ublox

Shaping IoT with responsible business practices

The u-blox Sustainability Report 2022

1#
About this report

The 2022 u-blox annual sustainability report published – 3rd April, 2023 – provides an overview of our responsible business practices and ongoing global sustainability efforts from March 31, 2022, to March 31, 2023.

United Nations Global Compact (UNGC)
In 2012, we signed the UNGC in recognition of our commitment to and support of the 17 United Nations Sustainable Development Goals (UN SDGs) across our global business.

Sustainability strategy based on five pillars
The u-blox sustainability strategy is based on five pillars derived from the UN SDGs: Business Ethics, Employees, Environmental Responsibility, Supply Chain Responsibility, and Community. Every year in our annual sustainability report, we report on the policies and activities in each pillar, set out our targets and measure the progress related to the Environment, Social, and Governance (ESG) goals within each.

1 Business Ethics
We believe in doing business the right way

2 Employees
We encourage diversity and promote a culture of inclusion

3 Environment
We are committed to protecting our planet

4 Supply chain
We create our products in ways that do not harm individuals, communities, or the environment.

5 Community
We believe in building sustainable communities around the world

2#
u-blox at a glance

- Internet of Things (IoT) technology leader
- 2022 revenues of CHF 624 million
- Listed on SIX Swiss Exchange since 2007
- 1,300 employees worldwide
- 33 locations across 5 continents
- 18 R&D centers
- Serving thousands of customers across 66 countries

- 3 key markets: Automotive, Industrial, Consumer
- Signatory since 2012 to the United Nations Global Compact and 10 principles
- Signatory since 2020 to the GSMA Digital Declaration – a set of aspirational principles to guide activity in the digital age to build a sustainable and secure digital future

How we create value

Shareholders
The year 2022 marks the 25th anniversary of u-blox and represents the best year in our history. We are proud of the incredible journey since our beginnings and the very hard work and dedication of our entire team in transforming u-blox from the ETH university (Swiss Federal Institute of Technology in Zürich) spin-off with some novel positioning components, to a global leader in innovative chip to cloud solutions.

Sustainability is a continuous journey, and we will continue to create value for our shareholders, employees, partners and the communities worldwide within which we operate.

Customers
Our unrivaled technology and core intellectual property combines positioning and connectivity with our high-touch customer experience steeped in Swiss tradition.

Additionally, we partner with our customers to deliver complex technology solutions, which are otherwise difficult for them to achieve.

Stakeholders
Our commitment to responsible business practices and sustainability projects around the world goes back more than a decade and is shaped by the 10 UNGC guiding principles and the 17 UN Sustainable Development Goals. In turn, as a market leader, we endeavor to help shape a responsible IoT industry.

Our values

To create products and services that enhance global sustainability – and produce them in a genuinely sustainable way – everything we do is founded on three core values.
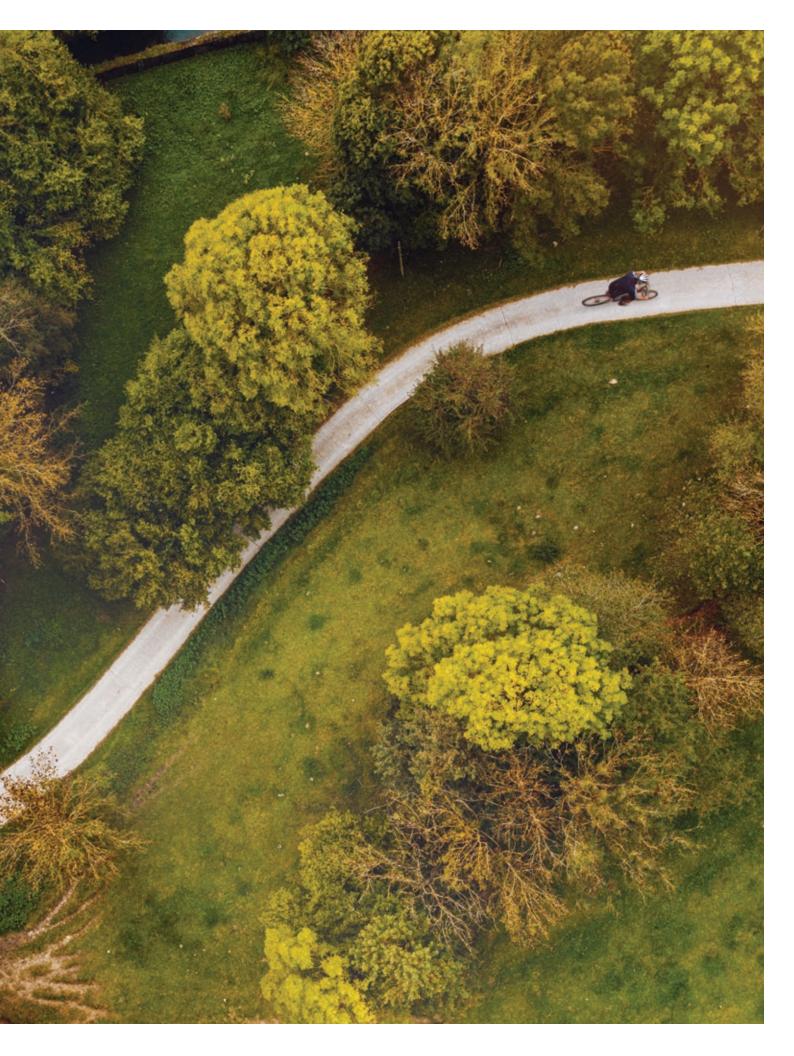
Firstly, we are **innovative,** investing heavily in R&D to push the boundaries of what technology can enable.

Secondly, we are **restless,** always looking to do more and be better across every aspect of our business.

And thirdly, we are **reliable** because trust and teamwork are vital for delivering excellence to our customers.

These values provide a profitable and sustainable framework for growth, enabling us to create commercially attractive products that genuinely make a positive difference.

3# Foreword by our CEO

I began at the beginning of 2023 as the new CEO of u-blox and feel privileged to help further develop and lead our culture of innovation, sustainability, and responsible business practices across our global business and shape the next chapter of the company with the excellent u-blox team.

IoT is addressing some of the most acute human challenges

At u-blox, we feel fortunate to be inspired by and work with some of the world's most innovative thinkers and doers. Our customers, from 66 countries around the globe, working across many sectors, are revolutionizing how we move about our planet, looking for ways to protect it and us from the impact of climate change and making complex tasks simpler.

Together with our u-blox community partners and our technology, we have been able to reach and help traditionally underserved communities. Here are two examples:

- The organization 'charity: water' estimates in 2022, their India Mark II hand pump helped keep clean water flowing for **130,854 people,** and with an additional 1500 water sensor units in 2023, that will increase to **579,000 people** living in remote parts of the world.

- The organization 'No Isolation's' **2,310 AV1 education technology robots embedded in schools,** hospitals, and homes across 12 countries reduced social isolation and school absenteeism for approximately **5,000 ill or disabled students.**

We are all experiencing IoT emerge as a powerful enabler in many application domains, such as transportation, healthcare, food security, energy management, climate and other environmental monitoring, smart cities, smart industry, and supply chain management.

As IoT takes on some of the most acute human challenges, it contributes to the United Nations Sustainable Development Goals (SDGs). IoT optimizes resource consumption and reduces CO_2 emissions, extends access to healthcare, empowers the disabled, and reduces social isolation for older people with 'AgeTech' and those who are ill or disabled with 'Warm Technology.'

New Swiss legislation and ESG reporting goals
New federal Swiss legislation entitled 'Ordinance on Climate Disclosures' came into effect in December 2022, mandating that all large Swiss companies are required to publicly disclose information on their climate-related risks, impacts, and plans as of 2024.

We see this as a welcome opportunity for u-blox to dive deeper into the impact of our activities on climate change. In 2022, we calculated the baseline for our greenhouse gas (GHG) emissions. We are currently working on our climate strategy to reduce our CO_2 footprint by 2030 and become climate neutral by 2050. In 2023 we will set our GHG emission reduction targets and outline how we plan to achieve them, disclosing this in our sustainability report next year.

Doing business with integrity
We believe it is critical that we operate within international regulatory frameworks and work closely with manufacturing and supply chain partners who respect our ESG values about protecting human and labor rights, health and safety, and the environment. In line with our sustainability best practice, we do business with integrity, care for our employees, protect the environment, and contribute to the well being of communities through ESG projects around the world.

Together we are shaping the future of IoT
As we navigate this journey of sustainability with our stakeholders, we know there is more to be done. Together with our ingenious customers and partners around the world across thousands of applications and millions of devices – we are shaping the future of IoT with innovation and responsible business practices.

We look forward to sharing our progress with you.

Stephan Zizala, Chief Executive Officer

4#
2022 u-blox ESG Highlights

An additional 579,000 people will now access clean water

u-blox and 'charity: water' continued with their successful partnership to leverage the power of IoT to bring clean drinking water to 130,854 people. The success of the pilot phase has allowed charity: water to begin the production process for an additional 1500 water pump sensor units, which they estimate will help keep clean water flowing for 579,000 people living in remote parts of the world.

AV1 helped 5,000 students in 12 countries attend school

2,310 AV1 warm technology robots from 'No Isolation,' embedded in schools, hospitals, and homes across 12 countries, reduced social isolation and school absenteeism for approximately 5,000 students.

In 2022 we updated our Supplier Code of Conduct and SAQ

Our updated Supplier Code of Conduct and SAQ, in line with Responsible Business Alliance (RBA) best practices and aligned with the guiding principles of the UN Global Compact, is being distributed to our supplier partners around the world.

No Weapons

One of the central pillars of the u-blox Code of Conduct is the policy we set out in 2002 prohibiting the sale of our products for use in weapons and weapon systems.

uGive – Running so others can breathe
We expanded our uGive program to give our employees more flexibility for community engagement. uGive funding was opened to sponsor employees who wish to participate in a worthwhile cause, like Martin Leach, who ran the London Marathon to raise money for The Asthma and Lung charity in the UK.

Ukraine, Pakistan, Turkey, Syria
The countries u-blox helped either through employee led initiatives or with humanitarian aid in partnership with the International Red Cross.

We calculated the baseline for our GHG emissions
We calculated the baseline for our greenhouse gas (GHG) emissions this year, and next year we will set our GHG emission reduction targets and outline how we plan to achieve them.

51% of our employees trained in nonviolent communication
We trained just over half of our employees globally in Non Violent Communication and significantly exceeded our 40% target.
https://www.cnvc.org/

67,000 tonnes of CO_2 saved
As of 2022 u-blox helped ADES save 67,000 tonnes of CO_2 in Madagascar.

70 nationalities represented across 33 sites
We promote an inclusive culture at u-blox where diversity is valued, discrimination is not tolerated, and everyone is treated with dignity and respect.
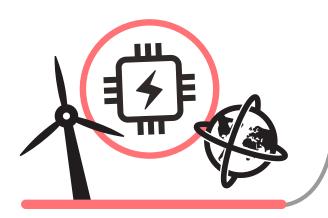
100,000 students received environmental education
With u-blox support, ADES provided environmental education to over 100,000 school children in Madagascar as of 2022.

5# Our business model
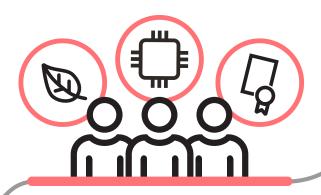
The u-blox value chain

Our growth within the IoT value chain is accelerating primarily because our unrivaled core technology combines positioning and connectivity. u-blox is one of the few companies able to offer essential connectivity technologies (positioning, cellular, and short range) optimized with services from one company. Additionally, we partner with our customers to deliver complex technology solutions, which are otherwise difficult for them to achieve.

2 MANUFACTURING

Transparent and binding Environmental Management System (EMS)

As a fabless company, we are committed to ensuring u-blox products are produced responsibly and work exclusively with suppliers who embrace the environmental compliance and governance of our transparent and binding Environmental Management System and hold ISO 14001 certification. We adhere to international regulations and standards that restrict and control hazardous substances, e.g., RoHS, REACH, Conflict Minerals, and ELV, and aim to enforce these standards throughout our supply chain. All u-blox partners are expected to operate in line with our Supplier Code of Conduct. This is based on the Responsible Business Alliance (RBA) Code of Conduct.

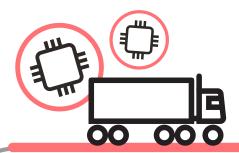## 1 PRODUCT RESEARCH & DEVELOPMENT

Designing to last

At u-blox, we believe that component longevity makes sense. The u-blox chip team designs for zero defect, robust life span, optimal form factor, and minimum energy consumption. Sustainability is good for our customers, their customers, and better for our planet.

3 SALES AND DISTRIBUTION

Partnership and trust
Our products are marketed worldwide through 18 of our locations and a global network of trusted distribution partner companies.

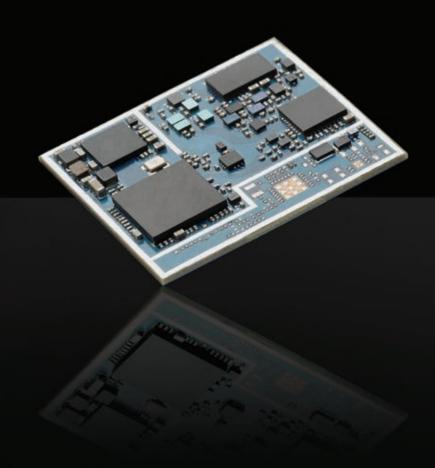## 4 PRODUCT INTEGRATION AND END USE

Making a meaningful contribution
Our products are then incorporated into our thousands of customers' products in millions of IoT devices around the world in support of efficiency, human safety, environmental protection, healthcare, and well being, among other benefits.

Our people and the environment
We protect the health and well being of our people and are equally concerned about the health and well being of our manufacturing partners' employees. Our Supplier Code of Conduct is aligned with international standards Responsible Business Alliance (RBA) and based on internationally agreed upon principles.

To minimize our indirect impact on the environment, we must continue to work closely with our suppliers. We will continue to partner exclusively with our top tier manufacturer partners with leading environmental compliance and governance systems in place.

6# Delivering responsible IoT products, services, and solutions

Monitoring, optimizing, supporting, connecting, and empowering

Our IoT products, services, and solutions are embedded into millions of devices designed by our ingenious customers and partners around the world. They monitor, optimize, support, connect and empower people and processes in support of efficiency, human safety, environmental protection, health, and well being, among many other potential beneficial use cases.

The United Nations International Telecommunication Union (ITU) identified the potential of IoT to help humanity reach the UN SDGs back in 2016 and began working through global public private sector initiatives to create a framework so that society could effectively harness IoT for global development.[1] This foundational work was augmented in 2018 by the World Economic Forum when they set up a multidisciplinary team with the goal to measure the impact of IoT on sustainability.[2] Since these early initiatives, both organizations have continued to benchmark, report and communicate about how IoT interventions are helping to tackle some of our world's biggest challenges. [3, 4, 5, 6]

[1] **United Nations International Telecommunication Union (ITU) – 2016**
Harnessing the Internet of Things for Global Development
https://www.itu.int/en/action/broadband/Documents/Harnessing-IoT-Global-Development.pdf

[2] **World Economic Forum – January 2018**
Guidelines for Sustainability
https://www3.weforum.org/docs/IoTGuidelinesforSustainability.pdf

[3] **United Nations Development Program – April 2020**
Summary Findings of the Pilot Project Internet of Things (IoT) for Climate Early Warning
https://www.undp.org/rwanda/publications/summary-findings-pilot-project-internet-things-iot-climate-early-warning-0

[4] **UN Secretary-General's High-level Panel on Digital Cooperation – June 2020**
The age of digital interdependence Report of the High-level Panel on Digital Cooperation
https://www.un.org/en/pdfs/DigitalCooperation-report-for%20web.pdf

[5] **World Economic Forum – July 2022**
IOT can help small and medium businesses implement sustainability measures. Here's how
https://www.weforum.org/agenda/2022/07/iot-small-medium-businesses-profitable-sustainable/

[6] **United Nations Secretary General António Guterres – February 2023**
Addressing the *World Internet of Things* convention
https://www.un.org/sg/en/content/sg/statement/2023-02-10/secretary-generals-video-message-the-world-internet-of-things-convention

IoT has many beneficial ESG use cases

Our innovative customers and partners continue to address many of humanity's challenges with beneficial IoT solutions, as anticipated by the UN ITU back in 2016. In addition to the specific fleet management example cited later in this section, other specific use cases can be found in this report.

