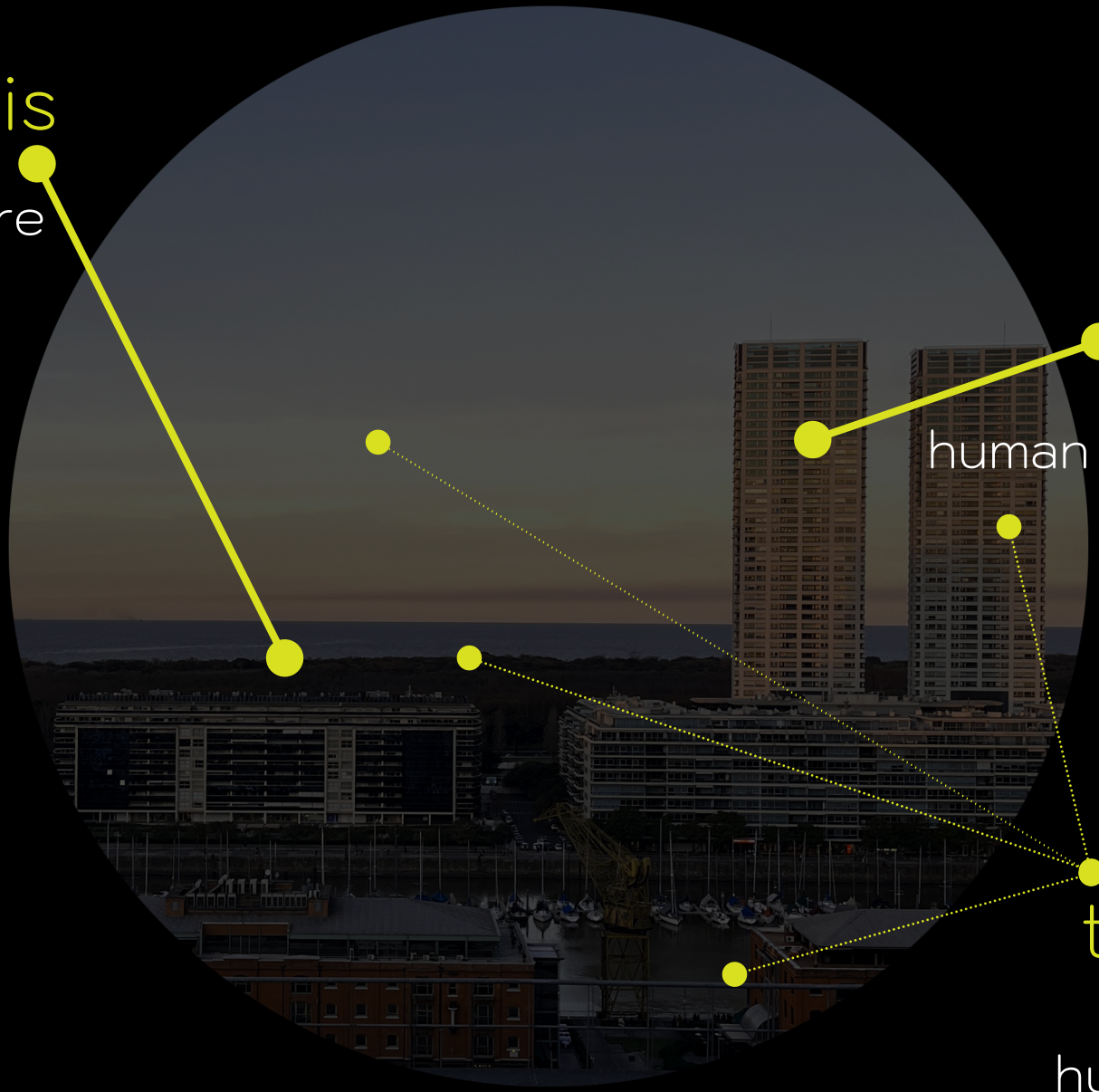
VYTAUTO DIDŽIOJO UNIVERSITETAS
MCMXXII

Technological Culture at school • Martín Parselis • VDU 2023

PASAULIO LIETUVIŲ UNIVERSITETAS


physis
polis
telépolis


physis
polis
telépolis



physis

human-nature

polis

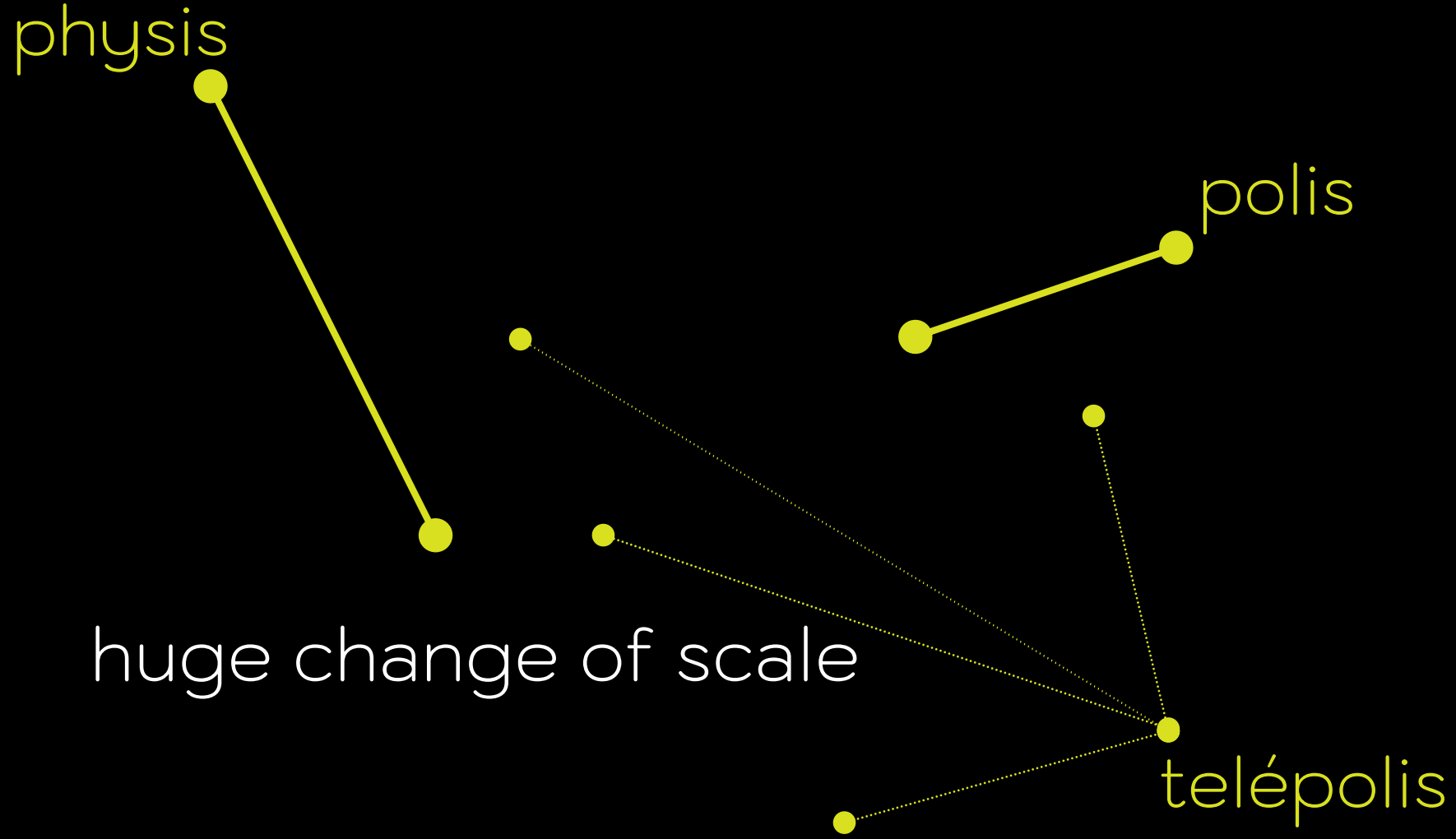
physical

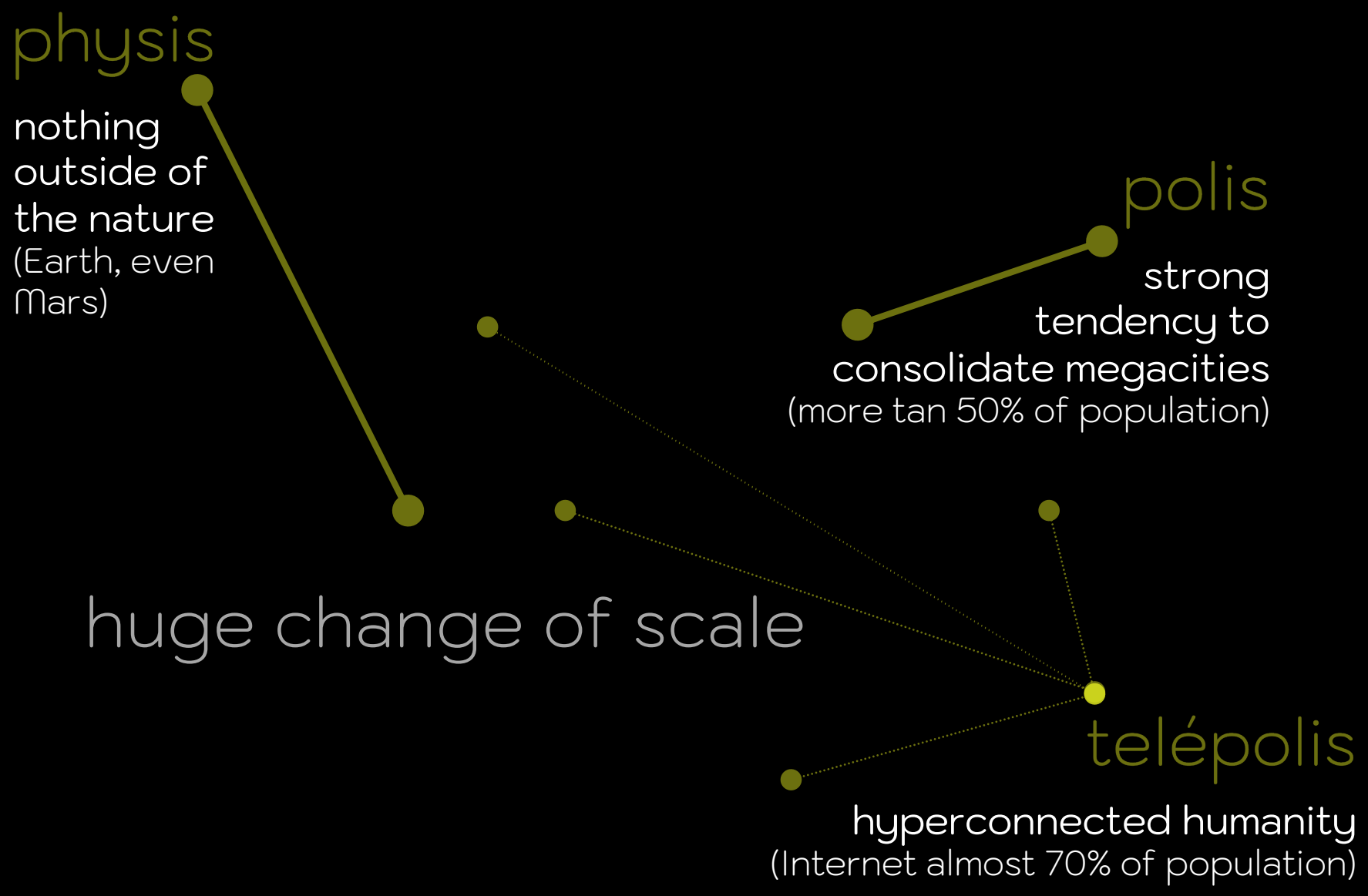
human - human

telépolis

virtual

human-human


physis
polis
huge change of scale
telépolis


physis
nothing outside of the nature (Earth, even Mars)
polis
strong tendency to consolidate megacities (more tan 50% of population)
huge change of scale
telépolis
hyperconnected humanity (Internet almost 70% of population)

