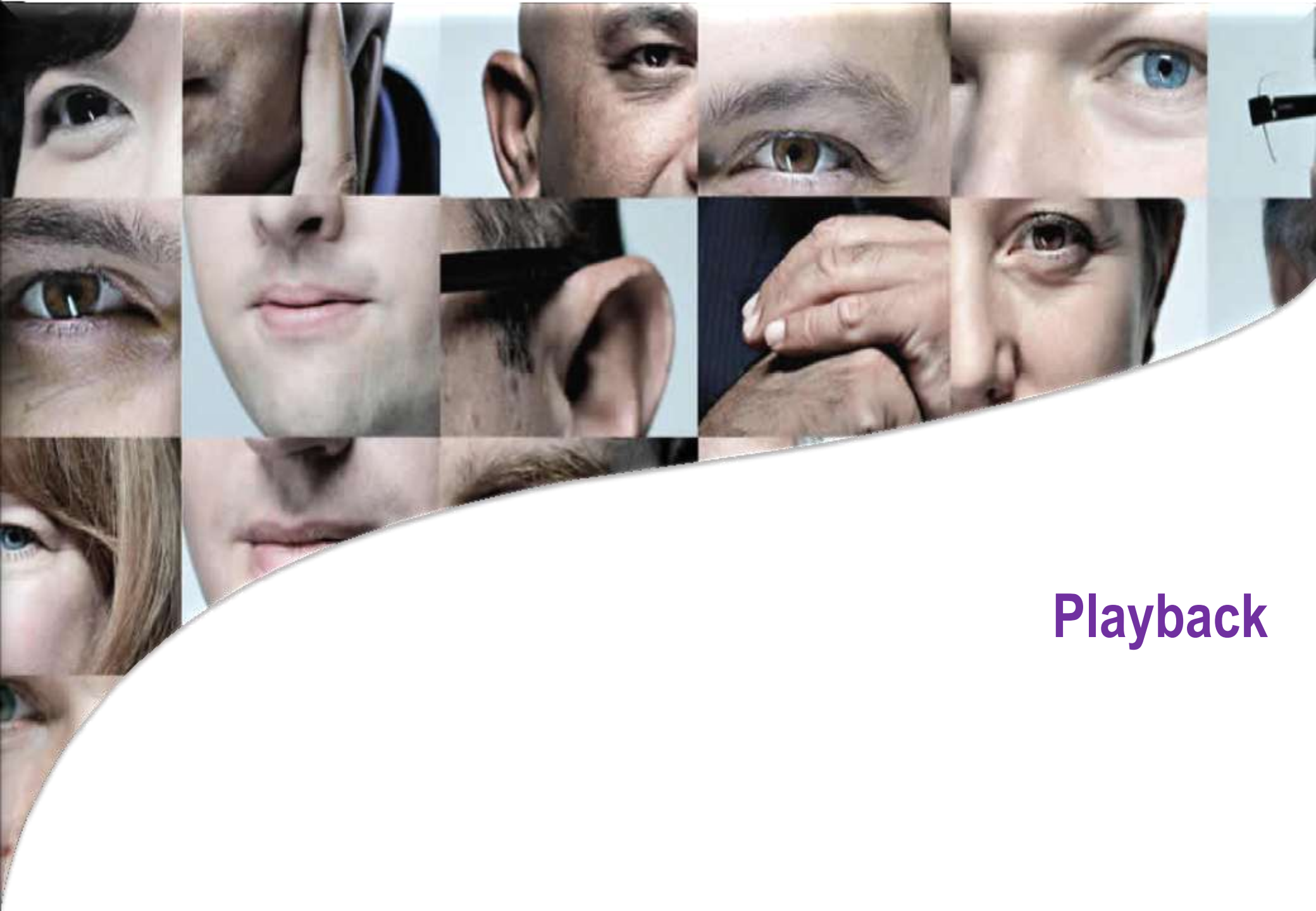


Agile Foundation and Introduction to Scrum

Day 3 – Scrum (Artifacts)

