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Product Development with Scrum

XP San Diego

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By Paul Hodgetts, Agile Logic www.AgileLogic.com

Introductions

Agile Logic
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- **Solutions for Delivering Your Projects:**
  - Agile Process Adoption Solutions
  - Coaching, Consulting, Mentoring Services
  - Training in Agile Processes, Software Development and Enterprise Technologies
  - Turn-Key Software Development
- **Fullerton, CA, based**
- **Founded 2001 by industry veterans**
- **Contact info:** www.agilelogic.com (866) 64-AGILE

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Paul Hodgetts

- Team coach, trainer, consultant, developer
- Founder and CEO of Agile Logic
- 22 years overall, 5 years agile experience
- Certified ScrumMaster Trainer
- Innovator in Agile business and project management
- Author (Extreme Programming Perspectives)
- Presenter at conferences (ADC, XPAU, JavaOne)
- Agile Alliance Program Director
- Member of CSUF agile advisory board
- Contact info: phodgetts@agilelogic.com

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Process Improvement

- *"Improving the way we do things around here."*

- *Not "doing a process" for its own sake*

- *Increasing our capability to deliver software*

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Most development is chaotic

- *Code and fix*

- *Short term decisions*

- *Does not scale*

- *Increasing debt*

  - *Quality, design, integration, knowledge*

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Some Development is Bureaucratic

- Complex
- Mandated activities
- High overhead
- Long release cycles
- Inability to keep up with business needs
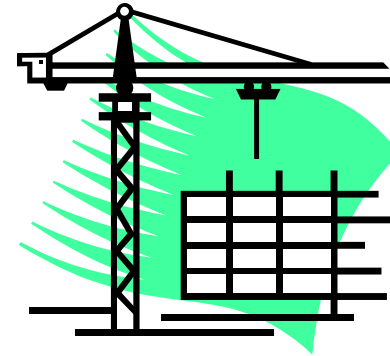
Options for Process Improvement

- *"Heroic" Approach*
  - Relies heavily on individual effort
  - Difficult to plan, results unreliable
  - High risk of failure
  - Heavy human cost

Options for Process Improvement

- ***"Formal" Methodologies***
  - Detailed, bureaucratic process
  - Engineering/construction-style planning – predictive of activities
  - Expensive, time-consuming to implement
  - Limited success, not popular with teams

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Options for Process Improvement

- *"Agile" Methodologies*
  - Just enough process
  - Adaptive rather than predictive
  - People-oriented focus to the process
  - Faster and less-costly to implement

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What Exactly Is an "Agile" Process?

- *Focus on adaptability and responsiveness*
- *Built around core strategies:*
  - Iterative and Incremental Development (IID)
  - Adaptive project management
  - Collaborative, "whole team" approach
  - Common shared vision and goals
- *Constructed from "best practices":*
  - Emphasis on simplicity, lightness, communication, self-directed teams, quality and technical excellence

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The World of Agile Processes

- *Scrum*
- *Extreme Programming (XP)*
- *Feature-Driven Development (FDD)*
- *DSDM (Dynamic System Development Method)*
- *Crystal Family of Processes, e.g. Crystal Clear*
- *Lean Software Development*
- *Adaptive Software Development (ASD)*
- *Others: MSF Agile, Agile UP/RUP, Evo, Win-Win Spiral*

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The Agile Alliance

- 2001 – representatives from agile processes meet in Snowbird, Utah.
- Agreed on a "manifesto" of values and principles:
  - Individuals and interactions over processes and tools
  - Working software over comprehensive documentation
  - Customer collaboration over contract negotiation
  - Responding to change over following a plan
- **"That is, while there is value in the items on the right, we value the items on the left more."**

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What in the World is "Scrum?"

Why Scrum?

- *Develops software in incremental steps*
- *Requires delivery of completed software*
- *Works with your instincts and expertise*
- *Focuses combined power of team*
- *Incorporates learning and adaptation*
- *Easy to learn*
- *Facilitates incremental adoption*
- *Scrum is low risk to implement*

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Scrum is all about <u>Common Sense.</u>

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The Zen of Scrum

- ### *Scrum is simple*
  - *Small number of practices*
  - *Practices are straightforward*
- ### *Scrum is hard*
  - *Requires involvement and common sense*
  - *Requires constant inspection and adaptation to project realities*
- ### *Scrum is subtle*
  - *Practices are synergistic*
  - *Higher-level benefits emerge*

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Scrum History

- *1993 – Ken Schwaber at ADM developed cycle framework*
- *1994 – Jeff Sutherland at Easel defined Scrum*
- *Ken and Jeff work together to refine Scrum*
- *1996 – IDX scales Scrum to ~600*
- *1996 – Scrum published at OOPSLA*
- *2000 – XP practices used within Scrum framework*
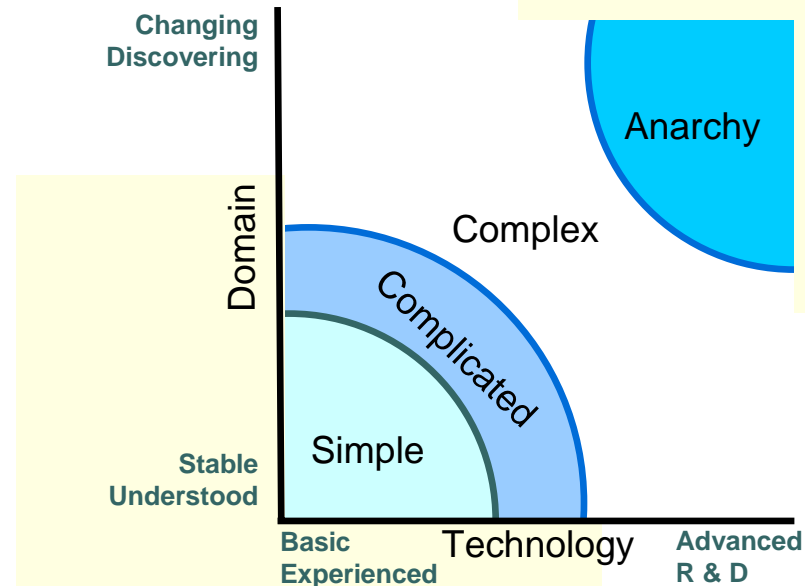- *2003 – ScrumMaster certifications*

