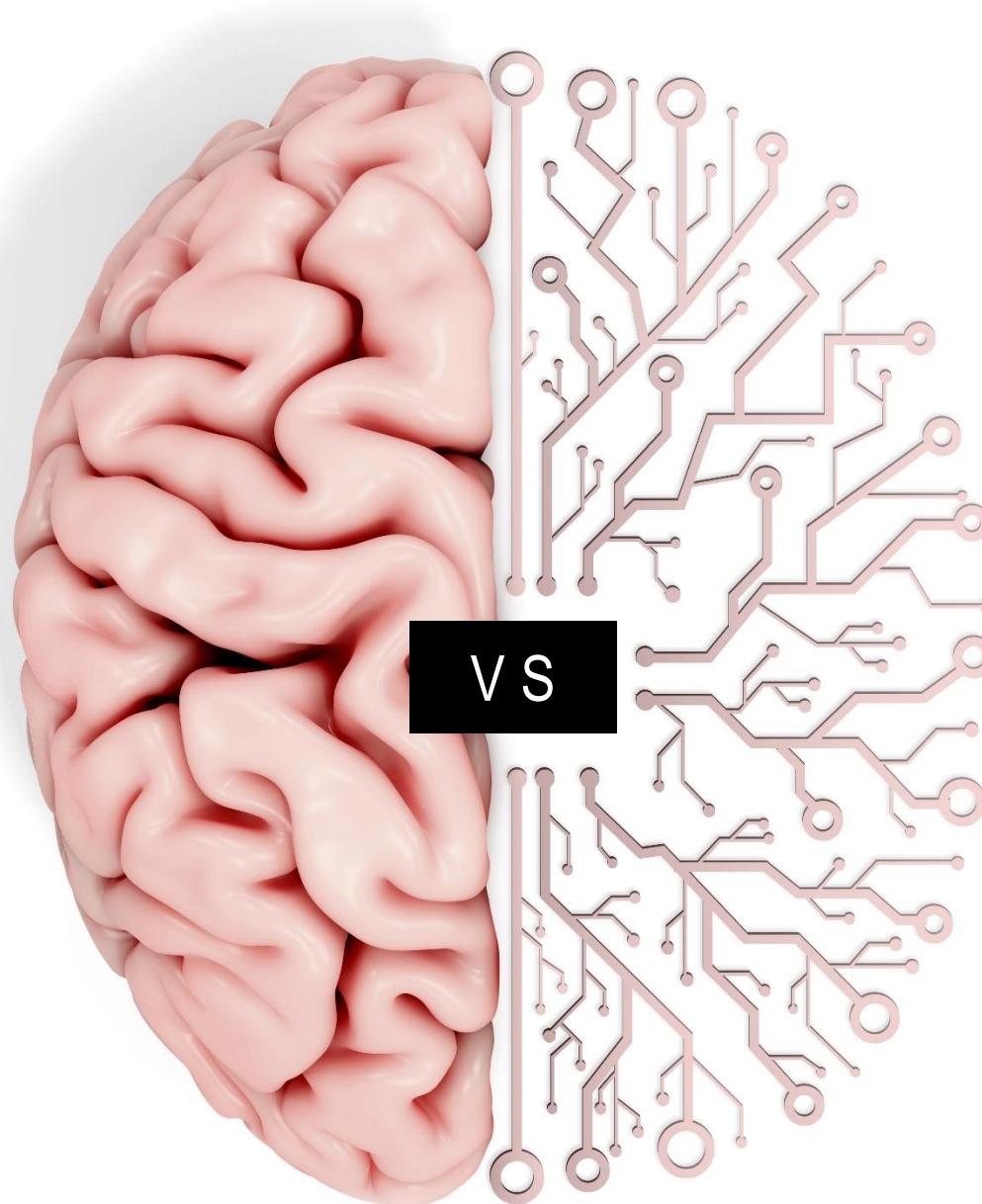


THE
HUMANS



THE
MACHINES



**THE DIGITAL UNIVERSE IS HUGE
– AND GROWING EXPONENTIALLY**

2.5 EXABYTES ARE PRODUCED EVERY DAY - WHICH IS EQUIVALENT TO...



90YRS

OF HD VIDEO



5M

LAPTOPS



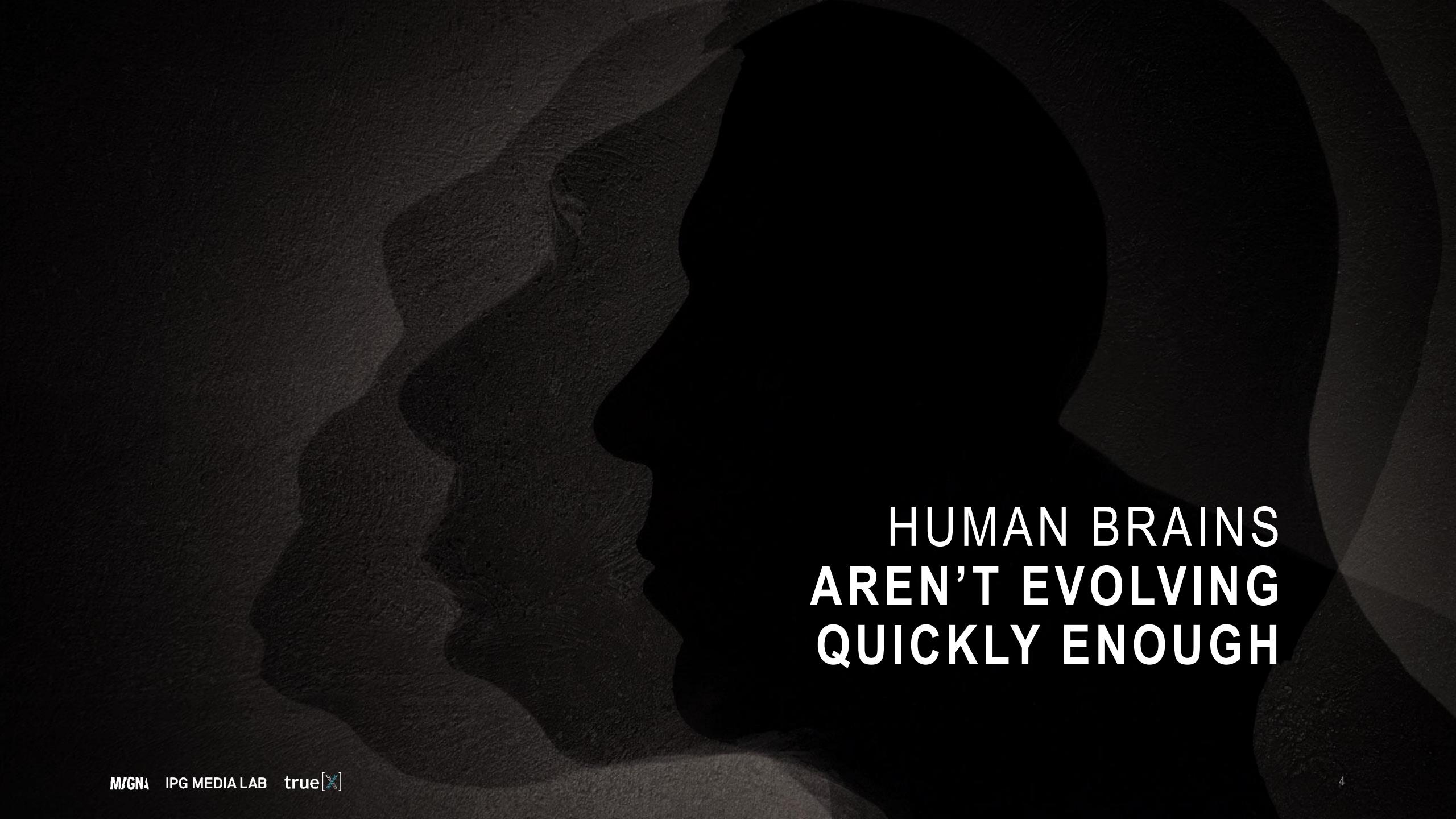
150M

iPHONES

