Emerging Project Management Trends and Their Role in Successful Project Delivery®

Stephen W. Volz, DBA, PMP, CMQ/OE
Amir Al-Nizami, PhD, MPM, PMP, MBA, PHRM, CSM
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Dr. Steve Volz

- Program Chair – Colorado Technical University Online College of Business and Management
- Board Advisor – PMI Central Alabama Chapter
- PMI GAC Site Visit Team Member
- Post-Doctoral Certificate in Project Management Candidate
Dr. Amir K. Al Nizami

• Lead Faculty – Project Management, Logistics, and Supply Change Management, Colorado Technical University Online College of Business and Management
PMIAA

Program Management Improvement and Accountability Act

The PMIAA reforms federal program management policy in four important ways:

• Creating a formal job series and career path for program managers in the federal government
• Developing a standards-based program management policy across the federal government
• Recognizing the essential role of executive sponsorship and engagement by designating a senior executive in federal agencies to be responsible for program management policy and strategy
• Sharing knowledge of successful approaches to program management through an interagency council on program management. (Project Management Institute, 2017, para. 3)
Waterfall Method

- Waterfall

Reason it’s Not Optimal:
You don’t know you have a problem until TQA or beyond.

“I believe in this concept, but the implementation described above is risky and invites failure.”

Dr. Winston W. Royce – Waterfall Inventor
Manifesto for Agile Development - A Better Way?

- Individuals & Interactions OVER Processes & Tools (Checklist Mentality)
- Working Software OVER Comprehensive Documentation (PSD, BRD, SRD, TRD, CRD)
- Customer Collaboration OVER Contract Negotiations.

• Responding to Change OVER Following a Plan.

Agile – Customer Changes Happen Up Front (Low Cost)

Waterfall – Customer Changes Happen at the End (High Cost)
Agile Project Approach

• Agile (Scrum Methodology)

Iterative & Incremental

Product Backlog → Sprint Planning Meeting → Sprint Backlog → Daily Scrum → Sprint Review → Sprint Retrospective

• Determine Portion of the Product Backlog that can be Completed in 2-4 Weeks; What? and How?
• 15 Minute Daily Inspection
  • Answer 3 Questions

• List of Daily Tasks for Each Story

• Determine if “Done”
  • Demonstrate Completed Work
  • Product Backlog Review

• Prioritized List of Requirements (Known as User Stories or Just “Stories”)

• Three Roles
• Five Meetings
• Four Artifacts
“Lean Principles” of Agile

- Eliminate Waste
- Build Quality In
- Deliver Fast
- **Optimize the Whole**
- Learn Constantly
- Keep Getting Better
- Respect People
Scrum Values

• Commitment
• Focus
• Openness
• Respect
• Courage

• “I think I have a problem”
Scrum Values

• Commitment
• Focus
• Openness
• Respect
• Courage

• “I think I have a problem”
• How can we help you?
The Numbers Say...

• A Mediocre Scrum Team is 10% Better Than They Used to Be.

• A Good Scrum Team is 25% Better Than They Used to Be.

• A Great Scrum Team (5% Get There) is 100% Better Than They Used to Be.

*Succeeding with Agile – Michael Cohn*
Agile Waterfall vs. Incremental Delivery
Kanban

• Is an emerging set of management practices for software development teams that was derived from Lean Manufacturing, the Toyota Production System (TPS) and Goldratt’s Theory of Constraints
• Kanban is just about managing work flow. Doesn’t replace anything initially, but does drive change
• Kanban is a set of practices that can be used to complement current Agile practices or when current processes stop making sense
• Kanban is now popular for project delivery because:
  - Its ease of implementation
  - Use of visual controls
  - Ability to accommodate a wide variety of organizational design patterns
  - Integration of stakeholders and relentless focus on the continuous delivery of value
• Success was mostly found when more mainstream agile practices did not yield acceptable outcomes
• Blending Agile and Kanban can create tremendous value for the organization
Kanban vs. Traditional Scrum/Agile

- Less planning overhead
- No estimating. WIP is the constraint
- Focus on the work and improving the system
- Still have daily standup which provides focus on work flow through the system and resolving bottlenecks
Kaizen

- What does it mean?