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Scrum Projects

- *Scrum has been used on 1,000s of projects*
- *Types of applications:*
  - Financial, FDA life-critical, government, shrink-wrap, enterprise workflow, biotech, embedded real-time, internet e-business
- *Some well-known organizations:*
  - Primavera, Yahoo!, PayPal, Nike

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Project Complexity

- *Three dimensions of complexity*
  - Domain
  - Technology
  - People
  - Just about all projects these days are complex

Changing
Discovering

Domain

Anarchy

Complex

Complicated

Simple

Stable
Understood

Basic
Experienced

Technology

Advanced
R & D

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Defined, Predictive Process Control

- *Predict and plan expected activities*
- *Management by controlling activities per plan*
- *Change is minimized and managed via change control*

Project Development Schedule
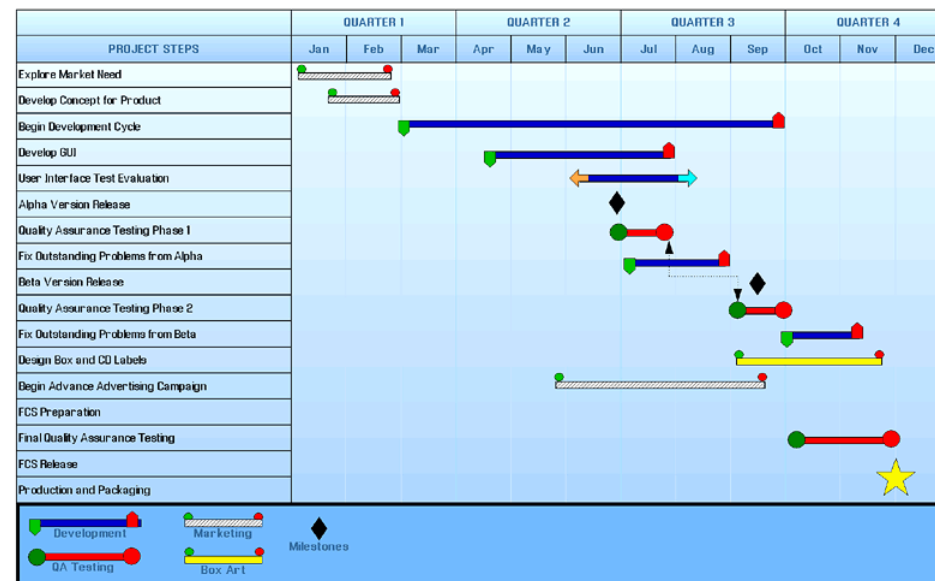
Why Empirical Process Control?

- *Ad Hoc control works for low precision problems*
- *Defined control can bring precision into play*
- *Complex problems are not predictable, change is common*
- *Defined control breaks down under unpredictability*
- *Empirical control manages complexity*

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Empirical Process Basics

- *Visibility*
  - Important aspects must be visible
  - Realistic and true
- *Inspection*
  - Frequent inspection
  - Ability to assess
- *Adaptation*
  - Monitor for out-of-band results
  - Quick adjustments

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Pair Dialogue – Empirical vs. Defined

- **Pair up with someone different, turn to each other and share short answers to the following:**
  - What are the problems you see with the predictive, defined approach?
  - How does your project team deal with them now?
  - What might be a better way to solve them?

The Scrum Process Structure

DAILY DEVELOPMENT CYCLE

every 24 hours

Daily Scrum

Sprint

Sprint Backlog

SPRINT CYCLE
(30 days)

New functionality is demonstrated at end of sprint

Selected Product Backlog

PRODUCT RELEASE CYCLE
(1 to 3 sprints...)

Product Backlog: Emerging, prioritized requirements

BUSINESS PLANNING CYCLE
(quarterly, yearly...)

Vision: Anticipated ROI, Releases, Milestones

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Source: Adapted from *Agile Software Development with Scrum* by Ken Schwaber and Mike Beedle.

The Context of Scrum

- Business cycles define overall goals
- Product cycles define product releases
- Context provides vision for development
- Context not specifically part of defined Scrum

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The Framework of Scrum

- *Iterative, incremental framework*
- *Each iteration driven by product needs*
- *Team selects target functionality for increment*
- *Iterations have a fixed timebox*
- *Each iteration produces completed product increments*
- *Two nested cycles – Sprint and Daily*

The Core of Scrum

- *Within an iteration*
- *Team determines how to build the increment*
- *Daily inspection and adaptation*
- *Creative process exploited within the core*

THE "WHOLE TEAM"

BUSINESS TEAM

STAKEHOLDERS
END USERS
MANAGEMENT
OWNERS/B.O.D.
MARKETING/SALES
CUSTOMER SUPPORT
TRAINING

PRODUCT OWNER
PRODUCT MANAGER
BUSINESS ANALYST

DEVELOPMENT TEAM
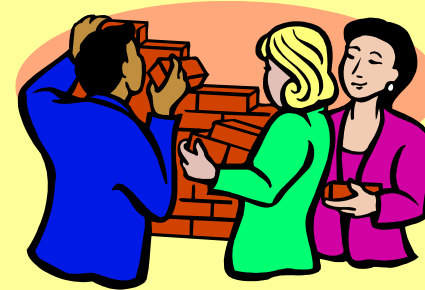
PROGRAMMERS
ARCHITECTS & DESIGNERS
TECHNICAL LEADS
QA / TESTERS
IA / UI DESIGNERS
DATABASE DESIGNERS / DBAS
TECHNICAL WRITERS
NETWORK ENGINEERS
HARDWARE DESIGNERS
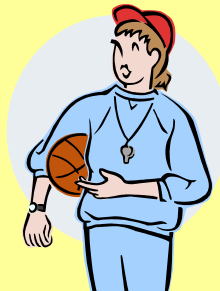
SCRUMMASTER
ADMINISTRATIVE
PROCESS

The Roles in a Scrum Project

- *ScrumMaster*
  - Facilitator and coach
- *Product Owner*
  - Manages product vision and ROI
- *Development Team*
  - Realizes the product plans
- *External Roles*
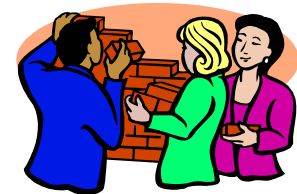
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ScrumMaster

- *Knows Scrum philosophy and practices*
- *Works to ensure team stays on-process*
- *Facilitates work of Product Owner and Development Team*
- *Protects the team from impediments*
- *Personal commitment to the team – the "sheepdog"*

