

ENOVIA Semiconductor Accelerator™ **for Enterprise Project Management**

Chip makers are facing a new set of business challenges. While the typical corporate goals of introducing more new products with increased functionality at lower costs or tighter market windows still exist, the rules by which these need to happen have changed. No longer can chip designers depend on new tools from EDA vendors to continually squeeze more performance out of their design processes — and staffing levels are continually under tight scrutiny. In order to be successful, chip makers need to address a new set of business challenges. These challenges include:

- Managing a more disaggregated design supply chain, including resources spread across multiple locations, or even multiple companies
- Increasing the use of design partners, outsourced resources and third-party manufacturing sites
- Achieving more aggressive schedules and predictable results through better project management instead of adding new tools or resources
- Increasing profitability by designing chips that can be used in more than one product— typically requiring design platforms that combine hardware, software and more computational functionality
- Leveraging the benefits of industry best practices and corporate standards to streamline design processes
- Fully utilizing existing resources in the most effective manner by assigning the right resource with the best skills to critical projects when they are needed
- Enabling a collaborative design environment built upon effective communication and carefully planned design strategies
- Continuously improving design quality and team efficiency, enabled by collecting design process metrics
- Providing greater visibility and accountability into critical design tasks and daily events in order to make better decisions

All of these new challenges tend to leave managers with more to watch but with less ability to do so. This lack of visibility leads to poor decision making, often resulting in costly re-spin due to the wrong or incomplete data sets reaching the mask shop, late delivery of chips, delivery penalties and potentially missed market windows costing millions of dollars.

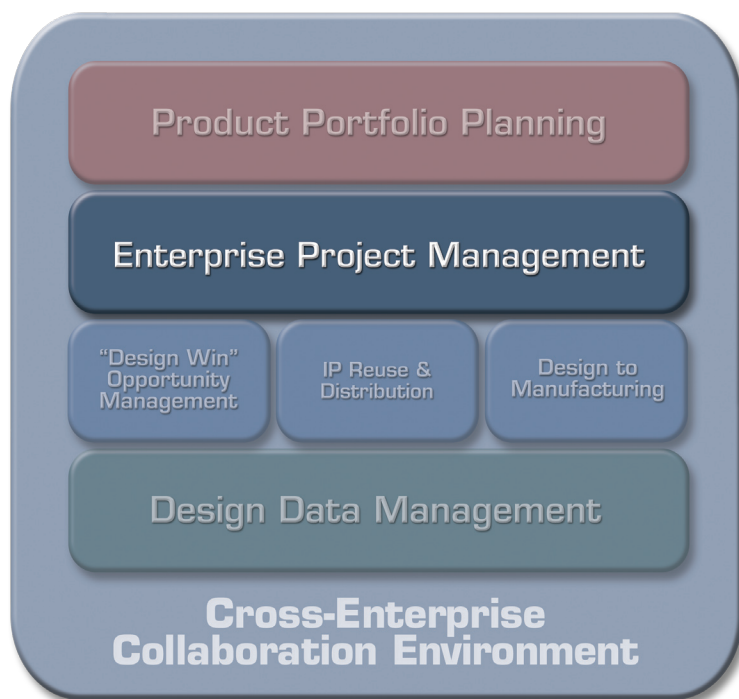
The key to meeting these challenges is better project planning, execution and tracking. No given chip maker is likely to experience all of these problems at once, but without good project management tools in place, the risk of running into any of these challenges, and their resulting consequences, is dramatically increased. The use of good project management tools, and methodologies to use them, will significantly mitigate such risks.

Is the ENOVIA Semiconductor Accelerator for Enterprise Project Management what you need?

- Do your Project Managers lack visibility into the daily events and early warning signs of projects that could help them make decisions and keep projects on track?
- Do projects lack the ability to tie deliverables directly to semiconductor design data causing larger development schedule and costs than is necessary?
- Do your Design Teams collect metrics that can help you measure efficiency, increase quality and predict future performance?
- Is there a tendency to blame downstream Design Groups for project delays?
- Can your Program Managers roll up information across multiple layers of project hierarchy into program-level reports?
- Do you currently have issues managing resources across your project teams or finding the right resource at the right time for your design tasks?
- Would your projects benefit if you could use standardize processes and best practices across all of your business units and design locations?
- Do you struggle with the management of complex collaborative projects that include stakeholders across the enterprise: prospects, customers, suppliers or partners?

The ENOVIA Answer

The ENOVIA Semiconductor Accelerator offers powerful solutions for Enterprise Project Management. It tunes the capabilities of ENOVIA's Program Central™—a full-featured advanced project management tool—to the specific needs of chip makers and links them to the world's leading design management solution for IC designers, ENOVIA's Synchronicity DesignSync®. For the first time engineers can inform management of their status without leaving their Cadence®, Synopsys® or proprietary tools environment.



Standardization of Best Practices Using Pre-configured Design Templates

The ENOVIA Semiconductor Accelerator for EPM includes a number of pre-configured design flow templates. Using these, you can begin new design projects using a consistent flow across all design teams and locations. You can use these templates "out-of-the-box" or modify them to include your corporate set of best practices. The result is that you can quickly get your teams working in a consistent, auditable fashion. The following templates are provided with this solution:

- Digital IC Design Flow
- Analog/Full Custom Design Flow
- CMOS Manufacturing Process Design Flow
- Microprocessor Design Flow
- ASIC Design Flow
- Memory IC Design Flow
- FPGA Design Flow
- IP Quality Checklists
- NPI Business Processes

Features and Capabilities

Industry Standard Templates Projects can be planned and implemented using pre-defined templates for familiar IC design. They provide a consistent manner in which to plan and measure project status and expected results. These templates can be used either "out-of-the-box" or as a model for customer-specific flows.

