

PHOTONIC COMPONENTS MARKET: ANALYSIS AND TRENDS



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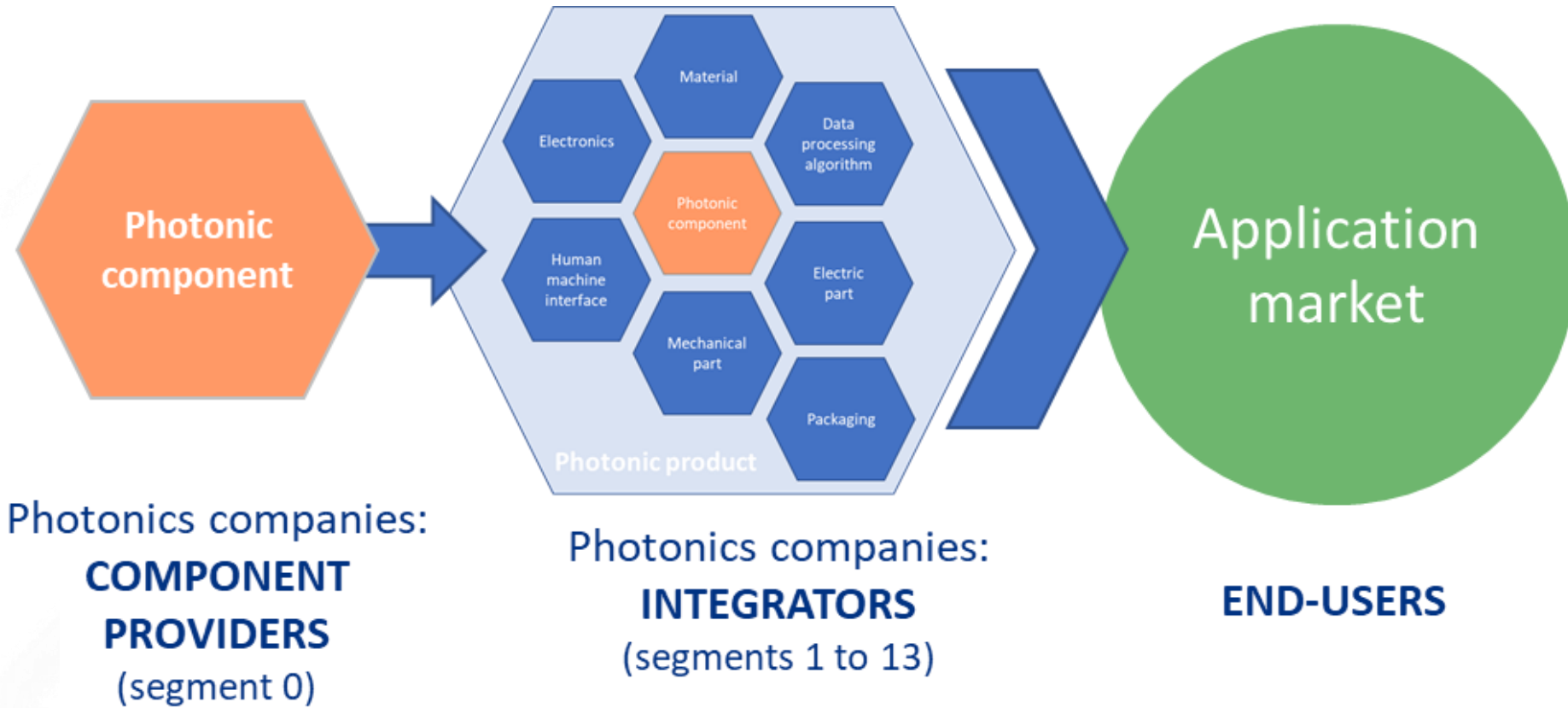


Introduction

- ➔ The global market of photonic products and systems is growing rapidly, thanks to the underlying base of materials and photonic components such as sources, sensors and optics.
- ➔ Photonic component revenues are growing at a faster rate than system revenues, at 8-9% versus 6%, respectively, as photonics content continues to increase in systems across many industries.
- ➔ The market was valued at \$115 billion in 2022 and is projected to reach \$168 billion by 2027, presenting a significant growth opportunity for manufacturers.



