



SANDYNET ADVISORY BOARD MEETING

Thursday, October 16, 2025 at 7:00 PM
39055 Pleasant St. and via Zoom

AGENDA

TO ATTEND THE MEETING IN-PERSON:

Come to 39055 Pleasant St., Sandy, OR 97055

TO ATTEND THE MEETING ONLINE VIA ZOOM:

Please use this link: <https://us02web.zoom.us/j/83884195601>

Or by phone: (253) 215-8782; Meeting ID: 83884195601

ROLL CALL

CHANGES TO THE AGENDA

PUBLIC COMMENT

APPROVAL OF MINUTES

- [1.](#) Approval of Minutes

OLD BUSINESS

NEW BUSINESS

- [2.](#) CBX Business IGA Revision
- [3.](#) Calix SmartHome

STAFF UPDATES

- [4.](#) Static IP Addresses

ADJOURN

Americans with Disabilities Act Notice: Please contact Sandy City Hall, 39250 Pioneer Blvd. Sandy, OR 97055 (Phone: 503-668-5533) or (Email: recorder@ci.sandy.or.us) at least 48 hours prior to the scheduled meeting time if you need an accommodation to observe and/or participate in this meeting.



SANDYNET ADVISORY BOARD MEETING

Item # 1.

Thursday, August 21, 2025 at 7:00 PM
39055 Pleasant St. and via Zoom

MINUTES

TO ATTEND THE MEETING IN-PERSON:

Come to 39055 Pleasant., Sandy, OR 97055

TO ATTEND THE MEETING ONLINE VIA ZOOM:

Please use this link: <https://us02web.zoom.us/j/81562879375>

Or by phone: (253) 215-8782; Meeting ID: 81562879375

ROLL CALL

Meeting started at 7:07 PM.

PRESENT

Chair Pietzold
Board Member Smith
Board Member Rabe
Board Member Cloutier
Council Liaison Hokanson

ABSENT

Board Member Freetage
Board Member Horsfall
Board Member Moore

CHANGES TO THE AGENDA

PUBLIC COMMENT

APPROVAL OF MINUTES

1. Approval of Minutes

MOTION: Adopt the prior meeting's minutes

Motion made by Board Member Smith, Seconded by Board Member Rabe at 7:09 PM.

Voting Yea: Chair Pietzold; Board Member Rabe; Board Member Smith

Voting Abstained: Board Member Cloutier

MOTION CARRIED: 3-0-1

OLD BUSINESS

2. SandyNet Master Plan Update

Staff provided the latest update on the adopted master plan, and staffs initiatives.

3. SandyNet Rate Increase - Staff will provide information about the initial results of the rate increase.

Staff provided notice that the rate increase would begin on the August utility bill. Staff provided statistics on non-move out cancellations that were correlated with the rate increase.

NEW BUSINESS

4. BEAD Update

Staff provided an explanation of why the joint SandyNet/CBX filling was mutually cancelled. Staff also provided supplemental BEAD information to the board regarding the status of the program and potential outcomes.

5. CBX Construction IGA

Staff brought forward a draft of a new CBX construction IGA for finishing up some underground work on Colorado Rd. and Gunderson Rd.

Council Liaison Hokanson asked about clarification of the type of IGA, as whether or not it was a time and materials contract.

Board Member Smith asked about language for a dispute clause. Staff noted that it would look into each and add any necessary language before bringing it before City Council.

MOTION: Approve the IGA with the discussed changes to the contract.

Motion made by Board Member Rabe and Seconded by Board Member Smith at 7:37 PM.

Voting Yea: Chair Pietzold; Board Member Rabe; Board Member Cloutier; Board Member Smith

MOTION CARRIED: 4-0

STAFF UPDATES

6. New Facilities Update

Staff provided up to date information on its plan to move forward with designing a new facility for the SandyNet and IT department, noting that it begins to make headway toward the master plan goal, that funds were available to begin the design and that staff is waiting internally on a few items before it begins the process of soliciting a design firm.

7. Rural Expansion Update

Staff explained that it will begin utilizing the newly adopted criteria for determining rural expansion, noting that a few smaller areas have been selected to test the ranking system.

Discussion around identifying representatives from areas to help gather support or interest in new locations.

ADJOURN

Adjourned at 8:15 PM

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Meeting Type:	SandyNet Advisory Board
Meeting Date:	10/16/2025
From:	Gregory Brewster
Subject:	Calix SmartHome

BACKGROUND / CONTEXT:

Calix, SandyNet's main provider for fiber-to-the-home equipment, released a series of routers named Gigaspire, which were the replacement line for Calix's existing Gigacenter modem/router combination. Staff has been working over the past four years to replace aging Gigacenters with the newer Gigaspire model. The Gigaspire line was designed to support new Wi-Fi standards, but also a platform that Calix calls the Experience Operating System (EXOS). This operating system runs services on top of the platform's existing operating system in containers that allow for expanded use.

