



Diversity in Design

DELIVERING MEANINGFUL SOFTWARE
SINCE 2010

**Exclusions
happen in both
physical and
digital spaces**

CLOSE YOUR EYES AND
IMAGINE YOU'RE A BLIND
PERSON

ON A DAILY BASIS
YOU NEED TO

LOCATE A SHOP ON A STREET

CROSS ROADS

CROSS BIKE PATHS

ENGAGE WITH CARS, SCOOTERS,
BIKES, PEDESTRIANS, TRUCKS,
BUSES, AND TRAMS

GET FROM A TO B

**THIS PROBLEM
ENCOMPASSES**

URBANISM

ARCHITECTURE

**DIGITAL
PRODUCT
DESIGN**

**PHYSICAL
PRODUCT
DESIGN**

ANOTHER EXAMPLE

AIRBAGS

ONLY STARTING FROM 2011
AIRBAGS WERE TESTED ON
FEMALE DUMMIES

TESTING ONLY ON MALE
DUMMIES (BIGGER,
HEAVIER) CREATES CARS
FOR MEN. NOT DESIGNED
FOR WOMEN.

ANOTHER EXAMPLE

KITCHEN

**MOST KITCHEN EQUIPMENT
ISN'T DESIGNED WITH
MALES IN MIND**

HANDLES ARE SMALLER,
LAYOUT OF BUTTONS IS
DESIGNED FOR SMALLER
HANDS

ANOTHER EXAMPLE

RACIAL DISPENSERS

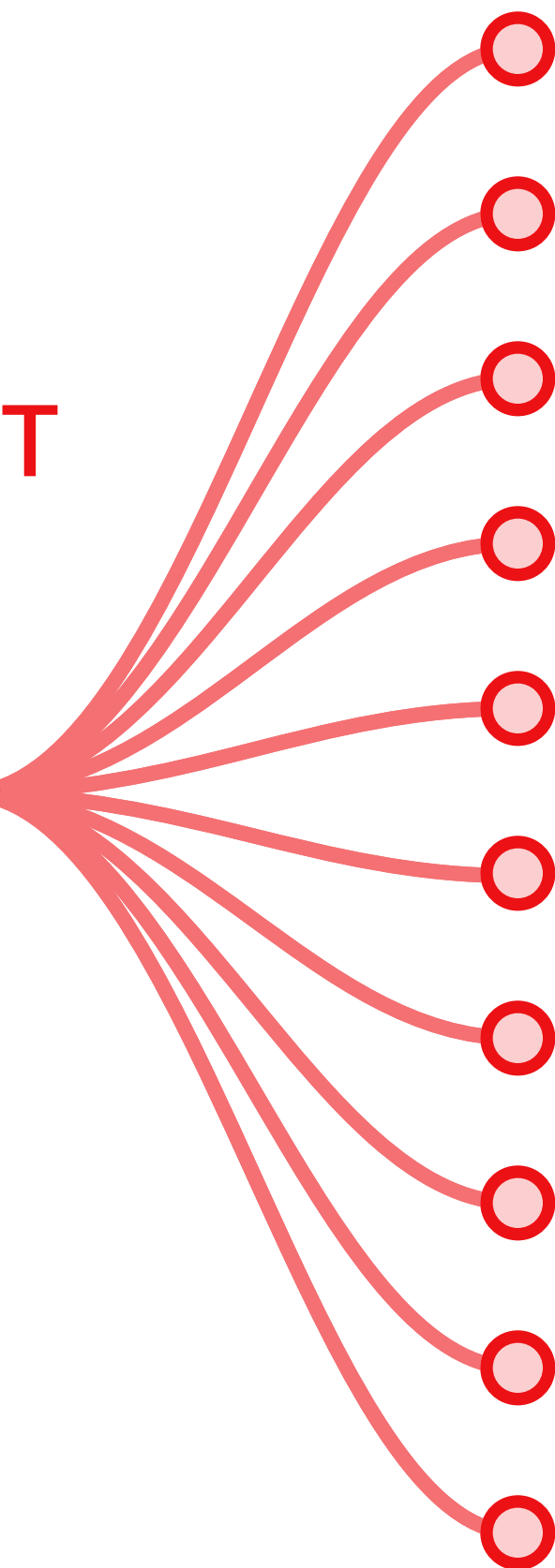
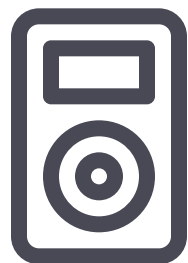
**SOME SOAP DISPENSERS
DON'T REACT FOR DARK
SKINNED HANDS**

**Diversity is not
enough**

WHY IT MATTERS

EVERY DECISION WE MAKE
CAN RAISE OR LOWER
BARRIERS OF
PARTICIPATION IN
SOCIETY.

