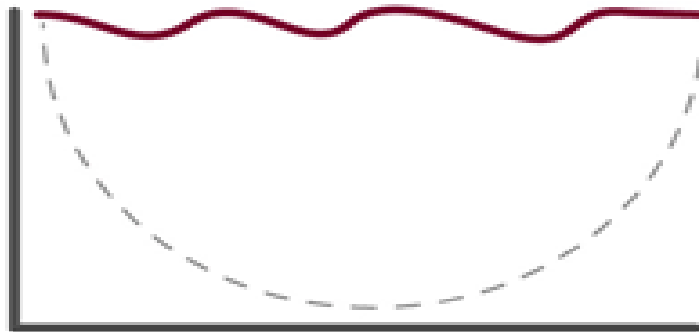


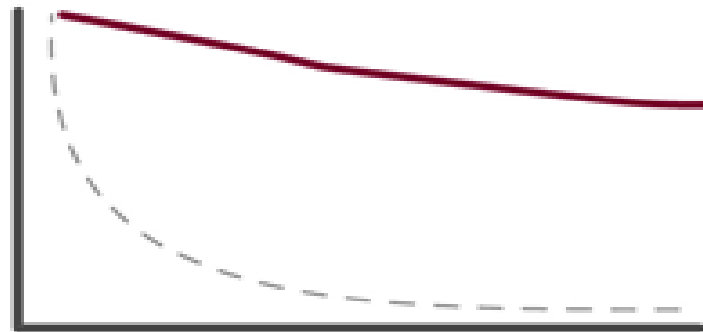
AGILE DEVELOPMENT

VALUE PROPOSITION

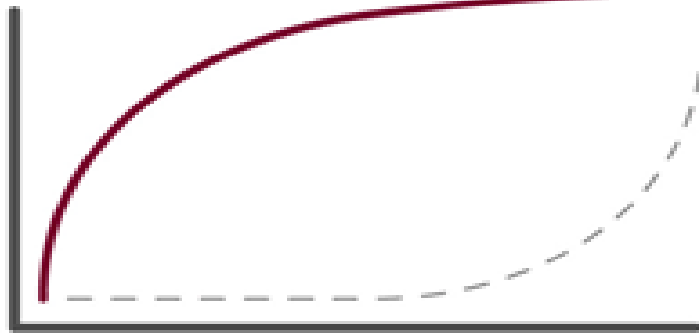
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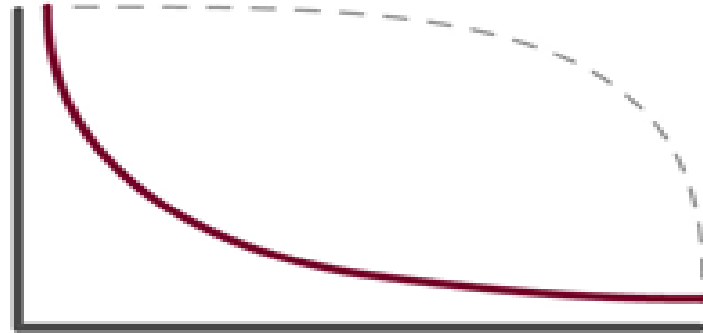
ADAPTABILITY



BUSINESS VALUE



RISK



— AGILE DEVELOPMENT

- - - TRADITIONAL DEVELOPMENT

Scrum Values



• Focus

- “Because we focus on only a few things at a time, we work well together and produce excellent work. We deliver valuable items sooner.”

• Courage

- “Because we work as a team, we feel supported and have more resources at our disposal. This gives us the courage to undertake greater challenges.”

• Openness

- “As we work together, we express how we’re doing, what’s in our way, and our concerns so they can be addressed.”

• Commitment

- “Because we have great control over our destiny, we are more committed to success.”

• Respect

- “As we work together, sharing successes and failures we come to respect each other and to help each other become worthy of respect.”