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Product Owner

- *Represents the interests of the stakeholders*
- *Collaborates daily with the Development Team*
- *Communicates product requirements*
- *Prioritizes requirements based on business value and risk*
- *Uses "sushi" technique to stage completed business value*
- *Inspects increments*

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Development Team

- *Cross-functional team builds and completes increments*
- *Team estimates cost and communicates trade-offs*
- *Team mutually commits to Sprint backlog*
- *Team self-organizes and self-manages tasks*
- *Team is responsible for standards and practices*

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External Roles

- *External roles have minimal direct involvement*
- *Process issues interface via ScrumMaster*
- *Product issues interface via Product Owner*
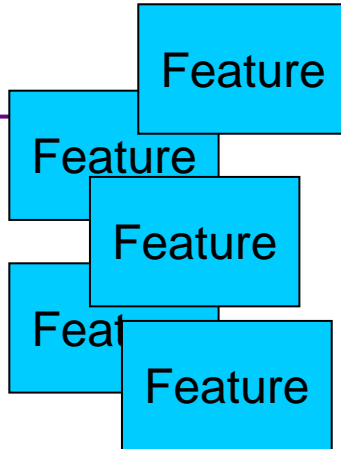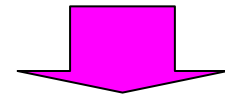- *Team is responsible for status and demonstrations*

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IDEA

FEATURE SETS & FEATURES

Feature

Feature

Feature

Feat

Feature

PRODUCT BACKLOG

Product Backlog Item

Product Backlog Item

Product Backlog Item

Product Backlog Item

Product Backlog Item

Product Backlog Item

Product Backlog Item
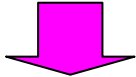
PRODUCT PLANS & STRATEGIES
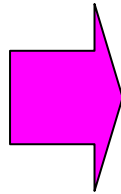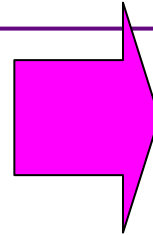
SPRINT BACKLOG

Sprint Backlog Item (Task)

Sprint Backlog Item (Task)

Sprint Backlog Item (Task)

Sprint Backlog Item (Task)

Sprint Backlog Item (Task)

Sprint Backlog Item (Task)

Sprint Backlog Item (Task)

Sprint Backlog Item (Task)

POTENTIALLY SHIPPABLE INCREMENT OF PRODUCT
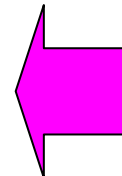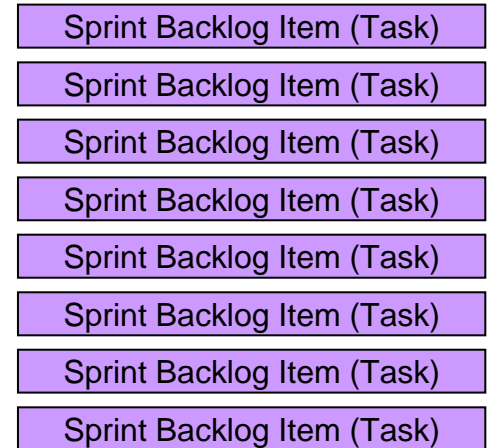
PROJECT ARTIFACTS
SOURCE CODE
DOCUMENTATION
TESTS
DATABASE SCHEMA
EXECUTABLES
ETC., ETC., ETC...

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Artifacts of a Scrum Project

- ***Product Backlog***
  - Owned by Product Owner
  - Captures product requirements
  - Prioritized by business value and risk
  - Supports coarse-grained estimating and planning

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Product Backlog

Story	Priority	Estimate
User browses product category list	M	2.0
User selects & browses product category	M	2.0
User views product details	M	1.0
User adds product to shopping cart	M	1.0
User views shopping cart	M	1.0
User starts check out, reviews order	M	1.0
User enters shipping info	M	1.0
User pays by credit card - simple case	M	2.0
User enters separate billing address	S	1.0
System validates payment with service	M	3.0
System save user profile for later order	S	2.0
User enters CV number	S	1.0
System displays order summary	S	1.0
User searches for product key words	S	3.0

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Artifacts of a Scrum Project

- ## *Sprint Backlog*
  - Owned by Development Team
  - Captures team implementation strategy
  - Supports fine-grained tracking

