

# IT Symposium

## DISCIPLINED AGILE DELIVERY

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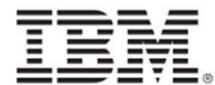
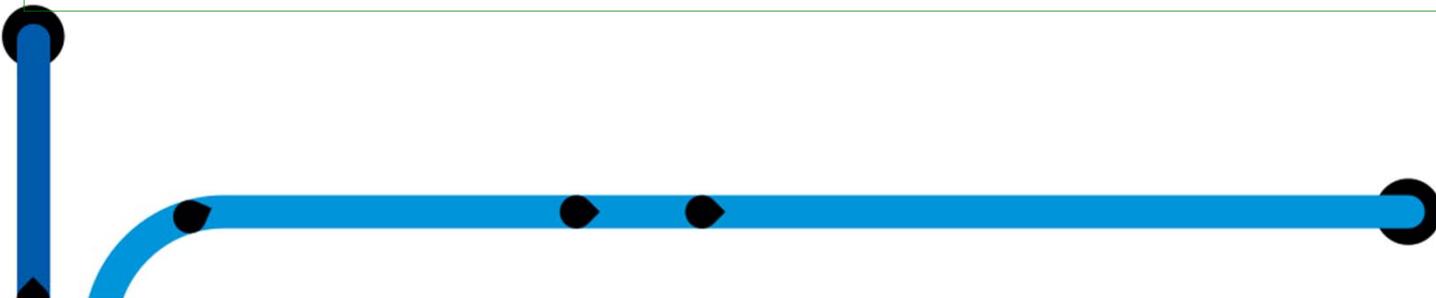
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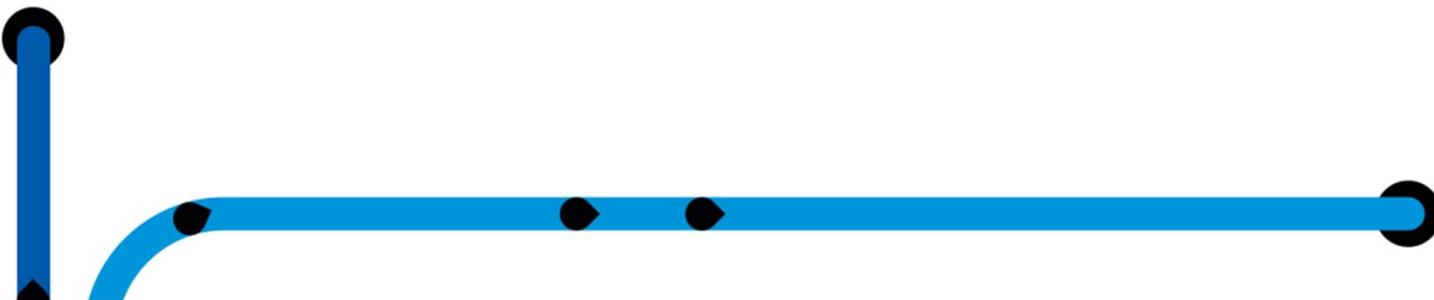
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# The Problems We Face...





## Companies Considering Agile Need Help

### Low Success Rates

**42%**

The percentage of agile project that are successful

**10%**

The number of projects that can actually prove why they were successful

### Increased Inhibitors

**77%**

Of all companies that report they need to monitor and measure mixed environments

**75%**

The total percentage of companies citing geographic distribution, regulatory compliance or management support as a key inhibitor

### Water-Scrum-Fall

**78%**

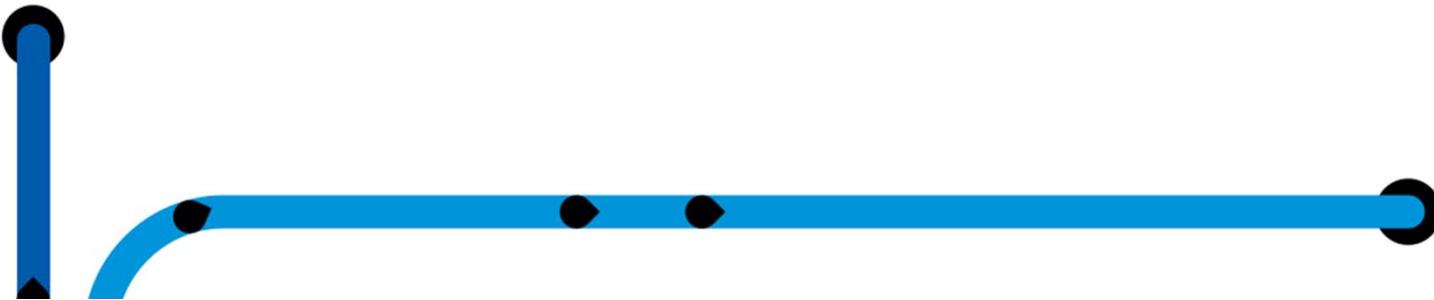
Percentage of the organization who feel they can't keep up with an agile development team

**26%**

Estimated number of organizations who use agile methodologies ONLY in development



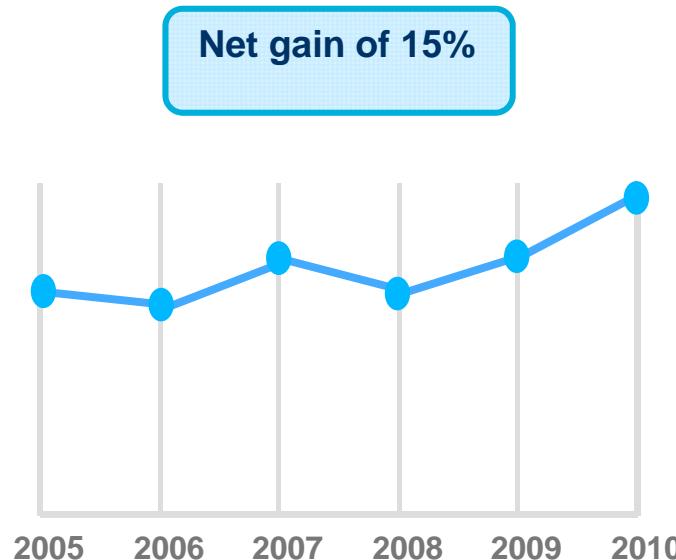
# What Does IBM Know About “Agile”?





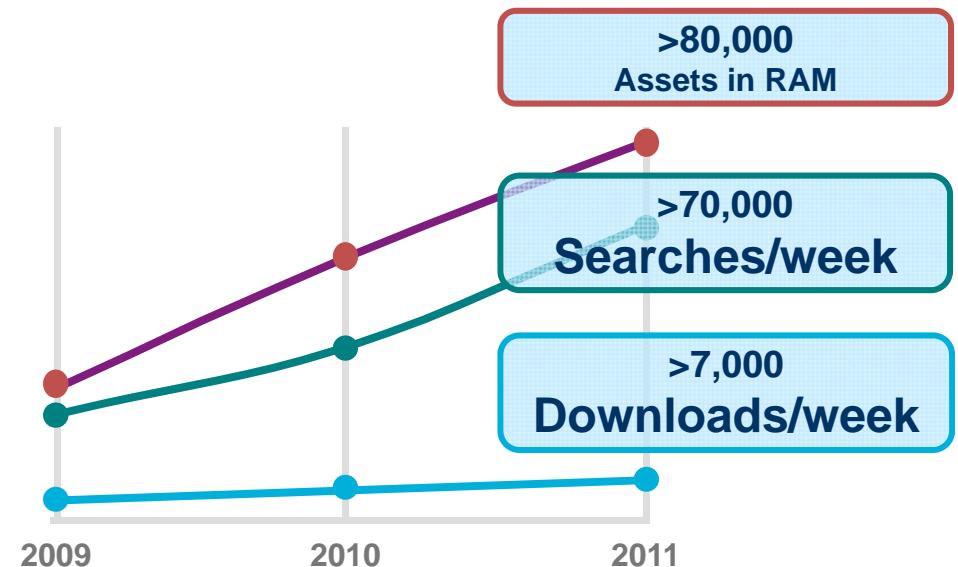
## Results from IBM's agility@scale Transformation