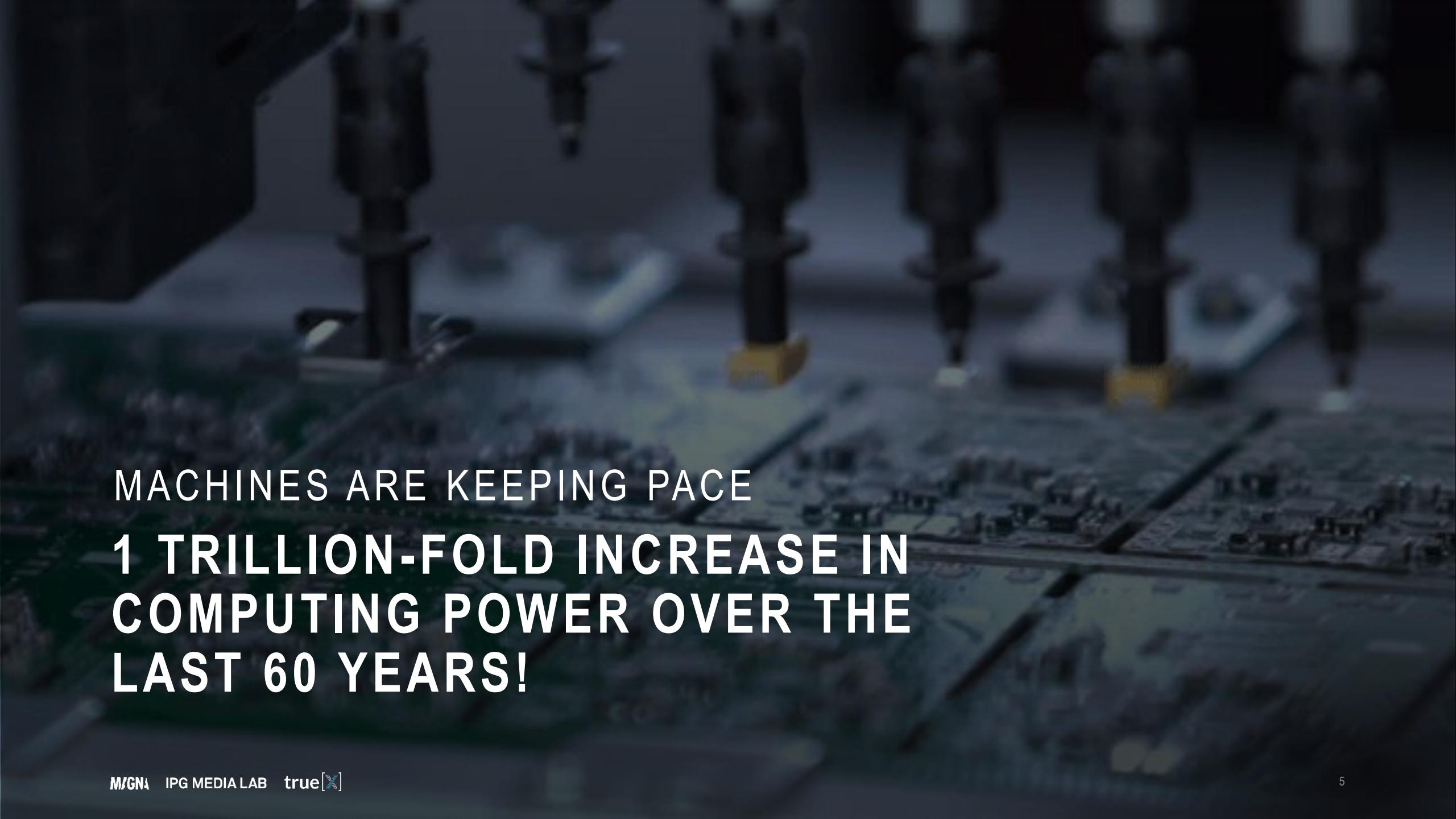


530E

SONGS



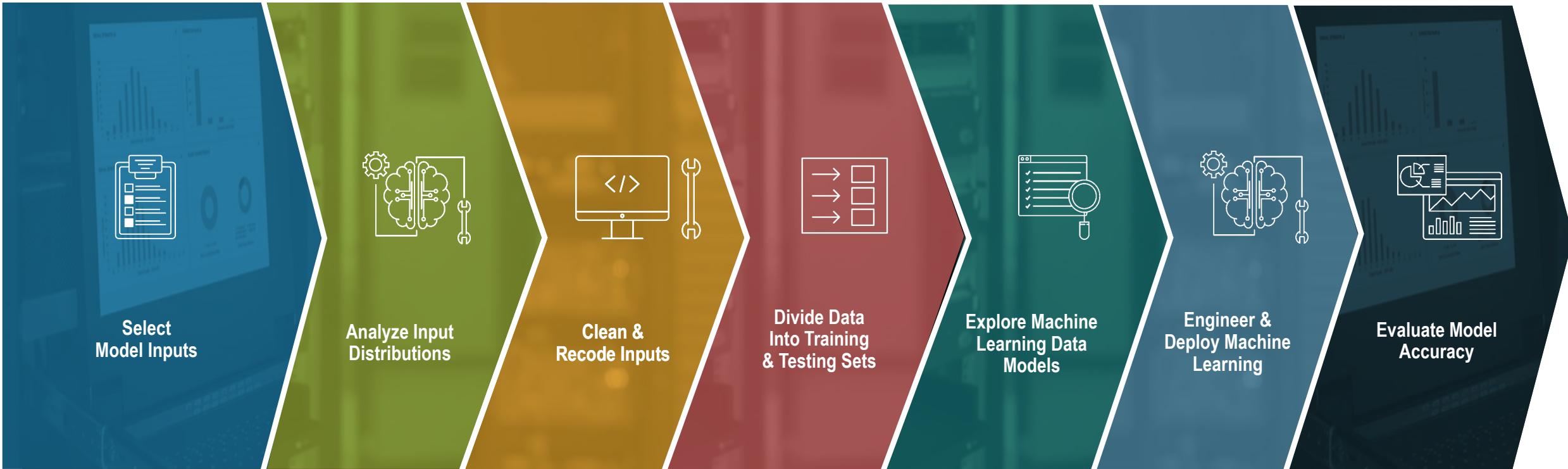
HUMAN BRAINS
AREN'T EVOLVING
QUICKLY ENOUGH



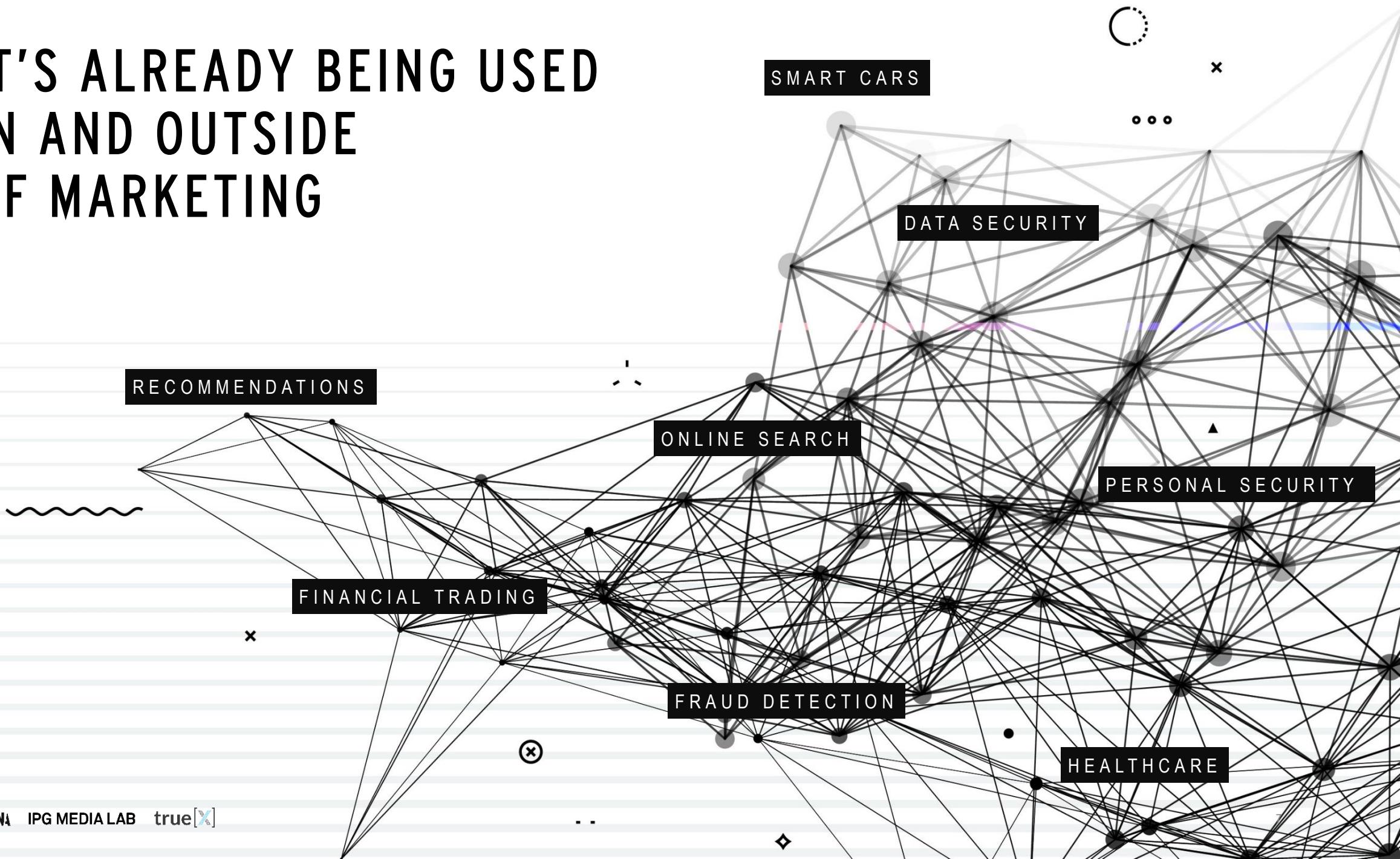
MACHINES ARE KEEPING PACE
1 TRILLION-FOLD INCREASE IN
COMPUTING POWER OVER THE
LAST 60 YEARS!

ENTER MACHINE LEARNING.

