



# DSDM

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# Why “Agile” Development?

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- Desire to meet the needs of unstable business environment
    - From Heavyweight to Lightweight
    - From document-oriented to code-oriented
    - From predictive to adaptive
    - From process-oriented to people-oriented
  - Name agreed upon by members of the Agile Alliance
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# What are the Agile Methodologies?

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- While XP has received the most attention, there are others which deserve mention
    - XP
    - SCRUM
    - DSDM
    - The Crystal Family
    - ASD
    - FDD
    - dX (agile RUP)
    - Open Source
    - Agile Modeling
    - Pragmatic Programming
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# DSDM

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## ■ Overview

- Invented by DSDM Consortium in the UK.
  - DSDM is an acronym for:  
Dynamic Systems Development Method
  - DSDM most widely used agile approach in Europe (Craddock)
  - Has gradually become the number one framework for rapid application development (RAD) in the UK (Stapleton 1997)
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# DSDM

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- Asset
    - Known for framework of controls (business centered development) and best practice for rapid application development
  - Phases
    - Feasibility Study
    - Business Study
    - Functional Model Iteration
    - Design and Build Iteration
    - Implementation
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- Feasibility Study Phase
    - Time in phase not to exceed a few weeks
    - Feasibility Report. Assess whether or not to use DSDM for given project. Review type of project, and issues surrounding people and organization; define general scope and objectives. Decide whether DSDM is appropriate. Document decision in report
    - Outline Plan for development
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- Business Study Phase
    - Business Area Definition (BAD). Facilitate workshop of experts to identify high level requirements and process description; document in BAD in proper format
    - System Architecture Definition (SAD). Sketch architecture of system. Evolves over life of project
    - Outline Prototyping Plan. State prototyping strategy; plan for configuration management
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- Functional Model Iteration (FMI) Phase
    - First of three iterative and incremental phases
    - Includes analysis, coding, prototyping. Prototypes continue to evolve until quality level can be used in final system. Prototypes are used to improve analysis models
    - Functional Model. Produced as output, including prototype code and analysis models. Testing is continuous and vital
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- Design & Build Iteration (DBI) Phase
    - Second iterative and incremental phase
    - Design and Build. Crux of system built in this phase; design and functional prototypes reviewed; further development analyzed
    - Tested System. Output fully tested system which meets all requirements noted as essential in particular iteration
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- Implementation Phase
    - Delivered System. Transfer of completed system from development environment to production environment
    - Other deliverables. User training, User Manual and Project Review Report
    - If issues arise, project can be reiterated beginning with DBI phase
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- Team Size
    - Geared for smaller teams of 2-6 persons
    - May involve multiple teams ranging from 1-6
  - Collaboration with XP
    - Possible integration with XP currently under consideration by DSDM Task Group. XP community has already started considering an "enterprise" version of their method to address the weaknesses that DSDM so clearly already deals with (Craddock)
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- Key points
    - “Application of controls to RAD, use of timeboxing, empowered DSDM teams, active consortium to steer the method development”
  - Special features
    - “Refactoring-the ongoing redesign of the system to improve its performance and responsiveness to change”  
(Abrahamsson, P., et. al., p. 89)
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- Identified shortcomings
    - “While the method is available, only consortium members have access to white papers dealing with the actual use of the method.” (Abrahamsson, P., et. al., p. 90)
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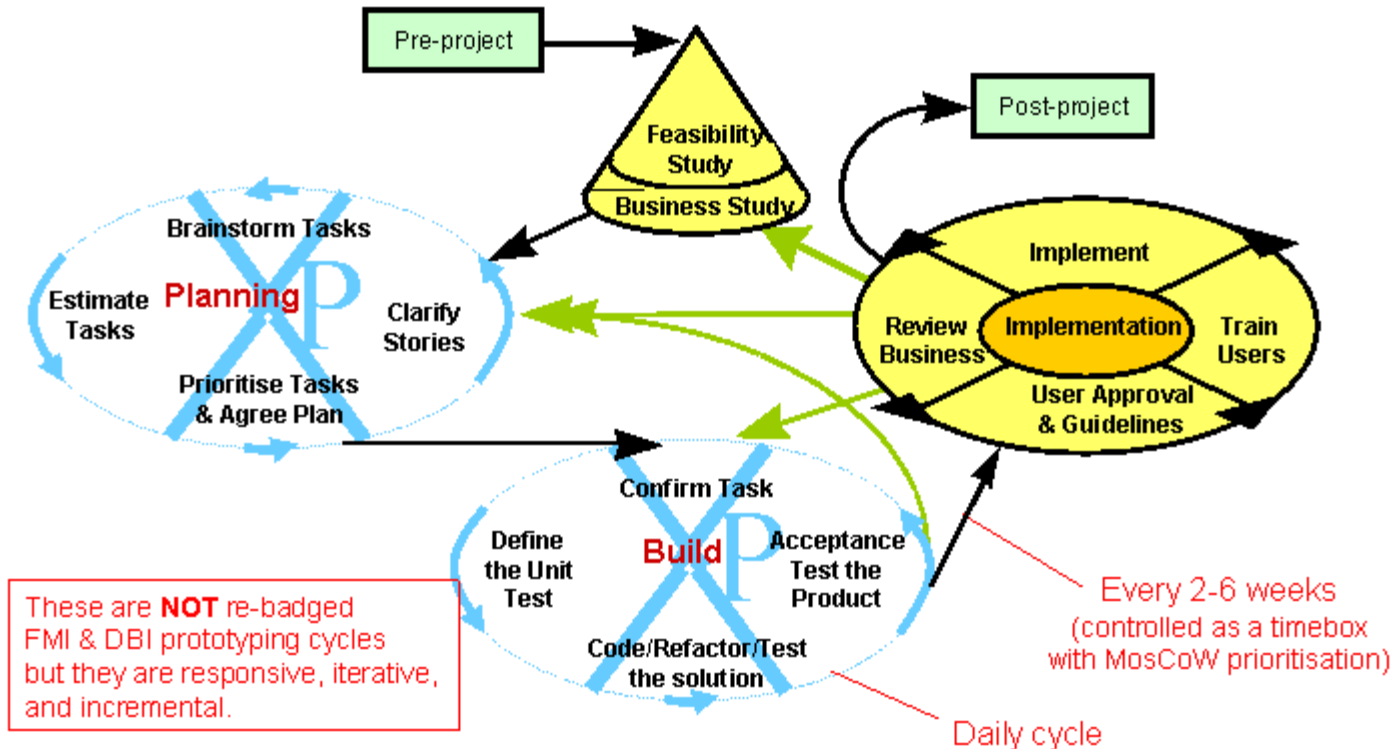
- Suggestions for Collaborating DSDM & XP
    - “...excise the FMI and DBI DSDM phases and replace them with the entire XP process.” (Craddock)
    - “...tweak to business study to ensure high level requirements are captured as user stories and the integration of the two processes is structurally complete.” (Craddock)
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DSDM and XP combined

