

CONSIDERACIONES SOBRE INTELIGENCIA ARTIFICIAL EN HORIZONTE EUROPA

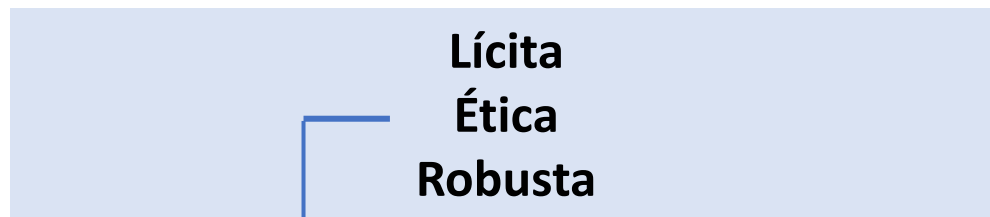
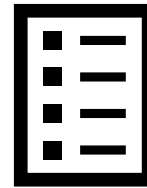
Infoday Nacional CDTI Clúster 4 Industria 2024

19 Octubre 2023

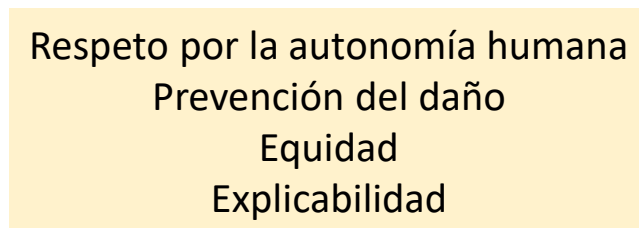
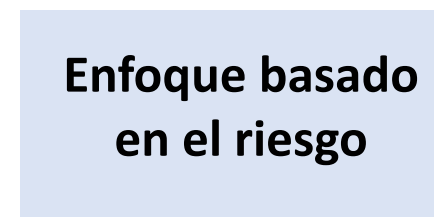
Cristina Contero Almagro



DIRECTRICES Y NORMATIVA



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ACCIÓN Y SUPERVISIÓN HUMANAS

