



# Product Capability Guide

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## Introduction

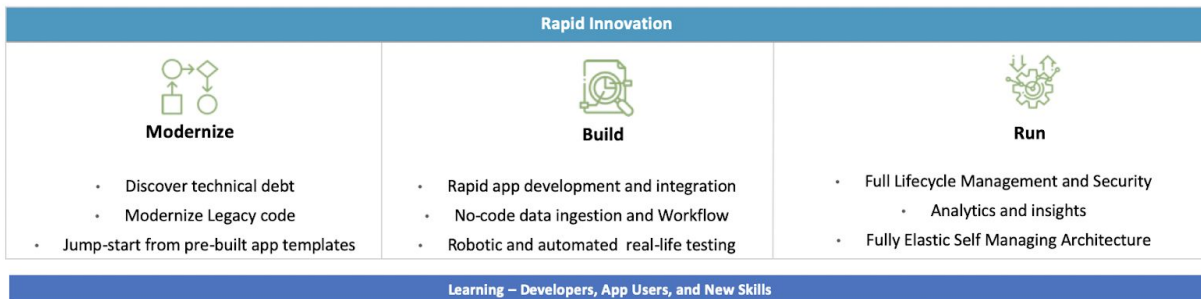
Formerly appsFreedom, Pillir is a low-code, cloud-native, PaaS provider that specializes in enabling customers to generate resilient, always-available, self-managing applications that work in any connectivity landscape. Pillir's EdgeReady Cloud provides rapid application development with little-to-no programming and reusable objects; enabling companies to enhance speed to market and innovation. With pre-built integrations for SAP, Oracle, Microsoft Dynamics, Salesforce.com, and other legacy systems, customers leverage Pillir to modernize any process or application in weeks, regardless of connectivity, device, or backend system. device and tightly integrate with core business systems that are critical to your operations.

EdgeReady Cloud, Pillir's flagship product enables organizations to

- Modernize their legacy applications
- Build new applications 20X faster
- Run applications in a cloud-native platform

## EdgeReady Cloud

The EdgeReady Cloud is a modern, cloud-native platform that enables digital transformation 20X faster by modernizing legacy applications as well as accelerating digital transformation with its award-winning low-code platform.



The EdgeReady Cloud has three basic modules

- **Modernize:** Discover technical debt, modernize legacy applications or start from pre-built app templates

- **Build:** Develop and deploy enterprise applications on any device enabling a Work-anywhere model, 20X faster
- **Run:** Execute and manage your applications in a cloud-native platform with no Ops overhead.

## Modernize

The modernize module takes into account your technical debt within your backend system application like SAP and converts them into modern applications within our platform. It provides the capability to convert legacy applications to modern applications with a good user experience.

Modernize has three offerings as listed below

- Discover ABAP custom objects and TCO using Pillir's NANJI,
- Convert and modernize ABAP applications into EdgeReady Apps (Coming soon)
- Pillir provides pre-built templates out of the box to expedite the development process.

### Diagnostic tool for ABAP technical debt discovery

Pillir's newest release - ABAP Diagnostic tool helps in discovering all your custom ABAP development as well as calculating your TCO of these custom objects. This helps to keep your ECC core clean and pristine while helping you reduce your TCO.

This tool was created for SAP customers who require the ability to identify unnecessary ABAP technical debt, while also evaluating the total cost of ownership if they choose to migrate identified ABAP customizations from ECC to S/4HANA. Using ABAP diagnostic tool will allow SAP customers to clearly see which ABAP customizations they need to remediate as well as associated costs when considering their migration to S/4HANA.

- Discovers and visualizes ABAP customizations, such as objects, tcodes methods, RFC's, tables, reports, programs, screens, functions, data elements, in a manner that is consumable for all stakeholders.
- Provides the total cost of re-mediating, ABAP customizations for S/4HANA.
- Provides the total maintenance cost of ABAP customizations in S/4HANA.

### Pre-built Application Template by User Role

Pre-built app templates are purposely built for unique business roles and business functions. The pre-built application can be used out-of-the-box or used as a starting point for further customization based on specific use cases. The pre-built app templates can be integrated with on-premise backend systems like SAP, Oracle or cloud-based systems like Salesforce, Workday, and many others.

