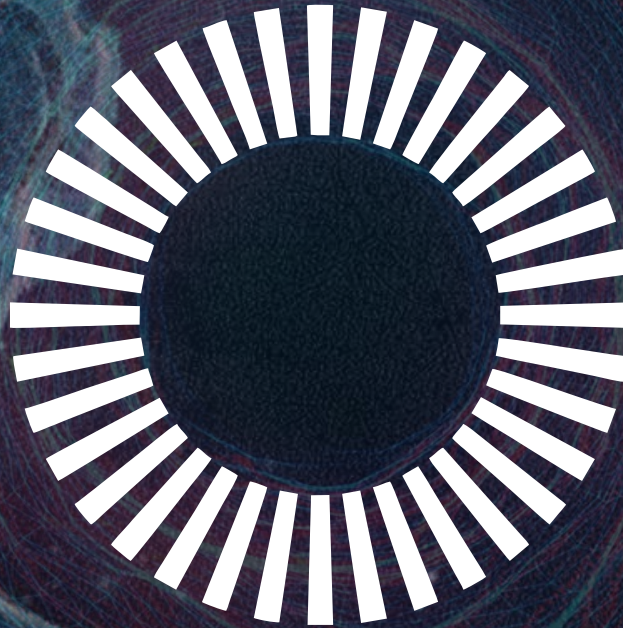


# 5G & XR

THE INTERCONNECTION BETWEEN THEM AND HOW THEY  
WILL TRANSFORM OUR WORLD

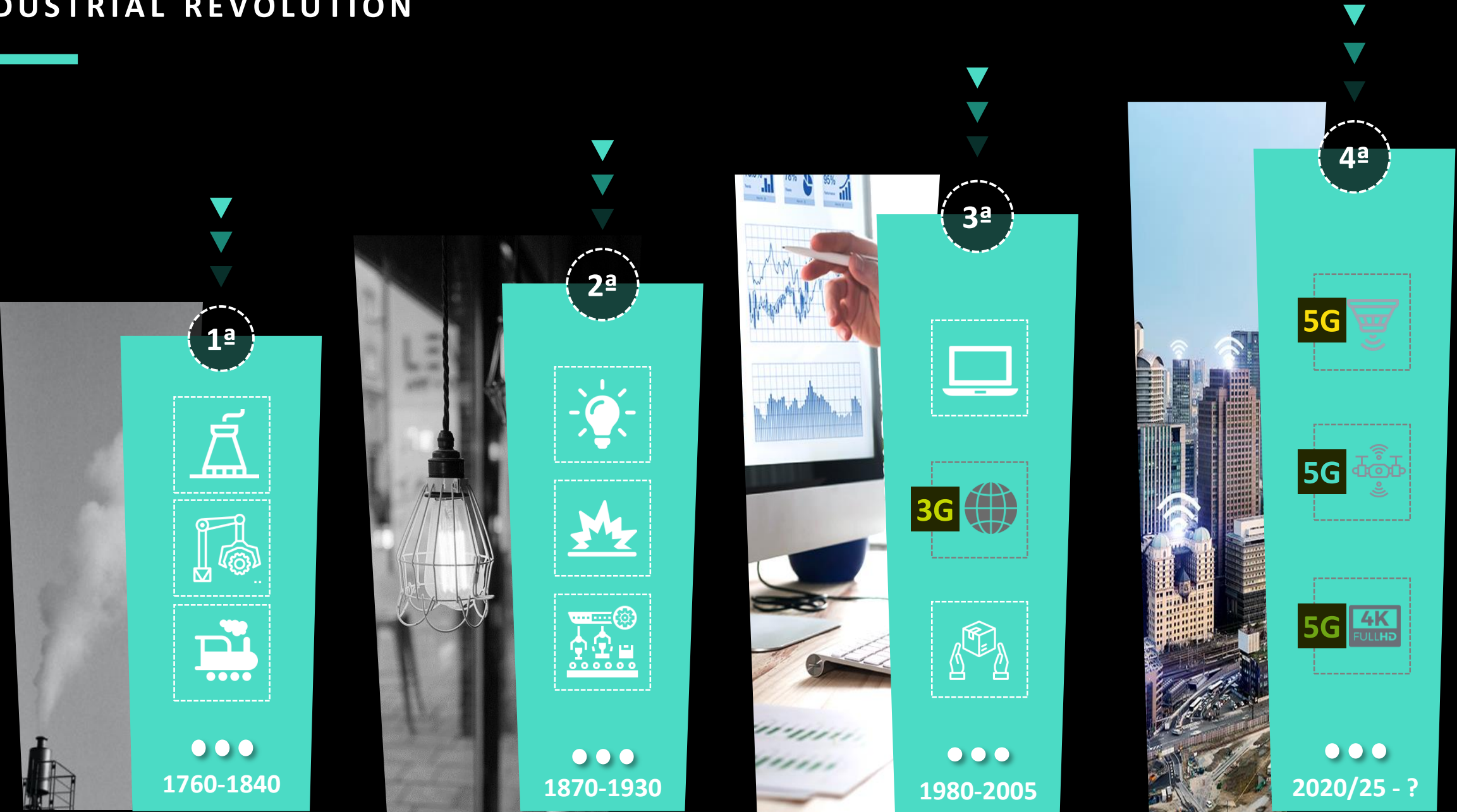


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APDC  
FEBRUARY 11<sup>TH</sup>, 2021



# 5G PROMISES TO BE THE ACCELERATOR OF AN UPCOMING INDUSTRIAL REVOLUTION



# THAT MARKS THE ENTRY INTO A 5.0 SOCIETY SUSTAINED BY THE EXPONENTIAL INCREASE OF DATA AND SUPER INTELLIGENT CONNECTED SYSTEMS

150B

DEVICES CONNECTED IN  
2025 AROUND THE  
WORLD

25%

DATA GENERATED IN **REAL  
TIME** IN 2025 (FROM 15%  
IN 2016)

175 ZB

OF **GLOBAL DATA** IN 2025  
(FROM 1.2 ZB IN 2010  
WITH ROLLOUT OF 4G)

40 TB

DATA VOLUME GENERATED  
BY AN **AUTONOMOUS CAR**  
IN 8 HOURS

00:01:20  
00:00:00am

00:01:20  
01:20:23am





# MIXED REALITY IS INDISPENSABLE TO CONSUME IN A MORE INTELLIGENT WAY ALL THIS INFORMATION



80%

COMPANIES THAT EXPECT VR/AR SOLUTIONS TO BE THE NORM WITHIN 5 YEARS

79%

ESTIMATED INCREASE IN VR/AR INVESTMENT IN 2020

15

INDUSTRIES THAT EXPECT TO SEE THEIR AR INVESTMENT GROW MORE THAN 100% BY 2025





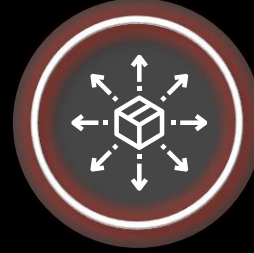
# AR/VR, EMPOWERED BY 5G, WILL TRANSFORM OUR DAILY LIVES, BUSINESSES AND SOCIETIES



LIVES



BUSINESSES



SOCIETIES



IT WILL TRANSFORM THE WAY...  
WE LIVE



...WE GET ACCESS TO CULTURE...



