

SYNPHONYA

Open Digital Twin for Optical Networks

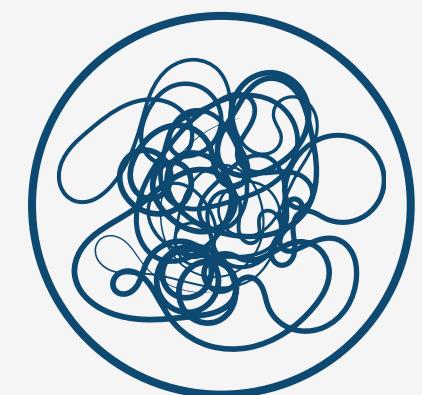


SYNPHONYA

PROBLEM

OPTICAL NETWORKS UNDER PRESSURE

Internet traffic is growing by **17% per year** *, but networks are not scaling fast enough to keep up.



Network Saturation

Traffic growth driven by AI, cloud, and data centers is putting **network infrastructure under stress**.



Rigid and Proprietary Architectures

Each vendor enforces its own ecosystem, **limiting flexibility and interoperability**.



Rising Costs and Lead Times

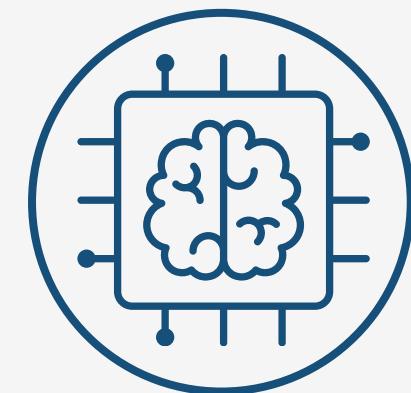
Integrating new equipment requires months of testing and **increases operational costs by up to 50%** **.

* Source: [Cloudflare](#)

** Source: [Nokia](#)

SOLUTION

Synphonya addresses the pressure on optical infrastructures with a **highly scalable** and **replicable** software solution capable of **predicting**, **simulating**, and **optimizing** the network in **real time**.



AI-powered Digital Twin

A digital twin that replicates the physical network to **anticipate bottlenecks** and **optimize traffic flows** based on real-world loads.



Multi-vendor, Multi-domain

Unified management of diverse vendors and domains: **total flexibility** and **freedom from vendor lock-in**.



Single Pane of Glass

An intuitive dashboard for **rapid decision-making**, **complete visibility**, and **operational cost reduction**.



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VALUE PROPOSITION

Cost Reduction

Up to 30% savings on CapEx and OpEx thanks to greater network efficiency.



01

Freedom from Lock-in

True interoperability with multi-vendor equipment.



02

Time & Agility

Launch new services up to 10x faster.