huge change of scale

over those environments, into this huge change of scale, we unfold our lifes

over those environments, into this
huge change of scale, we unfold
our lifes, surrounded by
tons of objects

over those environments, into this
huge change of scale, we unfold
our lifes, surrounded by
tons of objects

environments

objects

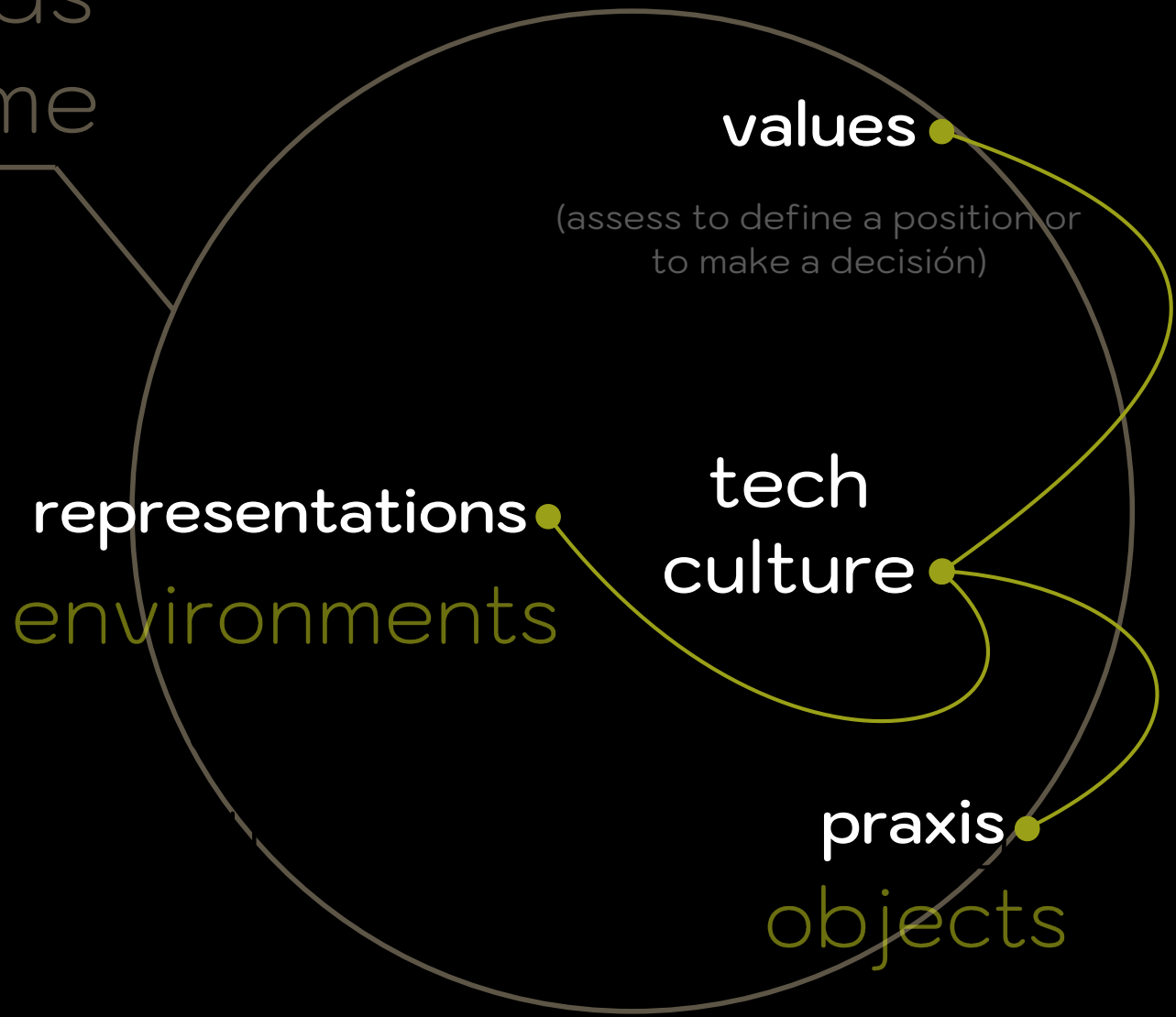
basic needs
of this time

develop capacities for
the critical assessment
of technologies
(assess to define a position or
to make a decisión)

develop capabilities
to unfold over the
three
environments

stimulate the
effective
use of
objects

basic needs
of this time



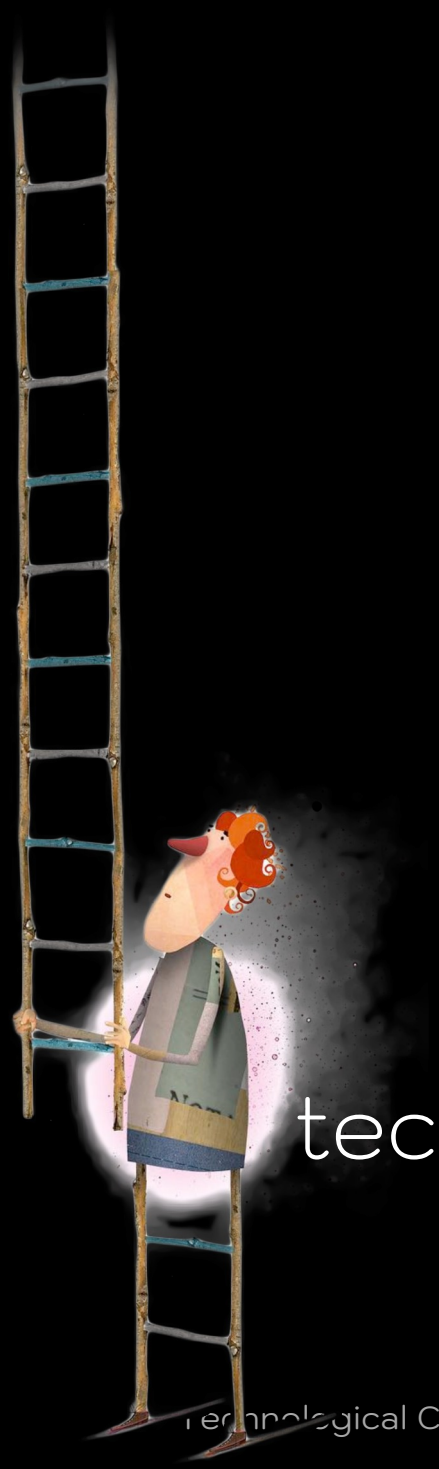
basic needs
of this time

schools do not
sufficiently
encourage
tech
culture

basic needs
of this time

schools do not
sufficiently
encourage
tech
culture

1st problem



technological culture

uso de ilustración con permiso de Pablo Bernasconi

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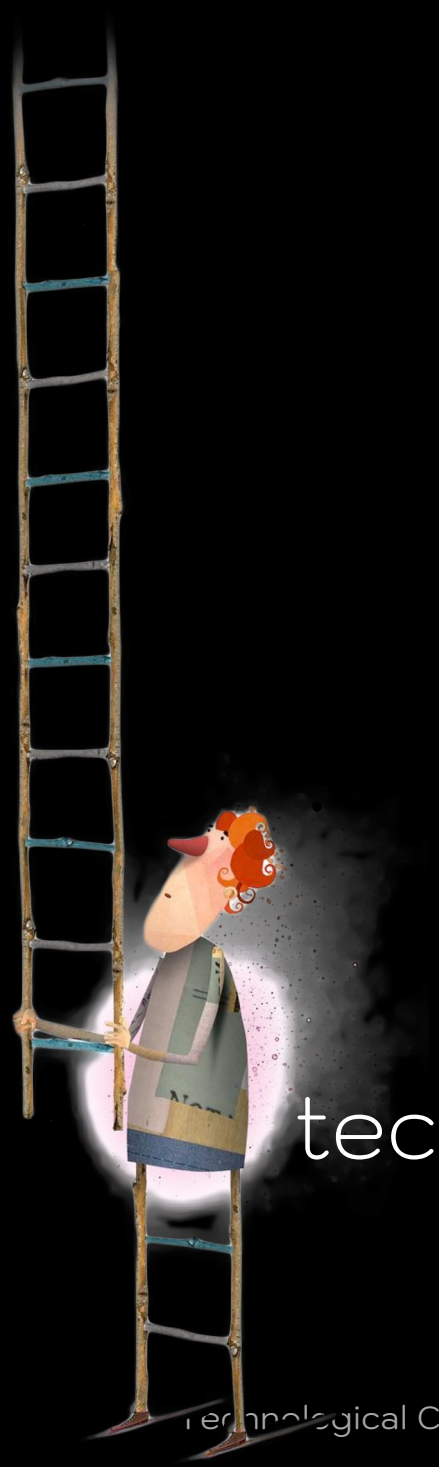

- **representations** (information about the properties and features of the medium)
- **praxis** (information about how to take action)
- **values** (information about what is preferable, convenient, valuable)

technological culture

(Miguel Angel Quintanilla)

uso de ilustración con permiso de Pablo Bernasconi

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“technology is anything invented after you were born”

(everything that precedes us is naturalized)

(Alan Kay)

“it is culture that governs man”
“is an initiation into the opinions of determinate social groups having existed in previous epochs”

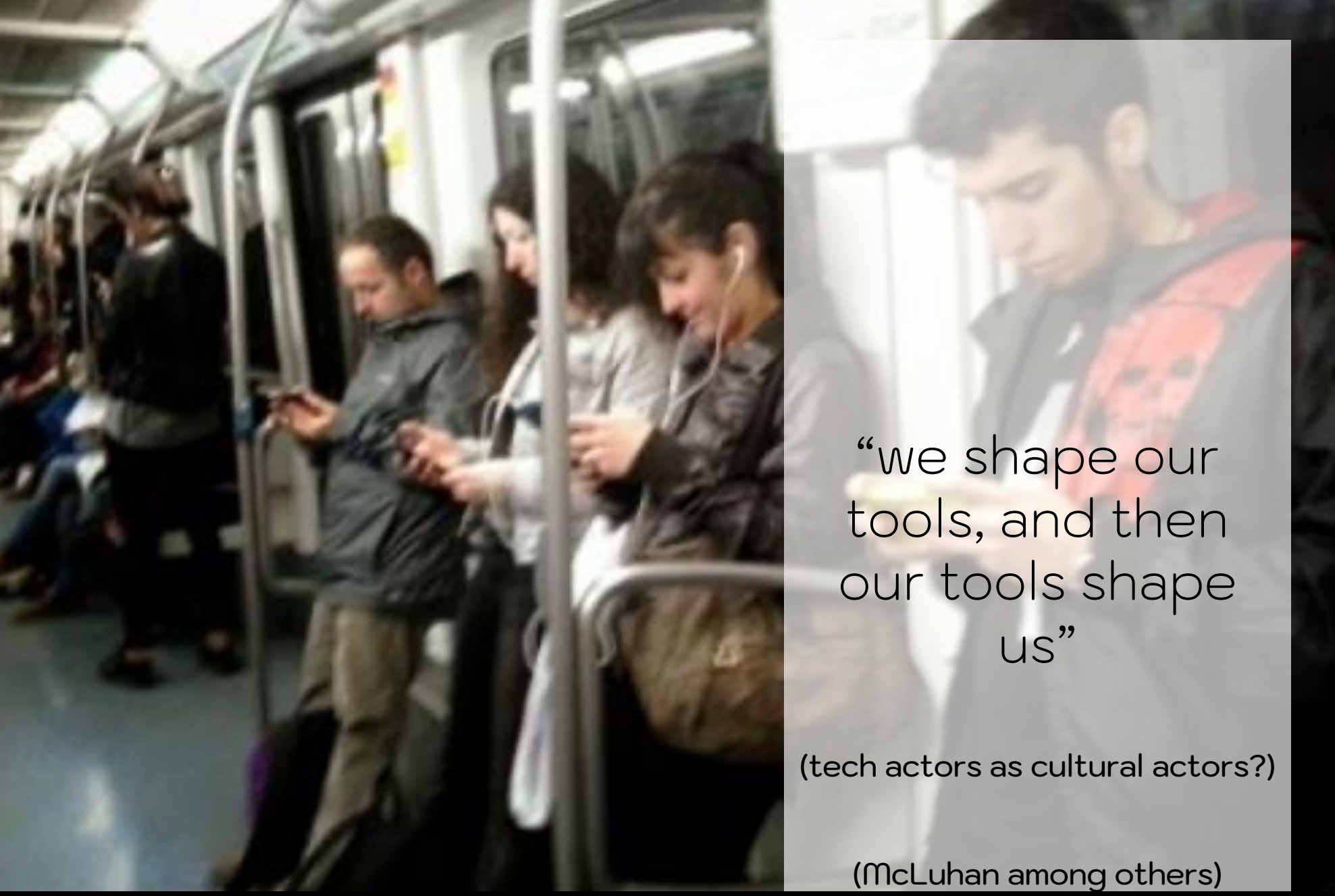
(culture shapes us)

(Gilbert Simondon)

“the mediation between technics and power can be realized only through the mediation of culture”

(culture shapes us)

(Gilbert Simondon)



“we shape our tools, and then our tools shape us”

(tech actors as cultural actors?)

