

Model-based Architecture and Process Strategy™ (MAPS) Workshop

This intensive and interactive workshop helps you plan an effective strategy for applying Model-Driven Engineering technologies to improve your enterprise system architecture and processes.

new Specialized editions of this workshop are now available: *Business Process Modeling* edition, *Model-Driven Software Engineering* edition, and *Model-Based Systems Engineering* edition.

Are you considering the cost and benefits of Model Driven Engineering (a.k.a. Model Driven Development) technologies (e.g., UML™ 2, BPMN™, SysML), but are confused about the differences between Muddle Driven Marketecture hype and bona fide Model Driven Tarchitecture solutions? You may want to consider a *Model-based Architecture & Process Strategy* workshop to develop an enterprise strategy to reap the benefits, but avoid the pitfalls, of Model Driven Engineering.

WHAT IS A MAPS WORKSHOP?

A **Model-based Architecture and Process Strategy (MAPS)** Workshop is a 1 to 5 day collaborative review, analysis and planning workshop that performs **an extreme makeover of your enterprise strategy for applying Model-Driven Engineering languages, processes, tools, and frameworks to your projects**. Each MAPS workshop produces concrete recommendations and plans to improve your enterprise system architecture and processes using industry-proven principles and best practices. A MAPS workshop benefits your enterprise by:

- Understanding the technical and business advantages of a model-based, architecture-centric process that is requirements-driven and reuses patterns and frameworks.
- Learning how to apply industry-standard visual modeling languages (UML 2, BPMN, SysML) to precisely and concisely specify your enterprise system architecture and processes.
- Understanding how to select visual modeling tools and related tools that will accelerate your Model-Driven Engineering processes.
- Learning how to apply architecture frameworks (e.g., DoDAF/MODAF/UPDM, TOGAF, Zachman) and process frameworks (e.g., Unified Process) to improve your enterprise system architecture and process.
- Identifying and prioritizing problems related to your usages of enterprise system architecture languages, processes, tools, and frameworks.
- Resolving problems related to enterprise system architecture languages, processes, tools, and frameworks.
- Developing sound strategies for evolving your enterprise system architecture languages, processes, tools, and frameworks.

THE PIVOTPOINT TRAINING ADVANTAGE

- **Authored and taught by experts.** All workshops are authored by PivotPoint's founder, Cris Kobryn, an internationally recognized expert in visual modeling languages and model-driven development technologies. (Cris chaired the international standardization teams for UML 1.1, UML 2.0 and SysML 1.0.) In addition, all PivotPoint instructors have 10+ years experience working with Model-Driven Development technologies.
- **Small, intense and interactive.** We limit workshop sizes, usually to a maximum of 12 students. This ensures that students get the individual attention that they need to learn quickly. Also, our workshops are intense and highly interactive with frequent work sessions, so you will learn from other students as well as your instructor.
- **Proven principles and best practices.** Our workshops emphasize proven modeling principles and best practices that will work with all modeling tools that comply with the relevant standards. If you have already chosen a modeling tool, we can integrate optional tool training in your workshop. If you have not yet selected a modeling tool, we can help you select one that best meets your project and team needs.
- **Emphasis on pragmatic problem solving.** Our workshops emphasize the use of modeling technologies to solve tough, practical problems such as those you encounter on your day job. The bigger and more difficult the problem you choose for practice sessions, the more interesting the workshop will be for the students and the instructor.
- **Flexible choice of venue.** Our workshops are available onsite at Client training facilities, which allow us to customize workshops to meet Client project or team needs, or at PivotPoint training facilities.

WHO SHOULD PARTICIPATE IN A MAPS WORKSHOP?

You should consider participating in a MAPS workshop if you are encountering any of the following problems:

- Are you finding that your high-level conceptual architectures and processes don't work or scale, and are looking for more precision and expressive power?
- Are you encountering difficulty estimating when your iterative, incremental System Development Life Cycle (SDLC) processes will finish?
- Are you confused by tool vendor marketecture that fails to deliver what you expect or need for your project?
- Do you need to improve the speed or productivity of your business analysis, software engineering, or systems engineering processes?
- Do you need to increase the quality of your software-intensive products in a fast and efficient manner?
- Do you want to accelerate your learning of concepts, principles and best practices related to Model-Driven technologies?
- Do you need help in developing sound strategies for evolving your enterprise system architecture technologies, including languages, processes, tools or frameworks?

