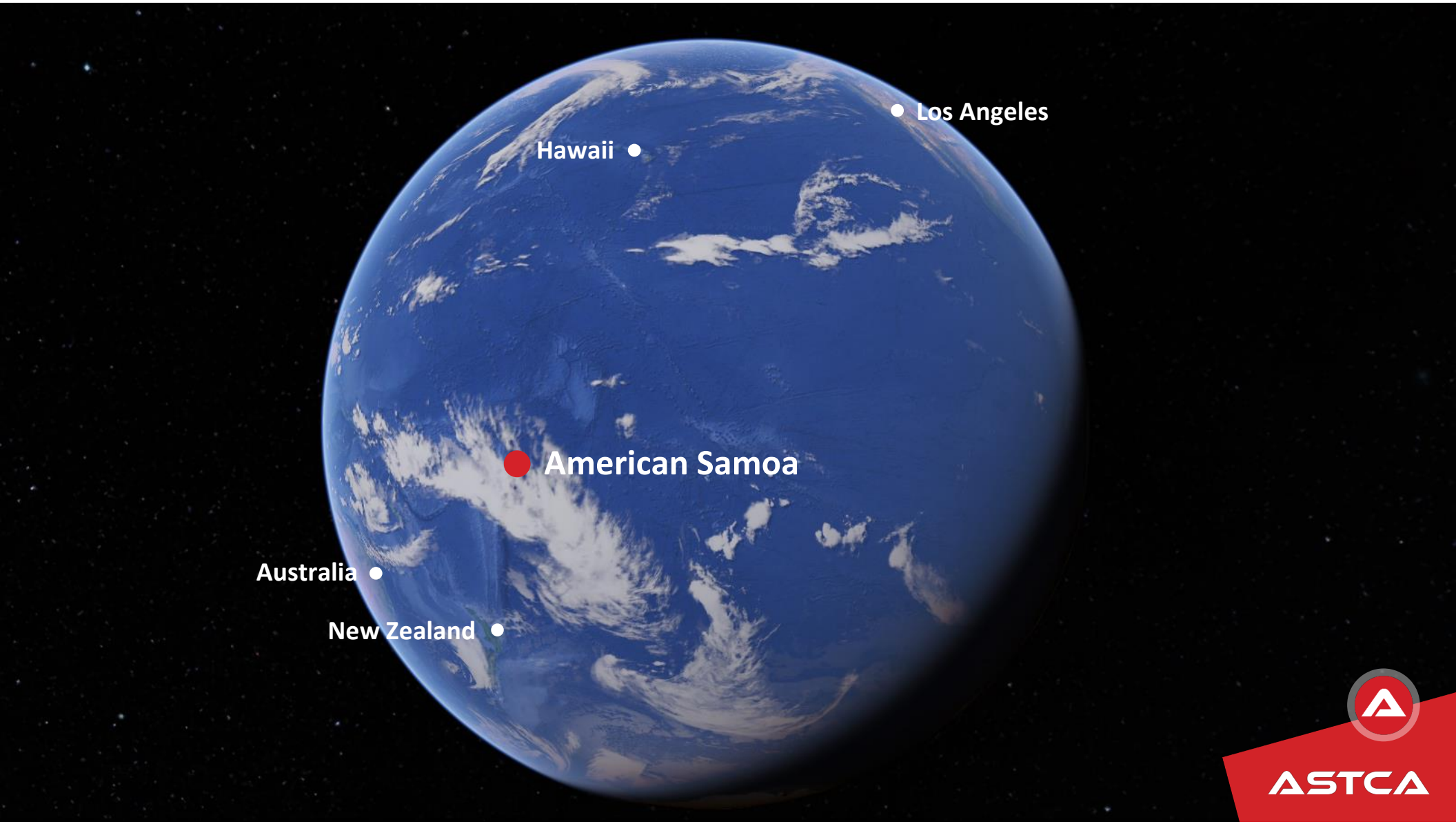
Shovel Ready Projects

American Samoa
Broadband

March 28, 2022

ASTCA


Los Angeles
Hawaii
American Samoa
Australia
New Zealand

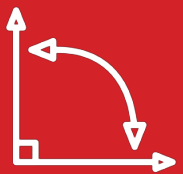
March 28, 2022

About American Samoa

1900

7

50,000



76 Sq Mi

12,000

Highest Per Capita

Highest Per Capita

First Earth Contact

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About ASTCA

- 1900 – Established by the US Navy at the time of the deed of cession.
- 1986 – Introduced cellular service.
- 1994 – Introduced internet service.
- 2005 – Introduced “high-speed” wireless internet.
- 2005 – Introduced 3G wireless service.
- 2009 – Connected to ASH submarine cable from Hawaii.
- 2015 – Fiber network turned on, copper wire connections turned off.
- 2015 – Introduced O3B Satellite internet, capacity 400 Mbps.
- 2018 – Connected to Hawaiki submarine cable, 200 Gbps.
- 2019 – Launched 4G/LTE mobile wireless service.
- 2020 – Introduced FirstNet in partnership with AT&T.

