

The Future of Computing Runs on Light



Who is Q.ANT?

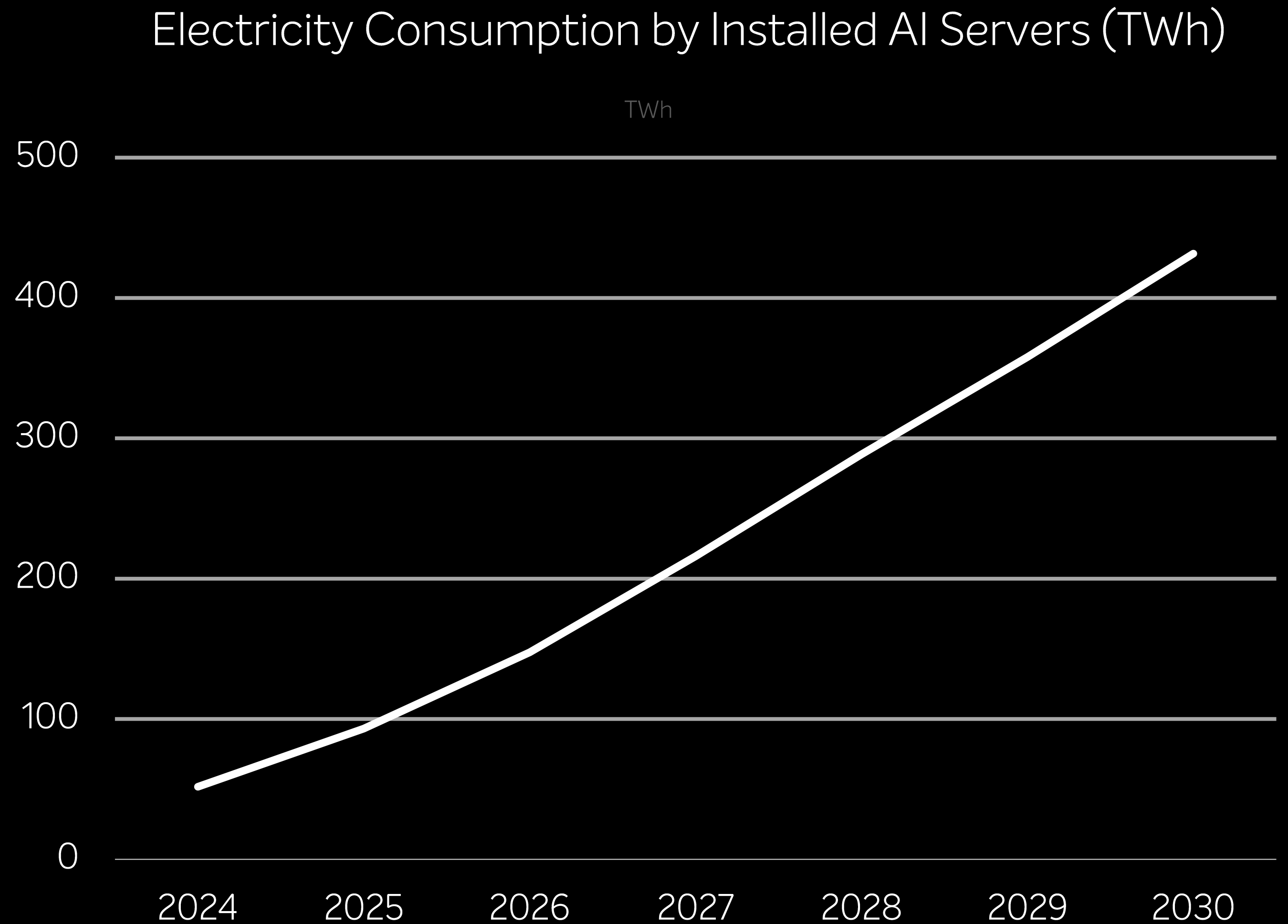
Series A in 2025, \$80M

Photonic Compute Devices

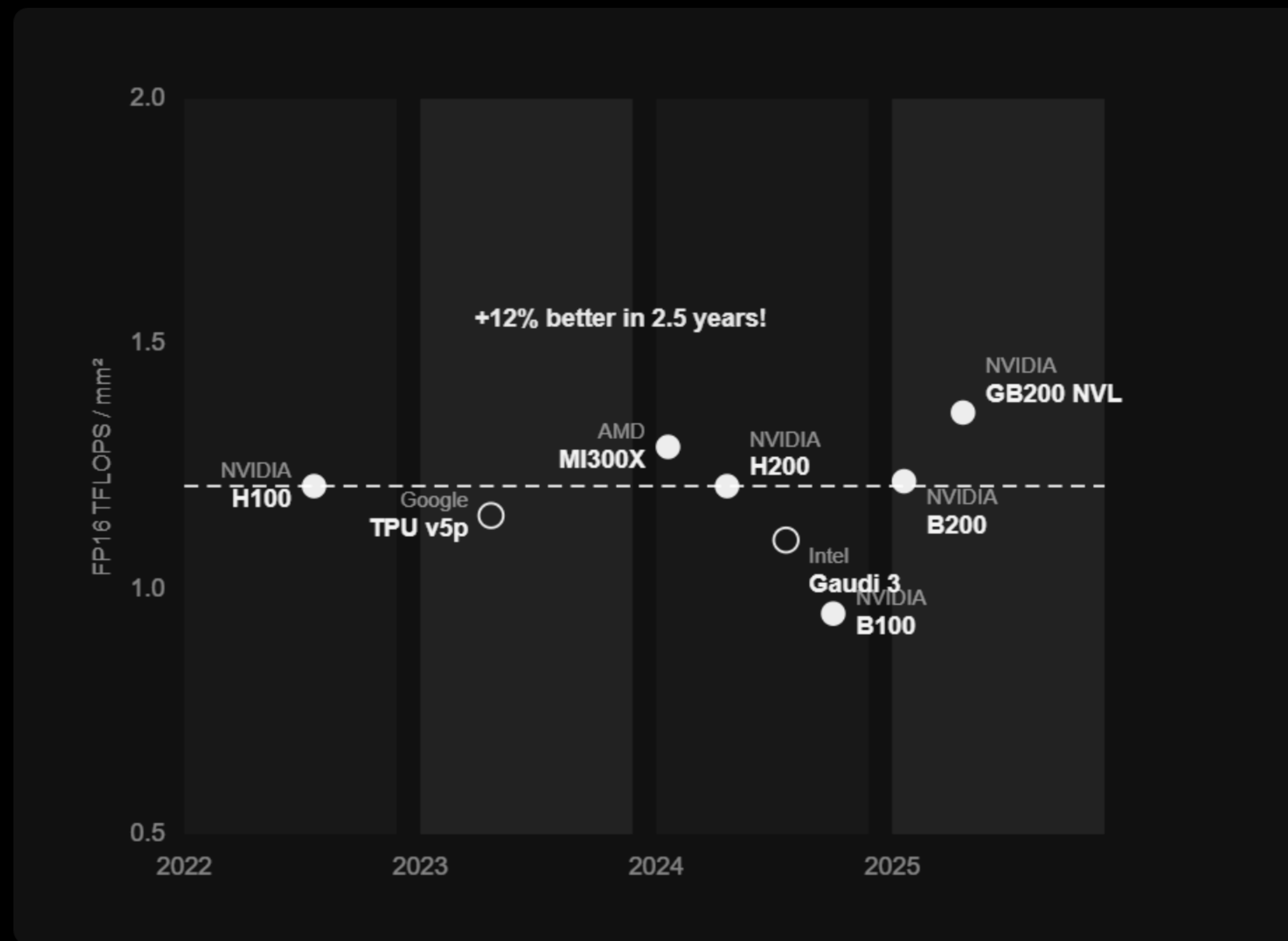
Designed and made in Germany – from chip to device

