Compliance with standards/norms (Respect des normes)

Compliance means that a company or organization adheres to the applicable rules and standards (norms). This includes both country specific laws and requirements from the regulatory authorities as well as internal organization directives/ policies/ procedure.

Here, we should mention the difference between a regulation and a standard. They are both requirements that apply on you or your organization.

Standard: - it is a level of **quality** or atteinment (Oxford Dict).

- a moral rule that should be obeyed (Cambridge Dict), e,g: Certain of the candidates were well below the usual standard, but others were very good indeed.

ISO have thousands of standards.

Regulatory: - having the power to control an area of business or industry and make sure

that it is operating fairly (Oxford Dict).

of or relating to a person or organization whose job is to control an activity or process. (Cambridge Dict), e.g: State and local governments also have considerable *regulatory* authority over **granting permits** necessary for the operation.

Compliance with standards/norms : Most active standardization organization

https://www.ianor.dz/normalisation/normes-ctn/

Compliance with standards/norms (Respect des normes)

Examples of standards in different fields:

Civil engineering	Entreprise Management	Environmental & human protection	Oil & Gas sector
B.A.E.L 91 (R 99) is a French norm/ standard/code for concrete & reinfoircing steel.	**ISO 9001** specifies requirements for a quality management system (QMS).	FAO/WHO Standard for Natural Mineral Waters (**CODEX STAN 108-1981**) Description : This standard applies to all packaged natural mineral waters offered for sale as food	**DNV-ST-F101:** The pipeline standard, Submarine pipeline systems, it provides acceptance criteria and procedures for pipeline design, fabrication and installation
ASCE 37, the wind load applied to a structure under construction for less than six weeks is 56% of that applied to a permanent structure, due to its reduced probability for being exposed as a permanent structure	**ISO 26000** is giving guidance about how any organization can improve its Social Responsibility (sustainablity, social economic development)	**NA 270** Norme Algerienne specifies procedures for the preparation of a test sample from a laboratory sample of animal or vegetable fats and oils for the purpose of analysis. **Equivalent ISO 661**	**NA 563** Liquefied petroleum gases (**GPL**),Determination of gauge vapour pressure LPG method
ASTM D615 is an American testing standard that provides dimensional, chemical, and physical requirements for steel bars.	**ISO 20022** is an ISO standard for electronic data interchange between financial institutions	**ISO 14001** It provides a framework for organizations to design and implement an environmental management systems(EMS).	**API 5CT** standard for Casing Pipes used for oil well and their grade, size, connection type….

Ethics and Artificial Intelligence

The world is not static; there are a great and fast change due to the owe of doing things more quick, more smart and more autonomy. This is happening by using a very powerfull computing machines that are using a huge existing data. These known to us as Artificial Intelligence (AI).

Artificial intelligence: Artificial Intelligence can be defined as technology that demonstrates some form of basic human intelligence; mainly the ability **to learn to solve problems** and **make decisions**. AI generates solutions based on existing data, whereas humans can think outside the box and invent entirely new concepts. Do this state of the art will change?

Elon Musk wrote in his post on Twitter (now X).March 13th , 2024

"AI will probably be smarter than any single human next year. By 2029, AI will probably be smarter than all humans combined," !!!!!!!!!!!!!!!!!!!!!!!!!!!!

Ethics and Artificial Intelligence

AI is becoming more present in our daily life, its impact on society is more significant from day to day, concerns and issues are raised regarding some aspects such as:

- Values respect and alignement (Privacy, theology….).

- Law and regulations comittments.

- Data analysis and bias; AI is potentially to be biased due to it needing to learn from data that **is given** to it.

- AI may threats industries where they are implemented; for the cybersecurity field, an AI tasked with assigning users on a network or a software access certain privileges may automatically deny a user these privileges based on biases that it may have.