KAI
To modify, or change

ZEN
Think, make good, or make better

KAIZEN
Prepare for it and make it the improvement by eliminating waste
Kaizen Elements

• Improvement
• On-going continuity
• Who does it? Where?
  - Usually done by middle management
  - Find out pain area(s)
  - Analyze the pain
  - 3Ms considered with 4Ms

3Ms – Mura, Muri, and Muda
4Ms – Man, Machine, Material, and Method
Benefits From Kaizen

• Eliminates waste
• Total improvement in:
  - Space utilization
  - Product quality
  - Use of capita
  - Communications
  - Production capacity
  - Employee retention
• Provides instant results
Six Sigma

• **Six Sigma** is a disciplined, data-driven product and process-improvement methodology that was originally developed by Motorola. The idea was to improve processes by eliminating defects, which are defined as "nonconformity of a product or service to its specifications." Those of us in project management generally do not think of it as a project management methodology.

• The process steps go by the acronym DMAIC-S, which stands for Define, Measure, Analyze, Improve, Control, and when it is done to Synergize through the organization.
Usage Of Six Sigma
Roles For Six Sigma

Six Sigma identifies several key roles for its successful implementation:

• Executive leadership
• Champions
• Master Black Belts (Identify projects & functions)
• Black Belts (Identify non-value added activities)
• Green Belts (works on small projects)
Rapid Applications Development (RAD)

• Mostly used in software development, RAD calls for the interactive use of structured techniques and prototyping to define user's requirements and design the final system. This has a cycle of models then prototypes over and over in the process.

• Some criticism of this methodology claim that the short interactions don't allow the complex or deep functionality to be thoroughly developed. However with newer, light applications, such as development for Web 2.0 it may be coming back into favor.
An Iterative Development Process

1. Define system deliverables
2. Design system architecture
3. Specify system increment
4. Build system increment
5. Validate increment
6. Integrate increment
7. System complete?
   - Yes: Deliver final system
   - No: Return to Specify system increment
Advantages of Incremental Development

• Accelerated delivery of customer services. Each increment delivers the highest priority functionality to the customer

• User engagement with the system. Users have to be involved in the development which means the system is more likely to meet their requirements and the users are more committed to the system
PRINCE2

• PRINCE2 is both a methodology and a de facto standard used extensively by the UK Government and is widely recognized and used in the private sector, both in the UK and internationally
  - PRojects IN Controlled Environments
  - Developed by OGC (Office of Government Commerce) in 1989 and updated (PRINCE2) in 1996
  - There is a register of PRINCE2 accredited (for instance Ruysdael The counseling company) and certified persons (PRINCE2 practitioner and foundation)
What is PRINCE2

- PRINCE2 is a project management method. Developed to make sure an organization uses resources controlled and efficient and to handle risk in an effective way.
- PRINCE2 has several aspects that are common with other methods, but also distinguish elements such as:
  - The business case
  - A defined organization structure for the whole Project. Tasks and responsibilities are defined
  - The principal of management by exception
  - A product-based planning
  - No predefined phases
  - Components and processes are defined
PRINCE2 in Reality
Other Methods

Extreme Programming (XP)
- Features short development cycles, frequent releases, and open communication with the customer. Project teams focus on collaboration and efficiency, writing the simplest possible code to produce the desired feature, avoiding burnout and low-quality deliverables.

