



Impact Report

2023



2023

#goodthingsarecoming



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FOREWORD

#goodthingsarecoming

LUMO Labs originates from the awareness that rapid urbanization, climate change, shifting demographics, and a sequence of technological breakthroughs necessitate a profound redesign of the governance, operations, and infrastructure of our cities, healthcare, and education systems.

Emerging technologies, particularly Deep Tech AI, master complexity at unprecedented speed and scale. These technologies hold the key to disrupting widespread degenerative habits and systems by reaching large numbers of people through sustainable—or rather regenerative—propositions. These solutions facilitate and encourage both professionals and individuals to take better care of themselves and their surroundings.

As impact-driven investors, we are committed to maximizing our impact by selecting portfolio companies that contribute to three United Nations Sustainable Development Goals (UN SDGs) that align with our technology focus and network: good health and well-being (SDG 3), quality education (SDG 4), and sustainable cities and

communities (SDG 11). This impact is closely intertwined with advancements in Artificial Intelligence/Data, Blockchain, Robotics/Drones, the Internet of Things, and Extended Realities, which are poised to permeate society even more profoundly in the coming years.

This is our third Impact Report, and as this is an emerging field, we are continuously learning and evolving our approach. We hope you find this report insightful and inspiring, and we encourage you to reach out with remarks and questions to collaborate and make an impact together.

Founding Partners and Team - LUMO Labs

HIGHLIGHTS

In 2023, our impact-driven Fund experienced a transformative year, marked by significant growth and accomplishments. Our commitment to impactful investments, portfolio success, robust impact governance and ecosystem engagement has yielded impressive results.

Here are the highlights of our journey this past year.

Impactful investments We are thrilled to announce the expansion of our portfolio with five new investments: Protyon, Cordys Analytics, Tap Electric, HULO.ai, and Whispp. These additions reflect our dedication to supporting innovative solutions that drive positive change.

Portfolio Success Our investments have yielded tangible benefits and are showing traction. Autoscriber successfully passed ISO 27001 and NEN 7510 audits, while Aiosyn and Healthplus.ai obtained QMS certification ISO 13485. Chunkx was honoured with the “Most Promising Enterprise Startup” award at Viva Technology,

and Healthplus.ai was named one of the winners of the EIT Digital Challenge Finals 2023. Additionally, over 30% of our portfolio companies secured follow-on funding at higher valuations, and our current portfolio employs more than 200 impact-driven individuals.

