



Optimize Healthcare Enterprise Capacity Planning with **SAP Analytics Cloud**

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SAP Garage, October 2021

Agenda

Human-Centered Innovation and Design

Application Realization Diagram (ARD)

Discovery Center Mission

Dashboard Walkthrough

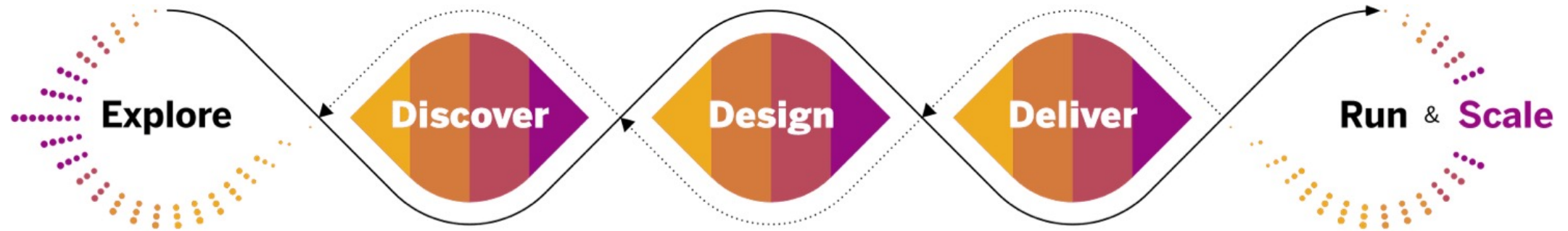
Q&A



Human-Centered Innovation and Design



SAP's Human-centered Approach To Innovation (HCAI)



Scale with Architecture Thinking

Start with Design Thinking

Explore innovation opportunities and tie them to strategic business goals.

Discover and gain a deep understanding of the needs and opportunities of customers and their end users

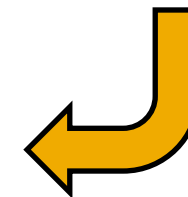
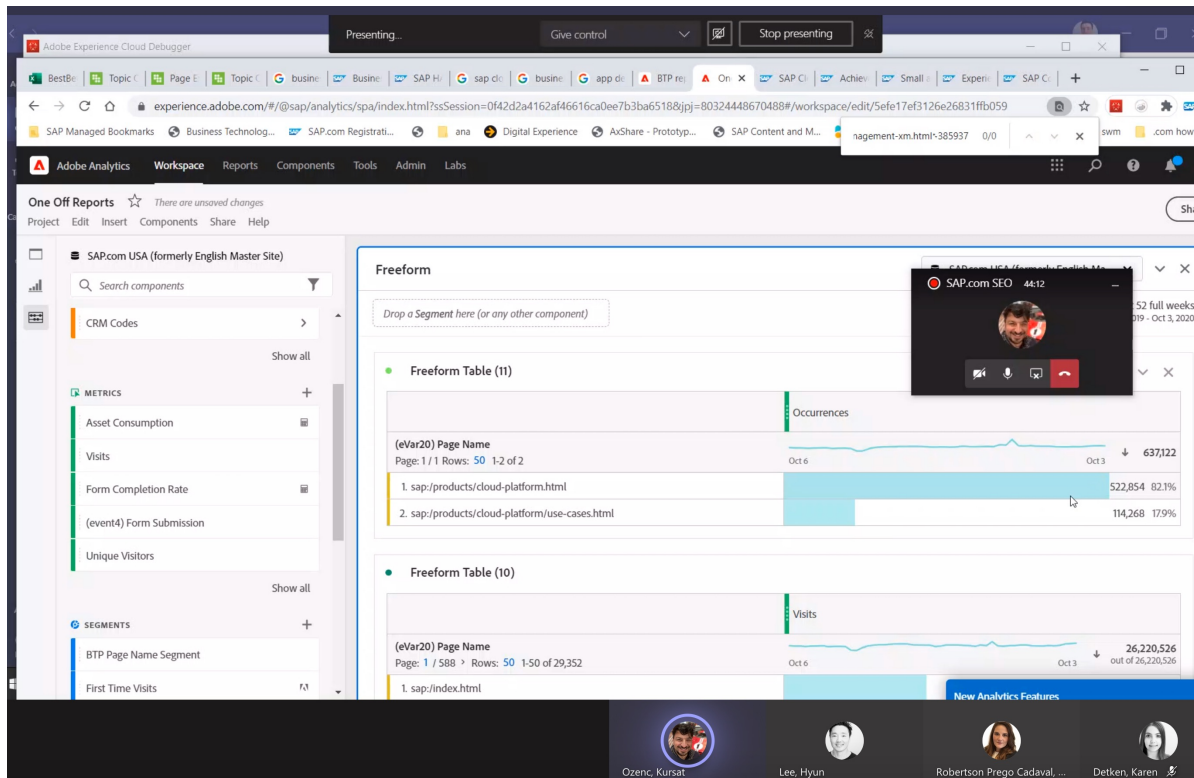
Design and create a prototype of the solution and define the enterprise architecture components

