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# EPIC Quantum Computing Platforms

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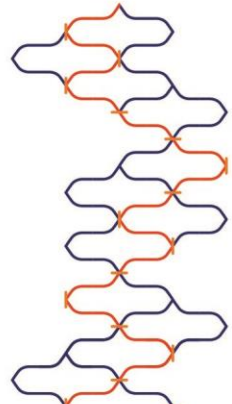
A microscopic view of a quantum photonic chip. The chip is dark with intricate gold-colored circuitry. A bright blue light source is visible, creating a strong glow and highlighting the complex patterns of the chip. The text "Mission statement" is overlaid in white at the top center.

# Mission statement

Make the world's best quantum photonic hardware

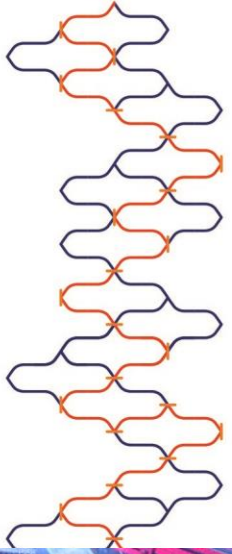
# Who are we

- Young company (founded Jan 2019), 13 people
- Spinout of University of Twente, located on campus
- 2020 seed funding round Forward One, OOST NL



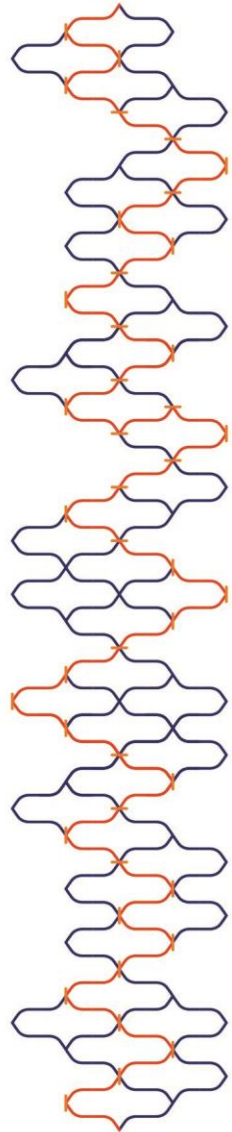
# Photonics leads Quantum

- Photonics is one of two architectures that has a quantum advantage
- Advantages of photonics:
  - Scalable
  - Highly integrated with classical tech
  - Operates at room temperature



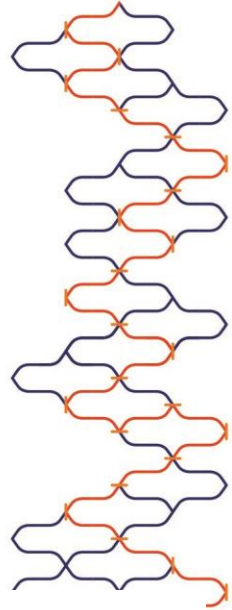
# QuiX leads Quantum Photonics tech

- We have the world's largest, best quantum photonic hardware (more on this in a minute)
- We have delivered on our tech milestones in a market filled with hype



# QuiX is market leader in Quantum Photonics

- 4 sales to major academic / startup players
- Collaborations with major universities



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## French quantum industry chooses photonics – QuiX delivers!



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## QuiX makes first sale

1 April 2021 – QuiX, the Dutch quantum photonics company, announced today that it has sold its first quantum photonic processor. The customer is Qontrol, a quantum technologies company from the UK.

Quantum photonic processors are the central component of a photonic quantum computer. Such devices could be used in the future for carrying out information processing tasks that are beyond the capabilities of present supercomputers.



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## QuiX delivers its processor to Germany!

QuiX Quantum, the worldwide market leader in quantum photonic processors, has delivered a 12-mode quantum photonic processor to Germany, for a collaboration with researchers from Paderborn University. This photonic processor is the most powerful in the world.