Delivering systems to LRZ, JSC, IONOS – more lined up

Why Photonic Computing?



Why Photonic Computing?

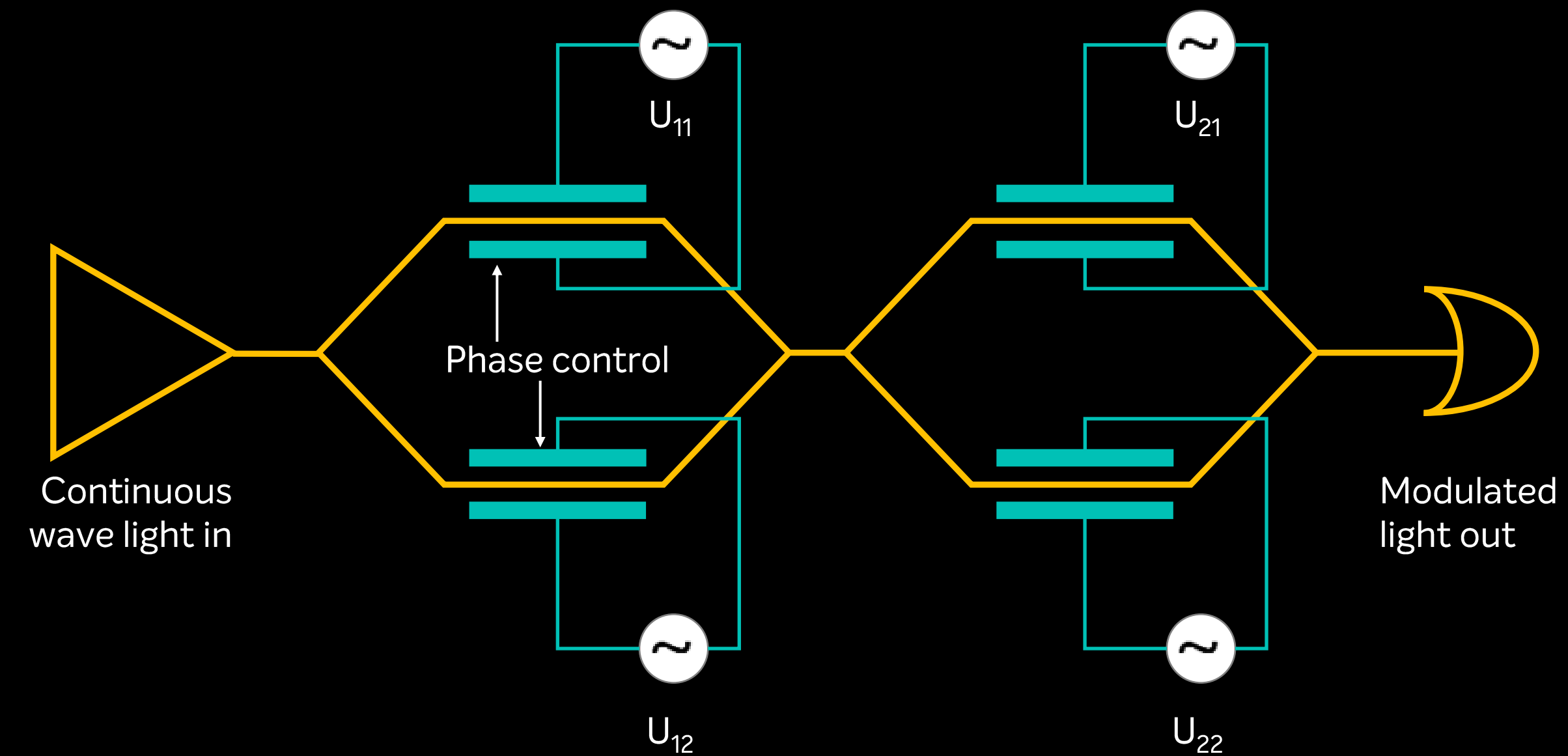
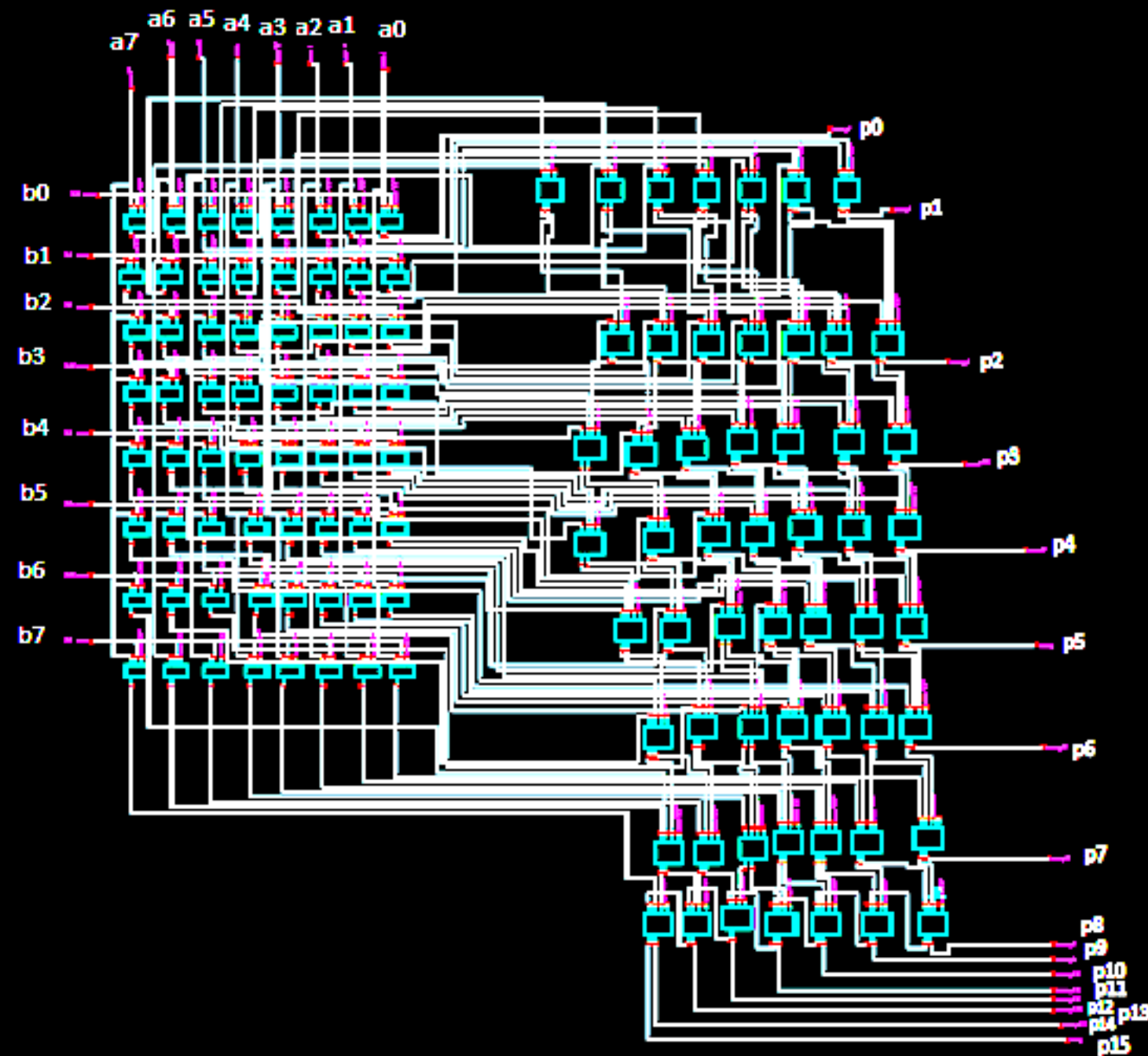