Incluidos los derechos fundamentales, la acción humana y la supervisión humana

Respeto por la autonomía humana



Evaluación de impacto de derechos fundamentales

+

Herramientas para **comprender** los sistemas de IA e **interactuar** con ellos

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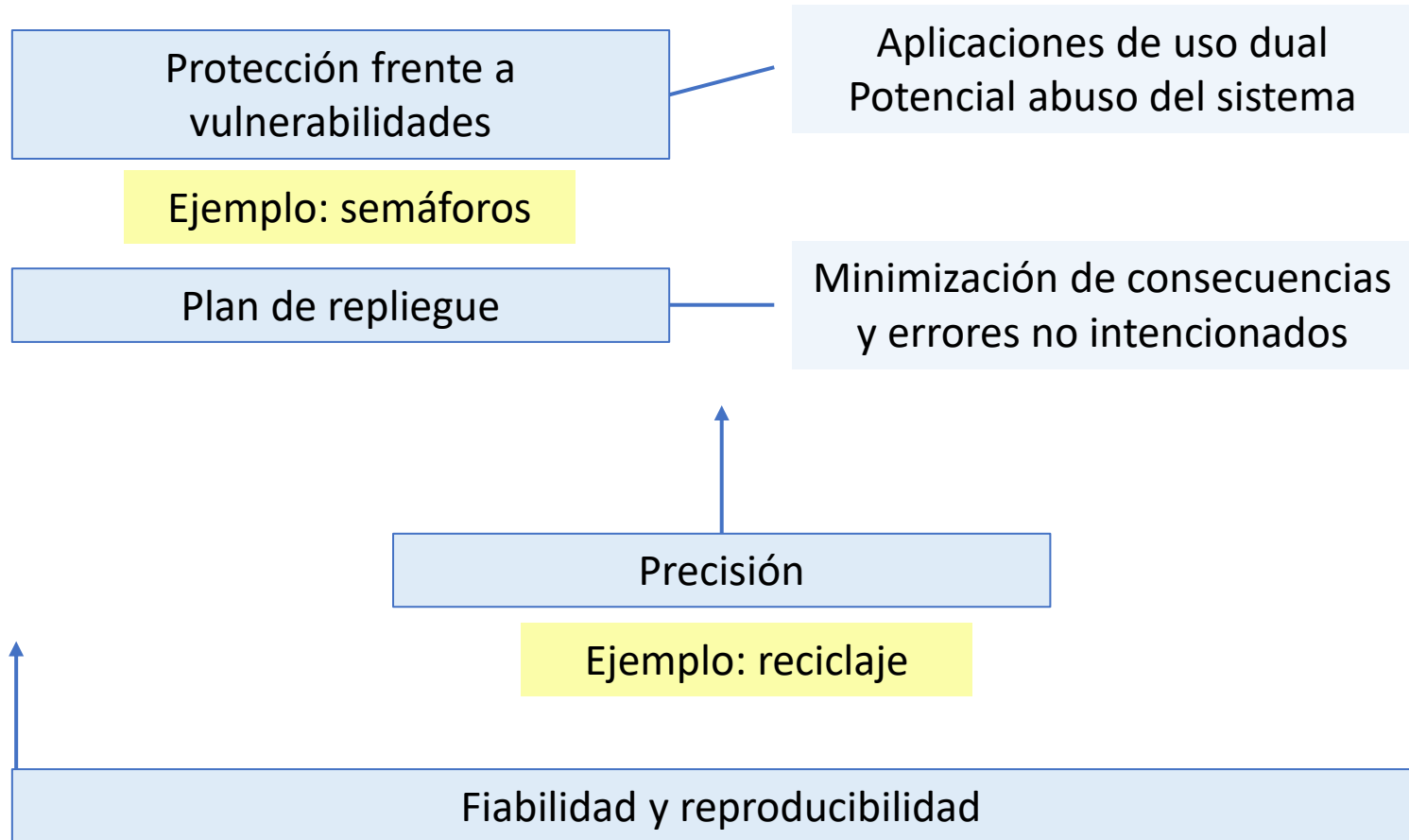
Human-in-the-loop
Human-on-the-loop
Human-in-command

Ejemplo: interfaces

SOLIDEZ TÉCNICA Y SEGURIDAD

Prevención del daño

Incluida la capacidad de resistencia a los ataques y la seguridad, un plan de repliegue y la seguridad general, precisión, fiabilidad y reproducibilidad



GESTIÓN DE LA PRIVACIDAD Y LOS DATOS

Incluido el respeto de la privacidad, la calidad, la integridad y el acceso de los datos

Prevención del daño
Equidad
Explicabilidad



1

Calidad e integridad de los datos

2

Ejemplo: préstamos, smart cities

RGPD y leyes nacionales de protección de datos



Acceso a los datos

Ejemplo: movimientos de trabajadores
en la planta

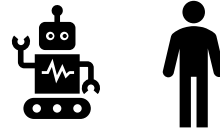
TRANSPARENCIA

Explicabilidad

Incluidas la trazabilidad, la explicabilidad y la comunicación

Procesos que motivan la decisión del sistema de IA

Explicación de los procesos técnicos del sistema de IA y las decisiones humanas vinculadas