Local

● *Live*

**NOS Alive**

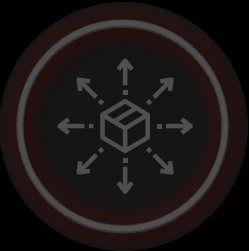
Palco NOS

Lotação

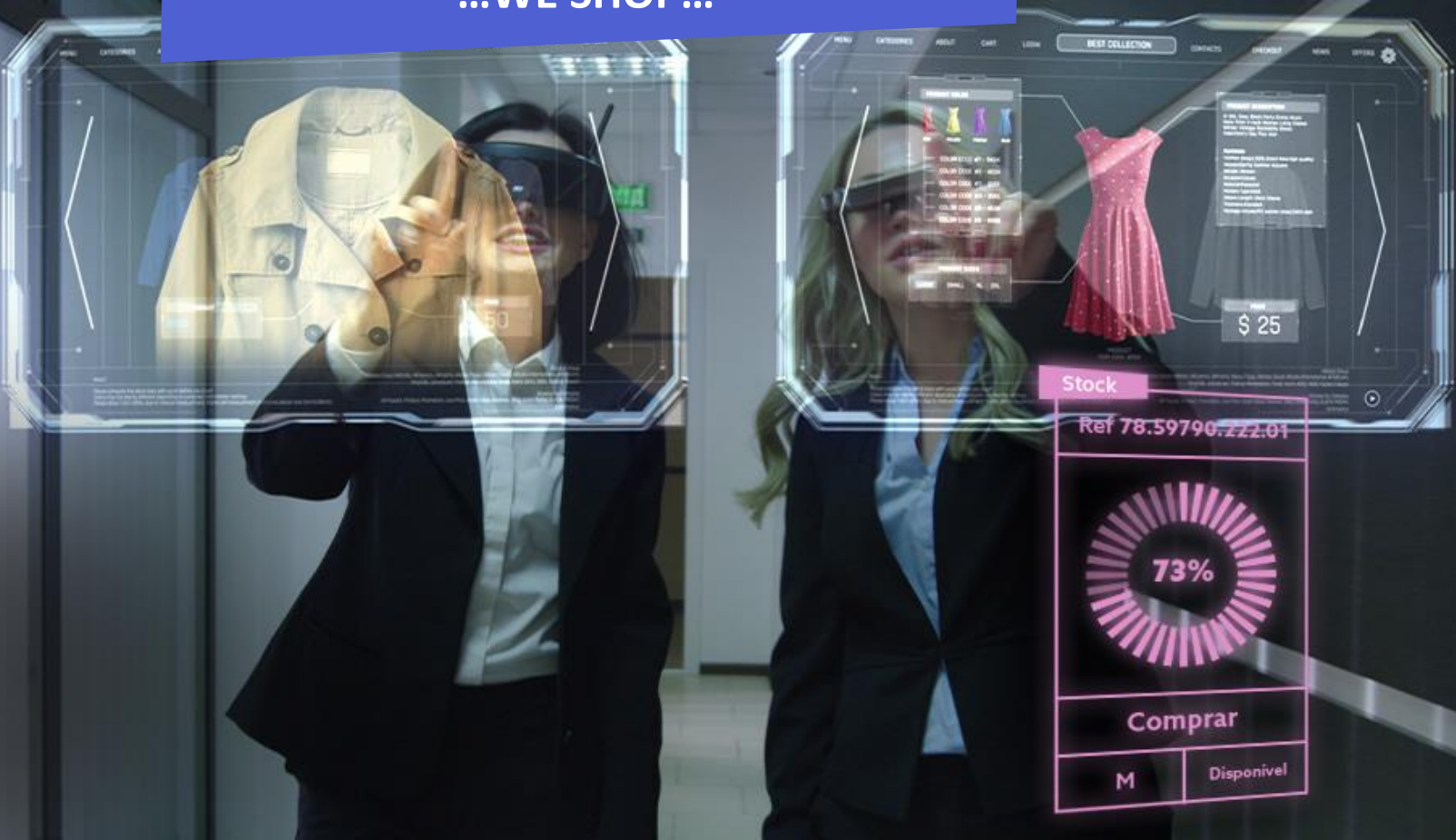




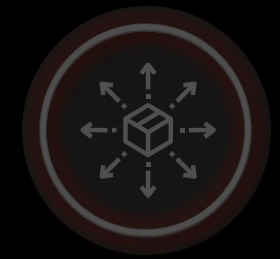
IT WILL TRANSFORM THE WAY...  
WE LIVE



...WE SHOP...



IT WILL TRANSFORM THE WAY...  
WE LIVE



...WE WATCH SPORTS...