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Ask Request

- American Samoa Internet Redundancy | **15M**
- Local Broadband Fiber Network | **8.2M**
- Cable Landing Station and Technical Operations Center | **10M**
- Mobile Broadband Expansion and Systems Optimization | **17.7M**
- Cybersecurity | **2.5M**
- Inter-Island Sea Support | **350K**
- Technology Park | **30M**

$83.75M

Total

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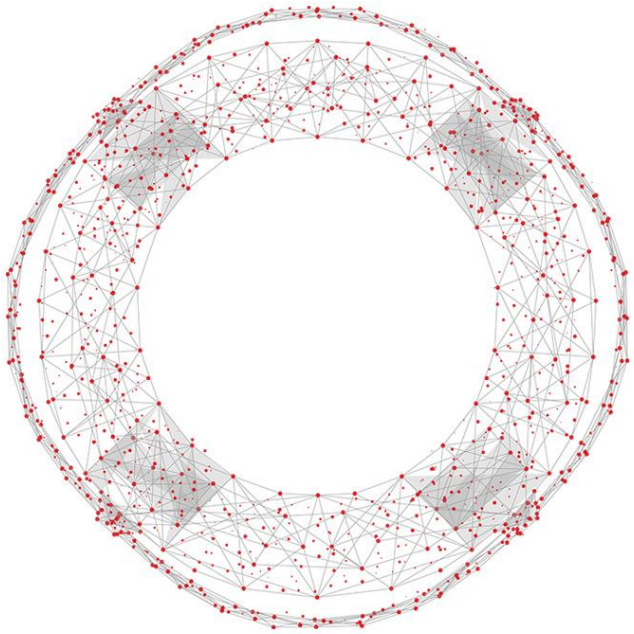
American Samoa Internet Redundancy | 15M



All Local and Federal government operations, banking, medical, and logistics occurs over a single point of failure connection. The people and the government require a backup connection with an undersea fiber cable to the nearby independent state of Samoa for physical and economic security. The impact of losing connection would effectively cut off ASTCA and our broadband users from the United States and the world.

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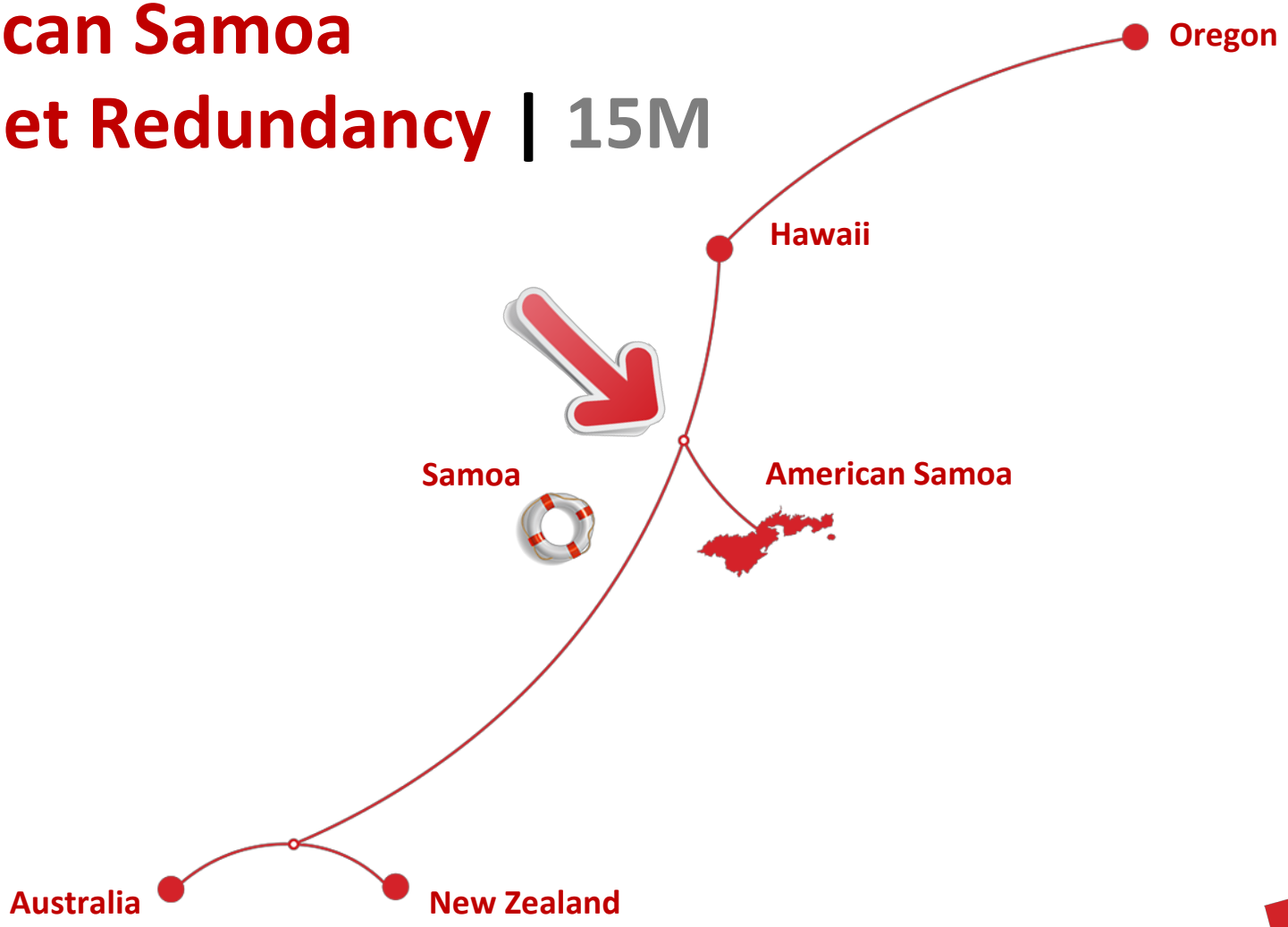
American Samoa Internet Redundancy | 15M



