

CDL-INF(2023)002

Or. En.

EUROPEAN COMMISSION FOR DEMOCRACY THROUGH LAW
(VENICE COMMISSION)

in cooperation with

**THE MINISTRY OF DIGITAL TRANSITION AND ADMINISTRATIVE
REFORM OF THE KINGDOM OF MOROCCO**

Regional seminar for senior civil servants

17th UniDem Med

**" DIGITAL TRANSFORMATION AND ARTIFICIAL
INTELLIGENCE: RULES AND APPLICATIONS "**

hybrid format (online and in Rabat, Morocco)

21-22 November 2023

**DIGITAL TRANSFORMATION, ARTIFICIAL INTELLIGENCE, AND AUTOMATED
DECISION-MAKING IN PUBLIC ADMINISTRATION**

by Mr Fernando de PABLO MARTIN
(Director General of the Digital Office of the City of Madrid, Spain)

Co-funded
by the European Union



COUNCIL OF EUROPE



Co-funded and implemented
by the Council of Europe

The UniDem Med project is implemented in the framework of the joint European Union/Council of Europe programme
"Protecting human rights, the rule of law and democracy through shared standards in the Southern Mediterranean"
(South Programme V)



DIGITAL TRANSFORMATION AND ARTIFICIAL INTELLIGENCE: AUTOMATED DECISION-MAKING IN PUBLIC ADMINISTRATIONS



17th UniDem Med Regional Seminar
Morocco-Rabat 21-22 November 2023.



Fernando de Pablo Martín
Digital Office Director – Madrid City Hall (2020)
CIO Central Administration (2009-2012, 2018-2020)
CEO IT in tourism sector (2017-2018)
Office to Reform Public Administration in Spain (2013-2017)
IT Spanish Tax Administration (1993-2009)



AGENDA



- Introduction
- Evolution of technology for digital public services
- From paper to automation
- Why Artificial Intelligence now – generative AI
- AI - Balance between Risks & Opportunities
- What is AI?
- AI Technologies (relation with data, 5G, etc)
- International challenges with AI – Ethics
- AI Governance by delivering digital public services.
- AI in Madrid City Council
- Laernig point and conclusión

- Some open questions for debate ...

Europe | The Brussels effect

The EU wants to become the world's super-regulator in AI

And there's a precedent



Business | Rift valley

The Sam Altman drama points to deeper split in the tech world

Doomers and boomers are fighting for AI dominance



TTY IMAGES



Sam Altman, el 16 de mayo en el Senado de EE UU. GETTY

Microsoft ficha a Sam Altman para liderar un laboratorio de inteligencia artificial

M. G. PASCUAL

Un grupo de 500 empleados de OpenAI, la empresa desarrolladora de ChatGPT que dirigía el ejecutivo, amenazan con irse si no le restituyen



Post



Satya Nadella @satyanadella

We remain committed to our partnership with OpenAI and have confidence in our product roadmap, our ability to continue to innovate with everything we announced at Microsoft Ignite, and in continuing to support our customers and partners. We look forward to getting to know Emmett Shear and OAI's new leadership team and working with them. And we're extremely excited to share the news that Sam Altman and Greg Brockman, together with colleagues, will be joining Microsoft to lead a new advanced AI research team. We look forward to moving quickly to provide them with the resources needed for their success.

Traducir post

8:53 a. m. · 20 nov. 2023 · 23 M Reproducciones

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Graphic detail | Daily chart