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Sprint Backlog

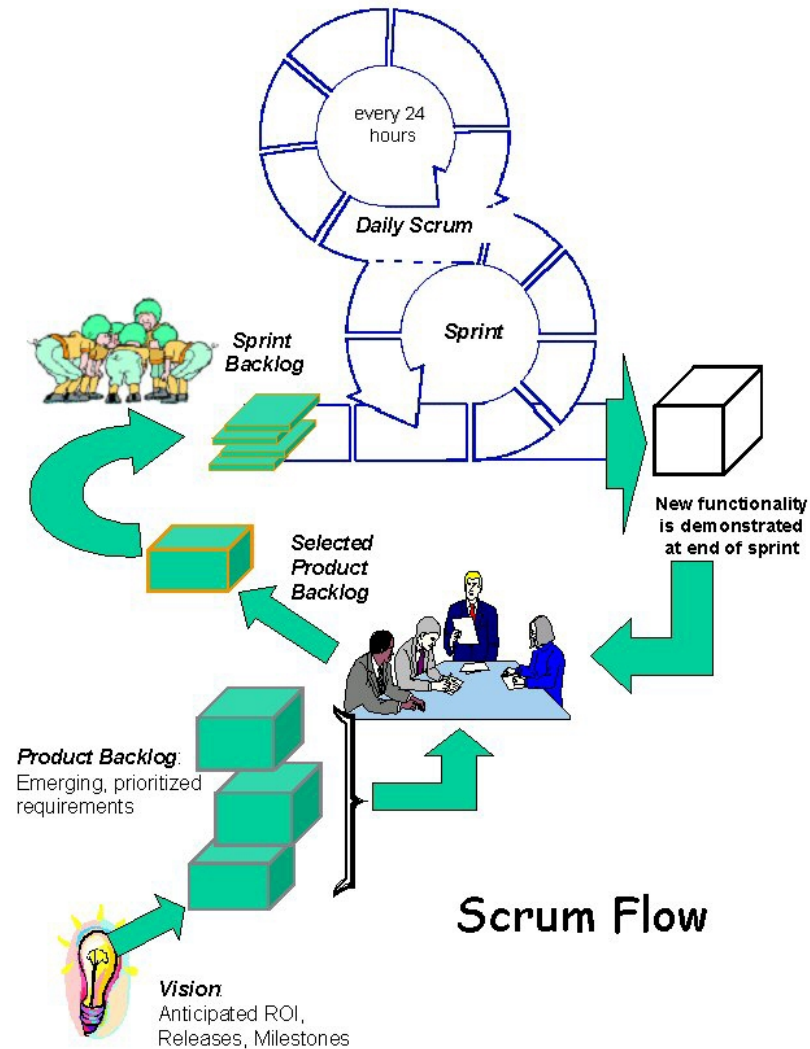| Date logged	RFA	Description	Remaining Effort in Days															
			2/11/2002	2/18/2002	2/25/2002	2/26/2002	2/27/2002	2/28/2002	3/1/2002	3/2/2002	3/3/2002	3/4/2002	3/5/2002	3/6/2002	3/7/2002	3/8/2002	3/9/2002	3/1…
		TOTAL EFFORT IN Man Days	46	22	15	25	22	21	19	19	19	16	17	18	26	18	0	0
11-Feb-2002	1	UI Object Model	2	1	0	0												
11-Feb-2002	1	UI Framework	3	1	1	2	1	1	1	1	1	0	0	2	5	3		
11-Feb-2002	1	Learn Torque API	2	0	0													
11-Feb-2002	1	Learn Struts/Tiles API	3	3	0													
11-Feb-2002	1	Finish HTML admin UI workflow	1	1	0													
11-Feb-2002	1	Complete SRS use cases for 2nd iteration	2	0	0													
11-Feb-2002	4	Migrate CPM to WAS 4.0 to get a WAR jetspeed	5	5	4	4	4	4	4	4	4	4	4	4	4	4		
11-Feb-2002	4	Implement UT for J2EE (Cactus)	8	2	2	2	2	2	2	2	2	2	2	2	2	1		
13-Feb-2002	4	Automate DB test data upload	12	4	2	2	0	1	1	1	1	1	1	1	1	1		
13-Feb-2002	4	Extract CPM DB schema with Torque	4	1	0	0												
18-Feb-2002	1	Design Access Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
18-Feb-2002	1	Design Business Entity Type	2	2	2	1	1	1	1	1	1	0	2	1	1	0		
25-Feb-2002	1	Set development environment			1	1	1	1	0	0	0	0						
25-Feb-2002	1	Verify what and how is used for attribute definition			1	0												
26-Feb-2002	4	Torque primary key generator for CPM				2	0											
26-Feb-2002	4	Torque/Struts/CPM OM prototype				2	2	1	0	0	0	0						
27-Feb-2002		Implement Business Entity Type UI					2	2	2	2	2	1	0	0	1	0		
27-Feb-2002	1	Define Access Group UI and workflow					1	1	1	1	1	1	1	1	1	0		
4-Mar-2002		BE Session façade				7	6	5	5	5	5	5	5	5	5	5		
7-Mar-2002	4	Torque Blob Problem													4	1		
8-Mar-2002	1	Deploy admin UI on WAS 3.5														1		

Artifacts of a Scrum Project

- *Product Increment*
  - Owned by everyone
  - "Complete" and potentially shippable system
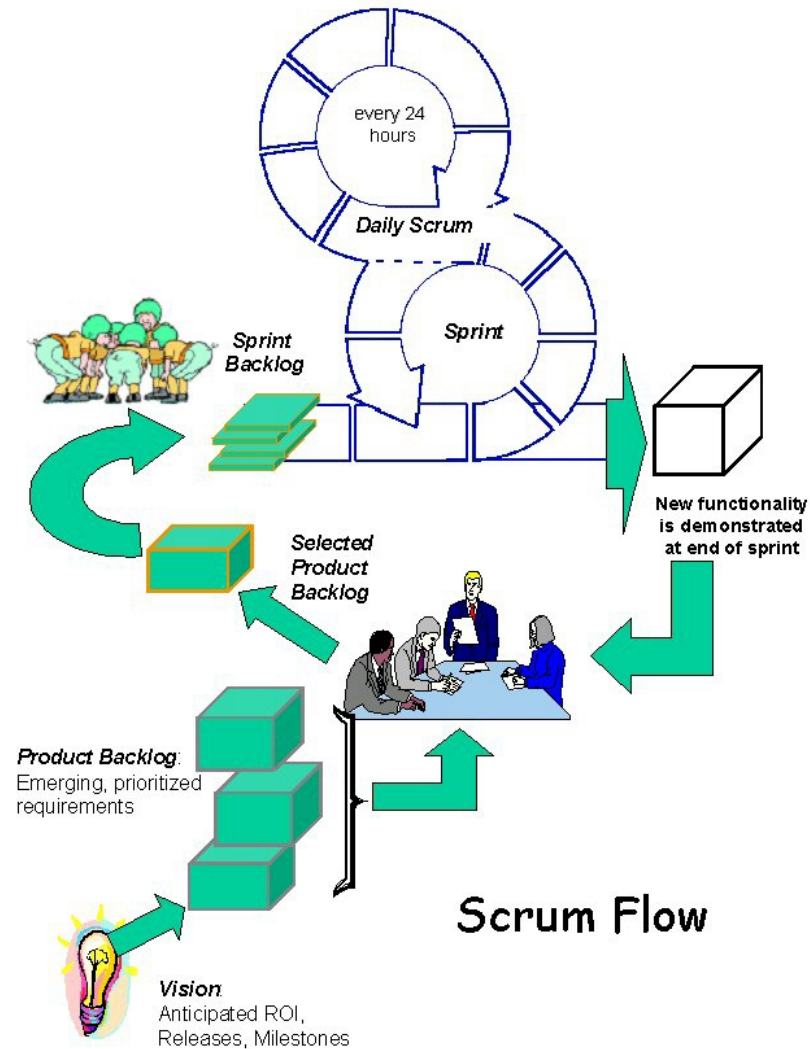 - The ultimate measure of progress

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Scrum Process Flow

every 24 hours

Daily Scrum

Sprint

Sprint Backlog

New functionality is demonstrated at end of sprint

Selected Product Backlog

Product Backlog: Emerging, prioritized requirements

Scrum Flow

Vision: Anticipated ROI, Releases, Milestones

Product Vision

- *Organization identifies overall project goals*
- *Organization devises overall product strategy to meet goals*
- *Organization defines investment and resource commitments*

