

# DAT255 / DIT543 SOFTWARE ENGINEERING PROJECT

## EXTREME PROGRAMMING

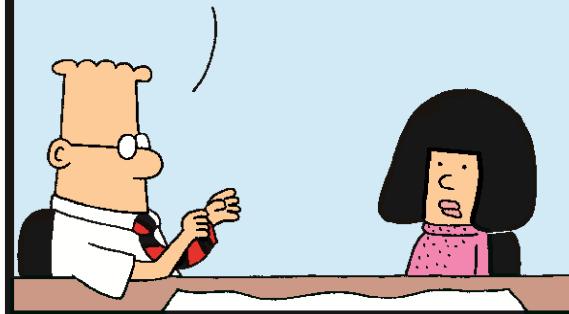
I CAN'T GIVE YOU ALL OF THESE FEATURES IN THE FIRST VERSION.



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[www.dilbert.com](http://www.dilbert.com)

AND EACH FEATURE NEEDS TO HAVE WHAT WE CALL A "USER STORY."



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OKAY, HERE'S A STORY: YOU GIVE ME ALL OF MY FEATURES OR I'LL RUIN YOUR LIFE.



A photograph of a man with dark hair, wearing a white dress shirt and a dark tie. He is looking upwards and slightly to his right with a thoughtful expression. The background is a bright, cloudy sky.

TODAY

Reflections

Scrum

Practical Stuff

Vårt mål är att lägga ner mycket tid tidigt i projektet för att minska arbetet med att refaktorera koden i slutet. KPI blir således att vi kategoriseringar den typ av arbete vi gör, framförallt då refaktorering och skapande av ny funktionalitet. Vi tänker att ett optimalt resultat är 0, då allt över det innebär refaktorering. Då vi vet att det kommer behöva läggas tid på refaktorering bör riktmärket sättas högre än så för att skapa ett KPI som faktiskt är rimligt att använda.

The last learning is that SCRUM isn't something you just pick up and get to work with in a second, it takes time for the team to learn how to use it. I look forward to learn how to use it during this course and in my future.

“THE SPRINTS WHERE TOO SHORT

“NEXT TIME WE’LL HAVE A COMPLETE  
UNDERSTANDING UP-FRONT”

## **Strategi för kvalité**

Under legoövningen blev våra leveranser inte godtagna efter första sprinten, men det blev de i både andra och tredje.

Då kunde vi däremot hela tiden kolla med produktägaren om något vi gjorde höll måtten. Det gjorde det väldigt tydligt om det vi byggde var stabilt och konsekvent.

Så är inte fallet under detta projekt: det kommer inte vara lika tydligt om produkten i projektet är bra jämfört med om ett legobygge är klart och det är inte möjligt att ständigt fråga produktägaren för att undersöka detta.

Som KPI För att mäta vilken kvalitet leveranserna håller tänker vi att mäta hur stor andel av alla rader av vår kod som körs av de enhetstester som vi bygger.

Desto större andelen är, desto större är sannolikheten att vi vet vad vår kod gör.

En brist med detta KPI är att det är beroende av våra enhetstester, och det kan finnas fall som vi inte har gjort lämpliga enhetstester för.

The chosen strategies, with related KPIs are:

Daily Scrum

→ Estimation Accuracy, Happiness

Trello

→ Estimation Accuracy, Git

Retrospectives and Surveys

→ Happiness

The chosen KPIs are:  
Estimation Accuracy

→ Burn down/up chart

Happiness

→ Survey

Git

→ Autogenerated

It was also important to ask leading questions like  
“Do you want the color blue or red?”,  
rather than asking open questions like  
“Do you want to add something?”  
to prevent additional requirements from the product owner, that  
~~waste time~~  
waste time.



# QA

'Questions don't have to make sense, Vincent', said Miss Susan.

