



THE FUTURE OF NETWORKING IS HERE

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AGENDA

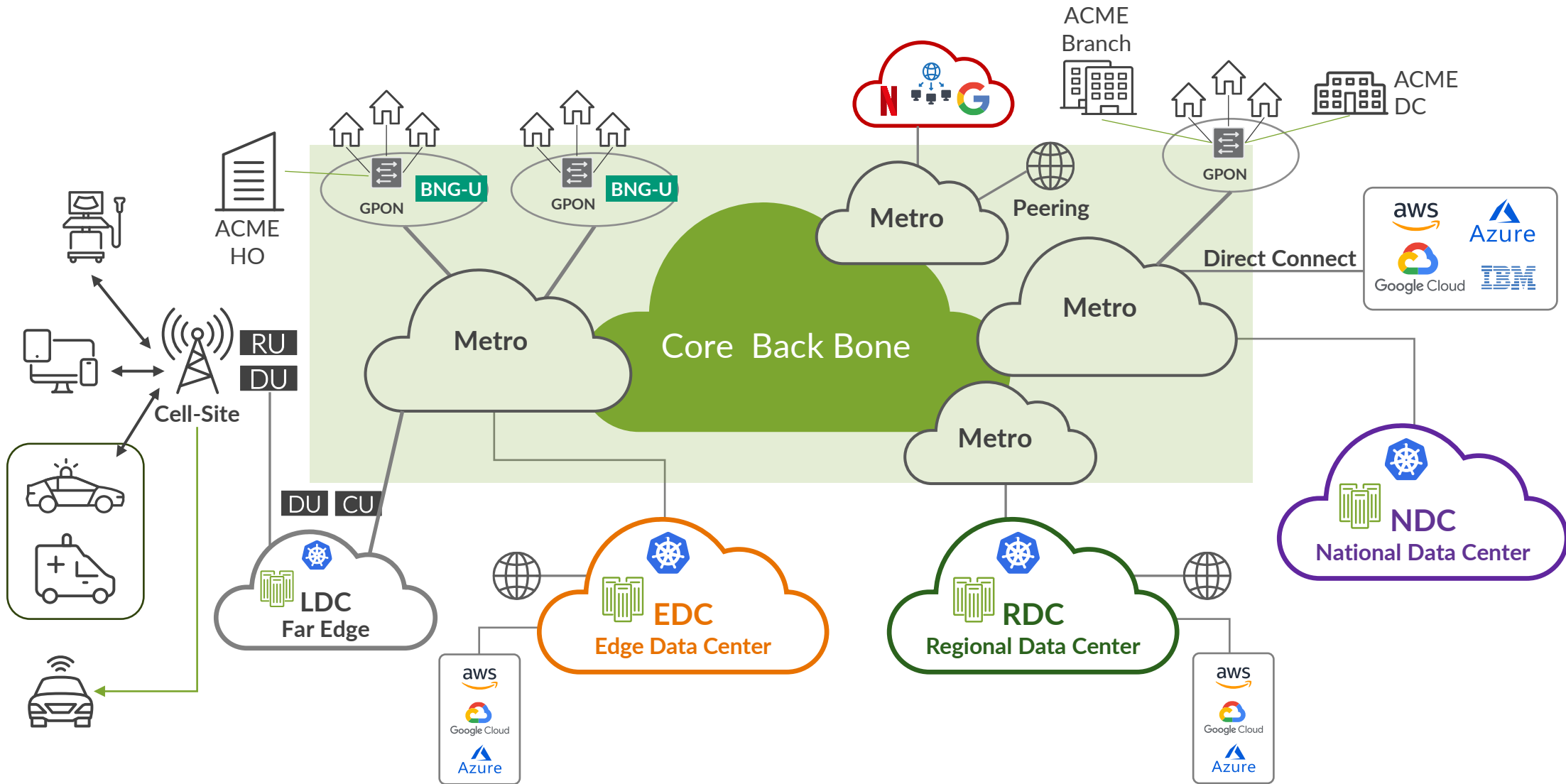
Networks Today

WAN Automation

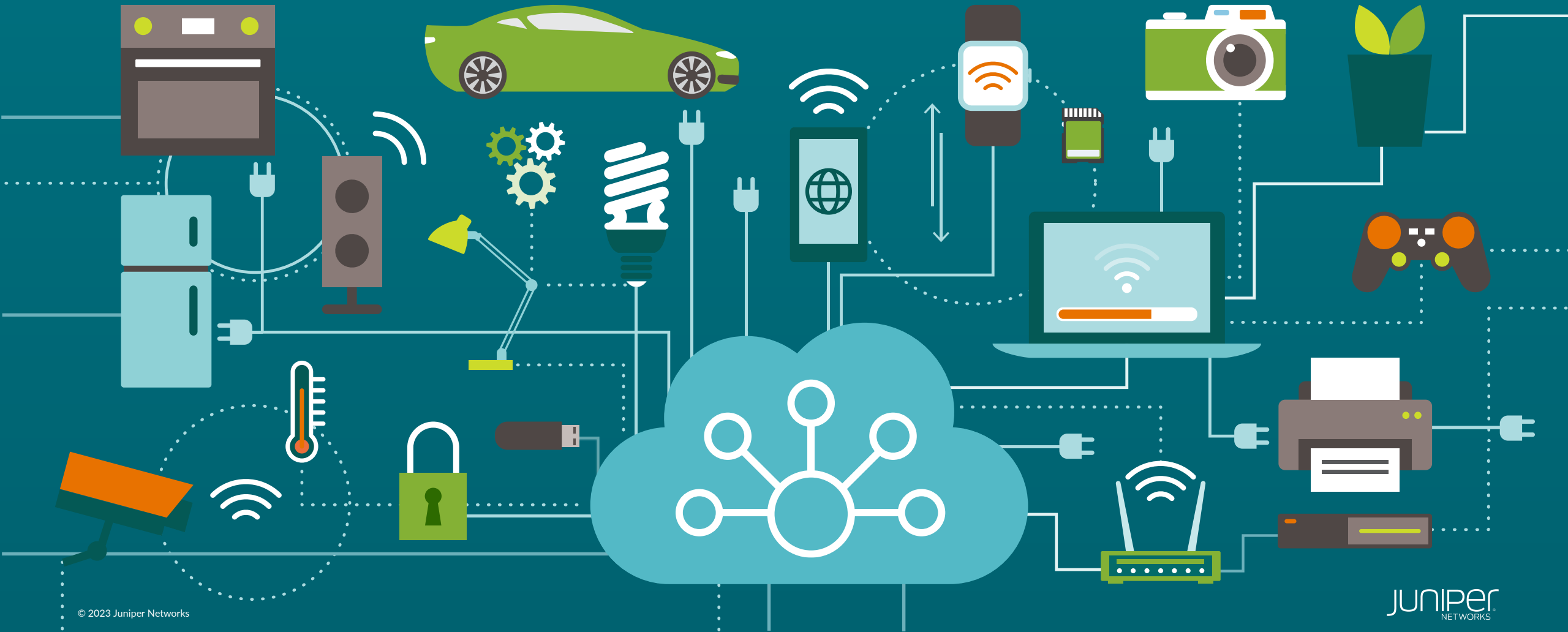
Network Digital Twin

Sustainability