Calix has previously experimented with value-added services that ran on top of EXOS, including some lines that did not pan out, which SandyNet did not seriously entertain before those initiatives were retired. SandyNet waited upwards of a year and a half after the initial Gigaspire release before it began retiring Gigacenter's from homes. Since then, Calix has focused more of its efforts on subscriber experience. Calix released its CommandIQ application around 2019, and SandyNet adopted a branded version of the application in 2022. The CommandIQ application allows subscribers to manage their home network remotely from a smartphone. The application is only compatible with the Gigaspire line, which is currently deployed to about 70% of the city. Adoption of the application has remained somewhat low at this time and has not been widely pushed during device installations or swaps. Staff has plans to increase the application's adoption rate, especially after its recent 3.0 version release.

In late 2023, Calix announced its SmartHome program, which included a consolidation of services that were previously available under a per subscriber basis. Calix has consolidated most of its residential services under the SmartHome umbrella. The list of applications can be found under *Exhibit A*. These services are similar to the services that other router companies offer, with a few exceptions that only service providers can get.

Calix has slowly changed its model from being a traditional telecom equipment manufacturer to pushing service providers more into their subscribers' homes. This is something that SandyNet has always done and was one of the original selling points for the Gigacenter line. SandyNet as a service provider can get into any SandyNet provided router and help individuals with their connection or Wi-Fi devices. Older service providers traditionally ended their responsibility at a home's demarcation point, which made service delivery easy, but didn't allow the provider to help the subscriber any further. The trend of having the service provider take on more responsibility over time is increasingly becoming the norm. Many service providers are still hesitant to adopt this method and stay out of the home by offering and charging a monthly fee for managed Wi-Fi service, or by not supplying a router and forcing the subscriber to provide and manage their own device.

Managing Wi-Fi has been incredibly important for SandyNet, and most trouble tickets are Wi-Fi or device related. Without having a SandyNet router in each home, SandyNet would be unable to assist subscribers with their Wi-Fi or hardwired devices. These services are not free but have been built into the SandyNet rate model since it first began deploying fiber in 2014.

The Calix SmartHome program is poised to be the next evolution of this idea. Subscribers have become increasingly more reliant on their service providers and have higher expectations than they did a decade ago. Additionally, the lack of technical assistance for wireless issues or network problems has naturally fallen to service providers to pick up. It is likely that a subscriber is likely to attribute a Wi-Fi issue as an internet issue, and if they are unable to get assistance to fix it, it will result in dissatisfaction or even a cancellation of service.

SandyNet can only help subscribers who use a SandyNet router. That limitation is nearly impossible to circumvent due to the nature of how networks and internet security work. As more homes demand services like parental controls or virus protection, if SandyNet cannot offer those services, subscribers may use their own devices instead, and prevent SandyNet from being able to assist them.

ANALYSIS / KEY CONSIDERATIONS:

SandyNet has not taken advantage of the Calix SmartHome program yet and has mostly delayed reviewing and considering the program prior to the adoption of the SandyNet Master Plan. Calix has announced that its future initiatives will be heavily tied to its SmartHome program and the Gigaspire line, which means that there will likely be a time that SandyNet will have to adopt the program if it intends on using Calix systems in the future.

While staff is unsure of the number of future features that will be added to the program, there are several features that exist today that SandyNet could benefit from. Calix has packaged SmartHome as a bundle for all of its services, which are applied to the entire subscriber base.

ProtectIQ is Calix's version of a real time Deep Packet Inspection system, which compares traffic signatures to a database of known ransomware or malware threats. This is a residential version of what an enterprise might have under a firewall, which analyzes traffic real time and attempts to block things at the network level before they reach an end device. These are similar to paid subscriptions that you might find on similar consumer routers like Netgear's Armor subscription.

ExperienceIQ is Calix's expanded parental control functionality that is a commonly requested service from family households. This includes device time and zone conditions, down to the application level, but also allows for content filtering as well based on category or group.

SmartTown is a feature that SandyNet has traditionally handled in house by using existing systems but has not been able to leverage across its entire fiber-to-the-home network. SandyNet specifically wants to utilize this service to allow for a city wide first responder Wi-Fi network to fill in mobile connection dead zones as well as rural areas that have no mobile service for technicians. SandyNet is not interested in offering a service similar to Comcast's Wi-Fi umbrella network, where any subscriber can connect to another Comcast subscriber's Wi-Fi network. SandyNet specifically wants to use this service for its technicians and first responders.

