

Capacity Planning and Infrastructure

Problem Statement.

To design an administration web portal for CPI Support team to maintain & manage the creation & updation of company's locations, sites, facilities, floors, bays/rooms, and seats.

To Understand the user better I started by asking the 5W's.

- **Who is the User**

An IT support Admin looking after seats adding and allocations or Bay creation and updatations across different sites and locations.

- **What will the user be doing**

Seat allocations to a single person or a team.
After Infrastructure change updating bays or seats.
Rooms and bays allocations.
Relocating a team.

- **When the user be working**

At any time of the day.

- **Where will the user be working**

Either sitting in front of the computer.
On a hand held device when on a floor survey

- **Why or the motivations**

To ensure space allocations happen in an organised manner.
To understand where there is free space and how it can be used.
Help new joiners with fast space allocation.
New infrastructure updates

This understanding helped me define my user's Goals, pain points and motivations.

Persona



John Doe

Age : 40
Role : CPI IT Support Admin
Education : Management student

Bio :

Prashant is an Administrator head of CPI which Five locations Bangalore, Pune, Chennai, Hyderabad & Mumbai DC's. He has domain experience of 5-6 years. Using the CPI administration web portal he maintains and manages the company's locations, sites, facilities, floors, bays/rooms, and seats.

Devices Used:



Tasks and Goals :

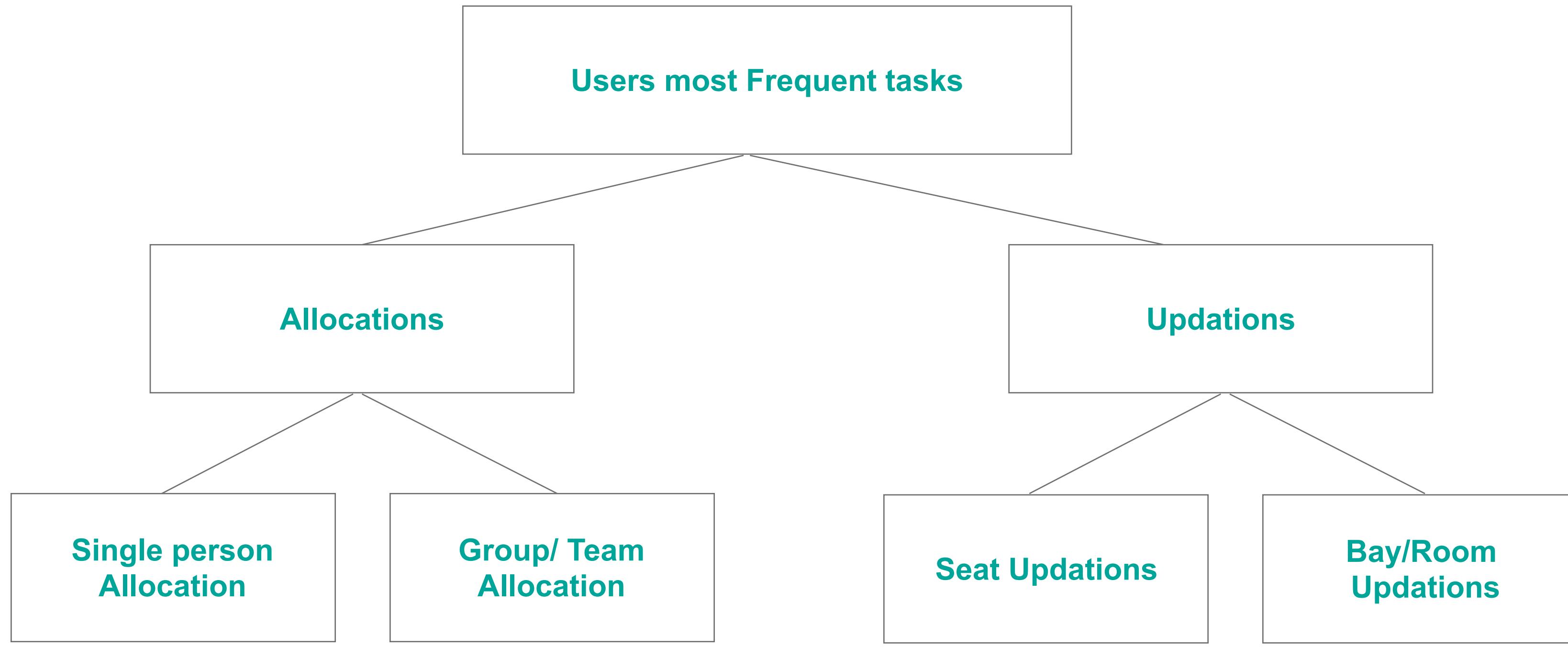
Overview of seat/bays updates and allocations across locations.
Identifying spaces for new infrastructure to accommodate ever-growing employees.
Creating & updating the bays/rooms.
Adding & allocations of seats
Identify and locate areas which are not being used optimally.