PRODUCT



DIVERSE
AUDIENCE

YOUNG, MIDDLE AGED, OLD

GOOD/BAD INTERNET

HEARING IMPAIRED

VISUALLY IMPAIRED

ONE HAND, NO HANDS

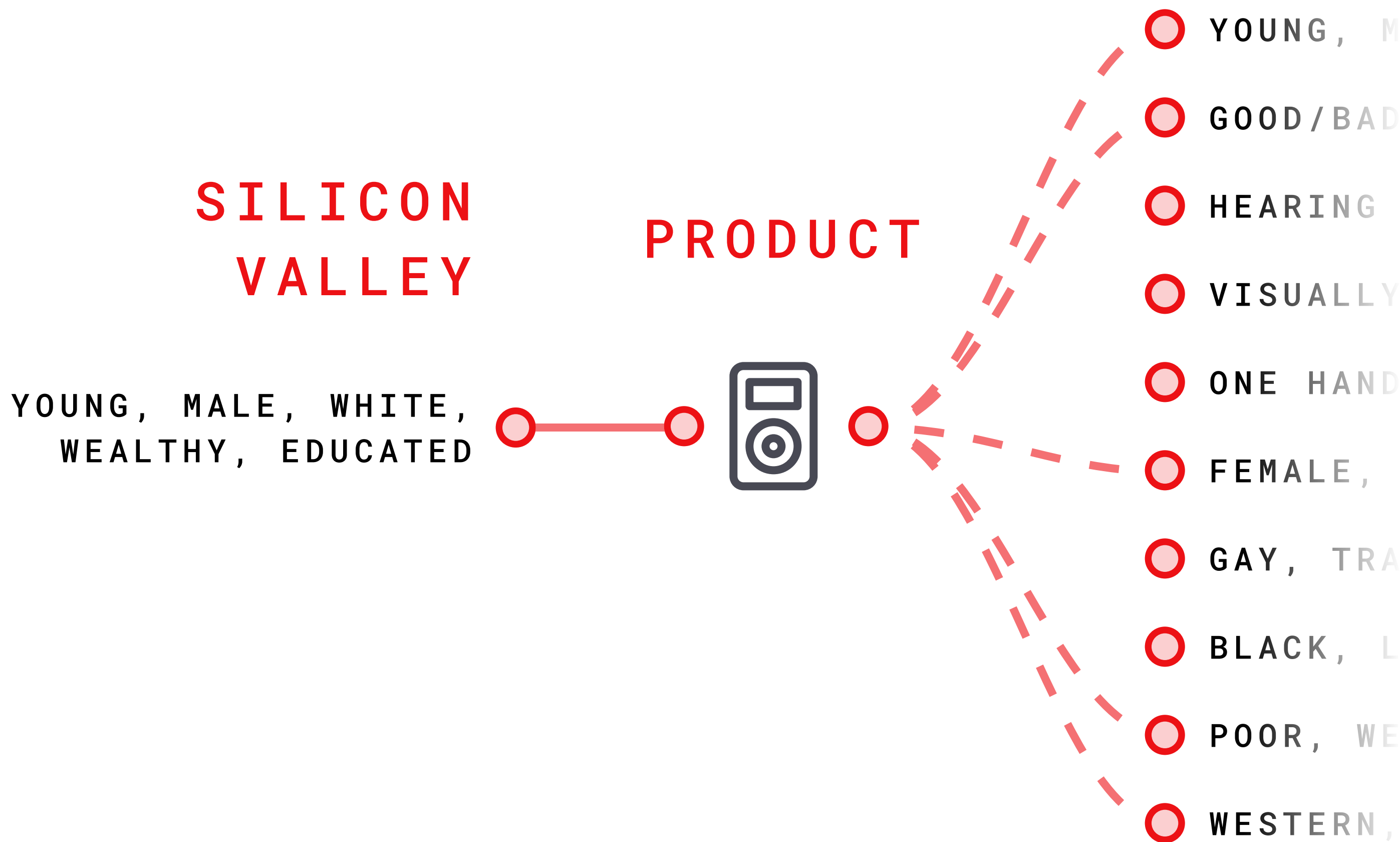
FEMALE, MALE

GAY, TRANS, NON-BINARY

BLACK, LATINO, ASIAN

POOR, WEALTHY

WESTERN, EASTERN



