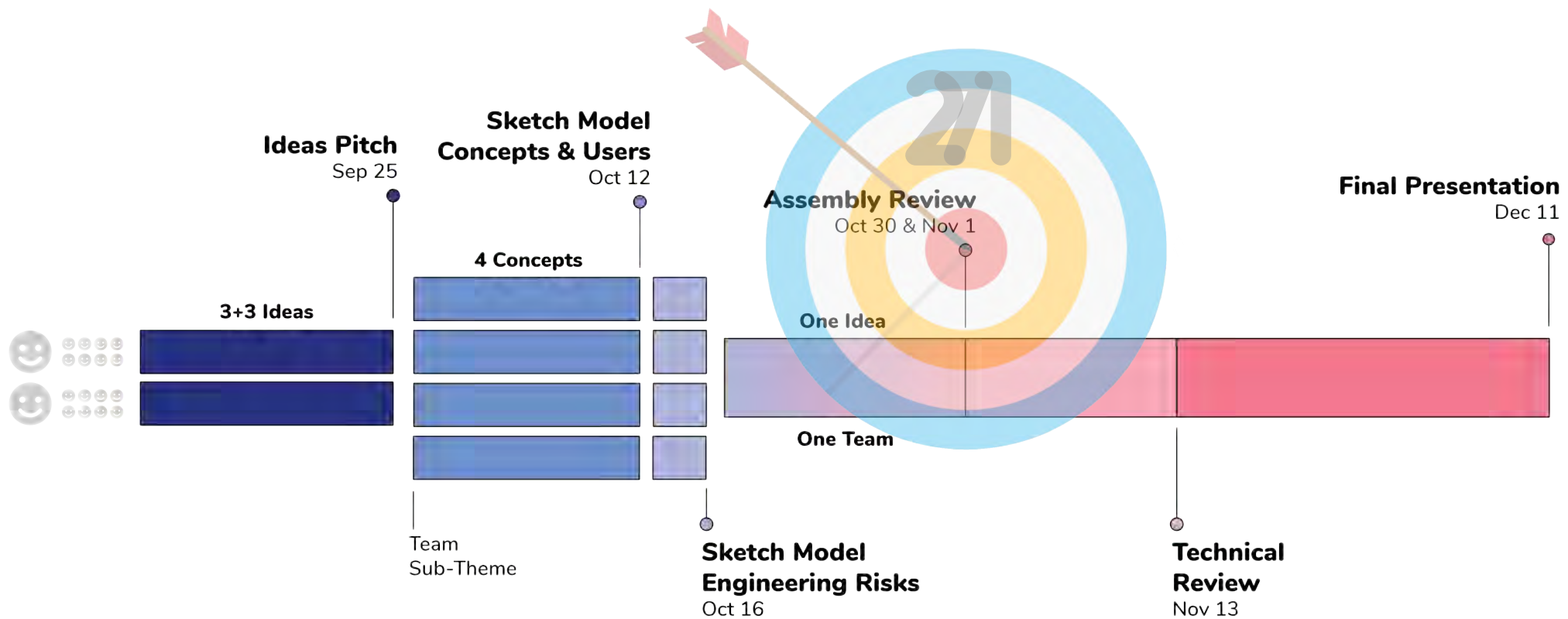


learning is not compulsory  
and neither is survival

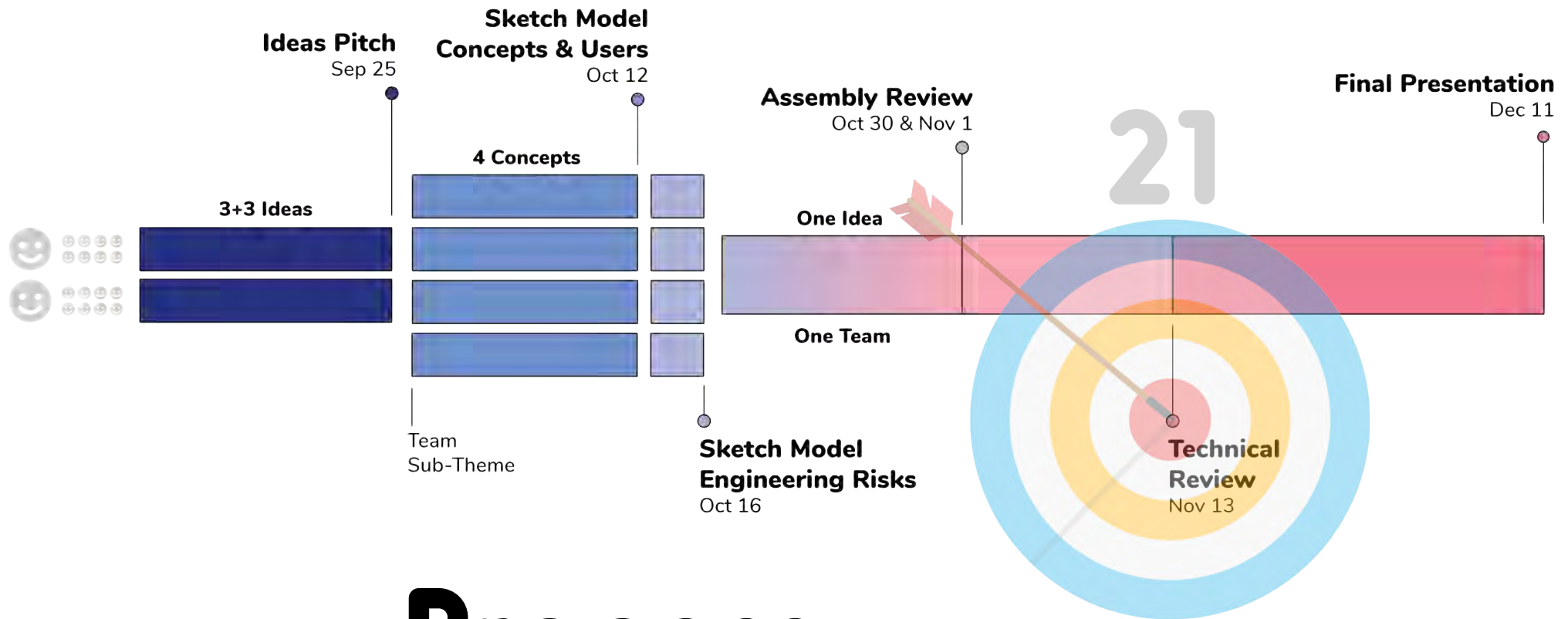
W. Edwards Deming, 1900-1993 modern quality management, father of the Japanese post-war industrial revival

