

 Enableness Investor Overview

We bring your ideas to light.

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Note: All financial figures contained in this presentation are in US dollars unless otherwise stated.

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Key assumptions made in preparing the forward-looking statements contained in this Presentation include, but are not limited to, the following:

- the Company will be able to raise sufficient financing to meet its financial obligations as they come due and to allow it to execute fully on its business plan;
- the Company will develop and deliver new products on time in order to satisfy the requirements of current and future customers and contribute to near-term profitability;
- the Company will continue to successfully reduce product costs to improve the Company’s gross margin and/or avoid any margin erosion associated with competitive pricing pressure;
- the Company will be able to attract and retain key people;
- the Company will continue to maintain an ongoing tenancy for its fabrication facility in Fremont, California, despite the month-to-month nature of its current lease;
- the Company will be able to raise additional new capital in the future to allow the Company to expand its manufacturing capacity as required; and
- the Company will be able to maintain production volumes that are sufficient to meet sales demand and expectations of customers.

Financing Overview

Industry Backdrop

- Semiconductors are crucial in today's economy, which has become problematic over the past 3 years with the onset of COVID-19 which brought severe chip shortages that linger still to this date and are exacerbated by tensions between China and the USA.
- In August 2022, the US Government enacted the landmark Chips and Science Act to help solve this puzzle. The act attempts to inject capital into the sector to repopulate the US with semiconductor resources, most of which had naturally migrated to Asia over the past 20 years, leaving the US customers dangerously exposed.
- We expect to see a major trend to repatriate semiconductor chip capacity back to the USA and Enableness stands out as a highly desirable beneficiary of that plan.

Investment Opportunity

- Enableness stands to benefit significantly as the only owned, non captive fabrication facility in North America.
- Tech giants such as Intel and Texas Instruments operate large facilities to support their own products and customers leaving no local option for fabless chip companies like Qualcomm, AMD, NXP and countless others.
- Enableness is already a leader in the Datacoms market, with blue-chip customers such as Facebook, Google, and Microsoft.

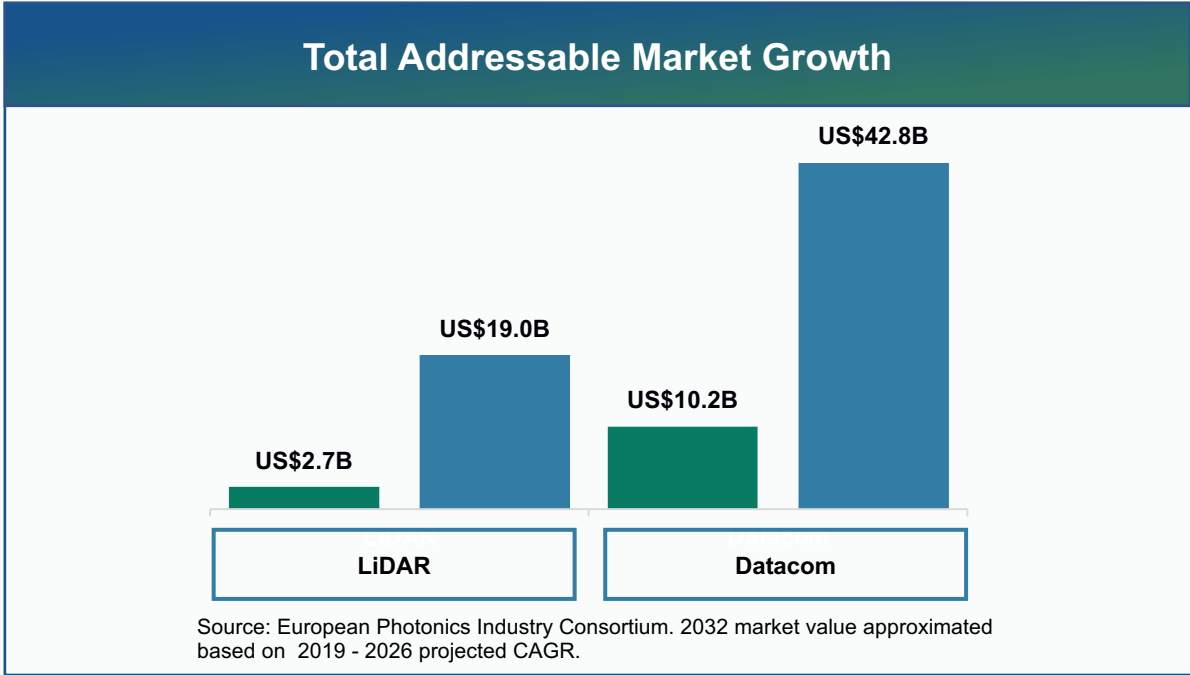
Near Term Growth

- Enableness is seeking a US\$5M investment to modernize its current fab facility in San Jose California and to expand capacity to handle a growing pipeline of orders and new market opportunities.
- This investment would allow the Company to grow its popular Datacom products division over the next year, reaching break even for the division and providing a solid base for sustainability and a source of cash flow for other new product initiatives.
- The investment would also fund the Company's efforts to win substantial purchase orders in the emerging automotive light-emitting radar ("**LiDAR**") market. LiDAR is the brains behind autonomous driving and assisted driving systems, which is rapidly emerging as the newest and most exciting part of the automotive sector, and along with electric vehicles stands as the future of the automotive industry.