IN OTHER WORDS

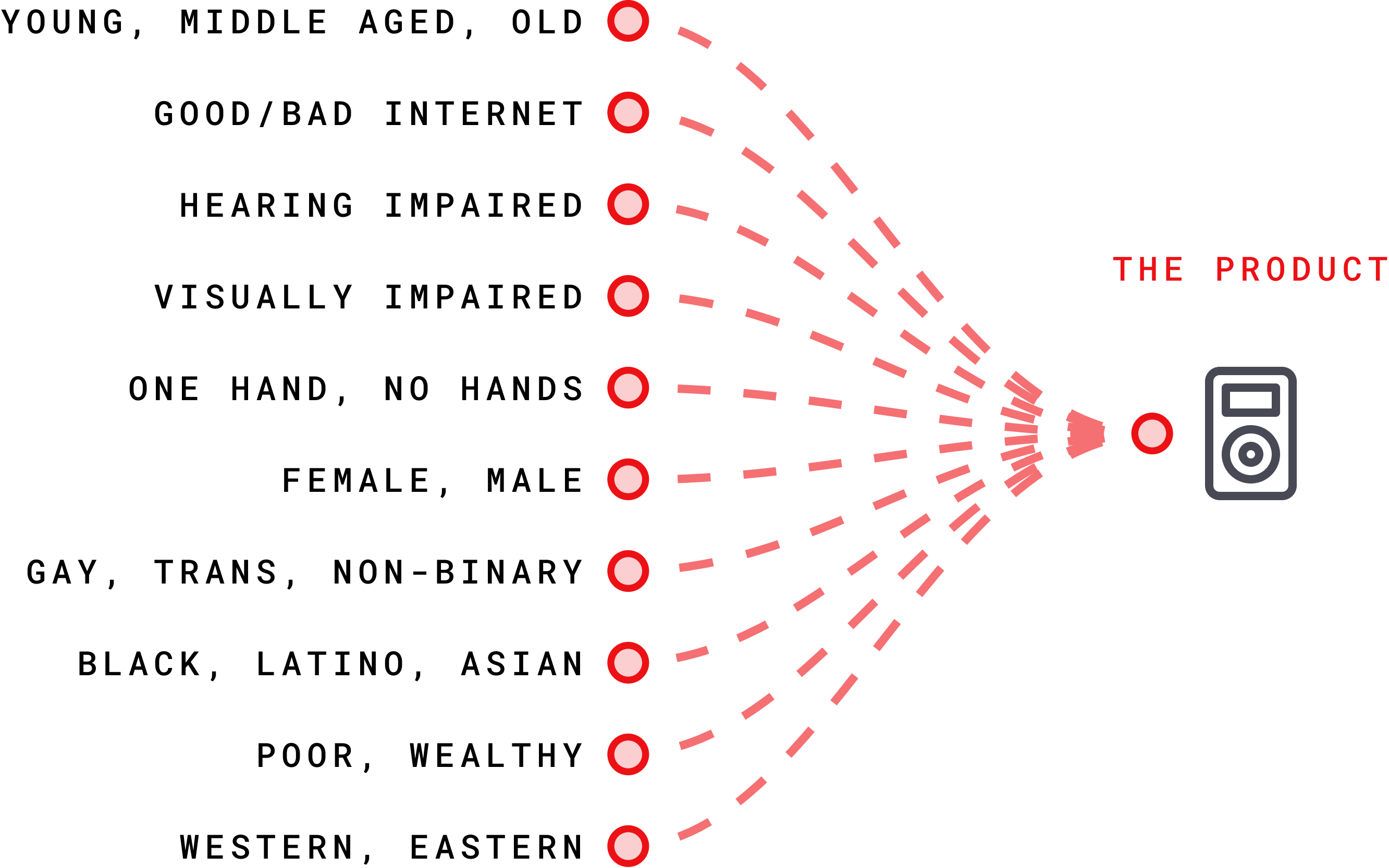
W.E.I.R.D.

WESTERN, EDUCATED,
INDUSTRIALIZED, RICH,
DEMOCRATIC

EXCLUSION

TRANSFER OF OUR BIAS,
PREJUDICE OR IGNORANCE
INTO THE SERVICE OR
PRODUCT

DOES A DIVERSE TEAM SOLVE A PROBLEM?