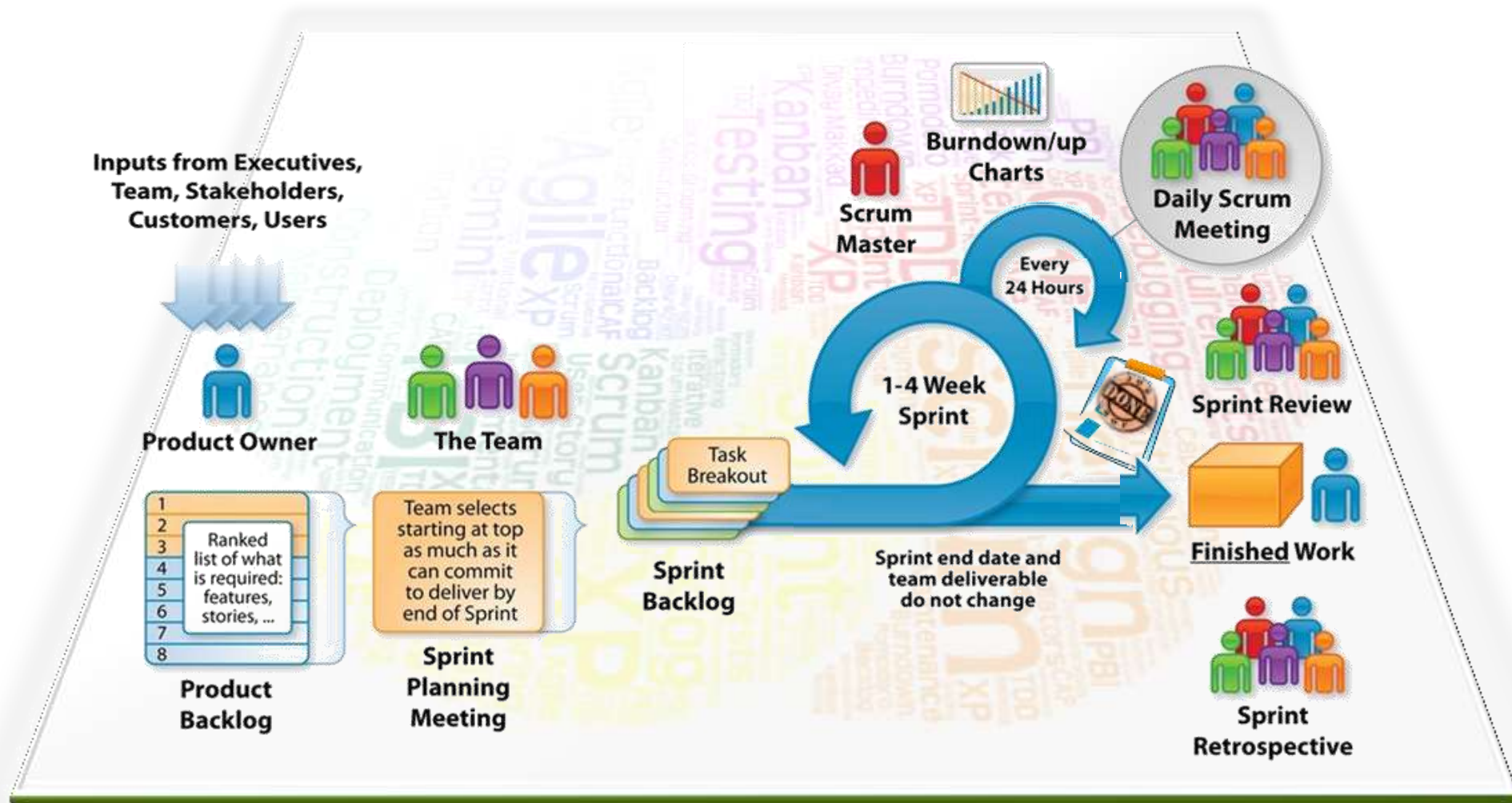
Divay Makkad
2017





Playback

Scrum Framework





Product Backlog



Product Backlog

The Product Backlog defines the scope of requirements

- List of requirements
- Contains not only functional requirements, should include all kinds of requirements (quality, security, maintenance, etc.)
- Issues (i.e. development and test environment, database set-up)
- Light weight – detailed enough to make a rough estimation to help the PO to prioritize the items



Product Backlog

- Prioritized – features with highest business value for the customer on the top, nice-to-have's on the bottom of the list
- Not complete – just a start-up version, no need for lengthy, upfront effort to document all requirements
- Not final – can be changed and extended during the whole project
- The Icebox - An alternative to deletion that allows you to keep a history of rejected stories. Frozen stories cannot be updated. A frozen story can be restored at any time.



