

General Partner



Partner



DIGITAL TRANSFO RMATION UKRAINE 2020



BusinessViews



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WHY DID WE MAKE THIS GUIDE

The main changes that are taking place in business today are digital. The use of digital technologies is a mandatory factor of competitiveness. Digital transformation is a process that promotes business competitiveness.

STRUCTURE OF REPORT



SOURCES

Darnitsa
 DTEK
 Інтерпайп
 Metinvest Digital
 Ministry of Digital Transformation of Ukraine
 The Official Website of Online Public Services Diia (Diia)
 AEQUO Law Firm
 Accenture

All Top Everything
 ARK Invest,
 Atos
 BizVibe
 Burning Glass Technologies
 Department for Environment, Food and Rural Affairs (Defra)
 Gartner
 Google AI Blog
 INGO

Innosight
 Kantar
 Kernel
 Knoema
 Lego
 McDonald's
 Meituan Waimai
 Newzoo
 Our World In Data
 Perception System

Prometheus
 PwC
 ScienceDirect
 sportbank
 Statista
 Wait But Why
 World Bank Group (WBG)
 World Economic Forum (WEF)
 Yahoo Finance



HUMANITY

AND

CHANGES

The digital age has only recently begun

IF WE CONSIDER HUMANITY AS THE LIFE OF GENERATIONS, THEN WE*

10 000
generations

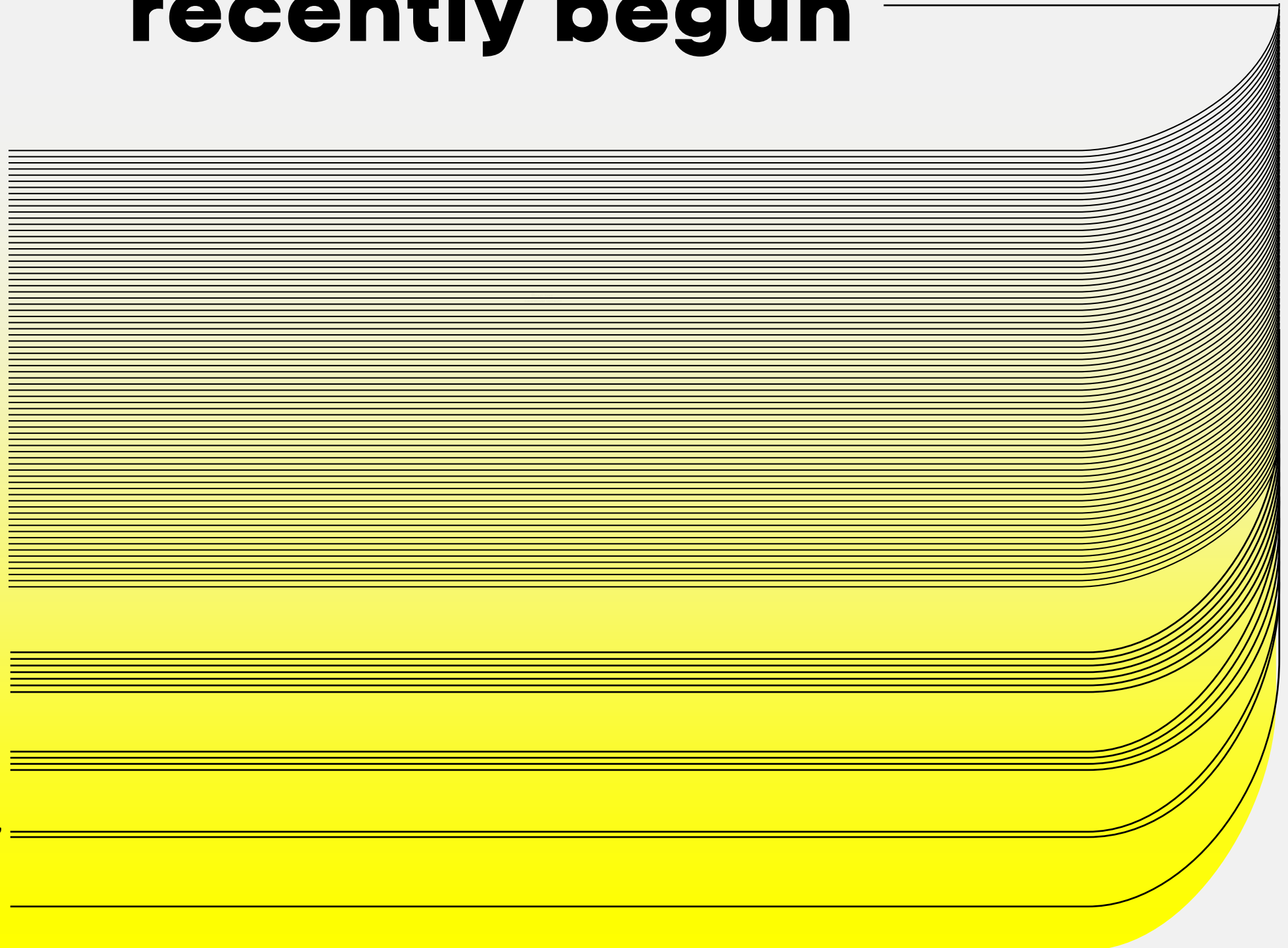
WE ARE HUNTER-GATHERERS

160 WE HAVE WRITING SYSTEM

30 WE PRINT

3 WE HAVE A PHONE, COMPUTER

1 WE LIVE WITH SMARTPHONE IN HAND



WE LIVE ON THE HORIZON

THERE HAS NEVER BEEN
SO MUCH CHANGE
AS THERE IS TODAY

THERE WILL NEVER BE
AS LITTLE CHANGE
AS THERE IS TODAY

GLOBAL GDP
trillion USD (PPP in prices of 2017)

0,2



1100

1900

2019

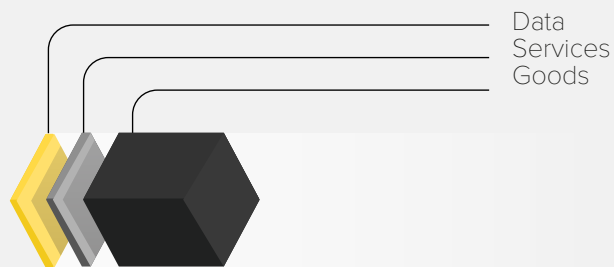
130

HOW THE ECONOMY IS CHANGING

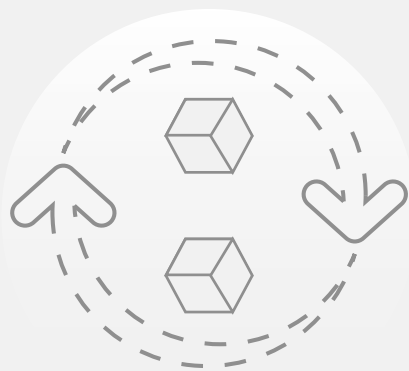
THERE ARE TWO MAIN COMPONENTS OF THE ECONOMY:
 THE GOODS WE CREATE 
 AND EXCHANGE OF THESE GOODS 

STATUS QUO ECONOMY

AGRICULTURAL AGE



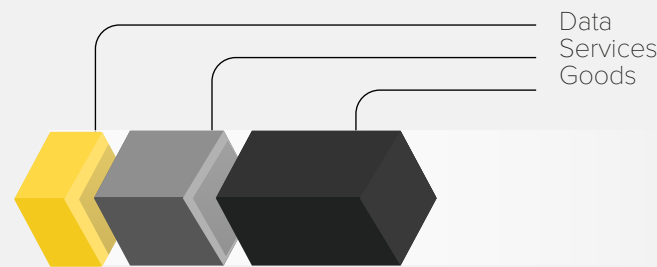
Commodities are almost all goods. And food and means of its production are almost all commodities



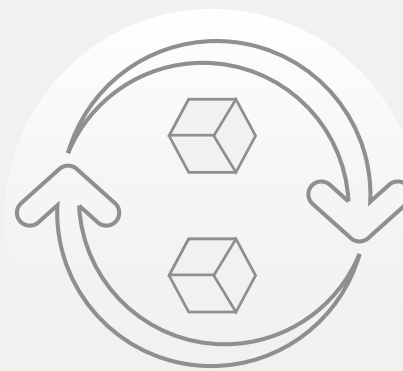
It is too early to talk about the market, there are only a few cases of exchange between households in a limited area. Almost always the producer and the consumer are the same person

ECONOMY OF DISCOVERY

INDUSTRIAL AGE



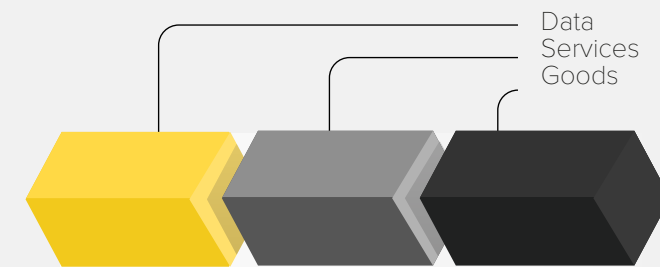
Mass production of goods is a new normal. The services sector is developing, a new value is emerging — data



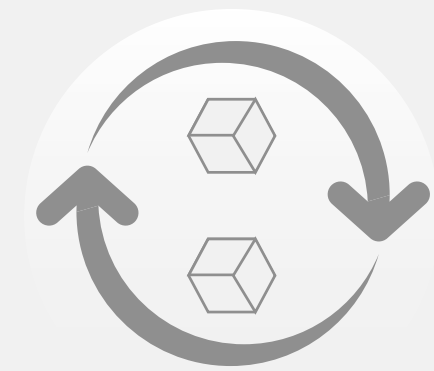
Exchange is a part of everyday life. The trade process is facilitated. Distance becomes less important, but the exchange is equally concentrated in separate areas and is not available to everyone

TRANSFORMATION ECONOMY

DIGITAL AGE



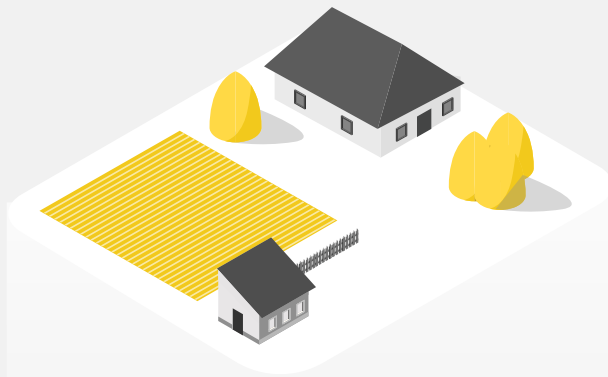
The basis of the economy is the sector of services, mostly intangible. Together with commodities, they become "more complex" every day. But the main goods — data and everything around it



The exchange is simplified, accelerated, and becomes cheaper. More and more people can trade with the whole world. Accelerating exchange accelerates the economy. Business platform model creates new markets - digital

ECONOMIES OF THE PAST AND PRESENT

STATUS QUO ECONOMY



AGRICULTURAL AGE

WEATHER BEATS EVERYONE



The one who best manages what he has and preserves what he has achieved survives. Stability is the main advantage

HOE

ECONOMY OF DISCOVERY



INDUSTRIAL AGE

BIG BEATS SMALL



Leadership belongs to the greatest, they are able to spend money on research. The invention is the main advantage

ELECTRICITY

KEY TECHNOLOGY

TRANSFORMATION ECONOMY



DIGITAL AGE

FAST BEATS SLOW



A startup can turn the industry upside down in one day. Implementing change is the main advantage

CODE

FEATURES OF THE DIGITAL AGE

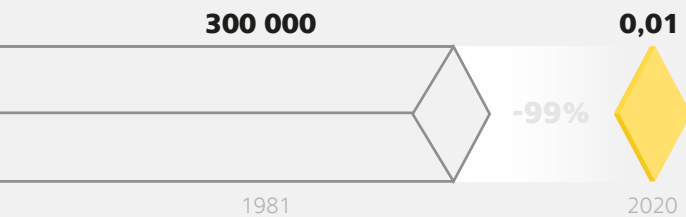
DIGITAL TRANSFORMATION IS A NEW MILESTONE OF CHANGE, WHICH IS CHARACTERISED BY THREE DIRECTIONS

COMMODITIZATION

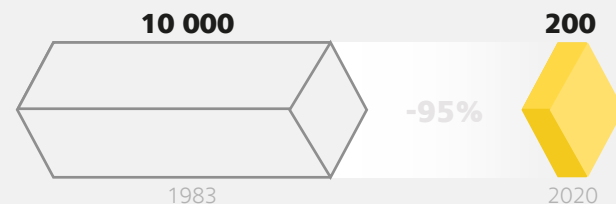
Advanced technologies turn into cheap "raw materials"