NO

**We need to
include these
diverse people,
to make a
difference**

INCLUSIVE DESIGN

DESIGNING IN DIVERSE
WAYS SO THAT EVERYONE
CAN PARTICIPATE AND
EXPERIENCE A SENSE OF
BELONGING

INCLUSIVE DESIGN

A DESIGN METHODOLOGY
THAT ENABLES AND DRAWS
ON THE FULL RANGE OF
HUMAN DIVERSITY

ACCESSIBILITY

THE QUALITIES THAT MAKE
AN EXPERIENCE OPEN TO
ALL

SEEMS FINE

Label

Item3

Label

Item 3

WHAT DALTONISTS SEE

Label

Item3

Label

Item 3

SHOULD BE

Label

Item3

Label

Item 3

SEEMS FINE

LABEL

Item3

LABEL

Item 3

WHAT AN OLDER PERSON
MIGHT SEE

LABEL

Item3

LABEL

Item 3

SHOULD BE

Label

Item3

Label

Item 3

SEEMS FINE?

Choose gender

☐ Male

☐ Female

PROBABLY BETTER

Choose gender

☐ Female

☐ Male

☐ Other

SEEMS BEST

Choose gender

☐ Male

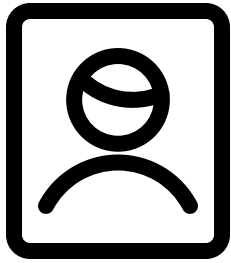
☐ Female

☐ Trans

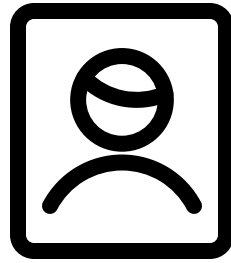
☐ Non-binary

**Representation
is very
important**

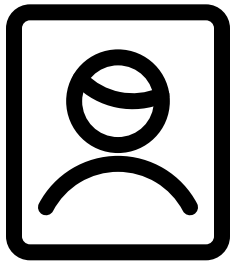
IF YOU START WITH THIS



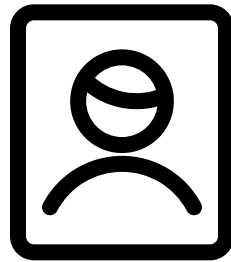
John Doe



John Doe



John Doe



John Doe

YOU CAN END UP WITH THIS



Marvin McKinney



Floyd Miles



Ralph Edwards



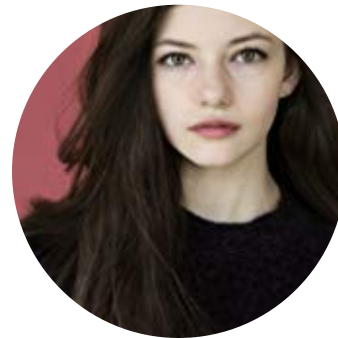
Robert Fox

THESE AVATARS AND NAMES ARE
FROM A PLUGIN IN FIGMA. ALL
MALES, YOUNG, ONE ASIAN

TO BE FAIR: SECOND ITERATION



Jenny Wilson



Jacob Jones



Kristin Watson



Bessie Cooper

THIS BRINGS US TO

Algorithm

INCLUSIVE DESIGN

PRODUCT WORK CAN HAVE
MUCH BIGGER CONSEQUENCES
WHEN SOMETHING EXTERNAL,
LIKE A SELF-LEARNING
ALGORITHM, IS CREATED

EXAMPLE

COMPASS

THE JUDICIARY SYSTEM IN
THE USA THAT HELPED
EVALUATE THE RISK OF
ANOTHER OFFENSE, TOOK
RACE AS A FACTOR BASED
ON BIASED HISTORICAL
DATA

EXAMPLE

GORILLAS

THE GOOGLE IMAGE
RECOGNITION SOFTWARE
QUALIFIED TWO BLACK MEN
AS GORILLAS

EXAMPLE

SIRI'S RESPONSES IN THE EARLY STAGES

“SUICIDE” – “OK”

“JUMP FROM A BRIDGE” –
“LIST OF BRIDGES”

“I WAS RAPED” – “I DON'T
UNDERSTAND WHAT YOU'RE
TALKING ABOUT”

