Sustainab

ility
Insights from Atos

The most often used definition of sustainability comes from the UN World Commission on Environment and Development: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Sustainability is becoming increasingly important and urgent because, despite making progress in areas such as clean water, sanitation, clean energy and forest management, the world is still living unsustainably, and biodiversity and climate change have continued to deteriorate.[1]

Technology has a key role to play in addressing the sustainability challenges and in meeting the goals. Therefore, sustainability has and will gain an even more prominent place in ITEA (and the Eureka Clusters) in the near future. Smart energy, for example, is the new key challenge that has recently been added to ITEA's main challenges and it immediately was picked up by the ITEA Community during the Online ITEA PO Days 2021. Several other initiatives are in preparation.

It is important that industry, as a major consumer and polluter but also as a powerful game-changer, takes the lead in making the world more sustainable. Indeed, many companies already started along this path quite some time ago. We are proud that in this ITEA Magazine, Alexandra Knupe, Group Head for Corporate Social Responsibility at Atos, ITEA Board member, shares her views and takes us along their path.

'Raison d'être' of Atos
"At Atos, we are fully aware of our responsibility towards society at large and have been making our contribution, in particular in the fight against climate change for many years. In this respect, we follow the Sustainable Development Goals (SDG) principles. "We started our Corporate Social Responsibility

(CSR) journey 10 years ago. Today we lead our sector in Environment, Social and Governance (ESG) relevance. Atos is constantly rated by leading CSR ratings agencies, e.g. in the Dow Jones Sustainability Index in 2020, as one of the best CSR performing companies in its sector.

"Decarbonisation is one of our integral objectives and tied into our 'purpose' (or 'raison d'être') at Atos, which is to help design the future of the information space and enable our customers, employees and members of societies at large to live, work and develop sustainably, in a safe and secure information space. Today it is essential, mandatory even, for every business to commit to non-financial reporting on sustainability (Corporate Social Responsibility) KPIs. Fundamental business decisions are based on sustainable objectives and the reported results of a company – any stakeholder looking to buy, partner, work or invest in Atos bases their decisions on this sustainable performance. Atos' clients also have sustainability goals and, like Atos, are facing increasingly ambitious requirements, especially in the fight against climate change. Atos supports them in achieving these targets and offers consulting and solutions to reduce their carbon footprint with the help of digital technologies.

[1] UN News May 2021: https://news.un.org/en/story/2021/05/1092532

∧ Alexandra Knupe
*Group Head for Corporate Social
Responsibility Atos*

> › contributing to the planet's fight
>   against climate change using Atos
>   digital competencies;
> › contributing to social development
>   through diversity, digital education
>   and digital inclusion;
> › contributing to economic
>   development through the data
>   economy, protecting our customers
>   from cyber-criminality and
>   unleashing the potential of data
>   spaces and data sharing;"

"We believe that decarbonisation
is the value-adding dimension to
digitalisation. In this respect, leveraging
on our recent EcoAct acquisition, we
have created comprehensive, end-to-
end decarbonisation capabilities to
enable and accelerate our customers'
journeys to net zero."

"For our major contracts, we include
binding decarbonisation commitments,
so called Decarbonisation Level
Agreements (DLA), in a similar way
to Service Level Agreements (SLA),
by which Atos commits to reduce our
customer's carbon footprint and offset
at its expense the CO_2 emissions in case
of underperformance."

The role of technology and R&D

"Technology is very important in
meeting environmental targets and is
usually involved when companies take
measures to increase their efficiency in
order to reduce their carbon footprint.
Take the example of the Digital/Virtual
Twin in Manufacturing which is a virtual
representation that acts as the real-time
digital counterpart of a physical object
or process, and ultimately increases
efficiency. Technology helps improve a
range of business processes to become
leaner, smarter, faster and thereby
reduces companies' carbon footprint.
Additionally, we need digital solutions in
order to measure this."

"Atos invests in R&D for
decarbonisation. Our supercomputers
belong to the most energy efficient
worldwide (the greenest in Europe),
with 70+ patents in this domain. Some
ITEA projects have contributed to
develop some of them. Furthermore,
we do research on supercomputers
and data centres powered by green

"It is therefore important that Atos leads
by example, and we show this through
our ambition to reach 'net zero' by 2028:
to reduce the global carbon emissions
under our control and influence by
50% by 2025 and to offset all of Atos's
residual emissions by 2028."