TECHNOLOGY COST REDUCTION, USD

GB OF DISK MEMORY



CELLPHONE

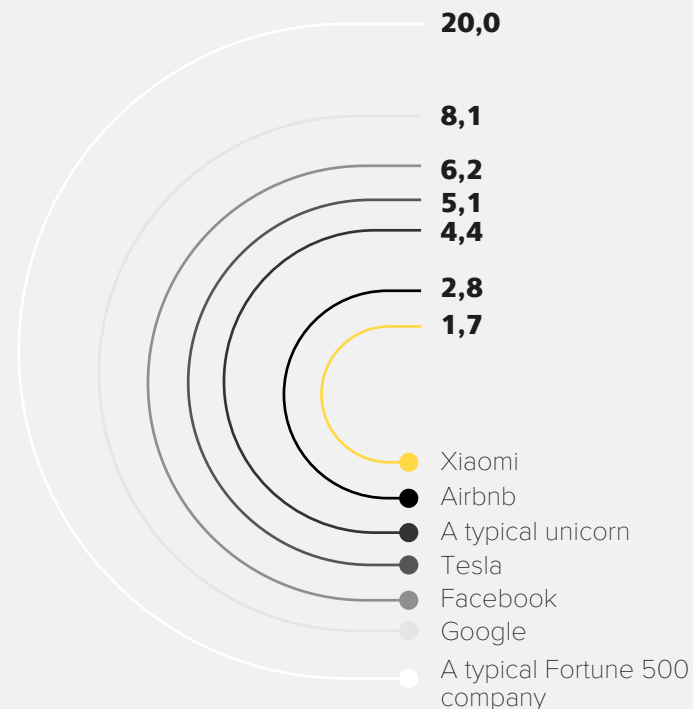


COMPETITION

Changes are instant: a few years — and the startup is transforming the industry

THE TIME IT TAKES TO BECOME A "UNICORN", years

YEARS REQUIRED TO ACHIEVE A 1 BLN USD VALUE

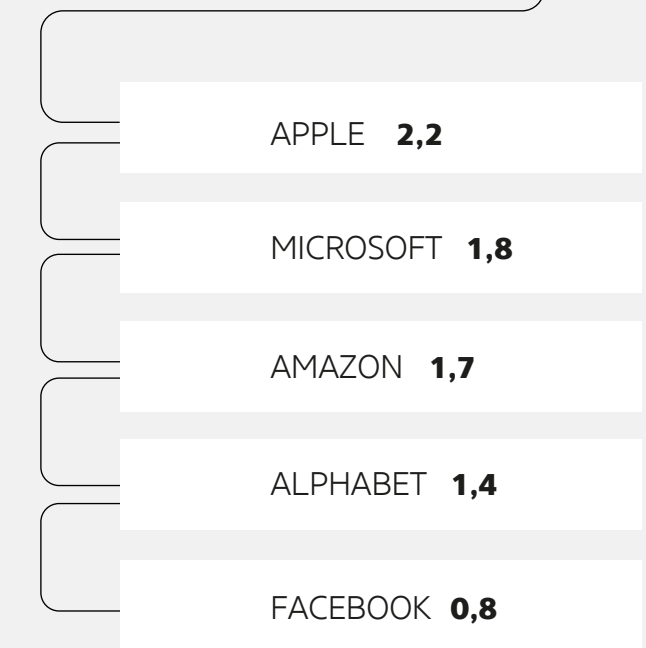


DIGITIZATION

Intangible assets become fixed

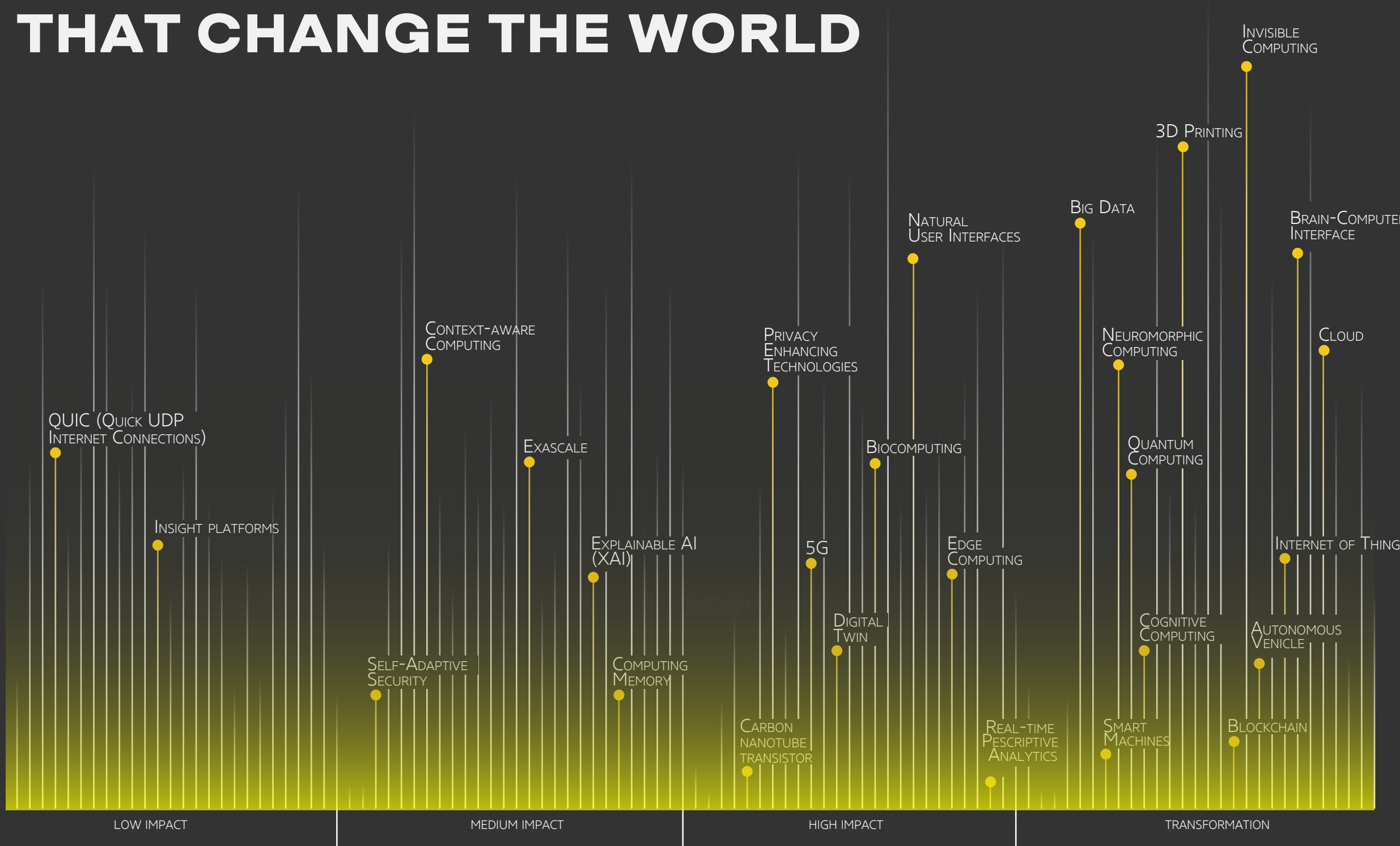
TOP-5 LARGEST COMPANIES IN THE WORLD ARE DIGITAL, January 2021, capitalization, trillion USD

January 2021, capitalization, trillion USD



TECHNOLOGIES THAT CHANGE THE WORLD

BRICKS OF THE NEW ECONOMY



TECHNOLOGY

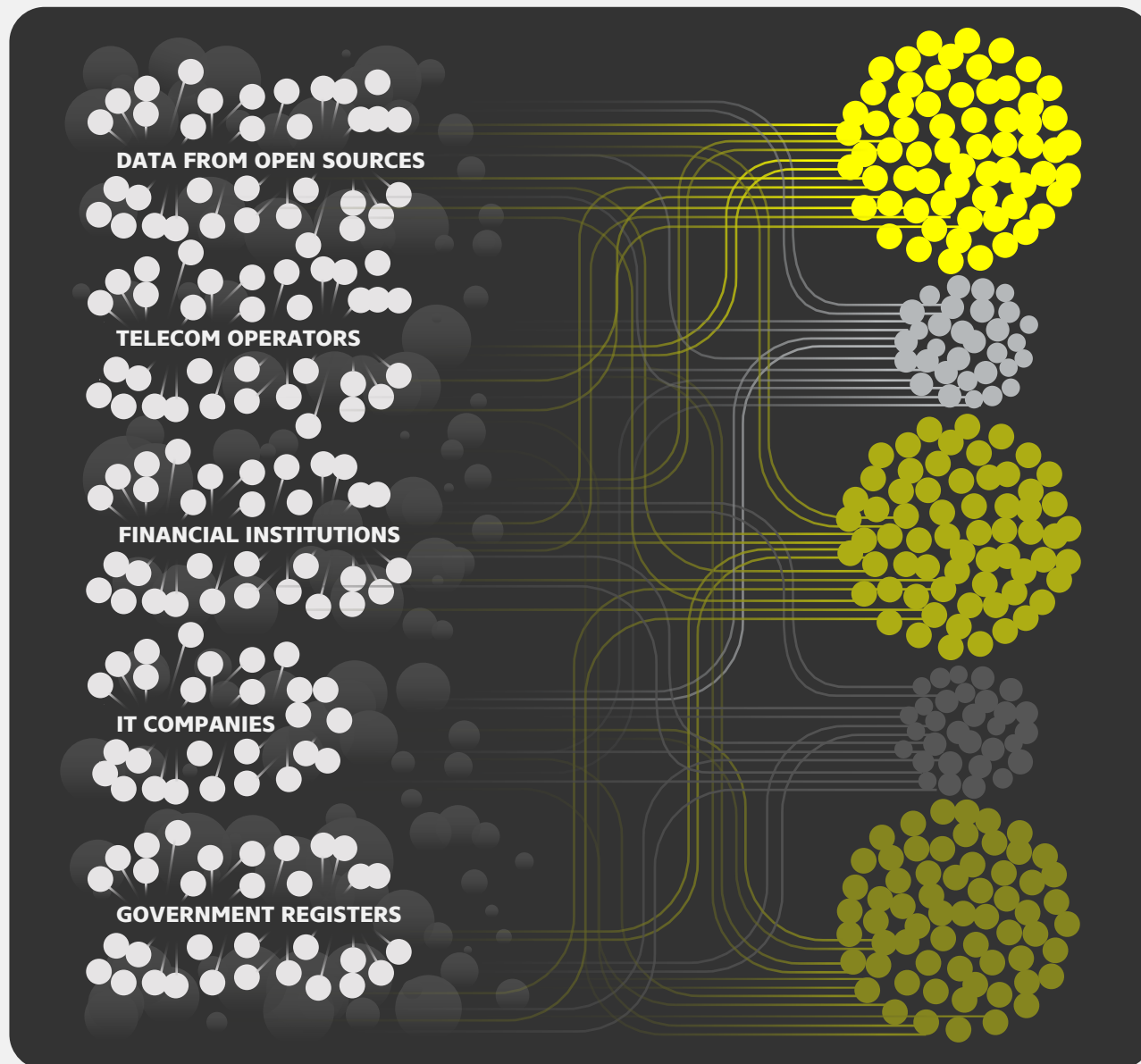
FOR CHANGES

BIG DATA – FUEL OF DX

DATA

ANALYSIS

RESULT: BUSINESS SOLUTIONS*



INCREASING THE EFFICIENCY OF EXISTING PROCESSES

FOR BANKS

Optimal location of branches reduces the need for their quantity by 10%

A NEW APPROACH TO PRICING

FOR INSURANCE COMPANIES

People who run in the morning in the green areas of the city spend 20% less on medicine

SEARCH FOR GROWTH POINTS

FOR RETAILERS

Buyers with two active bank cards have a 30% higher average check

IDENTIFICATION OF NEW MARKET SEGMENTS

FOR TRAVEL AGENCIES

People who actively use Instagram are 25% more likely to travel abroad

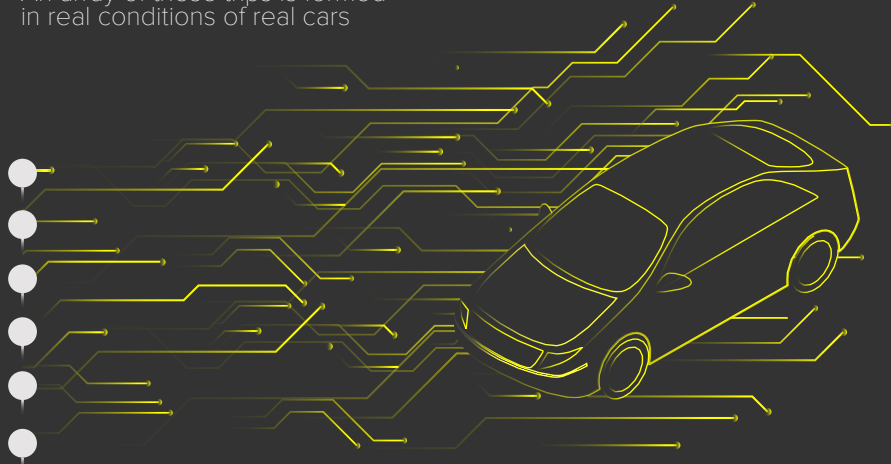
ARTIFICIAL INTELLIGENCE - CATALYST OF DX

DATA

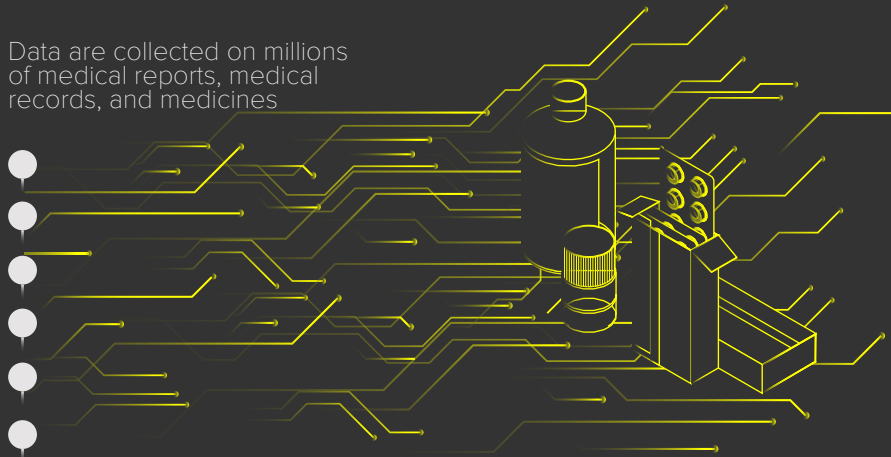
AI

RESULT: TECHNOLOGY

An array of these trips is formed in real conditions of real cars

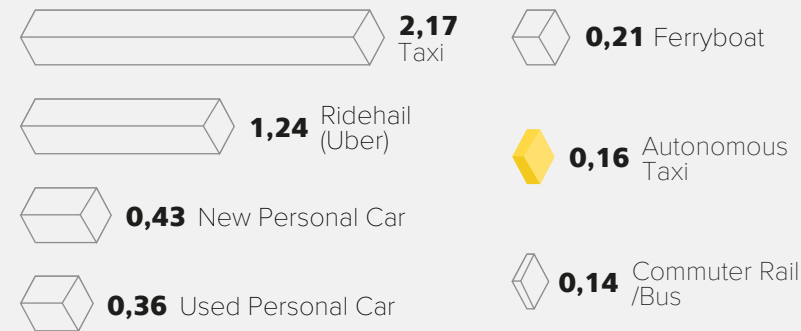


Data are collected on millions of medical reports, medical records, and medicines



AUTOPILOT

PRICE PER KM OF DIFFERENT MODES OF TRANSPORT, USD in USA*



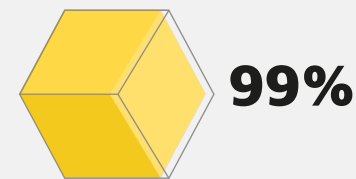
REVOLUTION IN:

- Transportation of passengers (railway, short flights)
- Logistics of goods
- Private car market
- Logistics and life in suburban areas
- Car insurance etc.