'But answers do'

Terry Pratchett  
*Thief of Time*, 2001

# SCRUM



# SCRUM

## The Agile: Scrum Framework at a glance

Inputs from Executives,  
Team, Stakeholders,  
Customers, Users



Product Owner



The Team



Product Backlog



Sprint Planning Meeting



# SCRUM BACKLOGS

## Product backlog:

Prioritised list of **all** product requirements

Product backlog can be continuously updated by the **Product Owner**

## Sprint backlog:

List of requirements selected **for the current sprint**

Sprint backlog contains more detailed information – **tasks**

Sprint backlog is only updated by **Scrum Team**

# Backlog Items

## User stories

As an X I want Y since Z

**“As an entrepreneur I want a portable booth to be able to sell sausages to hungry citizens wherever they happen to be”**

**“Sausages!”**

## Epics:

Largestories that can be delivered within one sprint

## Themes:

Something that is common to a number of backlog items

Roads and bridges  
Work places  
Vehicles

### **User story #11.1: Squad car**

As a police officer, I need a car to drive around in.

### **User story #5.1: Supermarket**

As an entrepreneur I want a supermarket so I can sell food and other stuff to my customers.

#### **Acceptance Criteria:**

- The store should contain shelves and a cashier
- The store should have a parking lot for three vehicles
- The store should have a flat roof

# User Story Cards

- Describes the requirements and the acceptance criteria
- Can also hold information about the estimate (from Scrum Team) and the priority (from Product Owner)
- Can be updated continuously

Front of Card	Back of Card
<p>1B</p> <p>As a student I want to purchase a parking pass so that I can drive to school</p> <p>Priority: <del>Must</del> Should Estimate: 4</p>	<p><u>Confirmations:</u></p> <p>The student must pay the correct amount. One pass for one month is issued at a time. The student will not receive a pass if the payment isn't sufficient. The person buying the pass must be a currently enrolled student. The student may only buy one pass per month.</p>

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I	Independent	User stories should not overlap and they should be formulated so they can be implemented in any order.
N	Negotiable	A user story should be an invitation for a conversation. It can be changed, augmented, and redacted; of course, always in dialog with the Product Owner!
V	Valuable	Each user story should deliver value, either to the Product Owner or to Scrum Team.
E	Estimable	It must be possible to assign effort to each user story. A story that can not be estimated is not complete!
S	Small	A user story must be a manageable task. If its completion takes longer than 3 or 4 days, it must be broken down!
T	Testable	There must be clear, testable criteria to define when the story is done in the eyes of the Product Owner and the Scrum Team.

[Buglione & Abran, 2013]

# Scrum Task Board

ACME Inc.

Stories	To Do		In Progress	Testing	Done
User story 1	Task 1.3	Task 1.7	Task 1.4 Task 1.5 Task 1.9	Task 1.1	Task 1.6
User story 2	Task 2.4 Task 2.9	Task 2.5 Task 2.7	Task 2.6 Task 2.8	Task 2.3 Task 2.2	Task 2.1



CATS						
To Do		In Analysis		Ready for Development		In Progress
CATS-6 ↑ Contract Report	8	CATS-187 ↑ View signed transporter contract agreements	5			CATS-144 ↑ Standard contract.
CATS-823 ↑ Hub module receiving process and error/bug fixing	5	CATS-461 ↑ Fast on Set requests without associated plan	5			CATS-825 ↑ Populate amount of commodity to be transported
CATS-828 ↑ List of approved source and destination for generating bid	5	CATS-826 ↑ Generate requisitions for Fast on set requests	2			CATS-808 ↑ Refactor request detail page UI
CATS-832 ↑ Register GRN for GIN within a transport contract	8					CATS-820 ↑ Hub module dispatch refactoring and
CATS-393 ↑ View list of submissions with status	8					CATS-824 ↑ Define workflow for transporter payment request
CATS-833 ↑ Contract administration summary page for	5					CATS-827 ↑ Transporter model difference in Hub/CATS
CATS-834 ↑ Bid winners with status - awarded, signed, disqualified	5					CATS-830 ↑ Generate winner(s) 1st and 2nd transporters for
CATS-837 ↑ Transporter Payment Request Registration	5					
In Analysis		Ready for Development		Internal Test		PO Approved
				CATS-812 ↓ Prepare a Gift Certificate SI lookup	3	
				CATS-810 ↑ Dispatch stock status on screen report	8	
Done						
						CATS-822 ↑ Source destination for bid planning/list of FDP and
						CATS-819 ↑ Woreda supported by donors on HRD
						CATS-821 ↑ Current Bid view
						CATS-829 ↑ Generate RFQ
						CATS-394 ↑ Data entry for bid proposal submission

