Full mock scenario – Packt Lightning Utilities

This scenario is part of the book *Becoming a Salesforce Certified Technical Architect*. The scenario, its proposed solution, artifacts, and several elements of the presentation pitch can be found in the book. You can get your copy from Amazon at `https://www.amazon.com/Becoming-Salesforce-Certified-Technical-Architect/dp/1800568754/ref=sr_1_1?crid=D5L23IKSKZ6M&dchild=1&keywords=becoming+a+salesforce+certified+technical+architect&qid=1624804105&sprefix=becoming+a+salesforce%2Caps%2C217&sr=8-1`.

Timing

The following list contains the suggested timing for this scenario:

- **Preparation**: 180 minutes
- **Presentation**: 45 minutes
- **QA**: 45 minutes

You can increase or reduce the suggested timing to place yourself under looser or stricter exam conditions as required.

The scenario

Packt Lightning Utilities (**PLU**) is a European electric utility company that serves several cities across Germany, Italy, France, Portugal, Belgium, and the UK. PLU operates in 40 cities. PLU offers services to both B2C customers (residential) and small and medium B2B customers. They offer a wide range of services related to electricity and natural gas distribution. They are currently serving more than 6 million households and over 700K small business accounts.

PLU has been struggling with its existing CRM solutions for many years, and as a new strategic movement, decided to switch to Salesforce. PLU is looking to use its new CRM to launch a global unified new set of sales and service processes. This is part of a bigger digital transformation that PLU is undertaking to become a more customer-centric organization.

The new services should offer the most modern customer experience and maintain an overall low cost-to-serve operating model. They also plan to use the new CRM to manage a close and special relationship with their most valued B2B customers and as a way to boost the performance of their field sales and field service teams.

PLU has a centralized service support center that offers multilingual support for all covered countries. However, the cost-to-serve has been historically too high in the last 3 years, and PLU would like to explore the possibility of introducing additional modern service channels.

Project overview

There are multiple types of employees who require access to the system:

- **Key customer managers**: They manage the relationship with the key B2B customers and are organized by region. Each country contains multiple regions. The key customer managers report to the country's VP of key customers, who, in turn, report to the global SVP (Senior Vice President) of key customers.
- **Support agents**: They operate from a central call center. They serve both residential and business customers. Agents are organized into teams depending on the languages they can support. Some agents are multilingual. They all report to the global SVP of service.
- **Field sales**: They operate in specific regions in each country and are mainly responsible for developing the B2B business. They regularly visit existing and potential customer sites and try to generate new and renewal deals for PLU. They report to the region's director of sales, who, in turn, reports to the country's VP of sales.
- **Field service**: They operate in specific regions in each country and are responsible for collecting meter readings and fixing reported minor issues with residential and business customers. They report to the country's VP of service, who, in turn, reports to the global SVP of service.
- **Marketing team**: They are responsible for generating more leads by executing marketing campaigns to attract and retain B2C and B2B customers. They segment customers and send mass-marketing emails. There is a marketing team in each of the countries covered that reports to its VP of marketing. Marketing and Sales VPs report to the global SVP of sales and marketing.
- **Maintenance partners**: PLU works with a network of over 500 maintenance partners across Europe. They handle and fix incidents related to energy supply. Each partner is associated with one or more regions within a country.

Residential customers can have up to *two contacts per property* and be related to more than one property. On average, residential customers are subscribed to 1.5 different services per account/property. Business customers can have up to *five contacts per account* and typically have several related properties. More than 80% of business customers are subscribed to both electricity and gas.

PLU historically received an average of three service requests per customer annually. Legally, they should keep 2 years' worth of data, such as meter readings and service requests.

PLU is expecting its future system to support the local language of the operating countries. PLU has the following landscape.

Current landscape

PPA is currently using the following systems:

- **Country ERP**: PLU uses a different ERP system for each country. All these systems, except Belgium's ERP, have SOAP-based APIs. Belgium's ERP is very old and is based on a flat-file database. It doesn't offer any API and doesn't support any database adapter. However, it can connect to SMTP servers. PLU would like to retain all ERPs and integrate the new CRM with them.
- **Power Sales**: This is a heavily customized third-party solution. It is currently used to calculate the tariffs, discounts, and bundles for electricity and gas offers. This system offers a poor API, which is difficult to modify. However, PLU still plans to use it for the next 5 years. It has recently signed a maintenance contract with the vendor.
- **Radar reader**: This is a device that is used to read older-generation meters remotely. It operates within a range of 20 meters and sends a wake-up radio signal to the meter to instruct it to power up and transmit its data. This device supports corded and Bluetooth communications. PLU would like to continue using these devices to read the older-generation meters.
- **Smart meters**: These are the new version of meters. They can transmit their readings directly to a centralized server. In addition, they can also receive data and signals from the server. PLU deals with four different smart meter vendors; each provides its own SaaS cloud-based solution to manage smart meters remotely. All smart meter platforms have REST APIs.

