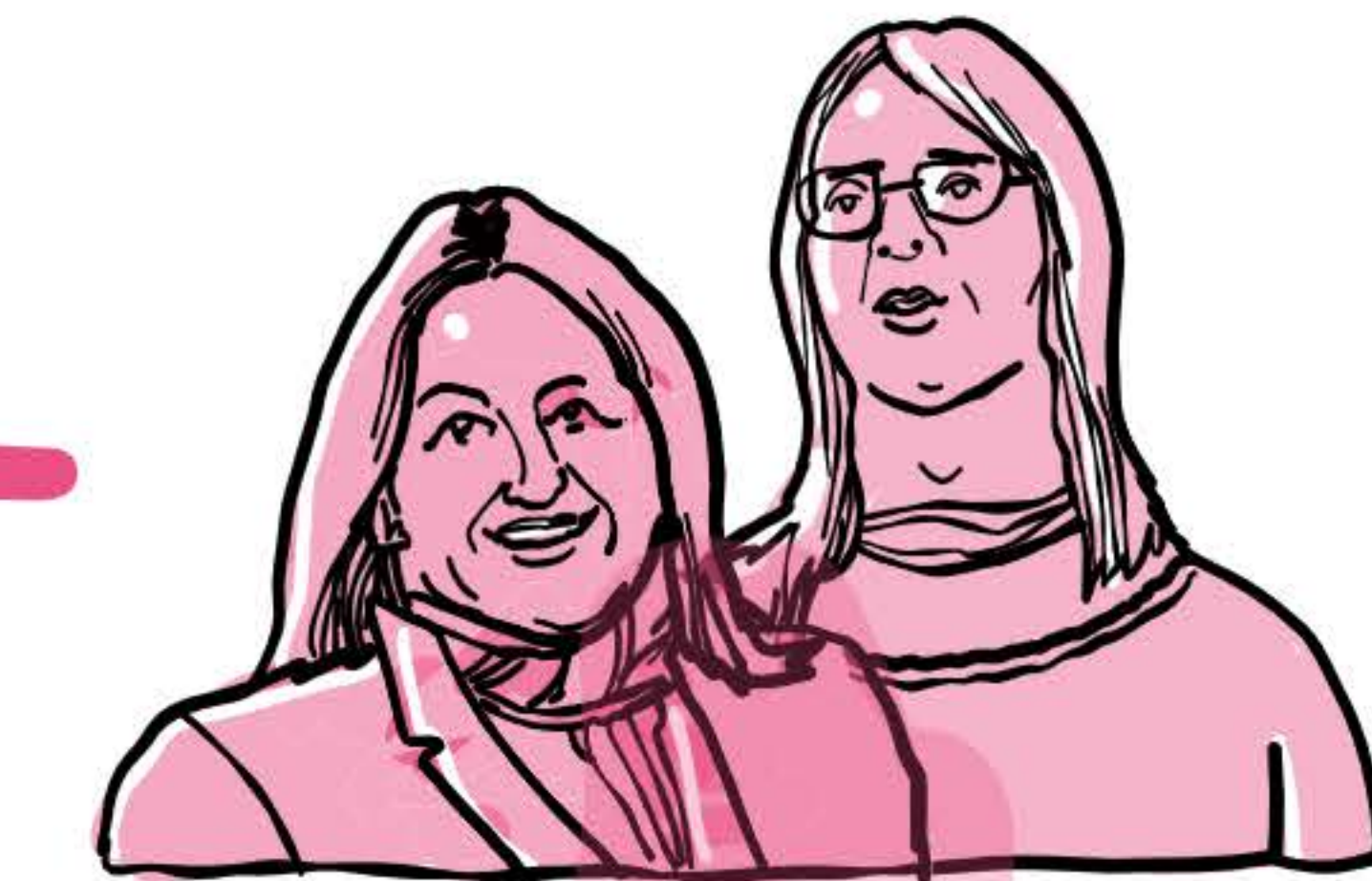


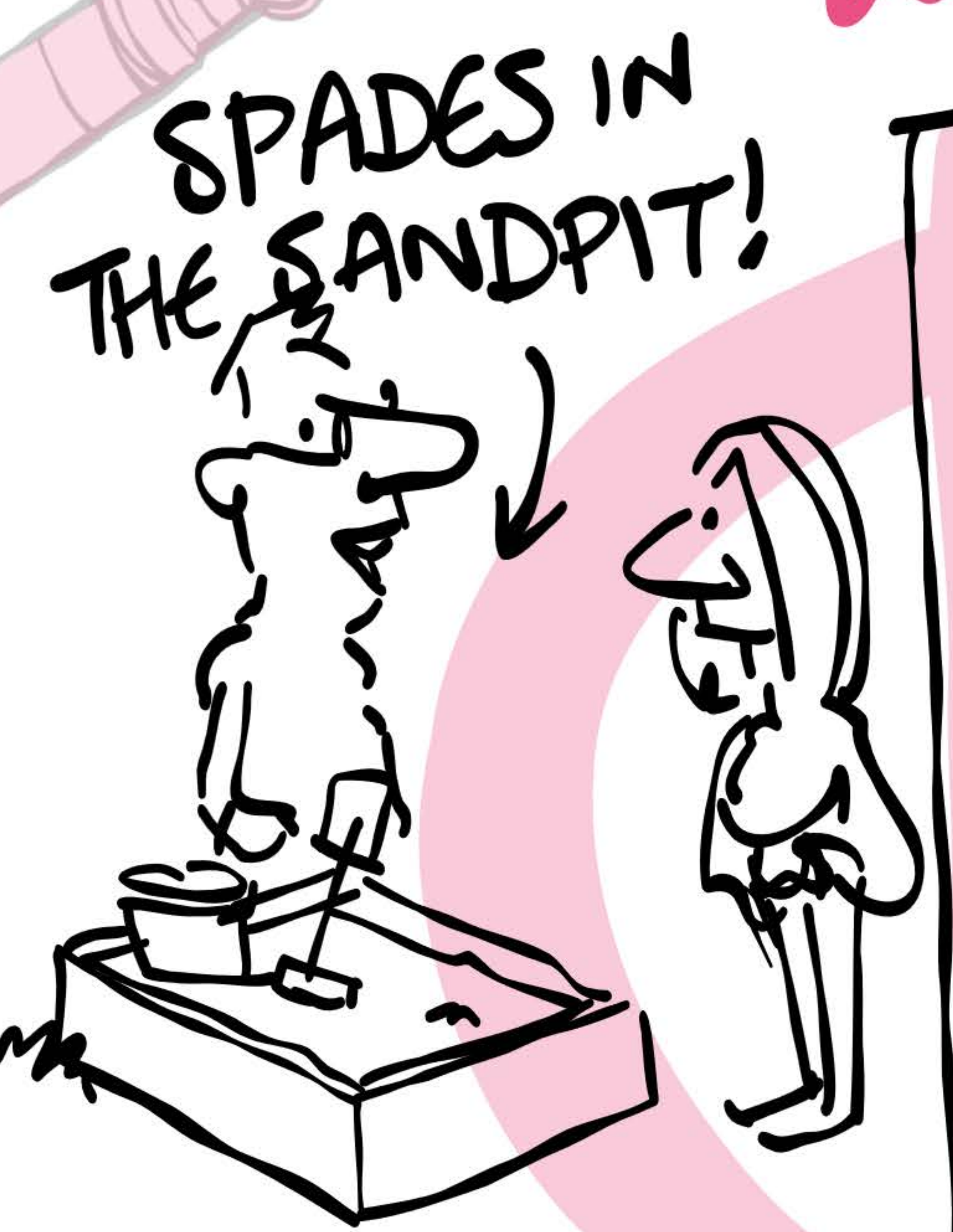
2023-10-03 **CREATING THE DIGITAL MANUFACTURING FUTURE**
WE WANT

INTERACT
Pioneering human insight for industry

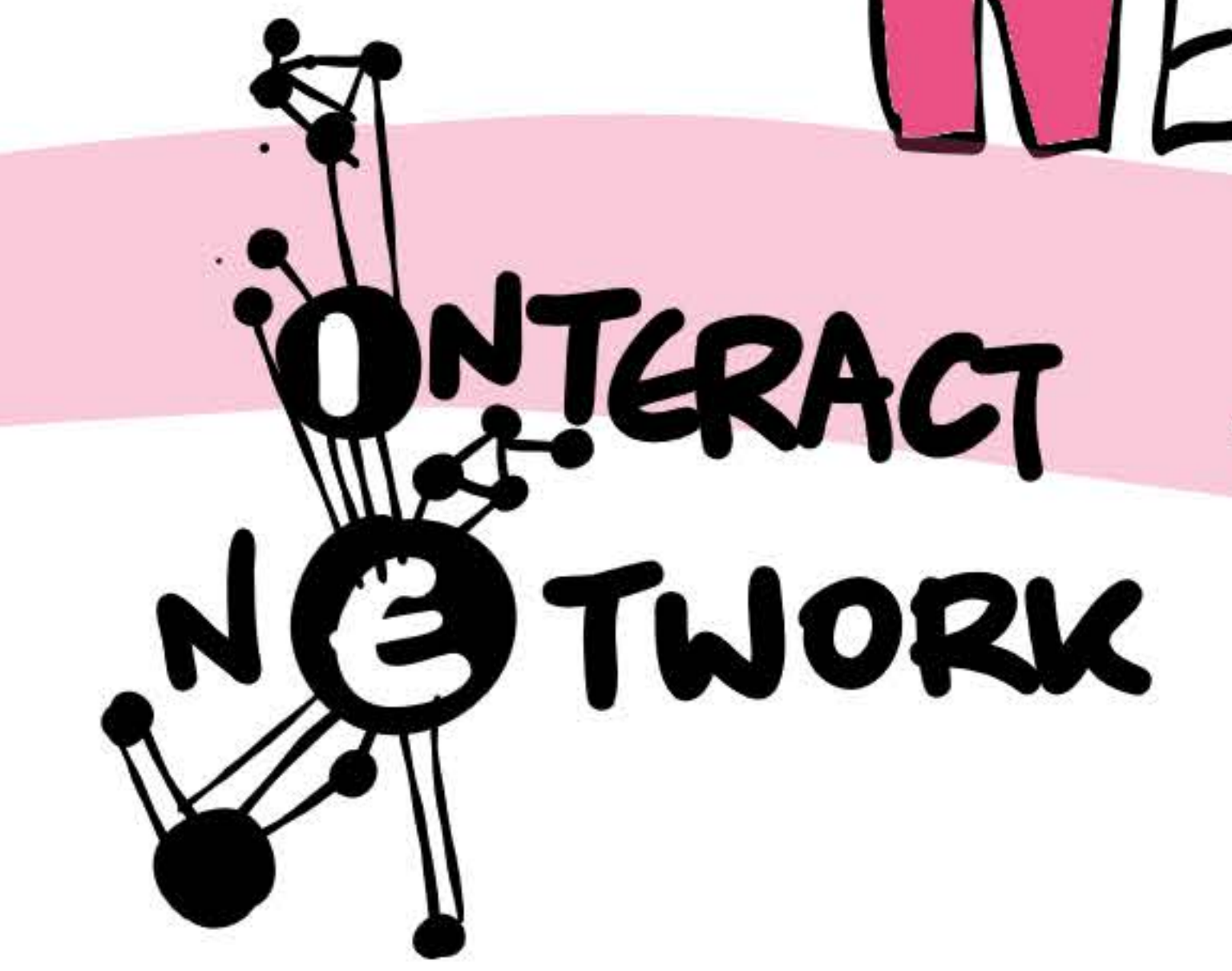


WELCOME JILL MACBRIDE & MELANIE KNETSCH

SYSTEMS THINKING
—
& TIME TO INVEST



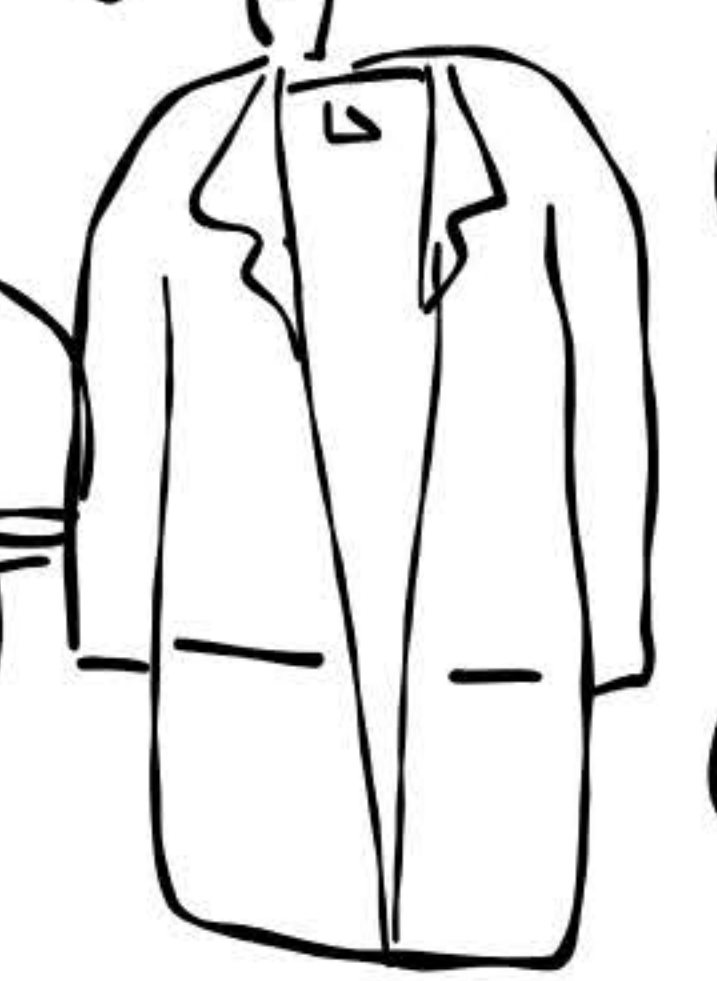
PRACTICALITIES
COURSES - IN PERSON & HYBRID



★ **THE SECOND EVENT**

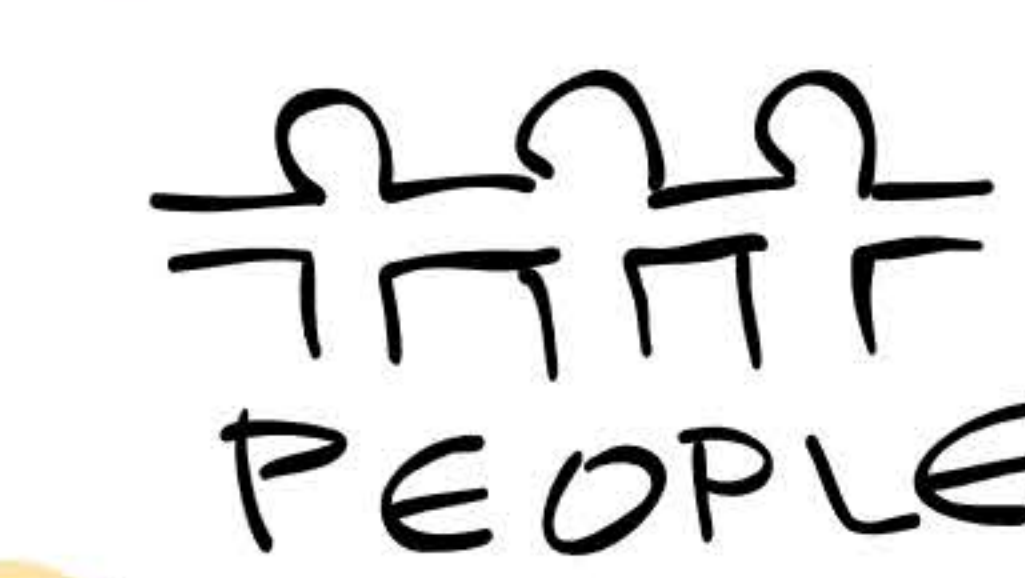


BEYOND DIGITAL TECHNOLOGY



COATS CLOAKS & CONTROL

IT WAS OBVIOUS TRANSFORMING WAS MORE THAN R&D



&

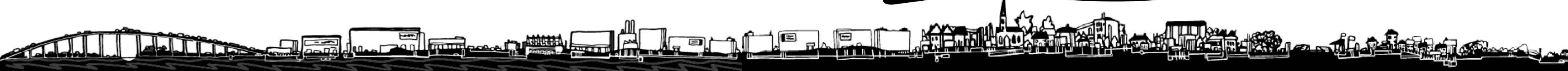


INTERACT ESRC FUNDING

INNOVATE UK
UKRI

MAKEUK

CAN THE NETWORK MODEL GROW?