03

New Revenue

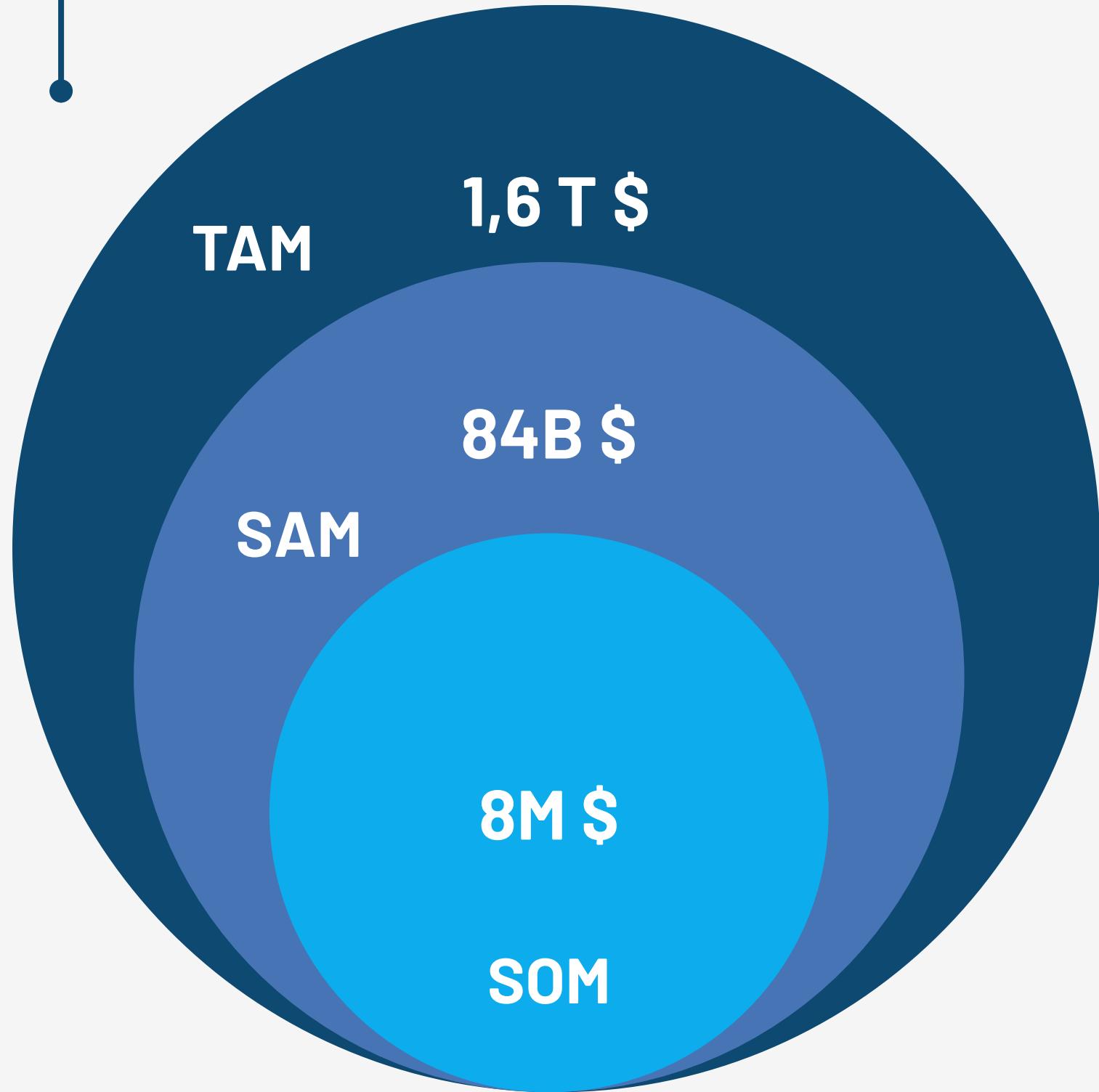
NaaS enabler, monetizing the **dynamic capacity of the 6G era**.



04

Synphonya transforms a **structural problem into a competitive advantage**.