ChatGPT could replace telemarketers, teachers and traders

Here's why that is no bad thing

Apr 14th 2023

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EVOLUTION OF THE DIGITALIZATION PROCESS IN PUBLIC ADMINISTRATIONS



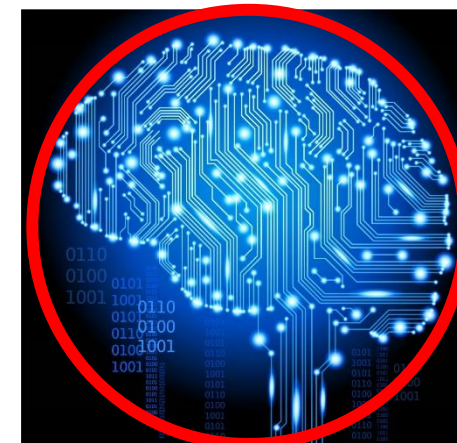
**PERSONAL
COMPUTER
(1985)**



**INTERNET
(1995)**



**“SMARTPHONE”
(2007)**



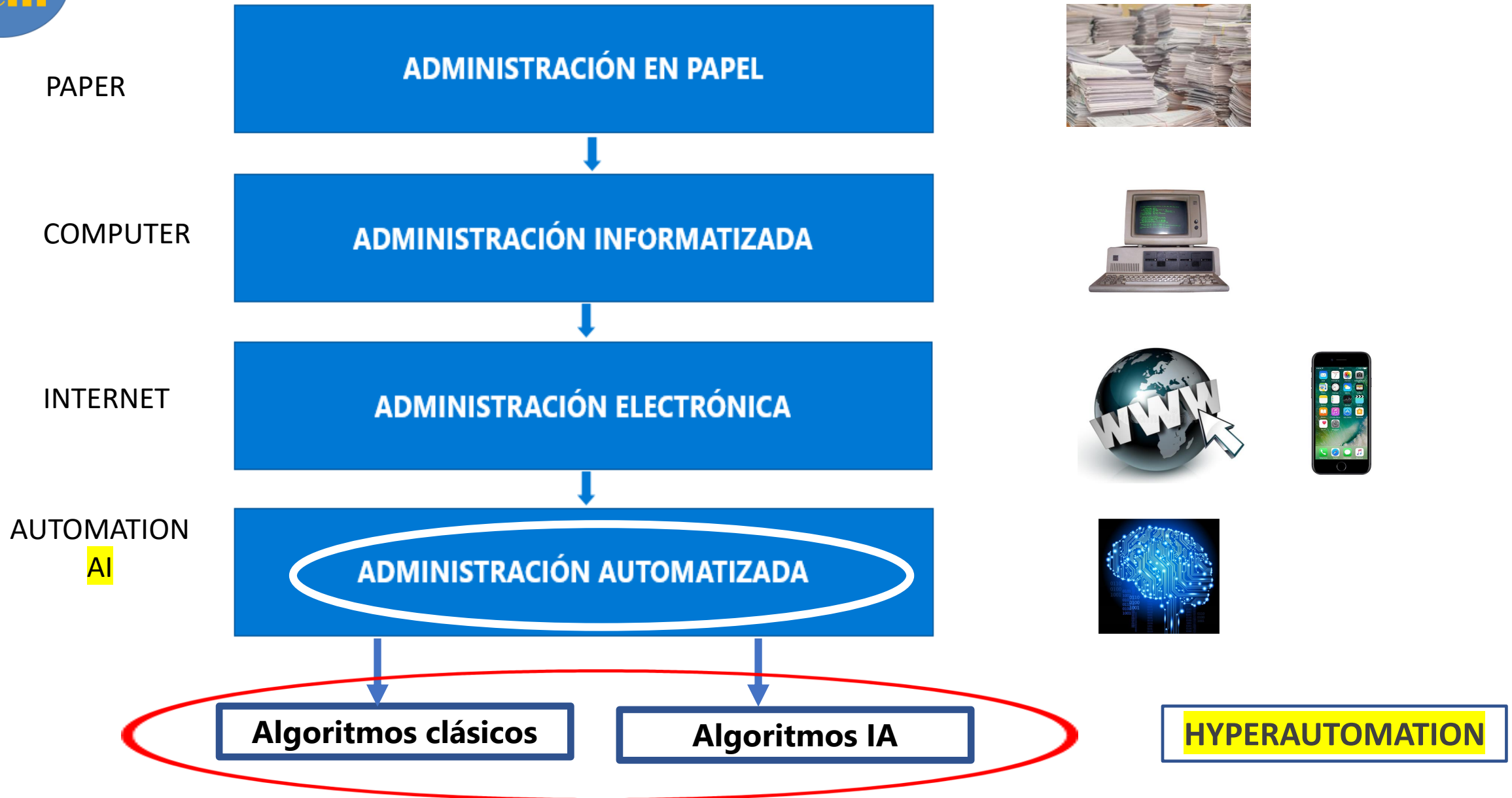
**ARTIFICIAL INTELLIGENCE
(2015)**



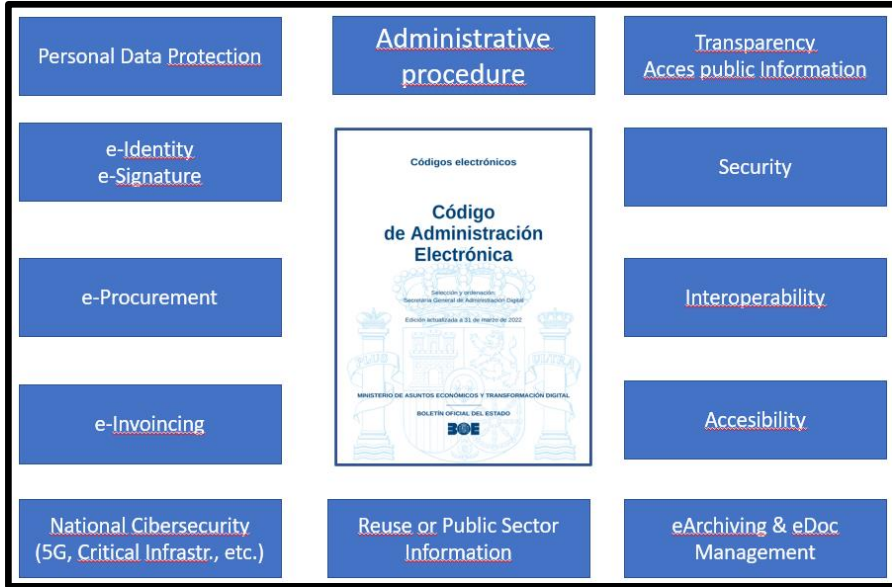
Artificial intelligence, or AI, refers to technologies programmed to analyse the world around them and take action to achieve specific goals. **Public services.**

[iPhone 1 - Steve Jobs MacWorld keynote in 2007 - Full Presentation, 80 mins - YouTube](#)

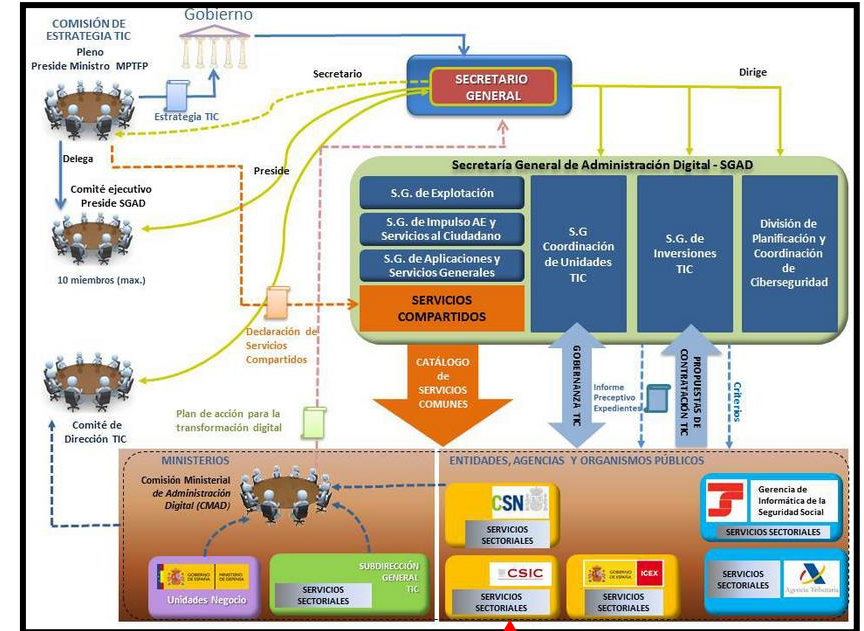
EVOLUTION OF THE DIGITALIZATION PROCESS OF PAs



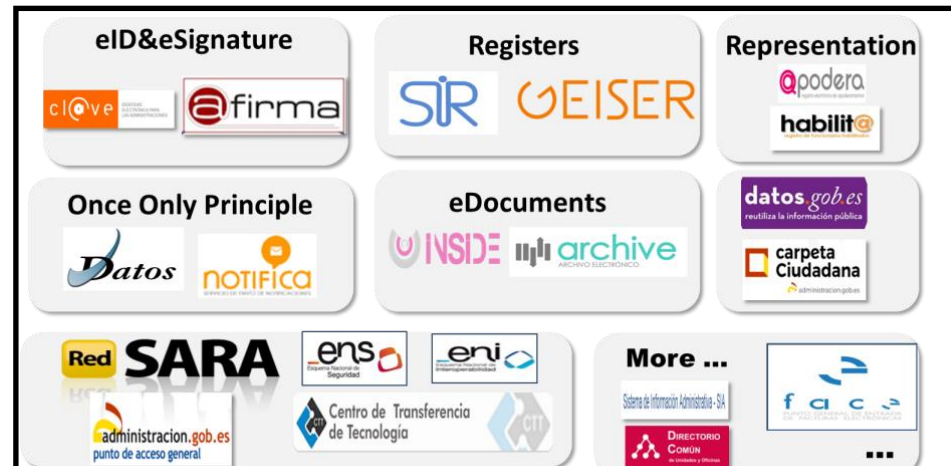
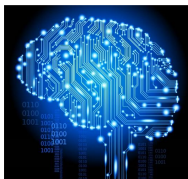
E-GOVERNMENT IN SPAIN – MADRID - PILLARS



