Albert Einstein, 1879-1955
strive not for **success**
but to be of **value**

success factors

connection to need. How **real** is it?

success factors

involved **user** or representative

success factors

shared **team** vision

success factors

realistic **stretch** goal

success factors

understanding the **competition**

success factors

frequent, realistic **testing**

success factors

Petra

frequent, **realistic** testing

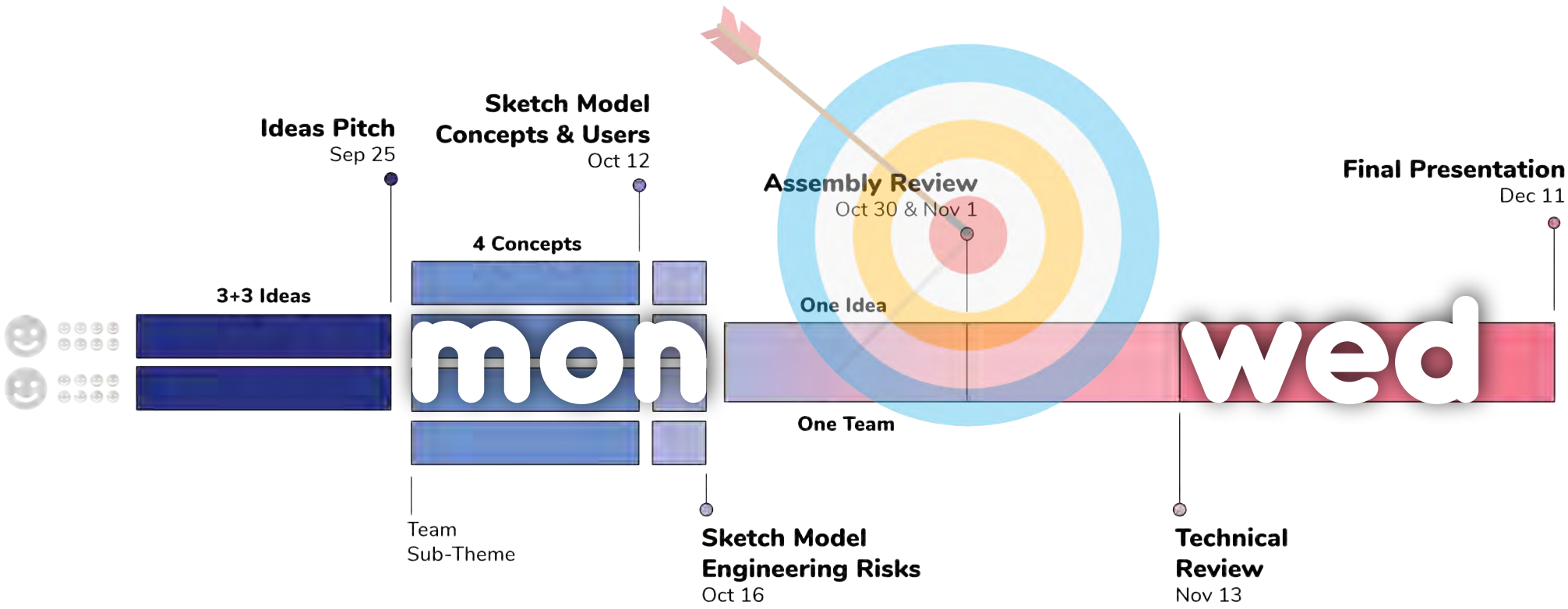
success factors

open communication

success factors

working in **Pappa!**

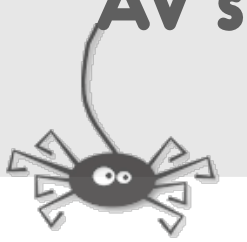
success factors


Ideas Pitch
Sep 25
Sketch Model
Concepts & Users
Oct 12
Assembly Review
Oct 30 & Nov 1
Final Presentation
Dec 11
4 Concepts
3+3 Ideas
One Idea
mon
wed
One Team
Team
Sub-Theme
Sketch Model
Engineering Risks
Oct 16
Technical
Review
Nov 13

mon 30

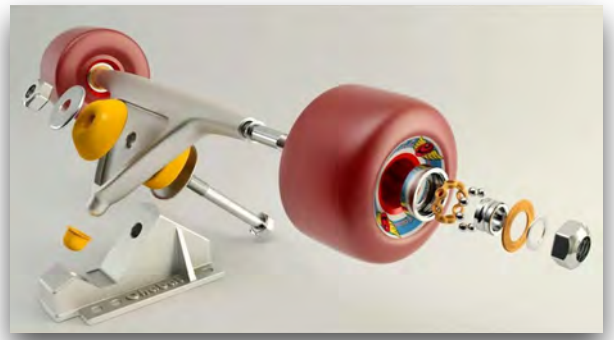
wed 1

AV setup: bring two computers, one for your main slides, one for specifications



AV setup: bring two computers, one for your main slides, one for specifications

user need	product attribute(s)	engineering specification(s)
can be easily transported	weight	total weight less than 40 lbs
is easily stored in the home garage	size	less than 24" x 24" x 24" in smallest configuration
can handle most repair situations	lifting capability	more than lift 15 cycles for a 3000 lb automobile with external power
can be used on many uneven surfaces	stability	3000 lb vehicle raised 16 inches will not tip under 400 lb side loading

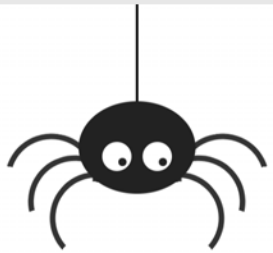


user need	product attribute(s)	engineering specification(s)
can be easily transported	weight	total weight less than 40 lbs
is easily stored in the home garage	size	less than 24" x 24" x 24" in smallest configuration
can handle most repair situations	lifting capability	more than lift 15 cycles for a 3000 lb automobile with external power
can be used on many uneven surfaces	stability	3000 lb vehicle raised 16 inches will not tip under 400 lb side loading

practice times: 8:30 AM to 9:15 AM before each class

online submission: images, link to online assembly view by midnight before

discussion: 12 minutes, discuss your most current work

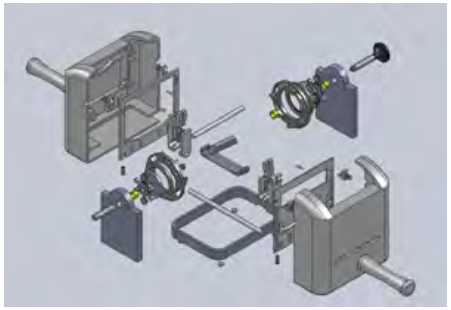


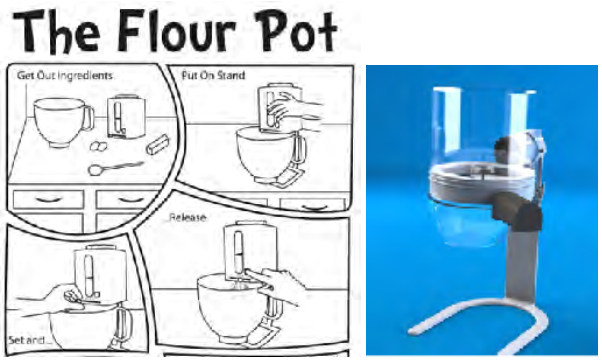
product contract: value proposition, up-to-date user, and key needs, attributes and specifications

assembly review

design variations: vision, web-viewable assembly, exploded assembly, use storyboard…

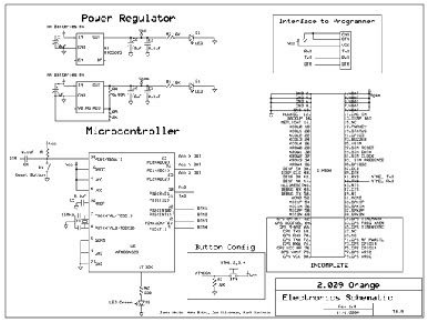
assembly review

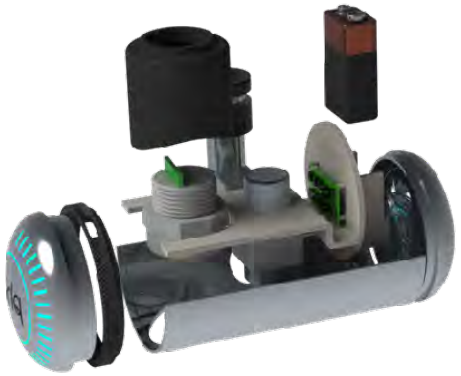




design variations: vision, web-viewable assembly, exploded assembly, use storyboard…