Submarine cable map not to scale

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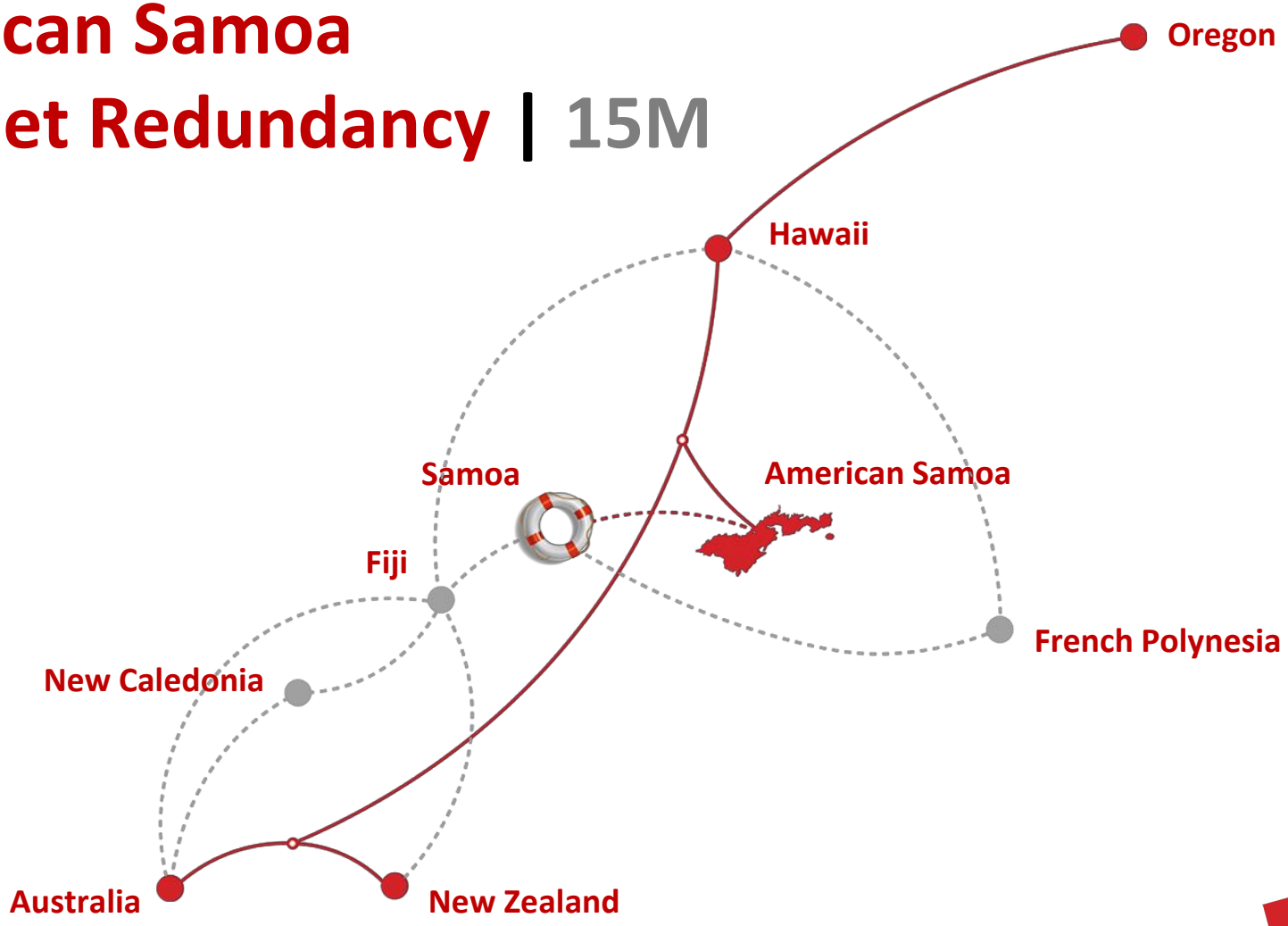
American Samoa Internet Redundancy | 15M



Submarine cable map not to scale

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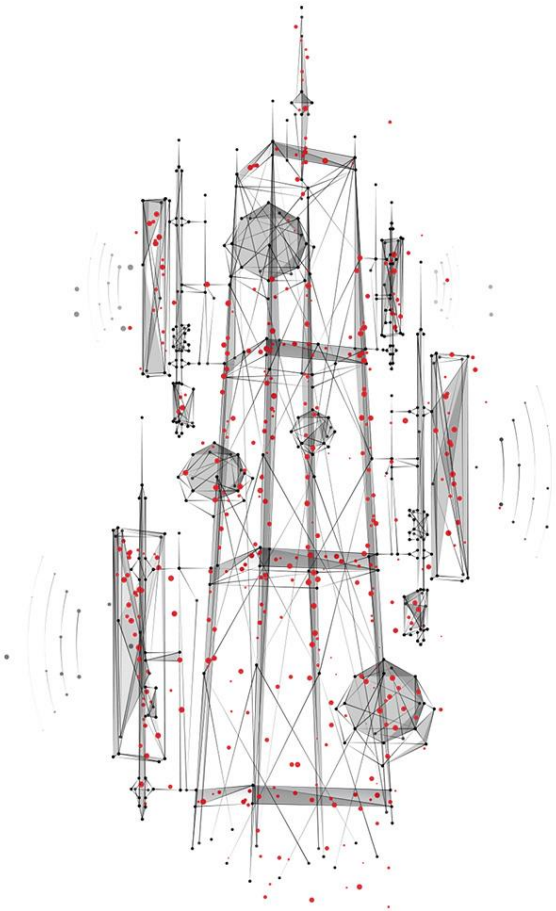
Local Broadband Fiber Network | 8.2M



Local Network Redundancy and Backup

The Territory has no backup in place to protect the government and population against an on-island fiber (BLAST) network failure. A failure would disrupt communications and broadband in large geographic areas of the island for indefinite periods of time – from weeks to months. The government wants to avoid and mitigate this risk by installing a wireless point-to-point system using microwave technology located on ASTCA's existing towers and other key geographic locations.

