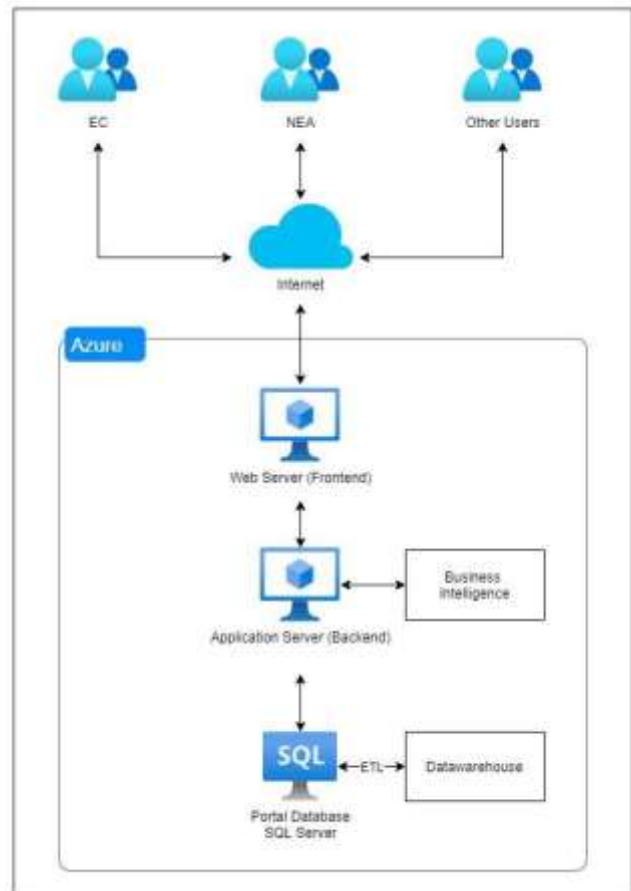


NEA-BIT Application Background

Monolith Architecture

Based on the gathered documents and initial information, the NEA-BIT application was built using Monolith architecture in which the functionalities are interrelated to each process (handle multiple interrelated task) rather than containing architecturally separated components.

- The Web Server enables NEA and each EC to be able to upload their accomplished data entry templates for ingestion to the data warehouse for the generation of operational reports and analytical views.
- The Application Server serves as a WEB API (Application Programming Interface) for client apps in order to retrieve and update data that is accessed through the HTTP/HTTPS protocol. It is built using .NET and running in Microsoft IIS (Internet Information Services).
- The Web Database server serves as the storage of all uploaded Data Entry Templates (DET) which will be used by the ETL/SQL server.



Frameworks: Front-End

Re-build and create the main portal and user interface of the NEA BIT application using the latest version of the software application.



Current Version: 1.0 released June 14, 2012	Latest Version: Version 12 – Released May 12, 2021
<ul style="list-style-type: none">AngularJS support has officially ended as of January 2022. It will be in an archived state.	<ul style="list-style-type: none">The framework upgraded to a better structure, which provides improved performance and speedMost of Angular’s core functionality moved to various modules that created a lighter and a faster core.Ease of maintenance - Angular has an architecture based on components or services, in other words – modules. The module enables the organization of application functionalities by separating them into reusable pieces of dataCost Optimization - making the development process more productive because of CLI and reduced development time leads to fewer costs – as the developers spend lesser time on coding and testing

Frameworks: Back-End

Build and create integration of Front-end to the business logic/functionalities of the NEA-BIT application.



Current Version: 1.0.0 released February 13, 2002	Latest Version: Version 4.8 –Released April 18, 2019
<ul style="list-style-type: none">Mainstream support of this version ended July 10, 2007, and extended support ended July 09, 2009	<ul style="list-style-type: none">The .Net Framework 4.8 includes an updated toolset as well as improvement in several areasEach new version of .NET Framework adds new features but retains features from previous versions.The framework update brings not only new features, but also deletes bugs found in previous versions, fixes security vulnerabilities, and improves performance.

Frameworks: Database

Contain SSRS, SSIS and Database of the NEA BIT application.