Revenue per Headcount



Growth in Asset Reuse

Year-to-year Growth

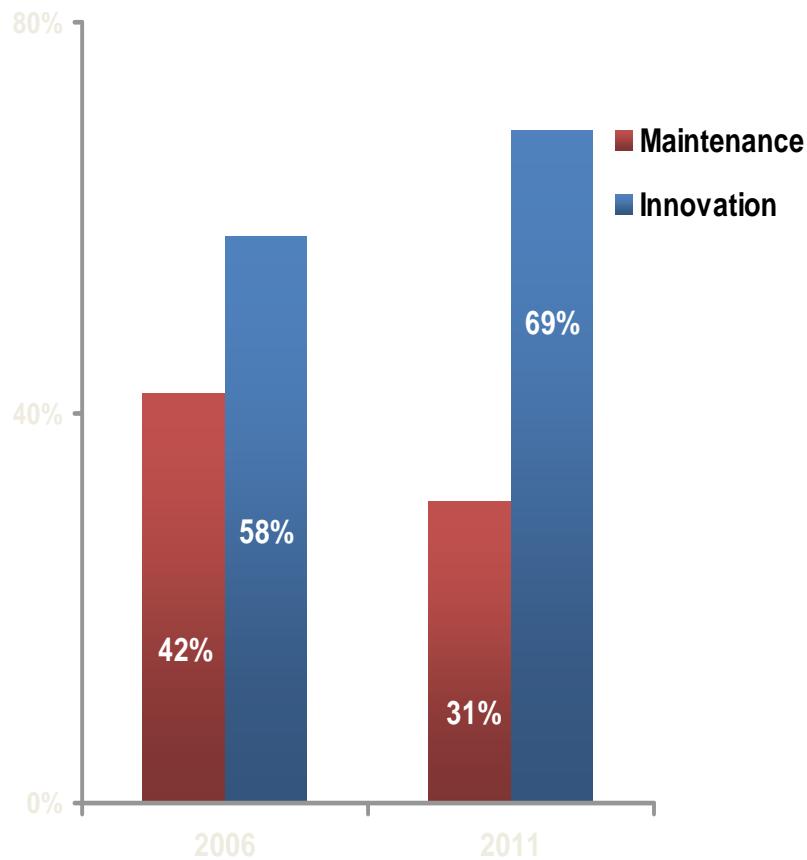


***Reduced scrap and rework by 4.5% and avoided \$300M  
in maintenance costs***

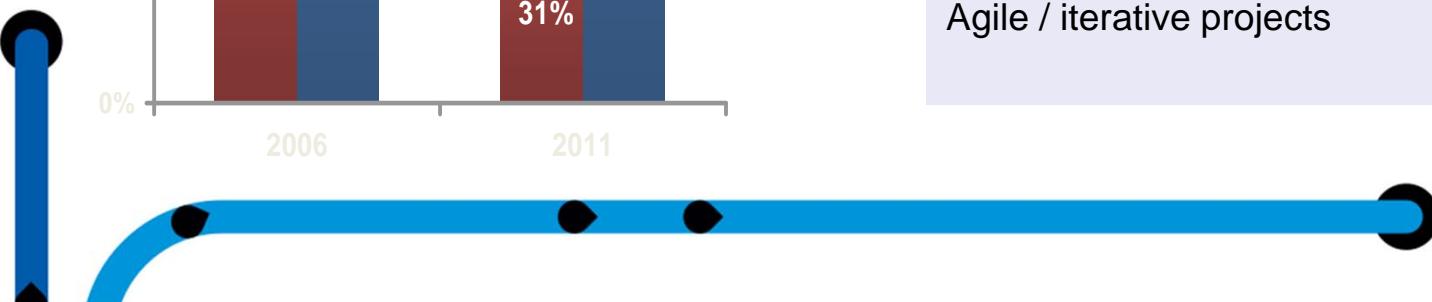


## Rational Transformation: Improved Efficiency Means More Innovation

### Investments



Efficiency Measures	2006 → 2011	
On time delivery	47%	95%
Defect backlog in months	>9	2.7
Beta defects fixed before GA	3%	95%
Agile / iterative projects	5%	85%

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# Agenda

- Defining Disciplined Agile Delivery (DAD)
- People first
- Learning oriented
- Hybrid agile framework
- A risk and value driven lifecycle
- Goal driven lifecycle:
  - Inception
  - Construction
  - Transition
- Enterprise aware
  - Optimize the whole
  - Agile governance
- Scalable: Agility@scale
- Questions

