

Viktoria Stray

Associate Professor, PSE Group

- Computer Science, NTNU, 2007
- 3 years as an IT-consultant, Accenture
- PhD, Software Engineering, UiO, 2014

knowit®

SpareBank 1

storebrand

NR Norsk Regnesentral
NORWEGIAN COMPUTING CENTER

Kantega

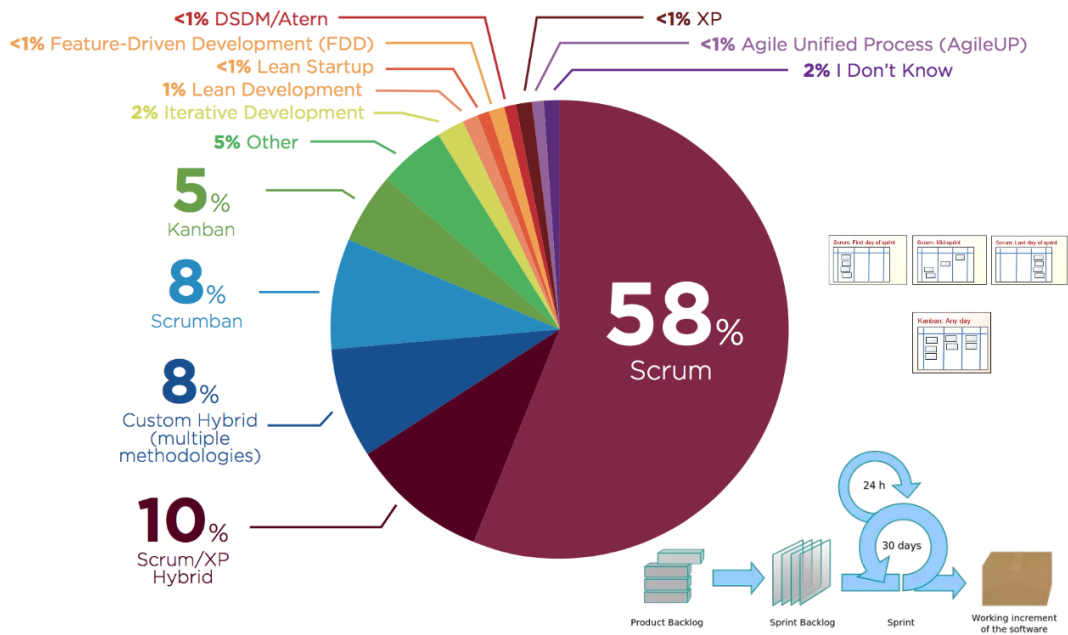


SINTEF

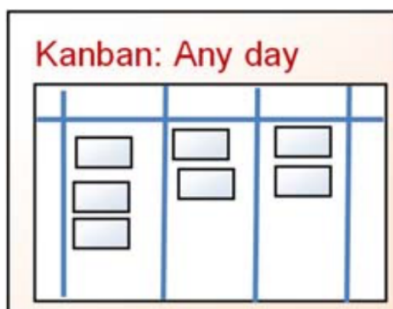
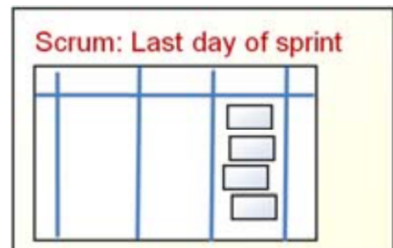
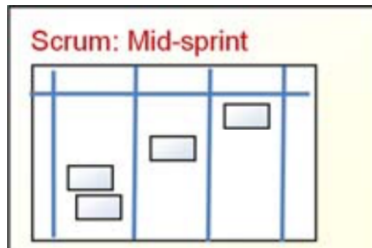
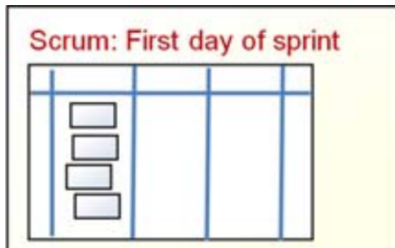
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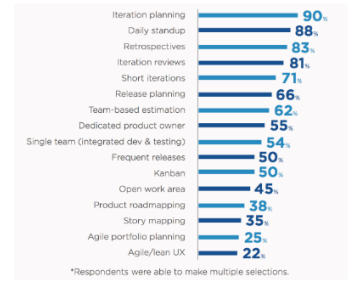
AGILE METHODS AND PRACTICES



VersionOne, 2016,
<https://explore.versionone.com/state-of-agile/versionone-11th-annual-state-of-agile-report-2>