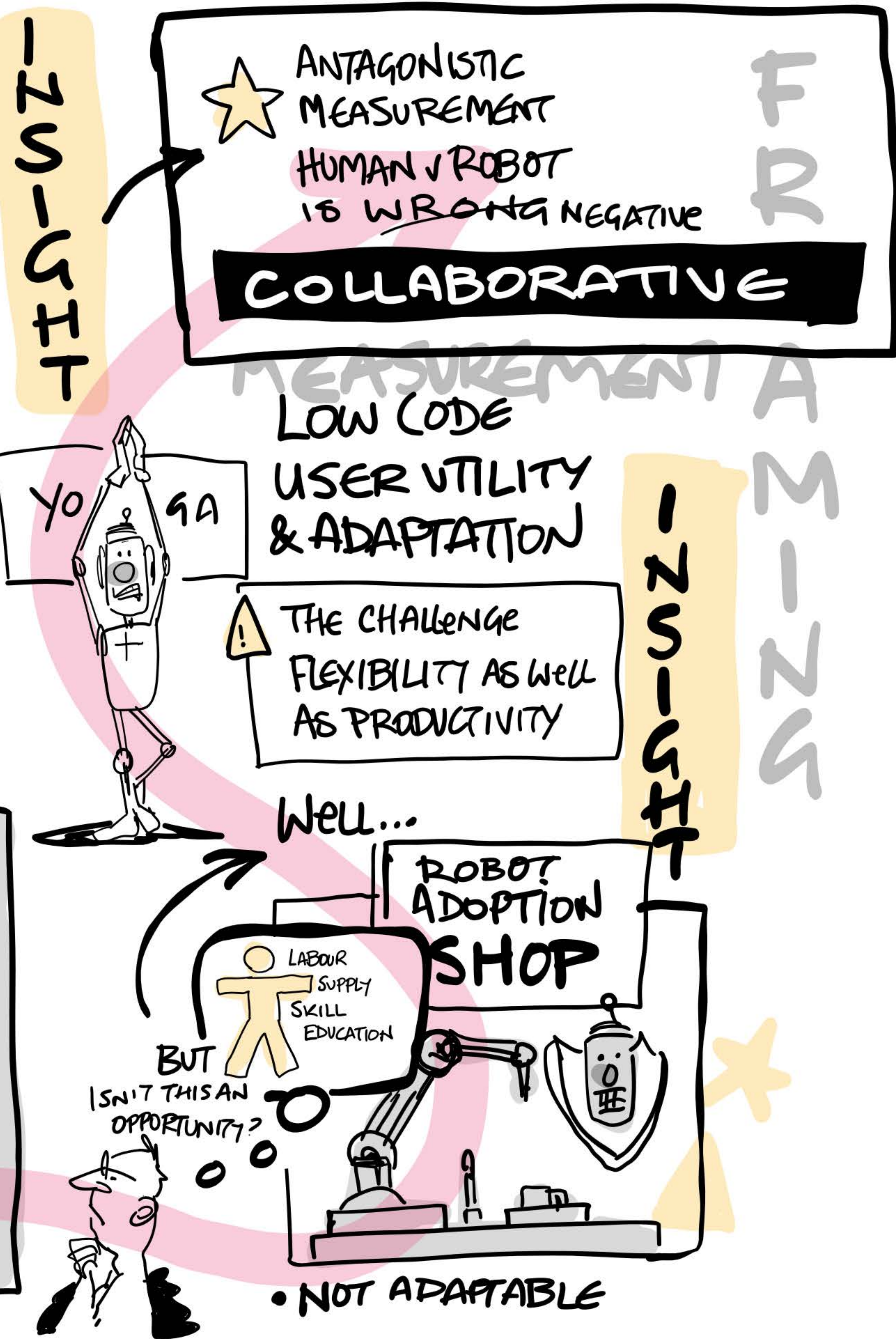
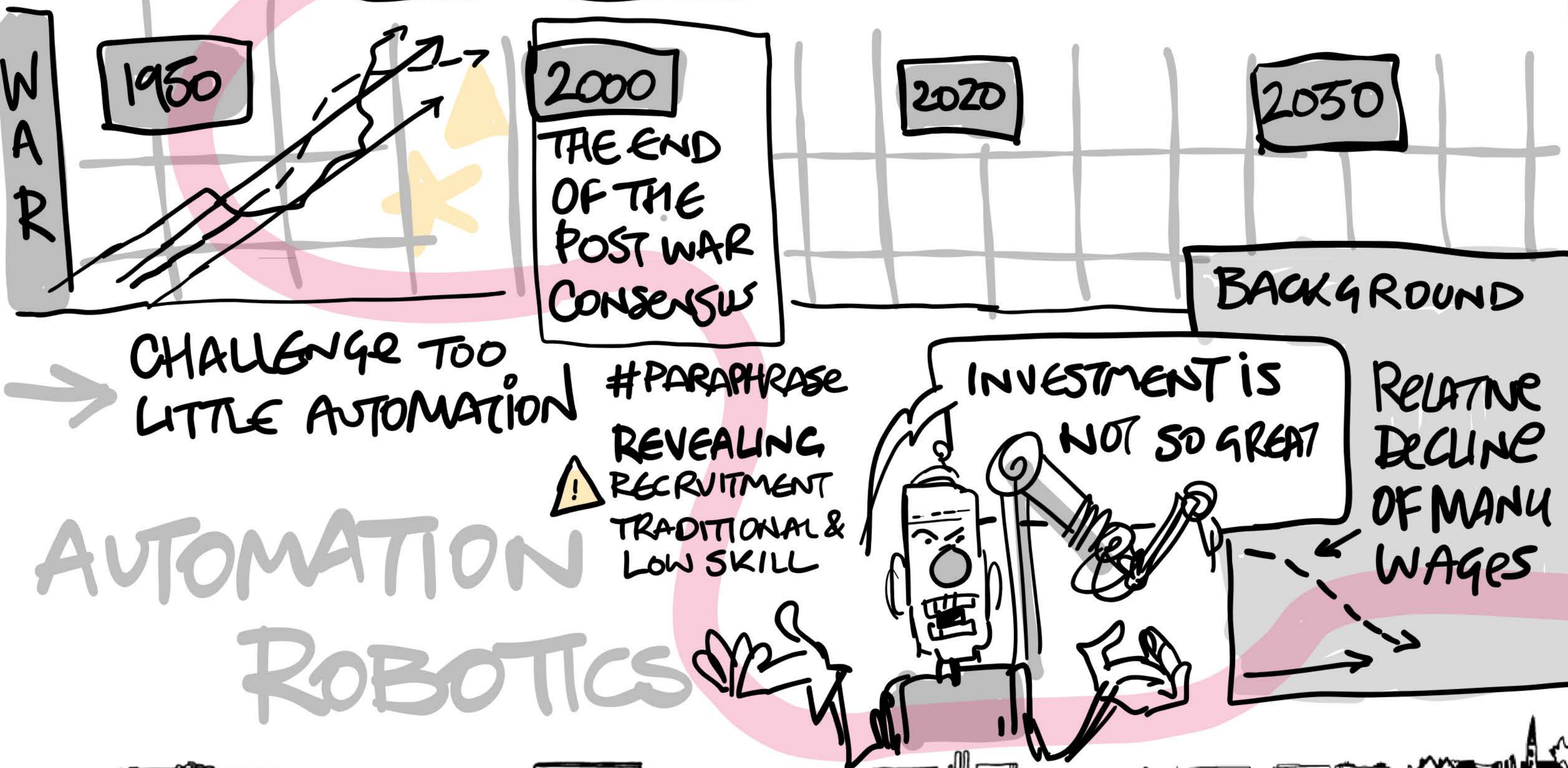


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KEYNOTE BEN ARMSTRONG APPLYING DIGITAL IN MANUFACTURING



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THE FUTURE OF
WORK IS
HUMAN

[KEYNOTE PETER CHEESE]

MANAGING PEOPLE

THE DIGITAL JESSE

#CONTEXT
DIGITAL
THE COMMUNICATION
REVOLUTION

& A SERIES OF
CONNECTED
TURNING
POINTS

& CONSEQUENT
GEOPOLITICS
GLOBALISATION IN
RETREAT

CONFLICT

NATIONALISM

RISE OF
PURPOSE

LED
BUSINESS

THE DEMAND
FOR COLLABORATION
AND PARTNERSHIP
AND CHANGE

PROFIT
&
PURPOSE

INSIGHT

THE END
OF THE
MILTON
FRIEDMAN
ERA

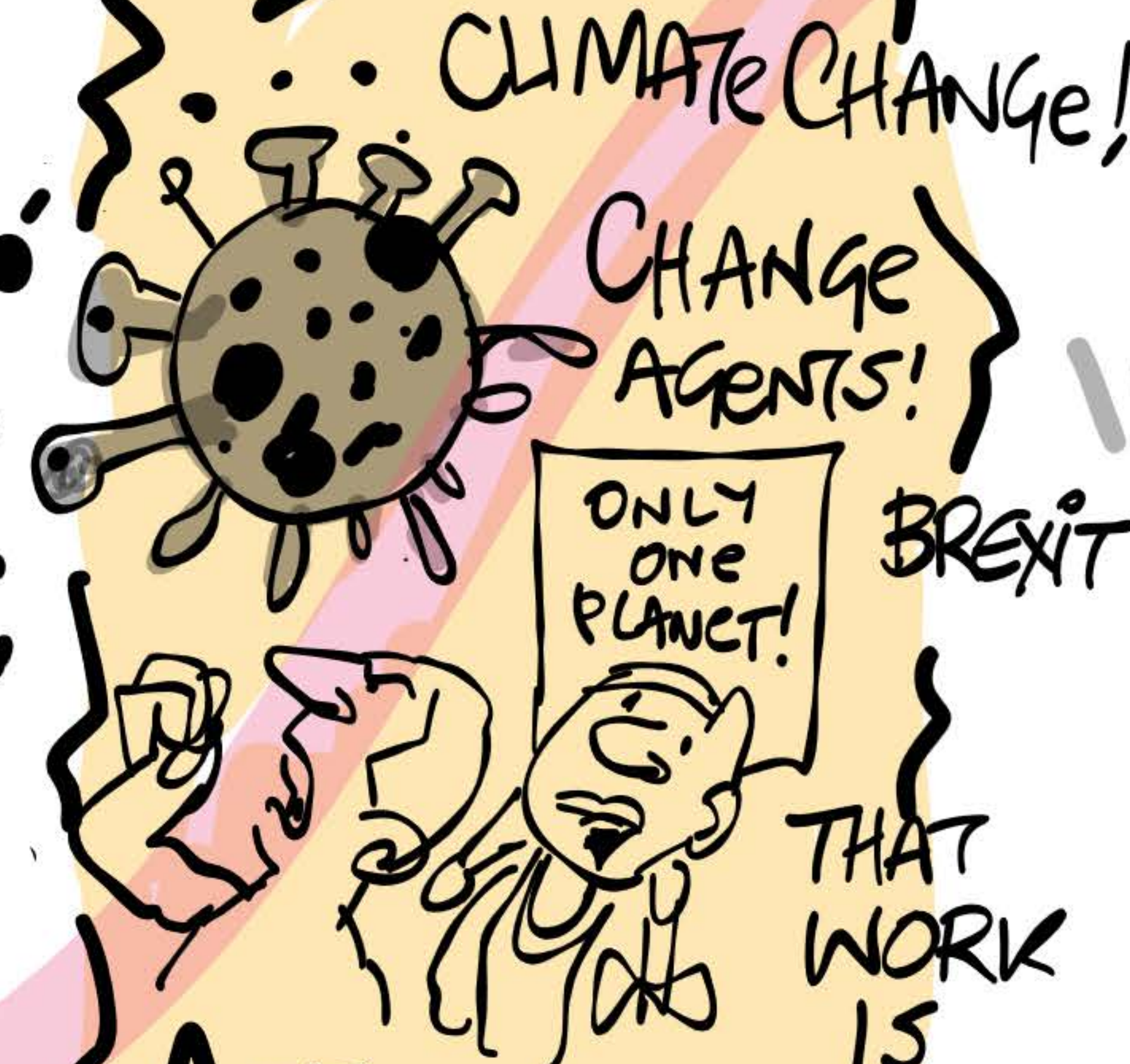
INDUSTRY
5.0?

RE
SKILLS

PEOPLE & TECHNOLOGY

DISRUPTORS !!