21



# Process

detail design



# Process

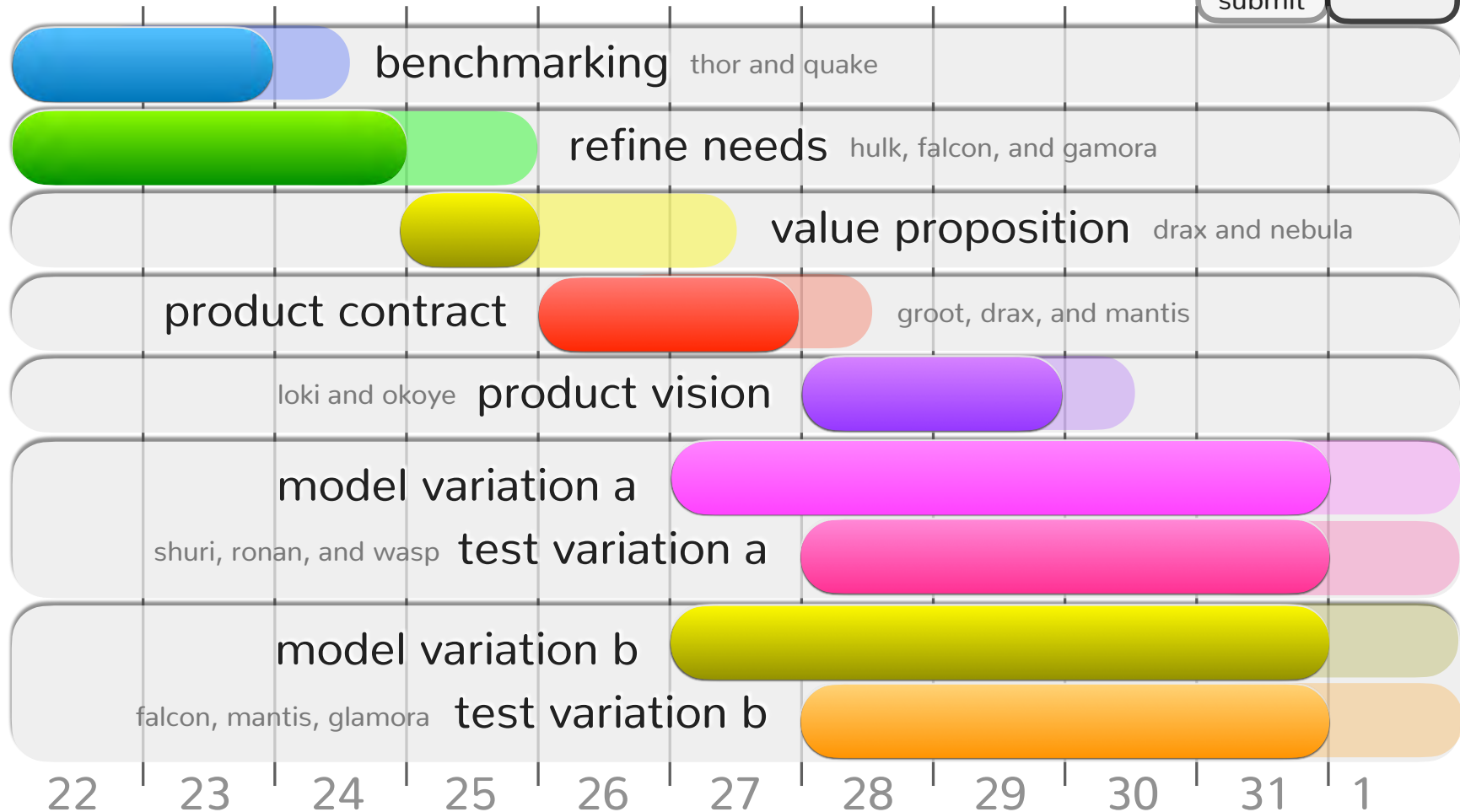
detail design

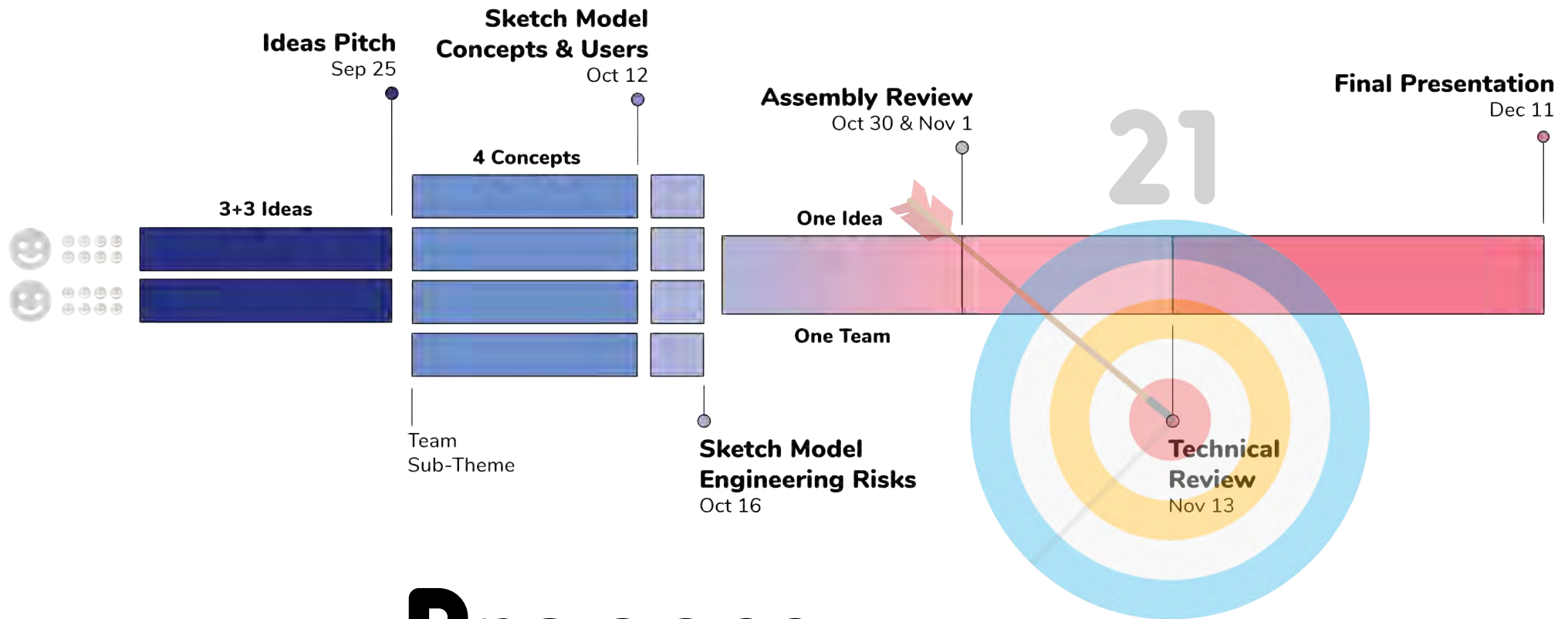
# milestone schedule

updated on 10/23