Pain points :

Cumbersome to locate data in the tables
No filters to locate projects, empty spaces, specific dates etc.
Number of clicks and time taken to process a request.
No consolidated plan of the floor/bays to help locate empty spaces.
Not easy to track bays/seats that would be free in the near future or a date.
Identifying temporary empty seats.
Too much switching in tabs
Website not responsive

Motivations :

Organisations can better forecast growth by ensuring good utilisation and organised space allocations.



Customer Journey

Taking two scenarios of single seat creation and another for Group allocation made customer journeys. They helped me understand how the user currently interacts with the product and the challenges faced.

Scenario - Single seat Creation and Allocation					
	Requirement	Research	Feedback Received	Reconsider	Process Request
Doing	<p>Allocation of a single seat to a person in an on going team project.</p> <p>The person will be arriving in a day and needs to start work immediately.</p>	<p>Goes to the seat tab.</p> <p>Filters according to the site and facility required.</p> <p>Looks for the project name in the list and their seating.</p> <p>There are no seats available on the asked floor but finds a few seats on the next floor and updates the concerned person about the same.</p>	<p>The project manager is pushy about wanting a seat close to the already seated team on the same floor.</p>	<p>Asks the Facility Admin to visits the floor to see if a new seat can be added in the available bays.</p> <p>Looks for other temporary available seats on the same floor.</p>	<p>Facility identifies a space where an extra seat can be added.</p> <p>Updates a new seat in an existing bay in the system and allocates the space to the person.</p>
Thinking	<p>As this is on high priority need to quickly locate a space so that other teams like system allocation can start their work</p>	<p>Wish it was easier to locate specific projects on the floor.</p> <p>Wish there weren't so many clicks to get to the table.</p> <p>Not at all easy to locate empty seats in a specific place in the table.</p>	<p>This is taking longer than I had estimated.</p> <p>Need to get help of that facility admin to locate a space.</p> <p>Wish I had the floor plan to help identify space with the team.</p>	<p>I am sure there must be some seats held for future allocations on the floor, wish there was a way to identify such temporary seats.</p> <p>Hopefully the facility admin finds something.</p>	<p>Now the system allocations team can start their work.</p>
Feeling / emotions	UNSURE if a space can be found in this short time	IMPATIENT	FRUSTRATED as needed data is unavailable.	HOPEFUL	HAPPY
Opportunities		<p>Easier navigation to reach the all seats view.</p> <p>Filters to help quickly search using key words.</p> <p>Easily locate empty seats on the floors.</p>	<p>A view which easily allows the person to locate spaces where extra seats can be installed. A top view of the floor.</p>	<p>A view to show seats that are free for some days or temporarily.</p>	

Scenario - Group seat allocation in a specific space

	Requirement	Research	Feedback Received	Reconsider	Process Request
Doing	For a new project with a team of 25 people, needs to be placed in a specific site. Needs an enclosed area Team could expand later	Looks through the list of floors / bays to find an empty space to accommodate 15+ people. Looks at other teams whose allocations might end soon. Finds 2 adjacent rooms with 8 people capacity each, and proposes the space.	Receives a feed back that they need a space where team can sit together on a specific floor. As the other team members are already sitting there.	Admin looks for people who can be reallocated. Visits the floor to find more space to fit in more people Looks for space to reallocate people to other preferable bays. Adds extra in between seats to the existing bays for people with laptops.	Sends requests for reallocations. Adds the newly added seats in the system ready to be allocated in future. Holds the whole bay for the project by entering the go live date.
Thinking	The request has come from a higher authority to allocated space in a short period of time, so this needs to be done on priority	It's hard to find such large number empty seats in such a short period of time.	Will have to use this space with maximum empty space. How can I optimise it further	Need to personally visit the floor to ensure as many free seats as possible. Need to convince people to reallocate to other spaces	There is still some time for the Go live date and I have some temporary empty seats in between, maybe can be used if needed.
Feeling / emotions	TENSED	ANXIOUS	DETERMINED to provide a space soon	DETERMINED, ANXIOUS	RELIEVED
Opportunities	Easy way to search or filter out spaces that can has many empty seats	A top view of the floor to show empty spaces that can be used . Show bays which might get released in near future	Mark bays in different colours to show which groups of projects together	Ensure updated release dates from project to ensure better allocations . A way to show seats that are going to be available soon for allocations	Show spaces that are empty temporarily.