Networks are Increasingly Complex and Mission-critical



Everything is Connected

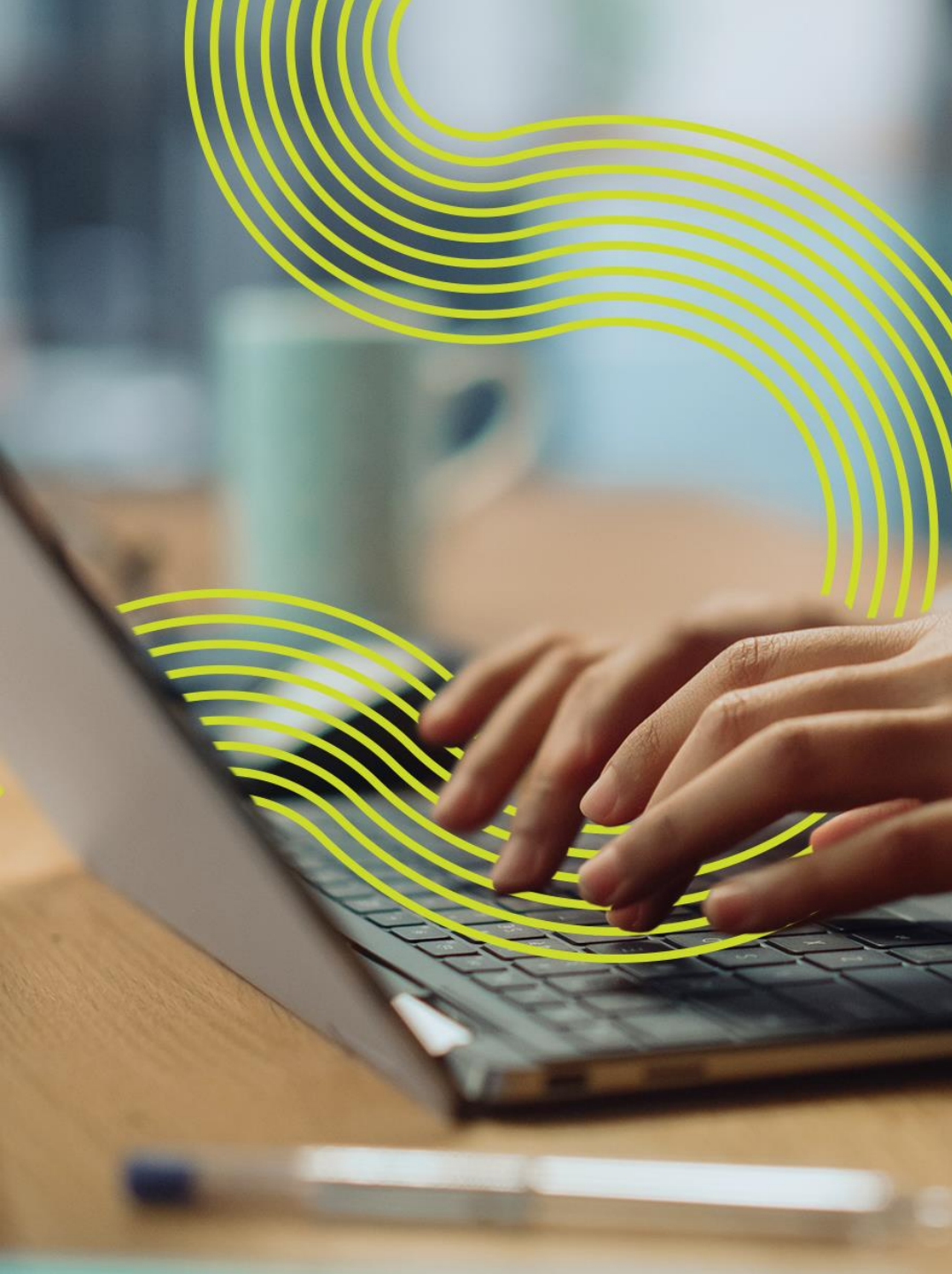


Networking as Extreme Sports





**WE'RE HERE TO
HELP**

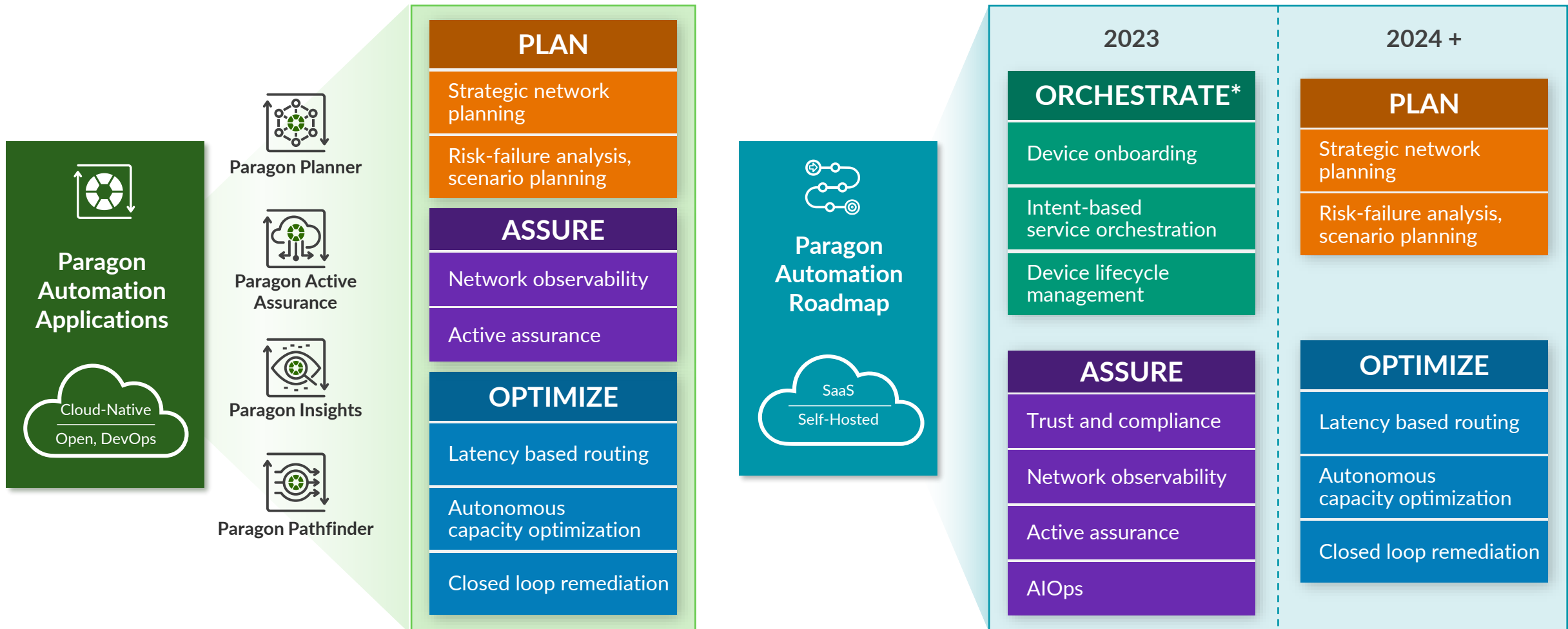


WAN AUTOMATION

Things to take care of ...