Enablence Overview

Enablence Technologies Inc. (TSX-V: ENA) is a designer and manufacturer of optical semiconductors, primarily in the form of planar lightwave circuit (“PLC”) chips used in data centers, telecommunications, and sensing devices across the world. Enablence has spent 15 years perfecting design and manufacturing processes for photonic chips and is the only non-captive PLC fab in North America.

ENA mission: Enable world class optical networking and advanced vision solutions through industry-leading design, development, and manufacturing of PLC chips.



Capitalization Table

(All figures in C\$M)

Financials	
Share Price (C\$)	\$1.40
Basic Shares Outstanding	18.6
Fully Diluted Shares Outstanding	20.4
Market Capitalization	\$26.0
Fully Diluted Market Capitalization	\$28.5

(Market Data as of May 19, 2023 close)

Key End-Markets



Data Centres



Telecom



Autonomous Vehicles



Robotics

Strategy

Leverage next gen PLC platform to accelerate datacoms penetration and expand into adjacent applicable markets such as Automotive LiDAR and Medical Imaging.



Adjacent Markets

- Non-invasive medical imaging
- Automated mobility
 - Automotive LiDAR, Robots, Automated heavy-duty equipment, Drones
- Manufacturing
 - Preventative maintenance, Air quality monitoring



Customer Focus/Operational Excellence

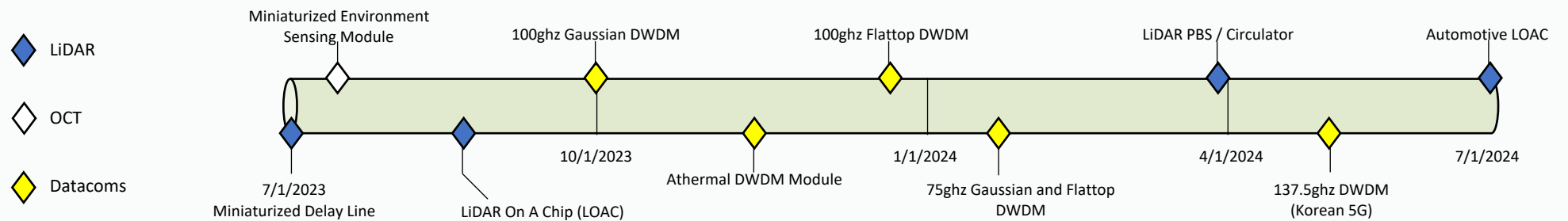
- Focus on distribution through optical component manufacturers
- 6 sigma adoption
- Capacity expansion



Technology Pillars

- Miniaturization
- Performance
- ML Design
- ML Analysis
- Testability
- Integration

Product Roadmap



Growth Plan

1 Build and Outsource Capacity to Meet Excess Demand

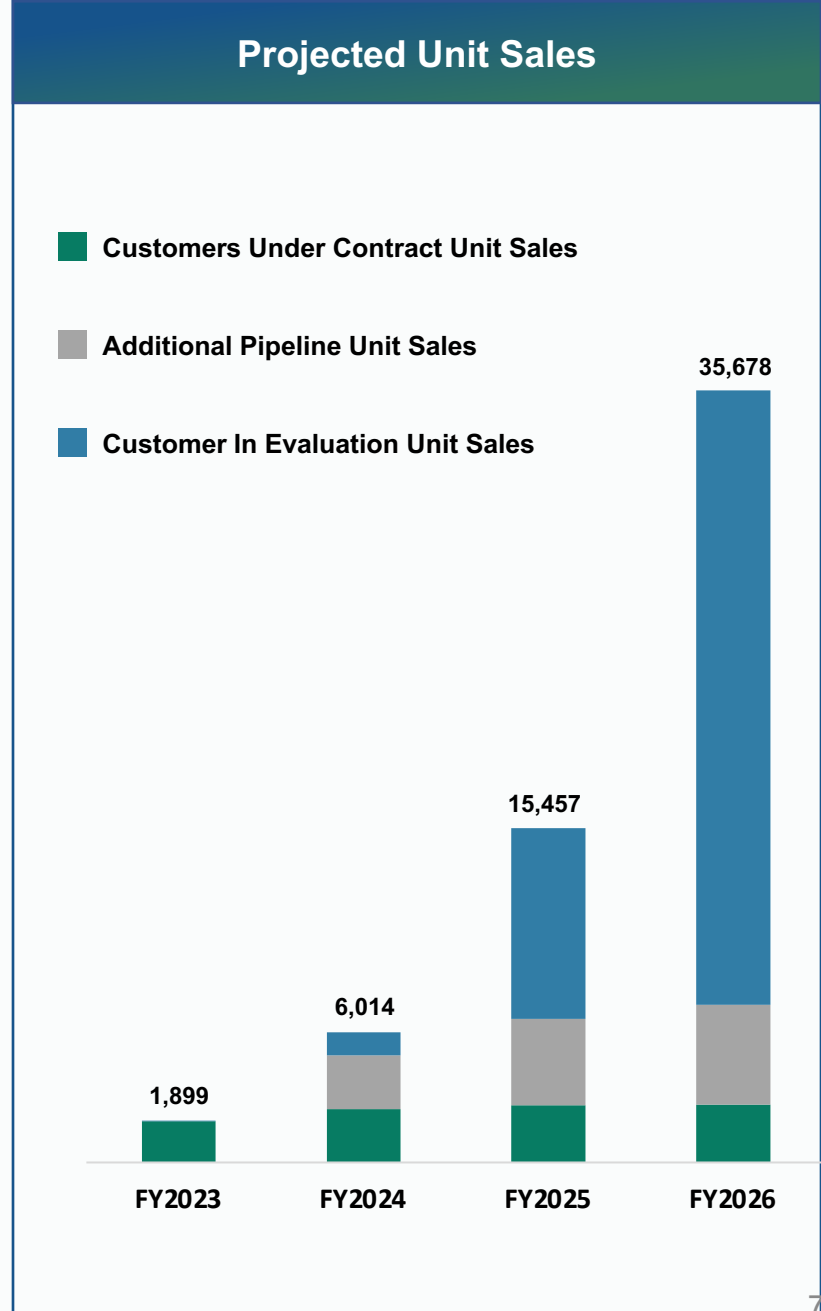
- Enablence has a robust sales pipeline of consisting of existing and new customers exceeding capacity in Q1 FY2024
- To meet demand and accommodate projected sales, Enablence will:
 - Cultivate tactical and strategic outsource partners
 - Leverage financing round to increase or refresh key equipment in the fab to expand production capacity to 1,500 wafers per month