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every 24 hours

Daily Scrum

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Scrum Flow

Vision: Anticipated ROI, Releases, Milestones

Develop Product Backlog

- *Product Owner plans and defines features sets*
- *Product Owner builds feature definitions*
- *Product Owner identifies Product Backlog items*
- *(Development Team estimates Product Backlog)*
- *(Product Owner prioritizes Product Backlog)*

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every 24 hours

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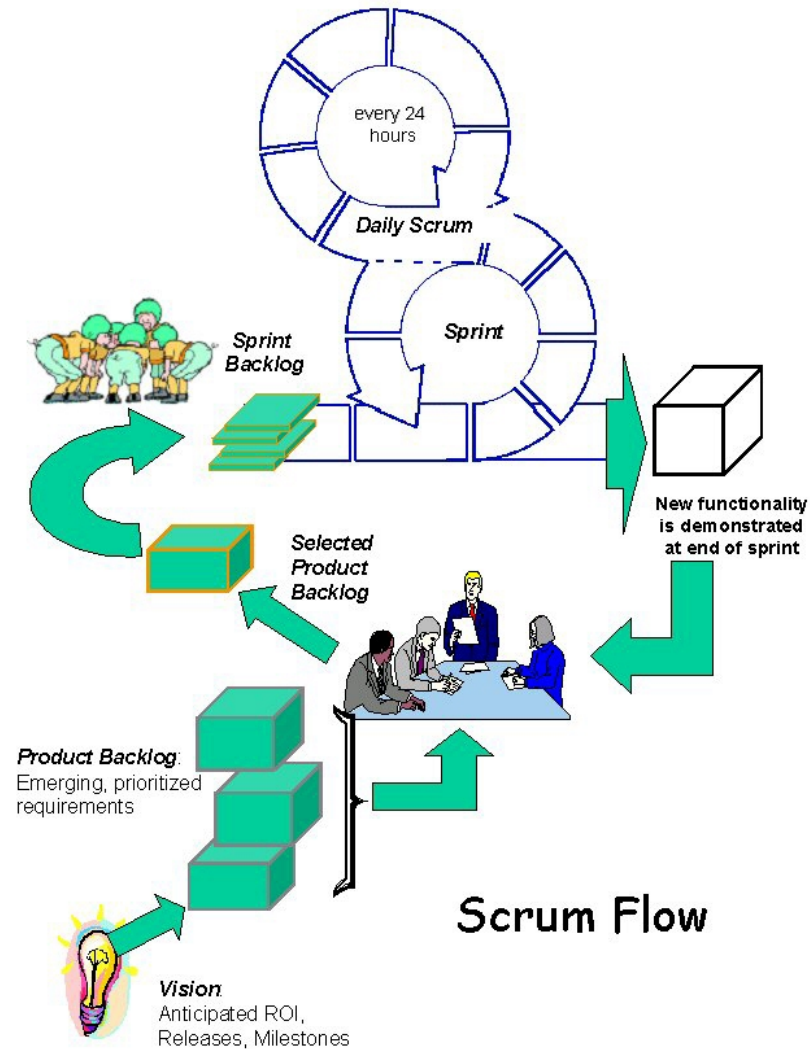
Scrum Flow

Sprint Planning

- *ScrumMaster, Product Owner, Development Team*
- *Typically about one day in duration*
- *Product Owner arrives with prepared Product Backlog*
- *Two parts – Select Backlog for Sprint, Sprint Backlog Planning*

Select Backlog for Sprint

- *Typically about a half-day in duration*
- *Product Owner and Development Team discuss Product Backlog items*
- *Product Owner and Development Team choose target Backlog items for Sprint*
  - Team agrees on "theme" for Sprint
  - Product Owner prioritizes on importance
  - Development Team estimates and commits

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Sprint Backlog Planning

- *Typically about a half-day in duration*
- *Development Team explores each Sprint Backlog item in more detail*
- *Development Team devises strategies for building Sprint Backlog Items*
- *Development Team builds Sprint Backlog*
  - Tasks, task estimates
  - Development team determines implementation plan
  - Initial task assignments
  - Sufficient to gain mutual commitment and start Sprint

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Scrum Process Flow

every 24 hours

Daily Scrum

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Scrum Flow

Vision: Anticipated ROI, Releases, Milestones

Daily Scrum

- *First thing in the day, all team members required to attend*
- *Typically about 15 minutes in duration*
- *Round robin, each team member answers three core questions:*
  - What did I accomplished over the past day?
  - What will commit to working on today?
  - What does the team need to know about?
    - Obstacles preventing progress?
    - Need to collaborate with others?
    - Important discoveries and learning?
- *Additional conversations arranged for after the meeting*
- *Non-team members may observe, but not participate*

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Sprint

- *Team can seek outside advice, help, information, support*
- *No direct advice, instructions, commentary, direction from outside the team*
- *Product Backlog for Sprint remains stable during Sprint*
- *Team works on and completes Backlog items*
- *Development Team adjusts strategies and tasks as needed*
- *Team updates Sprint Backlog tracking during the Sprint*

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Engineering Practices

- *Standards – design, coding, "sane subsets"*
- *Source code management*
- *Engineering and functional testing*
- *Design improvement – refactoring*
- *Frequent integration*
- *Automated builds and configuration management*
- *Collective code stewardship*
- *Collaborative work environment*

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What Does "Complete" Mean?

- *Code is written and compiles*
- *Code is unit tested*
- *Code adheres to standards, is clean and refactored*
- *Code is checked-in and builds*
- *Backlog item is functional tested*
- *System is regression tested*
- *Installation and deployment is ready*
- *Documentation, training is ready*