# DoD - DEFINITION OF DONE

A checklist which usefully guides discussion, estimation and design

Should be helpful and not an obstacle

Team level – PO – Other teams

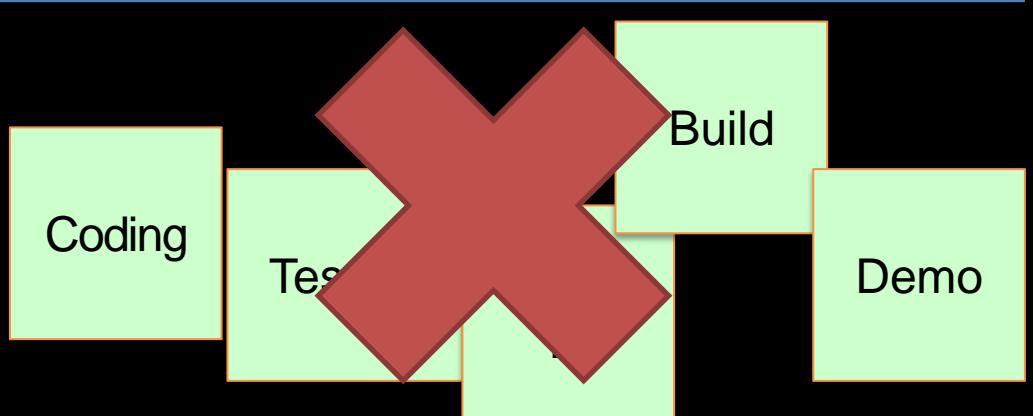
Can change over time

Code – Test – Integrate – Demonstrate – Ship

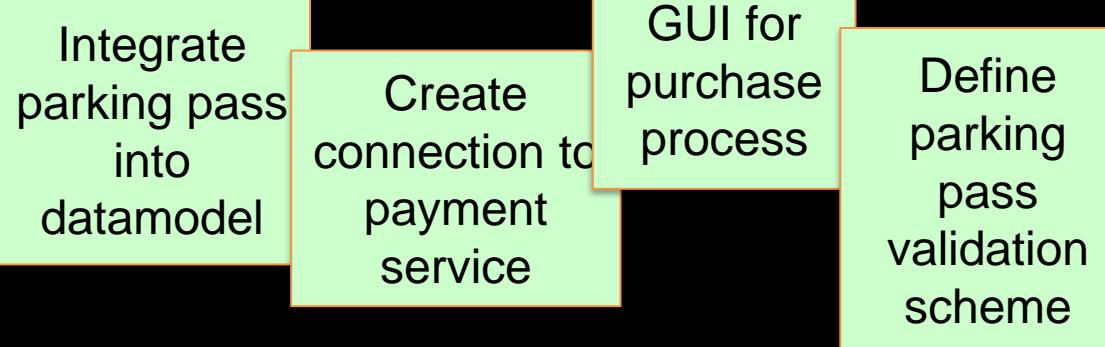
## STORIES

As a student, I want to purchase a parking pass so that I can drive to school.

## TODO



As a student, I want to purchase a parking pass so that I can drive to school.