2 Achieve EBITDA Breakeven in FY2025

- Base case forecasts show Datacoms business growing from ~1,800 wafers per year to ~15,500 by FY2025 and reaching monthly EBITDA breakeven by late FY2025
- High operating leverage involved in the semiconductor business allows for tremendous cash flow growth as operations expand

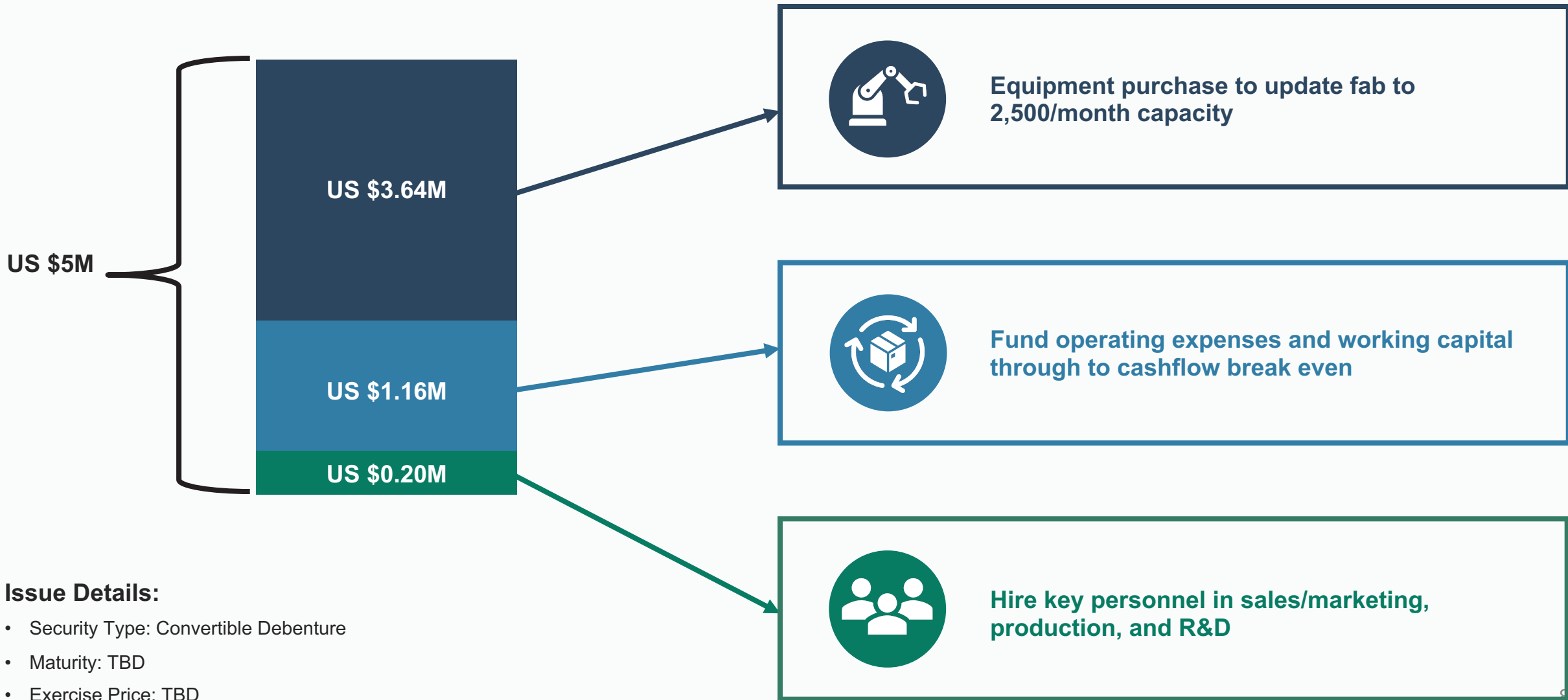
3 Win LiDAR Design Contracts

- Continued R&D in PLC unlocks large opportunities in Datacoms (DWDM) and Advanced Vision particularly Automotive LiDAR
- On track for securing initial LiDAR contract wins H1 FY2024; one automotive LiDAR and one non-automotive LiDAR