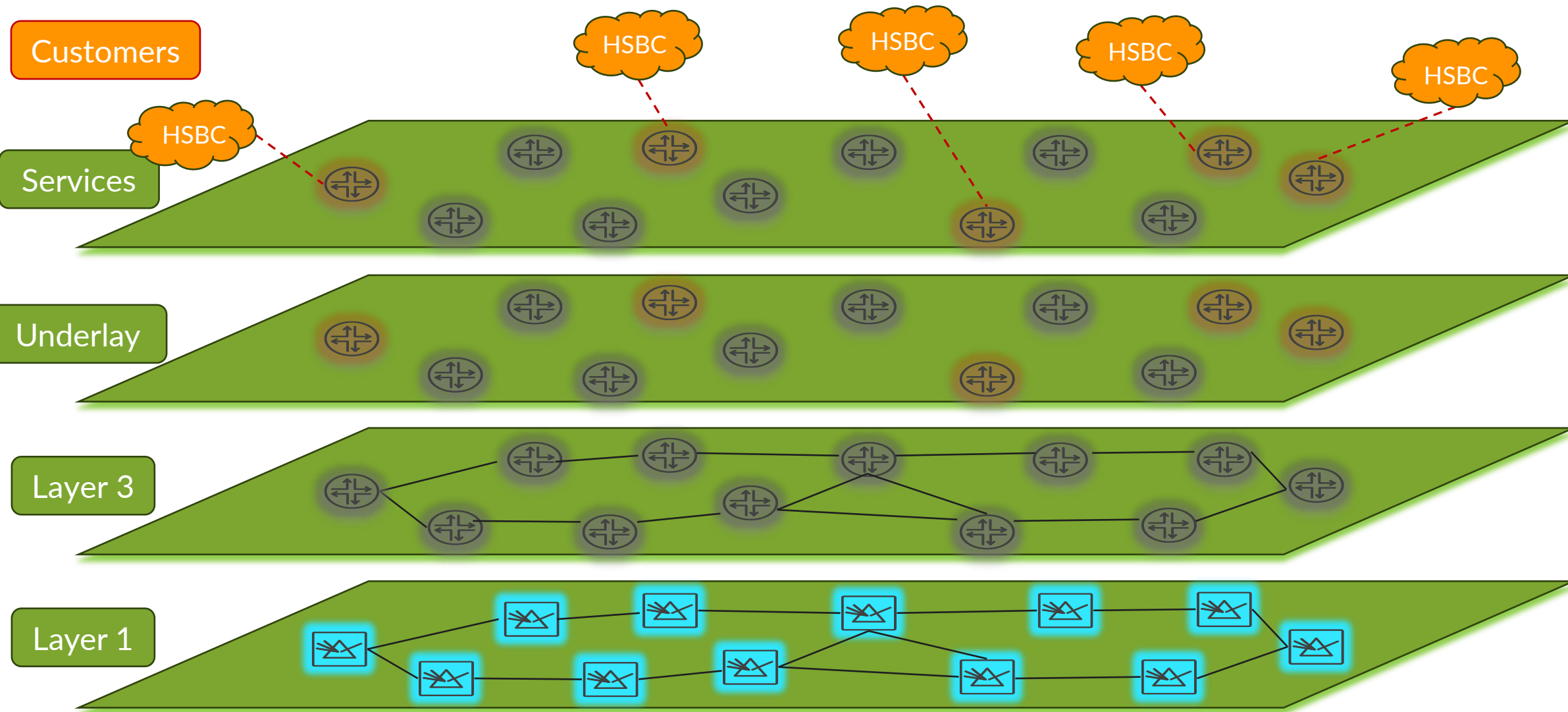
- Plan upgrades to your network
- Onboard new devices
- Manage the underlay
- Orchestrate new services
- Monitor health of services → underlay → devices
- Understand your customers' experience
- When (or before) things go wrong, fix them