Defined Opportunities

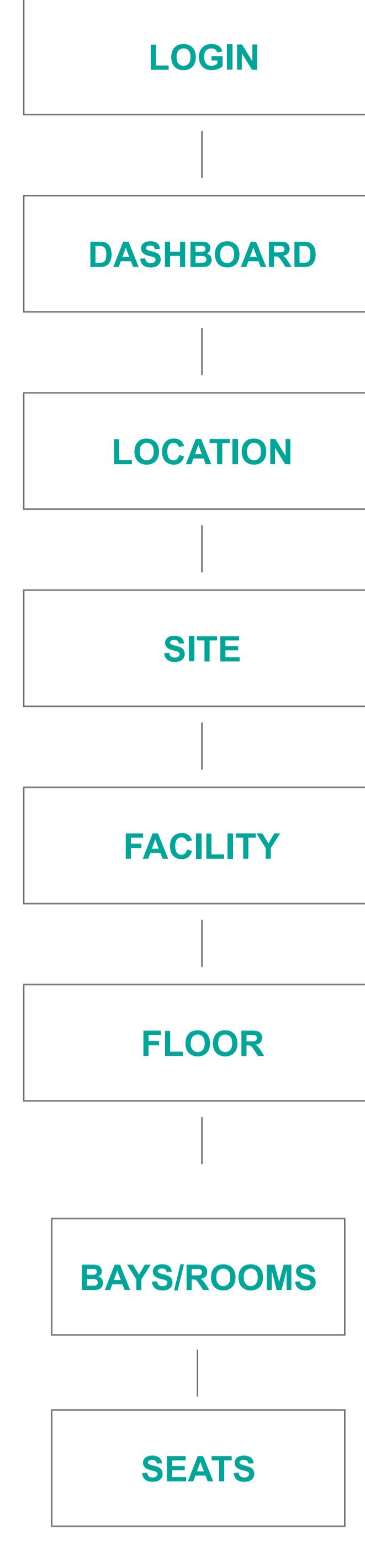
1. Consolidated view of the spaces.
2. Search with the help of keywords eg Project name.
3. Filters for types of seats, bays, dates, etc., like open spaces can be filtered for number of seats.
4. Easy way to identity spaces with nearby release date or temporary empty spaces.
5. Floor plan view.
6. Easy updation of new seats and bays.
7. Easy access on hand held devices

Defined Design Criteria

To come up with a web portal for CPI support to help manage allocation and updating the seats and bays along with sites, facilities and floors.