Within the Sustainable Innovation section Manchester, UK based **FreeUp** explains how it uses IoT to support the UK government in improving the water quality of rivers and beaches across the country. Inside the Pillar 5 Community section of this report, New York City based **charity: water** delivers a promising update from the field about the significant results they are benchmarking as IoT water pump sensors help maintain clean drinking water supplies to hundreds of thousands of vulnerable people in remote areas of the world. Also, in the Community section of this report, **No Isolation,** the warm technology company founded in Oslo, Norway, and 2,310 of its AVI education robots helped 5,000 students attend school across 12 countries last year.

Optimizing individual vehicle route/traffic management

Measuring and monitoring water quality for human health and safety

Optimizing the maintenance and life span of remote community water pumps to keep the tap flowing for thousands of villagers

Empowering visually impaired people to walk independently

Enabling smart micromobility solutions

Advancing vehicle driver assistance systems for safety

Connecting children who are unable to attend school to their classrooms and classmates with robotic avatars

Optimizing agriculture to reduce water and pesticide consumption while helping to prevent food scarcity

Optimizing vehicle fleet management and transport

Optimizing sustainable building and site management

Supporting older people who live alone with AgeTech

Optimizing energy generation and reducing energy waste

Optimizing sustainable management of cities

Delivering vaccines to remote, hard to access communities

Optimizing manufacturing and logistics

Optimizing water generation and reducing water waste

Protecting vulnerable wildlife with precision GPS

Optimizing healthcare technologies and environments

Use case:

Whereas the manufacturing process of a u-blox 8 chip produces slightly more than 50 grams of CO_2, effective fleet management of a 40-tonnes truck supported by u-blox technology reduces CO_2 emissions by 50 tonnes per year, a savings factor of one million.

u-blox fleet management systems significantly reduce CO_2 footprints through optimized routing, traffic prediction, speeding or harsh braking reduction, and preventative maintenance.

R&D for a more sustainable world
In addition to producing solutions that are beneficial, we are committed to ensuring our products are produced responsibly. Long before our products are shipped to market, the u-blox

R&D team has invested significant IP and sustainability considerations into the value chain with product design, the right balance of capability, form factor, energy consumption, and component longevity, further reducing CO_2 emissions.

Designed and manufactured to last
At u-blox, we believe that component longevity makes sense. As a result, many of our customers' products are manufactured to last and

remain reliably in use for more than a decade. Components, therefore, need to be robust, highly reliable, easy to maintain, and, where required, continue to evolve with Firmware Over The Air (FOTA) after they leave the factory. Sustainability is good for our customers, good for their customers, and better for our planet.

Designing a research and development process for a more sustainable world
u-blox engineers continuously collaborate with our suppliers to find innovative ways to improve and adopt new manufacturing technologies to optimize energy, water, and materials used while minimizing waste to protect the environment as much as possible during production.

Chip design:
The u-blox chip team designs for zero defect, robust life span, optimal form factor, and minimum energy consumption.

Wafer optimization:
Through an extensive miniaturization project in 2021, we have extended the number of chips produced on one wafer by a factor of 2. We now produce 2 times as many components with the same amount of silicon, precious metals, and energy, effectively saving 50% on energy and materials. We have also designed our manufacturing process to use the minimum layer of metallization and implant options.

Wafer testing:
We test both hot and cold to screen any potentially defective parts as soon as possible. We save considerable energy by removing defective parts from the production flow as early in the manufacturing process as possible.

"At u-blox, we believe that component longevity makes sense. As a result, many of our customers' products are manufactured to last and remain reliably in use for more than a decade."

Assembly:
The u-blox chip team has designed our robust products to rely on simple package technology, i. e., quad flat no-lead package (QFN), which does not require a substrate. We have also moved from gold wire bonding to copper to optimize environmental impact further.

Transportation:
We minimize transport from wafer-tester-stock throughout the manufacturing process and perform the final test precisely at the location where we have our stock to avoid the environmental impact of additional transportation.

FreeUp
water quality
in real time

FreeUP, an innovative start-up that has developed a sensor platform to automate and streamline workflows in the scientific, agricultural, and industrial sectors, recently collaborated with u-blox to develop a communication solution to manage their fleets of water quality measurement devices in the UK.

A land of water
A nation of islands with thousands of kilometres of coastline and over 200,000 kilometres of river systems – where each inhabitant uses approximately 142 litres of water per day for drinking, cooking, and washing[7] – it is easy to understand why water quality is important to the people of the United Kingdom.

So much so that throughout the summer bathing/swimming season (15 May to 30 September), the UK Environment Agency monitors water quality along the coastlines, checking for Escherichia coli and intestinal enterococci or other potential hazards to swimmers' health in designated areas. Until recently, UK rivers have not been a part of the water quality monitoring scheme, but this is changing after an alarming **Water quality in rivers report** in 2022 by the UK Parliament Environmental Audit Committee.

A fleet of FreeUp sensors ready to deploy.

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7 https://www.energysavingtrust.org.uk/sites/default/files/reports/AtHomewithWater%287%29.pdf

A 'Chemical cocktail' of sewage, slurry, and plastic
Only 14% of English rivers meet good ecological status, with pollution from agriculture, sewage, roads, and single-use plastics contributing to a dangerous 'chemical cocktail' coursing through waterways putting public health and nature at risk. Not a single river in England received a clean bill of health for chemical contamination. The Environmental Audit Committee warned that poor water quality in English rivers is a result of chronic underinvestment and multiple failures in monitoring, governance, and enforcement.

"Getting a complete overview of the health of our rivers and the pollution affecting them is hampered by outdated, underfunded, and inadequate monitoring regimes."

Founding FreeUp
Tom McNamara grew up in the great outdoors of Wales before completing a Master's degree in Chemistry at the University of Oxford and then a Doctorate in Biomedical materials at The University of Manchester. He did a stint in the chemical sector and then worked for a few years as an academic researcher in the physical sciences, such as hydrogen fuel cells and computational modelling.
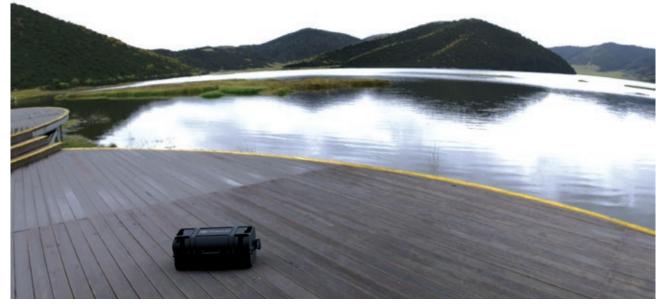
"I know how various scientific measurements are made and have a fundamental appreciation for – if you wanted to measure X – this is how you would do it theoretically to then work backwards from there."

And then Tom started FreeUP, "We have all this fantastic scientific knowledge which is rarely used," explains Tom. "It's sometimes frustrating because generating this knowledge should be the difficult part, and actioning it, building technology and solutions should be straightforward."

The team at FreeUP is working to make it easier to measure and gather water data at global scales, to make that data easily accessible and useful so that humanity can benefit from insights at a much broader level.

While visiting an agricultural college just after founding FreeUP, Tom closely looked at how water sensing was done and was surprised when he found out that one sensor cost almost the same as a car in the UK.

Thinking there was no fundamental reason why such sensors needed to be so expensive, the

Easy to deploy FreeUP water quality sensor fleets transmit data in real time.

FreeUP team started tinkering. It wasn't long before Tom reached out to the UK Environmental Agency and pitched a pilot program to prove that water quality sensor devices (SONDES) could be produced and operated at a significantly reduced cost.

FreeUP's technology has been tested in rivers, lakes, and oceans. If the body of water is more than 20cm deep, FreeUP can measure it as long as a signal is available. Some river data in the UK has gone from being collected once every three months to being collected and transmitted in real time every 30 minutes. Getting water quality information in real time from a particular river or an entire region is now possible.

In the past, one of the high cost aspects of the production of water quality sensor devices were the required base stations and communication infrastructure for data and image streaming, which often resulted in data bottlenecks and much higher production and operating costs.

Customers now purchase FreeUp fleets
FreeUP proved they could make the devices low cost, out of low cost materials, and yet reliable and highly effective. They are now trending towards making their devices almost 'recyclable' in terms of cost so that they can be deployed at scale, reaching far more bodies of water and resulting in greater data collection. Customers now purchase FreeUP's sensors in

'fleets' available in different sizes for different applications.

"In the future, before we go to the beach, we will be able to check the water quality in real time just like we check the weather before we go out today."

A second form factor for drinking water network pipes has been developed to assist water utilities in monitoring water quality without digging up the roads and enabling utilities to preempt events before they affect customers. Another application is for water reservoirs to measure microbes as indicators of water safety and for this data to also help wild swimmers and other public groups enjoy wild water more safely.

First the UK, then beyond
FreeUP's go to market plans are firmly focussed on the UK for now, where they are producing their hardware. Key target markets are providers of water, industries that use a lot of water, and the public who drink, bathe, and swim in it. The problems they are solving, however, are global and they plan to deploy to other countries once UK deployments have scaled up as ensuring access to clean water is critical to us all.

Learn more: https://freeup.world/

7# 25 years of innovation

"The results are disruption of old business models, first-of-kind designs, better performance, longer lifespan, and new ways of positioning, connecting, computing, and data transferring within the IoT industry."

Chip to cloud path over the last 25 years

Within the rapidly expanding IoT industry, u-blox has taken a different path with its chip to cloud evolution over the last 25 years. A solution is no longer just about the hardware. It is now also about the u-blox value-added service, which improves how the hardware works. Of course, the hardware will work without the service. However, the service decisively enhances functionality. We generate extraordinary value when we combine the two and create the best solution for our customers.

Over 70% of our employees are dedicated to R&D at u-blox – in the market, working closely with our partners across the IoT eco-system delivering first-of-kind product and service innovation. For example, smaller form factor, lower power consumption, new security attributes, higher accuracy, and robustness, or a new range of user tools to help our customers accelerate time to market.
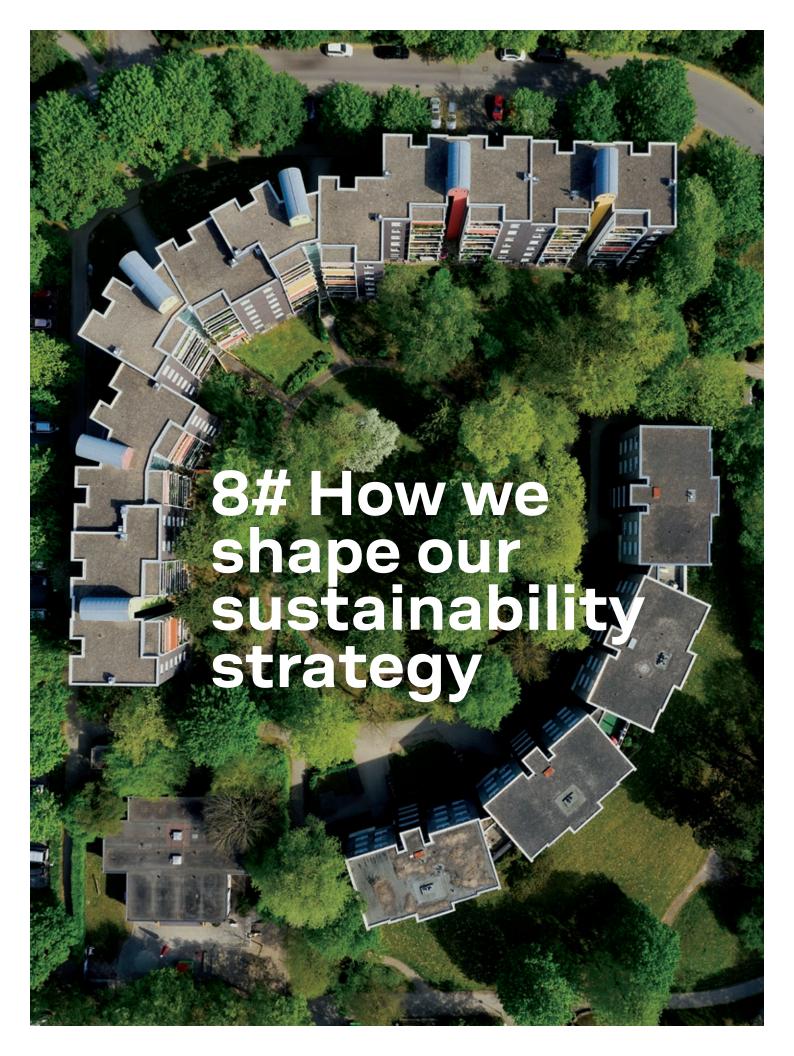
u-blox R&D is at the global market edge anticipating the next major technology development to ensure we maintain our leading market position.

Deepening our understanding of each industry to deliver solutions

As industries automate and go through their unique digital transformation – from a smartwatch to a fully automated farm tractor – we partner within each industry with market leaders and other technology providers to deepen our understanding of the required solutions.

Customers gain access to our best and brightest R&D minds

Our successful collaboration with global market-shaping leaders has been mutually beneficial as these key customers gain access to our best and brightest R&D minds and, in turn, we to theirs. The results are disruption of old business models, first-of-kind designs, better performance, longer lifespan, and new ways of positioning, connecting, computing, and data transferring within the IoT industry.

8# How we shape our sustainability strategy

Targeting all levels of our business

Our sustainability strategy is designed to ensure sustainability considerations feed into every decision we make – at all levels of the business.

To underline our commitment to be a good corporate citizen – and learn from a community of like-minded, responsible organizations – we signed the United Nations Global Compact already in 2012. This is the world's largest corporate sustainability initiative encompassing the 17 Sustainable Development Goals (SDGs) established by the United Nations as a blueprint for achieving a better and more sustainable future for everyone. They address the global challenges we face, including poverty, inequality, climate change, environmental degradation, peace, and justice.

Why the UN Global Compact?

Back in 2012 when u-blox became a UN Global Compact signatory, there were far fewer signatories than the, to date, 22,247 organizations. Together these businesses and civil society organizations are doing business responsibly by aligning their strategies and operations with the UNGC 10 principles on human rights, labor, environment, and anti-corruption; and taking strategic action to advance broader societal goals, such as the 17 UN Sustainable Development Goals, with an emphasis on collaboration and innovation.