Examples of roles or user groups that could benefit from these pre-built applications within any industry are as follows:

- **Field Technicians.** Digitizing the field services process to accelerate the meantime to repair (MTTR) and ramp-up curve for technicians by automating maintenance and repair business processes such as the creation of work order, notification, activities, etc.
- **Drivers.** Users who require custom applications for store delivery, drop-offs, reverse logistics, and store pickups to automate the current processes.

- **Quality Inspectors.** Users who require custom applications for plant inspections, site inspections, inspection audits, construction audits, Lean Six Sigma applications; such as 5S Surveys, Lean Assessment, etc.
- **Warehouse Personnel.** Digitizing the current process for goods receipt, goods transfer, posting, and many more reducing manual entry time.
- **Master Data Managers.** Reducing the steps and time required for creation/management of material, vendor master data.
- **Inventory Managers.** Enabling Inventory managers to keep a track of inventory through PR or PO approvals, goods receipts, stock visibility.

Pillir is constantly adding new application templates for EdgeReady Cloud Platform users. Please contact your Pillir account manager to receive the most current list of pre-built application templates.

## Build

### Browser-Based Development

Pillir's EdgeReady Cloud platform provides a 100% browser-based app development environment. There is no development component (e.g. IDE) to be installed on the laptop nor any need to install any IDE plugins or browser plugins. It is a clean, fresh, and simple browser-based drag-n-drop development environment that an app developer can use from any laptop to build and deploy apps.

The Build module in the Edge Ready Cloud provides the tools to build out the application, whether it's enhancing pre-built templates or building an application from scratch. Build module lets the user put down the application process, customize the UI, and integrate with the backend application. The build module has three sections as listed below.

**Multi-Channel-** Pillir's EdgeReady Cloud platform simultaneously generates applications for nearly all devices, mobile operating system, and web applications:

- iOS: iPhone, iPad, and iPad-mini
- Android: All Android smartphones, tablets, and phablets.
- Windows: Windows smartphones and tablets (v10.0 and above)
- Modern browsers: Web apps for browsers like IE, Firefox, Chrome, Safari, etc.
- Rugged Devices: All rugged devices like Zebra etc

### Process Modeler

Pillir's EdgeReady Cloud enables app developers to document their app development process in a graphical process flow. This is enabled by the Process Modeler module within the platform. Pillir's Process Modeler supports all the typical process flow components (e.g. Microsoft Visio) but is enhanced with mobile-specific components like "Take a Picture", "Capture GPS", etc.

The application process is what the user goes through as they go through the application and complete the process. Process modeler has 3 components

- Container components- Process Modeler provides horizontal, vertical lanes to build out the application process.
- Standard components- Standard components include basic components like tasks, actions, decision objects.
- Advanced component- Advanced components are device-specific components that can be utilized to build out the app process like GPS, Photo capture, etc.

### App Designer

The development process in Pillir's EdgeReady Cloud is centralized around user-experience. The

app-building process starts with an app process to model the end-user experience and then works backward towards backend business applications and data. The app designer lets the user customize, enhance the UI through different components.

- Standard components- Standard components contain a list of objects that can be utilized to build out the UI via drag and drop. The standard component contains header, footer, input box, list views, grid views, buttons, etc.
- Advanced components- Advanced components are device-specific objects that can be utilized to build out the UI. Some of the advanced components are GPS location, Photo capture, contact list, call feature, etc.
- Analytical components- App designer provides components to build analytical applications be it dashboard apps or KPI's. The analytical components are charting components like bar graphs, pie charts, donut charts, etc.

### Data Mapping

The data mapping feature of App Designer lets the user map the services and interface it with the UI. Users can map the inputs and outputs as configured by the services. This feature bridges the gap between the backend system and the application.

### Events

Events feature of App Designer enables the user to call the service based on an event (onPageShow, onClick, etc.) Apart from invoking services, events it lets the user write custom JavaScript as per the use case to configure and enhance the user interface and experience.