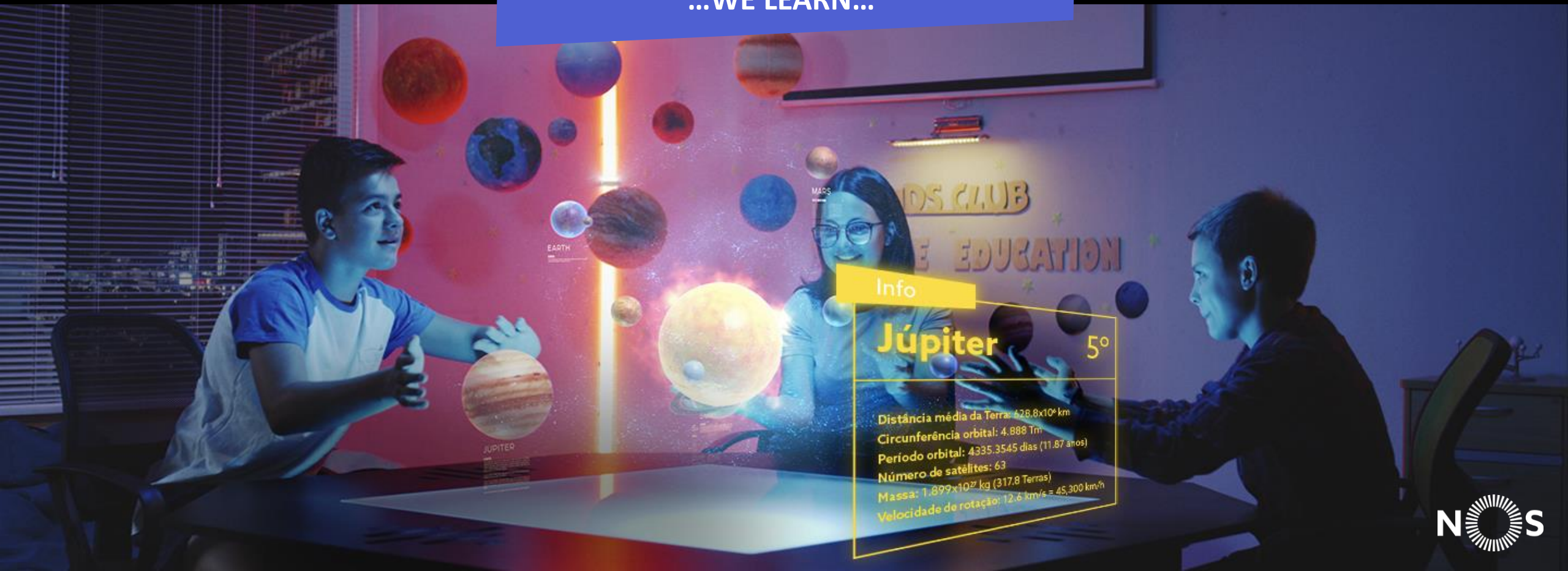




IT WILL TRANSFORM THE WAY...  
WE LIVE



...WE LEARN...

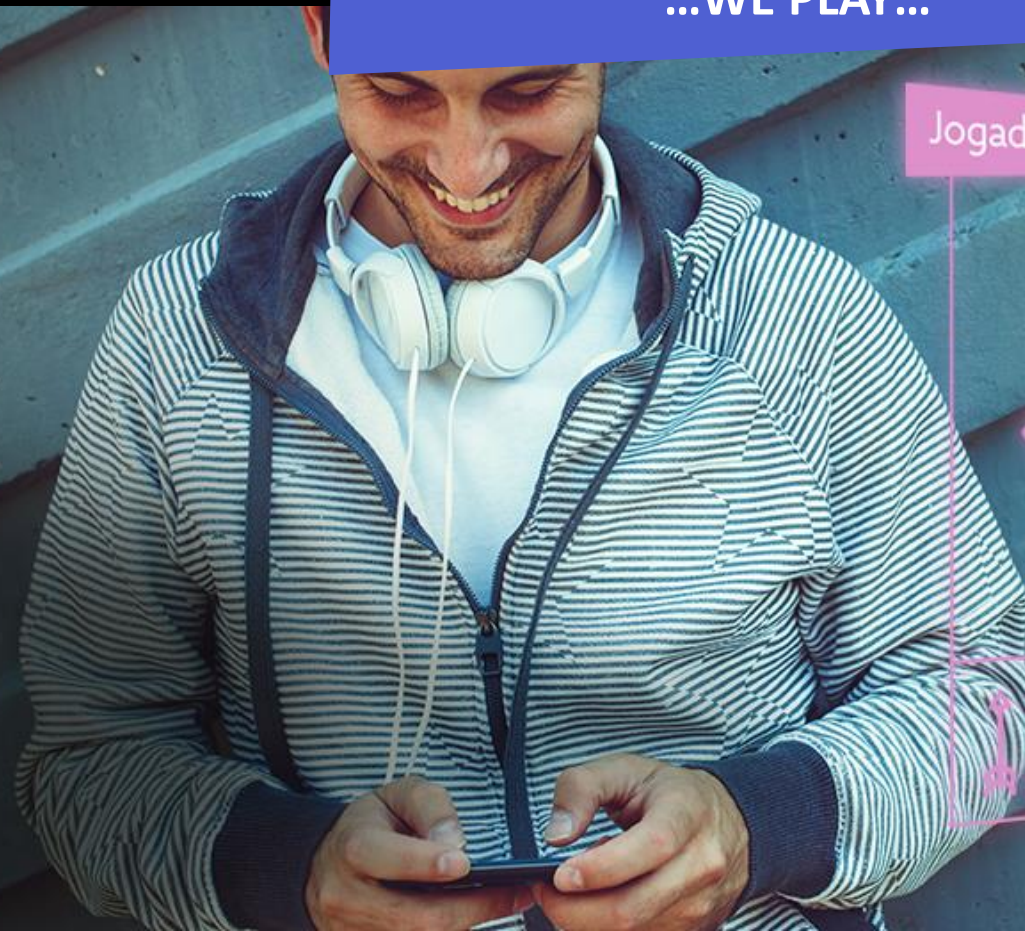




IT WILL TRANSFORM THE WAY...  
WE LIVE



...WE PLAY...



Jogador 1



520 pts



12/25



IT WILL TRANSFORM THE WAY...  
WE LIVE



...WE INTERACT WITH OUR HOMES...



Controles



Modo



Manual



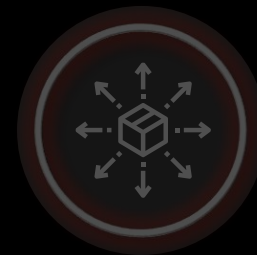
IT WILL TRANSFORM THE WAY...  
WE LIVE



...WE SPEAK...