# SLICING

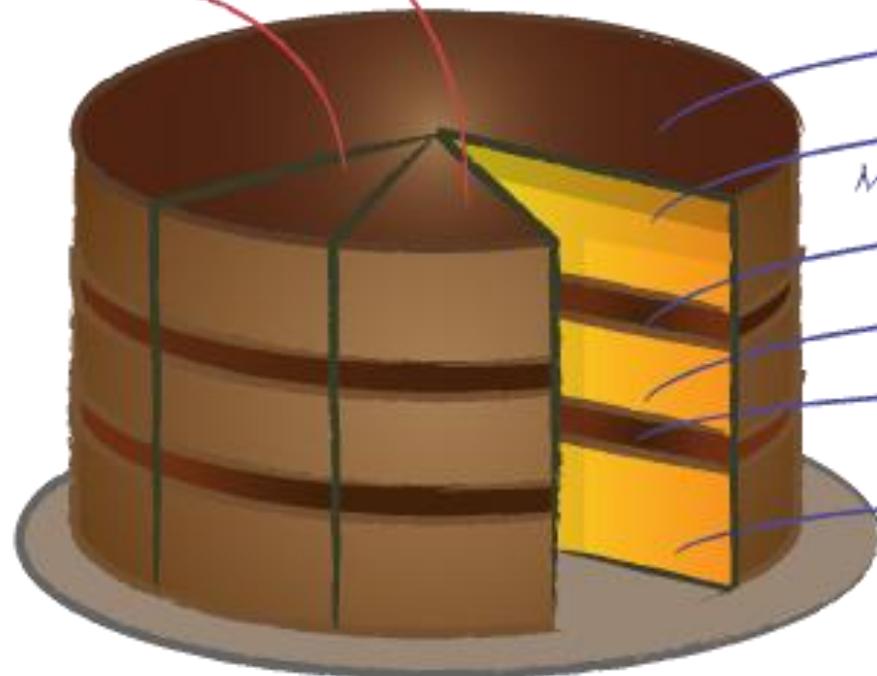
Automated Teller Machine (ATM)

Horizontal and Vertical User Stories - Slicing the Cake

Vertical User Stories

Cash Withdrawal (90% usage)

Bank Statement



Horizontal Stories

UI - PIN and Card Reader

Security Layer

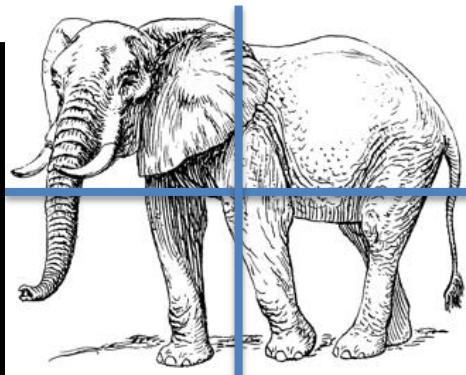
Middleware - Transaction Protocol

Tuxedo DB Interface

Transport Protocol

Bank Mainframe Database

As a student, I want to purchase a parking pass so that I can drive to school.



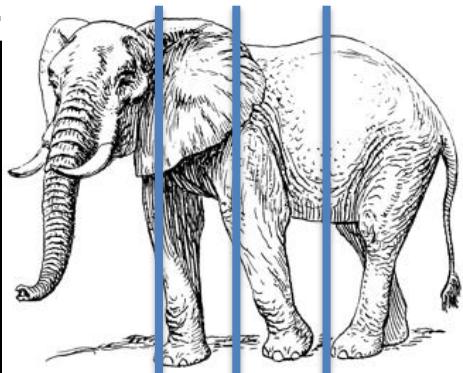
Integrate parking pass into datamodel

Create connection to payment service

Design GUI for purchase process

Define parking pass validation scheme

As a student, I want to purchase a parking pass so that I can drive to school.



Implement purchase process without payment

Integrate payment into the purchase process

Allow users to see their past orders

Define parking pass validation scheme

# ELEPHANT CARPACCIO

- Vision: Retail calculator – calculate prices for deliveries in other countries
- Three Inputs:

How many items

Price per item

2-letter country code

- Output: total price of the order.
- Algorithm: Give a discount based on total price,
- then add state tax based on country code
- and discounted price.

Slice user stories as  
small as possible!

