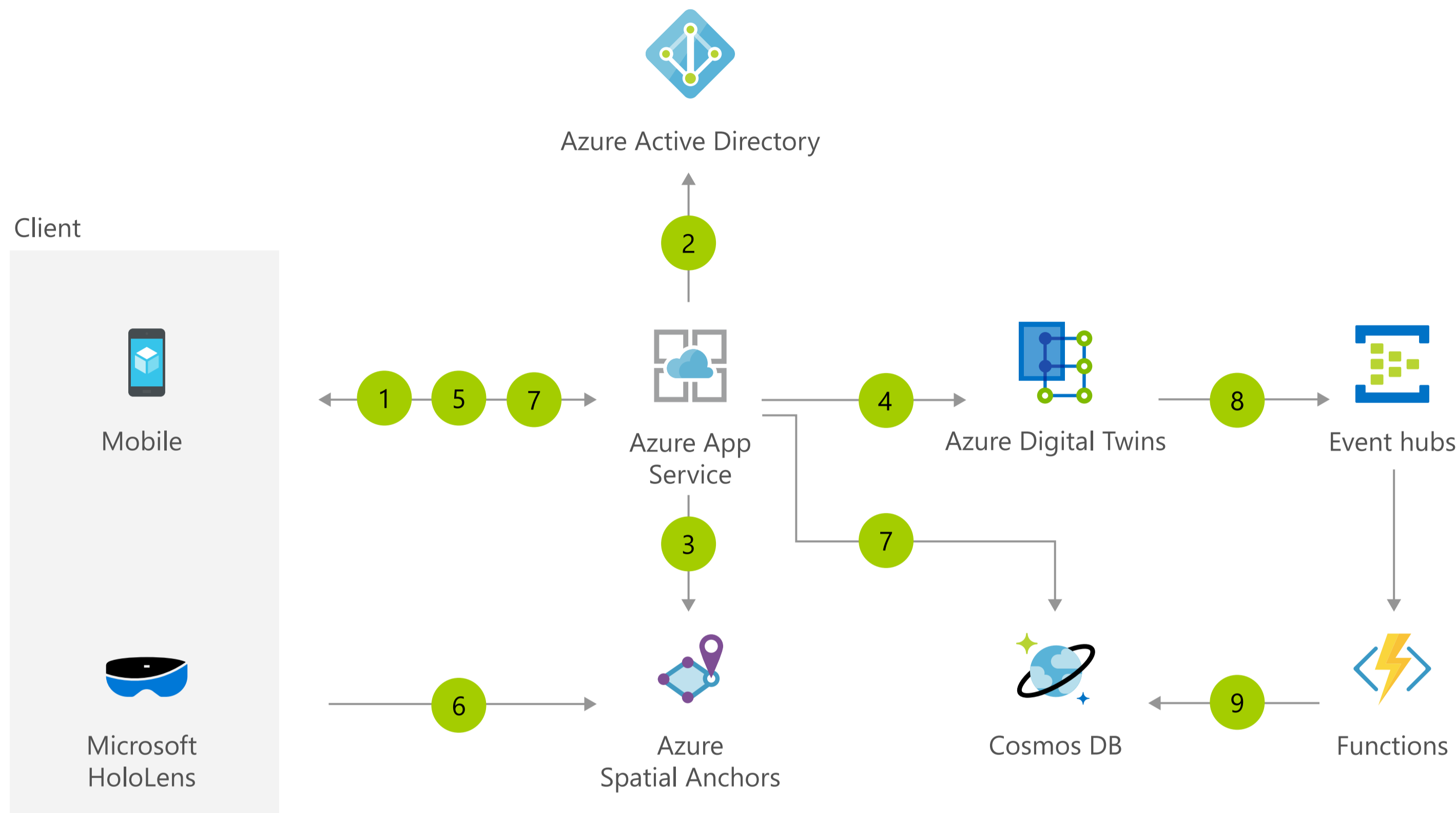


Facilities Management










Architecture overview

Create a smart space solution leveraging mixed reality and IoT. Using Spatial Anchors and Digital Twins, coordinate space, infrastructure, people and organizations with real-time data modeled virtually, or in the context of your environment. And with our SmartHotel360 reference sample, build open, scalable, and intelligent cross-platform apps with a reliable Azure backend.

- 1 Client authenticates to the facilities management web service, and specifies the name of the area where it's located
- 2 The web service authenticates itself to AAD.
- 3 The AAD token is then sent to the Azure Spatial Anchors service to retrieve an access token for the client to later use.
- 4 The web service retrieves information about the sensors present in the area specified by the client, and returns sensor IDs as well as the anchor IDs they correspond to in the Azure Spatial Anchors service.
- 5 The Azure Spatial Anchors authorization token is returned to the client, alongside the anchor IDs of the sensors and additional metadata required by the client application.
- 6 The client completes a visual scan of the environment, and retrieves its position in the area; using the nearby API of Azure Spatial Anchors service, it retrieves the position of all nearby anchors
- 7 The client requests sensor data and controls to be displayed as hologram in the space, where the sensors are located, making it easy for the operator to detect and fix any issues. The data is fetched by the app's web service from its Cosmos DB storage
- 8 When sensor data is updated, Azure Digital Twins pushes it to Events Hub.
- 9 An Azure function uses an event hub trigger to process the change and update data in Cosmos DB as needed.

Azure products used in this solution

-  Azure Active Directory
-  Azure Digital Twins
-  Azure App Service
-  Cosmos DB
-  Azure Functions
-  Event Hubs
-  Azure Spatial Anchors