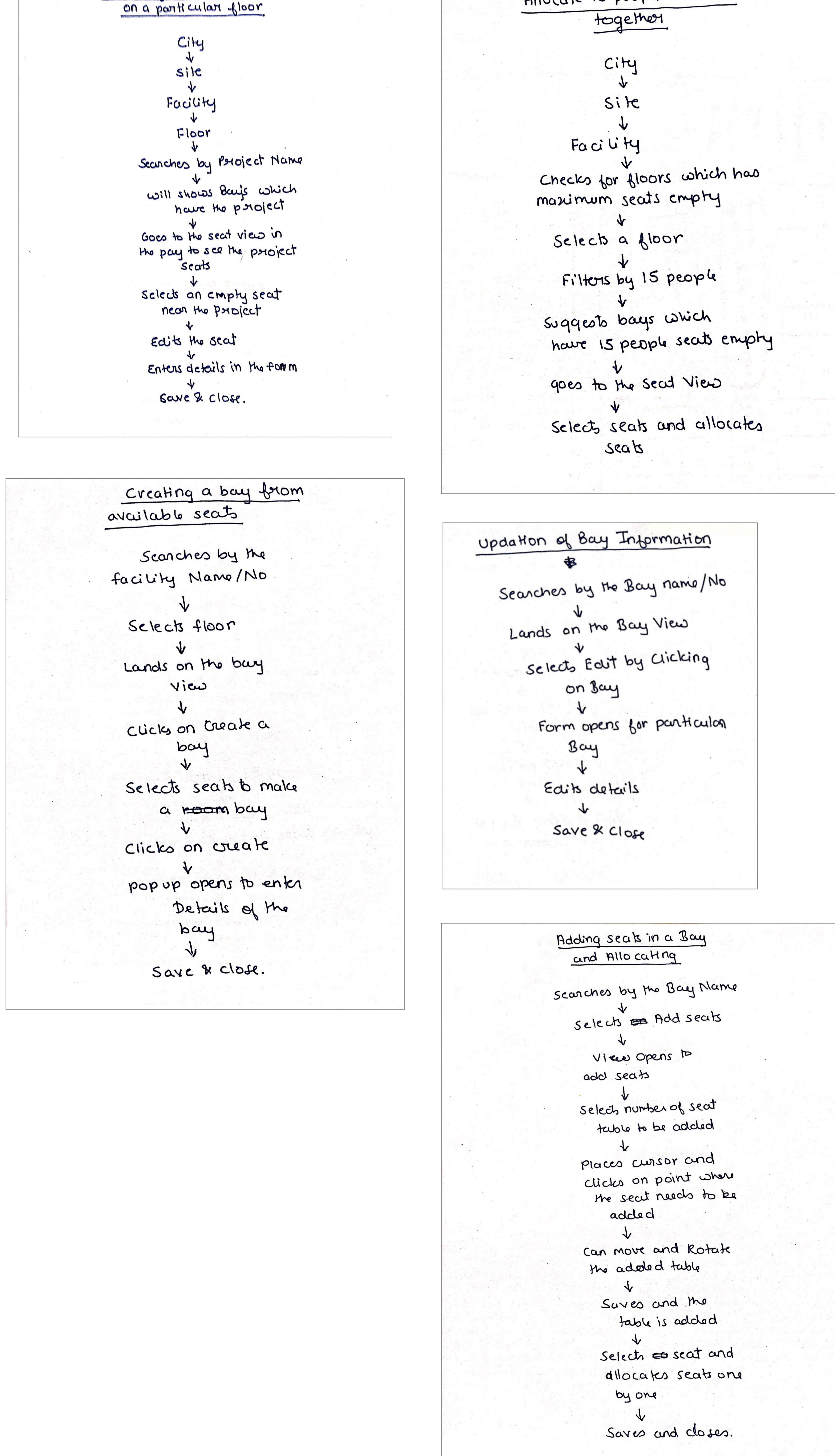
1. Reduce number of clicks
2. Provide a consolidated floor view.
3. Easy and intuitive navigation.
4. Easily update new seats and bays.
5. Modern look and feel.
6. Responsive.

Navigation Flow



Task Flows

Task flows created around Seat/ Bay allocation and creation. They helped me understand the path the user will take in the application.

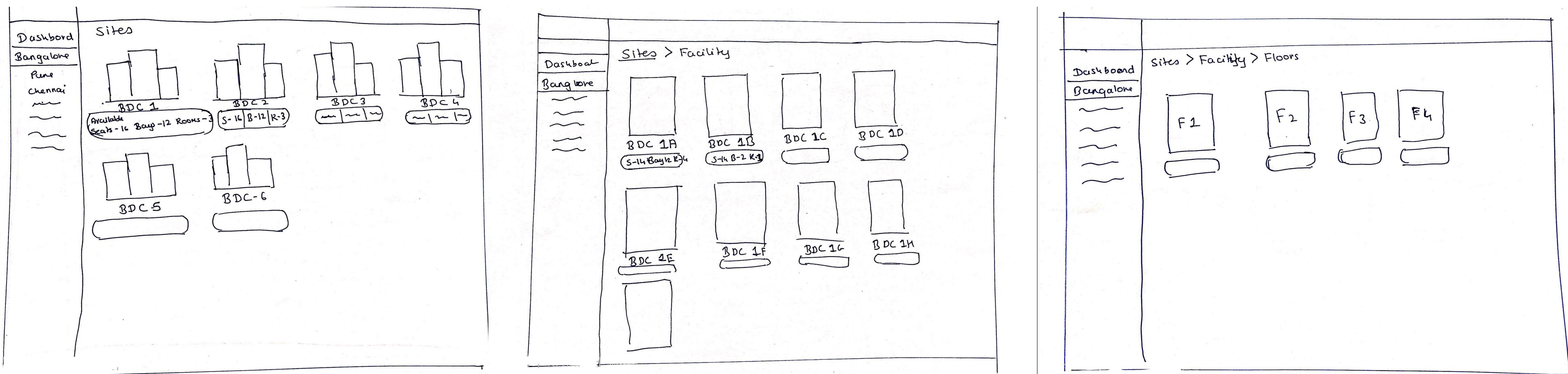


Design Concept

High fidelity wireframes were made of the administration web portal for the CPI Support team. As soon as the administrator logs in to the portal he lands on the Dashboard.