What is Photonic Computing?

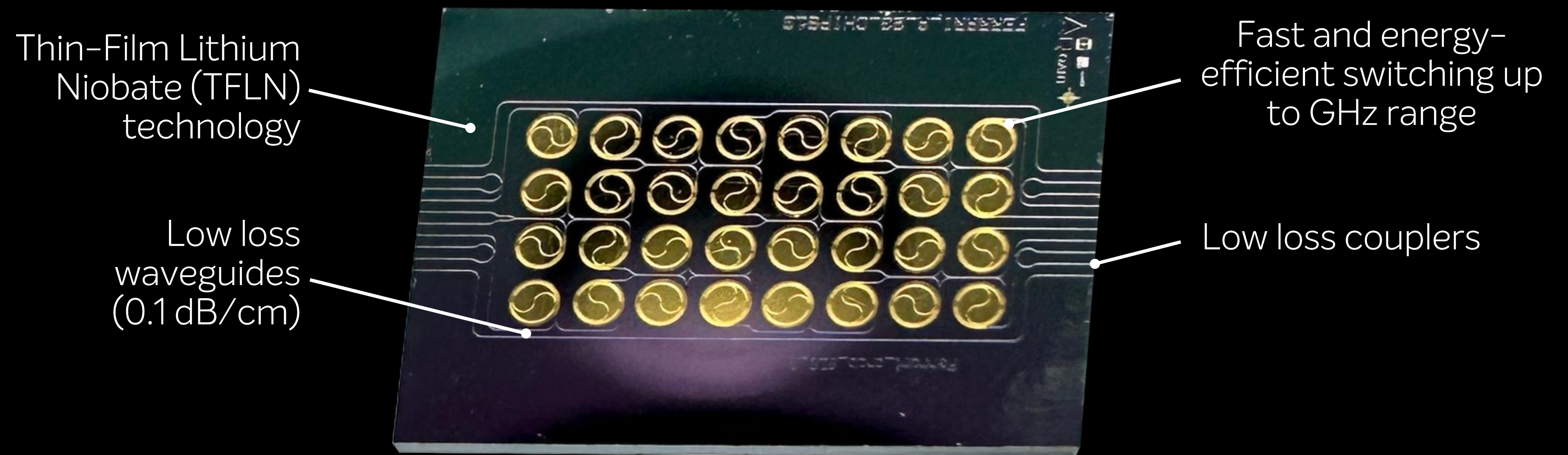
CMOS (today)

Orders of Magnitude in Energy Efficiency

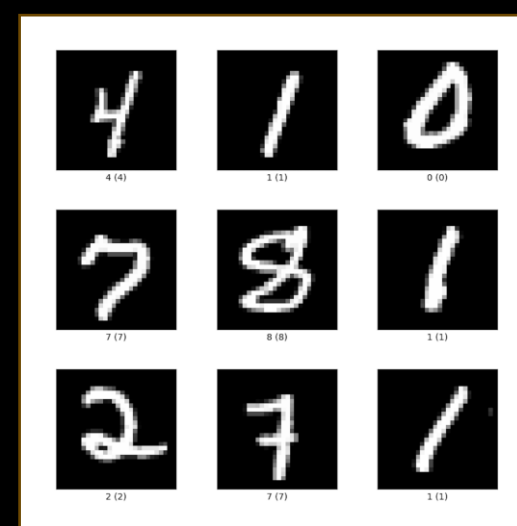
Photonic Computing



How does Photonic Computing Look Like?



What Can You Do with Photonic Computing?



Digit Recognition
(MLP)

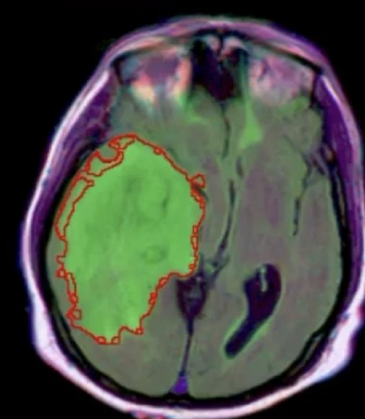


Image Segmentation
(U-Net)



Image classification
(ResNet-18)