The UN Global Compact is a global movement that is shaping a sustainable future through a shared commitment to deliver on ambitious goals for humanity and our planet. Each UN SDG represents challenges far greater than any one organization alone can overcome. We can accomplish far more through shared commitment, collaboration, innovation, and action.
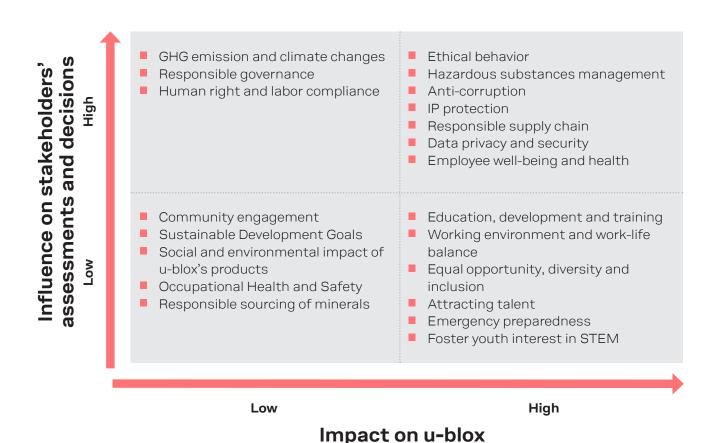
Our 2022 GRI Materiality Analysis

In 2022, we renewed our Global Reporting Initiative (GRI) Materiality Analysis to identify and prioritize the areas where u-blox can make a meaningful economic, environmental, and social impact – areas that are important to and highly influence the decision-making of u-blox and our stakeholders. Coupled with the United Nations SDGs, the results shaped our sustainability strategy and how we organize, take action, report, and communicate on sustainability.

Open dialog with u-blox stakeholders around the world

With a global footprint in all regions, the u-blox stakeholder community is vibrant and diverse. Our employees, customers, investors, partners, the communities we live and work in, and other organizations and entities that can affect or be affected by our activities all have a stake in u-blox.

We actively seek opportunities on an ongoing basis to communicate with and gather input across multiple channels with our global stakeholder community.

We welcome an open dialog with stakeholder engagement along our journey to a more sustainable future.

Influence on stakeholders' assessments and decisions

High
- GHG emission and climate changes
- Responsible governance
- Human right and labor compliance

- Ethical behavior
- Hazardous substances management
- Anti-corruption
- IP protection
- Responsible supply chain
- Data privacy and security
- Employee well-being and health

Low
- Community engagement
- Sustainable Development Goals
- Social and environmental impact of u-blox's products
- Occupational Health and Safety
- Responsible sourcing of minerals

- Education, development and training
- Working environment and work-life balance
- Equal opportunity, diversity and inclusion
- Attracting talent
- Emergency preparedness
- Foster youth interest in STEM

Low   High

**Impact on u-blox
(Economic, Environmental and social)**

Stakeholders	Stakeholders dialog	Areas of interest (ESG)	How we work with these topics today
Our investors	• Full year and half year IFRS based reporting (Annual ESG update) • Quarterly revenue reporting • 1-to-1 meetings • Annual general meetings • Responses to investors's questions and feedback collection • u-blox's website • Press releases and IR mailings	• ESG goals in compensation • Ethical behavior • Supply chain management • People management • Green products • Weapons ban	• RBA supplier code of conduct in place • UN Global Compact implemented • Code of Conduct available and yearly training • Anti-corruption policy in place • Applications limitations avoiding use in weapons
Our customers and distributors	• Direct sales connects to all our customers and their applications • Face-to-face • Customer support • Technical expertise • u-blox website, forum and portal • Webinars • Exhibitions and seminars • Mailings, webcasts	• Products compliance • Resource efficiency • Sustainable sourcing • Human rights and labor compliance • Security in data connectivity • Green products	• RBA supplier code of conduct in place • UN Global Compact membership • Hazardous substances management/document • Conflict mineral statement • Low power products • Miniaturization products
Our manufacturing partners and suppliers	• Supplier Self-Assessment surveys • Ongoing product compliance monitoring • Annual supplier survey • Supplier training • Annual sustainability report	• Human rights and labor compliance • Environmental, Health & Safety (EHS) compliance • Supply chain management • Environmental protection • CO_2 footprint	• UN Global Compact membership • RBA supplier code of conduct in place • u-blox Environmental Management Systems (EMS) • EU Restrictions of Hazardous Substances (ROHS) directive • EU Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) regulation and the linked SCIP database • Perfluorooctanoicacid acid (PFOA), and Perfluorooctane sulfonic acid (PFOS) regulations • Halogen Free content according to IEC 61249-2-21 standard • Conflict mineral statement • Anti-corruption policy in place
Our employees and potential employees	• Supportive dialogue • Employee satisfaction survey • Intranet resources • Monthly staff meeting • Internal training • Open doors and transparency	• Training and education • Ethics • Health and safety • Working conditions • Work-life balance • Non-discrimination • Woman in tech, equal pay/ equal chances	• Code of conduct in place • Anti-bribery and anti-fraud guidelines and yearly training in place • Employee satisfaction survey are carried out • RBA code of conduct in place • Benefits program in place • NVC training
Authorities	• Legislative and regulation requirements • Audits	• Product compliance • Anti-corruption • Working environment • Legal compliance • Regulation compliance	• Hazardous substances management with database covering all products • UN Global Compact membership • Anti-bribery policies in place
Communities and public	• Press releases • u-blox's website • Cooperation with educational institutions • Dialogue with government institutions • Social media	• Community engagement • Education and training • The environment • Ethical behavior	• UN Global Compact membership • Charitable contributions (funds and products) in the communities • Employee volunteer program in place • Cooperation with universities • Meeting with government representatives

9# The five pillars of our Sustainability Strategy – in depth

Our key topics and concerns

We have identified several key topics and concerns, which we have grouped into five pillars and aligned with the UN SDGs to form the basis of our sustainability strategy.

u-blox five pillars of sustainability, our goals, and UN SDGs at-a-glance

Pillar 1

Business ethics, privacy, and security
We believe in doing business the right way. Conducting ourselves with honesty and integrity – and maintaining high standards around privacy and security – is essential if we are to win and maintain the respect of our customers, investors, business partners, and the communities where we operate.

Pillar 2

Employees
We encourage diversity and promote a culture of inclusion among our employees. Our varied backgrounds, ideas, and experiences are critical to our success. Fostering a truly inclusive organizational culture helps us attract and retain the best talent. People retention and development is, therefore, a key performance indicator that we monitor.

Pillar 3

Environmental responsibility
We are committed to protecting our planet for future generations. We will do this by continually seeking ways to make our products and operations even more environmentally friendly.

Pillar 4

Supply chain responsibility
Our focus is to ensure we create our products in ways that do not harm individuals, communities, or the environment and that all minerals and other materials are sustainably and responsibly procured.

Pillar 5

Community
We believe in building sustainable communities around the world. And u-blox is contributing in various ways: we provide our technology, we make financial contributions, we encourage (and incentivize) our people to offer their expertise, and we work with educational establishments to support learning.

10#
Our goals, achievements, and status

Each year we progressively do more

Since 2012 we have continually worked on implementing policies and activities around our five pillar sustainability strategy. We have progressively done more each year to improve the sustainability of all aspects of our business.

Our specific sustainability goals, projects, and commitments within each of our five pillars are all designed to contribute to one or more UN SDGs.

u-blox ESG goal status as of December 2022

Pillar/ESG Goals	Goal / Goal evaluation	Status	Supporting SDGs
Business ethics and supply chain responsibility			
1. Do business the right way: Business ethics, privacy, and security.	Execute implementation for the responsible Supply Chain Management for relevant tier-1 suppliers: Update Supplier Code of Conduct and SAQ, and run audit.	100%	
	Our Supplier Code of Conduct has been updated and is ready to be distributed to suppliers in April–May 2023 to identify and address any gap.		
Employees			
2. Respect our people: Diversity, equality, and inclusion training.	Train **40%** of our staff in non-violent communication techniques.	150%	
	Train **48%** of our staff in non-violent communication techniques.		
	Number of people trained: 633 employees, representing 51.04% of our staff.		
Environmental responsibility			
3. Protect the environment: Commitments to achieve net zero emission goals in the medium term.	Continue "Prevent, Minimize, Offset" strategy for 3 sites.	150%	
	We implemented the strategy for 4 sites: Thalwil, Sgonico, Malmö, and Berlin.		
Community			
4. Sustainable products: Implementation of our technology for socially responsible projects.	Create a framework to qualify the field impact of our products.	50%	
	Our framework is not yet complete due to the many different applications in which our products provide a positive impact. We have positive feedback from product donation partners: Charity: Water, No Isolation and NaviBlind.		
5. STEM education: Cooperation with organizations delivering STEM education.	Support **two-three** organizations inspiring youth to pursue an education in STEM.	150%	
	We now support three organizations inspiring youth to pursue an education in STEM.		

u-blox goal setting for April 2023 – March 2024

| Pillar		Goals (base)	Goals (optimum)	Supporting SDGs
	Manage ESG	• Refine an overall ESG strategy	• Define a measurable base line for (e. g. our carbon footprint) to assess future progress	
Pillar 1: **Business ethics, privacy, and security**	Do business the right way	• Provide anti-bribery training to sales/pur-chasing employees	• Provide conflict of interest training to all employees	
Pillar 2: **Employees**	Respect our people	• Refine our diversity and inclusion strategy	• One pilot diversity and inclusion initiative in place	
Pillar 3: **Environmental responsibility**	Protect the environment	• Measurement of CO_2 emissions of flights: "Prevent, Minimize, Offset" strategy for 2 sites (Thalwil, Berlin) • Definition of "CO_2 zero by 2050" strategy and measurement parameters	• Measurement of CO_2 emissions of flights: "Prevent, Minimize, Offset" strategy for 4 sites (+Sgonico, Malmö)	
Pillar 4: **Supply chain responsibility**	Do business the right way	• Define long-term business ethics and supply chain (non-environmental) responsibility strategy for 2023-2030	• Evaluate relevant tier-1 suppliers for potential risks of ESG related topics (social, environmental, health and safety, and/or ethical risk) and, if risk identified, run 1 audit (online or on-site)	
Pillar 5: **Community**	STEM education	• Support three organ-izations for inspiring kids and young students to pursue education in STEM	• Support four organiza-tions for inspiring kids and young students to pursue education in STEM	
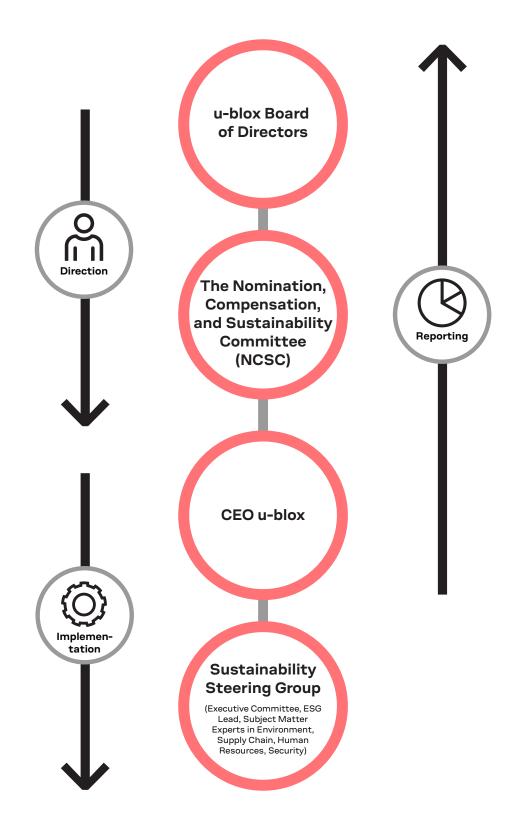
11#
Sustainability governance at u-blox
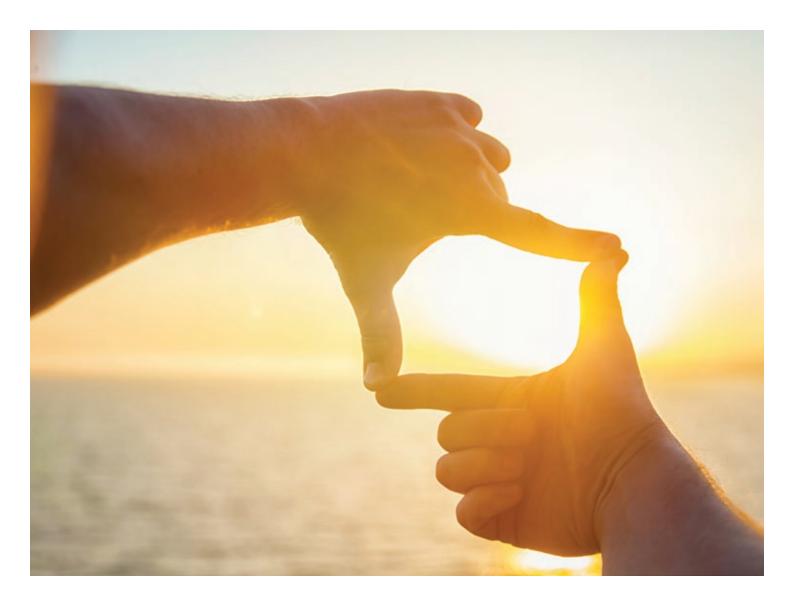
The Nomination, Compensation, and Sustainability Committee (NCSC) comprises two members of our Board of Directors. The Committee monitors ublox's sustainability activities and ambitions and approves its strategy and goals based on regular sustainability updates from the Sustainability Steering Group.

Our CEO, Stephan Zizala, is responsible for global sustainability at u-blox and chairs our Sustainability Steering Group.

The Sustainability Steering Group is responsible for setting the u-blox Environmental, Social, and Governance (ESG) strategy, implementing key processes, and coordinating data collection. The composition of the steering group includes members of the Executive Committee, the ESG manager, and subject matter experts.

The Sustainability Steering Group meets four times yearly and reports to the NCSC. For further detail on the NCSC, see the Corporate Governance Report.

Direction

**Implemen-
tation**

**u-blox Board
of Directors**

**The Nomination,
Compensation,
and Sustainability
Committee
(NCSC)**

CEO u-blox

**Sustainability
Steering Group**

(Executive Committee, ESG
Lead, Subject Matter
Experts in Environment,
Supply Chain, Human
Resources, Security)

Reporting

12#
Pillar 1:
Business ethics, privacy, and security

Explanation of the material topic and its boundaries

We believe in doing business the right way every day. Conducting ourselves with honesty and integrity and maintaining high standards around privacy and security are vital to u-blox employees around the world. It is also essential if we are to win and maintain the respect of our customers, investors, business partners, and the communities where we operate.

Our approach to business ethics, privacy, and security

The u-blox Code of Conduct was updated in 2022 and is based on the UN Global Compact's 10 guiding principles, simplified into 7 core principles. These principles cover human rights, labor, the environment, and anti-corruption; they feed into every aspect of our business, both strategically and operationally, and are the foundation of our approach to business ethics, privacy, and security.

Learn more about the u-blox Code of Conduct

Annual business ethics training

Everyone at u-blox regularly receives business ethics training, which provides practical guidance on responding in different situations. The u-blox Code of Conduct is an important resource that sets forth our fundamental commitment to conducting business ethically and honestly. We are absolutely committed to winning with

"Our Code of Conduct was updated in 2022 and is based on the UN Global Compact's 10 guiding principles, simplified into 7 core principles. These principles cover human rights, labor, the environment, and anti-corruption; they feed into every aspect of our business, both strategically and operationally."

integrity! The Code of Conduct clearly lays out what we ask of our employees and is designed to help them deal with difficult situations, upholding our reputation as a company with integrity that can be trusted. We do business responsibly and ethically and are committed to sustainable development while respecting the needs of the individual, society, and the environment.