Definition of Scrum

- Scrum is:
 - Lightweight
 - Simple to understand
 - Difficult to master
- Scrum is a process framework that has been used to manage complex product development since the early 1990s
- It's not a process or a technique for building products
- Scrum is a framework within which you can use various processes and techniques (CI, TDD, BDD)

Components of Agile Scrum Development

- The Scrum Team
- Scrum Events (Ceremonies)
- Scrum Artifacts
- Scrum Rules

The Scrum Team

- Scrum Teams are composed of 7 +/- 2 members (only 5-9 members)
- No Team Leader to delegate tasks or decide how a problem will be solved
- The Scrum Team, as a whole unit, decides how to address issues and solve problems
- Each team member is an important part of the team and is expected to carry a product from inception to completion
- **Note** – *Scrum Team focuses on the “Product” not the “Project”*
 - Product is the solution being built
 - Project generally refers to the effort to build an application or system

Scrum Team Roles

- The Product Owner
 - No “Project Manager” role
- The ScrumMaster
- The Development Team



The Product Owner

- Project's Key Stakeholder
- Usually an internal or external customer
 - Can also be a spokesperson for the customer
- Conveys the overall mission and vision for the product which the team is building
- Accountable for:
 - Managing the **Product Backlog**
 - Accepting completed increments of work by the development team

Product Owner VS Project Manager

Product Owner = Project Manager + X

Project Manager Responsibilities	Product Owner Responsibilities
Activity Planning and Sequencing	Understand the users'/customers' needs
Resource Planning	Collaborate with development team
Budgeting	Manage the Stakeholders
Risk Analysis	Create the business model
Team Leadership	Develop the Product Roadmap
Monitoring Progress	Describe the User Experience (UX) and product features
Time/Cost Estimating	Set the sprint goals, detail stories
Controlling Quality	Update the UX/feature description
	Coordinate the Product Launch

The ScrumMaster

- Servant Leader to the Product Owner, Development Team, and Organization
- Has no hierarchical authority over the Scrum Team
- ScrumMaster ≠ Product Owner/Project Manager/Manager
- Facilitator
 - Ensures that the Scrum Team adheres to the Scrum Theory, practices, and rules
- Protects the team by doing anything possible to help the team perform at the highest level
 - Removes **Impediments**
 - Facilitates Meetings
 - Helps Product Owner in **Backlog Grooming**

ScrumMaster Service to Product Owner

- ScrumMaster serves the Product Owner
 - Finding techniques for effective Product Backlog Management
 - Helping the Scrum Team understand the need for clear and concise Product Backlog items
 - Understanding Product Planning in an empirical environment
 - Ensuring the Product Owner knows how to arrange the Product Backlog to maximize Value
 - Understanding and practicing Agile concepts
 - Facilitating Scrum Ceremonies

ScrumMaster Service to Development Team

- ScrumMaster serves the Development Team
 - Coaching the Development Team in the concepts of self-organization and cross-functionality
 - Helping the Development Team to create high-value products
 - Removing impediments to the Development Team's progress
 - Facilitating Scrum Ceremonies
 - Coaching the Development Team in moving towards a more Scrum-like environment if necessary

ScrumMaster Service to the Organization

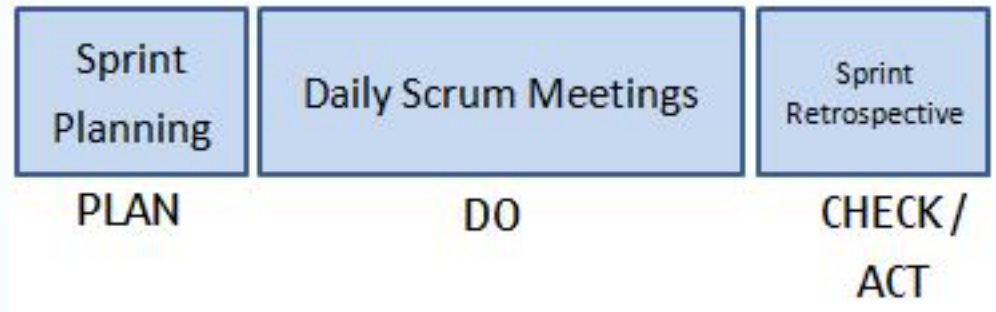
- ScrumMaster serves the Organization
 - Leading and coaching the organization in its Scrum adoption
 - Planning Scrum implementations within the organization
 - Helping employees and stakeholders understand and enact Scrum and empirical product development
 - Causing change that increases productivity of the Scrum Team
 - Working with other ScrumMasters to increase the effectiveness of the application of Scrum in the organization