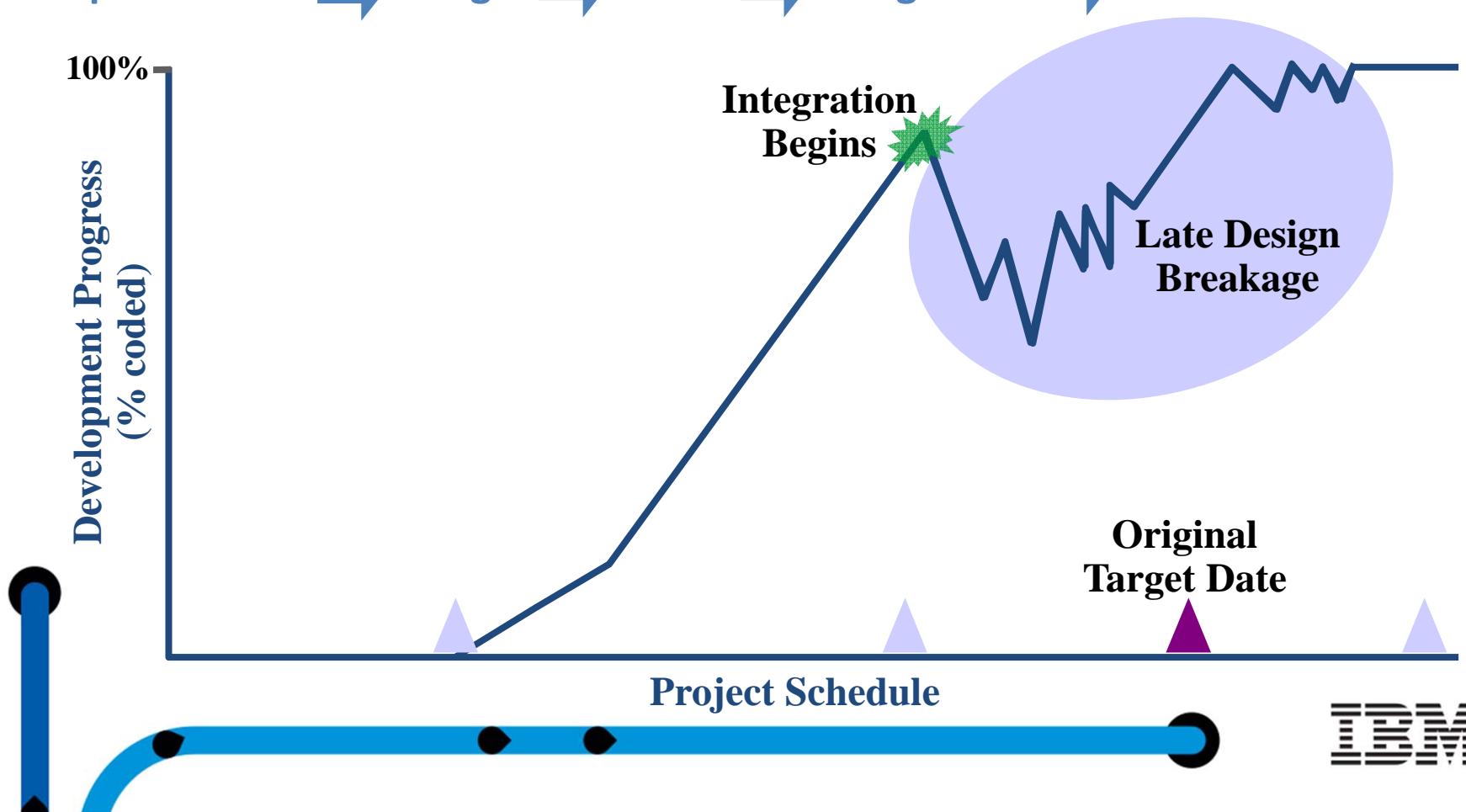




## What Usually Happens

*Sequential activities:*

Requirements → Design → Code → Integration → Test



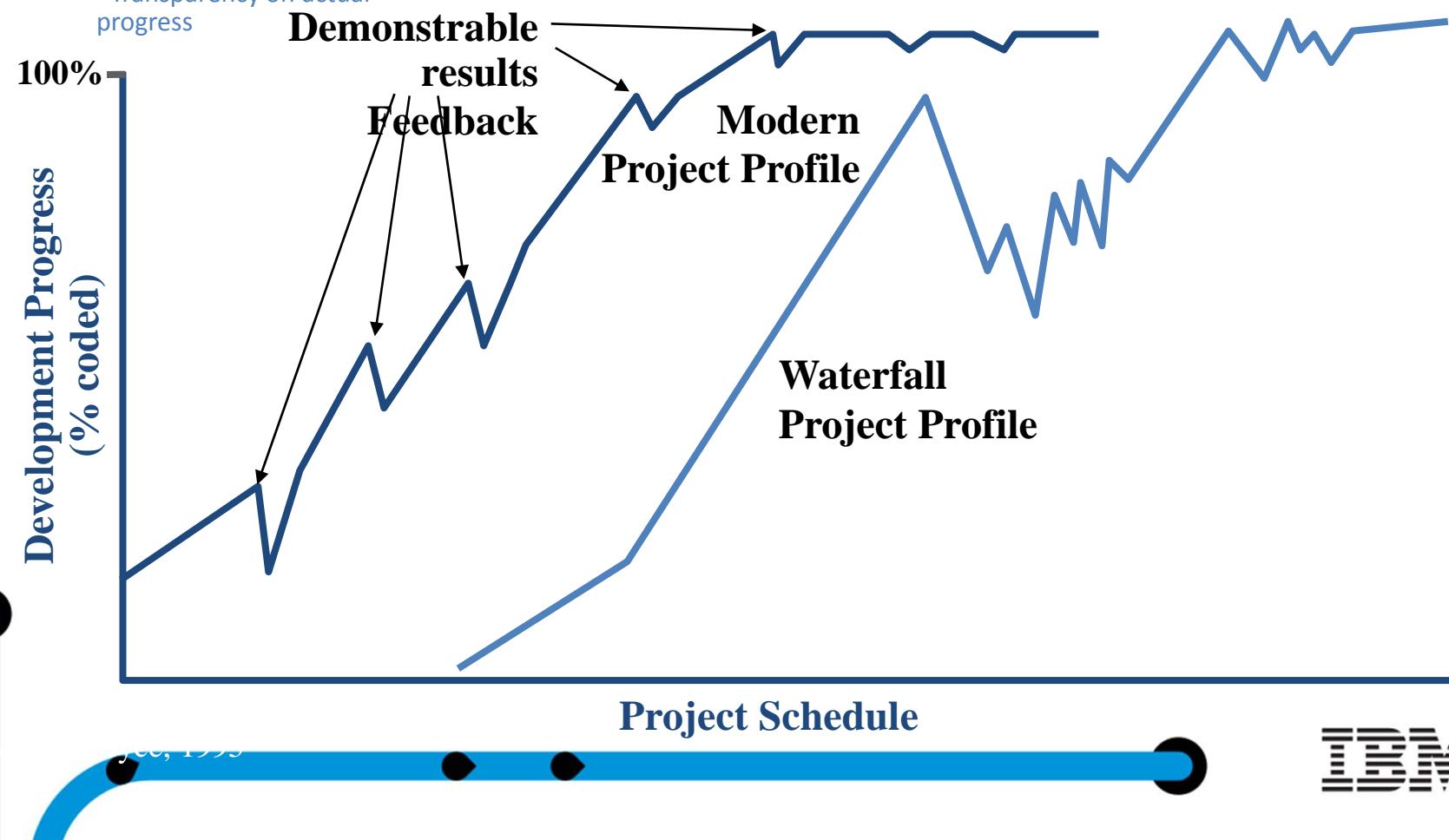


## With An Incremental, Iterative, “Agile” Development Process

Sequential phases, but iterative activities...

*The main value comes from:*

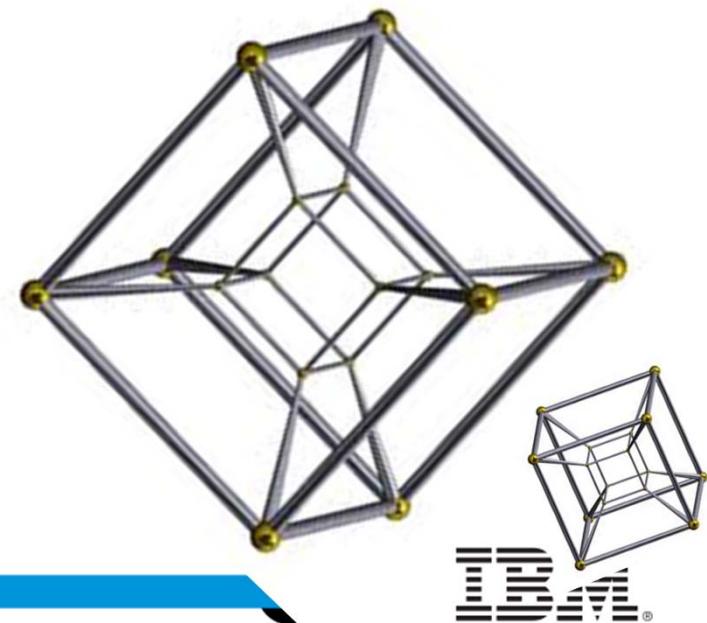
- Breaking early and often
- Demonstrable feedback
- Transparency on actual progress





## Defining Disciplined Agile Delivery (DAD)

- The DAD process framework is an agile approach to IT solution delivery that is:
  - People-first
  - Learning-oriented
  - Risk and value driven
  - Goal-driven
  - Hybrid
  - Enterprise aware
  - Scalable



## People First: Principles and values

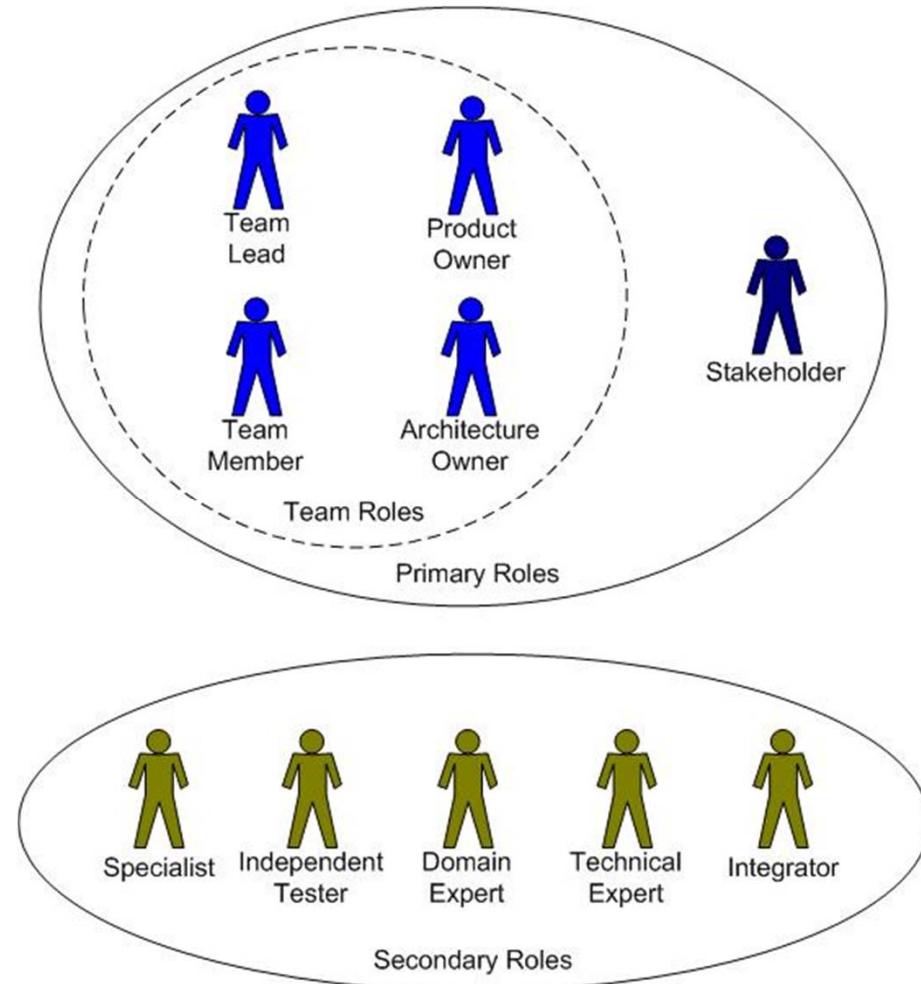
- People and the way they collaborate are the primary determinant of success
- DAD team members are:
  - Self disciplined – commit only to work they can accomplish and do it well
  - Self-organizing – estimate and plan own work
  - Self aware – understand how to improve
- DAD encourages:
  - Cross functional teams
  - Generalizing Specialist
  - No hierarchy within teams