(McLuhan among others)

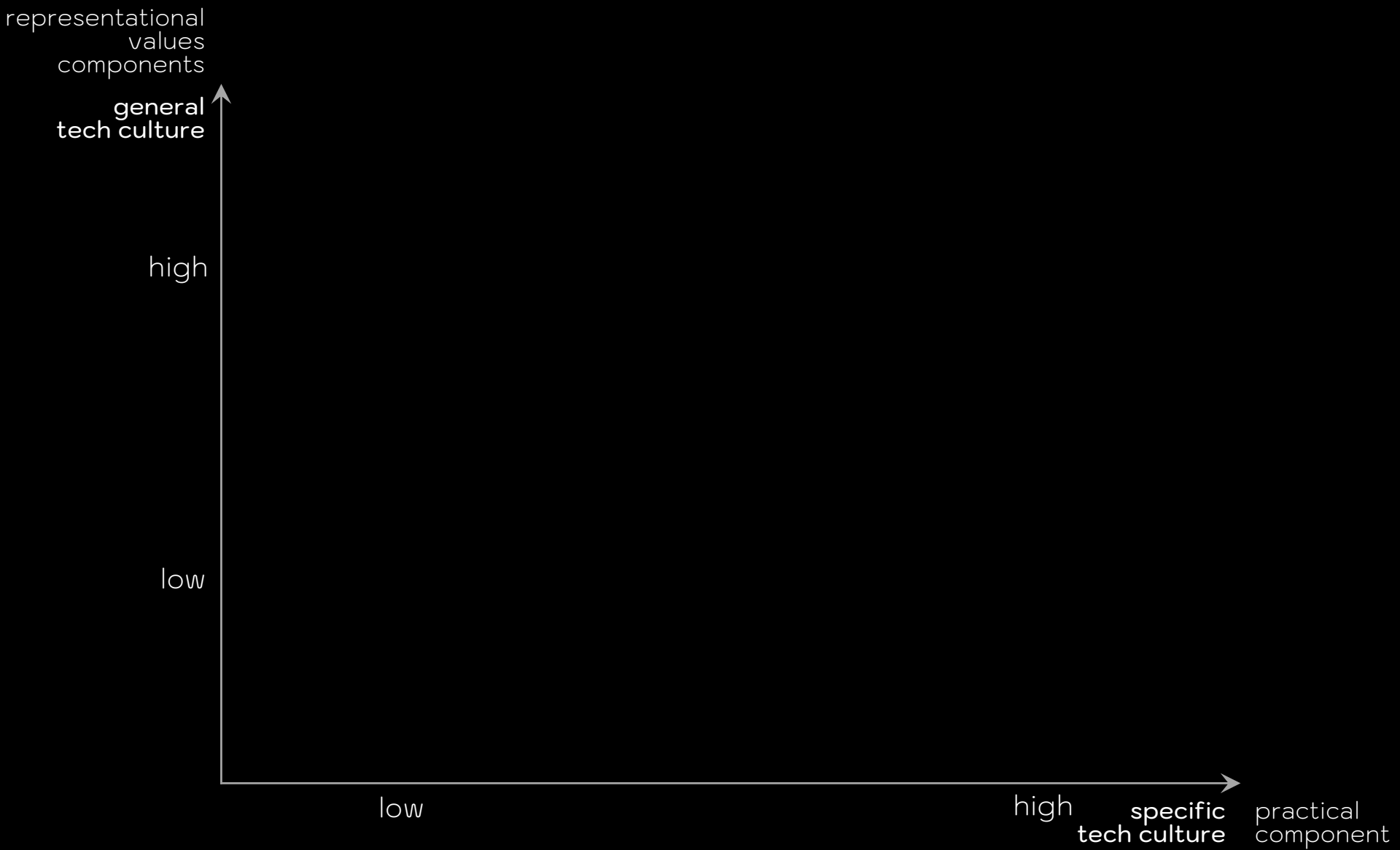
tech actors as cultural actors

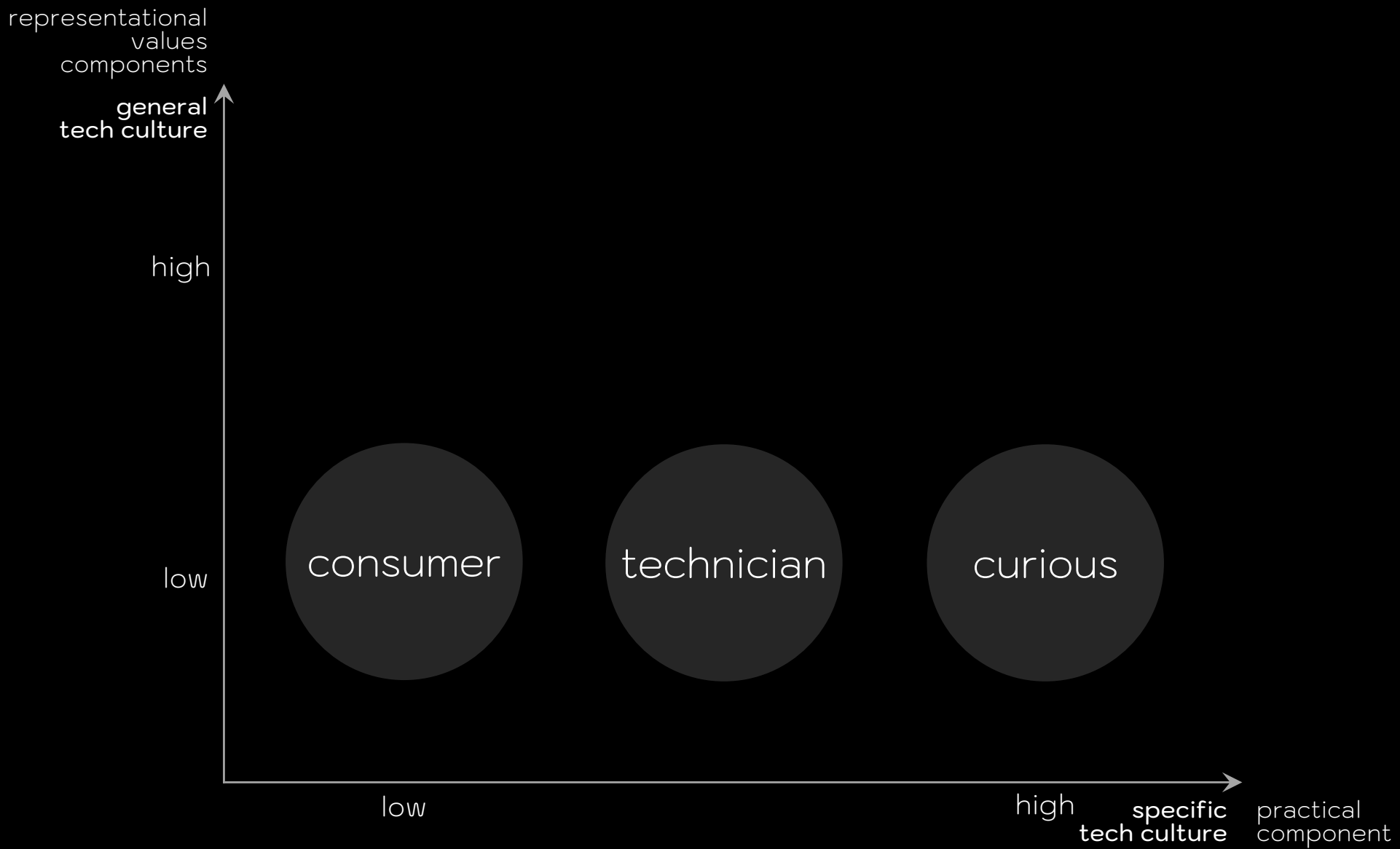
tech actors as cultural actors

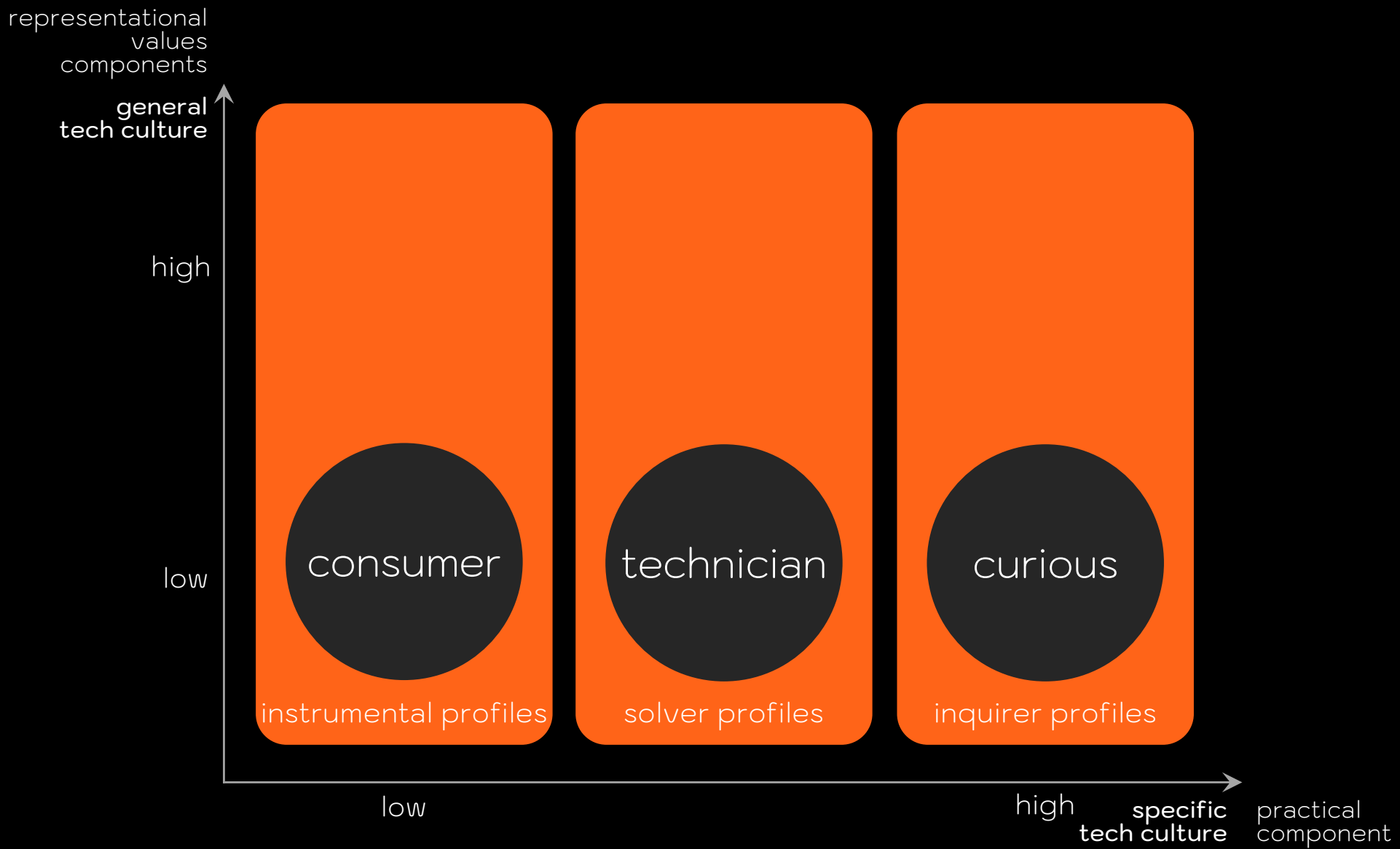
what about the users?

