Universal Safety Technologies

Hypothetical Scenario

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CONFIDENTIAL

TRAILHEAD ACADEMY

Project Overview

Universal Safety Technologies (UST) is a provider of safety and security systems to commercial customers. It has 150 offices across 15 regions in the U.S. and Canada, providing services which include system design, installation, monitoring, and maintenance. Its mission is to protect people, property, and assets from fire and theft.

UST has 100,000 commercial customers, with growth expected to be about 10% per year for the next 5 years. Customers have an average of 2 locations per customer, with an average of 50 monitoring and fire suppression devices at each location (expected to grow to 100 per location within 5 years).

UST has been struggling with systems that are not well integrated, leading to additional work for its employees. While UST's most critical emergency systems generally work well, they see an opportunity to create a more unified system by leveraging Salesforce.

The following UST employees will be using the new system:

1. 3000 system specialists who meet with customers, design customer systems, supervise installations, and perform scheduled maintenance. These specialists are distributed across the 150 offices.
2. 500 support representatives, who pre-qualify prospective customers, and handle post-installation customer support issues. These support representatives are in three service centers: two in the U.S. and one in Canada.
3. 180 managers, including an office manager at each of the 150 local offices, a regional manager at each of 15 regional offices, and another 15 at headquarters.

UST has identified several external users who will also be using the system:

1. 6000 contractors, who provide installation services under the supervision of the system specialists.
2. 200,000 primary customer contacts (one for each location), who can submit and track support issues, and administer other contacts at the customer location.
3. 500,000 secondary customer contacts, who can submit and track support issues.

Current Systems

UST has grown over the last 10 years through organic growth combined with the acquisition of two other companies providing similar services.

Currently, UST uses several systems to run their business:

1. A single custom public website which provides product information, phone numbers, and inquiry forms to prospective customers in both the U.S. and Canadian markets. The website will remain in place and can be updated as needed to accommodate the new system.
2. An existing CRM system (not Salesforce), currently only used to capture leads, schedule customer appointments, and capture order data. This system will be retired.
3. Three custom monitoring systems, one for each of the three original companies. These monitoring systems provide data collection and alarm notification services.
    a. The existing monitoring systems must remain in place to support existing devices installed at customer locations by the original companies, since those original systems are not cross-compatible.
    b. The three original companies had some geographical overlap with each other, and in some cases, the same customer is in more than one legacy system.
    c. API access can be enabled for all three data collection systems. At present, these monitoring systems are not integrated with the website or the ERP systems.
    d. Single sign-on has been implemented for the monitoring systems for internal users.
4. Two ERP systems, one for the U.S. and one for Canada, which currently manage all sales, installation, scheduled maintenance, and support activity.
    a. Due to regulatory requirements for fire and safety systems, the ERP implementations in the U.S. and Canada have very different order management processes and data requirements. For this reason, they have remained separate.
    b. API access is available for both ERP systems, although it is not currently used to integrate with the website or the monitoring systems.
    c. UST plans to decommission parts of the sales, installation, support, and maintenance functions of the ERP systems and replace them with Salesforce.
    d. Single sign-on has been implemented for the ERP systems for internal users.

5. A custom browser-based design tool used by the salespeople and installation specialists to lay out the components of a customer installation.
    a. The design tool creates PDF files used by installation specialists and contractors to install safety and security devices at the customer location.
    b. At present, these PDF files are stored on the system specialist's desktop or laptop, then sent via email to contractors who may also retain them on their laptops.
6. An enterprise-wide Windows Active Directory for management of internal UST users across all systems.
    a. When UST employees log into their internal network, they should be able to connect to Salesforce (including deep links) without having to log in again.
    b. Contractors will not be added to the Active Directory. Their login credentials will be managed within Salesforce.