SHORT
&
LONG
TERM



AI
& LARGE
LANGUAGE
MODELS

CARBON REDUCTION &
NET ZERO AND..
A JUST TRANSITION

#JUST A FEW

INVESTMENT
SKILLS
PEOPLE
WELLBEING

THAT
WORK
IS
BAD

BREXIT

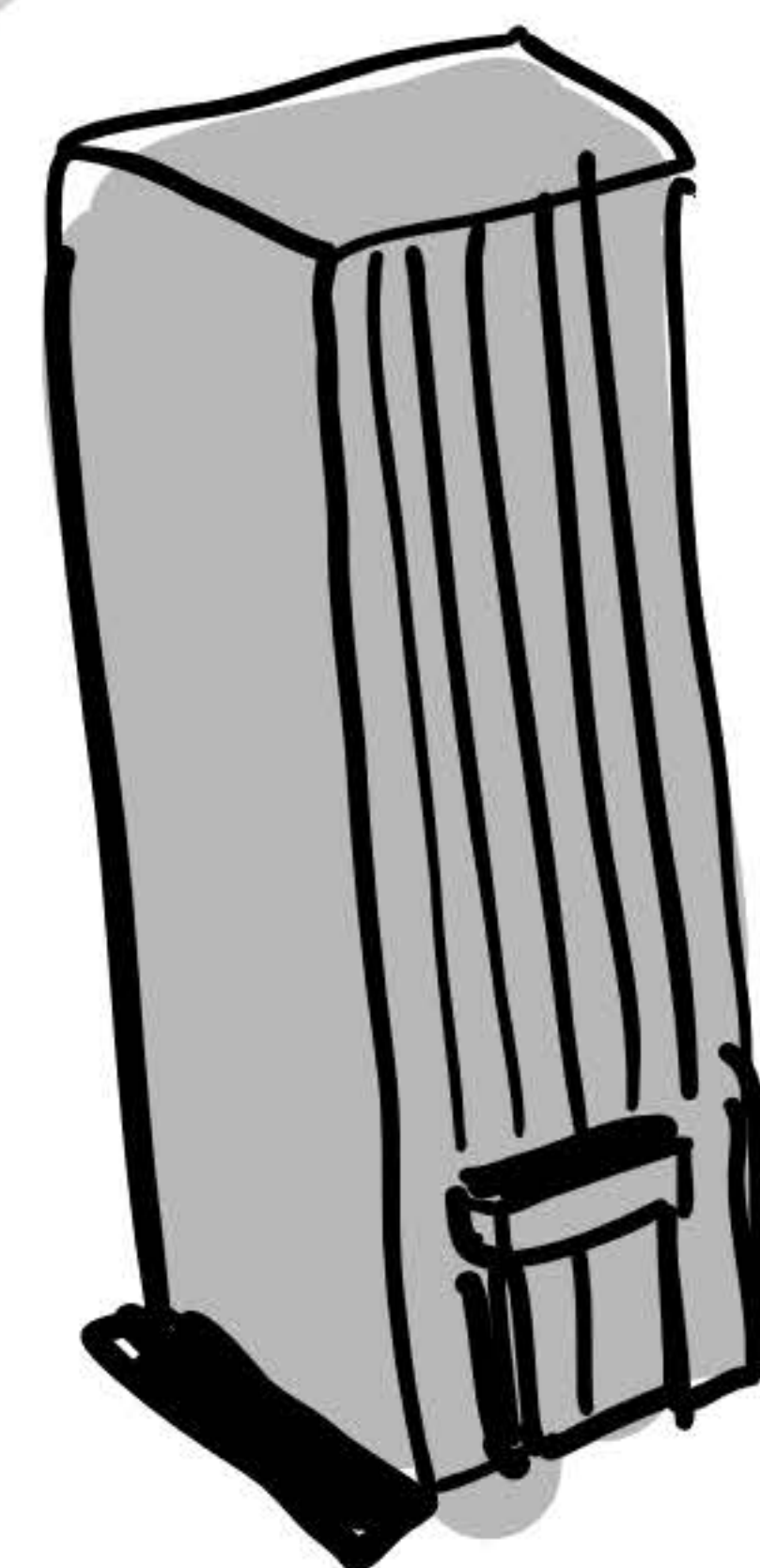
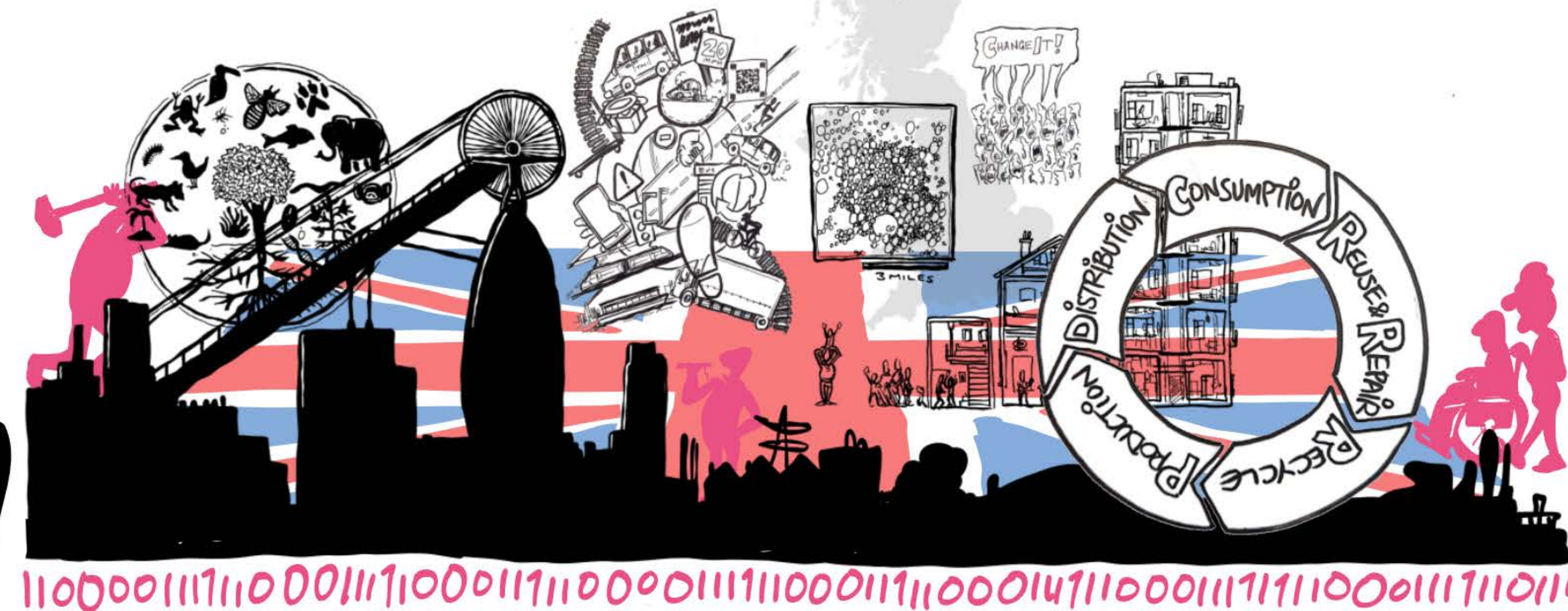


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FUTURE OF THE ECONOMY DAVID REA



COMMERCIAL PROPERTY

! MORE THAN OFFICES

THEMES

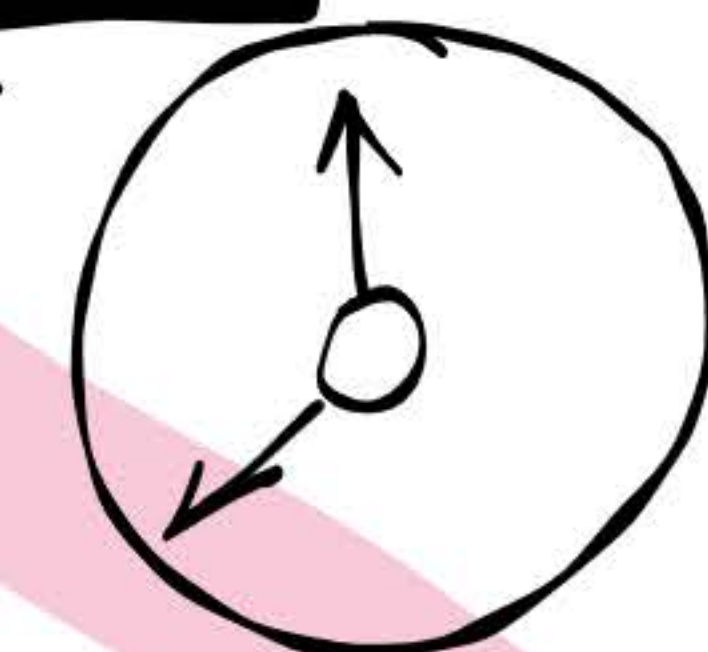
• POLARISATION

REDUCTION IN DEMAND FOR SPACE - c 25%

#WFH

• COLLABORATION

ADAPTABLE SPACES



CoWORKING &

↑ BEST QUALITY & THE NEED FOR CONVERSION
PRESSURE
↓ WORST



• TECHNOLOGY

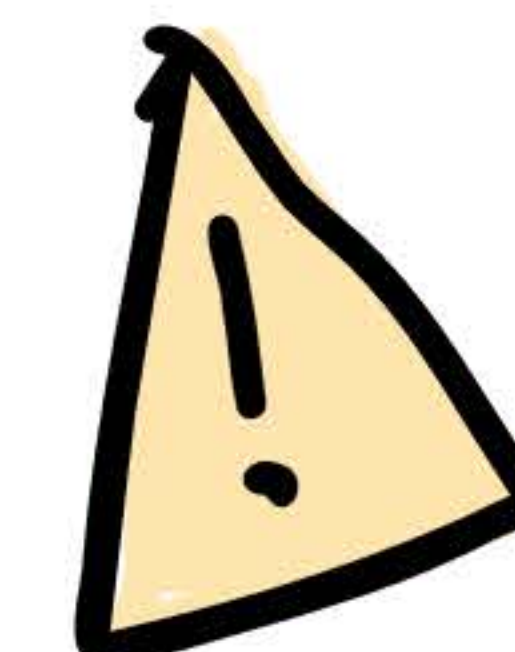


CITY TRANSFORMATION & THE ENERGY TRANSITION



• SUSTAINABILITY

PEOPLE
PROFIT
PLANET



! 39% GLOBAL EMISSIONS ARE HABITATION
BUILDING EFFICIENCY

THE ESSENTIAL OPPORTUNITY

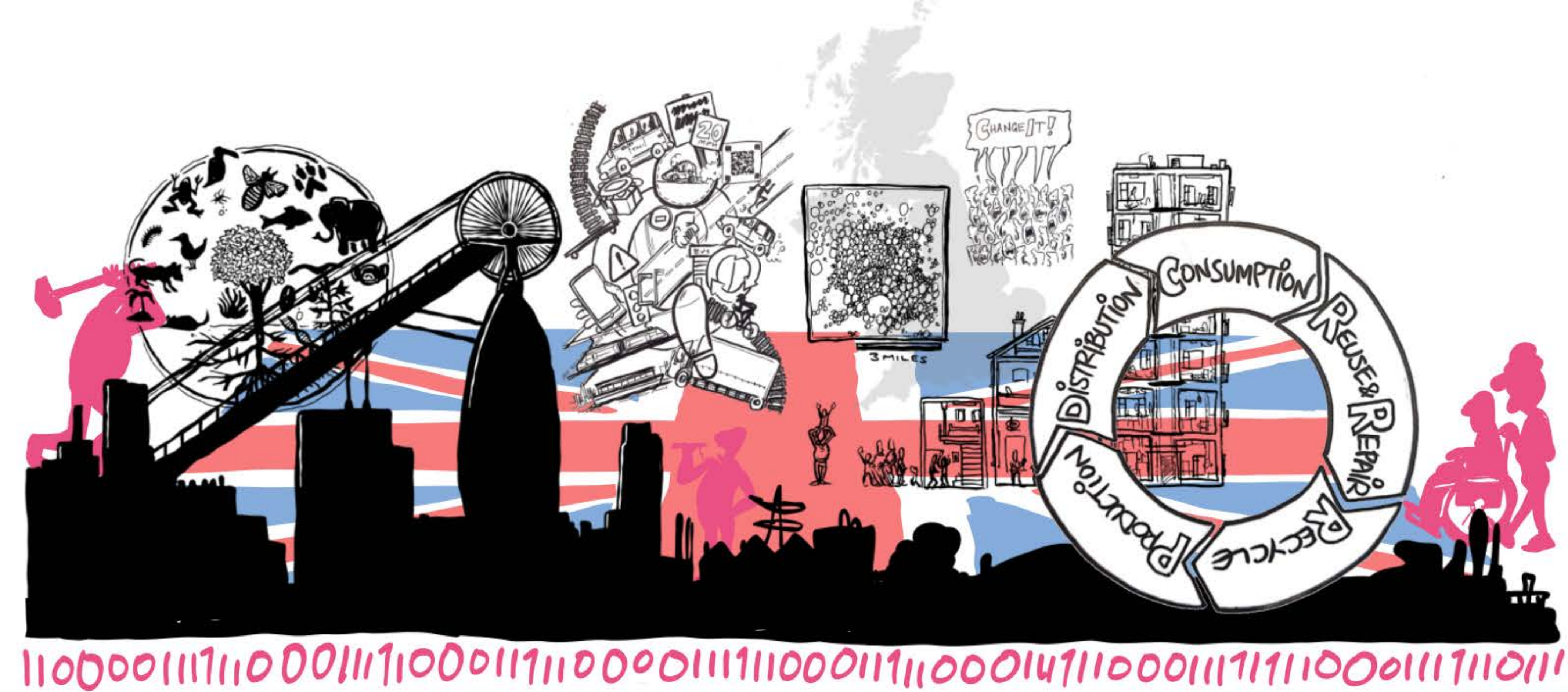


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FUTURE OF THE ECONOMY VANIA SENA