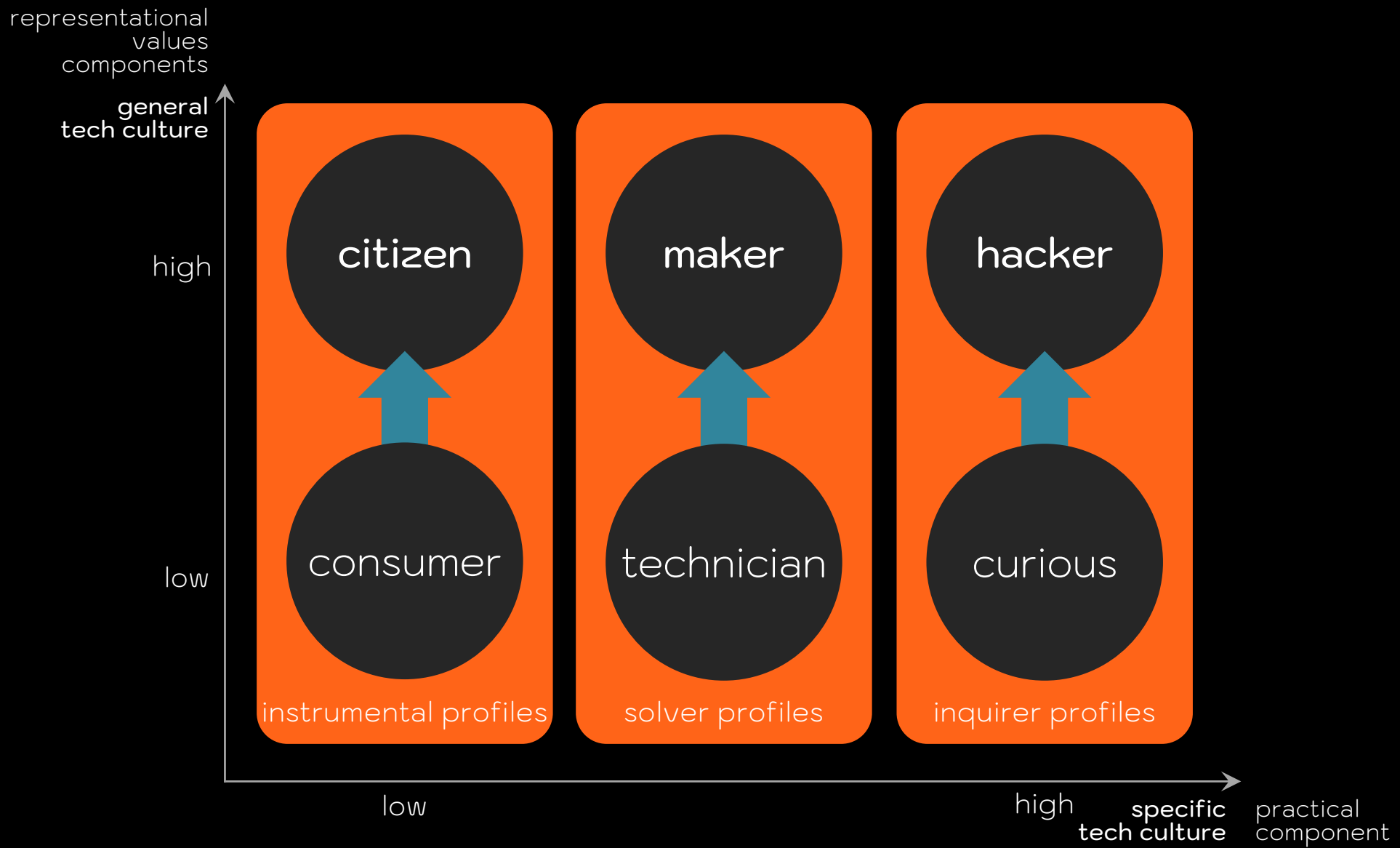
in platform times,
we can be active,
sharing designers capabilities
and developing solutions

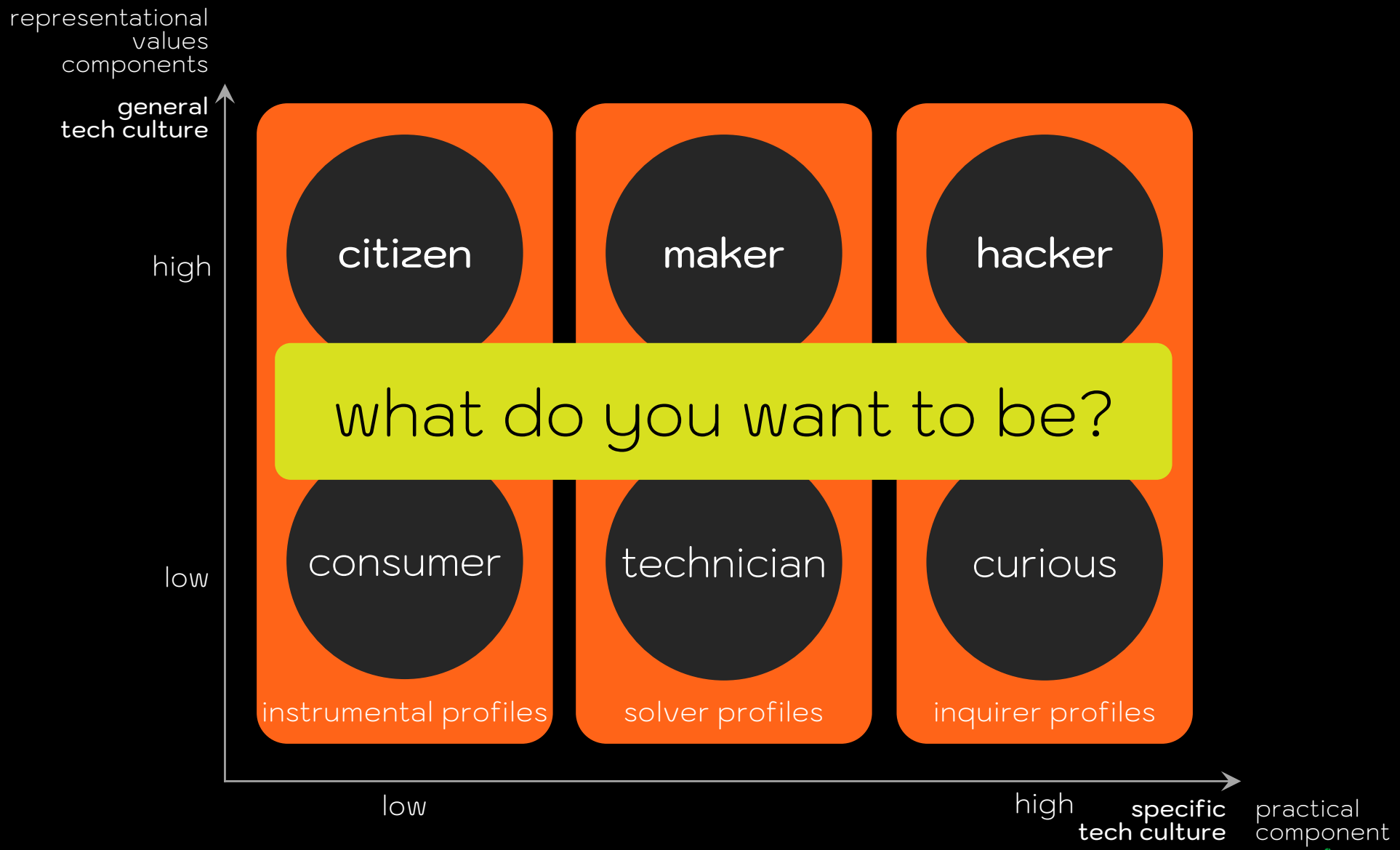
yes:
the users

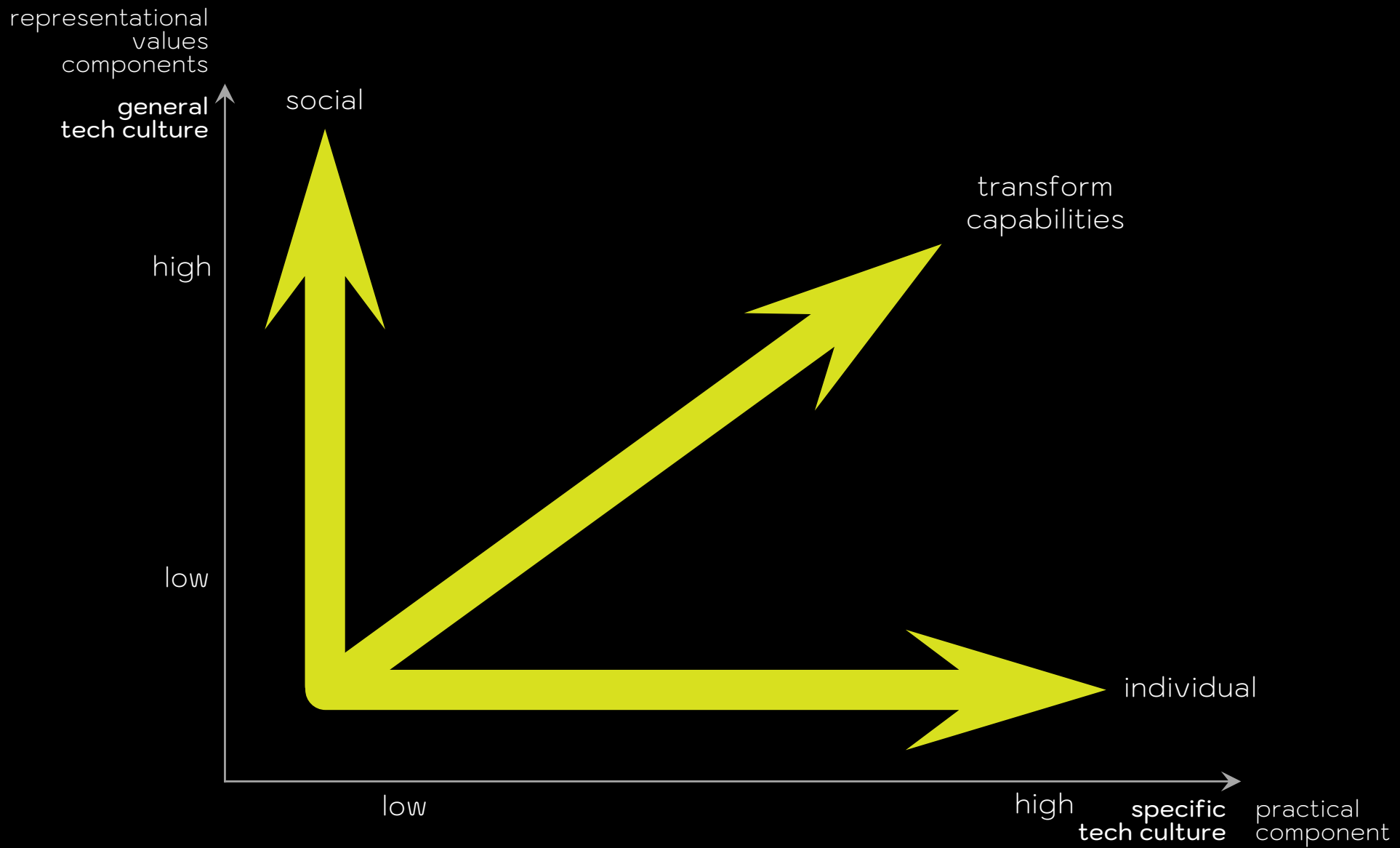

representational
values
components
general
tech culture
high
low
low
high
specific
tech culture
practical
component