"DIGITAL TREATMENT"

ACCURACY OF DETECTION OF METASTASES BY AI TECHNOLOGIES,

Deep Learning from Google**



It halves the number of missed micrometastases

REVOLUTION IN:

- Invention of medicines (this is already the main approach)
- High-precision oncology
- NGS (personalized treatment based on the patient's genome)
- Patient data management
- Digital diagnostics etc.

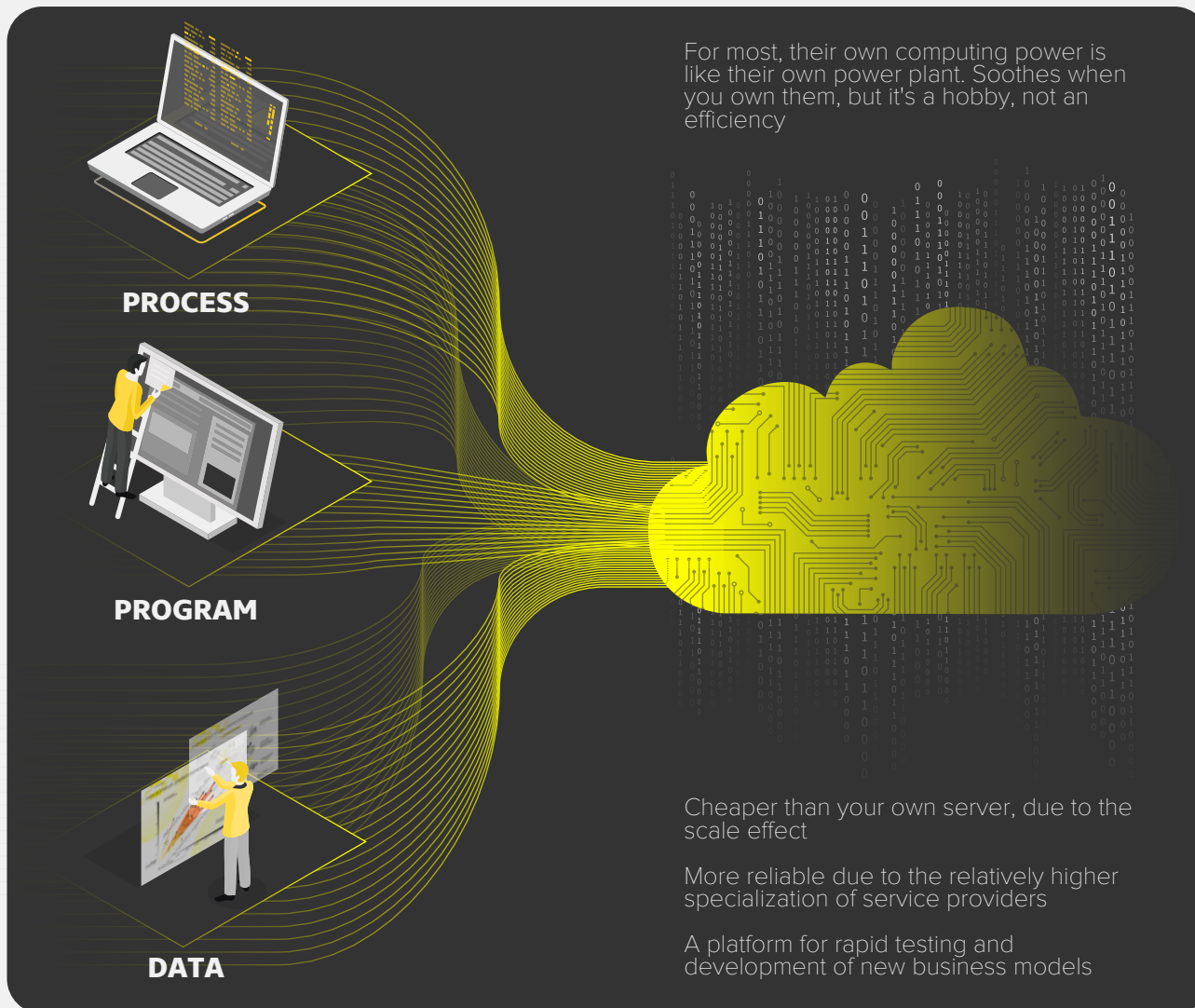
"Remote detection of COVID-19 by determining the characteristic type of cough"

"CLOUD" - TRANSMITTER OF DIGITAL TRANSFORMATION

OBJECT

CLOUD

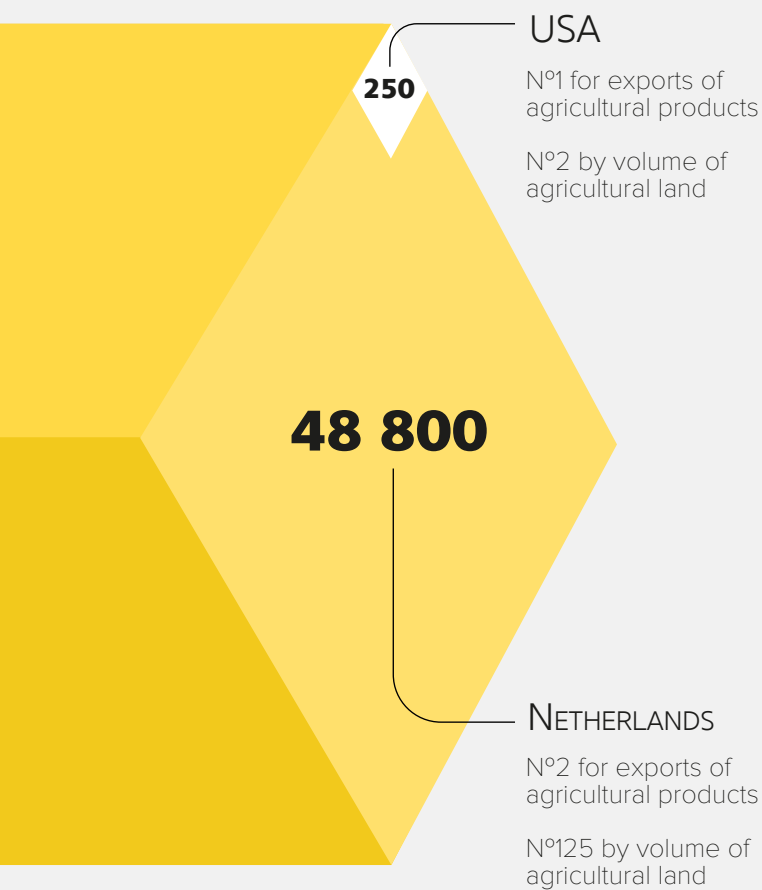
RESULT: TECHNICAL SOLUTION



AGRICULTURE BECOMES A PLACE OF INNOVATION

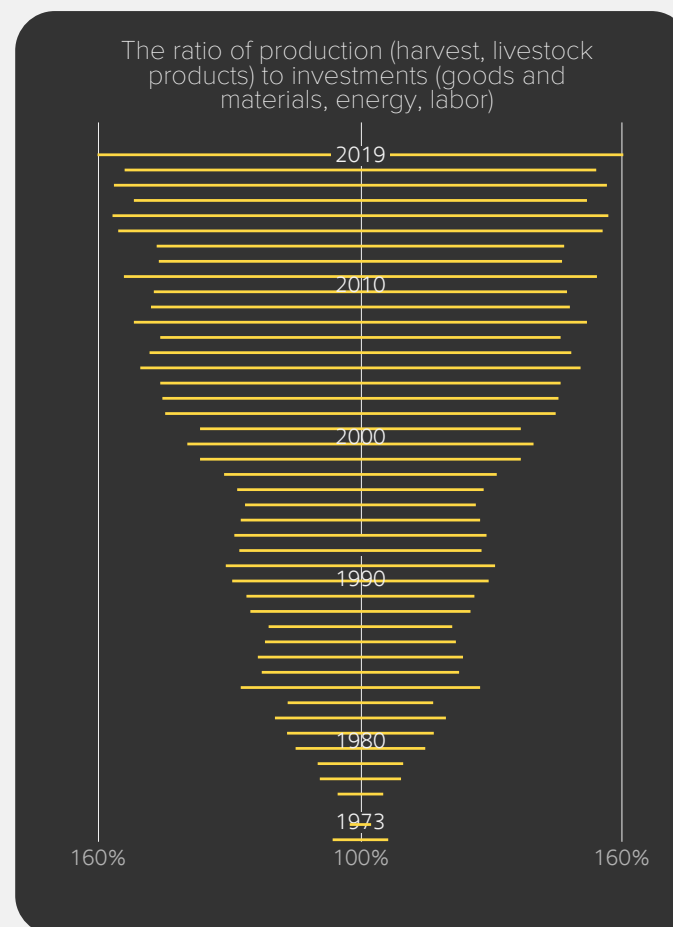
LAND IS NO LONGER THE MAIN RESOURCE

EXPORT OF AGRICULTURAL AND FOOD PRODUCTS PER 1 HA OF AGRICULTURAL LAND, 2019, USD/ha



TECHNOLOGIES ALLOW UNLIMITED GROWTH

DEVELOPMENT OF THE AGRICULTURAL SECTOR ON THE EXAMPLE OF THE UNITED KINGDOM, 1973—2019, %



THE PACE OF DEVELOPMENT WILL INCREASE

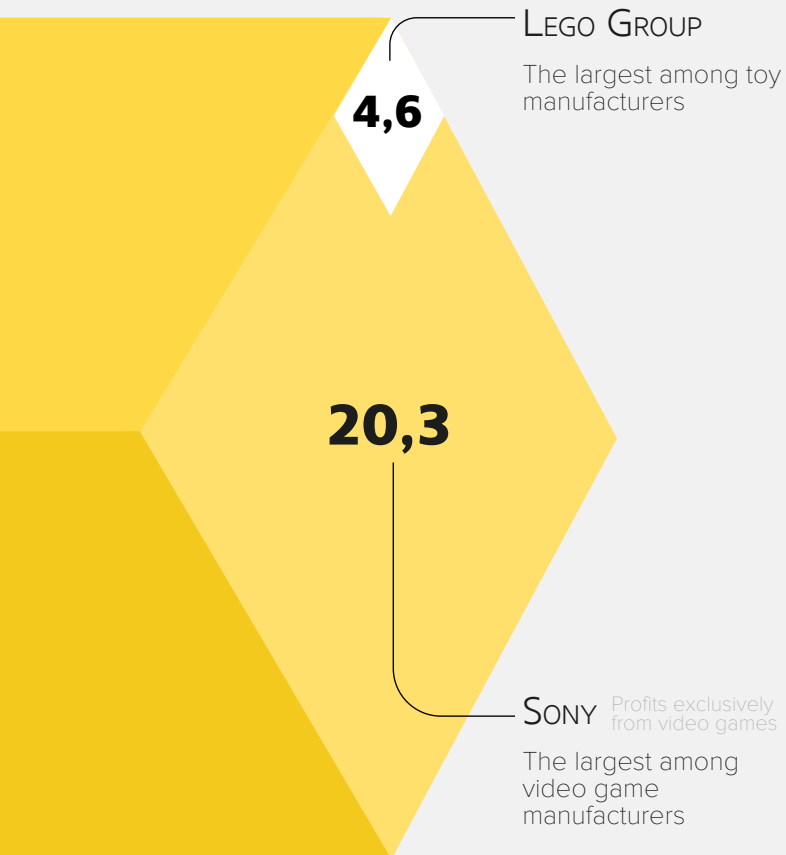
TECHNOLOGIES OF THE FUTURE IN AGRICULTURE