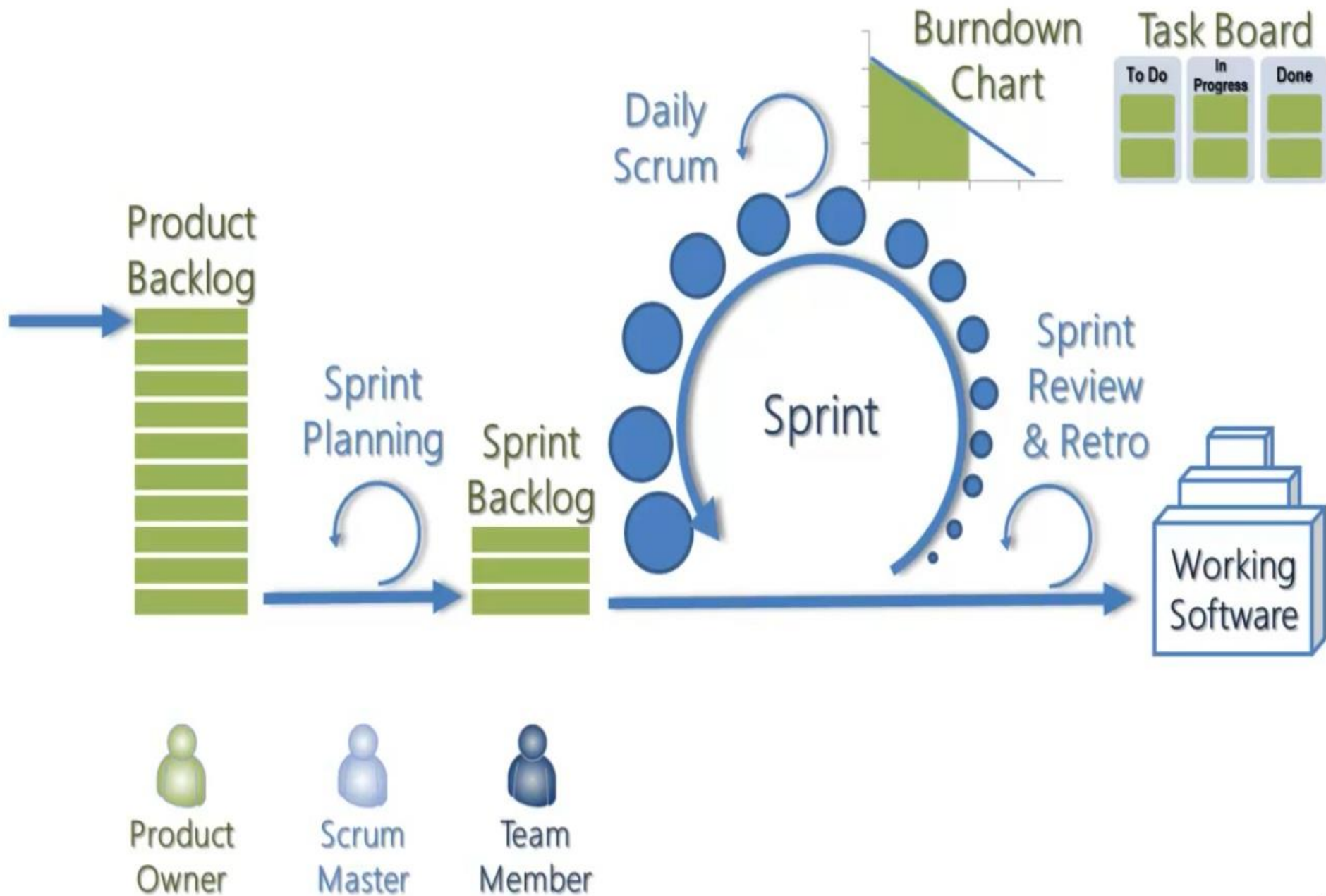
The Development Team

- Self-Organizing & Cross-Functional Team
- Have the skills necessary to deliver shippable increments at the completion of each sprint
- Includes more than just “programmers” or “developers”
 - Anyone who participates in the creation of the delivered increment is part of this team
- There are no titles in the Development Team
- NO ONE tells Development Team HOW to convert the Product Backlog into shippable increments
 - No one tells them how to program, how to test, etc.