assembly review

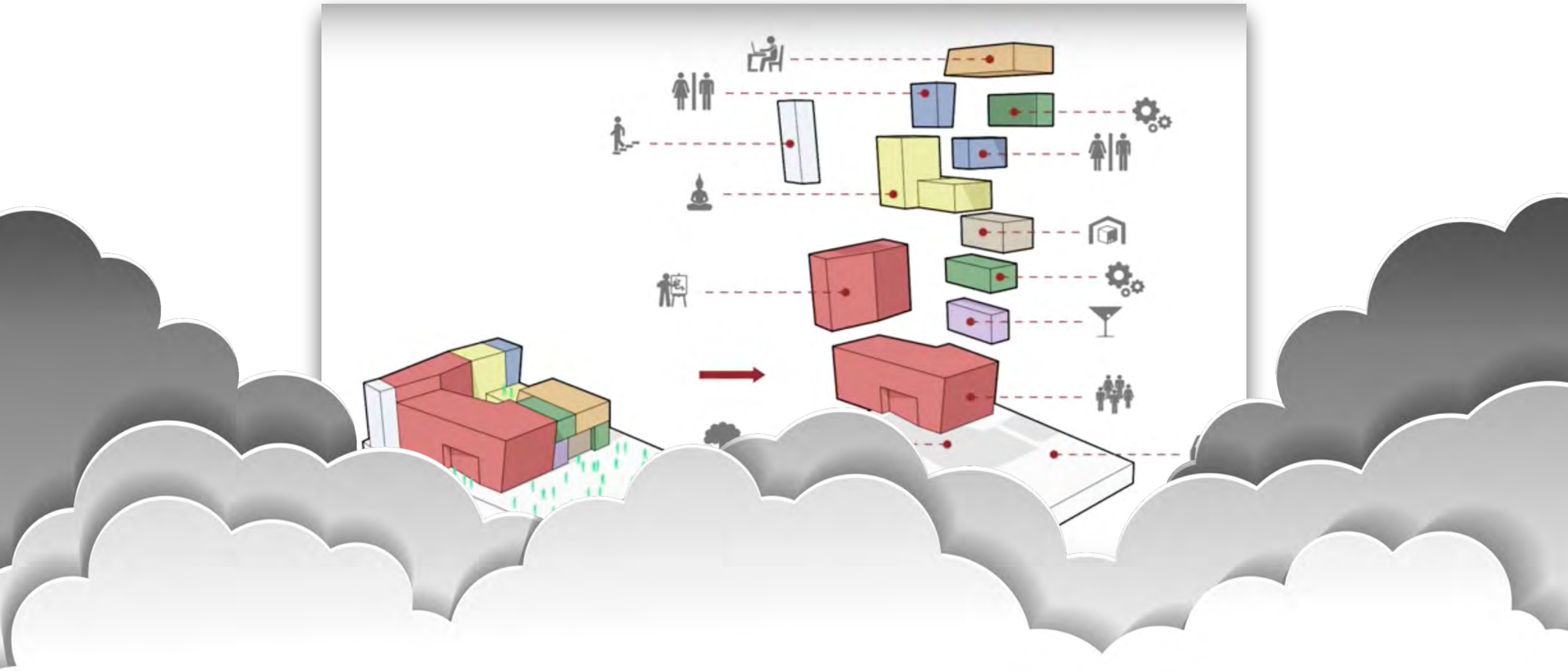


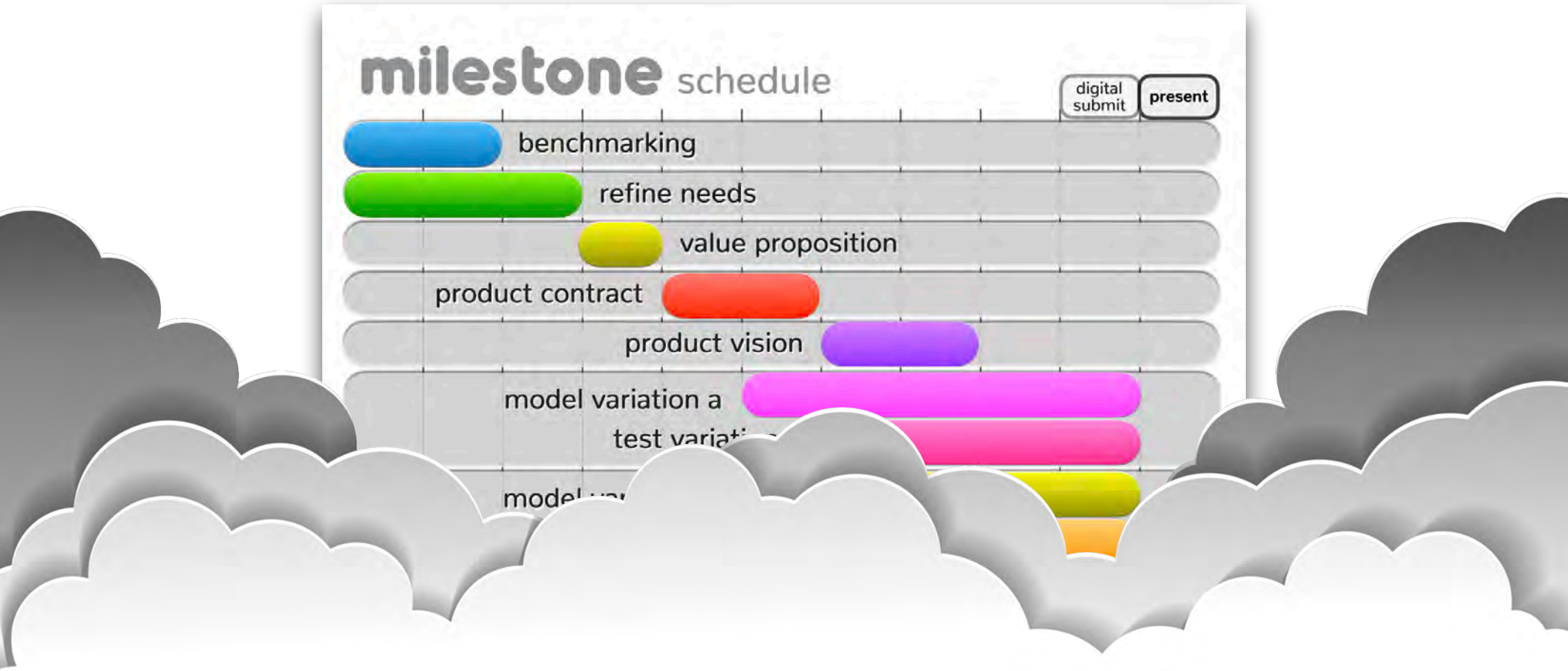


who-did-what: all team-members contribute to the deliverable. You may work in pairs

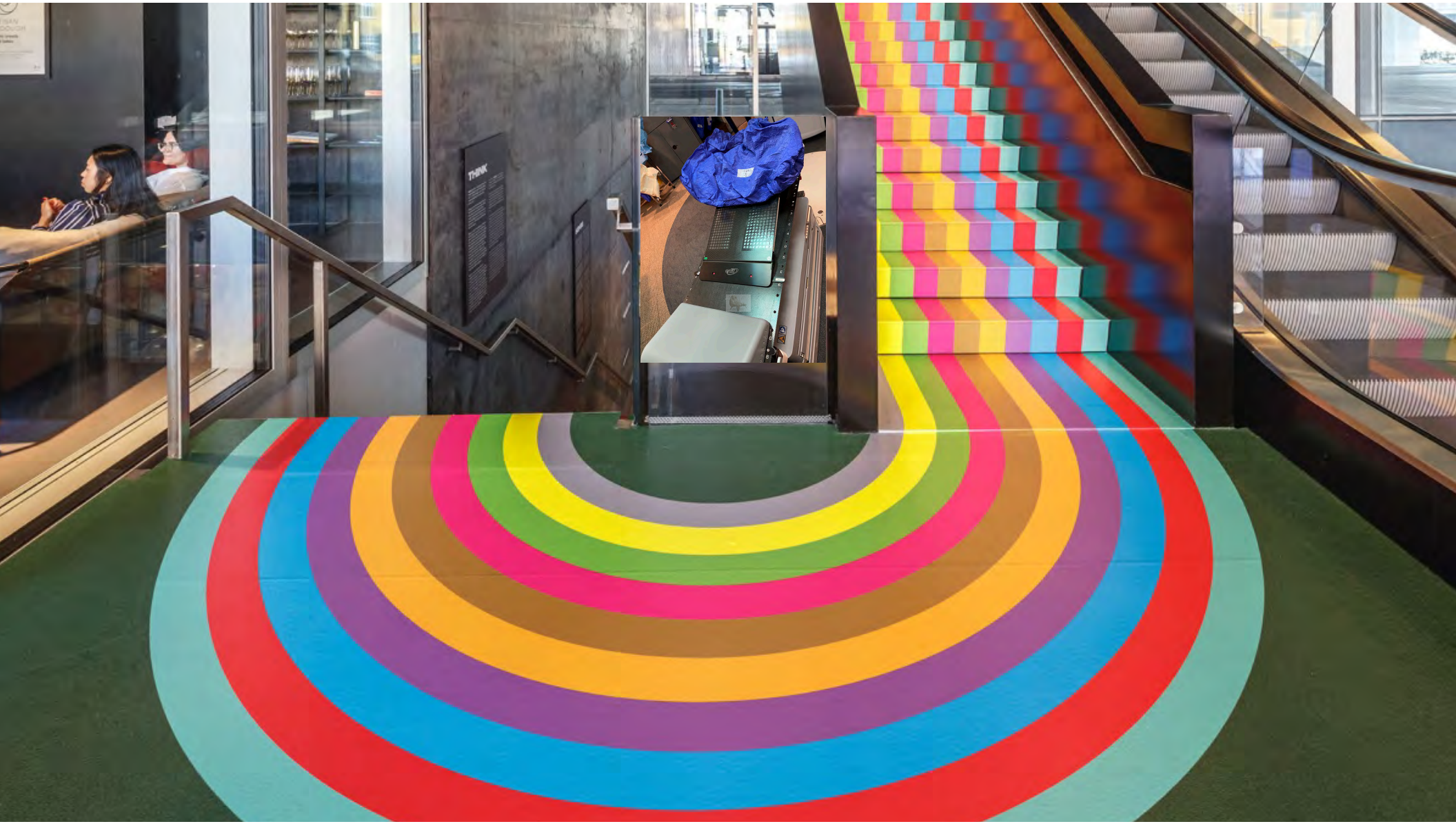
assembly review

design time!




milestone schedule
digital submit
present
benchmarking
refine needs
value proposition
product contract
product vision
model variation a

DEWALT
DEWALT
16"
60 VOLT
Toout

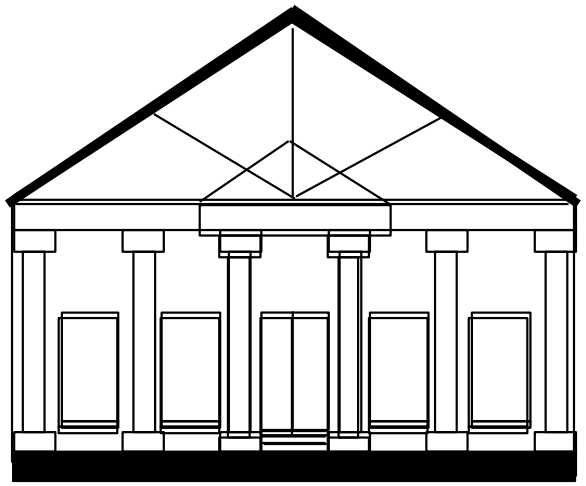

THINK

orfit

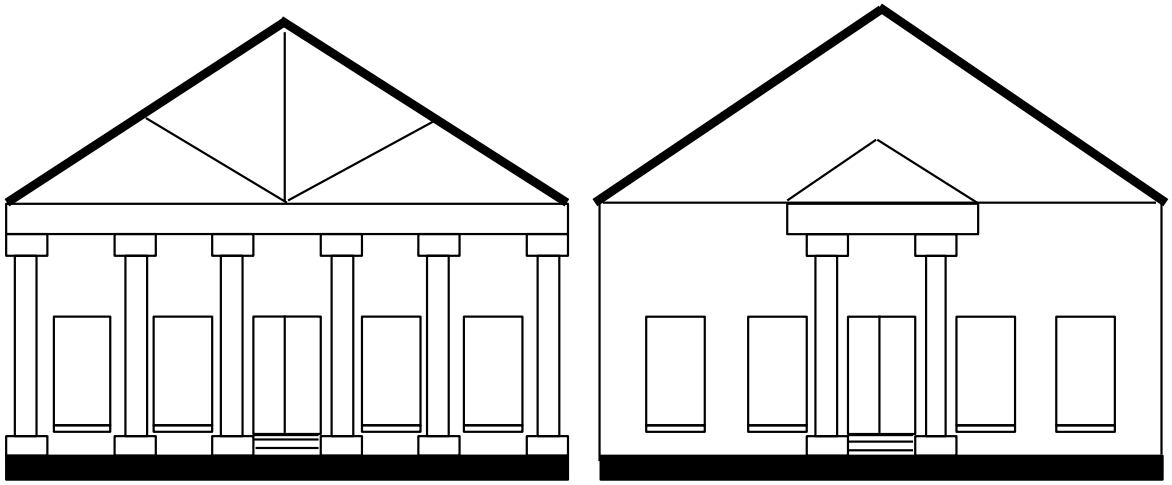
orfit

orfit
F4 SUPERIOR
F4 INFERIOR

form follows **function** **Louis Sullivan,** 1856-1924



form follows **function** Louis Sullivan, 1856-1924



form instructs

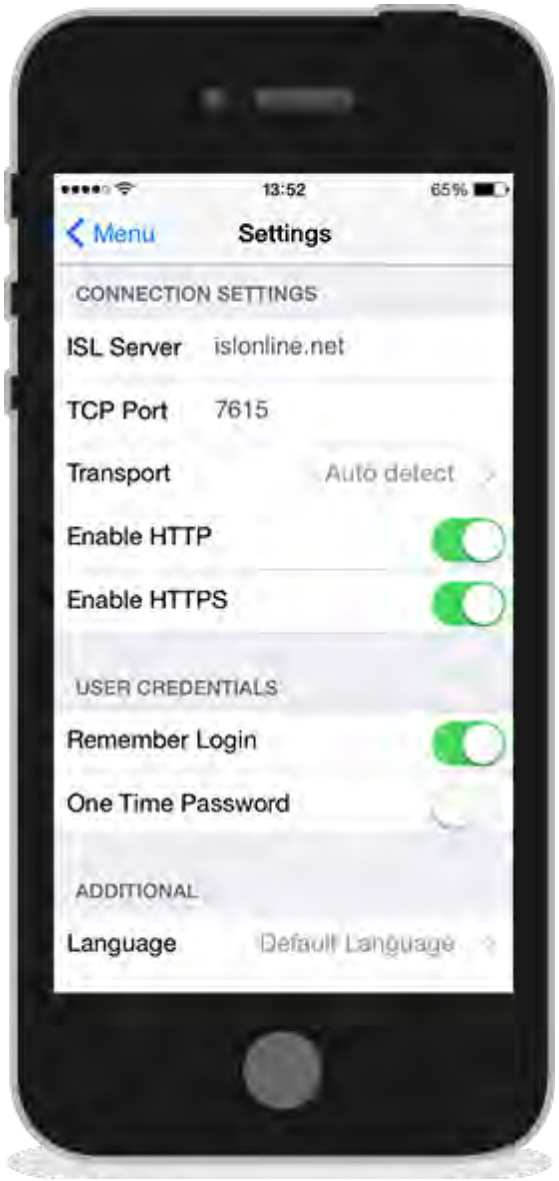
10:25 am
0
km/h
Radio
Temperature
Music
Mic
Navi
Phone
Chat
Weather
Mailbox
Video