- USING ALGORITHMS TO FIND PATTERNS, LEARN, AND PREDICT OUTCOMES
- IDEAL FOR BIG DATA



IT'S ALREADY BEING USED IN AND OUTSIDE OF MARKETING



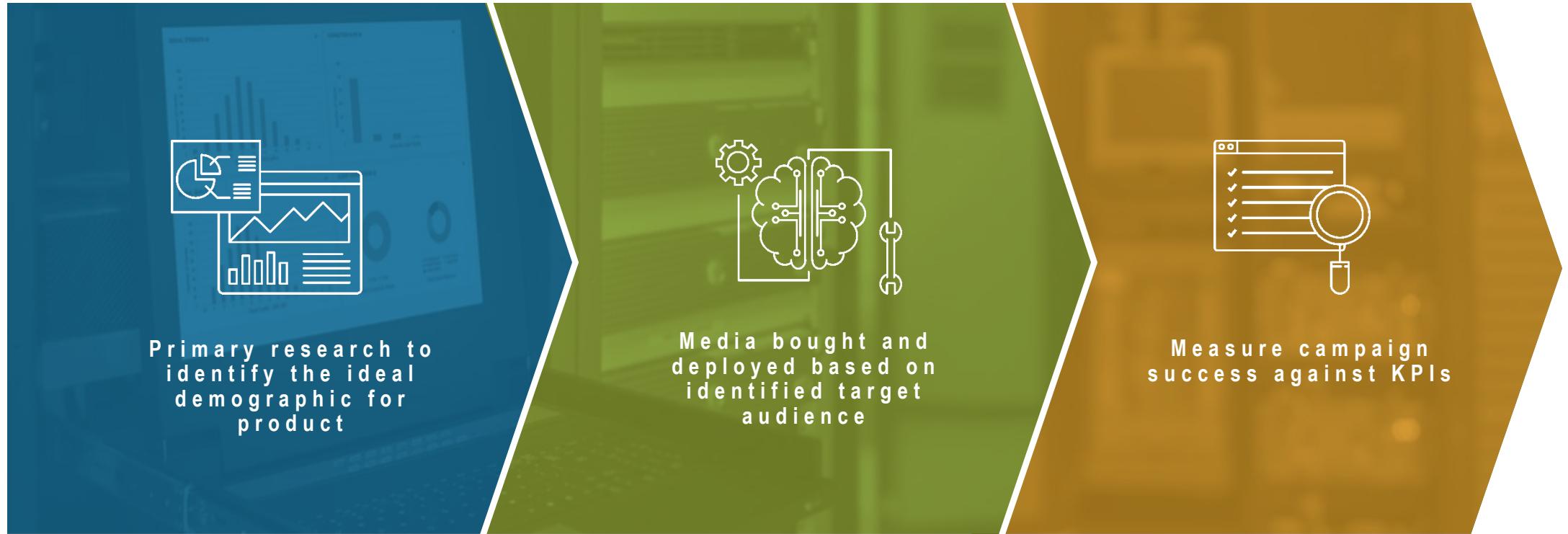
A dark, atmospheric photograph of a person from behind, sitting at a desk and working on a laptop. The screen of the laptop is bright, illuminating their hands and face. In the background, a city skyline is visible at night, with numerous lit-up buildings creating a bokeh effect of colorful lights.

SHOULD HUMANS LEVERAGE MACHINE LEARNING FOR ONLINE CAMPAIGN OPTIMIZATION?

A photograph of a man with short brown hair, seen from the side and back, working in a server room. He is wearing a dark t-shirt and is focused on a computer monitor in front of him. Behind him are several tall server racks filled with hard drives and other electronic components. The lighting is low, creating a professional and technical atmosphere.

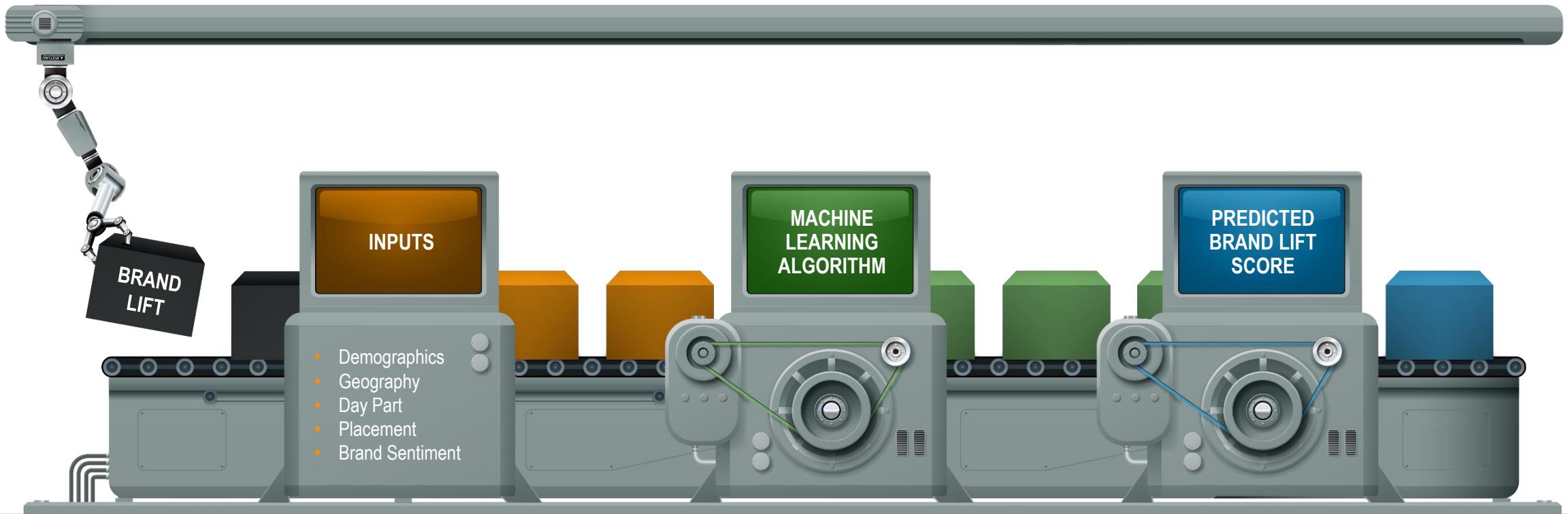
WE PUT MACHINES TO
THE TEST TO FIND OUT.