Top 4 agile techniques



90%
ITERATION
PLANNING

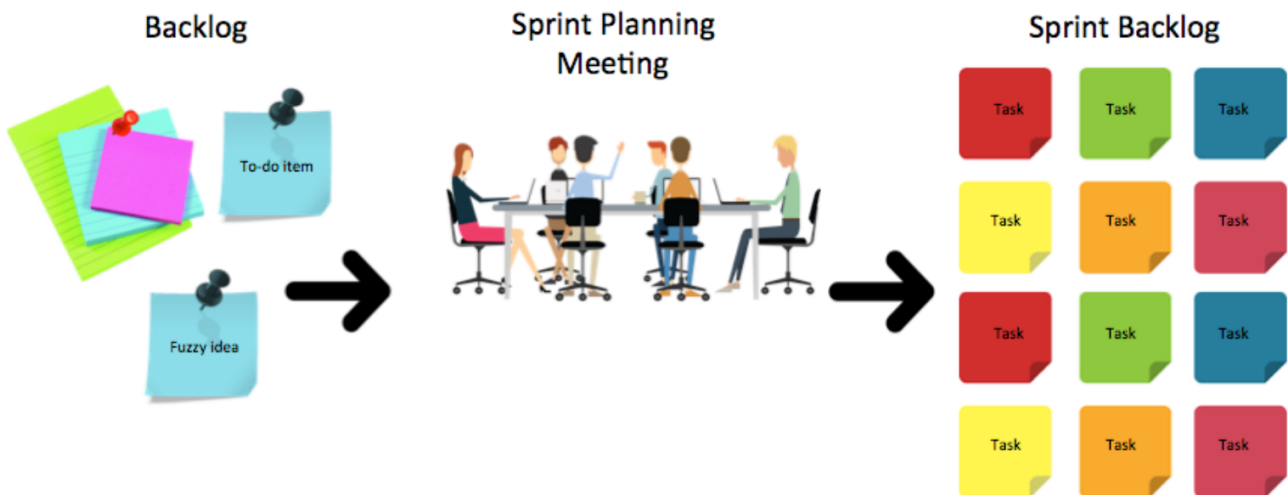
88%
DAILY
STANDUP

81%
ITERATION
REVIEWS

83%
RETROSPECTIVES

VersionOne.com, 2016,

Sprint Planning Meeting



DAILY STAND-UP



Max 15 min



The practice has many names:

- Daily stand-up meeting
- Daily meeting
- Daily Scrum
- Scrum meeting
- Daily huddle meeting

The practice is known by many names:

- Daily stand-up meeting
- Daily meeting
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- Daily huddle meeting

What are the names of the practice?

- Daily stand-up meeting
- Daily meeting
- Daily Scrum
- Scrum meeting
- Daily huddle meeting

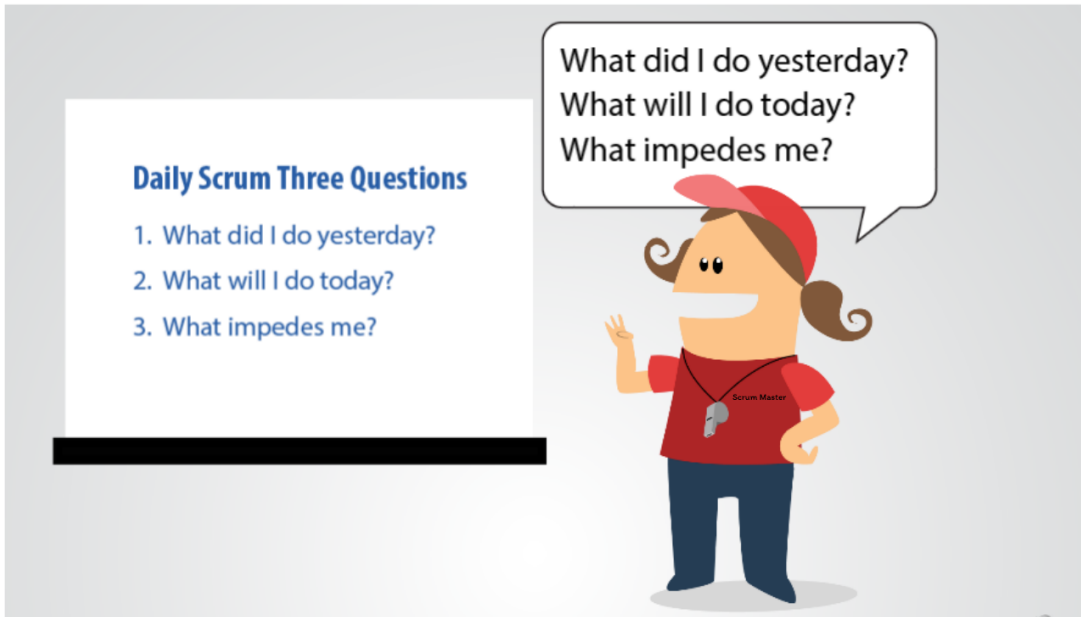


The practice has many names:

- Daily stand-up meeting
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<http://scrumtrainingseries.com/>



