



Creating Infinite
Possibilities.

The Cable Home is the Wellness and Telemedicine home –
lets now deliver these new solutions

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Service Network Gateway (SNG) is essential for T4W

- Telecom for Wellness (T4W) architecture
- Sensor Network Gateway (SNG) a critical in-home component
- SNG functionalities and interfaces
- Recommendations

Telecom for Wellness* (T4W) opportunity summary



Aging in Place



Telehealth

Subscribers (Users)	Older adults (65+), caregivers	Individuals, providers
Stakeholders	Family members, caregivers, doctors, service personnel etc.	All family members, providers, (payers)
Needs	Communicating, monitoring, service, support, integration	Communicating, monitoring, integrating with provider systems
Challenges	Ease of use, provider network integration, problem solving	Ease of use, device and EMR integration, remote monitoring,
Telecom opportunity	End to end solution, managed services, provider integration	End to end solution, managed services, provider integration

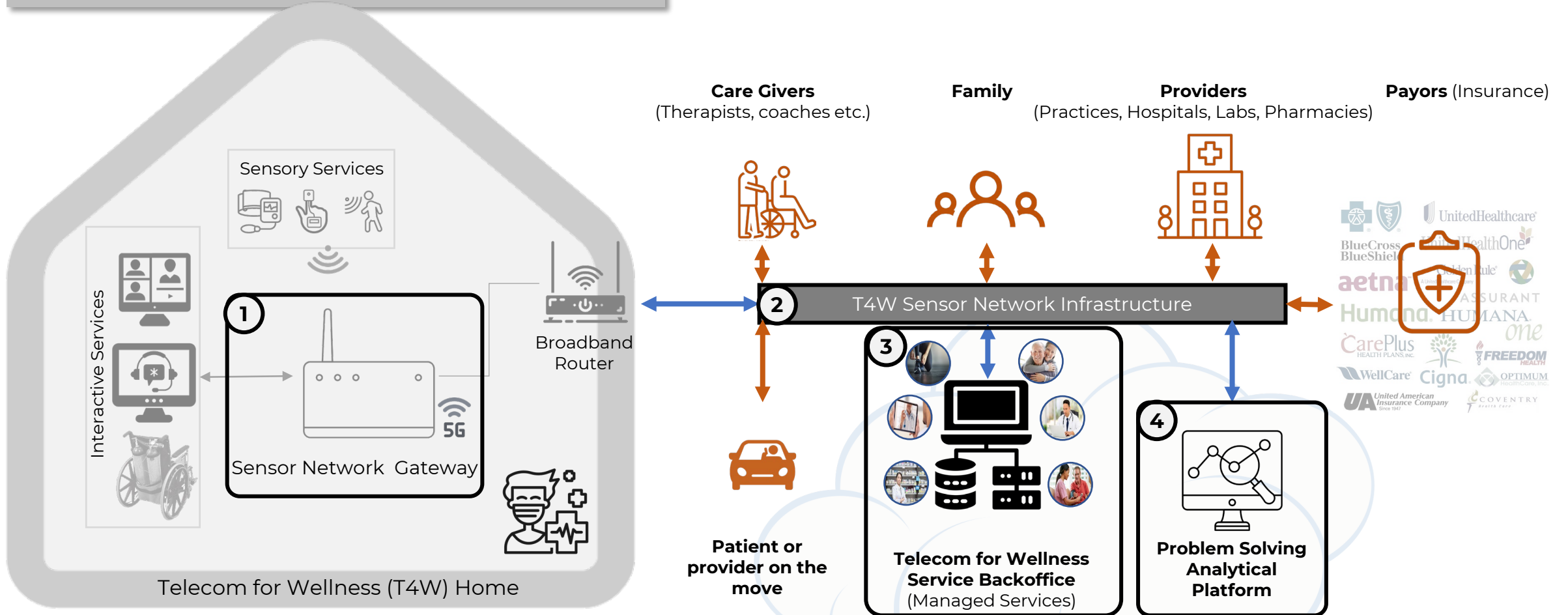
High level T4W use cases

- 1 **Basic communication** between the users and the providers/ caregivers
- 2 **Seamless communication** between the users and stakeholders
- 3 **Monitoring the users** for health, mobility, fall detection etc.
- 4 Analyze the data and **provide relevant notifications** to the stakeholders
- 5 **Assist** the T4W service providers with their **accountability claims**
- 6 **Managed services** to support installations, support and services