### Devices

Pillir's Edge Ready Cloud Platform provides the flexibility to have a consistent user interface across all devices, build once, run it everywhere. If the requirements require different UI for different devices, this can be accomplished by selecting the particular device from the devices dropdown menu.

### U/X Design

Pillir's EdgeReady Cloud platform, via the App Designer module, provides a WYSIWYG, visual app design editor to enhance the app. It enables the app developer to customize the app with specific themes, UI elements, and other aspects pertaining to the look-n-feel of the app.

### Customization

Pillir's EdgeReady Cloud platform also provides customization features for developers to create the look and feel of apps beyond what is available out-of-the-box from the platform. Some of the customization options are:



- **Themes.** Pillir allows developers to load custom themes that can be applied across an app. These themes, once loaded, can be made available to all developers in the organization to be applied when apps are developed.
- **Cascading Style Sheets (CSS).** Customized CSS can be loaded into the platform to give a unique look and feel to any app generated.
- **Graphical Assets.** Customized graphical assets such as images, logos, etc. can be loaded into the platform and used appropriately in the app development process.
- **U/X Library.** 3<sup>rd</sup> party U/X libraries can be imported into the platform and utilized during app development. All features and functions of the imported U/X library, including custom libraries, can be used in the app development process.
- **JavaScript.** Code can be written in JavaScript and customize the app for any unique business needs. The code-writing capability can be leveraged to add additional features, customize unique features, and anything else that a developer might need that may not be available as an out-of-the-box feature from the platform.

## Integration Builder

Pillir's EdgeReady Cloud provides the ability to interact with backend systems and interface with the UI via its Integration Builder tool. The drag-n-drop feature enables quick development of integrations and business logic. The Integration Builder is a central module for all business and integration logic and some of its capabilities are:

### Business & Integration Logic

The Integration Builder provides several out-of-the-box business logic components called "actions" and "action groups" that can be combined to build and execute any business logic. These actions are encapsulated and self-contained and are used in any sequence to build the desired business logic. For example, it contains Logical actions such as ASSIGN, IF-ELSE, LOOP, REPEAT, TERMINATE, etc. as well as Utility actions such as LOOKUP, SORT, FILE PARSE, etc.

### SaaS Adapters

The Integration Builder provides adapters for 3<sup>rd</sup> party SaaS application integrations. These adapters are provided as actions that can be simply dragged and dropped while building the integration logic. The adapter actions are self-contained to be used anywhere when building the integration logic. After connecting to the SaaS system the adapter provides the relevant meta-data which can be visually mapped to the application. Some of the out-of-the-box SaaS adapters available are:

**Salesforce Adapters:** Pillir's EdgeReady Cloud platform provides an out-of-the-box adapter for Salesforce integration. The Salesforce adapter supports all the functions of Salesforce integrations such as Object List, Object create, Object Update, and Object delete.

**Web-Service Adapters:** Pillir's EdgeReady Cloud platform provides Web-Service adapter supporting SOAP protocols and is used to connect to SaaS applications via web-services. It supports all read and write functions as provided by the 3<sup>rd</sup> party SaaS application. The adapter can read any legacy application exposed as a web-service.

**REST-Service Adapters:** Pillir's EdgeReady Cloud platform provides a REST-Service adapter that supports integration to any SaaS applications that are exposed via REST Services. It works very similar to Web-Service adapters except that it supports REST protocols.

**Database Adapters:** Pillir's EdgeReady Cloud platform provides database adapters that can connect to cloud-based database applications, i.e. any SaaS applications that give access to its relational databases via the cloud or any on-premise database system like Oracle, MySQL, etc. The database adapter provides the capability to read, write, update, delete, and access PL/SQL scripts.

**FTP Adapters:** Pillir's EdgeReady Cloud platform comes with FTP/File adapters to read and write files

from 3<sup>rd</sup> party cloud applications. The adapter lets the user connect to various cloud-based systems via SFTP-SSH file transfer protocol to connect to the cloud system to download a file, upload a file, copy a file, list of files, delete a file.

