icair

Manifesto on Sustainable A.I.

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ICAIR members

- Accenture
- ACRI-ST
- Air France
- Amadeus
- Arm
- Docaposte
- HPE
- IBM
- NXP
- Orange
- Renault
- SAP
- ST Microelectronics
- Thales Alenia Space

Our mission

Today's world faces many environmental and social challenges. From reducing inequality, to fighting hunger and poverty, to combatting climate change and preserving the natural world, sustainable development has become an urgent priority.

What do we mean by sustainable development? We mean finding ways to meet the needs of the present without compromising the ability of future generations to do the same. We mean reducing our environmental footprint, so we tread more lightly on the Earth. And we mean rethinking how our organisations are governed and how they can best support pressing social issues.

The 17 United Nations Sustainable Development Goals (SDGs), adopted in 2015, provide a model set of sustainability objectives for all organisations to aspire to. And at ICAIR, the Industrial Council for Artificial Intelligence Research, we're looking for ways to use artificial intelligence (AI) to accelerate progress against those objectives.

Our Sustainable AI programme brings together 14 companies based in Sophia-Antipolis in the South of France that conduct market-leading research in industrial AI applications. By integrating sustainability into our operations, we hope to be able to advance the UN SDGs across a wide range of industrial sectors: from travel and transport, to computing and telecommunications, to aerospace and the environment.

Our strategy for Sustainable AI

ICAIR's strategy for sustainable AI is built on three pillars:

- Innovation
- Responsible Consumption
- Building Fairness

These topics are at the core of the business strategies of ICAIR members. They also address several important SDGs, including promoting sustainable industry, innovation, and infrastructure (SDG9), reducing inequalities (SDG10), and ensuring responsible consumption and innovation (SDG12). This, in turn, will support activities in other SDGs, such as climate action (SDG13), sustainable cities (SDG11), and clean water (SDG6), and more.

To support this strategy, ICAIR has two key aims for AI. First, to make AI more sustainable, by reducing its carbon footprint and waste production, avoiding AI bias, and improving trustworthiness. Second, to harness AI to improve the world, by using it to combat climate change, create safe digital structures, develop smart cities, and broaden access to personalized education.

Innovation

Innovation underpins our entire Sustainable AI programme. With Europe's largest high-tech cluster on our doorstep, we benefit from an incredibly vibrant local innovation environment. This includes one of the four Interdisciplinary Institutes in Artificial Intelligence (3IA) in France, the Maison de l'Intelligence Artificielle (MIA), the SophI.A. Summit, and the World Artificial Intelligence Cannes Festival (WAICF). We also encourage partnerships with other experts in AI, both inside and outside our own industries, to foster further innovation and advance the field of research.

For example, some ICAIR members are part of the AI4EU project to accelerate AI innovation in research, products, and solutions. Others are members of GAIA-X, which aims to create the next generation of federated, secure, and trustworthy data infrastructure. ICAIR provides a local platform where ideas can be exchanged, common challenges and solutions identified, and a more efficient and sustainable approach to AI development nurtured.

At ICAIR, we emphasise transparency, accountability, and trustworthiness. These are our core values. We believe they are essential in working towards a more ethical approach to AI, in broadening public acceptance of the technology, and in enabling AI to play its part in meeting the UN SDGs.

Responsible consumption

AI systems can consume large amounts of energy, especially during the training, tuning, and inference phases of development. This is a challenge, not only from an environmental perspective, but also in terms of operational cost to business.

At ICAIR, we're committed to optimising the use of infrastructure, supporting greener IT, and developing more energy efficient AI systems. Our goal is to reduce both energy needs and operational costs. And in doing so, AI itself may be part of the solution. For example, the technology could help to optimise and decarbonise computationally intensive data processing and analysis and promote responsible data consumption.

We're also applying AI research to ensure responsible consumption of other resources. That includes, for example, optimising fuel consumption in the transport sector. It also includes research into how AI can continuously monitor the natural world to safeguard it from both anthropogenic impacts and natural disasters.

These issues are highly relevant to our members at a local level. Tourism, pollution, flooding, fires, and preserving the marine environment are all high priorities across the French Riviera. And we believe that the solutions will include improving existing infrastructure and developing both 'smart cities' and 'smart rural areas.