MACRO
&
MICRO
ENVIRONMENTS

RESEARCH

CLUSTERING
&
KNOWLEDGE
TRANSFER



STARTED
IN S. YORKS

ADVANCED COMPANIES
&
PROCESS LED COMPANIES

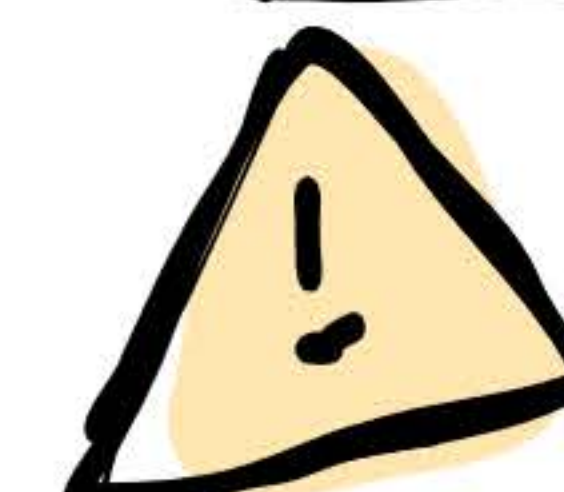
SOUTH YORKSHIRE

GOOD GRANT GATHERING
POOR INTEGRATION AND
CONNECTION / NETWORKS

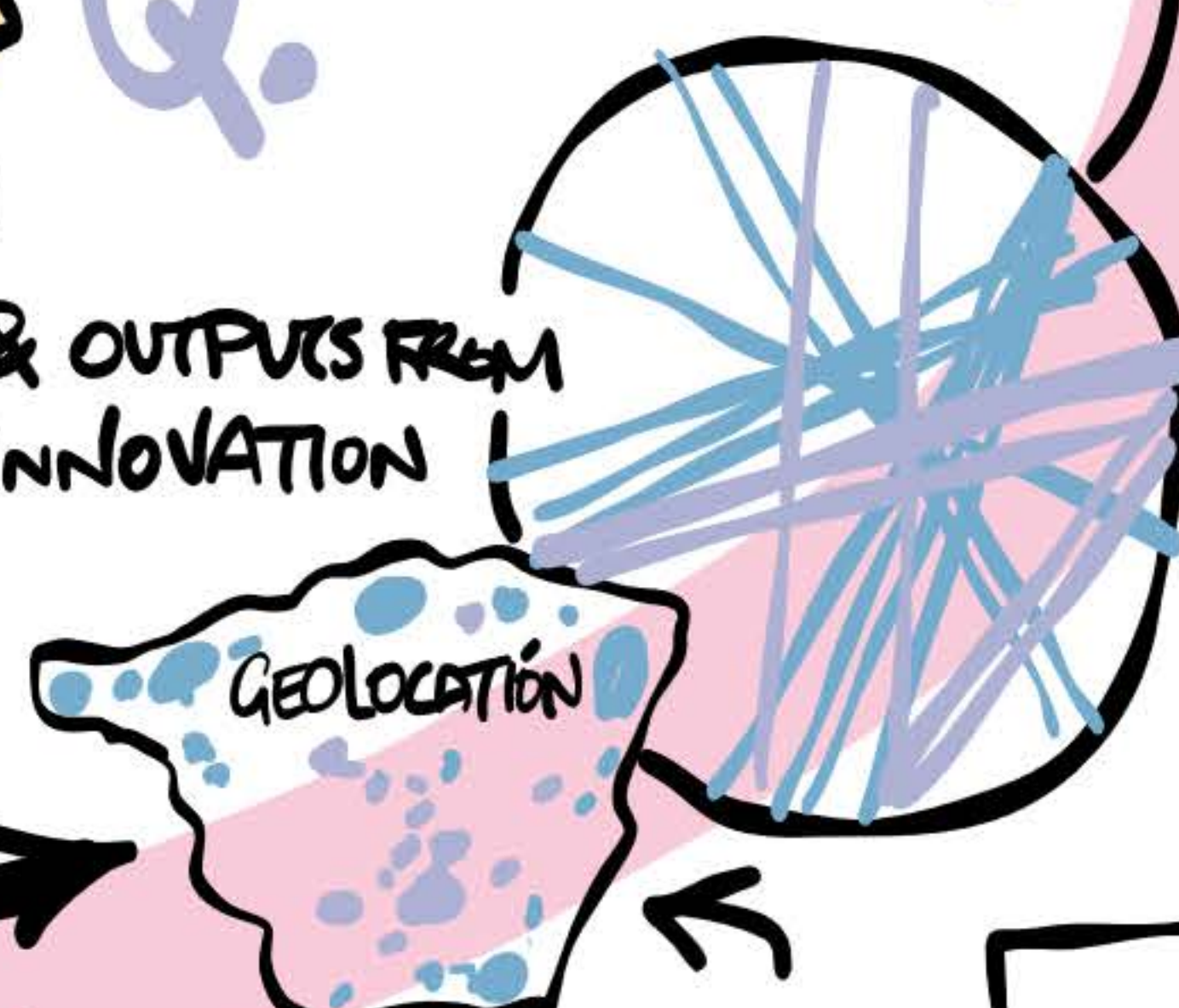
EG. NORTHERN
GRITSTONE

& VC
FUNDING

MEASUREMENT(S): £ GRANTS



Q. WHERE AREN'T
THE CONNECTIONS?

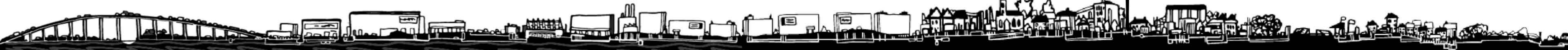


A MAJOR GAP

SCALEUPS ☒

STARTUPS ☒

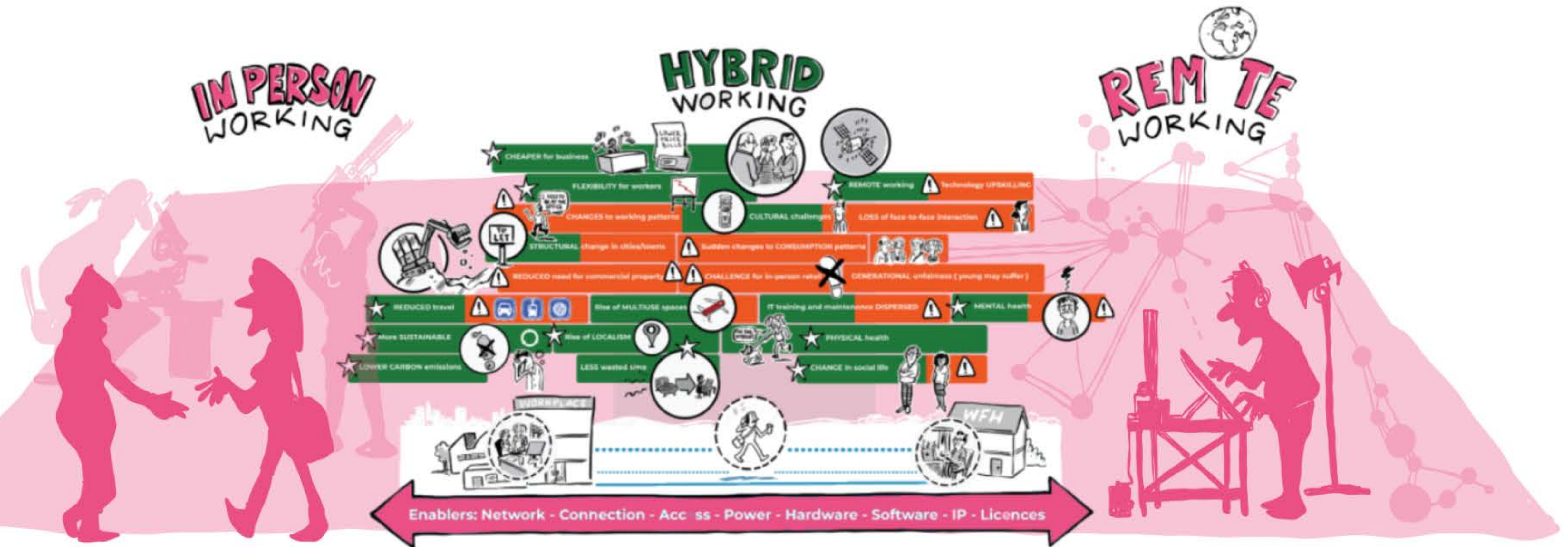
★ IMPORTANCE OF UNIVERSITIES



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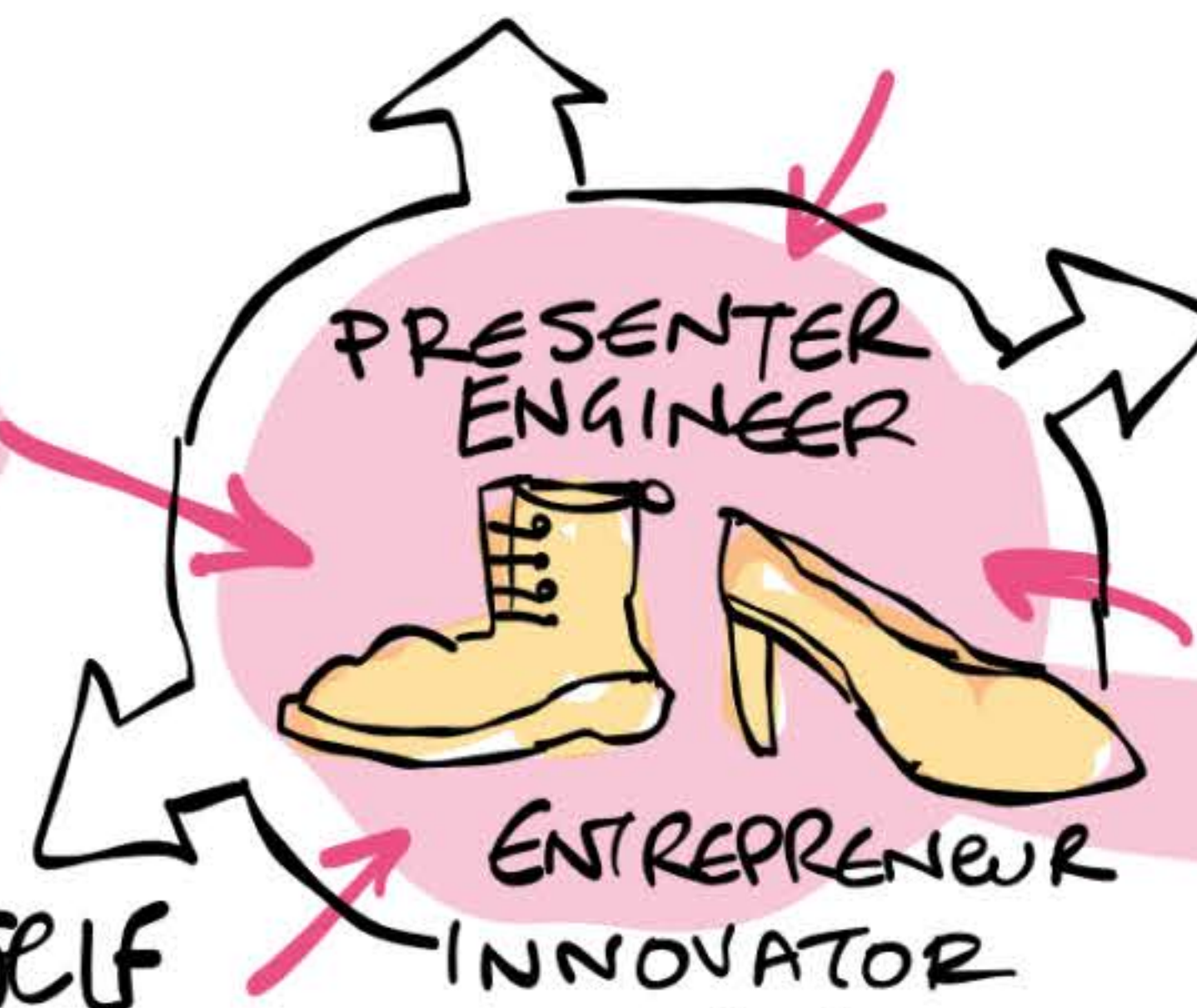
INTERACT
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FUTURE OF WORK ADRIENNE HOUSTON



★
SMALL MANUFACTURER WITH HIGH VALUES
VACUUM PUMP MANUFACTURER

★
MAKING THE ORGANISATION RESILIENT BY CHANGING MYSELF



CONTEXT

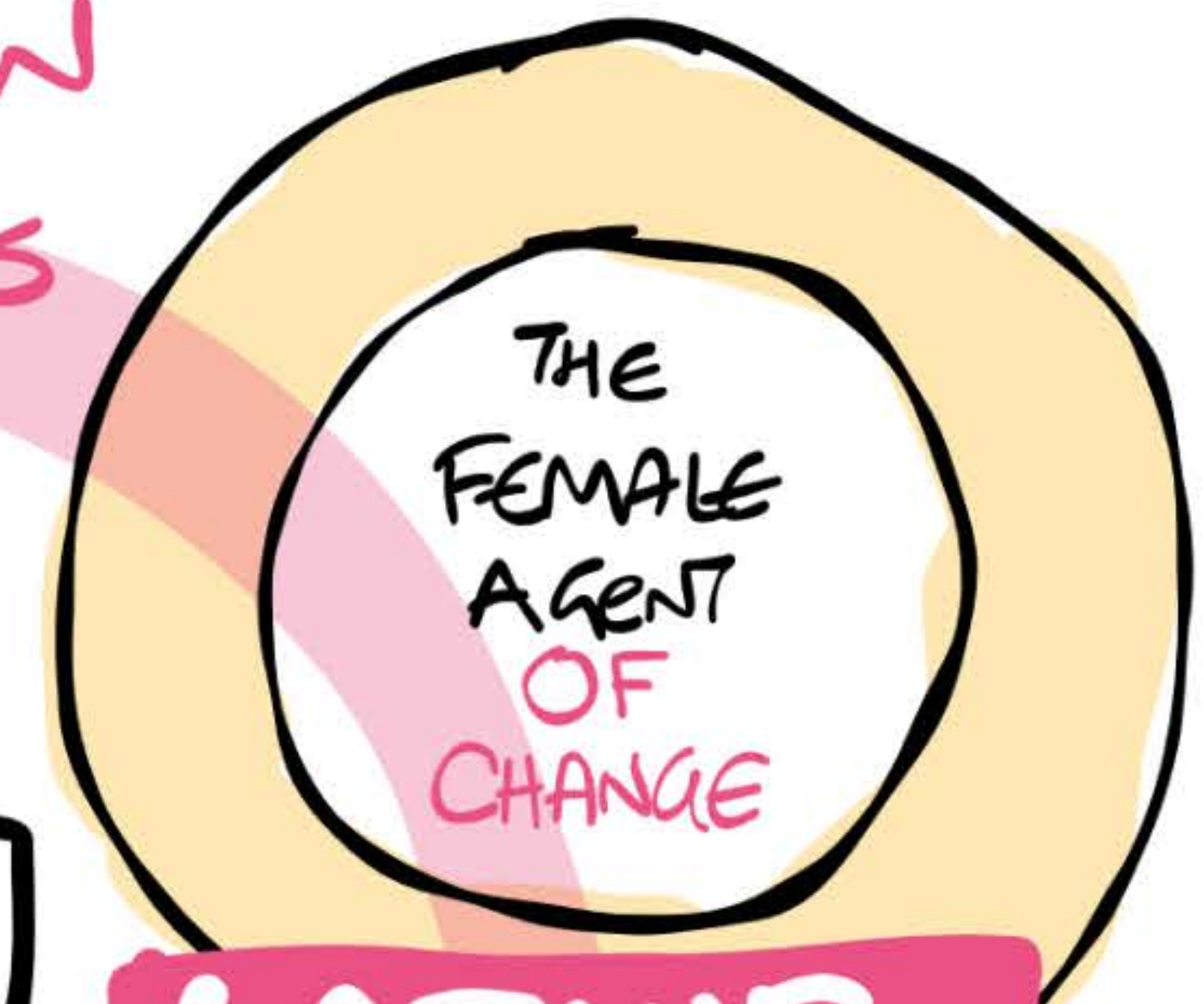


MY LATER WORK IN EDUCATION IS BORN OF THIS

⚠ I WAS DRIVING GROWTH — NOT THE BUSINESS CULTURE

BUT WE ARE NOT THE SAME THING

AGE
GIG
DEMOGRAPHIC & SOCIAL CHALLENGE
GENDER
DEI



LABOUR SHORTAGE

THE ENGINEER GAP

#PARAPHRASE
DEPLOYING PEOPLE SKILLS

WE MUST CHANGE

#CONTEXT
ROUTINE & REPETITIVE WORK WILL DECLINE

★ OPPORTUNITY

THE GENDER GAP...
THE BAME / DIVERSITY GAP...

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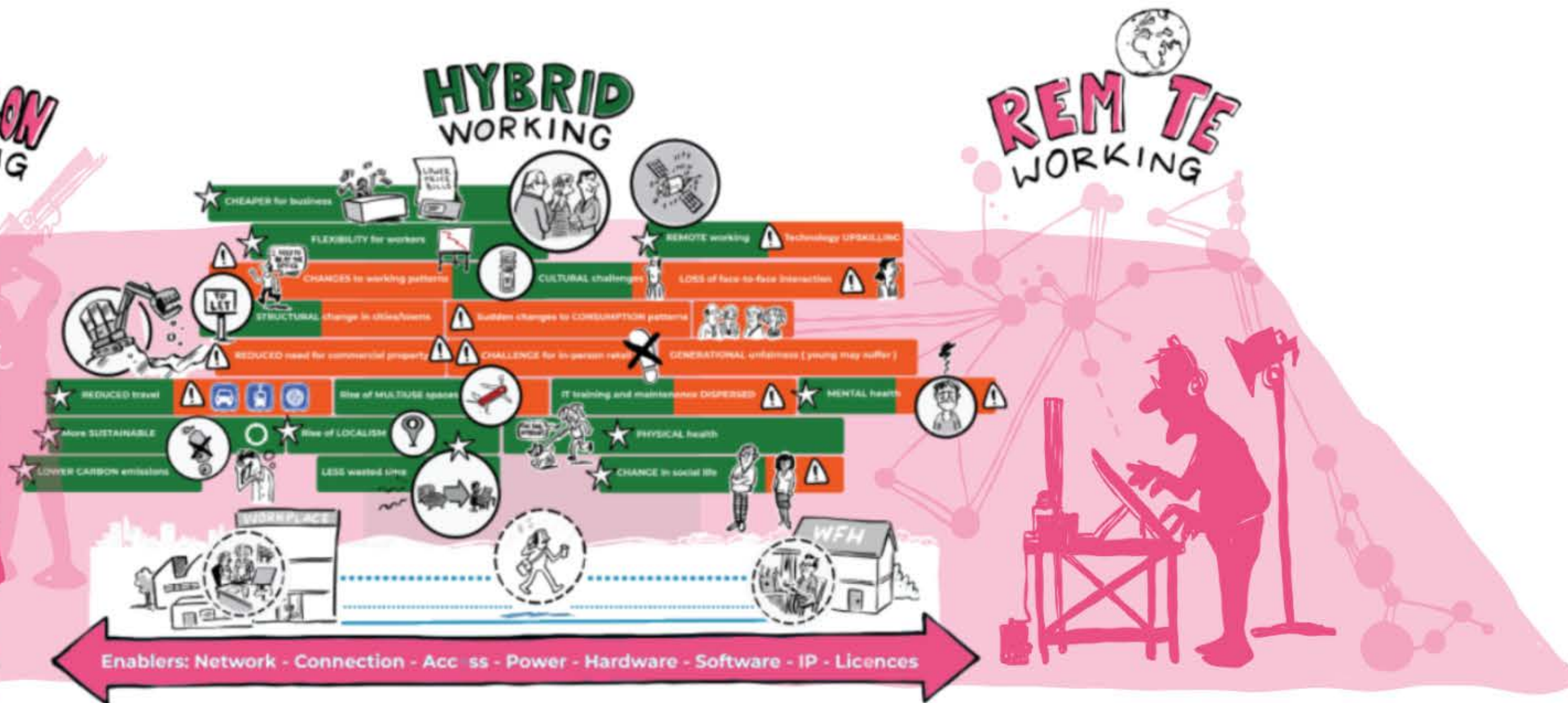
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FUTURE OF WORK VICKI BELT