Common e-service platforms portfolio



Complet legal framework

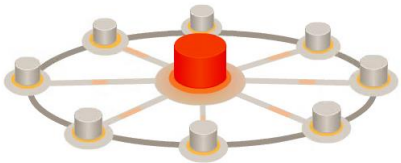
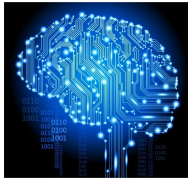
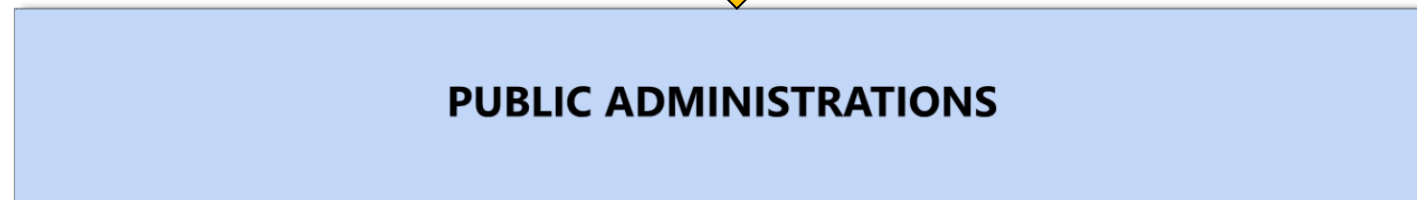
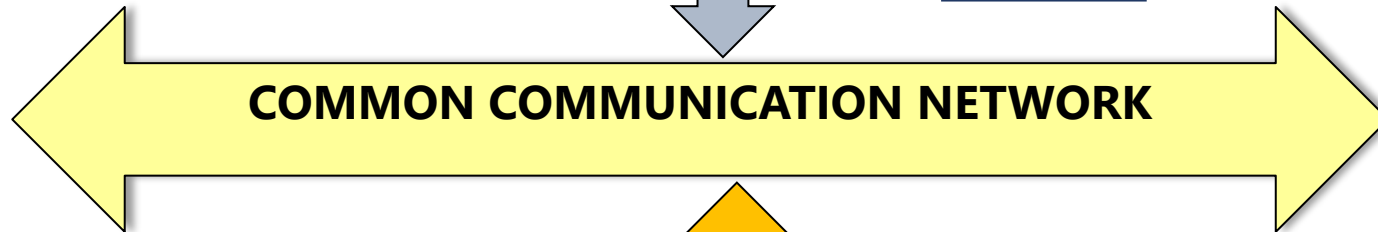
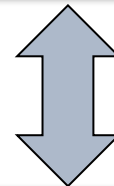
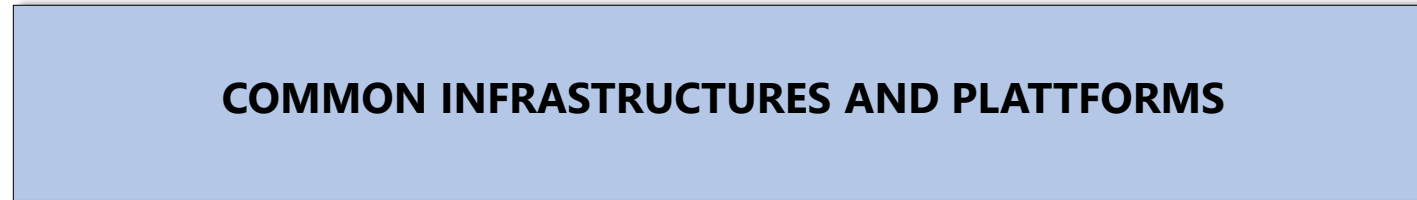


Cooperative Governance



E-GOV COMMON SERVICES IN SPAIN (building blocks)

Common infrastructures and services in Spain. Portfolio with 30 common infrastructures free to use to all public administration levels. **GOV CLOUD**, Interoperable with EU projects and standards. **Madrid as providers and consumer of services**



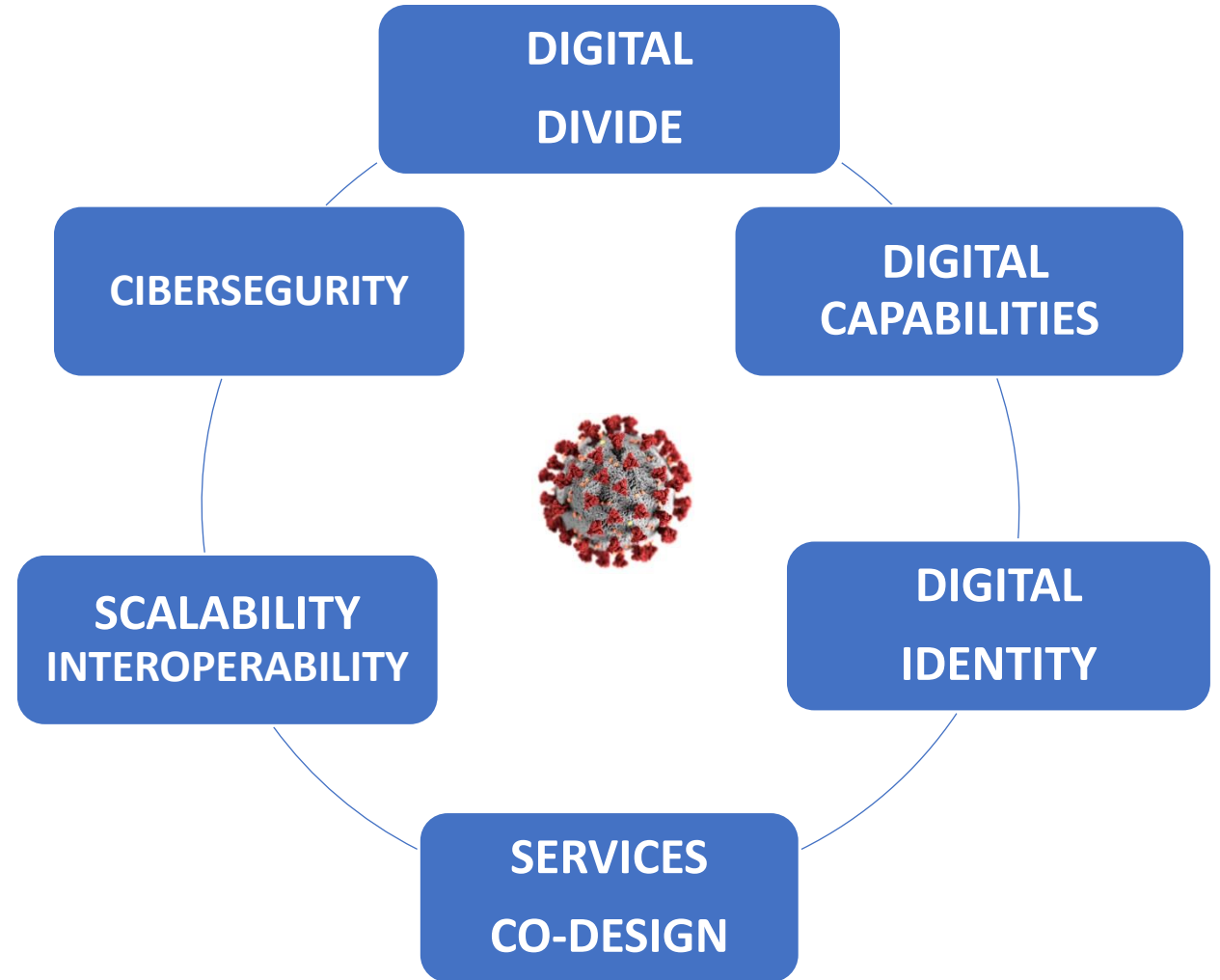
MAIN DIGITAL CHALLENGES IN CITIES DURING COVID

ACCELERATE DIGITAL TRANSFORMATION - Technology to solve people problems



 **MADRID**

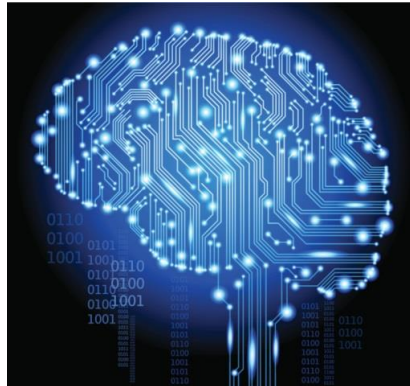
- 30.000 public employees
- 800 offices
- 3,3 M millones in municipal census (5 M)
- 10 M tourist pre-COVID
- 0,55 M companies (multinational-SME)
- Complexity - diversity
- 60% GDP Madrid región
- High contribution to Spanish DGP (12%)



WHY DOES AI EXPLOIT NOW (GENERATIVE AI)

Press release | 21 April 2021 | Brussels

Europe fit for the Digital Age: Commission proposes new rules and actions for excellence and trust in Artificial Intelligence

