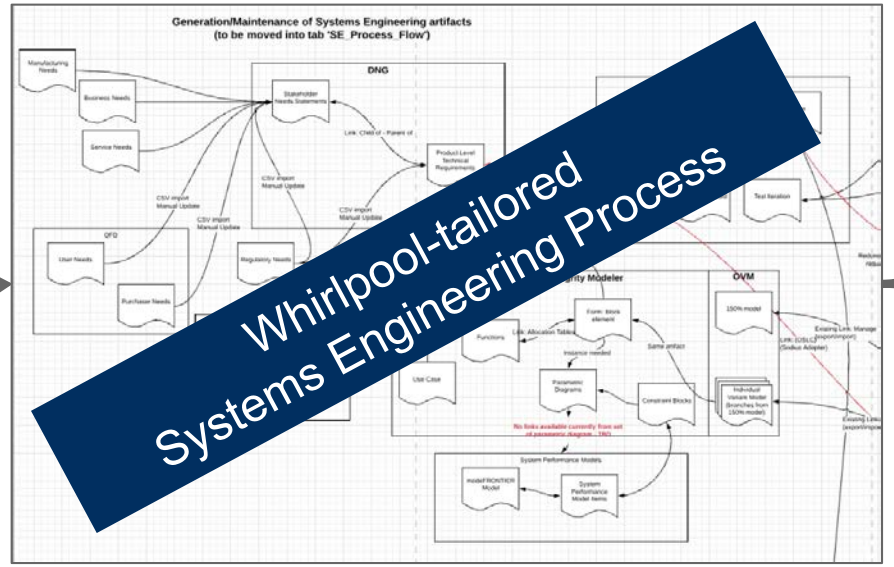
Industry Best Practices

WPD SOPs



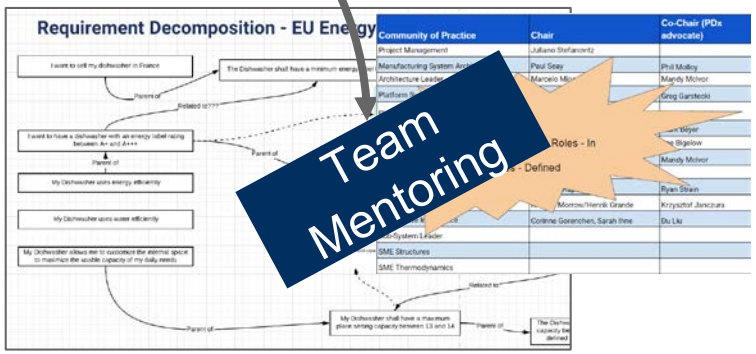
Academia "Latest Ideas"