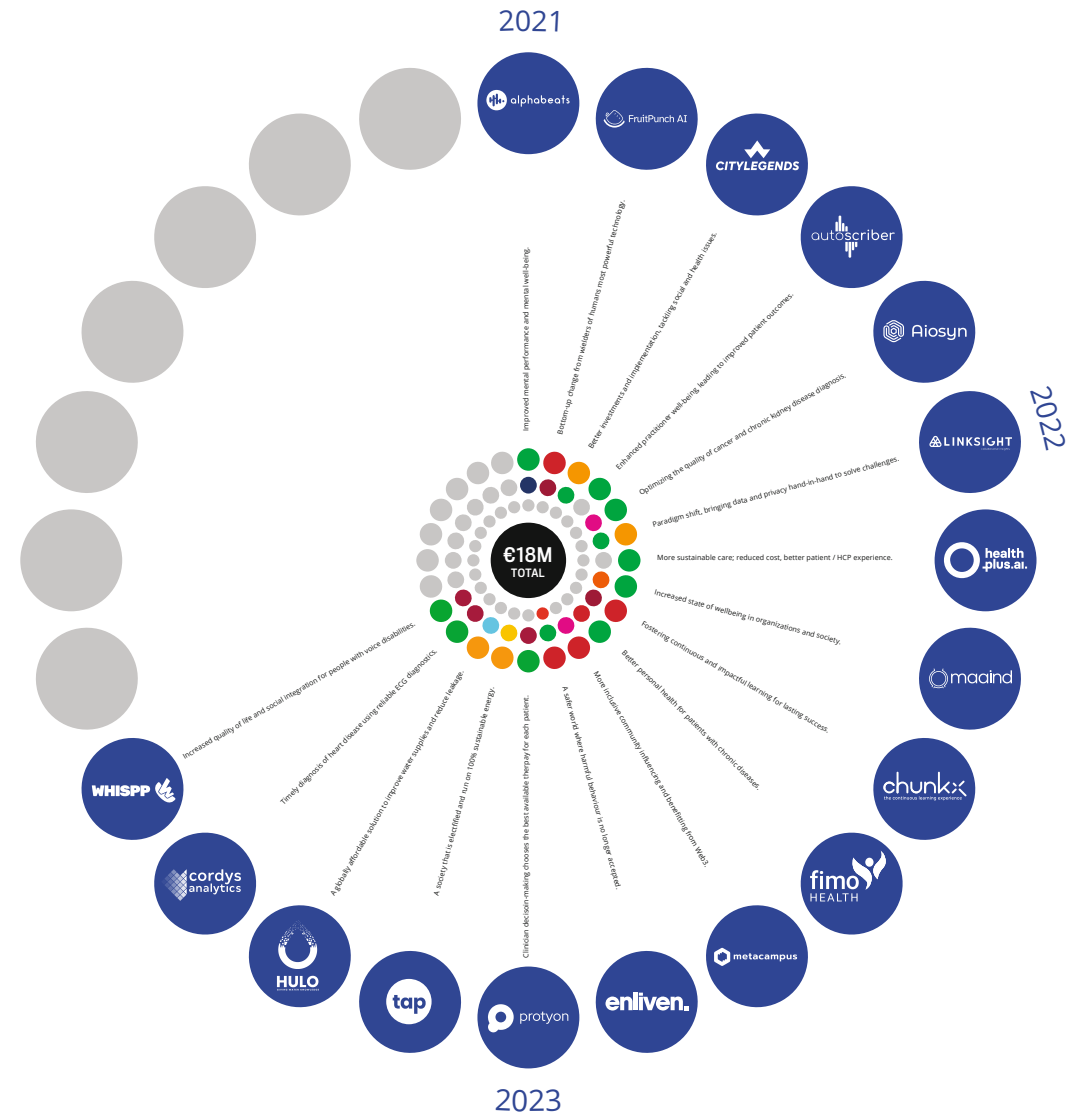
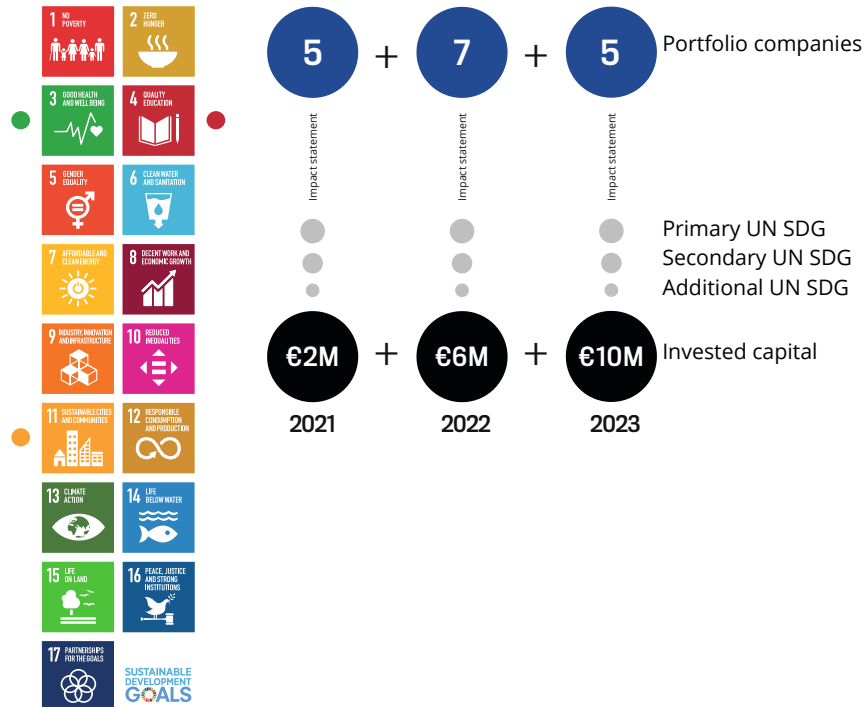
Impact Governance We are strengthening our engagement as an impact-driven Fund. We are happy to announce that we are now a signatory of the United Nations Principles on Responsible Investment (UN PRI), publicly demonstrating our commitment to responsible investment. As a testament to our commitment to advancing sustainability and digital transformation, LUMO Labs also joined the European Green Digital Coalition (EGDC) as a Supporting Partner. Furthermore, to enhance community engagement, we have joined IMPACT VC, a network of impact-driven venture capitalists. We also joined Diverse Leaders in Tech, to progress our approach on data driven DEI, to connect with underrepresented communities and to continuously educate ourselves on the DEI topic.

Ecosystem Engagement Our team actively hosted and participated in numerous industry events, workshops, and conferences to foster collaboration and knowledge sharing within the impact investment community. Notable engagements included the Nexus Impact Society and BMW Foundation Events, as well as the TNW, World Summit AI, The Gap in Between, and 4YFN.

In recognition of our efforts in fostering and promoting an inclusive culture, LUMO Labs was honoured with the Fe+male Tech Heroes Corporate Inclusion Award, an initiative by the High Tech Campus.

Addition of Two New Partners: We are excited to welcome Dagmar van Ravenswaay Claasen and Sabine Schoorl as Senior Partners for our upcoming LUMO Rise Fund. Their expertise in digital security, blockchain, compliance, impact methodologies, diversity, equity and inclusion, sustainable cities and climate action strengthens our team.

