



Last update in
Photonics technology
towards edge performance sensors

NANOELEC.

Join us at IRT Nanoelec webinar
On Monday, July 6th 2020, 5pm CET

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Live webinar July 6th 2020



APPLIED SILICON PHOTONICS FOR TODAY AND FOR THE FUTURE

Eleonore HARDY, CEA-Leti

06/07/2020



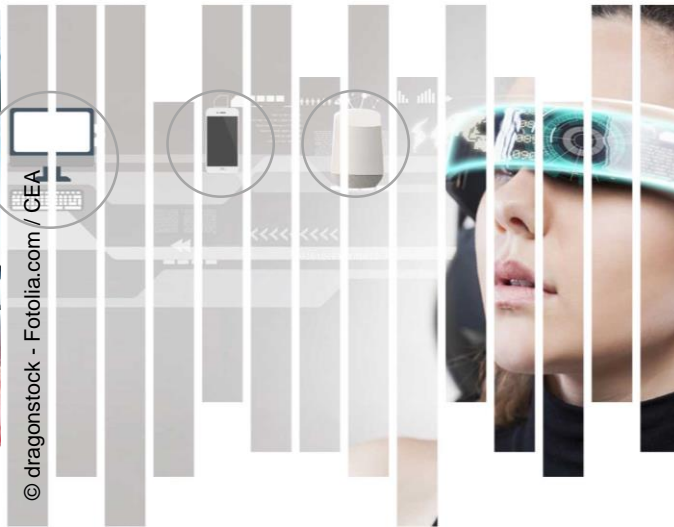
ANYTIME, ANYWHERE, ANY DEVICES



World Digitalization



Mobility



Digital Life



e-Health

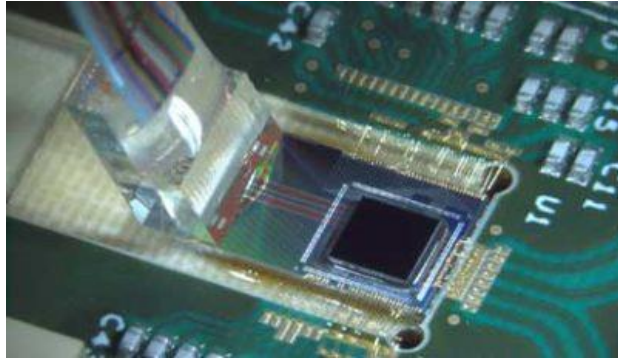
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MIGRATION TO 400G AND BEYOND

