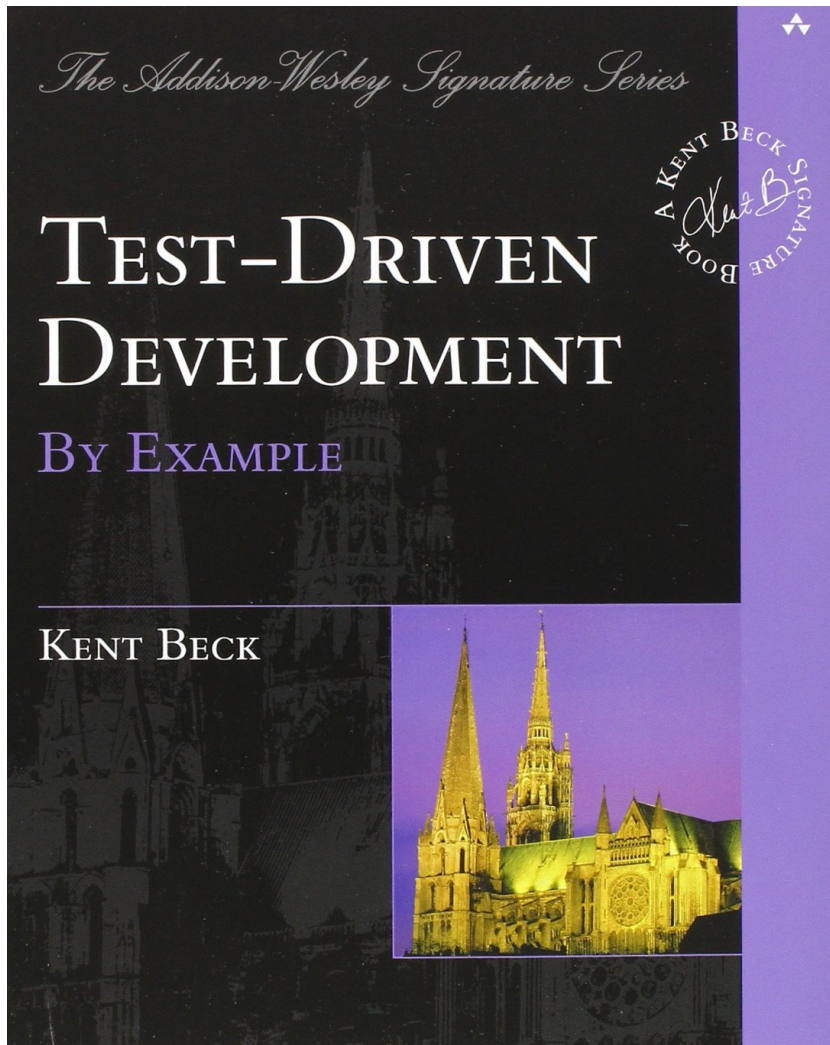


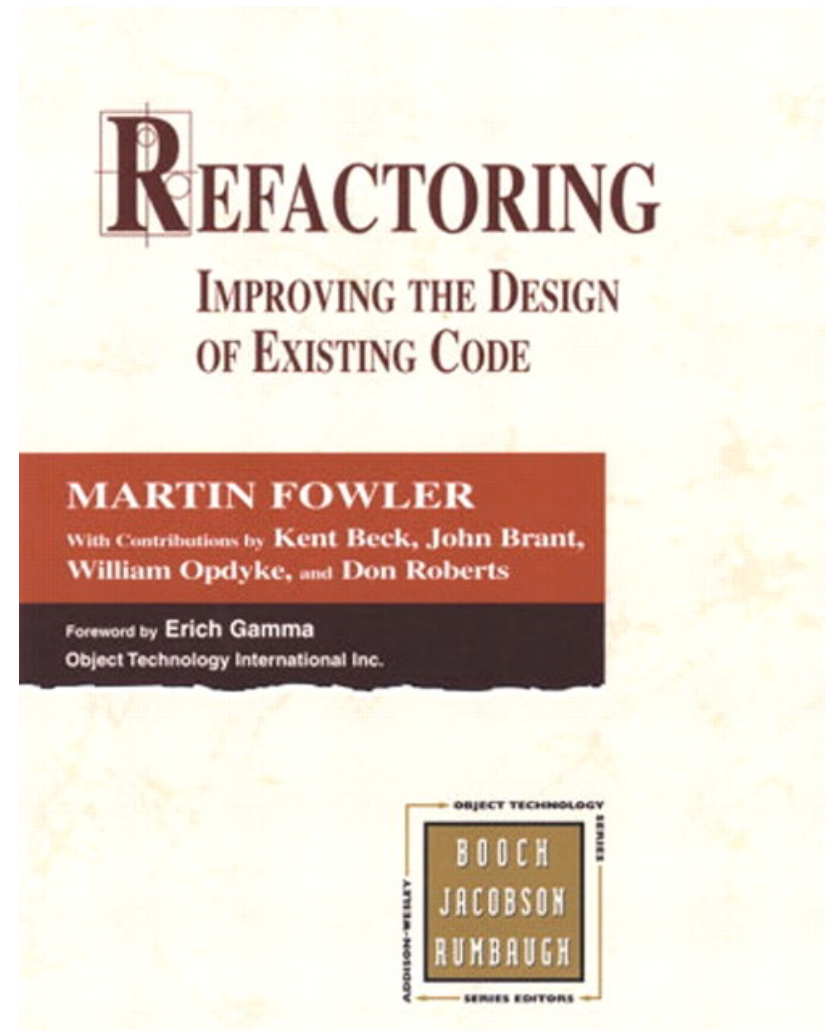
# Testdrevet utvikling