SUMMARY





IMPACT-DRIVEN

THE FUNDAMENTAL BELIEFS BEHIND OUR CHOICES

EMBRACING INNOVATION FOR IMPACT

We firmly believe that emerging and disruptive technologies, such as Deep Tech AI, are crucial for overcoming today's global challenges. Their unparalleled ability to swiftly navigate complexity and scale solutions makes them powerful catalysts for transformative change and profound impact.

WHAT IMPACT-DRIVEN MEANS TO US ?

Our goal is to deliver both financial and social returns to our investors. We integrate impact throughout our entire investment process, ensuring that our investments are intentional, measurable, and relevant.

Our approach is flexible and adapts to the evolving regulatory landscape, ensuring that we consistently meet our commitment to impact-driven investing.

IMPACT DRIVEN WITH COMPETITIVE FINANCIAL RETURNS

To achieve sustained and lasting impact, innovations must resonate with people and generate sufficient recurring revenue to maintain operations and support further development.

A truly sustainable impact proposition thrives on a scalable and profitable business model. This is why we back purpose-driven founders with funding and expertise to achieve and validate product-market fit, ultimately bringing transformative ideas and discoveries to market.

THEORY OF CHANGE

Our Theory of Change outlines our commitment to leveraging technology for a sustainable and regenerative future. Through strategic investments and dedicated support, we aim to create a lasting positive impact, enhancing well-being and reducing environmental strain relevant to our cities.

VISION A world where cities thrive sustainably, healthcare is inclusive and resilient, and education is personalized and adapts to all needs. Technological advancements enhance quality of life, reduce environmental impact, and create equitable opportunities, fostering healthy, fulfilling lives for everyone.

CHALLENGES Rapid urbanization, climate change and shifting demographics are straining our cities, healthcare, and education systems. Urban growth exacerbates social and environmental issues and infrastructure demands. Climate change threatens sustainability and resilience. Demographic shifts pressure cities, healthcare and education to become more inclusive and adaptive.

INPUT

- Time and Effort provided by the LUMO Partners and team in scouting, evaluating and supporting potential startups.
- Investments in emerging and disruptive technology startups.
- Proprietary startup coaching program coupled with strategic partnerships and networking opportunities designed for portfolio companies.

OUTPUT

- Investments in startups at the intersection of technology and impact related to defined UN SDGs.
- Execution of proprietary startup coaching program for the portfolio companies.
- Provision of strategic networking and partnership opportunities to portfolio companies.

OUTCOME

- Enhanced capacity of portfolio companies to deliver on their mission
- Increased awareness and adoption of technologies aimed at improving the quality of life of individuals.
- Increased capacity for the startups to attract follow-on investments and scale their operations effectively.

IMPACT

- Social changes driven by the successful implementation of innovative solutions in healthcare, education and cities.
- Sustainable growth and scalability of startups that leads to broader adoption of their solutions
- Amplifying global impact through targeted SDGs forging a sustainable future for all.

IMPACT FOCUS

We provide (pre-) seed venture capital and a proprietary startup coaching program to purpose-driven founders bringing technological innovations to market to address social and environmental challenges through scalable and profitable solutions.

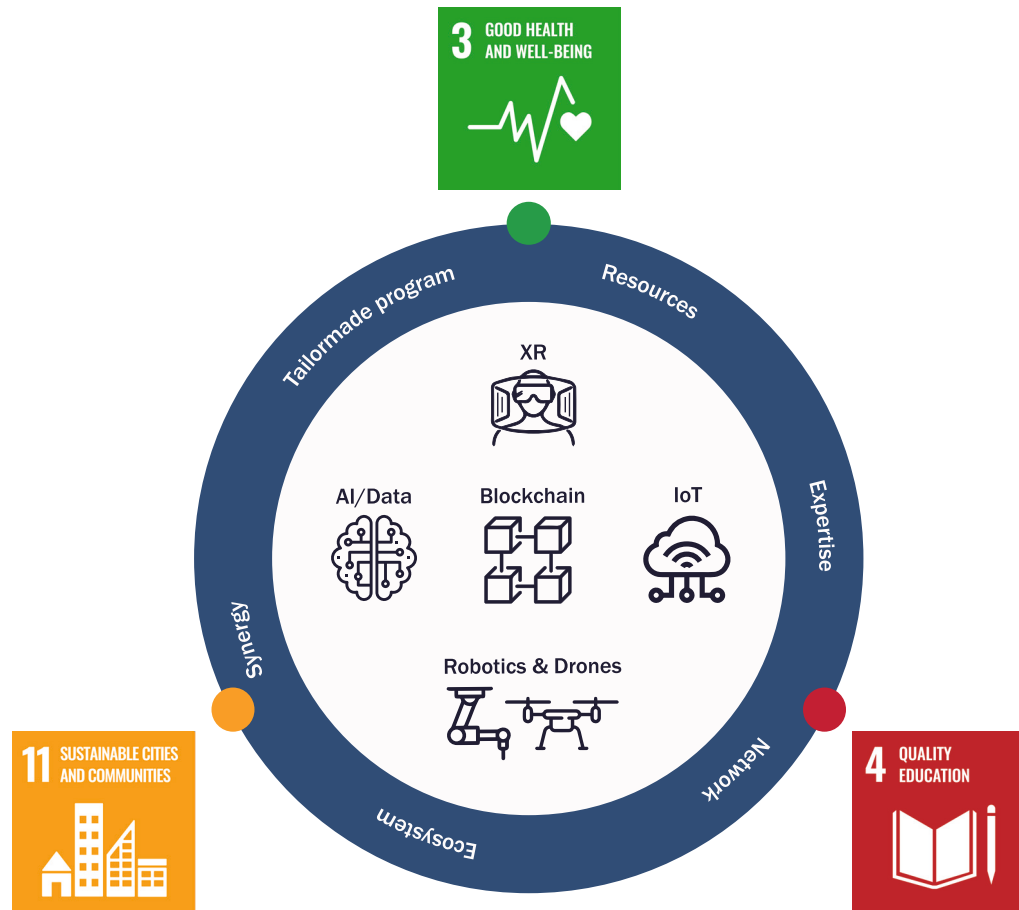
At LUMO Labs, we strategically enter the early stages—specifically during the (pre) seed phase—because this period offers critical opportunities to instill and accelerate aspects that significantly enhance both the financial and social impact of a venture, both immediately and over the long term.