Business Process Requirements

UST would like to automate and streamline the following business processes in the new system:

Sales and Design

1. Prospective customers can place a call to phone numbers provided on the public website, in which case they will be directed to an available support representative in one of the three support centers (based on availability). Alternatively, prospective customers can submit an information request on the website, in which case a support representative will be notified to return their call based on the location information provided.
2. Approximately 5,000 prospective customers per month are added to the system through one of these channels.
3. The support representative pre-qualifies the prospective customer in Salesforce using a custom questionnaire, after which the support representative schedules a site visit for a system specialist to review the customer's requirements.
4. During the site visit, the system specialist can do the following, all from within the same mobile application:
    a. Take pictures and/or videos of the site and upload them for reference during final design. The photos and/or videos should be accessible from Salesforce.
    b. Create a preliminary estimate and send a copy to the customer via email.
    c. Capture GPS information for the location.

5. The creation of an estimate activates a process to allow the customer to access Salesforce to view the estimate and to collaborate with the system specialist during the design process.
6. Back at the office, the system specialist creates design plans with the custom design tool. The plans, which can be up to 100MB in size or larger, should be accessible by the customer via Salesforce.
7. Once the design documents are created, the system specialist notifies the customer to access the documents via Salesforce. The customer can collaborate with the system specialist during this review. Once the design meets the customer's requirements, the customer digitally signs an updated estimate to proceed with installation.
8. At this point, the customer also provides financial data to the systems specialist which is recorded on their location record. This step initiates an approval process where the local manager (and the regional manager if the installation cost is high enough) must approve the customer for the work.
9. Customers should be able to use their Facebook, Twitter, or LinkedIn credentials to log into Salesforce and collaborate with UST.

Contracting and Installation

1. UST works with contractors to install customer systems.
   a. Contractor records are created and managed in the appropriate ERP systems, and should not be created or updated in Salesforce.
   b. Contractor records created or updated in ERP should be sent to Salesforce daily.
   c. New contractors should be automatically provisioned for access to Salesforce using native credentials.
2. The system specialist selects a contractor for the customer installation, at which point the customer design documents, estimates, photos and videos, and collaboration space are automatically made available to the contractor via Salesforce.
3. The contractor reviews the customer documents and collaborates with the system specialist and the customer as needed. If necessary, the system specialist revises the documents and repeats the customer approval process.
4. Once the design is acceptable to the contractor, the contractor indicates acceptance in Salesforce. At this point, the system automatically generates a contracting agreement for the contractor to sign online, which is then stored in Salesforce.

5. The system specialist is notified of contractor acceptance and signature, at which point they can do a final review and place the order for the required devices, materials, and supplies.
    a. The order is created in Salesforce, and once the order is flagged as complete, Salesforce sends the order information to the appropriate ERP system, where a sales order is created and fulfilled.
    b. Detailed order data in the ERP systems should be viewable or accessible from within Salesforce.
6. The ERP system updates the order status in Salesforce through the point of arrival at the customer location.
7. Once the order arrives at the customer location, the system specialist and contractor should be notified by SMS and email that they can contact the customer and begin installation.
8. During installation, as each device is added to the customer installation, it is connected online to the appropriate UST monitoring system. UST would like this process to automatically create a record in Salesforce for the device, associated with the customer location.
9. Once installation is final, Salesforce is updated by the system specialist, and final information from the installation is sent to the ERP system for the creation of an invoice.

Scheduled Maintenance

UST performs regular scheduled maintenance on its customers' installations.

1. The maintenance schedule is set by the systems specialist when the installation is complete, and managed by the support center after installation. On average, each customer location is serviced twice a year.
2. When scheduled maintenance is one week away, the system should create a service order in the appropriate ERP system for the scheduled maintenance.
3. Once the scheduled maintenance is complete, the system specialist updates Salesforce on their mobile device, and the status of the ERP service order is updated on a real-time basis.

Monitoring and Issue Management

Issues can be raised from the monitoring systems, created by customer contacts, or created by support representatives.