og refactoring

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*Ove Gram Nipen*





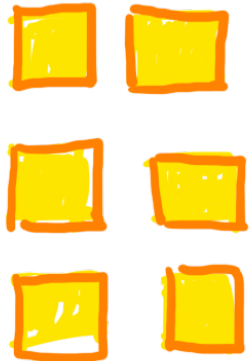

2003

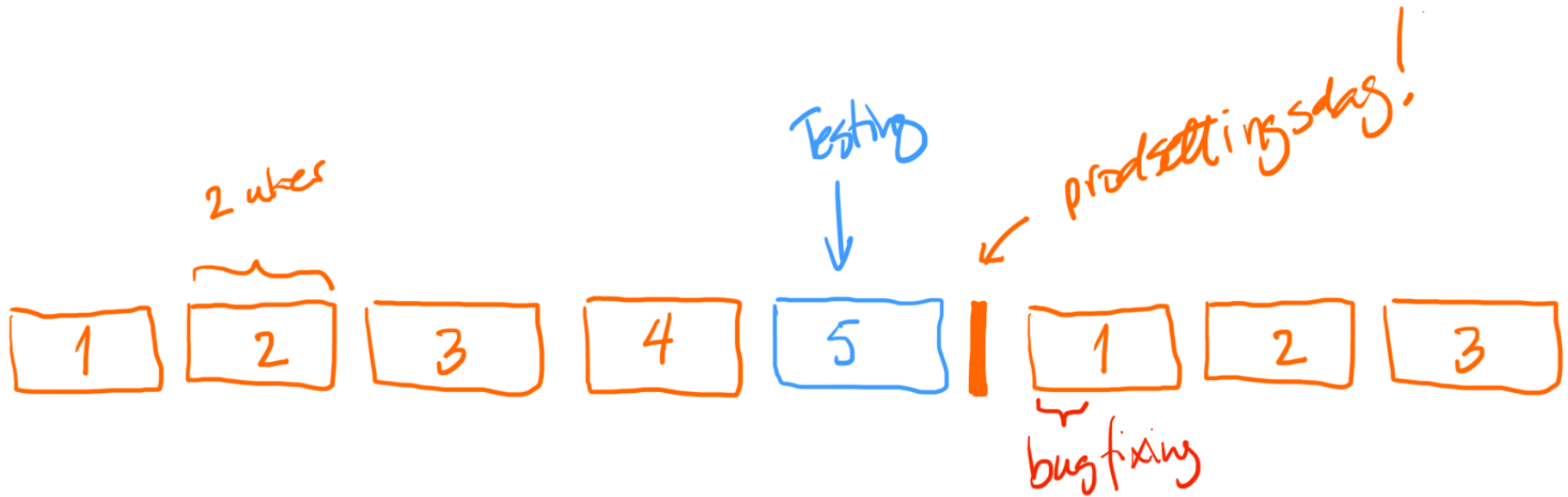


1999

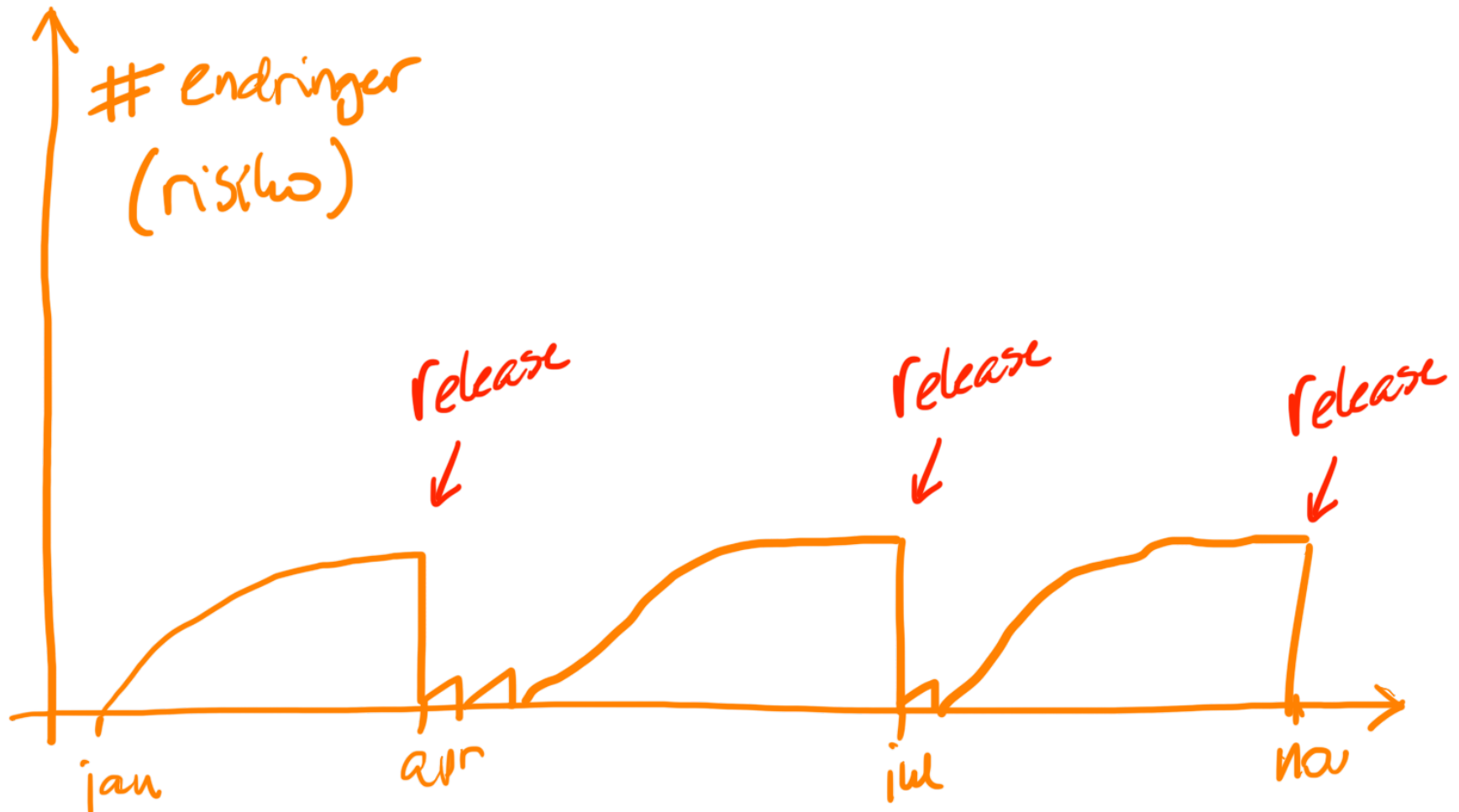