digital  
submit

present

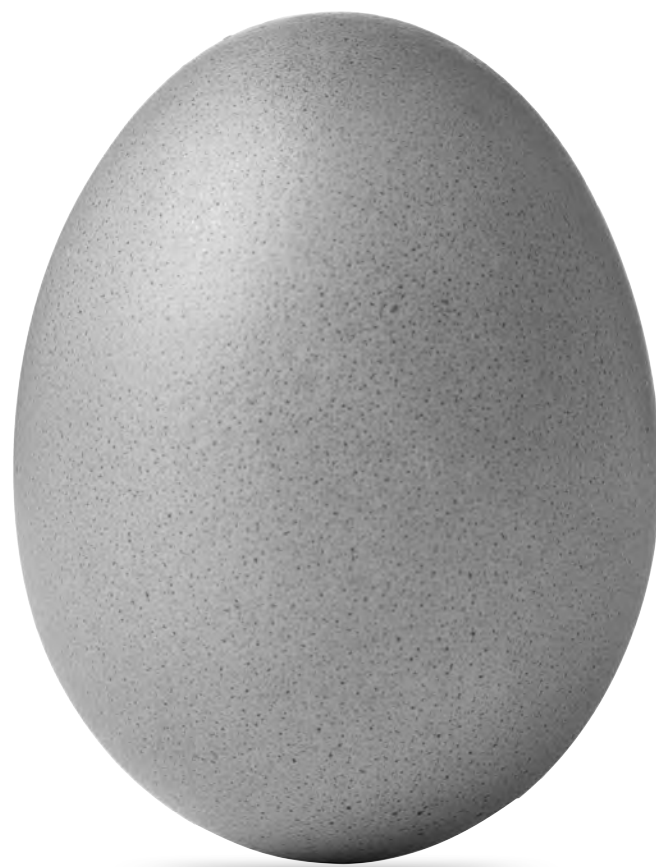




# Process

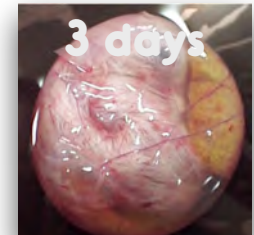
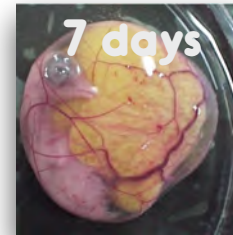
detail design