Country	VAT
Belgium (BE)	21%
Germany (DE)	19%
Hungary (HU)	27%
Sweden (SE)	25%
United Kingdom (UK)	20%

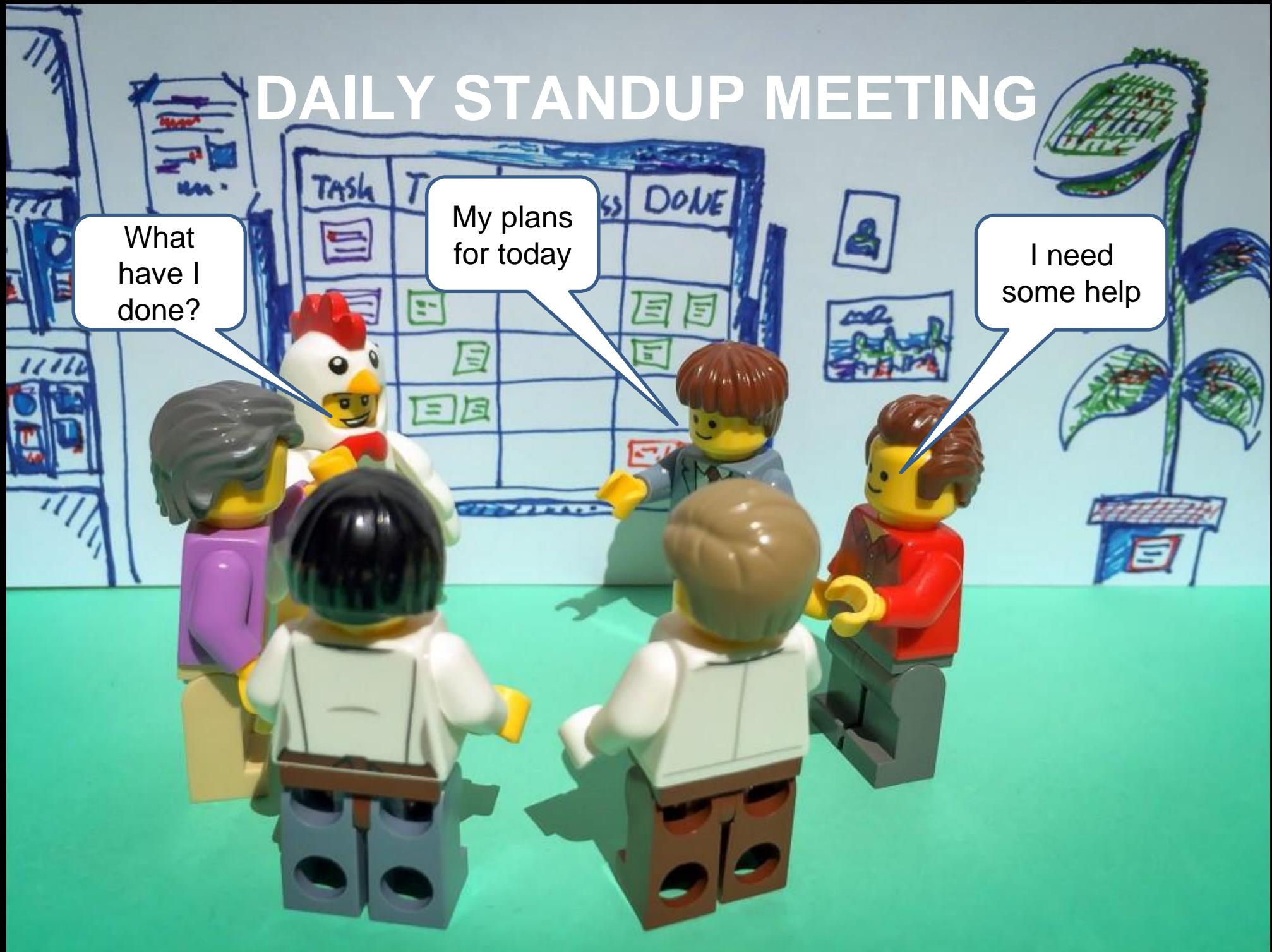
Amount	Discount
10.000 SEK	2%
50.000 SEK	3%
100.000 SEK	5%
200.000 SEK	8%
500.000 SEK	10%