THE HUMAN APPROACH



THE MACHINE APPROACH: ADVANCING THE HUMAN APPROACH

TRUE[X] LEVERAGES UP//LIFT TO DELIVER IN TARGET BRAND LIFT PREDICTIONS PRIOR TO EXPOSURE

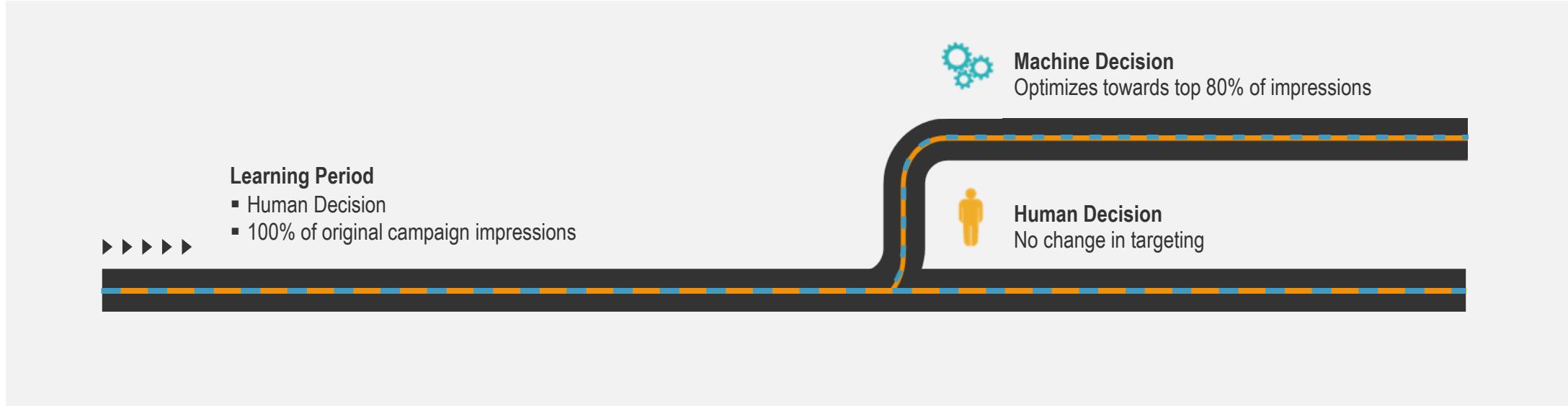


METHODOLOGY

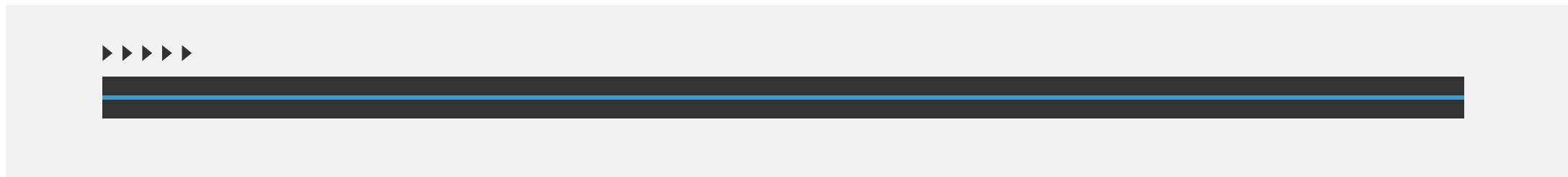
TEST GROUP - BRAND AD SHOWN

— Brand Sentiment Poll for Optimization

— Brand Lift Survey to Measure Success

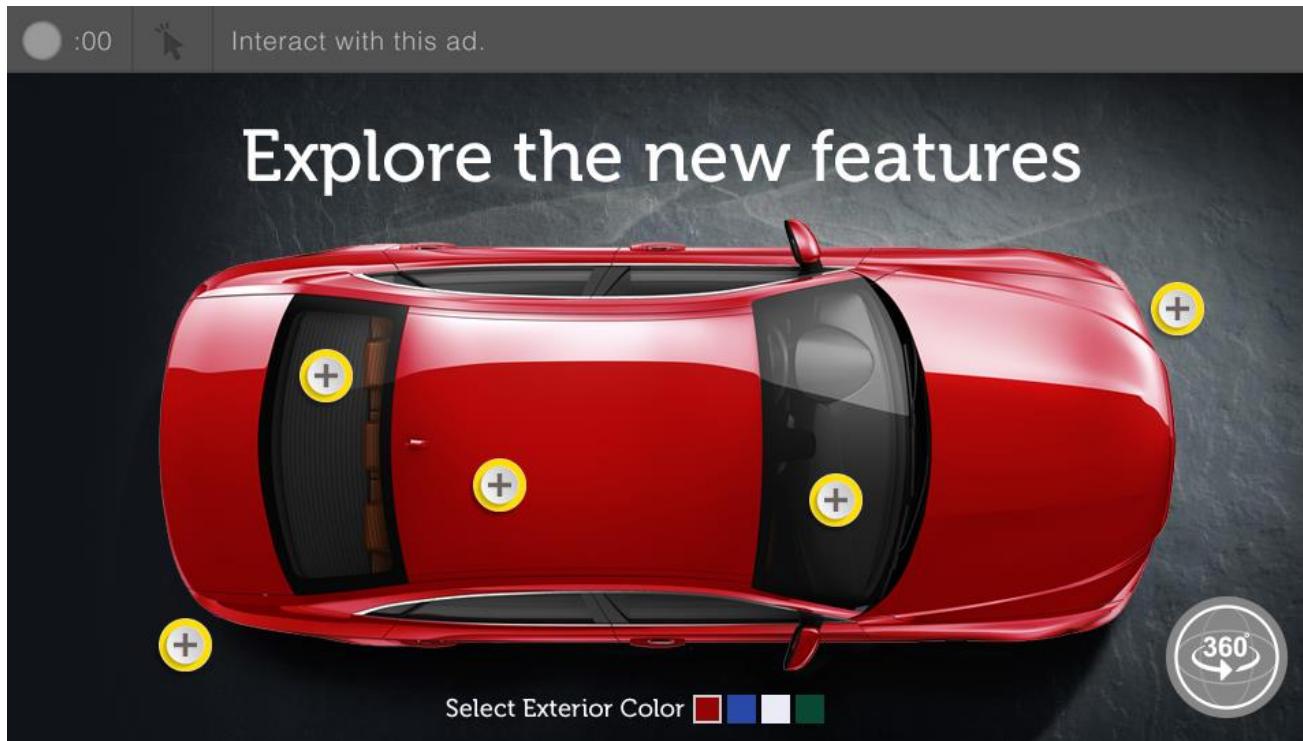


CONTROL GROUP - NO AD SHOWN

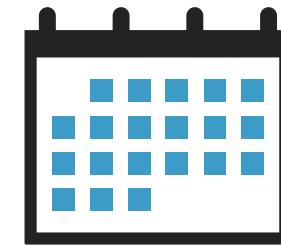


CAMPAIGN DETAILS

3 LIVE UP//LIFT CAMPAIGNS



TIMING



Each campaign/
measurement period was
approximately **1 month**

SAMPLE SIZE

N=5,750

AD FORMAT

User opt-in
:30 seconds
At least 1 interaction with
creative
100% share of screen



HUMAN VS. MACHINE
PUT TO THE TEST

HUMAN WORKED FINE.

IMPACT OF HUMAN DRIVEN CAMPAIGNS - DELTAS (TEST-CONTROL)

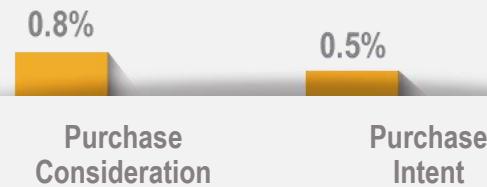
KNOWING THE BRAND



ENTHUSIASM FOR THE BRAND



BUYING THE BRAND



The Human



The Machine

*Significant difference from control group at p=0.1

Human N=3253, Machine N=4714

The control group was weighted separately to each exposed group to balance distributions of publisher, age, gender, income, and in-market status.*

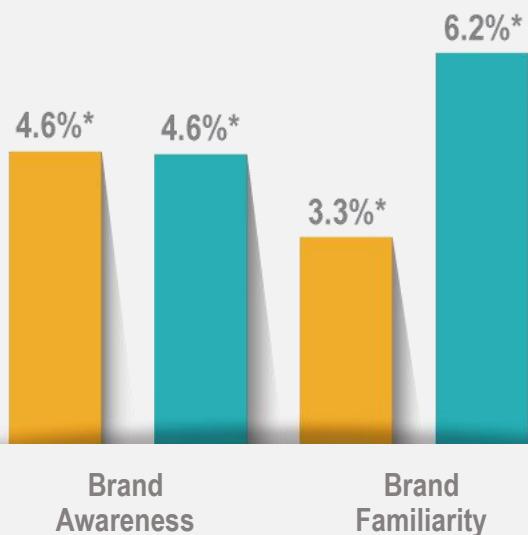
MACHINE WORKED BETTER.

IMPACT BY CAMPAIGN TYPE - DELTAS (TEST-CONTROL)

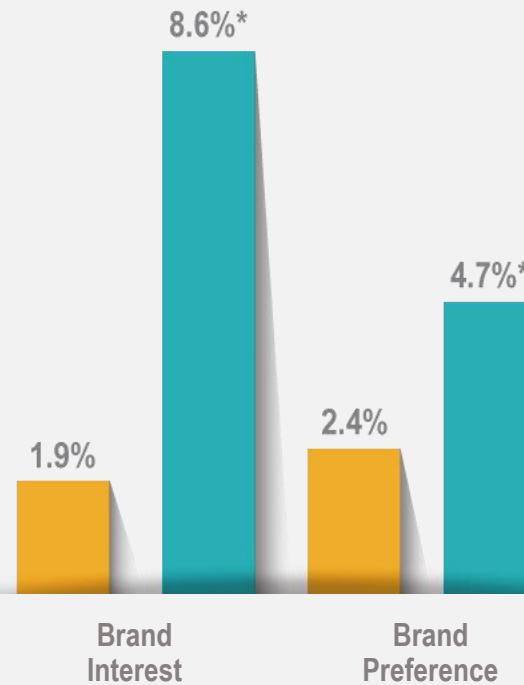


Machine drove better results in all areas of the purchase funnel

KNOWING THE BRAND



ENTHUSIASM FOR THE BRAND



BUYING THE BRAND



The Human



The Machine

*Significant difference from control group at p=0.1

Human N=3253, Machine N=4714

The control group was weighted separately to each exposed group to balance distributions of publisher, age, gender, income, and in-market status."

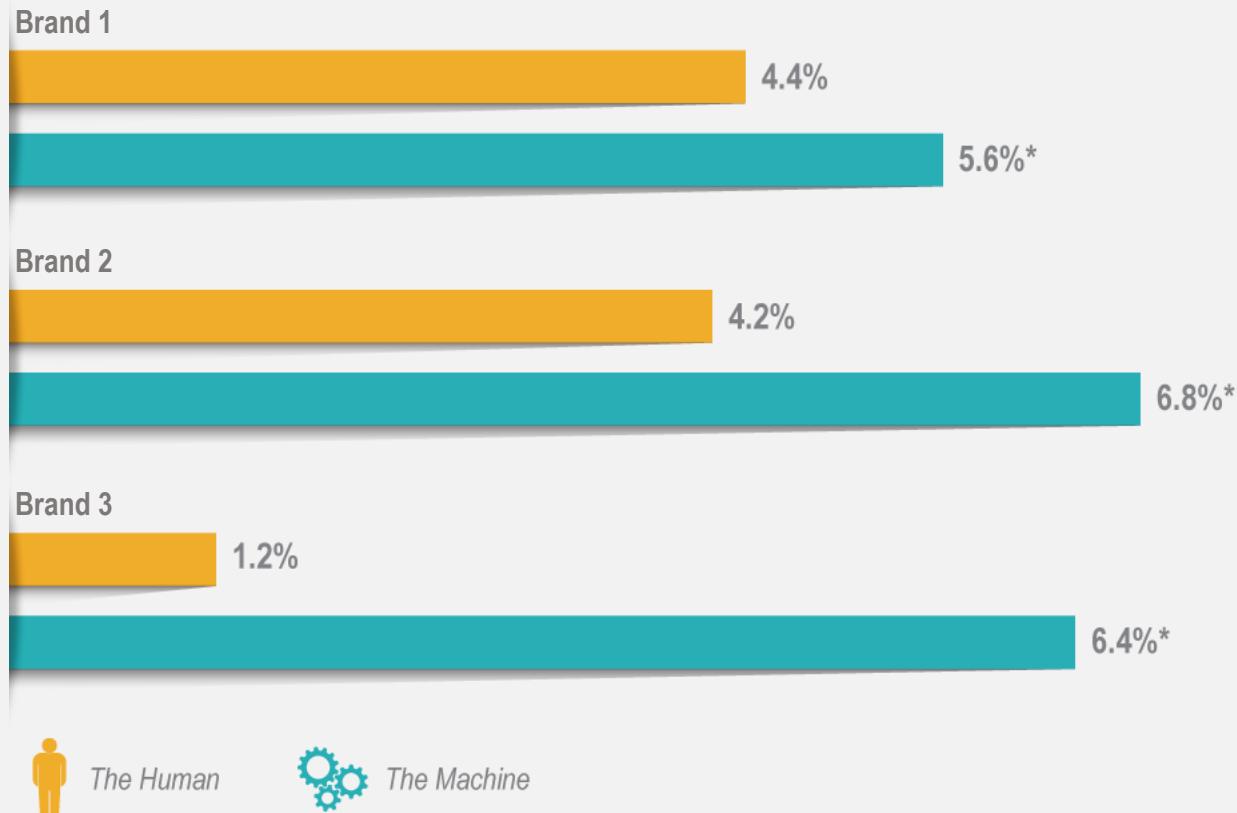


CAMPAIGN BY CAMPAIGN A CLOSER LOOK

WHEN THE MACHINE GETS TO KNOW THE CONSUMER, THE CONSUMER GETS TO KNOW THE BRAND

IMPACT ON 'KNOWING THE BRAND' - DELTAS (TEST-CONTROL)