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Scrum Process Flow

every 24 hours

Daily Scrum

Sprint

Sprint Backlog

New functionality is demonstrated at end of sprint

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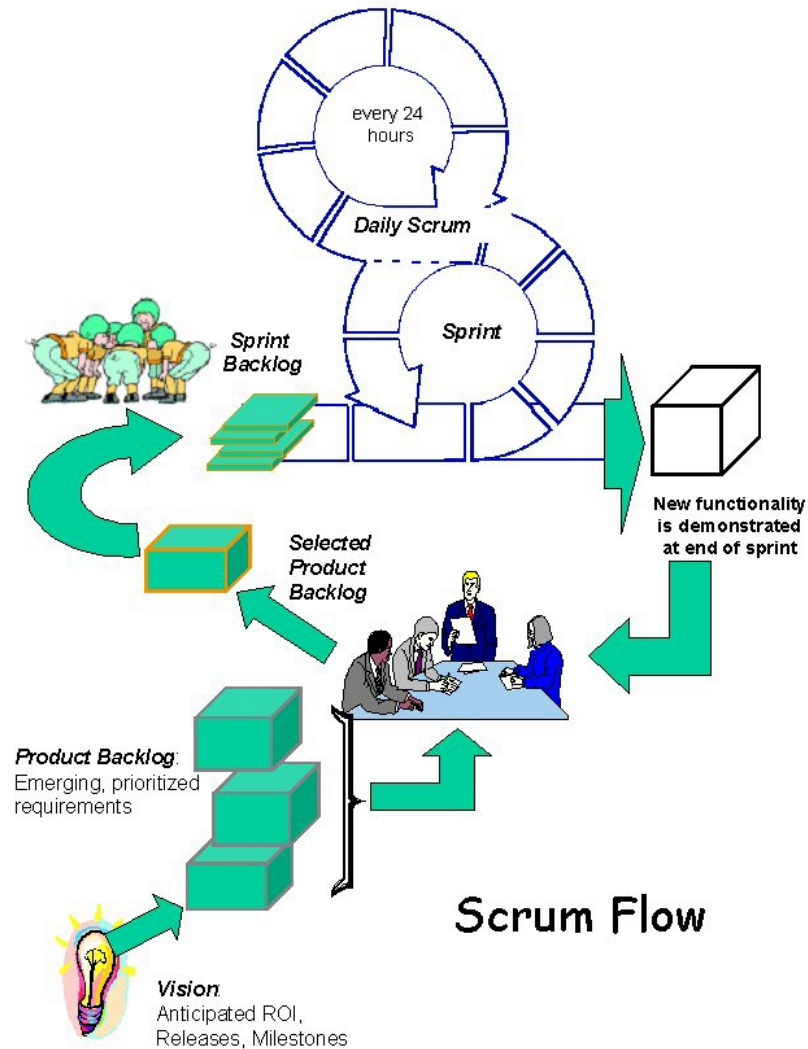
Scrum Flow

Sprint Review

- *Typically about a half-day in duration, minimal preparation*
- *Development Team presents completed increment to Product Owner and stakeholders*
- *Incomplete Backlog items are not presented*
- *System should be deployed on a QA server*

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Sprint Review

- *Review Sprint goals, answer questions*
- *Stakeholders polled for comments*
- *Product Owner, stakeholders, Development Team discuss and make Product Backlog adjustments*
- *Next Sprint review scheduled*

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Sprint Retrospective

- *Typically less than a half-day in duration*
- *ScumMaster, Development Team, Product Owner only*
- *Each team member answers two questions:*
    - What went well during the Sprint?
    - What could be improved for the next Sprint?
    - SAMOLO – Same As, More Of, Less Of
- *ScrumMaster records answers and summarizes*
- *Team prioritizes improvement issues*
- *Team creates Sprint Backlog action items for next Sprint*

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Delivering Releases

- *Latest completed Sprint increment used*
- *Stabilization Sprints may be needed*
- *Hold reviews with key users after release*

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References and Resources

- *Agile Software Development with Scrum*
  - By Ken Schwaber and Mike Beedle
- *Agile Project Management with Scrum*
  - By Ken Schwaber
- **Ken Schwaber's Scrum Site**
  - www.ControlChaos.com
- **Mike Cohn's Scrum Site**
  - www.MountainGoatSoftware.com/scrum
- **Scrum Development Discussion List**
  - groups.yahoo.com/group/scrumdevelopment/
  - (Lots of other great Yahoo! groups.)
- **The Agile Alliance Site**
  - www.AgileAlliance.org
- **Agile Logic's Resources Site**
  - www.AgileLogic.com/resources.html
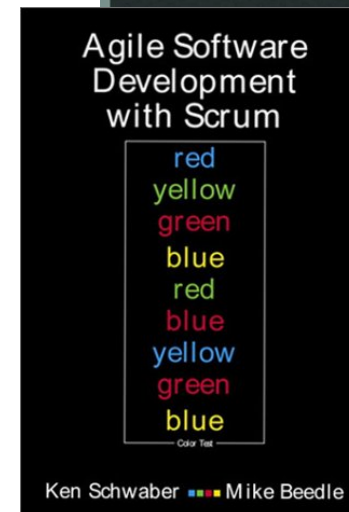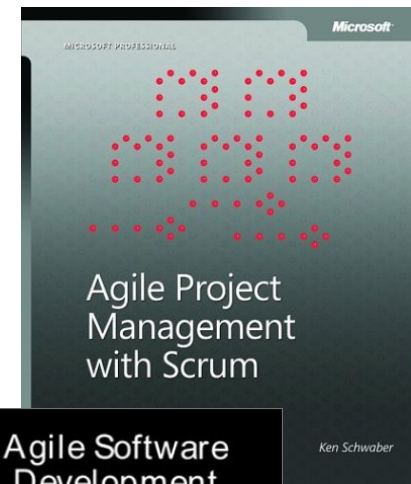
What's Next?

- *Project Initiation Plan*
  - Present project vision, goals, timelines
  - Define Product Backlog for at least three months
  - Teach Sprint planning
  - Brainstorm about overcoming impediments
  - Brainstorm about Product Backlog for next Sprint – team commits
  - Team defines Sprint Backlog
  - Teach daily Scrum, Sprint review, Sprint signature, and management
  - Discuss engineering tools and practices

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ScrumMaster Responsibilities

- *Removing the barriers between development and the customer so the customer directly drives development;*

- *Teaching the customer how to maximize ROI and meet their objectives through Scrum;*

- *Improving the lives of the development team by facilitating creativity and empowerment;*

- *Improving the productivity of the development team in any way possible; and,*

- *Improving the engineering practices and tools so each increment of functionality is potentially shippable.*

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Tracking and Reporting

- *Current status*
- *Progress towards releases*
- *Changes in plans and why*
- *Issues and actions to improve*
- *Big Visible Charts and Project Dashboards*

