

Project Management

A Project Manager's Guide to Enterprise Architecture

Enterprise architecture (EA) is an agency-wide framework for incorporating business processes, information flows, applications, and infrastructure to support an organization's goals and objectives. An effective EA is comprised of a comprehensive view of the organization, including its drivers, vision, strategy, information, partners, systems, technology, and other related items.

The primary reason for defining an EA is to ensure that the organization's business strategy, processes, and information technology (IT) investments are aligned with its goals and objectives. This allows for the traceability of business strategy to underlying technology investments. This enterprise view allows for the development of frameworks, standards, and guidelines for projects to support the consistent and appropriate delivery of products, services, and systems across the enterprise that work together, collaborate, or integrate in support of the overarching goals and objectives of the organization.

A well documented and understood EA allows an organization to quickly assess the impact of change on their environment and respond quickly to take advantage of opportunities resulting from such changes. EA documentation and management allows for consistent, higher quality control of business processes and technology that leads to higher productivity and investment success that results from improved systems analysis and design.

EA can also provide a foundation for business process improvement, re-engineering, and quality management. A well managed EA protects information management investments and encourages the use of metrics to measure the quality and quantity of both business processes and supporting IT productivity. Some of the benefits EA offers an organization include:

- Alignment of information technology (IT) to the organization's mission
- Improved integration and interoperability
- Organizational agility and ability to adapt to change

- Reduced costs and reduction in duplication
- Reduced technical risk
- Improved security

Project managers benefit from EA through the increased consistency resulting from the standards, processes, rules, etc. that define the relationship of all business, information, development, and technology objects across the organization.

On February 6, 2002 the development of a Federal Enterprise Architecture (FEA) commenced. Led by the Office of Management and Budget (OMB), the purpose of this effort is to identify opportunities to simplify processes and unify work across the agencies and lines of business within the Federal government. The FEA is located at <http://www.whitehouse.gov/omb/egov/a-1-fea.html>

Over the coming weeks the CDC UP Project Management Newsletter will publish a series of articles focusing on how project managers can leverage EA to support the successful delivery of their projects. This series of articles will include topics such as:

- Enterprise Architecture 101
- Project Manager's Leveraging Enterprise Architecture
- Shorten Project Delivery Using Enterprise Services
- Enterprise Architecture Repositories
- Utilizing Segment Architectures in Project Planning
- Enterprise Architecture Alignment with the Enterprise Performance Life Cycle (EPLC)

For more information about enterprise architecture please visit the CDC EA website located at <http://intranet.cdc.gov/ncphi/ea/> or contact the EA team at ea@cdc.gov. For more information on the CDC Unified Process (UP) please visit the CDC UP website at <http://www.cdc.gov/cdcup/>. ■

Scrum in the Research Environment

Scrum is an iterative development methodology that cycles through project work in fixed durations referred to as "Sprints". Each Sprint is planned and executed, typically lasts 1-4 weeks, and contains components of the full product life cycle, including planning, requirements, design, and testing. During each Sprint, work is performed collaboratively by the project team with focus on face-to-face interaction over written documentation. At the end of each Sprint stakeholders reevaluate project priorities and begin work on the next iteration. This approach to delivery has been leveraged with great success by the National Center for Public Health Informatics (NCPHI) Division of Knowledge Management Services (DKMS), Natural Language Processing (NLP) project.

The DKMS team is made up of 5-7 people collocated in a low-tech collaboration room located on the CDC's Century Center campus. The team is focused on speed, flexibility, and the production of viable products, features, and functions within short timeframes, while remaining flexible enough to respond to changes in project influencing factors.

The team has defined their Sprints to be two week iterations that involve the cooperation of stakeholders when identifying and planning work to be performed. Project leadership has learned to trust the team's ability to deliver high-quality output and has empowered the project team to ultimately determine what can and cannot be realistically delivered in any given iteration.

The DKMS team has learned that anything can be defined as a Sprint deliverable; it doesn't need to be software. Deliverables can be reports, documents, requirements, etc; anything tangible that can be built, delivered, and tracked within the confines of one iterative cycle.

Upcoming Project Management Community of Practice Meetings and Topics

- **Friday, August 22**
General Management vs. Project Management
- **Friday, September 26**
Records Management, PIA, and Classified Information
- **Friday, October 24**
Facilitation – A Key to Project Success
- **Friday, December 5**
Influence – A Critical Skill for Successful Project Managers

Future iterations are often planned before prior iterations are completed. Work is identified and tasks are outlined, estimated, and associated information posted onto a tack-board for the whole team to review and police. All tasks are then reviewed by the project team which critiques all of the information posted. This process allows for the team, as one unit, to review all tasks, estimates, and proposed approaches, and has on occasion resulted in leveraging of other items to more efficiently complete NLP project deliverables.

Project status is communicated during daily stand-up meetings that last only a few minutes, just long enough for team members to report what they accomplished yesterday, what they are planning to do today, and any issues they may have. Issue follow-up and resolution is performed off-line and progress reported in the next day's status meeting.

Some of the most helpful benefits of Scrum realized by the DKMS team include:

- Time boxed focus on planned activities
- Collocated resources communicating
- Planning with outcomes in mind
- Deliverables associated with each work activity
- Quick input from Stakeholders

Portions of this newsletter were paraphrased from a presentation by Lisa Grant, MBA, PMP during the July 2008 meeting of the CDC Project Management Community of Practice (PMCoP). For more information on the DKMS team's Scrum experience, the CDC PMCoP, or the CDC Unified Process (UP) please visit the CDC UP website at <http://www.cdc.gov/cdcup/>. ■

Contact the CDC Unified Process Team

The *CDC Unified Process Project Management Newsletter* is authored by Daniel Vitek MBA, PMP and published by the National Center for Public Health Informatics.

For questions about the CDC UP, comments regarding this newsletter, suggestions for future newsletter topics, or to subscribe to the CDC UP Project Management Newsletter please contact the CDC UP Team at cdcup@cdc.gov

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