Hypothetical Scenario: Universal HealthBit

Project Overview

Universal HealthBit (UHB) is a US company that provides monitoring devices and services for people with diabetes. Their skin-based device measures insulin levels in real time throughout the day without requiring a blood sample, saving their users more time and providing more convenience. Additionally, the device pairs with a smartphone via bluetooth and saves real-time measurements to the UHB portal.

UHB's product has become wildly popular, and they have experienced tremendous growth in their 3 years of business, now serving 1.5 million customers. UHB anticipates serving 50% of the market (currently 30 million people with diabetes in the US) in the next 5 years. However, UHB's current systems and processes will not scale well, and they have identified processes they'd like to move to the Force.com platform.

UHB has two types of customers & partners:

- **Patient Customers** purchase the monitoring device directly from UHB.
- **Distributors** resell the product to popular retail pharmacies.

UHB has the following users that will need to use the new system:

- **Partner Channel Reps** manage sales with distributors.
- **Billing Reps** manage invoicing for distributors.
- **Customer Service Agents** manage support requests for the device and additionally perform emergency callouts if a patient's insulin levels become critical.
- **Executives** analyze sales and support data to make strategic decisions for the organization.

UHB has the following systems that they would like their new application to integrate with:

- **ERP**: An on-premise hosted standard ERP application that was recently implemented. The ERP system is not experiencing any scalability constraints, and is expected to meet growth requirements for the next 10 years. The ERP system has a SOAP-based API.
- **Vitals Tracking Service (VTS)**: An on-premise database that receives hourly data feeds from all deployed devices enabling customers to view their insulin trends and receive alerts for critical levels. As UHB is rapidly growing, the VTS is proving difficult to scale; UHB is looking for recommendations to address this.
- **Website**: Presently, the UHB website is hosted on-premise and utilizes a traditional LAMP-based CMS.
- **LDAP**: UHB utilizes an LDAP-based store to manage credentials for internal users.
- **Address Validation Service**: An on-premise hosted application that validates supplied addresses against USPS data. The system has both SOAP and REST APIs. UHB is open to other options.

Business Process Requirements

Patient Customer Sales

- The UHB website should provide customers with a catalog so they can view more information about UHB's devices.
- After viewing and selecting a device, the customers should be able to configure and purchase devices directly from the UHB website. Devices have many configuration options that impact both the price and manufacturing of the device. UHB is looking for recommended tools that meet this need.
- During check-out, the customer's address should be verified with UHB's Address Validation service. Additionally, the customer should be able to pay for their device with their credit card.
- UHB would like the system to track all customer sales. Upon a successful sale, the new system should initiate a billing process with the ERP system.
- If the customer has any questions while browsing or shopping, UHB would like the customer to be able to chat with a support agent.

Distributor Sales

- Partner Channel Reps are assigned to work with various distributors. The Application Architect has determined that Territory Management should be utilized to automate the assignment of distributor accounts.
- Partner channel reps can receive sales opportunities from their accounts via Phone or Email. Additionally, UHB would like to provide distributors with an online tool where they can submit opportunities without having to email the UHB channel rep.
- The project's Application Architect has determined that after receiving and qualifying the sales opportunity, the Channel Rep should mark the opportunity as "Contracting." Upon entering this stage, an order contract that includes the order details, terms and conditions, and details and pictures from the parts catalog should be sent to the distributor for e-signature.
- After e-signing the contract, the opportunity should automatically be marked "Closed/Won" to initiate the billing processing with the ERP system.

Billing

- All successful sales tracked in the new system should be sent to the ERP system for fulfillment as Sales Orders, including any configuration parameters and customer details.
- For "Distributor Sales," the new system should also automatically create an invoice in the ERP system that the ERP system will send to the distributor.
- For "Patient Customer" sales, both an invoice and payment should be posted to the ERP system and the customer should only receive a receipt.

- When the order is complete and shipped the order is updated in the ERP system. However, as-is, the ERP system does not notify customers when orders have shipped. UHB would like to notify customers when orders have shipped.

Deployment

- After receiving their product, customers will pair it with their bluetooth-enabled smartphone via UHB's App. Currently, the smartphone application has limited functionality and only sends hourly status updates to the VTS and performs very limited alerting based on critical insulin levels.
- UHB would like to enhance the smartphone app to enable customers to submit support requests, view their recent history of insulin levels, and capture data in situations with limited network connectivity.

Support

- Customer Support Agents should also be able to view the status of an order from within the new system.
- If a customer's device reports to the VTS that a customer's insulin level has reached critical, a Customer Support agent should be notified so they can reach out to the customer and/or emergency services. Additionally, the customer's physician should also be notified via SMS.
- If a customer's device hasn't sent any new data to the VTS within 3 days, a Customer Support Agent should be notified. .

Data Model & Migration Requirements

- UHB currently has 1.5 million customers. UHB expects to grow to 15 million customers over the next 5 years.
- UHB devices have 10 different configuration options that are tracked. On average, customers order 2 devices.
- UHB currently has 15k support requests and continues to experience a linear growth rate.
- UHB would like existing customers and orders to be migrated to the new system in addition to support requests.

Accessibility Requirements

- UHB would like to provide their customers and partners with a portal they can use to view the status of orders and submit cases for support. Additionally, end users of devices should be able to use this portal to view alerts and trend charts of the data collected by the VTS.
- UHB would like to enable customers to sign in to the portal with their Facebook and Twitter credentials.

- Internal users should login utilizing credentials that are stored in the on-premise LDAP system. As new employees are hired and terminated, they should automatically be granted access to the new system and have their access revoked.
- The solution should provide 99.999% uptime so that Customer Service Agents can process critical-level notifications.

Reporting Requirements

- Production managers need to be able to analyze potential new orders to ensure UHB inventory levels can meet forecasted demand. The ERP system contains all current inventory levels.
- Executives would like to see historical trend reports of sales.
- Additionally, executives would also like deeper analytics of the data collected by the VTS that may help them improve and better market the product.

Governance

- The solution should be PCI compliant.
- As the solution will be dealing with individuals' health information, it must be HIPAA compliant. Additionally, UHB would like architectural recommendations that will enable them to grow into other global markets, the first being the EU.
- UHB's business and IT stakeholders are located in the US. Additionally, UHB's Java development team is based in India and may be utilized for development, testing, and support of the solution.
- Given their distributed teams and regulatory and technical constraints, UHB is seeking recommendations for the project methodology and governance structure and any recommended toolsets.