Paragon: Juniper's Holistic Automation Suite

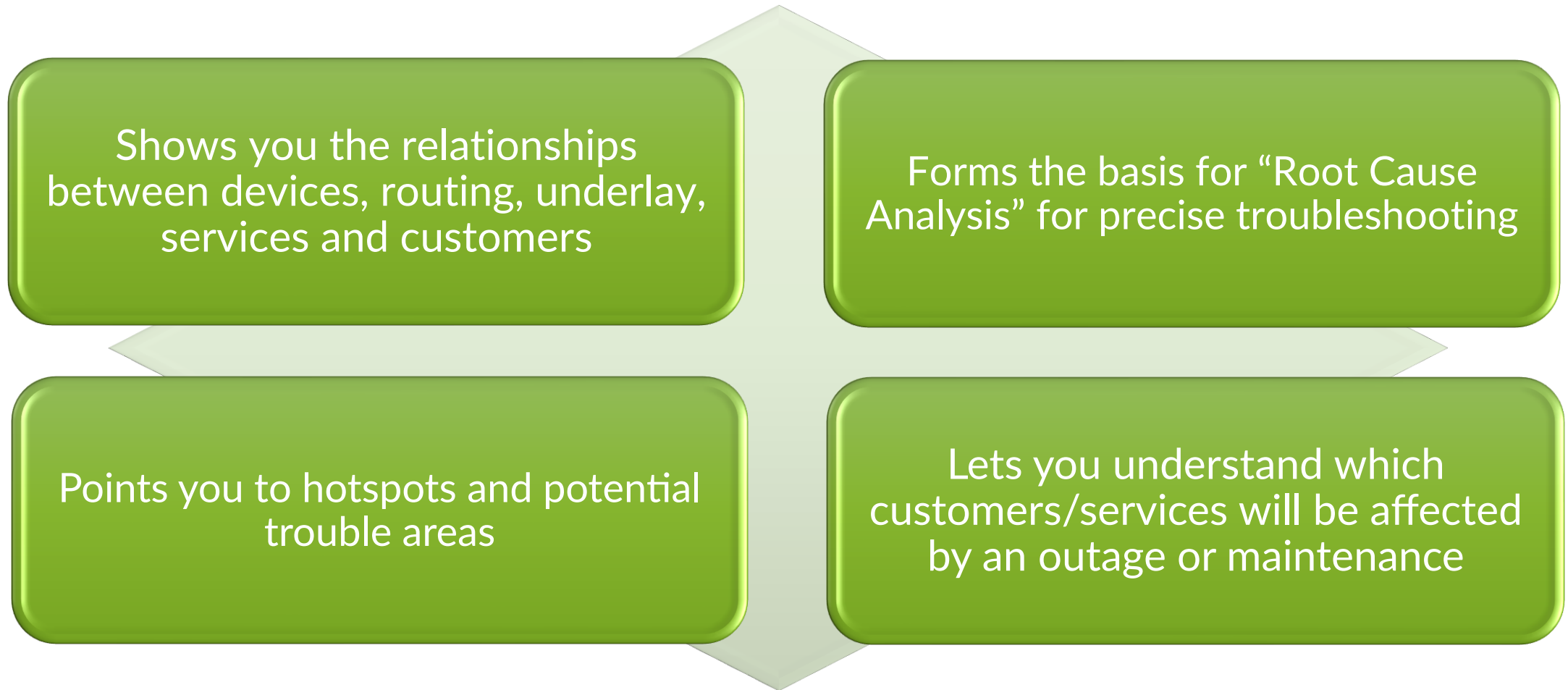


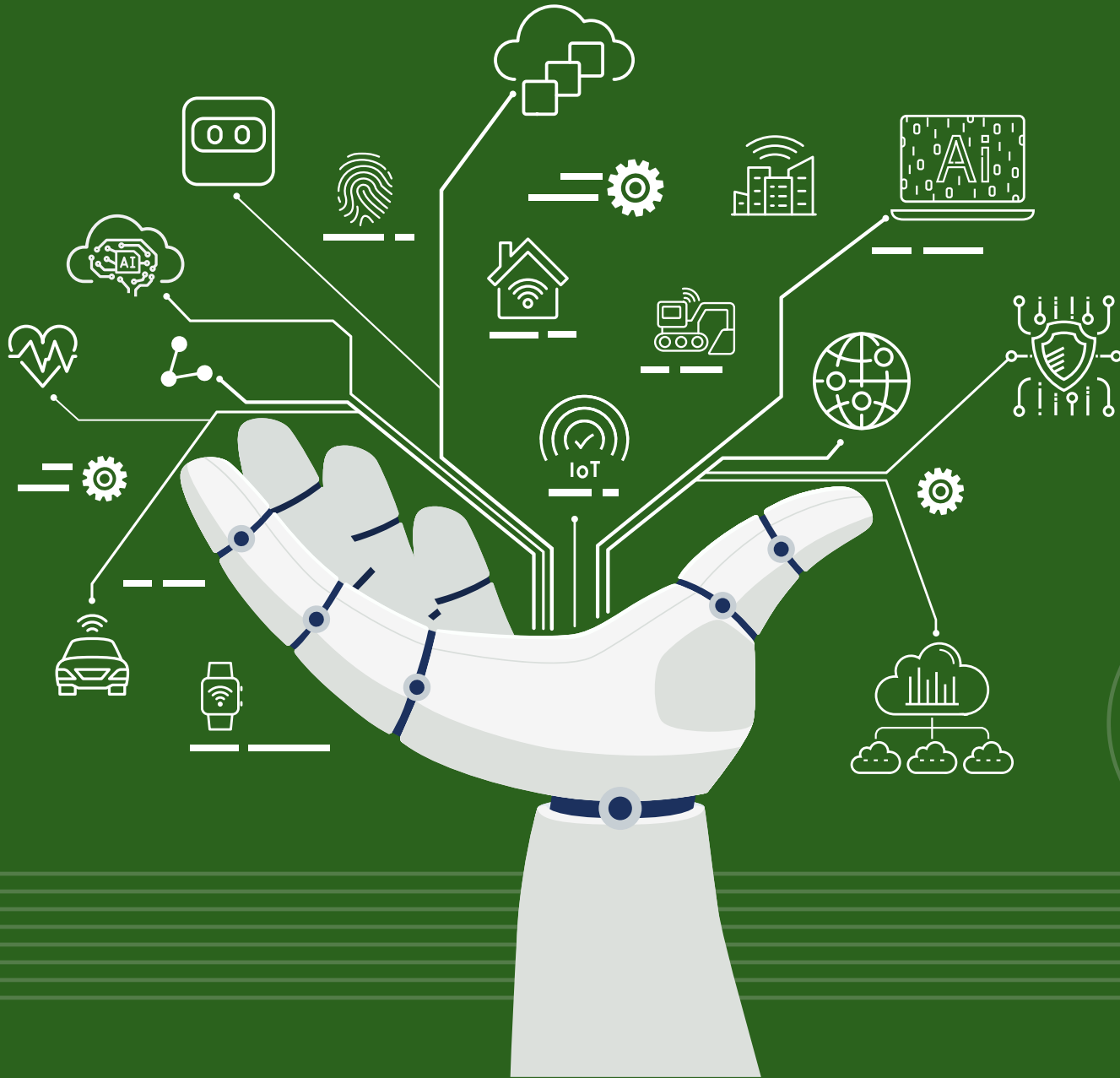
* multi vendor support under development

