Case Studies

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NewYork Presbyterian Hospital (NYP)
SITA Lost & Found Property (SITA)

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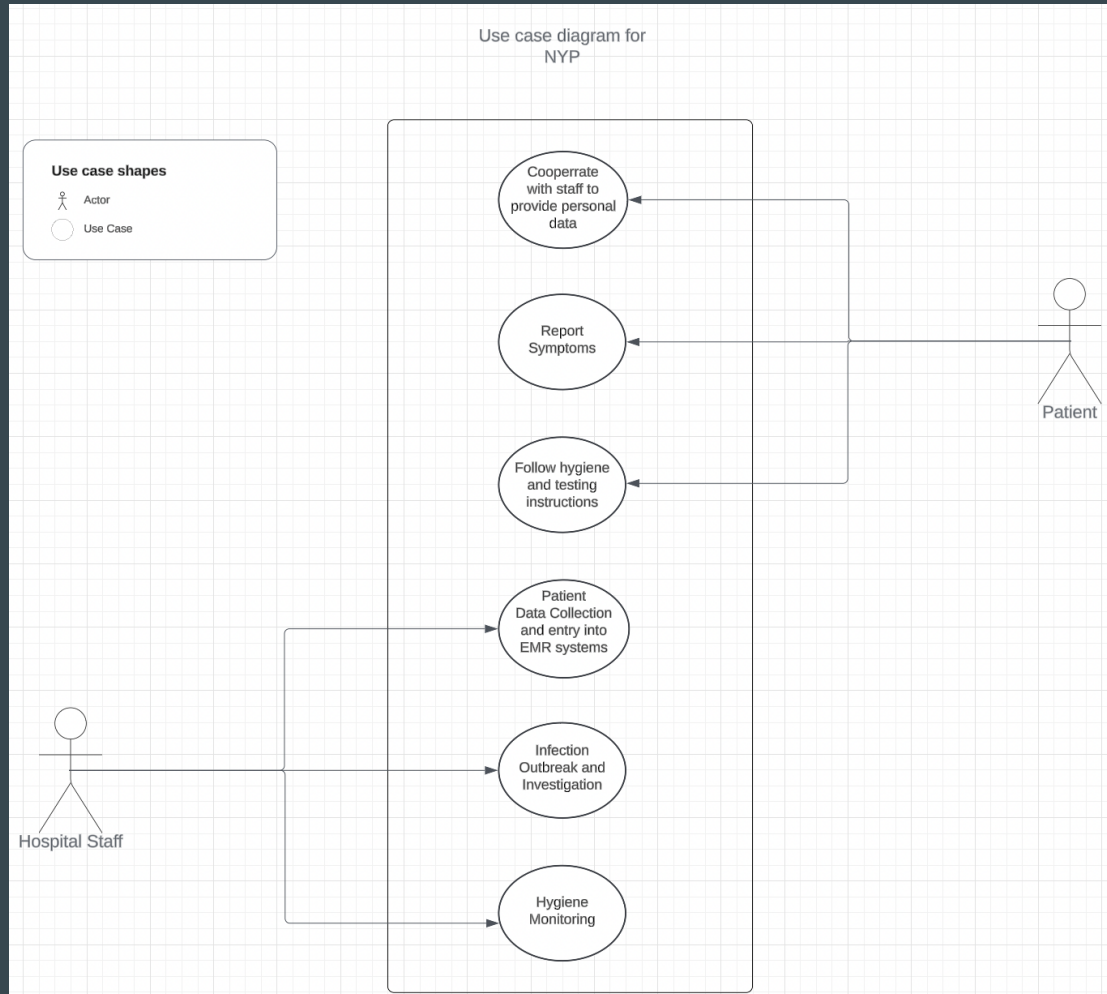- Why A Graph Database
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SITA Lost & Found Property

- The Problem
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# The Problem for NYP

Stopping the spread of infection.

Maps pinpoint where events happened, but not when. A time series captures the sequence of events, but not where they happened.

Use case diagram for NYP

Use case shapes

Actor

Use Case

Cooperrate with staff to provide personal data

Report Symptoms

Follow hygiene and testing instructions

Patient Data Collection and entry into EMR systems

Infection Outbreak and Investigation

Hygiene Monitoring

Patient

Hospital Staff

Why Graph Database?

Graph technology offers a flexible way to connect all the dimensions of an event: what, when and where it happened.