Lean
- Delivers high-value, high-quality work with less manpower, money, and time. Lean cuts waste by eliminating bottlenecks, focusing on customer value, and continually improving processes. Use Lean to cut budgets, meet quick deadlines, and get big results with a small team.
Other Methods

New Product Introduction (NPI)
• NPI is not really a full project management methodology, because it does not include all of the required project management steps that are needed for project success (lacking such things as development of a WBS), but it still is the process that many organizations follow for their product-related projects

Packaged Enable Re-Engineering (PER)
• Not a commonly referenced methodology today, but one worth noting because of its familiarity in the service and business traditional approach to project management
Other Methods

DMAIC

• This is part of the Six Sigma methodology, but it also is often used as a stand-alone method. DMAIC (an abbreviation for Define, Measure, Analyze, Improve and Control) refers to a data-driven improvement cycle used for improving, optimizing and stabilizing business processes and designs. It and can be used as the framework for improvement projects outside of Six Sigma.

• The framework is described briefly here:

  - Define – who are the customers and what are their needs. Define the project purpose and scope. Define the current process and what customer wants from it.
  - Measure – how is the process performing and how is it measured. Gather data on how well the current process performs in meeting customer needs.
  - Analyze – what are the most important causes of problems. Identify root causes of performance gaps and confirm with data.
  - Improve - how do we remove the causes of problems? Plan, test, and implement solutions that eliminate root causes (use data to evaluate both the solutions and plans used to carry them out).
  - Control – how can we maintain the improvements? Maintain the gains by standardizing work methods or processes. Anticipate future improvements and preserve the lessons from this effort.
Other Methods

Outcome Mapping

• Outcome mapping consists of two phases: a design phase and a record-keeping phase. During the design phase, project leaders identify metrics in terms of which records will be kept. It is most commonly used in charitable projects in developing countries funded by large donors. Outcome mapping was designed by the grant-making organization International Development Research Centre (IDRC).

• It differs from traditional metrics in that it does not focus on measuring deliverables. It focuses on behavioral change exhibited by secondary beneficiaries.

• Since outcome mapping is more concerned about contribution than attribution, it is unlikely to be utilized in most projects.
Project Portfolio Management Software

- Organizations are moving to strategic alignment of projects
- Project Portfolio Management (PPM) software is increasing (openPR, 2017)
- CA Technologies, Microsoft, Oracle, SAP SE, Workfront, Inc. and Planview are leaders in PPM software (openPR, 2017)
Mobile Apps

• In conjunction with PPM software, mobile applications allow project managers to use mobile devices to manage projects
• Android and iOS applications are increasing
• Key Players:
  - Clarizen
  - Asana
  - LiquidPlanner
  - Mavenlink
  - ProjectManager.com
Mobile Apps

Mavenlink. (n.d.).
Why Know Emerging Trends

• Organizational leadership are asking leaders to lead the organization in transformative ways
• Increased focus and interest in PM soft skills
• Viewing PM (the PMO) as a profit not a cost-center
• Increased interest in doing it right the first time and corporate responsibility
Value of Emerging Trends

• Deliver Value to the organization
• Leadership is key
• Growth in program and portfolio management
• A changing world – Multiple tools and approaches
• Cost cutting through waste elimination
Project Manager Salaries
Resources

- www.coloradotech.edu
- www.PMI.org
- www.ASQ.org
- www.agileforall.com
- www.apmgroup.co.uk
- PRINCE User group: www.pugnl.nl
- https://www.projectsmart.co.uk/the-six-project-management-trends-you-need-to-know.php
- https://www.apm.org.uk/resources/find-a-resource/emerging-trends/
Emerging Trends Quiz

The Program Management Improvement and Accountability Act creates a formal job series and career path for what group?

- US Senators
- Program Managers in Federal Government
- Project Managers state government
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Which of the following is NOT a lean principle of the agile methodology?

- Excessive Waste
- Optimize the Whole
- Respect People
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Emerging Trends Quiz

Which methodology was developed by Motorola?

RAD  Kaizen  Six Sigma
Emerging Trends Quiz

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Discussion

• Final Questions?