# A Combined Framework

Cool ?





# DSDM

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- Benefits of Collaborating DSDM & XP
    - “XP leaves the definition of specific responsibilities open, precisely to accommodate small projects. With DSDM, putting defined responsibility back is a simple matter of assigning the coordination roles it specifies.” (Robinson)
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- Benefits of Collaborating DSDM & XP
    - “XP is focused on coding; DSDM is focused on system life cycle. Combining these focuses allows a team to get its arms around a hefty programming burden without sacrificing quality.” (Robinson)
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# Summary

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- The question, is collaboration the final answer?
    - If XP were to now collaborate with SCRUM, DSDM, or some other methodology, will there finally be an “all-inclusive, win-win” methodology adaptable to all types of projects? Or is a “catch-all” methodology even possible?
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# Summary

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- Martin Fowler stated his thoughts that different methods borrow from each other; if a good idea appears in one method, it is often adopted by the others. So another question, are so many methodologies really necessary? I believe that the creation of the Agile Alliance is definitely a step in the right direction.
  - As much research and development is still underway, and continues to unfold, it will be very interesting and exciting to see how these vital methodologies transform.
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# References

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- Abrahamsson, P.; Salo O.; Ronkainen, J.; Warsta, J., **Agile software development methods: Review and analysis**, pp. 1-112.
  - Craddock, Andrew. **DSDM and eXtreme Programming: Agility With Structure.**  
[http://www.dsdm.org/en/publications/newsletter3/dsdm\\_xp.asp](http://www.dsdm.org/en/publications/newsletter3/dsdm_xp.asp)
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# References

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- Robinson, Scott. **An XP Hybrid Methodology For Large-Scale Projects**, Builder.com, 2002 Oct 07. <http://asia.cnet.com/builder/manage/project/0,39009352,39086925,00.htm>
  - Sliwa, Carol. **XP, SCRUM Join Forces**. Computerworld, 2002 Mar 18. <http://www.computerworld.com/softwaretopics/software/appdev/story/0,10801,69183,00.html>
-



# References

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- Schwaber, Ken. **ExtremeProgramming and Scrum ... Incremental Business Value through Emerging Software.**  
<http://www.xp2003.org/xp2002/talksinfo/schwaberinfo.htm>
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