- **Legacy CRM**: PLU has a different CRM per country. One of them is based on a legacy XML file storage system with very poor data quality. The others are all based on MS SQL Server. However, they have different data models and are developed by different vendors. PLU is looking to retire all of these systems and replace them with a unified Salesforce-based solution.
- **PDF Generator**: This is a third-party application that is used to generate PDF versions of the invoices. It has bespoke PDF-generating capabilities and offers a rich API. Generated PDFs will be stored temporarily at a related SFTP (SSH File Transfer Protocol). The application automatically deletes files that have been stored on the SFTP for more than 24 hours.

PLU shared the following business process requirements.

Business process requirements

The following sections explain the business processes that PLU expects to have in its new system.

Key customer management

PLU needs to maintain a special relationship with its key business customers. The new system must meet the following requirements:

- Key customers are small or medium businesses that consume more than 50,000 kWh of electricity annually at one of their sites. Key business customers usually have between 5 and 15 sites/properties across the country.
- PLU would like the system to regularly identify new key customers and enroll them automatically into a special nurturing program. If any site is consuming more than 5,000 kWh for 3 months in a year, the enrollment team should be notified. The enrollment team consists of the country's VP of key customers and the relevant regions' key customer managers.
- The enrollment team should start the enrollment process. The first stage is to define a leading key customer manager to start the negotiations with the customer. Multiple tailored tariffs and offers should be shared with the customer. These offers should be generated by Power Sales. PLU would like to get a recommendation for the best way to facilitate this without impacting its employees' efficiency.
- By the end of this process, the customer could be switched to a different, more business-oriented, tariff and a new contract signed.

- PLU would like to streamline the process by introducing a digital signature. Once the document is signed, the contract is updated, and the process of switching the customer to the new tariff should start.
- The new contract details are sent to the country's ERP, which facilitates the switching process. This can take up to 48 hours. Once the process is complete, the customer and key account managers of relevant regions should be notified.

PLU shared the following requirements for the customer service process.

Customer service

PLU is looking to expand the number of support channels. Furthermore, they are looking to introduce a more governed and standardized way of handling their customers. The new system must meet the following requirements:

- All customers should be able to create inquiries or complaints using a self-serve customer portal or by calling the call center. These requests should be assigned to the right agent based on multiple factors, including language, incident type, and customer type.
- If a complaint is not resolved within 7 days, the SVP of service should be notified.
- The system should automatically generate a forecasted meter reading for the next month based on the previous month's reading.
- Forecasted and actual electricity and gas consumption for every site should be displayed in the customer portal. The data should cover the last 24 months. Customers should also be able to view their past invoices and payments. Customers should also be able to view a PDF version of their invoices.
- In case an energy failure was reported, a critical incident should be created and assigned to the right maintenance partner based on the property's address. All customers in the impacted region should receive SMS and email messages upon incident creation, status update, and incident resolution.

PLU shared the following requirements for the scheduled manual meter reading process.

Scheduled manual meter reading

The manual meter reading process is still required for the older meter models. PLU shared the following requirements:

- Manual readings are expected to be taken every quarter. In some countries, this has to happen every month due to regulations. The field service agents drive or walk by the residential house or the business establishment and use the radar reader devices to identify nearby compatible readers served by PLU.
- The radar reader device has a screen that displays the mketer ID of nearby PLU-served meters. The device can communicate with the meters to get their readings. The radar reader is not connected to the internet. However, it can be paired with a nearby Bluetooth device.
- PLU would like the radar reader devices to be paired with the field service agent's mobile phone. The phone is then used to send the reading data to Salesforce.
- PLU is looking to optimize visiting times and travel costs for their field service agents.
- At any given time, PLU would like to track the location of its field service technicians.

PLU shared the following requirements for the scheduled automatic meter reading process.

Scheduled automatic meter reading

The automatic meter reading process is the most commonly used. PLU shared the following requirements:

- Smart meters are widely used across the countries covered. However, PLU worked with 4 different vendors during the past 3 years. Each provided and installed their own smart meter devices. Each vendor has a different cloud-based platform used to control and communicate with the meters. The last 3 months' meter readings are also stored on these platforms. PLU currently has subscriptions to all four cloud-based platforms.

- Smart readers must be read on a monthly basis. Two of the device models can push data periodically to a server. All models support *pull* operations. PLU is looking to unify the way it retrieves the smart meter data from all of its vendors. All four platforms offer a rich set of SOAP and REST APIs. They all offer web services that can be used to pull the meter readings from a smart meter. In addition, two of them also offer a pub/sub interface that allows a real-time recipient of meter readings.

PLU shared the following requirements for the customer registration process.