Scrum Ceremonies

- The Sprint
- Sprint Planning
- Daily Stand-up
- The Sprint Review
- The Retrospective





The Sprint

- A Time-Boxed period
- Specific work is completed & ready for review within this time-boxed period
- 2-4 weeks long
- Can be as short as 1 week
- Inspection and adaptation occurs on a daily basis
 - Assess progress towards the sprint goal – When?
- No changes to requirements are made during a Sprint

The Sprint *con't*

- Cancelling a Sprint
 - Can only be canceled before the time-boxed period is over
 - Only the Product Owner has the authority to do so
- Would be canceled if the Sprint Goal becomes obsolete
 - Company changes direction
 - Market/Technology conditions change

Daily Stand-up

- Meeting held daily to organize the day
- Three questions must be answered by all Scrum Team members:
 - What you completed yesterday
 - What you will work on today
 - What (if any) impediments you face that block your progress
- No more than 15-20 minutes long

The Sprint Review

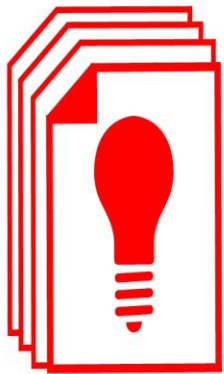
- “Show and Tell”
- A demonstration event for the Scrum Team to present the work completed during the sprint
- Product Owner checks the work against pre-defined acceptance criteria
 - Accepts or Rejects the work
- Stakeholders/clients provide feedback to ensure that the delivered increment met the business need

The Retrospective

- Final Team meeting in the Sprint
- Facilitated by the ScrumMaster
- Determines:
 - What went well
 - What didn't go so well
 - How the team can improve in the next Sprint
- Opportunity for the team to focus on its overall performance and identify strategies for **continuous improvement**
- ScrumMaster acts as a coach
 - Doesn't tell the team what to do/not do
 - Guides the team's discussion

Scrum Artifacts

- Product Backlog
- Sprint Backlog
- Increment
 - PSI



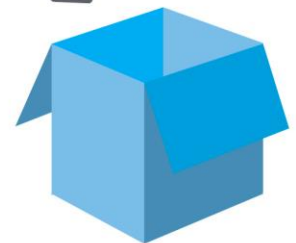
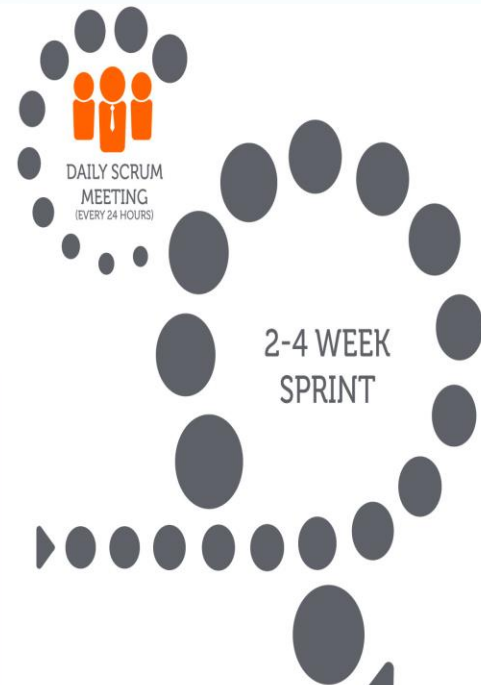
PRODUCT BACKLOG



SPRINT PLANNING



SPRINT BACKLOG



POTENTIALLY SHIPABLE
PRODUCT INCREMENT

Product Backlog

- Owned by the Product Owner
- Single most important document that outlines every requirement for a system or product
- To-Do List
- Consists of Work Items
 - User Stories (requirements)
 - Tasks
- Completion of these tasks produces the deliverable product with business value
- Items are ordered in terms of business value

Product Backlog Management

- Tasks involved in managing the Product Backlog include:
 - Clearly expressing Product Backlog items
 - Ordering the items in the Product Backlog to best achieve goals and missions
 - Optimizing the value of the work the Development Team performs
 - Ensuring that the Product Backlog is visible, transparent, and clear to all, and shows what the Scrum Team will work on next
 - Ensuring the Development Team understands items in the Product Backlog to the level (or degree) needed

Sprint Backlog

- Specific list of items taken from the Product Backlog
- Items on here are what must be completed during that sprint
- Scrum Team decides what to take from the Product Backlog during Sprint Planning
- Once Sprint Backlog is created, it doesn't change for the duration of the sprint
 - Requirements can change, but only outside of the sprint

User Story	Tasks	Day 1	Day 2	Day 3	Day 4	Day 5	...
As a member, I can read profiles of other members so that I can find someone to date.	Code the ...	8	4	8	0		
	Design the ...	16	12	10	4		
	Meet with Mary about ...	8	16	16	11		
	Design the UI	12	6	0	0		
	Automate tests ...	4	4	1	0		
	Code the other ...	8	8	8	8		
As a member, I can update my billing information.	Update security tests	6	6	4	0		
	Design a solution to ...	12	6	0	0		
	Write test plan	8	8	4	0		
	Automate tests ...	12	12	10	6		
	Code the ...	8	8	8	4		