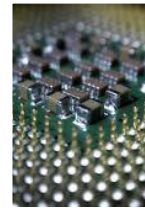


ARTIFICIAL INTELLIGENCE



DATA

BIG DATA - IoT – DIGITAL FOOTPRINT



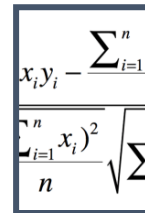
COMPUTING CAPACITY

PC-CLOUD-SMARTPHONES



COMMUNICATIONS

REAL TIME, MOBILITY, 5G-6G



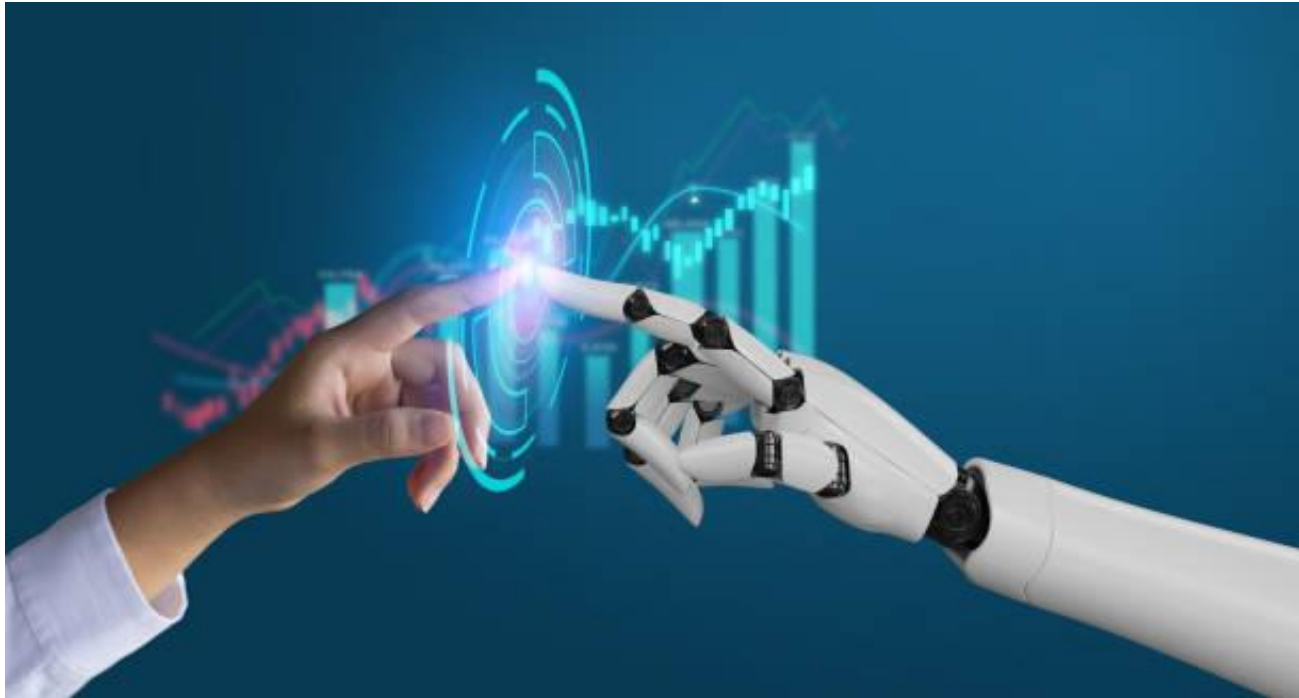
ALGORITHMS

DATA ANALYTICS – COGNITIVE - ETC



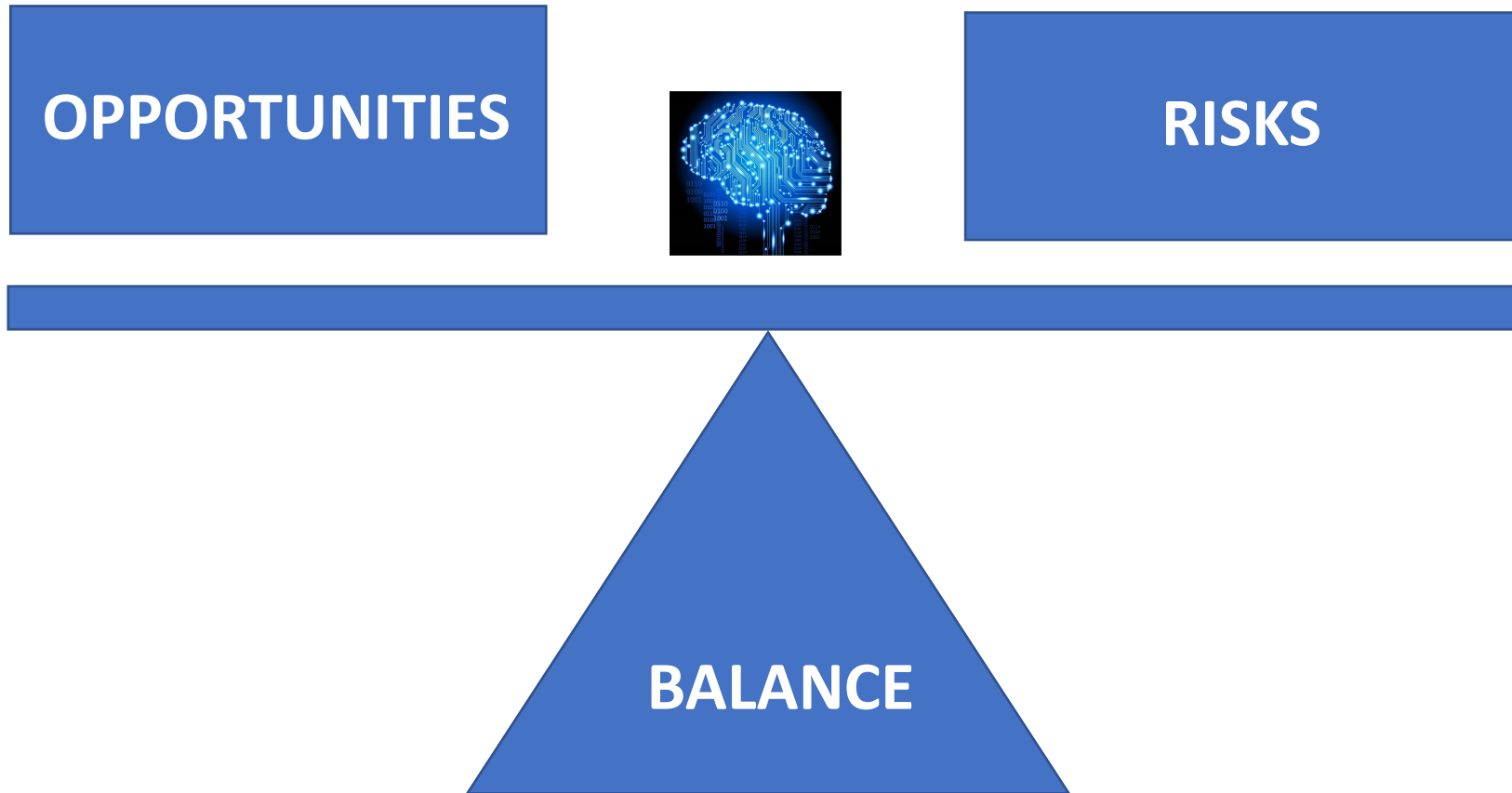
Chat GPT

AI IS HERE. TAKE ADVANTAGE OF ALL ITS POSSIBILITIES

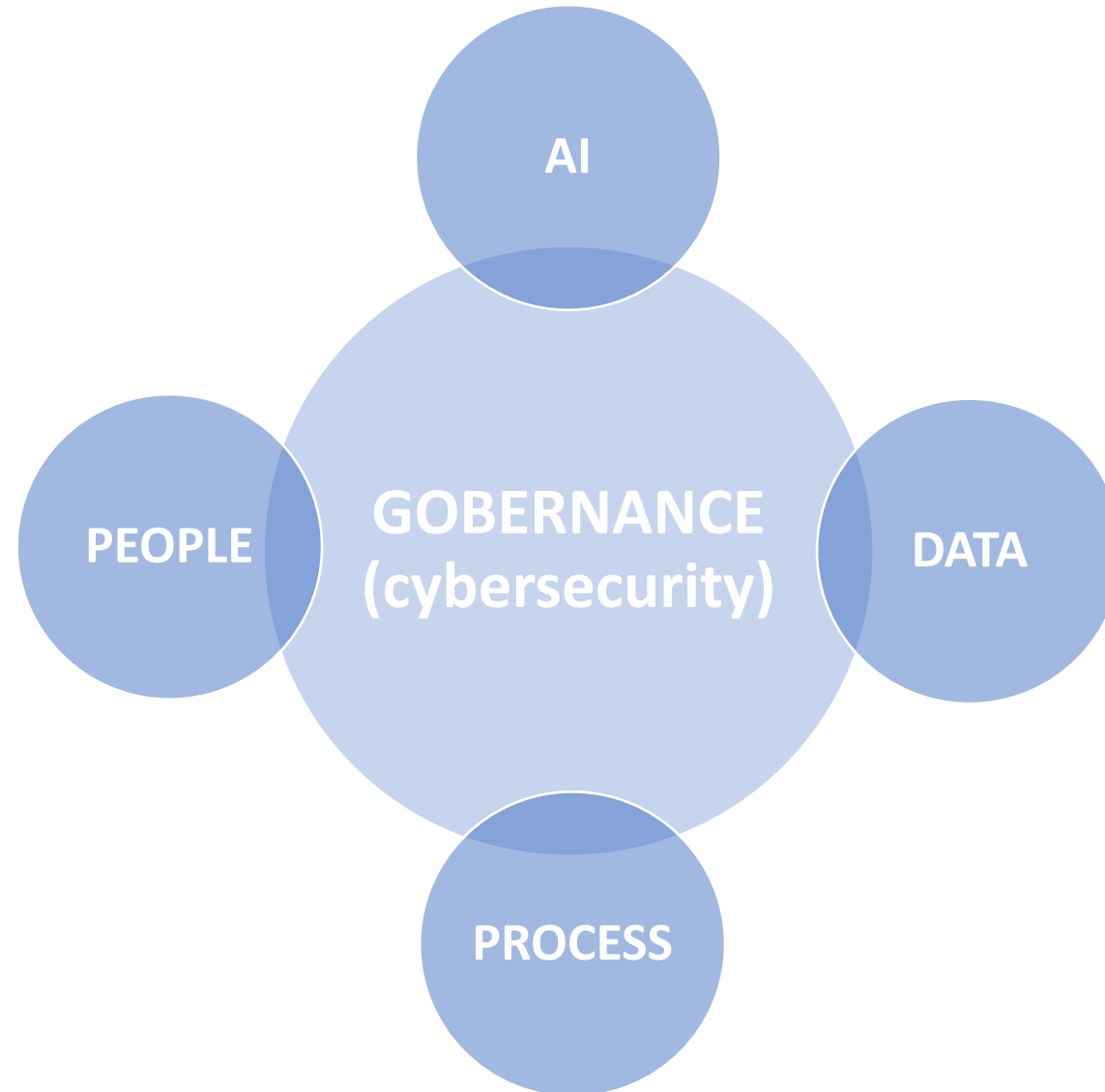


- AI is one of the most powerful technologies of our time. Next step in improving digital public services.
- We must take bold action to harness the benefits and mitigate the risks of AI.
- We need to protect safety and rights in the age of AI, so that everyone can benefit from the promise of AI.

AI - BALANCE BETWEEN OPPORTUNITIES AND RISKS