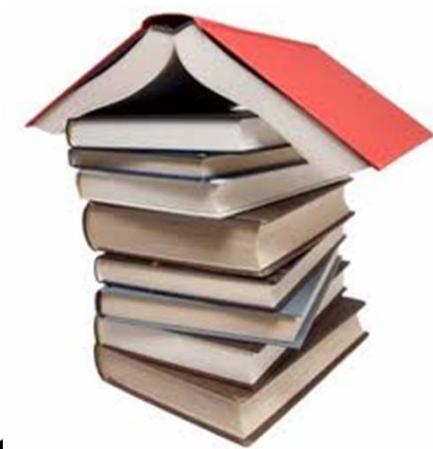
## People First: Potential roles on disciplined agile teams

- Primary roles:
  - Stakeholder
  - Team Lead
  - Product Owner
  - Agile Team Member
  - Architecture Owner
- Secondary/optional roles:
  - Domain Expert
  - Technical Expert
  - Independent Tester
  - Integrator
  - Specialist



# Learning Oriented

- Domain learning
  - Initial requirements envisioning
  - Incremental delivery of a potentially consumable solution
  - Active stakeholder participation throughout lifecycle
- Process improvement
  - Retrospectives at the end of an iteration
  - Tracking of improvements
  - Sharing of skills through non-solo development
- Technical learning
  - Architecture spikes
  - Proving the architecture with working code
- General strategies
  - Training
  - Education
  - Mentoring/coaching
  - Individuals are generalizing specialists, not just specialists



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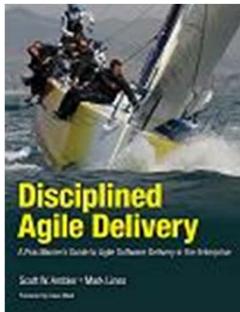
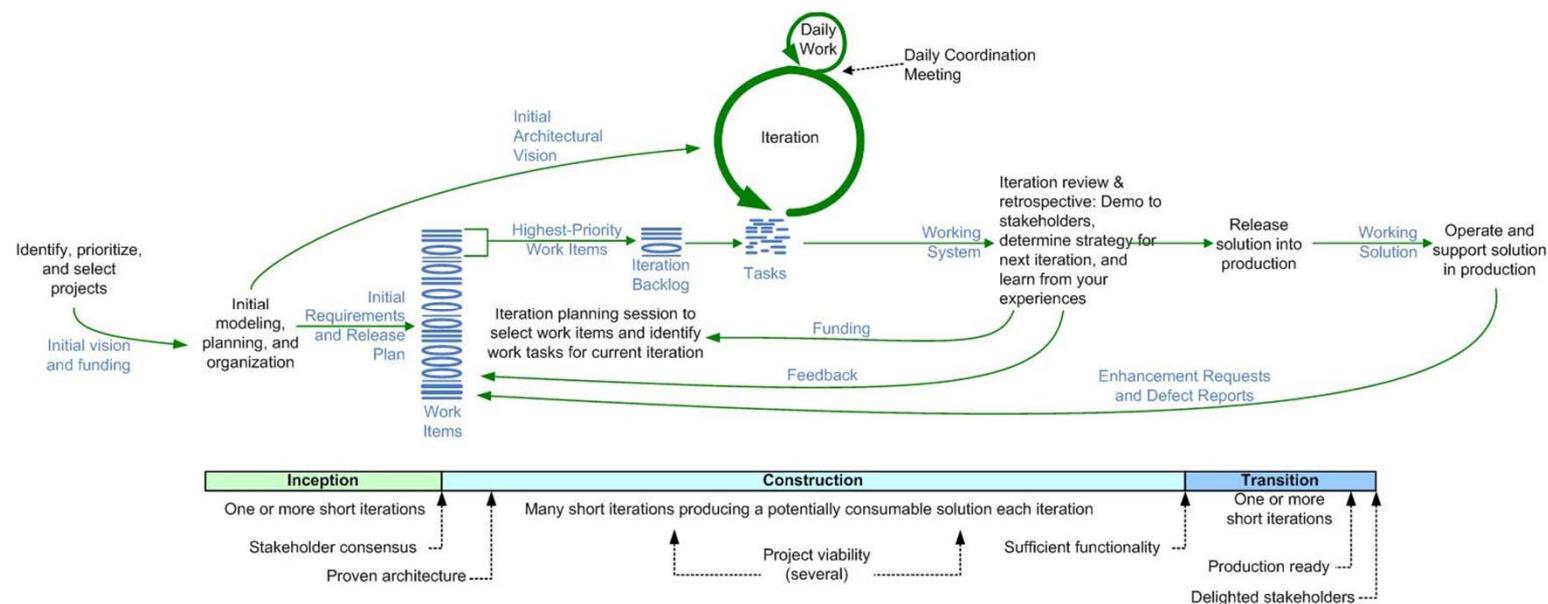
## Risk-Value Driven

- Address common project risks, for example:
  - Stakeholder consensus around vision
  - Proving the architecture early
  - Align with enterprise direction
  - Work on things that promote learning early in the lifecycle
- Value Driven
  - Work on the most valuable things first
  - Continued assessment of project viability and business value
  - Determining when sufficient functionality has been produced
  - Potentially consumable solutions throughout the lifecycle
  - Continually assessing new work against the vision





## The Disciplined Agile Delivery life cycle – Basic



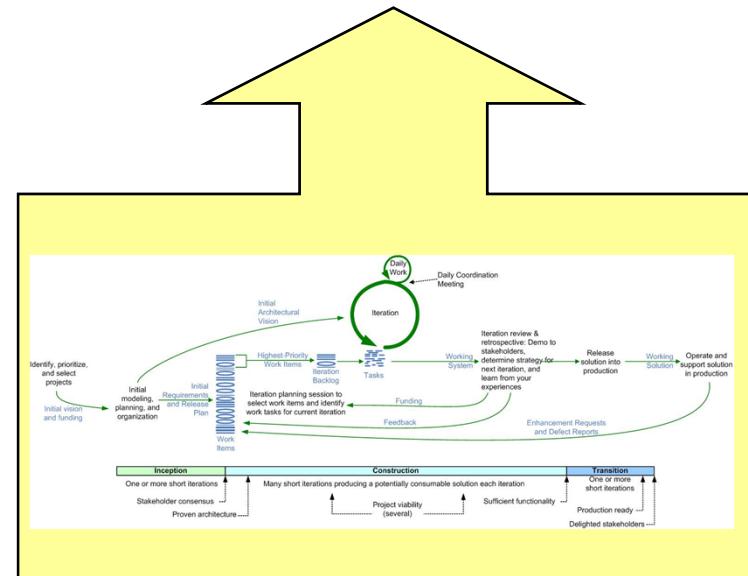
The Disciplined Agile Delivery (DAD) process framework is a people-first, learning-oriented hybrid agile approach to IT solution delivery. It has a risk-value lifecycle, is goal-driven, scalable, and is enterprise aware.