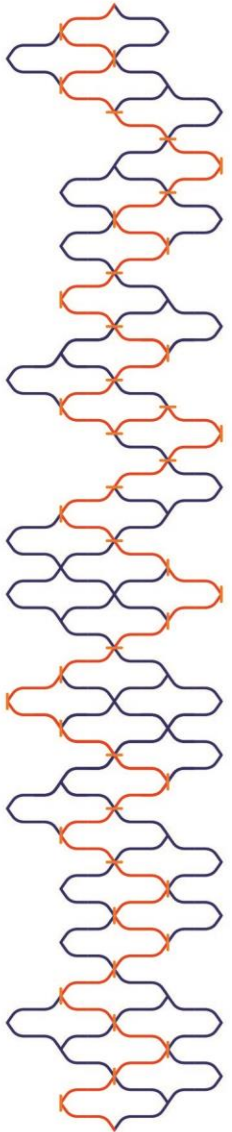
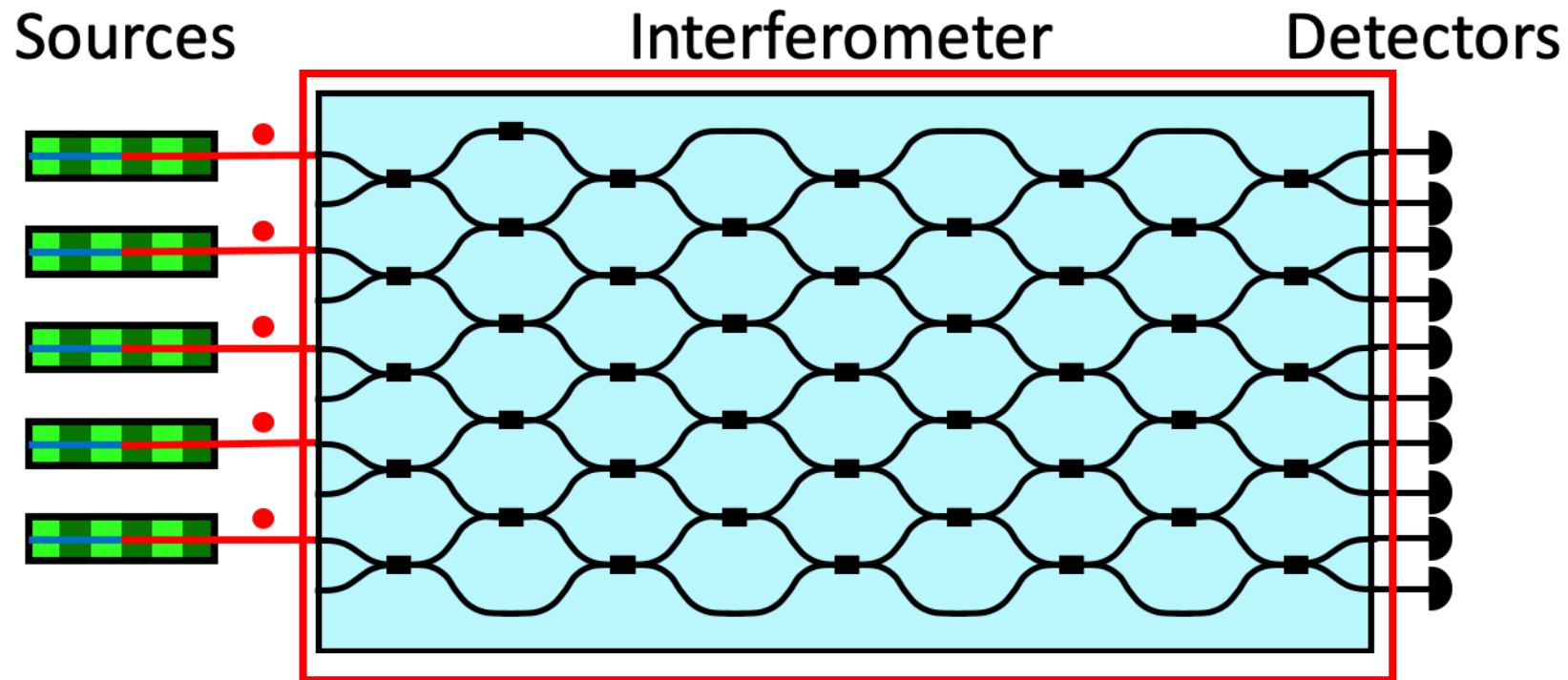
Quantum photonic processors are the central component of photonic quantum computers, holding great promises in performing certain computations faster than current supercomputers. Machine learning, chemistry and finance are believed to be revolutionized by such quantum technology.