Capacity Expansion Funding Round: Uses of Funds

Total Raise: US\$5M

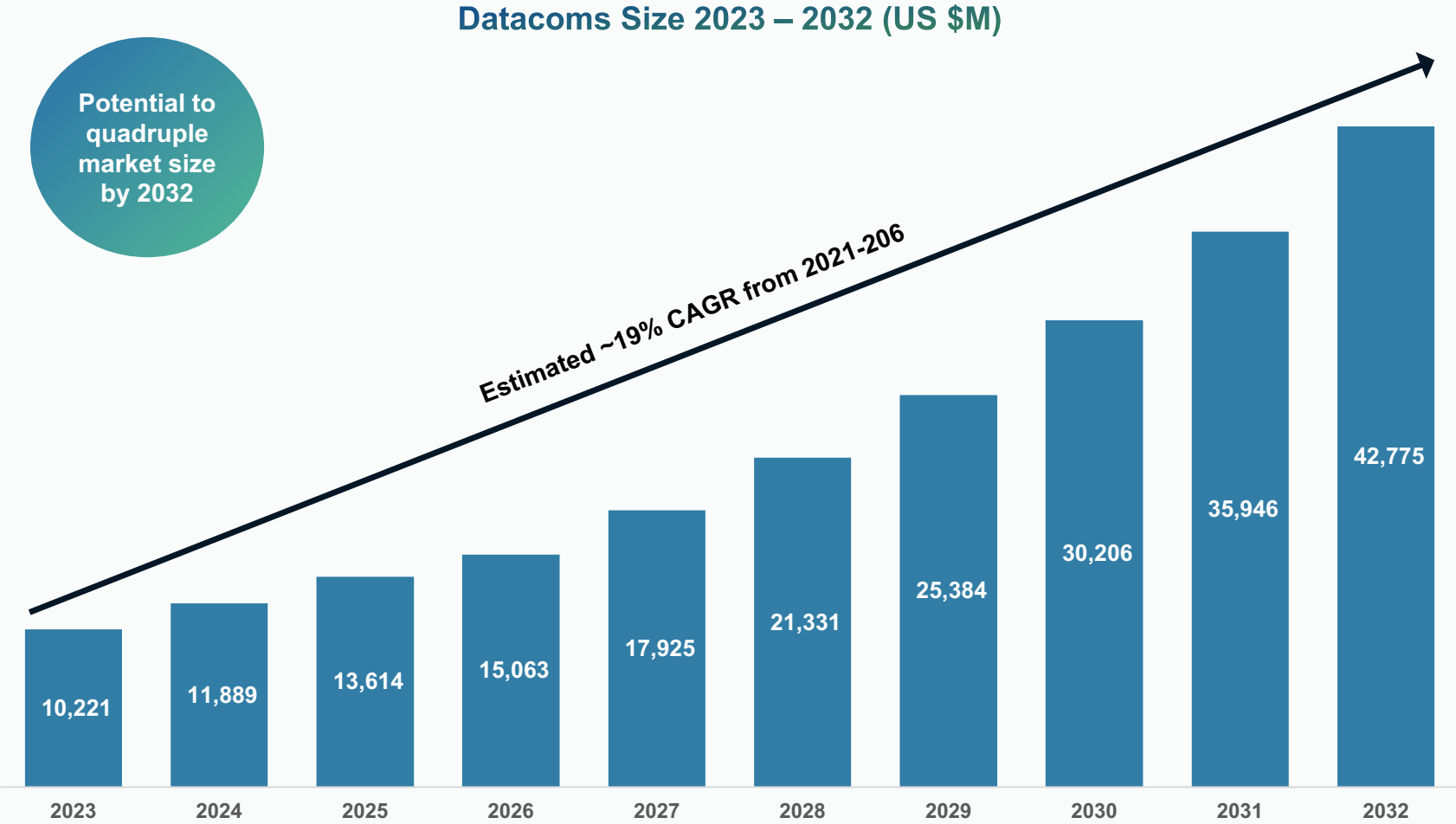


Issue Details:

- Security Type: Convertible Debenture
- Maturity: TBD
- Exercise Price: TBD

Established Traction in Large, Growing Markets

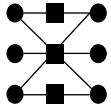
Enablence is positioned to expand within the WDM market which lacks a clear, dominant leader. Enablence's versatile technology is already well established in Datacoms and has the opportunity to gain traction across other diverse markets.