(*) Telecom for Wellness (T4W) includes many healthcare and caregiving use cases such as Aging in Place (AIP) and Telehealth (Refer [here](#))

T4H opportunities such as AIP and Telehealth inherently solve very similar problems that promotes a common architecture

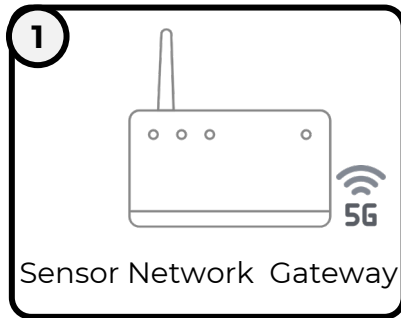
DTS's T4W Environment Framework (DTEF*)



(*) DTEF was introduced to address wellness support by Telecom operators [here](#)

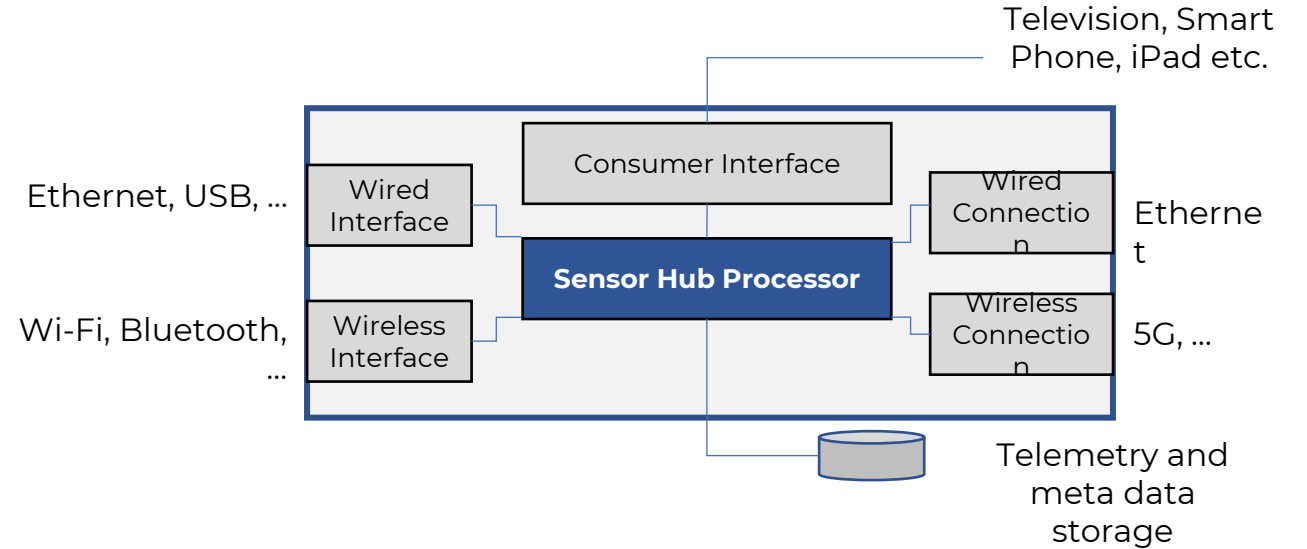
T4W opportunities such as AIP and Telehealth inherently solve very similar problems that promotes a common architecture

T4W Sensor Network Gateway



This is an in-home gateway that **interacts with different T4W devices, collects data and provides reliable communication**