Quantum photonic processors are the central component of a photonic quantum computer. Such devices could be used in the future for carrying out information processing tasks that are beyond the capabilities of present supercomputers.

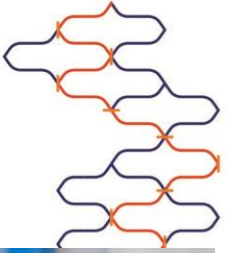


# The product

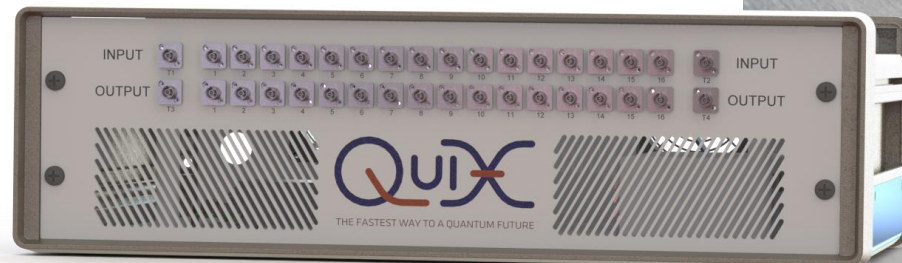
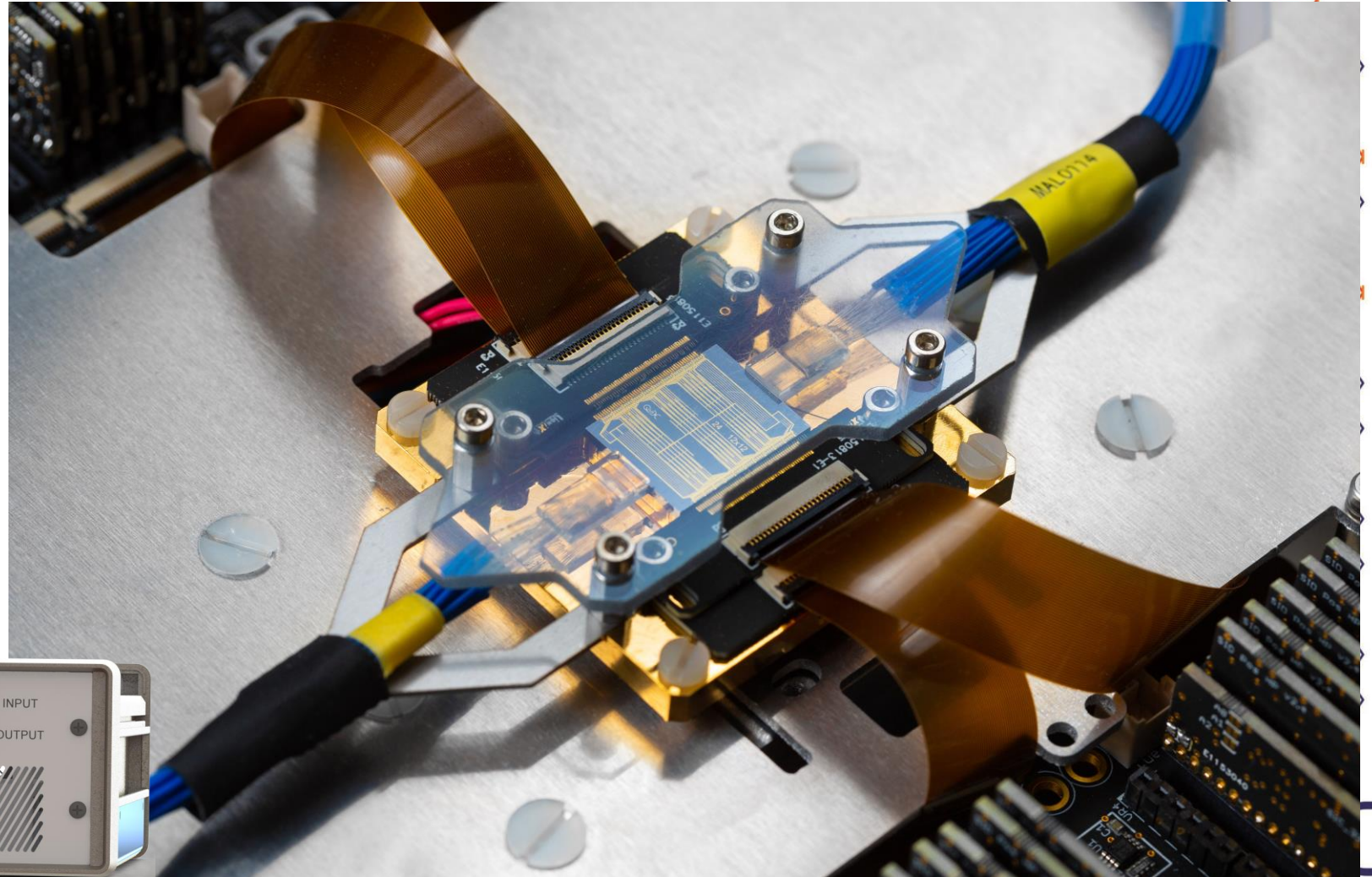
- Quantum photonic processor → large scale, tunable linear interferometer
- Heart of a NISQ photonic quantum computer