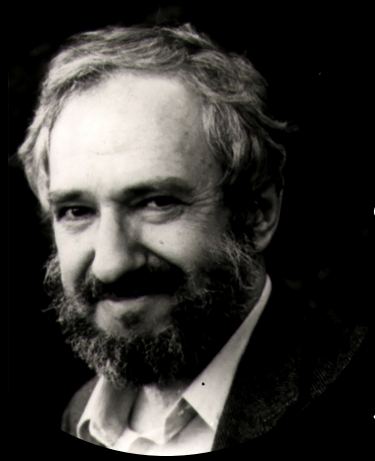

representational values components
general tech culture
high
low
consumer
technician
curious
low
high
specific tech culture
practical component


representational values components
general tech culture
high
low
consumer
technician
curious
instrumental profiles
solver profiles
inquirer profiles
low
high
specific tech culture
practical component

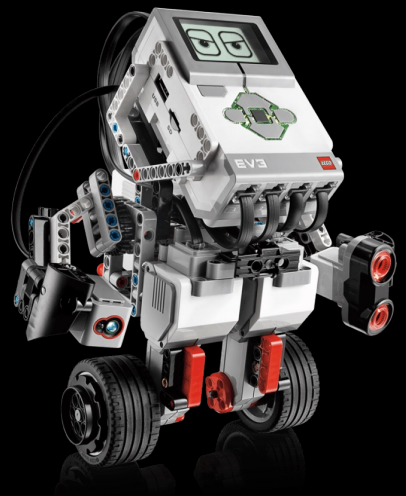

representational values components
general tech culture
high
low
citizen
maker
hacker
consumer
technician
curious
instrumental profiles
solver profiles
inquirer profiles
low
high
specific tech culture
practical component


representational values components
general tech culture
high
low
citizen
maker
hacker
what do you want to be?
consumer
technician
curious
instrumental profiles
solver profiles
inquirer profiles
low
high
specific tech culture
practical component

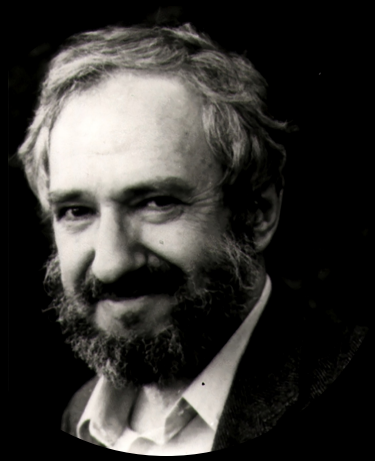

representational values components
general tech culture
social
high
low
transform capabilities
individual
low
high
specific tech culture
practical component



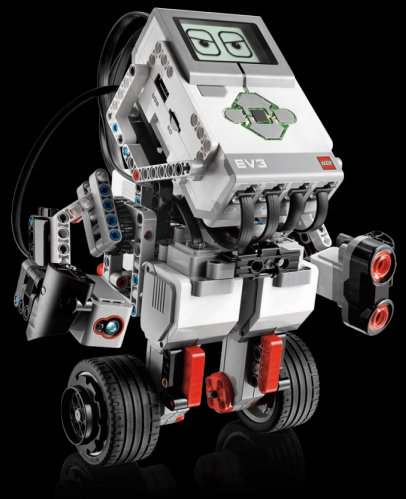
Seymour Papert



“how strange, then, that
'computers in education'
should so often reduce to using
bright new gadgets
to teach **the same old stuff**
in thinly disguised versions of
the same old way.”



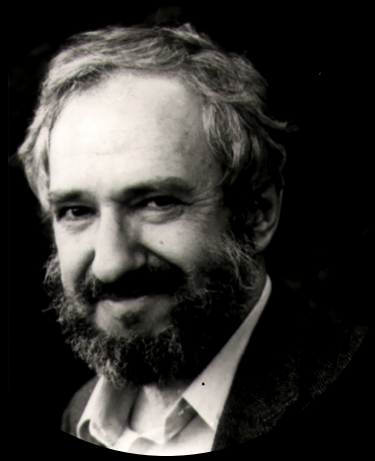
Seymour Papert



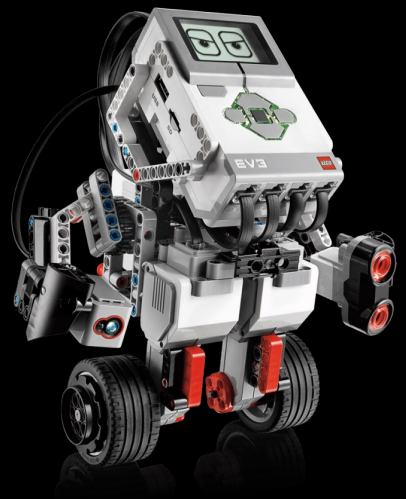
bright new gadgets technologies

to teach **the same old stuff** contents

the same old way pedagogy



Seymour Papert



new technologies

same contents

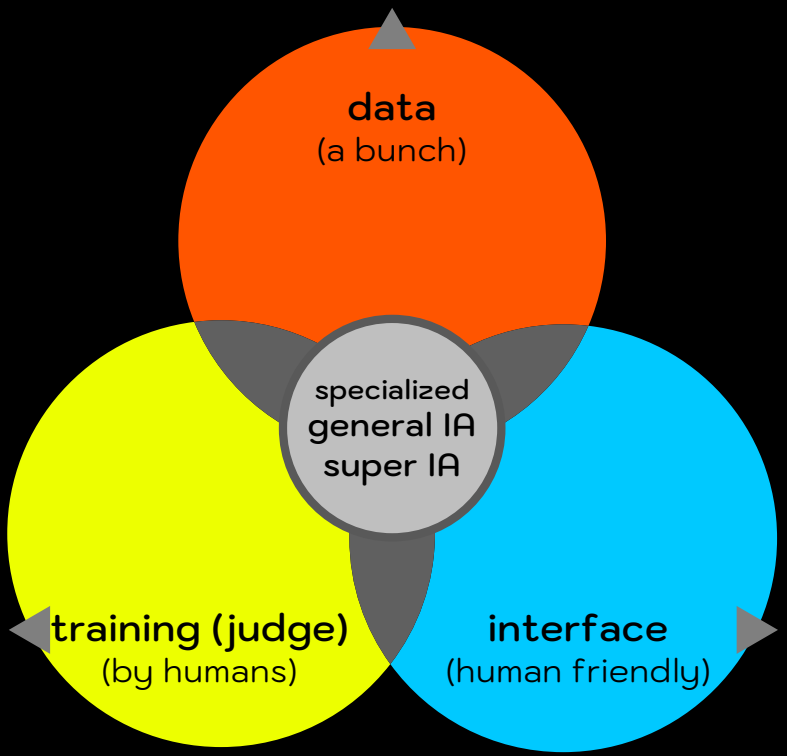
same pedagogy

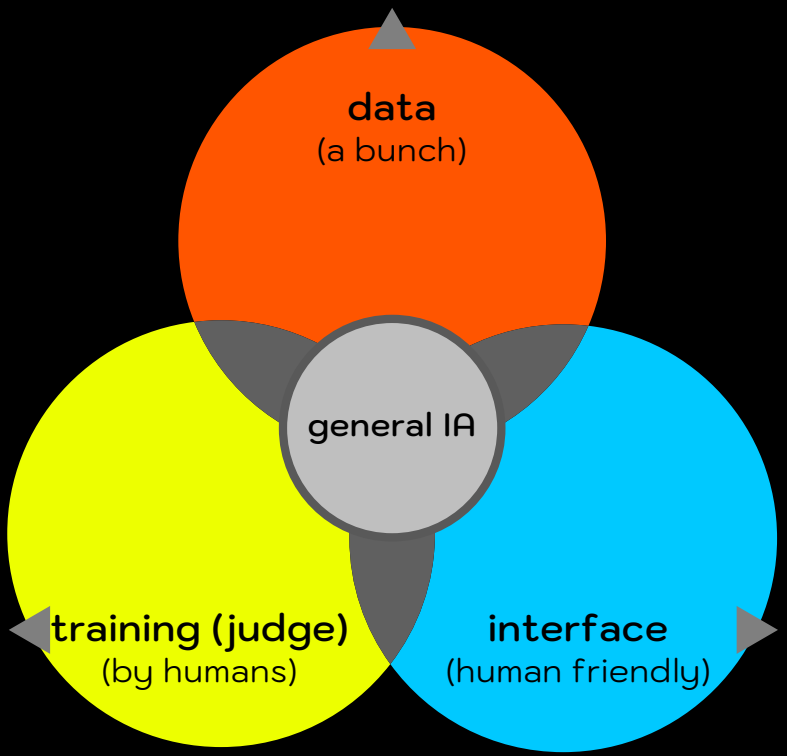
50 years, the same problem

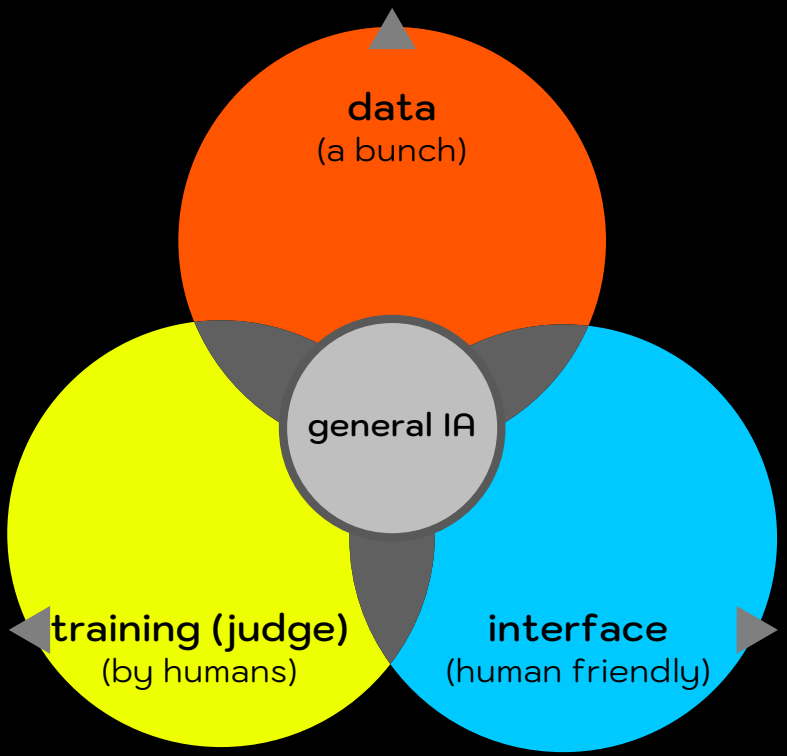
to be part of this era is to naturalize the technologies to make them work, but without eliminating the deep understanding of this time