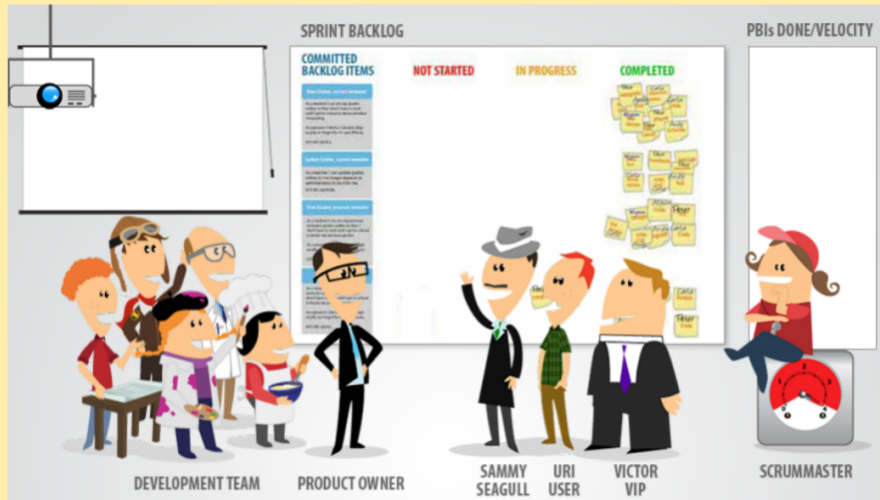
<http://scrumtrainingseries.com/>

SPRINT REVIEW

(Demo)



Max 4 hours

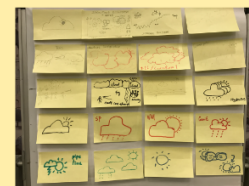


<http://scrumtrainingseries.com/>

RETROSPECTIVE



Max 3 hours



Qualitative research on daily stand-ups

Data collected in four companies

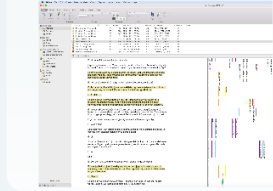


81 interviews (13 teams)

83 observations of daily stand-up meetings

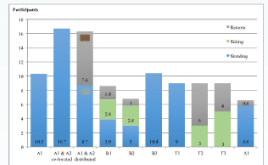
More than 100 observations of other meetings

Analysis

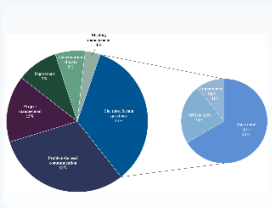
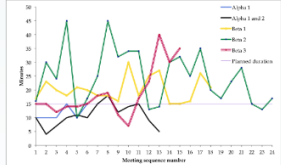


FINDINGS

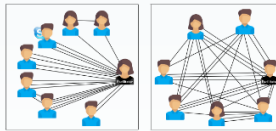
The average number of participants was 9.6



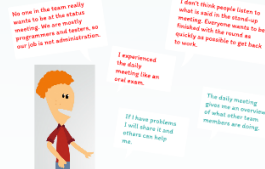
The duration of the meetings in Alpha and Beta varied



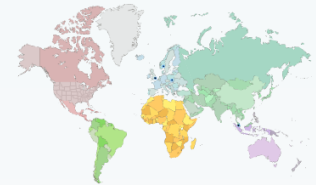
Degree of self-management affected the interactions



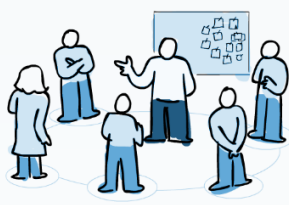
Negative and positive opinions from the interviews



Data collected in four companies



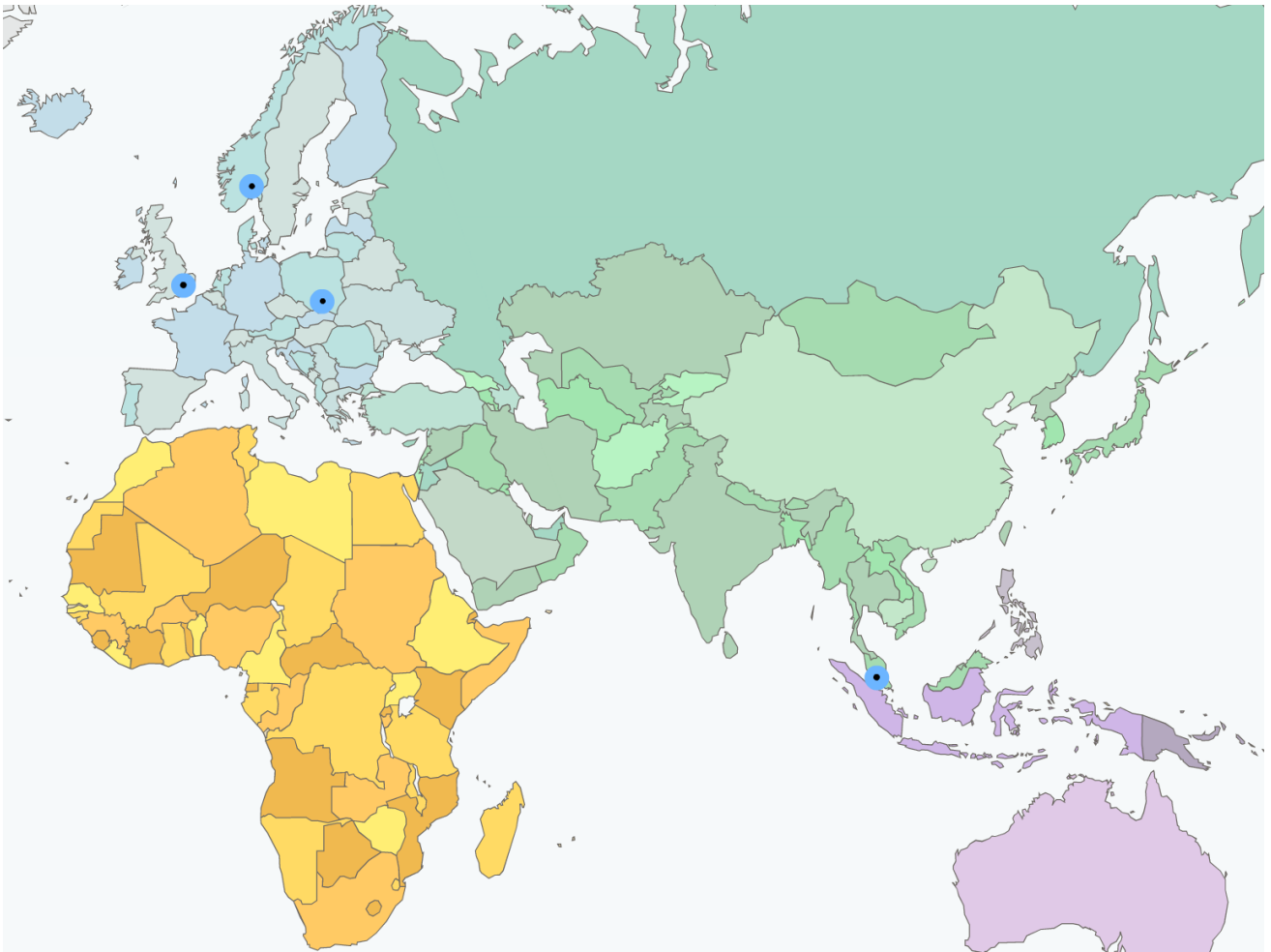
81 interviews (13 teams)