form follows **function**

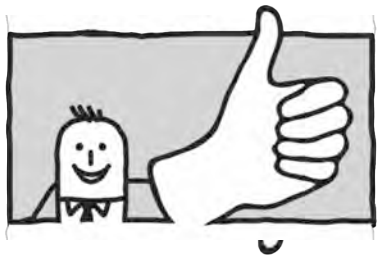
circles imply rotation

form follows **function**

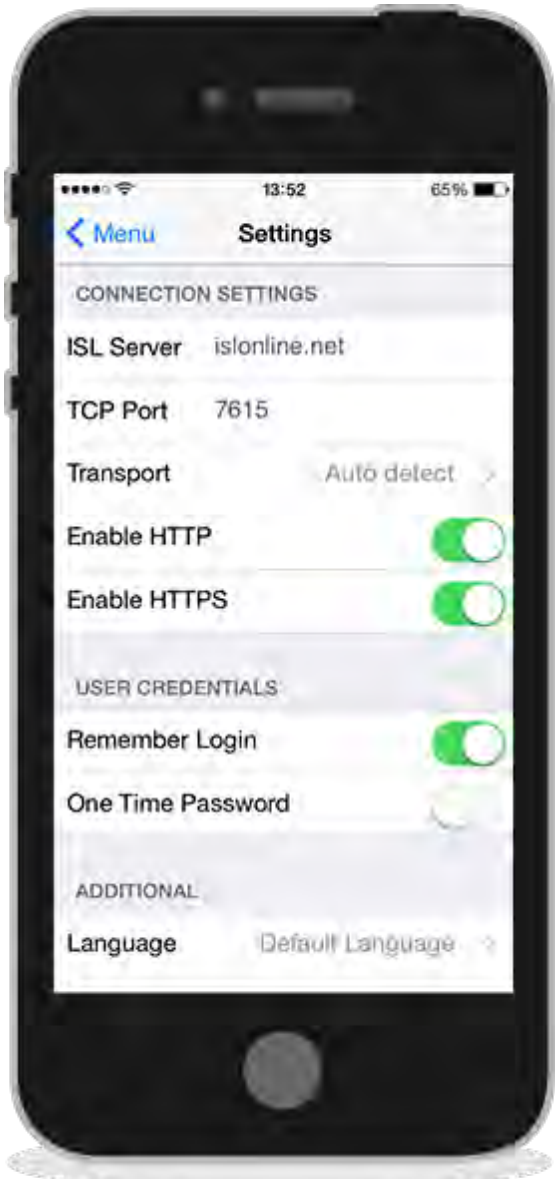
negative forms imply motion



form follows **function**



negative forms imply motion

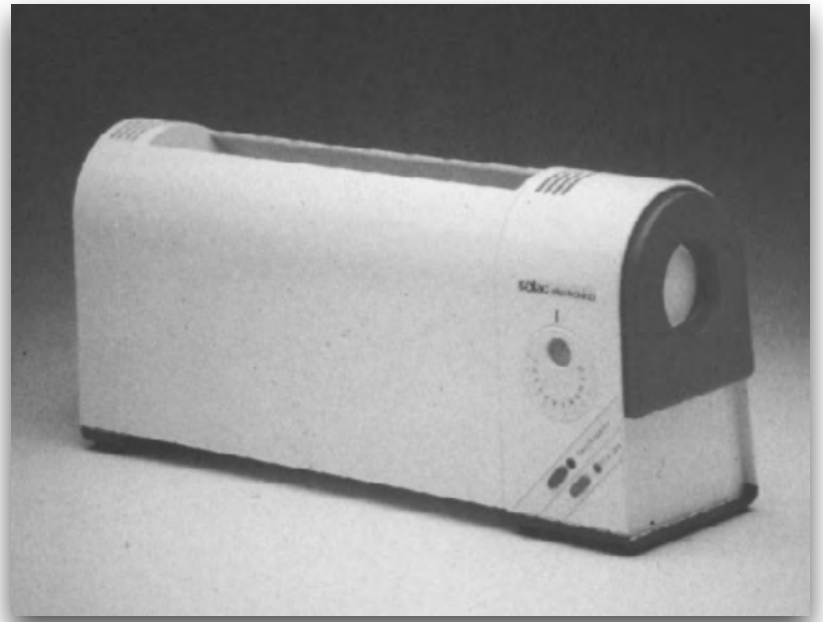


form follows **function**

parting lines have detail

things separate on lines

form follows **function**