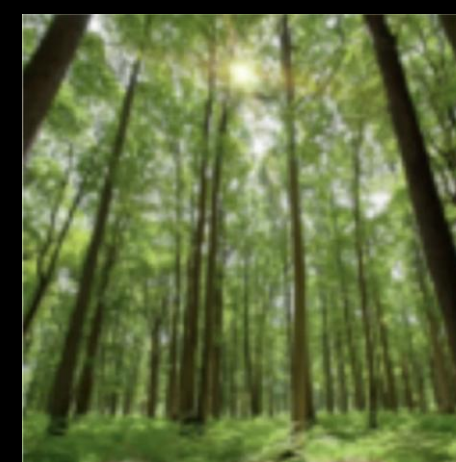
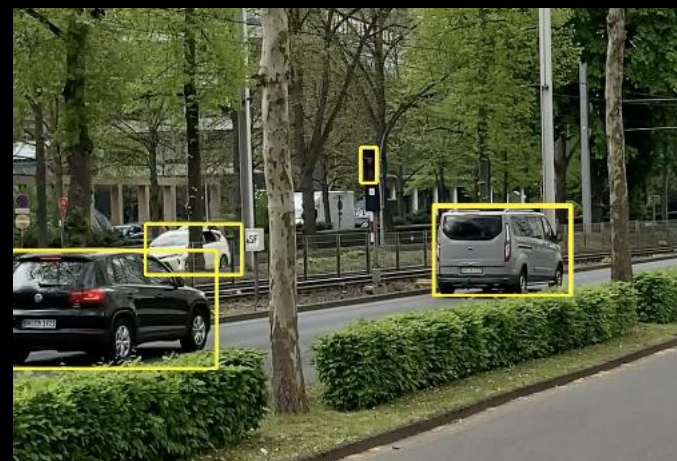
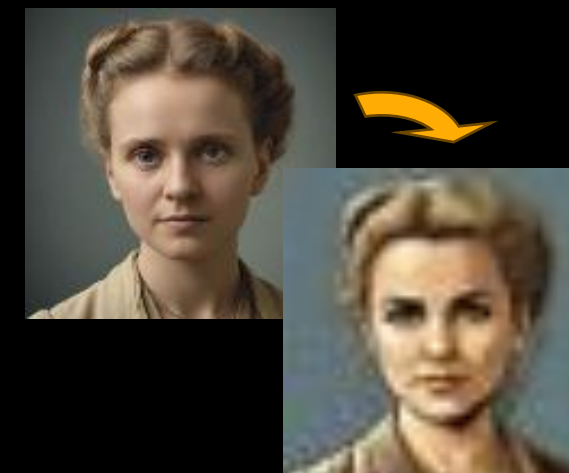


Image learning
(Advanced Neural Network)

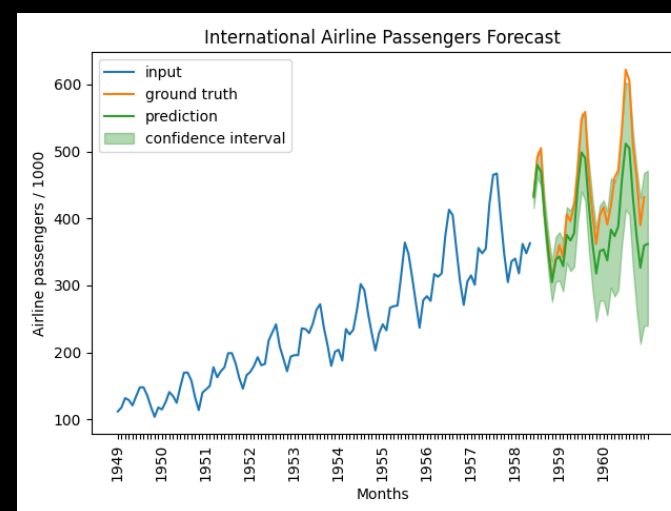
What Else Can You Do with Photonic Computing?



Object detection
(Faster R-CNN)



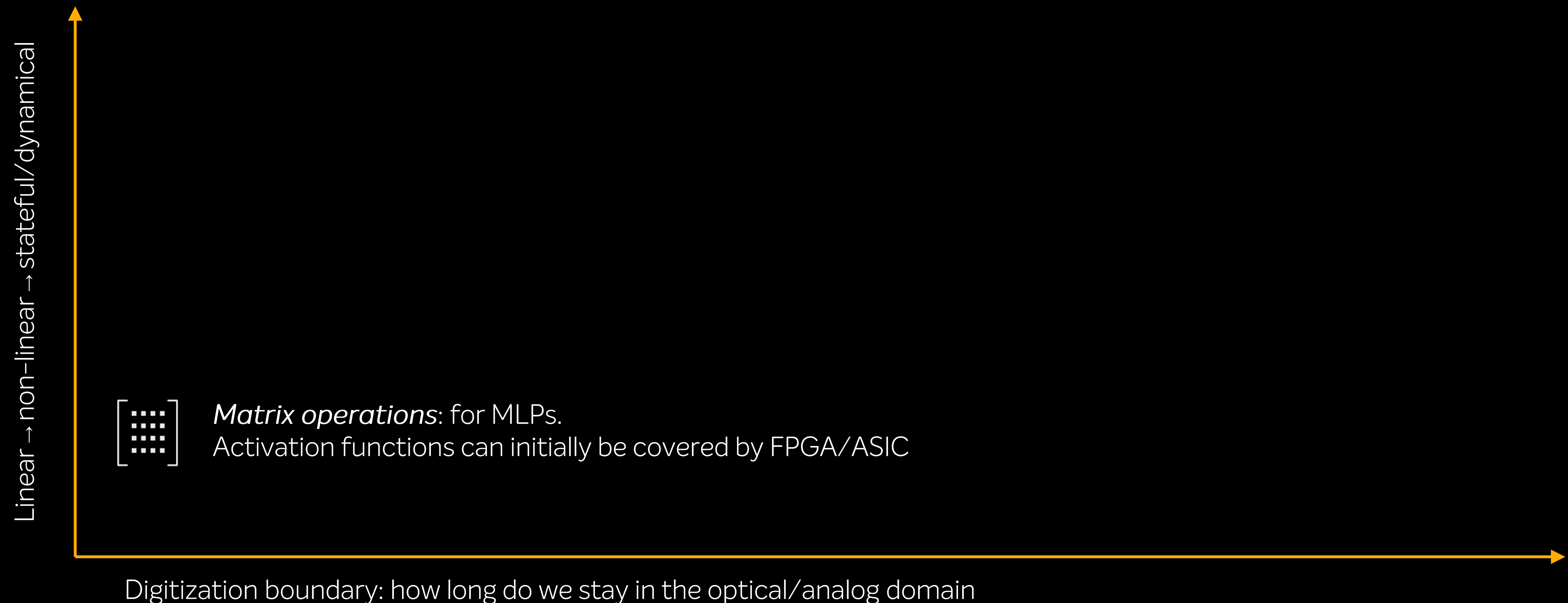
Style Transfer
(CNN-based Diffusion Model)