AI IN ADMINISTRATIVE PROCEDURES DIGITAL TRANSFORMATION IS NOT ONLY TECHNOLOGY



Shaping Europe's digital future

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[Home](#) > [Policies](#) > [A European approach to artificial intelligence](#)

A European approach to artificial intelligence

The EU's approach to artificial intelligence centers on excellence and trust, aiming to boost research and industrial capacity while ensuring safety and fundamental rights.

The way we approach Artificial Intelligence (AI) will define the world we live in the future. To help building a resilient [Europe for the Digital Decade](#), people and businesses should be able to enjoy the benefits of AI while feeling safe and protected.

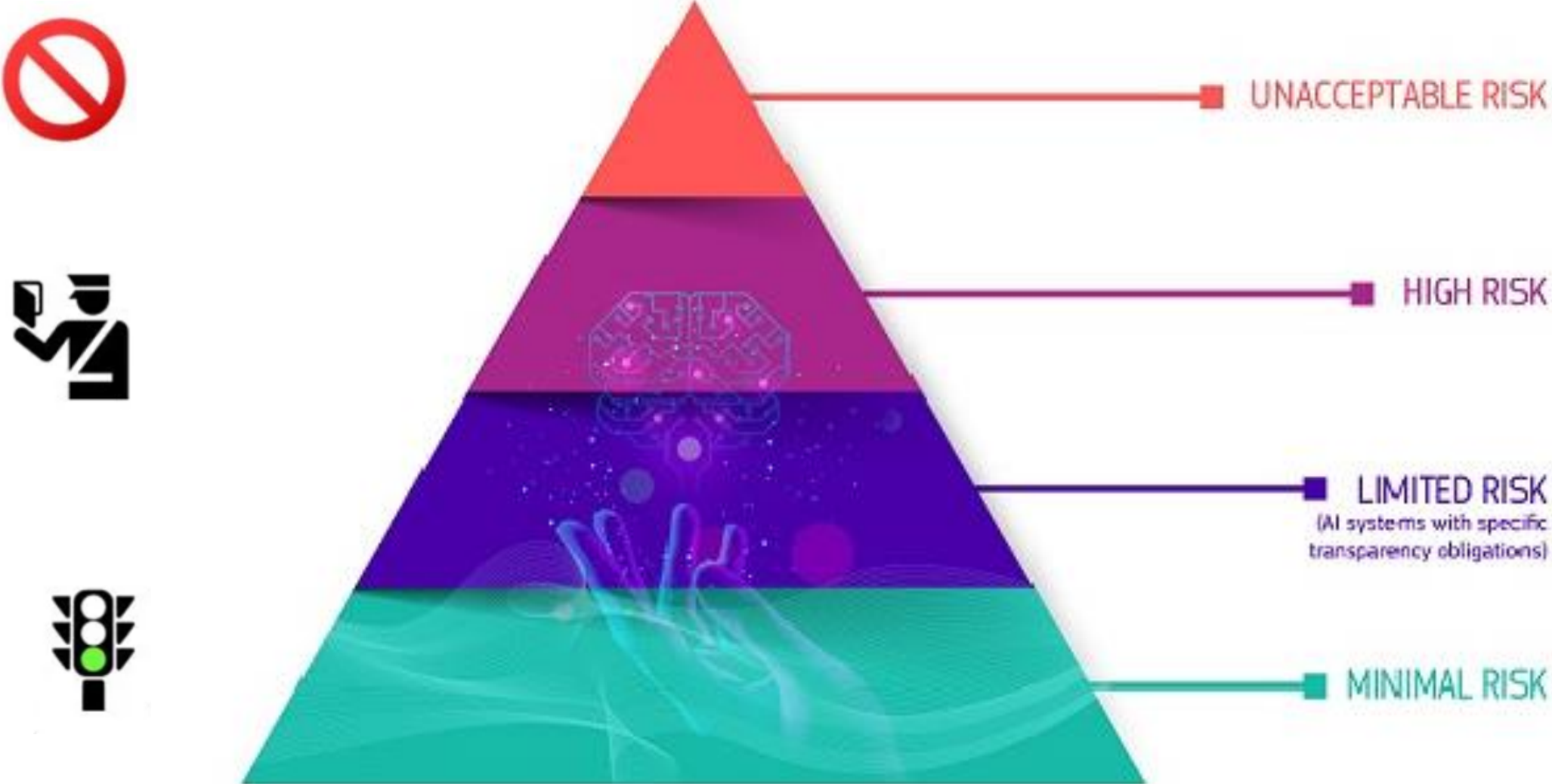
The [European AI Strategy](#) aims at making the EU a world-class hub for AI and ensuring that AI is