83 observations of daily stand-up meetings

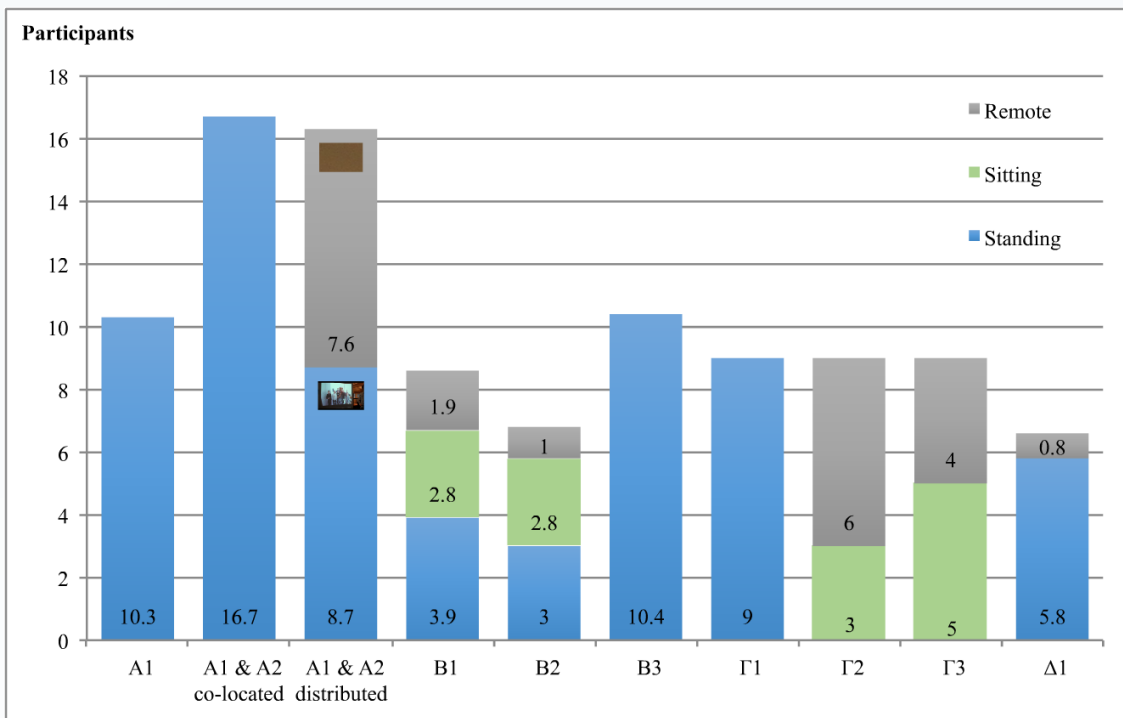


More than 100 observations of other meetings

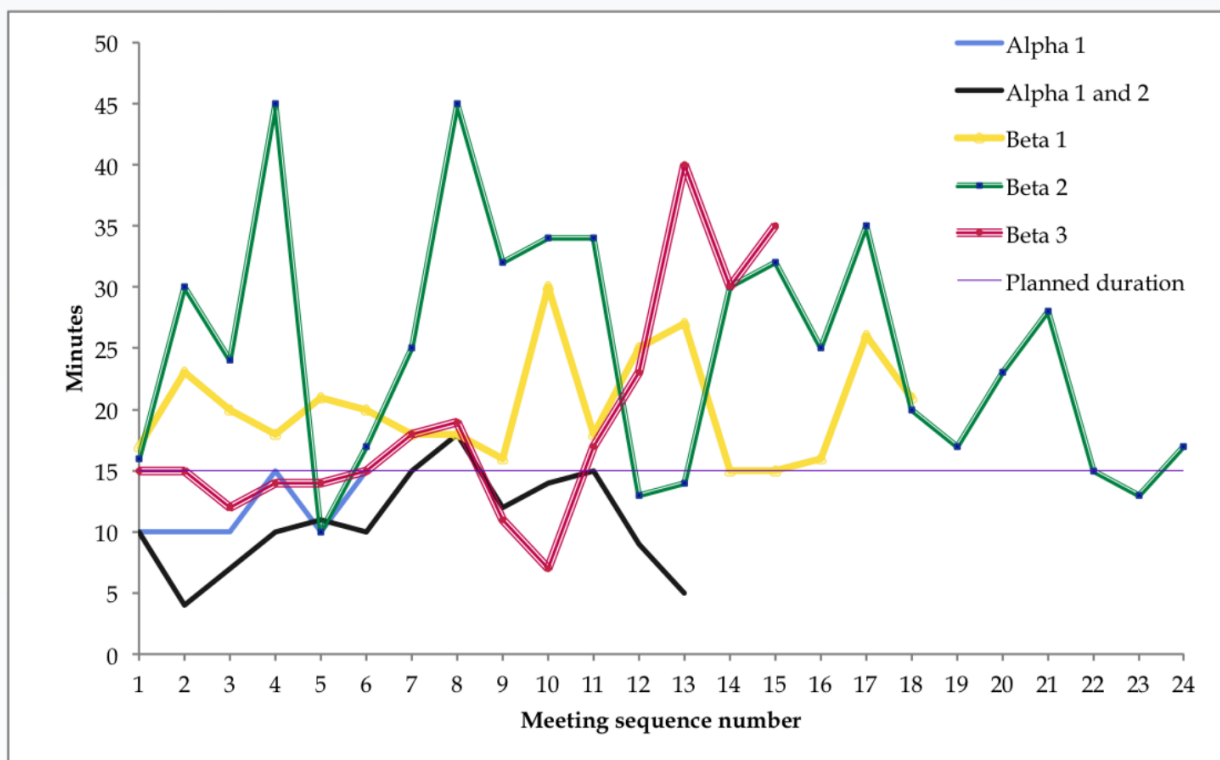


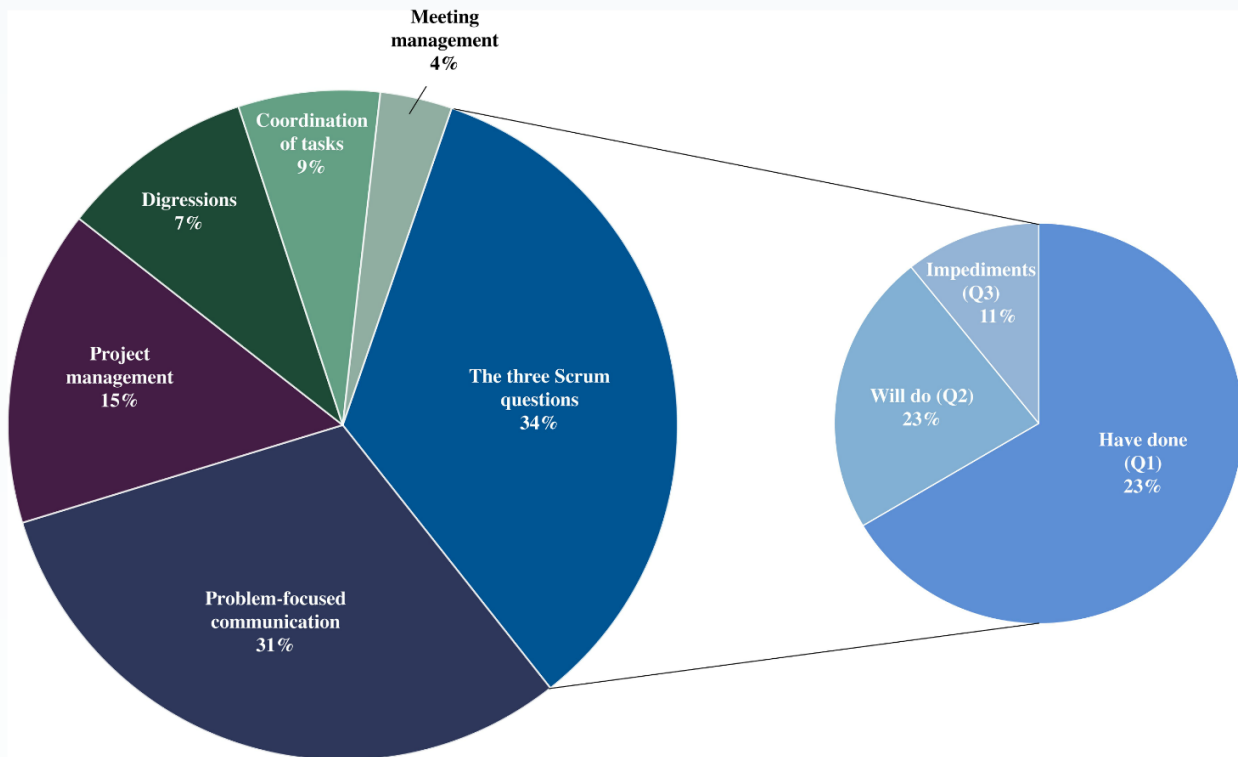
FINDINGS

The average number of participants was 9.6

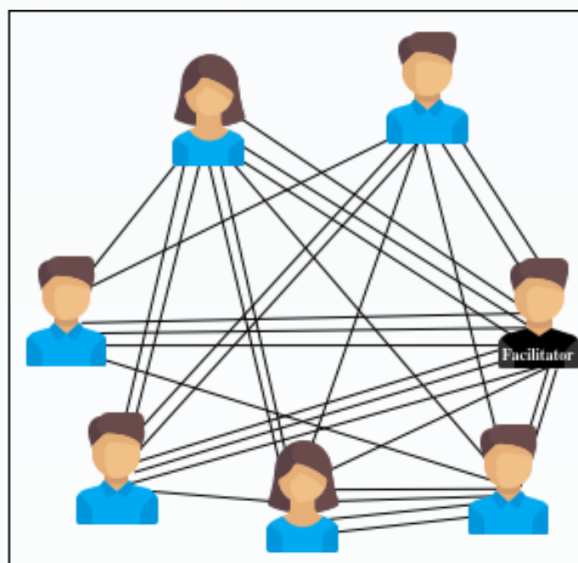
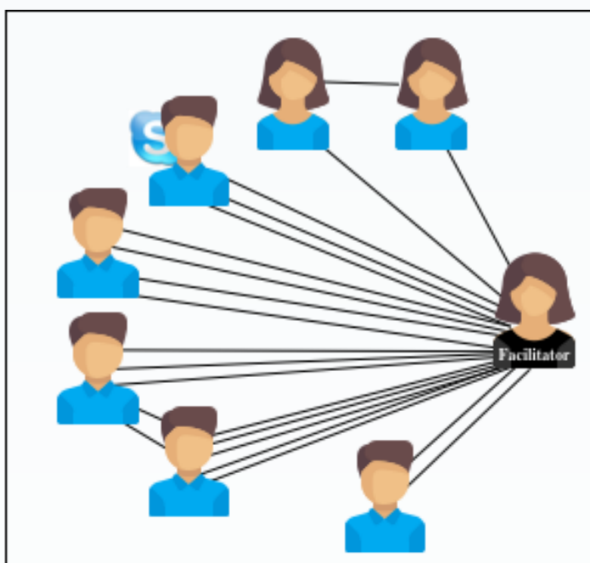


The duration of the meetings in Alpha and Beta vari





Degree of self-management affected the interactions



Negative and positive opinions from the interviews