Navigation to reach any bay or seats view

Here India as a country will be selected by default. The primary navigation will show the list of all the cities that he would be administering. The Dashboard will show the user his tasks list and give the user an overview of important data across the allocated cities, which will help him take important decisions.



At every step the user will be shown details like the number of available seats, bays and rooms in that particular site, facility and building. This will help user take decisions on the go and is not dependent on the main seats view.

Bays and Rooms

After selecting the preferred facility and floor the user will land on the Bay view of that floor. Here he has an option to toggle between a list view of all the bays or a top view of the floor showing the bays. Here the user can filter by available seats, number of people looking for or for a particular date. User can also search by a project on the floor.

The image contains two side-by-side wireframes of a web application interface.

Left Wireframe (Bay/Rooms View):

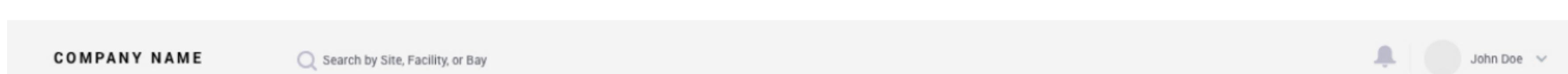
- Header:** COMPANY NAME, Search by Site, Facility, or Bay, John Doe.
- Left Sidebar:** Dashboard, Bangalore, Chennai, Pune, Hyderabad, Mumbai.
- Current Path:** Sites 7 > Facility A > Floor 5 > Bay/Rooms.
- Filter Bar:** Bays/Rooms, Seats, Filter, Search, Date, No. of people.
- Table:** Shows a list of bays with columns: Name, Description, Actual, Functional, Go Live, Release Date, Seats. Examples include B7C.09.06 (Project Name, Open, Open, 01/Oct/2013, 01/Oct/2013, 55), B7C.09.07 (Lorem Ipsum Text, Enclosed, Open, 15/Oct/2013, 15/Oct/2013, 13), etc.
- Buttons:** + Add Bays, pagination (1, 2, 3, 4, 5).

Right Wireframe (Bays/Seats View):

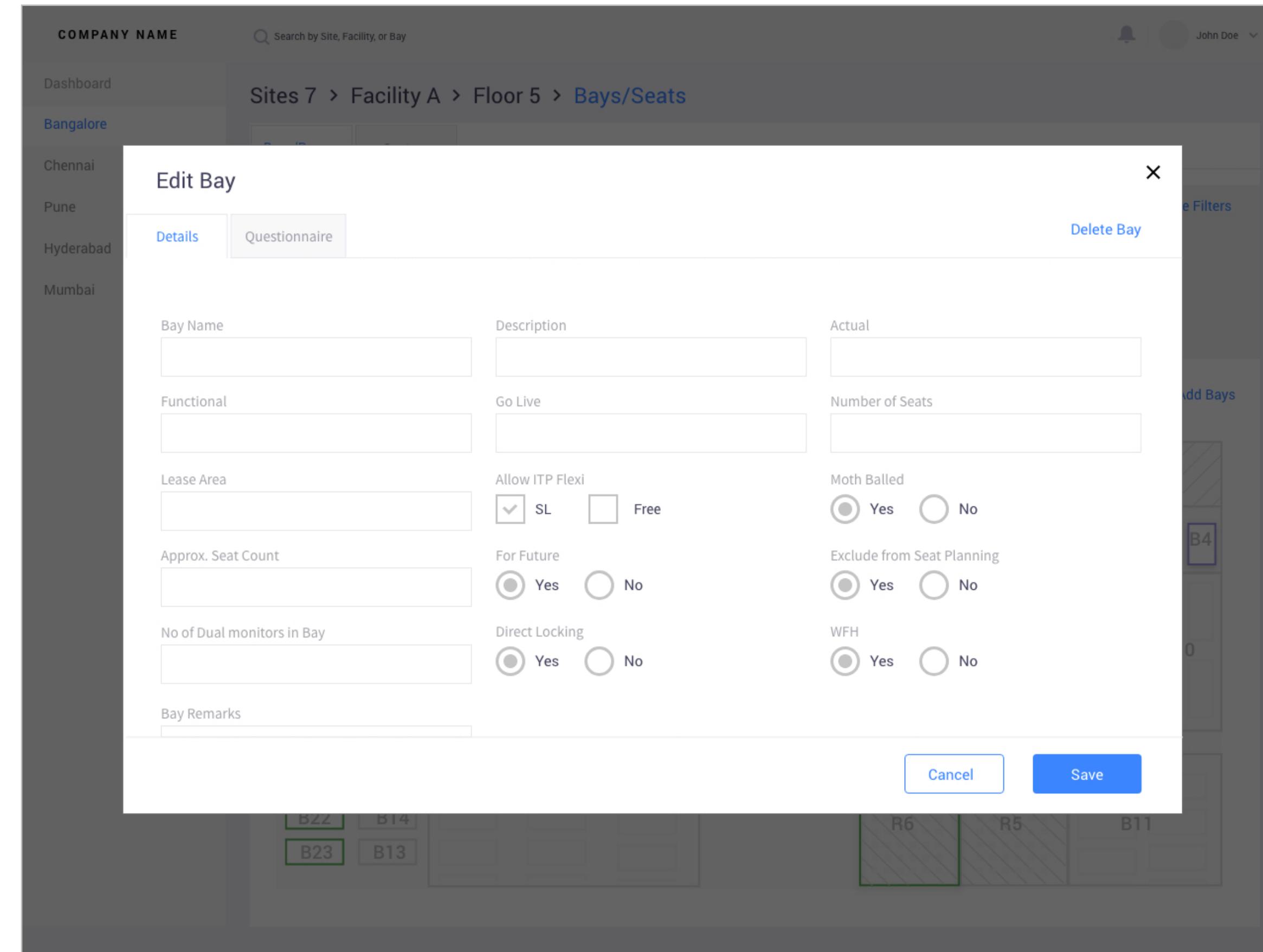
- Header:** COMPANY NAME, Search by Site, Facility, or Bay, John Doe.
- Left Sidebar:** Dashboard, Bangalore, Chennai, Pune, Hyderabad, Mumbai.
- Current Path:** Sites 7 > Facility A > Floor 5 > Bays/Seats.
- Filter Bar:** Bays/Rooms, Seats, Filter, Search, Date, No. of people.
- Table:** Shows a list of bays with columns: Name, Description, Actual, Functional, Go Live, Release Date, Seats. Examples include B7C.09.06 (Project Name, Open, Open, 01/Oct/2013, 01/Oct/2013, 55), B7C.09.07 (Lorem Ipsum Text, Enclosed, Open, 15/Oct/2013, 15/Oct/2013, 13), etc.
- Top View:** Shows a grid of bays labeled R1, R2, R3, R4, B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B20, B21, B22, B23.
- Actions:** Edit, Delete, Seat View.
- Buttons:** + Add Bays, -, +.

Global Search

With the help of the global search, user can search with any keyword such as Bay number or facility number and can directly land in view of the facility or bay. This way user can skip the steps of selecting from the city to sites to facility etc.



On click of any bay the user gets three options to edit, delete or see the Seats view of that floor. On the click of edit user is taken to the form regarding the details of that particular bay. User can edit and save the details.

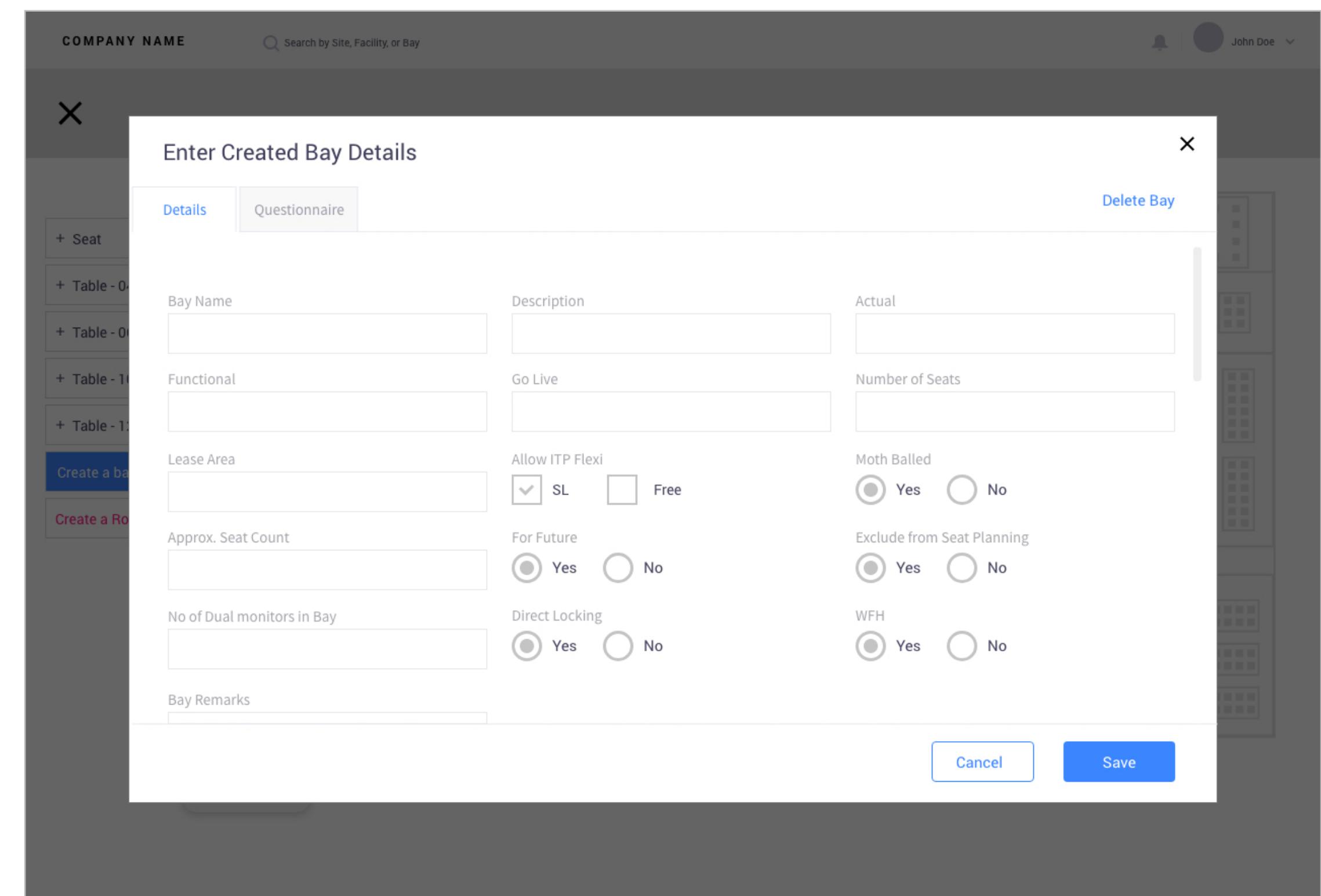
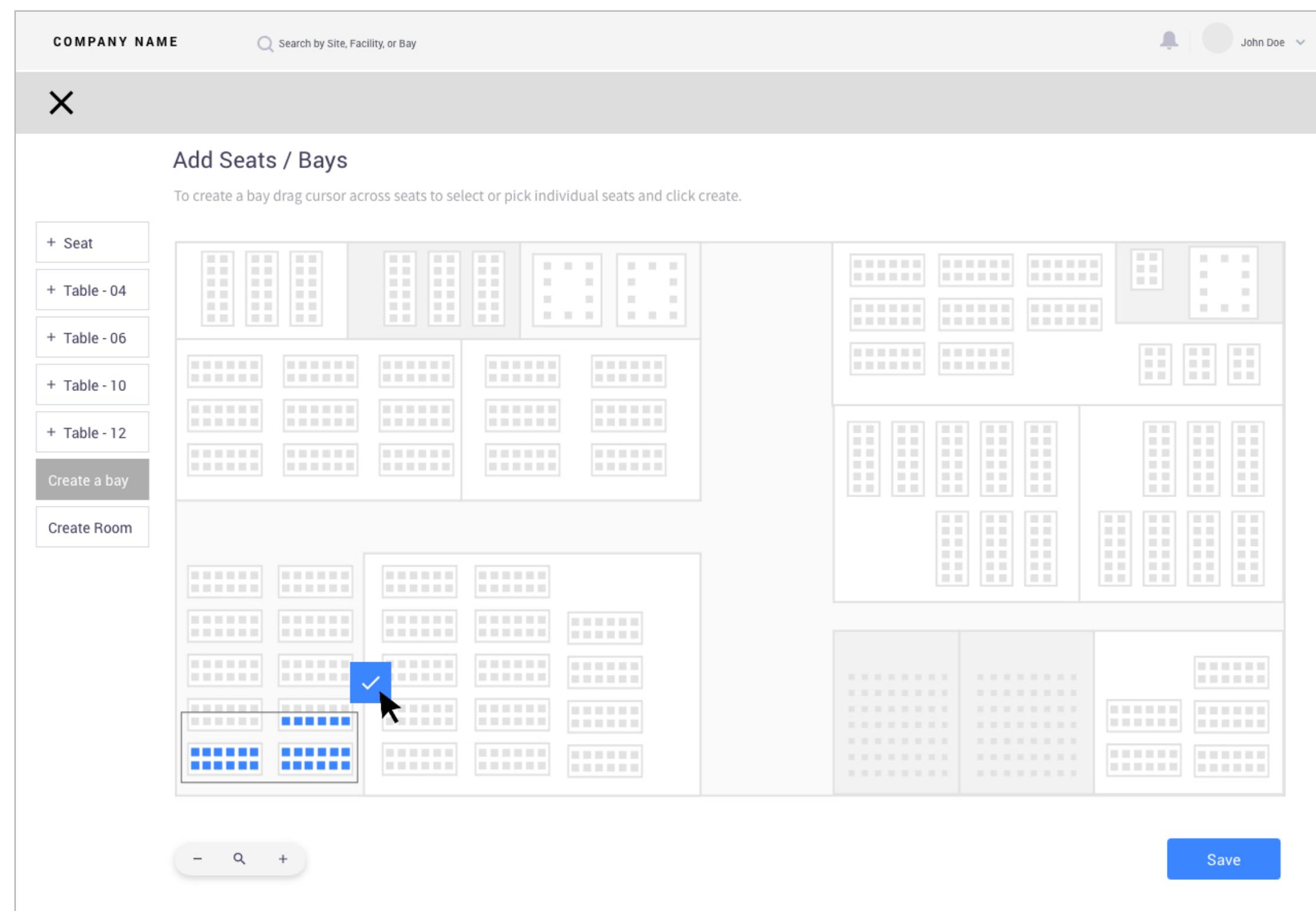