## On-Premise Adapters

The Integration Builder enables integrations to on-premise backend applications like ERP systems, databases, and many others via EdgeReady Plugin. The on-premise adapters are enabled as actions in the Integration Builder. They can be graphically used to interact with various on-premise backend applications. These adapters are native adapters that provide integration to the on-premise backend applications to discover the meta-data and map the required fields to the application. The mappings can be done graphically while building the integration logic. The various out-of-the-box native adapters are:

**SAP Adapters:** EdgeReady Plugin, the on-premise component of the Pillir's EdgeReady Cloud comes with various native SAP adapters to integrate to on-premise SAP applications such as ECC, CRM, SRM, BI, and other components. Some of the native SAP Adapters are:

**BAPI/RFC Adapter:** The BAPI/RFC adapter can connect to all SAP applications such as ECC, CRM, SRM, and many others using BAPI (Business Application Programming Interface) and RFC (Remote Function Calls) of SAP. The BAPI/RFC adapter can be used to call any standard or custom BAPI/RFC interfaces from SAP applications.

**Business Function Enabler (BFE) Adapter:** The BFE adapter is a unique adapter that allows Pillir's EdgeReady Cloud platform to connect to native, custom objects from SAP that are NOT remote-enabled or BAPI-enabled. The adapter saves time and resources to write additional ABAP code to access and maintain the customized Z program. For example, it can connect to Z function- modules or Z ABAP/4 reports and programs directly without having the need to write additional ABAP code to remote-enable it.

**Enterprise Services Adapter** SAP functionality exposed via SAP Enterprise Services can be consumed in the platform using this adapter.

**BI Adapter** The SAP BI Adapter can consume SAP BEx queries that are enabled as QaaS (Query-as-a-Service) in SAP BI. It essentially allows leveraging the BEx queries to generate reports and leveraging it to build a dashboarding/ reporting mobile app.

**Oracle Adapters:** The on-premise component of the Pillir's EdgeReady Cloud platform comes with pre-built adapters for Oracle Applications. It covers various Oracle products such as

- Oracle EBS
- Oracle database applications

- Oracle Fusion/ Middleware

**Microsoft Dynamics Adapters** The on-premise component of the Pillir's EdgeReady Cloud platform comes with pre-built adapters for Microsoft Dynamics applications. The adapter supports all the functions of Microsoft Dynamics such as listing of objects, Read/Write/Update, and Deletion of objects.

**Web-Service Adapters:** The on-premise component of the Pillir's EdgeReady Cloud platform comes with pre-built adapters for connecting to on-premise applications via Web-Services using SOAP protocol. It supports all read and write functions as provided by the middleware or the business application.

**Database Adapters:** The on-premise component of the Pillir's EdgeReady Cloud platform comes with pre-built database adapters for connecting to relational database applications such as Oracle, SQL Server, MySQL, etc

**Wearables & IoT adapters:** As part of Pillir's EdgeReady Cloud platform, the Integration Builder provides adapters for connection with Bluetooth / IoT and wearables. The adapters are enabled as actions in the Integration Builder and can be used to obtain information from any Bluetooth enabled devices.

## Platform Extensions

The Pillir's EdgeReady Cloud platform provides an SDK that can be used by customers and partners to build their own integration adapters for specific business actions for their unique business needs. The SDK allows the customer or partner to extend the platform, as appropriate, for any adapters that are not available out-of-the-box from the platform. The newly extended actions are available as graphical components that can be used similar to other action blocks as part of the integration builder. These platform extensions are also secure and available only to the tenant/customer/partner building and importing it.

### Backend-as-a-Service (BaaS)

Pillir's EdgeReady Cloud platform provides BaaS capabilities that can be consumed by other 3<sup>rd</sup> party applications. Anything and everything built and generated using the Integration Builder (called the BOS or Business Object Service) can be enabled as BaaS with a simple 1-click process. The BaaS can be consumed by any other application for example web apps, native apps, or hybrid apps. The BaaS is enabled and available as REST services so that it can be consumed by apps. This capability allows the apps to leverage all the integration, authentication, notification, deployment, and other governance capabilities of the platform into the apps

## Data Storage

Pillir's EdgeReady Cloud platform comes with data storage capabilities that can be used for application development. There are two types of data storage available and can be used based on the requirements. The two types of data storage supported are:

**Structured Data** The platform comes with a pre-built, secure, segregated, relational database isolated by tenants called the EdgeReady Database. EdgeReady Database is typically used to:

- Enhancing the business processes by storing mobile-specific data that cannot be kept in the backend application
- Storing business data based on the newly designed business process that the existing backend application is not equipped to handle.