Deliver the business and technical solutions for productive use in your enterprise architecture landscape

Run and scale the solution, and deploy across the company

User Research

The purpose of User Research is to discover the real end user behavior, their needs, frustrations and expectations.



From in-person
to remote

COVID User Research Challenges

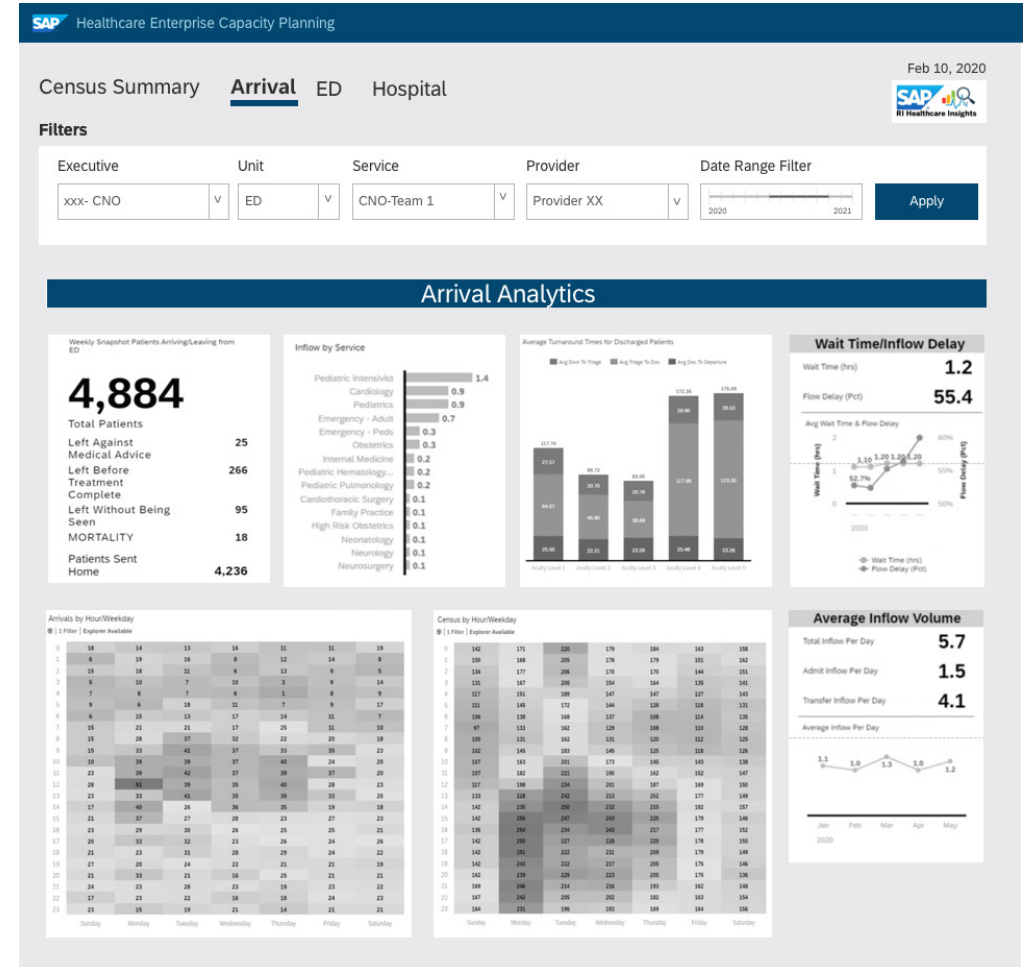
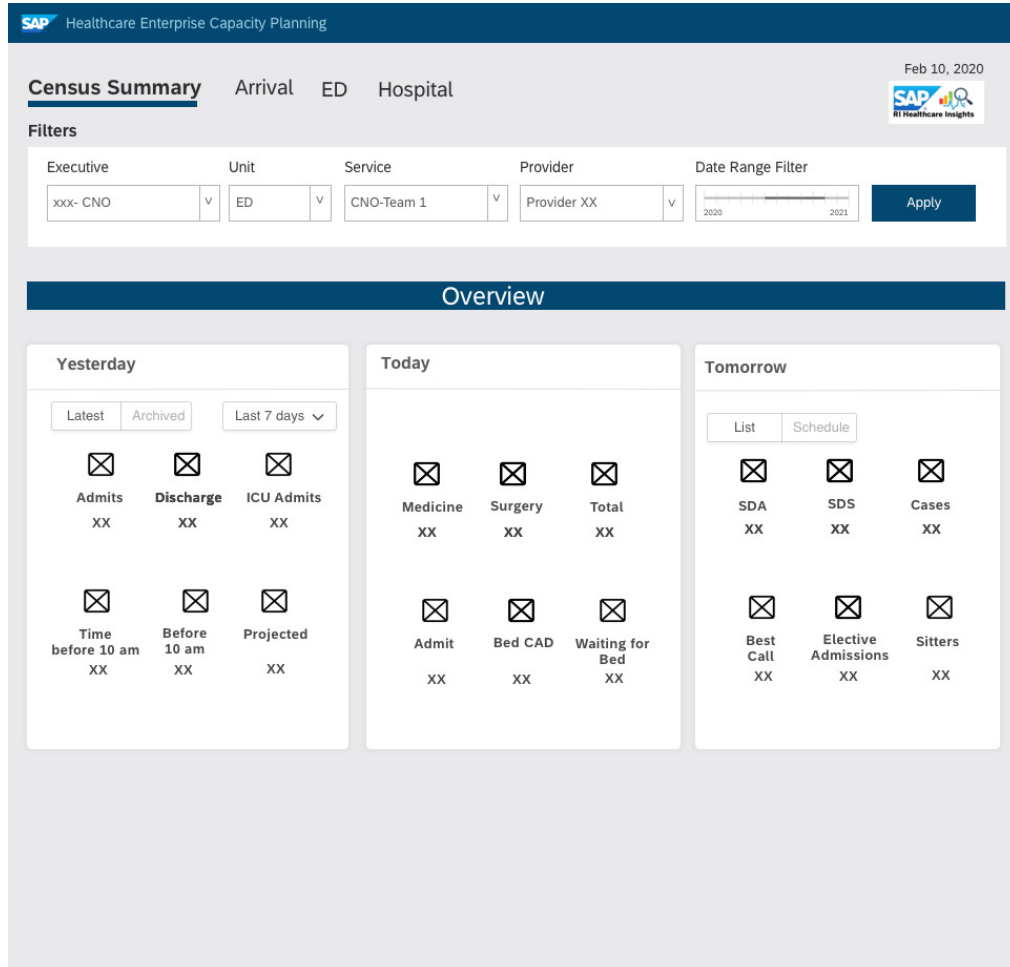
- Hospital in crisis mode due to COVID.
Result → No access to end users

Next best alternative: Proxies

- Interviewed SAP Partners who work in the healthcare space.
- Interviewed Healthcare IBU Experts



Early Design Exploration: Low Fidelity Designs



Stakeholder and Partner Feedback

- Good content, but
 - Persona not clear
 - Designs don't match stories
 - May not be able to get data for some charts