Global Market of Photonic Components





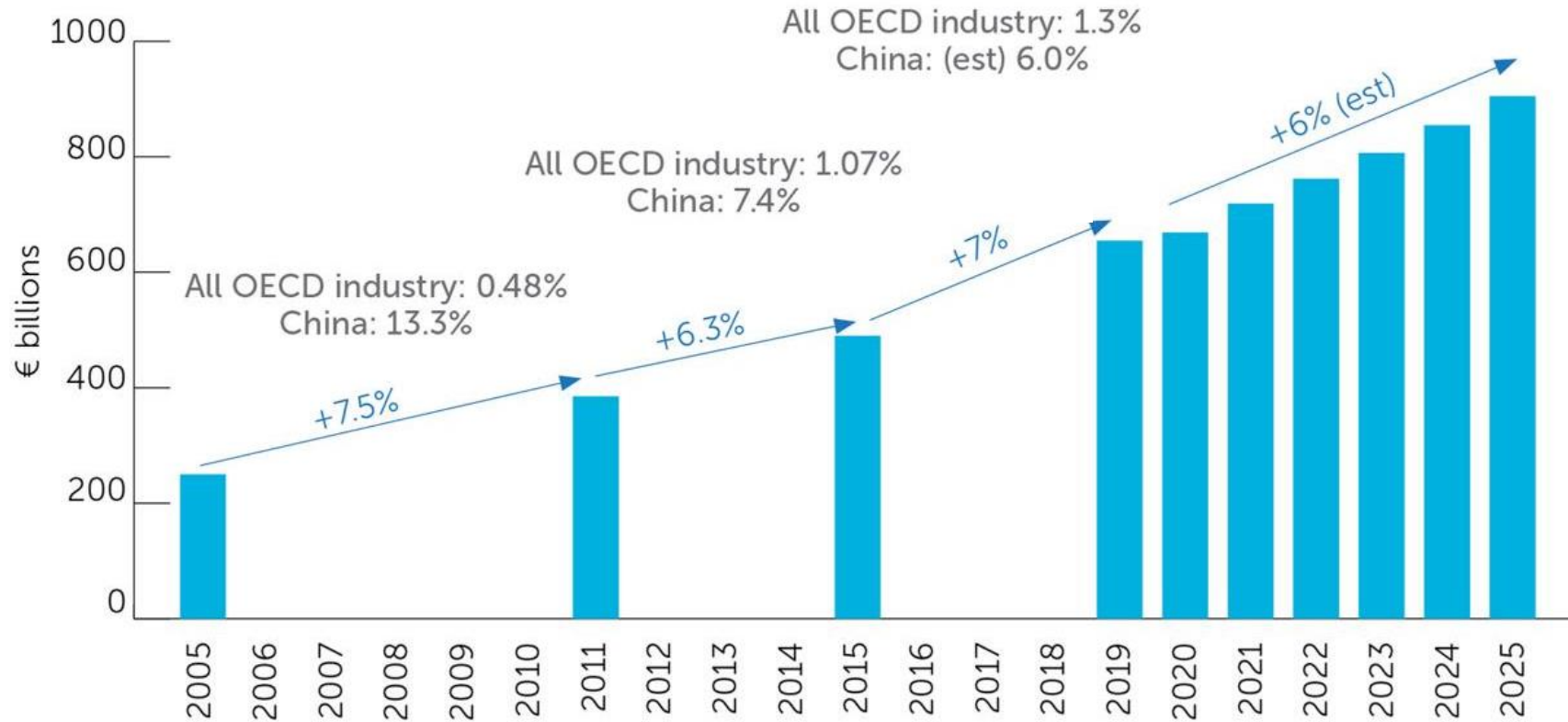
Global Market of Photonic Components

Photon sources		Optical components		Photonic sensors
LEDs	Lasers	Discrete optics	Optical fibers	Single and imaging detectors
Low, medium, and high-power LED Organic LED (OLED)	Diode VCSEL Fiber Solid-state CO2 Excimer QCL/ICL Others	Regular lenses Aspherical / Free-from lenses Polarizers Filters & coatings Gratings Mirrors	Preforms Single-Mode Fibers Multimode Fibers	Complementary metal-oxide semiconductors (CMOS) Charge-coupled devices (CCD) Photodiodes Si Photodet., SPAD Others
Photonic Integrated circuits (PIC)				



In recent years, the photonics industry has enjoyed strong, steady growth, well ahead of the expansion of global GDP.