EU AI Act: first regulation on artificial intelligence

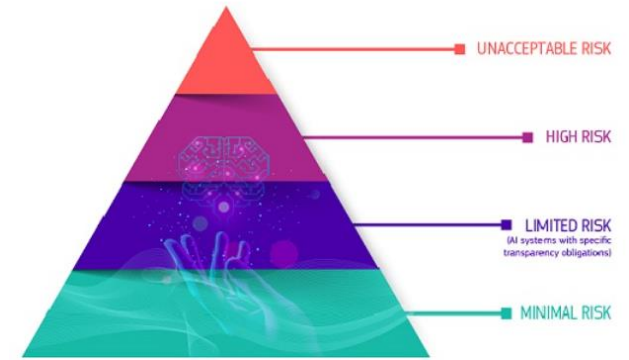
Society Updated: 14-06-2023 - 14:06

A risk-based approach



The proposed rules will:

- address risks specifically created by AI applications;
- propose a list of high-risk applications;
- set clear requirements for AI systems for high risk applications;
- define specific obligations for AI users and providers of high risk applications;
- propose a conformity assessment before the AI system is put into service or placed on the market;
- propose enforcement after such an AI system is placed in the market;
- propose a governance structure at European and national level.



How does it all work in practice for providers of high risk AI systems?

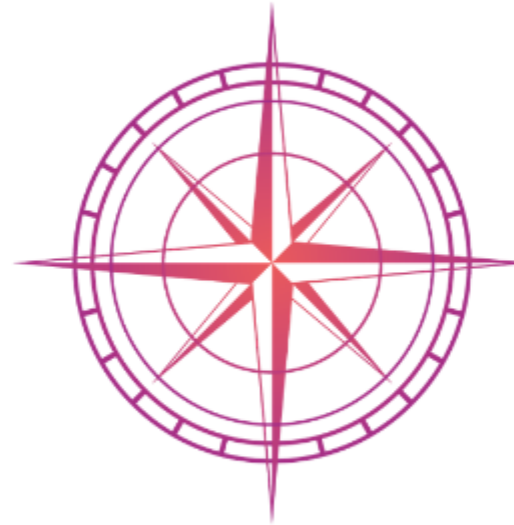
Europe's Digital Decade: digital targets for 2030

Skills

20 million employed **ICT specialists**, more graduates + gender balance
80% of adults can **use tech** for everyday tasks

Government

Key Public Services - 100% online
Everyone can **access health records online**
Everyone can use **eID**



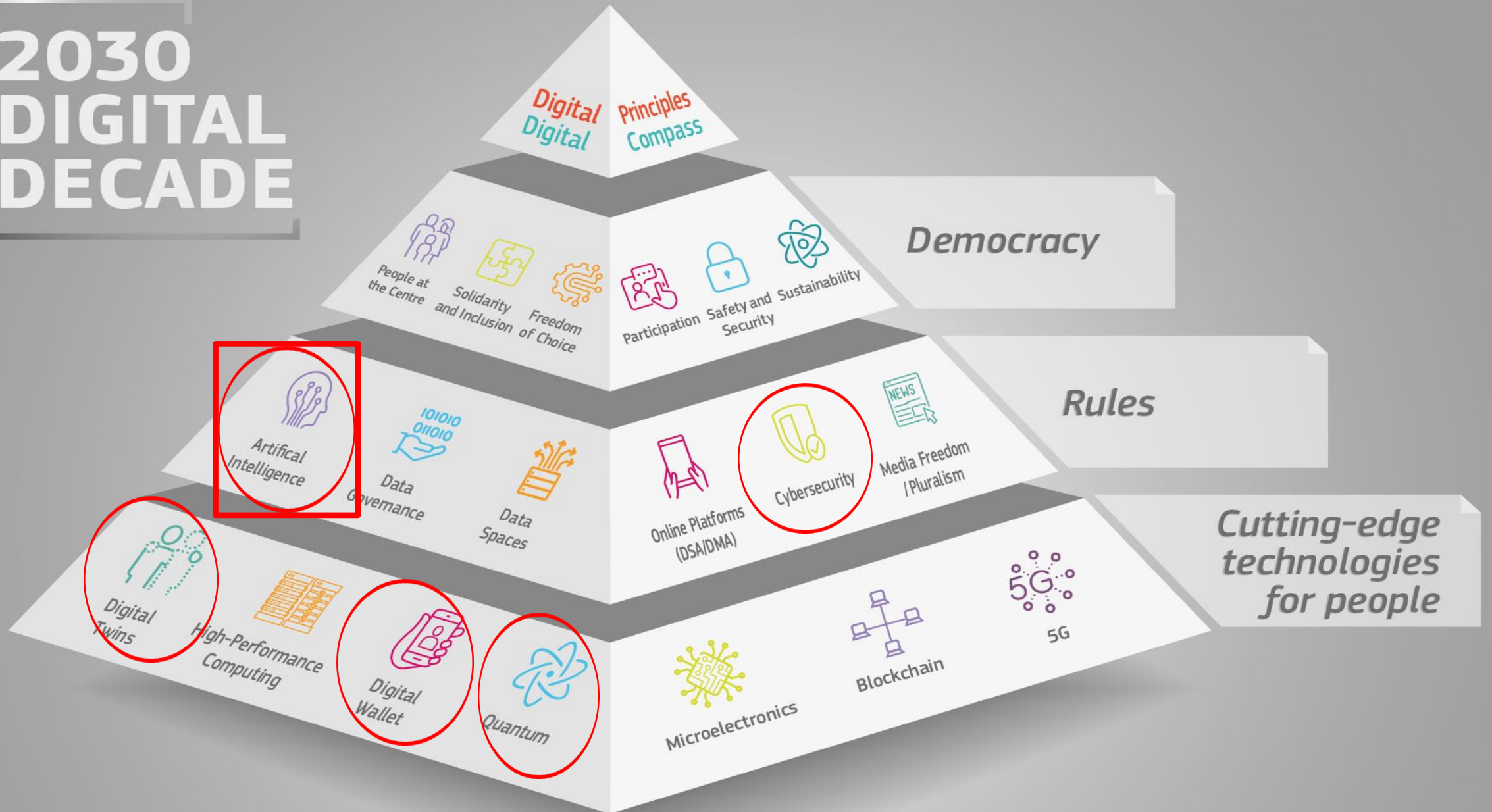
Infrastructure

Gigabit connectivity for everyone, **high-speed mobile coverage** (at least 5G) everywhere
EU produces 20% of world's **semiconductors**
10 000 **cloud edge nodes** = fast data access
EU **quantum computing** by 2025

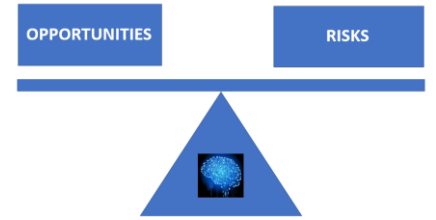
Business

75% of companies using **Cloud, AI or Big Data**
Double the number of **unicorn startups**
90% of **SMEs taking up tech**