Dependency Graph: Layer 1 ↔ Layer 3 ↔ Underlay ↔ Services



Dependency Graph

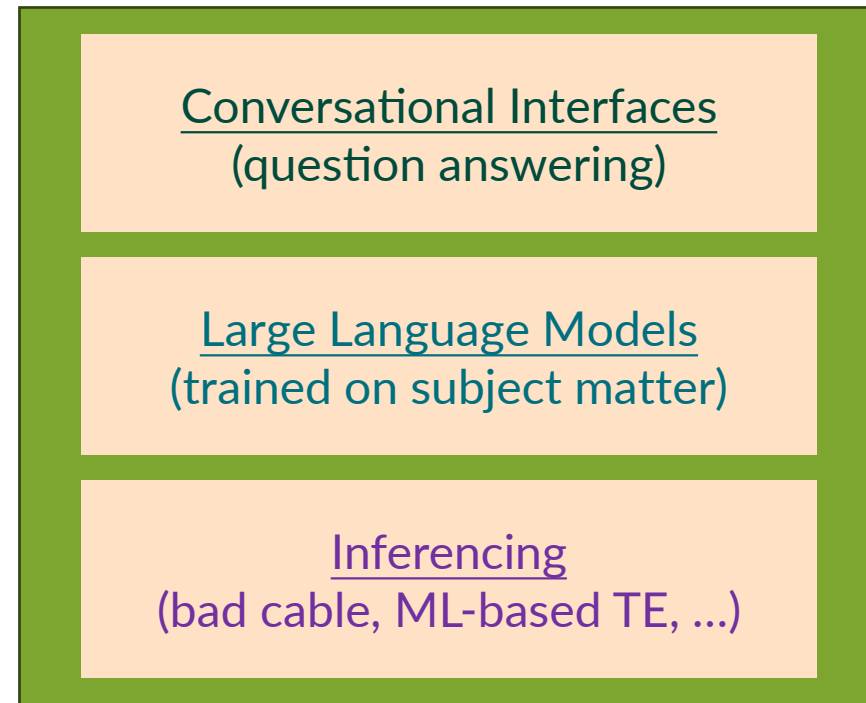
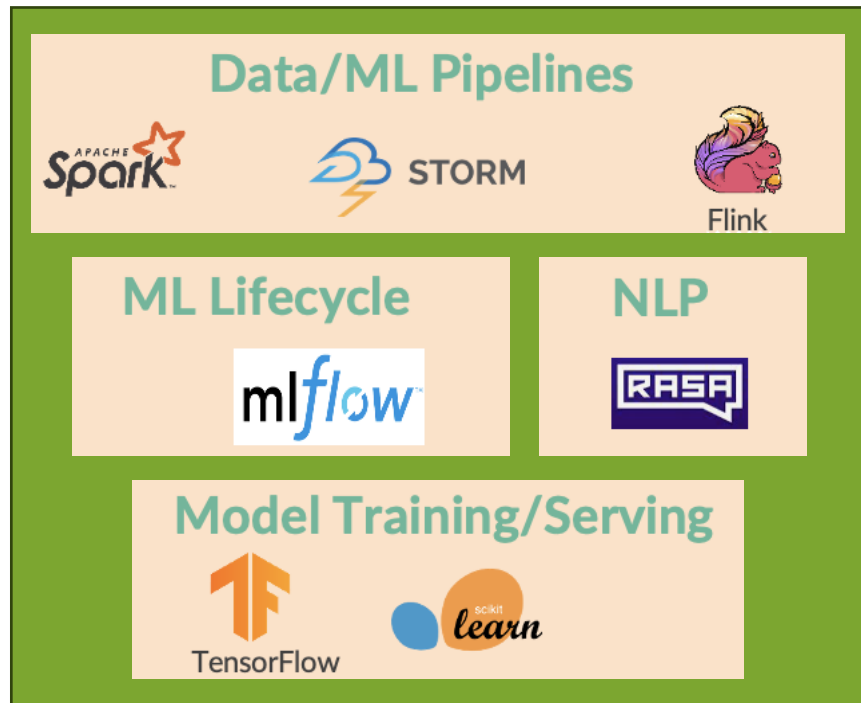




Got AI?

AI adoption is
accelerating

YES! We've Brought AI to WAN Networking



Watch this space: more to come!



Network Digital Twin: Playing & Testing

Dr. Sina Kahen, 2023:
"From Scalpels to Robots"





What If You Had A Faithful Replica Of Your Network?