Product Backlog

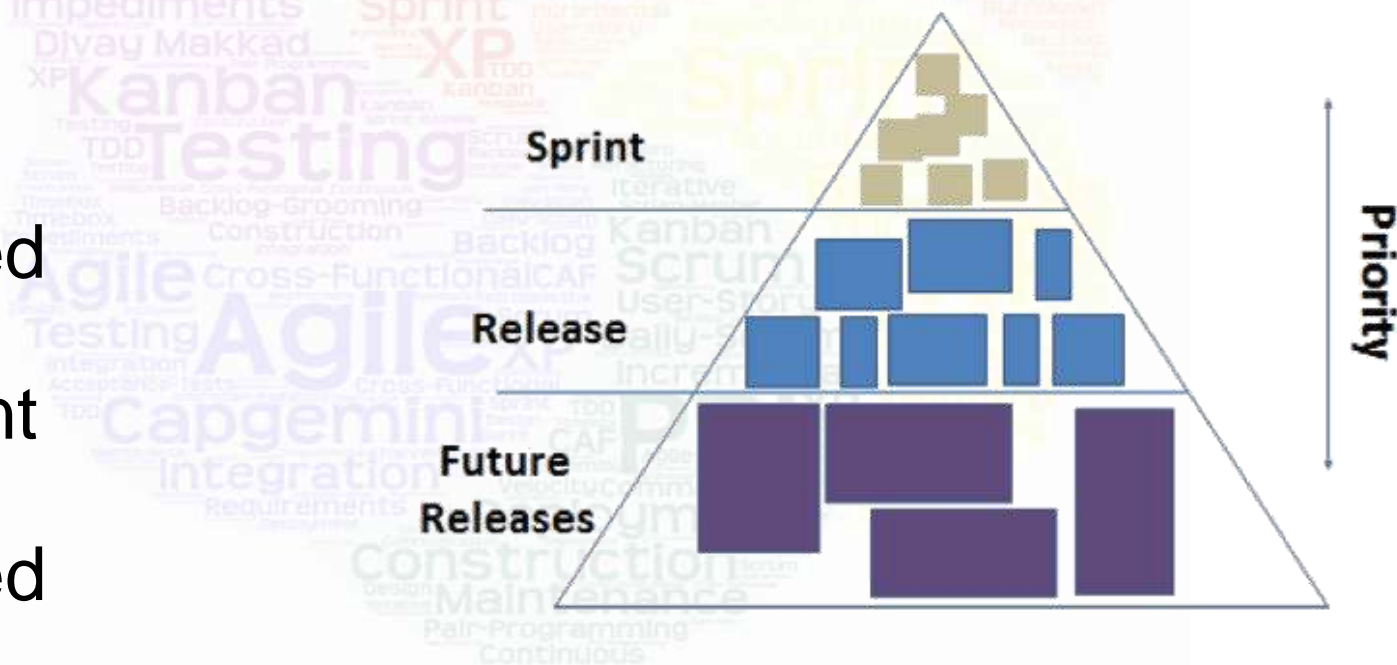
User Story	Effort	Theme
As registered user I want to write testimonials for trainings, in order to inform other visitors of the website how much I liked the training.	2	Website
As administrator I want to be able to announce more than one trainer for one training, so that participants can see all their trainers for this training.	3	Website

- **Responsible for Product Backlog: Product Owner**
- Responsible for estimations: Team
- List of all defined requirements (features) in prioritized order
- It should contain at least a complete Sprint of estimated and prioritized requirements
- Requirements can be user stories or use cases
- Effort is in story points or ideal days
- Frequent practice for estimations: Planning Poker is a consensus-based technique for estimating relative size of user stories



A good Product Backlog should've the following attributes:

- **Detailed**
- **Estimated**
- **Emergent**
- **Prioritized**





Detailed

- User Stories that are high priority are described in detail so that they can be well understood before they can be completed in the sprint.
- Stories that are low on priority should have just enough details and they can be refined over time.

Estimated

- Product Backlog is a key planning tool other than being work repository are is very helpful in estimation.
- The Backlog Items are estimated
- Can be refined overtime



Emergent

- Product backlog isn't static, it evolves and contents change over time.
- As more is learned, user stories are added to the PB.
- Existing user stories are modified, re-prioritized, refined regularly.