Source: Optical Transceivers for Datacom & Telecom | Report - YOLÉ . 2027-2032 market value approximated based on 2019 - 2026 projected CAGR

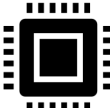
Key Capabilities with Applications to Datacom

Explosive growth in data communications relies on continuous improvement in throughput and performance. Customers such as Facebook, Google, and Microsoft utilize our technology for their Datacom needs.



Wavelength Management

Low loss designs to multiplex and demultiplex high data rate signals.



Sophisticated Chip Layout

Advanced proprietary tool for compact and efficient chip layouts.



Advanced Signal Processing

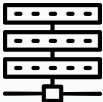
Retrieves low signal-to-noise features in multi-dimensional datasets.



AI/ML

Matches designs to fab conditions, adjusts conditions in real-time during fabrication to improve yield & reduce cost.

Datacom Applications



Rack Interconnections



Data Centre Interconnections



Sub-Sea Cables



Cluster Interconnections



5G Cell Tower Connections



Cross-Country Trunk Lines

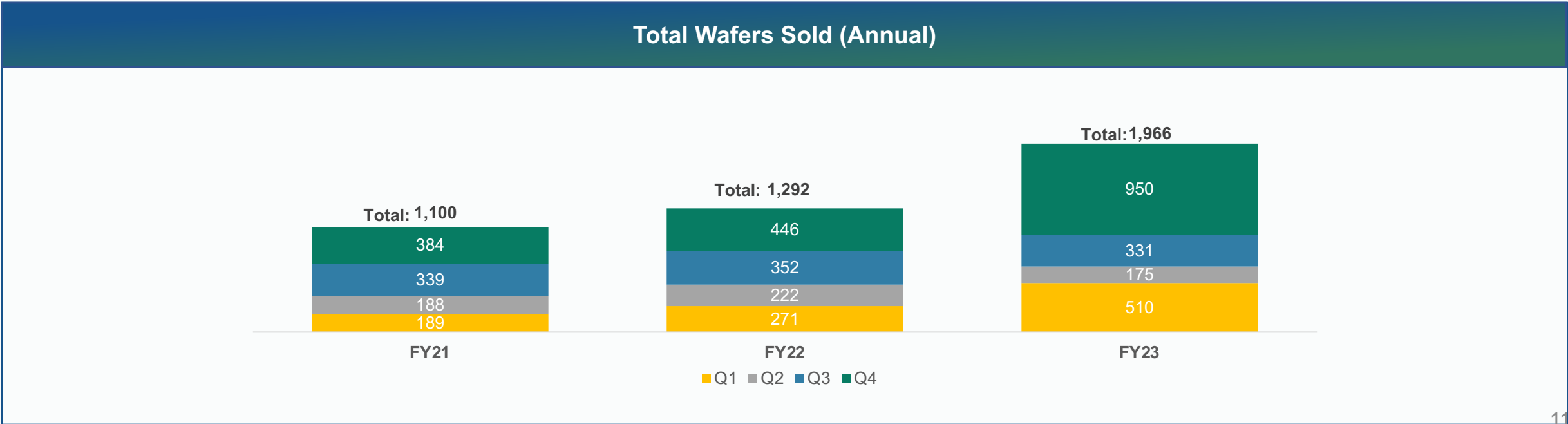
Datacoms Traction

Progress to Date

- Initiated transition to stable wafer sales model in 2019
- Wafer sales projected to grow significantly in FY2024
- Key wins with tier 1 datacoms providers such as Coherent and Innolight
- Tier 1 DWDM in final stages of development
- Revenue from sales of datacom wafers increased more than 100% in Q3 vs Q2 in FY2023
- Based on growth rate, technological advancements, and operational maturation, management believes the shares currently under valued

Enablene Advantages

- ✓ **Accelerating Sales** - more than \$10M in annual datacom sales through 2026 under evaluation
- ✓ **Protective Moat** - \$150M invested in PLC design and production provides huge Invest in only non-captive North American PLC fab
- ✓ **IP Advantage** - unique silicon PLC technology delivering smallest, most efficient, highly integrated chips in the industry reducing assembly costs
- ✓ **Differentiated Cost Model** - proprietary AI based design, layout, and testing software enables low-cost model



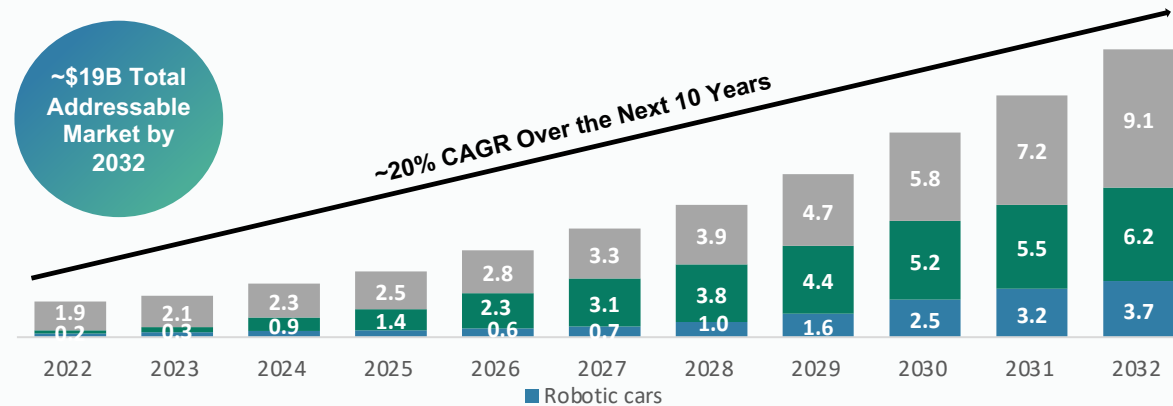
Global LiDAR Market Opportunity

Rising adoption of LiDAR technology in robotic cars, Advanced Driver Assistance Systems (ADAS) and other end-use markets are fueling demand.