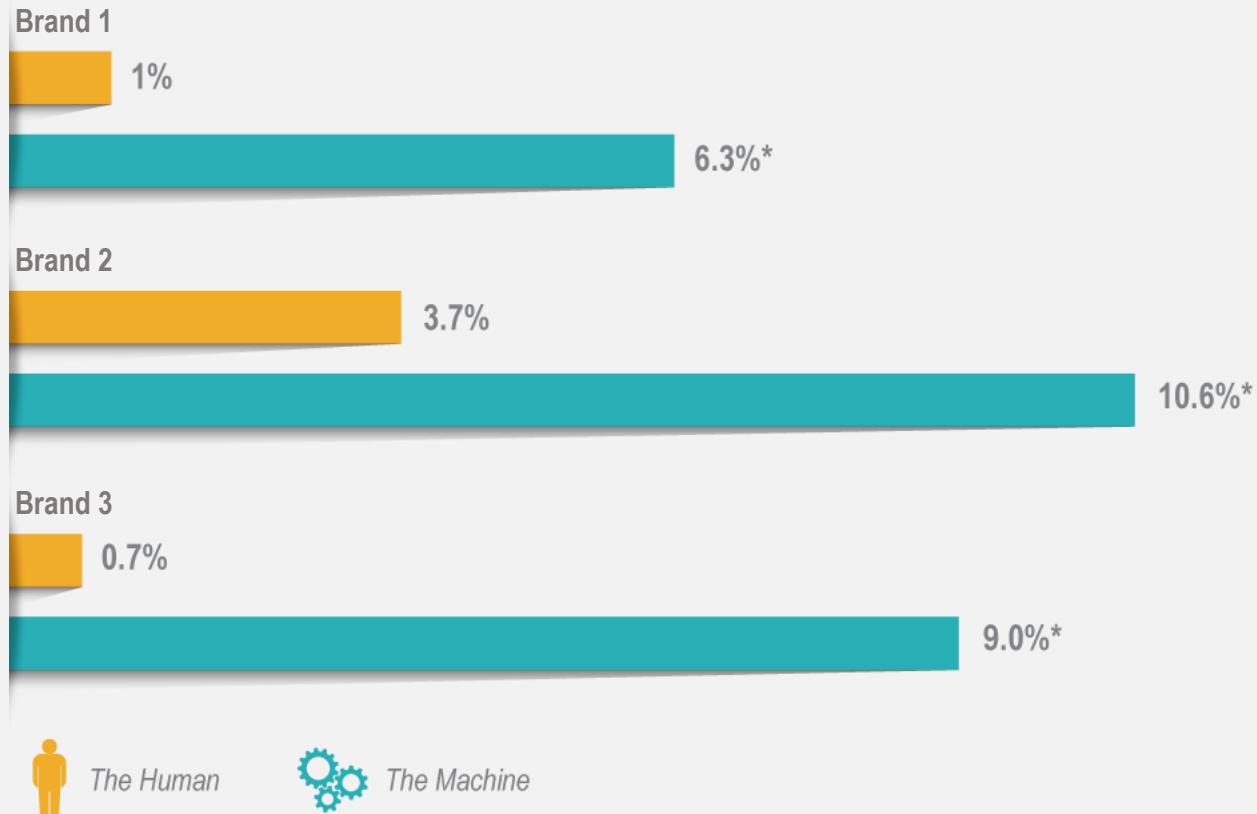
BRAND FAMILIARITY



THE MACHINE REACHES THE MOST RECEPTIVE AUDIENCE

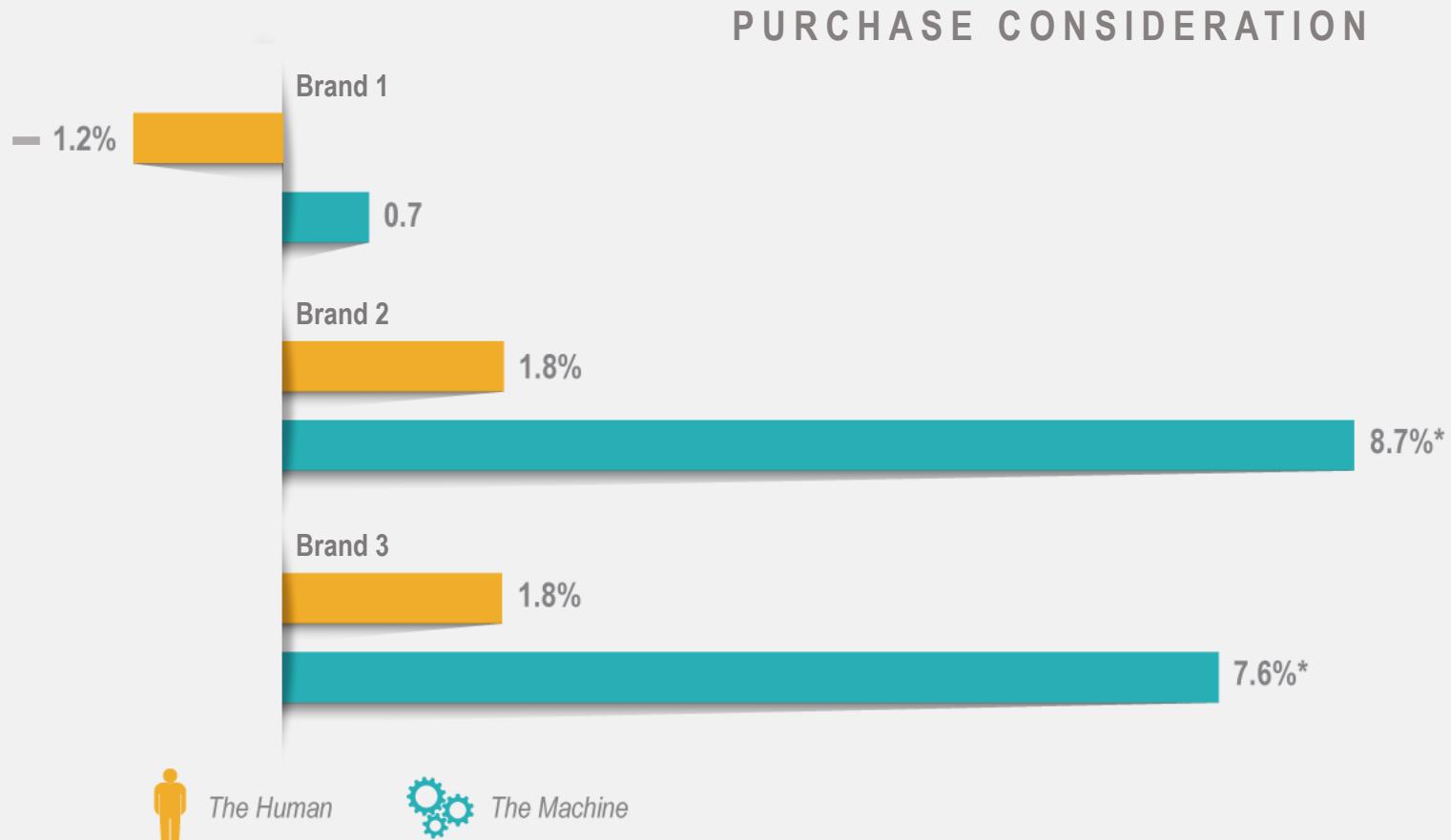
IMPACT ON 'ENTHUSIASM FOR THE BRAND' - DELTAS (TEST-CONTROL)

BRAND INTEREST



AND, ULTIMATELY PRIMES CONSUMERS TO MAKE A PURCHASE

IMPACT ON 'BUYING THE BRAND' - DELTAS (TEST-CONTROL)



**GREATER IMPACT
OCCURRED DESPITE
LOWER FREQUENCY**

AVERAGE FREQUENCY



THE HUMAN

4.13

Ad Exposures



THE MACHINE

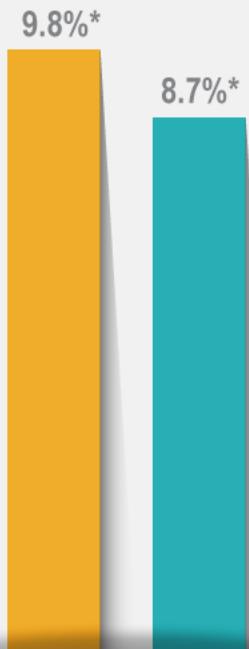
3.08

Ad Exposures

INITIAL EXPOSURES PRODUCE SIMILAR IMPACT ON FAMILIARITY, BUT MACHINE WAS MORE PERSUASIVE

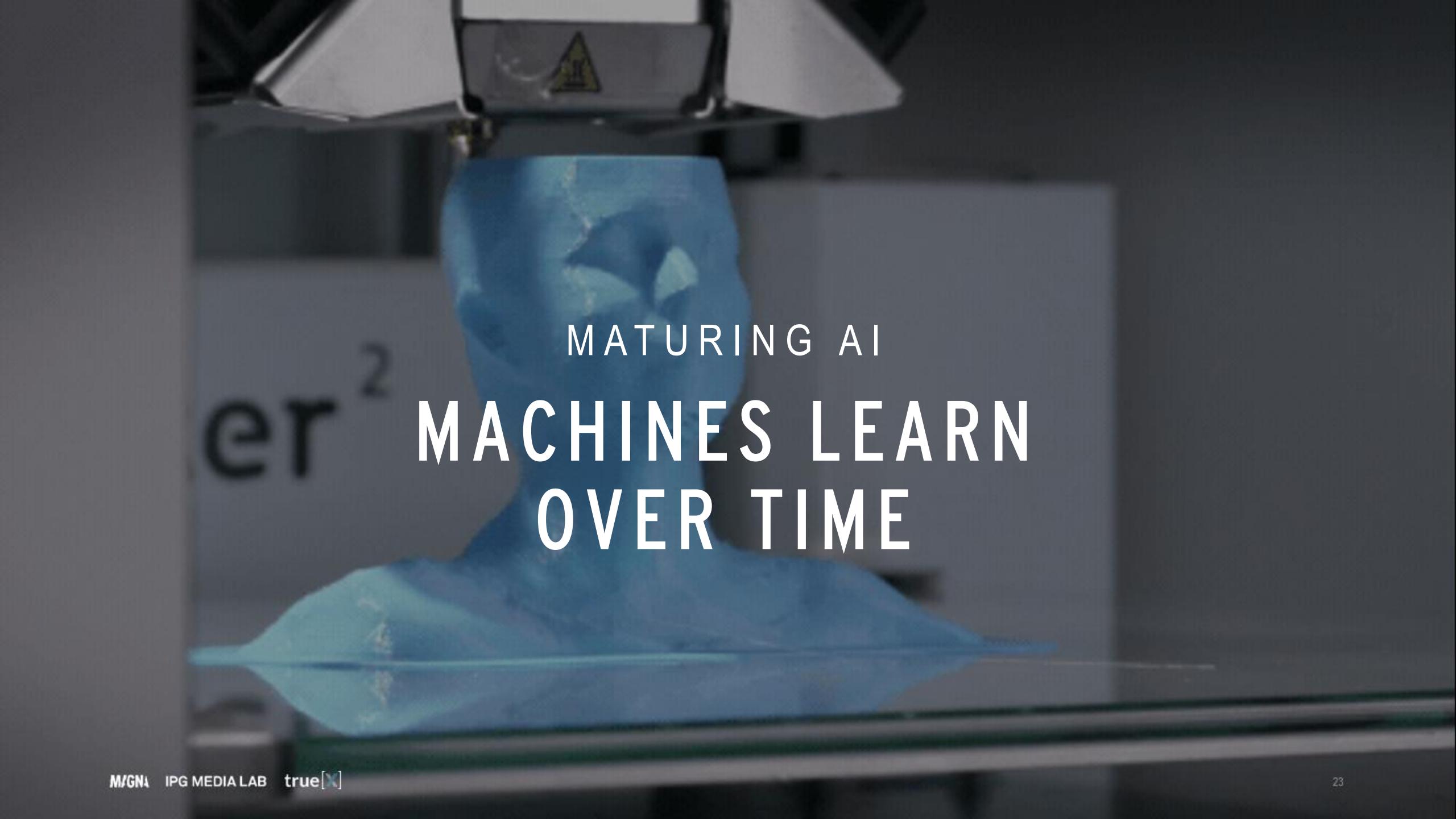
IMPACT AT FREQUENCY <=2 - DELTAS (TEST-CONTROL)