- VERTICAL FARMING**
- MINICHROMOSOME ENGINEERING**
- WIDESPREAD AUTOMATION**
- CULTIVATED MEAT**

EVEN RECREATION IS TRANSFORMING

VIRTUAL RECREATION IS ALREADY WELL AHEAD OF PHYSICAL

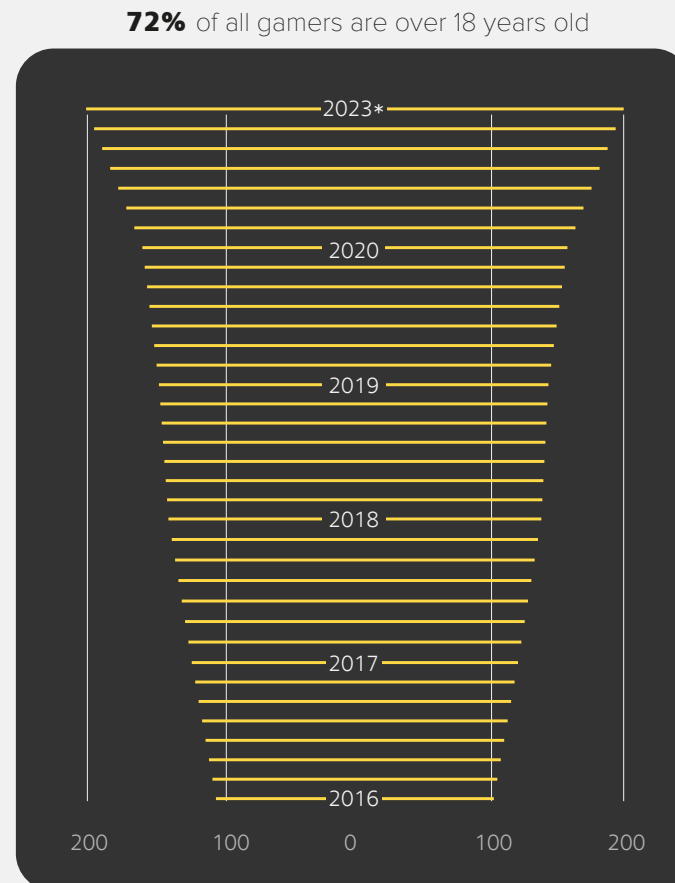
PROFITS OF TOP GAMING COMPANIES, 2019, bln USD



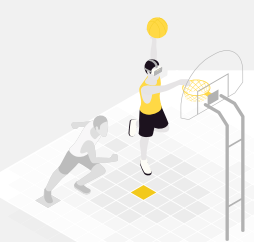
Source: All Top Everything, Lego, Statista, Newzoo

VIDEO GAME MARKET IS GROWING RAPIDLY

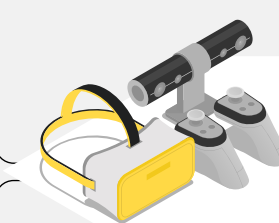
VIDEO GAME MARKET REVENUE
worldwide, 2016–2023, bln USD



VIDEO GAMES ARE BECOMING MORE ADVANCED AND AFFORDABLE



AR/VR
Virtual reality technologies that allow you to immerse yourself in the world of games



HYPERREAL EXPERIENCES
Technology that combines virtual and physical reality



CLOUD
Allows you to run technically demanding games in the cloud, making them available on low-power devices

ESTABLISHED BUSINESS MODELS ARE CHANGING

FOOD DELIVERY IS ALMOST AS POPULAR AS A VISIT TO A RESTAURANT

COMPANY'S PROFIT,
worldwide, 2019, bln USD

21

McDONALD'S
The largest among restaurants

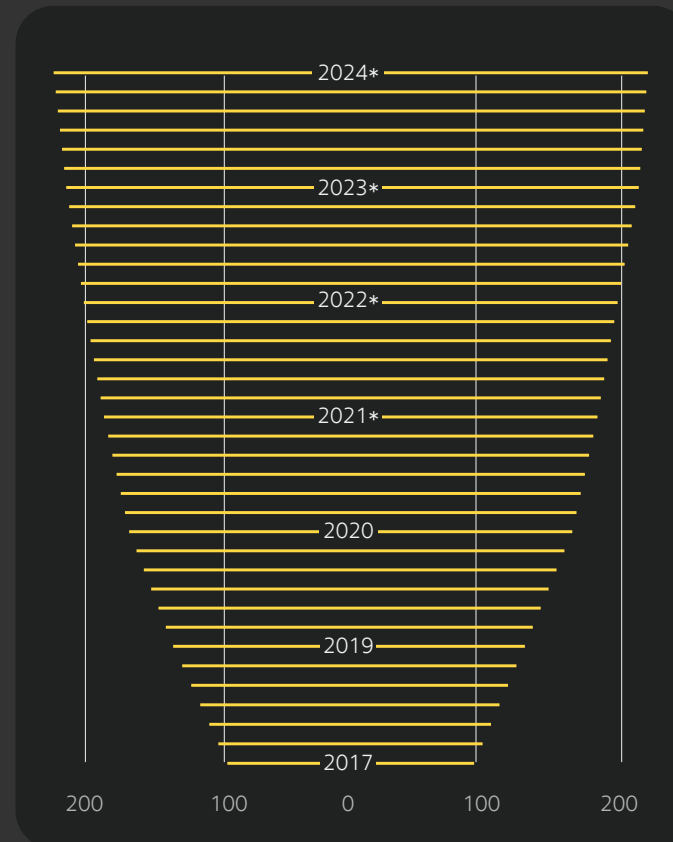
13,7

MEITUAN WAIMAI
The largest among the food delivery applications

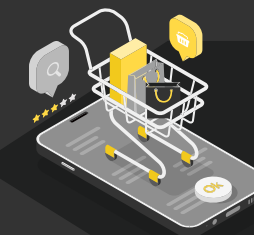
THE MARKET FOR ONLINE FOOD DELIVERY IS GAINING MOMENTUM

ONLINE FOOD DELIVERY MARKET,
worldwide, 2017–2024, bln USD

+25% growth of users in 2020 compared to 2019



FOOD SERVICE IS CONSTANTLY BEING TRANSFORMED



DARK STORE

The store exists only online, where the buyer makes an order, which is collected and sent by employees



DARK KITCHEN

Restaurant that works only for delivery. Physically, there is only a kitchen and couriers



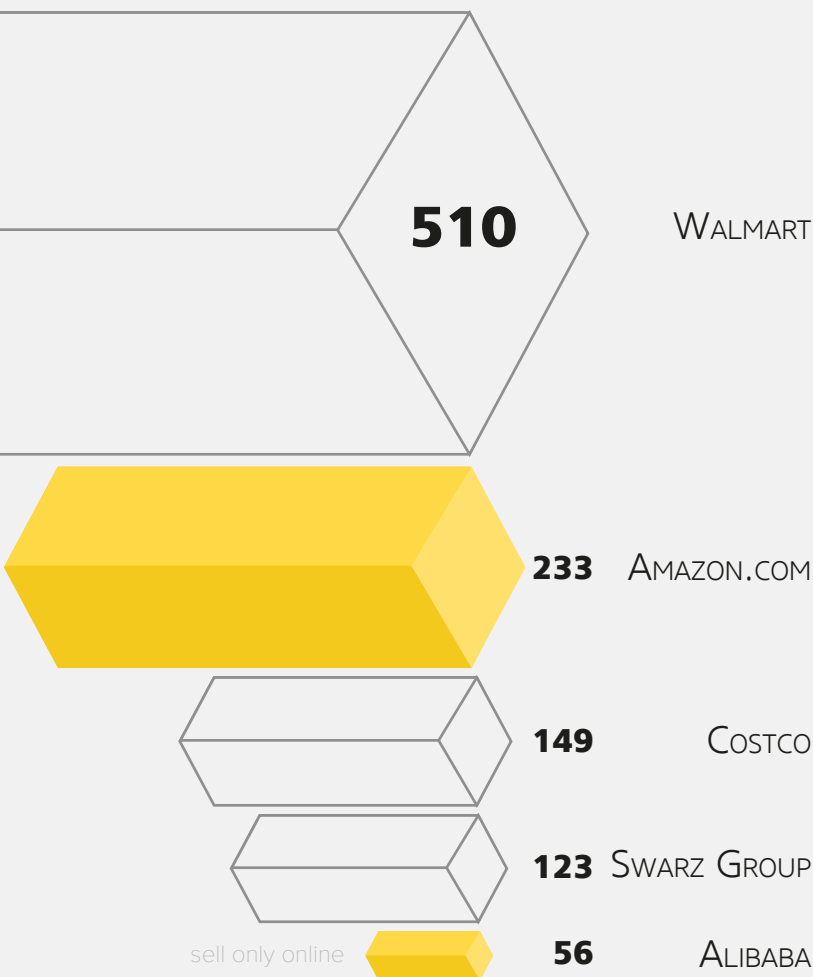
DRONES AND ROBOTS

Fast, flexible and cheap food delivery by drones

TRANSFORMATION CAPTURES RETAIL

TWO OF THE TOP-5 LARGEST RETAILERS ARE DIGITAL

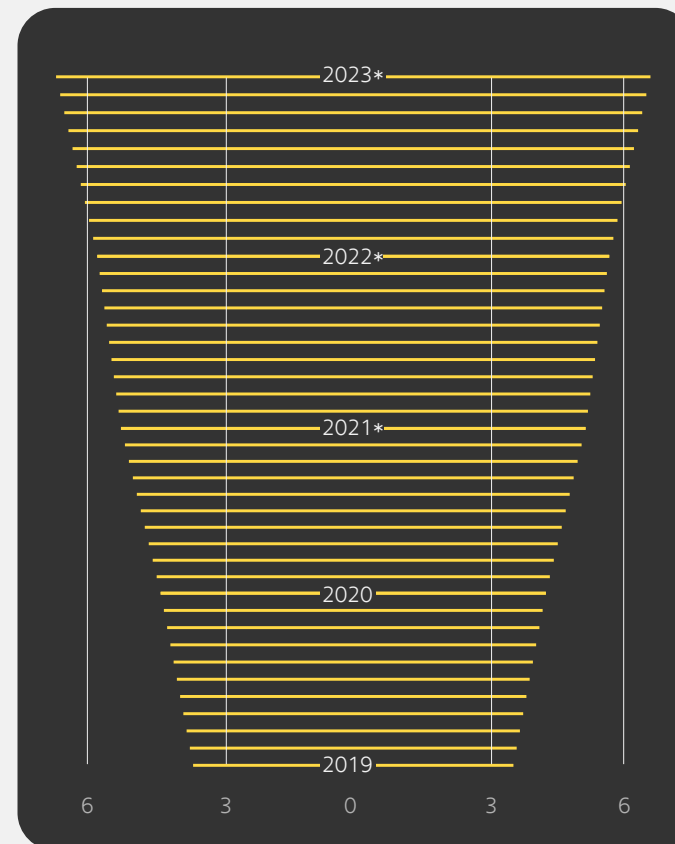
PROFIT OF TOP-5 RETAILERS
worldwide, 2020, bln USD



E-COMMERCE IS BECOMING THE MAINSTAY

E-COMMERCE SALES,
B2C worldwide, 2019–2023, trillion USD

95%
all purchases until 2040
will be made online



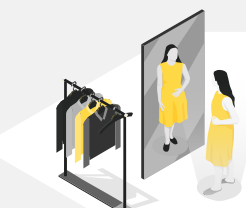
RETAIL IS NOT JUST GOING ONLINE, IT IS TRANSFORMING



IKEA PLACE
An augmented reality application that models your apartment and places furniture in it



AMAZON GO
Shop without cash registers and queues, where payment for goods is made automatically, without the participation of the buyer

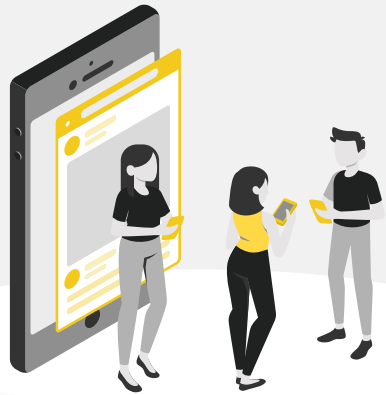


PERFECT FIT BY H&M
Application with a digital avatar of the buyer, for virtual fitting of clothes

CHANGES IN GOVERNMENT

TRANSFORMATION OF UKRAINE

PROVIDING ACCESS

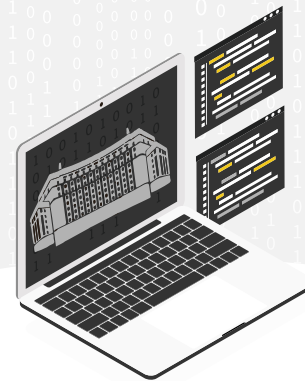


Access to digital services for all citizens and dissemination of digital skills

EVERYONE CAN TAKE ADVANTAGE OF DIGITAL OPPORTUNITIES

- Simplification of regulatory norms in telecommunications
- Educational hubs in cities, "Entrepreneurship" course in universities
- Expanding and improving the network of Administrative Service Centers
- Connecting social facilities to the fixed Internet

DIGITIZATION OF GOVERNMENT



Translating government activities and 100% government services into digital format

GOVERNMENT IS THE DRIVER, NOT THE OBSTACLE FOR CHANGES

- Development of electronic identification
- "Diia" Portal and Application
- "Trembita" State Information Resources Interaction System
- Transition to paperless government and government services

TRANSFORMATION OF THE ECONOMY



Increasing the role of IT in the economy and creating conditions for innovation

FORMATION OF THE CORE OF ECONOMIC RECOVERY

- Legal field for virtual assets
- Special legal regime for the IT industry "Diia City"
- E-residency
- Translating business-government interaction into electronic format

DIIA CITY – DIGITAL ECONOMIC ZONE

DIIA CITY – SPECIAL LEGAL REGIME OF THE IT INDUSTRY. IN FACT, IT IS A REGISTER OF IT COMPANIES THAT FALL UNDER THIS SPECIAL REGIME

GOAL – THE ECONOMIC DEVELOPMENT OF UKRAINE AND INCREASING OF ITS WEALTH

AIM – INCREASING THE ROLE OF THE IT INDUSTRY IN THE ECONOMY OF UKRAINE

REASONS FOR CREATION:

- OUTDATED REGULATORY STANDARDS FOR DOING BUSINESS
- INEFFICIENT TAX SYSTEM
- BAD INVESTMENT CLIMATE IN UKRAINE
- WEAK AND CORRUPT JUSTICE SYSTEM



WHAT WILL DIIA CITY GIVE TO UKRAINE?

