

SuperLight Photonics

Better Light | More Insight

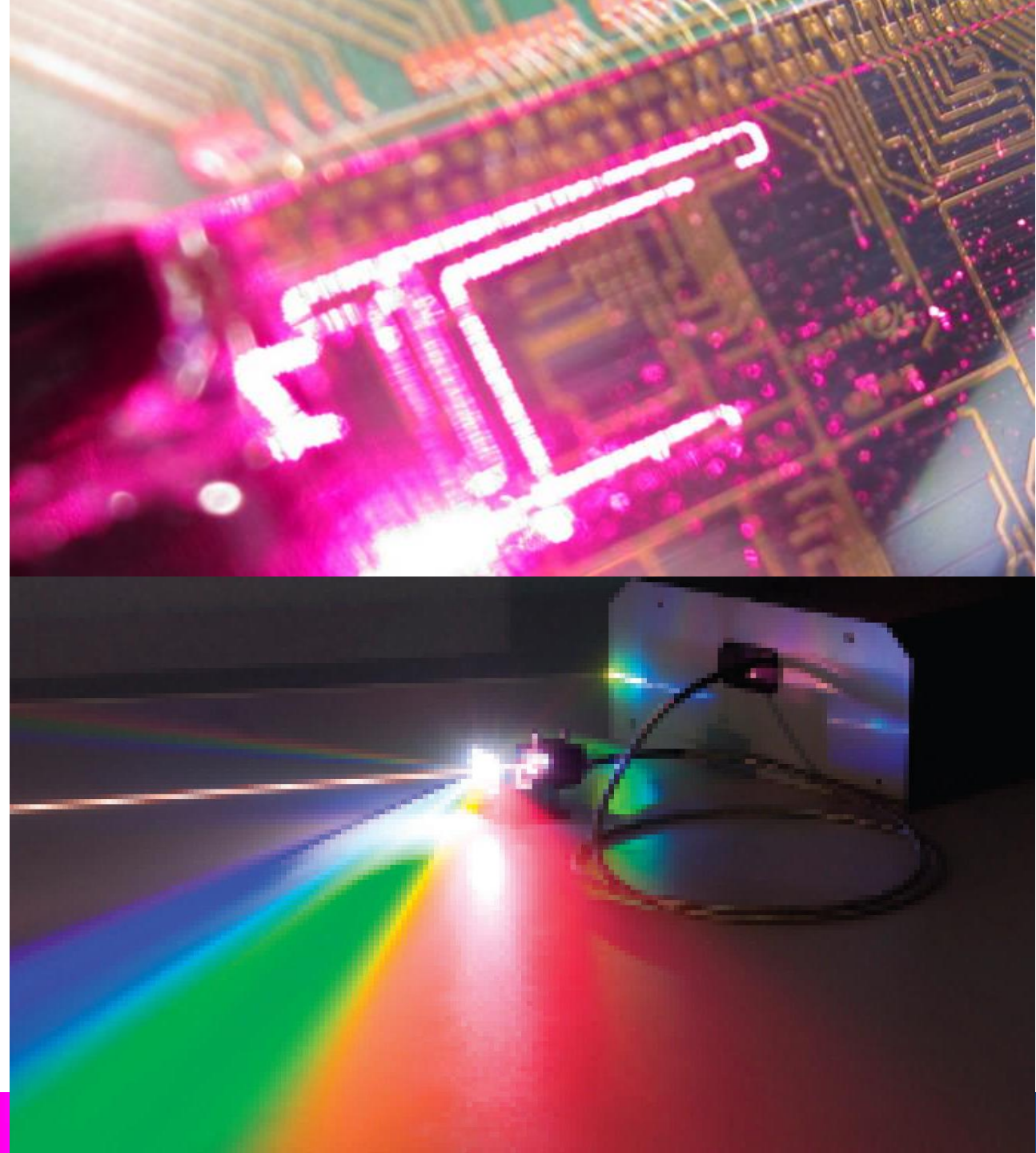
EPIC Sustainability Workgroup Meeting
11 October 2024

Elly Schietse - CMO



SUPERLIGHT PHOTONICS IN A NUTSHELL

- Spin-out of Twente University, Enschede, NL
- Fabless supplier of **lasers on Photonic Integrated Circuits** (PIC)
- Unique technology to convert single-color lasers into **broadband lasers** (all-color)
- Specialized in **supercontinuum generation** technology
 - Used for Wideband Lasers, Ultra-fast Lasers & Optical Frequency Combs (OFCs)
 - Focusing on **OCT** (Optical Coherence Tomography)
 - For ISM (Industrial, Scientific and **Medical**) applications



INTERNAL & EXTERNAL MOTIVATION

Why ESG initiatives in an early-stage startup?