Our impact focus is best identified as the bottom-up crossroads between the UN SDGs:

- SDG 3 (Good Health and Well-being)
- SDG 4 (Quality Education)
- SDG 11 (Sustainable Cities and Communities).

We focus on software propositions without the need for proprietary hardware and invest in emerging and disruptive technologies in AI/Data, Blockchain, IoT, Robotics and Drones and AR/VR.

Strategically based in Eindhoven, with a presence in Los Angeles, we leverage the city's blend of industrial heritage and modern tech advancements to foster innovation. Our location at the High Tech Campus connects us with cutting-edge developments, enabling us to build interconnected companies that amplify their collective impact.



IMPACT APPROACH

Impact is integrated throughout our entire investment process supported by our Impact Program to align portfolio companies with strategic impact goals, monitor progress, and share best practices. These events, held both in-person and online, foster networking and collaboration among founders, enhancing the collective strength and impact of the portfolio.

LUMO Impact Program

The LUMO impact team organizes quarterly Impact Days to bolster the development and alignment of portfolio companies with their strategic impact goals. These sessions are held four times a year, including two in-person events that span two days each, and two online events conducted over a single day.

The primary objectives of these Impact Days are to help integrate and align the business models of new and existing portfolio companies with their defined impact statements and to monitor and evaluate their progress against the Key Value Indicators (KVIs).

Additionally, these gatherings serve as a platform for sharing best practices on maximizing impact value creation. The in-person sessions particularly encourage networking among startup founders, fostering opportunities for collaboration and peer-to-peer learning, thus enhancing the communal and cooperative strength within the portfolio.

Our entire impact investing process is summarised as follows;

PRE-INVESTMENT

We actively scout for companies that are in line with our impact focus: SDGs 3, 4 and 11 (Positive Screening).

We also consider the IFC exclusion list “forbidden activities”. (Negative Screening).

Such activities include the production and trade in weapons and munitions and tobacco production.

ONBOARDING

After our initial investment follow onboarding to our LUMO Impact Program which follows a 100-day plan.

Guided and directed by our impact team, the companies will receive impact workshops, centered around their impact vision, challenge, and solution, and identifying the KVI's and measurement approach, guided by their primary and secondary UN SDGs goals.

LUMO IMPACT PROGRAM

During the LUMO program, the companies are further supported by our impact team who monitor progress on the management of their Impact KVIs, including refining their Theory of Change plus tracking and assessing ongoing impact targets and performance.

FOLLOW-ON INVESTMENT STAGE

For the follow-on investment stage, companies will update their quarterly KVIs and annual Impact Target updates for investors and review and refine their Theory of Change accordingly.



SFDR

IMPACT TRANSPARENCY

Impact transparency is a crucial aspect of any impact-driven Fund

At LUMO Labs, transparency is key to providing stakeholders with reliable insights into the environmental, social and governance (ESG) characteristics of their investments. By adhering to the EU's Sustainable Finance Disclosure Regulation (SFDR), we are working to ensure comprehensive disclosure of our sustainability objectives, strategies, and impact metrics.

Our commitment goes beyond regulatory compliance to empower stakeholders with well-informed decisions, fostering accountability and ethical practices.

We classify ourselves as Article 8+ Fund, a “mid-green fund”. As an Article 8+ Fund, we not only promote social or environmental characteristics in our investment practices, but we also go beyond promotion by incorporating “sustainable investment” as our fundamental investment objective.