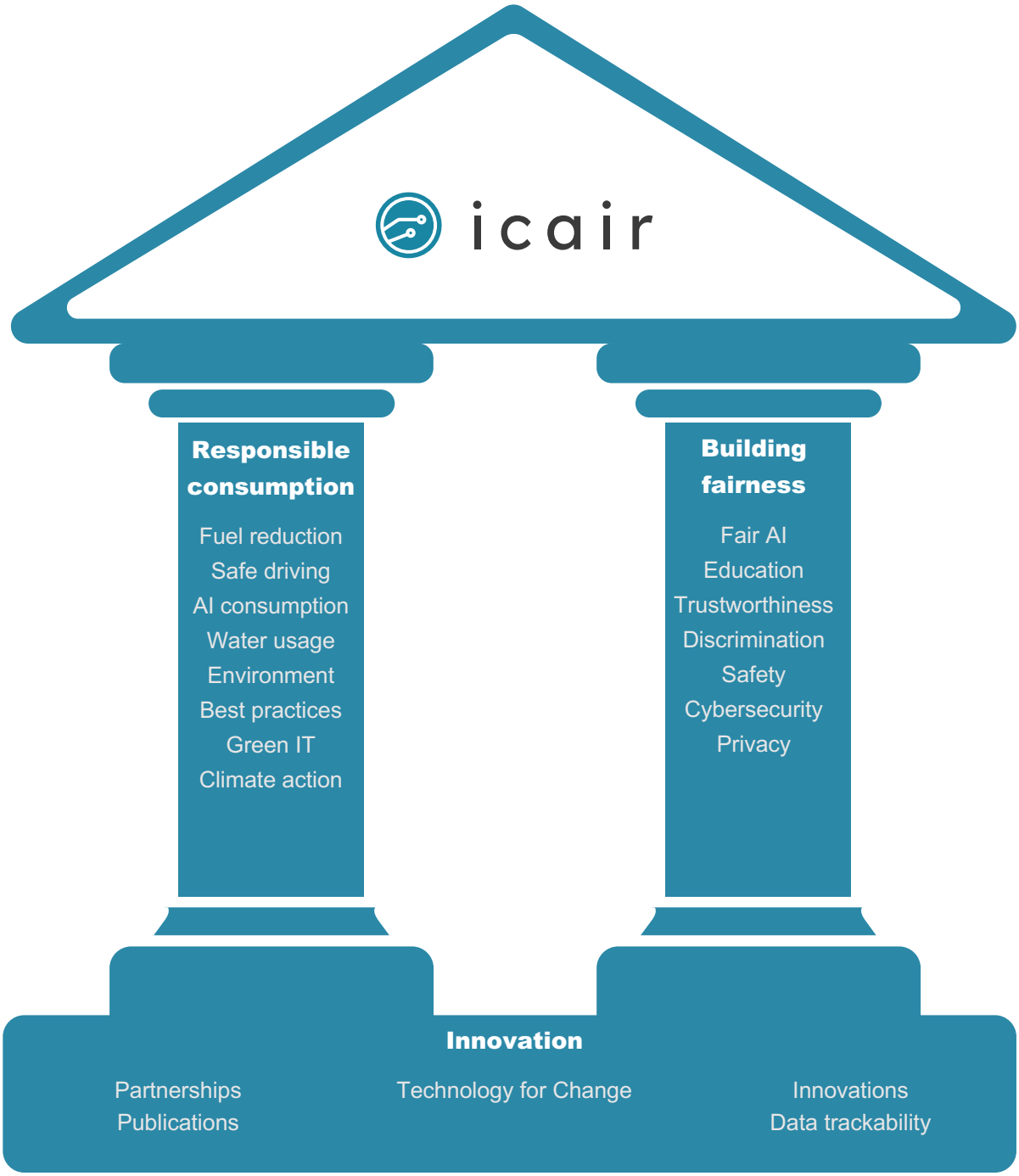
Building Fairness

Equality is a fundamental right. And its absence is arguably the cause of many of the world's social problems. This idea needs to be central to AI research. Discrimination caused by biases in AI can have real and far-reaching implications for people's lives.

Our guiding principle is to minimise bias and maximise fairness. This includes developing AI innovations that produce "explainable" results, as well as democratising data to help reduce inequality. We also recognize that data privacy, security, and safety are high on the list of public concerns when it comes to Big Data, and we're looking at both technical and regulatory solutions for all these challenges.

We believe building a highly skilled, diverse, and future-ready workforce is a key part of the fairness agenda. It's why we're also working to reduce the knowledge gap among today's workers. We're doing this by sharing our know-how and supporting training, through both formal programmes (local educational and research institutions) and informal initiatives (community educational projects). In doing so, we're particularly focused on improving gender, age and socio-economic equality.

AI has the potential to play a pivotal role in improving environmental and social outcomes. It could also improve the quality of daily life, through better working conditions, reduced stress, and a boost to general well-being. It's why we at ICAIR are committed to using AI responsibly, for the benefit of the whole planet and all the people who live on it.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Responsible consumption
Fuel reduction
Safe driving
AI consumption
Water usage
Environment
Best practices
Green IT
Climate action
Building fairness
Fair AI
Education
Trustworthiness
Discrimination
Safety
Cybersecurity
Privacy
Innovation
Partnerships
Publications
Technology for Change
Innovations
Data trackability