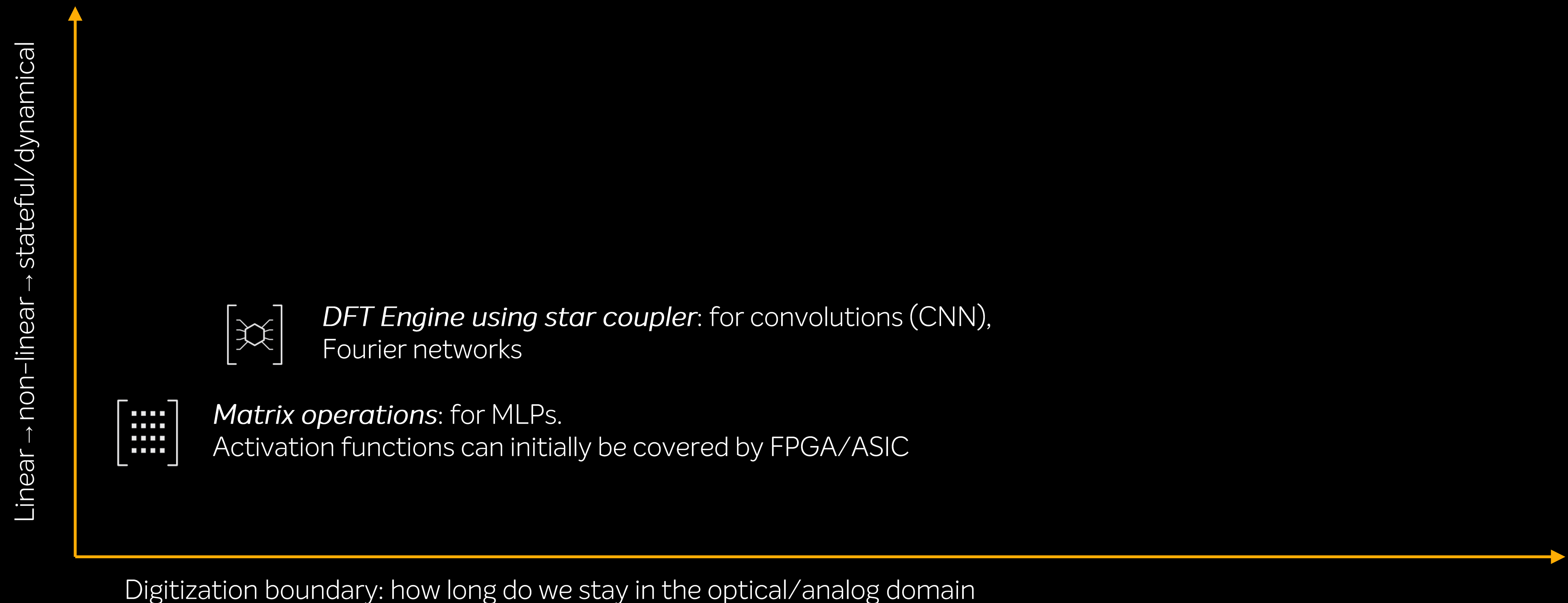
Time Series Prediction
(xLSTM TiRex model from NXAI)



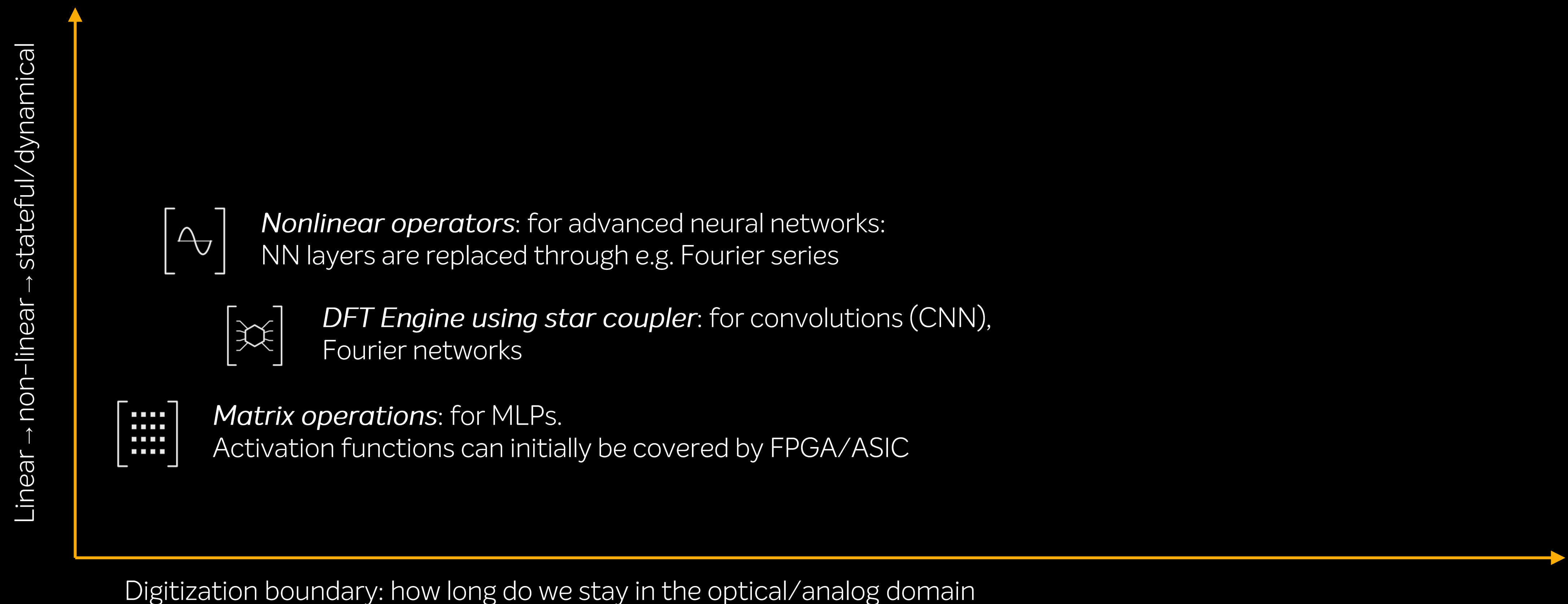
How To Fully Exploit Photonic Computing?