This can be witnessed from our commitment to sustainable practices that align with the United Nations' Sustainable Development Goals (UN SDGs);

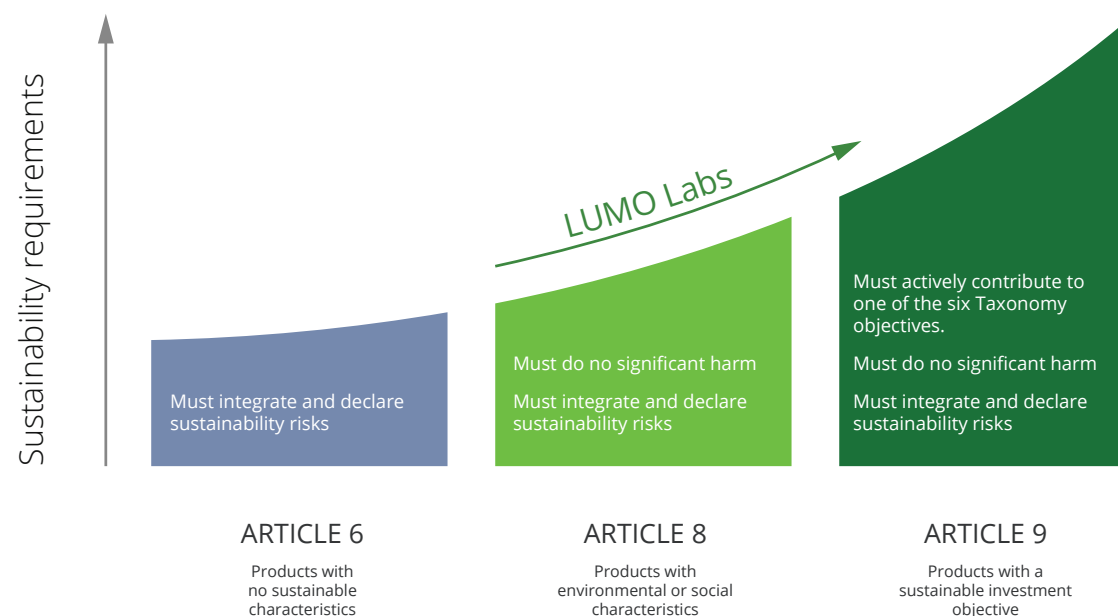
- SDG 3 (Health & well-being)
- SDG 4 (Quality Education) and
- SDG 11 (Sustainable Cities & Communities).

LUMO Labs full SFDR Disclosure can be found here
<https://lumolabs.io/sfdr>

FUND CLASSIFICATION IN SFDR

Our vision is to transition to an Article 9 Fund, reflecting our dedication to sustainable investment and driving positive social and environmental change.

This road to transition reflects our Fund's dedication to sustainable investment as the primary focus and commitment to driving positive change through investments that contribute to addressing pressing social and environmental challenges.



Ref: carbometrix.com

DE&I

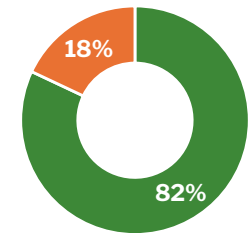
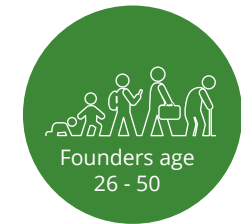
DIVERSITY EQUITY AND INCLUSION

Diversity, Equity and Inclusion (DEI) are paramount, both within our team, our venture advisors, LP's, advisory board and across our portfolio companies.

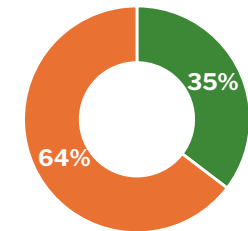
We understand that a mix of different perspectives, backgrounds, and experiences is crucial for the creation of successful companies that generate positive social, environmental, and economic impacts. Our commitment is to nurture an environment that values and integrates diversity at every level of our organization and within the businesses we invest in.

Embracing and including multiple perspectives forces teams to think harder and not to rely on bias and assumptions. This not only diminishes blind spots but also boosts talent retention and attraction, fostering ongoing optimization and reflective practices.

In 2023, we are happy to share that we are the winner of the 2023 Corporate Inclusion Award, organized by Fe+male Tech Heroes, an initiative from the High Tech Campus.



■ Netherlands ■ International



■ Female Co-Founder ■ Male Co-Founder

ECOSYSTEM

CULTIVATING A THRIVING IMPACT ECOSYSTEM

At LUMO Labs, we nurture an impact ecosystem that empowers social entrepreneurs, engages community stakeholders, and fosters industry collaboration. We work towards upholding the highest regulatory and ethical standards and adhere to internationally recognized impact frameworks.