Prioritized

- All items in product backlog are prioritized
- Teams select High Priority items (Add effort estimate if it's missing)
- The highest priority items are implemented first, least ones at last.
- This approach of prioritization, helps team maximize product value



Product Backlog

Visual Studio Team Foundation Server 2015 / Fabrikam / Account Management

HOME CODE WORK BUILD TEST

Backlogs Queries

Epics
Features
Backlog items

Account Management Epics

Backlog Board

New + - Create query Column options

Order	State	Work Item Type	Title
1	New	Epic	Support customers using mobile apps <ul style="list-style-type: none">Mobile feedbackMobile shopping cartText alertsResearch available solutionsEnable feedback via text alertsSupport automatic broadcast alertsMobile account updateBuy bill via mobile app
2	New	Epic	Performance and security review
3	New	Epic	Promotional program support
4	New	Epic	Chat support
5	New	Epic	Streamline and enhance standard services



Product Backlog

Domain-Driven
Scrum Mechanism

Visual Studio Team Foundation Server 2015 / Fabrikam Fiber

HOME CODE **WORK** BUILD BUILD.PREVIEW TEST




Backlogs Queries

Epics
Features
Backlog items

Current
Sprint 1
Future
Sprint 2
Sprint 3
Sprint 4
Sprint 5
Sprint 6

Backlog items

Backlog Board

New   Create Query Column Options 

Type Product Backlog Item

Title

Add

Order	Work Item Type	State	Effort	Title
1	Product Backlog Item	New	8	Hello World Web Site
2	Bug	New	2	Slow response on welcome page
3	Product Backlog Item	New	13	Change initial view
4	Product Backlog Item	New	3	Welcome back page
5	Product Backlog Item	New	5	Add an information form



Sprint Backlog



Sprint Backlog

- A subset of Product Backlog Items, which define the work for a Sprint
- Is created ONLY by Team members
- Each Item has it's own status
- If a task requires more than 16 hours, it should be broken down (Ideal 0 - 6 Hours)
- Team can add or subtract items from the list. Product Owner is not allowed to do it



- Scrum team takes the Sprint Goal and decides what tasks are necessary
- Team self-organizes around how they'll meet the Sprint Goal
- The Scrum Master doesn't assign tasks to individuals
- The Scrum Master doesn't make decisions for the team





Sprint Backlog during sprint

Changes

- Team adds new tasks whenever they need to in order to meet the Sprint Goal
- Team can remove unnecessary tasks
- But, Sprint Backlog can only be updated by the team

Estimates are updated whenever there's new information, but it's always better to think through and list all the tasks that are required to complete the story during the sprint planning.



Sprint Backlog

Domain-Driven
Scrum-Master

Fabrikam Fiber Team Sprint 1

May 4 - May 22
15 work days

Backlog Board Capacity

Work details On

Create Query Column Options

State	Assigned To	Effort	Remaining Work	Title
New	Jamal Hartnett	8	9	Hello World Web Site
To Do	Johnnie McLeod		2	Design welcome scr...
To Do	Christie Church		2	Change background...
To Do	Christie Church		2	About screen
To Do	Jamal Hartnett		3	Standardize on form...
New	Raisa Pokrovskaya	3	5	Slow response on form
To Do	Christie Church		5	Fix performance iss...
New	Raisa Pokrovskaya	8	10	Add an information form
To Do	Raisa Pokrovskaya		5	Auto-complete user's...
To Do	Raisa Pokrovskaya		5	Auto save

Work

Team

(293 of 315 h)

Work By: Activity

Unassigned

(293 of 315 h)

Work By: Assigned To

Christie Church

(45 of 90 h)

Jamal Hartnett

(99 of 90 h)



Definition of Ready



Definition of Ready (DoR)

Letter	Meaning	Description
I	Independent	The PBI should be self-contained, in a way that there is no inherent dependency on another user story.
N	Negotiable	PBIs are not explicit contracts and should leave space for discussion.
V	Valuable	A PBI must deliver value to the stakeholders.
E	Estimable	You must always be able to estimate the size of a PBI.
S	Small	PBIs should not be so big as to become impossible to plan/task/prioritize with a certain level of certainty.
T	Testable	The PBI or its related description must provide the necessary information to make test development possible.

Any Additional criteria e.g. Degree of User Story Detail, Story Title Format, etc.