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Tracking and Reporting

■ *Product Backlog Tracking*

	Item #	Description	Est	By
Very High				
	1	**Finish database versioning**	16	KH
	2	**Get rid of unneeded shared Java in database**	8	KH
	-	**Add licensing**	-	-
	3	Concurrent user licensing	16	TG
	4	Demo / Eval licensing	16	TG
		Analysis Manager		
	5	File formats we support are out of date	160	TG
	6	Round-trip Analyses	250	MC
High				
	-	**Enforce unique names**	-	-
	7	In main application	24	KH
	8	In import	24	AM
	-	**Admin Program**	-	-
	9	Delete users	4	JM
	-	**Analysis Manager**	-	-
	10	When items are removed from an analysis, they should show up again in the pick list in lower 1/2 of the analysis tab	8	TG
	-	**Query**	-	-
	11	Support for wildcards when searching	16	T&A
	12	Sorting of number attributes to handle negative numbers	16	T&A
	13	Horizontal scrolling	12	T&A
	-	**Population Genetics**	-	-
	14	Frequency Manager	400	T&M
	15	Query Tool	400	T&M
	16	Additional Editors (which ones)	240	T&M
	17	Study Variable Manager	240	T&M
	18	Haplotypes	320	T&M
	19	**Add icons for v1.1 or 2.0**	-	-
	-	**Pedigree Manager**	-	-
	20	Validate Derived kindred	4	KH
Medium				
	-	**Explorer**	-	-
	21	Launch tab synchronization (only show queries/analyses for logged in users)	8	T&A
	22	Delete settings (?)	4	T&A

Story	Priority	Estimate
User browses product category list	M	2.0
User selects & browses product category	M	2.0
User views product details	M	1.0
User adds product to shopping cart	M	1.0
User views shopping cart	M	1.0
User starts check out, reviews order	M	1.0
User enters shipping info	M	1.0
User pays by credit card - simple case	M	2.0
User enters separate billing address	S	1.0
System validates payment with service	M	3.0
System save user profile for later order	S	2.0
User enters CV number	S	1.0
System displays order summary	S	1.0
User searches for product key words	S	3.0

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Tracking and Reporting

- *Sprint Tracking*

Date logged	RFA	Description	Remaining Effort in Days															
			2/11/2002	2/18/2002	2/25/2002	2/26/2002	2/27/2002	2/28/2002	3/1/2002	3/2/2002	3/3/2002	3/4/2002	3/5/2002	3/6/2002	3/7/2002	3/8/2002	3/9/2002	3/10/2002
		TOTAL EFFORT IN Man Days	46	22	15	25	22	21	19	19	19	16	17	18	26	18	0	0
11-Feb-2002	1	UI Object Model	2	1	0	0												
11-Feb-2002	1	UI Framework	3	1	1	2	1	1	1	1	1	0	0	2	5	3		
11-Feb-2002	1	Learn Torque API	2	0	0													
11-Feb-2002	1	Learn Struts/Tiles API	3	3	0													
11-Feb-2002	1	Finish HTML admin UI workflow	1	1	0													
11-Feb-2002	1	Complete SRS use cases for 2nd iteration	2	0	0													
11-Feb-2002	4	Migrate CPM to WAS 4.0 to get a WAR jetspeed	5	5	4	4	4	4	4	4	4	4	4	4	4	4		
11-Feb-2002	4	Implement UT for J2EE (Cactus)	8	2	2	2	2	2	2	2	2	2	2	2	2	1		
13-Feb-2002	4	Automate DB test data upload	12	4	2	2	0	1	1	1	1	1	1	1	1	1		
13-Feb-2002	4	Extract CPM DB schema with Torque	4	1	0													
18-Feb-2002	1	Design Access Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
18-Feb-2002	1	Design Business Entity Type	2	2	2	1	1	1	1	1	1	0	2	1	1	0		
25-Feb-2002	1	Set development environment			1	1	1	1	0	0	0	0						
25-Feb-2002	1	Verify what and how is used for attribute definition			1	0												
26-Feb-2002	4	Torque primary key generator for CPM				2	0											
26-Feb-2002	4	Torque/Struts/CPM OM prototype				2	2	1	0	0	0	0						
27-Feb-2002		Implement Business Entity Type UI					2	2	2	2	2	1	0	0	1	0		
27-Feb-2002	1	Define Access Group UI and workflow					1	1	1	1	1	1	1	1	1	0		
4-Mar-2002		BE Session façade				7	6	5	5	5	5	5	5	5	5	5		
7-Mar-2002	4	Torque Blob Problem													4	1		
8-Mar-2002	1	Deploy admin UI on WAS 3.5														1		

Tracking and Reporting

■ *Progress Reporting – Burn-Down Chart*
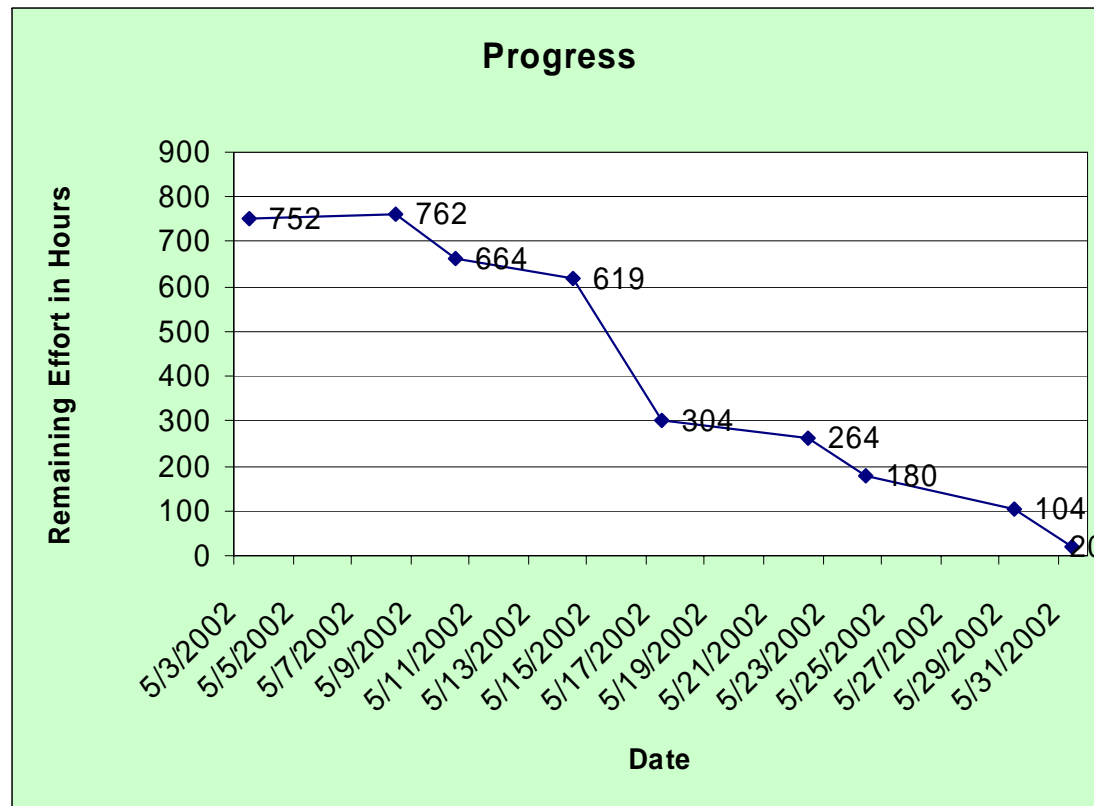
Progress