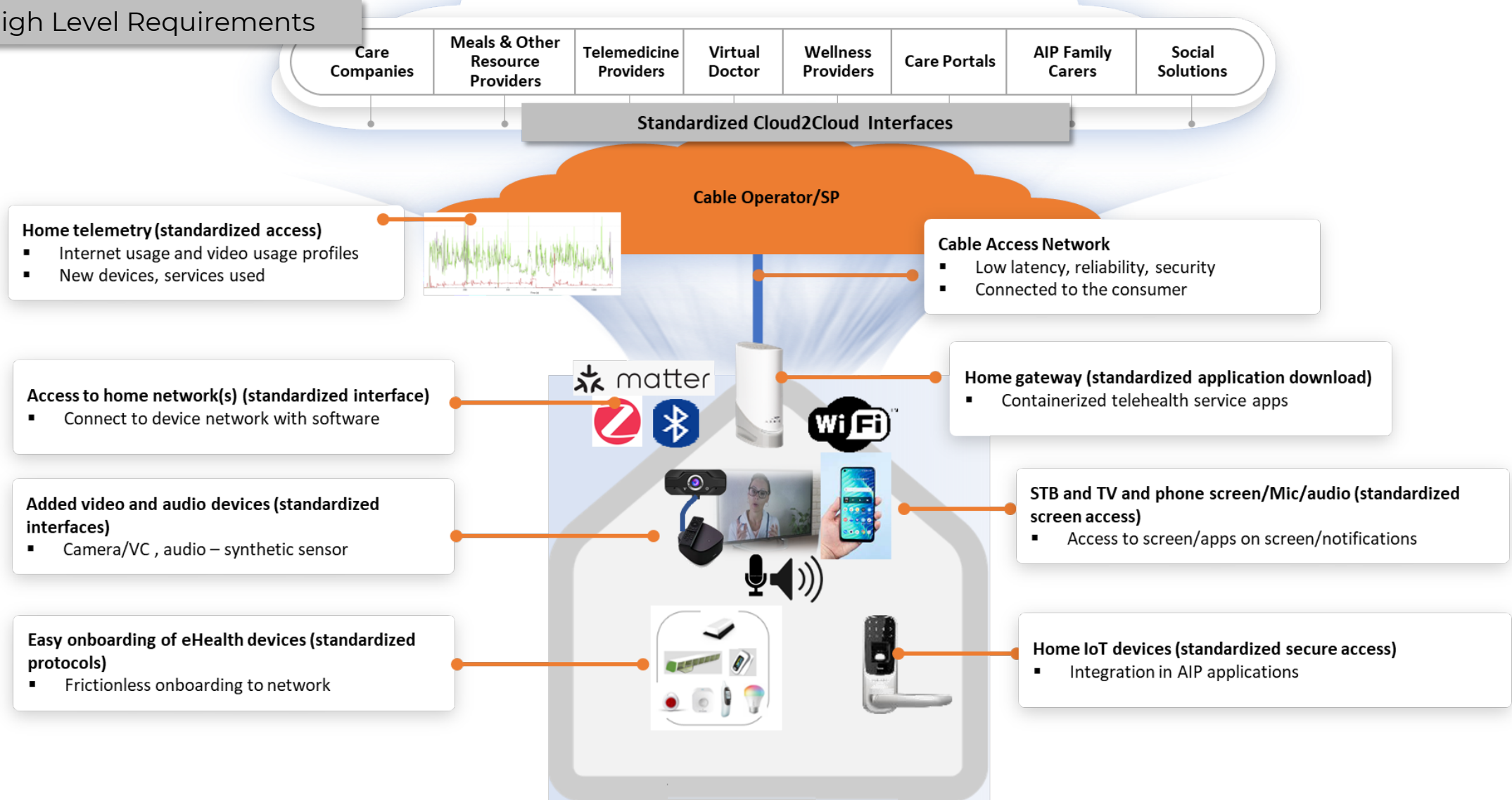
Sensor Network Gateway Architecture Diagram