Add Bays

On click of the Add Bays option user is taken to the map view of the floor. Here he has options to add seats and Create Bays and Rooms using the existing or newly added seats. Here user can freely zoom into any part of the map view.

User can add seats by selecting the type and click the cursor to place the seat at any point.

On the selection of create bay, user can drag cursor to select multiple seats or select individual seats to create a Bay.



On the click of the button user will be navigated to a popover to add the details of the created bay and save the details.

Seats

By selecting Seats tabs user can go to the Seats view of the floor bay wise. To edit the seats user needs to select the bay which opens Seat view for that bay. Here by clicking on any seat user can edit the seat details.

The interface consists of two main sections. The left section is a 'Bays/Rooms' view showing a grid of bays with different seating configurations. One bay in the bottom-left corner is highlighted with a green border. The right section is a detailed 'Bay/Seats' view for Bay 13, showing a grid of individual seats. A cursor is hovering over one of the seats in the grid.

Adding Seats

On selecting the type of seat user can directly place the seat anywhere in the Bay. Any seat will have its own padding which ensure no overlapping or placing two seats very close to each other.

Here after placing user can choose to rotate the seat. On clicking of the seat will be placed and user can go ahead and allocate the seat.

The dialog box is titled 'Add Seats / Bays'. It features a sidebar on the left with options for adding different types of seating and tables. The '+ Table - 12' option is currently selected. The main area shows a grid of bays. One bay in the bottom-right corner is highlighted with a blue border around its seating arrangement. A cursor is hovering over this blue-bordered bay. In the top right corner of the blue-bordered bay, there is a circular rotation icon with a checkmark inside, indicating that the seat has been placed and can be rotated.

Tablet View

Sites 7 > Facility A > Floor 5 > Bay/Seats

Bays/Rooms Seats

Filter

Search Date No. of people

Available Temporarily available (For today) Available soon (A months time)

Open Enclosed Secure

More Filters

Search by Site, Facility, or Bay

More Filters

+ Add Bays

R1 R2 R3 R7

B1 B2 B3 B4 B5 B6 B7

B18 B17 B19 B20 B16 B21 B15 B22 B14 B23

B7C.09.09 B7C.09.10

R6 R5 B11

- Q +

Mobile view

Sites 7 > Facility A > Floor 5 > Bay/Seats

Bays/Rooms Seats

Filter

Search Date No. of people

Available Temporary Available soon

Open Enclosed Secure

More Filters

Search by Site, Facility, or Bay

More Filters

+ Add Bays

R1 R2 R3 R7

B1 B2 B3 B4 B5 B6 B7

B18 B17 B19 B20 B16 B21 B15 B22 B14 B23

B7C.09.09 B7C.09.10

R6 R5 B11

Filter

+ Add Bays

R1 R2 R3 R7

B1 B2 B3 B4 B5 B6 B7

B18 B17 B19 B20 B16 B21 B15 B22 B14 B23

B7C.09.07

R6 R5 B11

B3 B4 B5 B6 B7 B8 B9 B10

B7C.09.09 B7C.09.10

Thank You