interface metaphors are good

form follows **function**

direct metaphors are better

form follows **function**

human factors triumph

Form follows **function**

form follows **function**

nice bits

nasty bits

form follows **function**

nasty bits

nice bits

form follows **function**

convey your value proposition

form follows **function**

convey your team values

form follows **function**

convey your team values

form follows **function**

convey your team values

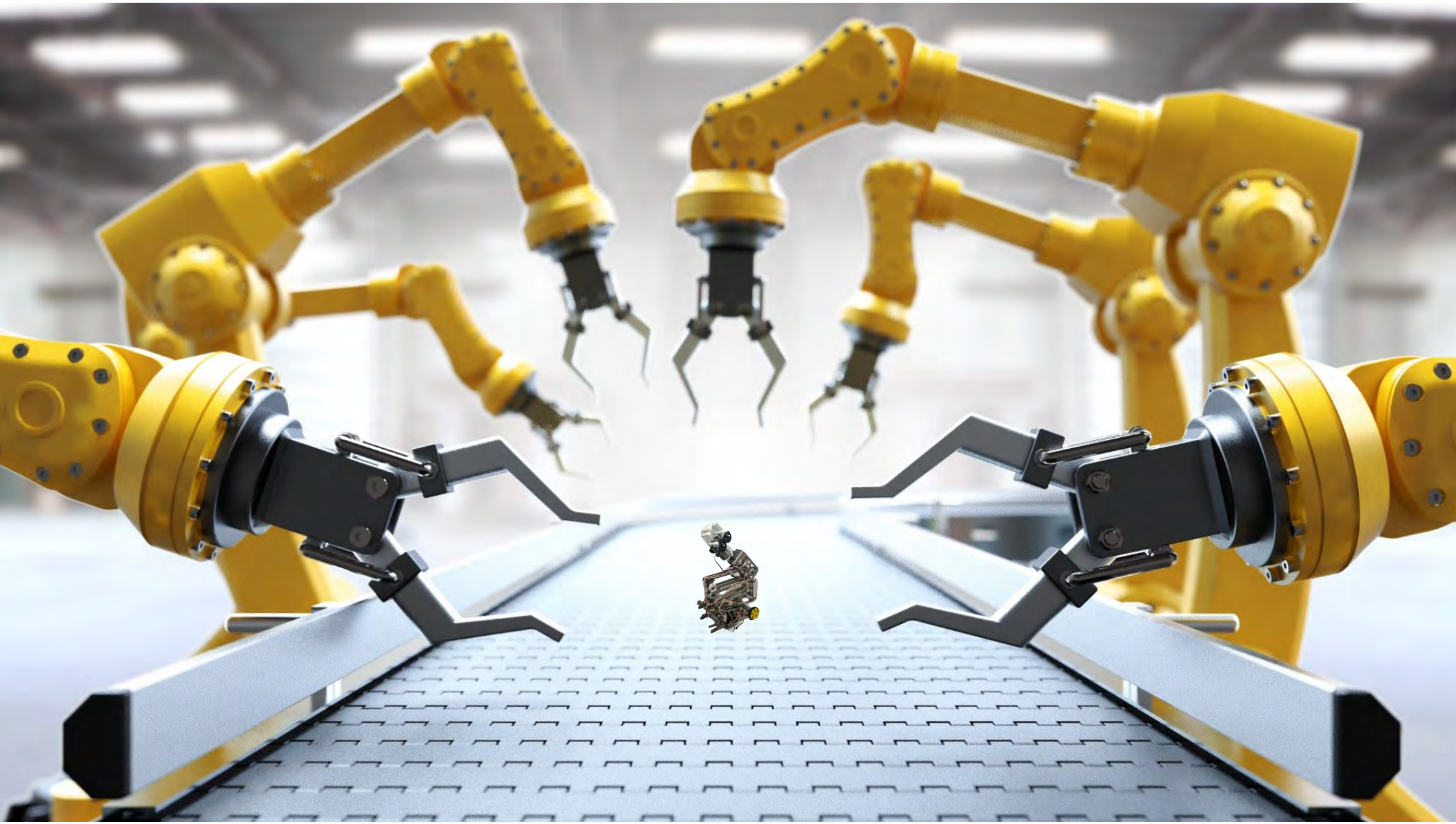
form follows **function**

think about misuse

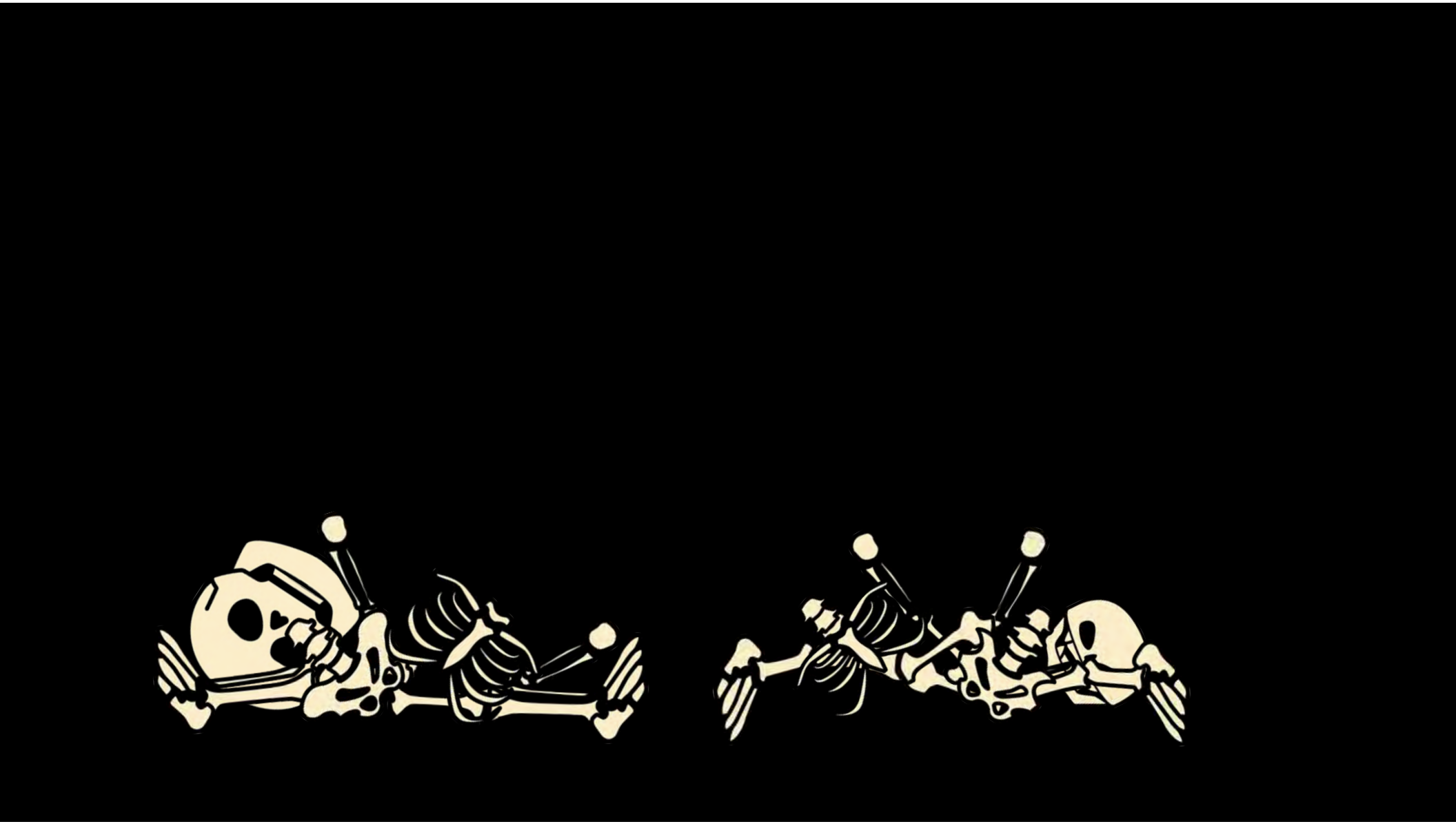
product
not product

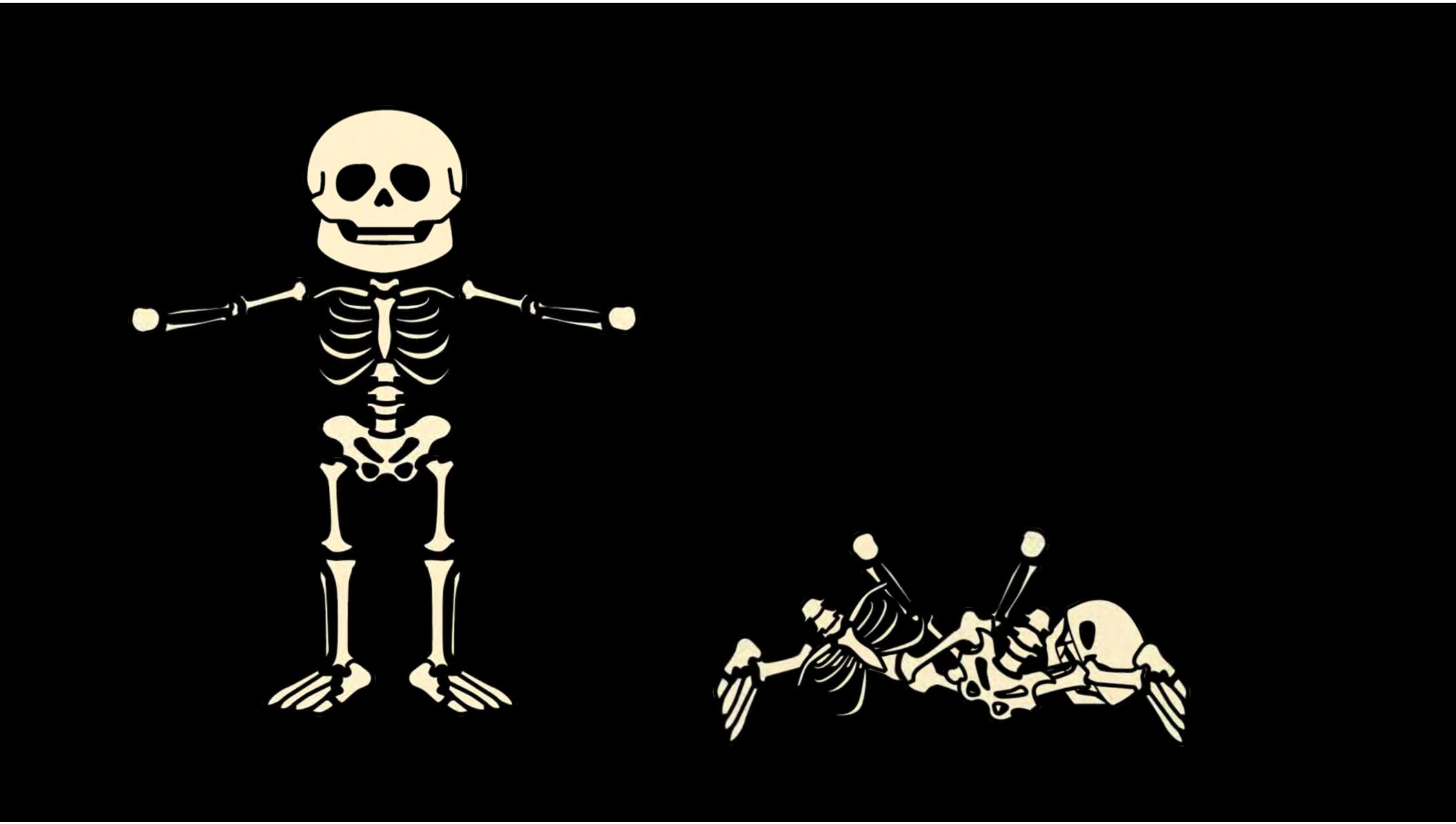
can-am

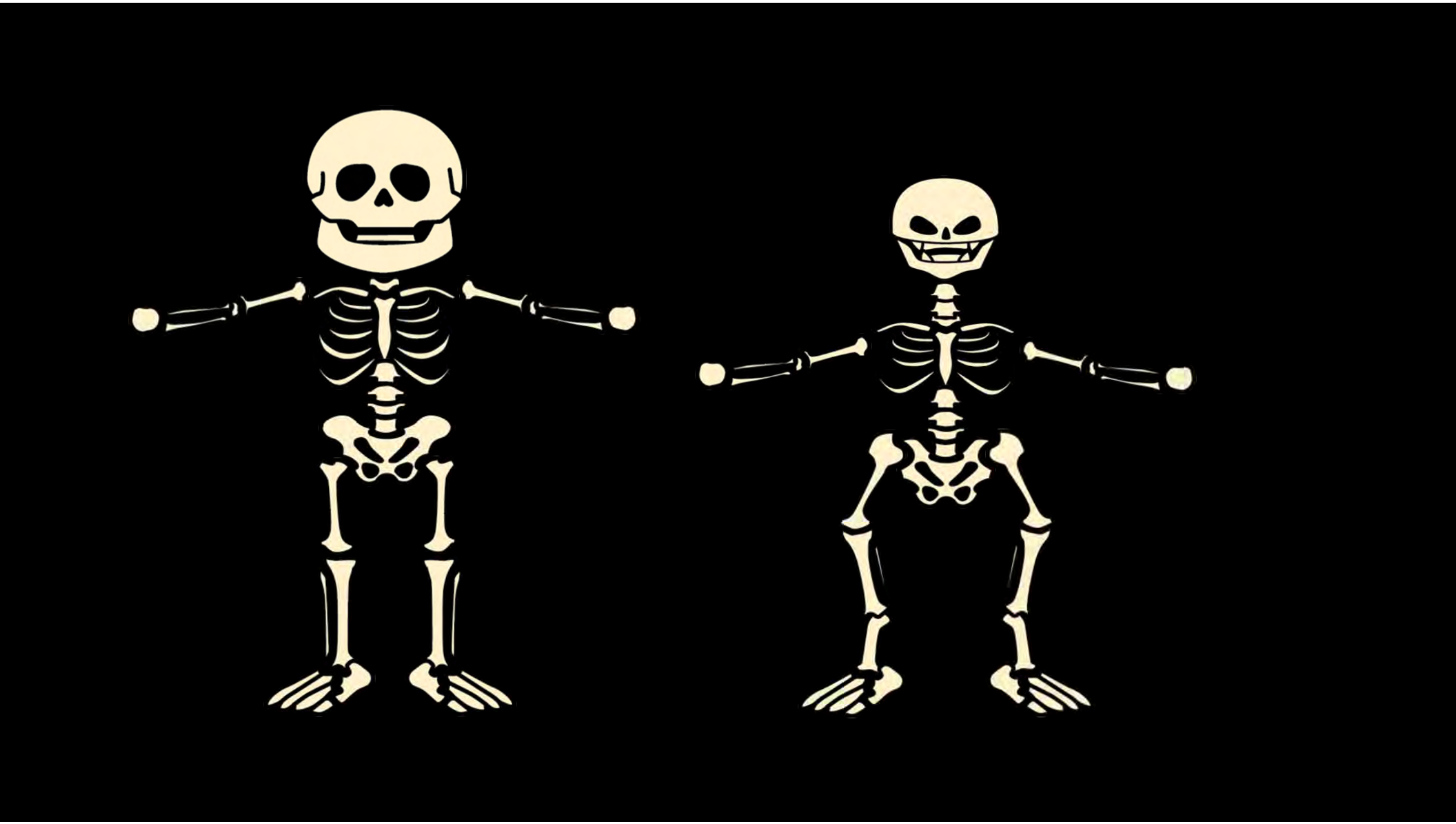
MARMOT
SKI-DOO

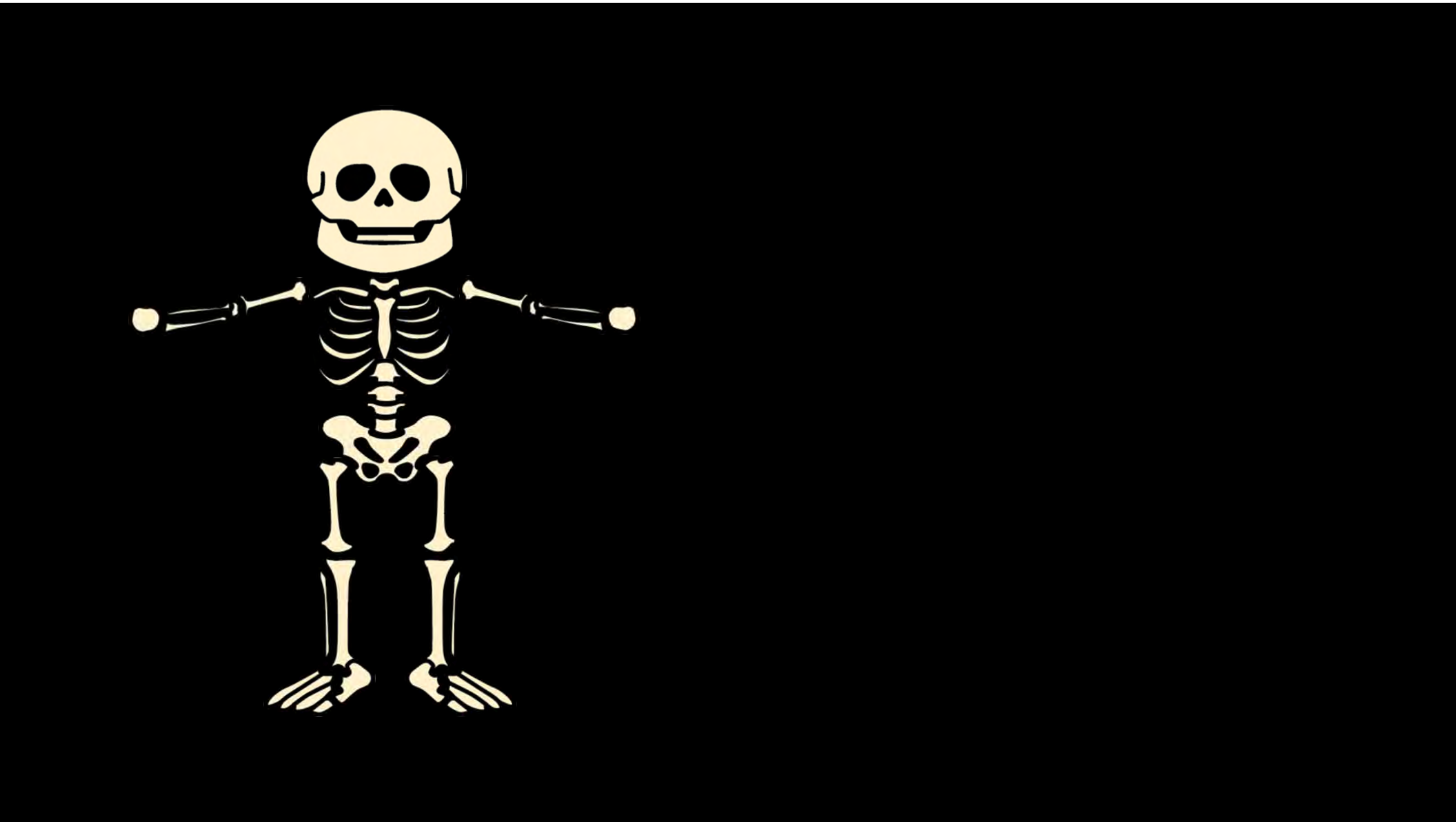