# Our product: 12 mode photonic processor



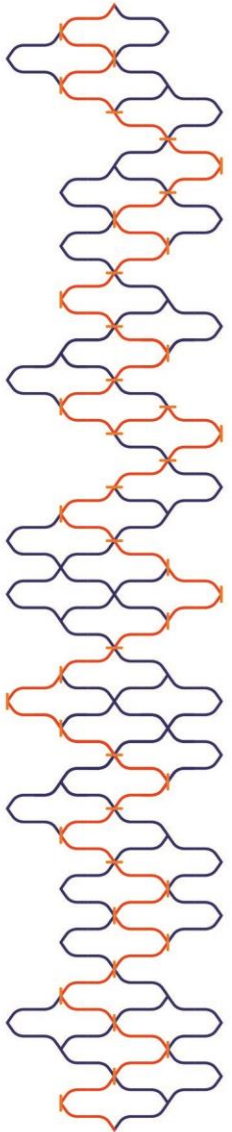
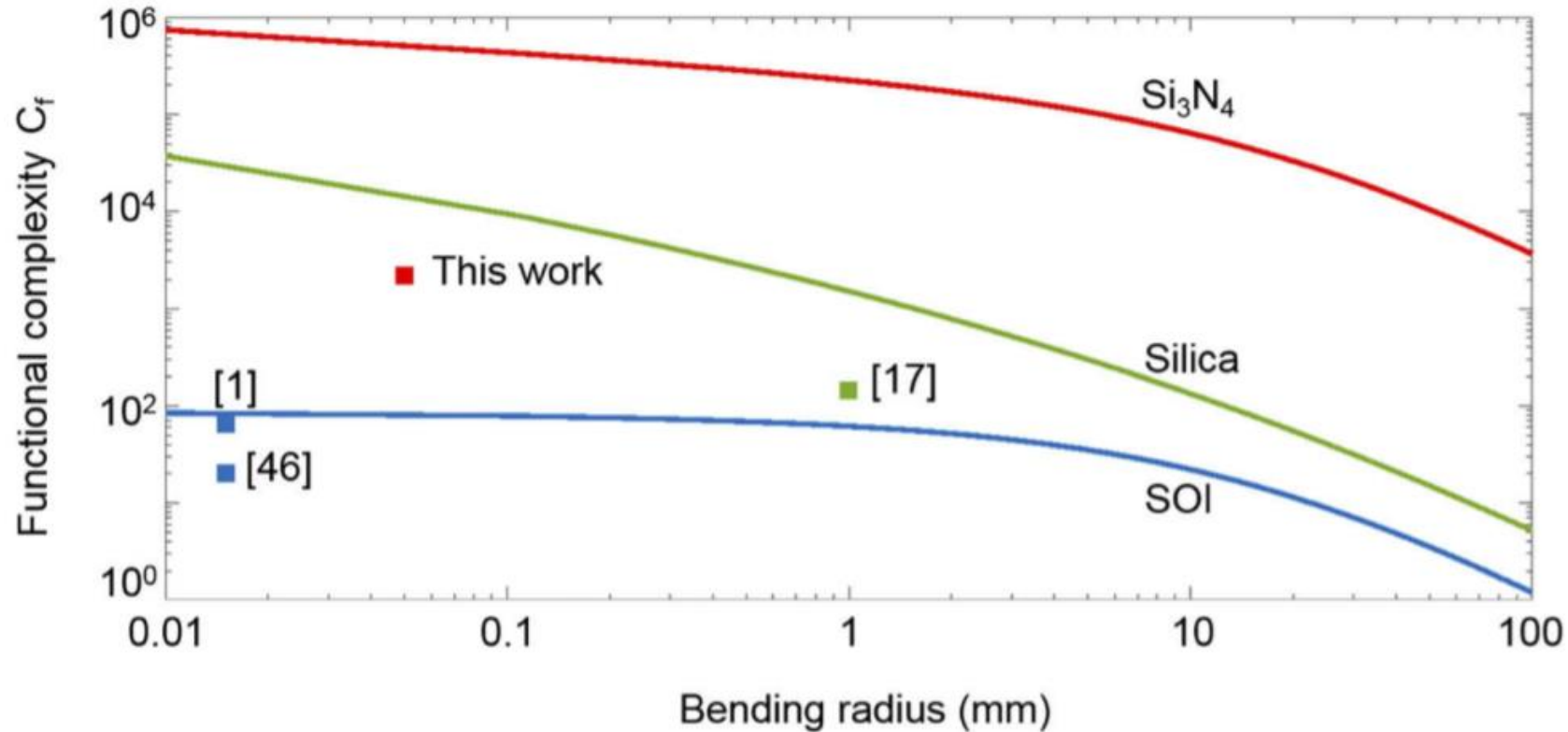
- 12 qumodes -> record size
- 2.5 dB optical loss -> record low losses
- 99% transformation fidelity -> record F
- Plug-and-play, ready to go