**Unstructured Data** The platform comes with an inbuilt module, called the EdgeReady Drive, to store all documents and files. It is designed to store and manage documents for enterprise mobile access. It comes with all file management capabilities such as version management, access management, user and role management, upload/download of files via EdgeReady Apps.

**Data Loads** The EdgeReady Cloud Platform provides multiple mechanisms to upload and download data from both EdgeReadyDatabase and EdgeReadyDrive as per the requirement. The various mechanisms are:

**CSV File Loads** The EdgeReadyDatabase provides a capability to import CSV files directly into the database using the Database Designer module of Pillir's EdgeReady Cloud platform.

**Business Object Service (BOS) upload** The BOS from the Integration Builder can be used to upload or download data from the EdgeReady Database or files/documents from the EdgeReadyDrive. The BOS can be scheduled to execute independently or can be executed via the application. All data from both the EdgeReadyDatabase and EdgeReady Drive can be accessed via the apps.

## Test

The Pillir's EdgeReady Cloud platform also provides various testing capabilities to be used in various stages of app development

**App Simulation** The App Designer module provides a browser-based device simulator to test the application during the development process. All aspects of the app, including navigation, data, and UI elements, can be tested using the device simulators. The available device simulators from the platform are:

### Smartphones

- iPhone
- Android devices

### Tablets & Phablets

- iPad
- Android tablets and phablets
- Windows 10 tablets

### Browsers

- Internet Explorer
- Chrome
- Firefox
- Safari

**Integration Test Tools** Pillir's EdgeReady Cloud platform provides integration test tools to test the built backend integrations. These are typically used for unit-testing business object service (BOS) as well as specific API/integration testing.

**Automated Testing** Pillir's EdgeReady Cloud platform provides robotic testing capabilities that can record user flow in real-time across more than 350 real devices, across all network providers (Verizon, Sprint, AT&T, etc). This test tool can test both online and offline apps, simulating real-life scenarios for mission-critical applications. Robotic testing provides continuous insights by providing comprehensive reports capturing screenshots, video recording of the test scripts. The tool can reduce the hours spent in User Acceptance Testing (UAT), testing cycles, regression cycles as well as provide tools for continuous learning and improvement. The devices and network providers supported are

### Smartphones

- iPhone

- Android devices

#### Tablets & Phablets

- iPad
- Android tablets and phablets

#### Network Providers

- AT&T
- Verizon
- T-Mobile
- Sprint

The apps tested will provide exhaustive reports, screenshots as well as video recordings of the app on various devices.

## Run

Pillir's EdgeReady Cloud platform supports full app lifecycle management activities like application design, development, testing, QA cycles, deployment, rollout, post-rollout metrics, app enhancements, and app retirement. The various support capabilities are:

### Administration

The Pillir's EdgeReady Cloud provides various Administrative capabilities as below

#### Multi-tier Cloud Landscape

The Pillir's EdgeReady Cloud platform provides a multi-tier cloud landscape, which includes: Development Cloud, Quality Cloud, and Production Cloud

#### Backend Connection Management

The Pillir's EdgeReady Cloud platform provides a module called the Connection Manager which can be used to connect and manage all backend application integrations. This includes SaaS business applications, on-premise business applications, Email servers, etc. This is a centralized location to view and manage all backend connections.

#### Project Management

All apps development and deployment are encapsulated into projects in the Pillir's EdgeReady Cloud platform. The platform provides project management capabilities to encapsulate all components of an application, with version management to move across environments like development, quality to production.

#### Transport Management

The Pillir's EdgeReady Cloud platform provides one-click transport management capabilities to move all relevant application components from one cloud environment to another (i.e. moving the app from Pillir Development Cloud to Quality Cloud for testing and Production).