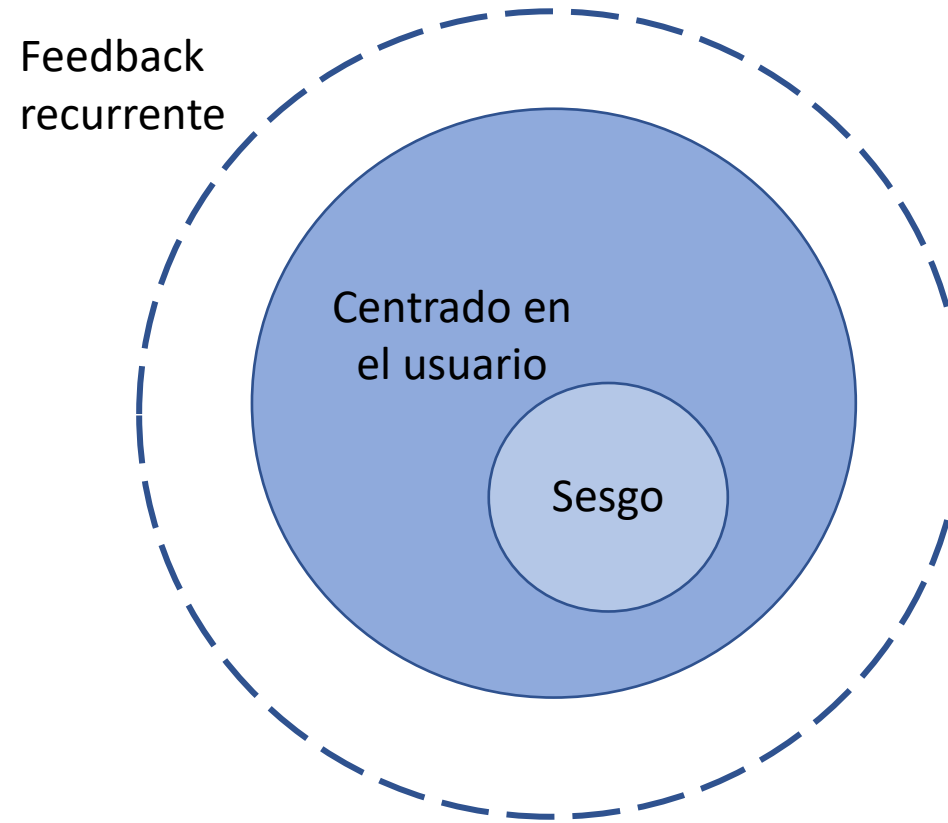


Ejemplo: optimización de flujos,
¿despidos vinculados?

DIVERSIDAD, NO DISCRIMINACIÓN Y EQUIDAD

Incluida la ausencia de sesgos injustos, la accesibilidad y el diseño universal, así como la participación de las partes interesadas

Equidad
Prevención del daño



Ejemplo: algoritmos de contratación (Amazon)

BIENESTAR SOCIAL Y AMBIENTAL

Incluida la sostenibilidad y el respeto del medio ambiente, el impacto social, la sociedad y la democracia

Equidad
Prevención del daño



Ejemplo: detección de plagas en cultivos

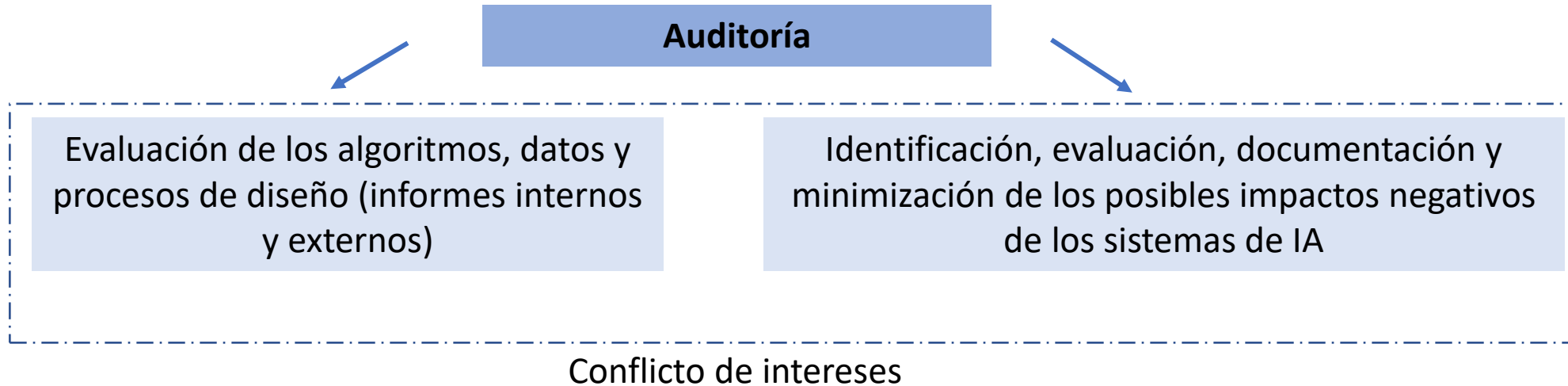
Ejemplo: distribución de multitudes en eventos masivos