- Lead investor is a Dark Green fund = strict ESG reporting requirements
 - Required by customers/prospects
 - Important to new investors
 - Employer evaluation criterium from job candidates
 - Part of supplier selection
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- ⇒ No longer “just ticking the box” or nice page on website
 - ⇒ Intrinsic motivation to take initiative & comply
 - ⇒ Strategic move to enhance brand, attract environmentally conscious investors, customers & employees and create long-term value

INITIAL ASSESSMENT & SUSTAINABILITY ANALYSIS

- Theory of Change
Investor tool - provides a clear roadmap for startups to connect actions with broader societal and environmental impacts while ensuring accountability and measurable progress
- SASB Materiality Finder
<https://sasb.ifrs.org/standards/materiality-finder/find/?industry%5B0%5D=TC-SC>
- Dimensions of Impact
<https://impactfrontiers.org/norms/five-dimensions-of-impact/>
- United Nations Sustainable Development Goals: 17 Goals to Transform the World
<https://www.un.org/en/exhibits/page/sdgs-17-goals-transform-world>

ESG INITIATIVES AND IMPACT

ENVIRONMENTAL

- Energy efficiency
- Upstream supplier management
- Emergency preparedness
- Waste management
- Recycling process
- Employee travel

SOCIAL

- Diversity and inclusion
- Employee welfare and well being
- Performance & remuneration
- Health & safety
- Customer satisfaction
- Training & mentoring

GOVERNANCE

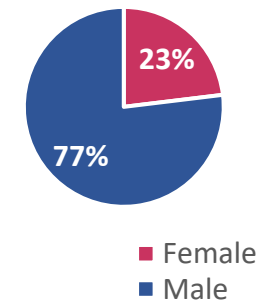
- Ethical standards
- Transparency & integrity
- Stakeholder engagement
- Advisory board
- Responsible supply chain
- Quality management \cong ISO9001
- Cybersecurity \cong ISO27001



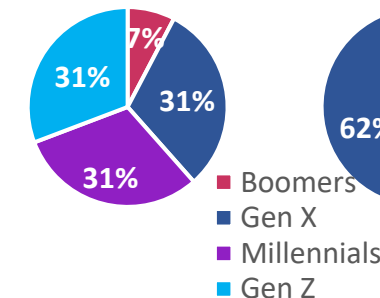
ESG IMPACT

- Improved product quality and cost savings
- Production efficiency and waste reduction
- Enabling technology for higher energy efficiency
- Accessibility to advanced technology
- Educational and research opportunities
- Enhanced competitiveness of customers & OEMs
- Employment in supply chain & photonics industry

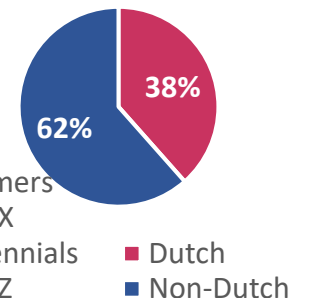
Gender Diversity



Age Diversity



Cultural Diversity



ESG INITIATIVES IN UN FRAMEWORK

- Defined the SuperLight Photonics ESG goals based on standardized framework
- United Nations Sustainable Development Goals: 17 Goals to Transform the World
- Use as a reporting framework moving forward



ESG Goals – 2 Categories

1. ESG practices implemented by SLP
Internally = 3, 5, 8, 9 & 12
2. ESG impact through SLP products to the world
Externally = 3, 6, 7, 9, 12, 13, 15, ...

ARTIFICIAL EXERCISE?

- Fabless PIC company
 - No waste streams
 - Counting sheets of paper & batteries?
 - Penny wise, pound foolish?
- Limited impact with office in rental building
 - No choice in heating, light source, energy provider, etc
- Start-up is by definition frugal & cautious not to over-consume or over-produce

NOT AN ARTIFICIAL EXERCISE!

- Photonics technologies inherently contribute to sustainability through energy savings and green applications
- Green product design
 - Minimising environmental impact of a product throughout its lifecycle
 - Resource saving
 - Harmful material reduction, minimize hazardous materials
 - Product recycling
- Packaging & logistics
 - Optimize packaging to reduce waste and shipping emissions
- Green supply chain: upstream supplier management
 - When selecting (new) suppliers, review their ESG initiatives and/or certificates
- Life-Cycle-Assessment (LCA) approach
 - Product impact
 - End customer application impact
 - Product End-of-Life program

NOT AN ARTIFICIAL EXERCISE!

- Corporate culture and employee engagement
 - Awareness!
 - Ethical leadership
 - Company mission and alignment with personal values
- Internal sustainability practices
 - HR policies incentivize using public transportation
 - WfH policy & allowance
 - Lunch & learn in sustainability/ESG
 - Community engagement
 - Employee well-being
 - Employee initiatives celebrated & encouraged by rewarding ideas
 - Hall of fame
 - Team lunch
- Transparency and reporting to investors & employees

EMS + QMS + ISMS

- ISO Management Systems as lighthouse frameworks
 1. ISO 9001 for Quality Management System
 2. ISO 27001 for Information Management System
 3. ISO 14001 for Environmental Management System
- Same ISO umbrella: integrated management systems
 - 50-70% overlap
 - Total effort decreases for implementing additional ISO management systems
 - No isolated efforts, part of integrated ISO management system initiatives
- Status today at SuperLight Photonics
 - Basics in place
 - ISO certification project kicks off in 2025

EARLY IMPLEMENTATION?

- Easy (easier) if implemented early
 - Less “change resistance” in startup (vs. scale-up)
 - No scrambling when required
 - Historical data available
- Create discipline and official framework to comply
- Foster a culture of sustainability, create awareness & employee engagement

⇒ **Yes, we have an impact!**

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Thank you.



SuperLightPhotonics.com



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