TELECOM INFRA
PROJECT

# Demand for Connectivity is Rising – Supporting the Industry so it can Deliver

Connectivity is transforming our world and how we live; it is the driving force behind smarter urban management, rural development, and new opportunities for enterprise. COVID-19 highlighted how increasingly dependent we are on connectivity, and how access to the internet can provide much needed continuity for business, education, public services, and social links.

As the telecommunications ecosystem seeks to provide this vital internet connection and support growing demand, it faces **three systemic issues**:

- **Limited Innovation and Choice** — Telecom network infrastructure is provided by a small number of end-to-end suppliers and constrained by closed systems that make it hard for new, innovative suppliers to enter, compete, and thrive. Limited choice and a lack of flexibility makes it hard for operators to upgrade and expand their networks.
- **The Unconnected** — Roughly half of the world's population remains unconnected to the internet, many in places where telecom infrastructure is poor and it may not be commercially viable to invest with the current technologies.
- **Rising Demand** – Even among those who have access, bandwidth constraints prevent many users from experiencing the full benefits of connectivity. And the rapidly expanding ways we use the internet — remote work, online education, streaming video, and more — are pushing the limits of the existing infrastructure.

It is widely acknowledged by the industry that current global telecom infrastructure won't enable operators to access the opportunities that are emerging in the digital world. The most transformational use cases for 5G will require simpler and more efficient deployments. We can do far more with an approach that sees the whole of the industry working together to change the way telecom infrastructure is built — from innovation to deployment — so network operators can enable the full potential of the digital revolution and people in all parts of the world can reap the benefits of efficient and effective connectivity.

## The Telecom Infra Project (TIP) — A New Approach To Connectivity

The Telecom Infra Project (TIP) is a global community of companies and organizations working together to accelerate the development and deployment of open, disaggregated, and standards-based solutions that deliver the high quality connectivity the world needs - now and in the decades to come. Founded in 2016, TIP has grown into a diverse membership that includes hundreds of member companies - from service providers and technology partners, to system integrators and other connectivity stakeholders.

## Disaggregated Networks Provide More Choice and Flexibility

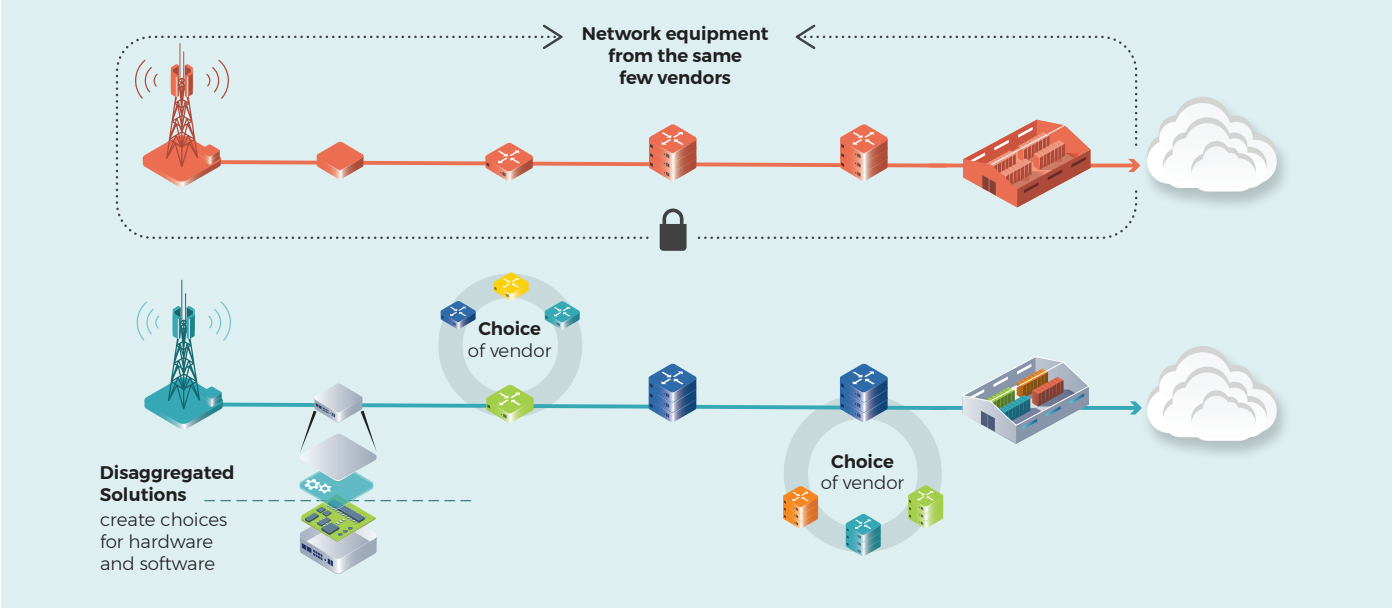
TIP believes open, disaggregated networks address the challenges of a consolidated ecosystem by providing network operators more choice and flexibility to improve networks at a pace that keeps up with rising demand.