## Goal Driven Phases + Iterations = Success

### Management Control



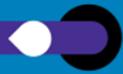
### Developer Productivity



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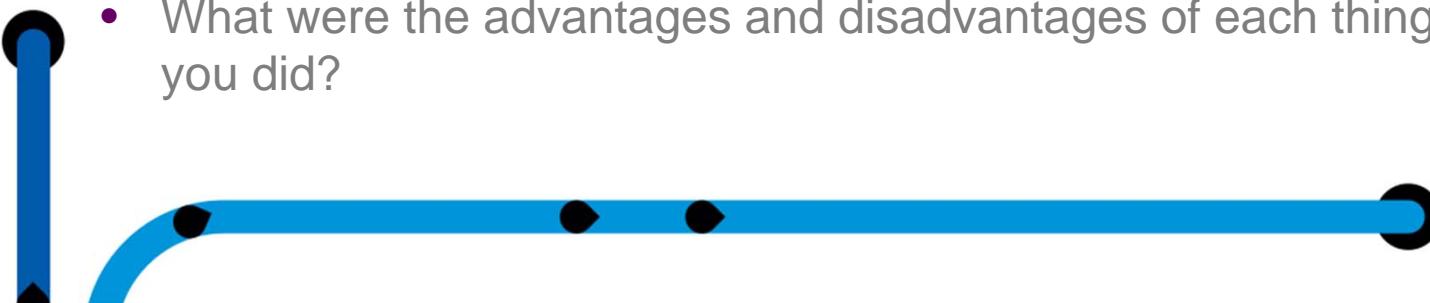
Inception Goals	Construction Goals	Transition Goals
<ul style="list-style-type: none"><li>• Identify the vision for the project</li><li>• Bring stakeholders to agreement around the vision</li><li>• Align with the enterprise direction</li><li>• Identify initial requirements, technical strategy, and project plan</li><li>• Setup the work environment</li><li>• Form initial team</li><li>• Secure funding</li><li>• Identify risks</li></ul>	<ul style="list-style-type: none"><li>• Incrementally produce a potentially consumable solution</li><li>• Address changing stakeholder needs</li><li>• Move closer to a deployable release</li><li>• Maintain or improve upon existing quality levels</li><li>• Prove architecture early</li></ul>	<ul style="list-style-type: none"><li>• Ensure the solution is production ready</li><li>• Ensure the stakeholders are prepared to receive the solution</li><li>• Deploy the solution into production</li></ul>
<h2>Ongoing Goals</h2> <ul style="list-style-type: none"><li>• Fulfill the project mission</li><li>• Grow team members skills</li><li>• Enhance existing infrastructure</li></ul>		<ul style="list-style-type: none"><li>• Improve team process and environment</li><li>• Leverage existing infrastructure</li><li>• Address risk</li></ul>





## Goals Driven: An example

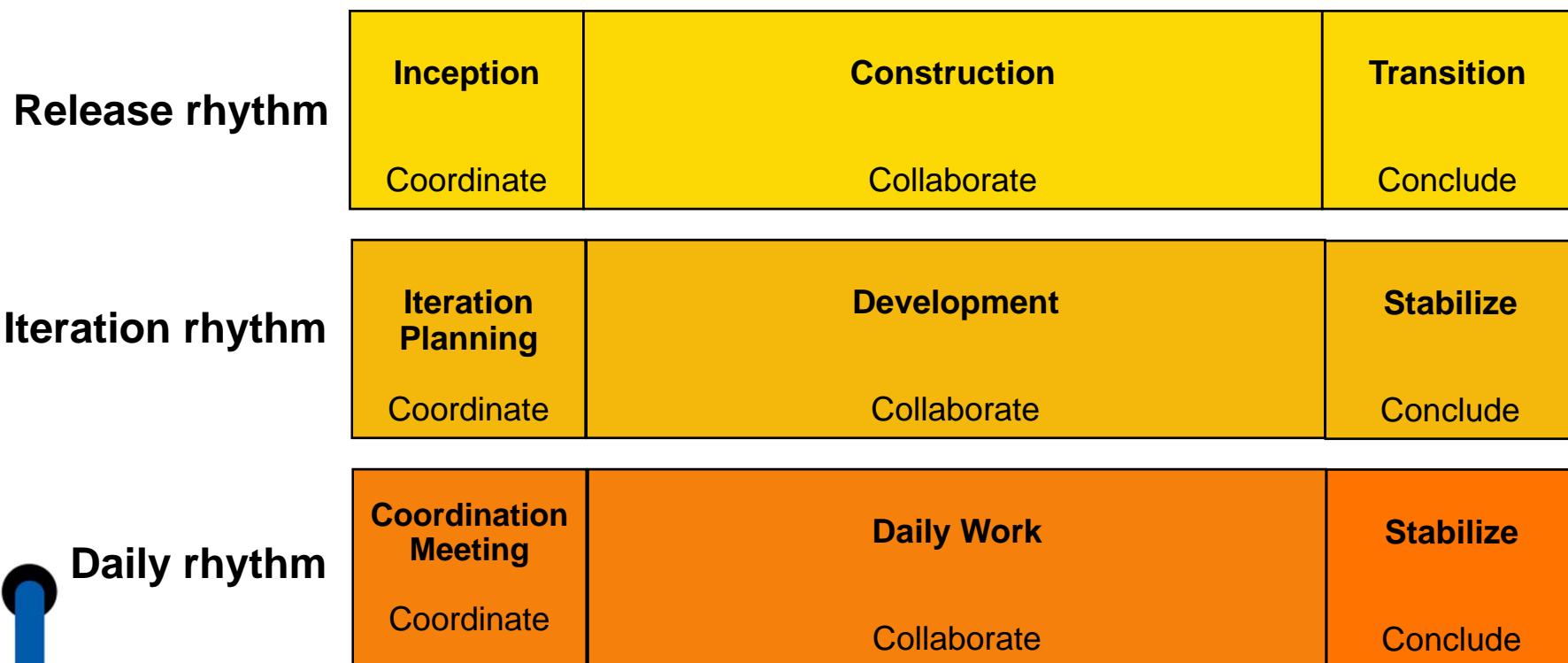
- Instructions:
  - Consider your actual experiences on agile projects, if any
  - Share your experiences exploring the initial requirements/scope at the beginning of agile projects
- Issues to consider:
  - Who did you work with?
  - What types of models/artifacts did you create, if any?
  - What level of detail did you go to?
  - How long did it take?
  - How did you go about doing it?
  - What were the advantages and disadvantages of each thing you did?





## Concept: the Agile 3C rhythm

*The coordinate-collaborate-conclude rhythm occurs at several levels on a disciplined agile delivery (DAD) project:*





## DAD Inception Phase

### Coordinate

### Collaborate

### Conclude

**Project / Product Approved to start**

- Initiate team
- Plan envisioning sessions
- Schedule stakeholders for envisioning sessions

- Refine shared vision
- Requirements envisioning
- Architecture envisioning
- Consider feasibility
- Release planning
- Staff team(s)
- Setup environment
- Secure funding
- Identify risks

- Light-weight milestone review
- Communicate vision to stakeholders
- Commit to iteration and release cadence

**Stakeholder consensus**

Up to a few hours  
(If staff is on hand)