- Potential misuse of AI technologies example of **Project Nimbus (2021)** a cloud computing project between Google+ Amazone and the Israeli government that motivate Google researchers to resign these days because of its specific mission which has not yet been revealed. AI tools could give the Israeli military and security services the capability for **facial detection**, automated image categorization, object tracking & sentiment analysis….
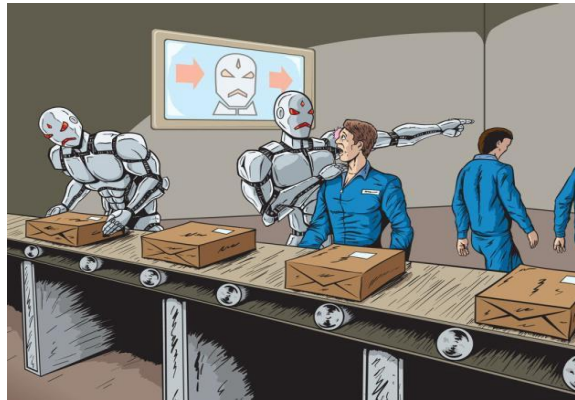
Ethics and robot (Roboethics)

Robot is a mechanical or virtual, artificial agent used to perform dirty, inaccessible and unsafe jobs. It is highly used for assembling and finishing tasks like in car industry. It improve production and reduce the cost of manufactured goods. But it makes a huge work force displacement/replacement of low skilled employees. Robots can accidentally hurt human kind and it is a serious danger if integrated with malicious AI.

Robert Nicholas Williams (January 25th , 1979) was the first known human to be killed by a robot. While working at the Ford Motor Company's Michigan Casting Center, Williams was struck and killed by the arm of a robotic transfer vehicle.

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Robot in automotive industry

Robot in packaging

Robot in millitary service

Ethics and robot (Roboethics)

Robot ethical issues:

Robot intelligence and ability to act can surpass humans in many fields.

Robot is not independent from AI, so any miseuse of AI can make from robot a new kind that can exterminate human.

Lack of standard there is a race to manufacture the faster robot in the world.

Robotic evolutionary speed versus regulations weaken human control and induce new types of hazards not known before (especially from humanoid robot).

To remedy:

• **Asimov 1950** was the first to establish the principle that robots should be governed by principles. He wrote **3 laws** (not injure human, must obey order, must protect its own existence).

• 2007 South Korea drafted an ethical code to prevent humans abusing robot and vice versa and Japan also do similar law.

• EURON (European Robotics Research Network) has identified 5 area that well regulate robot activity which are: Safety, security,privacy,traceability, and identifiability.

Ethics and Artificial Intelligence and sustainable development

AI has a white face also and promote sustainable development goals (17 SDG)set by the UN for the whole humanity.

It adviceable to watch the following video to well understand impact of AI on these 17 sutainable development goals and this can be done.

https://www.youtube.com/watch?v=FtvHrwOTc7E

Ethics, Artificial Intelligence and sustainable development

According to the world economic forum there are 4 ways AI can super-charge sustainable development:

- **1. Innovation: igniting a new wave of solutions**

Examples of project that materialize these solutions are:

Stream Ocean: Addressing the least funded SDG, life below water (SDG 14), Stream Ocean (formerly Nature Counts Foundation) deploys AI and machine learning for real-time monitoring of marine biodiversity through underwater video cameras. This technology aids coral restoration projects by providing advanced ocean data analytics, including biodiversity metrics, in real time.

Pano AI: Using AI to detect, verify and classify wildfire events in real time, Pano AI contributes to global resilience against the increasing frequency and intensity of climate-related disasters caused by forest fires.

Ethics, Artificial Intelligence and sustainable development

2. Sustainable finance: navigating climate risks with AI

AI-powered tools are invaluable instruments for analyzing vast datasets/databases, including climate and financial data, to identify climate risks, mitigation plans and investment opportunities. Examples on these approaches are:

The Asian Development Bank which aims to enhance energy security in developing countries and combat climate change through increased adoption of clean energy has launched the **Artificial Intelligence and Digitalization Fund**. This fund will support technologies across multiple energy sectors, including, but not limited to, industry, transport, and power.

The AI tool **Aladdin Climate** to quantify climate risks and opportunities in financial terms. It is an Integrated AI algorithms to measure and track the carbon footprint of investments. This is a good tool helping to draw the policy of net zero world wide for each country.

3. Impact Management & Measurement (IMM)

This is related to integration of AI to further enhance the precision and efficiency of assessments of the sustainable development goals. It provides a transparent means to assess whether the objectives are being achieved or not. It is also about accountability and transparency to track and report progress for achieving theses goals. A best way of this is the IMM frameworks, from the European Commission that tracks and measures the impact and progress related to clean water and sanitation goal (SDG 6), specifically focusing on the access to clean water and improvement of sanitation facilities.

4. AI's transformative role

AI emerges as a powerful catalyst for reshaping how society views sustainability. It drive transformation in all sectors. It fosters trust and propels innovation, becoming a pivotal force in directing our collective path toward a sustainable future. Keeping it ethical will be the main challenge