



Anterix[®] Catalyx[®]

A turnkey solution for connectivity management, delivering resiliency and control required for grid modernization

Catalyx, Anterix's first Active Ecosystem Platform commercial offer, is a turnkey connectivity management solution that helps utilities realize the benefits of 900 MHz private LTE networks, while leveraging commercial broadband. Catalyx simplifies connectivity management by integrating state-of-the-art SIM technology, device SIM management, and private to public roaming to deliver the flexibility and security that utilities require.

Catalyx integrates state-of-the-art SIM/eSIM management technology from Giesecke+Devrient (G+D), the market leader in eSIM management solutions. G+D supplied the world's first commercial SIM card and successfully deployed the first eSIM management platform. Their technology enables the security and reliability of connections to global mobile networks. As of 2024, G+D was actively managing millions of eSIMs, had deployed hundreds of SIM management solutions for leading service providers and device manufacturers worldwide, and is managing over 3 billion SIM cards. Anterix's collaboration with this renowned technology leader in security and identity enhances Catalyx's capabilities.

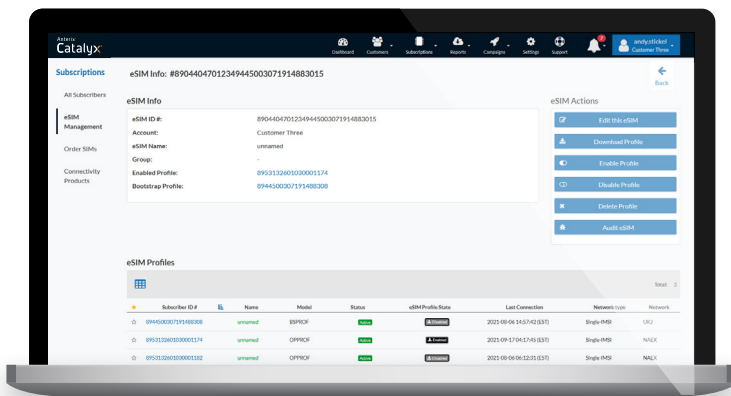
Utilities can efficiently and securely deploy and manage smart grid devices on a 900 MHz private LTE network while optimizing broadband coverage in their service territories. Through the easy to use web-based dashboard, Catalyx provides the control and visibility of devices for utilities, whether they are connected to a private or public radio access network. Utilities can manage each device SIM remotely, which can reduce operational costs and risks. With Catalyx, utilities can connect to the 900 MHz private LTE network, and roam on multiple carrier commercial networks.

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CatalyX can support utilities in their 900 MHz private LTE journey by accelerating onboarding of devices during the deployment of the network, extending the private network coverage in gap areas, and providing back-up connectivity during private network downtime. From their 900 MHz private LTE network, utilities can seamlessly connect devices to commercial networks for primary coverage, or as a fallback, helping them achieve the network coverage and resiliency that is required for mission critical grid applications.

CatalyX Solution Overview:

Connectivity Manager: The Connectivity Portal provides a complete cloud-based solution for the lifecycle management of private SIMs. Through a web-based portal, utilities can streamline operations by managing and monitoring device connectivity, subscriber access, billing, profile updates, with dashboards and APIs for bulk transactions.

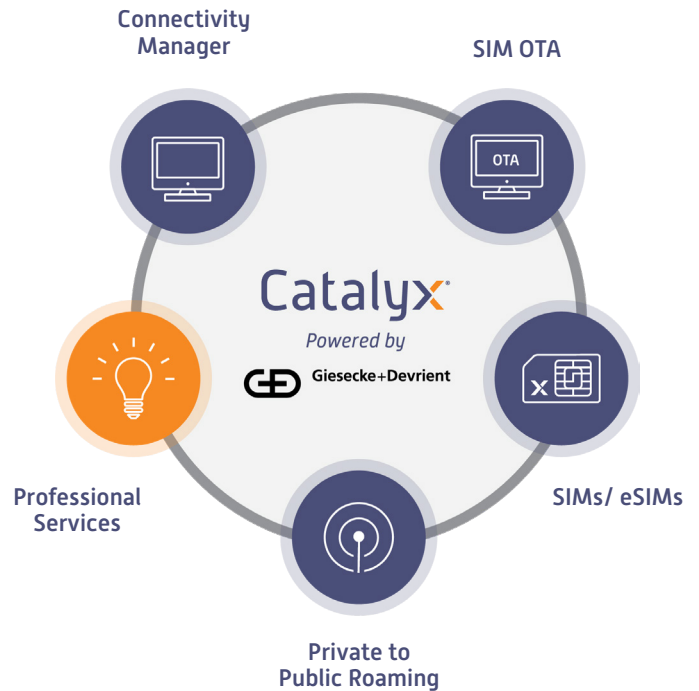


The Anterix CatalyX Connectivity Manager web-based portal interface makes SIM management simple and secure.