# DAILY STANDUP MEETING

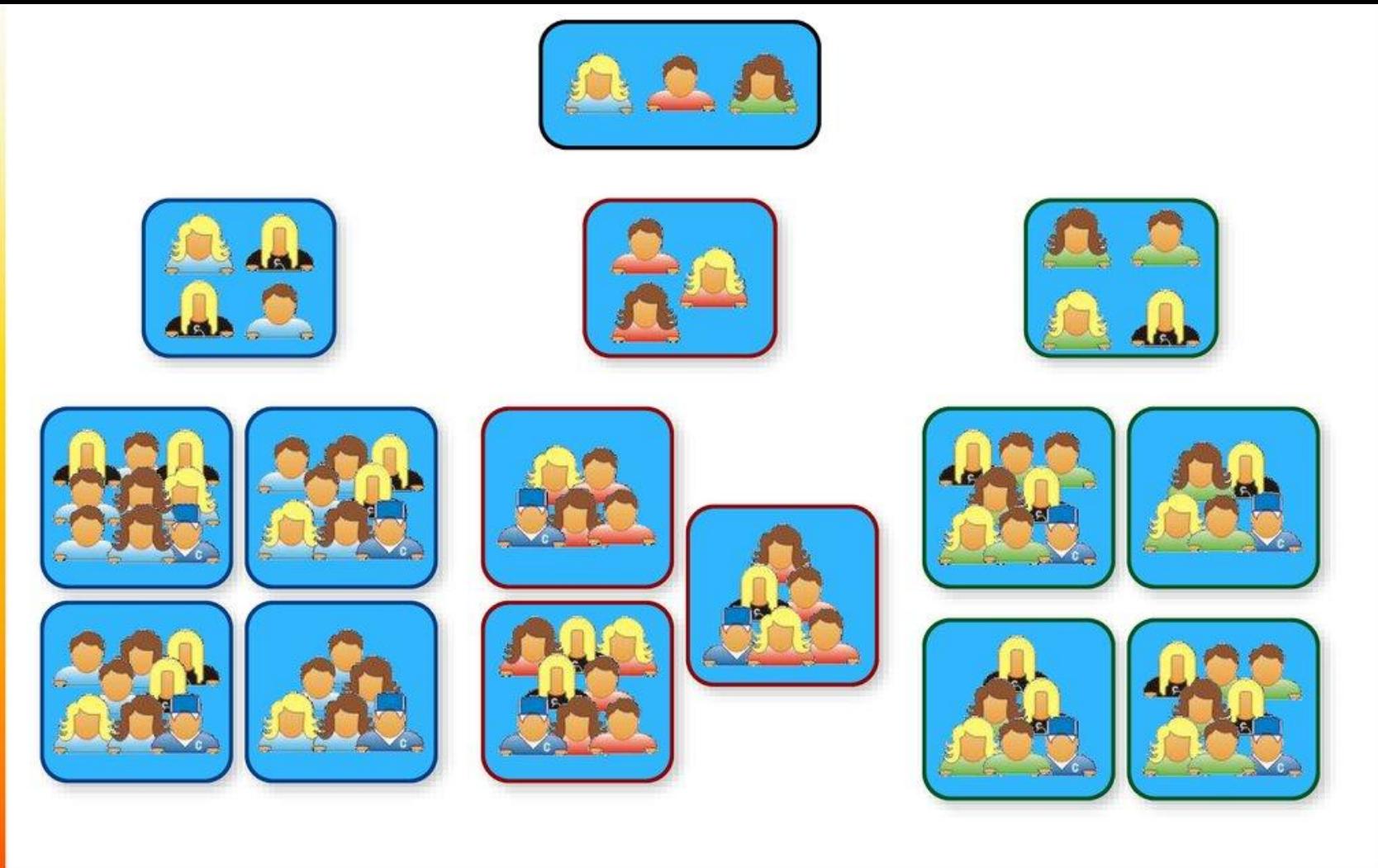
What have I done?