#### Role and User Management

The Pillir's EdgeReady Cloud platform provides role and access management covering capabilities such as user preferences, app access permissions, platform access permissions, etc.

#### Identity Management

The Pillir's EdgeReady Cloud platform can be integrated with a company's identity management



solutions such as Microsoft Active Directory/LDAP, etc. for single sign-on (SSO).

### App Generation

Pillir's EdgeReady Cloud platform provides container app generation capabilities. Multiple Container (native) apps can be generated per company with capabilities such as form-factor splash screens, EdgeReady Apps assignment, over-the-air deployments, etc.

### App Library

Pillir's EdgeReady Cloud platform provides a corporate app library for app deployment and rollout. It provides controls and user access permissions at the app level, the ability to receive and approve app requests, a BOS catalog, etc.

### App Watch

Pillir's EdgeReady Cloud platform provides post-deployment app metrics and app usage analytics to measure app adoption. It provides out-of-the-box reports such as an app usage report, user access reports, customer compliance reports, etc. The platform lets the user download these reports and the metrics can help customers make better business decisions.

## App Capabilities

- **Barcode Scanning.** Apps generated on the Pillir's EdgeReady Cloud platform for mobile devices can support barcode scanning via a device camera.
  - **Device Camera Barcode Scanning Support.** Users can scan barcodes utilizing their device's camera; supporting all major barcode systems such as UPC, EAN, Code 128, Code 39, ITF, QR, etc
  - **Specialized Barcode Scanners Support.** Supporting external or specialized barcode scanners like rugged device barcode scanners such as Zebra and Symbol. This utilizes all the special barcode scanning support provided by the hardware vendor.
- **Device Movement.** Apps generated by the platform can identify any device movement such as tilt, motion, rotation, and other device gestures; allowing the developer to identify actions and build appropriate logic to handle these gestures.
- **Document Viewer.** Pillir's EdgeReady Cloud platform provides a document viewer on all mobile operating systems to view attachments and other documents inside the app.
- **Screen Capture.** Pillir's EdgeReady Cloud platform offers users the ability to capture mobile app screens by generating a PDF document or images for the captured screens.
- **Camera.** Pillir's EdgeReady Cloud platform allows you to access the device camera and take pictures and videos; also providing access to the photo gallery to upload pictures and video from the mobile device.

- **Maps.** Pillir's EdgeReady Cloud platform provides applications to include maps, directions as well as routing via Google Maps.
- **Location/GPS.** Pillir's EdgeReady Cloud platform provides applications to capture location using the device's GPS.
- **Signature Capture.** Pillir's EdgeReady Cloud platform can capture signatures from within the app using the user's finger or stylus on their device; generating a PDF or image of the captured signature.
- **Phone Call.** Pillir's EdgeReady Cloud platform allows users to access phone calling features within their device via the app.
- **Address Book.** Pillir's EdgeReady Cloud platform allows users to access contacts or their address book on their device.
- **Files.** Pillir's EdgeReady Cloud platform allows users to access and upload files and images from their device into backend applications.
- **Personalization.** Pillir's EdgeReady Cloud platform comes ready with app personalization at the field-level, reducing IT workload to meet varied app needs which results in higher user adoption with personalized user interfaces.
- **Pull-down/Swipe.** Apps developed on Pillir's EdgeReady Cloud platform support native gestures such as pull-down, swipe to refresh, any other action performed on native gestures
- **Multi-Language.** Pillir's EdgeReady Cloud platform supports over 80 languages right out of the box. Applications can be built and enabled for multiple languages during application rollout. Apps support automatic field label translations that work in both online and offline apps.
- **User Preferences.** The EdgeReady Cloud platform supports user preferences such as date format, language, currency, etc.
- **Print.** The EdgeReady Cloud platform allows users to print documents from their device via Wi-Fi-enabled printers.
- **Bluetooth & IoT Adapters.** Pillir's EdgeReady Cloud platform provides capabilities that engage with pre-built device adapters to connect to smart equipment using Bluetooth. Supporting two-way communication with smart devices, data/tags can be passed to backend applications as required.

## Notifications

The EdgeReady Cloud platform provides mobile notifications to end-users which can be leveraged appropriately as per the required business logic.