Zero tolerance for bribery and corruption

A key pillar in the u-blox Code of Conduct is our zero tolerance for bribery and corruption. Both are the antithesis of doing business the right way. We do not give or accept bribes and have clear guidelines for employees to follow regarding gifts and entertainment.

"One of the central pillars of the u-blox Code of Conduct is the policy we set out in 2002 prohibiting the sale of our products for weapons and weapon systems."

No weapons or weapon systems

Sometimes, IoT innovations developed to benefit humanity can also be used to cause harm. One of the central pillars of the u-blox Code of Conduct is the policy we set out in 2002 prohibiting the sale of our products for use in weapons and weapon systems – including systems for target identification.

All u-blox products are designed for lawful, commercial use and civilian purposes only. Our global sales teams are regularly trained on u-blox's policy and distributors are contractually obliged to adhere to these restrictions:

We do not sell products when the intended use is for integration into weapons or weapon systems, including:

- Guns, cannons, or weapon systems, e. g., systems for identifying or localizing targets
- Systems for the guidance of missiles, bombs, or bullets
- Military drones, military unmanned vehicles, or military robots

We do not sell to trade embargoed countries, including:

Belarus, Iran, North Korea, Sudan, Syria, Cuba, Russia, and the territories occupied by Russia in Ukraine. In 2022 we added all members of the Eurasian Economic Union because its members are in a free trade zone with Russia and Belarus.

Speak Up at u-blox

Our Speak Up whistle-blower program provides a safe, easy, and anonymous way for employees to report potential misconduct related to our business. Complaints can be made directly through an externally provided service, which allows reporting anonymously. Our Compliance Committee will investigate all reports and has the power to set binding actions that require the relevant part of the business to follow. The binding advice can be overruled by a majority of the Executive Committee. The Compliance Committee (General Counsel and Head of Human Resources) refers to the Audit Committee. These could include organizational measures to protect against similar occurrences in the future and individual disciplinary action. Further, the u-blox program protects whistle-blowers against dismissal, demotion, and other forms of retaliation.

OECD compliant transfer pricing

u-blox adheres to the Organisation for Economic Co-operation and Development (OECD) transfer pricing guidelines for multinational enterprises and tax administration.

Financial assistance received from governments

In 2022, u-blox received the following types and amounts of financial assistance from the governments of Italy, Singapore, Sweden, and Switzerland.

u-blox entity	Government	Type	Amount
u-blox AG	China	Return social benefits	Minor
u-blox Malmö AB	Sweden	Project grant	Minor
u-blox Singapore	Singapore	Job growth incentive	Minor
u-blox Italia S.p.A.	Italy	Energy costs Job program	CHF 28,000 CHF 18,000

Participation in public policy and lobbying

u-blox does not participate in public policy making or lobbying activities.

Protecting Intellectual Property

u-blox has invested over CHF 1 billion in our core IP over the last 15 years. Our intellectual property (IP), which includes patents, trademarks, copyrights, and trade secrets, comprises some of our most valuable assets. We treat it extremely carefully to protect our market position and competitive advantage. Moreover, we invest heavily in growing this IP portfolio every year, with more than 20% of our revenue dedicated to R&D to generate a constant flow of innovation. Equally important, we respect the intellectual property rights of others. We are willing licensees to standard essential patents (SEPs).

Digital and physical security

Our company-wide security function, led by our Corporate Security Management team, utilizes our Information Security Management System aligned with ISO/IEC 27001 and Common Criteria (ISO/IEC 15408) requirements. In addition, specialized security experts and other stakeholders from across our business are responsible for the security of our physical sites worldwide, as well as our information systems, products, and services. The Executive Committee reviews and steers the security status and activities in the quarterly Corporate Security Steering meeting.

Protecting Data Privacy

u-blox does not collect or use sensitive personal data for business purposes. u-blox complies with applicable data privacy laws. Particular attention is given to ensuring compliance with regard to the collection of personal data of our employees. We protect this data per the policies and procedures in our Information Security Management System (ISMS).

Designing secure products

To protect our customers – and theirs – against the many and varied threats their devices and data face in the connected world, it is our responsibility to create secure products. This means designing for security from the start.

"To protect our customers – and theirs – against the many and varied threats their devices and data face in the connected world, it is our responsibility to create secure products."

IoT security is complex, fast-moving, and multi-faceted. Addressing it demands a sophisticated, multi-pronged approach. Security is built into our products. u-blox has established product standards based on industry requirements and best practices to form a foundation for building new generations of secure devices. Our internal network of Security Champions within the development teams enables us to provide secure products that fulfill these requirements.

We are continuously monitoring security requirements in critical markets such as Operational Technology (OT) and Automotive. Furthermore, we actively adopt requirements from emerging regulations, such as UN ECE R.155 or the EU Cybersecurity Act, and industry standards, such as ISO/SAE 21434.

In 2020, we signed the GSM Association (GSMA) Digital Declaration, a set of aspirational principles to guide activity in the digital age to build a sustainable and secure digital future.

Through our collaboration with digital security leader Kudelski Group, we are incorporating premium-grade security, including robust encryption key management, into our latest range of cellular products.

Proactive Security Monitoring, Testing & Threat Intelligence

To identify threats and vulnerabilities, we systematically engage a 3rd party SOC for 24/7 security monitoring, and our in-house Red Team of security analysts. Furthermore, we collaborate with independent security researchers to test our products and IT infrastructure.

Additionally, we run an invite-only Bug Bounty[9] on selected customer services, and we have a Responsible Disclosure Policy in place to enable individuals or organizations to report product and service vulnerabilities to us.

Increasing resilience after a cyberattack
In 2022, u-blox was subject to a ransomware attack, from which we could recover fully, with limited delays in product deliveries and no impact on u-blox Services or customer data. We immediately involved relevant authorities and 3rd party experts for investigation and forensics. As measures for data recovery were already in place, we completely restored affected data without paying a ransom.

Based on the lessons learned, we have accelerated our efforts to rework the IT architecture to significantly enhance our resilience towards future attacks.

Cybersecurity collaboration with suppliers and customers
In 2022 u-blox Corporate Security has continued to strengthen security collaboration with our most critical contract manufacturing partners and other critical suppliers. We have started to conclude Security Agreements with our key suppliers to ensure an adequate control level and fulfillment of ISO/IEC 27001, ISO/IEC 15408, and ISO/SAE 21434 requirements.

Furthermore, we have collaborated with our critical suppliers to ensure the preparedness of our Supply Chain for potential power shortages in Winter 2022/2023.

We have also worked closely with our customers' security teams to align security requirements towards u-blox products and infrastructure, coordinate security issue handling, and share information on current security issues and threats.

Evaluation of our approach to business ethics, privacy, and security
We are committed to the UN Global Compact's 10 guiding principles addressing human rights, labor, the environment, and anti-corruption. These principles guide every aspect of our business, both strategically and operationally.

We regularly train our employees and supplier partners with the u-blox Code of Conduct while conducting our global business responsibly and ethically, making a meaningful contribution to sustainable development.

[9] Learn more about the u-blox Responsible Disclosure Policy and Bug Bounty

Business ethics, privacy, and security indicators

We are committed to the UN Global Compact
Since we became a signatory in 2012, our Code of Conduct has been based on the UN Global Compact's 10 guiding principles, simplified into 7 core principles. These principles cover human rights, labor, the environment, and anti-corruption, and they feed into every aspect of our business, both strategically and operationally.

No weapons or weapon systems
One of the central pillars of the u-blox Code of Conduct is the policy we set out in 2002 prohibiting the sale of our products for use in weapons and weapon systems.

100% compliance/zero tolerance for bribery and corruption
A key pillar in the u-blox Code of Conduct is our zero tolerance for bribery and corruption. Both are the antithesis of doing business the right way. We do not give or accept bribes and have clear guidelines for employees to follow regarding gifts and entertainment.

u-blox Speak Up program
In 2022 we continued our Speak Up program to provide a safe, easy, and anonymous way for employees to report misconduct. In 2022 no breach of policy or misconduct was reported.

13#
Pillar 2:
Our employees and our u-blox family "Better Together" culture

Explanation of the material topic and its boundaries

We take our responsibility seriously to provide all our employees, located across 33 sites worldwide, with a safe, healthy, and equitable workplace where they can thrive and share in our success. The employee section of this sustainability report relates to how the u-blox Executive Committee (EC) and Global and Local Human Resource teams deliver on this crucial responsibility.

Our approach to our employees

We have a very strong and supportive "Better Together" culture in our u-blox DNA. This has become even more apparent during these challenging times and was highlighted by our employees in our recent engagement survey.

Throughout u-blox, employees display a strong emotional contract with the company. This was demonstrated throughout the past year as everyone pulled together and went above and beyond to support our customers and each other.

"There is a strong collaborative and innovative spirit across the business, nurturing a thriving start-up culture at u-blox – 25 years after our founding."

Agile, lean decision making

Our leadership team empowers employees to make their own decisions, whether on a day-to-day business or in an agile working environment encouraging employee development and ownership throughout u-blox. In addition, our leadership team members balance employee empowerment with knowing when an employee needs direct support either from them or from other team members.

Innovation and start-up mentality

Twenty-five years after our founding, despite the significant growth of our global footprint, there is a strong collaborative and innovative

spirit across the business, nurturing a thriving start-up culture at u-blox.

Diversity

Evidence shows that more diverse workforces are more productive, which is good for u-blox, our customers, and our shareholders. We have equality policies covering all aspects of our operations, including recruitment, pay, training, and development. Our HR team actively supports all parts of the business by providing practical help and training to colleagues to ensure we treat everyone equally.
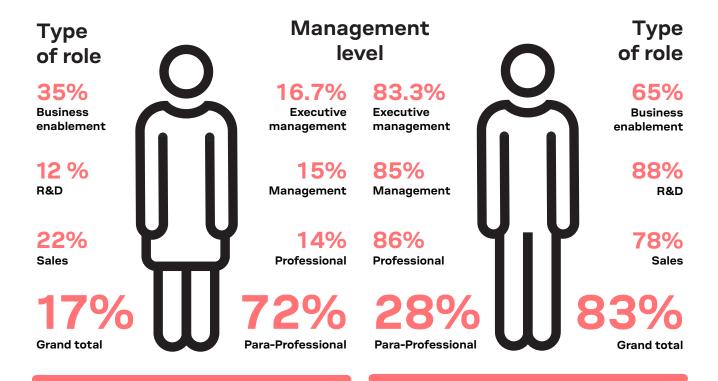
Gender Diversity

Like many engineering businesses, we have a gender imbalance, which we also see at universities where only one in five engineering degrees are earned by women. We seek to address our gender imbalance with a combination of our recruitment, training, mentoring, and retention strategies, including working with educational institutions and communications programs targeting potential candidates.

We closely monitor the gender balance at all levels of our business. At the end of 2022, 17% of our global workforce was female. 20% of our Executive and Management positions are held by female colleagues. Positions requiring an engineering degree have low levels of gender diversity proportional to the current situation at universities. However, in administrative roles, women hold the majority of the positions. At the Board of Directors level, two out of seven members are women. We encourage all of our employees, regardless of gender, to actively engage with their peers in fora and other external industry association roles to help take IoT forward.

Employee retention

Employee retention is a strategic goal at u-blox, and we have a wide variety of measures in place to support it. For example, we implemented structural salary and benefits adjustments in different countries along with other corporate, functional, and site measures. Besides tracking key performance indicators showing our numbers of leavers, both voluntary and dismissals, we conduct regular development and career discussions as well as objective reviews. With such

Type of role

35%
Business enablement

12 %
R&D

22%
Sales

Management level

16.7%
Executive management

15%
Management

14%
Professional

17%
Grand total

72%
Para-Professional

Female

83.3%
Executive management

85%
Management

86%
Professional

28%
Para-Professional

Type of role

65%
Business enablement

88%
R&D

78%
Sales

83%
Grand total

Male

insight, we define career progress measures. We have outlined below some of our actions to support employee retention:

Diversity and inclusion
Our culture reflects the communities we work in and the markets we serve. Across u-blox, currently at 33 sites, with staff representing 70 nationalities, we have a strong, inclusive culture where diversity is valued by all. Discrimination and bullying are not tolerated, and everyone is treated with dignity and respect. u-blox has a zero tolerance policy for any form of harassment or abusive behavior.

Grievance procedure
Grievance procedures are also described in our global employment policy as well as in our local policies. Grievance processes can differ from country to country depending on local labor laws and are taken very seriously. Progress is monitored tightly and treated with the highest level of confidentiality.

Our corporate values and identity guidelines, which are provided to all employees, help to ensure that we have a culture that nurtures diversity and inclusion regardless of race, gender, ethnic origin, age, religion, disability, family status, social origin, sexual orientation, gender identity, or gender expression. As a global company, we believe our people and culture

should reflect the diversity found in the communities we work in and the markets we serve. Further, we believe diversity drives innovation and efficiency and helps us to better serve our customers and our industry.

Our headquarters in Thalwil, Switzerland, is a good example, where our employees represent 35 different citizenships. Additionally, the majority of our development teams have members in more than one physical site, often in several countries. Collaboration is facilitated through virtual meetings, and a unique training program for line managers of multi-site teams has been developed to support international leadership in a multicultural environment.

Open-door culture
We work hard to nurture an open-door policy throughout the business. Our flat organizational structure promotes open communication at all levels to listen to and act upon employee needs.

An open information culture
Since the foundation of our company, we have fostered an open information culture and keep all staff updated every month in detail about the course of our business, the progress of our projects, and the status of our organization. We

"In 2022, we added to our recently implemented e-learning library with more than 20,000 new courses, and more than 2,300 were completed throughout the year."

treat all our colleagues with respect and trust.

Communication culture
As of the end of 2022, we trained just over half of our employees globally in Nonviolent Communication (NVC) and significantly exceeded our company's target. This corporate training helps us improve our collaboration by speaking up for things that are important to us (honesty) and listening carefully, without judgment, to what is important to others (empathy). Such a communication culture forms a strong foundation for inclusion and unleashes the power of diversity.

Freedom of association
u-blox employees have the right to associate freely as per local regulations. These rights are specifically clarified in our local employment policies.

Career development

u-blox recognizes that career development will mean different things to different people and perhaps be different at other points in their lives. As a result, we have designed a career development strategy that caters to a broad range of employee developmental needs to help them grow and reach their individual goals. We want all u-blox employees to shift their focus from past performance and look forward with emphasis on their personal development and growth for better performance.

In regular career development discussions, employees discuss and define jointly with their line manager their personal development needs and interests while addressing their career ambitions and progress. Alongside our core training, we offer flexible, professional development opportunities for everyone in the business, including courses and material from selected internal and external providers and training developed in-house, unique to u-blox.

Training and knowledge sharing

Since we implemented our learning management system and e-learning strategy at u-blox, our employees have access to 270 modules, most of them created internally by subject matter experts and tailored to share the company's specific knowledge.

With our learning strategy, our training activities are centrally logged. The system enables managers to assign training to employees and those employees to track their progress. Simultaneously it allows the company to report in detail on specific training targets like regular corporate training such as Code of Conduct, Communication, Management, and Safety and Security training. Additionally, the system supports u-blox by identifying and recognizing experts in particular areas. We have also established a number of cross-functional teams to support knowledge sharing and provide employees with a broader scope of u-blox initiatives and roles.

With the implementation of a globally renowned e-learning library and platform, we are investing in the personal development of all our employees. In 2022 we had 270 tailored modules on this learning management system specific to u-blox learning.

In 2022, we added to our recently implemented e-learning library with more than 20,000 new courses, and more than 2,300 were completed throughout the year. In addition, more training tailored to the career paths of employees will be added in 2023.