2030 DIGITAL DECADE



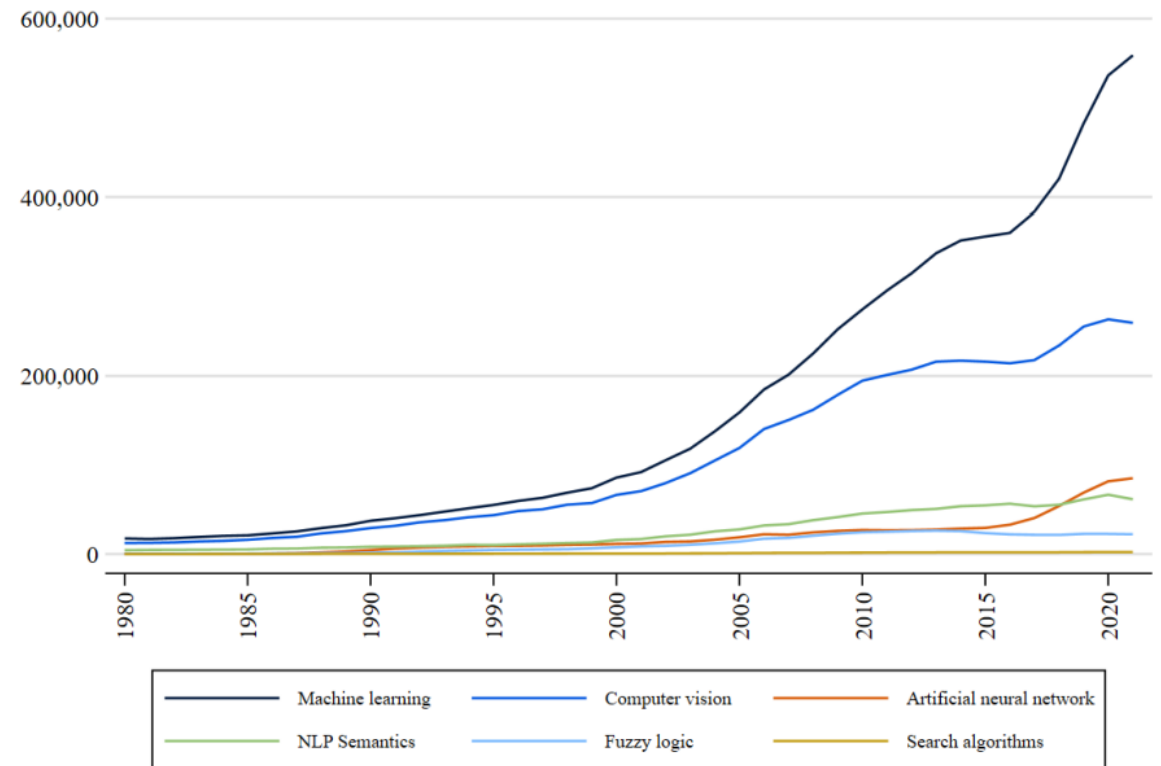
AI - SOME TECHNIQUES EMPLOYED



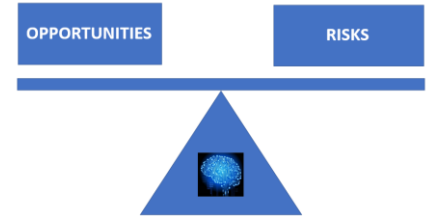
1. Machine Learning (ML)
2. Deep Learning (DL)
3. Natural Language Processing (NLP)
4. Computer Vision (images/videos)
5. Robotic control (RPA) - Drones
5. Evolutionary Algorithms
6. Generative AI
6. Expert Systems
7. Fuzzy Logic
8. Knowledge Representation and Reasoning
9. Clustering and Classification
10. Ensemble Learning
11. Swarm Intelligence

Figure 1. AI research publications by topic, 1980-2021

Count of publications



AI - SOME RISKS TO BE ADRESSED



1. Balance between personalization and privacy (**GDPR**)
2. Explicability/trazability of **administrative decisions**
3. Bias and Discrimination
4. Cybersecurity Threats
2. Manipulation of Information /Fakes
3. Autonomous Weapons
4. Privacy Violations
5. Financial Exploitation
6. Critical Infrastructure Attacks
8. Biometric and Healthcare Risks
9. Political Manipulation
10. Identity Theft and Fraud
11. **Effects on the Labor market (people)**

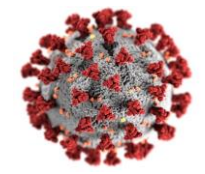
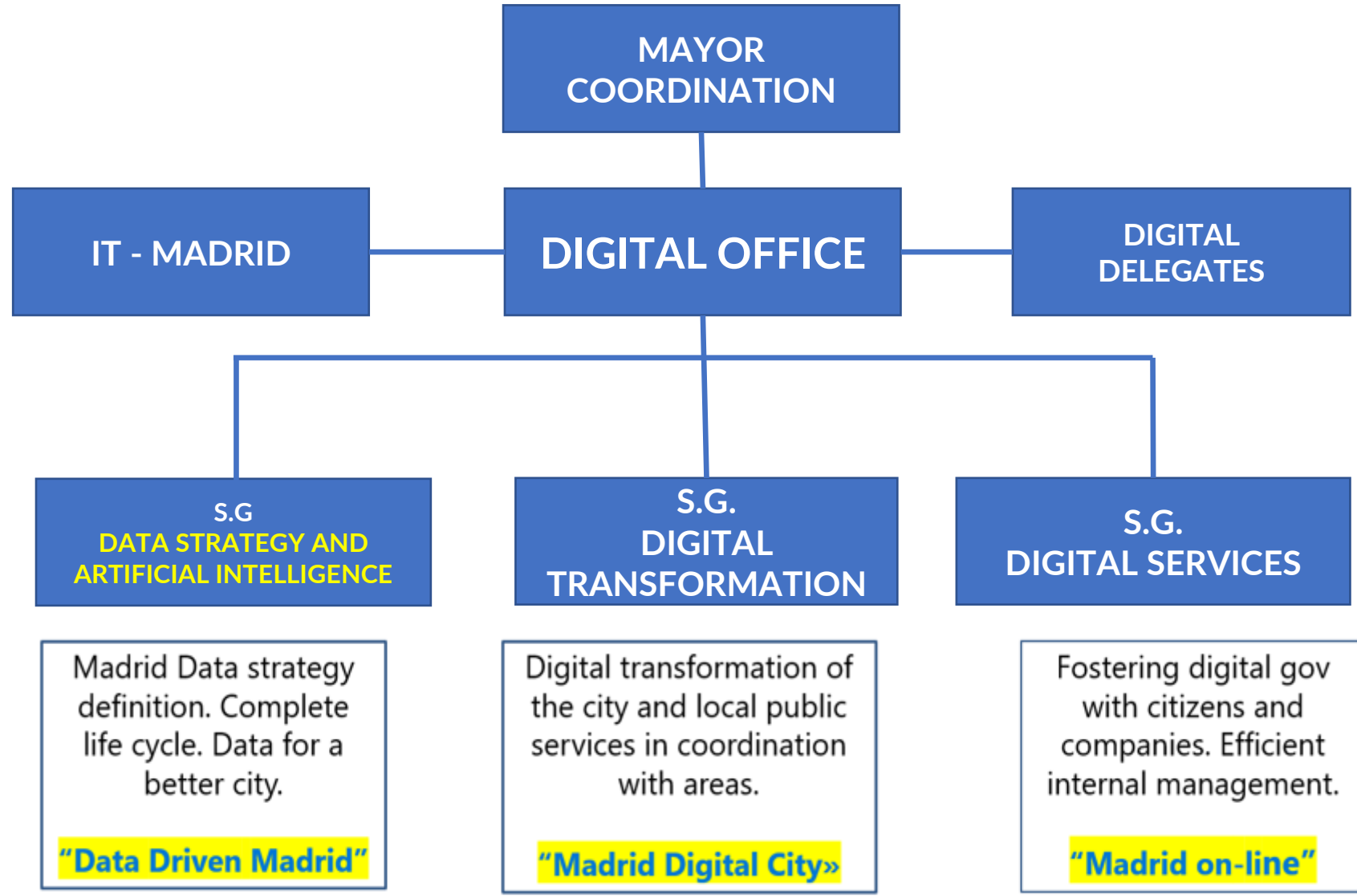


ETHICS/TRANSPARENCY

What **can** be done ?
What **should** be done ?