MARKET



TAM, SAM, and SOM estimates over 5 years

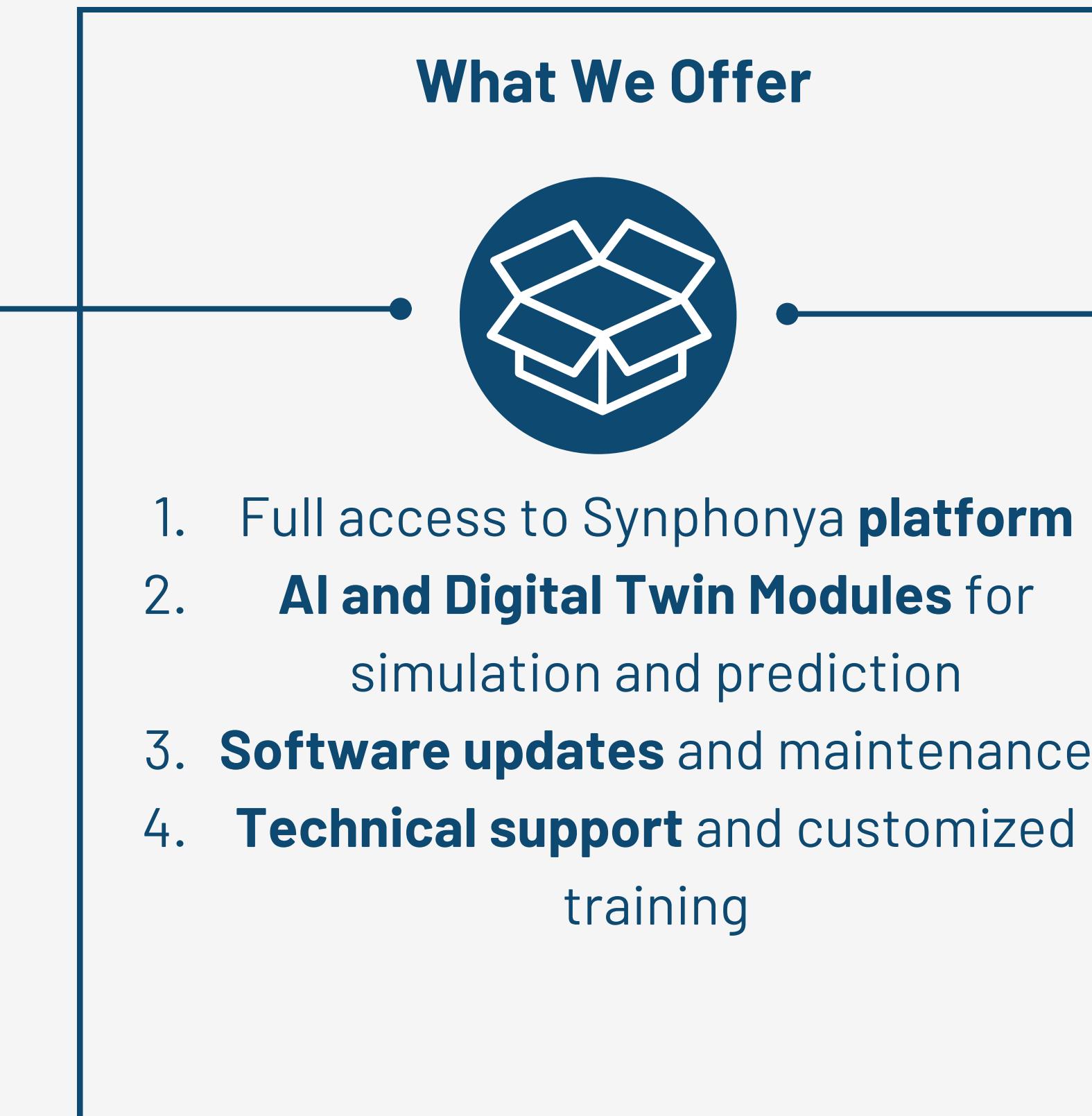
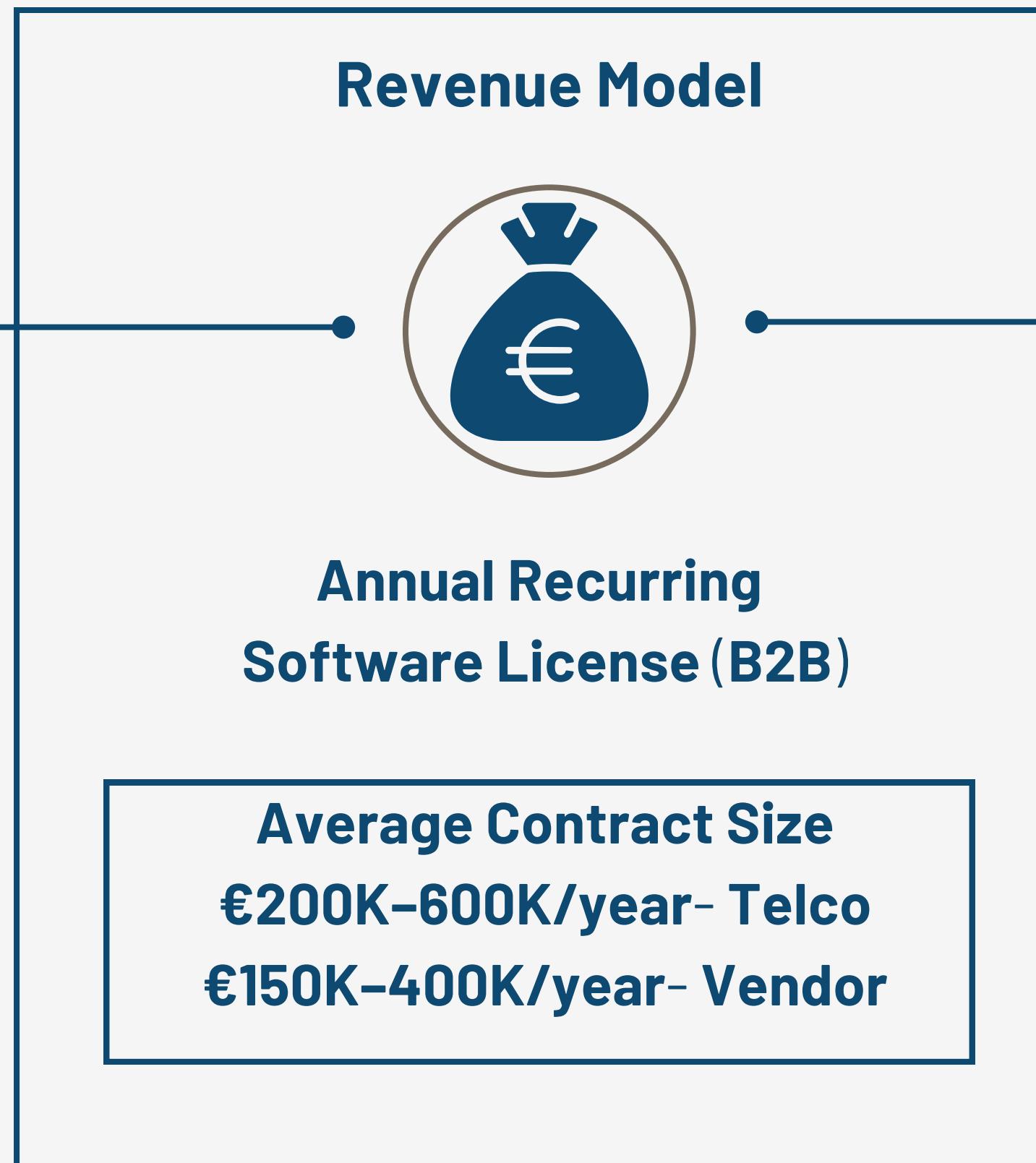
Synphonya focuses on the **high-growth segment of optical network automation**, where operators are seeking tools to manage **increasing loads and reduce operational costs**.