Ideally: 1-2 weeks  
Average: 4 weeks

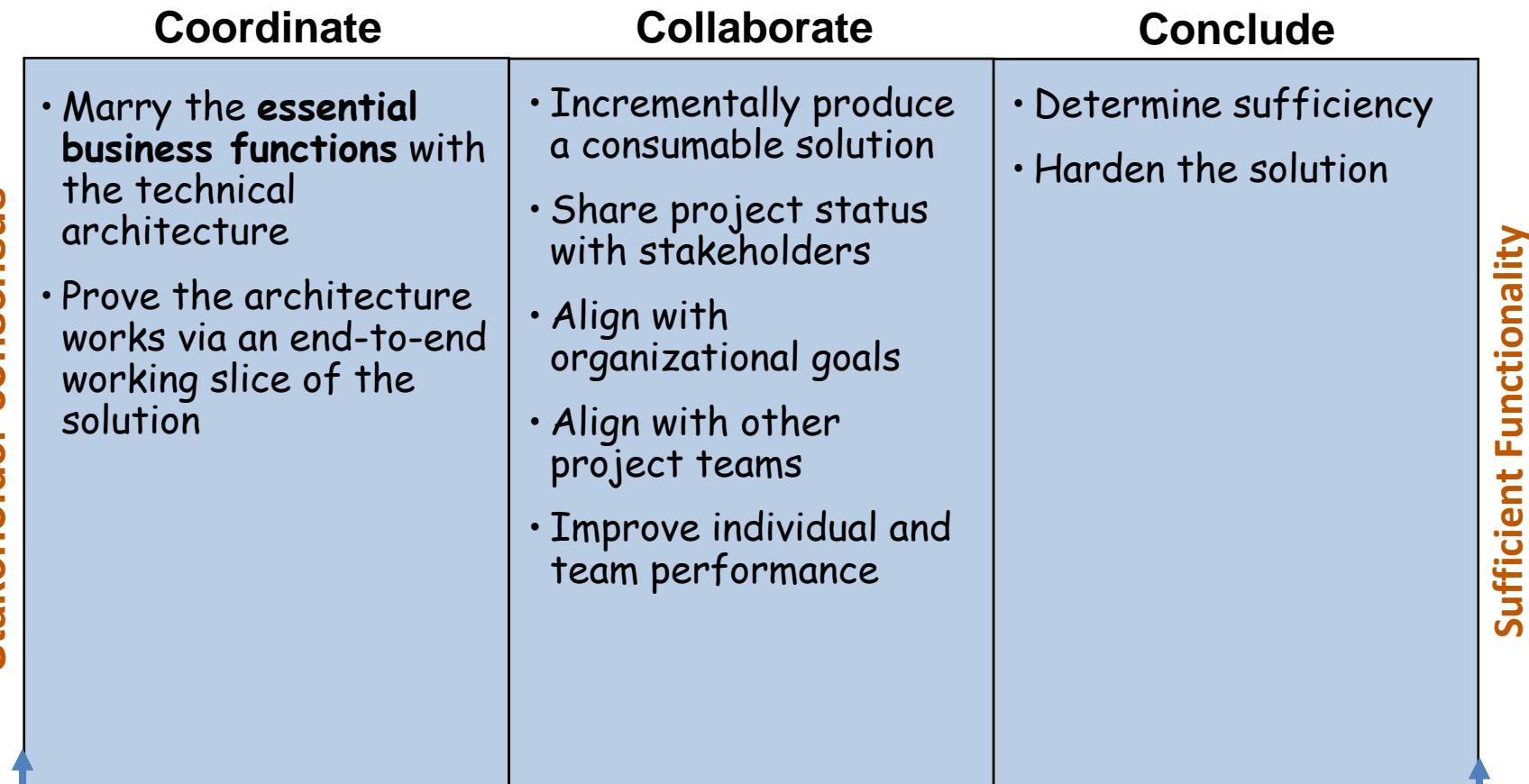
Up to a few hours

Worst case: Several months





## DAD Construction Phase



Worst case: Many iterations





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## Coordinate

- Iteration planning
- Iteration modeling

## Collaborate

- "Standard" activities / practices:**
- Visualize work
  - Daily coordination meeting
  - Developer regression testing
  - Evolutionary Architecture and Design Architecture spike (task of a story)
  - Continuous Integration
  - Refactoring
  - Sustainable pace
  - Prioritized requirements
  - Configuration management
  - Track "done" work (e.g. burndown)
  - JIT model storming

- "Advanced" practices:**
- Test-driven development (TDD)
  - Acceptance TDD
  - Continuous deployment (CD)
  - Parallel independent testing
  - Non-solo development
  - Look-ahead modeling
  - Look-ahead planning
  - Continuous documentation

## Conclude

- Iteration demo
- Retrospective
- Consider sufficient functionality
- Release plan update

**Construction Iteration start**

**Potentially consumable solution**

2 hours for  
each week of  
the iteration

Typical: Two weeks for simpler situations,  
Four weeks for complex projects with cross-agile team integration  
Worst case: Six weeks

2 hours per each  
week of iteration



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## Typical Construction Day



### Collaborate

### Coordinate

### Conclude

- Daily coordination meeting
- Update task board
- Update iteration burndown

- Address blocking issues
- Create tests
- Develop code
- Integrate
- Fix problems
- Model storm
- Promote code

