HUAWEI

20 YEARS OF CONNECTING EUROPE

INSIGHTS

HUAWEI'S CONTRIBUTION TO AI IN EUROPE

HUAWEI POSITION ON AI

DIVERSE AND INCLUSIVE	VULNERABLE POPULATIONS	ELIMINATE BIAS	REMEDIAL MEASURES
The development and application of AI must be diverse and inclusive, as it must ensure specific individuals or minority groups are not subject to unfair bias, stigmatization, or discrimination.	AI **must not be deployed in ways that will compound the disadvantages** of already vulnerable populations.	AI practitioners should strive to **minimize the introduction of bias when developing and deploying AI**. This can be done through: • using algorithms and data models that eliminate bias • using training datasets that meet diversity requirements • performing extensive validation of AI systems.	AI practitioners can promptly detect problems and initiate effective remedial measures with regards to: • algorithmic bias and discrimination • when datasets deviate from personal or organizational preferences

WHY IS AI SO IMPORTANT

- Practical AI applications will become pervasive
- This will generate new demands for intelligence and incubate new technologies, products, industries, businesses, and models
- Industrial AI will be the foundation of digital transformation and business innovation
- Full-scale and full stack globalized industrial AI will accelerate digital innovation

RECOMMENDATIONS FOR THE EUROPEAN APPROACH TO AI

- Stimulate a positive mind-set to outweigh negative challenges
- Uphold a specific, risk-based system for regulation
- Embrace global cooperation
- Reinforce synergies between national funding schemes
- Encourage development of digital skills
- Nurture start-ups
- Implement AI in the public sector

HUAWEI'S AI FOR GOOD

StorySign: Huawei has a free mobile app that aims to help deaf children read by translating text from selected books into sign language with AI.

Facing Emotions: application that uses AI to allow the visually impaired to "see" the emotion on the face of someone they are talking to by translating it into sound.

Unfinished Symphony: Using the power of AI, Huawei has taught its Mate 20 Pro smartphone to compose the third and fourth movements of Schubert's famously 'Unfinished Symphony'. The Mate 20 Pro listened to the first two movements of Schubert's Symphony No. 8, analysed the key musical elements that make it so incredible, then generated the melody for the missing third and fourth movement from its analysis.

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8 AREAS

HEALTHCARE

Track AI project

Detection of visual disorders in childhood requires a specialised paediatric ophthalmologist to examine children. Through a unique collaboration between Huawei and the **DIVE start-up**, 18 ophthalmologists from 5 different countries across 3 continents will collect data from children either with normal visual development or with a wide range of **visual disorders** to develop an easy-to-use, portable, and affordable device for non-trained professionals to identify these children with visual disorders as soon as possible.

Benefits:

- Decrease the rate of undiagnosed visual disorders
- Easy to use for non-trained people

TRANSPORTATION

Enabling a Future-Ready Airport through AI Innovation

Huawei and Shenzhen Airport are following the '**Platform + Ecosystem**' strategy to build a future-ready digital platform.

Based on Huawei's ICT infrastructure, the two parties have integrated the Internet of Things, big data + AI, Geographic Information System (GIS), and Integrated Communication Platform (ICP) resources. AI big data is used for applications such as knowledge graphs, machine learning, and natural language processing.

Benefits:

- Operational control
- Security
- Passenger services to the airport

FARMING AND AGRICULTURE

Smart farming; The connected farm

In Spain, Telefonica and ABB provided the remote irrigation system which helped farmers incorporate computers and mobile phones in setting up a suitable irrigation schedule. The solutions were based on the mobile telephony network and remote reading registers.

Benefits:

- Savings – 47 hm3 of water per annum
- 25% increase in farm profits
- 30% reduction in electricity bills

FORESTS

Prevention of illegal logging

Huawei is working with **Rainforest Connection (RFCx)** to prevent illegal logging: the sounds collected by mobile sensors spread throughout

the rainforests are stored and managed using **HUAWEI CLOUD's big data solutions.**

AI algorithm models identify the sounds made by electric saws and trucks.

Benefits:

- Monitoring of endangered animals' habitats
- Prevention of illegal activities

SKILLS

ICT Academy & Seeds for Europe Programme

Huawei has established **ICT academies** around the world, bringing the latest digital technologies to all parts of the world and cultivating local talent to equip them with skills they will need in the digital era. In addition, the scholarship programme **Seeds for the Future** sends European ICT students to China on a two-week study trip.

Benefits:

- Partnerships with +900 universities
- +45000 students benefit from this program yearly
- +1300 European students from more than 30 countries took part in Seeds for the Future

VEHICLES

Vehicle Intelligent Twins (iVehicle)

Through the use of big data and artificial intelligence (AI) technologies, **Vehicle Intelligent Twins (iVehicle)** provides functions such as vehicle status and location monitoring, driver drowsiness detection, real-time route planning, and robot assistants, powering intelligence transformation from products to services and making life smarter.

Benefits:

- Optimized algorithms improve the precision of intelligent Q&A
- Ease of use to facilitate third-party applications integration
- Improved road safety

CONNECTED CARS

ICT integrated Connected Vehicle platform

Huawei is collaborating with car makers to connect vehicles, joining the policy debate on standards for the future connected road ecosystem.

Thanks to the **ICT integrated Connected Vehicle platform, global public cloud services, and industry suites**, Huawei has become a perfect partner for **Groupe PSA** to execute their strategy and support all their car factories based on a global platform.

Benefits:

- Roll-out of connected vehicle services in eight regions by 2020
- Support to more than 10 million connected vehicles
- Mobility services for over 180 countries

MANUFACTURING

Smart Factory

Huawei's industrial predictive maintenance solution collects and transmits data in real time to reduce the need for physical inspections. By using data analytics on the cloud, it is possible to identify issues and send an alert in advance of a likely malfunction.

Huawei is working with its partners to provide **Schindler** with an industry-leading Internet of Elevators solution.

Benefits:

- Downtime reduced by 90%
- Maintenance costs -50%.

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