DoR Created by Bill Wake



Definition of Done



Definition of Done (DoD)

Criterion	Responsible (Role)
Demo verified by Product Owner	Product Owner
Functional tests passed with zero Critical and High active defects	Test Lead
Continuous Integration builds must not have errors	Dev Lead
Unit tests passed with code coverage greater than 90%	Dev Lead
Peer Reviews/Code Reviews have taken place (technical + security)	Dev Lead
All code checked-in	Dev Lead
VSTS tasks has no remaining effort, all tasks closed	Scrum Master



Burndown Chart



Information Radiator

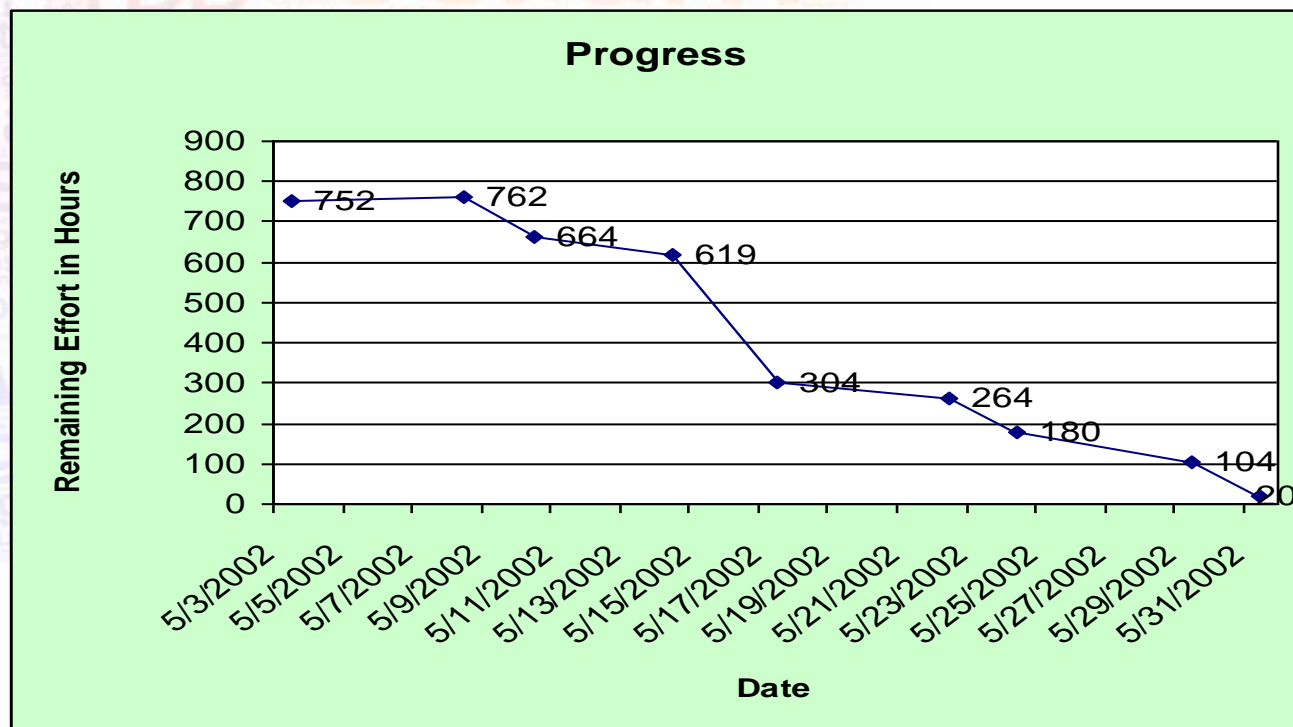
Two characteristics are key to a good information radiator:

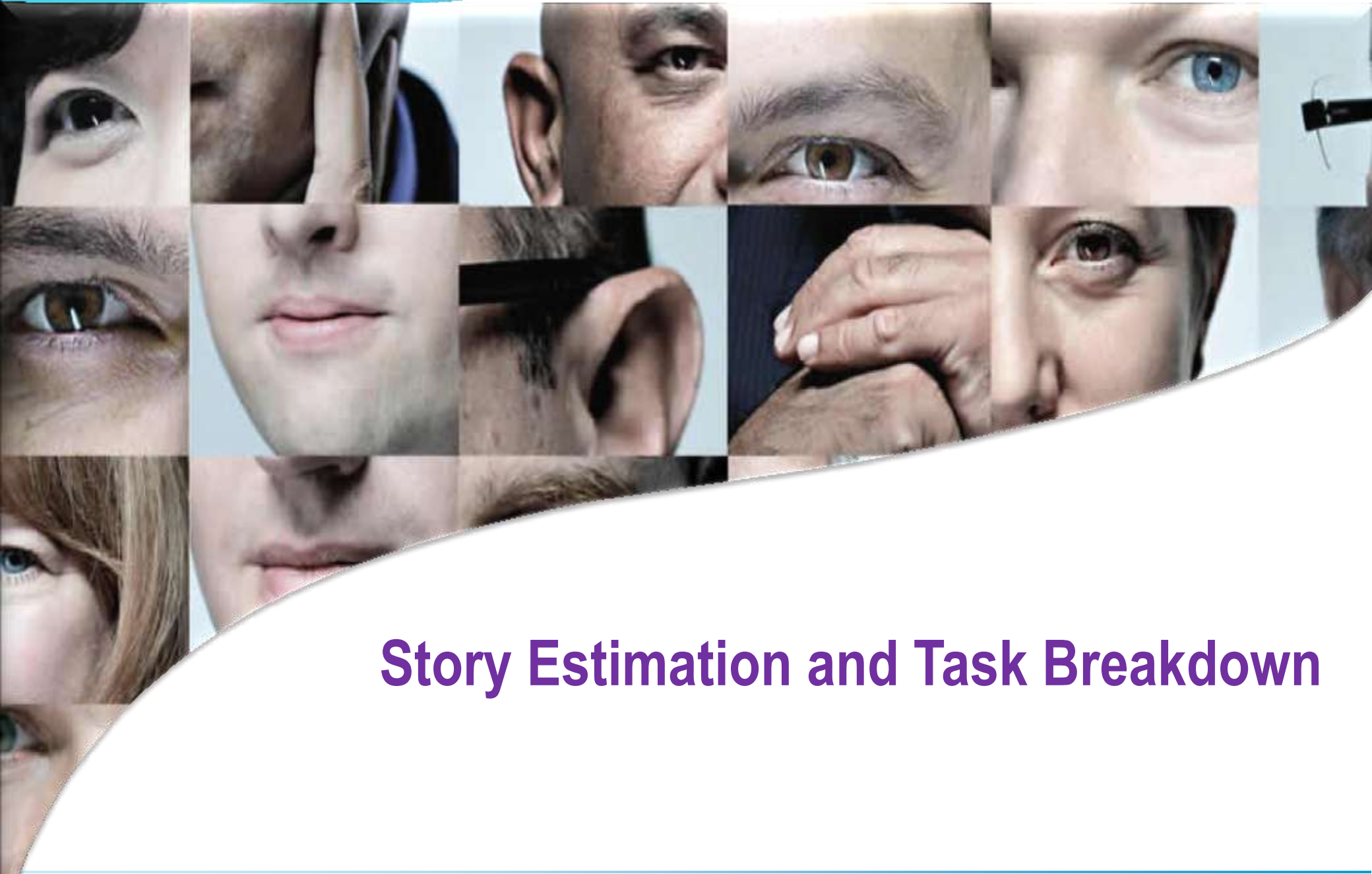
- The first is that the information changes over time. This makes it worth a person's while to look at the display.
- The other characteristic is that it takes very little energy to view the display.



Burndown Chart

- Depicts the total Sprint Backlog hours remaining per day
- Shows the estimated amount of time to release
- Ideally should burn down to zero to the end of the Sprint
- Actually is not a straight line
- Can bump UP





Story Estimation and Task Breakdown



Why Estimate?

We estimate for these reasons

- To provide an order-of-magnitude size/cost/date about the project, so we have a rough idea of the size/cost/date for planning purposes. An order-of-magnitude size means we want to invest just enough time in the estimate that we believe in the accuracy of it for planning purposes.
- We want to know when we will be done, because we are close.
- We need to allocate money or teams of people for some amount of time.



What is an Estimate?

Negotiate commitments not estimates

- An estimate is not a prediction
- An estimate is a guide
- An estimate reflects uncertainty



Estimate size; derive duration

Size

Calculation

Duration

600
kilometers

Velocity =
60

$600/60 =$
10 sprints



Measures of size

Traditional

- Lines of code
- Function points

Agile

- Story points
- Ideal days



Ideal Days

Ideal Days are units representing an ideal work day. That is the amount of time in a day that a developer works directly on the project exclusive of other supporting tasks (company meetings, etc.).