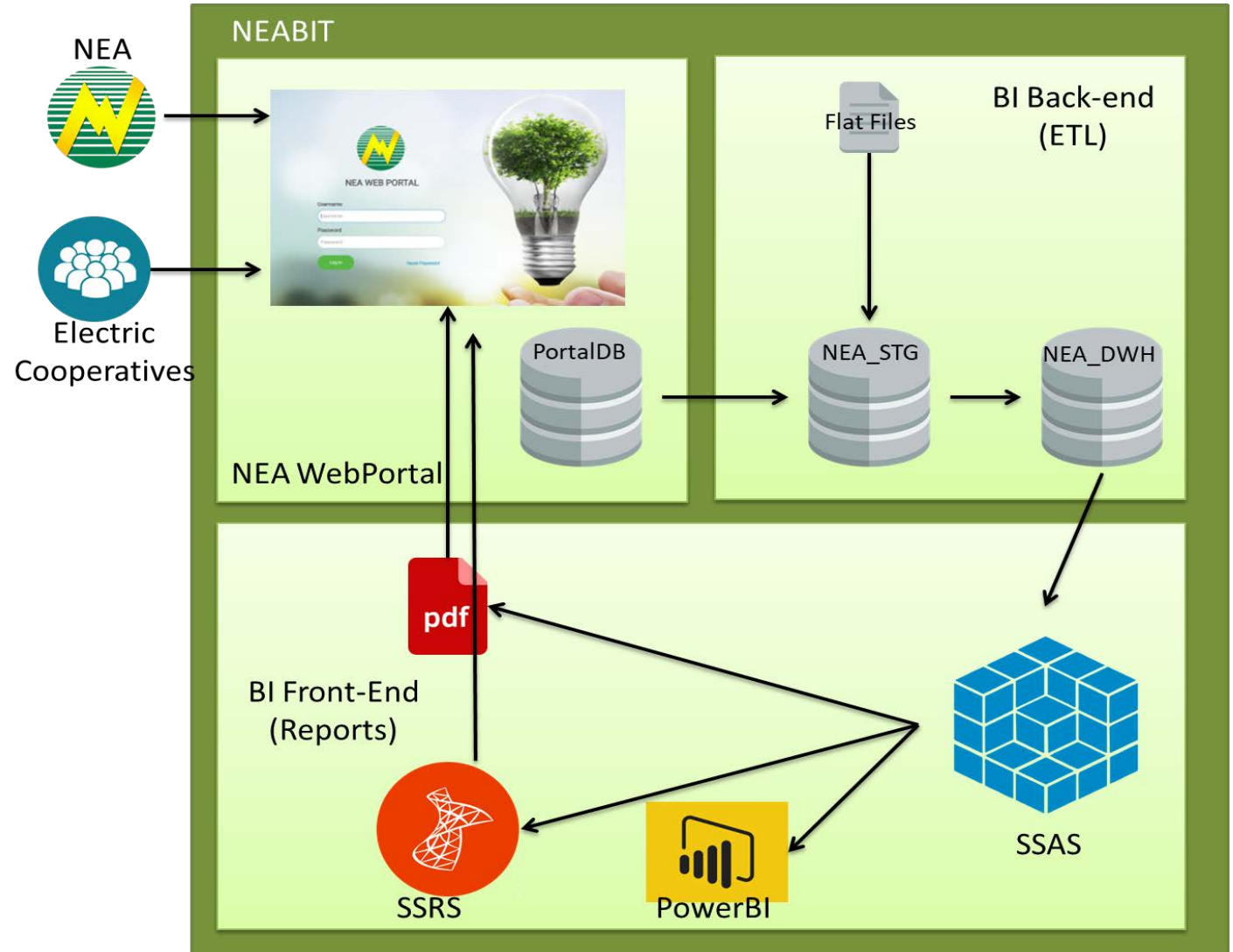


Current Version: 2016	Latest Version: Version 2019 – Support mainstream End Date: Jan 14, 2025
<ul style="list-style-type: none">Support mainstream End Date: July 13, 2021	<ul style="list-style-type: none">At the end of mainstream support, Microsoft will no longer provide non-security hotfixes unless you have an extended support agreement. All warranty claims end and they will no longer accept feature and change requests.Once a product reaches its 'Extended Support End Date' there will be no patches, security updates or support from Microsoft. If you're using any of these products and do nothing, it's almost certain that your risks around security and compliance will increase, which may also impact productivity. These risks will only grow over time.

System Architecture

Tools, Applications, & Database:

- NEA BIT Web Portal
- BI – SSRS, SSAS, SSIS
- Power BI
- Database: Microsoft SQL



System Architecture