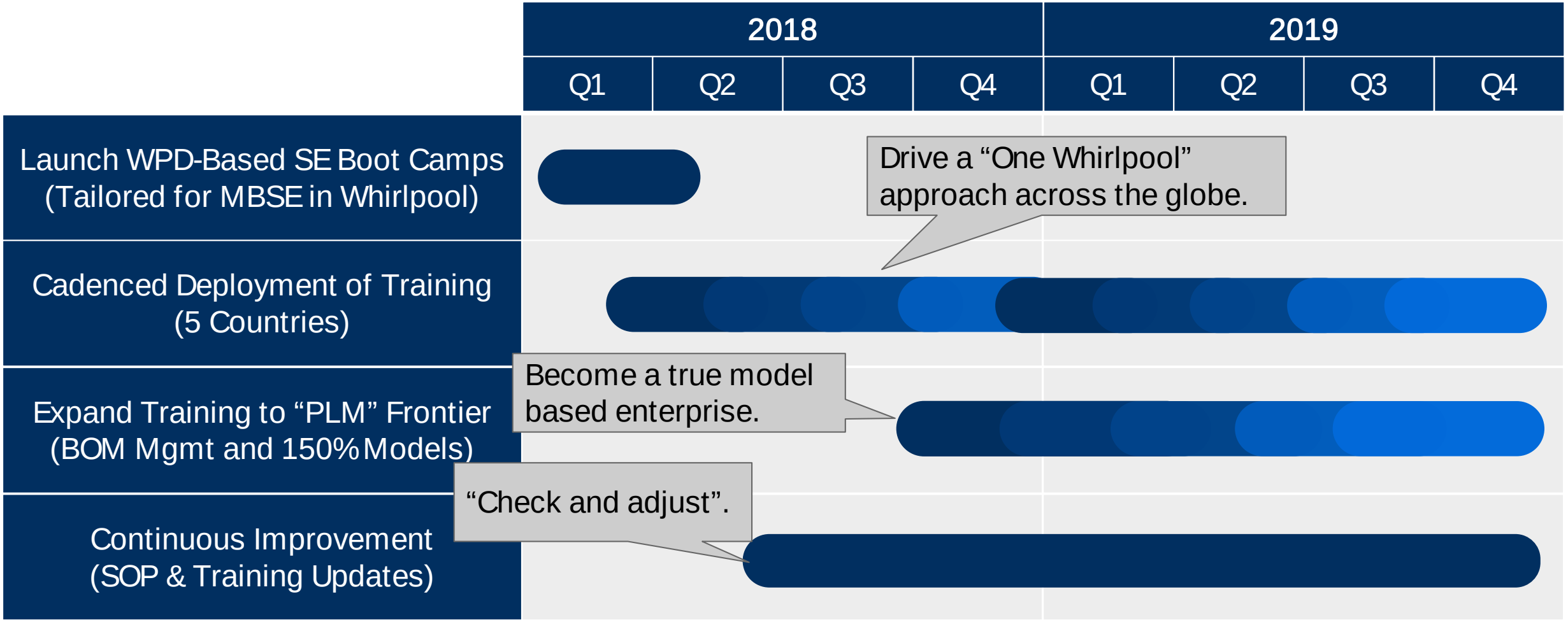
Whirlpool-tailored Systems Engineering Process

Comprehensive Training



Team Mentoring

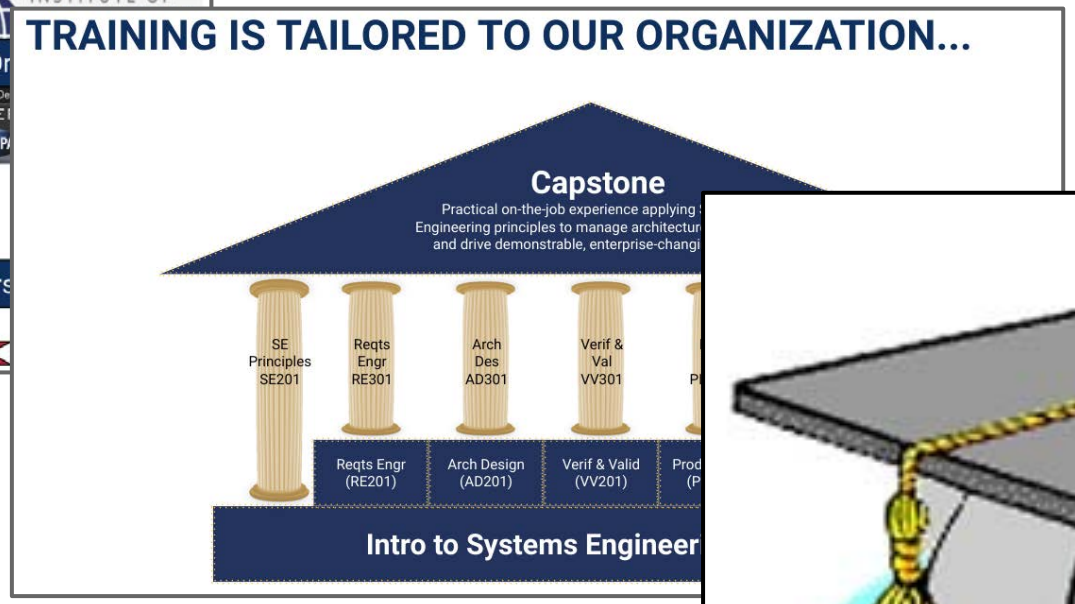
HOW ARE WE GETTING TO WHERE WE WANT TO BE?



SO WHAT DID WE DO?

"Systems Engineering training within your organization can be **effective** given the right **tailoring**, **education**, **practice**, and **follow-up support**"

LET'S GET STARTED



THANK YOU

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