IN PERSON
WORKING

HYBRID
WORKING

REMOTE
WORKING



A GROWING
ISSUE
(& PRE COVID)

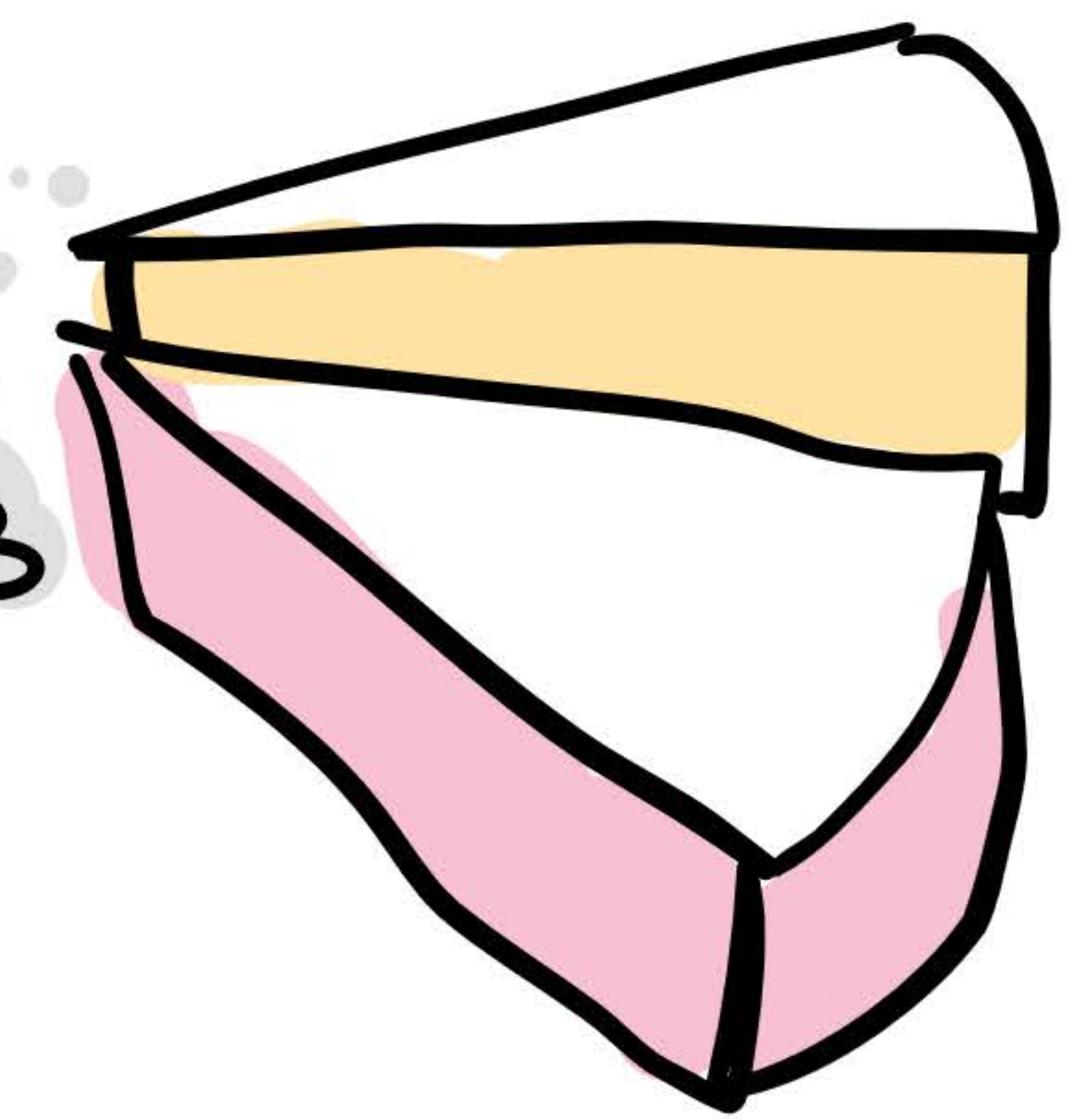
EST COST IN
2022
£56BN
(DELOITTE)

& EFFECT OF

PRE PANDEMIC SURVEY
1900 MIDLANDS BUSINESSES
#A RICH DATASET

INVESTIGATING
WORKPLACE
MENTAL
HEALTH &
EFFECT ON
PRODUCTIVITY

SECTORAL
DIFFERENCES



! PRESENTEEISM
(AT WORK WHEN ILL)
! SICKNESS / LOWER
THAN PRE PANDEMIC

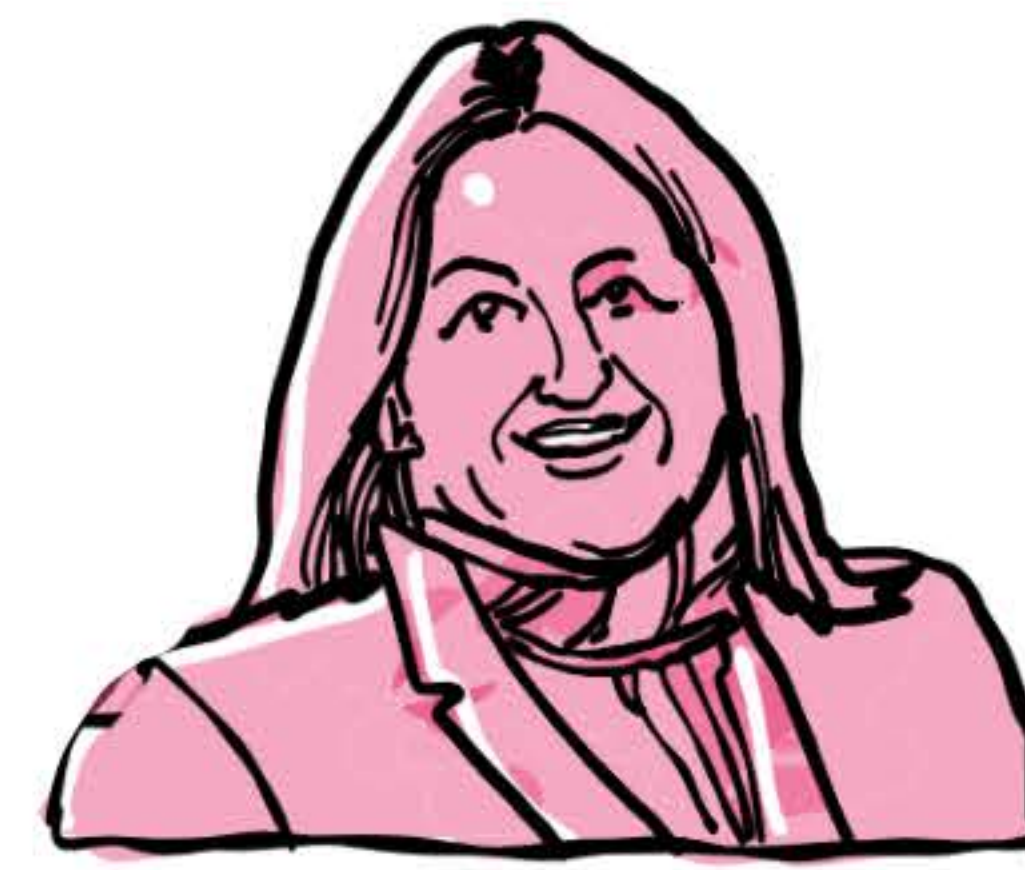
★ THERE HAS BEEN
POST PANDEMIC
CHANGE &
GROWTH IN
PROVISION

PRESENTEEISM IN MANUFACTURING

2023-10-03

INTERACT
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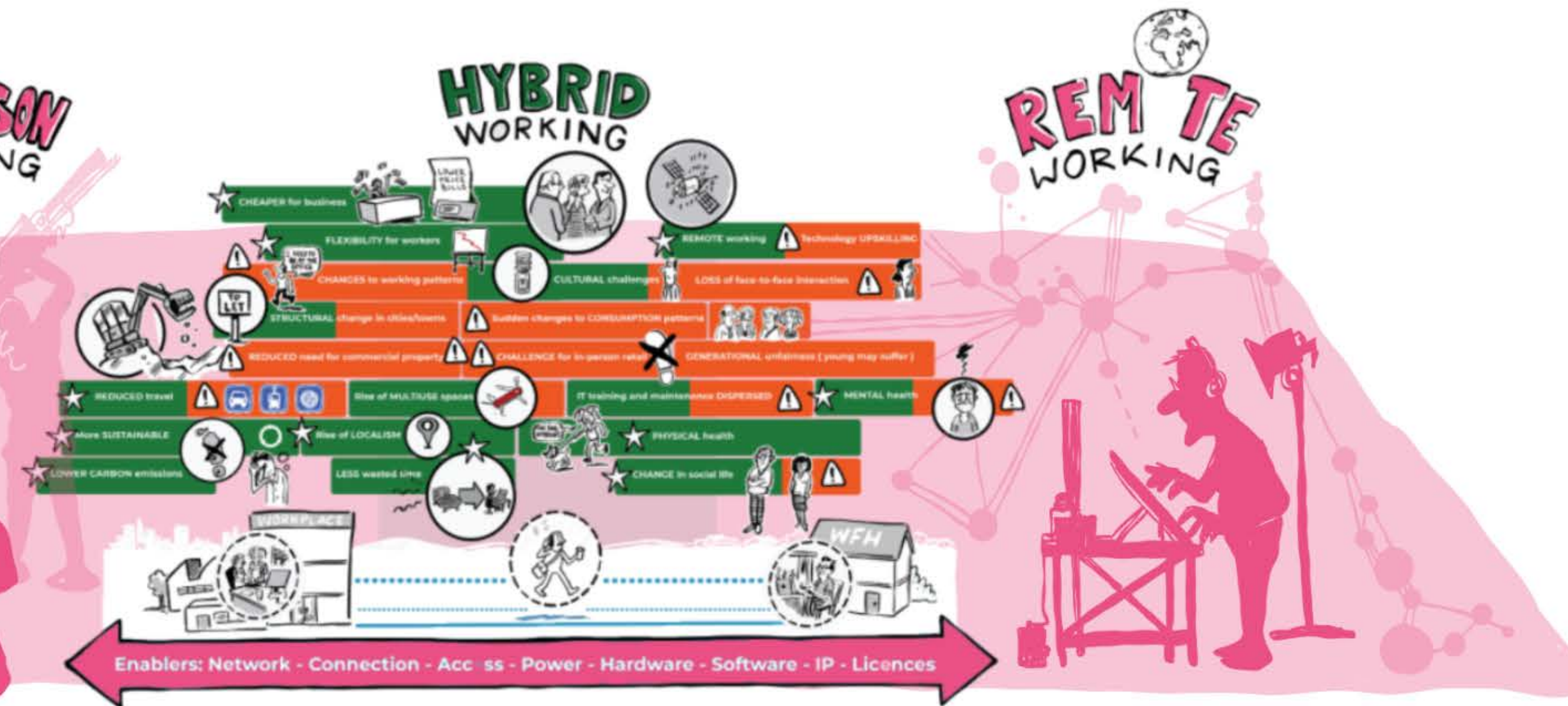
FUTURE OF WORK JILL MACBRYDE



IN PERSON
WORKING

HYBRID
WORKING

REMOTE
WORKING



PERCEPTIONS OF MANUFACTURING SURVEY



NO

MAJOR
GEOGRAPHICAL
DIFFERENCES

BUT BY AGE..
AND



WHERE
ARE
we?

REALITY..

MAKING
THINGS



THE DULL,
DANGEROUS,
REPETITIVE
JOBS ARE
GOING

DIGITAL & THE
REBRANDING
OPPORTUNITY

MANUFACTURING?
IS THAT LIKE
ENGINEERING?



BUT A
REBRAND
IS REQUIRED!



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DIGITAL FUTURE OF MANUFACTURING SYSTEMS