Planned Project Activities and Milestones Project management features enable project leaders to organize global project teams, plan and coordinate phase gate activities, and assign and organize tasks associated with the project. The task list also functions as a real-time scheduler, giving the entire project team an immediate status update as each task is completed.

Data-Driven Project Management Designers will continue to work within their comfortable EDA design environment. Changes that they make to the design data will automatically drive updates to the project plan, enabling project and program managers to obtain real-time information when making critical decisions.

DesignSync File Access Deliverables are directly linked to Semiconductor data managed by ENOVIA Synchronicity DesignSync® Design Data Management solution. DesignSync, is the industry standard for Semiconductor DDM that provides the underlying vault for both product designs and reusable IP. Users in the ENOVIA PLM environment can browse the DesignSync data directory hierarchy, view the content, and checkout/in as required. A centralized enterprise-wide system can work with multiple project-level DesignSync servers across the organization or multiple project-level systems may be set up alongside each DesignSync server.

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Designers Now Have the Ability to Update Project Status
within the Cadence or Synopsys Environment.

Designers are able to report status without leaving their native interface.

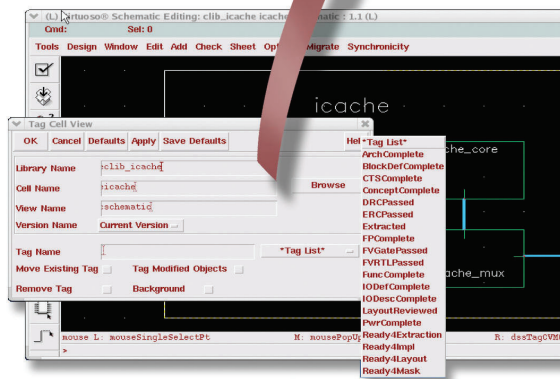
IC Design Work Breakdown Structure

Task Name	WBS	Task Type	State	% Complete	Duration	Start Date	End Date	Dur
Centurion	1	Project Space	Active	62.0	15.0	Sep 10, 2004	Dec 6, 2004	0.0
Specification	1	Task	Complete	100.0	6.0	Sep 10, 2004	Sep 30, 2004	1.0
Schematic Capture	2	Task	Complete	100.0	6.0	Oct 1, 2004	Oct 8, 2004	1.0
Circuit Validation	3	Task	Assign	0.0	7.0	Oct 11, 2004	Oct 19, 2004	0.0
Layout Entry	4	Task	Create	0.0	7.0	Oct 20, 2004	Oct 28, 2004	0.0
Layout Verification	5	Task	Create	0.0	10.0	Oct 29, 2004	Nov 11, 2004	0.0
Layout Extraction	6	Task	Create	0.0	2.0	Nov 12, 2004	Nov 15, 2004	0.0
Implementation	7	Task	Assign	0.0	15.0	Nov 16, 2004	Dec 6, 2004	0.0

Manage IC Design Deliverables

Name	Title	Rev	Ver	Type	Actions	Description	State	Completion State
DCII Library - Centurion				DesignSync Folder		DCII Library for Centurion	Ready4SchSim	Ready4Layout

Project process is automatically updated when design data is checked in or tagged in DesignSync.



Tracked Project Financials Through the use of financial features, project leaders can capture and manage actual and estimated project costs and benefits. Users can then easily view the status of the plan to see how well financial needs are being met.

Leverage of Desktop Tools Program Central supports the ability to create and manage project schedules and assign tasks to global teams according to preferred methodology. Through the full bidirectional Microsoft Project integration, project leaders can leverage Microsoft Project as a front-end to create and maintain project schedules and then re-import schedules and assigned resources back into ENOVIA Program Central for execution.

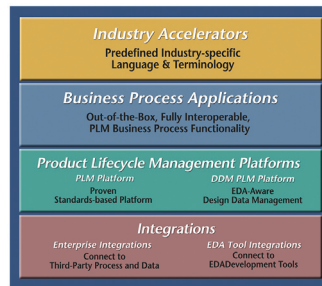
Task Deliverables Users can automatically update a task's status to "complete" by associating the task's deliverable to the task itself. Once the deliverable is promoted to "complete," custom triggers automatically promote the task to "complete."

Process to Approve New Concepts Program Central supports all phases of development, including the idea generation phase in which the organization evaluates the likely value and feasibility of a potential new project. Once a concept is approved, it is updated to an actual project and can be planned in detail.

Mitigate Project Risks Through basic techniques of analysis and measurement, risks are properly identified, classified and managed. Risks are prioritized in order to identify which should be mitigated due to their potential extreme impact, which should be given normal attention, and which are sufficiently minor and do not require significant attention.

The ENOVIA PLM Environment

As the industry's most robust and flexible PLM environment, ENOVIA provides organizations with a single, secure environment that eliminates the barriers caused by geographically dispersed organizations and value chains, multiple disparate systems and increasing security requirements.



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