# Et tradisjonelt utviklingsløp

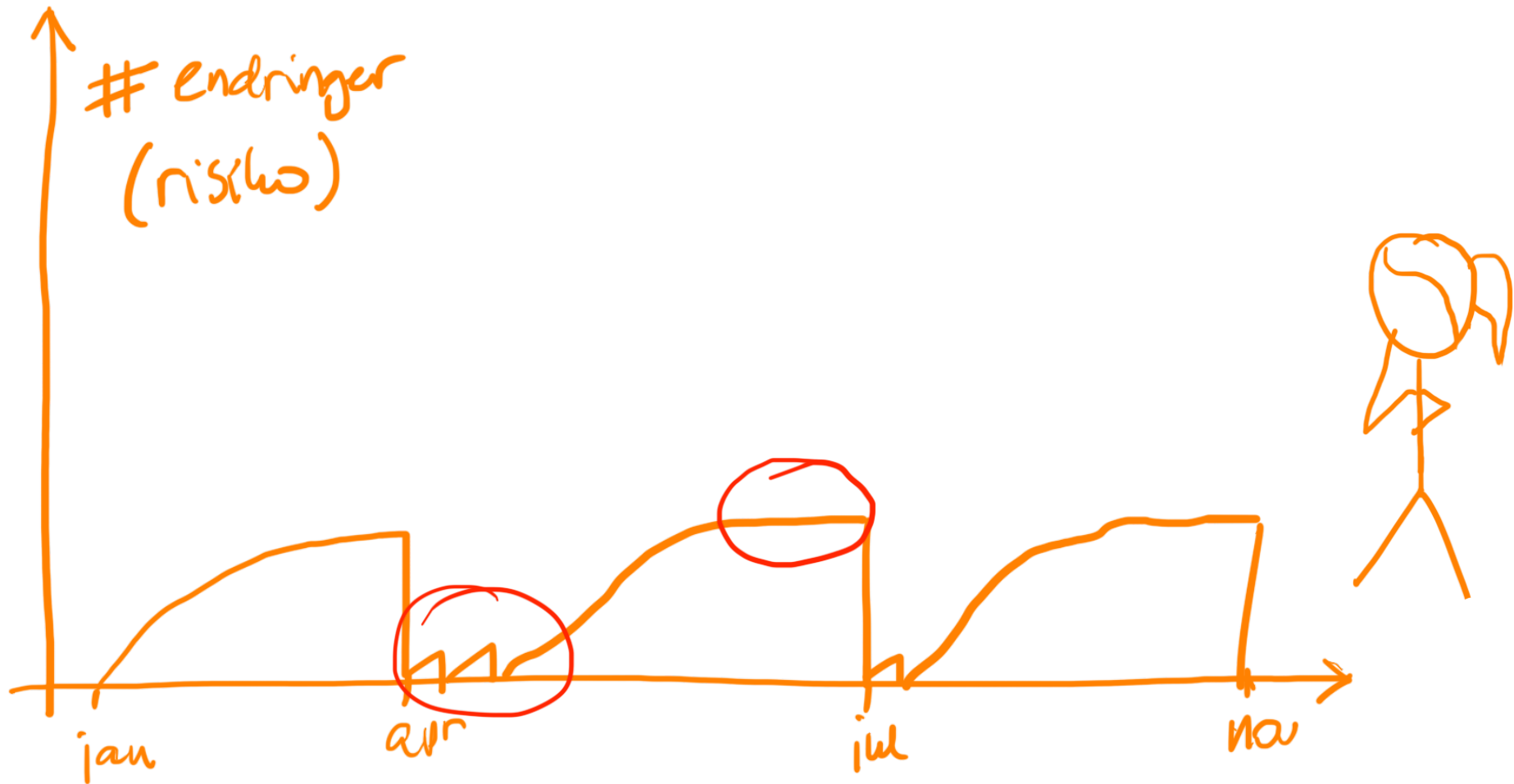
ToDo	Blokkert	Påbegynt	Ferdig
			