**What can we
do?**

RECOGNIZE EXCLUSION

EXCLUSION HAPPENS WHEN
WE SOLVE PROBLEMS USING
OUR OWN BIASES

LEARN FROM DIVERSITY

WHEN EXPERIENCES DON'T
SERVE PEOPLE THE WAY
THEY SHOULD, PEOPLE
ADAPT

INSIGHTS COME WHEN WE
UNDERSTAND THOSE
ADAPTATIONS, AND FROM
WHAT'S SHARED ACROSS
EVERYONE'S EXPERIENCES

SOLVE ONE, EXTEND TO MANY

**A SOLUTION THAT WORKS
WELL FOR SOMEONE WHO'S
BLIND MIGHT ALSO BENEFIT
ANY PERSON DRIVING A
CAR.**

**INCLUSIVE DESIGN WORKS
ACROSS A SPECTRUM OF
RELATED ABILITIES,
CONNECTING DIFFERENT
PEOPLE IN SIMILAR
CIRCUMSTANCES.**















One arm



Arm injury



New parent

	Permanent	Temporary	Situational
Touch	 One arm	 Arm injury	 New parent
See	 Blind	 Cataract	 Distracted driver
Hear	 Deaf	 Ear infection	 Bartender
Speak	 Non-verbal	 Laryngitis	 Heavy accent