Using Neo4j to graph space and time, we can log every event that took place in the hospital – **from the time a patient was admitted to all of the tests they undergo and their release from the hospital.**

UML Conceptual Diagram -
NewYork Presbytarian Hospital
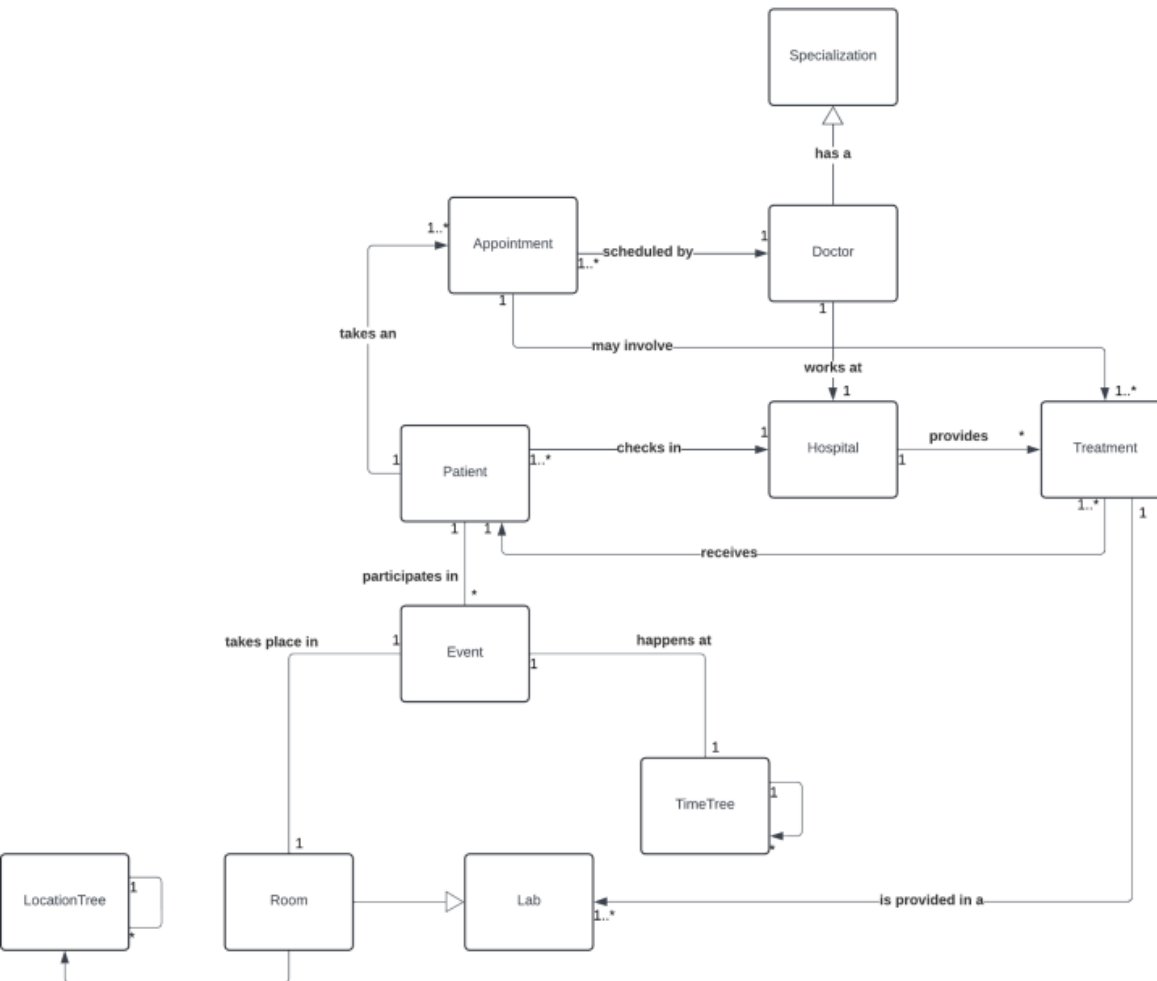
The Solution

Graphing space and time together.

An event entity that includes time, space, place and duration, with timestamps for the beginning and end of an event.

This graph could serve multiple use cases and ultimately position NYP's analytics team to analyze everything that happened in its facilities.

Conclusion

Traditional methods of mapping events fell short in capturing both the spatial and temporal dimensions of occurrences.

However, by leveraging graph technology, specifically Neo4j, NYP found a robust solution that seamlessly integrates space and time into its data model

The Problem For SITA

Tracking lost and found items on planes and in airports.