1. Issues raised from monitoring systems:
    a. The three existing monitoring systems will continue to perform their existing functions, and emergency services (such as fire or police) will be serviced from those systems.
    b. In addition to native notification capabilities, the monitoring systems can make real-time API calls when certain events occur. UST would like Salesforce to be updated when certain events are raised in the monitoring systems.
    c. These events should also create a task associated with the issue for the support representative to call the customer and assess the status of the issue.
2. Issues raised by customer contacts:
    a. Customer contacts can log into Salesforce on the web or on their mobile phones, and submit issues to UST for follow-up.
    b. UST devices installed at a customer site are fitted with barcodes. The customer's mobile device should be able to take a picture of the barcode to identify an individual device if there is a problem with it, and associate it with the issue.
    c. Issues submitted in this way should be routed to an appropriate service representative based on geography and expertise on the various devices that UST provides.
    d. If maintenance or repair work is needed, the support representative creates a maintenance task, which in turn creates the service order in the ERP system in real time. This ERP integration should provide immediate feedback of success or failure to the user.
3. Issues created by support representatives:
    a. For customers that call the support center, or for issues that are raised through other channels, support representatives can create issue records manually.
    b. From this point, maintenance or repair work can be scheduled as previously described.

On average, each customer location will produce 20 issues per year to be tracked in Salesforce (including those generated by the monitoring systems, and through other channels). Of these, about half will require work orders for unscheduled maintenance or repair.

Data Migration Requirements

1. Customer leads from the existing CRM system for the last 5 years should be migrated to Salesforce, except where they are also in the ERP system(s) as customers.
2. All Customer, Location, and Contact data from the ERP systems needs to be replicated into Salesforce, and UST needs to be able to logically link records between the two systems.
3. The last 3 years of Sales Order and Service Order data from the ERP systems needs to be replicated into Salesforce, and UST needs to be able to logically link records between the two systems.
4. All devices from the three monitoring systems needs to be replicated into Salesforce, and UST needs to be able to logically link records between the two systems. Note that some customers have device data in more than one monitoring system.
5. All design documents currently residing on system specialist desktops, for all open orders, need to be made available from within Salesforce.

Visibility and Accessibility Requirements

1. System specialists should be able to view and edit all customer and installed-system data for their own customers.
2. System specialists should be able to view all customer and installed-system data for other specialists' customers within their local office, except for customer financial data.
3. All managers (local, regional, and HQ) should be able to view and edit all customer and installed-system data within their respective areas (locations, regions, or global), including financial data.
4. Contractors should be able to view and edit data only for the customer locations to which they have been assigned, except for financial data to which they do not have access.
5. Customer contacts should be able to view and edit only their own customer, contact, and installed-system data.
6. There are certain customers with multiple customer accounts and locations set up in an account hierarchy. For these customers, primary customer contacts should be able to see all location and subordinate data across all related accounts.
7. Support center representatives should be able to see all data within their geography only (U.S. or Canada) except for customer financial data.

Reporting Requirements

1. Support representatives, system specialists, and managers should be able to run reports on sales activity and schedules for all customers they have access to.
2. Support representatives, system specialists, and managers should be able to run reports showing the number of device monitoring events for all customers they have access to.
3. Managers should be able to run ad-hoc trending reports showing the level of monitoring activity over various periods of time based on customer type, geography, installed device type(s), monitoring system activity, or responsible specialist.
4. Customer contacts should be able to run reports showing issues and their status for all issues they have access to.
5. UST would like a report that can be run live from the public website, showing the number of monitoring events and installations for the US and Canada.

Project and Development Requirements

1. The solution needs to support both English and French languages.
2. UST has geographically separate IT teams responsible for the two ERP systems (US and Canada) and the three monitoring systems. The ERP teams in particular have operated with a great deal of autonomy.
3. The IT teams have access to only one development and one test environment for each of their respective systems.
4. The Sales Management team at UST would like to simultaneously release the completed solution to production for all regions in four months.
5. UST would like recommendations on how to manage the project to address project priorities, technical design issues, team management, and organizational issues that may arise.