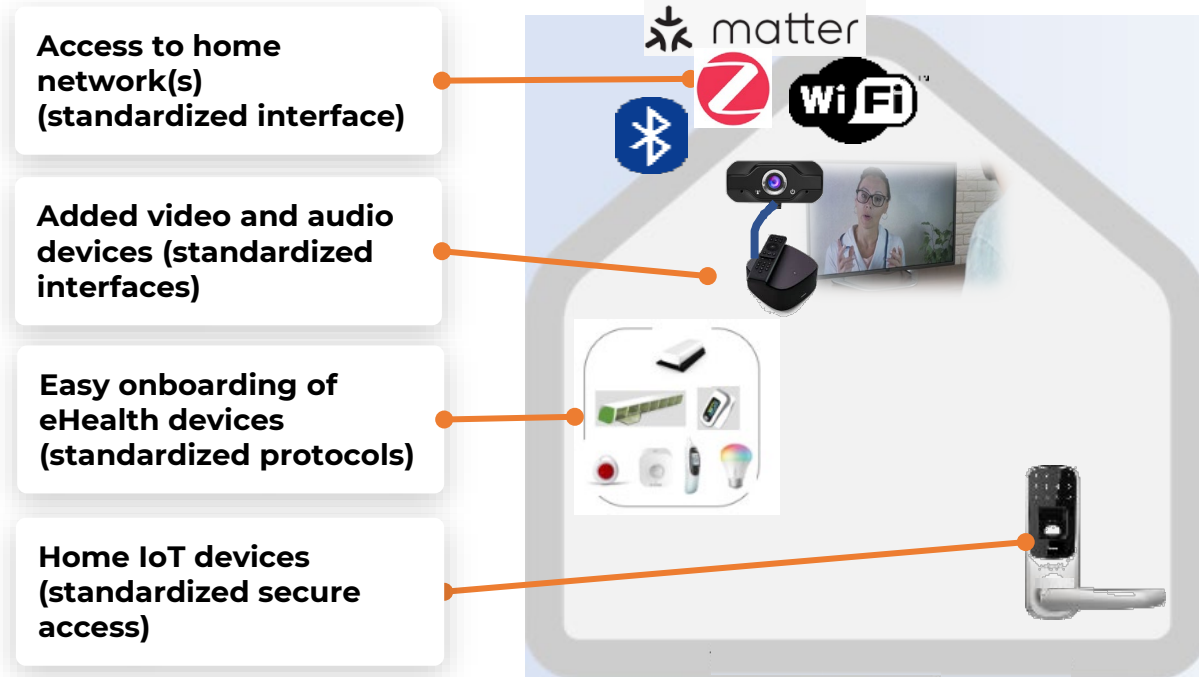


T4W sensor gateway is an essential component that interfaces and collects information from different devices at home

Unifying health resources with Home Networks and Devices

Gateway High Level Requirements





Functionality

- **Register, onboard** and **learn capabilities**
- **Detect** their status and **securely** communicate
- Identify the **status** and **collect** data

Interfaces

- **Wired** – Ethernet, USB, etc.
- **Wireless** - Wi-Fi, Bluetooth, BLE, Matter, etc.

Serviceability

- **Monitoring the reachability/connectivity status**
- **Debugging** the **connectivity** and other **serviceability**

Other

- **Charging** the connected devices

Functionality

- **High-quality differentiated communication**
- **One and two-way reliable communications**
- Per **session-based secure communications**

Interfaces

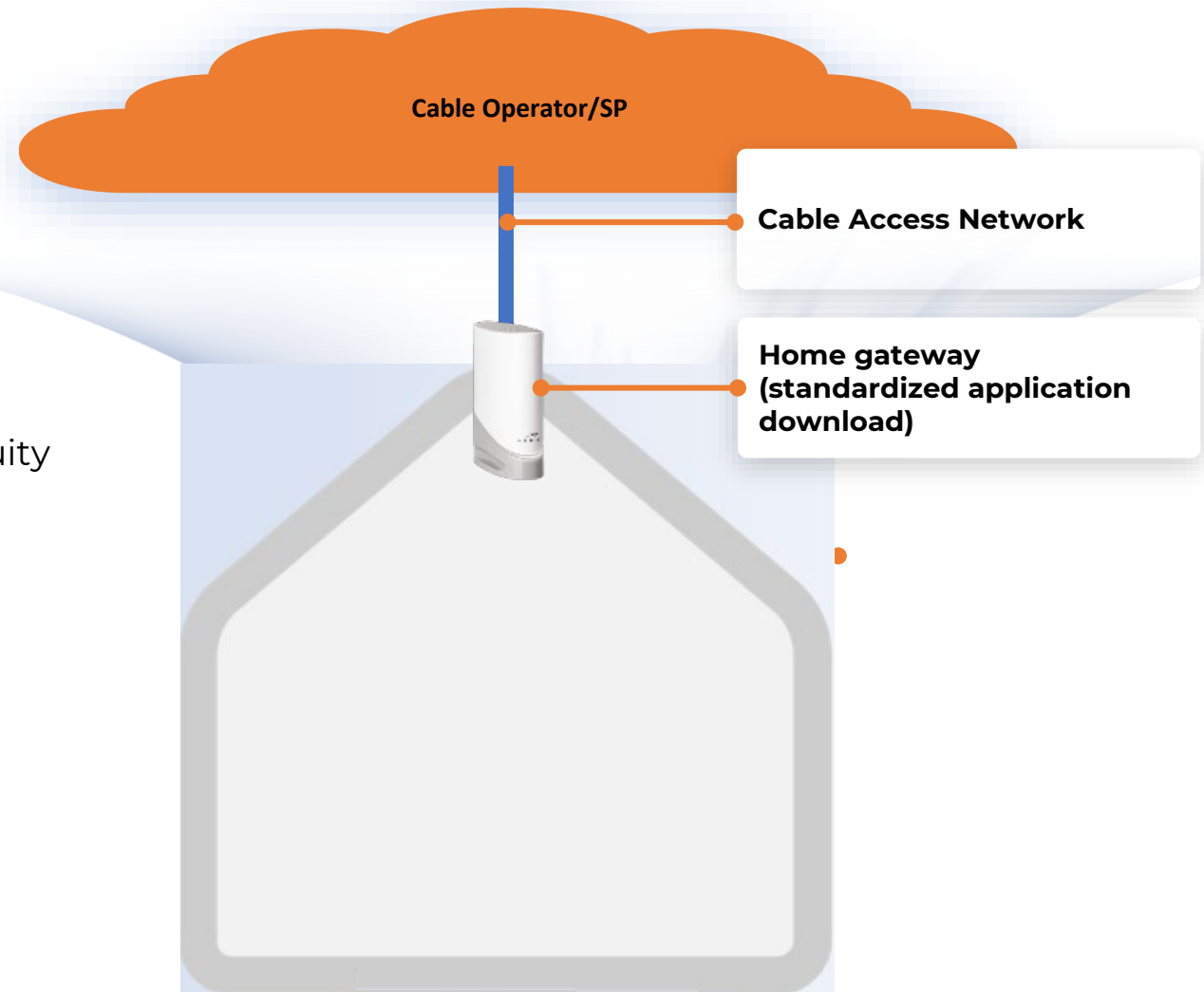
- **A wired primary interface** for QoS enabled interface
- **A wireless secondary interface** for high-priority traffic
- **A failover mechanism** that provides the service continuity

