# Software testing methods

Executing usability tests

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# Before executing usability testing

❯ Verify your test plan (using a checklist)

❯ Pilot test with 2-3 users (especially important if doing unmoderated remote testing)

- ❯ Fine tune test cases
- ❯ Check and adjust timing
- ❯ Determine and adjust order of test cases
- ❯ Ensure that you are testing with right participants
- ❯ Make sure that test environment and tools are working as expected

❯ If existing system is redesigned, you may execute usability tests on that before starting to design a new system (or test competitor product)
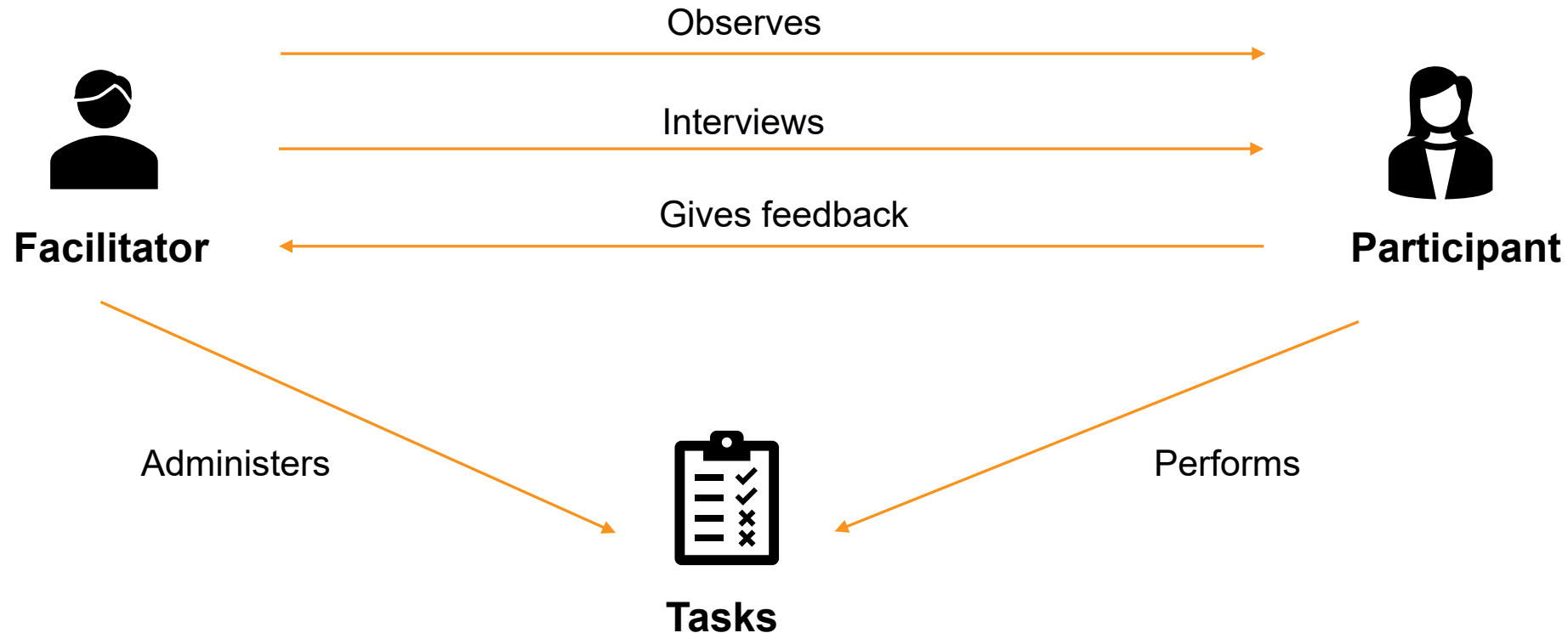
# Roles in usability testing

› Faciliatator (moderator)

› Observer/evaluator

› Participant

› Note-taker

› Support

# Facilitator

› Administers and moderates sessions

› Guides participants through the test process, gives instructions and answers possible questions

› Asks participant to perform test cases, observes outcome

› Observes participant's behaviour and listens feedback

› Ask follow-up questions

› Works to ensure that test produces high-quality and valid data

# Observer

❯ Although faciliatator is also observing, there can be one or several observers taking part of the testing sessions

❯ Observes participant's behaviour, facial expressions, body language, listens feedback and take notes

❯ Using multiple observers will provide various insights and give diverse perspective for the analysis

❯ Observers should not interfere with the test situation. If in lab environment, there might be even separate space/room for observers

# Participant

› Realistic user of the product or service

   › Already using the system

   › Having similar background to the target group

› Performs test cases

› Gives feedback and opinions, answer possible questions

› Might be asked to think out loud (narrate actions)

› Keep in mind, that the target system's usability is tested, **not** participant