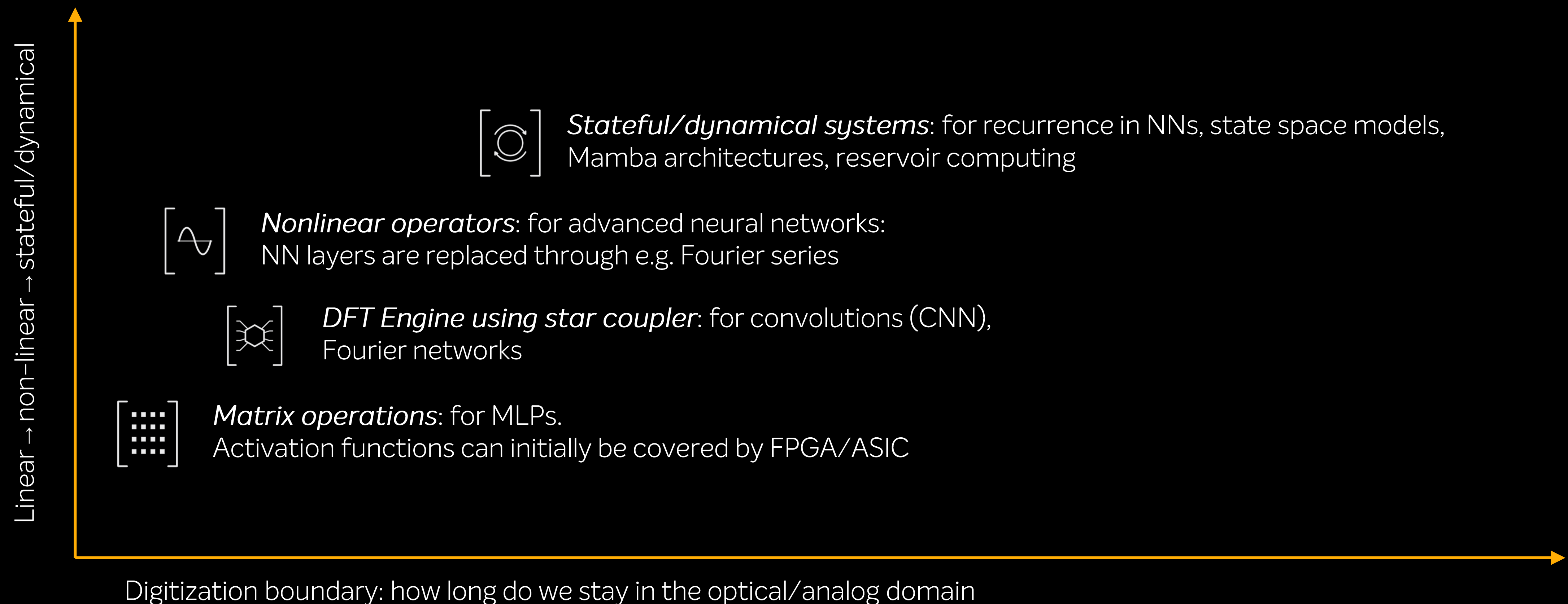
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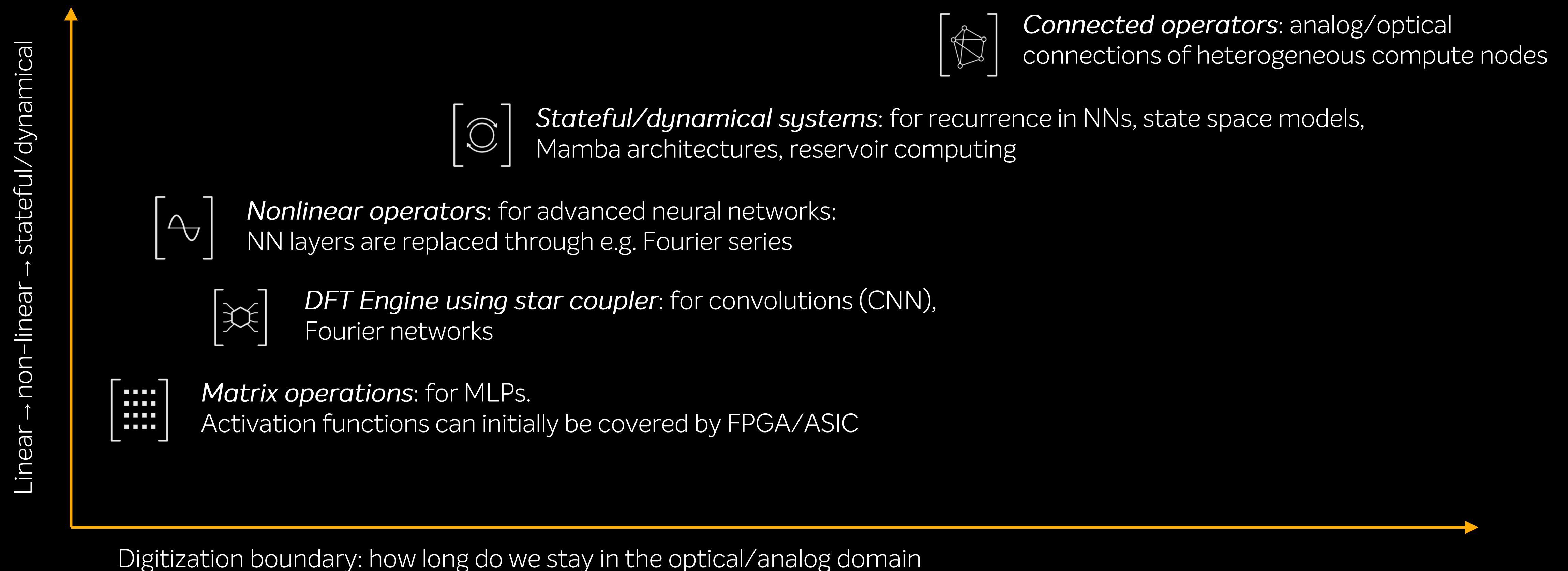
How To Fully Exploit Photonic Computing?



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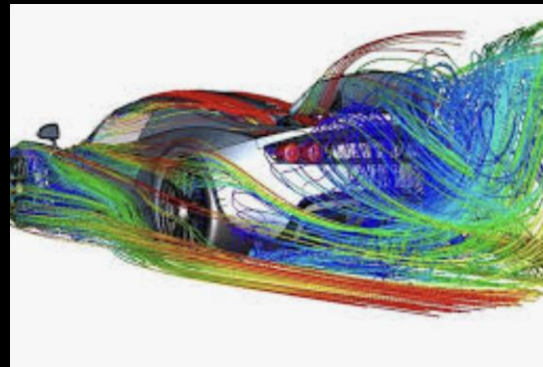
How To Fully Exploit Photonic Computing?