Tracking and Reporting

■ *Progress Reporting – Burn-Up Chart*

Feature Completion
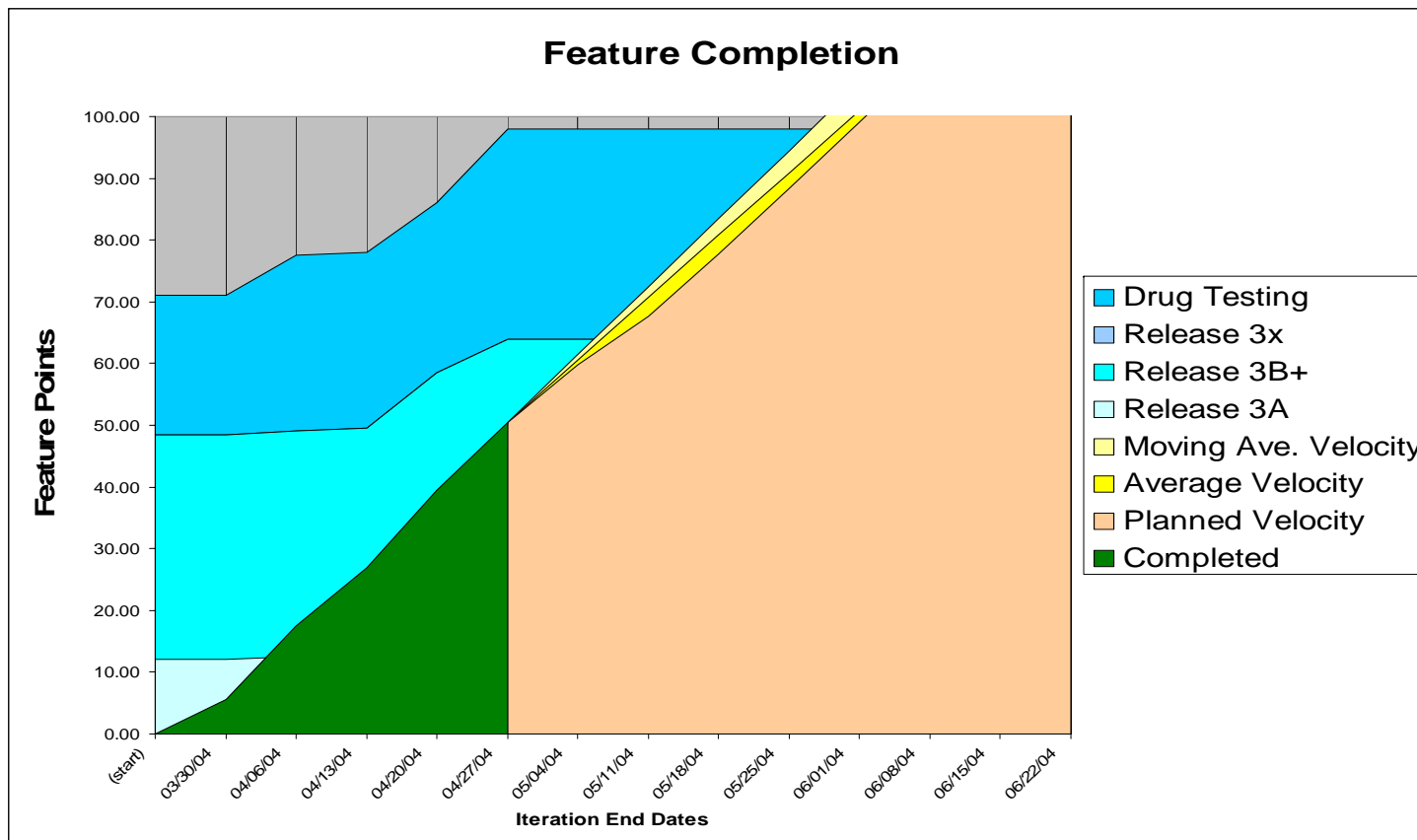
Tool Support for Scrum

- *Start simple and stay that way*
- *Find tools that work with you*

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Tool Support

- *Simple spreadsheets and documents*

Who	Description	Days Left in Sprint 15	13	10	8	
		7/22/2002	7/24/2002	7/26/2002	7/31/2002	
	Total Estimated Hours:	554	458	362	270	0
-	**User's Guide**	-	-	-	-	-
SM	Start on Study Variable chapter first draft	16	16	16	16	
SM	Import chapter first draft	40	24	6	6	
SM	Export chapter first draft	24	24	24	6	
	Misc. Small Bugs					
JM	Fix connection leak	40				
JM	Delete queries	8	8			
JM	Delete analysis	8	8			
TG	Fix tear-off messaging bug	8	8			
JM	View pedigree for kindred column in a result set	2	2	2	2	
AM	Derived kindred validation	8				
	Environment					
TG	Install CVS	16	16			
TBD	Move code into CVS	40	40	40	40	
TBD	Move to JDK 1.4	8	8	8	8	
	Database					
KH	Killing Oracle sessions	8	8	8	8	
KH	Finish 2.206 database patch	8	2			
KH	Make a 2.207 database patch	8	8	8	8	
KH	Figure out why 461 indexes are created	4				

Tool Support

■ *Version One* *(www.VersionOne.net)*

Tool Support

Rally *(www.RallyDev.com)*

Tool Support

- ## *ScrumWorks (www.ScrumWorks.com)*

What to Expect?

- *Initial progress will likely be slower than anticipated*
- *The process will quickly reveal constraints*
- *Team will take time to learn how to self-organize*
- *You will want to tell the team how to solve problems*
- *You will need encourage visibility and transparency*
- *Team may have difficulties focusing on daily plan*

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Typical "Process Smells"

- Loss of rhythm
- Too much involvement from external roles
- Team members missing in action
- Persistent unpredictability or fluctuations
- ScrumMaster is assigning work
- ScrumMaster is focus of Daily Scrum
- Unhealthy specialization or ownership

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