Our initial target is limited but strategic: **major global Telcos and Vendors** already in contact with the founding team.

TARGET CUSTOMERS
TELCO (10)
VENDOR (5)

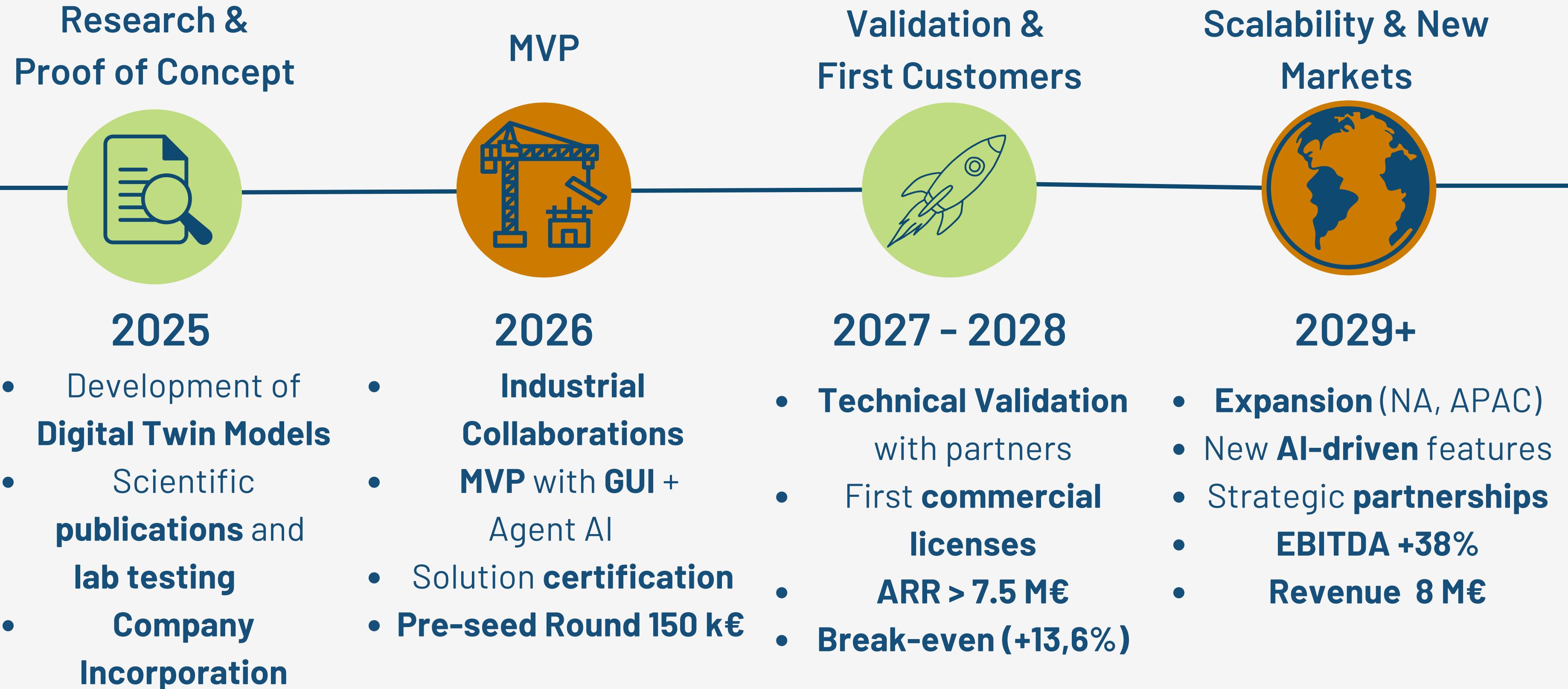
BUSINESS MODEL

Synphonya is a scalable, high-margin **enterprise** software solution based on an **annual subscription model**.



SYNPHONYA

ROADMAP



SYNPHONYA

TEAM

A unique technical and scientific team in Europe



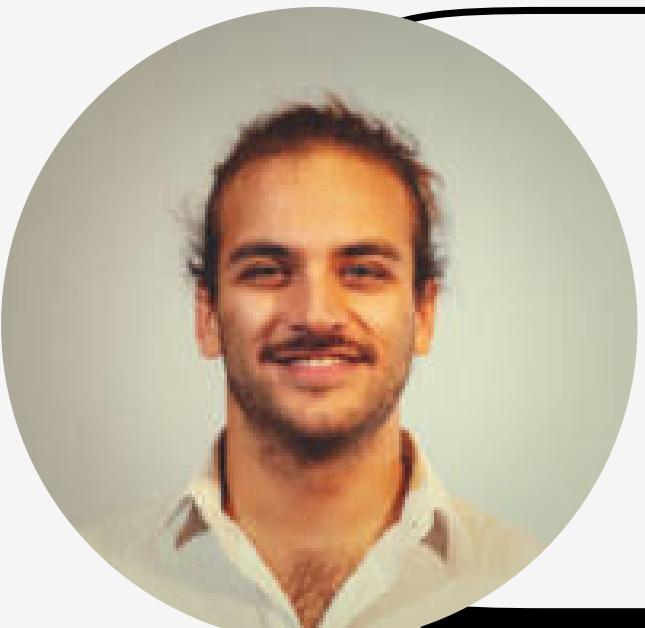
- PhD in Optical Communications (PoliTo).
- Expert in AI and digital twins for optical networks.
- Collaborations with Lumentum, NTT, NEC, LINKS Foundation.

Rocco D'Ingillo
CEO



- PhD Candidate in optical networks and software orchestration (PoliTo).
- Specialized in multi-vendor architectures and AI automation.
- Experience in international projects and labs (NEC Labs America).

Renato Ambrosone
CTO



- Researcher in optical transmissions (PoliTo).
- Expert in modeling and validation of complex optical systems.
- Supervises algorithmic development and industrial use cases.

Emanuele Virgillito
Tech Advisor



- Full Professor, IEEE Fellow, global expert in optical networks.
- Scientific Chair of GNPy, the global standard for QoT modeling.
- Provides scientific guidance and access to an international academic network.

Vittorio Curri
Scientific Advisor



Thanks!

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