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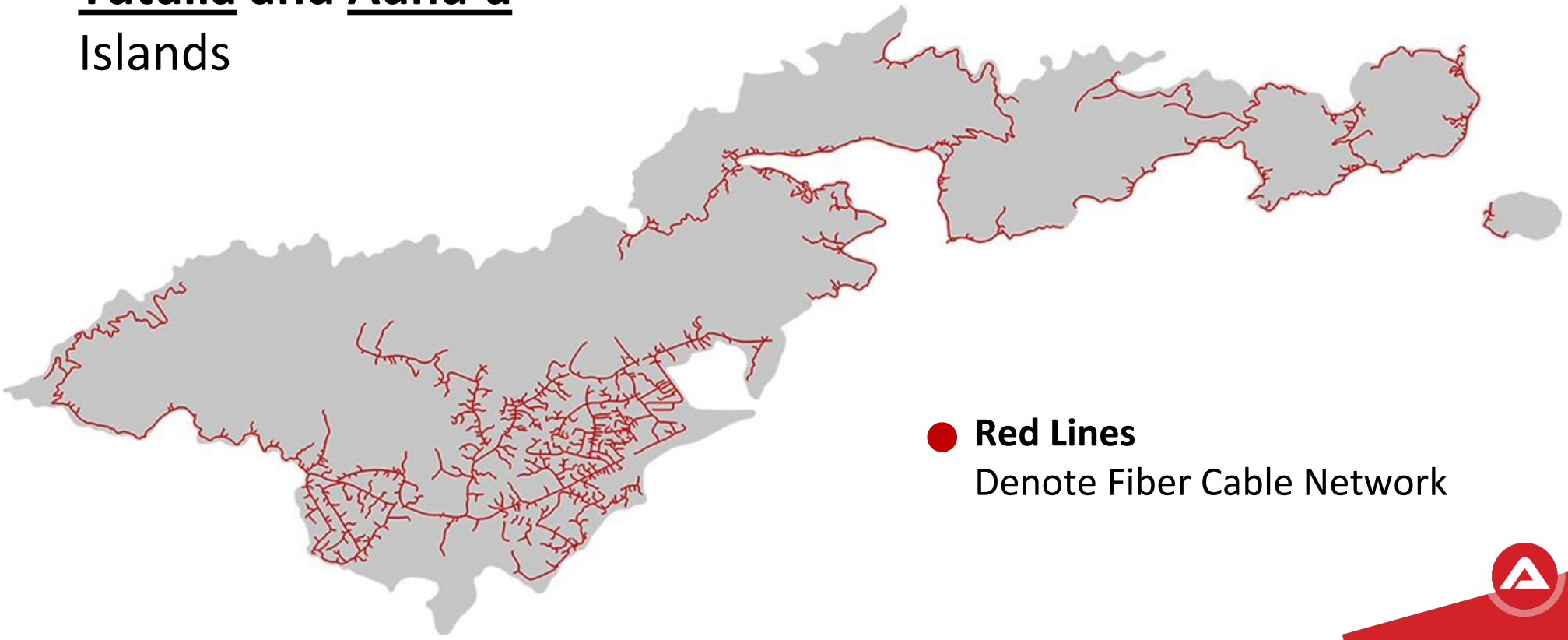
Local Broadband Fiber Network | 8.2M

Tutuila and Aunu'u
Islands



- **Red Lines**
  Denote Fiber Cable Network

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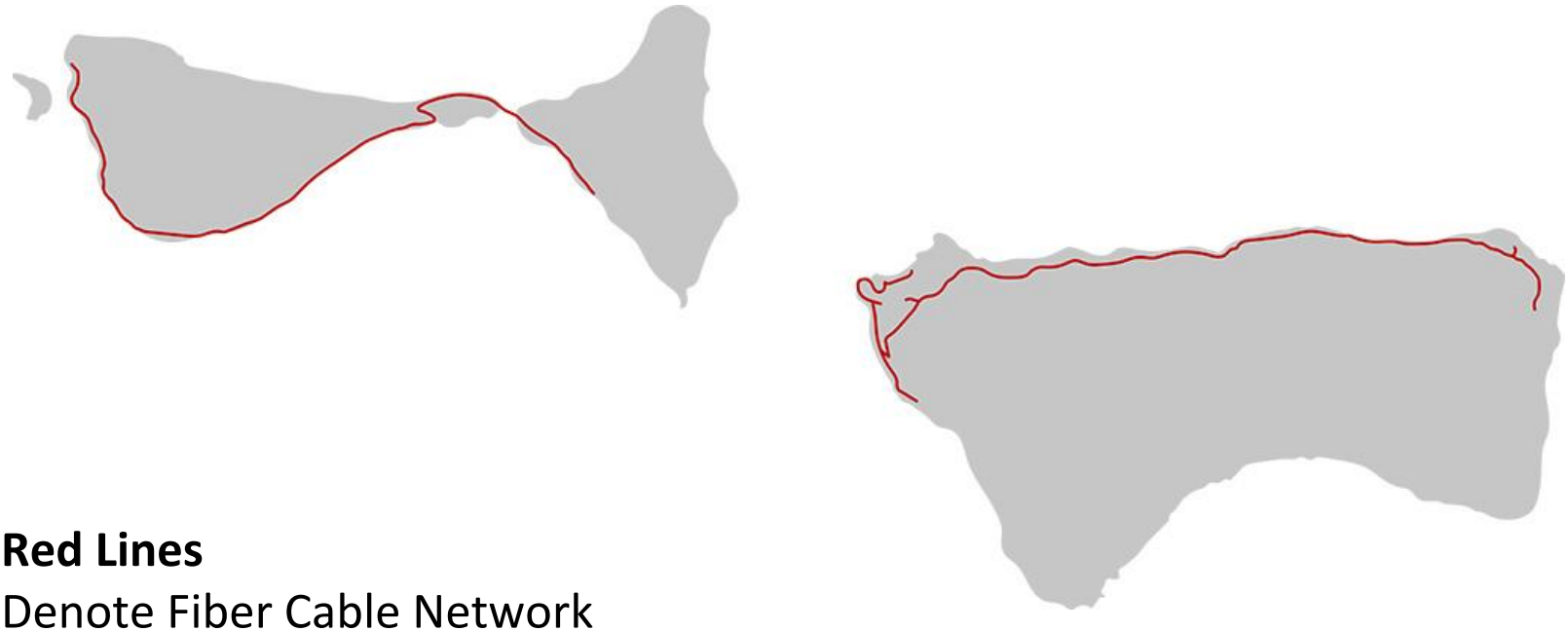
Local Broadband Fiber Network | 8.2M