**LOE required for each task
per day**



Increment

- Sum of all product backlog items that have been completed since the last software release
- Up to the Product Owner to decide when an Increment is released
- But...it's the team's responsibility to make sure everything that is included in an increment is actually ready to be released
- Also referred to as the **Potentially Shippable Increment (PSI)**
- Potential because Product Owner decides if he/she wants to accept or reject

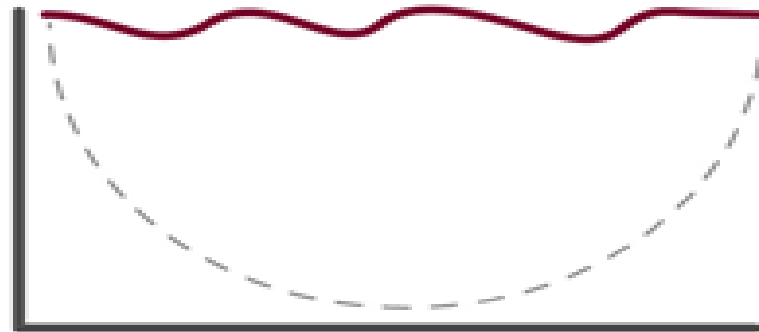
Scrum Rules

- Rules of Agile Scrum should be completely up to the team and governed by what works best for their process
- The best Agile Coaches will tell teams to start with the basic scrum events mentioned earlier and then inspect and adapt based on the team's unique needs
- Continuous improvement in the way the team functions together as a whole

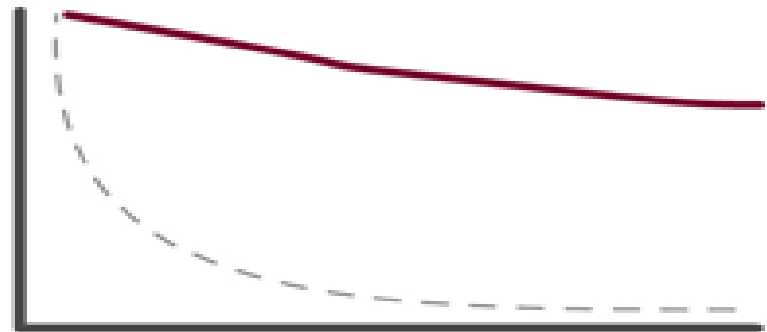
AGILE DEVELOPMENT

VALUE PROPOSITION

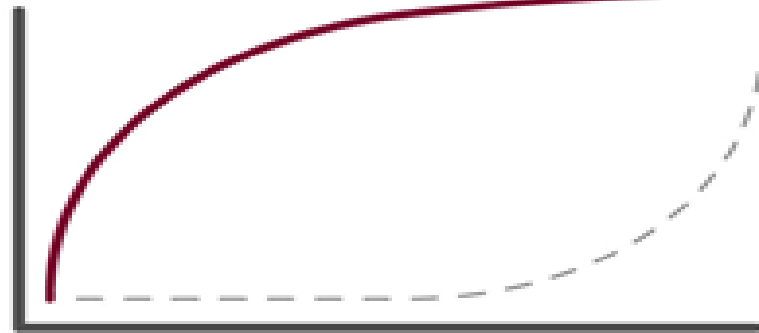
VISIBILITY



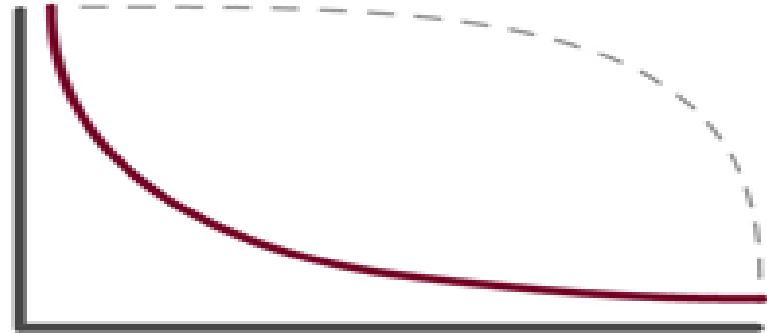
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BUSINESS VALUE



RISK



— AGILE DEVELOPMENT - - - TRADITIONAL DEVELOPMENT