10% GDP

The contribution of the IT industry to the economy of Ukraine is expected (6% now)

\$11,8 BILLION

IT market volume in 2025 (\$ 7 billion now)


+450 THOUSAND

New jobs in IT industry until 2025 after the launch of the project

CLOUD FOR PUBLIC SECTOR: CAPACITY BUILDING


IN JUNE 2020, AMENDMENTS REGARDING THE PROTECTION OF INFORMATION ON GOVERNMENT IT SYSTEMS WERE APPROVED

THE STATE OBTAINED MORE POSSIBILITIES TO USE CLOUD SERVICES




THE PUBLIC SECTOR MAY USE ISMS - INFORMATION SECURITY MANAGEMENT SYSTEMS

ISMS is created on the basis of international standards by contrast with CIPS - complex information protection systems based on the national standards



ISO 27001 AND COMMON CRITERIA CERTIFICATES ARE RECOGNIZED

The certificate is the evidence that the ISMS has been inspected. Earlier, the ISMS and its elements with internationally recognized certificates could not be used in the public sector



AVAILABILITY OF FOREIGN CLOUD SERVICE PROVIDERS

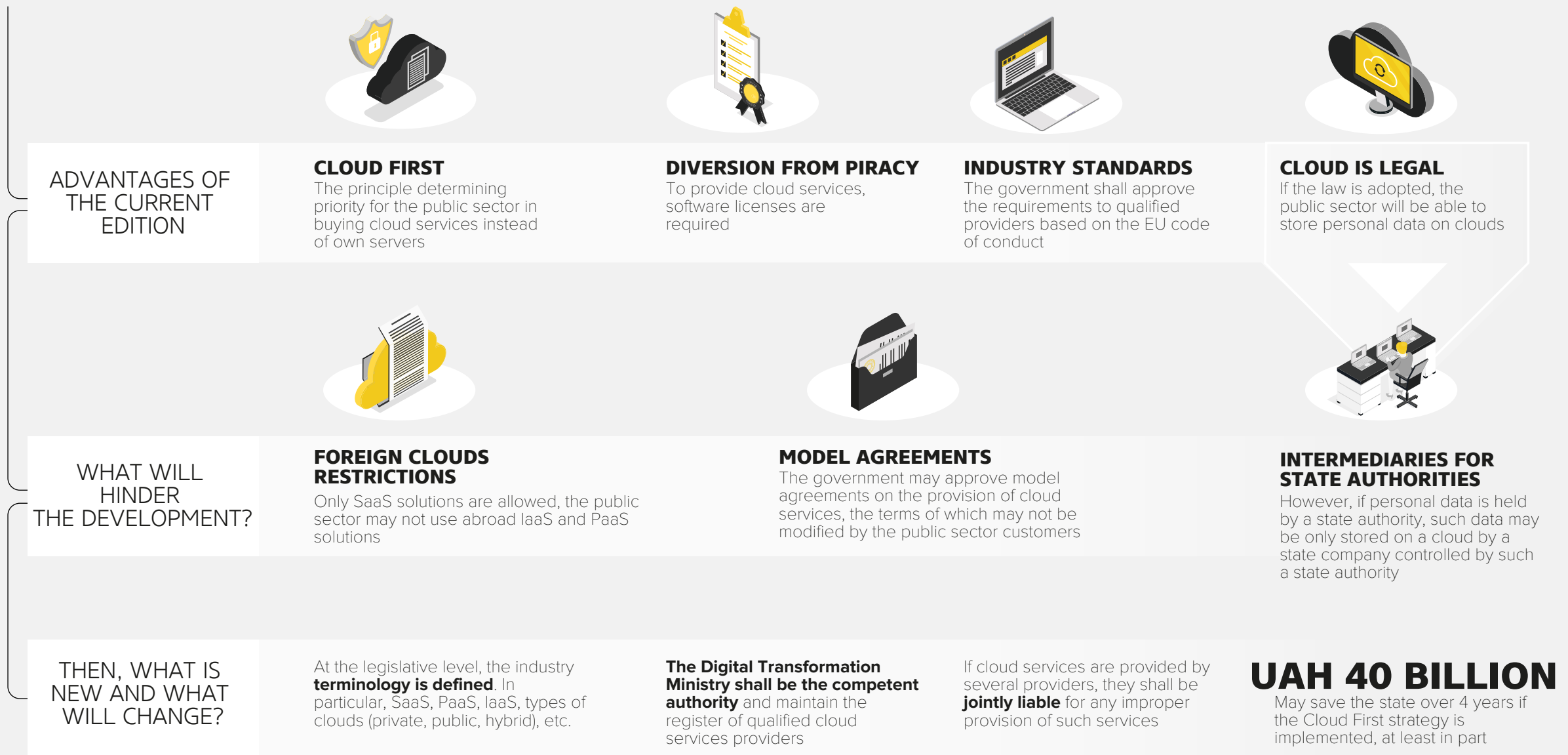
The public sector may use foreign clouds; it was impossible to do so earlier

NOW, CLOUDS MAY BE USED IN THE PUBLIC SECTOR

Data controller/data type	Ukrainian cloud	Foreign cloud
State-owned companies (Naftogaz, Ukrenergo, Ukrposhta)	✓	✓
State enterprises, organizations, and institutions	✓	✓
Public authorities	✓ other than public registers	✓ other than sites in the gov.ua domain, personal data, and public registers
Local self-government bodies	✓	✓ other than sites in the gov.ua domain, and personal data
Critical infrastructure	✓ other than management systems and SCADA-type systems	✓ other than management systems and SCADA-type systems
Personal data	✓ where controllers are not public authorities	✓ where controllers are not public authorities or local self-government bodies
Top-secret information, privileged information, and public registers	⊖	⊖

CLOUD FOR PUBLIC SECTOR: INDUSTRY STANDARDISATION

DRAFT LAW “ON CLOUD SERVICES”* WAS ADOPTED IN THE FIRST READING IN JUNE 2020



**CHANGES
BUSINESS**

STEPS TO DIGITAL TRANSFORMATION

WE DO NOT
NEED
CHANGES

IT'S ALL JUST
HYPE

THERE ARE STILL
SOME BENEFITS

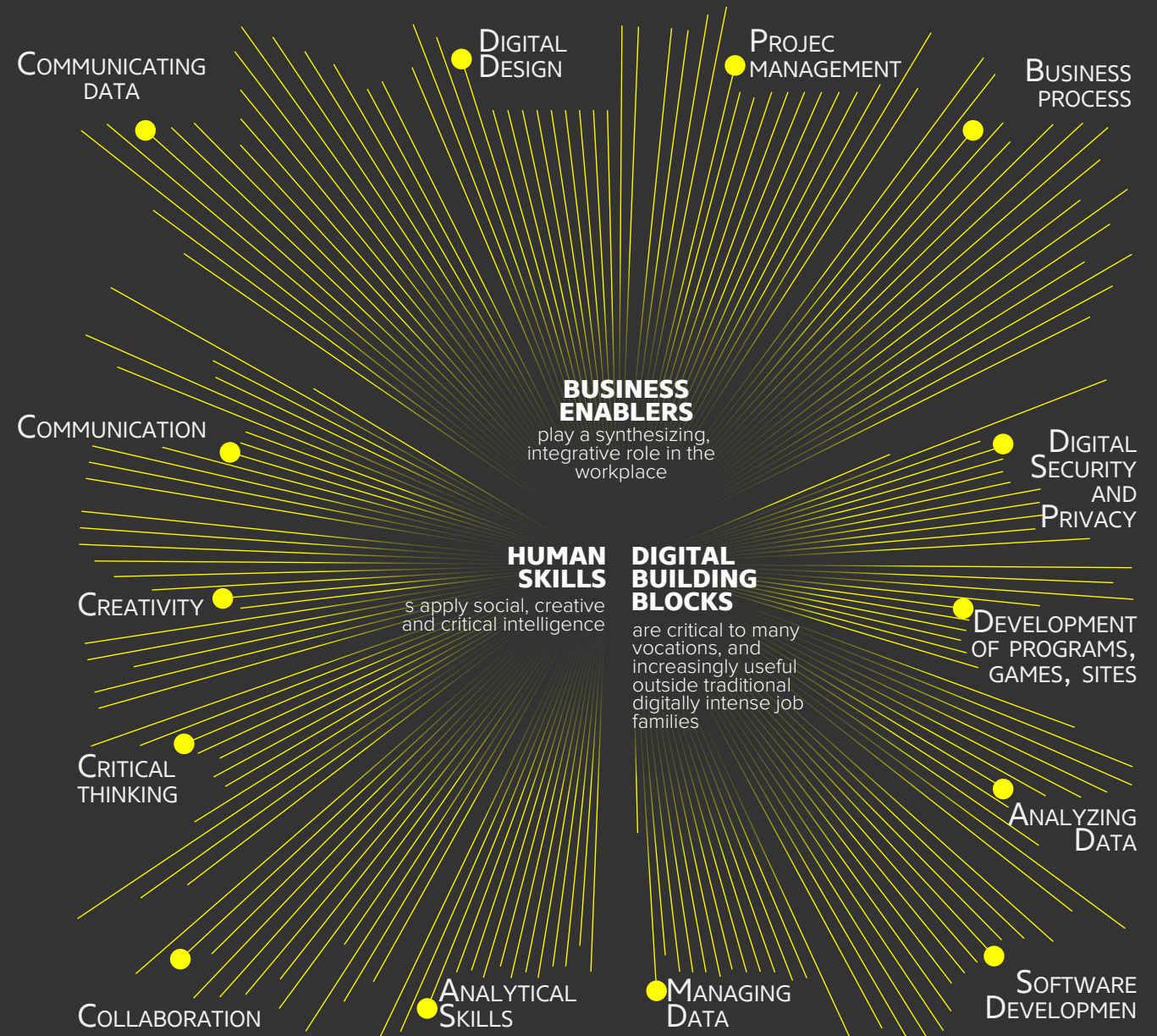
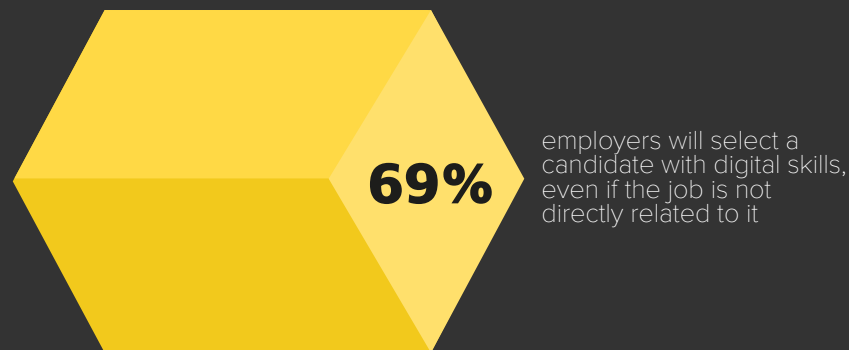
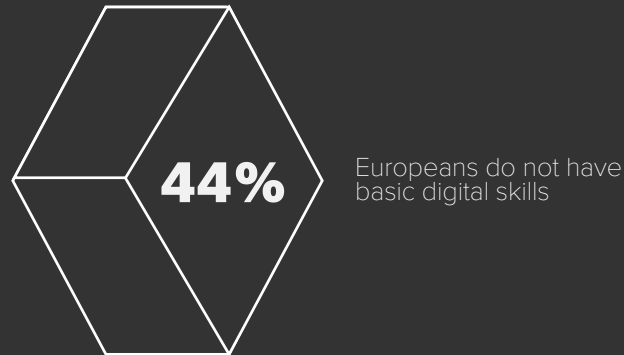
WE WILL NOT
BE ABLE TO
CHANGE

EITHER WE WILL
CHANGE OR BE
REPLACED



REQUIREMENTS FOR PROFESSIONALS ARE TRANSFORMING

TODAY, IN ORDER TO BE A SOUGHT-AFTER SPECIALIST, YOU NEED TO CONSTANTLY UPDATE YOUR KNOWLEDGE. IN THE DIGITAL AGE, EMPLOYERS' REQUIREMENTS FOR CANDIDATES ARE BECOMING STRICTER, BUT CLEARLY JUSTIFIED



CASE STUDIES STRUCTURE OF COMPANIES TRANSFORMATION

CLIENT

PROCESS

BUSINESS MODEL

At the top of the page we indicate in which area the changes are taking place. They are aimed at updating the customer experience, changing internal business processes or a new approach to business and entering new markets