JAN GODSELL



PERSPECTIVE

THE VIEW FROM
ABROAD

US DE-GLOBALISATION
& RE-SHORING

AKA
THE
BIGGER
PICTURE

SO...
IT'S THE
CIRCULAR
ECONOMY

3 ISSUES

1 STRATEGIC
MIS-ALIGNMENT

DYSON &
STICKERS

MANUFACTURING
&
COMMERCIAL
MEASURING

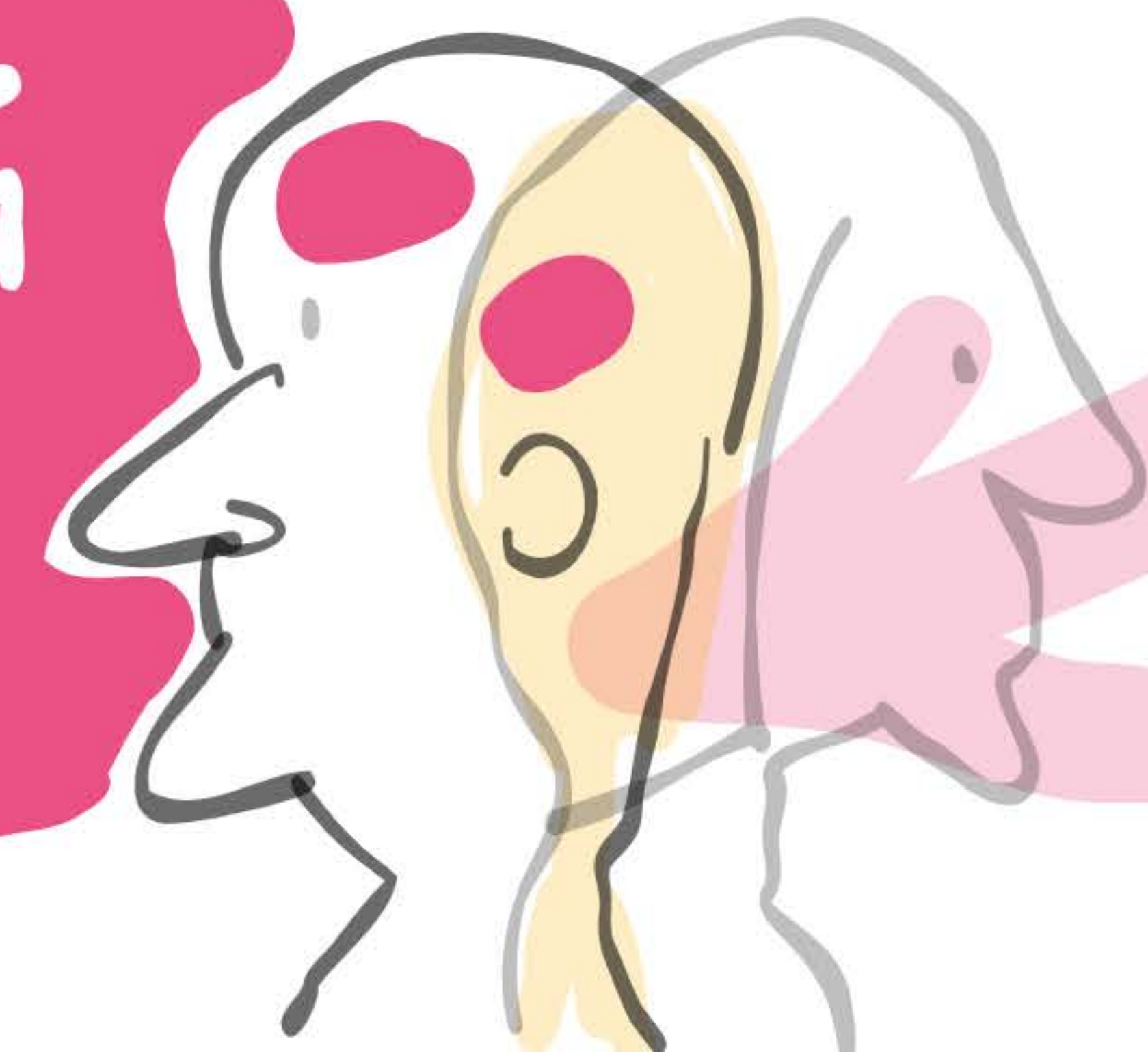
2 SHORT TERM
FINANCIAL
ORIENTATION

ROUTERS

THE IMPRESSION
OF GOOD MGMT

3 CONSUMPTION
DRIVEN GROWTH

RETHINKING
GROWTH



Y-4-L-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100

2023-10-03

INTERACT
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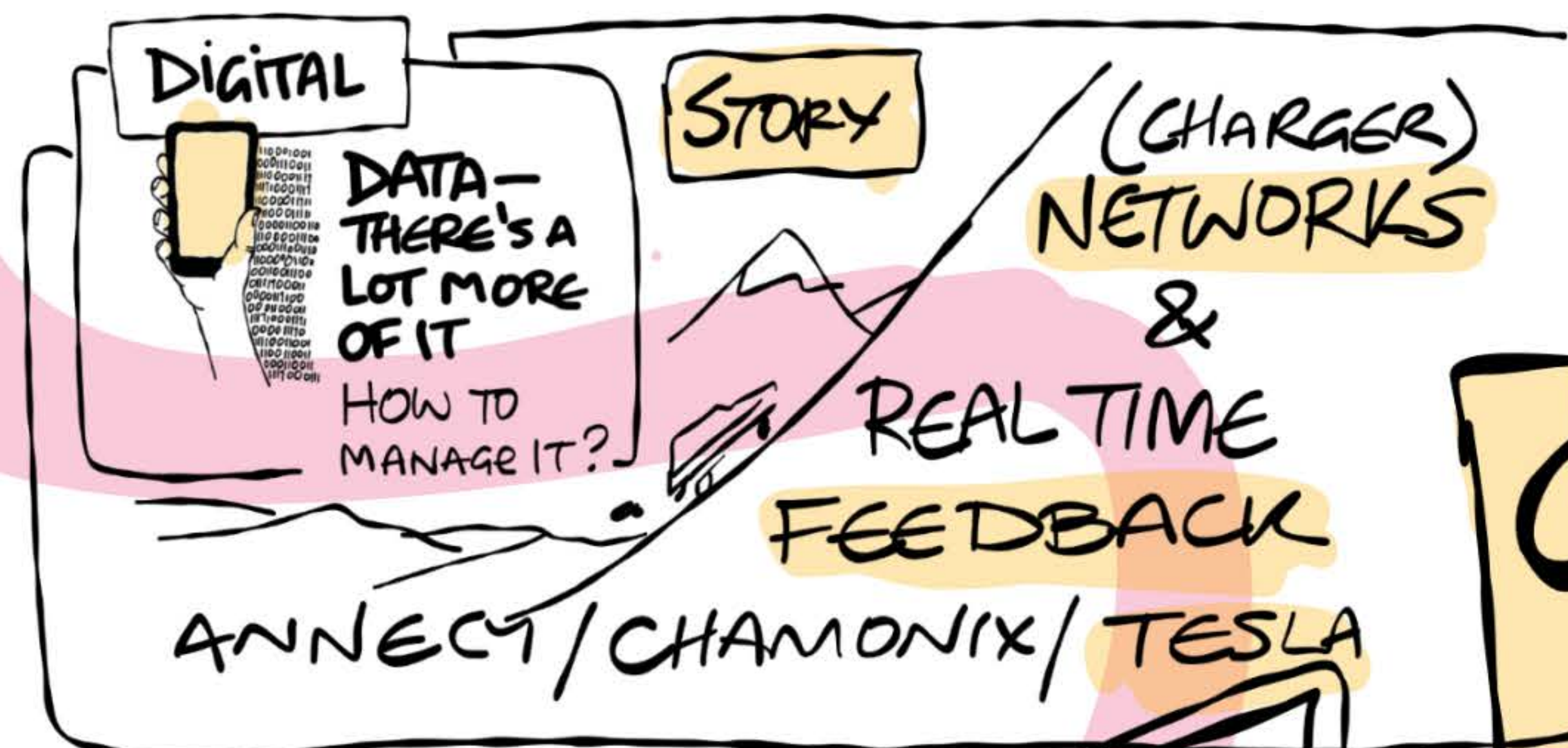


DIGITAL FUTURE OF MANUFACTURING SYSTEMS

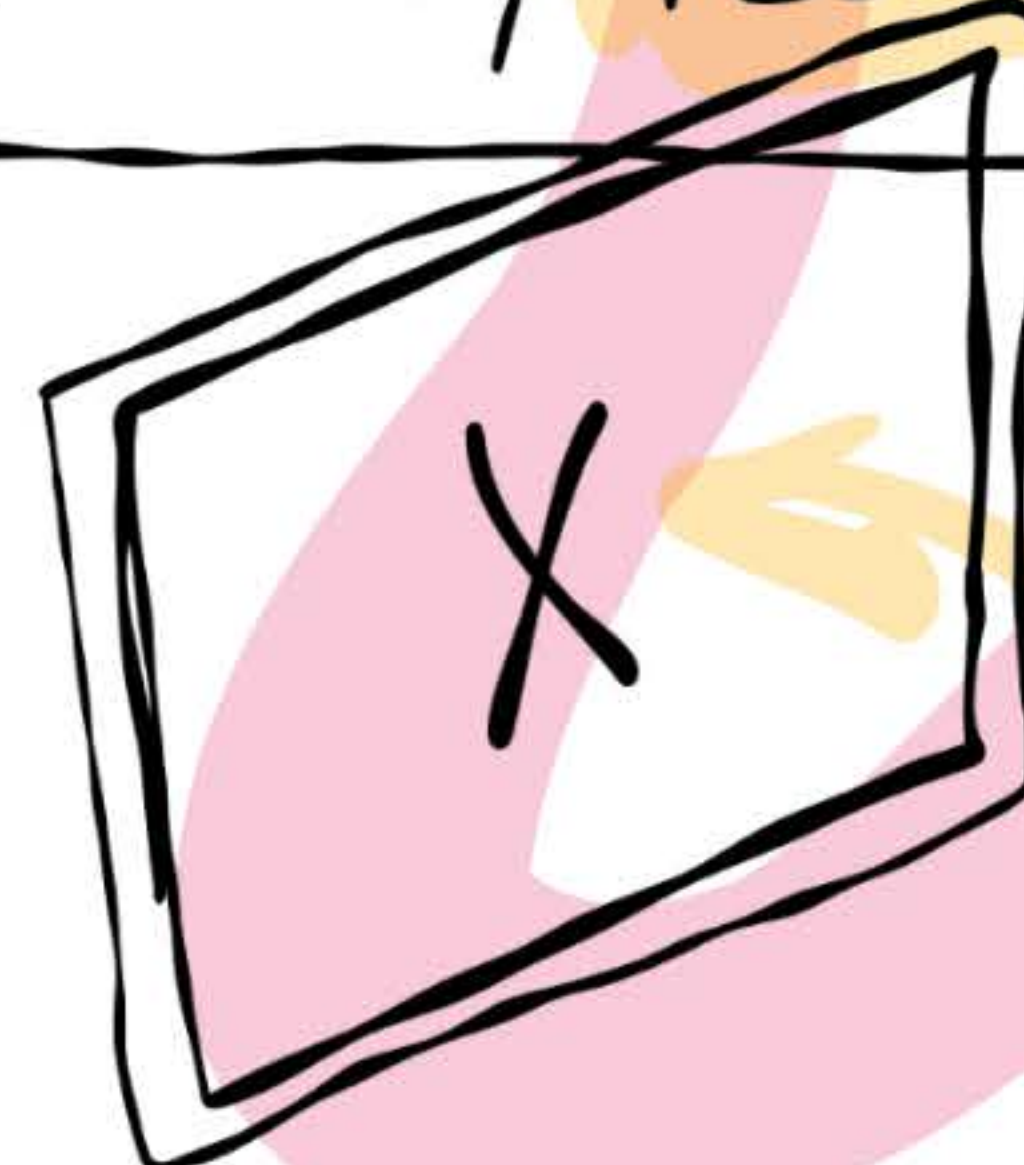
MARTIN BACH



Q:
SUSTAINABILITY

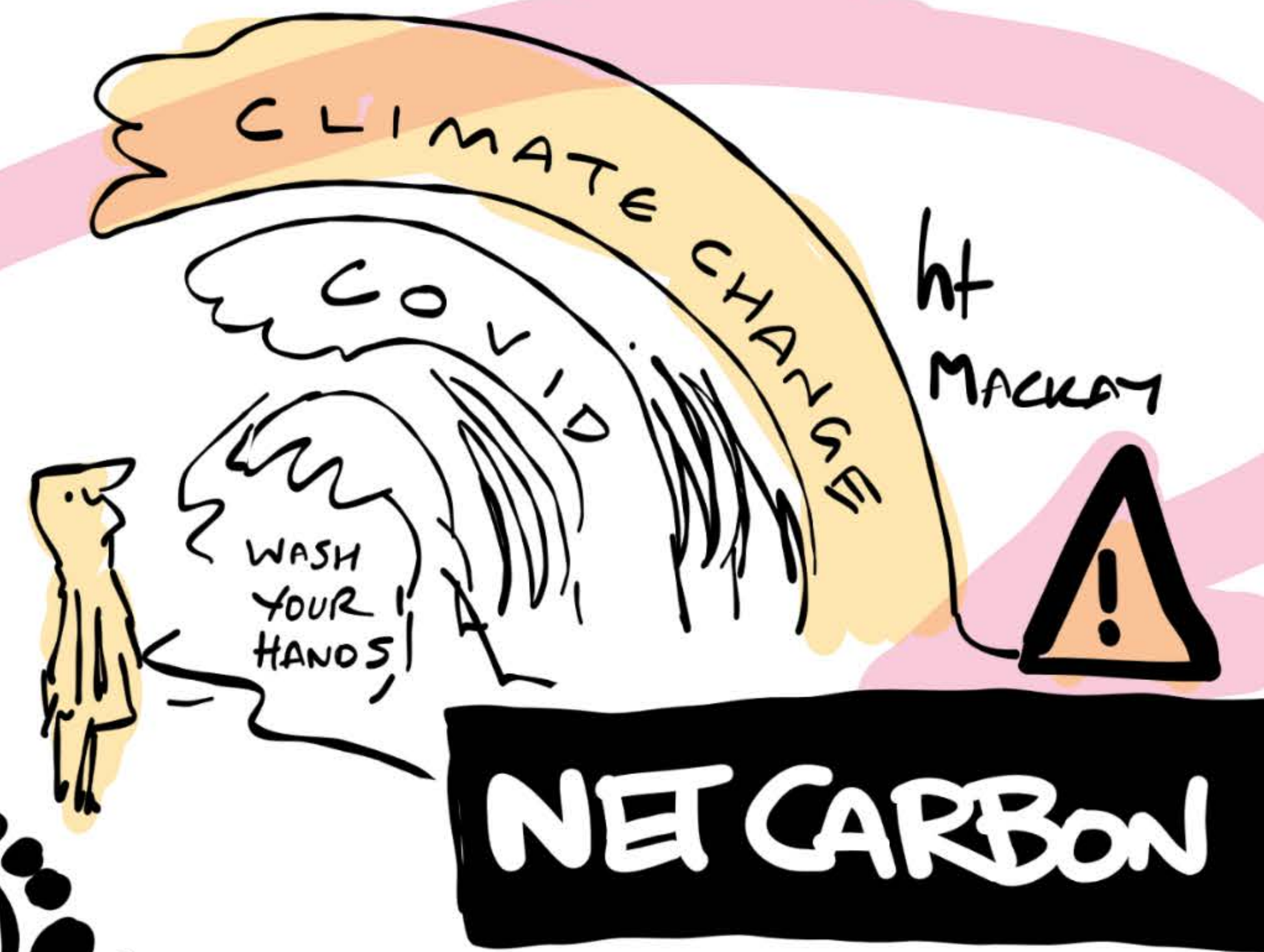


Q. WHAT DATA IS
MOST IMPORTANT
TO YOU?



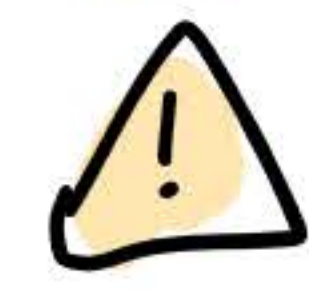
MARKS THE
SPOT
EDN

IF WE'RE NOT
PART OF THE SOLUTION...



CARBON

UNDERSTANDING
WHAT WE COST?



WHAT WE BUY?

WHAT WE WEAR?