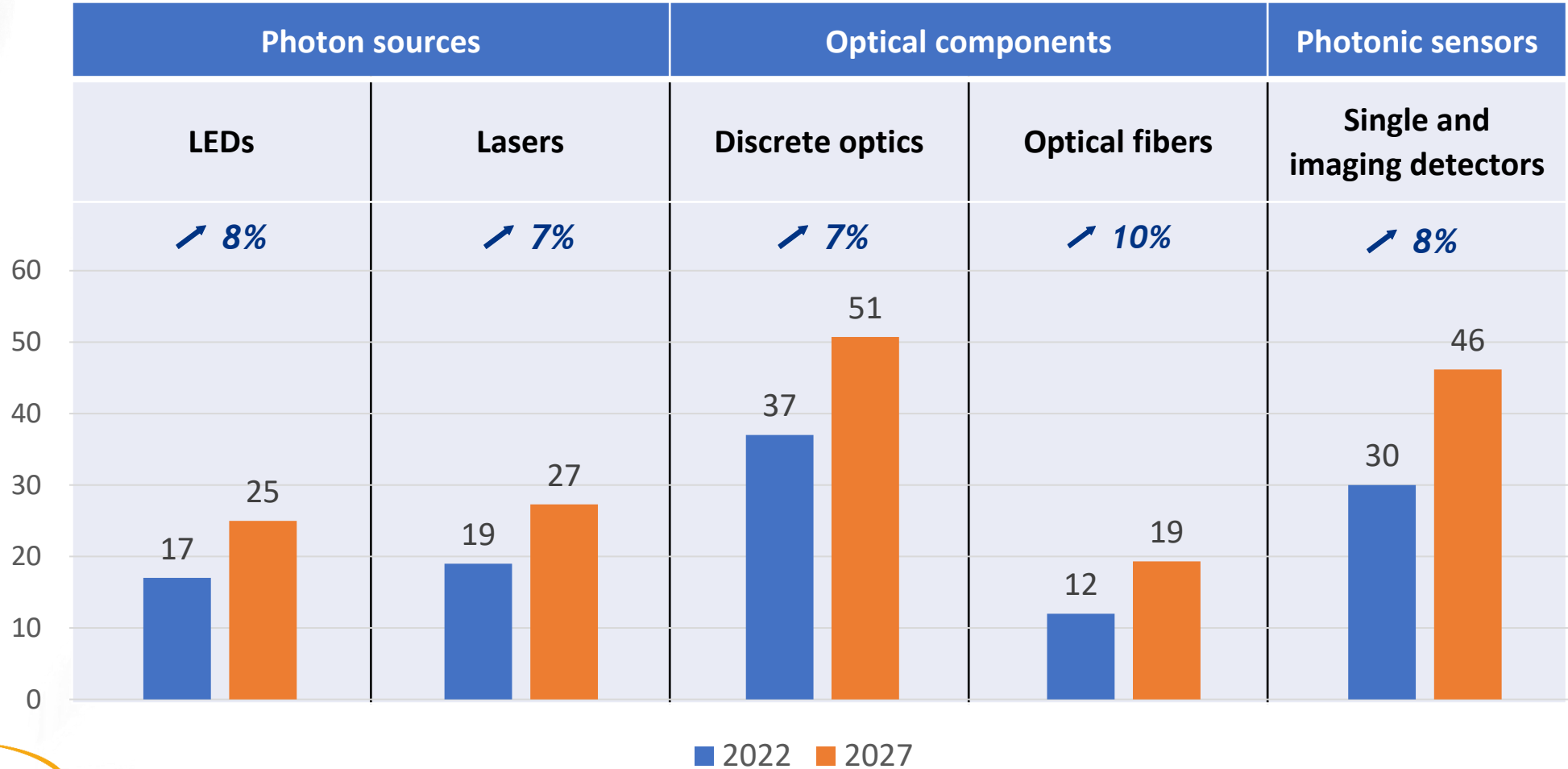
Photonics worldwide market size



Source: Market Data and Industry Report 2020, Photonics21 & Tematys.