In 2023, we became a signatory to the United Nations Principles on Responsible Investment (UN PRI), demonstrating our commitment to responsible investment.

We also joined the European Green Digital Coalition (EGDC) as a Supporting Partner and IMPACT VC, a network of impact-driven venture capitalists, to enhance community engagement.

Signatory of:



IMPACT GOVERNANCE

GOVERNANCE FRAMEWORK

We believe robust governance is essential for a transparent, responsible impact-investing environment. Our disciplined management ensures every investment aligns with our core values and impact objectives.

Regulations and Standards

We are registered with the Dutch Authority for the Financial Markets (AFM) and operate in line with EU standards and values. Our internal regulations include a Responsible Investment Policy, Sustainability Risk Policy and Diversity.

Equity and Inclusion Policy

Investment Committee (IC): Consisting of the Founding Partners, other Partners and members, we review investment proposals, select portfolio companies and advise on investment and divestment decisions.

Scientific, Industry and Impact Board of Advisors

Our Fund has a Scientific, Industry and Impact Board of Advisors consisting of members with relevant experience in impact and emerging technologies.

IMPACT LEADERSHIP TEAM



Britta Gruenig
Impact Officer and Coach



Andy Lüring
Founding Partner



**Dagmar van
Ravenswaay Claasen**
Senior Partner



Meron Mekonnen
Investment Analyst



Lorna Goulden
Impact Venture Advisor

IMPACT OFFICER AND COACH

We are very grateful to have on our team Britta Gruenig – one of the leading European experts on impact investments. Britta sets up the impact framework, supports and coaches the startup founders, monitors progress, and maximizes the impact of our efforts.

Britta was one of the first employees building up the Center for Sustainable Finance and Private Wealth at the University of Zurich, in collaboration with IRI at Harvard Kennedy School. She led the Wealth Owner Programs and built the Personal Development Program for family office successors. She was also one of the first senior team members of Katapult

Foundation, building up and directing their Impact Investing Academy for private wealth owners in the Nordics. As a certified personal, impact, leadership and relationship systems coach for wealth creators and successors in the ultra high net worth space, she delivered 1000+ coaching sessions to help clients with aligning their inner and outer impact journeys, creating their Impact Quest and elevating their collaborative leadership and culture so that they can succeed on their long-term quest towards a regenerative future.



WHAT outcome(s) does the effect drive, and how important are they to the people (or planet) experiencing it?



WHO experiences the outcome and how underserved are they in relation to the outcome?



HOW MUCH of the outcome occurs? Does it happen at scale? Does the effect drive the outcome deeply? Does it last for a long time?



What is the **ENTERPRISE CONTRIBUTION** to what would likely happen anyway?



What is the **RISK** to people and planet if the impact does not occur as expected?

IMPACT MANAGEMENT PROJECT

The IMP reached consensus that impact can be deconstructed into five dimensions: What, Who, How much, Contribution and Risk.

IMPACT OFFICER AND COACH

“When working with startup founders, I help them think big in terms of the contribution their ventures could make towards the UN SDGs. I increase their awareness of impact depth along the Impact Management Project’s 5 dimensions of impact.

I challenge the founders to develop a meaningful impact vision and to develop a coherent Theory of Change that states with which inputs, outputs and outcomes they want to make that impact happen. Subsequently I help them establish and track Key Value Indicators.

It is vital that they have lean impact measurement and management in place and that they understand why impact investors are investing in them.

The reason why investors – such as LUMO Labs - provide ‘additional’ capital to impactful startups is to create solutions to important problems. Impact investors want to make sure that their investments have intentionality, additionality, and measurability.

My goal is to make sure that positive impact is in the DNA of the founders and at the core of their business model. This means that there is no mission-drift and no trade-off between business and impact goals, but authentic alignment. The better the business does, the more positive impact it can create..”

- Britta Gruenig



Britta Gruenig
Impact Officer and Coach

LUMO LABS TEAM



Andy Lüring
Founding Partner



Sven Bakkes
Founding Partner



Dagmar van
Ravenswaay Claasen
Senior Partner



Sabine Schoorl
Senior Partner



Thomas Hannes
Investment Manager



Britta Greunig
Impact Officer and Coach



Federico Pisano
Investment Analyst



Meron Mekonnen
Investment Analyst



Pim Hollestelle
Investment Analyst



Bastiaan den Braber
Venture Advisor



Jenna Seiden
Venture Advisor



Harry Kok
Venture Advisor

LUMO LABS TEAM



Steven Nelemans
Venture Advisor



Per Slycke
Venture Advisor



Lorna Goulden
Impact Venture Advisor



Walter Hueber
Venture Advisor



Henk de Jong
Venture Advisor



RESULTS

2023

Our portfolio impact extends beyond financial returns, embracing our investment thesis that focuses on fostering Healthy Lives, Educated Societies, and Resilient Cities through innovative, scalable, and sustainable solutions that address the pressing challenges of urbanization, climate change, and technological advancements.