In general, your senior business analysts, system architects, application architects, and database architects should participate in a MAPS Workshop, as well as your project managers. Depending on the size of your project, one or more MAPS savvy architects will lead the workshop.

WHEN SHOULD YOU HOST A MAPS WORKSHOP?

We generally recommend that you host a MAPS workshop as early as practical in your system development lifecycle, so that you will obtain maximum benefit from it. It is usually more straightforward to improve your enterprise system architecture and processes in the formative stages of a project, before the major architectural and design decisions have been made. However, your project's architecture and process will benefit from a MAPS Workshop at almost any time, especially if you are encountering problems or are looking for ways to improve your project's efficiency and your product's quality.

PREREQUISITES

There are no special prerequisites for this workshop, although participants are expected to be actively engaged in specifying large complex business processes and/or architecting large, complex, software-intensive systems. Experience using UML/BPMN/SysML and one or more structured analysis/design, object or component methods is desirable, but not necessary.

WORKSHOP AUTHOR & PRIMARY INSTRUCTOR



Cris Kobryn is the CEO and Founder of PivotPoint Technology Corporation, a company that specializes in Model-Driven Engineering Solutions™ for tough business and engineering problems. He is an internationally recognized expert in visual modeling and model-driven development, and has successfully applied these technologies to diverse industries ranging from aerospace-defense and telecom to financial services and manufacturing. Cris has global experience leading high-performance software development teams, and has architected custom applications and commercial products. He formerly held senior technical positions at Telelogic, EDS, MCI Systemhouse, Inference Corporation, and SAIC.

Cris chaired large international teams of vendors and users to specify the Unified Modeling Language (UML) 1.1 and 2.0 standards for software engineering, and the Systems Modeling Language (SysML) for systems engineering. In recognition of Cris's contributions to the UML the Object Management Group (OMG) presented him with its Distinguished Service Award, and in acknowledgement of his contributions to the SysML the International Council on Systems Engineering (INCOSE) presented him with its Outstanding Service Award. Cris is a contributing editor for the *Software and Systems Modeling* journal, and a member of IEEE, INCOSE, ACM, and AAAI.

WORKSHOP SYLLABUS

The workshop syllabus, in a menu form that can be customized to meet your needs, is described at the end of this handout. NOTE: This workshop description and syllabus are subject to revision. Check www.PTCorp.com/training.htm for updates.

WORKSHOP SIZE

The number of workshop participants is restricted to maximize interactions with the instructor, especially during modeling lab sessions. Most workshops are restricted to 12 or fewer participants. Exceptions must be approved by the instructor.

COST, AVAILABILITY, AND FURTHER INFORMATION

This workshop is available at client sites, PivotPoint instructional facilities, or by web conferencing. Costs depend upon your choice of venue, duration, and the number of participants. For further information regarding the contents, availability, and cost of the workshop please email workshops@PTCorp.com or call +1-760-728-9747.

WORKSHOP MENU

All workshops include both structured presentations and interactive roundtables to discuss specifics related to your project. Workshops can be customized for different project and team requirements. For this workshop you can pick one or more of the following courses.

<p style="text-align: center;">STARTER COURSE [Module# MS101]</p> <p>Executive Overview</p> <ul style="list-style-type: none"> • Introduction to Model-Driven Engineering (MDE) • The MDE-Intellectual Property Connection • Strategic planning principles & techniques • MDE Tetrad: languages, processes, tools, and frameworks • Quick Tours: languages, processes, tools, and frameworks • MDE principles and best practices • Strategic goals for this workshop <p>Client “As Is” Architecture & Process Overview [to be provided or presented by Client]</p> <ul style="list-style-type: none"> • Business domain overview • Current system architecture/business process overview <p>Client “As Is” Issue Identification and Prioritization</p> <ul style="list-style-type: none"> • Top 10 language usage issues • Top 10 process usage issues • Top 10 tool usage issues • Top 10 framework usage issues 	<p>Goals</p> <ul style="list-style-type: none"> • Explain cost/benefits of a Model-Driven Engineering approach • Provide overview of MDE Tetrad concept for maintaining scaleable architectural integrity • Develop understanding of customer’s current use of languages, processes, tools, and frameworks • Explain how architecture/process patterns and frameworks can promote reuse and increase execution speed and efficiency • Identify and prioritize top-level issues
<p style="text-align: center;">ARCHITECTURE/PROCESS LANGUAGE COURSE [Module# MS102]</p> <p>Topics</p> <ul style="list-style-type: none"> • Architecture Description Languages (ADLs) & Business Process Modeling (BPM) languages • Industry-standard architecture/process languages: UML2, BPMN, SysML • Model-Driven language selection and customization guidelines • Architecture patterns and frameworks (optional) • Industry-standard architecture frameworks: DoDAF/MODAF/UPDM, TOGAF, Zachman (optional) <p>Client “As Is” Language Walkthrough</p> <ul style="list-style-type: none"> • Review current system architecture/process languages, frameworks, and specifications <p>Diagnosis</p> <ul style="list-style-type: none"> • Review and refine Top 10 architecture/process language usage issues • Review and refine Top 10 architecture/process framework usage issues (optional) <p>Treatment</p> <ul style="list-style-type: none"> • Recommendations to resolve Top 10 architecture/process language issues • Recommendations to resolve Top 10 architecture/process framework issues (optional) 	<p>Goals</p> <ul style="list-style-type: none"> • Assess current architecture language and framework usage • Validate customer issues related to languages and frameworks • Identify related issues • Collaborate on innovative solutions to resolve outstanding problems • Recommend specific improvements to languages, frameworks, and specifications