The global infrastructure that underpins connectivity is complex, and made of many different interconnected technology components. Disaggregation — separating complex technologies into small pieces that can be combined in different ways — will allow for more flexible networks that let operators develop and upgrade individual components, selecting the best technology available at any point in time for each piece of a telecom network. They can choose from a wide range of software and hardware options that interoperate seamlessly, instead of having to source integrated infrastructure solutions from a very limited set of suppliers.

Separating out complex technologies and ensuring interoperability also means more companies, including SMEs, can compete in different parts of the technology stack — incentivising innovation and giving network operators more choice among both incumbent & emerging solutions. This can make the process of upgrading networks — either partially or totally — easier, faster, and more cost efficient.

By reinventing how telecom infrastructure is built, we are creating a more dynamic ecosystem where new suppliers can innovate, compete, and bring to market

## Traditional vs disaggregated telecom networks




new solutions faster — boosting the efficiency of existing solutions, reducing the barriers for the most attractive 5G use cases, and delivering a variety of benefits to providers, partners, and users:

- **Expanded Access** - Greater choice among technology providers can also lower costs by driving competition, making it commercially viable for connectivity providers to reach communities previously unconnected or under-connected.
- **High Quality Experiences** - Disaggregated networks with interoperable components will also allow connectivity providers to optimize for innovation and evolve their networks at a rate that matches expanding demand for new applications, including the internet of things and smart cities.
- **Network Resilience** - A diverse range of solutions and suppliers enables connectivity providers to build more resilient networks and reduce dependencies that create single points of failure. Open standards provide transparency and certainty in what a product contains, increasing predictability and trust in supply chains.

## Together, We Build

Our growing community is already designing, building, and bringing to market a portfolio of disaggregated solutions that improve flexibility and drive down the costs of building telecom infrastructure. TIP's new approach to telecom infrastructure is both collaborative and comprehensive:

- **Project Groups driven by engineers** and other experts from member companies work together to design, build, and trial new technologies that cover all areas of the telecom network, including: Access, Transport, and Core & Services
- **Community Labs around the world** test TIP technologies and integrate them into end-to-end network solutions
- The **TIP Exchange marketplace** hosts TIP-incubated products from dozens of member companies, some of which are now deployed in markets across the world in a variety of use cases and geographies, from dense urban environments to ultra-rural areas.
- TIP coordinates closely with **Industry Consortia** such as O-RAN, OCP, ONF, OSA, OSF and more to streamline and strengthen collective efforts

## Driving Innovation through Better Telecom Ecosystems

By bringing together key connectivity stakeholders around the concept of disaggregated networks, TIP is transforming how telecom networks are built. This transformation will in turn create opportunities for more innovation within and on top of networks, open doors for innovators around the world, and create a market for new, high skilled jobs supporting the development and implementation of open, interoperable, standards-based connectivity solutions.

Connectivity is transforming the world and TIP is transforming the way connectivity is delivered. By working collaboratively to expand innovation and choice, together we can build the networks that support the full benefits of connectivity for communities around the world - both now and in the future.