- How long something would take if
 - it's all you worked on
 - you had no interruptions
 - and everything you need is available
- The ideal time of a basketball game is 40 minutes
 - Four 10-minute quarters
- The elapsed time is much longer (2+ hours)

XP teams used to refer to this a “load factor”.

Ideal Days can be easier for people to understand initially and might be easier to estimate at first.

Ideal Days force some evaluation into the efficiencies and might drive measures to allow developers to focus with less distractions.



Story Points

Story Points are an arbitrary unit representing the estimated “size” of a user story relative to similar user stories. Story Points are used because....

- The “bigness” of a task influenced by
 - How hard it is
 - Past Experience
 - Uncertainty / Dependencies
 - How much of it there is
- Relative values are what is important:
 - A login screen is a 2.
 - A search feature is an 8.
- Points are unit-less

Why Story Points?

- ***People are good at estimating sizes of things relative to other things.***
- ***Relative estimates stay constant and can be scaled if resources or velocity changes.***



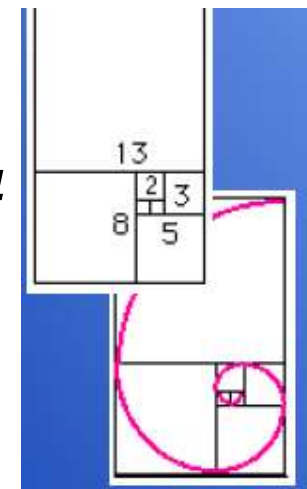
Story Points and Velocity

Story Points can be expressed in whatever units the team decides.



Fibonacci Sequence 1, 2, 3, 5, 8, 13, 21, 34

T-Shirt Sizes S, M, L, XL, XXL



Velocity

When a story satisfies the criteria defined in DoD and is accepted, only then the story points are claimed by the team.

The sum of the story points of the stories completed in a sprint is called the velocity of the sprint

The average of velocity of previous sprints defines the amount of work a team chooses, during the sprint planning, to do in the current sprint.



Should I use Story Points or Ideal Days?

Story Point	Ideal Days
Help drive cross functional behavior	Easier to explain to others
Story Point estimates stay viable over time	Force companies to confront time wasting inefficiencies
Story points are a measure of size alone	Ideal days seem easier to estimate at first when that's what we're used to
Story point estimation can be faster and less complex	
Story Points can be additive while ideal days vary from person to person	

While this certainly can vary from team to team, the current best practice is to:

- Estimate user stories in story points
- Estimate tasks in fractional days and ideal days.



Estimation Techniques

Estimation can be approached in 3 ways...

- **Disaggregation**
Decomposing the user story in to smaller stories estimating the smaller more estimable story. (User Story Decomposition)
- **Expert Opinion and Experience**
Allowing experts to make experienced guesses as to how long it will take. (e.g. Wide band Delphi)
- **Comparative Analysis**
Using the size of comparable projects to form a basis of estimates for other user stories. (e.g. Starbucks Coffee Sizes)



Estimation Techniques

Planning Poker

1. Customer / Proxy explains story/feature/theme/requirement
2. Team discusses work involved
3. Everybody estimates individually
4. Everybody reveals estimate simultaneously
5. Lowest and highest estimator justifies
6. Team decides on collective estimate



Planning Poker was a term coined by James Grenning(2002).



Estimation Techniques

Why Estimation Poker works..

- Multiple expert opinions during estimation
- People doing estimates are ones doing the work.
- Estimators justify estimates.
- Avoids anchoring, the tendency to assume an estimate based on existing expectations.

Agile estimation makes the entire team responsible for the estimate. Again, people over process.



Zoo points

What value in “zoo points” would you put on these zoo animals?

Lion
Kangaroo
Rhinoceros
Bear
Giraffe
Gorilla
Hippopotamus
Tiger



Tools

- TFS
- Rally
- Altasian JIRA
- VersionOne
- Trello
- BluePrint
- TargetProcess





Planning Poker



Planning Poker Exercise

User Story	Points
Run from Capgemini, SEZ to Cafeteria	
Run from Capgemini, SEZ to Gigaplex	
Run from Capgemini, SEZ to Airoli Station	
Run from Capgemini, SEZ to Thane Station	
Run from Capgemini, SEZ to Gateway Of India	



Q n A

Thank you!