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DIGITAL FUTURE OF MANUFACTURING SYSTEMS

MATT TOOTLE, SUE WILLIAMS



AND
THIS IS
ITS DIGITAL
TWIN



DUPLICATING
REAL WORLD ASSETS
DIGITALLY

- ↳ PRODUCT
- ↳ SYSTEM/ECOSYSTEM
- ↳ ASSET
- ↳ PROCESS

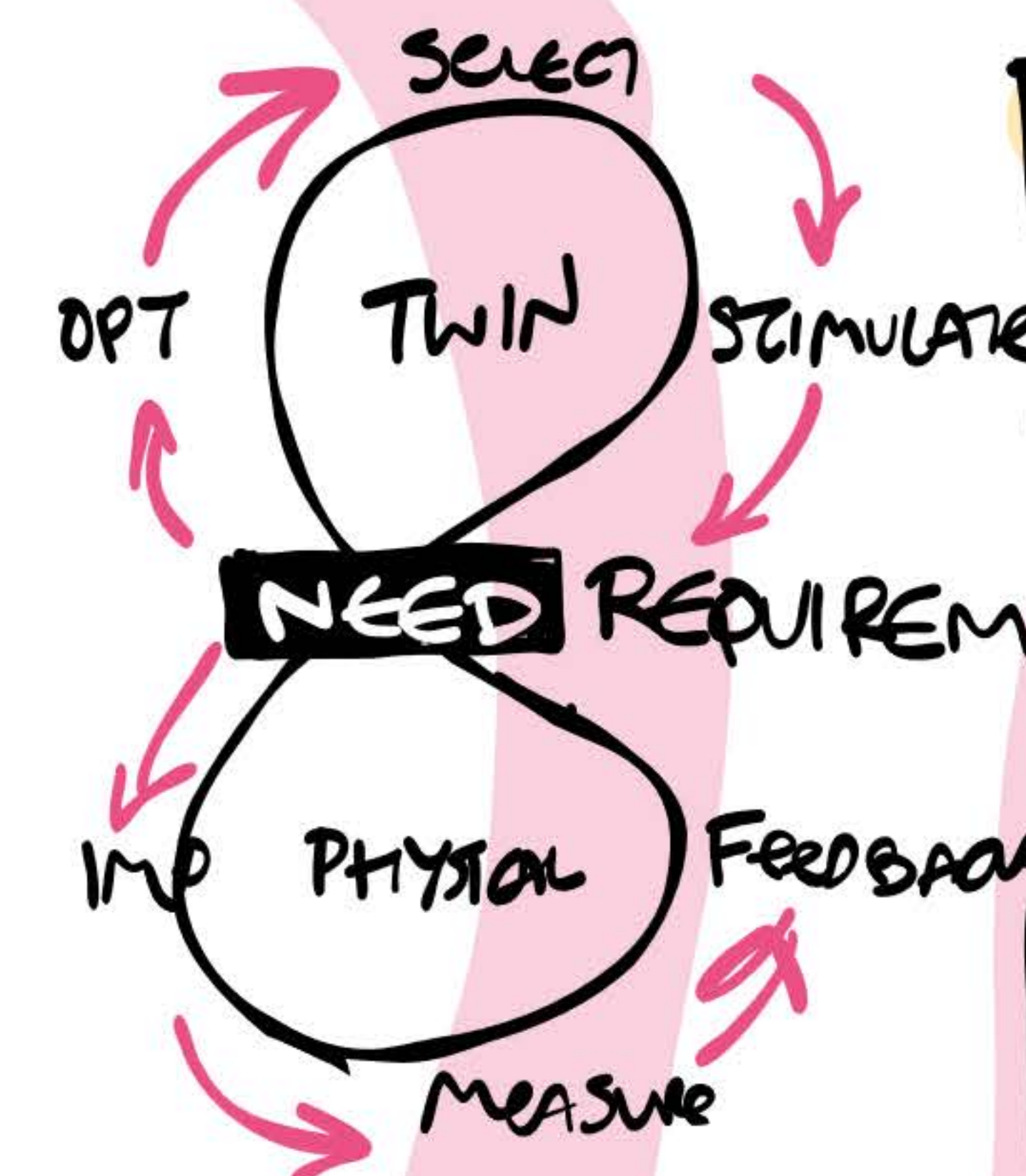
- MONITORING
- RESILIENCE
- SUSTAINABILITY
- DECISION SUPPORT
ANALYSIS

MODELLING COMPLEX CHANGE

THE DIGITAL ENTERPRISE TWIN

HOW

TO



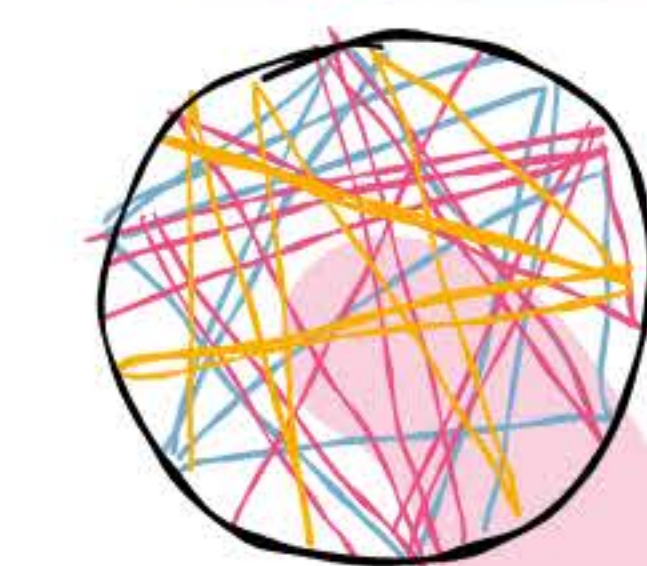
INSIGHT

↳ MOST BUSINESSES
ARE DATA RICH &
INFORMATION POOR

INSIGHT

↳ AN ANTICIPATION
AND EXPERIMENTATION
TOOL

EG
WHAT HAPPENS WHEN
WE REDUCE OUR
CARBON FOOTPRINT?



AUTOMATED
INTEGRATED
PROCESS

WITH IN-BUILT
INTEGRATION



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HEAD OF INNOVATION, TCS F&E, TATA CONSULTING



A STORY OF AN INDUCTION &



WE CAN'T KNOW
EVERYTHING...

So...

20-1-A-V-ZZ

5 PATTERNS

BANDWIDTH
AMAZON

PROTOTYPES

DYSON
 5126
 THE RESEARCH
 INSTITUTE

AT&T
VEXED
BY

DISTANCE

BELL LABS

RESEARCH

BANDWIDTH

AMAZON & THE NEXT STEP

ADJA CENCT

BT-Comms & HEALTH

MOONSHOTS

PHARMACOS

OCTOPUS

FROM THE DEEP

MEMORY MANAGEMENT

EG. NOTETAKING

CONTINUOUS INNOVATION

MARGINAL
GAINS—
BRITISH CYCLING

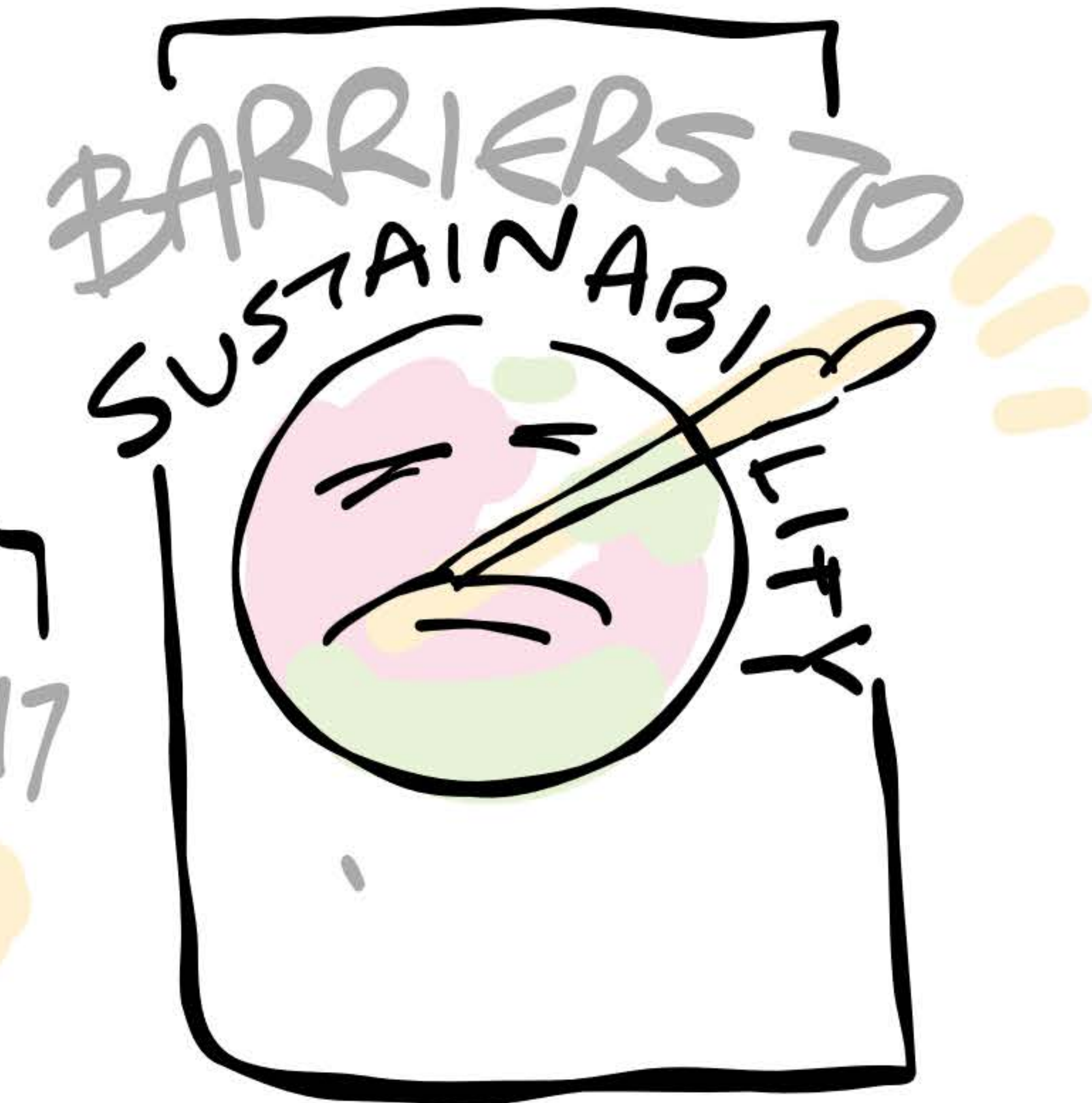
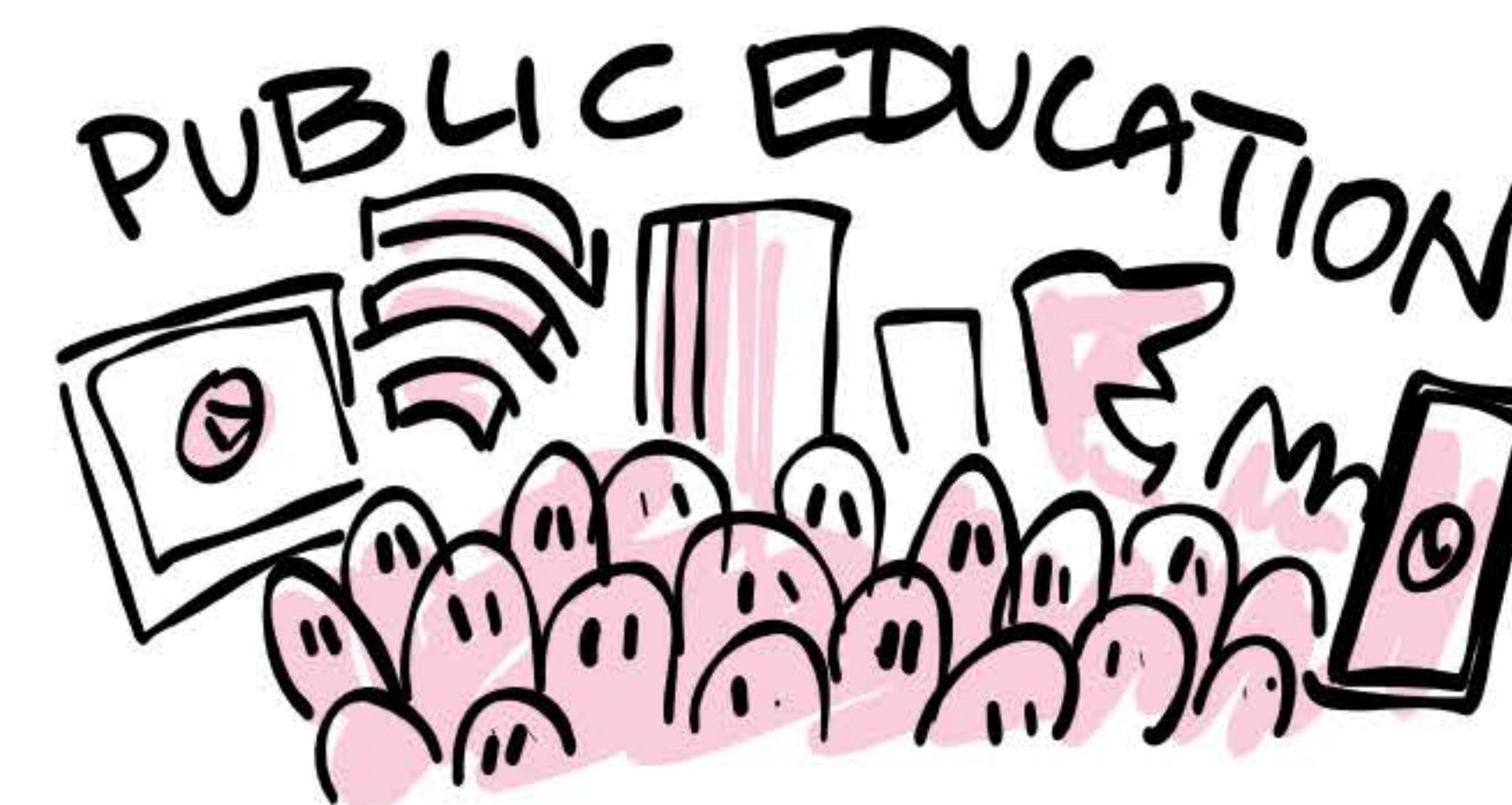
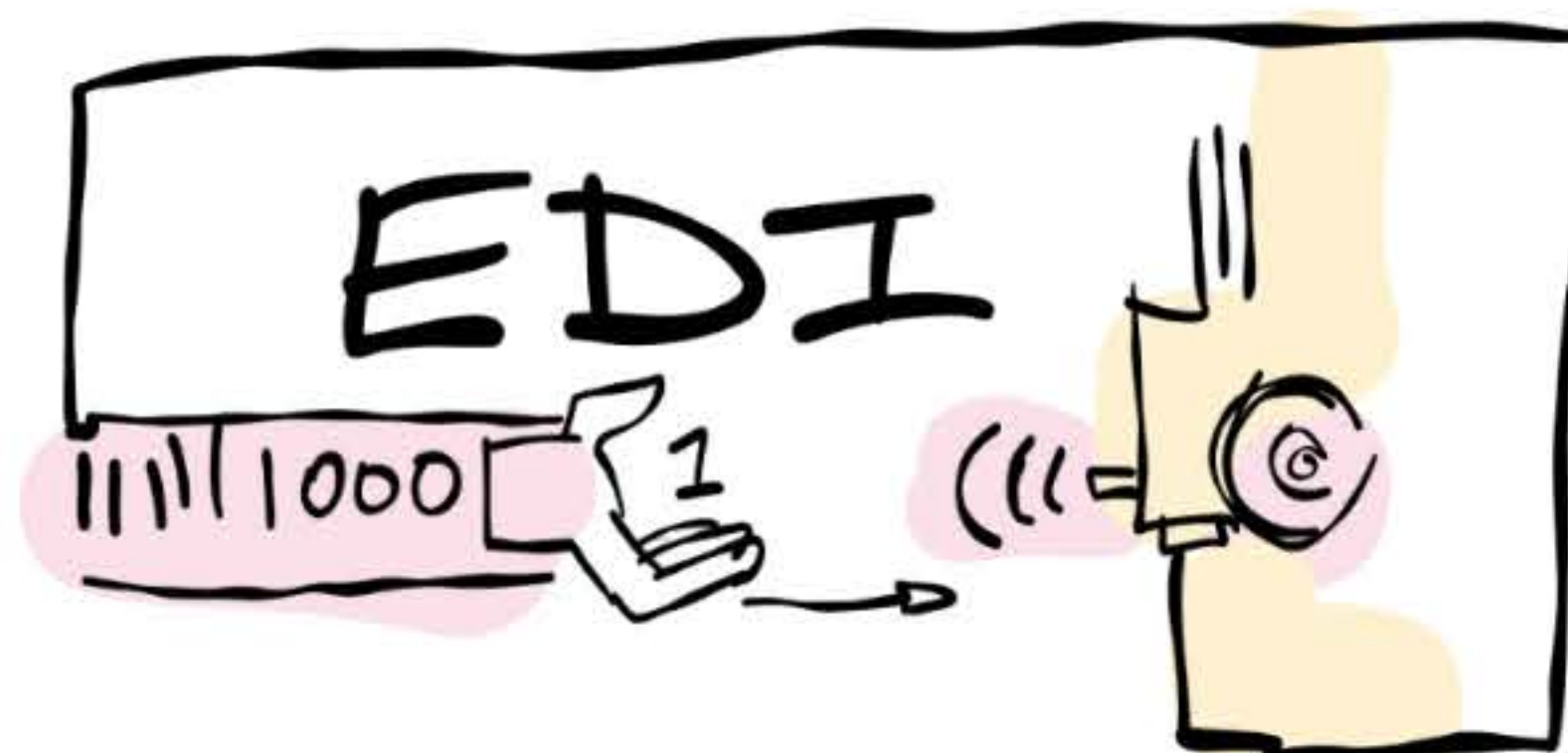
LEGO
GOOGLE
MUSK/BATTERY