IT WILL TRANSFORM THE WAY...  
COMPANIES WORK



...WE MANAGE OUR OPERATIONS...





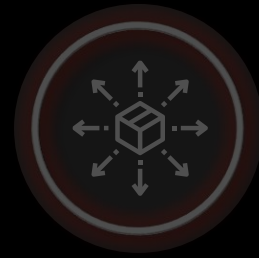
IT WILL TRANSFORM THE WAY...  
COMPANIES WORK



...WE TRAIN OUR EMPLOYEES...



IT WILL TRANSFORM THE WAY...  
COMPANIES WORK



...WE COLLABORATE...





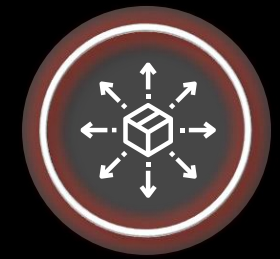
IT WILL TRANSFORM THE WAY...  
COMPANIES WORK



...WE INTERACT WITH CUSTOMERS...



IT WILL TRANSFORM THE WAY...  
SOCIETIES ARE ORGANIZED

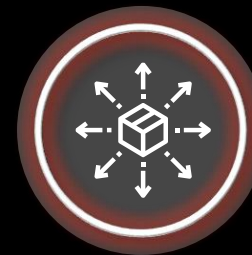


...WE OPTIMIZE FLOWS...

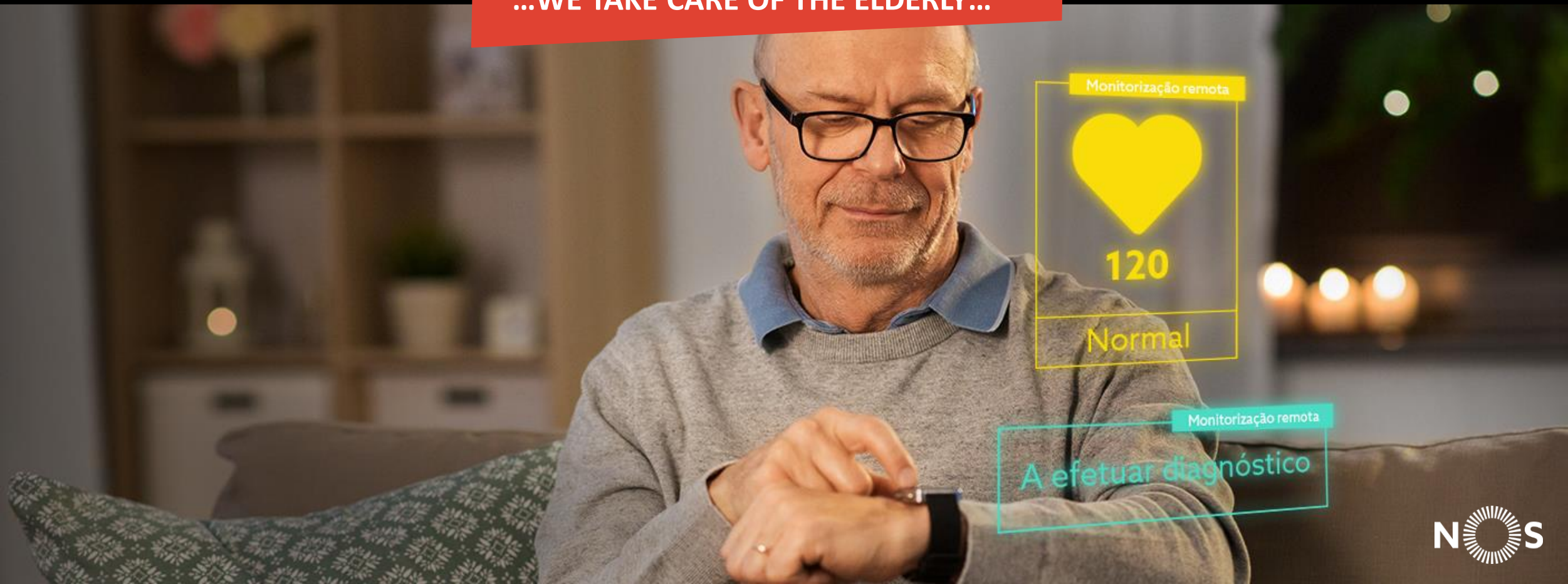




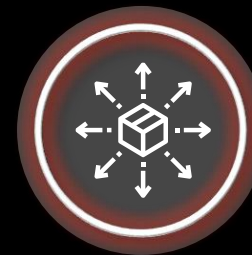
IT WILL TRANSFORM THE WAY...  
SOCIETIES ARE ORGANIZED



...WE TAKE CARE OF THE ELDERLY...