# Scalability

- SiN is the only technology capable of scaling to useful system sizes



# QUIX WEBINAR

QUANTUM

20-mode quantum  
photonic processor

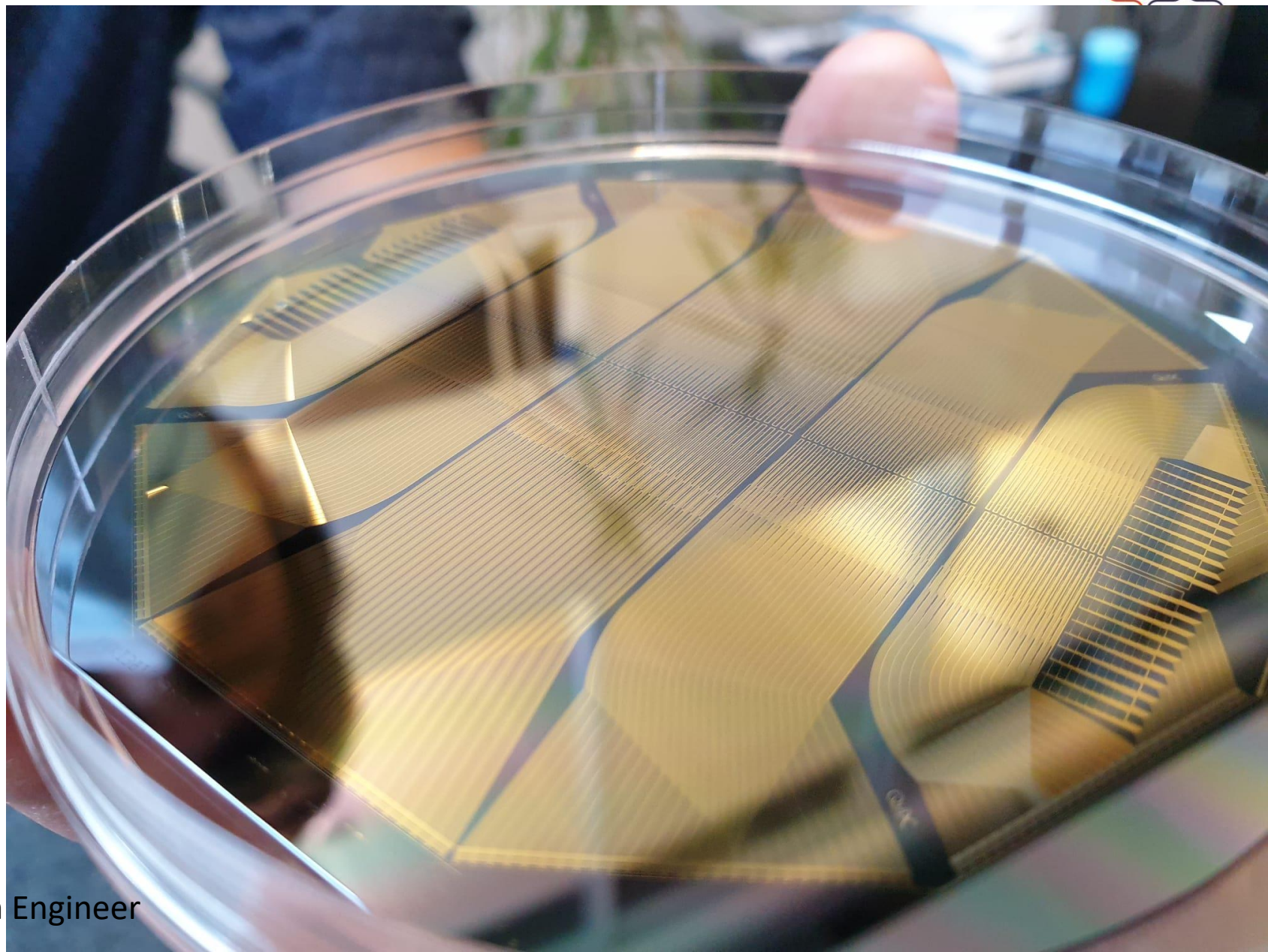
March 3, 15.00 CET



# Teaser for the future

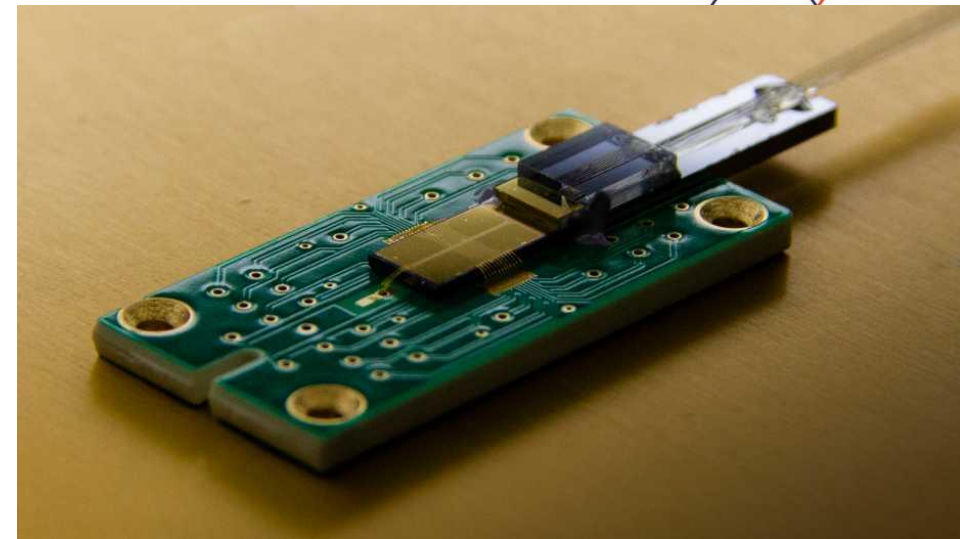


- Wafer-sized photonic circuits



# QuiX believes in open-access model

- **Looking for:**
  - Electronic packaging with more than 2000 connections
  - Quantum software partners
  - Hardware ecosystem collaborators
- **Offering:**
  - NISQ Photonic quantum computing as a product
  - Alternate applications of steering light in complex patterns (e.g. ion trap / cold atom / diamond / atomic clock control)



# Afsluiter presentatie

QR Code for webinar:

