

# LSA Application Build Scenario: Front Stage Event Booking

## Scenario overview

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Front Stage is a large entertainment organization that hosts shows, musical performances, and high-profile corporate events. Front Stage assists its customers with booking events that are between 5,000 and 18,000 guests. Front Stage plans to offer full event planning services that allow event organizers to not only reserve the venue, but also organize related events such as:

- Reserving hotel(s)
- Arranging for parking
- Preparing for outdoor events

After seeing Pega's case management and mobile capabilities, Front Stage is excited to use the Pega platform to build an application to support this new venture. Front Stage is also intrigued by the idea of giving the business more control over the design and features of the software applications that they use every day.

## Actors

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- **Sales executive** – Negotiates the contract with the customer and creates the proposal.
- **Executive officer** – Approves proposals. There are three executive officers, and one of them is the CEO.
- **Event manager** – Manages the overall event. There is a team of five event managers, and one of them acts as the team lead.
- **Facility coordinator** – Coordinates preparations for the event. There are a total of 15 facility coordinators, and each one is specialized in one or more areas, such as weather preparation and parking.

## Technology overview

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The Front Stage sales organization is highly mobile. The sales executives work almost exclusively with handheld and tablet devices. Facility coordinators and executive officers work in the office, but sometimes they work remotely. Event managers are on the road half of the time, and in the office the other half.

To compete with other event booking companies, Front Stage recognizes that it needs to deploy new software in a matter of hours, not days or weeks. The Front Stage IT organization knows this model is possible, but understands that big changes to the way it operates are needed to support this way of working. The IT organization also sees the cost savings in moving to a cloud-based solution instead of procuring and maintaining hardware to support the event sales and booking processes.

Front Stage operations use a combination of desktop applications and older technology to book events. The operations staff uses a mainframe terminal emulator to book hotels. The event manager can book a hotel in less than a minute. Front Stage has emphasized that the new solution cannot

take any longer than the time it takes the event manager to book a hotel using the mainframe emulator. All the hotels that Front Stage works with provide a web services to book a block of rooms. Also, the application cannot take any longer than one second to move between booking screens. Otherwise, the business SLA cannot be met.

Front Stage also sees the opportunity to leverage background processes to offload some of the manual processing Event Managers must do today. For example, Event Managers must check the weather to determine if the facilities coordinator should set up tents and provide rain gear to attendees. Event managers frequently receive questions from attendees about details about the event such as:

- When can I check into the hotel?
- What is the street address of the parking facility?
- Is there a vegan option on the menu?

The event manager is eager to see if the new application can provide answers to these types of questions automatically. However, any new background processing must not affect the overall performance of the booking application.

## Process overview

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Through this new application, Front Stage can provide a base package and some additional optional services. Event organizers can book these optional services on top of the base package. They cannot be booked separately.

The event booking application includes the following processes:

- **Event quote** – This process includes the event proposal capture and the calculations of the event quote.
- **Weather preparation** – The process includes the actions taken prior to the event based on the weather forecast (service included in the base package).
- **Hotel rooms booking** – This process includes arranging with nearby hotels to set aside blocks of rooms for event attendees (optional service).
- **Parking request** – This process includes the parking and shuttle service request for the event attendees (optional service).

The three latter processes must be able to execute independently and each event quote must be associated with the services involved in the event.

## Detailed Requirements

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### Proposal

While negotiating a proposal with the customer over the phone or in person, the sales executive captures the proposal in the application.

Event	
Category *	Concert
No Of Attendees *	8500
Start Date *	12/10/12
End Date *	12/12/12
Contact	
Name *	John Smith
Company *	Madonna
Phone *	617 123 1234
Email *	j.s@email.com
Services	
<input checked="" type="checkbox"/> Hotel Reservation	
<input checked="" type="checkbox"/> Parking & Shuttle Service	
Quote	
Discount (%) *	15
Base price (USD)	77,350
Additional per Parked Car (USD)	1.7

The event information includes the type of event (concert, sport, corporate, and other), the number of attendees, the start and end date, the customer contact information (name, company, phone, and email) and if the optional services are booked by the customer. The sales executive can also give up to 20 percent discount to the customer. The discount is applicable both to the base price and the price per car. The system automatically recalculates the quote if any related input value changes.

With this information, the system automatically calculates a quote amount for the event based on the following data.

Size of event (Number of attendees)	Base price
< 6,000 attendees	\$ 50,000
6,000 < attendees <= 12,000	\$ 80,000
attendees >12,000	\$ 100,000

Size of event (Number of attendees)	Hotel reservation price
<= 6,000 attendees	\$ 4,000
6,000 < attendees <= 12,000	\$ 5,000
attendees >12,000	\$ 6,000

Size of event (Number of attendees)	Parking and shuttle service price
<= 6,000 attendees	\$ 4,000 + \$ 2 per car
6,000 < attendees <= 12,000	\$ 6,000 + \$ 2 per car
attendees >12,000	\$ 8,000 + \$ 2 per car

The sales executive has the option to cancel the proposal if the customer chooses not to continue.

The quote is then submitted for approval. Executive officers are available to receive the quotes and approve them. They pull the quotes from a list without the possibility for cherry picking. Executive

officers pull the quotes in order defined by the event start date. The events with earlier start dates are pulled first. Quotes for events with more than 10,000 attendees must be routed directly to the chief executive officer, who is one of the executive officers who can approve events.

If a quote is rejected a note stating the rejection reason must be provided by the executive officer and the quote is routed back to the sales executive who can make changes and resubmit, quote or alternatively cancel the quote.

If the proposal is approved, the processes for the selected services are triggered and the event is sent to the event manager's team lead, who assigns it to one of the event managers. Assigning the proposal only to event managers is possible. The event manager can either accept or reject the event. The most common reason for an event manager to reject an event is the event manager does not have the time to plan and manage the event. This situation happens rarely. If the event manager rejects the event, the event goes back to the team lead, who can assign it to another event manager. If the event manager accepts the event, the event is then allocated to the event manager and put in a pending status until the next task is created and assigned.

Proposals can only be created by sales executives and the financial information must not be visible to the facility coordinators at any time.

Event managers should be able to classify each event quote using tags making it easy for sales executives to find examples of other similar events.

### Weather preparation

One day before the event, the weather forecast for the event dates is checked.

If the probability of precipitation is greater than 40 percent for any of the event days, a process to make arrangements is started. Also, the task is sent to the facility coordinator with the least amount of urgent work and who is specialized in weather preparation with the series of actions shown in the table below.

Set up tents
Provide disposable raincoats
Cover seating area

If the facility coordinator has not completed the work within eight hours, it is escalated to the event manager allocated to the event.

### Hotel reservation

Front Stage has agreements with five nearby hotels. The hotel list is maintained by the system administrator.

Hotel	Contact person	Email
Marriott	Sandra Smith	<email>
Hilton	John Jackson	<email>
Westin	Erin Edwards	<email>
Sheraton	Fred Franklin	<email>
Radisson	Niclas Newton	<email>

In general, the assumption is that 20 percent of the attendees need a hotel. The hotels do not have user accounts in the application. The system notifies the hotel contacts by email, requesting room reservations. Each hotel receives a request for the same number of rooms. To expedite the process, the hotels have to confirm the number of rooms reserved directly in the application.

Please confirm the number of rooms you can block for the event within 24 hours.

Start date

End date

Requested number of rooms

Confirmed number of rooms \*

The hotels have 24 hours to confirm that they have set aside rooms for the event. Hotels can confirm fewer rooms than requested, but not more. If a hotel does not respond within 24 hours, the system automatically assumes that the hotel could not set aside any rooms for the event.

Other Reservations

Hotel	Rooms Requested	Rooms Confirmed	Status
Marriott	340	200	Pending-Review
Westin	340	0	Pending-Confirmation
Sheraton	340	340	Resolved-Completed
Radisson	340	200	Resolved-Completed

This Reservation

Hotel  Phone

Contact  Email

Requested number of rooms  Confirmed number of rooms \*

If the hotel did not confirm all requested rooms, the reservation is sent to the event manager. The event manager reviews the reservation and can telephone the hotel to discuss the request and update the reservation accordingly. The event manager should have an overview of other reservations, both pending and confirmed, when reviewing a reservation.

### Parking and shuttle service

Front Stage can provide parking with a shuttle service. If this option is selected, the facility coordinator who specializes in parking and has the least amount of work is assigned the task to arrange the shuttle service. Depending on the size of the event, several transportation companies might need to be contacted.

Company	Contact	Number of busses
Smith's Bus Co	John Smith	4
Western Bus Co	Sara Jackson	12

[Add](#) Delete Item

The company, contact person, and number of buses are captured for each company. Entries can be added using the Add link, updated by double-clicking the entry, and deleted using the right-click menu.

On the event end date, the same facility coordinator gets the task of entering the number of cars that used parking, allowing the total invoice amount to be calculated.

## Additional requirements

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When the event is over and all processes have been completed, the event manager gets the task of calling the customer to get feedback. The feedback is captured as a required Satisfaction Score from 1 to 10 (only whole numbers can be selected), and then used later to compute a Net Promoter Score as well as an optional Comment as free text. When the feedback has been submitted an invoice, email is sent to the customer and the event is considered completed. The email template is shown in the appendix.