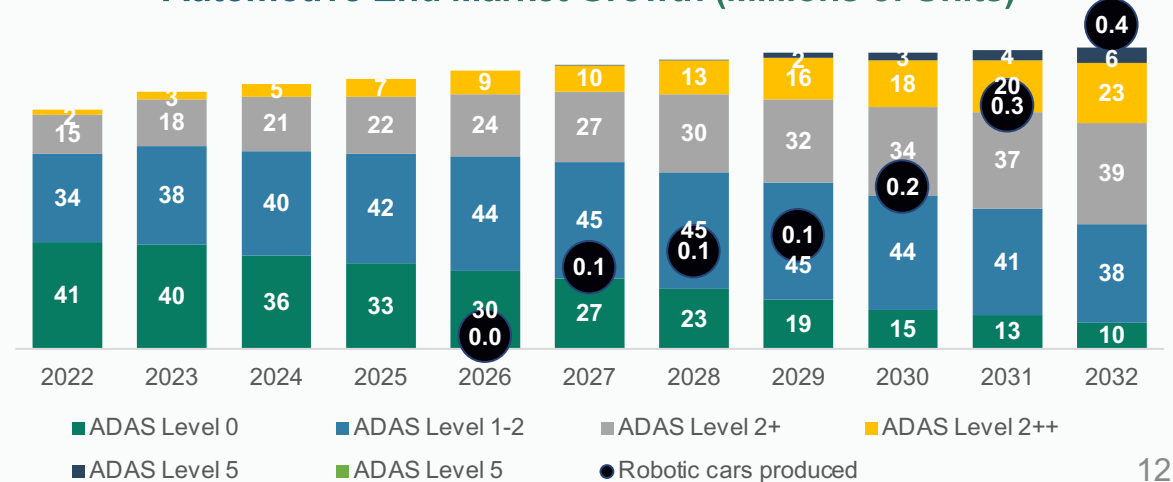
Autonomous Driver Assist and Robotic Vehicles

- Rising adoption of LiDAR technology in robotic cars, automotive guided vehicles (AGVs), unmanned vehicles, and drones is fueling demand
- LiDAR is projected to improve autonomous driving systems, allowing for faster and safer driving judgments
- FMCW Advantages
 - Improved Resolution and Accuracy, Longer Range, Immunity to Interference, Lower power consumption, Better in challenging environments

Total Addressable LiDAR Market (US\$ Billion)



Automotive End Market Growth (Millions of Units)



Key Technologies with Applications to Automotive LiDAR

Gen2 LiDAR (FMCW) depends on PLC chips and is the future of vehicle safety (improved range, resolution and accuracy, immunity to interference, lower power consumption, and better perception in challenging environments).

Gen2 LiDAR (FMCW) Depends on PLC Chips and is the Future of Vehicle Safety

- Improved range, resolution, and accuracy
- Immunity to interference
- Lower power consumption
- Better perception in challenging environments

Enable Key Advantages

- Unique silicon PLC technology delivering smallest, most efficient, highly integrated chips in the industry reducing assembly costs
- Proprietary AI based design, layout, and testing software enables low-cost model
- Special on-chip capabilities including Polarization Beam Splitters
- Low loss, enabling long delay lines essential for maintaining FMCW laser accuracy

PLC Chips Outperform Silicon Photonics Chips, Better Optical Performance for FMCW LiDAR:

- High optical power (~1 watt average)
- Low coupling loss
- Low propagation loss (for delay line)
- High polarization maintenance

Complementary Applications/Markets



Robotics



Quality Control



Manufacturing



Medical Imaging

LiDAR Traction

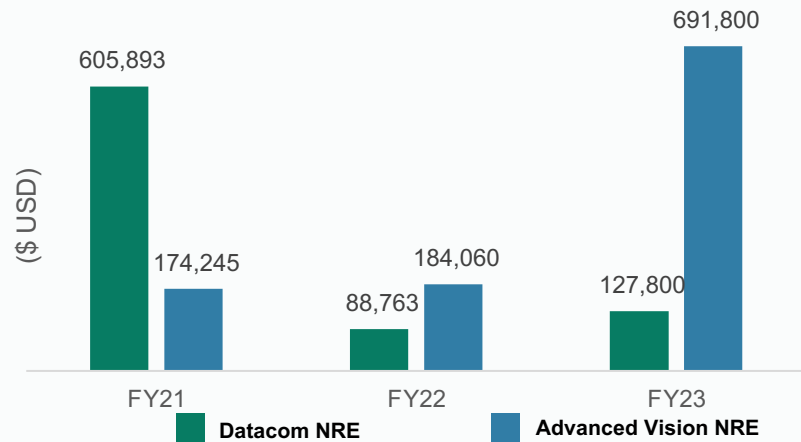
Progress to Date

- LiDAR NRE customer projects initiated in 2017
- LiDAR wafer sales projected to grow over 10x YoY in FY2025
- 5+ tier 1 LiDAR customers in North America and Asia
- LiDAR on a chip integrating all passive optical components in final stages of development
- Highest efficiency long delay-line fully qualified product publicly available