No one in the team really wants to be at the status meeting. We are mostly programmers and testers, so our job is not administration.



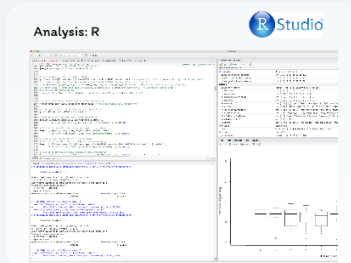
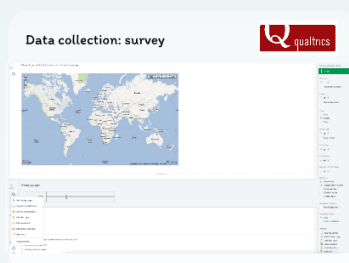
I don't think people listen to what is said in the stand-up meeting. Everyone wants to be finished with the round as quickly as possible to get back to work.

I experienced the daily meeting like an oral exam.

If I have problems I will share it and others can help me.

The daily meeting gives me an overview of what other team members are doing.

Quantitative research on daily stand-ups



Data collection: survey



Q13 Where do you live? (click the location on the image map)

Change Question Type
+ Slider

Choices
 1
 Automatic Choices

Labels
 0
 Automatic Labels

Type
 Bars
 Sliders
 Stars

Grid Lines
 0
 Snap to Grid

Min Value

Max Value

Number of Decimals

Options
 Show Value
 Custom Start Position
 Not Applicable
 Mobile Friendly
 Center Labels

Validation Options
 Force Response

Validation Type
 None
 Custom Validation

Actions
 Add Page Break
 Add Display Logic
 Add Skip Logic
 Copy Question
 Move Question
 Add Note

Q14 What is your age?

your current employment status?