21



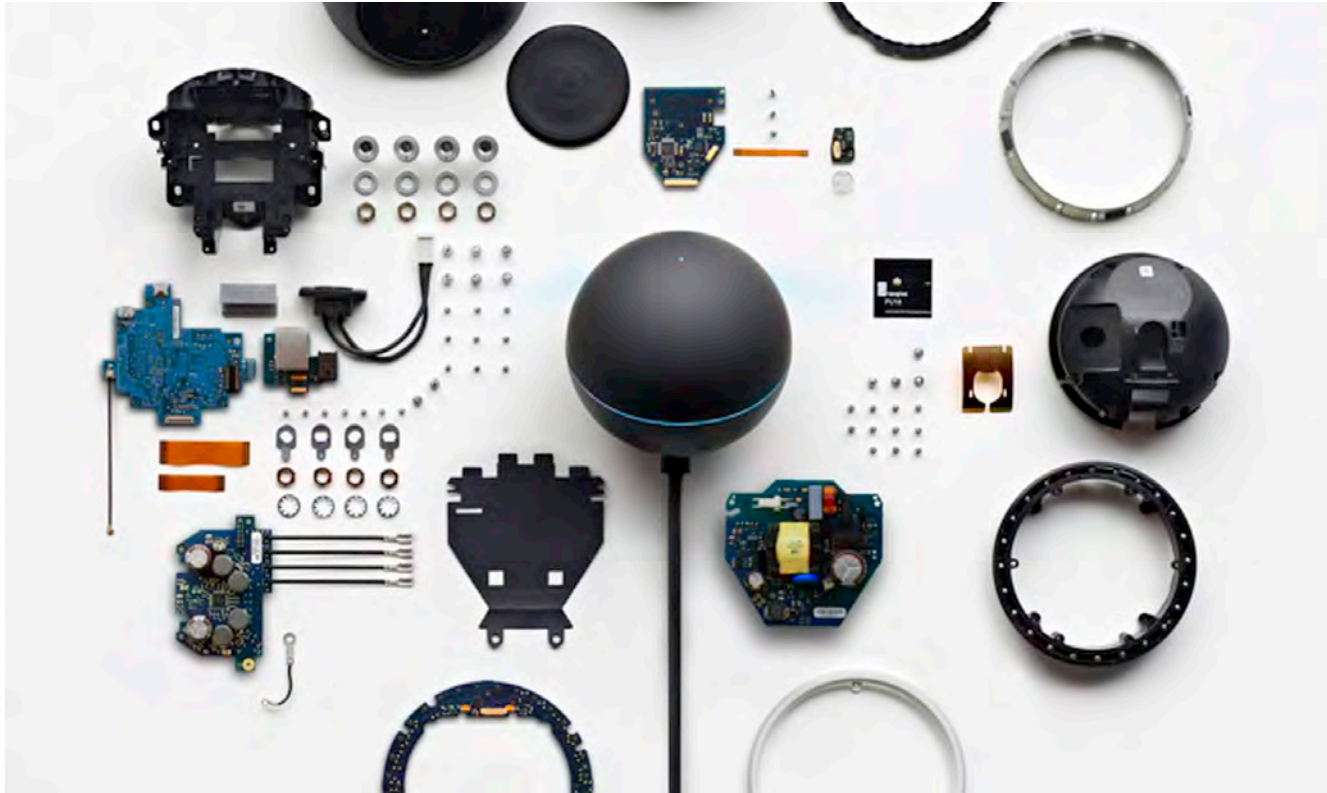


24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13



tech review





learning is not compulsory  
and neither is survival

W. Edwards Deming, 1900-1993 modern quality management, father of the Japanese post-war industrial revival







# teardown

## **exercise purpose**

observe realistic design details

practice part of the product benchmarking process

more secondary research practice

more practice organizing your team and moving fast

organize information so others can understand it

create a display of design details for all teams!

# example

**a scanner teardown**



# instructions

**deliverable.** a pegboard display to  
understand what the product is  
see what parts are in the product  
teach about part materials and costs



# instructions

**deliverable.** what to display?

the product's parts

pictures of the product's unpacking

pictures of product at key disassembly stages

the product's packaging



# instructions

**resources.** for tearing down  
safety glasses with your name on them!  
a product to teardown  
your team's tools





# instructions

**resources.** for researching  
your computer devices  
guidelines for identifying plastics  
magnets and lighters for materials identification  
guidelines for estimating costs  
scales for weighing parts  
a costing **expert consultant**



# instructions

**resources.** for displaying  
mounting tape

zip ties

bags for small parts

your phone cameras

dropbox link on website to print 4x6 photos

black sharpies

stickers for product and part information



# instructions

**resources.** for displaying

product name:
target customer:
retail cost:
estimated production volume:
location of manufacture:
estimated labor cost:
cost of the most expensive part:

product information sticker (2 sheets)



# instructions

**resources.** for displaying

part material:

method of manufacture:

estimated manufacture cost:

number of times used in product:

indicate data quality

guess, hunch, estimate, know



# getting it done

**go to your team area!**

things are laid out to help you organize

put your safety glasses on

tool officers, open your team's cabinets

develop a work plan (teardown, research, display)

if your product has a battery, consult with us first

complete the deliverable, safely safety officers!

have your team picture taken





are **giving** their lives **for education**

so please learn and enjoy the displays!