- Stabilize build

Start of Day

Working Build

Up to 15 minutes

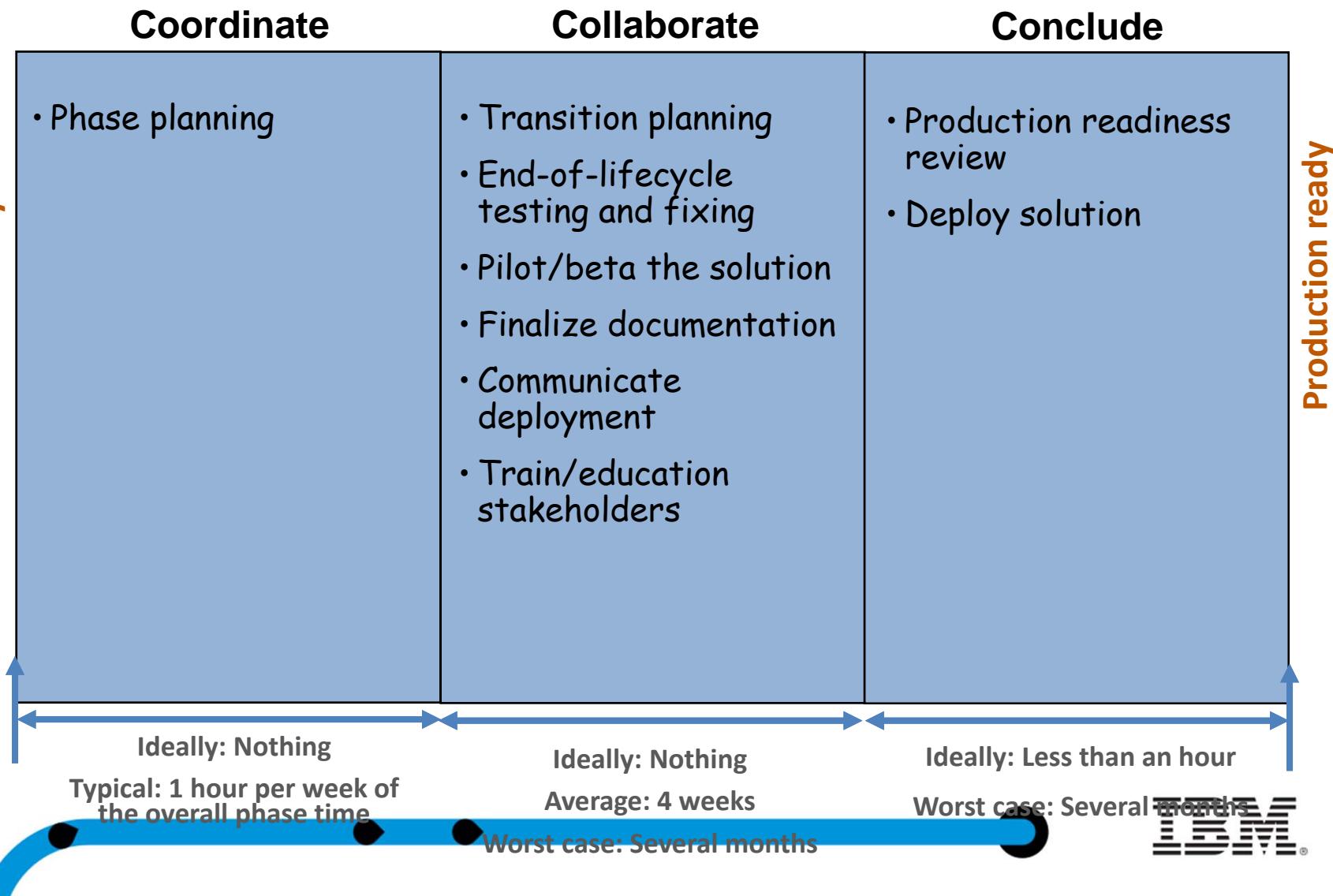
Typical: 5 to 6 hours

Ideally: Not a concern



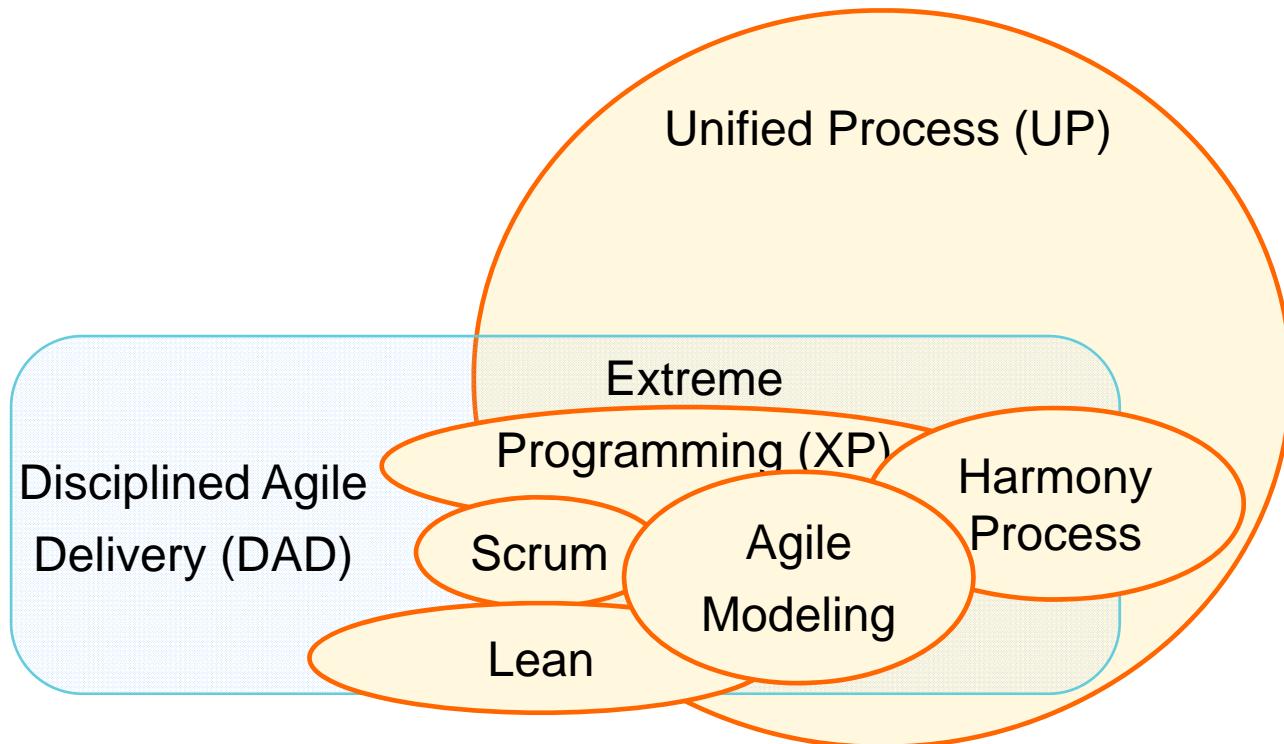


## DAD Transition Phase





## Hybrid: DAD adopts best practices from several agile methods



DAD is a hybrid process framework. DAD adopt best practices and philosophies from several methodologies



## Enterprise Aware: Optimizing the whole

- Follow corporate conventions:
  - Standards and guidance for the architecture
  - Coding standards, data guidelines, UI guidelines, etc.
- Enhance the organizational ecosystem:
  - Reusing and leveraging the existing infrastructure is great
  - Enhancing and building out the infrastructure is better
- Share learnings:
  - Personal and team improvement is great
  - Organization-level improvement is better
- Interact with other (potentially non-agile) teams:
  - Enterprise architecture
  - Data management
  - Governance
  - Quality assurance
  - Project management office (PMO)



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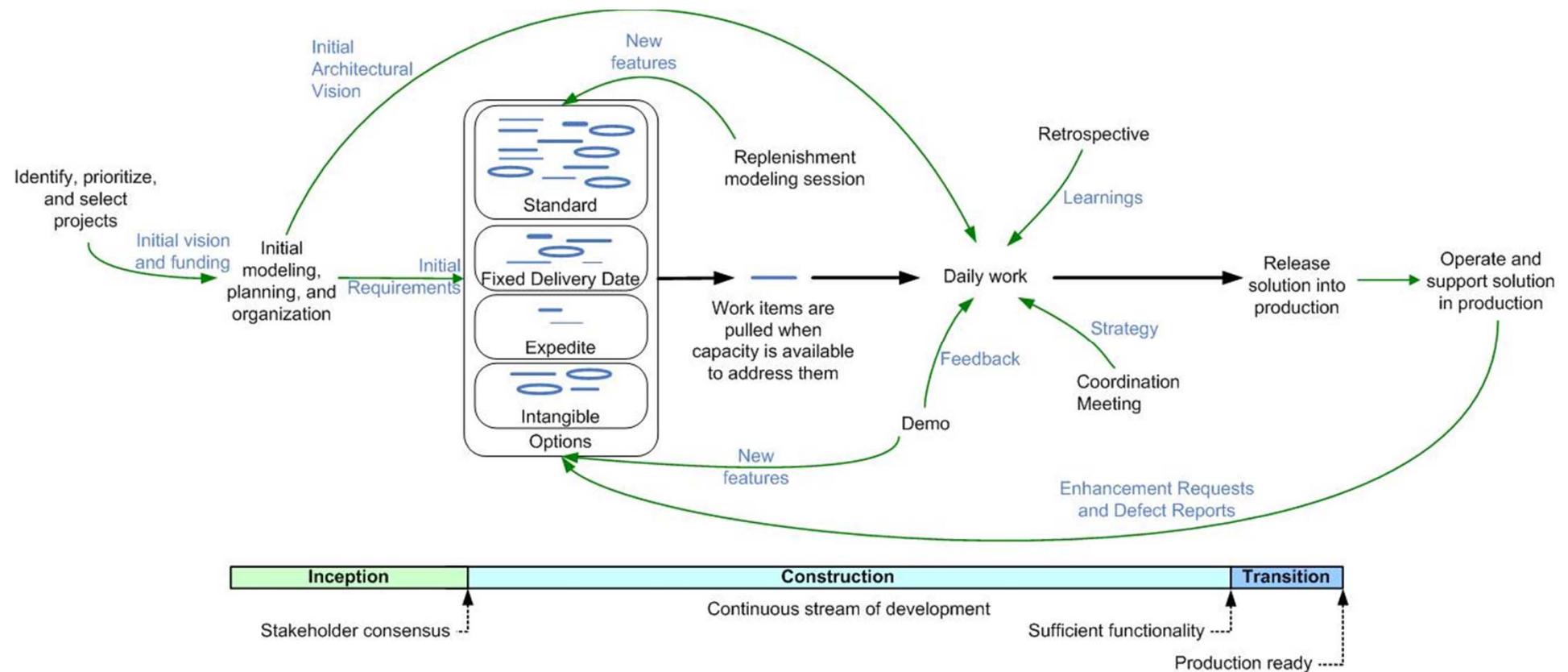
## Enterprise Aware: Governing agile teams