IT'LL BE
HERE

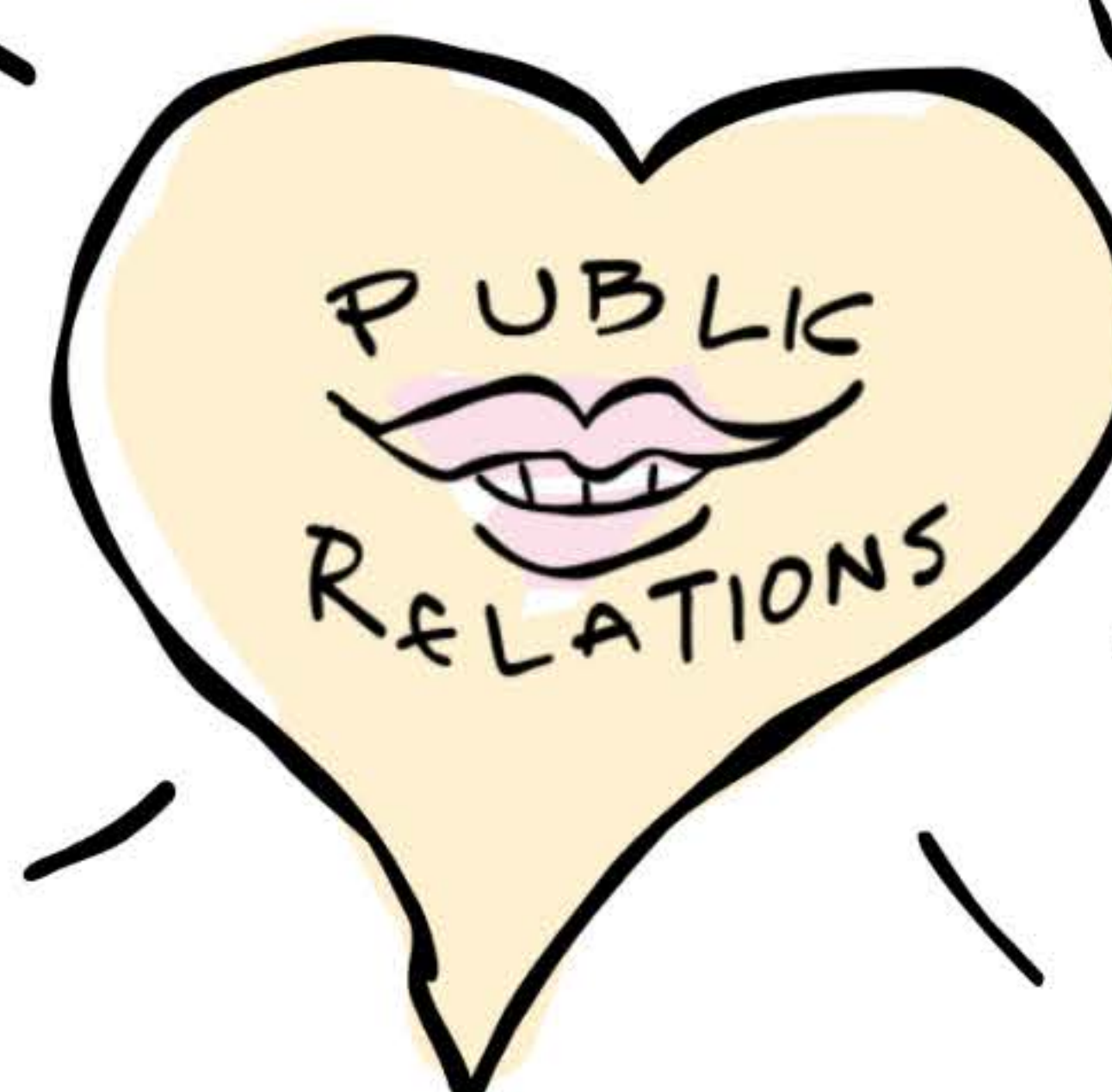
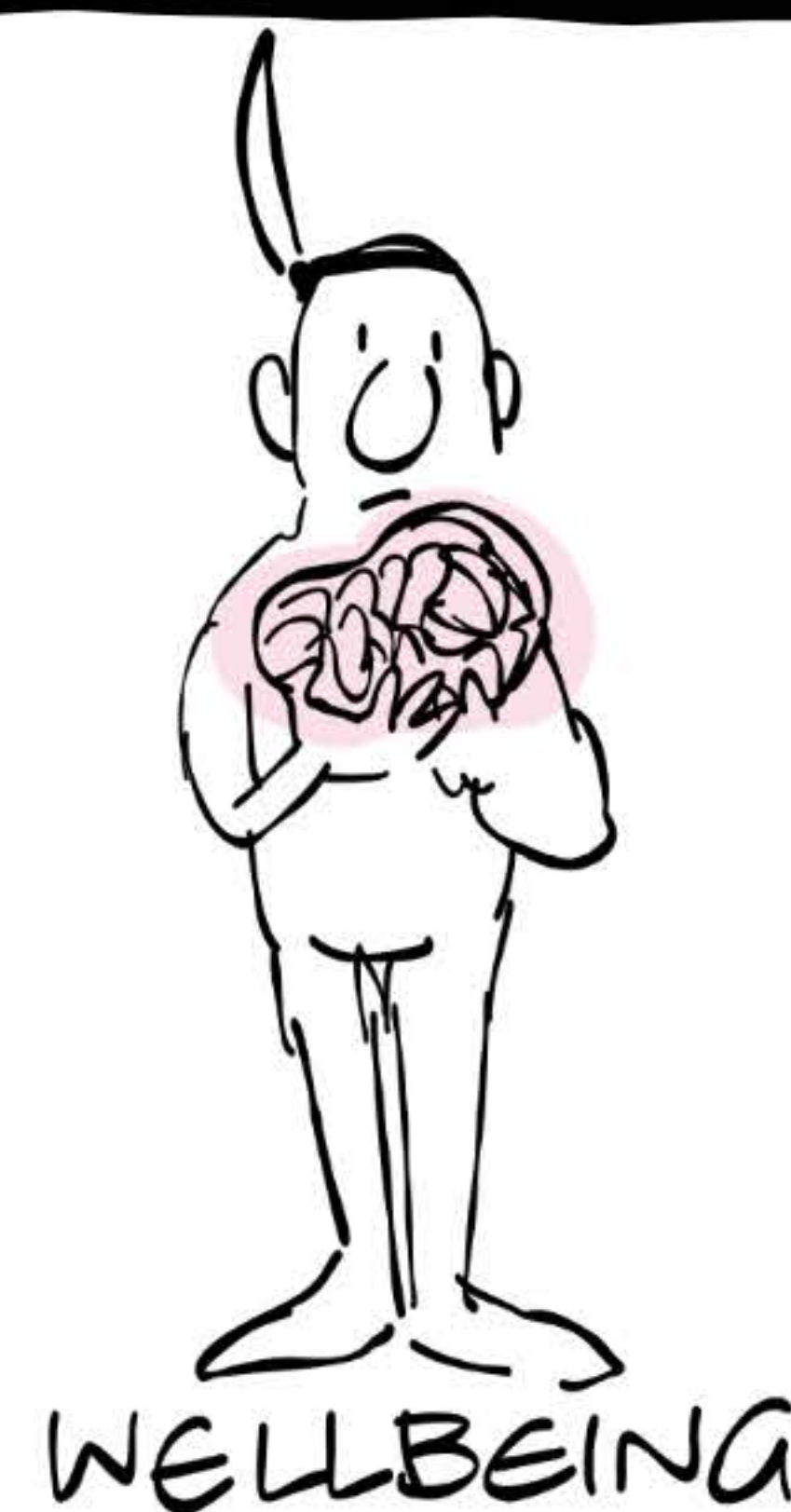
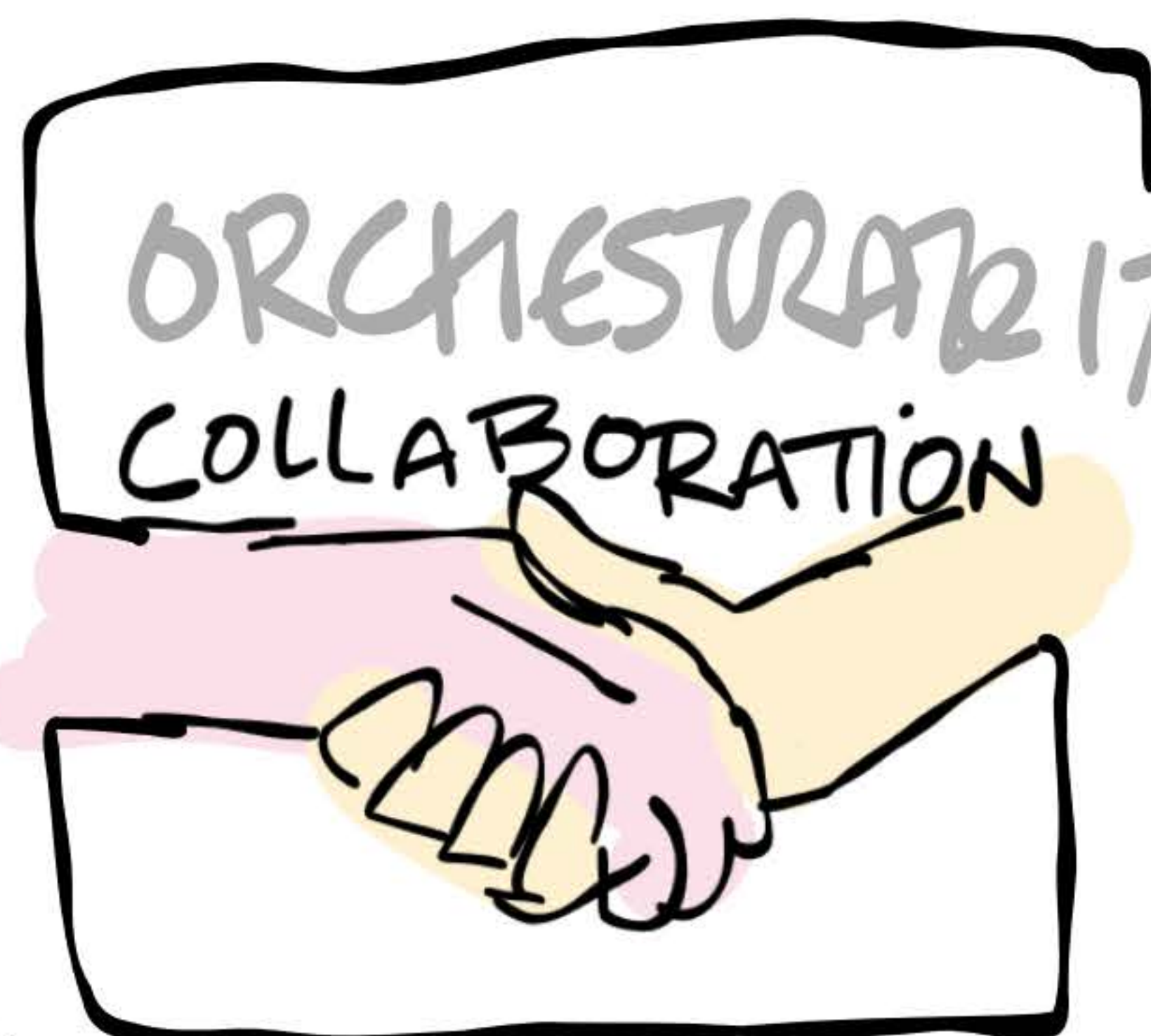
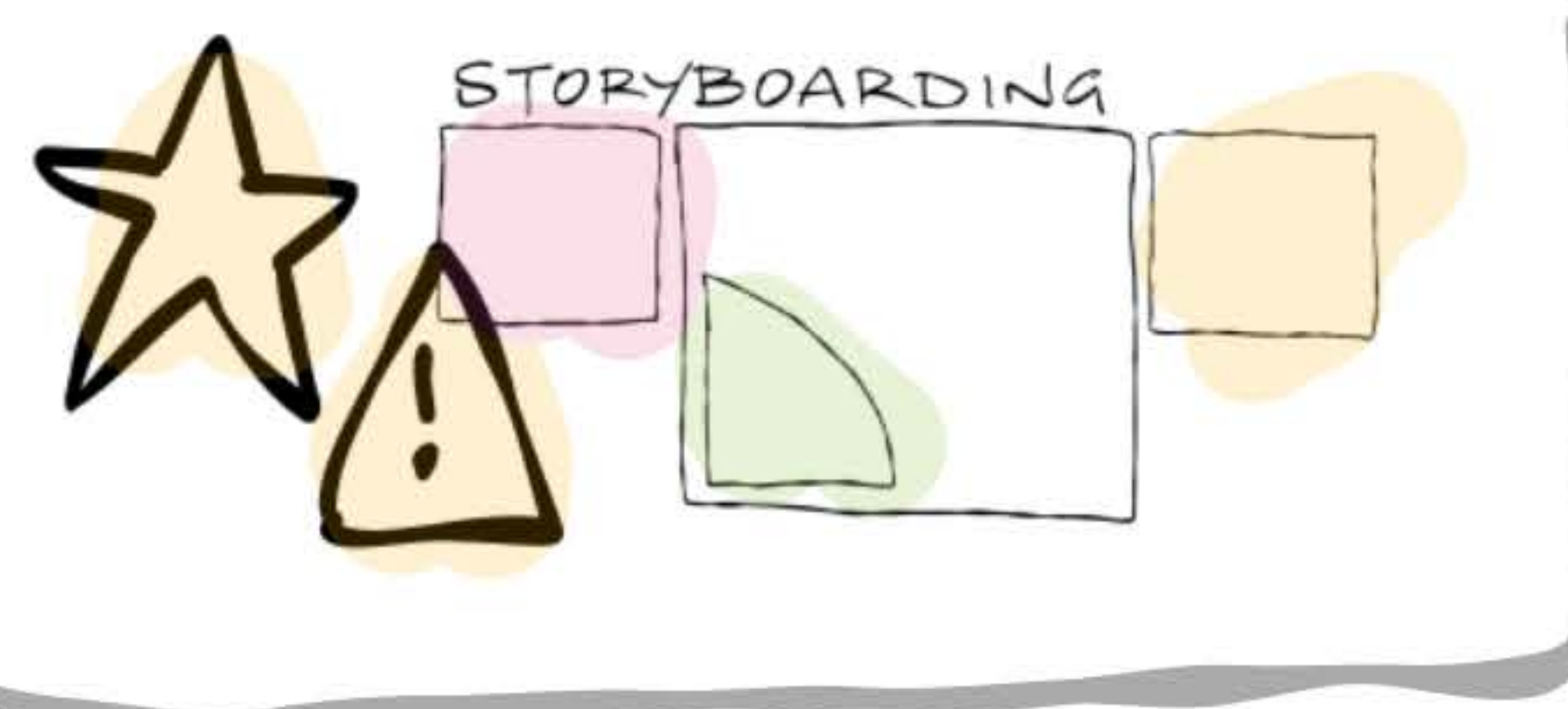
1 &
KRAKEN
BACK
END

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WORKSHOP STORYTELLING 13 THEMES DEVELOPING QUESTIONS EXPLORING FUTURE SCENARIOS



WORKFORCE INCENTIVISATION VS OWNERSHIP PRODUCTIVITY



BALANCE & HARMONY



HOW HARMONIOUS?



ARE THEY EXCLUSIVE?

PROMOTE A RESILIENT WORKFORCE