This modern learning experience is personalized, thanks to data-driven recommendations. As a result, our employees can use and apply learning according to their needs and personal growth

interests. u-blox is building a digital learning ecosystem that enables learning to happen anytime, anywhere. With this strategic approach and focus on digital learning, we are building a learning organization that also reduces our carbon footprint.

Investment in our future talent
u-blox offers an apprenticeship program at headquarters and internships throughout the year for students and early careers across our sites. These programs are very successful.

Employee engagement survey
In 2021, we shared the results of our latest employee engagement survey. Over 75% of employees participated in the survey. We are very pleased that 94% of the respondents confirmed being satisfied with their overall working conditions and working environment and that 92% confirmed being satisfied with u-blox as an employer.

In addition, every site and department has developed specific measures in accordance with the engagement survey results for their area, e. g., by implementing a dedicated department communication channel or adapting certain benefits.

With the implementation of an employee experience and success platform in 2023, we will have quarterly surveys and pulse checks to increase the engagement and development of our employees.

Work-life balance
We hire people who are passionate about what they do, but we do not want their work to take over their lives. Alongside their annual leave allowance, all employees are contractually entitled to time off to care for dependents and other

Types of employement	2022
Employees with permanent work contracts	98%
Employees with temporary work contracts	2%
Directly employed workforce	94%
Not directly employed workforce	6%

special reasons according to local legislation. At u-blox, we support further types of leave beyond the legal requirements whenever possible without disrupting business continuity. In different countries and in line with local regulations and contractual possibilities, we also offer up to two months of unpaid leave to our employees for their private activities and development.

Similarly, many of our employees have the possibility to reduce their working time if they need more time for family matters or to further their education related to their professional activity at u-blox.

As well, different local benefits across our 33 sites support a variety of sports and leisure activities for our people.

With our 2021 engagement survey, we addressed our employees' expectations and needs. Due to the experience of the pandemic, the vast majority appreciated the opportunity to work more flexibly from home. Consequently, effective September 2021, we implemented a new Remote Work Guideline – a flexible hybrid work model whereby employees can work up to 40% from home. The new flexible model is another significant contribution to supporting our employees' work-life balance with less commuting and a positive impact on our carbon footprint.

Types of employment
As a knowledge driven company with a unique in-house innovation rate, it is critical for our organization to limit the use of non-regular employment to a very low level.

With permanent work contracts, we also believe in giving our people stability in their lives and work. That's also why the vast majority of those working for u-blox are permanent employees.

Pay and benefits
Appealing employment packages with equal pay based on the job grade is another important part of our strategic aim to attract and retain the best people. All positions are graded using the Mercer Universal Position Code. In addition, we benchmark our salaries using an external provider to ensure we remain an enticing employer for the very best people.

With the recent remarkable inflation rate, benchmarking salaries can be challenging. As a result, and to have accurate data, u-blox has adopted a policy of data triangulation where we always source three sets of data for salary benchmarking purposes.

Gender pay equality
In December 2018, the Swiss Federal Government adopted an amendment to the Gender Equality Act, which entered into force in July 2020. This amendment resulted in all Swiss

companies with 100 or more employees being required to carry out a wage equality analysis by the end of June 2021.

u-blox carried out this analysis of the key data for employees based in Switzerland as of January 31, 2021, utilizing the "Logib" standard analysis tool provided by the Swiss Federal Government. This analysis was then audited by Revipro AG, Thalwil, in October 2021. In November 2021, we received the final report back with a good result: u-blox AG fully complies with the requirement of gender pay equity in Switzerland.

According to the Logib standard analysis model, there would be a well-founded presumption of wage discrimination if the wage analysis reveals a gender-specific wage difference that is not explained by objective factors and is statistically significantly greater than 5%.

The analysis considers the standardized qualifications, job-related factors, level of operational competence, and professional position. As a result of this analysis, u-blox AG female employees earn, on average 3.1% less than their male colleagues. This value is below the 5% tolerance threshold.

It remains our goal, as before, to treat all colleagues fairly and equally by addressing any difference in the annual Grading & Salary review.

Sharing success and celebrating together!
At u-blox employees share our business success and growth with a new profit sharing Company Performance Bonus and an Employee Share Option Program. In 2023, we will launch a new long term incentive program which allows our employees to participate even more in the business success of u-blox.

We regularly celebrate our teamwork and success with annual company events at each site several times per year.

Health and safety
It is our duty to safeguard the health and safety of every u-blox employee worldwide at work. u-blox employees undertake health and safety

training as part of their onboarding process. They are also personally responsible for maintaining safety, security, health, and environmental protection in the workplace relating to their own duties to the best of their knowledge, ability, and experience.

Our global Health & Safety Manager defined global Health & Safety guidelines in 2022 to be rolled out in 2023, including a global health & safety structure with the respective responsibilities, targets, and objectives. Several programs and training have been rolled out to raise awareness and be prepared for incidents. Progress is monitored, and a reporting system has been established.

Health & Safety activities in 2022:

- Regular local Health & Safety training is conducted at all sites according to the local rules and regulations
- Each u-blox site has a team of dedicated First Aid responders trained and equipped to support the health and safety of our employees in case of any onsite emergency
- u-blox understands the importance of an ergonomic workplace and has a policy in place to provide our staff with the individual ergonomic support they require

- On-demand webinars on personal health, resilience, and well being are available to all staff, as are virtual yoga drop-in sessions

We also encourage our employees to bring potential health and safety issues to our attention, and we respond openly to any concerns raised. In 2022, we were pleased to report no serious work-related injuries or work-related illnesses.

Evaluation of our management approach to our employees
Twenty-five years after our founding, there is a thriving "Better Together" and innovative culture at u-blox. Our agile working environment, personalized employee development strategy, work-life balance, and open door/open communication culture drive employee ownership, shared success, and employee retention. We consider the fact that u-blox people and culture continue to reflect the diversity found in the communities we work in and the markets we serve to be a meaningful contribution to sustainability.

Employee indicators

270 modules have been created on our learning platform
Since its launch, 270 modules have been created on the platform by our employees to empower them to share their knowledge and support other colleagues in their development and growth.

17% of our overall workforce is female
We closely monitor the gender balance at all levels of our business. At the end of 2022, 17% of our overall workforce was female. Female colleagues hold 20% of our executive and management roles. At the Board of Directors level, two out of seven members are women.

u-blox has 70 nationalities represented across 33 sites
Across all our operations, currently, at 33 sites with staff representing 70 nationalities, we promote an inclusive culture where diversity is valued, discrimination is not tolerated, and everyone is treated with dignity and respect.

Employees can work up to 40% from home
We offer a flexible hybrid work model whereby employees can work up to 40% from home.

98% of employees have permanent work contracts
With permanent work contracts, we also believe in giving our people stability in their lives and work. That's also why the vast majority of those working for u-blox are permanent employees.

51% of our employees trained in nonviolent communication
We trained just over half of our employees globally in Nonviolent Communication (NVC) and significantly exceeded our 40% target.

14#
Pillar 3:
Our environmental responsibility

Explanation of the material topic and its boundaries

We continually seek ways to make our products and operations worldwide even more environmentally friendly. Solid partnerships based on shared values that prioritize and protect the environment are essential for a fabless semiconductor manufacturer. The Environment section within this sustainability report relates to how u-blox strives to meet its environmental responsibilities.

"Our environmental management system is part of our product life cycle process. Before going into production, we ensure that all evidence of compliance has been verified throughout our supply chain."

Our approach to environmental responsibility

The u-blox Environmental Management System (EMS) was established in 2009 to set binding guidelines for our employees and suppliers. We have a dedicated team that manages all our environmental protection work worldwide, including checks on the fulfillment of our environmental requirements by our suppliers of parts and services, product material compliance reporting, internal training, and continuous improvement.

u-blox is a member of the non-profit organization IPC (ipc.org), a member-driven organization and leading source for industry standards, training, industry intelligence, and public policy advocacy for electronics manufacturing. With more than 3,000 member companies worldwide, IPC represents one of the most reliable resources available. IPC provides its members with tools for environmental product compliance best practices relating to the electronics industry, including design, printed board manufacturing, electronics assembly, and testing.

Our environmental team regularly benchmarks and verifies our performance in alignment with the environmental requirements of our global customer base. They often come with questions and request verification checks to ensure their environmental requirements are fulfilled. In addition to the internationally recognized environmental standards, there are sometimes region or country specific requirements.

Each year we renew our commitment to our UN Global Compact SDGs with respect to the environment. We are committed to ensuring u-blox products are produced responsibly and work exclusively with suppliers who embrace the environmental compliance and governance of our transparent and binding environmental management system.

Our transparent and binding environmental management system

The u-blox EMS manual sets out binding guidelines for our employees, supporting them in fulfilling their tasks in accordance with our sustainability objectives. It is also intended as an information tool for our customers and distributors, as it provides evidence of the implementation of their requirements in our environmental management system operations.

Our EMS is part of our product life cycle process. Before going into production, we ensure that all evidence of compliance has been verified throughout our supply chain. We focus on legal requirements such as the EU Restriction of Hazardous Substances (ROHS) directive, the EU Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) regulation and the linked SCIP database, the Perfluorooctanoic acid (PFOA), and Perfluorooctane sulfonic acid (PFOS) regulations, and the Halogen-Free content according to IEC 61249-2-21 standard. We also check customer specific environmental management requirements for some substances and their concentration limit values in our products.

Non-use of hazardous substances in our products

From a product material data perspective, we work closely with our suppliers and contract manufacturers to investigate and document our product compliance. We attribute our green label to all products that are both RoHS and

Halogen-Free compliant, and we are committed to developing products that are as **green** as possible and REACH compliant. Besides customer specific statements, we provide compliance statements for all volume products as follows:

- RoHS statement according to Directive 2015/863/EU
- REACH statement based on the latest Candidate List of Substances of Very High Concern published in Annex XIV of EU chemicals regulation (EC) 1907/2006
- Halogen-Free statement (if applicable) according to IEC 61249-2-21
- PFOA and PFOS free statements to according to Regulation (EU) 2019/1021 and Regulation (EU) 2017/1000, respectively

Data compilation and disclosure of materials
Since 2012, a Material Declaration Sheet (MDS) or Material Composition Declaration, according to IPC-1752A, is available for every u-blox volume product at the homogeneous level. IPC 1752A establishes a standard reporting format for material declaration data exchange between supply chain participants and supports reporting bulk materials, components, printed boards, sub-assemblies, and products. The MDS provides a detailed list of materials, including all homogeneous substances used in the product.

An MDS for each volume product is made possible through the investment and commitment u-blox have made to environmental management, compliance, and transparency and by partnering with leading top-tier suppliers who share a similar commitment to environmental, safety, and health best practice.

The full material declaration data of components and materials used are compiled and provided by our manufacturing partners. For automotive grade products, we also provide IMDS to meet the obligations placed on automobile manufacturers, and thus on their suppliers, by national and international standards, laws, and regulations.

The International Material Data System (IMDS) is the automobile industry's material data system. All materials used for manufacturing automobiles are collected, maintained, analyzed, and archived into IMDS. A global standard used by almost all the global OEMs, IMDS is used to meet the obligations placed on auto manufacturers by national and international standards, including their laws and regulations.

Product life spans of more than a decade
Over many years u-blox has created a unique quality system that assures the delivery of products that are functionally extremely robust and highly reliable. Further, we are a renowned supplier to the automotive industry and comply with their very specific requirements for process and product quality.

Many of our customers' products are manufactured to last and remain in use for more than a decade. Components, therefore, need to be robust, easy to maintain, and, where required, continue to evolve with Firmware Over The Air (FOTA) after they leave the factory.

Scope 1, 2, and Greenhouse gas emissions
As a global company with a footprint across all regions, we are very aware of how critical it is for every company, organization, and individual to take whatever steps they possibly can to help humanity progress toward reducing greenhouse gas emissions.
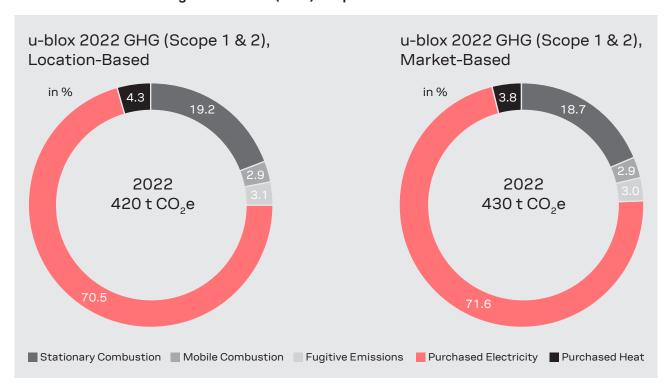
This year, we established a baseline for our greenhouse gas (GHG) emissions. In 2023, we will set our GHG emission reduction targets and outline how we plan to achieve them in the following Sustainability Report.

Our GHG emission data collection process is in its infancy; thus, we are taking steps to improve our worldwide emissions data management system.

u-blox 2022 Greenhouse gas emissions (GHG) Scope 1 and 2
According to the Greenhouse Gas Protocol (GHG) standard we started by identifying emissions associated with operations, categorizing them as direct and indirect emissions, and choosing the scope of accounting and reporting for indirect emissions. We used a materiality approach. We collected data for all sites with +50 employees. As u-blox does not have any production processes causing CO_2 emissions, most

u-blox 2022 Greenhouse gas emissions (GHG) Scope 1 and 2

u-blox 2022 GHG (Scope 1 & 2),
Location-Based

in %

4.3
19.2
2.9
3.1
2022
420 t CO_2e
70.5

u-blox 2022 GHG (Scope 1 & 2),
Market-Based

in %

3.8
18.7
2.9
3.0
2022
430 t CO_2e
71.6

■ Stationary Combustion ■ Mobile Combustion ■ Fugitive Emissions ■ Purchased Electricity ■ Purchased Heat

in t CO_2e/year	2022
Scope 1 & 2 total emissions location-based	420
Scope 1 & 2 total emissions market based	430
Scope 1 & 2 total emissions market based per FTE	0.335
Scope 1 direct emissions	106
Scope 2 energy indirect emissions location based method	314
Scope 2 energy indirect emissions market based method	324

of our emissions are caused indirectly during the production of our purchased energy.

Scope 1: Direct GHG emissions
Direct GHG emissions occur from sources owned or controlled by our organization u-blox. At u-blox, the main emissions sources for this scope were identified with local on site heating and cooling systems, as well as with mobile combustion of owned vehicles. The picture above shows the details.

Scope 2: Energy indirect GHG emissions
Scope 2 accounts for GHG emissions from the generation of purchased electricity and heating consumed on company premises; we used the approach to consider u-blox sites based on their

"materiality," i. e., we collected data for all sites with >= 50 employees.

Data for smaller locations was summarized and extrapolated based on the results of the bigger sites. (refer to the picture).

The location-based calculation refers to emission factors reflecting the energy and production mix with reference to national, sub-national, or regional grid average generic data.

Instead, the market-based approach considers

the emissions from electricty and heat which are caused by the specific utilities supplying u-blox with energy and their respective shares of renewable energies.

Reducing our CO_2 emissions as a fabless manufacturer
As a fabless semiconductor manufacturer, our direct impact on CO_2 emissions is low compared to a traditional semiconductor manufacturer fabricating in-house. However, we understand that much of our environmental footprint comes from indirect CO_2 emissions through the manufacturing of our products by our manufacturing partners.