The Manu’a Group

Islands



- **Red Lines**
  Denote Fiber Cable Network

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Local Broadband Fiber Network | 8.2M

Impacted Fiber runs from 9 YEARS of drainage issues and hostile tropical climate.

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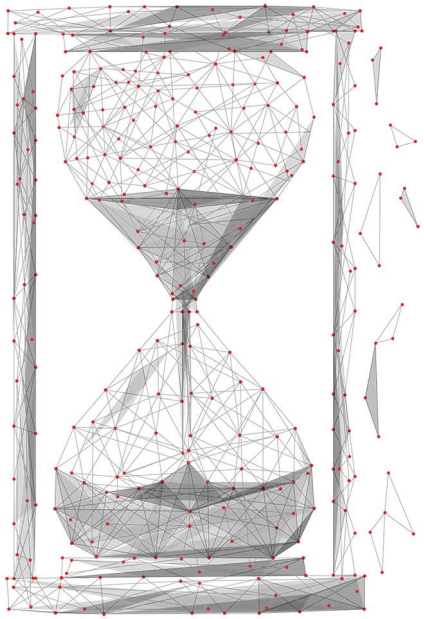
Local Broadband Fiber Network | 8.2M



Compliance with pending new FCC broadband requirement

Upgrading the fiber network is required to meet the new pending FCC broadband speed requirements of 100/20 Mbps. Key areas facilitating this would be:

- Protect and secure local fiber network and convert overhead lines to underground lines.
- Acquire software licenses for the management and provisioning of broadband services.
- ***Expand coverage to unserved areas.***
- Acquire additional hardware to support the FCC ACP (Affordable Connectivity Program) initiative.

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Cable Landing Station And Technical Operations Center | 10M

Relocating and Securing Cable Landing Station

This is where the undersea ocean cable rises to the surface and connects to the ASTCA network. The current location is at an unsecured village area on a golf course. Relocation to a properly secured, government-fenced location at the ASTCA headquarters in a building properly engineered and built for safe and secure data center operations would protect the Territory from any unwanted impacts.

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Cable Landing Station And Technical Operations Center | 10M

Details on Current Cable Landing Station

- Constructed in the 1960s.
- Not hardened against natural disasters.
- Not protected from vandalism or acts of terrorism.
- Not properly designed for current critical infrastructure use.
- No additional capacity for expansion.

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Cable Landing Station
And Technical Operations Center | 10M

Current Location in Village of ʻIliʻili
Cable Landing Station

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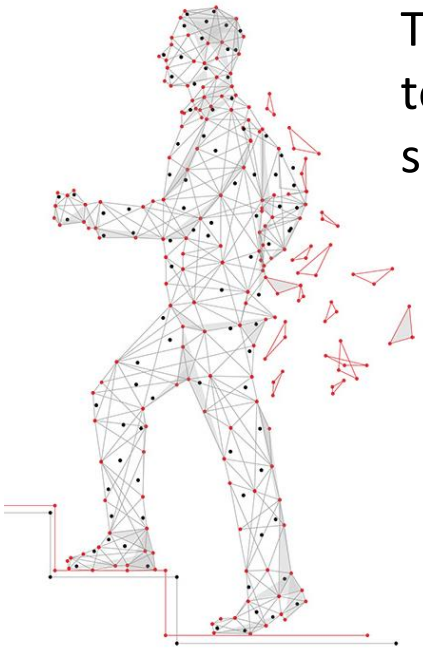
PROPOSED LOCATION
ASTCA Headquarters
CURRENT LOCATION
Cable Landing Station
Hawaiki
Cable Landing
And BMH

Cable Landing Station And Technical Operations Center | 10M



Technical Support & Training Facility

The facility would provide much-needed space due to the increasing technical complexity and training requirements for ASTCA provided services to the community. **Key benefits** would be realized in:

- **Centralizing support** for field operations, IT technical support, and improved organization of services provided to broadband users.
- **Outreach and community training** for building up local capacity in engineers and technicians to support broadband services and field operations.
- **Incubator** location for leveraging direct high-speed access to Hawaiki circuit quality broadband and speeds with no latency.