Next, based on the three components, we disclose these changes

GOALS, CAUSES AND CHALLENGES

THE ESSENCE OF THE CHANGES THAT HAPPENED

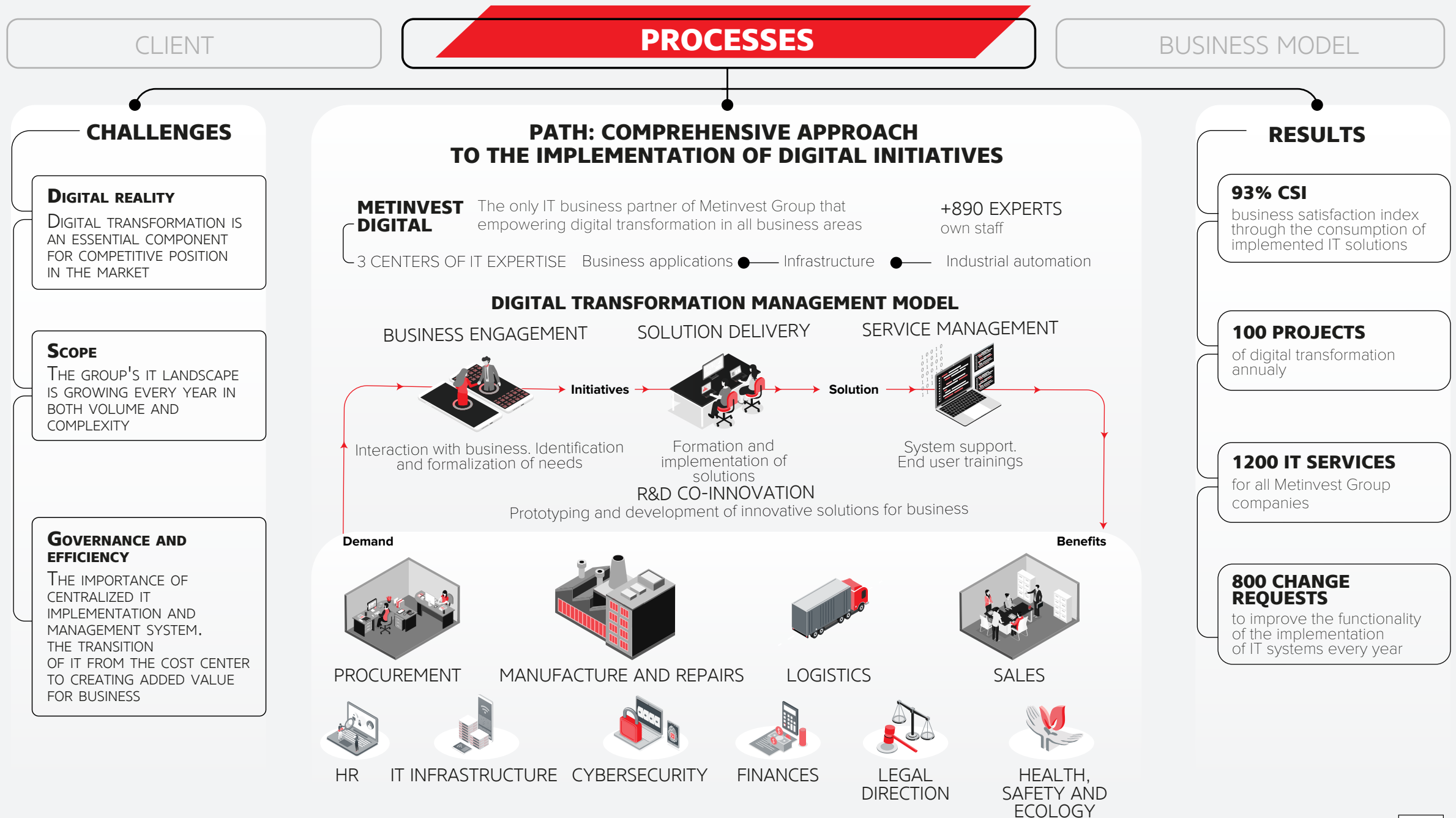
RESULTS OF IMPLEMENTED CHANGES

HERE ARE THE REASONS THAT CAUSED THE CHANGES. THE COMPANY'S DESIRE TO REACH NEW HEIGHTS, THE NEED TO SOLVE DIFFICULTIES, ETC.

HERE WE DESCRIBE HOW AN UPDATED OR NEW MODEL OR PROCESS BY WHICH CHANGES TAKE PLACE IN THE COMPANY WORKS

THIS SECTION DESCRIBES THE RESULTS THAT HAVE BEEN ACHIEVED AS A RESULT OF THE DIGITAL TRANSFORMATION

METINVEST DIGITAL: COMPREHENSIVE APPROACH TO DIGITAL TRANSFORMATION



METINVEST: THE LARGEST DATA CENTER MIGRATION TO MICROSOFT AZURE CLOUD PLATFORM IN UKRAINE

CLIENT

PROCESSES

BUSINESS MODEL

CHALLENGES

INCREASING BUSINESS DEMAND

REQUIRED TO SCALE UP AND EXPAND THE CAPACITIES OF EXISTING DATA CENTERS

IMPLEMENTATION OF INDUSTRY 4.0 TECHNOLOGIES

CUTTING-EDGE TECHNOLOGIES REQUIRE MORE FLEXIBILITY, RELIABILITY, SCALABILITY AND AVAILABILITY

DECREASING THE COST OF MAINTAINING THE IT INFRASTRUCTURE

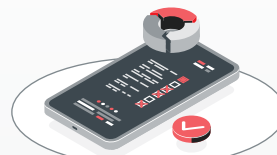
DECREASING OF CAPITAL INVESTMENTS (CAPEX) AND OPERATING COSTS (OPEX) TO SUPPORT METINVEST GROUP'S IT INFRASTRUCTURE IN THE LONG RUN

SOLUTION: DATA CENTER MIGRATION TO MICROSOFT AZURE CLOUD PLATFORM

IMPLEMENTATION: ● 680 servers ● 12 months ● 240 TB of information

BVA ANALYSIS

Business Value Assessment
Determining the best solution based on 10-year perspective (TCO)



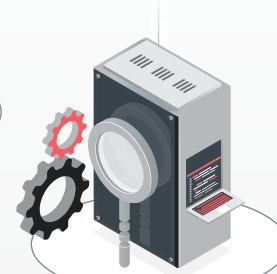
INITIALIZATION AND PLANNING

Requirements analysis, partner selection, project team formation and implementation plan approval



ARCHITECTURE

development and approval for IaaS and PaaS solutions. Migration strategy development, planning and testing



STABILIZATION OF IAAS SOLUTIONS

Azure infrastructure configuring. Migration and testing of pilot group of servers. Designing the mechanism of global migration, identification and fixing the bugs.



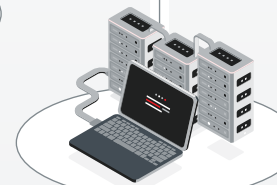
MIGRATION OF SERVICES AND SYSTEMS

Wave-by-wave migration without business and production downtime (5 waves).



TESTING CLOUD SERVICES

Performance and functional testing. Analysis of VM's Migration to the Cloud. Identification and fixing the bugs.