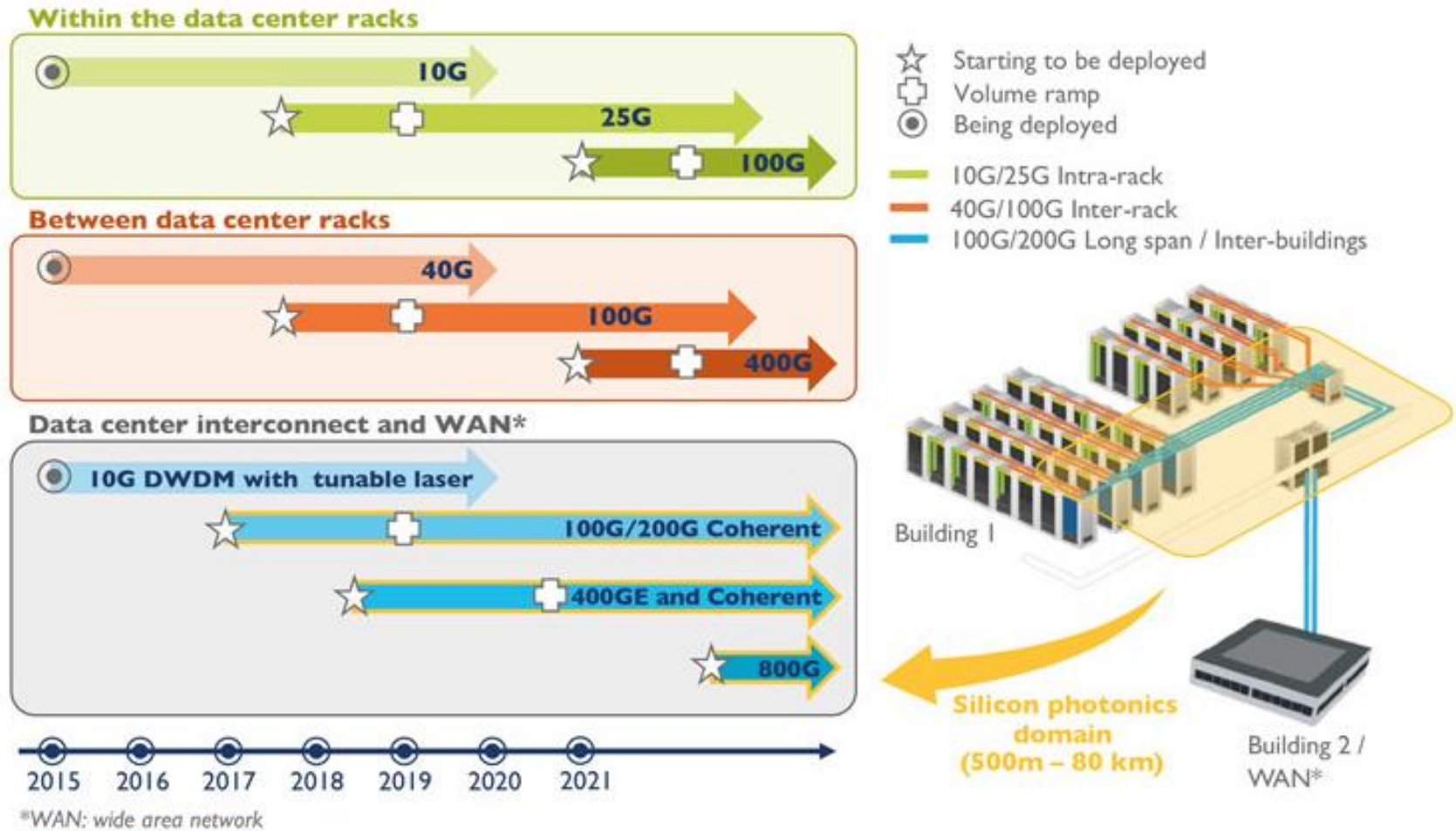


CEA-Leti CWDM transceiver scalable to 400G

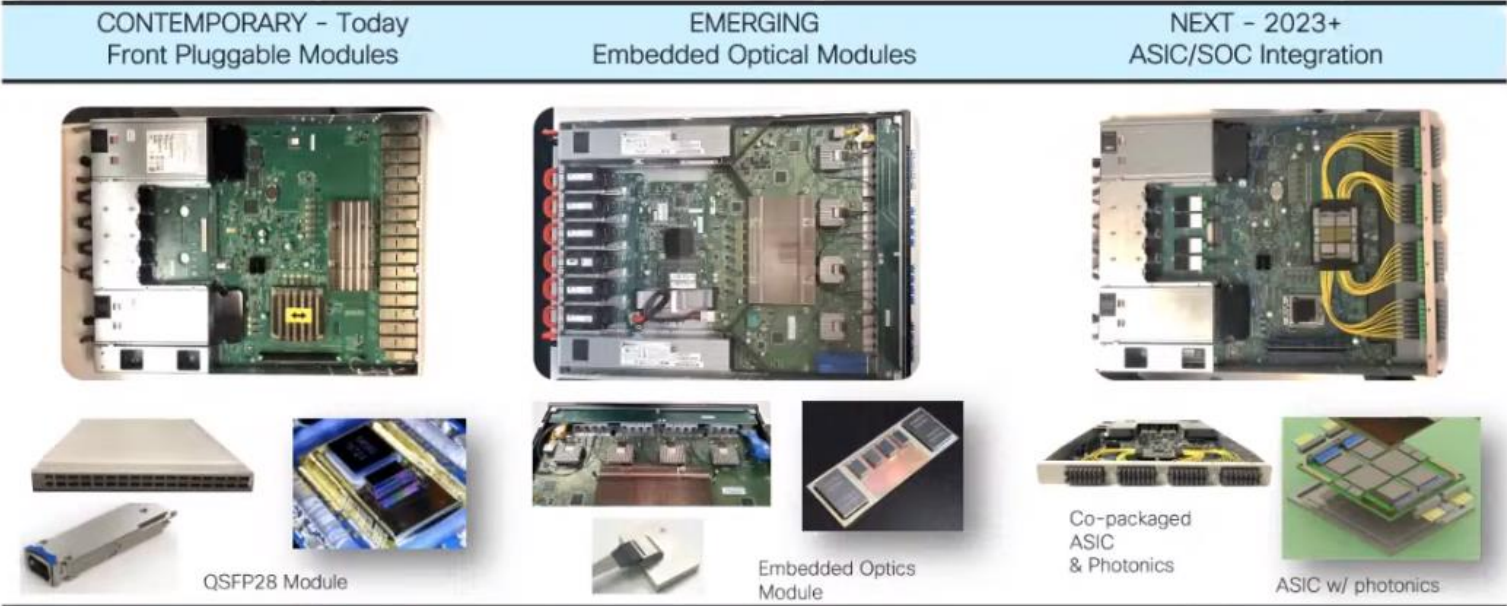


Source: Intel

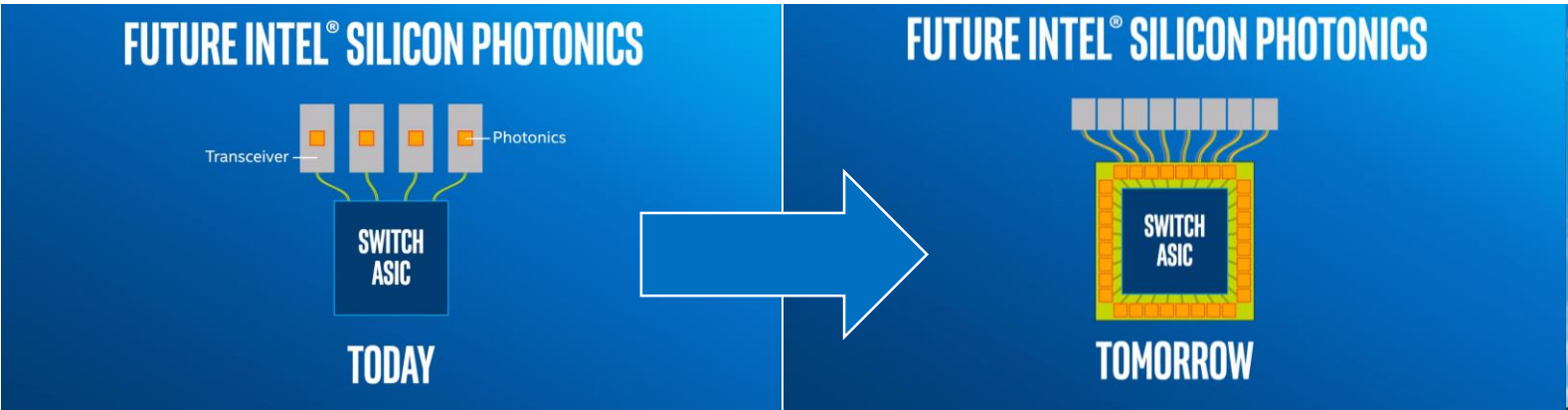
(Source: Optical Transceivers for Datacom & Telecom 2020 report, Yole Développement, 2020)



INTEGRATION WITH ASIC



Source: CISCO



Source: Intel

HETEROGENEOUS III-V ON SILICON INTEGRATED LASERS

1310 / 1550 nm
Laser Array
C/D-WDM
Tunable

MODULATORS

Pure Silicon Phase Modulators
Heterogeneous III-V on Silicon Phase & Absorption Modulators