Challenges, initiatives and added value

"The biggest challenge is the definition
of ambitious but achievable targets,
the consistent development and
management of the necessary
programmes and the definition of
key performance indicators (KPIs).
Ideally, target setting and the definition
of KPIs should follow recognised
guidelines, such as those proposed
by SBTi (Science Based Targets
initiative). Standards in environmental
management facilitate transparent

reporting and comparability of data.
"Ambitious environmental goals
also require the participation of
all stakeholders in a value chain.
Only when suppliers, providers and
customers work together on the
transparency of environmental data can
emissions be significantly reduced."

"Looking forward, Atos is committed
to embody sustainability in all areas of
its business and especially in regard to
its customers, people, environment and
the ethical and compliance standards
under which it operates. Atos' ambition
is to act as a trusted partner for all
its stakeholders – now and in the
long term. We indeed believe our
Environment, Social and Governance
commitment creates a significant
positive impact for our customers,
stakeholders and the society at large:

hydrogen, blockchain technologies for recycling performance or quantum technologies enabling creation of new materials absorbing CO_2 from the atmosphere."

"R&D is fundamental in helping Atos to become more sustainable. We aim to demonstrate, in 2023, the operation of a first full production centre using green hydrogen. Atos will provide a complete end-to-end green datacentre solution by designing and providing the hardware, software and integration services that make it possible to exploit the electricity produced by green hydrogen so that it can be used in datacentres. This includes using the most advanced Artificial Intelligence (AI) technologies to optimise energy consumption."

ITEA innovations for sustainability
In the views shared by Alexandra Knupe, technology is mentioned as an important enabler. For example, Digital/Virtual Twins and Smart engineering can increase efficiency and reduce a company's carbon footprint. Within ITEA, these are important research topics since many years. Software solutions can contribute, among other things, to the optimisation of renewable energy production, the accurate prediction of energy production and consumption, the real-time balance between energy supply and demand and the management of new charging or storage solutions.

Several ITEA projects have already addressed sustainability issues and you can find a few examples at the right side of this page.

ITEA 4 the future
We are very excited to see what comes out of the current ITEA Call where we see an uptake of projects addressing sustainability issues. Moreover, the new initiatives that will start in the near future will also support important innovative solutions that are needed to achieve the proposed sustainability goals and to offer the new generations a good world to live in. All good reasons for the ITEA Community to prepare ambitious research projects targeting sustainable development!

SPEAR
Smart Prognosis of Energy with Allocation of Resources

SPEAR aims to combine real-world production processes with Digital Twins in a simulation environment in order to accurately measure and optimise energy usage. Through its open approach to its optimisation platforms and algorithms, the project aims for uptake by companies of all sizes and a corresponding rise in the use of renewable energy in production plants.

https://itea4.org/project/spear.html

SEAS
Smart Energy Award System

Starting in 2014, the objective of the SEAS project was to enable energy, ICT and automation systems to collaborate at consumption sites, and to introduce dynamic and refined ICT-based solutions to control, monitor and estimate energy consumption. The SEAS revolution is more cost-effective, more green-friendly and more customer focused with streamlined electrical production and consumption...everywhere.

https://itea4.org/project/seas.html

M2MGrids
M2M Internet for dynamic M2M Information Business ecosystem

The project M2MGrids focused on developing enablers to create a dynamic cyber-physical information business ecosystem that connects the physical world with the business processes of companies in real-time. A platform was developed to support an energy flexibility service for balancing the power level and reduction of the peak loads in the distribution grid.

https://itea4.org/project/m2mgrids.html

ENERFICIENCY
User Led Energy Efficiency Management

Back in 2011, the ENERFICIENCY project set about developing a comprehensive, flexible and configurable open software platform able to analyse and respond to user needs in managing energy demands and consumption. This way, the huge investments that were being made on the energy supply side could be matched by improvements on the demand side in the efficiency of energy consumption.

https://itea4.org/project/enerficiency.html