Ejemplo: Cambridge Analytica

RENDICIÓN DE CUENTAS

Equidad

Incluidas la auditabilidad, la minimización de efectos negativos y la notificación de estos, la búsqueda de equilibrios y las compensaciones



Proyectos con actividades que impliquen el **desarrollo, despliegue y/o uso de sistemas o técnicas de IA**

Descripción del problema, soluciones planteadas y documentos relevantes (o el plazo esperado para tenerlos)

Mayores estándares éticos + Normativa nacional, europea e internacional

Comité ético



Limitación de los derechos humanos, subordinación, desventaja social o política, discriminación, daño físico, psicológico o financiero, daño mediambiental.

HORIZON-CL4-2023-TWIN-TRANSITION-01-45: Circular economy solutions for the valorisation of low-quality scrap streams, materials recirculation with high recycling rate, and residue valorisation for long term goal towards zero waste (Clean Steel Partnership) (RIA)



(Page 56) “Multidisciplinary research activities should address one or more of the following:

- Sustainable and efficient scrap management and recycling aiming high-grade steel production with increased scrap rates including:
 - Continuous analysis and monitoring of the scrap bulk composition using sensor systems with accompanied model-supported Big Data analytics and Artificial Intelligence (AI) techniques for scrap classification”

HORIZON-CL4-2024-TWIN-TRANSITION-01-05: Technologies/solutions to support circularity for manufacturing (Made in Europe Partnership) (RIA)

(Page 65) “Proposals should cover all of the following aspects:

- Develop new approaches of Artificial Intelligence to forecasts the environmental impact, also considering the quantity and state of products after their use”

HORIZON-CL4-2024-TWIN-TRANSITION-01-44: Digital transformation and ensuring a better use of industrial data, which can optimise steel supply chains (Clean Steel Partnership) (IA)

(Page 80) “Projects are expected to contribute to one or more of the following outcomes:

- Application of digital technologies such as, for example, Digital Twins and/or enhanced statistical analysis, machine learning (ML) algorithms, or artificial intelligence (AI) to develop decision-supported planning and process monitoring tools operable in offline or online modes”

HORIZON-CL4-2023-RESILIENCE-01-23: Computational models for the development of safe and sustainable by design chemicals and materials (RIA)

(Page 136) “Projects are expected to contribute to the following outcomes:

- The ‘chemicals and materials’ community will be provided with computational models supported by artificial intelligence for the design of new chemicals and materials integrating functionality and the Safe and Sustainable by Design framework”