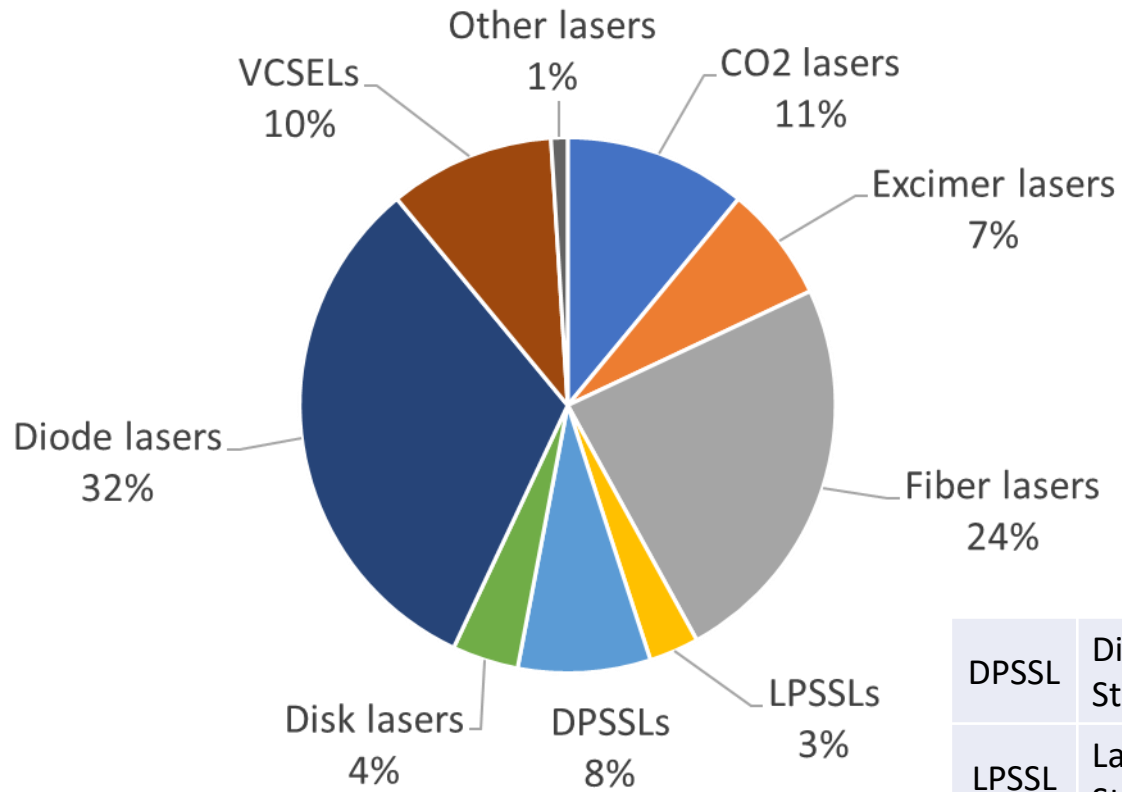
Global Market of Photonic Components (\$ Billion)