Flex Ltd., our main module product manufacturer, reported their climate change data on CDP[10] an (A-) rating for 2022, unchanged as compared to the previous year, 2021. Firmly committed to embedding sustainable practices throughout its operations, Flex builds more than 90% of the u-blox module products using 100% renewable energy. In addition, Flex was recognized by Ethisphere, a global leader in defining and advancing the standards of ethical business practices, as one of the 2023 World's Most Ethical Companies, along with 135 other organizations across 19 countries and 46 industries.

Amkor Technology Inc., our main chipset product manufacturer, also reported their climate change data on CDP with a (B) rating for 2022, unchanged as compared to the previous year, 2021.

As for our silicon wafer producers, Taiwan Semiconductor Manufacturing Company, Ltd. (TSMC) received a score of (A-); however, GlobalFoundaries, Inc. had not received a score by the time our Sustainability Report was published, despite submitting their climate change data to CDP for 2022.

u-blox partners with top tier manufacturers in our industry with leading environmental compliance and governance systems in place to minimize our indirect impact on the environment.

Minimizing business travel emissions
In 2022, we developed our Prevent, Minimize, Offset sustainability recommendations and have now launched these in early 2023 across four u-blox sites endeavoring to minimize our business travel emissions.

We asked u-blox employees worldwide to select a carbon removal project from myclimate which extracts CO_2 from the atmosphere and stores it permanently. They chose a reforestation project in Nicaragua.

Removing carbon with myclimate by planting trees in Nicaragua[11]

Project type: Land Use and Forestry
Project location: San Juan de Limay and Somoto, Nicaragua
Project status: In operation, credits available
Annual CO_2 reduction: 624,216 t (across 15 years)

This community-based reforestation initiative is situated upon a critical watershed that feeds into Nicaragua's most important estuary, the Estero Real. This estuary is home to one of the biggest extensions of mangroves and migratory birds in the region and has been recognized by the Ramsar Convention on Wetlands of International Importance. By reforesting this region, the program plays a vital role in regulating the hydrological cycle, providing important water

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[10] the not-for-profit charity that runs the global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts. A CDP score (from D- to A) provides a snapshot of a company's disclosure and environmental performance; in order to receive an A (highest score) or B, companies must demonstrate both awareness of their impacts on the environment, deforestation and water security, and appropriate actions taken to reduce these in line with the 1.5-degree trajectory laid out in the Paris Agreement.

[11] Source: https://www.myclimate.org/information/carbon-offset-projects/detail-carbon-offset-projects/nicaragua-forestry-7186/

and biodiversity benefits both locally and internationally, and improving the quality of life of smallholder farmers.

Environmental training and awareness at u-blox
u-blox's commitment to protecting the environment and our awareness that our operations can have a direct and indirect impact on the environment is clearly communicated in the u-blox Code of Conduct document. Every new employee is required to review the Code of Conduct, and an annual review process is in place for all existing employees.

In 2021, we introduced an e-learning training program available on our corporate knowledge base platform to inform both new and existing employees on the critical aspects of the u-blox Environmental Management System. In 2022, 154 u-blox employees working closely with the material data compliance report topic completed or refreshed their EMS training for the first time.
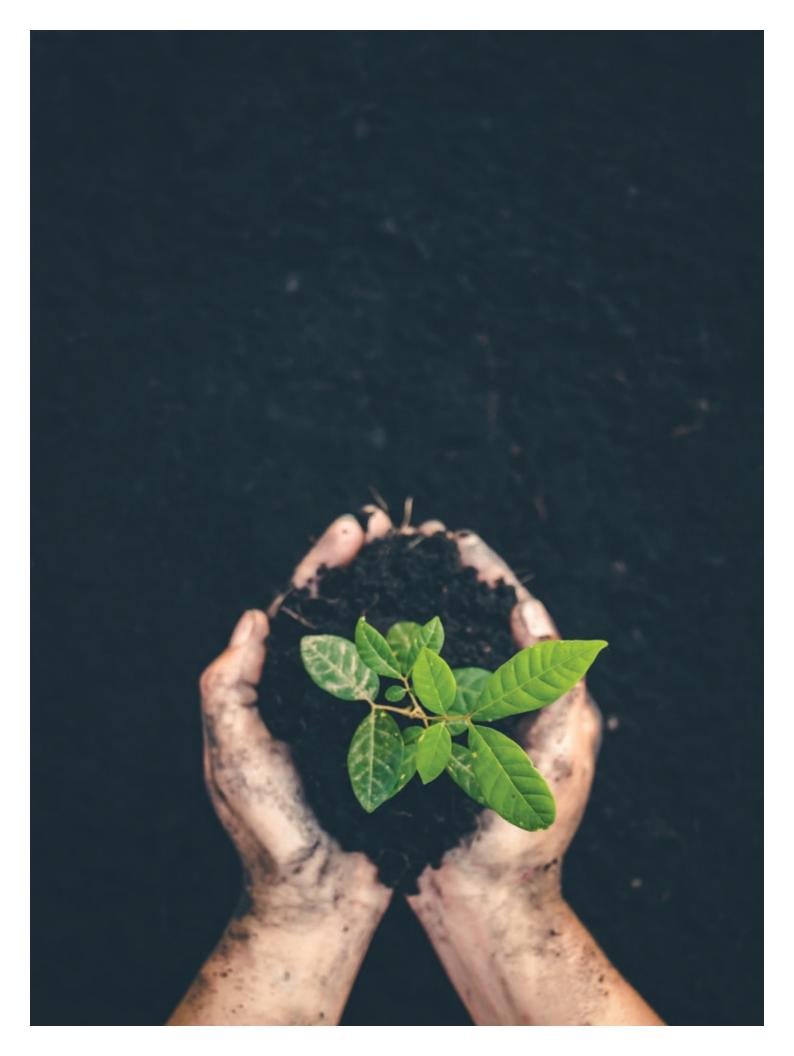
Evaluation of our management approach to environmental responsibility
Each year we renew our commitment to ensuring u-blox products are produced responsibly and work exclusively with suppliers like Flex, Amkor and TSMC, among others, who embrace the environmental compliance and governance of our transparent and binding environmental management system. Through our corporate knowledge base platform, we are also ensuring our employees around the world understand and value our EMS and have the opportunity to learn more.

This year, we calculated the baseline for our greenhouse gas (GHG) emissions. We are currently working on our climate strategy to reduce our CO_2 footprint by 2030 and become climate neutral by 2050. In 2023 we will set our GHG emission reduction targets and outline how we plan to achieve them, disclosing this in our sustainability report next year.

In 2020 we started monitoring our Corporate Social Responsibility performance, fulfilling the self-assessment in Ecovadis, an evidence-based online platform that allows companies to assess a company's ESG activities. Our first rating reached 38%, which we could enhance to 42% in 2021 thanks to some improvements in the sustainable procurement area (e. g., policy on conflict minerals, supplier code of conduct). We focused on some environmental improvement areas and implemented corrective actions in 2022, and in the latest scoring we achieved a 45% rating.

We are aware that although we have made and are still making progress, with continued commitment and innovation, u-blox can further minimize its direct and indirect impact on the environment.

Environmental indicators

Set a baseline for our GHG emissions
In 2022, we calculated the baseline for our greenhouse gas (GHG) emissions (Scope 1 & 2). In 2023, we will set our GHG emission reduction targets and outline how we plan to achieve them in the following Sustainability Report.

New Prevent, Minimize, Offset – Sustainable Policy
We piloted our new Sustainable Policy – Prevent, Minimize, Offset – now rolling out in 2023: We will **prevent** the creation of CO_2 emissions, when possible, **minimize** emissions and drive efficiency when we cannot avoid creating them, and **offset** unavoidable carbon emissions by financially supporting projects which remove CO_2 from our planet.

u-blox employees selected a myclimate reforestation project in Nicaragua
By reforesting this region, the program plays a vital role in regulating the hydrological cycle, providing important water and biodiversity benefits both locally and internationally, and improving the quality of life of smallholder farmers while removing CO_2 from the atmosphere.

91% of our modules produced with 100% renewable energy
Between 2019 and 2022 91% of u-blox's modules production has been made using 100% renewable energy at Flex Ltd. in Althofen, Austria.

We restrict the use of hazardous substances in production
The production of our products meets these legal requirements:
- EU Restriction of Hazardous Substances (ROHS) directive
- The EU Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) regulation
- Linked SCIP database
- Perfluorooctanoic acid (PFOA), and Perfluorooctane sulfonic acid (PFOS) regulationsHalogen-Free content (if applicable)
- Halogen-Free content (if applicable)

15#
Pillar 4:
Our responsible supply chain

Explanation of the material topic and its boundaries

u-blox is committed to producing its products ethically and responsibly. As a fabless semiconductor manufacturer, solid partnerships based on shared values help ensure the u-blox supply chain complies with established international principles around labor, human rights, worker health and safety, the environment, ethics, and management systems.

This sustainability report's responsible supply chain section relates to how u-blox strives to produce its products ethically and responsibly while protecting human and labor rights, health and safety, and the environment.

Our commitment and collaborative approach to a responsible supply chain

The u-blox Supplier Code of Conduct based on the Responsible Business Alliance (RBA) Code of Conduct is the bedrock of our commitment and collaborative approach to our responsible supply chain. All tier 1 suppliers in our supply chain undergo a rigorous and ongoing supplier risk assessment in line with our Supplier Code of Conduct.

Learn more about the u-blox Supplier Code of Conduct

Careful supplier selection

All potential u-blox suppliers undergo a comprehensive multi-stage due diligence process, including a supplier risk assessment, before we buy from them. The first part of this involves the Supplier completing our self-assessment process, including the Supplier's sector, size, geographical location, and the type of work performed. The risk assessment looks extensively at human and labor rights risk and impact. We then review their responses and feedback on any areas that need improvement, perform onsite audits, and take corrective action if necessary.

Continual improvement for u-blox and our partners

We are constantly striving to improve sustainability standards in our own business. This is why we look to learn from our suppliers' best practices.

No child labor, no trafficked labor, and no forced labor

Our policy with regard to human and labor rights is very simple: there should be no abuse of any form taking place during the manufacturing of our products. This means no child labor, no trafficked labor, and no forced labor. Working hours and pay must comply with local laws or the RBA Code of Conduct, whichever is stricter.

Freedom of Association

As stated in the u-blox Supplier Code of Conduct, in conformance with local law, u-blox suppliers shall respect the right of all workers to form and join trade unions of their choosing, to bargain collectively, and to engage in peaceful assembly as well as respect the right of workers to refrain from such activities. Workers and/or their representatives shall be able to openly communicate and share ideas and concerns with management regarding working conditions and management practices without fear of discrimination, reprisal, intimidation, or harassment.

Health and Safety

As outlined in the u-blox Supplier Code of Conduct, u-blox suppliers must recognize that in addition to minimizing the incidence of work-related injury and illness, a safe and healthy work environment enhances the quality of products and services, consistency of production and worker retention, and morale. ublox suppliers should also recognize that ongoing worker input and education are essential to identifying and solving health and safety issues in the workplace. Recognized management systems such as OHSAS 18001 and ILO Guidelines on Occupational Safety and Health were used as references in preparing the Code.

Further information about the u-blox Supplier Code of Conduct as it relates to health and safety can be found here:

https://www.u-blox.com/sites/default/files/Supplier_Code_of_Conduct.pdf

Suppliers who embrace environmental compliance and governance
As part of our Environmental Management System, we develop and publish detailed guidelines for our suppliers. The headline requirements are that all our contract manufacturers must hold ISO 14001 certification. Suppliers of components, materials, and parts are highly recommended to be ISO 14001 certified. Fabless companies should maintain an environmental management system and request that their production partners be ISO 14001 certified.

Much of our environmental footprint comes from manufacturing our products. To minimize this, as a fabless company, we must work closely with our supplier partners to control air emissions, waste management and recycling, and water management. Each of our suppliers has policies and strategies to deal with these very important issues, and u-blox monitors its operations closely. In addition, we cooperate exclusively with top-tier manufacturers in our industry with leading environmental compliance and governance systems in place.

Our commitment and approach to responsible mineral sourcing
Due to a long history of conflict in the Democratic Republic of the Congo (DRC), where mining profits have been used to finance violence and wars in the region, the minerals cassiterite, columbite, tantalite, wolframite (and their derivatives Tin, Tantalum, and Tungsten), and gold have been designated internationally as **conflict minerals.**

We aim to use 100% conflict-free minerals to produce conflict-free products. Our focus is to create products in ways that do not harm individuals, communities, or the environment and that all minerals and other materials are sustainably and responsibly procured. To this extent, u-blox is striving to ethically source minerals from responsible Suppliers to ensure its supply chain does not contribute to any human rights abuses around the globe nor to finance armed groups, directly or indirectly.

u-blox uses the RMI Cobalt Reporting Template (CRT), respectively Conflict Mineral Reporting Template (CMRT), relies upon the Responsible Minerals Assurance Process (RMAP) smelter database and Reasonable Country of Origin Inquiry (RCOI) information and implements a due diligence process in accordance with the five-step framework of the Organization for Economic Cooperation and Development (OECD) Due Diligence Guidance for Responsible Supply

Chains of Minerals from Conflict-Affected and High-Risk Areas.

As a responsible business, it is imperative that our work does not contribute to any conflict, anywhere in the world, through the use of conflict minerals. That is why our supplier selection process addresses these concerns.

u-blox suppliers, including contractors and external manufacturers, are aware of their obligations towards responsible minerals sourcing through our Supplier Code of Conduct. Accordingly, they are requested to have a policy to reasonably assure that the minerals they source are conflict-free. They are also expected to exercise due diligence on the source and chain of custody of these minerals and make their due diligence measures available to u-blox upon request.

Supplier risk assessment and segmentation
We began in 2020 by working with an external ESG consultancy with extensive experience in Responsible Supply Chain Management (RSCM) to analyze our tier1 suppliers in 10+ countries by aligning our pre-risk assessment supplier and sourcing data (company-specific leverage) with their proprietary segmentation approach.

u-blox's **leverage** data (spend, supplier location, duration of relationship) was then combined with their industry-leading proprietary data

engine for risk categories and supply chain geography to identify key supply chain risks.

Extensive desk research on five rather than one onsite audit
Rather than conducting one onsite audit, as was set as an ESG goal in 2022, we decided to ask our ESG consultancy to conduct extensive desk research on five suppliers' approaches to responsible supply chain management as a complementary element to the risk data completed in 2021.

Addressing Supplier risks
Based on the assessment data and additional desk research, three suppliers were identified in early 2022, with some risk. Meanwhile, we have adapted our Supplier Code of Conduct and are currently communicating and collaborating with all of our suppliers to identify and address any gap relating to our Supplier Code of Conduct and the risks identified through the desk research.

90% of our modules and 100% of our chipsets produced in low-risk (based on RBA topics) countries
Today, 90% of our modules and 100% of our chipsets are manufactured in low-risk countries at locations committed to the supplier code of conduct based on the Responsible Business Alliance (RBA) practices. In 2020, we set a goal to gain in-depth insight into our supply chain to improve supplier engagement, learn more about

their practices, prioritize resources, and thereby increase our opportunity to maximize impact.

Evaluation of our management approach to the supply chain
Our approach helps ensure the u-blox supply chain complies with established international principles around human and labor rights, worker health and safety, conflict minerals, the environment, ethics, and management systems.

In 2022, after several years of delving into and verifying the responsible management of our supply chain, we can affirm that 90% of our modules and 100% of our chipsets are manufactured in low risk countries at locations committed to the supplier code of conduct based on the Responsible Business Alliance (RBA) practices. Further, we feel confident that our suppliers are working alongside us to make sure our products do not include conflict minerals and do not end up in weapons or weapon systems.