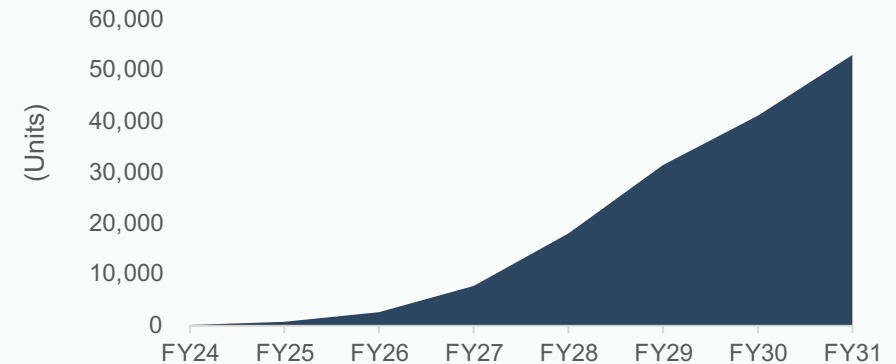
Enableness Advantages

- ✓ **Accelerating Sales** - more than \$60M in annual LiDAR sales under evaluation
- ✓ **Protective Moat** - 5 years R&D developed proprietary, industry leading, PLC miniaturization and integration technologies
- ✓ **IP Advantage** - ENA PLC platform outperforming alternative optical technologies for FMCW LiDAR
- ✓ **Differentiated Experience** - two decades optical design and manufacturing directly applicable to LiDAR solutions
- ✓ **World-Class Team** - history of developing and delivering products to global markets

NRE by Segment



Wafer Sales Pipeline (FY2024 – 2031)



Reaching New Heights

The transition to new leadership and recapitalization has resulted in remarkable progress across nearly every facet of the business, positioning Enablence for significant expansion.

Considerable Growth in Sales Pipeline

- Increased pipeline size **from \$4 to \$80 million**, while simultaneously improving the customer quality moving **from tier 2-3 to tier 1** customers.

Advancements in Design Knowledge and Industry Expertise

- Increased competitiveness driven through new, patentable, design discoveries enabling the creation of **smaller, more integrated chips**.
- Enablence's designs are already capable of **integrating 20-40 components**; competitors are **limited to 5-10 integrated components**.
- Rolling out new design patterns will **increase our design integration by 30% to 30-50 components** on a single chip.

Rise in Recurring Revenue

- Non-recurring engineering revenue, the **leading indicator of future wafer sales**, is **exceeding capacity** predominantly on advanced vision initiatives **indicating significant increases in recurring wafer revenue** for Advanced Vision.

Significant Enhancement in Operational Efficiency

- Management team has driven **operational maturity** across all departments—from resilient supply chain to preventative maintenance—resulting in **higher efficacy**.
- Manufacturing process improvements have **increased production yields to over 90%** for key products and **increased capacity from 200 to 400 wafers per month**.

Release of Innovative New Products

- Launching several products this year, including a complete dense wavelength division multiplexing (**DWDM**) product line and a **fully integrated LiDAR chip** designed in-house.

Primary Use of Funds: Fab Tooling Expansion

Investments in tooling expansion and working capital will position Enablece to increase production to 1,500 wafers per month and create a path to breakeven on a cashflow basis.

Tooling Expansion



Lithography

- Coater/Developer Machine: \$775,000
- Stepper Machine: \$750,000
- **Total: \$1,525,000**



Thin-film

- Chemical Vapor Deposition Machine: \$900,000
- Film Thickness and RI measurement: \$650,000
- **Total: \$1,550,000**



Back End Processing

- Dicing Saw Purchase: \$115,000
- Expand Backend Capacity: \$350,000
- **Total: \$565,000**

Working Capital

- Working capital needs to December 2023
- Additional operating costs associated with increased fab capacity from tooling expansion
- **Total: \$1,360,000**

Total Investment: US \$5,000,000



Appendices

Photonics Overview

Photonics uses light (photons) while electronics uses electricity (electrons) to communicate data between devices. The bridge between electronics and photonics occurs at the end of a fiber optic cable where PLC chips, like those produced by Enablence, convert light to electricity.