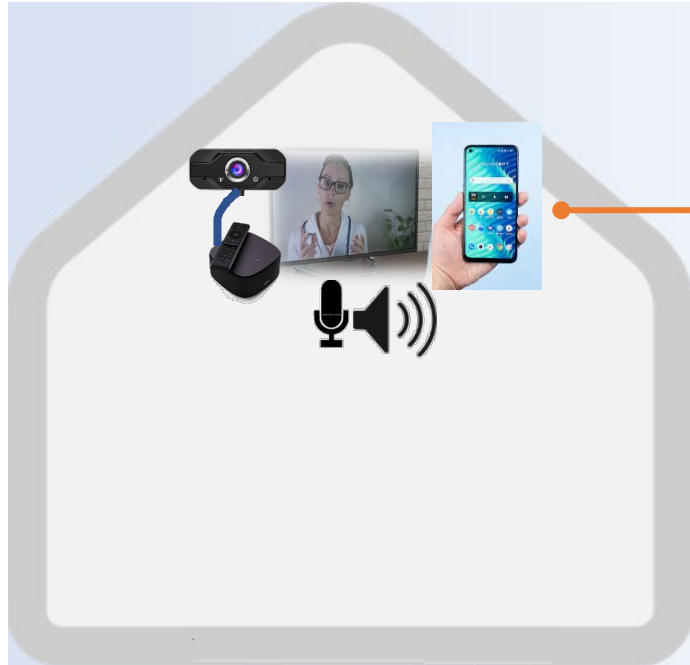
Serviceability

- **Remote access loopbacks**
- **Service level network connectivity polling**

Other ifs

- **The wiring closet**
- **The broadband router**, if SNG is not integrated into it
- A device that provides a **redundant communication**





STB and TV and phone
screen/Mic/audio
(standardized screen
access)

Functionality

- **Video console integration** with a simple **remote**
- **Voice-enabled interactions** with the SNG
- **Be able to split the feeds among the stakeholders**