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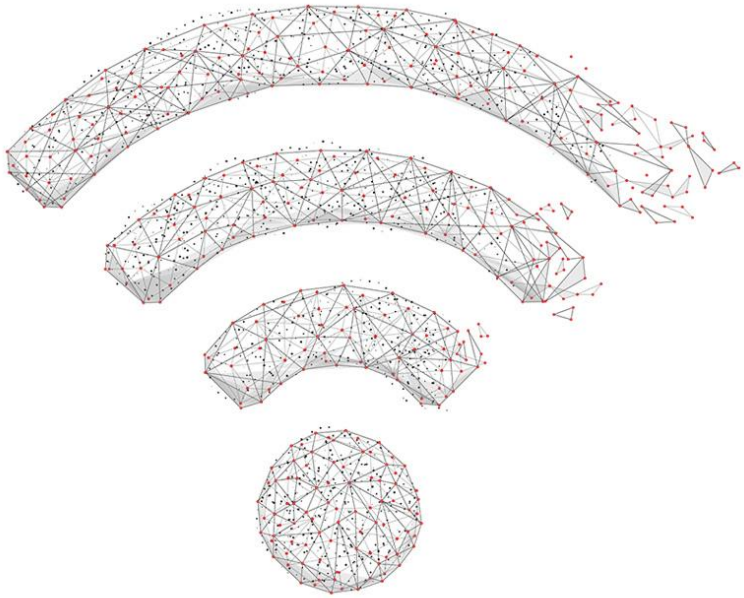
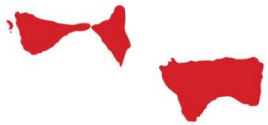
Mobile Broadband Expansion and Systems Optimization | 17.7M



High-Capacity Mobile Broadband Expansion

Expand service to underdeveloped and unserved areas by providing wireless broadband coverage and capacity on *both* island groups:

Tutuila



Manu’a

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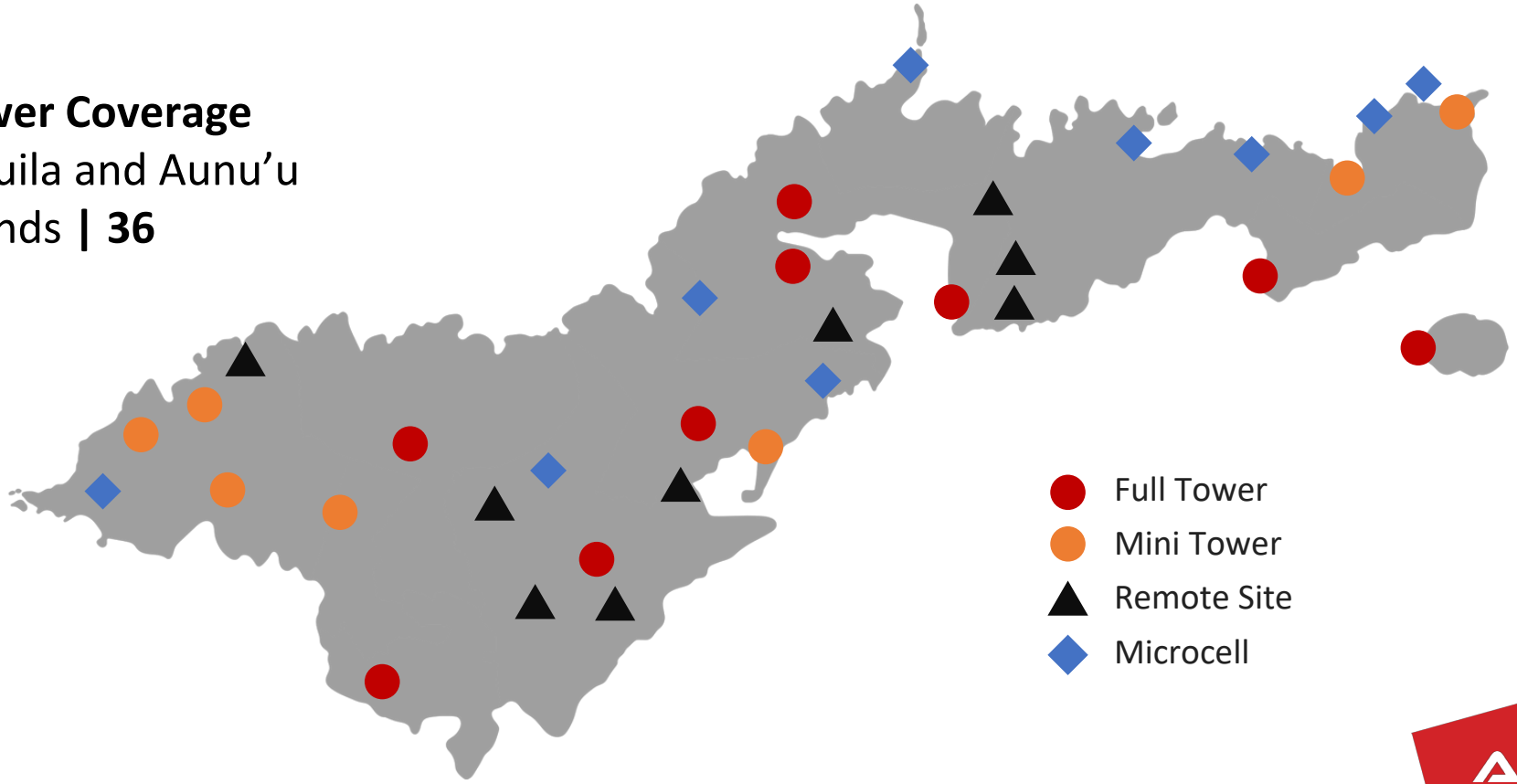
Mobile Broadband Expansion and Systems Optimization | 17.7M

Tower Coverage
Tutuila and Aunu'u Islands | **36**



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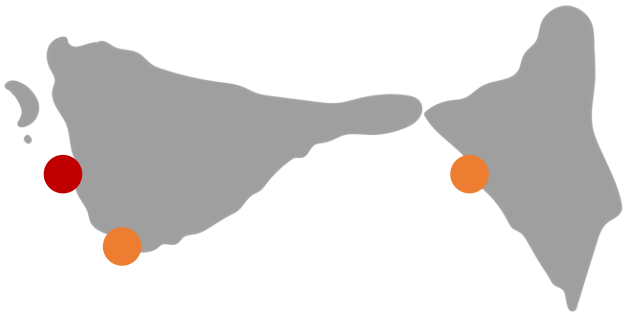
Mobile Broadband Expansion and Systems Optimization | 17.7M



- Full Tower
- Mini Tower
- Remote Site
- Microcell

Tower Coverage
The Manu'a Islands
Islands | **7**

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Mobile Broadband Expansion and Systems Optimization | 17.7M

Many towers are almost 50 years in age. Towers are also used by ***NOAA***, ***Homeland Security***, Police, Fire, and ***FirstNet***.