Airline passengers lose millions of items every year that can cost up to $95 per item.
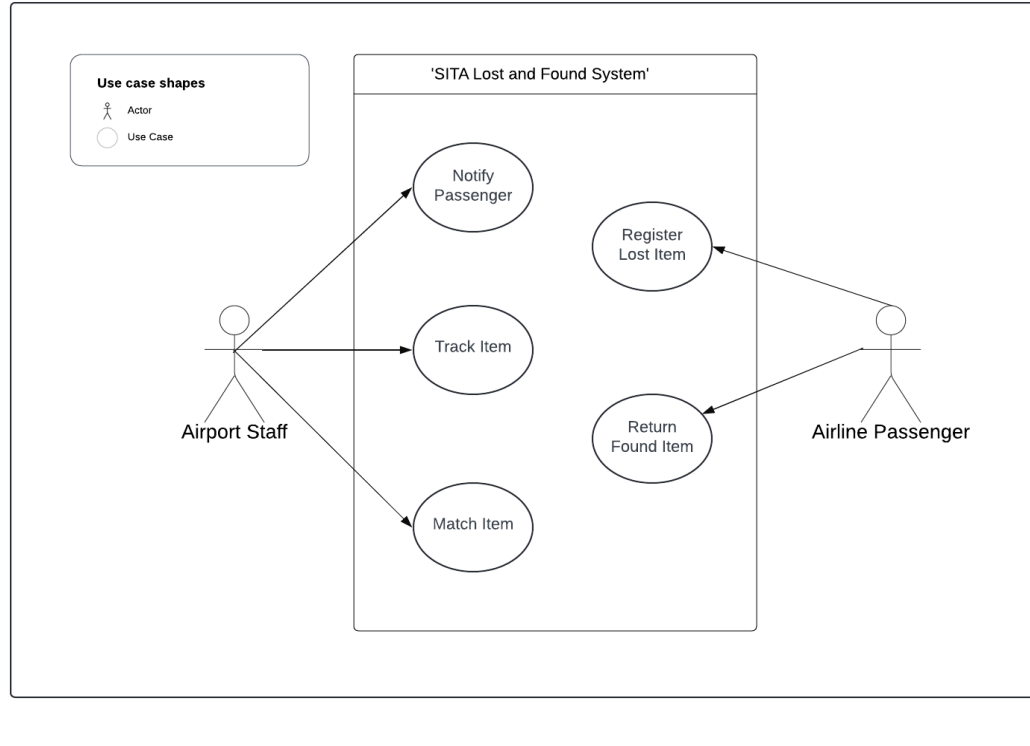
Why Graph Database?

Matching such large numbers of lost items with the descriptions made by passengers is incredibly demanding computationally and wouldn't be possible with a static, relational database.

We need a system needs to analyze and draw conclusions based on input about location, item specifications like size, shape and color.

UML Conceptual Diagram - SITA Lost & Found
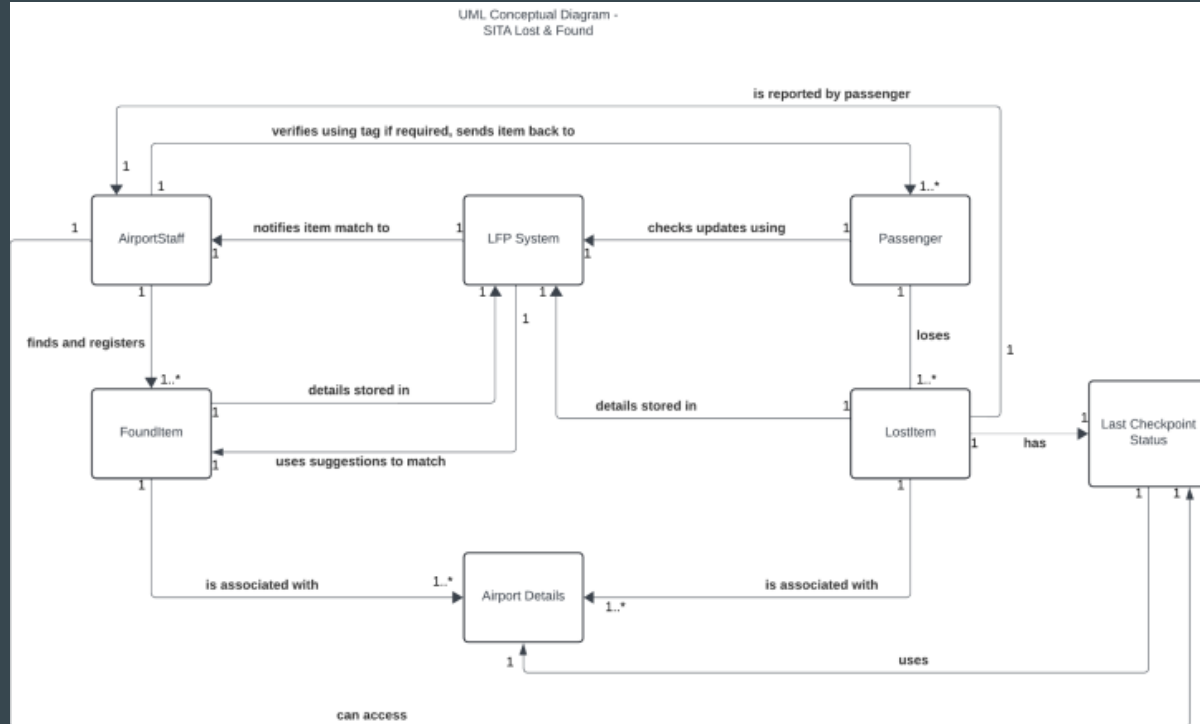
The Solution

Making the right connections using a Graph Database and the Lost and Found Property (LFP).

It now only takes agents 30 seconds to register a found item and a minute to complete a full report. Passengers can access the system from any location 24/7 via a simple web portal to report, pay for, and organize repatriation from any device connected to the internet.

Conclusion

By making the right connections and leveraging graph technology, SITA has demonstrated how innovative solutions can drive efficiency, accuracy, and customer satisfaction in the aviation industry, setting a new standard for lost and found management systems worldwide.

THANK YOU