

IOWN Global Forum: The Facts

A Shared Vision

It is imperative to move at the pace of innovation, to look around the corner to prepare for the next step change. The time is now to look beyond current Internet technologies to build the future communications frontier. This will demand industry wide collaboration; behavior shifts and giant advances in technology. The Forum is committed to delivering on the promise of a better world for all global citizens. A world that improves the way humans live and interact with technology, and each other.

Making our world smarter does not simply mean that everything becomes interconnected and highly automated. It is a foundational change; it will shift how we interact with technology to ensure it becomes a natural and pervasive part of everyday life. It must be personal, it must be useful, it must be intelligent to guarantee that people will trust it and will want to engage with it. True success comes when people are using technology without even realizing it.

This revolution will see entire industries be disrupted and change and possibly even vanish, while new industries and ecosystems will emerge. Virtually every facet of business and society today will witness tremendous change.

The Immediate Focus

The Forum initial focus is to address the biggest challenge and opportunity in achieving a smart and connected vision, a capable communications central nervous system. The backbone to this pivotal shift will be the development of a new communications and network infrastructure on which the future can be built. Our sole purpose is to turn our vision into a reality by accelerating the development of the necessary new technologies, frameworks, specifications and reference designs.

Initial efforts will focus on two key transformation technologies:

Photonics Network: will act as a communication infrastructure for the future. An all Photonics Network is an end-to-end optical communication system. It is anticipated that it has the capacity to deliver excellent bandwidth, low latency, flexibility, and energy efficiency. In fact, so optimistic are we that the IOWN Global Forum is already targeting a 100-fold improvements in power consumption, end-to-end latency, as well as transmission capacity levels compared to traditional networks.

Digital Twin Computing: will enable some of the technologies and use-cases needed for a smart world. The concept of digital twins started in the manufacturing space and is in the simplest of terms the idea of virtual replicas of physical objects and devices. In essence, Digital Twin Computing extend the concept of this conventional digital twin to human as well as things. In addition, it aims to enable for them to be recreated and autonomously behave and interact without restrictions.

For more details, please refer to the Digital Twin Computing whitepaper:
<https://www.ntt.co.jp/svlab/e/DTC/whitepaper.html>

[Technical outline of the infrastructure for a future smart world](#)