to avoid the same old problems we need to narrow the gap of contemporaneity

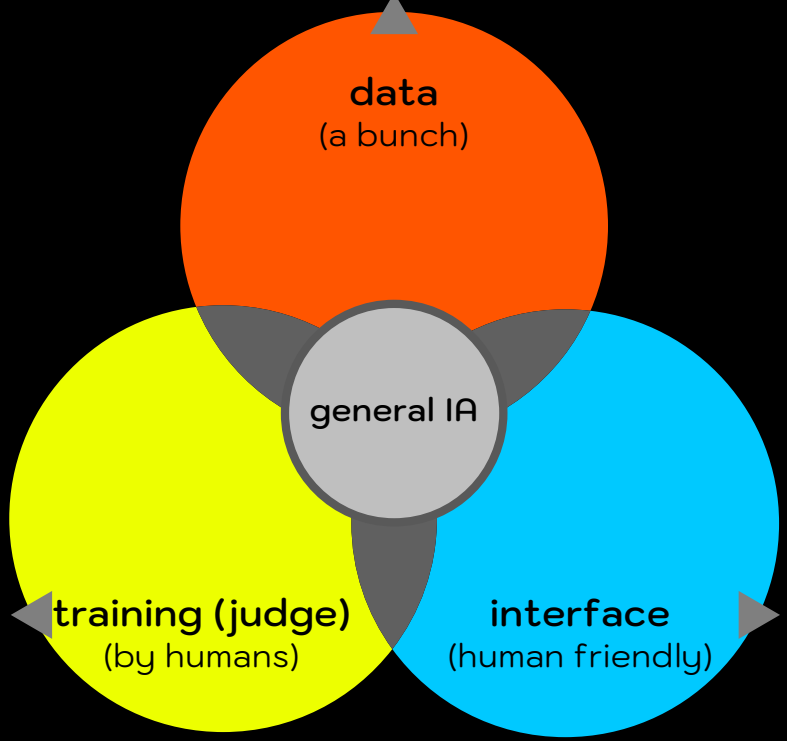
live, think, and feel into this time


data
(a bunch)
specialized
general IA
super IA
training (judge)
(by humans)
interface
(human friendly)


data
(a bunch)
general IA
training (judge)
(by humans)
interface
(human friendly)


data
(a bunch)
general IA
training (judge)
(by humans)
interface
(human friendly)