Customer registration

The customer portal represents a significant part of PLU's strategy to modernize customer service. They shared the following requirements for customer registration:

- Customers can't self-register into the community except via invitation. The B2C customer's access to the portal should be generated after signing up for a PLU service.
- PLU would like to expose its products to unauthenticated users via a public website. Users can subscribe online to PLU's service by providing information such as the number of households, expected power consumption, and address details. The system should automatically determine and display the right tariff for the customer. PLU is expecting this to happen via integration with *Power Sales*. The UI should be responsive to both browsers and mobile phones.
- The customer should be able to confirm the tariff. This should generate the necessary objects in Salesforce to store the customer and contract details. Furthermore, user access to the customer portal should be created.
- Upon the establishment of user access, the customer should receive an email notification to set a password. The password must meet strict complexity requirements.
- Once logged in, the customer should be able to view their contact and contract details. Customers should also be able to log in to the portal using a PLU-branded mobile application.
- Customers should be able to invite one more contact to the portal to co-manage a particular property and contract.

PLU shared the following requirements for the field sales process.

Field sales

The field sales process is essential for developing the B2B business. PLU shared the following requirements:

- The field sales agent visits potential B2B lead walks them through the different offers available using a handheld tablet. PLU would like to track all activities undertaken with the client, even if the client decided not to use PLU's services.
- 3 days after completing the visit, an email survey should be sent to the B2B customer's primary contact. 2 different survey templates should be used, one for successfully signed deals and another for lost deals. If the field sales agent's score is below 3 out of 10, a case should be automatically created and assigned to the field sales agent's manager.

PLU shared the following data migration requirements.

Data migration requirements

Considering the previously shared information about the current landscape, PLU shared the following data migration requirements:

- PLU has over 80 million customers in its legacy CRMs. The data is expected to contain a significant number of duplicates. The number of unique active customers is likely to be in the region of 6 million. PLU would like to migrate active customers just to Salesforce. PLU would like to understand how they can deduplicate the migrated records and link them with their corresponding ERP records, knowing that the same duplication also exists in the ERPs. There is no plan to do any significant data cleanup in the ERP.
- The legacy CRMs have details for over 200 million meters. The vast number of records is due to significant record redundancy. The actual number of meters to migrate is expected to be less than 10 million. PLU would like to clean up the data and maintain a single record for each meter to develop a 360 asset view.

PLU shared the following accessibility requirements.

Accessibility and security requirements

PLU is looking for guidance to design a secure solution; they shared the following requirements:

- Key customers and their meter readings are only visible to the key customer manager, who manages that customer and their managers, except for support agents who can view all accounts in the org.
- The key customer manager should be able to delegate the visibility of a customer account to another manager for a specific period. Once that period is due, the record should no longer be visible to the delegated manager.
- A complaint is only visible to the agent who is managing it and their manager. PLU would also like to define a set of super users who can view all complaints in the system.
- Inquiries should be visible to all support agents.
- The maintenance partners' records should only be visible to the support agents. However, they should only be editable by the support agent who manages the direct relationship with that partner.
- B2B customers should be able to manage all properties and meters related to their accounts.
- B2C customers should be able to manage all their related properties. It is common to have a B2C customer associated with more than one property.

PLU shared the following reporting requirements.

Reporting requirements

PLU requested a rich set of reporting capabilities, including the following:

- The global SVP of service would like a report showing service requests handled by the maintenance partners for a given year compared to data from four other years.
- The global SVP of service would like a dashboard showing the number of inquiries and complaints received and resolved broken down by country and region. The dashboard should indicate the number of incidents resolved within the target timeframe versus those that exceeded the target deadline.

- Key customer managers would like a set of business intelligence reports showing business improvements gained by switching key customers from previous tariffs to new tariffs.
- PLU would like to offer their customers a dashboard showing the change in their consumption across the past 2 years.

PLU shared the following project development requirements.

Project development requirements

Considering the complexity of PLU's program, they have requested the following project development requirements:

- PLU would like to start realizing value quickly and get Salesforce functionalities as soon as possible.
- The team maintaining the ERPs work in a 6-month release cycle, and they are unable to modify their timeline to suit this project.
- Historically, the customer support team is used to high-productivity systems, and they have a regulatory requirement to handle calls in no more than 10 minutes. They desire a similar experience in Salesforce.
- PLU would like to get support in identifying potential project risks.
- PLU would like to have a clear, traceable way to track features developed throughout the project's life cycle.
- PLU is looking for recommendations for the right environment management strategy to ensure that the proper tests are executed at each stage. PLU is keen to understand how to ensure the reliability of its integration interfaces.
- PLU is looking for an appropriate methodology to manage the project delivery and ensure proper technical governance.

PLU also shared the following additional requirements.

Other requirements

PLU's business is growing, and they are looking to expand to the renewable energy business. They shared the following requirement:

- PLU has recently acquired a company working in renewable energy. They manufacture and install solar system panels as well as electric batteries. The acquired company is also utilizing Salesforce as their central CRM. PLU would like to know whether they should plan to merge this Salesforce instance with theirs or keep it separate and are looking for your support regarding this decision.

That concludes the hypothetical scenario. Ensure that you have gone through all the pages and requirements of your actual hypothetical scenario before proceeding further.