Interfaces

- **Wired** and **wireless** interface to console

Serviceability

- **Service continuity** extended to this interface

Functionality

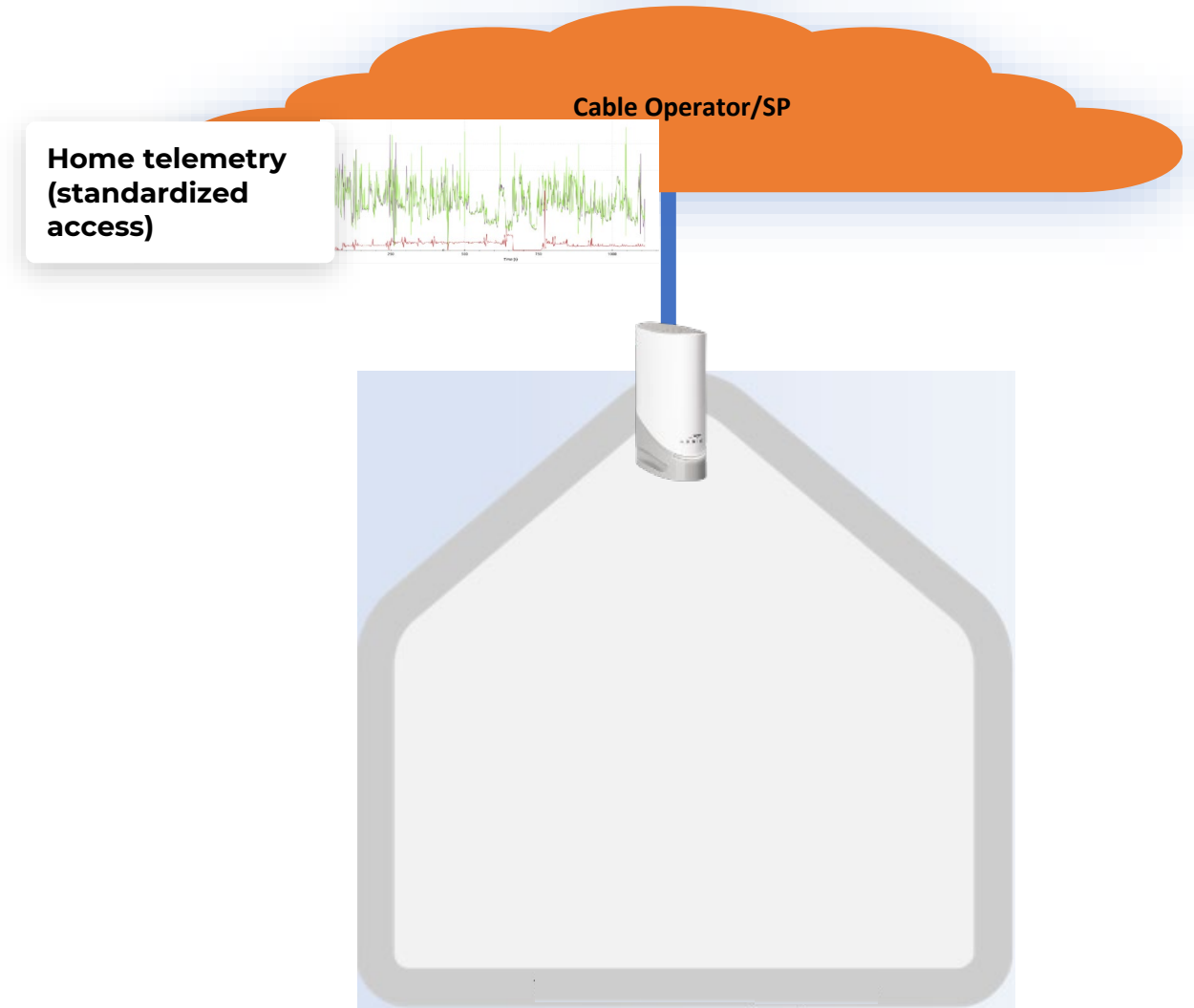
- **Register** SNG with the T4W platform
- **Unique addressability of the device** (IP address, etc.)
- **QoS** marking, prioritization, and fulfillment capabilities
- Be capable of **self-installing**
- **Management interface** to configure and manage
- Provide **extensive stats collection** capabilities
- Support some **basic on-SNG analytics**
- **Store and provide access**