at will
content

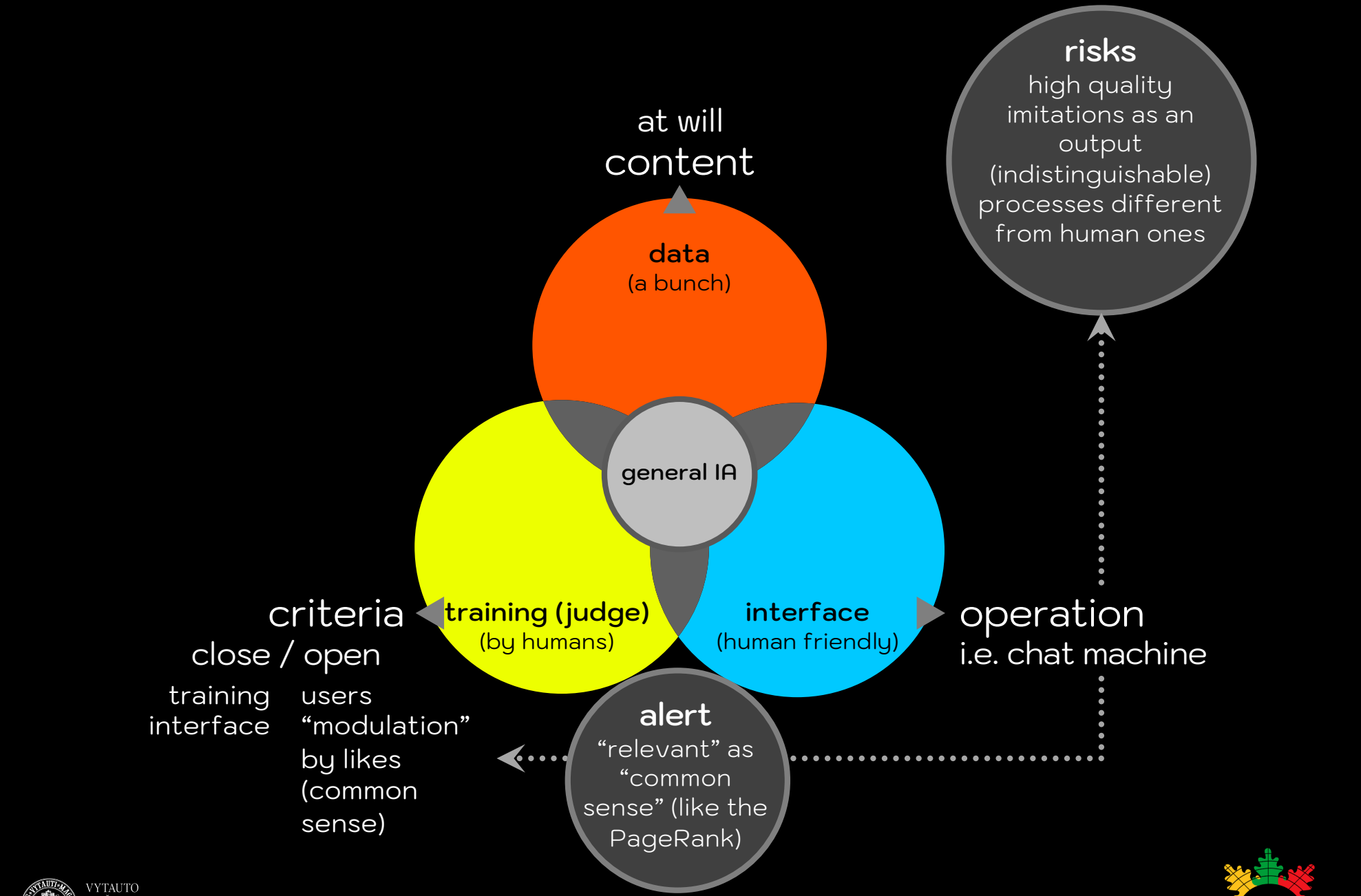


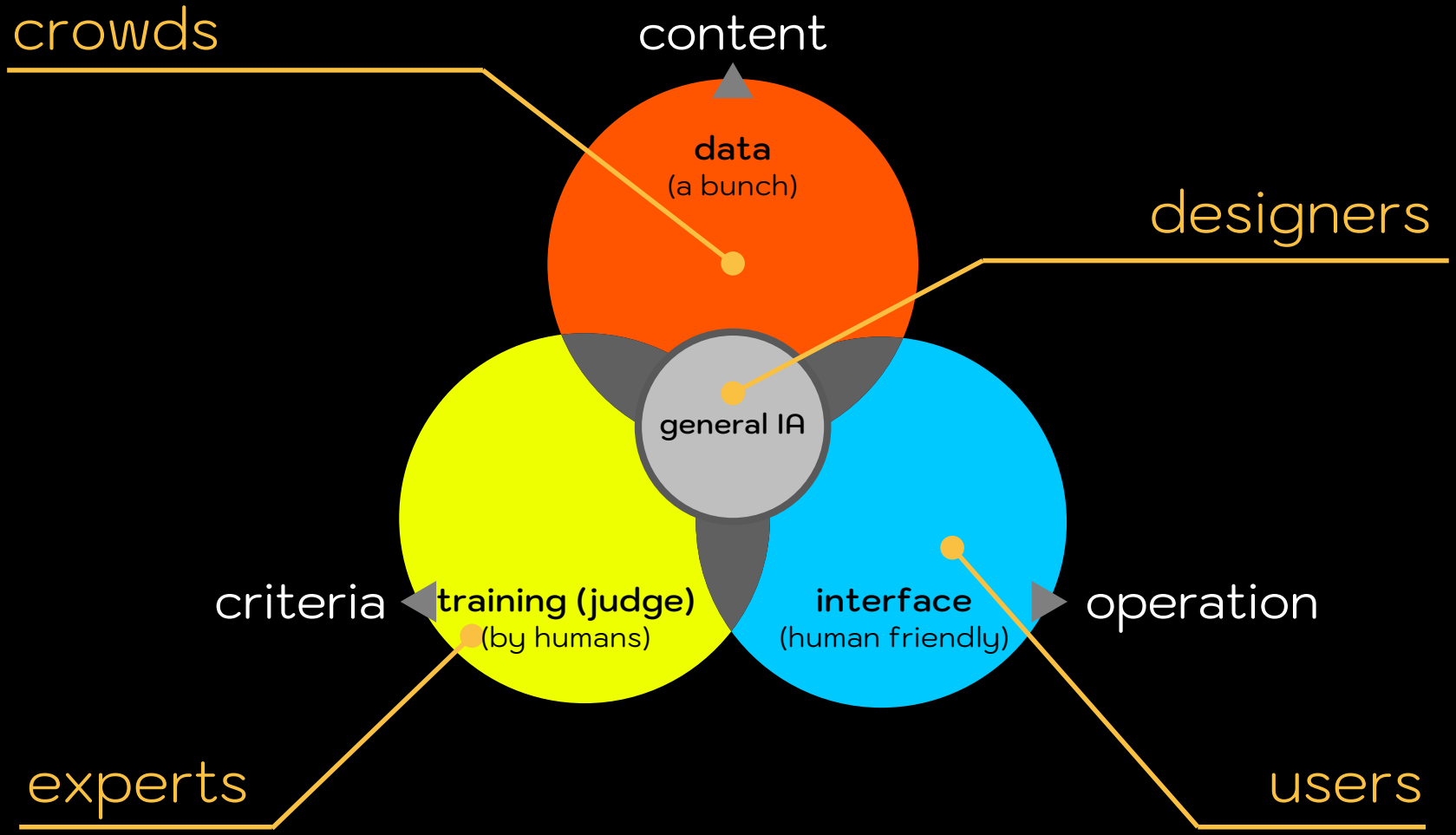
criteria
close / open

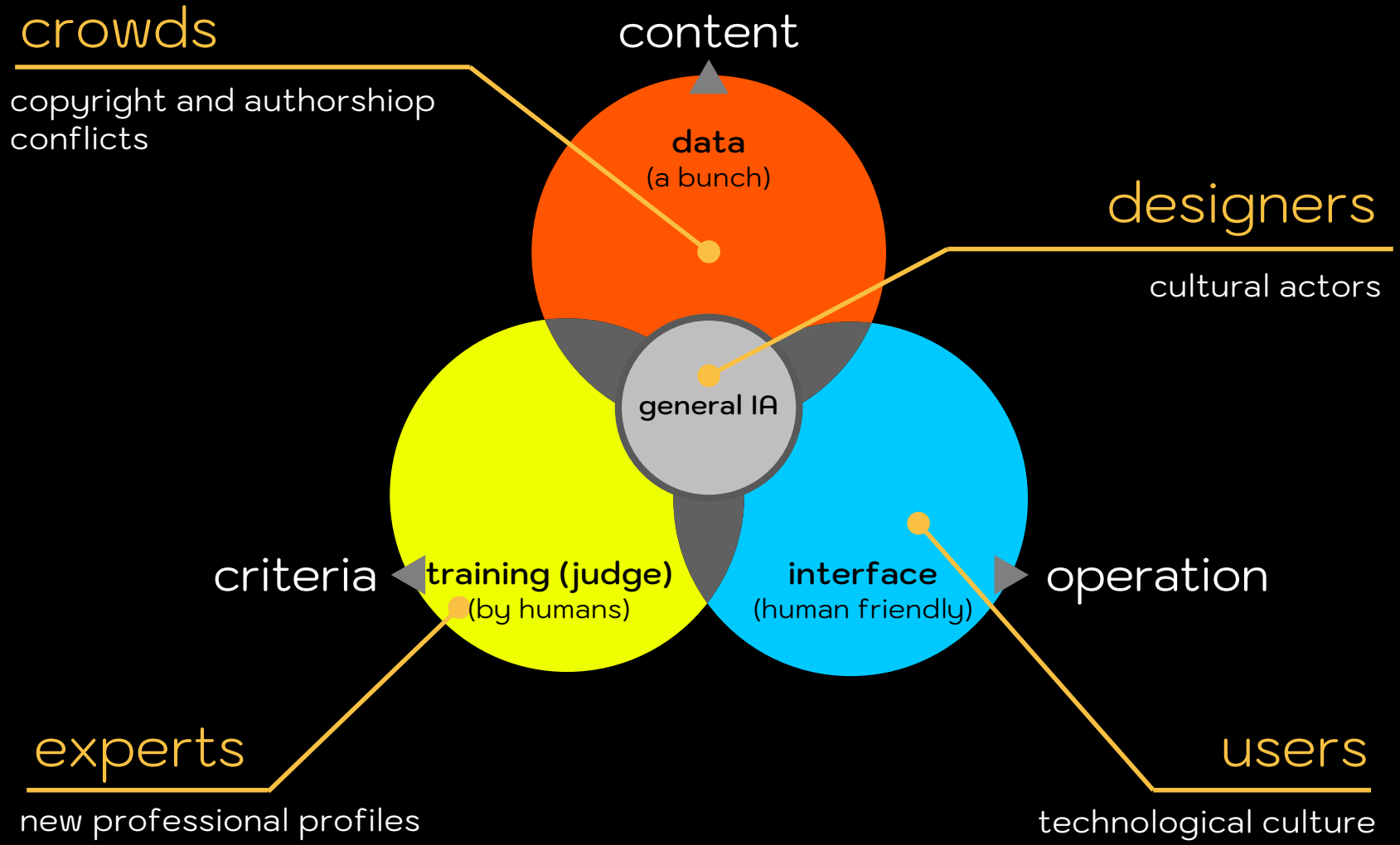
training interface

users “modulation” by likes (common sense)

operation
i.e. chat machine


risks
high quality imitations as an output (indistinguishable) processes different from human ones
at will
content
data
(a bunch)
general IA
criteria
close / open
training
interface
users
“modulation”
by likes
(common
sense)
training (judge)
(by humans)
interface
(human friendly)
operation
i.e. chat machine
alert
“relevant” as “common sense” (like the PageRank)


crowds
content
data
(a bunch)
designers
general IA
criteria
training (judge)
(by humans)
interface
(human friendly)
operation
experts
users


crowds
copyright and authorshiop conflicts
content
data
(a bunch)
designers
cultural actors
general IA
criteria
training (judge)
(by humans)
interface
(human friendly)
operation
experts
new professional profiles
users
technological culture

designers

cultural actors

users

technological culture

when technologies
(and their problematization)
come to school
they are already
accepted,
spreaded and
“**pasteurized**”

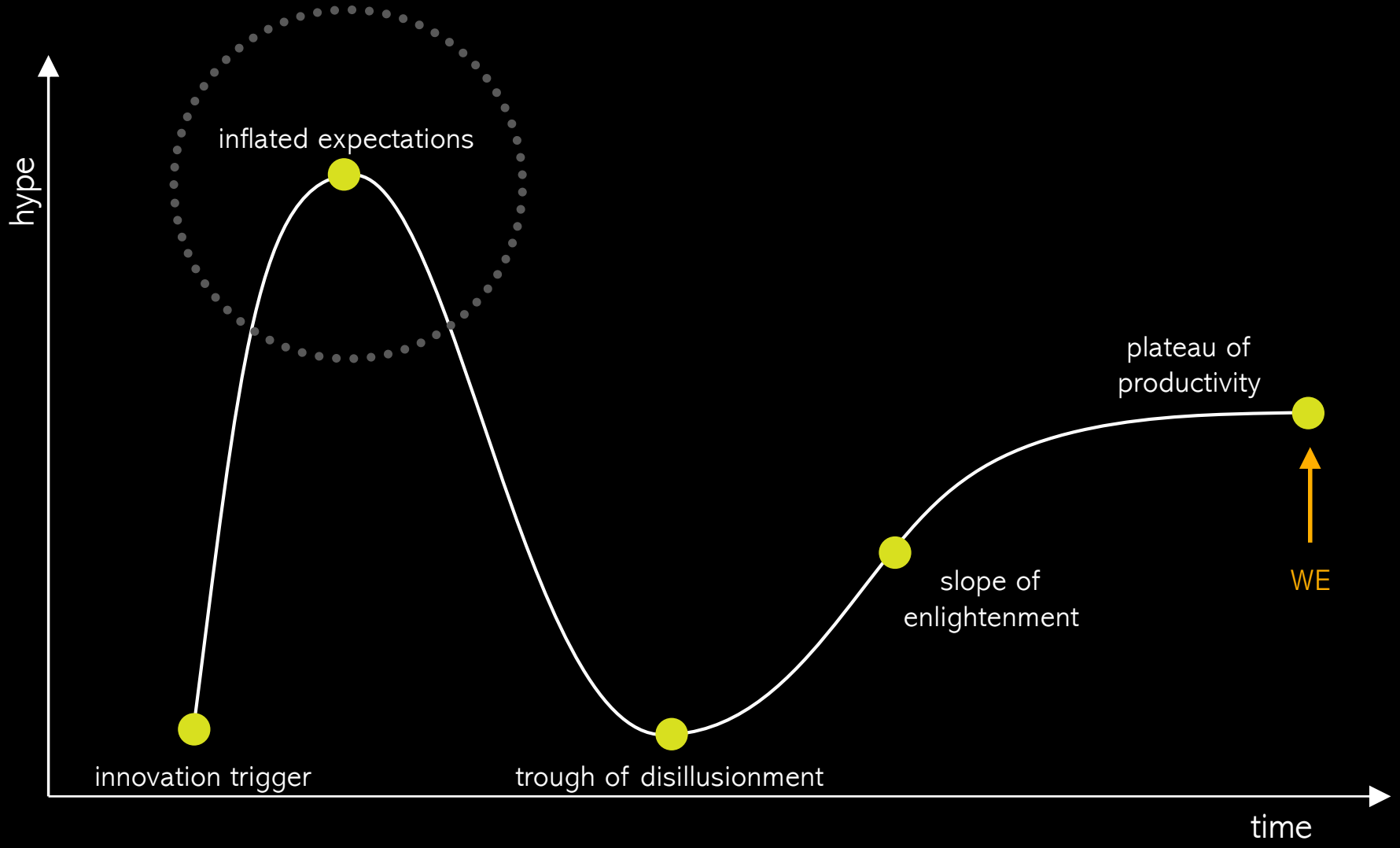
2nd problem

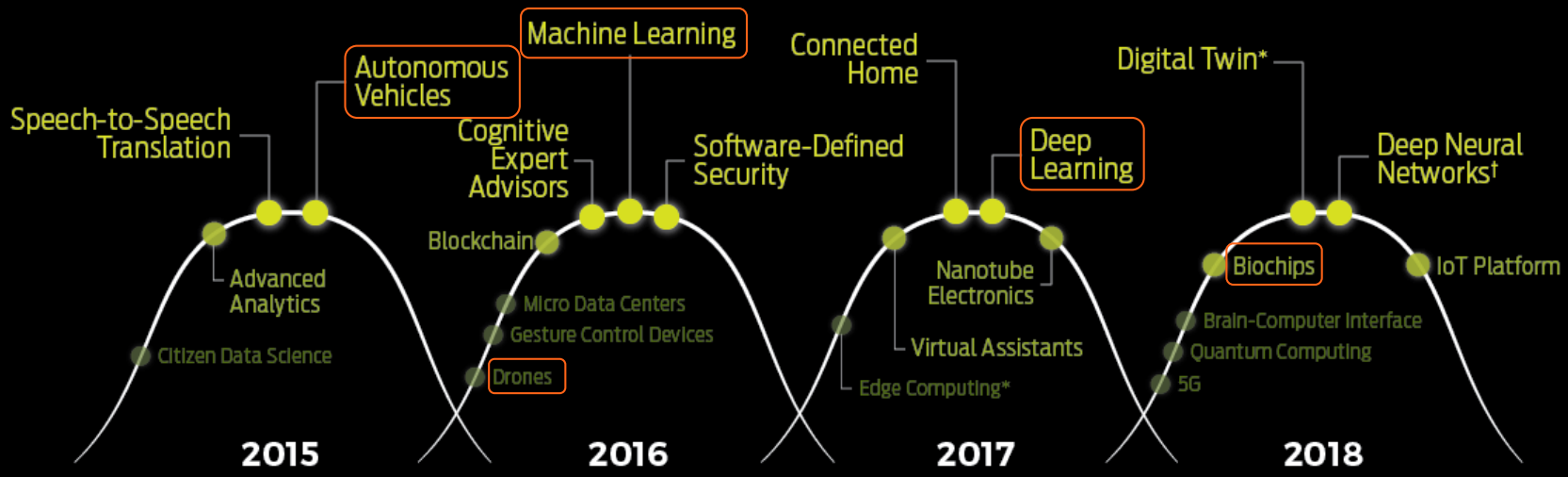
harm, or not, technologies are already with us
(and are increasingly irreversible)

school does not **anticipate**

school does not **anticipate**

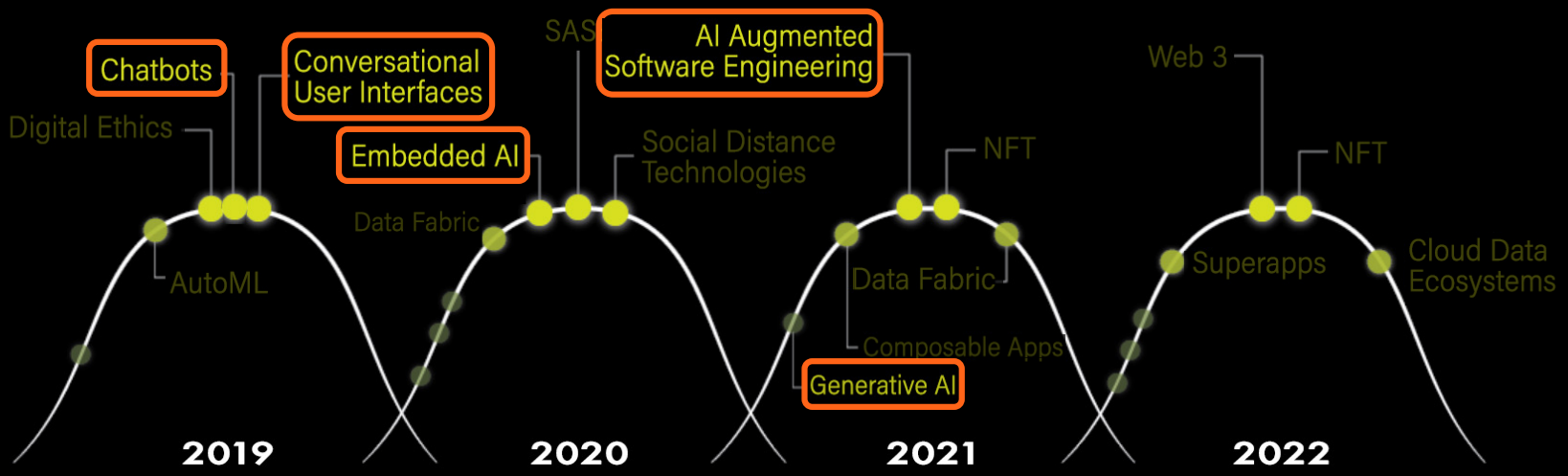
(not as **imagination** exercise,
but an **information** exercise)