The eSIM Manager enables remote SIM provisioning (RSP) including the ability to change SIM profile configuration, download new profiles, and remove or change SIM profiles without truck rolls.

SIM OTA: The SIM OTA service provides the ability to remotely manage deployed SIM cards throughout the entire lifecycle. This includes activities such as updating SIM card settings, provisioning new services, and fixing issues without requiring physical access to the SIM card. OTA updates can include changes to network settings, security keys, and other SIM parameters, improving operational efficiency and enhancing the user experience.

State-of-the-art SIMs: Provides physical SIMs in multiple form factors, including eSIMs.



Private to Public Roaming: Augments a 900 MHz private LTE network with the capability to roam on multiple carrier networks—delivering commercial wireless connectivity across a utility service area. Provides broadband connectivity during the buildout of private coverage, extends the private network where the utility has coverage gaps, and delivers a fallback solution, helping to ensure the network resiliency that is required for mission-critical grid applications.

Security: CatalyX meets GSMA-SAS and LTE standards-based security requirements with the ability to add multiple layers of customizable security aligned with established cyber frameworks such as National Institute of Standards and Technology (NIST) or International Organization for Standardization (ISO). The hosted solution is monitored 24/7 and air-gapped; only whitelisted IP addresses can communicate to the hosted network due to firewalls and intrusion detection.

Professional Services: Leverages Anterix expertise to deliver a fully integrated solution with utilities IT and network environments. CatalyX professional services include turn-up and delivery of the Connectivity Manager and roaming instance, integration with private LTE network infrastructure, as well as a **SIM profile design and test service**. This white-glove consultancy and design service accelerates the delivery of optimized SIM profiles for use in utility networks.

The Anterix Active Ecosystem Program supports the testing and integration of CatalyX compatible devices for deployment of 900 MHz utility private broadband.

Solution Benefits for Utilities:

- ✓ **Supports** initial deployment of devices on private networks that use commercial coverage until the 900 MHz private wireless broadband network is built out
- ✓ **Streamlines** operations with its Cloud-based solution that remotely provisions and activates devices, manages subscriber access, authentication, and configuration
- ✓ **Simplifies** management and reporting with its web-based dashboards and APIs for bulk transactions and integration
- ✓ **Smoothly transitions** devices from public to private coverage with state-of-the-art SIM technology
- ✓ **Eliminates** the need for truck rolls for connectivity reconfiguration with the added benefit of redundant connectivity for the life of the asset
- ✓ **Provides** access to available commercial connections across all utility service areas, enabling customized roaming plans—ability to change cellular provider over the lifecycle of the device without changing physical SIM
- ✓ **Enables** seamless evolution to 900 MHz private LTE, providing a private core that connects to commercial RAN with easy transition to utility owned private core and RAN
- ✓ **Accelerates** device onboarding by leveraging public to private network transition enabled by the latest GSMA eSIM technology
- ✓ **Employs** multiple layers of security at every level of the solution including device endpoints, network, and platform
- ✓ **Supported by** a robust ecosystem of approved 900 MHz devices, and professional services to guide stems integration, and device testing and integration

Flexible Solution Packages Designed to Meet Utility Requirements

CatalyX solutions provide the flexibility to meet utility needs at any point in the 900 MHz private LTE journey. Utilities that have not yet started to deploy private LTE can select the premium package that enables a secure, scalable, fully managed private LTE core network. Utilities that already have deployed private LTE core networks can select the basic or plus packages.

Pay as you go or pre-paid data pool bundles are offered to minimize OPEX and provide pricing flexibility and predictability. CatalyX packaging is unique to the utility industry and offers the benefit of price predictability and potential capitalization over the contract term.

Basic Package	Plus Package	Premium Package
Customer Stage Customer has PLTE Core	Customer Stage Customer has PLTE Core	Customer Stage Customer does not have PLTE Core
Package Components Connectivity Manager +Private SIMs	Package Components Connectivity Manager +Private SIMs +Roaming agreement	Package Components Connectivity Manager +Private SIMs +Roaming agreement +Core Network

As a premier supplier to Utilities, Anterix has responded to customer requests by collaborating with ecosystem members to offer bundled services. This initiative includes reselling hardware and services in conjunction with Anterix CatalyX SIMs and provisioning services. As customers transition from piloting their Private LTE Networks to full production, Anterix Lab facilities provide crucial support. These facilities facilitate testing and validation of end-to-end applications, onboarding services, and refining low-touch or zero-touch provisioning, device management, and security solutions.