As for the future, we will continue on our journey to help shape our supply chain and IoT responsibly by collaborating with and evaluating all of our suppliers to identify and address any gaps relating to our Supplier Code of Conduct and the risks identified through the desk research.

Supply chain indicators

No child labor, no trafficked labor, and no forced labor
As a signatory of the UN Global Compact, u-blox fully supports and respects the protection of internationally proclaimed human rights; and works diligently to ensure we are not complicit in human rights abuses.

Our production partners comply with RBA practices
90% of our modules and 100% of our chipsets are manufactured in low risk countries at locations committed to RBA practices.

In 2022 we updated our Supplier Code of Conduct
Our updated Supplier Code of Conduct, in line with Responsible Business Alliance (RBA) best practices and aligned with the guiding principles of the UN Global Compact, is being distributed to our supplier partners around the world.

UN Global Compact principles on labor 3, 4, 5, and 6
As a signatory of the UN Global Compact, u-blox fully upholds the freedom of association and the effective recognition of the right to collective bargaining; the elimination of all forms of forced and compulsory labor; the effective abolition of child labor; and the elimination of discrimination in respect of employment and occupation.

u-blox adheres to responsible mineral sourcing
u-blox uses the RMI Cobalt Reporting Template (CRT), respectively Conflict Mineral Reporting Template (CMRT), relies upon the Responsible Minerals Assurance Process (RMAP) smelter database and Reasonable Country of Origin Inquiry (RCOI) information and implements a due diligence process in accordance with the five-step framework of the Organization for Economic Cooperation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

16#
Pillar 5:
Our communities

"We have a footprint in communities all around the world – home to our family of employees, partners, and customers. These communities educate and nurture future generations, provide our workforce and supply the raw materials that make up our products."

Explanation of the material topic and its boundaries

We believe in building sustainable communities around the world. And u-blox contributes in various ways: we donate our technology, make financial contributions, encourage and incentivize employees to offer their expertise, and work with educational establishments to support learning.

A key focus of our work with communities is to inspire the next generation around science, technology, engineering, and mathematics (STEM) and ultimately encourage more people to pursue careers in this area.

We have a footprint in communities all around the world. They educate and nurture future generations and provide our workforce. They supply the raw materials that make up our products. And they are home to our family of employees, partners, and customers.

We could not do business without the support of these communities in all corners of the world. Therefore, it is so important that we support them in return. Our people's expertise, coupled with our technologies' capabilities, means we can make a meaningful difference to communities in ways few other organizations can.

Our approach to community

The u-blox Community Strategy is delivered through four key programs that we combine wherever appropriate to create maximum benefit:

- Corporate giving
- Product donation
- Employee volunteering
- Education

uGive employee volunteering

Running so others can breathe

Many u-blox employees volunteer their time to charitable organizations, and we like to encourage and reward this through our uGive program. u-blox pays the charitable organization 20 CHF for each hour a u-blox employee volunteers up to a maximum of 40 hours or 800 CHF. uGive is a little extra way of giving back to the communities we work in and the causes close to our employees' hearts.

We expanded our uGive program in 2022 to give our employees more flexibility for community engagement. uGive funding was opened to sponsor employees who wish to participate in a worthwhile cause, like Martin Leach, u-blox Senior Director, Head of Product Center Cellular, and uGive volunteer. Martin ran the London Marathon to raise money for The Asthma and Lung charity in the UK. The charity has invested over £100 million in research funding for lung conditions, including asthma, COPD, bronchiectasis, mesothelioma, interstitial lung disease, and Covid-19.

From couch potato to marathon runner
When he joined u-blox over eight years ago, Martin was a self-proclaimed couch potato. Having been active in sports in school, he stopped exercising when he went to university.

By his mid-forties, he realized he needed to exercise for health reasons. So Martin joined a running group at u-blox in Cambridge, where he is based, and began running after work and on the weekends. Very soon, he had the running bug, and his health improved. Within a month or so, he could run a 5 km and began Park Running, but the thought of running a 10 km was still a dream.

Martin started to get up to 10 km but still thought he would never be able to enter a half

"On the day I took off like a rocket, and I was absolutely flying, you get dragged along by the crowd, everyone is there, the adrenaline is flowing. I felt so good when I got halfway, and Tower Bridge was amazing!" explained Martin.

2022 London Marathon Highlights:

- First ever marathon run
- Fourth highest charity fundraiser for the 2022 London Marathon
- Raised over £3,700 for The Asthma and Lung Charity
- Over £2,000 from u-blox and its employees
- Completed in 4 hours 13 minutes
- 16-week training program
- Ran 750km and had four weeks off for an injury
- Trained all over the world: Cambridge, UK; Sgonico, Italy; Thalwil, Switzerland; Washington, DC, USA; New York City, USA; and Barbados
- Trained with over 15 different people (the majority from u-blox), e. g., Neil White (who also ran the marathon in 3 hours and 05 minutes!), Andrew Evans, Damian, Stephane, Anne, Graham, Giri, Chris, Drazen, and Venki

marathon. Then one year later, he ran a half marathon and thought he could never turn around and do that again. However, in the back of his mind, there was a persistent question: wouldn't that be something if I could run a marathon?

Notoriously difficult
Even with over 40,000 runners, the London Marathon – the largest annual fundraising event on the planet, with runners having raised over **£1 billion** for good causes since the race began in 1981 – is notoriously difficult to get in. However, Martin had heard that if you support a charity, your application had a better chance of being accepted.

Much of Martin's inspiration came from his colleague, Andrew Evans, who works at u-blox in Cambourne and was diagnosed with stage four lung cancer a few years ago. In his application Martin explained how Andrew has had rounds and rounds of chemotherapy and is still running while battling lung cancer. Martin also had asthma as a child, so he decided to support the Asthma and Lung Society charity in the UK if he were accepted to run the London Marathon to help them fund their lung research.

When his acceptance letter arrived, it was just 16 weeks before the London Marathon and the minimum training time required to prepare. Martin finished in 4 hours and 13 minutes – an incredible time.

Do it together in 2023

Zsu Pullar, Department Assistant at u-blox in Thalwil, Switzerland, inspired a group of her colleagues, who also work for u-blox in Thalwil, to walk in the annual **Do it together** 2022 Pink Ribbon Charity Walk fundraiser.

Over 5,000 people joined to form a 4 km long living pink ribbon symbol as they walked or ran around the Letzigrund stadium and the surrounding Zurich neighborhood.

The proceeds raised by the walk were donated to Krebsliga Zürich to raise money to help make healthy women aware of the importance of the early detection of breast cancer.

"We hope more ubloxians will be able to join us in 2023," says Zsu.

charity: water

Each year u-blox contributes to helping build sustainable communities through product donations to IoT innovators around the globe – supporting them as they leverage the power of IoT to help others. In 2022 a new model developed by charity: water – the India Mark II hand pump – was rolled out across Uganda, Sierra Leone, Papua New Guinea, and Nigeria utilizing SARA-U201 cellular modules and MAX-8C GNSS modules donated by u-blox.

u-blox and charity: water continue to leverage the power of IoT to bring clean drinking water to the world's most vulnerable. In 2023, charity: water will be field-testing a new version of the Afridev sensor and continuing to pilot sensors for piped systems in Nepal and beyond.

Keeping lifesaving water flowing with chip to cloud

charity: water created a new path for sustainability in the water sector when in 2012, they invented the first-ever remote sensor to monitor rural water points to ensure an uninterrupted supply of water and put the power of leading-edge IoT and cloud computing technology to work for the world's poorest people.

charity: water's most important objective for 2022 was to field test the first generation of India Mark II handpump sensors in Uganda and use that evaluation to guide[13] the production of the next round of manufacturing and R&D. At the close of 2022, 339 India Mark II sensors were being used by 20 different organizations in Uganda, Sierra Leone, Papua New Guinea, and

Nigeria. They estimate these sensors are helping keep clean water flowing for 130,854 people[14]. 90% of devices installed are transmitting data successfully from their location and being used by local mechanics to respond to breakdowns.

771 million people

With 771 million people lacking basic access to clean and safe drinking water, the sustainable water sector is watching closely to see if this pilot project can deliver sustainable gains in terms of safe and clean water access.

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[13] The two most common types of hand pumps in the developing world are the India Mark II and the Afridev. Countries generally select one or the other as their national standard.

[14] Based on the average number of daily users recorded at the 1,554 wells with hand pumps that charity: water has funded in Uganda since 2019, the median number of people who use a hand pump is 386.

"We're building a lifesaving application and need reliable technology to communicate with the cloud. u-blox modules have performed amazingly well and are a critical part of our commitment to keeping clean water flowing for the world's most vulnerable communities. We're so grateful for u-blox's support of our innovation and mission," said Christoph Gorder, Chief Global Water Officer, charity: water.

The success of this pilot phase has allowed charity: water to begin the production process for an additional 1500 units, which they estimate will help keep clean water flowing for 579,000 people living in remote parts of the world. u-blox has continued to support this initiative by donating the additional modules needed for this scaled-up production.

Sensors are critical to maintaining functionality
The data from the India Mark II sensors have helped the NGOs implementing them to maintain high levels of functionality at their water points and to support existing maintenance programs.

One such program in Uganda, Everflow, an enterprise arm of the International Lifeline Fund, has sensors installed on 32 of their India Mark II handpumps in Northern Uganda. Isaac, one of their WASH (WAter, Sanitation, and Hygiene) Engineers, shared this feedback with the charity: water team on a recent visit to Uganda:

https://www.charitywater.org/

"Having sensors on the water points allows us to quickly reach out to the community members when we see issues arise, rather than waiting for them to identify a problem and report it, which is often not until water is no longer available at the site. This has built stronger trust between the community and our maintenance program and decreased our response, repair times, and costs, keeping water flowing for our communities and eliminating the need to return to dirty water sources."

No Isolation is bringing people together

u-blox and No Isolation began working together eight years ago on the robotic avatar AV1. Designed to enable children who cannot leave home because of long-term illness to join school lessons, parties, and other activities, AV1 streams audio and video in real-time so that the children can interact and reduce their sense of isolation. No Isolation recently launched their new product "Komp" designed to give older people more independence and help them remain a part of their network by having frequent contact with their loved ones.

'Warm technology' and knowledge bring people together
Warm technology is defined as technology that seeks to accommodate human behavior and meet emotional needs rather than replace them. No Isolation design, manufacture, and market user-led devices that help excluded groups reconnect to society, such as older people and children with long-term illnesses or school absenteeism.

On a growth path, No Isolation teams based in Oslo, London, and Munich are out to reduce social isolation and loneliness while simultaneously delivering on several United Nations Sustainable Development Goals.

"2022 was an outstanding year in terms of reach and impact with 2,310 AV1 warm technology education robots embedded in schools, hospitals, and homes across 12 countries reducing social isolation and school absenteeism for approximately 5,000 students," **explains Anna Holm Heide, Chief Communications Officer, No Isolation.**

UN SDG 3 Good Health and Well-Being

By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well being.

No Isolation believes that loneliness and social isolation are health hazards. Good mental health and quality of life ensure that seniors can live at home longer, fewer people will need assistance from health services, and people will generally live longer. No Isolation products are developed and designed to increase well-being and quality of life.

UN SDG 4 Quality Education

By 2030, ensure that all girls and boys complete free, equitable, and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes.

Through their work with school absence, No Isolation has gained valuable insight into the challenges of inclusion and school attendance. They believe society needs a better overview of the causes of absence to track how many children are deprived of a good education. Access to education through digital solutions, such as AV1, is vital to providing all children with a good education.

UN SDG 10 Reduced Inequalities

By 2030, empower and promote the social, economic, and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

Children and young adults with a high level of school absence can be unsuccessful in completing their education and are also at risk of being excluded from social, political, and economic development. By offering solutions like AV1 to children and young adults with long-term absences, these students will continue to be included in their communities. In addition, with products such as Komp, older people can be independent and remain a part of their network by having frequent contact with their loved ones.

https://www.noisolation.com/

Humanitarian aid for Ukraine, Pakistan, Turkey, and Syria

u-blox maintains an annual Humanitarian Aid program to help those struck by unexpected events. In 2022, u-blox made corporate donations to support the International Red Cross in Pakistan and the Swiss Red Cross in Ukraine.

Humanitarian aid for Ukraine
In the districts of Ivano-Frankivsk and Ternopil in the west of Ukraine, the Swiss Red Cross supports its sister organization in providing emergency aid. The focus is on the accommodation and medical care of people who are fleeing within the country.

In Switzerland, committed to a pragmatic, unbureaucratic reception of refugees, the Swiss Red Cross helps Ukrainian refugees with various supportive services. For example, a people tracing service supports those in Switzerland who are missing relatives in Ukraine.

With the situation in Ukraine evolving quickly, the Swiss Red Cross assumes the people in Ukraine will continue to depend on humanitarian aid for some time. Therefore, they plan to remain involved until at least 2025 and are staggering the use of donations, hoping to be there for the affected people for as long as needed.

"With the situation in Ukraine evolving quickly, the Swiss Red Cross assumes the people in Ukraine will continue to depend on humanitarian aid for some time."

u-blox employee led initiatives around the world
u-blox employees in Thalwil, Switzerland, collected donated goods, and with a rented van, a u-blox colleague drove to Przemysl, Poland, near the Ukrainian border to deliver them to local humanitarian organizations on the ground. An employee matching program to raise funds for humanitarian aid for Ukraine was initiated at

u-blox in San Diego, California, USA, and in Reston, Virginia, USA, u-blox employees managed to collect 8,000 USD to support those who needed immediate help.

Responding to the flooding in Pakistan
Over 33 million people were affected by the flooding in 2022 in Pakistan. Over a million houses were damaged and made uninhabitable by the floods, and hospitals and schools were destroyed. Over 3,000 km of roads and 149 bridges were damaged.

Moreover, the livelihoods of hundreds of thousands of people were destroyed. The affected families required shelter, food, and basic necessities. They also urgently needed safe water, access to sanitary facilities, hygiene, and health care.

The International Federation of Red Cross and Red Crescent Societies initially earmarked CHF 25 million enabling the Pakistan Red Crescent Society to help around 324,000 people. Priority was given to particularly vulnerable people or families who lost their entire livelihood.

Search and rescue support for Turkey and Syria
u-blox is supporting the Swiss Red Cross after the recent earthquakes. They support search and rescue operations with REDOG, The Swiss Disaster Dog Association, and provide first aid and emergency medical assistance with their affiliates, the Turkish and Syrian Red Crescent organizations.

https://www.redcross.ch/en
https://www.redog.ch/

Savannah Education Trust in Ghana

In 2013, Howard Hickman, co-founder of Savannah Education Trust and Team Coach\Scrum Master at u-blox, reached out when he knew they were looking for a Corporate Giving project in Africa focused on education.

u-blox funded the construction of the new primary school in Mettoh. Other donors funded the construction of the nursery and the junior high schools. Ongoing support for the entire Mettoh site, including maintenance and providing food for the, to date, 284 school children enrolled there, is funded by u-blox each year.

Savannah Education Trust is a charity registered with the UK government working with the government in Ghana to build schools and provide education to the villages in the northern part of the country. Since their founding, its model has remained the same: build schools, feed the pupils, give them necessary resources, and train the teachers. Savannah Education Trust aims to provide pupils with basic education so they can take their national exams. This eleven-year education has a transformative effect, and the lasting impact is huge.

Ten schools have been built in the last seventeen years

This remote area of Ghana is populated by subsistence farmers making a living from what they can grow or raise to sustain themselves on small family-owned plots of land. Only two other schools have been built in the district in the last seventeen years besides the ten schools built by Savannah Education Trust. So when they find a village with no school, all the children are in the fields digging peanuts and shelling them for sustenance.