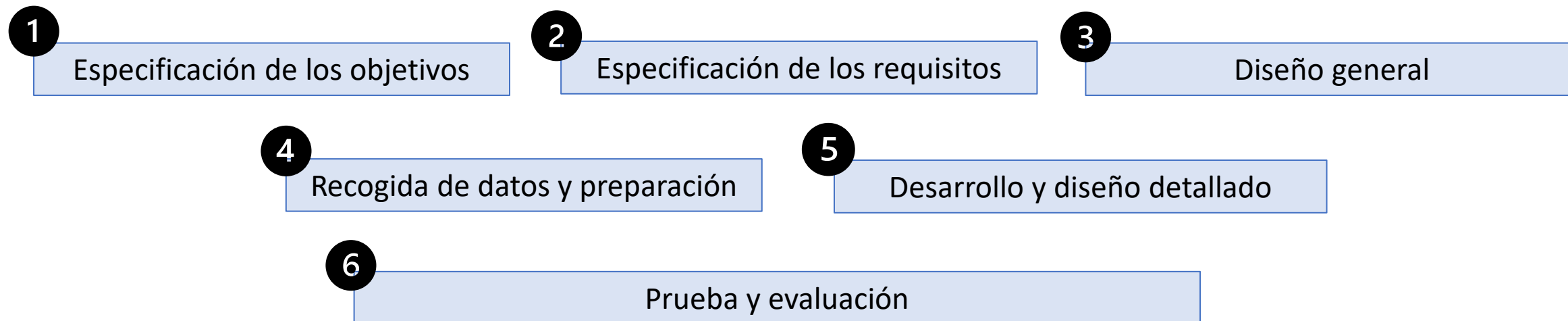
Destination 3: World-leading Data and Computing Technologies

(Page 177) In parallel, recent developments in sensor networks, cyber-physical systems, and the ubiquity of the Internet of Things (IoT) and Artificial Intelligence (AI) have increased the collection of data (including health care, social media, smart communities, industry, manufacturing, education, construction, agriculture, water management finance/insurance, tourism, education, and more) to an enormous scale (by 2025, 463 exabytes of data will be produced every day in the world). There is significant potential for advances of data analytics at the intersection of many scientific, technology and societal fields (e.g. data mining, AI, complex systems, network science, statistics, natural language understanding, mathematics, particle physics, astronomy, earth observation...), and new methods and approaches are needed along the whole data life-cycle and value chain.

HORIZON-CL4-2024-DATA-01-01: AI-driven data operations and compliance technologies (AI, data and robotics partnership) (IA)

(Page 190) Expected outcome: To enable companies and public sector to easily comply with existing and emerging regulation (e.g. GDPR, Data Governance Act, Data Act, Artificial Intelligence Act222) and create value on data assets that they possess or that they acquire from the market, and to allow citizens to feel more confident that data-driven systems treat them in a fair, unbiased and compliant way and respect their privacy/anonymity and other rights, and keep track of the use of personal data in a world where “everything” moves online

AUTOEVALUACIÓN – IA: ÉTICA POR DISEÑO PARA LA IA



ETHICS SELF-ASSESSMENT – AI: ETHICS AND DATA PROTECTION

Types of personal data	<ul style="list-style-type: none"> * racial or ethnic origin * political opinions, religious or philosophical beliefs * genetic, biometric or health data * sex life or sexual orientation * trade union membership
Data subjects	<ul style="list-style-type: none"> * children * vulnerable people * people who have not given their explicit consent to participate in the project
Scale or complexity of data processing	<ul style="list-style-type: none"> * large-scale processing of personal data * systematic monitoring of a publicly accessible area on a large scale * involvement of multiple datasets and/or service providers, or the combination and analysis of different datasets (i.e. big data)
Data-collection or processing techniques	<ul style="list-style-type: none"> * privacy-invasive methods or technologies (e.g. the covert observation, surveillance, tracking or deception of individuals) * using camera systems to monitor behaviour or record sensitive information * data mining (including data collected from social media networks), 'web crawling' or social network analysis * profiling individuals or groups (particularly behavioural or psychological profiling) * using artificial intelligence to analyse personal data * using automated decision-making that has a significant impact on the data subject(s)
Involvement of non-EU countries	<ul style="list-style-type: none"> * transfer of personal data to non-EU countries * collection of personal data outside the EU

Evaluación de Impacto de Protección de Datos

Delegado de Protección de Datos

Base legítima de tratamiento

Garantías para transferencias internacionales

Medidas técnicas y organizativas

Política de privacidad

¡GRACIAS!

¿Preguntas?

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