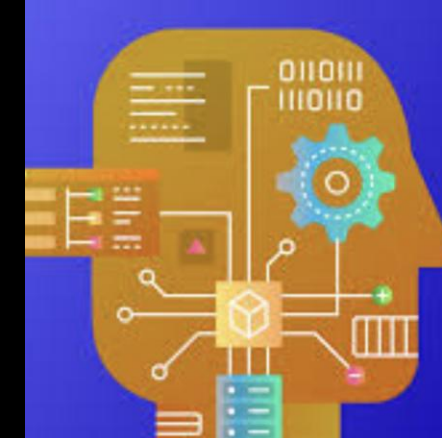
Target Use Cases

lorem.
ipsum

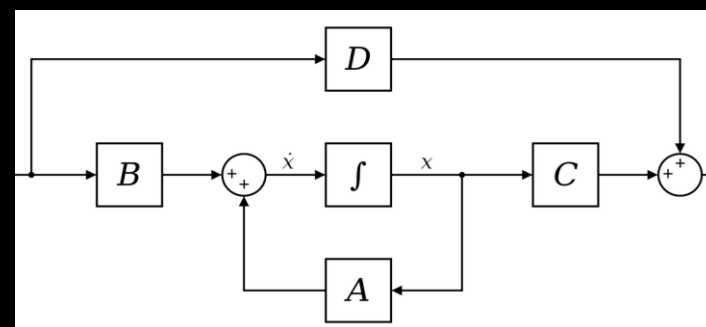
Large Language Model
→ Generate content



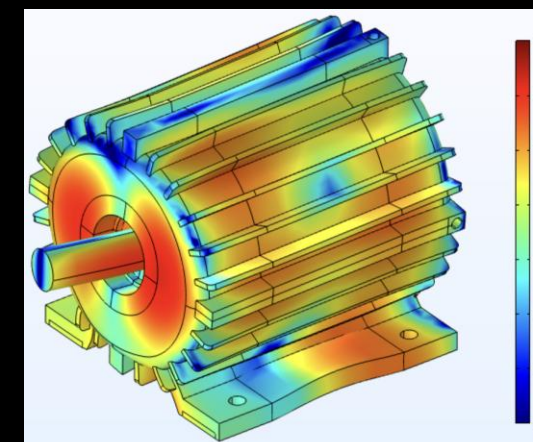
Scientific Computing
→ Advanced algorithms
for engineering