The schools are built through a self-help program. They are constructed by the local community using local materials. The whole village is

"Even though a village school and infrastructure exist, if the school children were not fed, they would be in the fields working or finding food for themselves," explains co-founder Howard Hickman.

in no doubt that the school belongs to them. A borehole, funded by Savannah Education Trust, provides clean water for the school and is also available for the villagers.

Each school has a separate nursery as well as the main school building. This allows older children to concentrate on their studies without having to care for their younger siblings.

The benefits of building a school in a village reach far beyond primary and secondary education. For example, villagers have a place to gather, communicate and carry out helpful community activities such as vaccinations.

New teacher training and conference center
Based in the market town of Lawra, Savannah's new teacher training and conference center are now complete. Construction occurred throughout the pandemic and is the most complex building yet to be constructed by Savannah.

The new facility provides a center for the ongoing support and training of Savannah's teachers and an office for staff. As it is not easy being a teacher in a remote village school, the center will assist them in all elements of their work, providing them with resources that would be impossible to access anywhere else in the area. Alongside the physical infrastructure, a School Improvement Officer has been appointed and is in active conversation with another NGO about various imaginative ways to keep improving the quality of education at the schools.

https://www.savannaheducationtrust.org/

ADES award winning multifaceted work in Madagascar

A long-term u-blox sustainability partner, ADES (Association for the Development of Solar Energy) in Madagascar produces and sells energy-efficient cooking stoves, reduces deforestation, mentors its stove resellers to become social entrepreneurs, and educates primary school children across Madagascar about how to care for their environment. u blox donated vehicle trackers to help ADES track their vehicles and contributes each year financially to ADES projects through the u-blox corporate giving program.

ADES awarded .ORG Organization of the Year
Every year, the Public Interest Registry (PIR) presents the .ORG Impact Awards to organizations around the world that stand out and make a significant contribution and positive impact on humanity. In 2021, 633 organizations were nominated for the finals in seven categories. As a finalist in the category **Overcoming Climate Change,** ADES was automatically in the running for the main prize. In addition to winning that category, ADES went on to win the top global award and officially became .ORG Organization of the Year in 2021. PIR cited ADES's work to protect the climate, biodiversity, and health of the population in Madagascar while enabling a path out of poverty as benchmarks for positive human impact.

Changing the deforestation trajectory
Madagascar has lost 90% of its forests and continues to lose half a million trees per year with the associated loss of biodiversity, climate change, and food scarcity. It is also one of the poorest countries and the fourth largest island in the world. Most of the massive loss of forests is due to poor agricultural practices, and 90% of the population is cooking on open wood or charcoal fires.

ADES provides funding to six Malagasy NGOs and community groups to help restore barren lands. Within these community groups, ADES works with village leaders to determine a plan to plant a healthy mix of native trees and trees that produce nutrition and value for the community.

3.496.000
compensated tonnes of CO_2

108.000
Schoolchildren and teachers reached
with educational programmes since 2011

741.000
Trees planted

Protecting biodiversity
through reduced deforestation

467.000
Solar cookers and energy efficient
cookstoves produced and sold

Reduced health risks compared
to cooking on an open fire

−50 % Charcoal
−70 % Wood

Over 247
jobs created

Surplus harvests can be sold at the market, combining poverty reduction with environmental restoration. Fast growing trees provide alternative construction materials and solid fuels that help to protect native forests. ADES planted another 192,000 trees in 2022, a total of 77 hectares (ha).

Severe drought in Madagascar's southern region has brought food scarcity and hunger. Within the communities where ADES has ongoing reforestation projects, the villagers sustain themselves by growing food in the shade provided by the replanted trees and vegetation.

ADES and myclimate to reduce 3.1 million+ tonnes of CO_2

ADES and myclimate, a leading provider of CO_2 offsetting and carbon offsetting consulting, have long been partners in their efforts to reduce CO_2. They are now expanding their long-standing and successful cooperation to jointly reduce more than 3.195 million tonnes of CO_2.

Both organizations believe effective climate protection always begins with avoiding emissions and that remaining emissions should be offset as an immediate measure with effective climate protection projects.

The partnership between ADES and myclimate is a prime example of sustainable climate

"The proceeds from the voluntary CO$_2$ compensations from companies and private individuals are enormously important for us to be able to subsidize the energy saving cookers. Each cooker reduces the need for wood or coal by 50 percent, which helps to preserve the precious natural environment," explains Herbert Blaser, President of ADES and a Senior Director at u-blox.

protection with a win-win situation for people and nature. ADES gets involved on the ground, while myclimate wins partners for climate protection and supports ADES in calculating and proving their projects' impact according to the Gold Standard's specifications[15].

Opening of the new metal manufacturing facility in Antananarivo
ADES cookstoves enable Malagasy households to make substantial financial savings, improve their health by eliminating smoke emissions and counteract the progressive loss of forests in Madagascar, increasing market demand.

In June 2022, another milestone on the way to sustainable growth was achieved when ADES officially opened the new metal manufacturing facility in Antananarivo. The Swiss Ambassador to Madagascar, Chasper Sarott, praised the work of ADES and the positive cooperation during his four years there. With the opening of the new facility, ADES solves production bottlenecks and massively increases its production capacity. Moreover, with growth in 2021 much more substantial than anticipated, the new facility comes at the right time, and transport routes, especially for the north of the island, can be significantly shortened.

New 'Protecting the Environment' teacher training
In 2021, the Department of Education in Madagascar authorized ADES to offer its Protecting the Environment curriculum across the entire primary school system to students aged 8 and 9. As of 2022, they have provided environmental education to over 108,000 primary school children.

In addition to direct teaching, ADES aims to enable teachers to integrate environmental issues into their lessons. Hence, they become multipliers reaching far more children in the long term than if ADES animators were to visit schools directly.

An ADES teachers training took place in Ejeda in August 2022. This year, the focus was on the action 'One child, one tree' with the goal of each child planting a tree as part of the environmental lessons and the participating schools transforming into green areas.

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[15] Gold Standard was established in 2003 by WWF and other international Non-Governmental Organizations (NGOs) to ensure projects that reduced carbon emissions featured the highest levels of environmental integrity and also contributed to sustainable development. https://www.goldstandard.org/our-story/gold-standard-global-goals

Each ADES cookstove:

- reduces fuel consumption by 50 to 70%
- reduces CO_2 emissions by approximately 3 tonnes annually
- saves a minimum of 7.5 KG of wood or 2.5 KG charcoal per day per family
- saves on average 50% on energy costs per day per family
- saves 500 hours per year on wood collection per family

On average, in Madagascar, one teacher looks after 50 children, and the classes sometimes comprise up to 200 children. Specially trained ADES animators accompany the teachers and show them how to teach environmental lessons. The teachers report positively on their experiences with the ecological studies as the children are very interested, as are their parents.

ADES teacher training is proving to be successful in promoting the integration of environmental education in schools, with the teachers becoming long term champions.

Roll out of gender plan
Women make up 80% of ADES cookstove resellers, so a gender plan was established in 2021 and rolled out over 2022. In addition to training women on how to use the cookstoves, they are mentored to build a business plan to generate income by selling them.

With equality and no discrimination as central goals of the organization, ADES staff members are trained in gender issues to put themselves in the shoes of the other gender. In addition, a contact person for gender issues has been appointed within ADES, and there is now a regular exchange on the topic with external and public partners.

The ADES Code of Conduct also sets out behavior rules, including gender-specific points, to avoid stereotypical role models. Another long-term goal is to increase the proportion of women in ADES leadership positions. Through our culture and ADES Mobile, the population is sensitized to gender and equality issues.

New leadership in 2022
Luc Estapé became the new Executive Director at ADES in August 2022, replacing Rita Bachmann after four highly successful years.

Before joining ADES, the father of two worked for AFS Intercultural Programs Switzerland as Executive Director for six years. Enthusiastic about the ADES project, Luc aims to add a new chapter to Madagascar's success story for people and nature.

https://ades-solaire.org/en/

uCan

STEM Education

uCan at u-blox

uCan – is a new program at u-blox encompassing our STEM (science, technology, engineering, and mathematics) education activities worldwide, one of our main areas of focus within our sustainability strategy. Engineers are critical to our future success – and not enough are coming through our education systems, especially female engineers.

We partner with local and national organizations dedicated to STEM education, open our company's doors each year to welcome young girls and boys into the world of IoT, and we make product and technology support donations to students' STEM projects.

Leading-edge technology exhibit and workshop series in Italy
Immaginario Scientifico is an interactive and experimental science museum located in Italy's

Friuli Venezia Giulia region, not far from u-blox's Sgonico facility. An interactive museum firmly committed to the sharing and participation of science with the public, Immaginario Scientifico also provides high educational content for school groups.

As part of their recent expansion, u-blox was invited to help create an exhibit dedicated to leading-edge technologies in telecommunications and co-develop content for an ongoing workshop series to accompany it.

https://www.immaginarioscientifico.it/

Sparking the imagination and talent of the future
We support two Swiss based STEM organizations: **Engineers Shape Our Future** and **Schweizer Jugend Forscht.** These organizations provide a range of exciting workshops for

students, giving them hands-on engineering experience to stimulate their interest in engineering and technology.

Schweizer Jugend Forscht also provides a STEM study week for students aged 10–13 in collaboration with a Swiss university. They also hold a national STEM contest each year targeting students around the age of 18 whom an expert coaches for several months.

https://sjf.ch/
https://ingch.ch/en/

Swiss National Future Day
We take part in the annual Swiss National Future Day. Held nationwide on November 10, 2022, we opened our doors to girls and boys, showing them what a career as an engineer could involve through various hands-on activities.

u-blox CEO joins >>venture>> advisory board
>>venture>> is the leading competition for up-and-coming entrepreneurs in Switzerland. Founded in 1997, the competition empowers young innovators to develop their business ideas into start-up companies. A public-private joint initiative of the Swiss Federal Institute of Technology Zürich, McKinsey & Company, Knecht Holding, Innosuisse, and the Swiss Federal Institute of Technology Lausanne, >>venture>> has been led by its advisory board since 2013. u-blox CEO Stephan Zizala has been recently appointed to the >>venture>> advisory board, where he will have the opportunity to mentor and empower young innovators.

Ulrich Looser (member of the Board of Directors) has co-founded <<Venture>> 1997/1998 and is Chairman of the Foundation Board of <<Venture>> since 2020/2021.

https://www.venture.ch/

Reaching future technologists early

The IngCH Engineers Shape our Future Association was founded over 30 years ago to promote young talent in Switzerland's MINT (Mathematics, IT, natural science, and technology) sectors. u-blox is one of 27 member companies that help fund the association's activities annually.

With approximately 60 **Technology and IT Weeks, Action Days, and Girls Technology Days** held annually as part of the talent development program, IngCH is now one of the most prominent organizations in Switzerland involved in this area. They remain focused on fulfilling their founding mandate to address the lack of technical experts for Switzerland from Switzerland. Their projects are designed to inform, inspire, and help tackle the shortage of skilled workers.

Age is critical
IngCH finds that most students have little knowledge about the range of technical roles between the classical subjects of Chemistry, Physics, and Biology. However, they believe it is

"Our job is to show young people what they can do and demonstrate the possibilities," explains Lea Hasler, Managing Director, IngCH. "Often they are put off by technical topics, and mathematics and we want to show them there are so many cool paths within tech."

worth trying to evoke change and to do this, they must reach future engineers and technologists at an early age.

So over 40 weeks per year, 17-year-olds, who are just one year away from graduating, are invited to attend a technology or IT project week at their

"We can say that when the girls participate in a technical day approximately 60% say in an immediate survey after the day, they could now imagine doing an apprenticeship in technology with approximately 10% later applying," Lea Hasler, IngCH.

school. Additional Girls Technology Days target female students, specifically giving them the opportunity to spend a day in a company so they can learn about technical apprenticeships. The companies then provide the program content for the day.

Once a year, IngCH also organizes an exchange with approximately 120 educators and representatives from business, science, and politics in association with Switzerland's two Federal Technology Universities (ETH Zurich and EPFL) to dialogue about what they expect from future technologists.

What are the trends?
IngCH says it is often challenging to measure the outcome of their ongoing activities. At the Technical Weeks with 17 year olds more than half say their image of STEM has improved, or now they know what it is because before, they did not. About 30% of participants report back that they are now considering pursuing a university degree program in a STEM field.

IngCH findings during follow up evaluations two to three years later show that approximately 10% chose to study within a technical field due to the IngCH Technical Week.

And with the Girls Technical Days program, 60% of participants responded at the end of the day that they would consider an apprenticeship in tech, with approximately 10% later applying.

A call to action for companies, teachers, parents, and other influencers
IngCH thinks there is still much work to do to increase awareness about technology's range of career options. Employers, teachers, parents, and other influencers have a critical role in changing existing stereotypes.

For example, IngCH offers a training program for career advisors to help increase their awareness of the breadth and depth of possibilities for future technologists.

https://ingch.ch/en/

Evaluation of our management approach to community

- In the last 11 years, u-blox has saved 67,000 tonnes of CO_2 through ADES projects and provided environmental education to 100,000 school children.

- ADES also planted another 192,000 trees in 2022, a total of 77 hectares (ha).

- u-blox and charity: water continued with their successful partnership in 2022 to leverage the power of IoT to reliably bring clean drinking water to 130,854 people. The success of the 2021 pilot phase has allowed charity: water to begin the production process for an additional 1500 units, which they estimate will help keep clean water flowing for 579,000 people living in remote parts of the world.

- In 2022, as with each year since u-blox funded the construction of the Mettoh school in Ghana in 2013, 284 school children were fed and educated through u-blox funding.

- In partnership with No Isolation 2,310 AV1 technology robots embedded in schools, hospitals, and homes across 12 countries reduced social isolation and school absenteeism for approximately 5,000 students in 2022.

- We expanded our uGive program in 2022 to give our employees more flexibility for community engagement. uGive funding was opened to sponsor employees who wish to participate in a worthwhile cause.

- In partnership with three STEM organizations, u-blox inspires the next generation of innovators and provides them with hands on opportunities to experience IoT.

Community indicators

AV1 helped 5,000 students in 12 countries attend school
2,310 AV1 warm technology robots embedded in schools, hospitals, and homes across 12 countries, reduced social isolation and school absenteeism for approximately 5,000 students in 2022.

An additional 579,000 people will now access clean water
u-blox and charity: water continued with their successful partnership in 2022 to leverage the power of IoT to reliably bring clean drinking water to 130,854 people. The success of the 2021 pilot phase has allowed charity: water to begin the production process for an additional 1500 units, which they estimate will help keep clean water flowing for 579,000 people living in remote parts of the world.

u-blox saved 67,000 tonnes of CO_2 through ADES projects
In the last eleven years, u-blox has saved 67,000 tonnes of CO_2 through ADES projects and contributed to ADES's ability to provide environmental education to over 100,000 primary school children in Madagascar. ADES also planted another 192,000 trees in 2022, a total of 77 hectares (ha).

uGive grassroots employee community engagement expanded
We expanded our uGive program to give our employees more flexibility for community engagement. uGive funding was opened to sponsor employees who wish to participate in a worthwhile cause.

284 school children were fed and educated
In 2022, as with each year since u-blox funded the construction of the Mettoh school in Ghana in 2013, 284 school children were fed and educated through u-blox funding.

u-blox partnered with three STEM organizations to inspire
In partnership with three STEM organizations, u-blox inspires the next generation of innovators and provides them with hands on opportunities to experience IoT.