# Test tasks

> Handed out verbally or in written format

> You might ask participant to read task/scenario out loud
>> Helps to ensure, that instructions are read completely
>> Staff taking part to the test session know which case is performed
>> Helps note taking

# Note taking

> One ore more people (e.g. observers) can be responsible for taking notes and you may record the sessions for later analysis

> Write down all relevant information (description what happened, how it occcured, task user was performing and other details describing the problem)

> Take lot of notes (paper or in electronic format), since you do not know beforehand what might prove valuable during analysis, basically write down every single issue that occurred

> Later on good (and structured) notes will make analysis (and transcriptions) easier

# Note taking

› Take notes of
  › Mistakes
  › System errors and messages
  › Click-paths
  › Strategies and tools
  › Search terms and results
  › Quotes

› Take also notes of technical issues (bugs) faced during testing sessions

› See [example](example) (Note taker's guide)

# Examples of notes

› He skipped zip field on the order form

› She was not able to login while using incorrect email address format

› She didn't click Order button before navigating to other window

› Error message: "Undefined"

› Click path: Home->Categories->Shirts->Men's black Nike T-shirt

› He said I am choosing About us to look for contact details

› She typed word "shoos" on search box and an empty page was displayed

› "This is really nice and easy to use."

› "This was really confusing and hard to use."

# Recording

› Recording sessions (audio, video, mouse movement, …) may help later analysis and remember/revisit test session if necessary

› If sessions is recorded remember to ask permission from the participant

› Remind people taking part to the testing session about recording

› There are various tools available for recording (capturing audio and screen), some tools are dedicated for usability testing

# Eyetracking

> Technology measuring eye moment making possible to know
>> where a person is looking
>> what they are looking for at
>> how long the gaze is on particular spot

> Enable to objectively and accurately record and analyze visual behaviour and scanning patters

> Some usability testing tools provide eyetracking capabilities

# Usability test session

❯ In-person
  ❯ Participant and staff are physically located to the same location (or lab)

❯ Remote
  ❯ Test is carried out using a remote connection
  ❯ **Moderated** test is executed pretty much the same way than in-person test, so staff is taking part on real-time remotely
  ❯ **Unmoderated** remote test session is recorded and staff is not observing it real-time
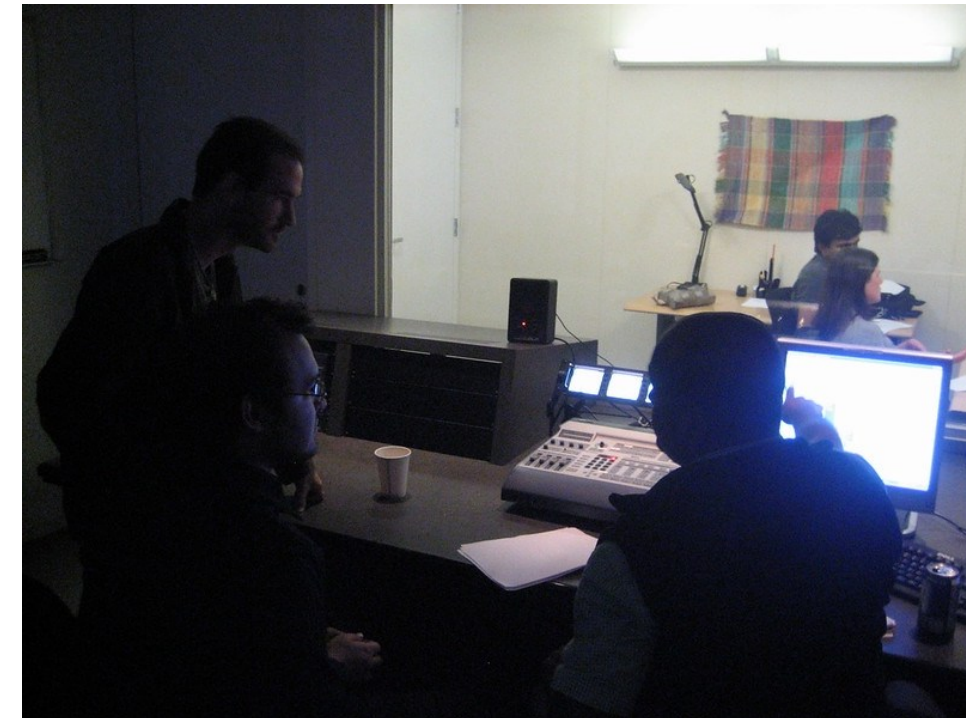
# Resources

❯ Nielsen Norman Group. Usability Testing 101.
https://www.nngroup.com/articles/usability-testing-101/

❯ Nielsen Norman Group. Checklist for planning usability studies.
https://www.nngroup.com/articles/usability-test-checklist/

❯ Nielsen Norman Group. Observer Guidelines for Usability Research.
https://www.nngroup.com/articles/observer-guidelines/