PHOTODETECTORS

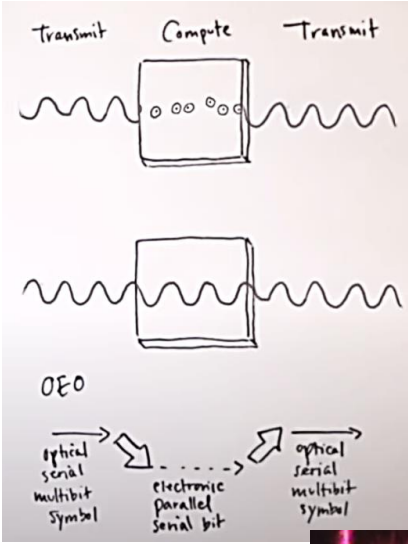
Surface and Wave Guide photodetectors
Monitoring & High Speed

LIGHT ROUTING, FILTERING & BEAM FORMING

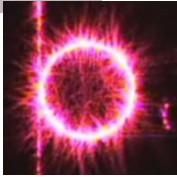
Fibre Coupler
Waveguides
Mux/Demux

ENABLING FULLY INTEGRATED PHOTONIC CIRCUITS

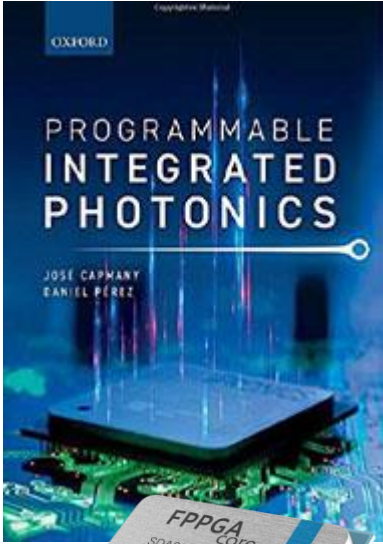
COMPUTING: SMARTER, FASTER, BETTER



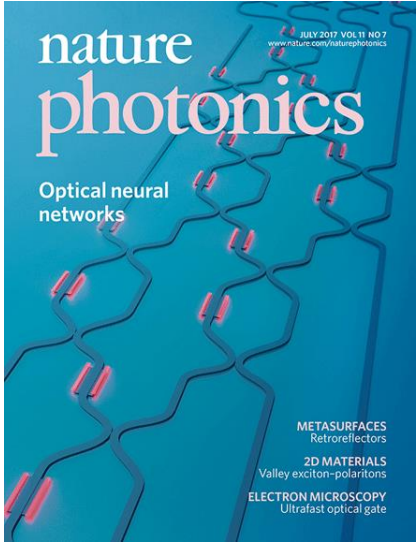

Hewlett Packard
Enterprise



Optical