MIGRATION RESULTS

\$3 MLN

TCO savings

AVAILABILITY

high fault tolerance of systems and services

DATA SECURITY

high level of corporate data protection

NEW TECHNOLOGIES

without capital investment

STORAGE OF INFORMATION

efficient back-up and recovery

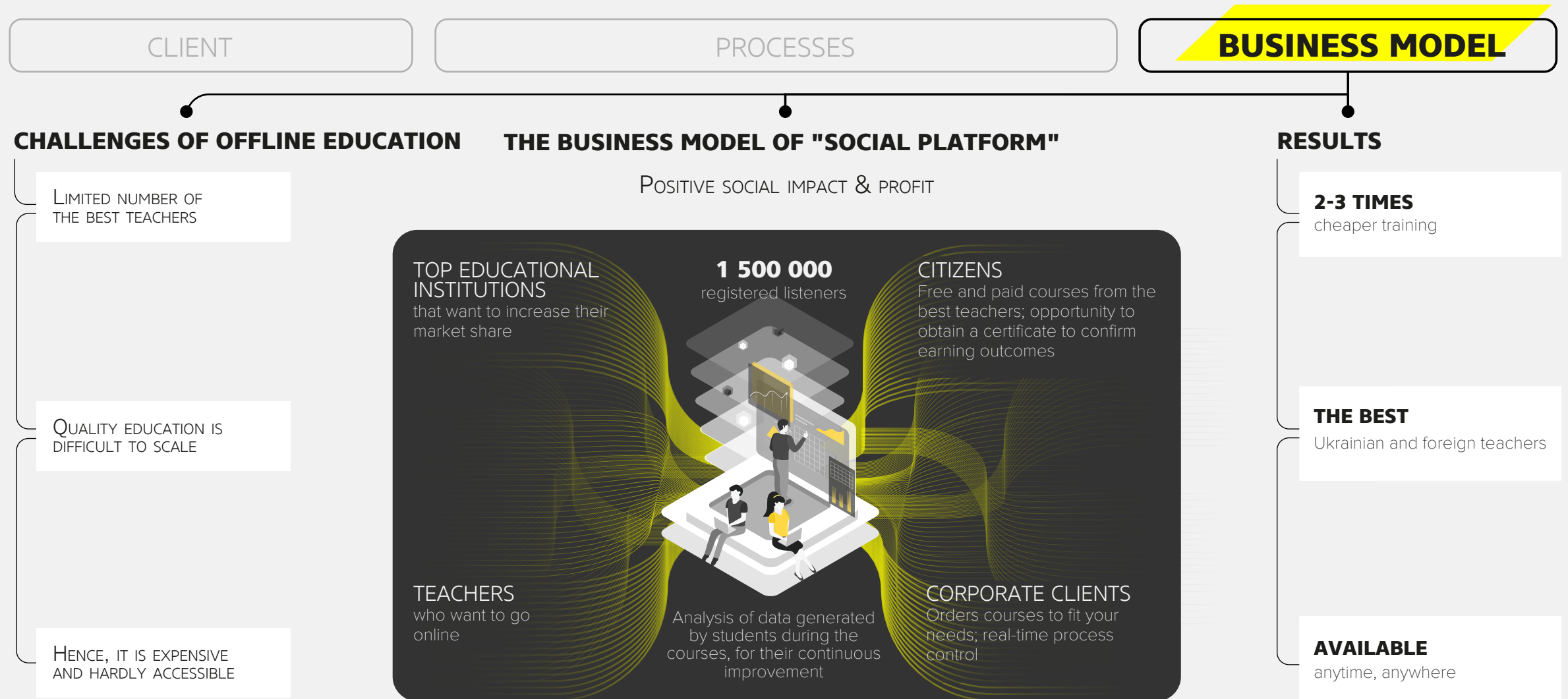
ACCESSIBILITY AND MOBILITY

of IT systems, services and applications

SCALABILITY AND FLEXIBILITY

of infrastructure based on business demands

PROMETHEUS – THE BEST EDUCATION FOR EVERYONE

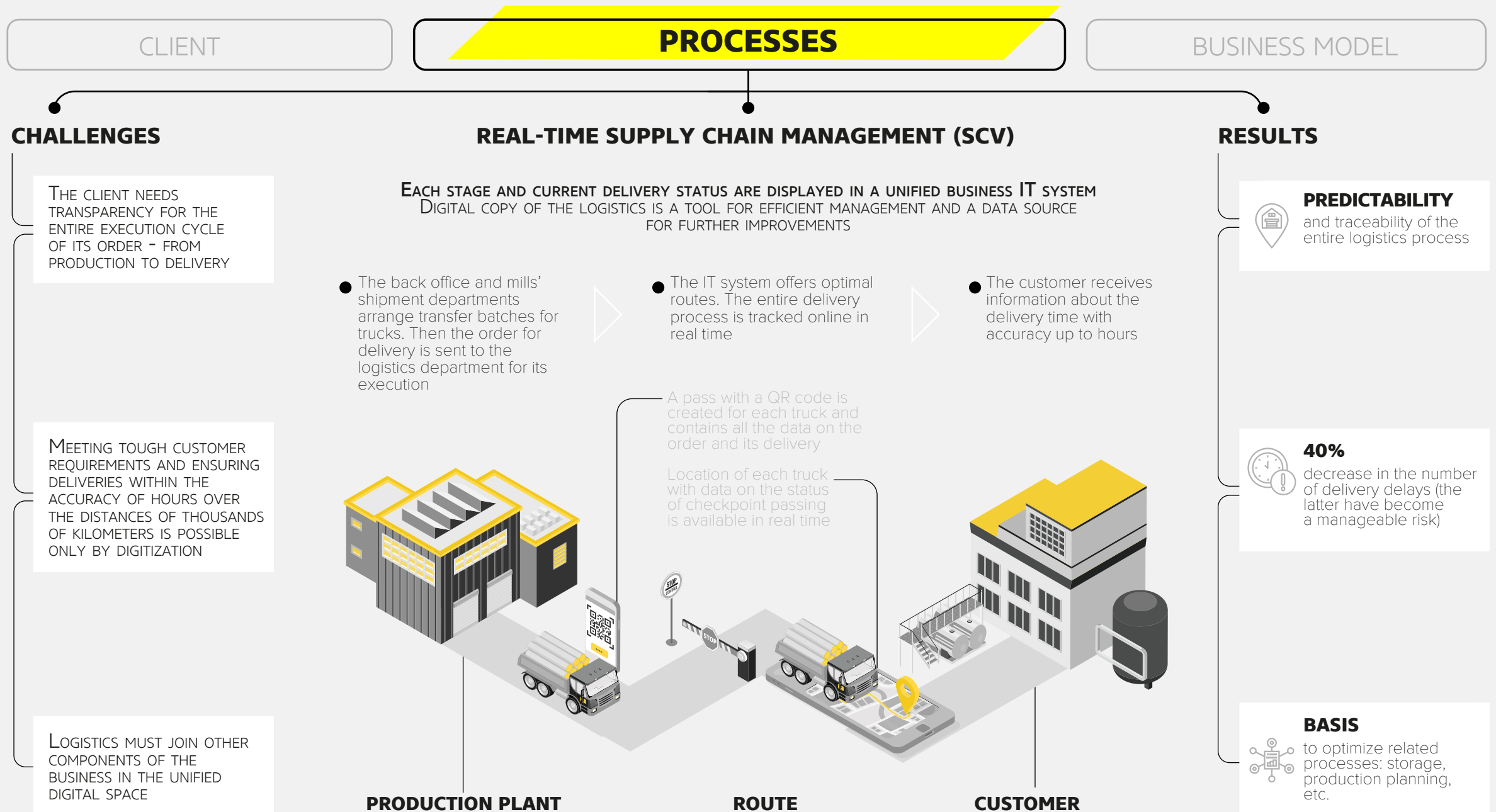


STRATEGY

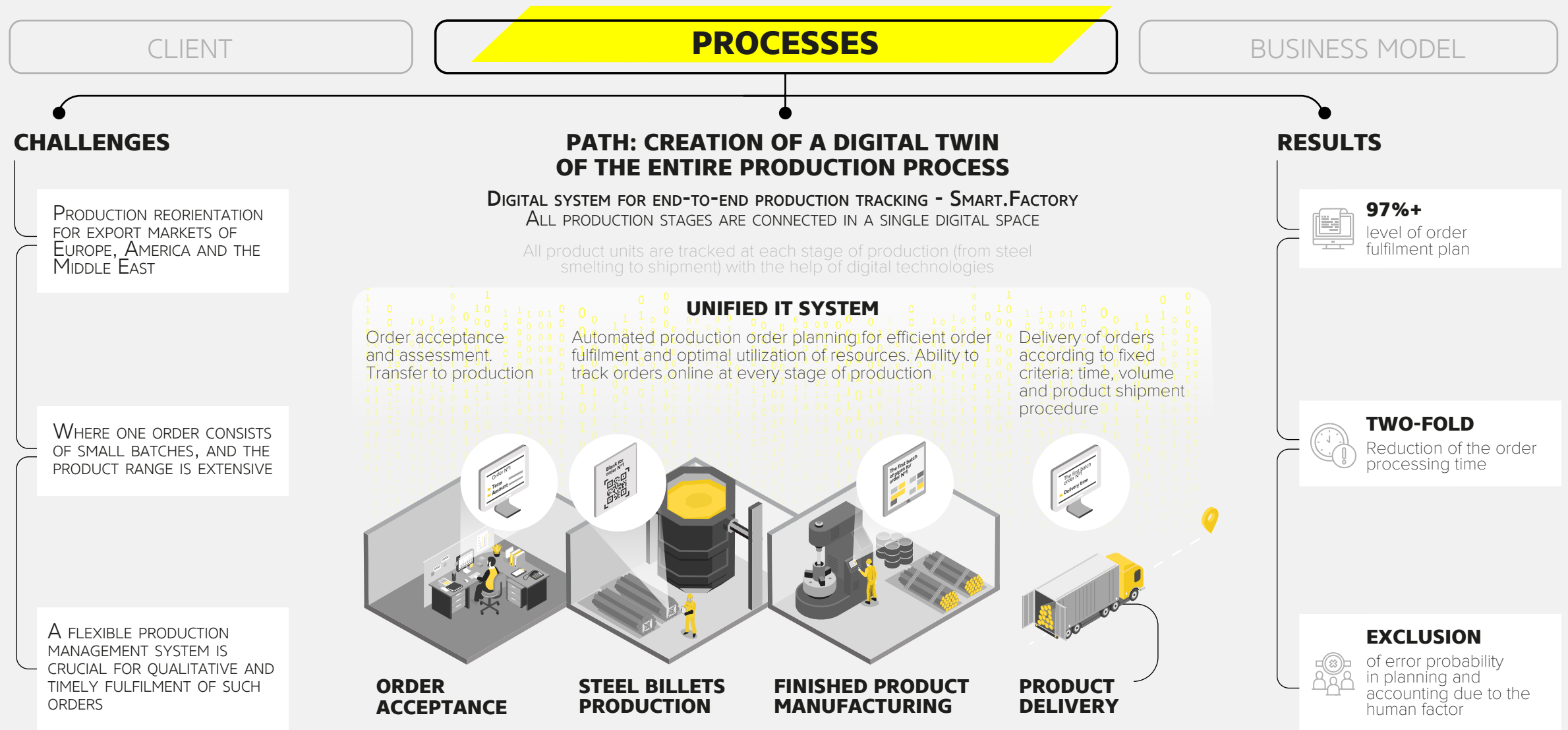
GOAL: DIGITAL TRANSFORMATION OF EDUCATION

METHOD: JUST AS THE PRINTING PRESS ONCE MADE THE BEST BOOKS AVAILABLE TO EVERYONE, SO ONLINE EDUCATION WILL MAKE QUALITY LEARNING OPEN TO ALL

INTERPIPE: DIGITAL JUST-IN-TIME LOGISTICS



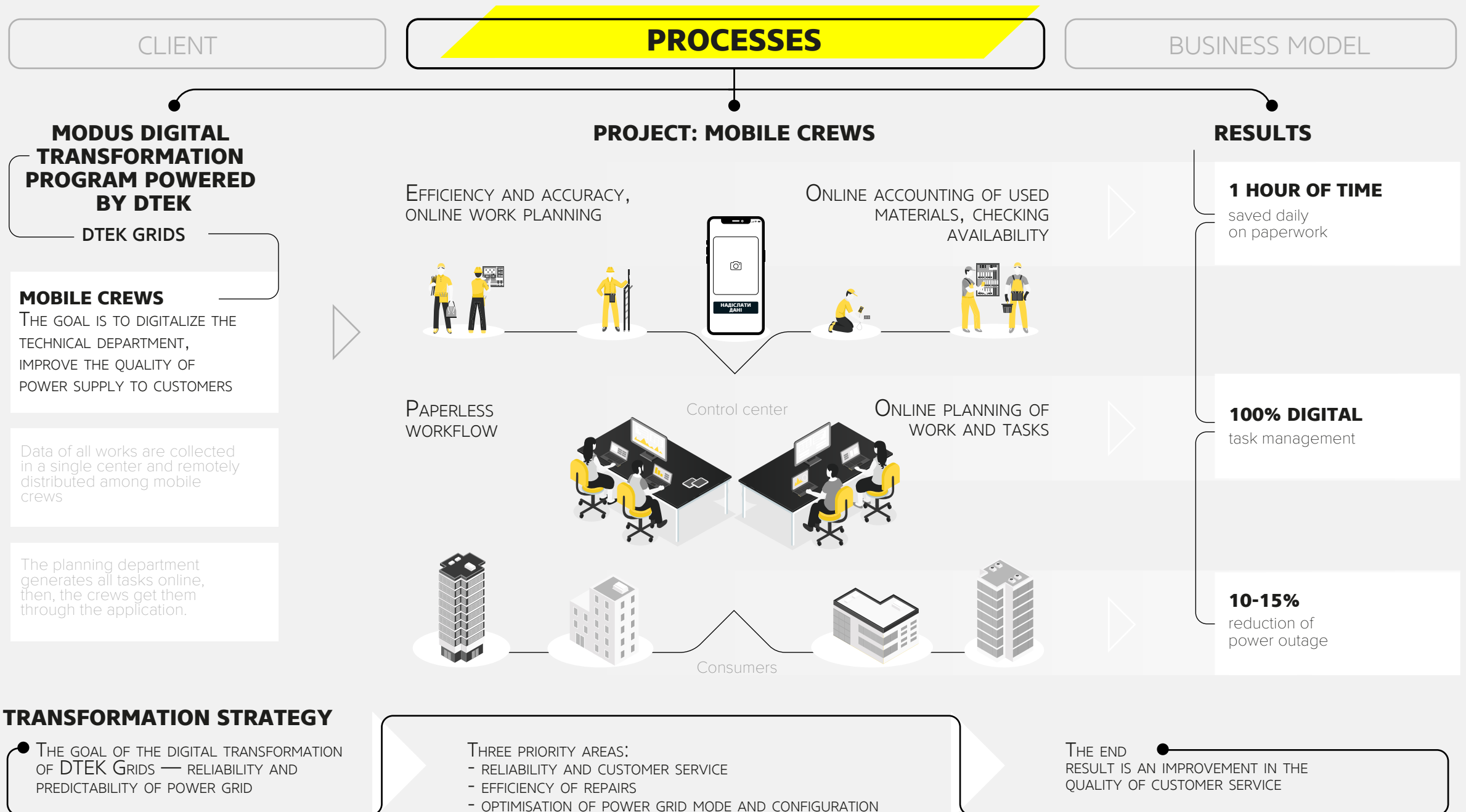
INTERPIPE: DIGITAL DIMENSION OF INDUSTRIAL-SCALE PRODUCTION



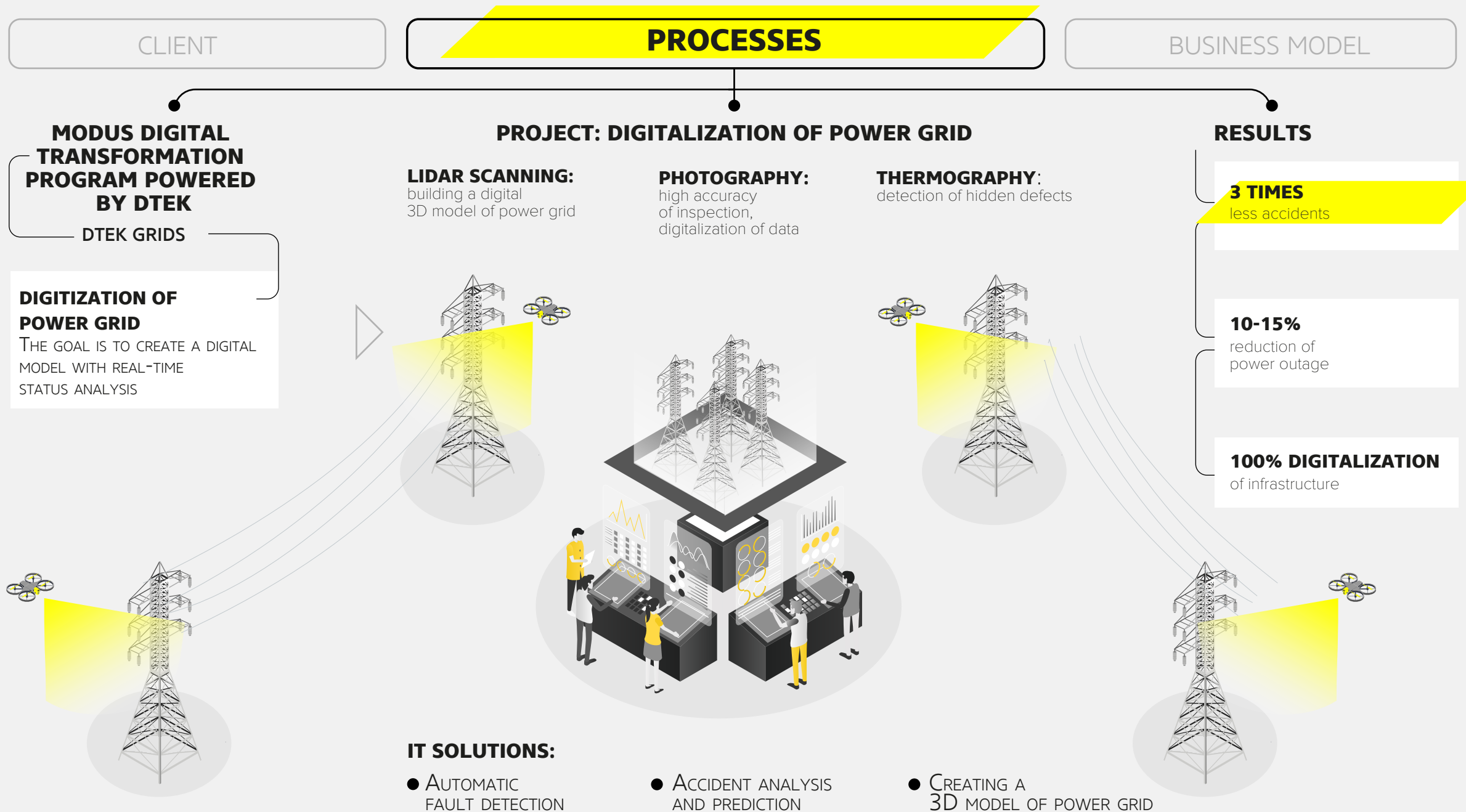
TRANSFORMATION STRATEGY

DIGITIZATION OF PRODUCTION IN ORDER TO FOCUS ALL OF ITS STAGES ON THE FULFILMENT OF A SPECIFIC ORDER AND COMPLIANCE WITH CUSTOMER NEEDS