IT WILL TRANSFORM THE WAY...  
SOCIETIES ARE ORGANIZED

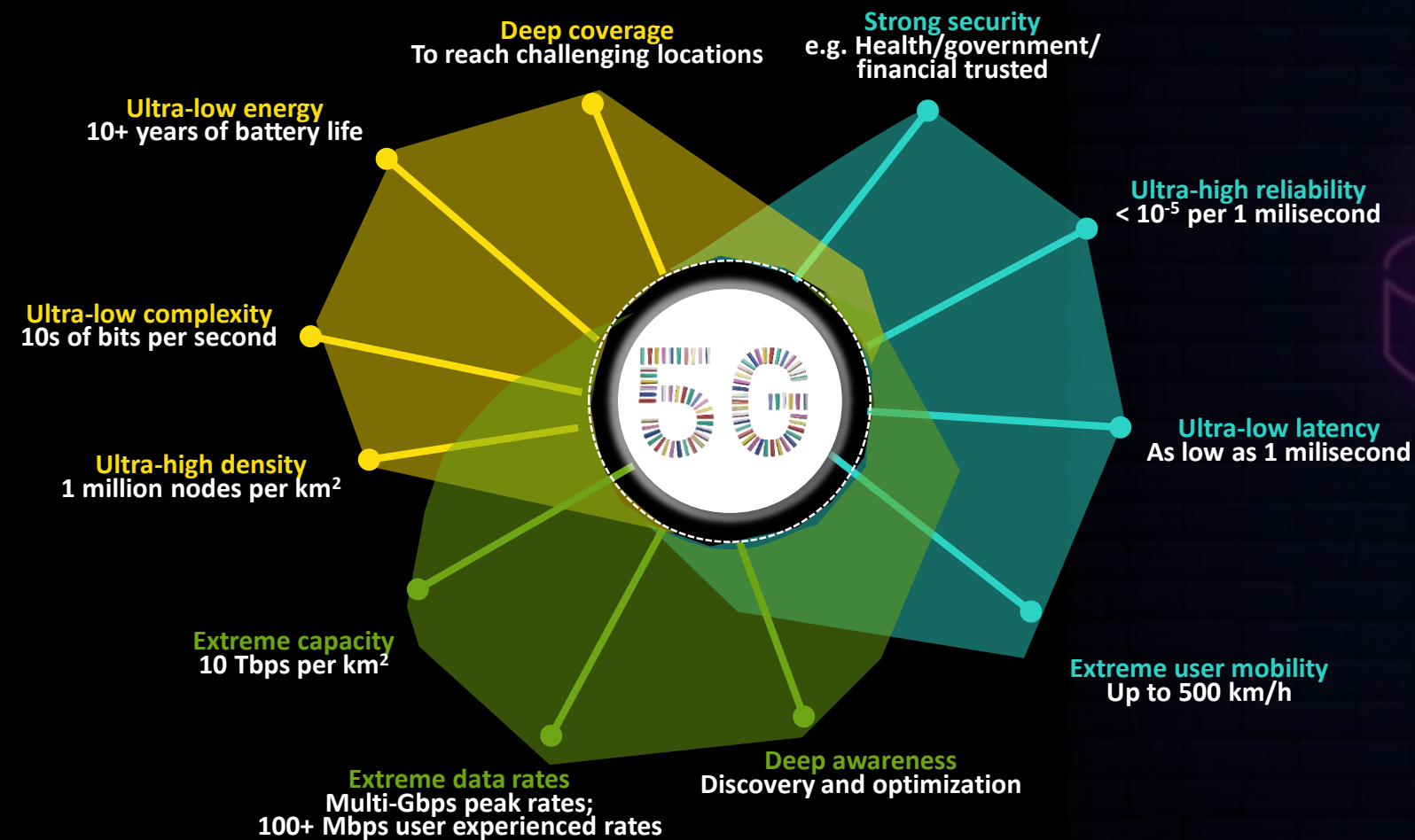


...WE MANAGE SERVICES...