WE MUST ADVANCE WITH TRUST

MADRID - DIGITAL OFFICE STRUCTURE



An ambitious but realistic strategy

The Strategy builds on and integrates **action plans** designed to incorporate emerging technologies that facilitate and accelerate digitisation of municipal and city services. **PACKAGE OF IT STRATEGIES**



Digital Transformation Strategy 2023-2027



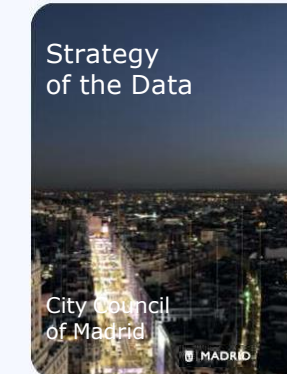
Digital Administration Plan



5G Agenda



Multicloud strategy



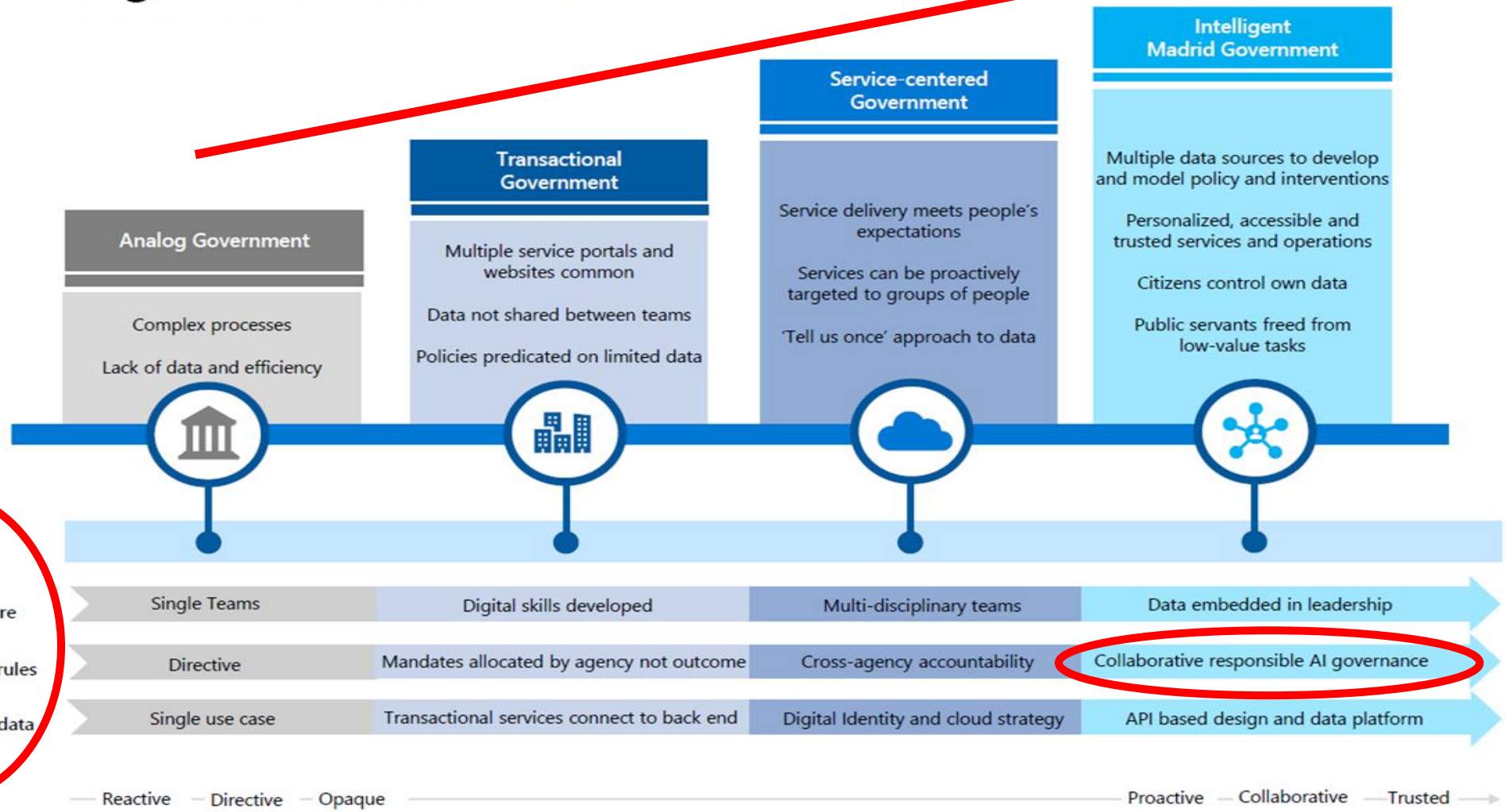
Data Strategy



Digital Training Plan

MADRID: PHASES OF DIGITAL PUBLIC SERVICES DELIVERY

Phases of government evolution



From a transactional to a intelligent administration in Madrid

AI - OPPORTUNITIES – some cases in MADRID

1. CRM Bots and **Chatbots** with natural language processing for Q&A
2. Automatic **classifications of documents** (document entrance units)
3. **Computer vision** (images and videos) – Mobility/security, etc.
4. DL and ML algorithms to fraud control, **cibersecurity patterns on real time**
5. **Aerial analysis of a city**: Geoportal
6. Increase internal **productivity** of public officials
 1. Automatic generation of code in sw developments
 2. Automatic generation of documents
 3. Summary of meetings, etc.
 4. Etc.

ALLWAYS WITH HUMAN SUPERVISION

AI GOVERNANCE - to generate TRUST

1. Strategy
2. Organizational governance
3. Skills and capabilities
4. Transparency in the use of algorithms
5. Regulatory and Ethic framework
6. Digital Right Charts
7. **Open register of use of algorithms**
8. **Regulatory AI sandbox**
- ...

Digital Rights and Principles



PEOPLE AT THE CENTRE

Digital technologies should **protect people's rights, support democracy, and ensure that all digital players act responsibly and safely.** The EU promotes these values across the world.



SOLIDARITY AND INCLUSION

Technology should **unite, not divide, people.** Everyone should have access to the internet, to digital skills, to digital public services, and to fair working conditions.



FREEDOM OF CHOICE

People should benefit from a **fair online environment, be safe from illegal and harmful content,** and be empowered when they interact with new and evolving technologies like artificial intelligence.



PARTICIPATION

Citizens should be able to **engage in the democratic process** at all levels, and have **control over their own data.**



SAFETY AND SECURITY

The digital environment should be **safe and secure.** All users, from childhood to old age, should be empowered and protected.



SUSTAINABILITY

Digital devices should support **sustainability and the green transition.** People need to know about the environmental impact and energy consumption of their devices.

LEARNING POINTS & CONCLUSIONS

- AI will be the new frontier **to provide better public services**
- At the same time we must **increase governance** of AI.
- There is a **balance between the risks and opportunities**. Take advantage of opportunities, reduce risks.
- **People must have TRUST** in technology being used for public administration to delivery digital public services.
- **Need of a global regulation (as GDPR)**. Too local initiatives. European AI Act.
- AI is currently a great **gepolitical challenge**

What can be done ?

What should be ?

WE MUST ADVANCE WITH TRUST



OCTOBER 30, 2023

FACT SHEET: President Biden Issues Executive Order on Safe, Secure, and Trustworthy Artificial Intelligence



▶ BRIEFING ROOM ▶ STATEMENTS AND RELEASES