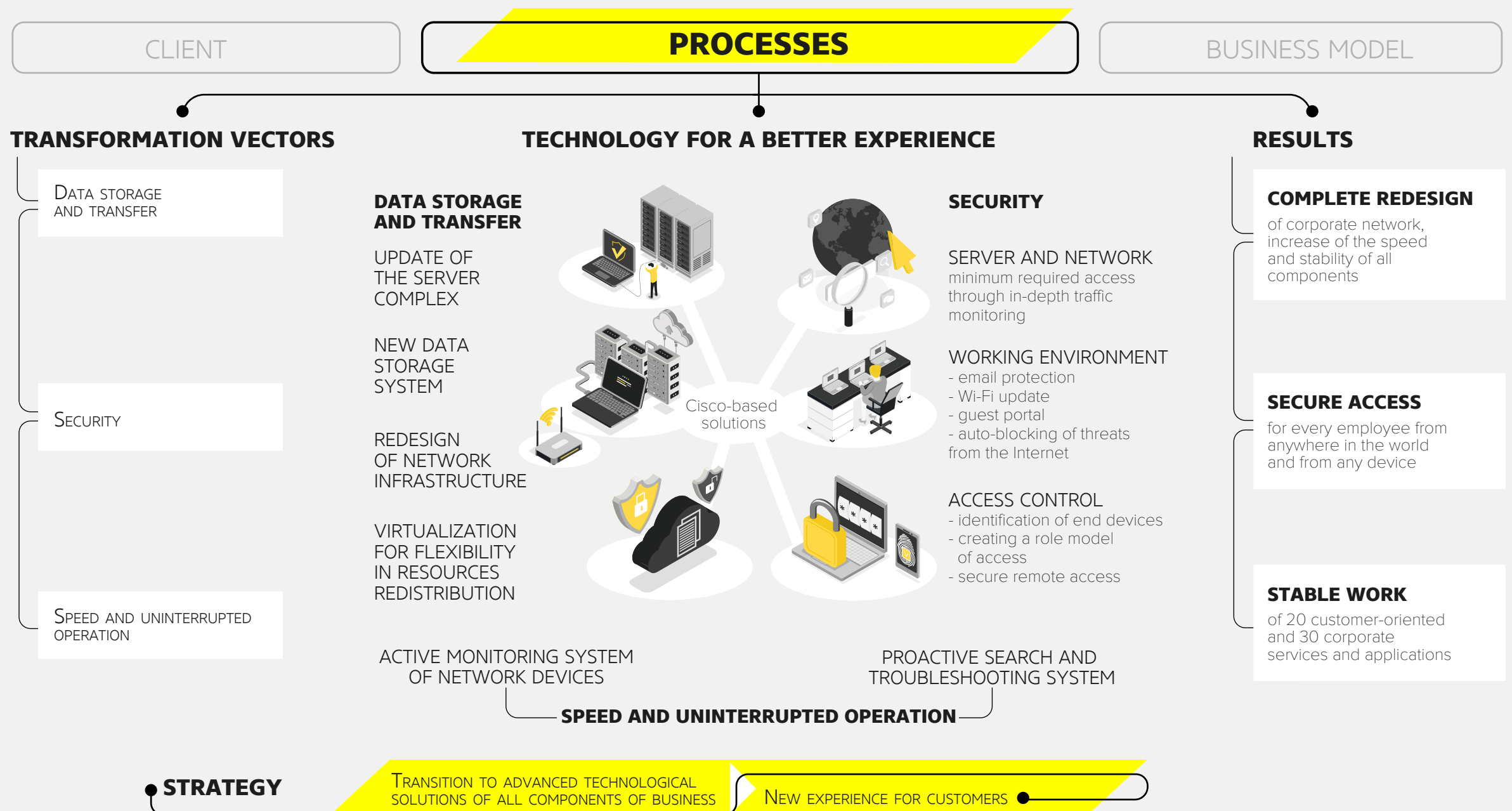
DTEK: CONVENIENCE-FOCUSED TRANSFORMATION



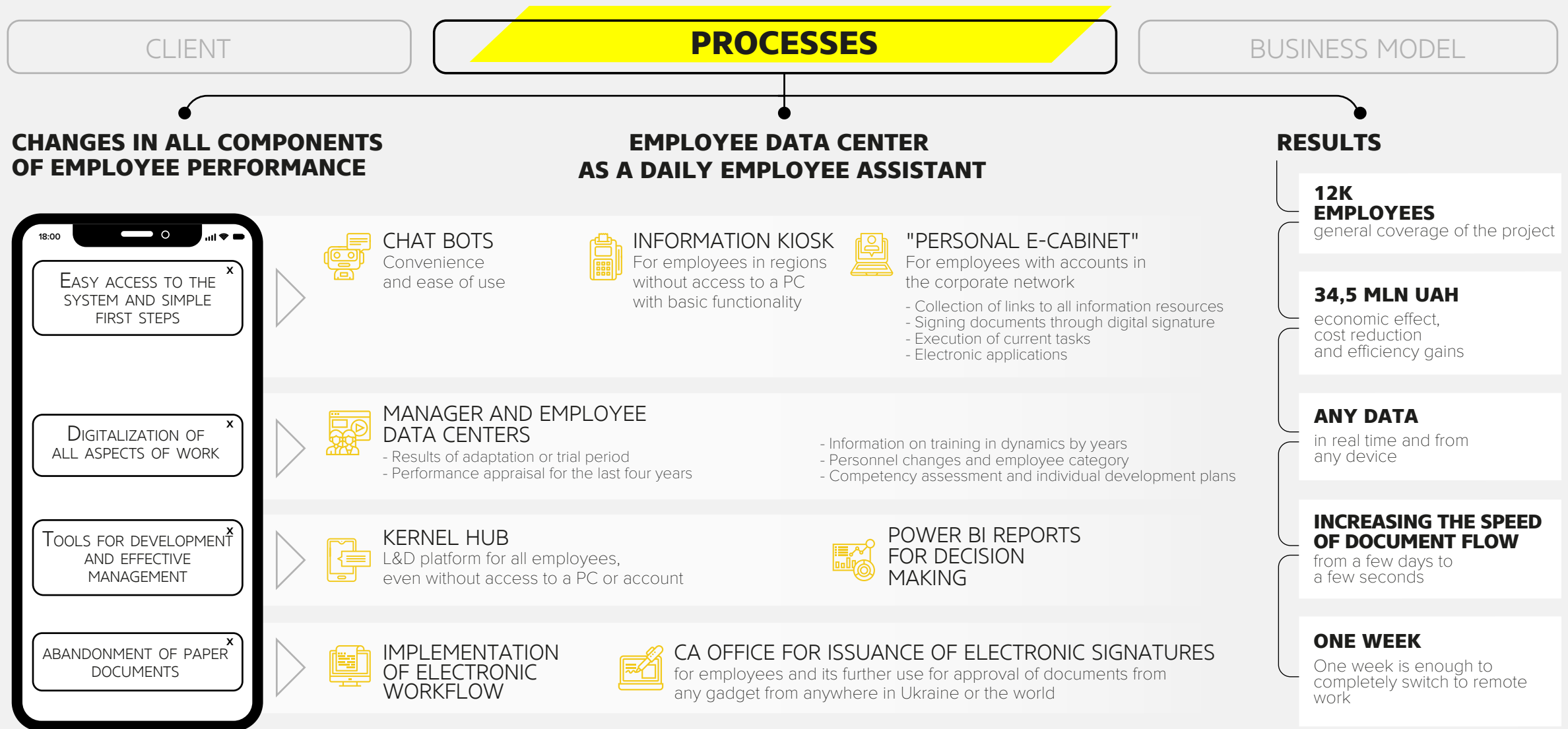
DTEK: DIGITALIZATION OF THE ENTIRE POWER GRID



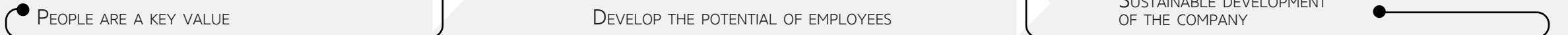
INGO - A NEW EXPERIENCE OF INSURANCE BASED ON NEW TECHNOLOGIES



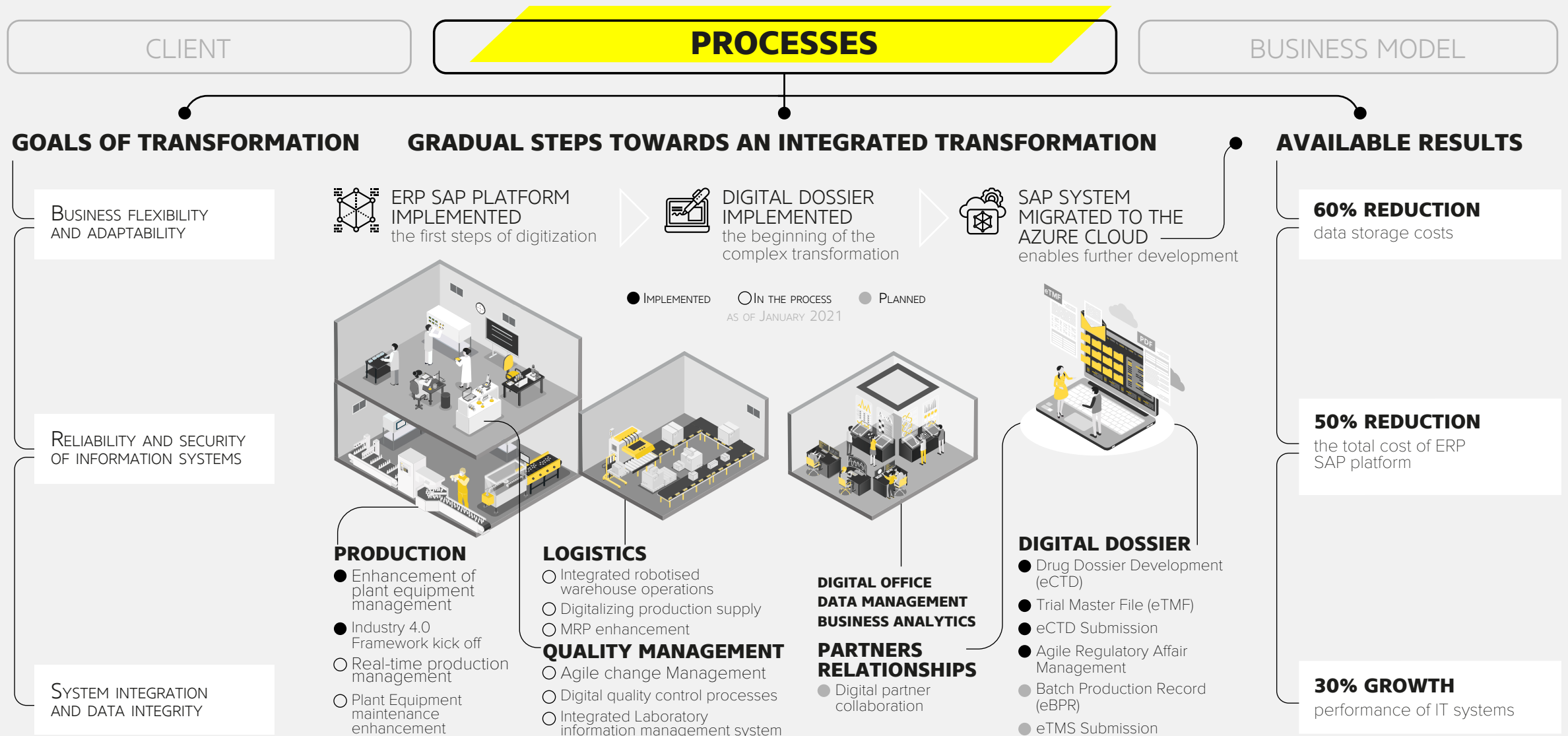
KERNEL: DIGITALIZATION OF HR-PROCESSES



TRANSFORMATION STRATEGY



DARNITSA – DIGITAL TRANSFORMATION STEP BY STEP



TRANSFORMATION STRATEGY



AEQUO IS A BUSINESS WITH SOCIAL DIMENSION

CLIENT

PROCESSES

BUSINESS MODEL

DRIVERS OF CHANGE

THE WORLD UNDERSTANDS WHAT IT TAKES TO ATTAIN SUSTAINABLE DEVELOPMENT

4 QUALITY EDUCATION
UN GLOBAL GOALS — SPECIFIC ACTION PLAN FOR SUSTAINABLE DEVELOPMENT

TOOL — UN GLOBAL AGREEMENT. THE LARGEST CORPORATE SUSTAINABILITY INITIATIVE IN THE WORLD

IN 2018, AEQUO BECAME THE FIRST NATIONAL LAW FIRM TO JOIN THE INITIATIVE

AEQUO FRIENDS IS A PROJECT ON THE BORDER OF EDUCATION AND INNOVATIONS

THE FIRST AND ONLY OF ITS KIND INTERNSHIP FOR LAW STUDENTS

FREE CHOICE OF PRACTICE AREA

Students independently select assignments and types of practice area. This helps them to determine their future area of specialty

RECRUITMENT

The internship programme allows trainees to join AEQUO team

GAMIFICATION

elements of a computer game are used in the course of training, valuation, and rating of trainees



COMPANY PHILOSOPHY
transformation directions

ONLINE ENVIRONMENT

Maximum efficiency, where and when convenient

COVID-19

The pandemic has not become a hindrance. In 2020, the number of enrolled trainees even increased

COMMUNITY

AEQUO Friends alumni

PROGRAMME TRANSFORMATION

Automated applicant selection stage as a result of its transformation into a computer quest game

RESULTS

EACH 4TH

trainee joins the firm's team

IN 2.5 TIMES

increased the number of applications since the beginning of the internship programme

STUDENTS FROM 30+ HIGHER EDUCATION INSTITUTIONS

Ukraine, Germany, USA, the Netherlands, United Kingdom, Poland, and Lithuania applied for an internship in 2017-2020

3.5 LESS TIME

needed for the selection due to automation

RECOGNITION

The programme was recognised by Financial Times Innovative Lawyers in the Managing and Developing Talent category

STRATEGY

TO UNDERSTAND THE CLIENT'S NEEDS, ENSURE THE HIGHEST QUALITY, AND EXCEED EXPECTATIONS

THIS CAN BE ACHIEVED BY SHARING COMMON VALUES AND USING RESOURCES OF A LEADING LAW FIRM IN UKRAINE TO CONTRIBUTE TO THE DEVELOPMENT OF THE BUSINESS COMMUNITY AND SOCIETY AS A WHOLE

AUTHOR



TOP LEAD
office@toplead.com.ua
toplead.com.ua

GENERAL PARTNER



UNIT.City
str. Dorohozhytska, 3
04112, Kyiv, Ukraine

mid@metinvest.digital
metinvest.digital

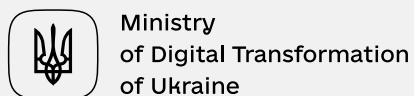
FOR SUPPORT PARTNER



Senator BC
Moskovska str.,32/2 15th floor
01601, Kyiv, Ukraine

lysenko@aequo.ua.
aequo.ua

INFORMATION PARTNER



Ministry
of Digital Transformation
of Ukraine

MEDIA PARTNER



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