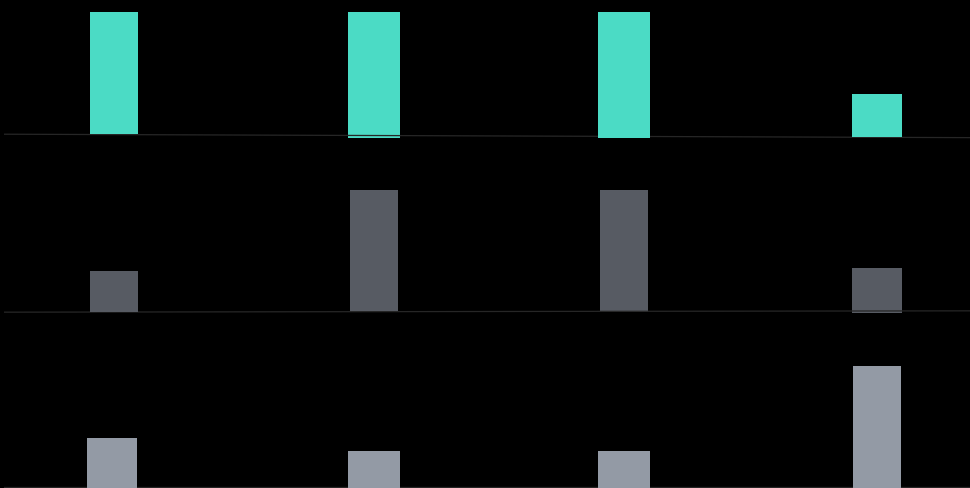
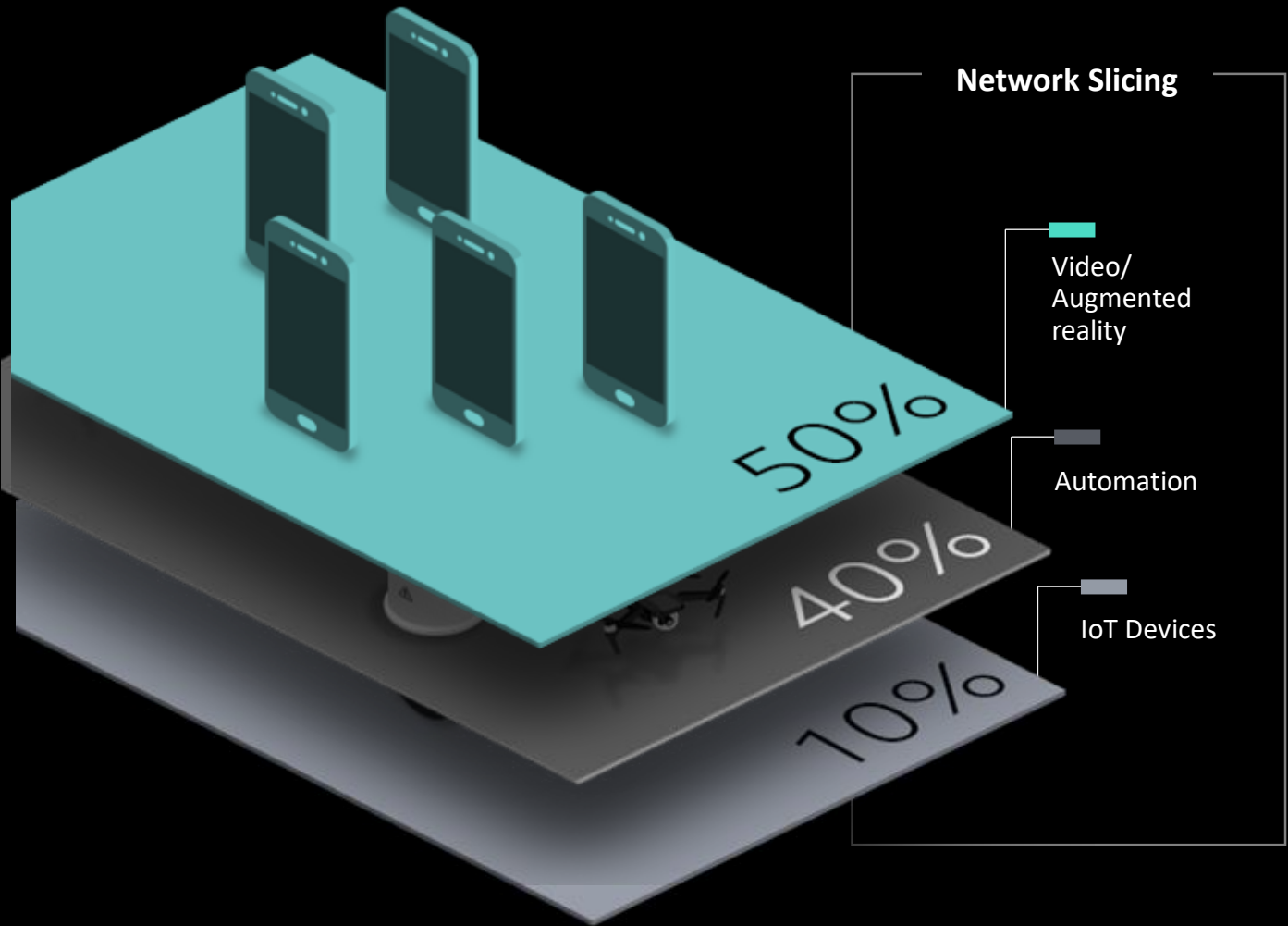