The notification capabilities provided in the platform are:

- **Mobile Operating Systems.** EdgeReady Cloud supports native mobile notifications for the following operating systems:

- iOS
- Android
- Windows 10
- **Email Notifications.** EdgeReady Cloud platform supports email notifications that can be triggered by specific, customized events in an app. The app can send email notifications with attached documents or without them. This feature will send an email notification to a relevant user based on the business logic incorporated by the app developer.

## Resiliency and Always available

EdgeReady Applications are resilient and are always available. The Edge Ready application works with full connectivity i.e. online apps, offline apps, or intermittent connectivity.

- **Online Apps.** Pillir's EdgeReady Cloud platform generates online or real-time applications for all smartphones, tablets, phablets, and web browsers. These apps do not store or cache any business data in the device or platform. They efficiently and intelligently interact with the configured backend system ensuring performance is not compromised. Thus providing real-time connectivity, visibility between the app, and backend application.
- **Offline Apps.** Pillir's EdgeReady Cloud platform generates offline apps that support extended offline mode - enabling end-users to be offline for days with all data self-contained within the device for the user to continue working in an offline mode. All business data is securely kept and packaged in the device and interacts with the backend system when connectivity becomes available. Offline apps come with out-of-the-box modules for iOS, Android, and Windows devices.
  - **Offline authentication** happens via a 4-digit user-generated passcode at the time of logging into the application.
  - **Business rules engine** is offered to operate under the constraints of a mobile device, used to execute all business rules in offline mode.
  - **Encrypted database** offers a secure and encrypted device database for business and transaction data storage.
  - **Data sync and orchestration engine** synchronizes all business/ transaction data appropriately with backend applications.
  - **Offline attachments** allow users to download and upload documents like images, pdf, spreadsheets, etc., for iOS, Android, and Windows devices as part of the EdgeReady Cloud platform.
  - **Process continuity engine** enables users to continue their business processes across business functions and apps without interruption in offline mode.
  - **Message queues** are generated in-device to guarantee delivery and replay or roll forward of data transactions.
  - **Conflict resolution** engines are generated to handle data conflicts during data sync processes. This can also be configured to identify data changes in the backend

- application before data from apps are posted and flagged as errors.
- **Error handling engine** allows users to view, manage, and rectify data errors after a data conflict. This also displays current server values and user-entered values, side-by-side, allowing users to choose which values to be sent to backend applications.
  - **Data consistency engine**, within the EdgeReady Cloud platform, provides a built-in data consistency engine to maintain consistency of data during a network switch.
  - **Data cleanup engine** allows for tracking stale data and isolating it for clean-up, as per defined business rules.
  - **Guaranteed delivery** is provided with offline apps to guarantee data delivery from apps to the cloud or to the on-prem backend system and vice versa utilizing robust integration architecture

An additional type of Edge Ready application that can be generated on the Edge Ready Cloud Platform are-

- **Transactional Apps.** Pillir's EdgeReady Cloud platform can generate transactional apps, both offline and/or online, that can support bi-directional integration with backend business applications, i.e. the ability to read as well as write data back to the backend business application.
- **Analytical Apps.** Pillir's EdgeReady Cloud platform can generate dashboarding or analytics-on-the-go app across any mobile device utilizing charting components.
- **Web Apps.** Through the EdgeReady Cloud platform, web apps can be generated and that can be executed on the user's browser.
- **Hybrid Apps.** Using a native app container (i.e. Apache Cordova), hybrid apps can be generated via extension with app plugins for additional security and other features.
- **Composite Apps.** Pillir's EdgeReady Cloud platform supports composite apps, allowing users to navigate across multiple backend business applications without having to switch apps or work on multiple backend business applications.

## Infrastructure and Security

Pillir's EdgeReady Cloud platform is a cloud-native, model-driven app that is designed ground-up for the cloud. The platform provides integrated design, build, administration, and runtime capabilities with a codeless, model-driven approach to app development. It generates apps based on the models and designs created in the platform. Some of the core capabilities of the platform are:

**Multi-Tenancy** The Pillir's EdgeReady Cloud platform is a multi-tenant platform that leverages all the capabilities of a modern cloud. It is architected with multi-tenancy to manage multiple but secure and independent tenants supporting different versions.

**Distributed Architecture** The Pillir's EdgeReady Cloud platform is a single platform with the following three distinct components:

- An On-Demand component called the EdgeReady Manager
- An On-Premise component called the EdgeReady Plugin
- An On-Device component called the EdgeReady Apps

The three components work in tandem and support distributed processing. For example, when an on-premise application provides data, business rules may be applied in the EdgeReady Plugin to filter relevant data that is sent out of the EdgeReady Plugin. The EdgeReady Manager receives data from the EdgeReady Plugin as well as other cloud applications, massages the data by applying business rules, and passes it on the data to EdgeReady Apps. The application in the device, with its own rules engine, can apply business rules and display the right and relevant data at the right time to the end-user.

**Open Standards** The Pillir's EdgeReady Cloud platform is built using open standards. All applications and relevant app components can be exported from the platform after development to be leveraged by other tools if applicable.

## Deployment Options

Pillir's EdgeReady Cloud platform provides flexibility and supports multiple deployment options described below. A customer can transition from one deployment model to another as needed.

**Multi-tenant Cloud** Pillir's EdgeReady Cloud platform is hosted on AWS (Amazon Web Services) with money-back guarantee SLA, multiple availability zones, backups, disaster recovery, and elastic infrastructure. The Platform comes with three (3) separate and distinct clouds – Development Cloud, QA Cloud, and Production Cloud to mirror your on-premise landscape.

**Single-tenant cloud** Pillir's EdgeReady Cloud platform can be deployed in a Single-tenant Cloud model on AWS. The cloud deployments come in three (3) separate and distinct clouds – Development Cloud,

QA Cloud, and Production Cloud to mirror your on-premise production landscape. All cloud deployments come with money-back guaranteed SLA, multiple availability zones, backups, disaster recovery, and elastic infrastructure.

**N+1 High Availability** The Pillir's EdgeReady Cloud platform public cloud model is deployed on a scalable N+1 high availability server infrastructure from Amazon Web Services and/or CenturyLink cloud.

**Elastic Infrastructure** The Pillir's EdgeReady Cloud platform is architected with elasticity to infinitely add capacity on-demand to provide unlimited scalability.

## Security

Pillir's EdgeReady Cloud platform has multiple layers of security embedded into the platform. Some of the security features in the platform are:

**Secure and Isolated Tenant** The Pillir's EdgeReady Cloud platform provides a secure and isolated tenant that includes:

- Data at rest and data in motion
- Independent integrations to SaaS and on-premise business applications
- Independent business rules, integrations, and app generation
- Isolated UI components, business and integration logic, adapters, data, etc.

**Transient Cloud** For online apps, the platform uses a transient cloud model where data is never stored or cached anywhere in the platform, neither at rest nor in motion.

**Secure communications** All communications in the platform utilize secure communications such as

- HTTPS (SSL/TLS) protocol communications
- 256-bit encryption to prevent eavesdropping
- Secure server identification
- Prevention of active and passive network attacks
- Prevention of data tampering of data content during transmissions

**Secure Storage** Secure data storage is embedded into the platform. Both EdgeReady Database and EdgeReady Drive employ isolated and secure data storage techniques.

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**Password Authentications** The platform provides multiple authentication mechanisms including a secure user management engine for password authentication.

**Multiple Password Authentications** In the authentication mechanisms, the platform provides a minimum of 2 passwords from 2 different systems. This model eliminates the adverse effects of device sharing or password sharing among users.

**Single Sign-On (SSO)** Pillir's EdgeReady Cloud platform provides SSO authentication mechanisms using logon tickets, SAML 2.0, or OAuth mechanisms.

**Controlled IP Access** Pillir's EdgeReady Cloud platform provides restricted IP access options to connections to the Pillir Platform.

**Audit Logs** The platform captures all activities into audit logs that can be used for reporting purposes.

**MDM Software** The Pillir's EdgeReady Cloud platform can be integrated with major Mobile Device Management (MDM) software for app rollout and deployments.