World Models
→ Enable Reasoning

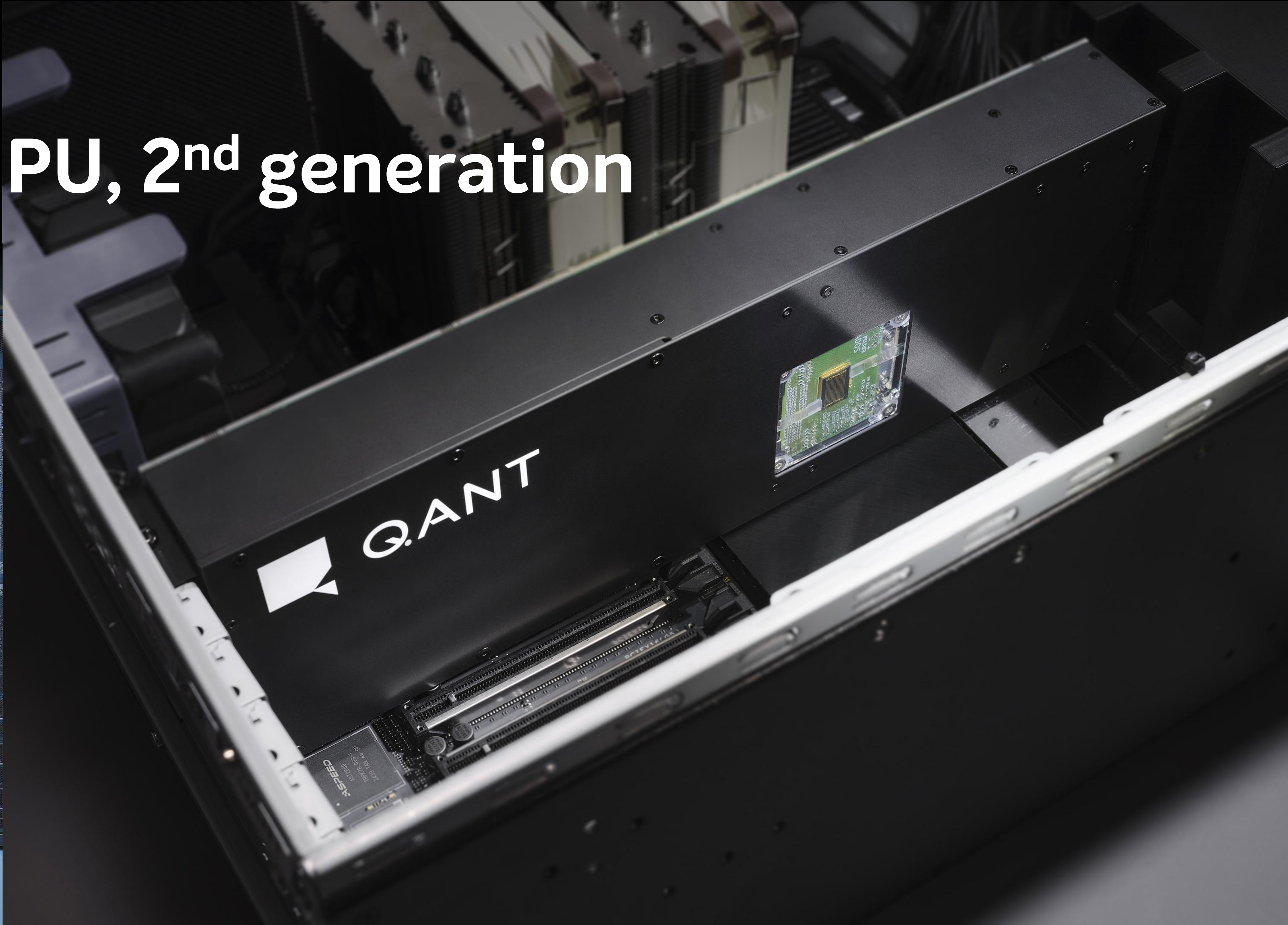


State Space Models
→ Build on new
optical designs



Physics-Informed Neural
Networks and Physical AI
→ Model physics

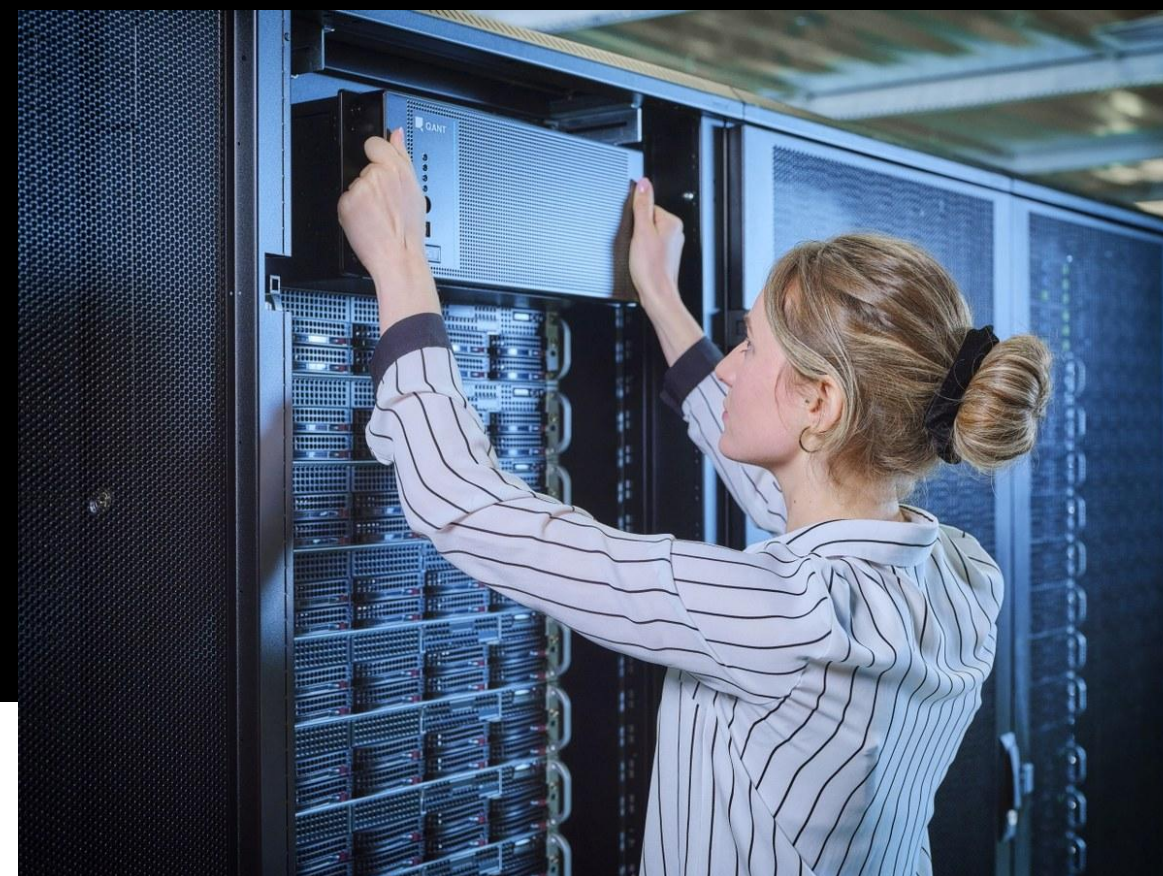
Q.ANT NPU, 2nd generation



Available soon: Q.ANT SDK



We deliver systems: LRZ, JSC, IONOS, ...



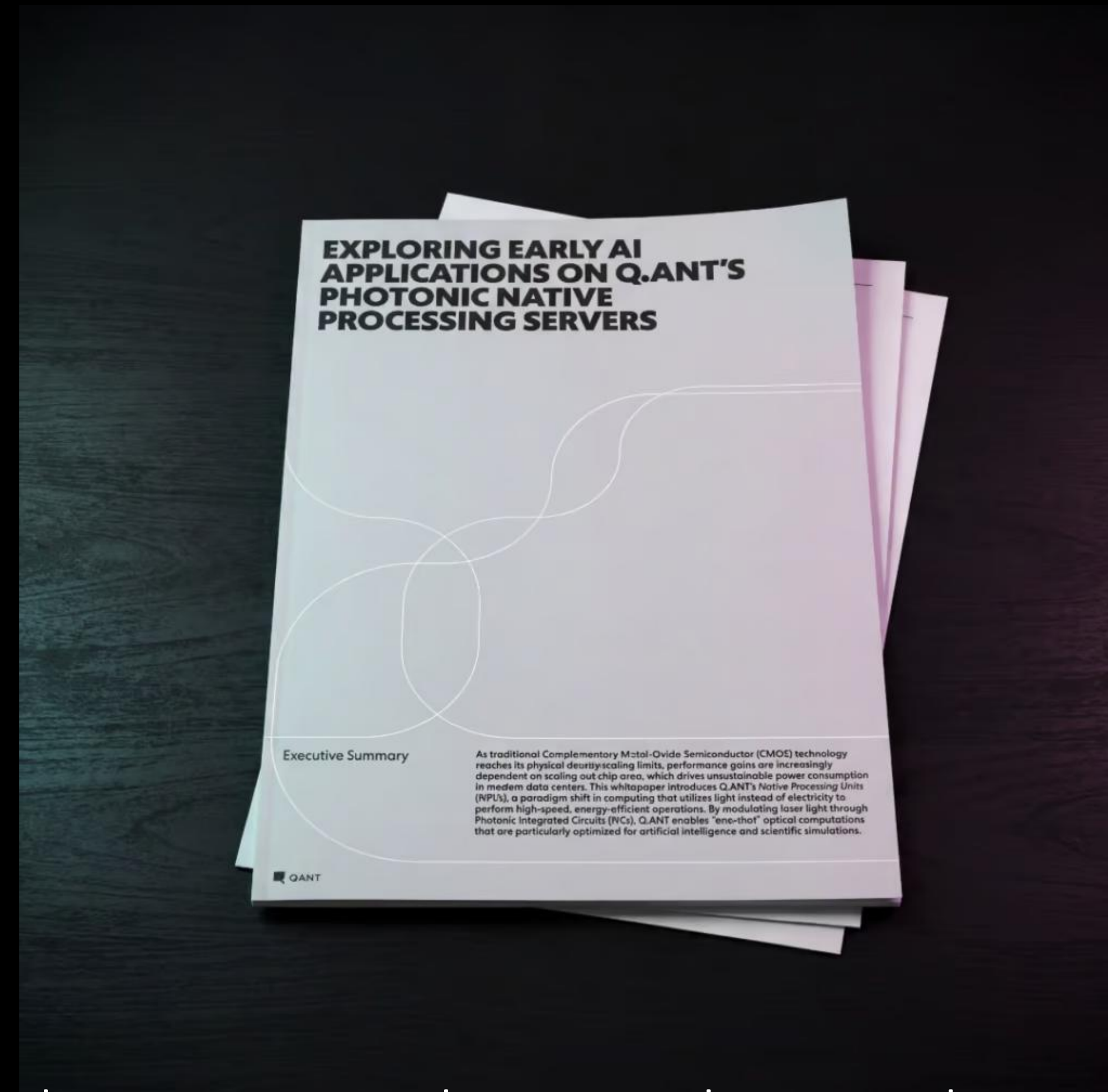
IONOS



Contact Details

Let's talk. Or drop us a line at

native-computing@qant.com



Whitepaper: Exploring Early AI Applications
on Q.ANT's photonic Native Processing Servers