Working (self-employed)
 Working (employed)

Analysis: R



The R Studio interface displays the following code in the editor:

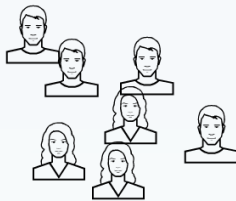
```
daily-standup-analysis.R | analysis_for_paper.R | load_and_create_variables.R | figure.R | table.R  
# Density plot of team size and distribution  
plot(density(dQ01_team_size_1[!(is.na(dQ01_team_size_1) & dQ038_team_distribution=="is local"]), col="red", main="Density plot of team size")  
# d.local <- dQ01_team_size_1[!(is.na(dQ01_team_size_1) & dQ038_team_distribution=="is local")  
lines(density(dQ01_team_size_1[!(is.na(dQ01_team_size_1) & dQ038_team_distribution=="is distributed across sites"]), col="blue")  
# d.distributed <- dQ01_team_size_1[!(is.na(dQ01_team_size_1) & dQ038_team_distribution=="is distributed across sites")  
# t.test(d.distributed, d.local)  
legend(15, 1, c("local", "distributed"), lty=c(1,1), lwd=c(2.5, 2.5), col=c("red", "blue"))  
# t-test: Differences between team size and distribution  
t.test(dQ01_team_size_1~dQ038_team_distribution) # not significant, but 1 person more  
# Plot example of joel test and time spent in meetings  
plot(dQ02_sum_joel, dQ033_hours_spent_1)  
# Boxplot of joel test and hours spent programming  
boxplot(Q03_hours_spent_2~Q02_sum_joel, data=d, main="",  
xlab="Joel sum score", ylab="Hours spent programming", ylim=c(0,20))  
# Boxplot of team distribution and hours spent programming  
boxplot(Q03_hours_spent_2~Q038_team_distribution, data=d, main="",  
xlab="Team distribution", ylab="Hours spent programming", ylim=c(0,15))  
# Dropping subjects who do not use programming  
# Boxplot of team distribution and hours spent programming  
boxplot(dQ033_hours_spent_2[dQ038_team_distribution!=dQ033_hours_spent_2 == 0], main="",  
xlab="Team distribution", ylab="Hours spent programming", ylim=c(0,15))  
# Boxplot of attending standup and hours spent programming  
boxplot(Q03_hours_spent_2~Q038_team_distribution, data=d, main="",  
xlab="Team distribution", ylab="Hours spent programming", ylim=c(0,15))  
# Visualize team size
```

The console shows the results of the t-test:

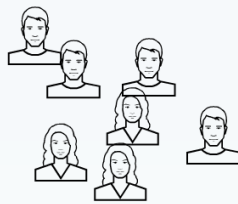
```
> t.test(dQ01_team_size_1~dQ038_team_distribution) # not significant, but 1 person more  
Welch Two Sample t-test  
data: dQ01_team_size_1 by dQ038_team_distribution  
t = 1.579, df = 165.95, p-value = 0.1173  
alternative hypothesis: true difference in means is not equal to 0  
95 percent confidence interval:  
-0.2625397 2.3167989  
sample estimates:  
mean in group is distributed across sites mean in group is local  
7.951613 6.924528
```

The boxplot shows the distribution of 'Hours spent programming' (y-axis, 0 to 20) across 'Joel sum score' categories (x-axis, 1 to 7). The plot shows that as the Joel sum score increases, the distribution of hours spent programming shifts towards higher values, with more outliers at higher scores.

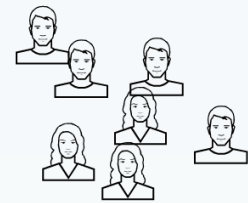
Results from survey



Students



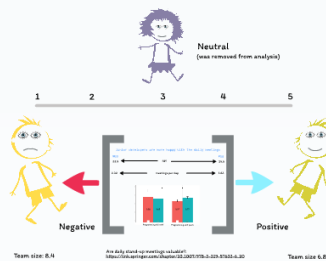
Professional developers



Not working in a team

74% use agile methods

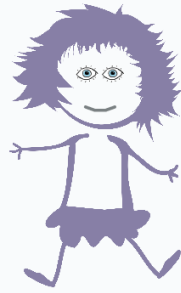
87% of agile developers attend
daily stand-up meetings



Professional developers

74% use agile methods

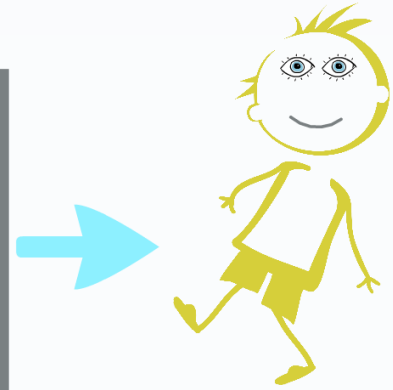
87% of agile developers attend
daily stand-up meetings



Neutral
(was removed from analysis)