Census Summary Arrival ED Hospital

Filters

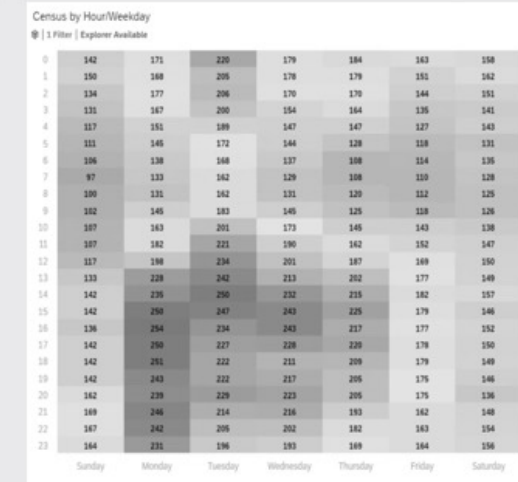
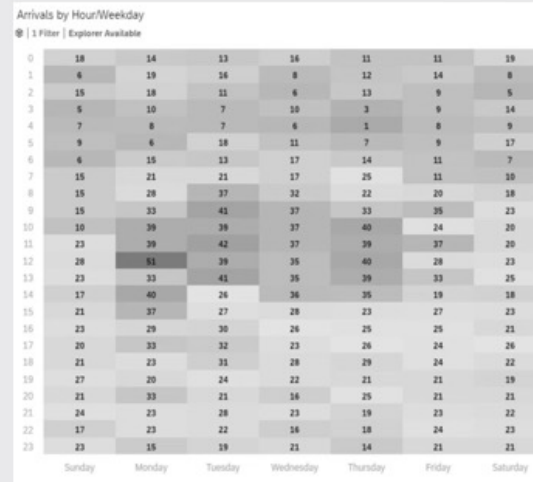
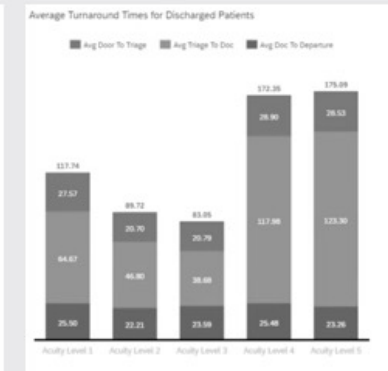
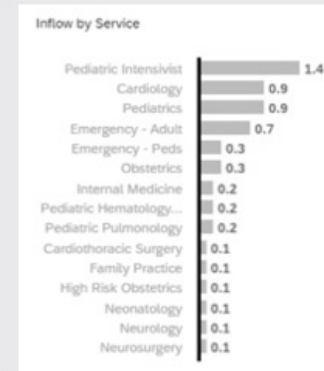
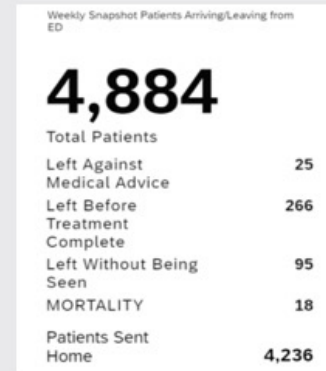
Executive Unit Service Provider Date Range Filter

xxx- CNO v ED v CNO-Team 1 v Provider XX v

2020 2021

Apply

Arrival Analytics

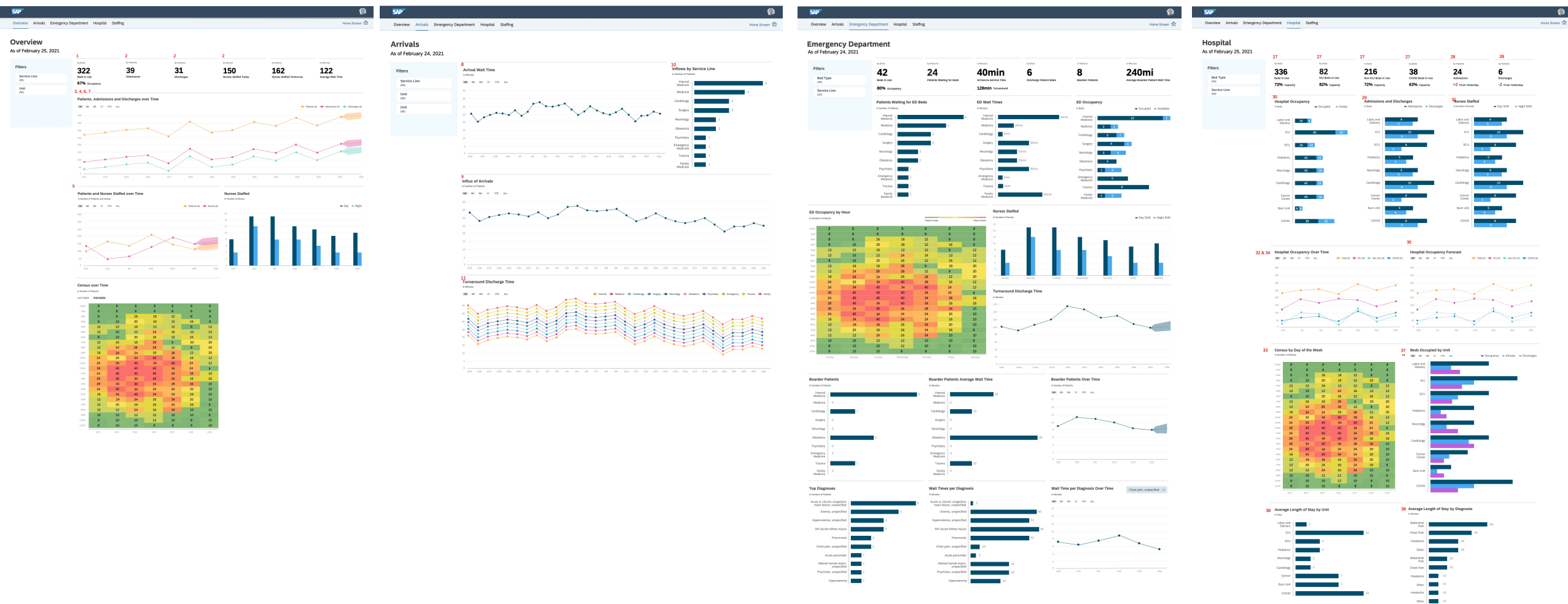


Persona & User Stories

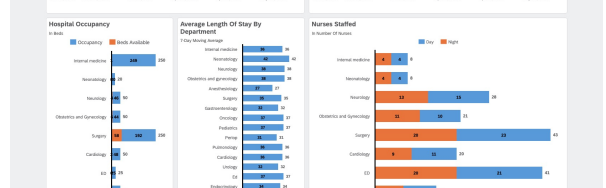
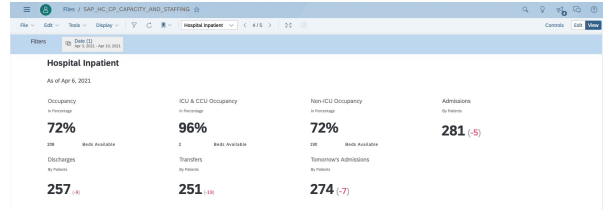
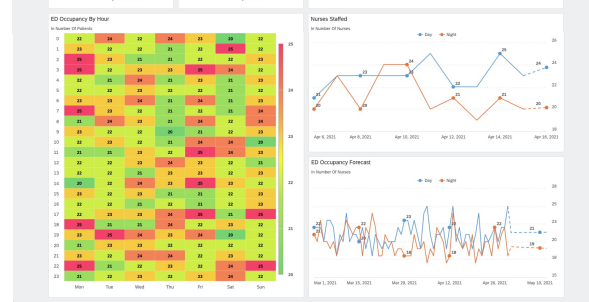
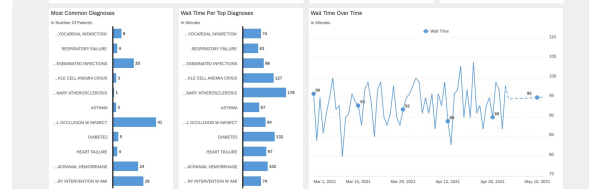
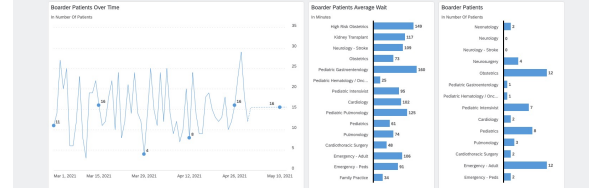
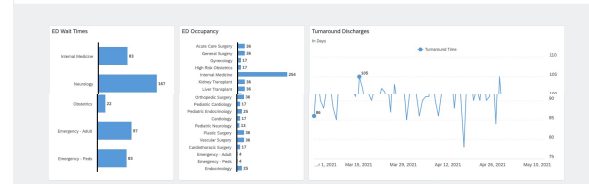
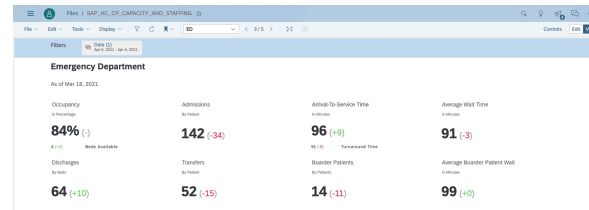
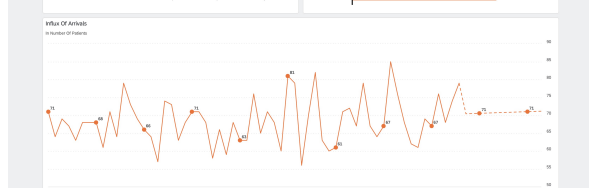
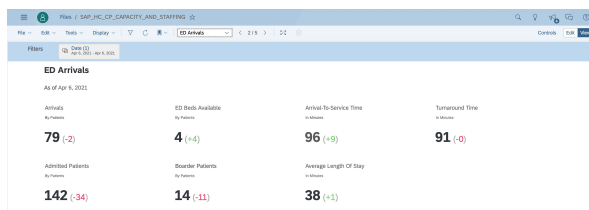
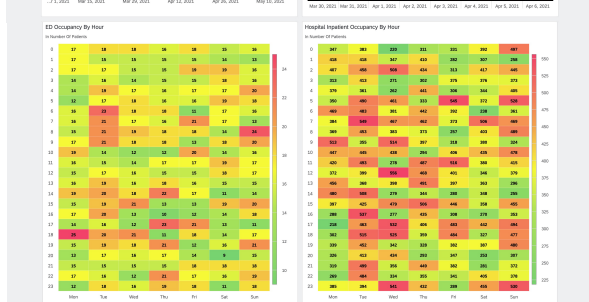
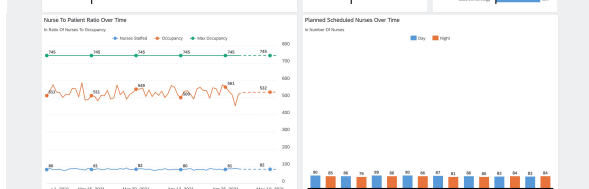
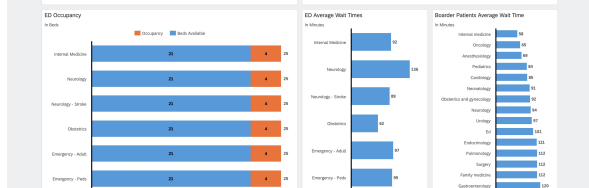
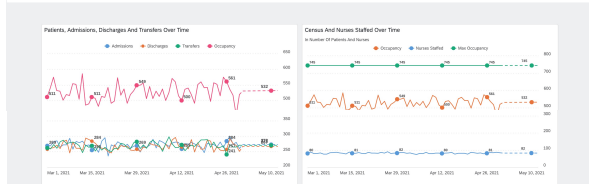
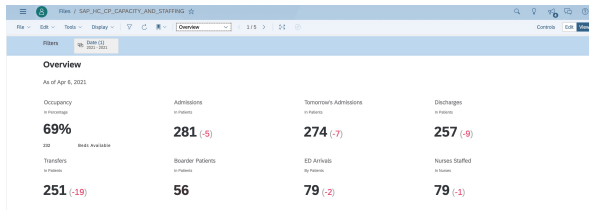


Capacity Planning User Stories			
Phase I			
ID	As a [type of user]	I want to [perform some task]	so that I can {achieve some goal}
Overview			
1	Capacity Planner (CP)	get an overview of the current total patients (beds) in the hospital (census)	know how much of total capacity of the hospital is being used
2	CP	get an overview of the Nurses staffed, Admissions, Discharges today	determine if today's staffing levels are sufficient for current patients, admissions and discharges
3	CP	see predictions for tomorrows total patients in the hospital (census)	determine tomorrows predicted census
4	CP	see predictions for the Admissions & Discharges tomorrow	determine tomorrows predicted total census including expected admissions and discharges
5	CP	see plan for Nurses staffed tomorrow	determine if tomorrows staffing levels are sufficient for predicted patients, admissions and discharges
6	CP	know how the current total number of patients (bed) in the hospital compared to yesterday's number	understand if census is up or down from the previous day
7	CP	know how the current total number of Nurses Staffed, Admissions, & Discharges compared to yesterday's number	understand if Nurses Staffed, Admissions and Discharges are up or down from the previous day
Arrivals			
8	CP	view the average arrival wait time over time	determine if ED intake is appropriately staffed to meet both quality of service and financial goals
9	CP	view the ED Arrivals per day of the week and hour	know when are the peak day of the week and times for ED arrivals to appropriately staff the ED intake.
10	CP	view the inflow by service line	understand the ED demand per Service Line
11	CP	view the average Turnaround Discharge by Service line by time	determine the ED discharges by Service Line by time (day, week, month..) to understand number of admitted vs discharged patients per Service Line
ED			

Design Exploration



Final High Fidelity Designs



Healthcare Enterprise Capacity Planning Highlights

Topic 1: Insight into Overall Capacity

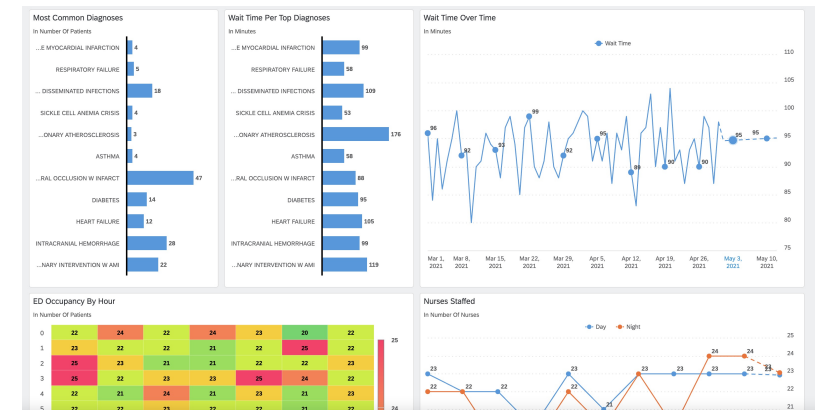
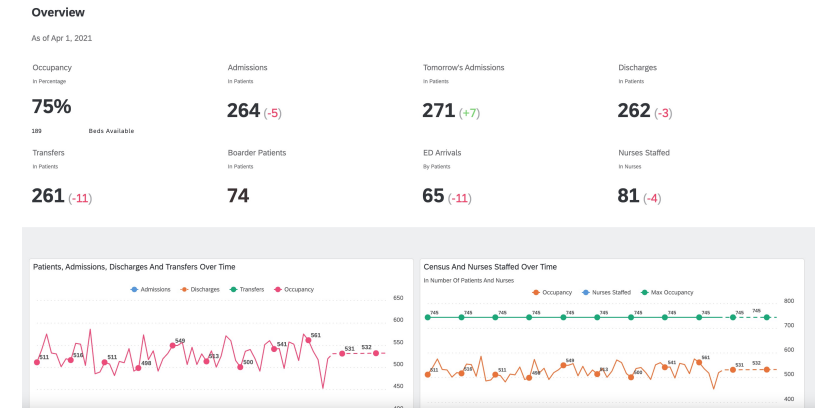
Gain insight into the overall capacity within the facility including admissions, discharges, transfers and ED arrivals

Topic 2: Drill-into Emergency Department and Critical Care

Monitor the arrivals, wait-time and occupancy within the emergency department and forecast needs based on predicted patient volumes

Topic 3: Staffing Insight

Track nurse staffing levels over time, and estimate needs in the future, based on expected occupancy



ARD and Discovery Center Mission

Optimize Healthcare Enterprise Capacity Planning with SAP Analytics Cloud

[Start Mission](#) [More !\[\]\(d66ff64371a51729ac8c1cdaa685ba6f_img.jpg\)](#)

[Overview](#) [Project Board](#) [Resources](#) [Support](#) [Related Missions](#)

Use Case

SAP Healthcare Enterprise Capacity Planning template offers healthcare providers an easy starting point for their analytic scenarios. The dashboards provides an overview into different units within a hospital including Admissions, Discharges, Total Beds, and Nurses Staffed to help healthcare leaders plan for the future.

Current Position - What is the challenge?

About Missions

Missions include best practices and step-by-step guidance for implementing use cases, with a well-established support from mission experts and SAP Community.

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