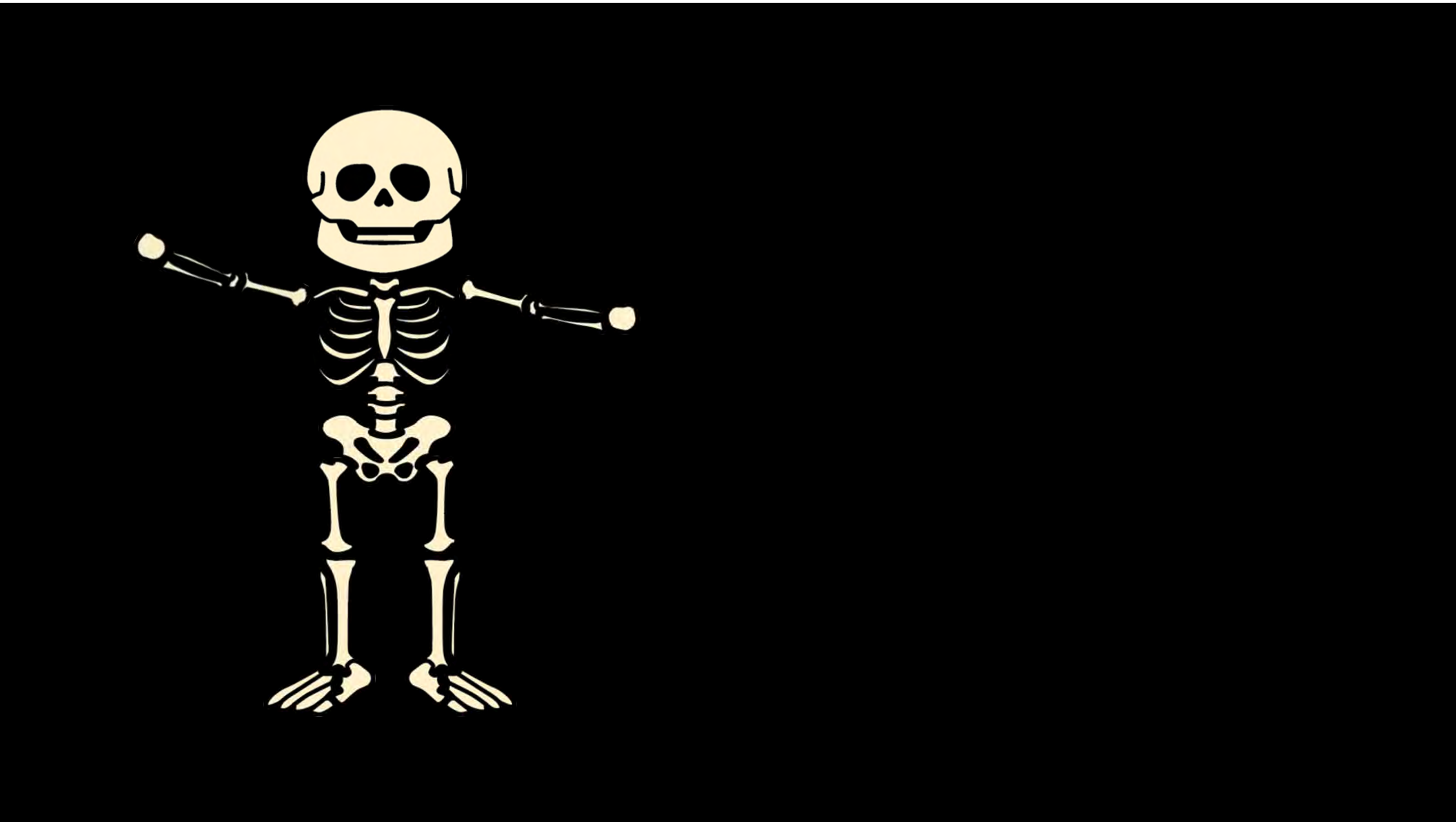
product
not product

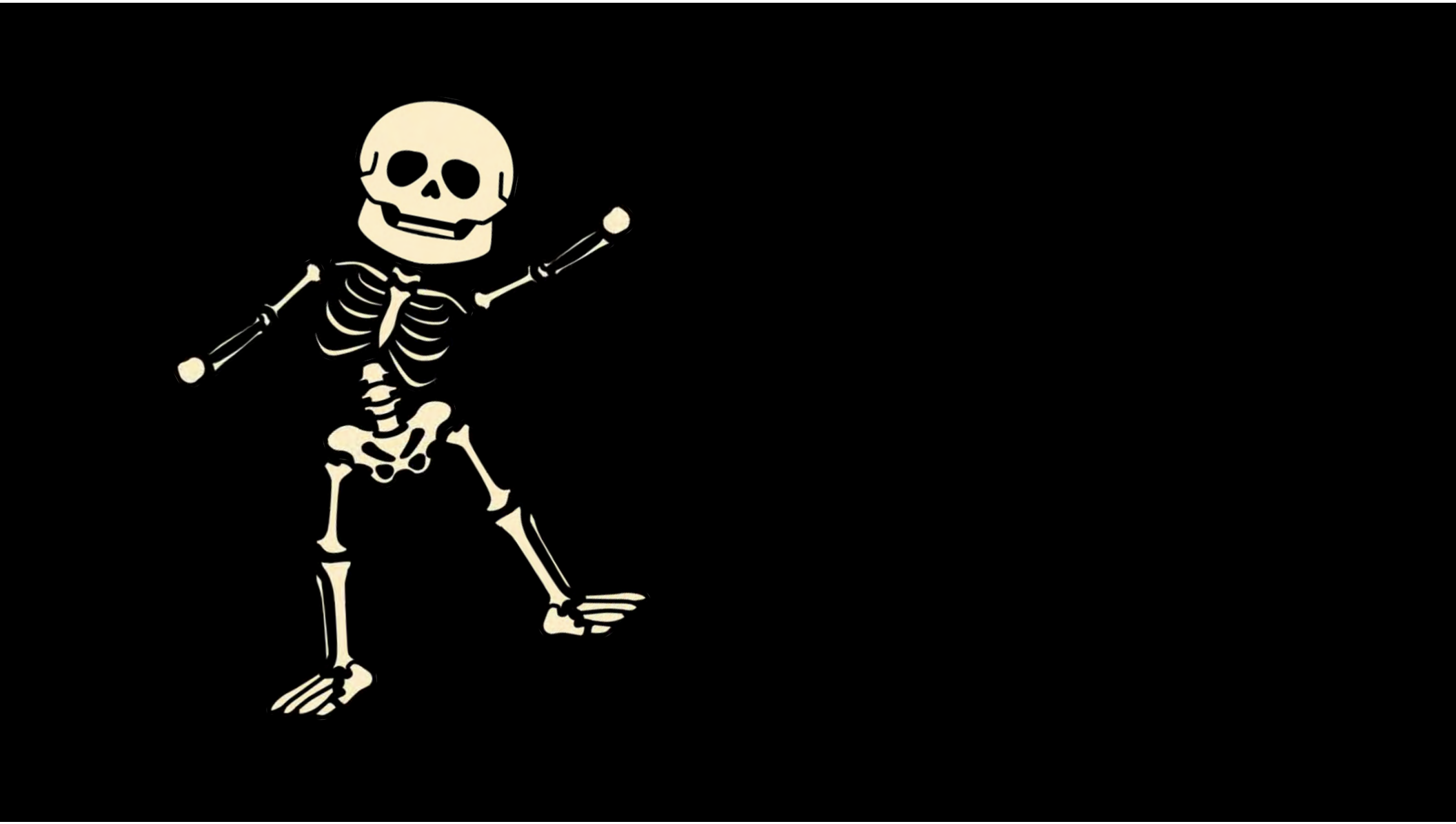


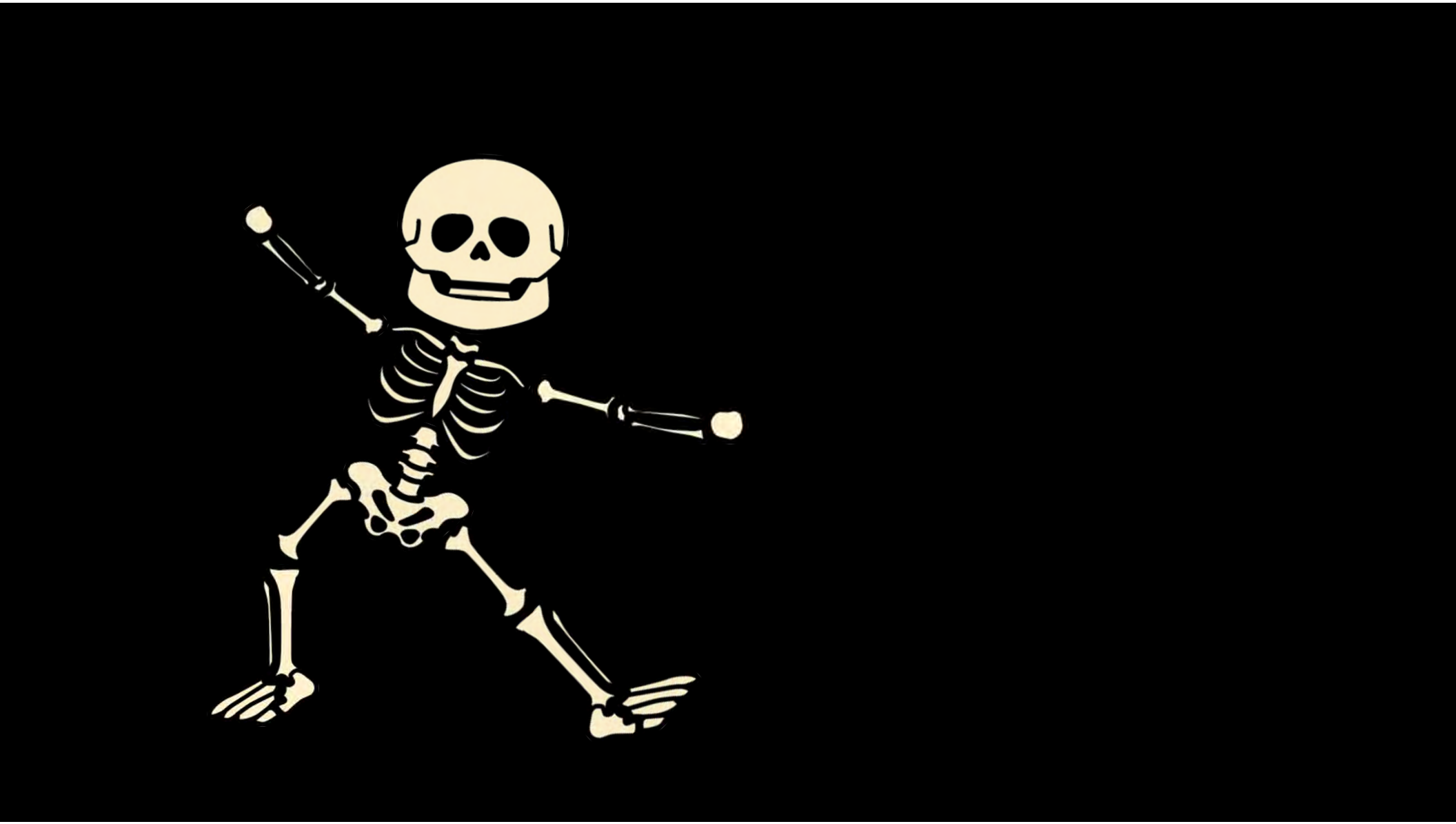


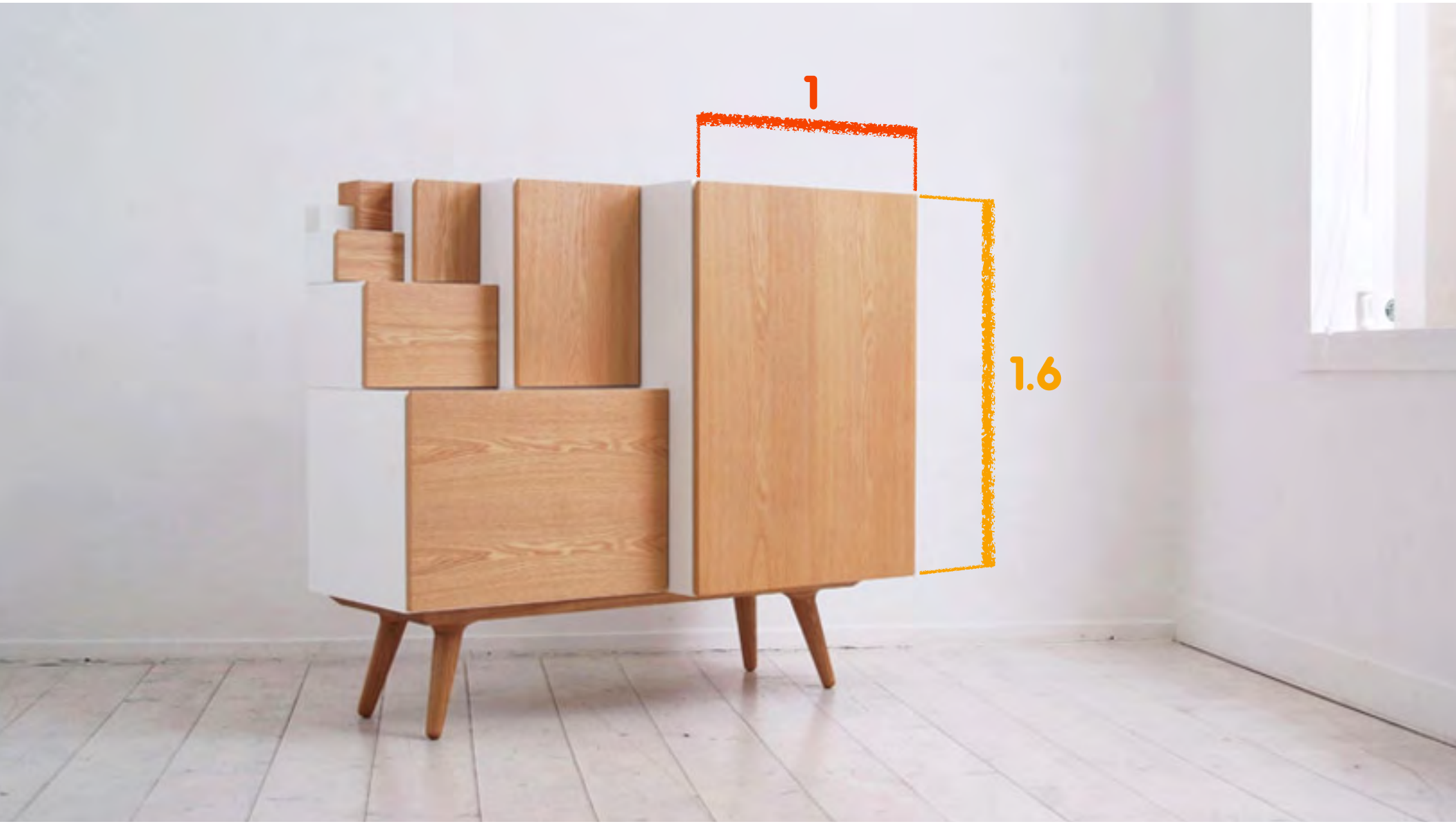










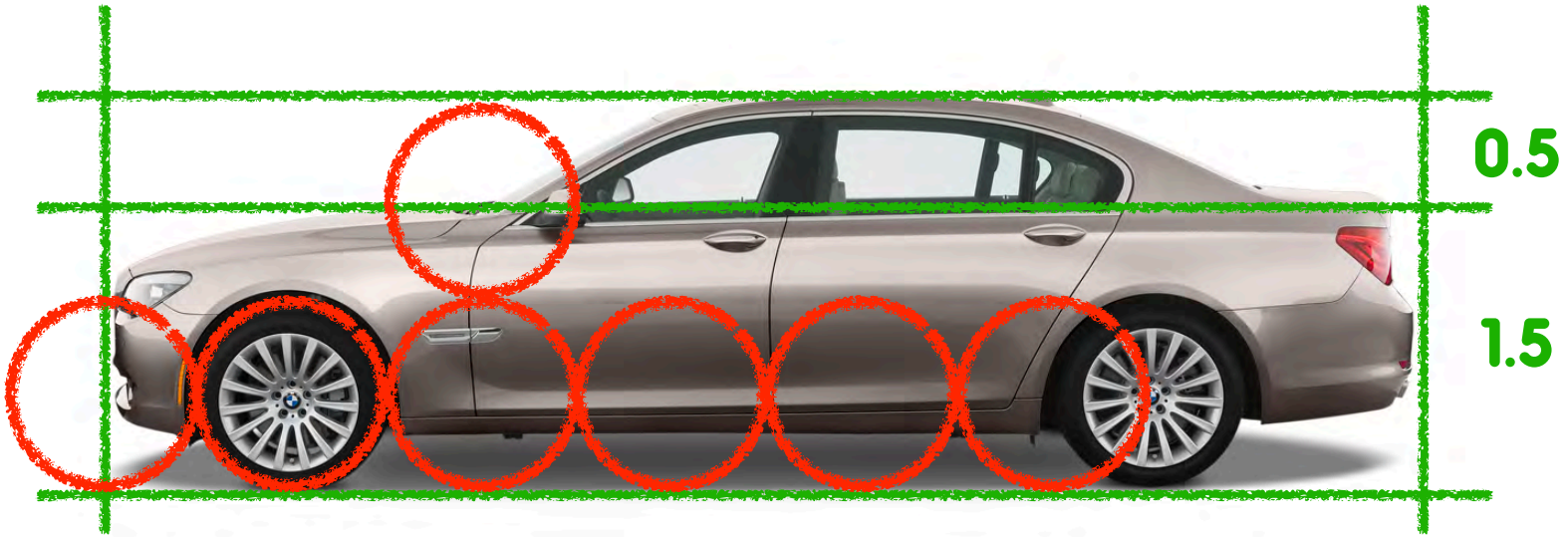

1
1.6

.6 1

.6
1

1 .6

0.5
1.5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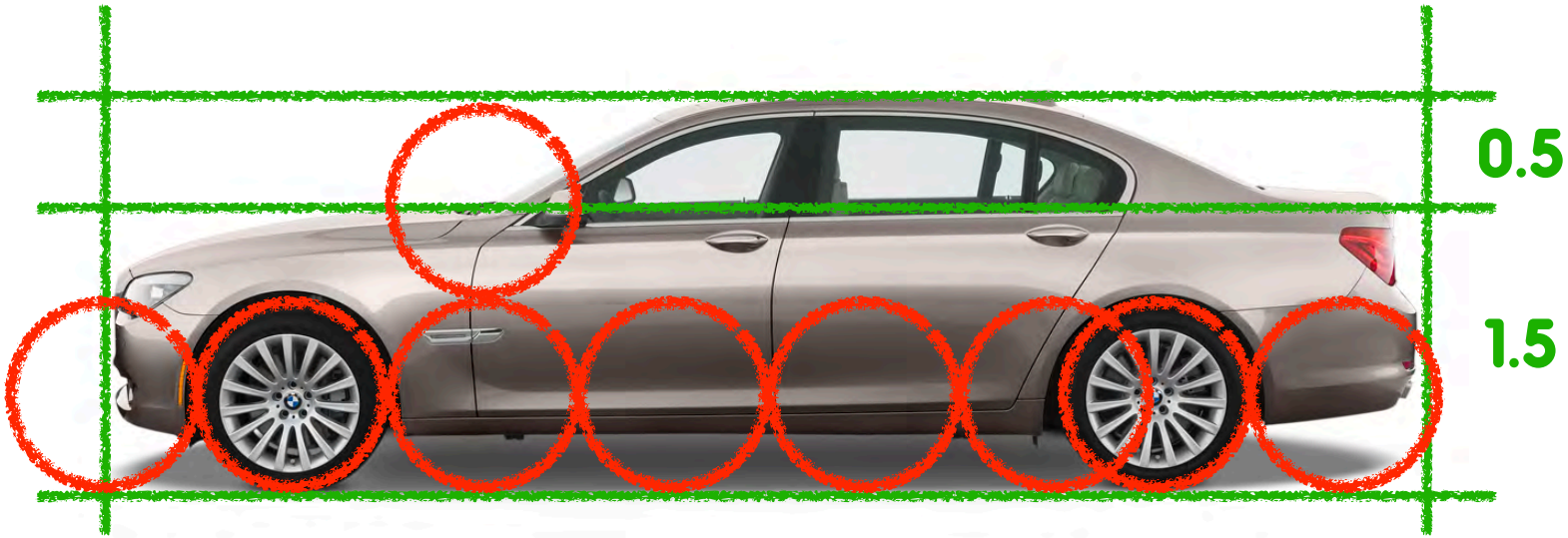
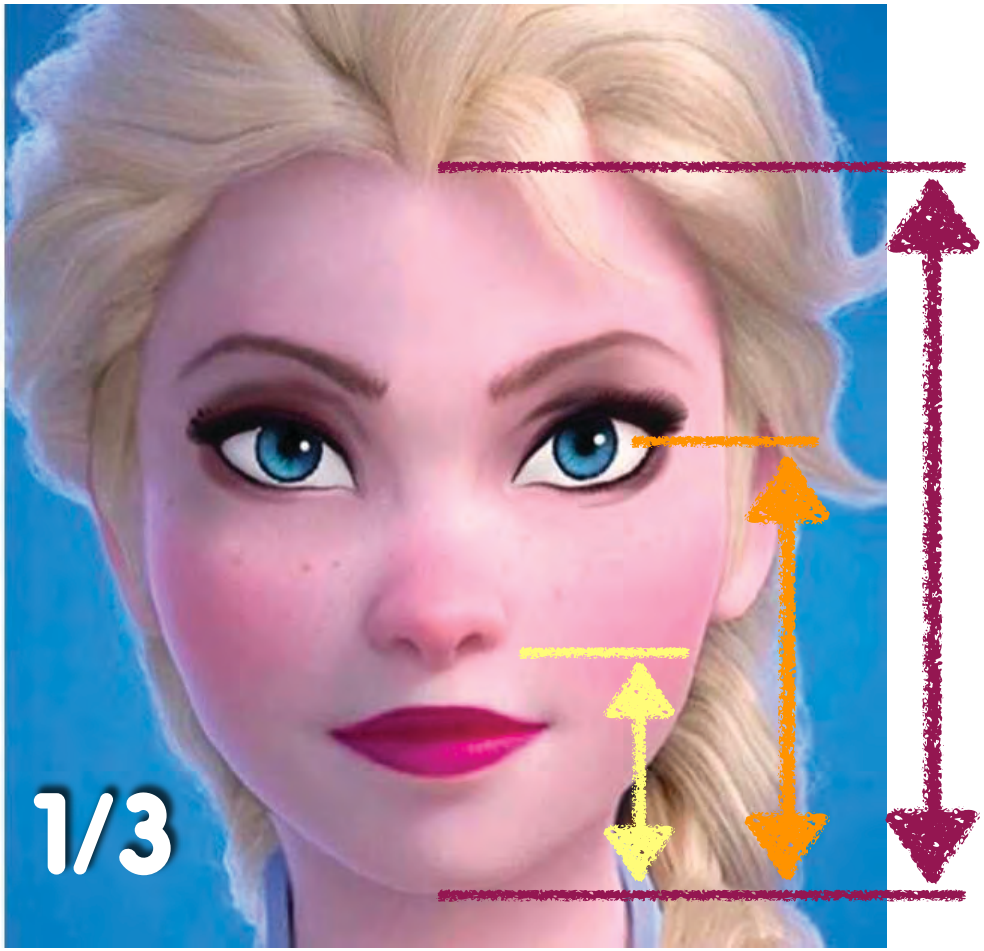