HomeOffice is an upcoming service that will enable work-from-home (WFH) individuals to fail over to a cellular hotspot connection for their router in the event of an internet disruption. Staff is increasingly seeing pressure from (WFH) individuals to prioritize repairs from those who need to

stay online during an outage. Traditionally, SandyNet has told those who WFH to purchase an alternate connection. Those discussions have had mixed outcomes in the past. SandyNet hopes that it can change the narrative by being able to directly inform existing and new subscribers on how to stay connected during an outage, as well as reduce overall dissatisfaction during an outage and decrease the overhead that service providers have to take on after an outage.

Back in April 2025, SandyNet reached out to the other municipal ISPs in Oregon to see which Calix customers were implementing SmartHome. The City of Hillsboro has already entered into this program with Calix, and the City of Sherwood expressed interest in moving towards the program and is currently under an older version of the program which only includes the ProtectIQ and ExperienceIQ suites.

The cost to implement the program results in an increase of \$1.5 for per subscriber, per month and is set up under a three-year term. Calix does not operate under annual or two-year terms. SandyNet has already allocated the necessary funds in its 2025 to 2027 budget to pay for that increase, in anticipation of joining the program.

LIST OF ATTACHMENTS / EXHIBITS:

- Calix SmartHome Datasheet
- ProtectIQ and ExperienceIQ Technical Specifications



What is a SmartHome™?

Item # 3.

ProtectIQ

- Malicious website, anti-virus and anti-ransomware protection
- Traffic monitoring that automatically blocks suspicious activity
- Notifications when content is blocked through CommandIQ—and you'll receive the credit for keeping the home protected

ExperienceIQ

- Enhanced parental controls to enforce household rules
- Family profile tools to manage content and screen time for each device or person
- Network prioritization capabilities managed through the CommandIQ mobile app

SmartTown

- Community wide outdoor coverage with fiber fed high speed Wi-Fi
- Managed subscriber experience authenticated through Passpoint token technology
- Smart Town and home traffic are placed on separate VLAN, segregating data in both layer-2 and layer-3.
- Automatically blocks suspicious traffic and community intrusions
- Marketing Splash page available for customizable colors, logos, etc.

HomeOffice IQ* (2H release 2025)

- Cellular backup tailored for Work from Home Subscribers
- Automatic fails over to cellular device or secondary router
- Keeps important devices online

IdentityIQ* (2H release 2025)

- Users personal information is checked for breaches and scams
- User are alerted when there is a detected breach on dark web
- Resolution experts on hand to help with identity theft or fraud
 - Communication with Law Enforcement
 - Creditor notification, dispute and follow up
 - Help with fraud alerts and credit freezes
 - Lost wallet assistance, emergency travel assistance

Calix Cloud Foundation Licensing

- Exos License for the Gigaspire
- OS platform for all Gigaspire models
- Quarterly releases and software updates
- Command IQ license for each Gigaspire
- Deployment Cloud

A large background image featuring a blue overlay. It shows a man and a woman smiling and looking at each other. Overlaid on this are various technical graphics, including binary code (0s and 1s), circuit board patterns, and abstract geometric shapes.

Calix Experience Innovation Platform

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INTRODUCTION

For broadband service providers (BSPs) that offer high-speed Internet services, focusing exclusively on hardware-specific benefits is challenging because, once installed, the traditional residential gateway that has been used for decades is a monolithic system. It cannot evolve. The only way to stay ahead of the competition with this approach is to constantly deploy new hardware, increase connection speeds, and reduce prices. This is a race to the bottom.

By adopting an innovative platform that runs on top of cutting-edge Wi-Fi systems, appealing new services and applications can be offered to subscribers on an ongoing basis. This approach results in increased subscriber satisfaction, while generating additional, recurring revenue.

CALIX EXPERIENCE INNOVATION PLATFORM OVERVIEW

The Calix Experience Innovation Platform transforms existing business models, taking advantage of the power of software with:

- **Hardware independence:** the software layer is abstracted from the hardware, allowing for an accelerated time to market because the containerized architecture allows for development and testing of features to be performed independently.
- **Services abstraction:** provide consistent and instantaneous availability across all products, simplifying software validation, and allowing feature mobility from one device to another.
- **Modular architecture:** ensure that changes to one function do not impact other system functions.

DE-COUPLING THE SOFTWARE FROM THE HARDWARE

The Calix Experience Innovation Platform abstracts the software and service applications away from the underlying system on a chip (SoC) found within the residential gateway. This delivers a solution where the software is integrated once and future hardware change cycles are largely hidden; improving time to market significantly, while greatly simplifying operational processes and delivering a common experience for subscribers.