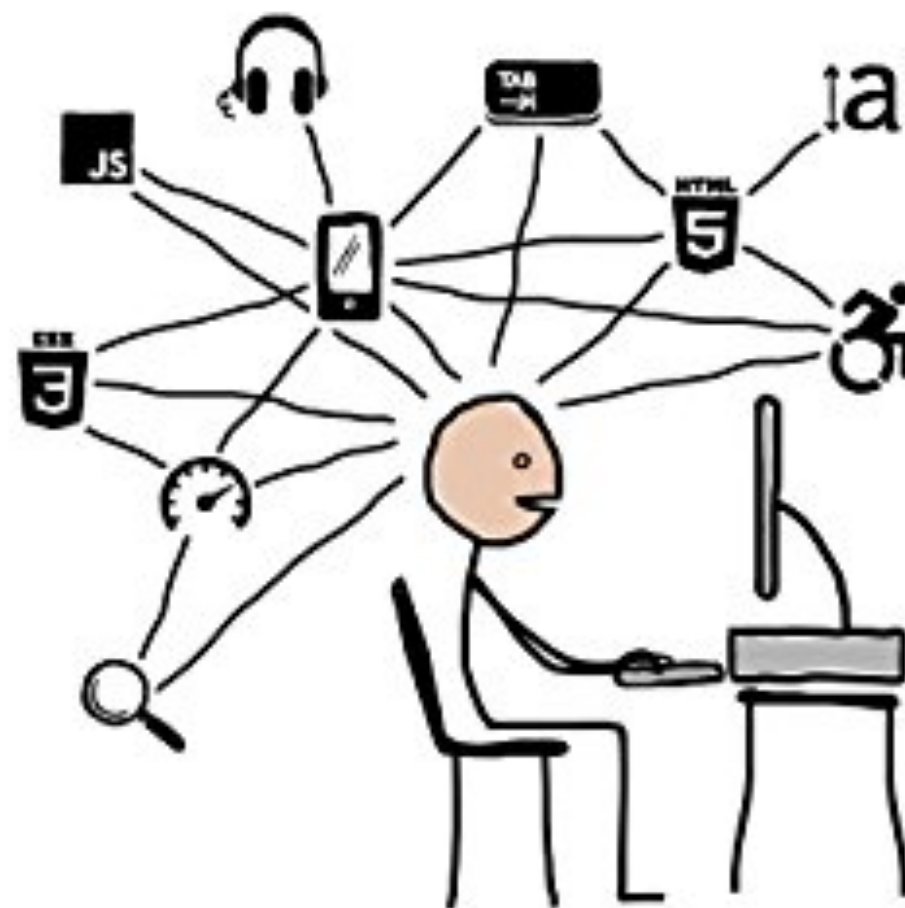


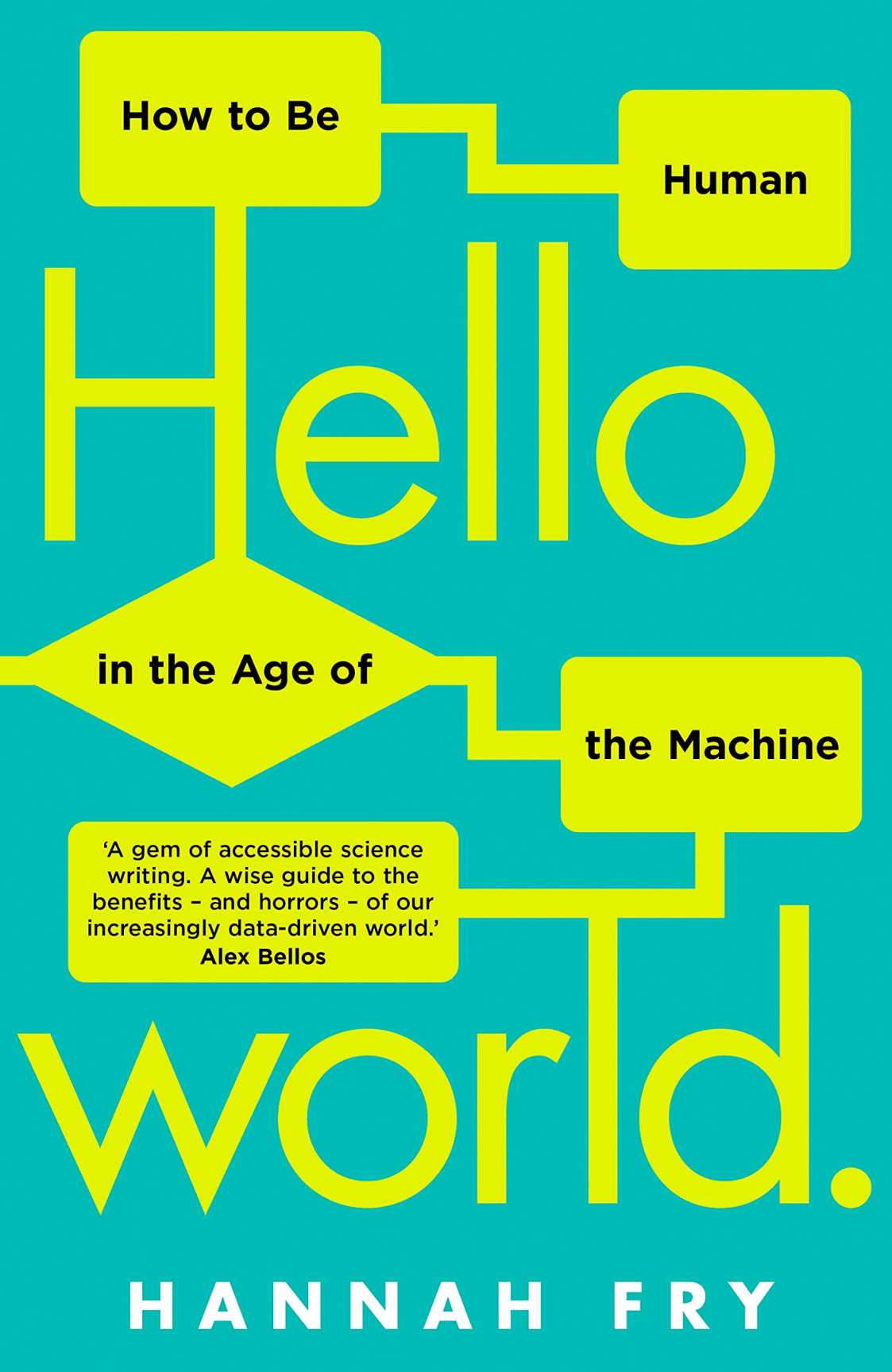
VIRTUAL WARSAW

THE CITY IS DEPLOYING A
NETWORK OF HUNDREDS OF
THOUSANDS OF BEACON
SENSORS, EQUIPPED WITH
NEXT-GENERATION BLUETOOTH
TO HELP VISUALLY IMPAIRED
RESIDENTS MOVE
INDEPENDENTLY AROUND THE
CITY WITH ASSISTANCE FROM
THEIR SMARTPHONES

INCLUSIVE DESIGN PATTERNS

Coding Accessibility Into Web Design





How to Be

Human

Hello

in the Age of

the Machine

'A gem of accessible science writing. A wise guide to the benefits - and horrors - of our increasingly data-driven world.'
Alex Bellos

world.

HANNAH FRY

'Eye-opening'
CORDELIA FINE

'HELL YES'
CAITLIN MORAN

THE SUNDAY TIMES BESTSELLER

INVISIBLE WOMEN

EXPOSING
DATA BIAS
IN A WORLD
DESIGNED
FOR MEN

CAROLINE
CRIADO
PEREZ

'Hugely readable'
ROBERT WEBB

'A game-changer'
THE TIMES



Thank you

DELIVERING MEANINGFUL SOFTWARE
SINCE 2010