BRAND FAMILIARITY



PURCHASE CONSIDERATION

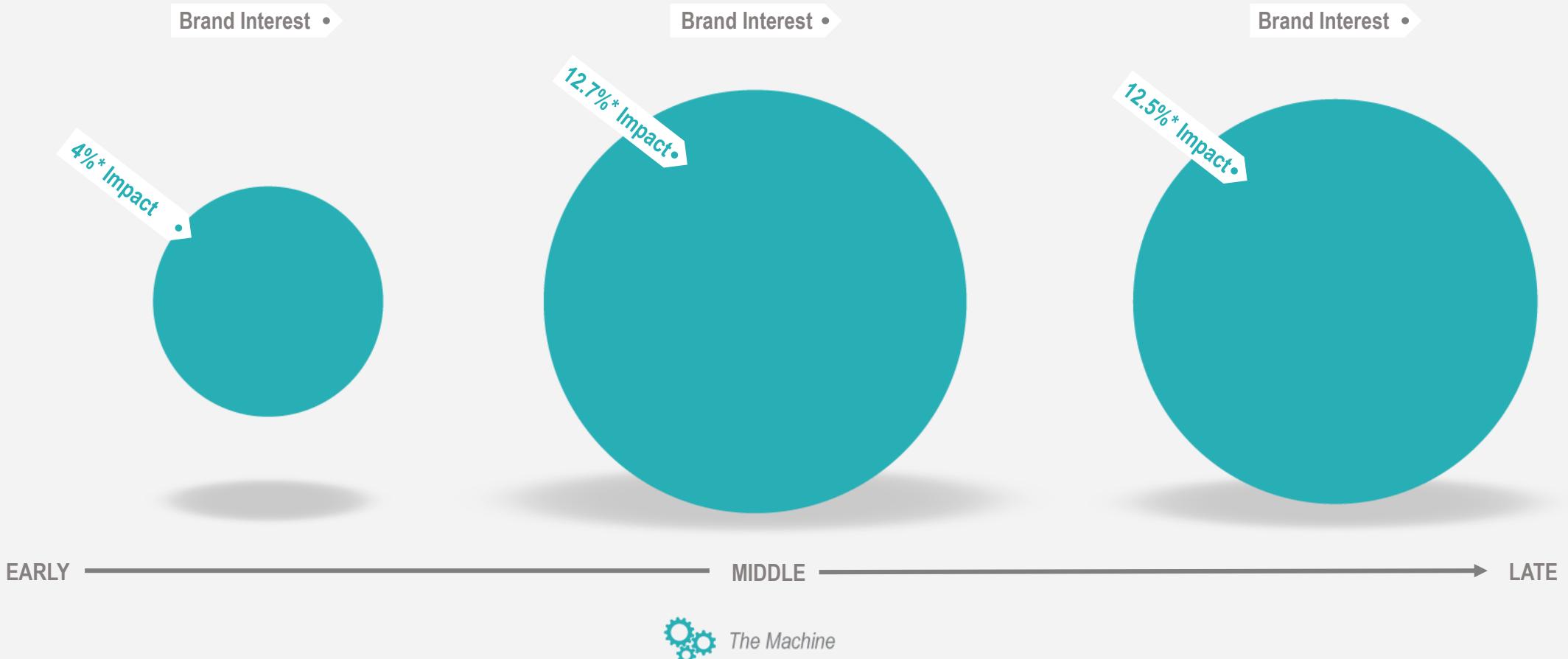


A close-up, low-angle shot of a 3D printer's extruder head. It is currently printing a blue, textured object, possibly a face or a similar organic shape. The printer is white with some black components. A small yellow warning label is visible on the top left of the extruder. In the background, the word "er" is partially visible, likely part of the printer's model name.

MATURING AI MACHINES LEARN OVER TIME

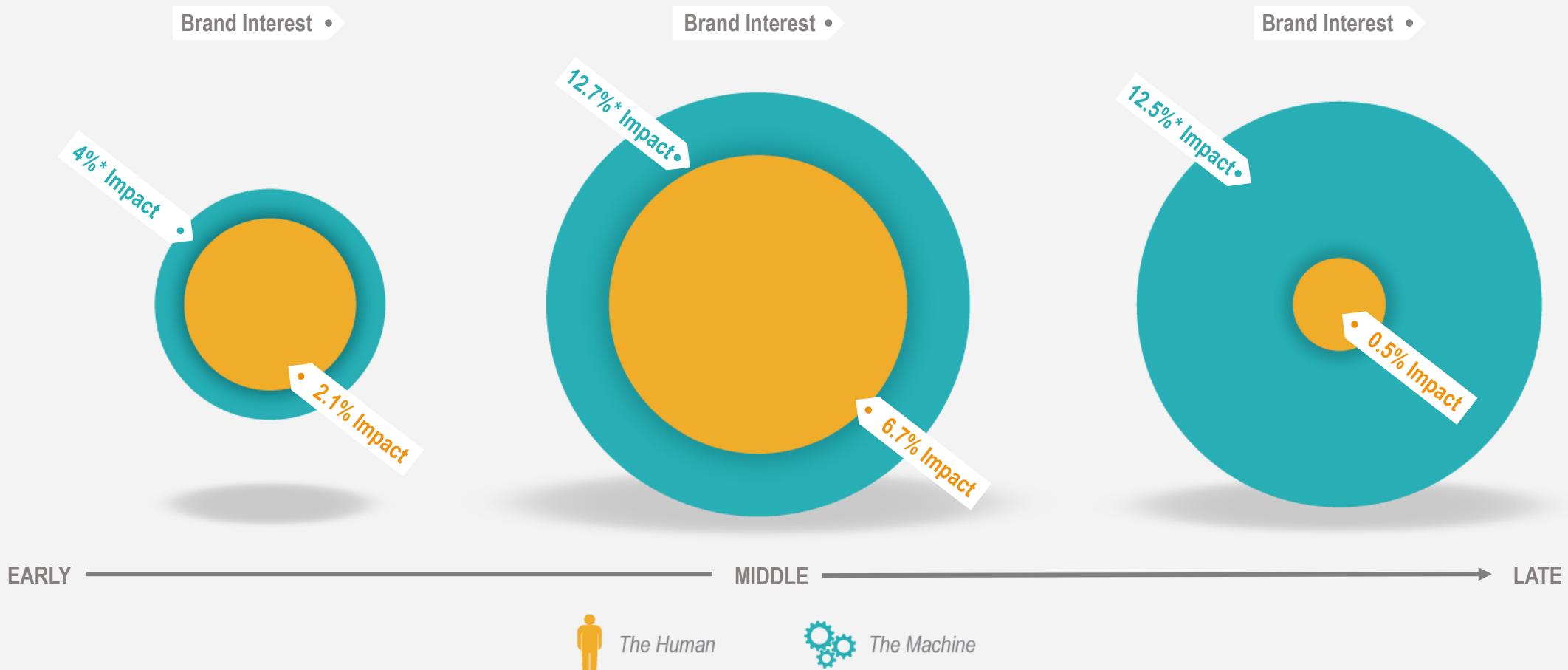
MACHINE BECAME SMARTER WITH MORE DATA

IMPACT ON BRAND INTEREST ACROSS TIME - DELTAS (TEST-CONTROL)



MOMENT BY MOMENT OPTIMIZATION NOT SEEN WITH HUMAN PLANNED CAMPAIGNS

IMPACT ON BRAND INTEREST ACROSS TIME - DELTAS (TEST-CONTROL)





SPEED OF DIGITAL ADVERTISING
**UNDERSTANDING
HUMAN LIMITATIONS**

CAN WE SIMPLY MIMIC THE
MACHINE'S LEARNING?