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Mobile Broadband Expansion and Systems Optimization | 17.7M

Integrated Billing and ERP Software

The new ERP software would support complete localization of market and community requirements unique to American Samoa. Platform would allow ASTCA to configure the system for optimal workflows to increase billing, improve cash flow, expand services, and bring ASTCA into compliance with digital equity requirements.

… continued next slide.

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Mobile Broadband Expansion and Systems Optimization | 17.7M

Integrated Billing and ERP Key Area Improvements:

- Integration with all mobile LTE spectrums, broadband, payment models, mobile App delivery, IoT (internet of things) and online payments.
- Provisioning capabilities for high-capacity broadband services.
- Custom workflows allowing for local indigenous payment practices for creating affordable service plans and expanding service to low-income users.
- Integrate multiple payment gateways for providing significant expansion in broadband operations.

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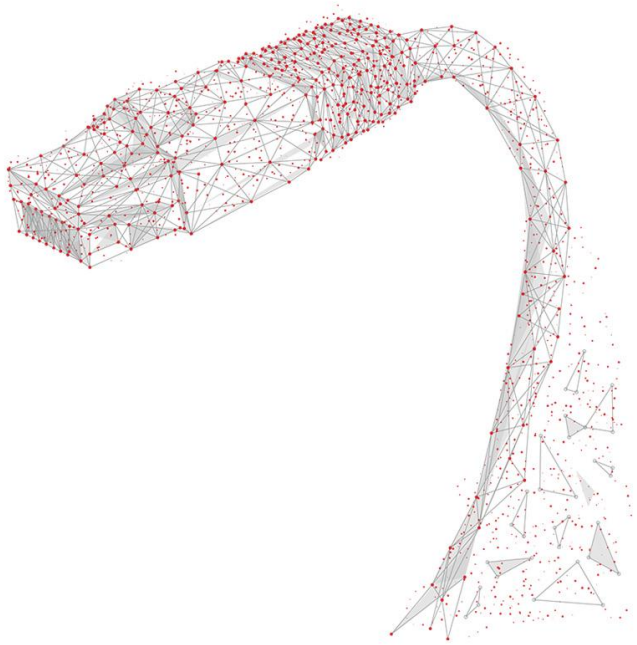
Mobile Broadband Expansion and Systems Optimization | 17.7M



Swains Island Connectivity

Allow residents and families to return to the island by adding this underserved area into the ASTCA network by satellite link for mobile LTE, broadband and FirstNet coverage.

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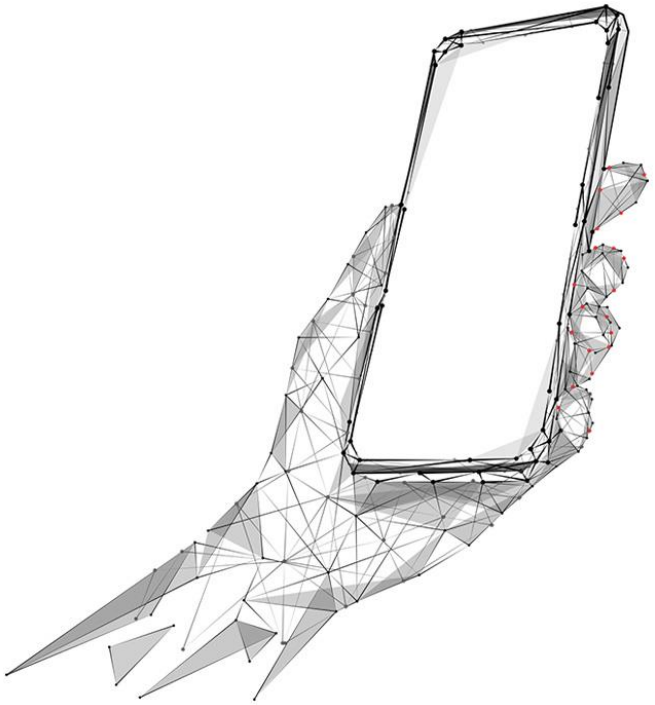
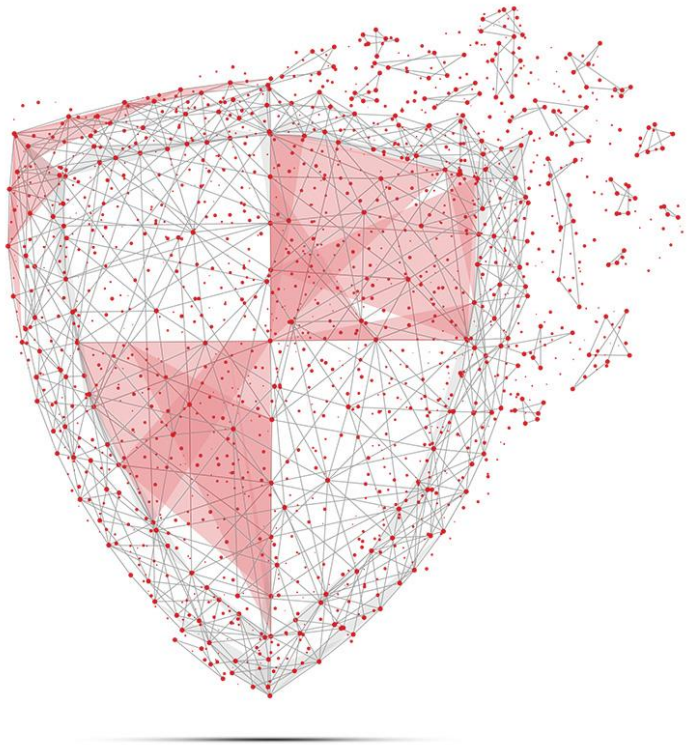
Mobile Broadband Expansion and Systems Optimization | 17.7M