My plans for today

I need some help



# SCRUM OF SCRUMS



# SCRUM OF SCRUMS

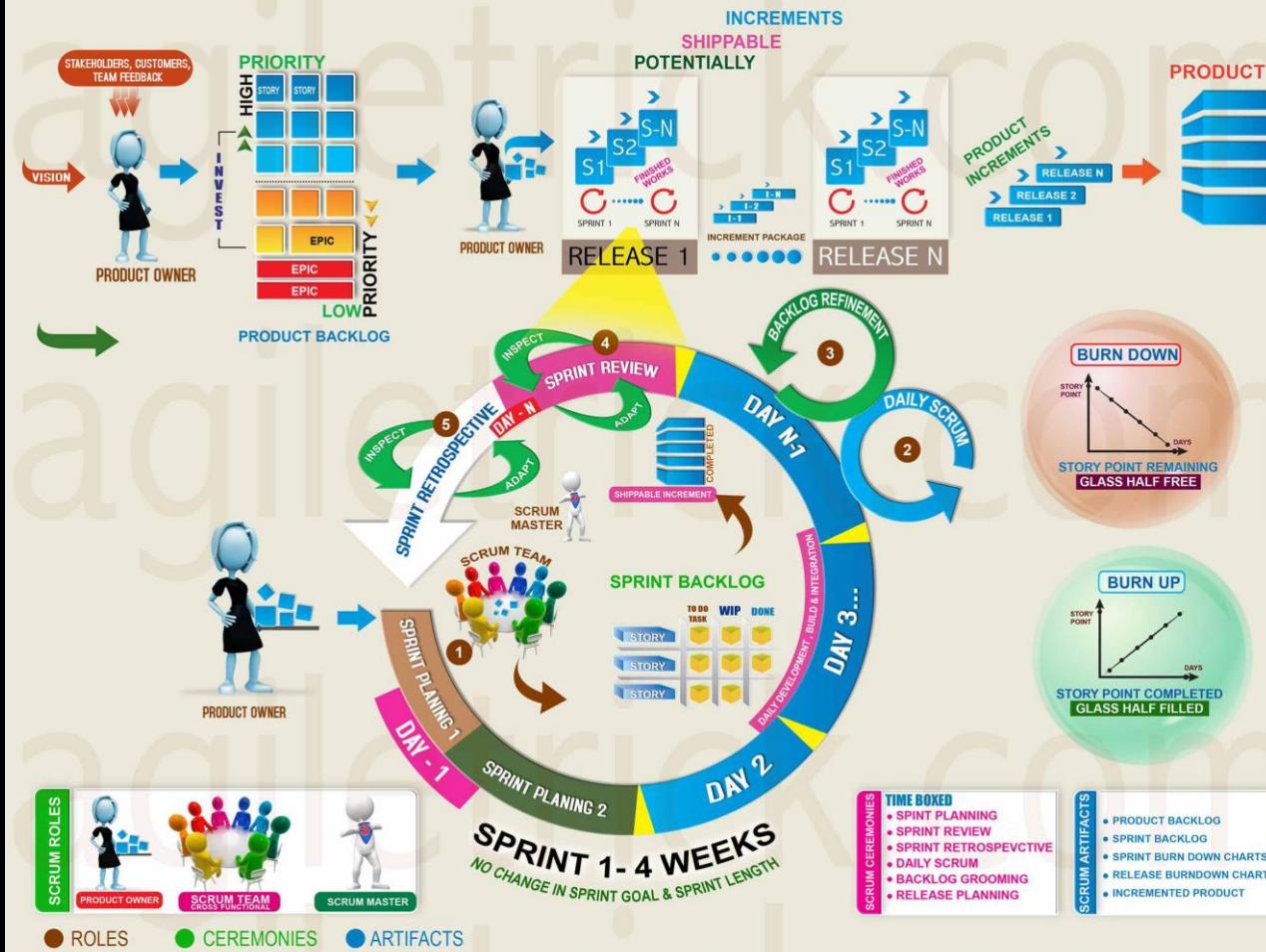


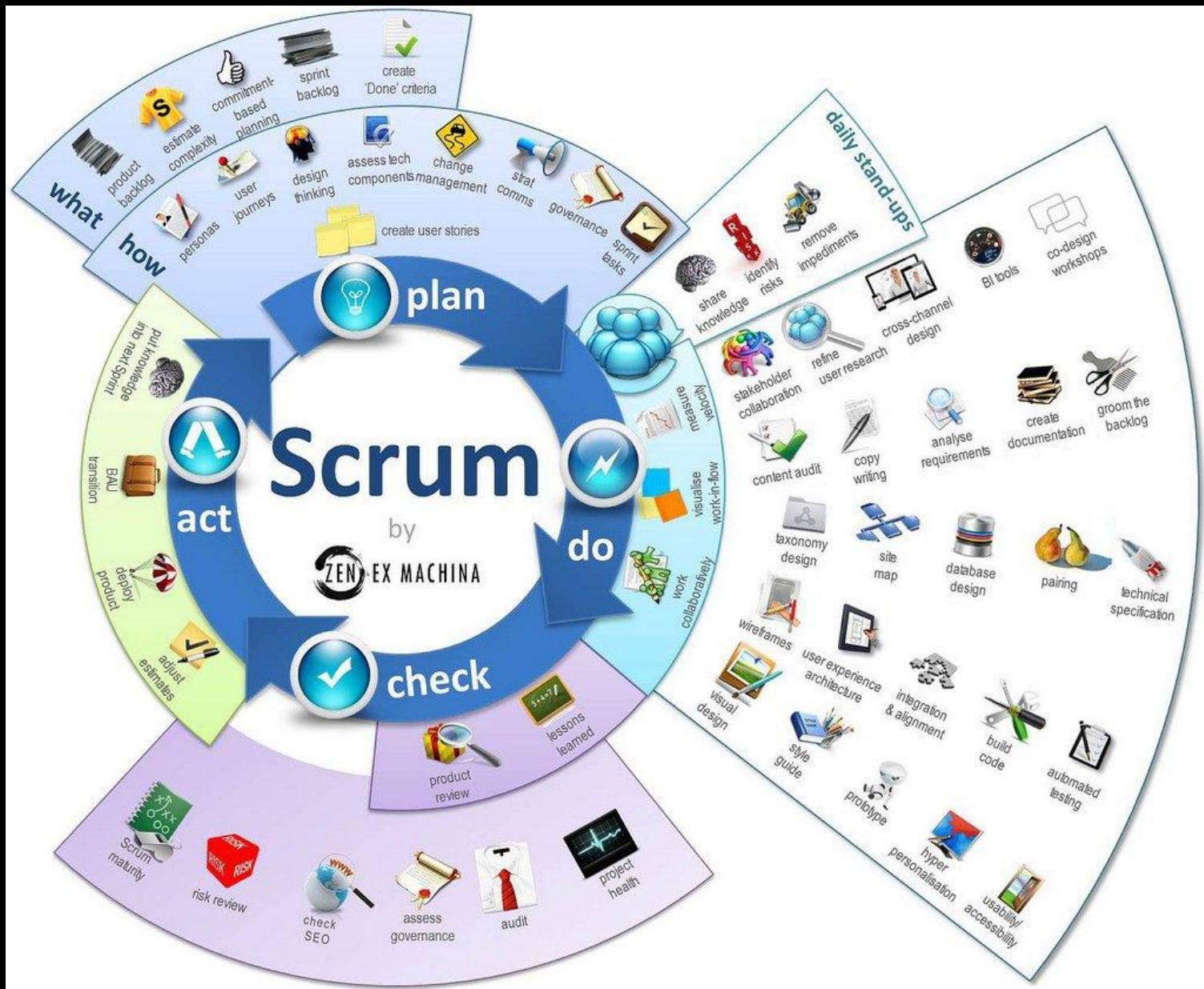
Regular meetings:

- 1) What has your team done since we last met?
- 2) What will your team do before we meet again?
- 3) Is anything slowing your team down or getting in the way?
- 4) Are you about to put something in another team's way?

# THE SCRUM FRAMEWORK

agiletrick.com





# WAY OF WORKING

Possible tools and practices:

- Slack / Facebook group
- Epic board
- Git repo
- Meet at lectures and supervision
- Rotate representatives
- Social contract
- DoD
- ...

What is  
What might or should be  
Feedback to reduce the gap



# REALITY CHECK

What was purpose of lecture?

Which learning objectives were covered? How?

What was the relationship to the course assessment?

# QA

'Questions don't have to make sense, Vincent', said Miss Susan.

'But answers do'

Terry Pratchett  
*Thief of Time*, 2001