Core to the Calix Experience Innovation Platform is a System on a Chip Abstraction Layer (SoCAL) that creates a common application platform across all systems, regardless of the SoC, Wi-Fi, or IoT chipsets. This enables rapid development of new functionality, re-use across implementations, and a DevOps approach to development, integration, and test methodologies. In addition, the Calix Experience Innovation Platform supports advanced capabilities across WAN, Wi-Fi, and IoT interfaces with rich Layer 2 and 3 services, and a portfolio of expanding features. Because the Calix Experience Innovation Platform is a comprehensive platform, it provides the basis for true “intelligence at the edge” as required for a wide variety of scenarios and use cases.

On top of the SoCAL are the application packages. These packages can be inserted via a container architecture, leveraging a stateful OpenWRT framework, allowing fast time to market without regressing the entire portfolio. The management plane is decoupled and centralized, so it can manage all the applications simultaneously even though the applications can be installed independently.

The Calix Experience Innovation Platform paves the road for a future that is hardware agnostic, separating the software layer from the hardware layer, giving BSPs the flexibility to develop and integrate applications and services that are free from the limitations of traditional hardware dependencies.

Hardware abstraction to allow for silicon independence is, in itself, not the goal. The goal is flexibility. By having a true abstracted platform, we are able to achieve four benefits: speed to market, capability flexibility, always on networks, and open APIs.

Speed to Market

Today, every new premises system requires feature development within a constrained software development kit (SDK) and TR-069 ACS integration that can take up to 18 months to complete. The Calix Experience Innovation Platform is abstracted from the silicon, allowing BSPs to reuse software applications running on the residential gateway across different hardware implementations. This results in radically reduced lab validation and integration times, with existing systems like OSS and BSS leveraging a hardware agnostic northbound interface to the ACS, as well as integration with other cloud platforms via JSON interfaces. The Calix Experience Innovation Platform will allow BSPs to integrate and launch new systems dramatically faster

Capability Flexibility

By embedding capabilities (i.e., band and node steering) into a componentized, abstracted platform, the Calix Experience Innovation Platform provides BSPs with the flexibility and speed of software innovation. BSPs will be able to develop their own applications or pick from a rich ecosystem provided by Calix. No more waiting.

Always on Networks

The Calix R&D mindset is based in the concept that rapid software innovation can't come at the expense of the subscriber experience and reliability. The subscriber wants to rapidly consume new features as quickly as they are available, but a software update can't impact their service. It must be 'always on'—whether it is a consumer not wanting their 4K movie interrupted, a gamer's demand for zero interruptions, or a small business never wanting their Wi-Fi enabled point of sale system to go down. The Calix Experience Innovation Platform allows BSPs to service systems remotely, without a reboot through a fully stateful platform design.

Open APIs

Whether exporting data to a BSP's data warehouse, using the native REST-based APIs to serve the BSPs mobile app, sharing data with partners, or enabling Calix Marketing Cloud behavioral insights, the Calix Experience Innovation Platform is an open architecture committed to enabling broad systems access.

MANAGEMENT FRAMEWORK

The Calix Experience Innovation Platform is built on a persistent database and object model that allows BSPs to access several management protocols and interfaces. Whether the device is managed through an internal graphical user interface (GUI), TR-069, or using NETCONF and YANG data modeling, the Calix Experience Innovation Platform provides adapters to access, manage, and provision for current and future interfaces.

Based on Linux, the Calix Experience Innovation Platform leverages stateful OpenWRT to provide a framework for full customization and integration of contained features. The Calix Experience Innovation Platform gives BSPs a platform that is hardened for carrier-grade deployments to manage consumer-grade devices.

With the Calix Experience Innovation Platform, BSPs are provided a framework that gives visibility into the connectivity behaviors and management capabilities for the many devices that make up the connected home. You can continue to support, manage, and control the subscriber experience through a standard framework.

ANALYTICS AND INSIGHTS ARE EVERYWHERE

An enormous benefit of the designs upon which the Calix Experience Innovation Platform is based, as previously detailed, is that it provides the perfect platform upon which to identify, mature, and execute advanced analytical models capable of furnishing intelligence. These models leverage the real-time and historical telemetry that they are inherently privy to, set the stage for intelligent behavior in response to real-time events, and leverage proactive behavior based on predictive modelling.

The results of applying analytic analysis within the network is twofold: You can find new opportunities to sell services that matter to your subscribers and fix areas of misalignment. With the former, BSPs can leverage the historical real-time behaviors of subscribers to market new services that best fit their usage, while the latter allows performance or security issues to be dynamically fixed before they impact the subscriber experience. In a rapidly evolving world, where superior subscriber experience is the deciding factor of who dominates, better insights are key. Finally, and perhaps most importantly, we believe every interaction with a subscriber represents a revenue opportunity, but fully embracing this will require a shift in the BSP mindset from premises as a 'cost'.