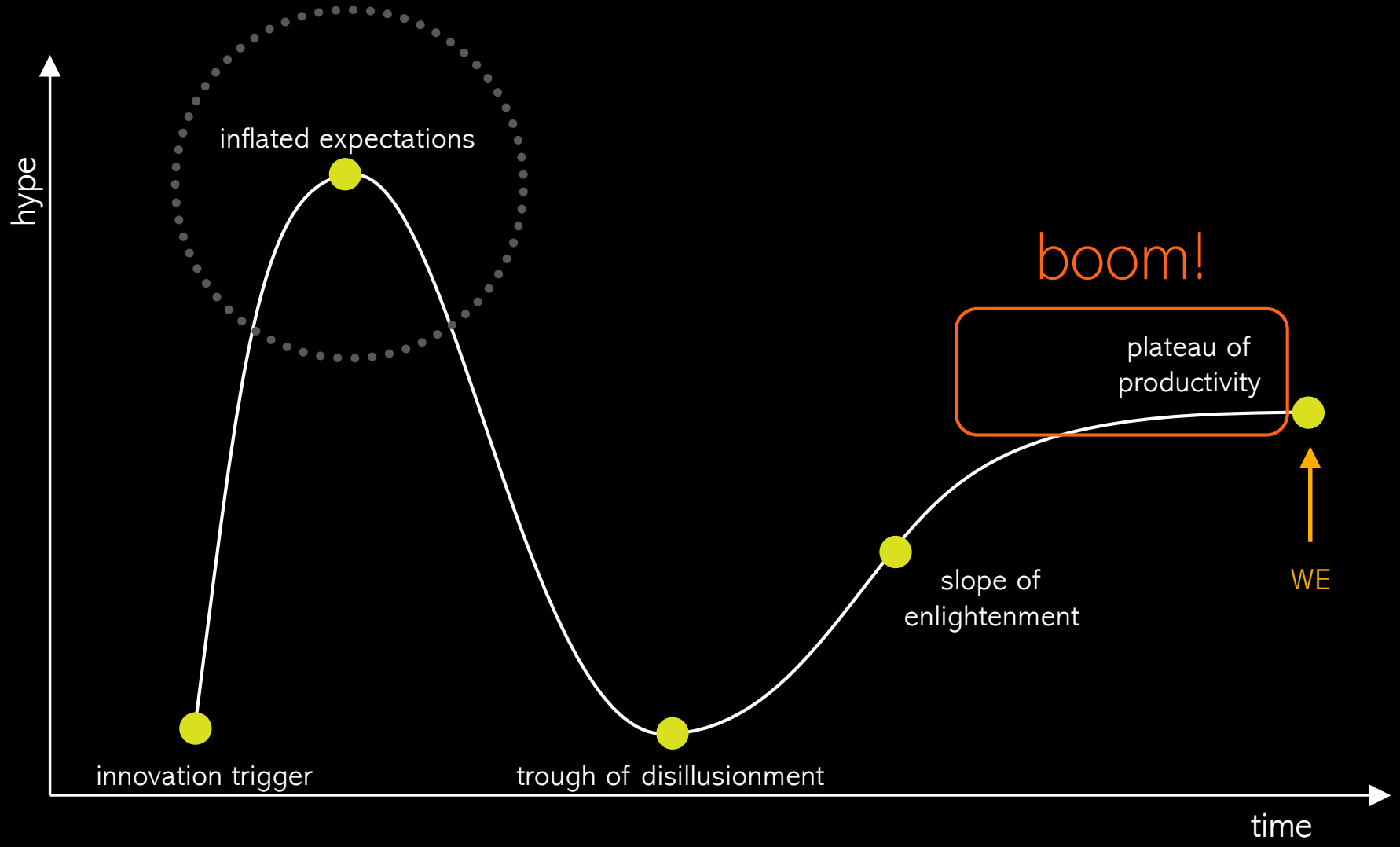

hype
inflated expectations
plateau of
productivity
slope of
enlightenment
WE
innovation trigger
trough of disillusionment
time


Speech-to-Speech Translation
Autonomous Vehicles
Machine Learning
Cognitive Expert Advisors
Software-Defined Security
Connected Home
Deep Learning
Digital Twin*
Deep Neural Networks†
Advanced Analytics
Citizen Data Science
Blockchain
Micro Data Centers
Gesture Control Devices
Drones
Nanotube Electronics
Virtual Assistants
Edge Computing*
Biochips
Brain-Computer Interface
Quantum Computing
5G
IoT Platform
2015
2016
2017
2018

example of the public explosion of AI applied to natural language (chatGPT, etc.)

We know the development of AI since the 40s of the 20th century, but this "language machine" had its peak of expectation half a decade ago, today it is in production




hype
inflated expectations
boom!
plateau of
productivity
slope of
enlightenment
WE
innovation trigger
trough of disillusionment
time

school does not **anticipate**

(not as **imagination** exercise,
but an **information** exercise)

school does not **anticipate**

(not as **imagination** exercise,
but an **information** exercise)

why should we do that?

there are no technologies that should be accepted just because they are possible

(what about the acceptable and the desirable?)

~~technological imperative~~

technologies do not arise spontaneously

(there are many agents pushing them)

What about social legitimation?

what we can do @school?

it is important to understand the evolution of the technologies that existed, the web of culture and technology

history, permanent categories, development, representational technological culture

it is important to understand the evolution of the technologies that existed, the web of culture and technology	history, permanent categories, development, representational technological culture
understanding the available technologies is useful if we consder that as a challenging, it allows us to “read” the changes we are experiencing in real time	intervene and solve problems (maker attitude, computational thinking), builds experiences on the multidimensionality of technology, be informed, practical, evaluative and owners of representational technological culture.

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anticipating developing technologies allows us to decide on and evaluate them at an early stages	critical exercise of citizenship on what we accept and what we want, value-based technological culture

capabilities	resources and strategies
it is important to understand the evolution of the technologies that existed, the web of culture and technology	history, permanent categories, development, representational technological culture
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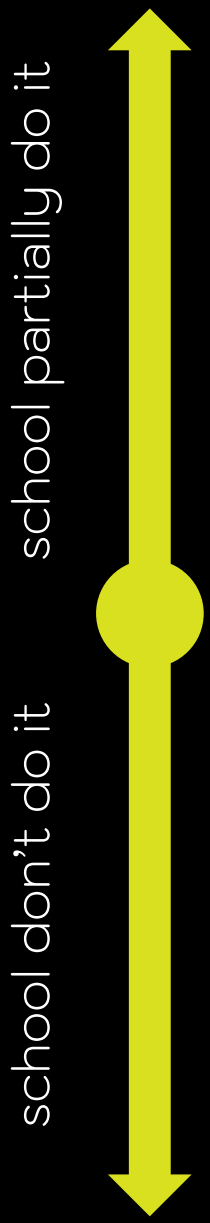
anticipating developing technologies allows us to decide on and evaluate them at an early stages	critical exercise of citizenship on what we accept and what we want, value-based technological culture

	capabilities	resources and strategies
past	it is important to understand the evolution of the technologies that existed, the web of culture and technology	history, permanent categories, development, representational technological culture
today	understanding the available technologies is useful if we consder that as a challenging, it allows us to “read” the changes we are experiencing in real time	intervene and solve problems (maker attitude, computational thinking), builds experiences on the multidimensionality of technology, be informed, practical, evaluative and owners of representational technological culture.
future	anticipating developing technologies allows us to decide on and evaluate them at an early stages	critical exercise of citizenship on what we accept and what we want, value-based technological culture



	capabilities	resources and strategies
past	it is important to understand the evolution of the technologies that existed, the web of culture and technology	history, permanent categories, development, representational technological culture
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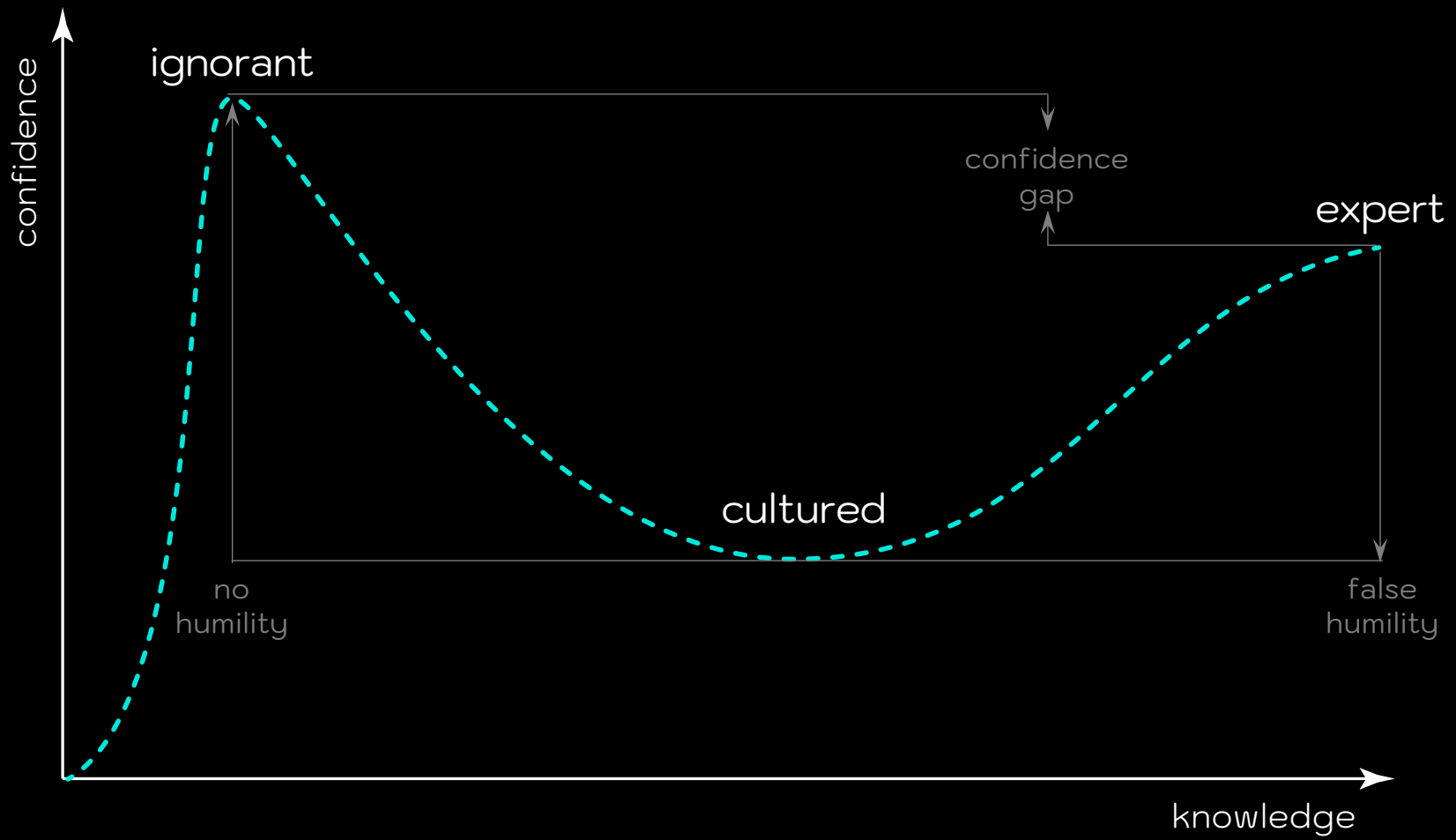
future	anticipating developing technologies allows us to decide on and evaluate them at an early stages	critical exercise of citizenship on what we accept and what we want, value-based technological culture

what is the dose?

the right dose to avoid the Dunning-Kruger effect



the knowledge curve of Dunning-Kruger is a graphical
representation of how an increase in knowledge modulates the confidence

don’t be ignorant

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don’t need to be an expert

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be cultured

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I am around, see you online