Laser sources - Breakdown by technologies

Laser sources - Breakdown by technologies

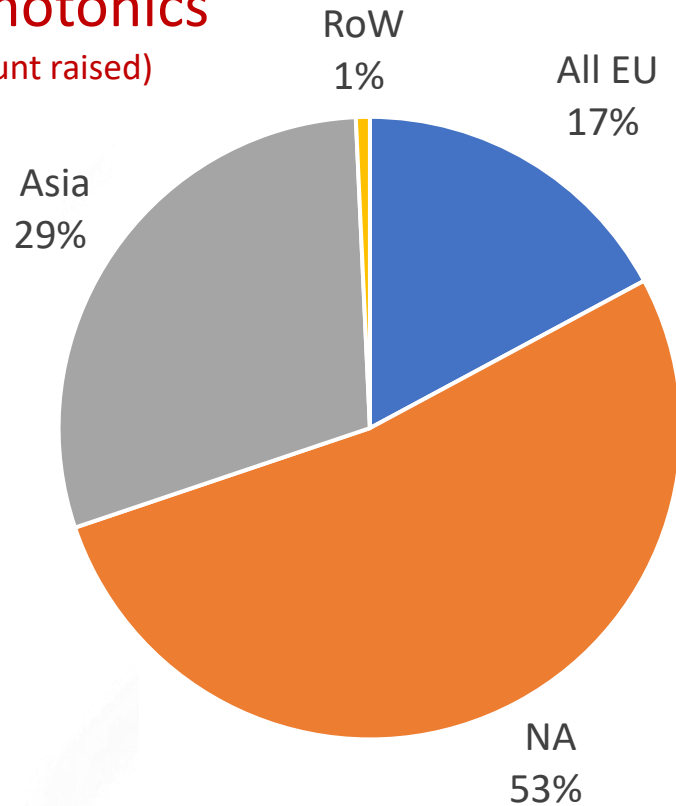


DPSSL	Diode Pumped Solid State Laser
LPSSL	Lamp Pumped Solid State Laser

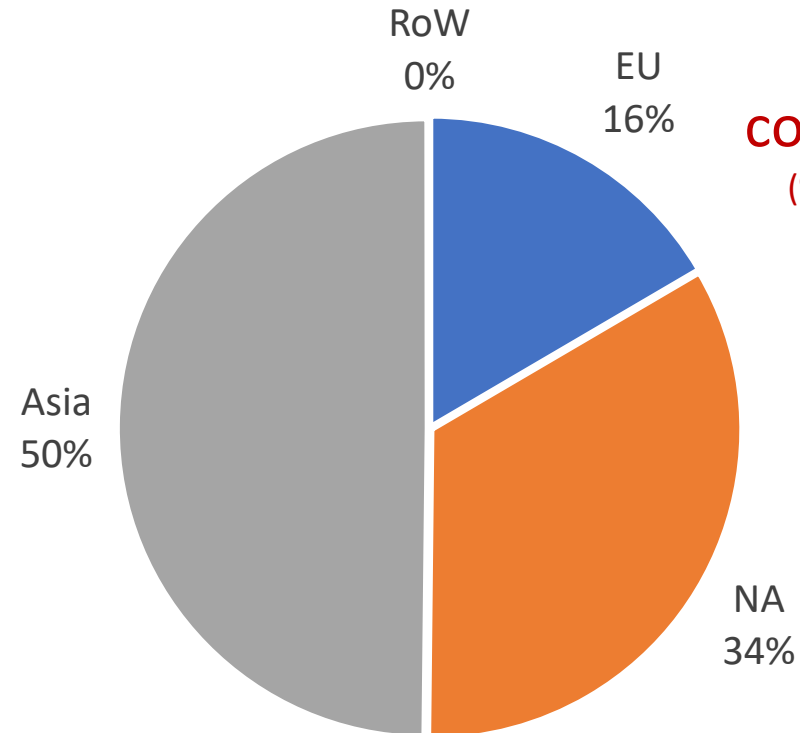


Amounts raised by Photonics companies from 2019 to 2023

All photonics (% Amount raised)



Photonic components (% Amount raised)