0.5
1.5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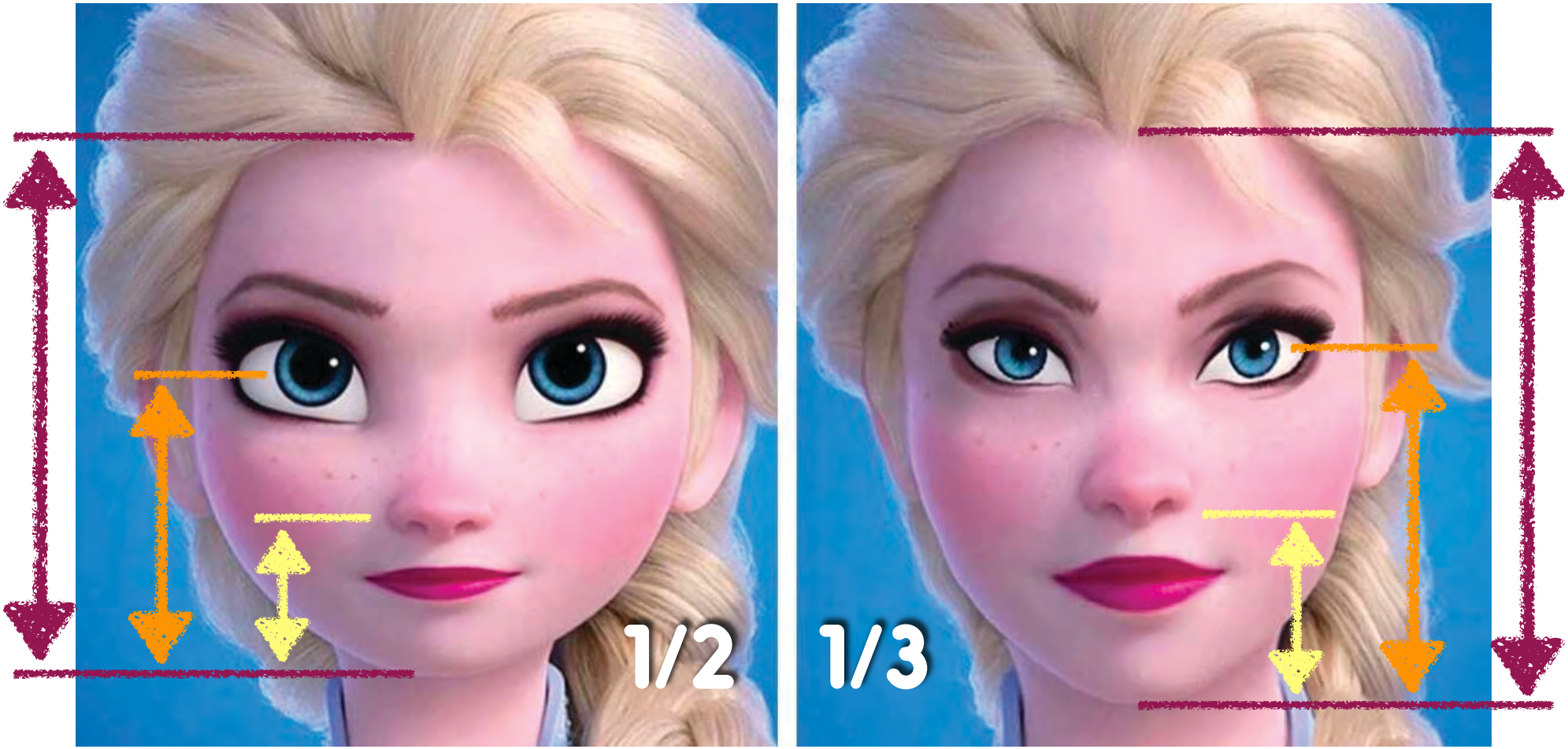
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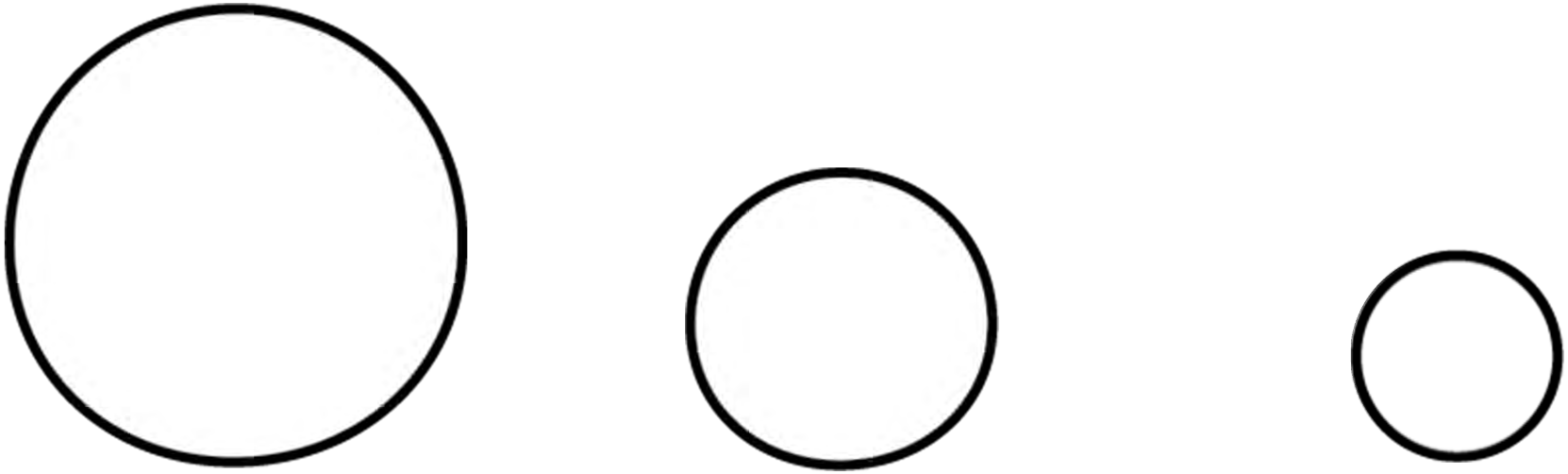
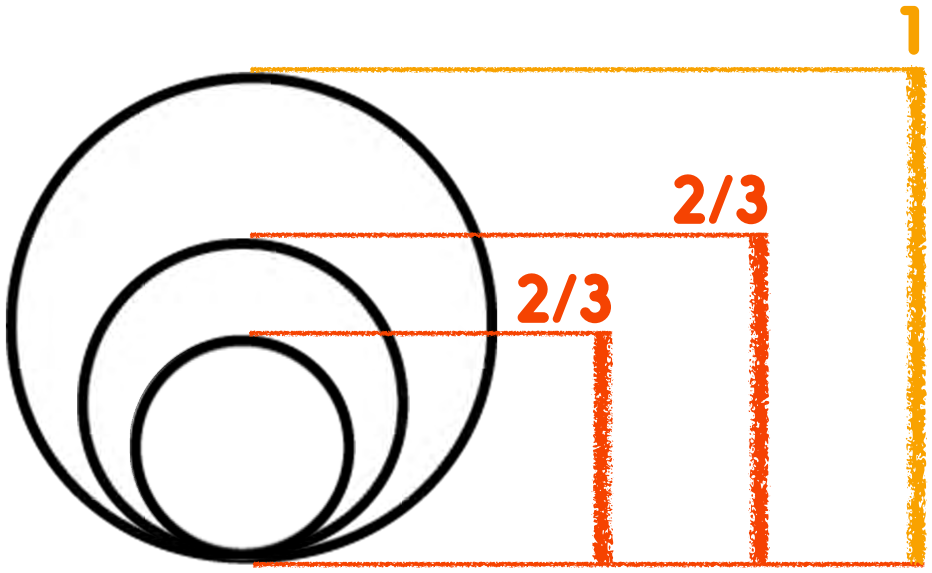
1/3




1
2/3
2/3

product
not product

HDG

42°
42°
Search
Weather
Google+

Steve Jobs, 1955-2011

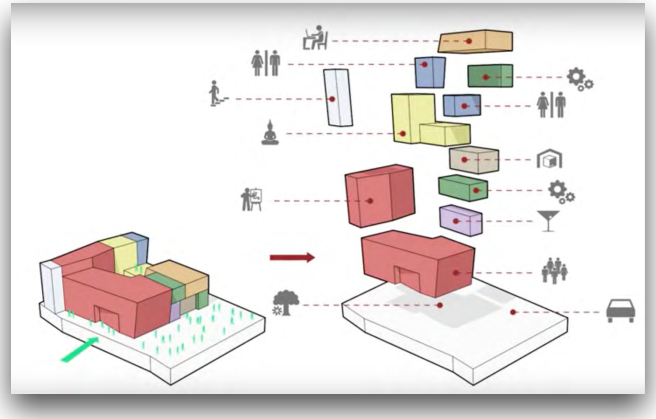
work hard to get your thinking clean to
make it simple

KIS'nS

Keep It Simple, not Stupid

mini quiz

what are **advantages** and **disadvantages** of a modular product architecture?



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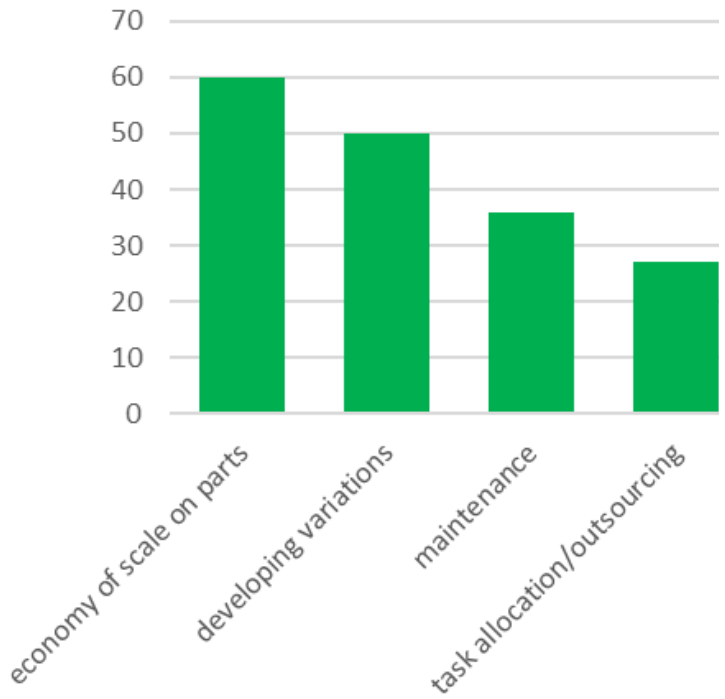

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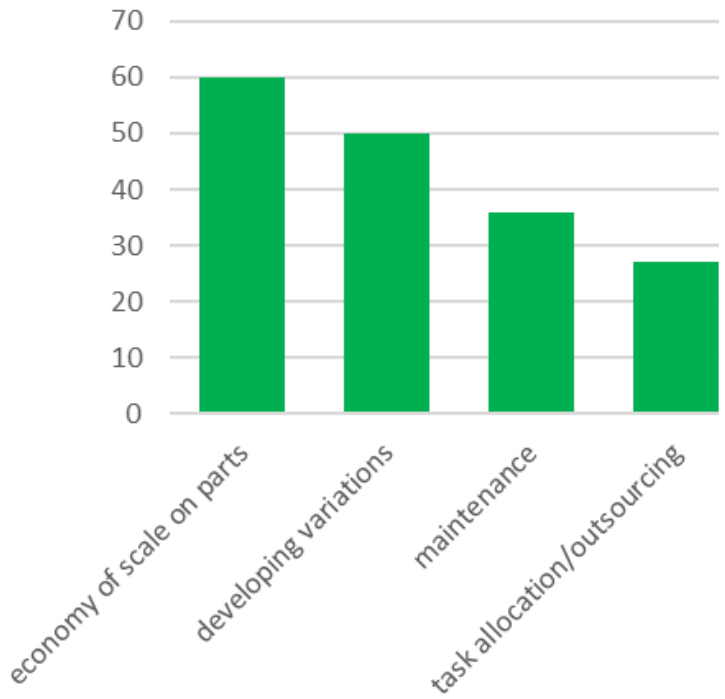

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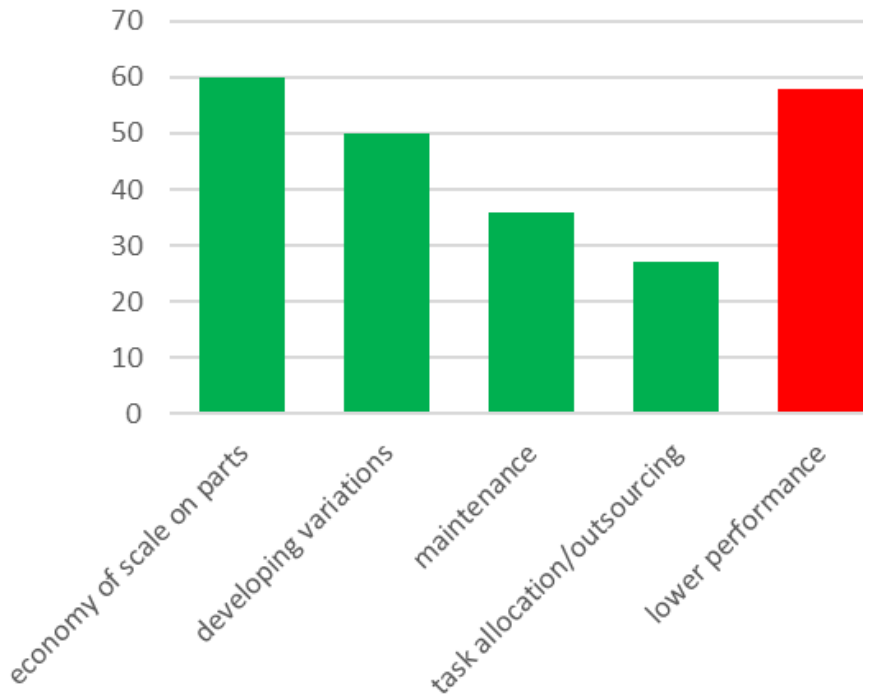

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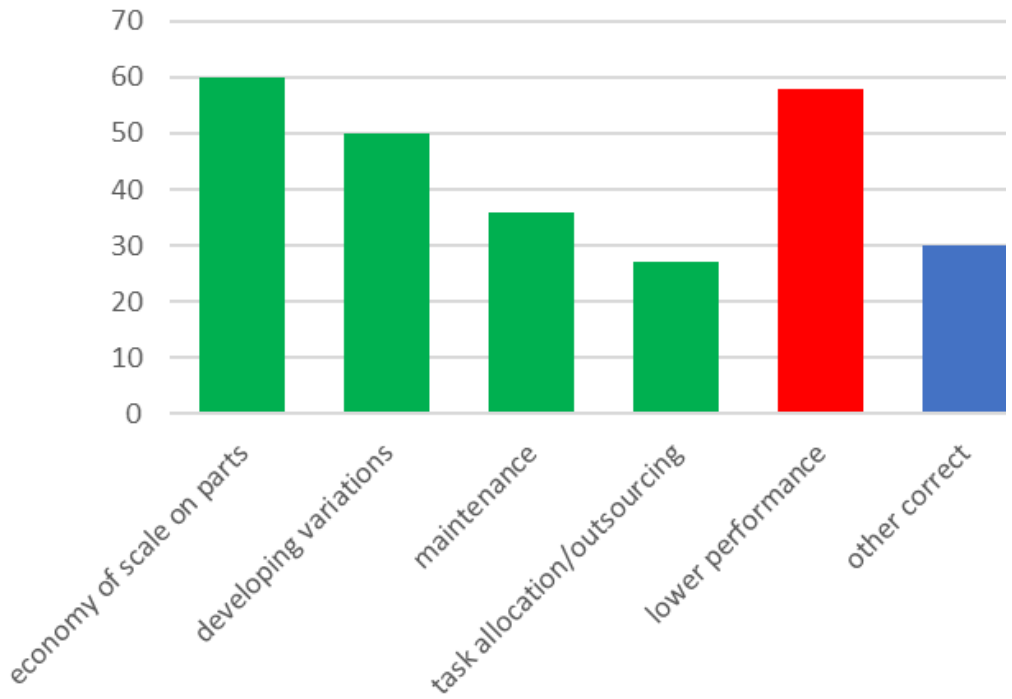