Interfaces

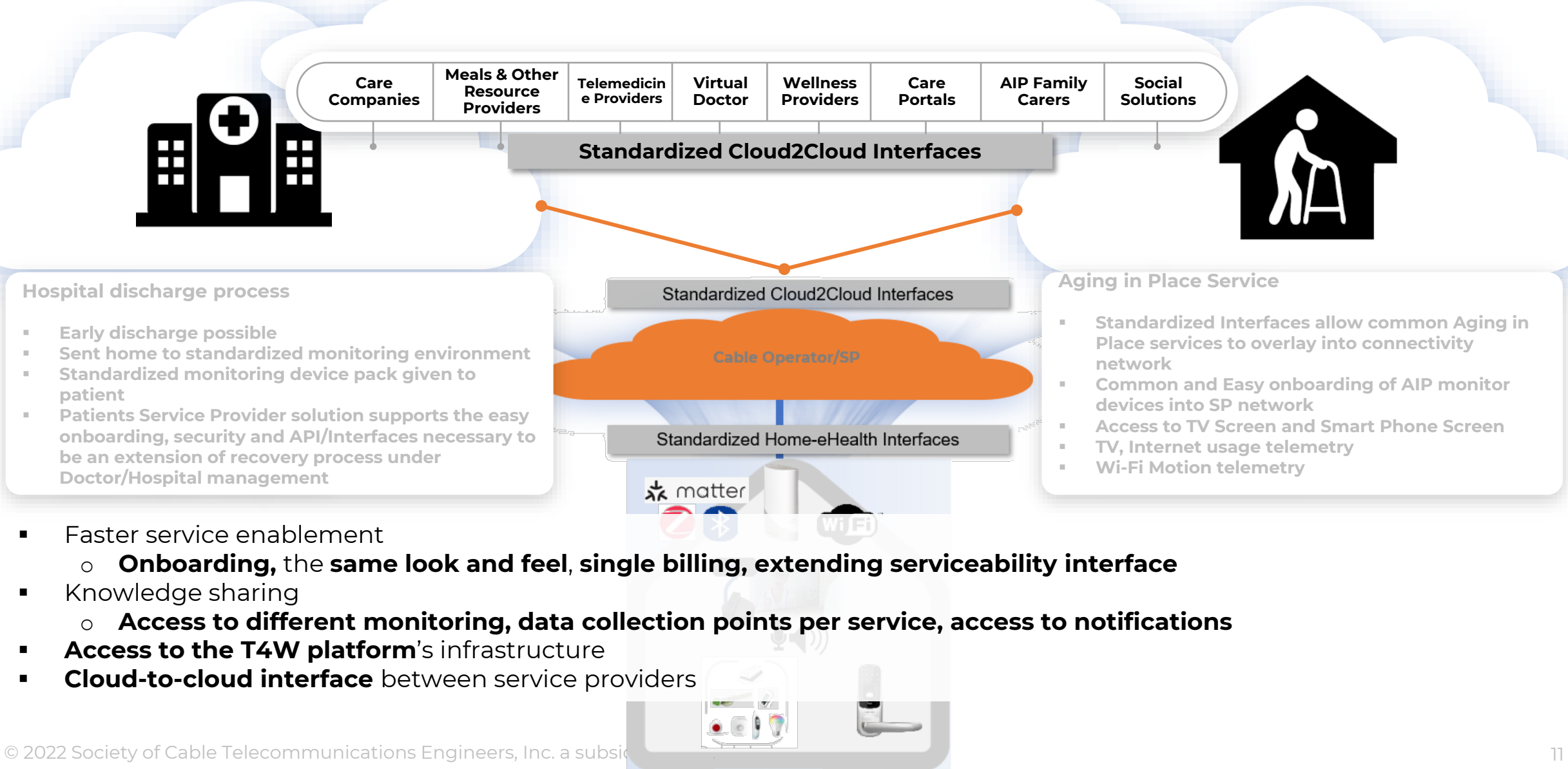
- **Service interface** to access the management interface
- A local **interface** for the field technician
- Allow **access to different debugging tools and statistics**

Other

- **AC and DC interface with battery backup**



Making the home an extension of Telehealth service through



Access to cable operator's Multi-Trillion-dollar T4W opportunity begins with SNG

SNG can be a standalone or integrated with in-home components such as RG or STBs

Recommendations

- Enables different one-way and two-way communicating devices,
- Offers standardized, redundant north-bound interface,
- Provides an in-home customer (and their service) management interface,
- Offers constructs to different data collection, problem-solving, and management of the device, and
- Provides standardized cloud-to-cloud interfaces to enable inter-industry collaborations



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Thank You!

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