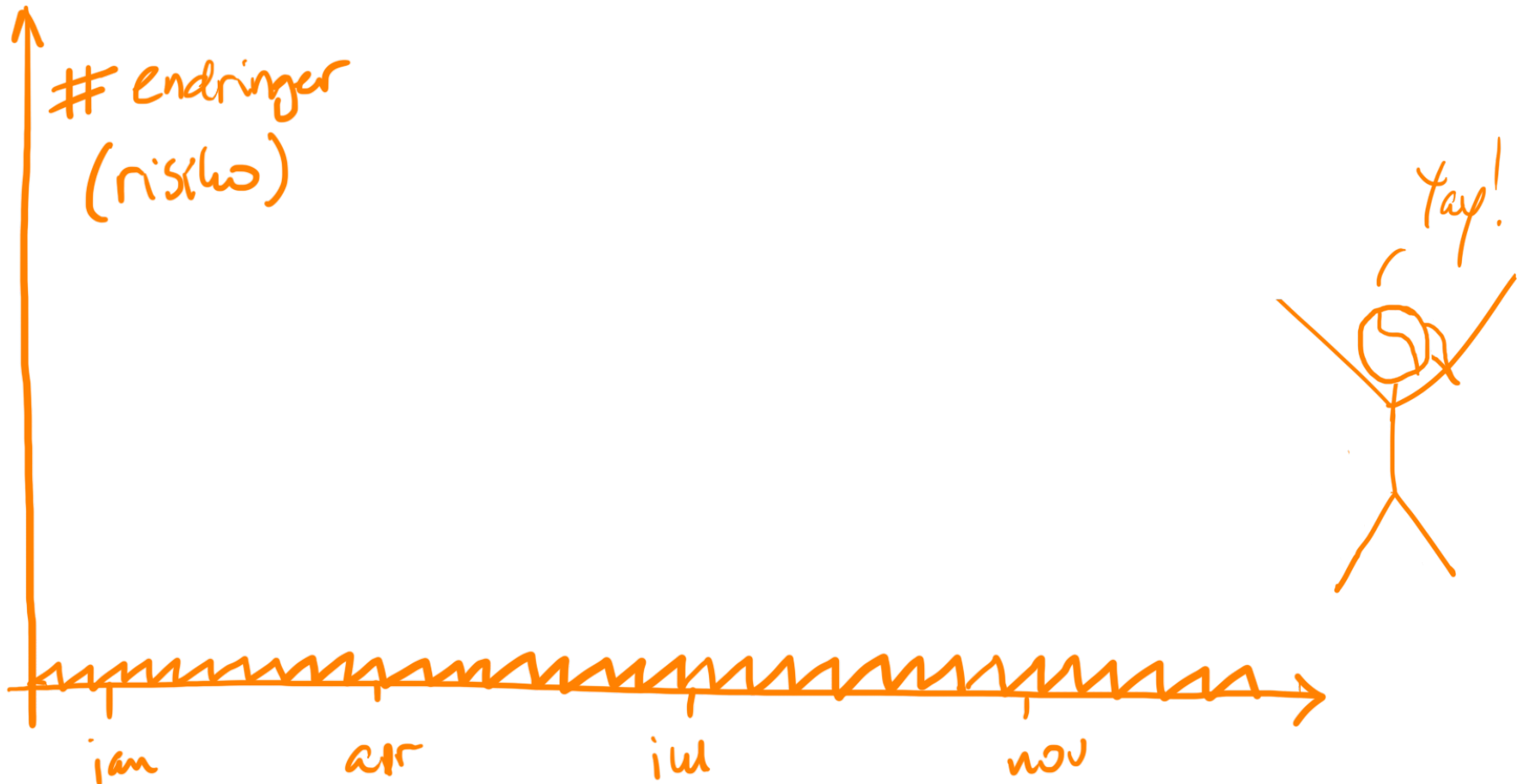
# Sjeldne releaser betyr at du sparer opp risiko