BOTH REACHED THE SAME OF THOSE IN-MARKET

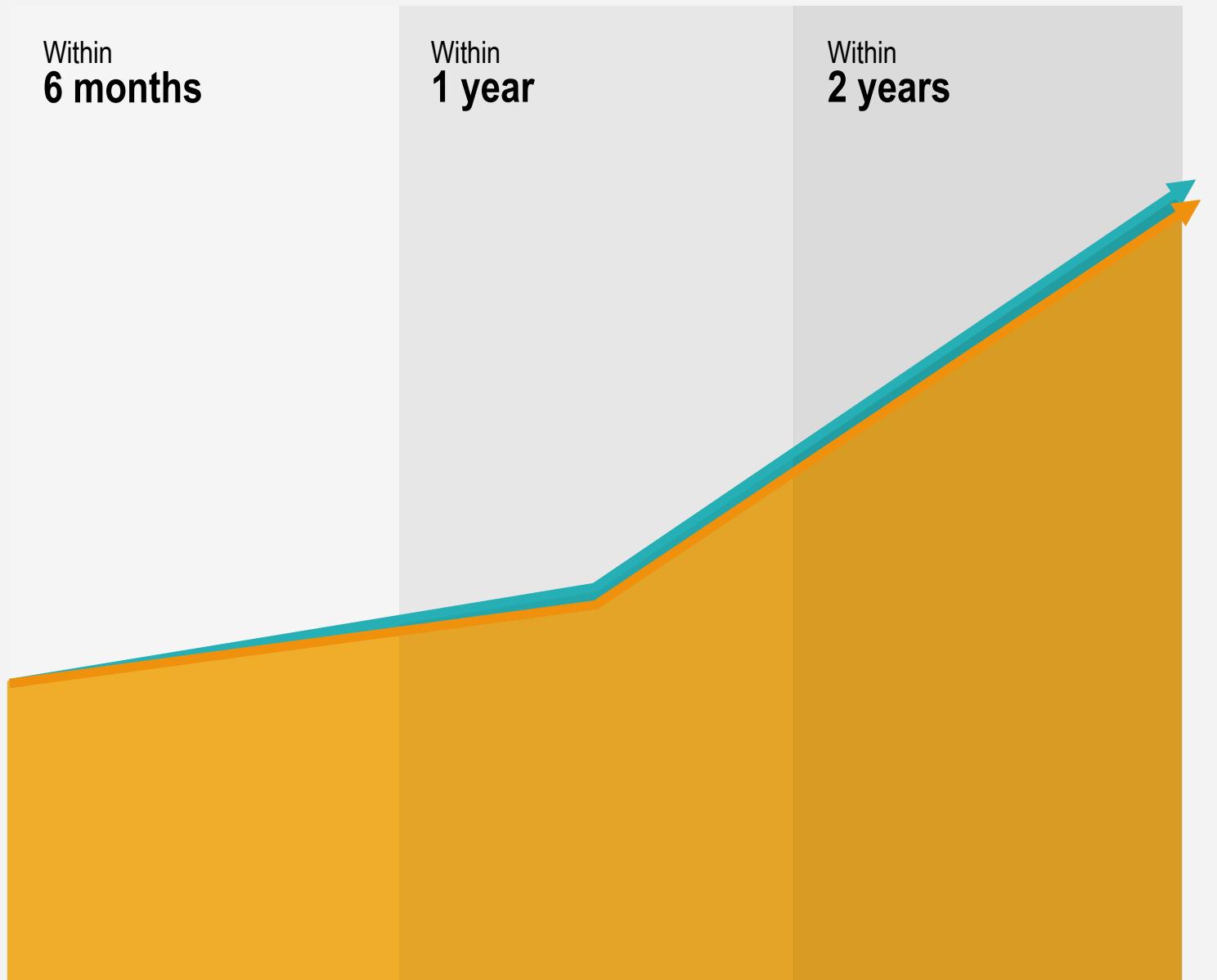
IN-MARKET FOR ADVERTISED PRODUCT BY CAMPAIGN TYPE



The Human



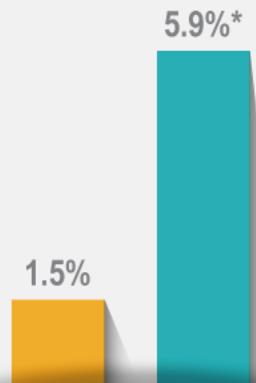
The Machine



MACHINE OUTPERFORMED AMONG THOSE IN-MARKET FOR THE ADVERTISED PRODUCT

IMPACT BY CAMPAIGN TYPE AMONG IN-MARKET FOR PRODUCT - DELTAS (TEST-CONTROL)

BRAND FAMILIARITY

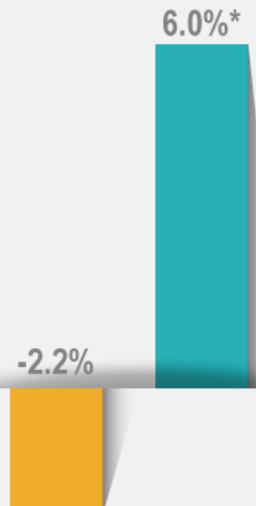


BRAND INTEREST



PURCHASE CONSIDERATION

The Machine didn't simply find more people in-market for the product. There's something more.



The Human



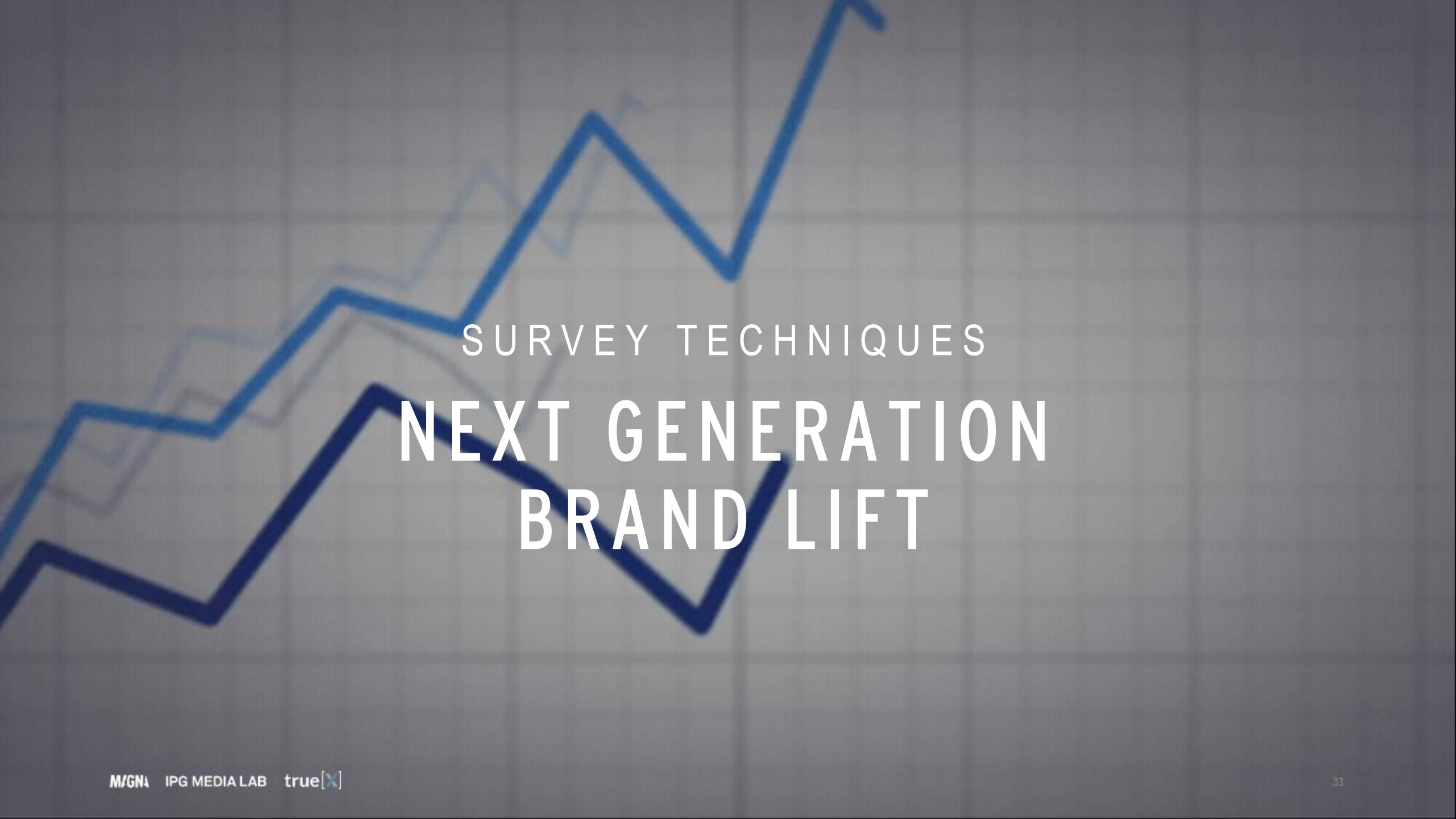
The Machine

IT'S THE VARIABLE HUMANS
CAN'T EASILY PINPOINT.

IT'S ONLY REVEALED
BY PATTERNS IN BIG
DATA. PATTERNS THE
MACHINE CAN FIND.

THE HIDDEN VARIABLE IS...

(AD RECEPΤIVITY)



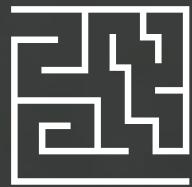
SURVEY TECHNIQUES

NEXT GENERATION BRAND LIFT

LONG SURVEYS ARE NOT FOR EVERYONE



HIGH
DROP-OUT
RATES



BURDENOME
CONSUMER
EXPERIENCES



FATIGUE LEADING
TO POOR
DATA QUALITY



MISSSED
OPPORTUNITIES
WITH HARD TO
REACH AUDIENCES

WHAT'S THE ALTERNATIVE?