We have defined our Impact Indicators by taking inspiration from the Global Indicator Framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development, considering the potential impactful companies we can invest in, current trends and developments, and our Fund's thesis presented as follows;

HEALTHY LIVES

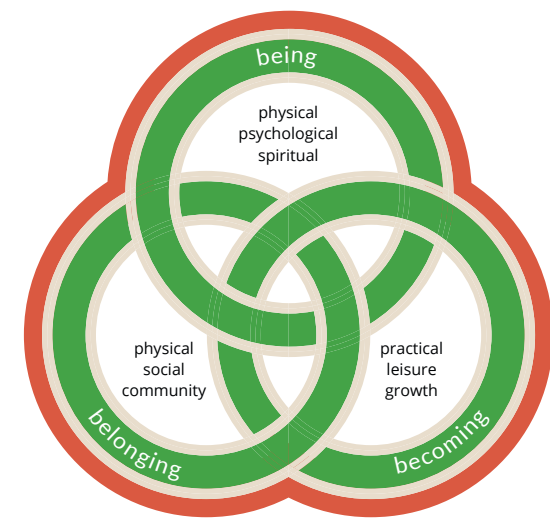
IMPACT FOCUS



The primary focus of SDG 3 is to benefit individuals, where the goal is to have a direct impact on their Physical and Mental Wellbeing.

A key secondary beneficiary is the Healthcare Infrastructure in both enabling as well as more efficiently streamlining the reduction and prevention of burden caused by disease, illness, injury and stress.

The Key Value Indicator is improvement of Quality of Life in the dimensions of Being: Physical and Psychological - with the potential to impact across all dimensions of QOL.



QUALITY OF LIFE

Quality of Life Model source University of Toronto's Quality of Life Research Unit

CASE STUDY

HEALTHY LIVES



VISION

Global democratization of the quality of the diagnosis of cancer and chronic kidney disease by using AI in pathology.

CHALLENGE

Pathology is the cornerstone of the diagnostics process. But there is a major inequality in the diagnostic process between healthcare systems worldwide. AI has the potential to speed up and improve the pathology workflow, increase access and democratize the quality of diagnosis.

IMPACT

Democratize quality of the diagnosis of cancer and chronic kidney disease, improve health outcomes.

www.aiosyn.com



VISION

We envision a world in which everyone can train their mind without limits, becoming the directors of their flow, focus and relaxation. Universal access to engaging mental training tools will reduce stress-related illnesses, boost societal productivity, and enhance overall quality of life for many.

CHALLENGE

In today's fast-paced world, most people lack the time, skills, headspace, motivation and/or financial resources to proactively manage their mental wellbeing before reaching a crisis point.

IMPACT

Improved mental performance and mental wellbeing

www.listenalphabeats.com



VISION

A world where everyday products and experiences are designed to improve mental wellbeing and mental performance, in situations where people spend the most time: at home, at work, on the move.

CHALLENGE

Everyday products and experiences are not designed explicitly with individuals wellbeing in mind and everyday smart technology does not really understand humans and what is beneficial for them.

IMPACT

Increased wellbeing in organizations and society. Wellbeing exists by design in everyday life and doesn't only depend on conscious effort.

www.maaind.com

EDUCATED SOCIETIES

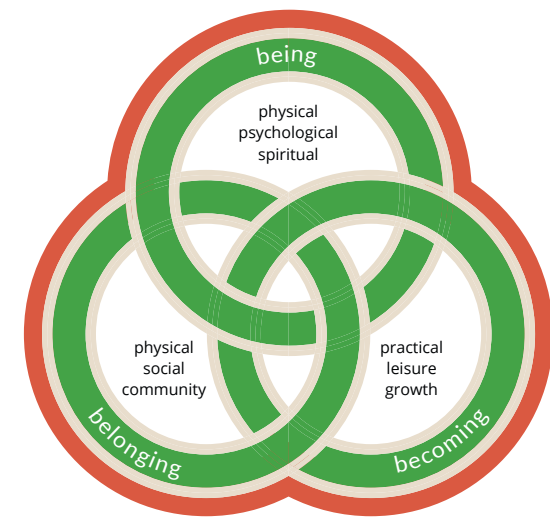
IMPACT FOCUS



The primary beneficiaries of the focus on SDG 4 are people both as individuals as well as a combined human resource required for successful and sustainable urban development.

Where the goal is to have a direct impact on access on lifelong, relevant and targeted education that indirectly impacts lifestyle and urbanization challenges and opportunities

The Key Value Indicator is improvement of Quality of Life in the dimensions of Becoming: Growth - with the potential to impact across all dimensions of QOL.



QUALITY OF LIFE

Quality of Life Model source University of Toronto's Quality of Life Research Unit



VISION

A world in which professionals are empowered to curate their learning experiences. Continuously developing the skills required in a constantly changing world without the pressure to learn everything at once.