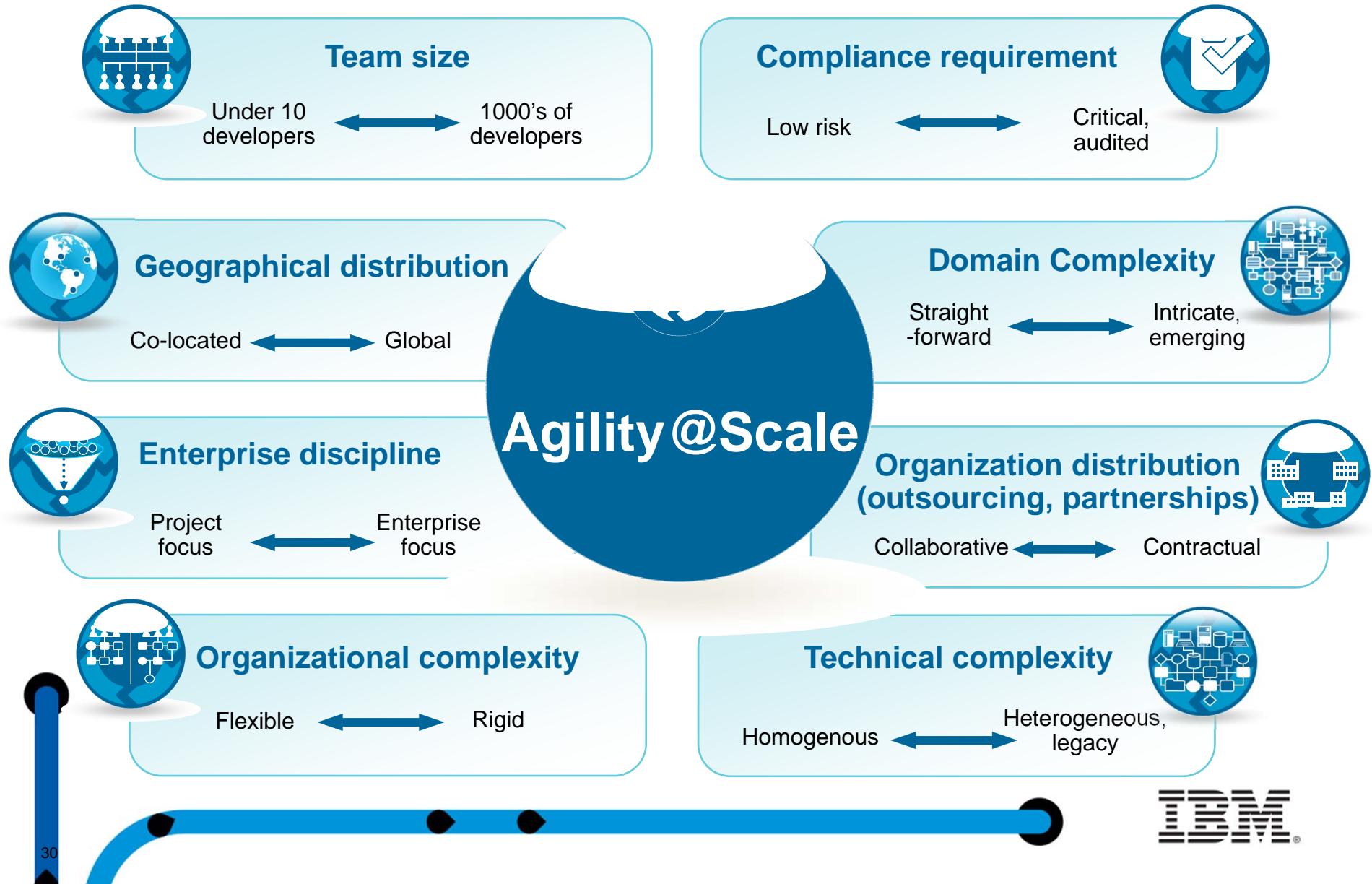
- Agile teams provide:
  - Significantly greater visibility to stakeholders regarding their actual status
  - Many more opportunities for stakeholders to steer the project
  - BUT... require stakeholders to be actively involved and accountable
- Practices:
  - Active stakeholder participation
  - Potentially consumable solutions every iteration
  - Risk-value lifecycle
  - Explicit, light-weight milestone reviews
  - Daily coordination meetings
  - Iteration demos
  - All-hands demos
  - Follow enterprise development guidance
  - Work closely with enterprise architects
  - Automated metrics gathering





## The Disciplined Agile Delivery life cycle – Advanced







## The Discipline in DAD





## Some agile whitepapers on IBM.com

- The Agile Scaling Model (ASM): Adapting Agile Methods for Complex Environments
  - <ftp://ftp.software.ibm.com/common/ssi/sa/wh/n/raw14204usen/Raw14204USEN.PDF>
- Scaling Agile: An Executive Guide
  - <ftp://public.dhe.ibm.com/common/ssi/sa/wh/n/raw14211usen/Raw14211USEN.PDF>
- Improving Software Economics: Top 10 Principles of Achieving Agility at Scale
  - <ftp://public.dhe.ibm.com/common/ssi/ecm/en/raw14148usen/Raw14148USEN.PDF>
- Enable the Agile Enterprise Through Incremental Adoption of Practices
  - <http://public.dhe.ibm.com/common/ssi/ecm/en/raw14077usen/Raw14077USEN.PDF>
- Disciplined Agile Delivery: An Introduction
  - <http://public.dhe.ibm.com/common/ssi/ecm/en/raw14261usen/Raw14261USEN.PDF>



## Disciplined Agile Delivery (DAD) offerings

**DAD training (PMI approved, registered under provider number 1107)**

- Introduction to disciplined agile delivery: Self-paced virtual class (16 PDUs)
- Advanced disciplined agile delivery: 3 days (21 PDUs)

### Related Training

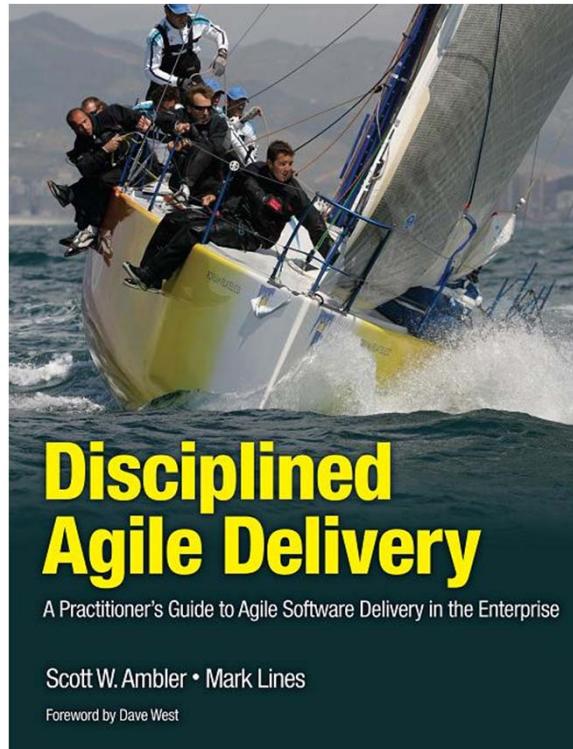
- Mastering DAD with RTC (RP350)
- Applying DAD with User Stories (RV037)
- Applying DAD with Use Cases (RV036)

### DAD Services

- DAD with RTC quick start
- IBM Rational Rapid Deployment for Agile Delivery
- Collaborative Lifecycle Management (CLM) for IT
- Agile Jumpstart

### DAD Products

- The DAD process template for Rational Team Concert (RTC)



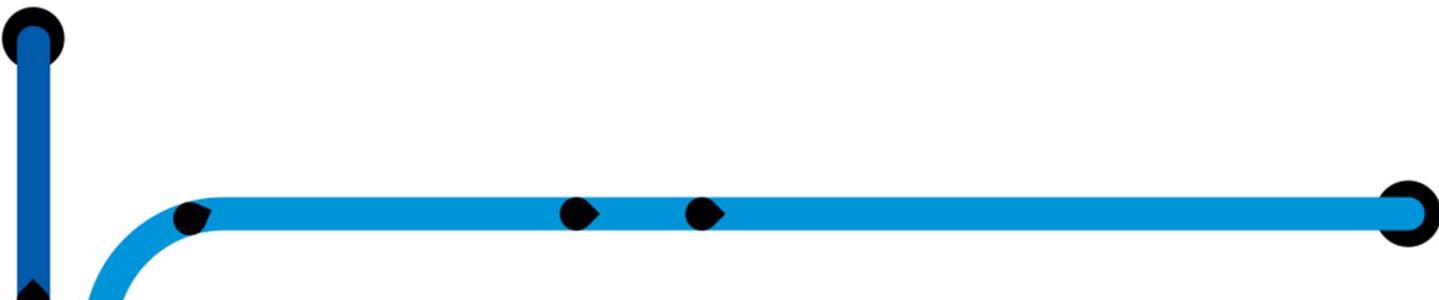


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# QUESTIONS

The word "QUESTIONS" is rendered in a large, bold, black font. The letters are partially transparent, revealing a collage of diverse business people's faces (men and women of various ethnicities) behind them, suggesting a community or network of professionals.

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