# FOR THIS REALITY TO BE POSSIBLE, A NETWORK OF HIGH CAPACITY AND RELIABILITY IS INDISPENSABLE



# ENSURING THE LATENCES, DEBITS AND RELIABILITIES NECESSARY WITH GUARANTEED SLAS





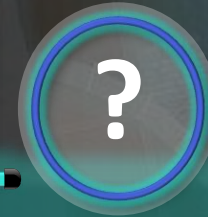
# NEVERTHELESS THE EXISTING MATURITY, THE FUTURE IS STILL TO BE DISCOVERED



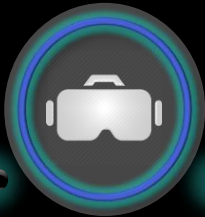
**HANDHELD/SMARTPHONE  
BASED**  
VR/AR por via do  
smartphone/tablet



**SMART GLASSES**  
Glasses with augmented  
and assisted reality  
technology



**THE FUTERE IS STILL TO BE  
DISCOVERED...**



**VIRTUAL GLASSES**  
Augmented and assisted  
reality glasses

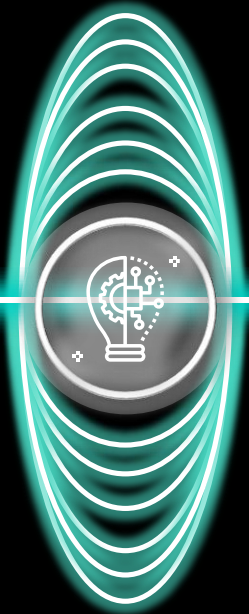


**HUDS**  
Projections made on  
transparent surfaces



**HOLOGRAMS**  
Interference pattern which  
uses diffraction to  
reproduce a 3D light field

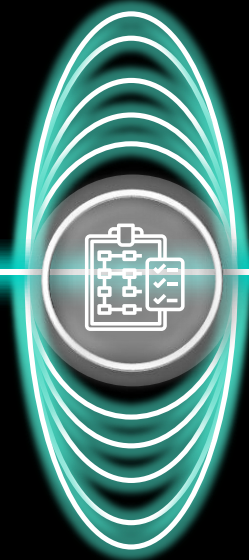
# BUT THE OPPORTUNITIES ALREADY EXIST AND IT IS ESSENTIAL TO TAKE ADVANTAGE OF THEM TODAY



01

## BRAINSTORMING

Identification and analysis of new opportunities and outline of the development process.



02

## TECHNOLOGY READINESS

Elaboration of a study focusing on the structuring of solutions and their technological feasibility.



03

## BUSINESS IMPACT

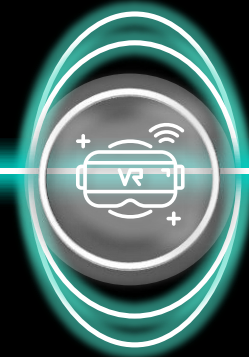
Evaluation of the business financial impact of solutions to be implemented in the medium and long term.



04

## ROAD MAP

Prioritization of opportunities, based on the analyses carried out and selection of pilots to be executed.



05

## VALIDATION

Development and implementation of prototypes for the selected solutions.



06

## SCALE

Large-scale implementation of validated solutions.

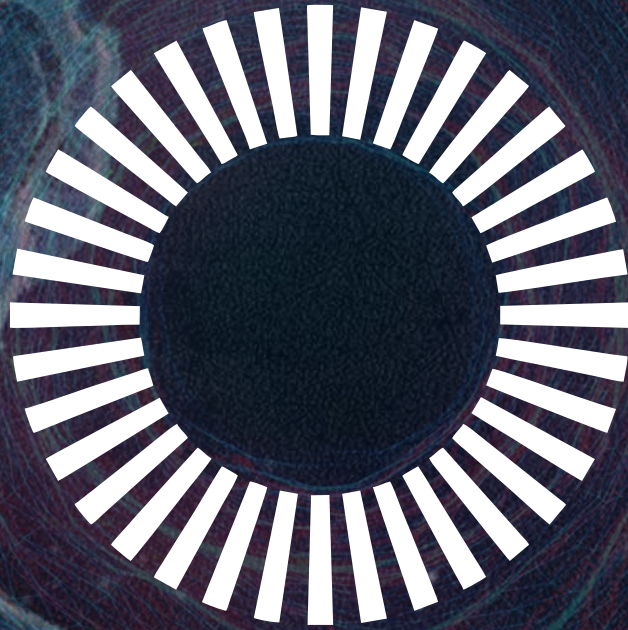






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