<p align="center">ARCHITECTURE-CENTRIC PROCESS COURSE [Module# MS103]</p> <p>Topics</p> <ul style="list-style-type: none"> • Model-Driven process overview • Automating Validation & Verification (V&V): Requirement-driven processes • Balancing process rigor vs. agility: Unified Process vs. Agile Modeling Methods • Managing iterative, incremental System Development Life Cycle (SDLC) • Model-driven process patterns and frameworks: Unified Process • Model-driven process selection and customization guidelines • Component-Based Development (CBD) methods [optional] • Transitioning from SA/SD or object-oriented methods [optional] • Capability Maturity Model Integration (CMMI) [optional] <p>Client “As Is” Process Walkthrough</p> <ul style="list-style-type: none"> • Review current system business processes and development processes <p>Diagnosis</p> <ul style="list-style-type: none"> • Review and refine Top 10 process usage issues <p>Treatment</p> <ul style="list-style-type: none"> • Recommendations to resolve Top 10 process usage issues 	<p>Goals</p> <ul style="list-style-type: none"> • Assess current system development processes • Validate customer issues related to system development processes • Identify related issues • Collaborate on innovative solutions to resolve outstanding problems • Recommend specific improvements to system development process and sub-processes
<p align="center">ARCHITECTURE/PROCESS TOOLS COURSE [Module# MS104]</p> <p>Topics</p> <ul style="list-style-type: none"> • Model-driven Requirements Management (RM) tools • Architecture definition modeling tools • Business Process Modeling (BPM) tools • Model-driven process tools • Model-driven tool selection and customization guidelines • Model-driven Integrated Development Environments (IDEs) [optional] <p>Client “As Is” Process Walkthrough</p> <ul style="list-style-type: none"> • Review current architecture/process tool suites <p>Diagnosis</p> <ul style="list-style-type: none"> • Review and refine Top 10 tool usage issues <p>Treatment</p> <ul style="list-style-type: none"> • Recommendations to resolve Top 10 tool usage issues 	<p>Goals</p> <ul style="list-style-type: none"> • Assess current tool selections • Validate customer issues related to tools • Identify related issues • Collaborate on innovative solutions to resolve outstanding problems • Recommend specific improvements to current tool selections
<p align="center">FINALE COURSE [Module# MS105]</p> <p>Re-Assessment Update Top Ten lists:</p> <ul style="list-style-type: none"> • Top 10 language usage issues • Top 10 process usage issues • Top 10 tool usage issues • Top 10 framework usage issues <p>Pulling it all together Recommendations:</p> <ul style="list-style-type: none"> • Language strategy • Process strategy • Tool strategy • Framework strategy <p>Planning</p> <ul style="list-style-type: none"> • Technology futures • Next steps 	<p>Goals</p> <ul style="list-style-type: none"> • Holistically re-assess customer issues related to enterprise system architecture languages, processes, tools, and frameworks • Provide a cohesive strategy for evolving enterprise system architecture languages, processes, tools, and frameworks • Ensure strategy includes an open standards strategy • Consider future technology trends in planning process • Develop short term (3-6 months) tactical plans and longer term (year or longer) strategic plans