Network Digital Twin

“Planner” on steroids

Platform for training

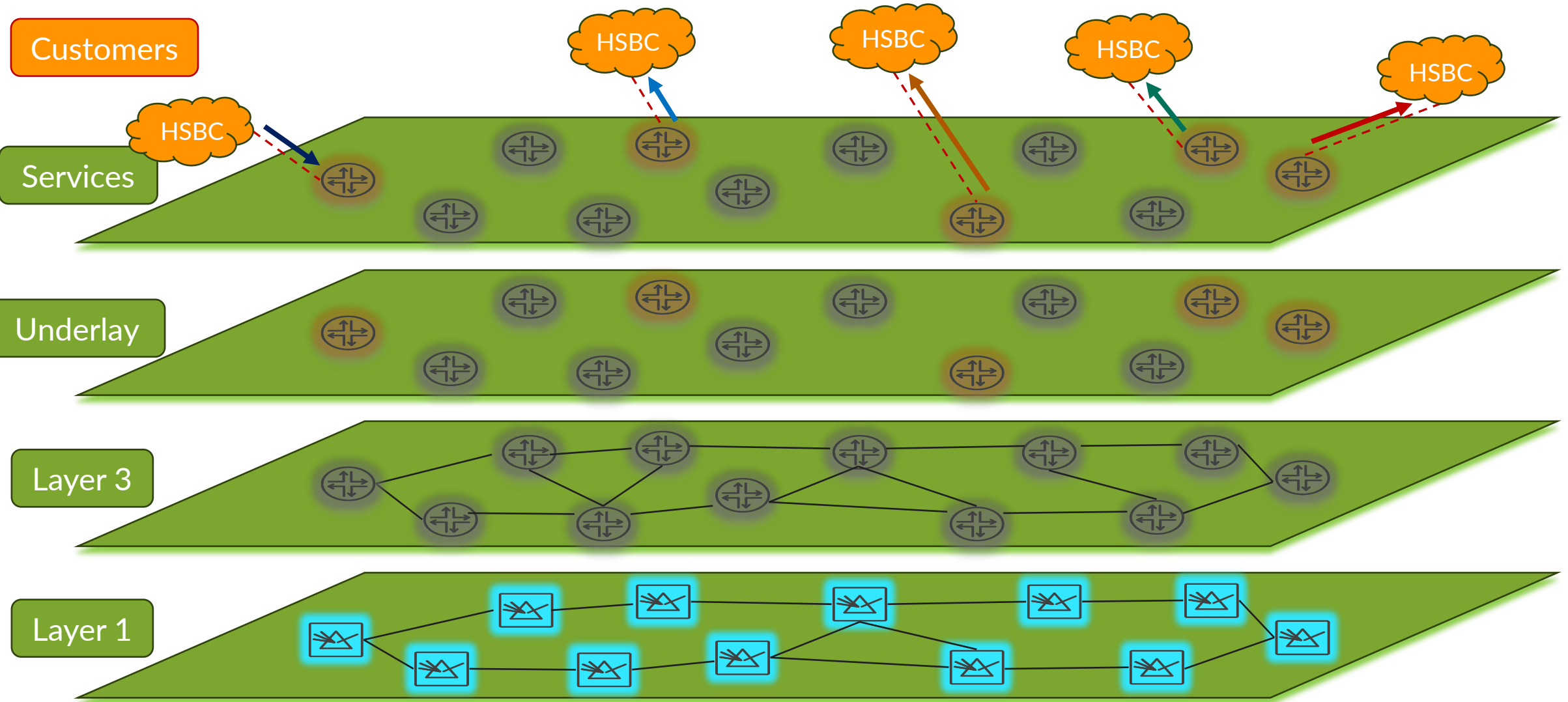
Exploring via Mixed Reality?

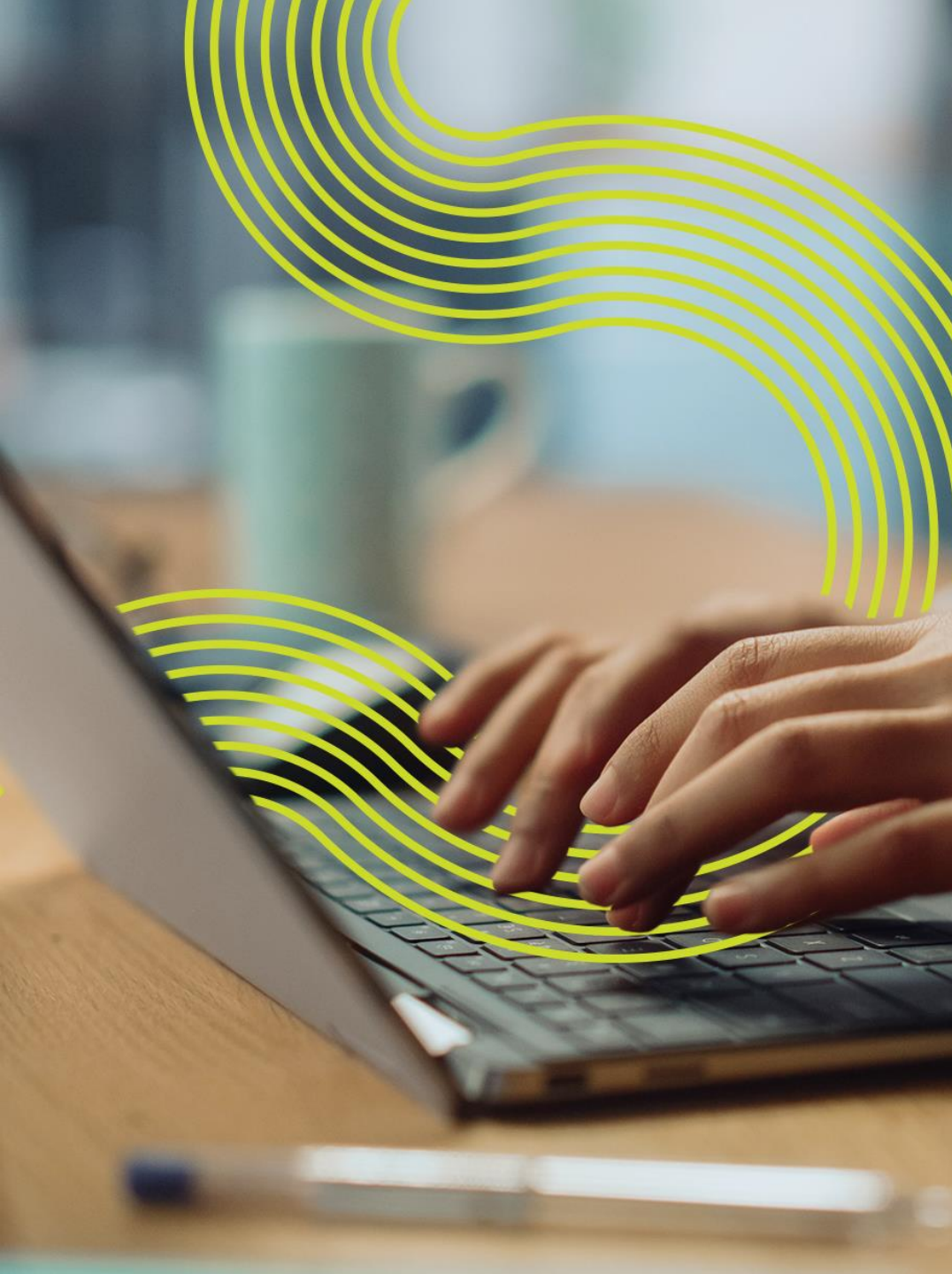
“What happened” analysis

“What if” scenarios

Devices (and software)
Topology (planning)
Data Plane (traffic)
Control Plane (protocols)
Management Plane