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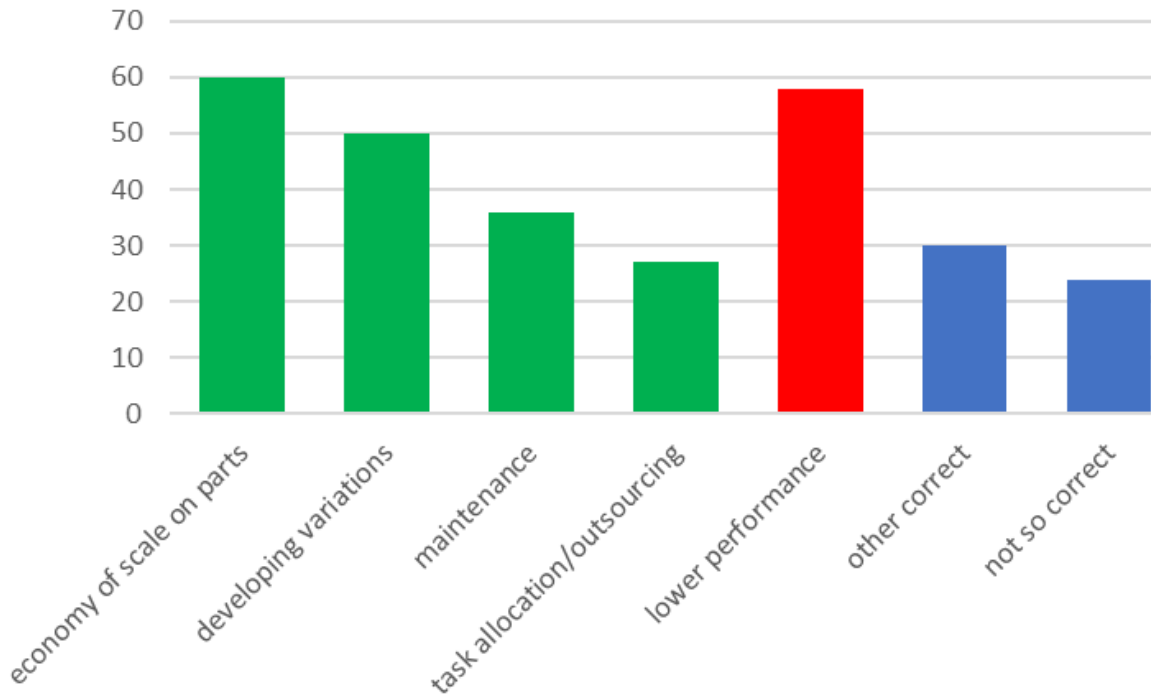

mini quiz

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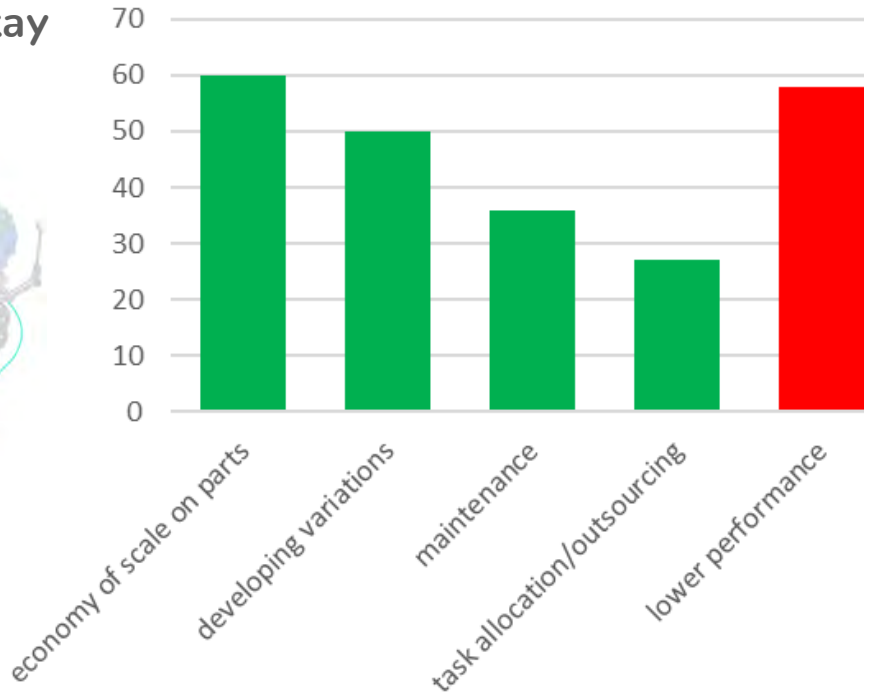
Cady Boronkay



mini quiz

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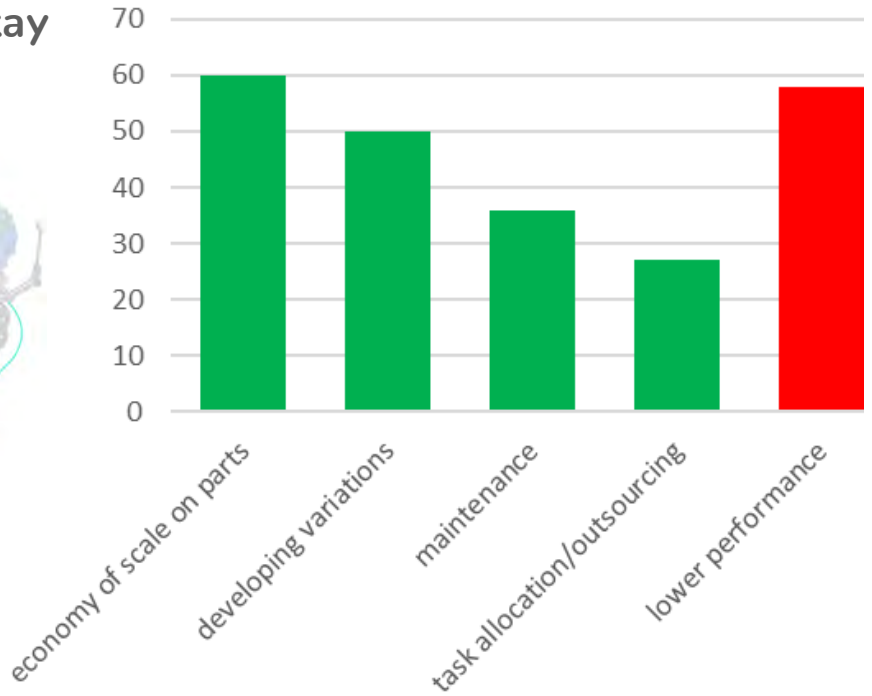
Cady Boronkay



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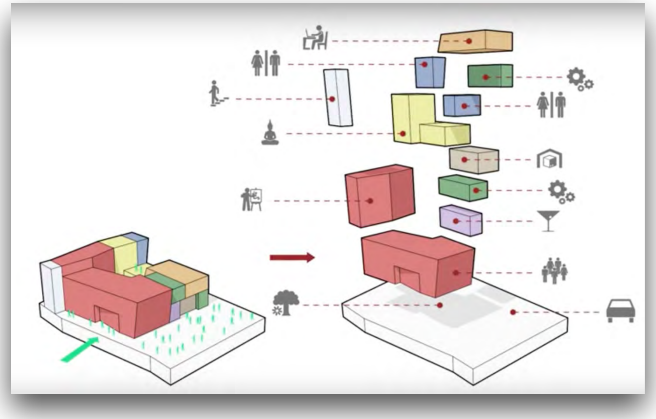


not cool

Form follows function

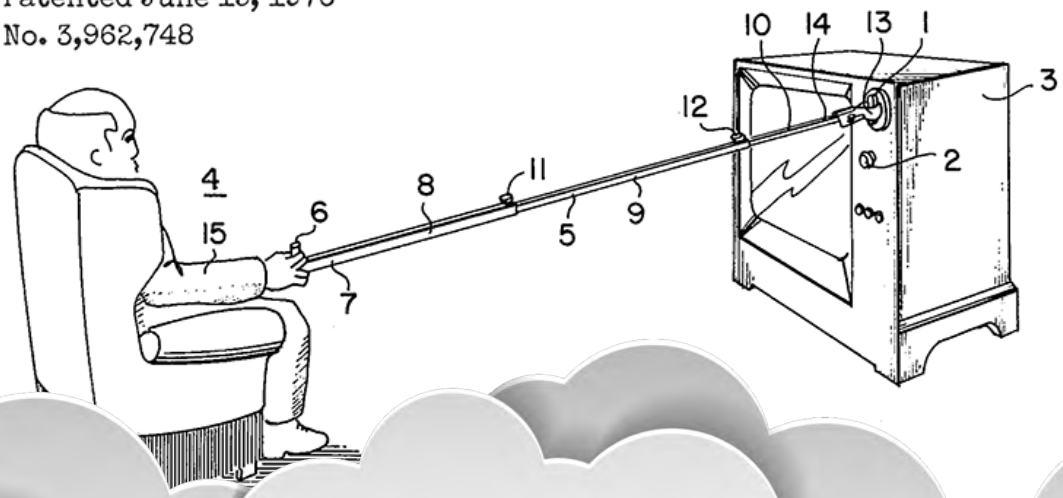
patent searching Wed at 7 PM in 14N-142

CHRIS T. MICHAELS

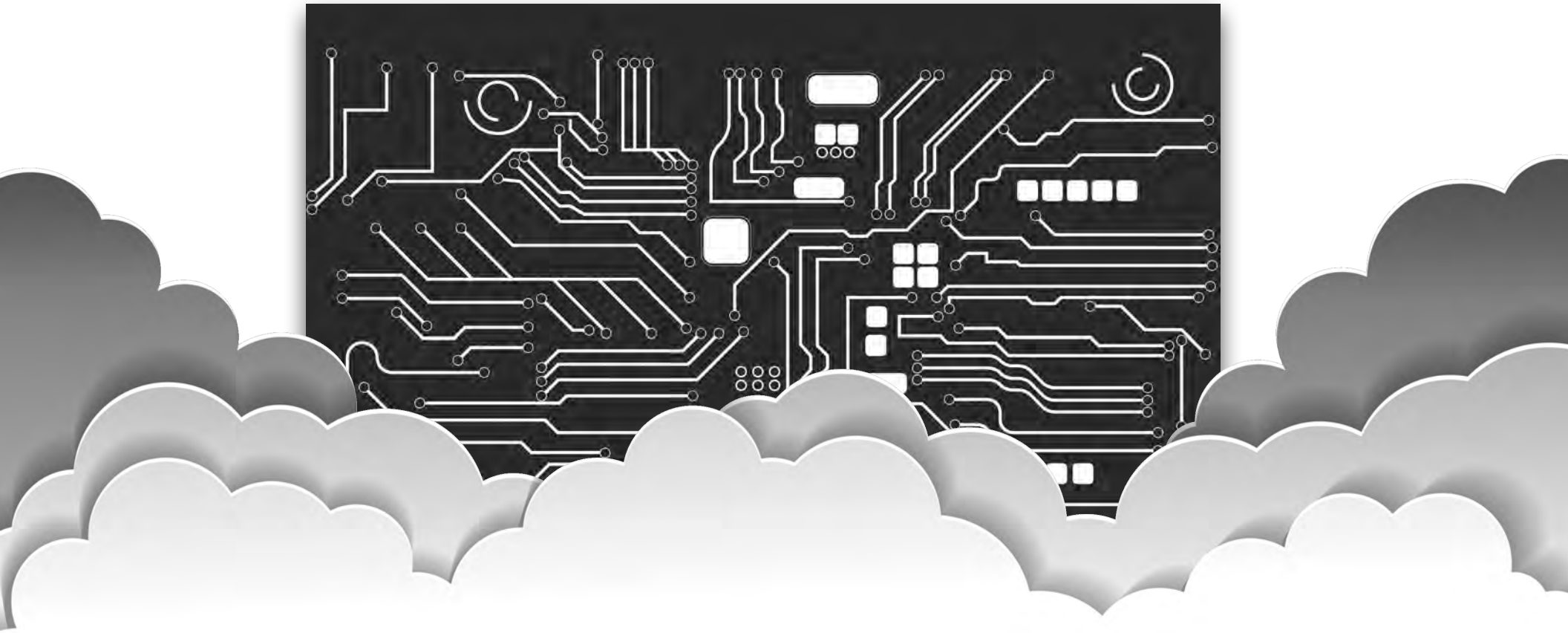
TV CONTROL DEVICE

Patented June 15, 1976

No. 3,962,748



advanced electronics Thurs at 7 PM. 3-062



product costing Fri at 4 PM. 3-333

team review please reflect in lab

Form follows function has been misunderstood

Form and function should be **one**

Frank Lloyd Wright

1867-1959