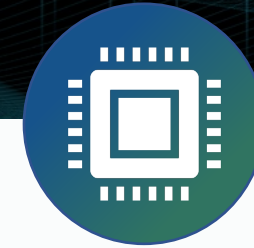
Communications

- Photonics started in the Department of Defense in 1975 to connect computers
- In 1977, fiber optics were first used in Chicago for telecom
- Photonics has overtaken communications because of massive data rate improvements



Advanced Vision

- Early use began with 3D satellite imaging and mapping in 1960s
- In 2005, LiDAR enabled first driverless vehicle to successfully complete DARPA challenge
- Photonics is overtaking cameras in a host of applications because it provides richer data



Computing Revolution

- Artificial intelligence and machine learning will drive greater computing requirements
- Quantum computing will enable exponentially faster computing speeds
- Photonic processors will be orders of magnitude faster than electronic processors

Experienced Leadership Team



Todd Haugen
CEO

Joined: 2022

Prior: Microsoft, Q Strategies, Accenture

Education: MA Computer Science at University of Washington; BA Economics at University of Colorado



Serge Bidnyk
Director – Research & Design

Joined: 2004 – one of original co-founders

Prior: Optenia, Zenastra

Education: PhD, Physics at Oklahoma State University (USA)

Other: Adjunct Professor at University of Ottawa



T. Paul Rowland
CFO

Joined: 2022

Prior: Over 35 years in senior finance roles with private and public companies including Yamana Gold, Barrick Gold, Accenture, and E&Y

Education: CPA (Canada; Ontario); CPA (Illinois); CGMA; Honors BSc at Western University (Canada)



Ksenia Yadav
Director – Engineering, AI/ML

Joined: 2011

Prior: Cisco, Communications Research Centre

Education: PhD, Electrical and Computer Engineering at Carleton University



Ashok Balakrishnan
CTO

Joined: 2004 – one of original co-founders

Prior: Optenia, SDL (now JDS Uniphase), Mitel Semiconductor (now Zarlink), US National Institute of Standards and Technology

Education: PhD, Physics at University of Toronto (Canada)

Why Planar Lightwave Circuits in Datacom

Telecommunications equipment, cloud service providers, and data centers are driving the rapidly growing demand of reliable data communication solutions with higher bandwidth, longer reach, and lower power consumption. The transmission of bandwidth using single optical fiber has reached its limits, introducing the need for new solutions to support connectivity demands. The use of PLCs dramatically expands the capabilities of fiber optics.



Cost-Effectiveness

- Installing additional optical fiber is a costly solution. The use of **Wave Division Multiplexing (“WDM”)** to transmit or receive multiple signals has proven to be a cost-effective solution to increase the capacity of existing fiber cable.



Precision

- High levels of accuracy in the splitting and combining of signals which is essential for fiber optic communications.
- Manufactured with multiple inputs and outputs, allowing for more complex optical routing configurations.



Size

- Unlike traditional splitters which use bulky components, a PLC is compact and can be easily integrated into existing optical systems.



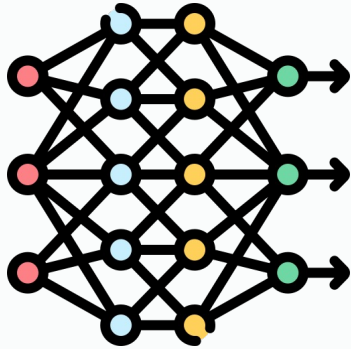
Reliability

- With no moving parts or electrical components, PLCs are durable and can withstand stress from harsh environments.

ML and AI in Design, Fabrication, and Analysis

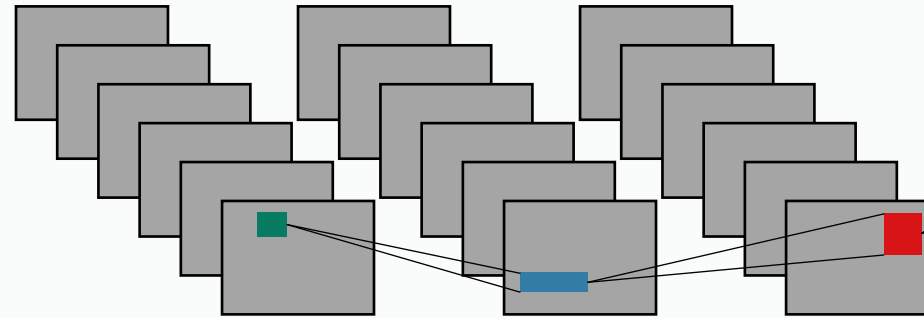
Enablence has developed a tightly coupled design-to-manufacturing process that is able to provide in-situ monitoring of wafer fabrications with a possibility of real-time process adjustments

Deep Network



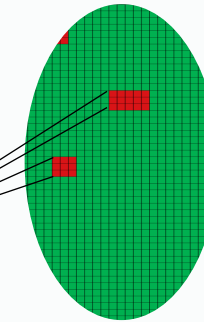
- The use of deep learning / neural networks optimizes performance and design tuning resulting in design times faster than competitors

Feature Learning



- Convolutional layers apply learned filters to input images to create feature maps
- Stacking convolutional layers allows layers close to the input to learn low-level features and layers deeper in the model to learn high-order or more abstract features
- Addition of pooled layers reduces the size of feature maps which makes computation faster

Mapping



- Proprietary process results in designs 250x faster than competitors

Enablement Platform Relative to Competition