Simulate All Layers of Your Network (and Traffic)





**TEST BEFORE YOU
MAKE CHANGES**

Testing: “CI/CD”-like Pipeline

Software-style discipline for automation changes

Automation as code: snapshot and version

Commit → run the tests (on digital twin)

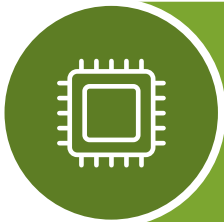
Success: deploy or Fail: roll back



SUSTAINABILITY

What makes a system “Sustainable”?

Greater Longevity + Higher Density + Lower Power + Lower TCO = Sustainable System



- **Optimized silicon for each use case.**
 - Custom, Run-to-Completion, Pipeline, Merchant.

- ✓ Optimal Power
- ✓ Lower TCO
- ✓ Density
- ✓ Longevity



- **Balanced chassis design for each role in the network.**

- ✓ Optimal Power
- ✓ Lower TCO
- ✓ Density
- ✓ Longevity



- **Highest logical scale.**
- **Intuitive for humans, structured for machines.**

- ✓ Lower TCO
- ✓ Longevity

**Juniper builds every system optimally to its role in the network.
No Compromises!**

Delivering low power and TCO

Leading green networking with modern silicon & platforms

Carbon Neutral
across our
operations by
2025



Up to **77%**

Lower power consumption
– with Cloud Metro ACX platforms

Up to **12yrs**

System life
– with Cloud Metro ACX platforms

73%

More power efficiency than
previous gen
– with Trio 6 Silicon

57%

More power efficiency than
previous gen
– with Express 5 Silicon

Up to **64%**

More space efficient
– with Cloud Metro ACX platforms

Up to **90%**

More space efficient
– with MX10K platforms

71%

More power efficiency than
previous gen
– with MX10K Platforms

59%

More power efficiency than
previous gen LC
– on PTX10k Platforms

Platform Innovations

Adaptive power innovations

Titanium-rated power efficiency

PFE & software feature auto turn-off

Compact form-factor options

Optimized airflow & thermals for highest density/capacity/scale

Silicon Innovations

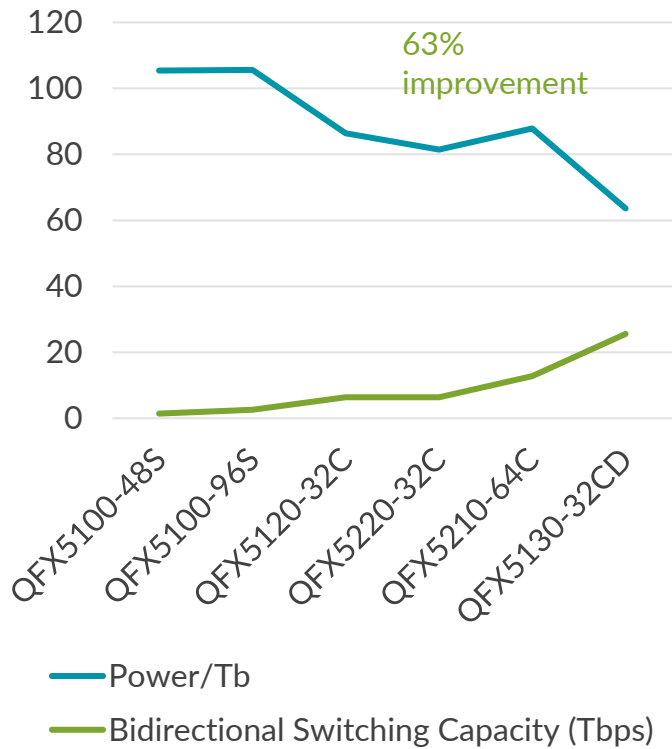
Smaller process geometry with 16nm/7nm vs. 28nm

Designed for multi-generational chipset
longevity

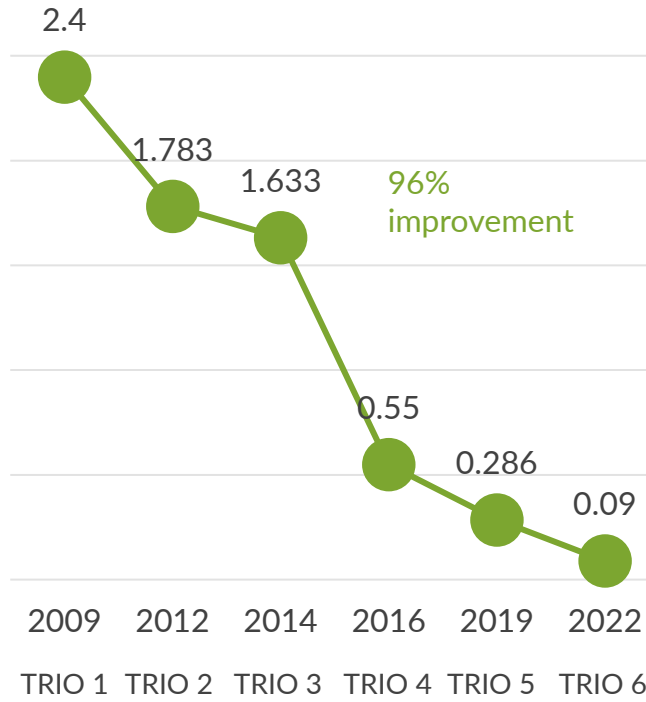
High degree of functional integration
such as MACsec