Negative



Positive

Team size: 8.4

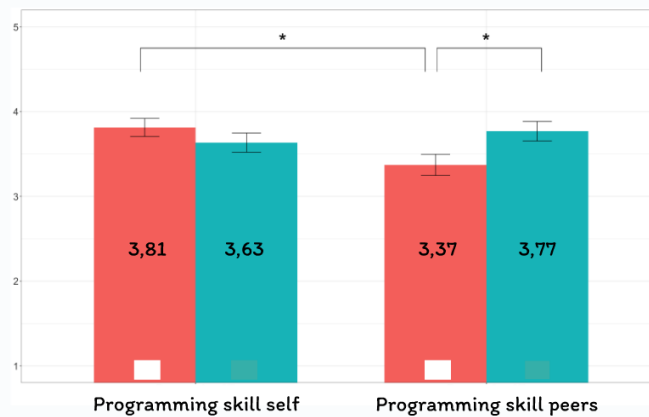
Are daily stand-up meetings valuable?:
https://link.springer.com/chapter/10.1007/978-3-319-57633-6_20

Team size 6.8

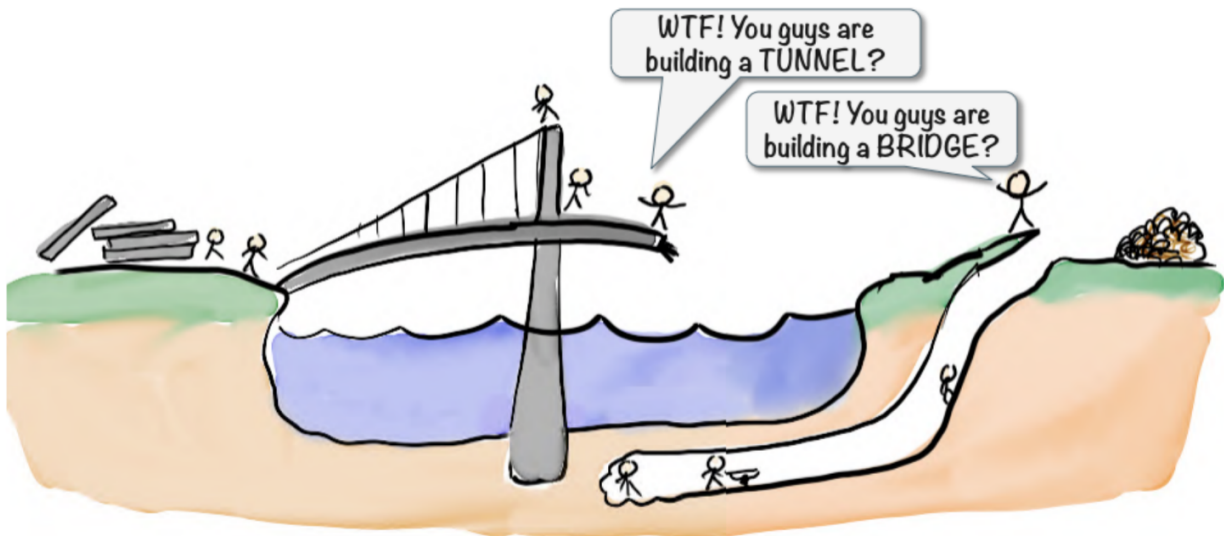
Junior developers are more happy with the daily meetings

NEG 33.5 ← age → POS 29.6

2.32 ← meetings per day → 1.83



Team awareness

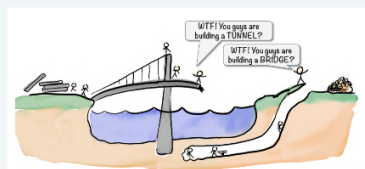


<http://blog.crisp.se/wp-content/uploads/2017/10/Scaling-Agile-at-LEGO-and-Spotify.pdf>

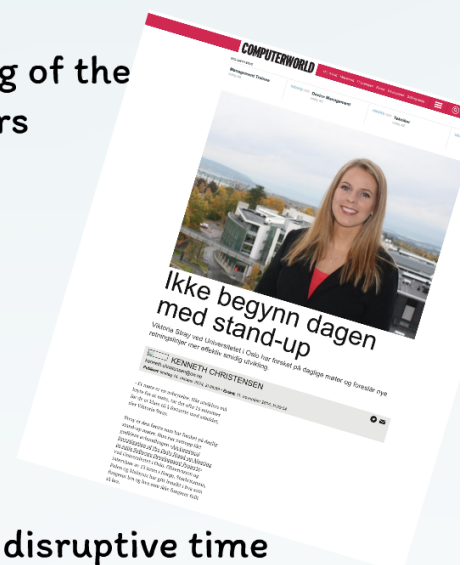
NEW GUIDELINES

- Purpose: Obtain a shared understanding of the current activities of other team members

- Team awareness



<http://blog.crisp.se/wp-content/uploads/2017/10/Scaling-Agile-at-LEGO-and-Spotify.pdf>



- The team should strive to find the least disruptive time
- Does not have to be held every day, but must have a regular frequency
- Round robin approach for turn-taking

MORE READING

<https://www.computerworld.no/nyheter/2017/09/28/stand-up-er-ikke-stand-up-20170928/>

MORE READING

Digi.no:

<https://www.digi.no/artikler/mange-har-endret-standup-motene-pa-grunn-av-forskningen-til-viktoria/398339?key=k4fqQQQ9>

Journal of Systems and Software:

https://www.researchgate.net/publication/301559978_The_Daily_Standup_Meeting_A_Grounded_Theory_Study