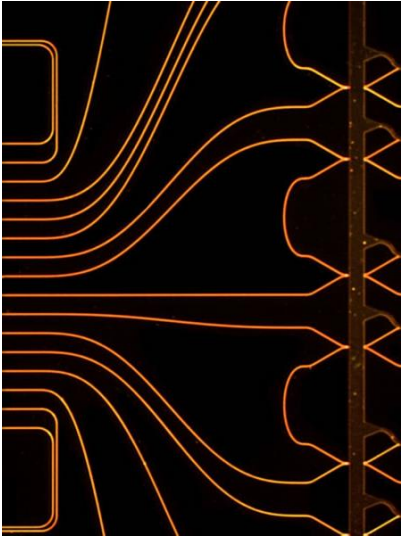


Programmable




LIGHTELLIGENCE

Neuromorphic

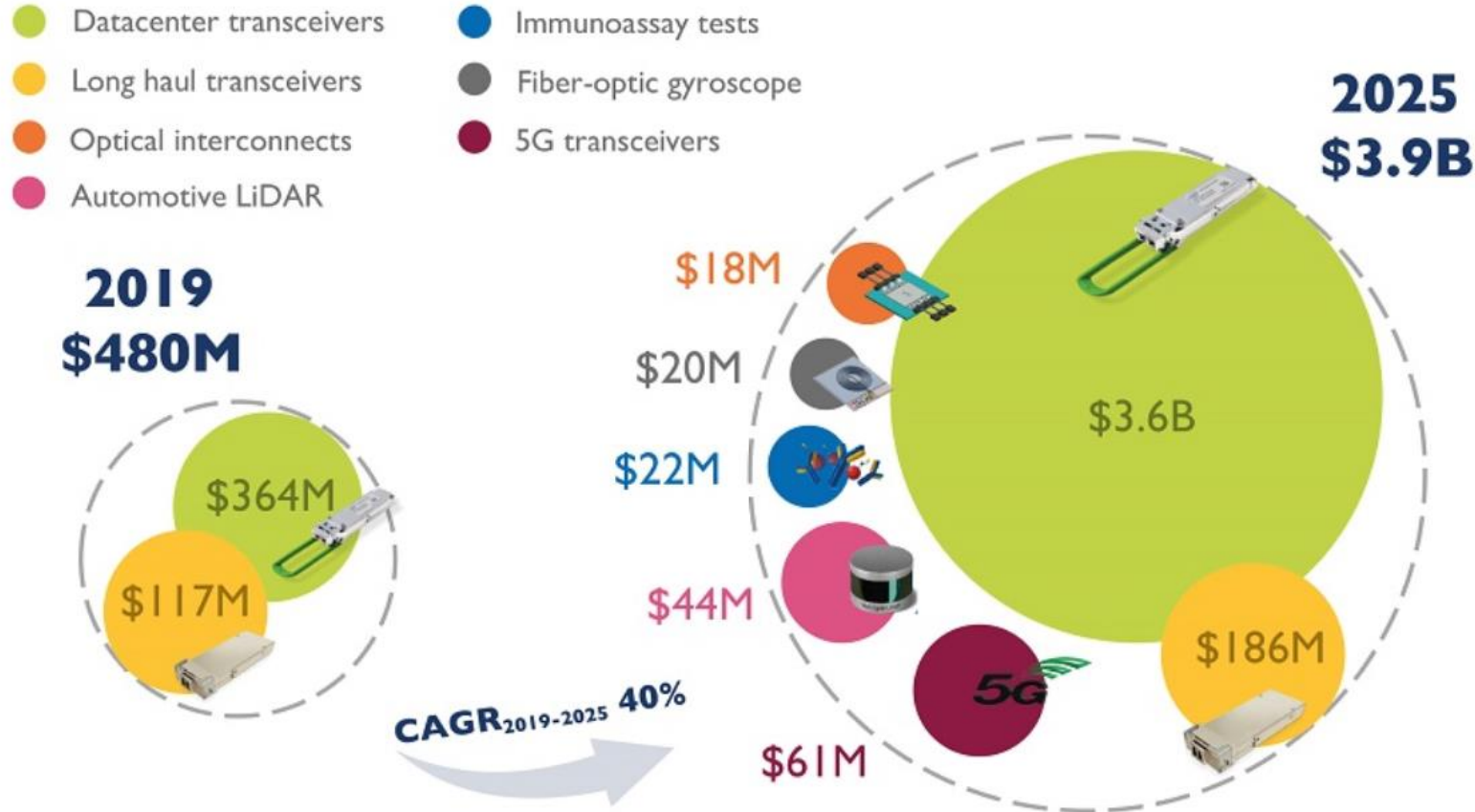


XANADU

Quantum

SILICON PHOTONICS MARKET: ON THE RISE

(Source: Silicon Photonics 2020 report, Yole Développement, 2020)



“Silicon Photonics Market will worth \$3.0 billion by 2025.”

Source: Silicon Photonics Market Global Forecast to 2025 by Markets and Markets

Thank you for attention



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