The portal is different depending on which type of actor is logged in. The sales executives and event managers portal has three tabs: My Dashboard, My Cases, and My Worklist.

As frequent travelers, sales executives need mobile and offline access to the event bookings that they are working on.

Within the next year, Front Stage expects sales prospects to be able to start a new event booking request through social channels, such as Facebook Messenger.

The executive officers have a My Report tab in addition to the tabs above. The report tab contains the reports specified in the reporting requirements section plus the standard reports. Executive officers should be able to create new custom reports using the standard features.

The dashboard enables access to the worklists of the user's peers. For example, sales executives can view and access work from other sales executives (but only other sales executives). The same is true for executive officers and event managers. However, it must not be possible to access work on peers' worklists that are related to events with more than 10,000 attendees and, therefore, go directly to the CEO for approval. In addition, the dashboard contains the usual standard features.

The My Cases tab provides an overview of open cases that the actor is involved in. So for the sales executive the ones he created, for the executive officer the ones he approved, and for the event manager the ones allocated to him. This allows for an easy overview of open cases and their status.

The facility coordinators only see their own worklist and the work specifically assigned to them.

Front Stage is planning to buy additional arenas in the future, and wants to be able to reuse the current application with appropriate customization for each additional arena.

## Integration requirements

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The weather is checked using a web service. The web service returns the likelihood of precipitation for a date range. The web service has not yet been implemented and needs to be simulated during development.

## Reporting requirements

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Executive officers have two reports. The first one lists the events with revenue, cost, and profit. The second report shows profit by event type. The internal costs are shown in the following tables.

Size of event (Number of attendees)	Internal cost
$\leq 6,000$ attendees	\$ 30,000
$6,000 < \text{attendees} \leq 12,000$	\$ 40,000
attendees $>12,000$	\$ 50,000

Size of event (Number of attendees)	Hotel reservation internal cost
$\leq 6,000$ attendees	\$ 2,000
$6,000 < \text{attendees} \leq 12,000$	\$ 3,000
attendees $>12,000$	\$ 4,000

Size of event (Number of attendees)	Parking and shuttle internal cost
$\leq 6,000$ attendees	\$ 2,000 + \$ 1 per car
$6,000 < \text{attendees} \leq 12,000$	\$ 4,000 + \$ 1 per car
attendees $>12,000$	\$ 6,000 + \$ 1 per car

## Appendix

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### Invoice email

This is the template of the invoice email sent to the customer when the event has been completed.

#### Invoice from Front Stage

<Date>

Dear <Contact Person Name>,

Below is an invoice for the event organized by Front Stage.

Yours Sincerely,

<Event Manager Name>

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Invoice Details:

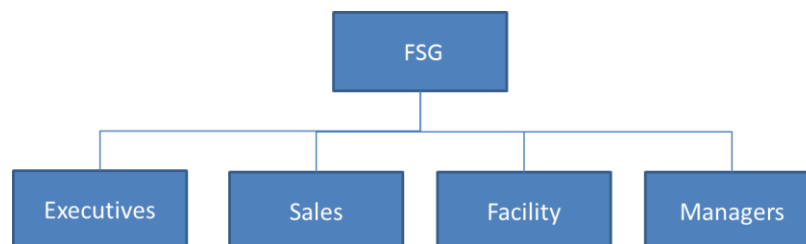
Invoice #: <Event ID>

Due Date: <One month from today's date>

Total Amount Due: \$ <Total invoice amount>

### Organizational Structure

Front Stage's (FSG) organizational structure for event planning and execution looks as follows.





Create the following users for testing purposes.

<b>Department</b>	<b>Role</b>	<b>Operator ID</b>
Executives	Executive Officer and CEO	CEO.Booking
Executives	Executive Officer	ExecutiveOfficer1.Booking
Executives	Executive Officer	ExecutiveOfficer2.Booking
Sales	Sales Executive	SalesExecutive1.Booking
Sales	Sales Executive	SalesExecutive2.Booking
Facility	Facility Coordinator specialized in Parking	FacilityCoordinator1.Booking
Facility	Facility Coordinator specialized in Weather Preparation	FacilityCoordinator2.Booking
Facility	Facility Coordinator specialized in Weather Preparation and Parking	FacilityCoordinator3.Booking
Managers	Event Manager and Team Lead	EventManager1.Booking
Managers	Event Manager	EventManager2.Booking
Managers	Event Manager	EventManager3.Booking