TRADITIONAL BRAND LIFT SURVEYS

Survey Style

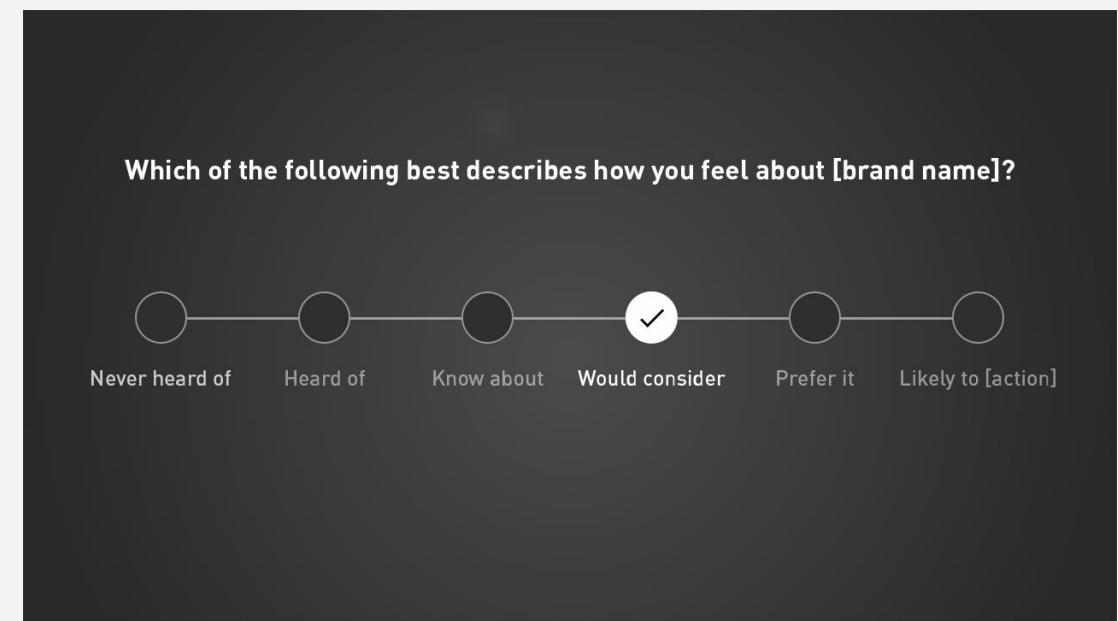
Matrix question for each metric in the funnel:



BRAND FUNNEL IMPACT (BFI) SURVEYS

Survey Style

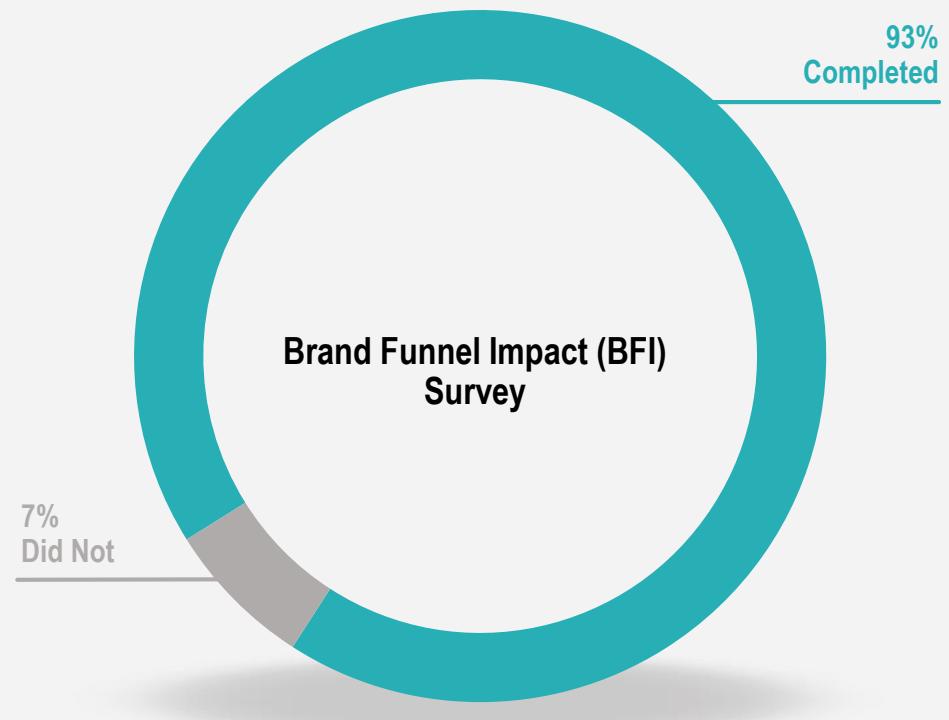
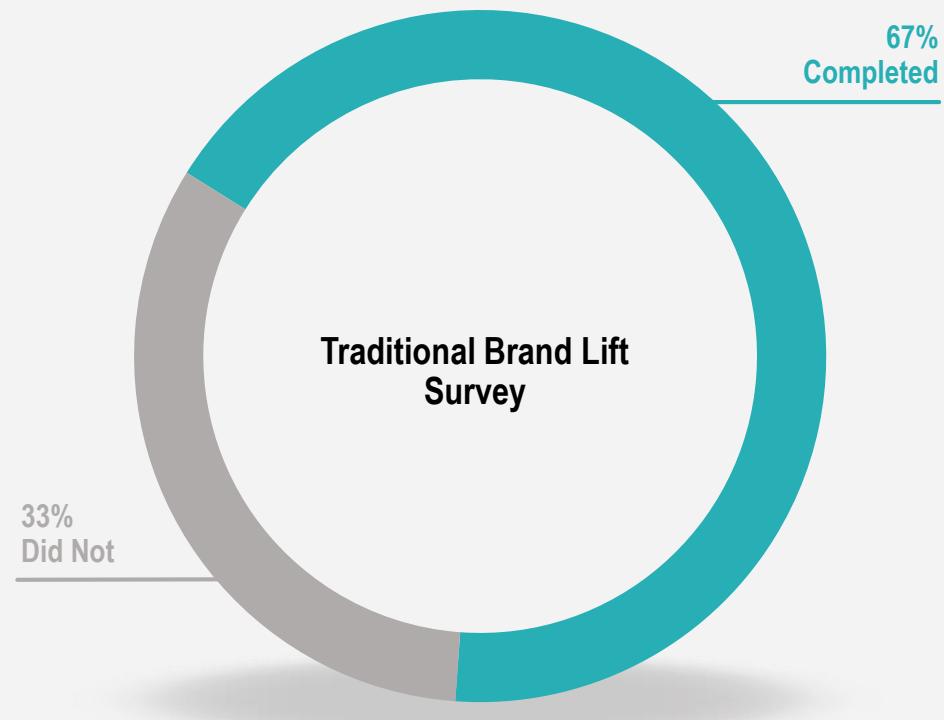
Asks a single question to shorten the survey experience::



THE SHORTER, THE SWEETER

IMPACT OF SURVEY METHOD | PERCENT WHO COMPLETED SURVEY

SURVEY COMPLETION

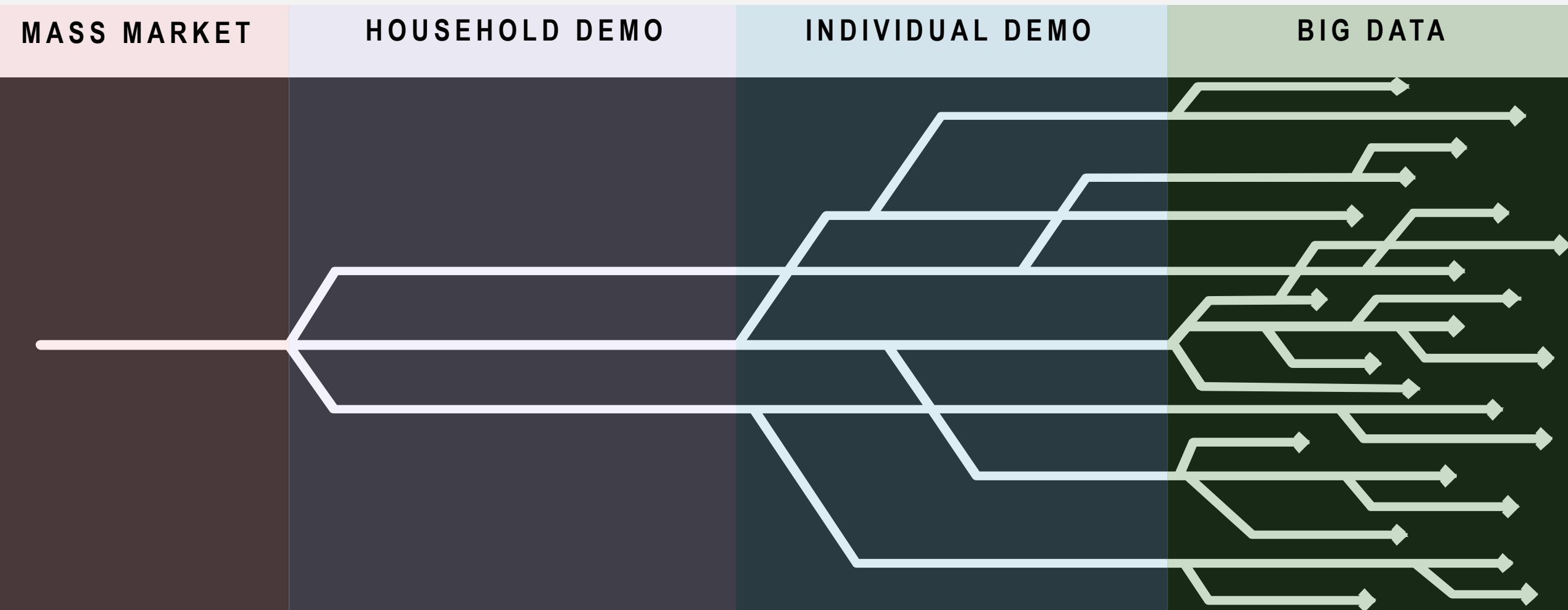




KEY FINDINGS

WE'VE COME A LONG WAY.

EXPLORE USING MACHINE LEARNING TO BROADEN YOUR TARGET AND AVOID MISSING OUT ON CONSUMERS WHO MAY BE RECEPTIVE TO YOUR AD.

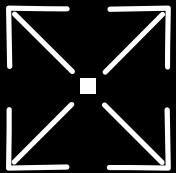


KEY FINDINGS



HUMANS + MACHINES

Leveraging machine learning for ad targeting allows humans to push beyond the confines of standard targeting techniques.



RECEPTIVITY. NOW TARGETABLE.

Machine learning can help identify and target the most receptive consumers, not just demographics. This translates into bigger impact on brand KPIs.



IT'S TIME FOR MEASUREMENT INNOVATION.

Consumer feedback fuels important marketing decisions. Marketers should aim to improve the consumer survey experience, by finding the right balance between survey length and data collection needs.