CHALLENGE

With talent shortage it is crucial to equip people with new skills. Yet time and attention are constrained. This creates mounting pressure for professionals to navigate learning resources and to adequately retain newly acquired knowledge.

IMPACT

A continuous and impactful learning culture increasing the long-term success of learning measures.

chunkx.io



VISION

A safer world where harmful behavior is better understood, more often talked about and no longer accepted, with the silent majority empowered to take action to prevent.

CHALLENGE

A lack of empathy is a key part of many of today's social problems: racism, bullying, child abuse (domestic) violence, and inequality, to name a few. To truly understand, without having experienced the same situation is a challenge. Unable to understand the victim's perspective, we are less likely to act to prevent.

IMPACT

A safer world for all where harmful behavior is no longer accepted.

www.enlivenempathy.com



VISION

A world where the population has equal access to the full breadth of work opportunities within an advanced digital society with data and identity sovereignty.

CHALLENGE

Adoption of digital technologies in the workplace is estimated to displace 50% of total global workforce by 2030. Yet traditional education systems are biased towards premium institutions with exclusive access requirements for professionals. Many training courses are becoming obsolete in the exponential economy.

IMPACT

A more inclusive society, influencing and benefiting from Web3 growth opportunities.

www.metacampus.ai

CASE STUDY

EDUCATED SOCIETIES

RESILIENT CITIES

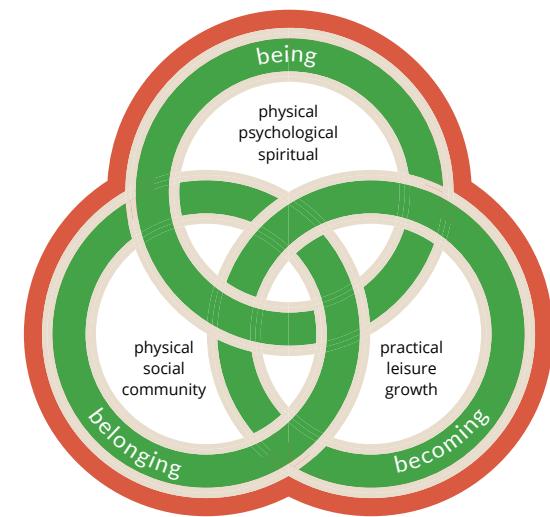
IMPACT FOCUS



The primary beneficiaries of a focus on SDG 11 are citizens and their communities in the urban environment.

Where the goal is to have an impact on various aspects of Urban Infrastructure and key Urban Resources that directly influence the wellbeing, safety and resilience of the city.

The Key Value Indicator is improvement of Quality of Life in the dimensions of Belonging: Physical, Social, Community - with the potential to impact across all dimensions of QOL.



QUALITY OF LIFE

Quality of Life Model source University of Toronto's Quality of Life Research Unit



VISION

A world that invites youth to play urban sports and engage in culture where, when and with whom. With sustainable cities, ethical brands, and inclusive vibrant communities, designed to stimulate the health and wellbeing of its youngsters.

CHALLENGE

Youth crisis. We don't reach, understand and empower young people. Causing social problems (e.g. inactivity, obesity, criminality, loneliness, lacking school performances, lacking personal development)

IMPACT

Better city investments. Faster implementation with the right people. Effectively addressing social and health problems.

www.citylegends.io



VISION

A world where water utilities are resilient and the water cycle is sustainable for ecosystems and communities.

CHALLENGE

Climate is changing, and with that the water cycle. Ecosystems and communities are facing clean water scarcity. 30% of clean water is lost worldwide. yet Water utilities are not resilient against such water losses; finding it hard to create actionable insights from data.

IMPACT

Resilient and optimized urban infrastructure ensuring adequate and fair access to water for all.

hulo.ai



VISION

A world in which all forms of transportation are electrified and run on 100% sustainable energy.

CHALLENGE

Fossil fuels continue to burn in part because the electricity infrastructure cannot handle electrification of everywhere we live, work and play. The technological change required to address is also a social challenge as people need to adapt to using new technology.

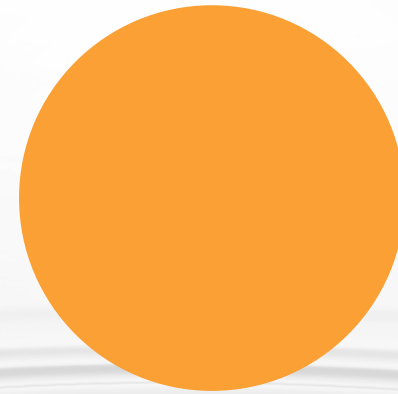
IMPACT

An optimised and completely electrified transportation system future-proofs urban accessibility, increasing the resilience and wellbeing of cities and their inhabitants.

www.tapelectric.app

CASE STUDY

RESILIENT CITIES



#goodthingsarecoming