Improving power efficiency with each product generation

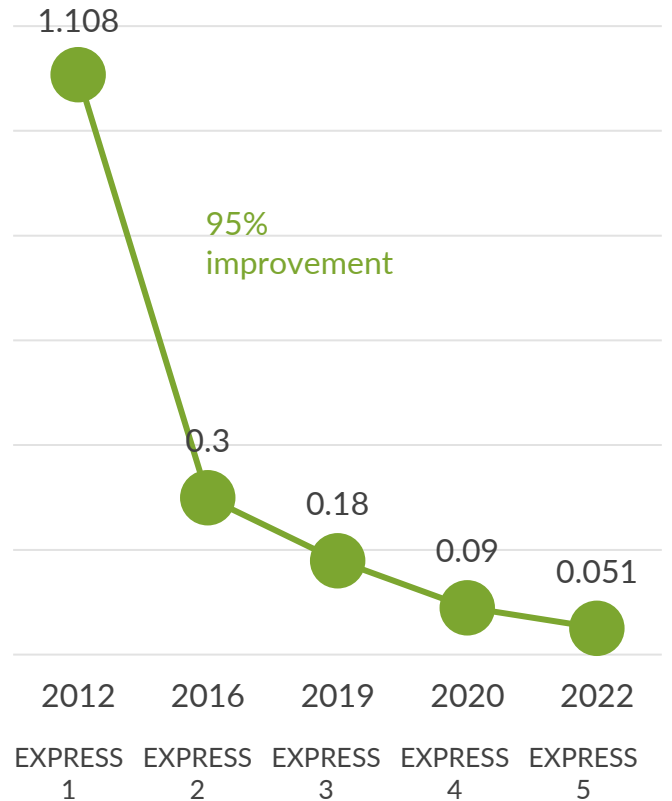
Lifetime power efficiency Trend for QFX5K (1RU models)



TRIO Power Efficiency



Express Power Efficiency





EMBEDDING SUSTAINABILITY ACROSS THE BUSINESS



Supply Chain Sustainability: Goals & Memberships

- Communicated to direct and indirect suppliers our emission reduction expectations by 2023, 2024 and 2025
- Top spend suppliers required to report total company emissions annually to CDP



supplier engagement on the CDP climate change questionnaire with suppliers scoring a 'B' or better



supplier engagement on the CDP water questionnaire with suppliers scoring a 'C' or better



Responsible Business Alliance
Advancing Sustainability Globally



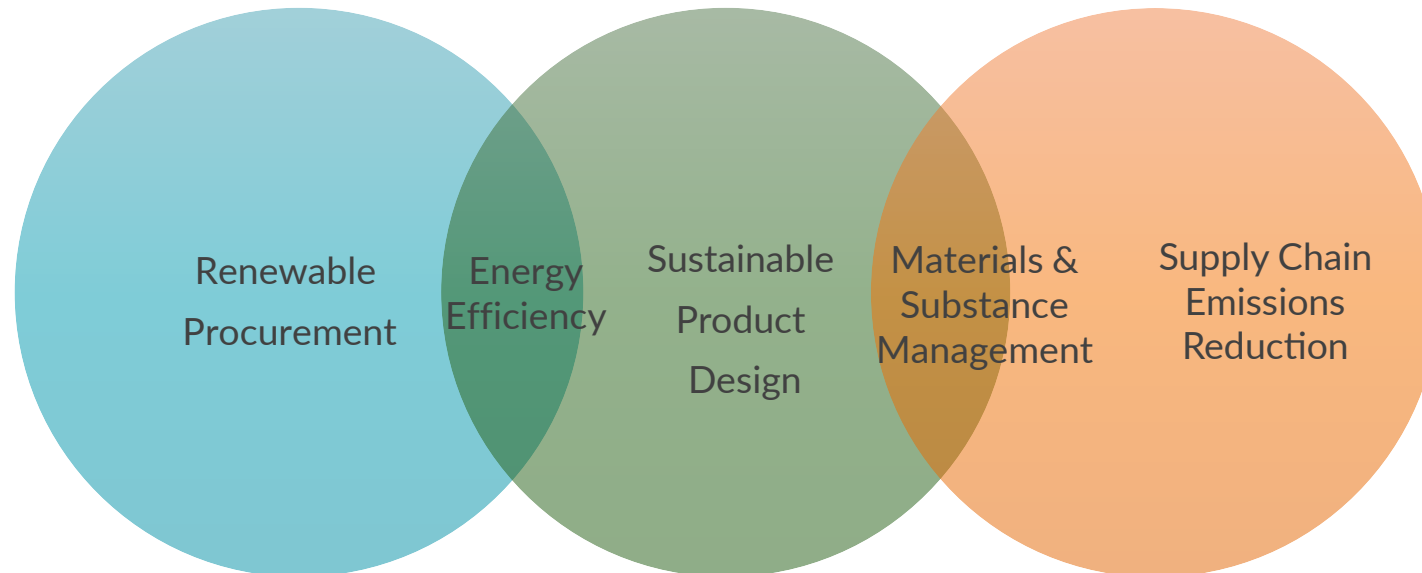
Our Environmental Sustainability Strategy

We aim to minimize environmental impacts and advance emissions reduction across operations, product use, and supply chain

Build carbon neutral operations, achieving carbon neutral GHG emissions by 2025

Advance product circularity, from product design, to packaging and end of life management

Drive emissions down across Juniper's supply chain



Our sustainability credentials

GREEN TO THE CORE

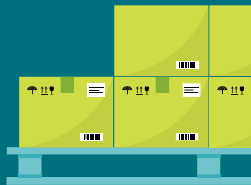


Carbon neutral
across global
operations
by 2025



100% compostable
material

Used for any new
product introduction
packaging*



* For any system less than 70 lbs

United Nations
Global Compact
Member

Since 2021 Juniper Networks
has been committed to the
UN Global Compact corporate
responsibility initiative and its
principles in the areas of human rights,
labor, the environment, and anti-corruption.

WE SUPPORT



Juniper Headquarters

Built to LEED certifications

93% solar powered

Juniper Bangalore



THANK YOU

AI IN ACTION JUNIPER
driven by Mist AI