IPO, loans and public subsidy are not taken into account



Global trends that should impact the Photonic component market

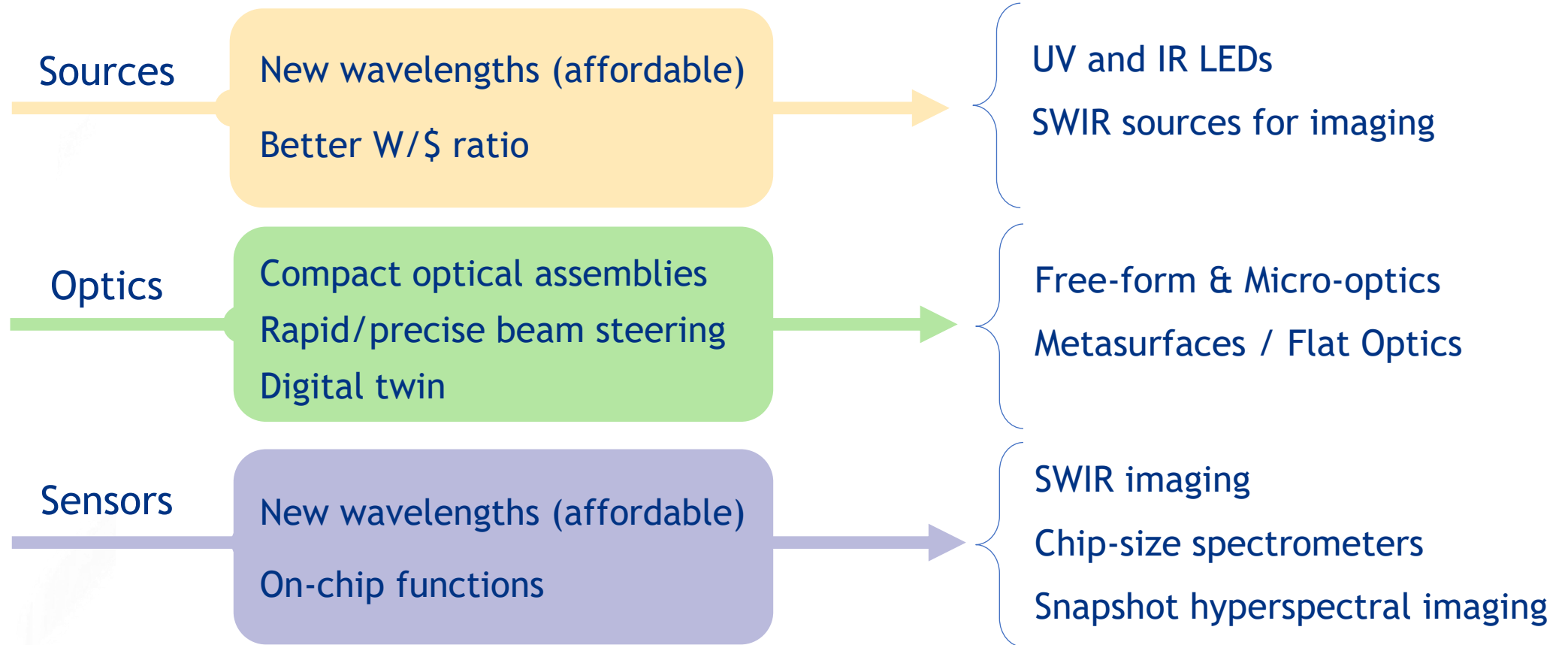
- ➔ **Sustainability and environment challenges:** the increasing need for advanced instrumentation, better processes and remedying solutions
- ➔ **Escalating Need for High-Speed Data Transmission:** As digitalization, machine learning, and the Internet of Things (IoT) continue to evolve, they are generating an unprecedented volume of data.
- ➔ **Expansion of Remote Vision and Sensing Technologies:** augmented and virtual reality (AR/VR), autonomous vehicles and Advanced Driver-Assistance Systems (ADAS), process automation, and unmanned reconnaissance
- ➔ **Advancements in Digital and Additive Manufacturing:** increased precision, reduced waste, and greater design flexibility, revolutionizing traditional manufacturing processes.
- ➔ **Rapid Evolution in Healthcare and Life Sciences:** advanced technologies for better diagnostics, personalized medicine, and innovative treatment methods.
- ➔ **Growing Geopolitical Instability and Its Impacts:** Governments will be looking to innovate in defense and surveillance and strengthen their supply chains.



Trends in Photonics components

MAIN TRENDS

RECENT AND EMERGING TECHNOLOGIES





Key takeaways

- ➔ **More than ever, Photonic components are key enablers for facing global challenges.**
- ➔ **Projected increase of over \$50 billion between 2022 and 2027: significant growth opportunity for manufacturers.**
- ➔ **Miniaturization of photonic components is going fast and the question is "Who is going to catch the value ? i.e. who will take the risk and gather the capital for maturing industrial processes and build the plants (remember microelectronics / impact of the Chips Acts in EU and US).**
- ➔ **Bring critical production locally:** Given the supply chain problems of the recent past, customers are willing to pay a premium for local production of relevant components. This will open up new opportunities in the Photonics component segment.



Thank You !



Exploration of Photonics markets

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