MVNO – Mobile Virtual Network Operator

This would allow ASTCA to commercialize wholesale access to its network for third parties to sell branded mobile wireless broadband services. Consumer benefit would be an increase of broadband options and lower costs for providing affordable broadband services to underserved mobile wireless customers.

Cybersecurity | 2.5M



The risks for American Samoa are particularly high due to its limited and non-redundant infrastructure. With an architecture security assessment rating of 3 out of 10 (10 being the best), damage and disruption in the future are **certain.** Coupled with geographic isolation and limited on-island cybersecurity support, a more robust cybersecurity solution is critical for the Territory. The local government, eleven US Federal agencies, and most businesses and individuals are dependent on ASTCA for providing broadband and telecommunication services, including FirstNet.

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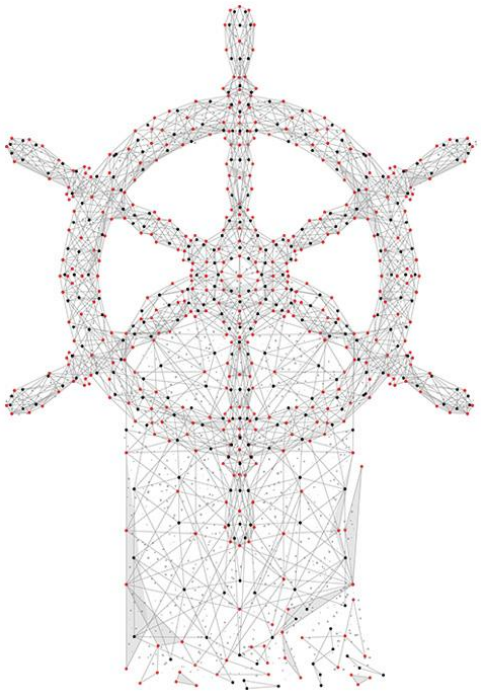
Inter-Island Sea Support | 350K



Maintenance and infrastructure support for broadband and telephone service is constrained and limited due to availability and exorbitant costs of on-demand charter transportation. Comparable would be a land-based Telecom with no maintenance and support trucks. An island Territory maintenance support vessel ***("water truck")*** would allow ASTCA to conduct lower-cost preventative maintenance and emergency maintenance.

- Maintenance and security of the multiple undersea fiber optic cable systems and landing sites in American Samoa.
- Timely transportation of technicians and equipment to Manu'a without scheduling conflict and load capacity restrictions.
- Support FirstNet service in Aunuu and the Manu'a islands.

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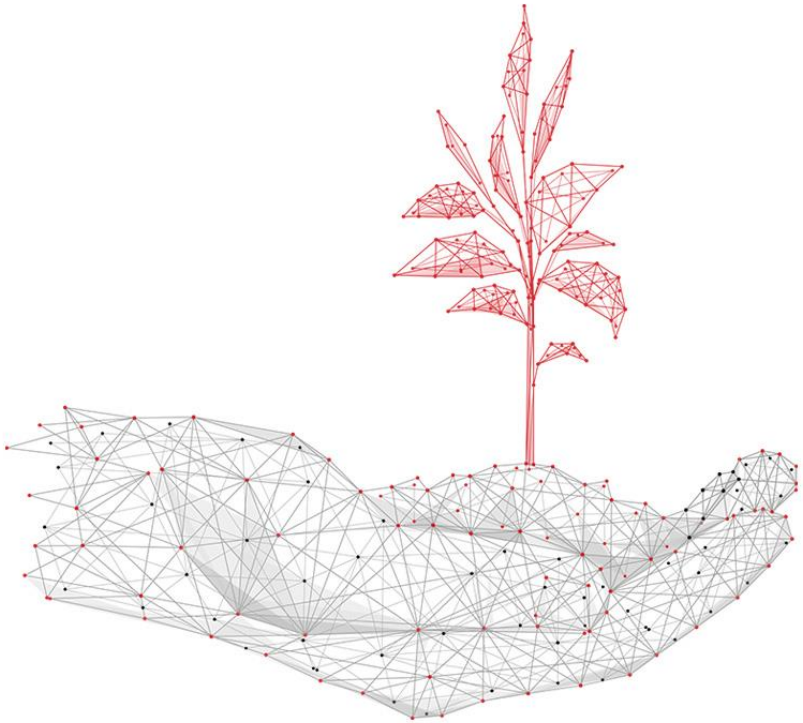
Technology Park | 30M



Preparing for Now. The Future.

Create an environment with the proper infrastructure, technology redundancies, and environmental controls necessary for attracting global talent and investment for the development of our indigenous peoples to compete in the global marketplace of ideas without the hindrance of our geographic isolation. Training and local job creation, economic diversification away from our fishing sector, a soon expiring industry of American Samoa.

ASTCA

Thank You

Fa'afetai Tele Lava