# Men hva er det som skjer her?



# Hva hvis vi kunne gjøre slik?

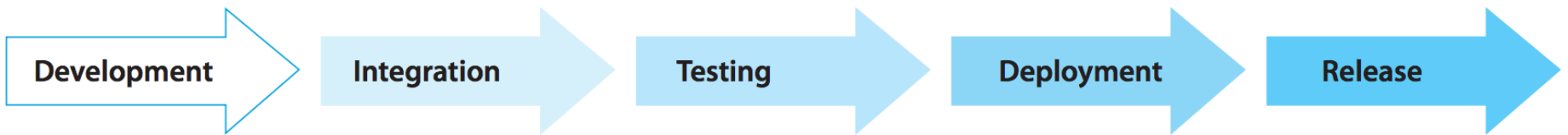






# Continuous Delivery

## Traditional iterative and incremental development



## Continuous delivery



# Forutsetninger

- Vi må forstå koden ordentlig
- Vi må ikke lage feil
- Vi må ikke lage rot
- Vi må holde et fornuftig tempo

# Verktøy og hjelpemidler

- Parprogrammering
- Testdrevet utvikling – automatiserte tester
- Refactoring
- Tid til rydding i hver oppgave

A PRINCIPLE OF SOFTWARE DELIVERY:  
**BUILD QUALITY IN!**

BUSINESS



IT



QUEUE TO PRODUCTION



I CAN SHIP MY IDEAS WHENEVER I LIKE!

BUSINESS



CUSTOMER



# CONTINUOUS DELIVERY

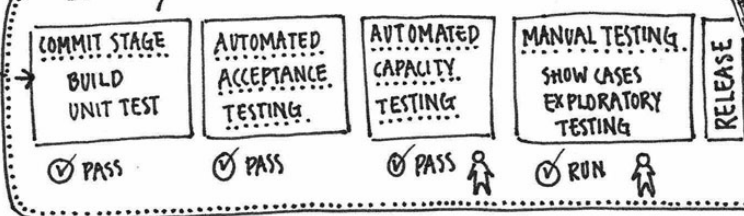
BY JEZ HUMBLE & DAVID FARLEY

DONE MEANS RELEASED

A CLOSER LOOK  
COMMIT STAGE

- ✓ CREATING EXECUTABLE CODE MUST WORK. VERIFIES THAT THE SYNTAX OF YOUR SOURCE CODE IS VALID
- ✓ UNIT TEST PASS
- ✓ FULFILL CERTAIN QUALITY CRITERIA SUCH AS TEST COVERAGE AND OTHER TECHNOLOGY-SPECIFIC METRICS

## KEY pattern DEPLOYMENT PIPELINE



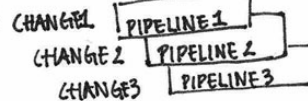
FAST → SLOW  
SHOWSTOPPERS → NOT NECESSARY SHOWSTOPPERS  
ENVIRONMENT NEUTRAL → PRODUCTION LIKE ENVIRONMENT

EXAMPLE



CHANGE

CREATE NEW INSTANCE OF PIPELINE



- CHANGE IN
- EXECUTABLE CODE
  - CONFIGURATION
  - HOST ENVIRONMENT
  - DATA

• ANY CHANGE IS A TRIGGER • FAST • ACT ON IT

## BENEFITS

EMPOWERED - IN CONTROL  
LOW STRESS - SMALL RELEASES

REDUCING ERRORS  
- CONFIG MGT.  
- VERSION CONTROL

DEPLOYMENT FLEXIBILITY  
- EASY TO START APPLICATION IN NEW ENVIRONMENT

PRACTICE MAKES PERFECT

SEEMS LIKE THE AUTHORS CAN'T STRESS IT ENOUGH. IT'S EVERYWHERE THROUGHOUT THIS BOOK.



ENCOURAGING GREATER COLLABORATION BETWEEN EVERYONE INVOLVED IN SOFTWARE DELIVERY IN ORDER TO RELEASE VALUABLE SOFTWARE FASTER AND MORE RELIABLY.

If it hurts, do it more frequently

CC BY-SA  
Nhan Ngo

# Live coding

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*Binærsøk og Tic-Tac-Toe*