Assignment 5 – Application Architecture

Design the target application architecture of your transformation initiative. Choose an adequate viewpoint from ArchiMate. At the very least, you need to use elements such as application component and application service.

Furthermore, you need to identify all relevant data objects that are accessed by your application components.

Make sure that your application architecture aligns with the business architecture of the previous assignment.

Before you begin with this modelling task, define and discuss a suitable viewpoint for the task at hand.

Hint: Check TOGAF (Phase C Information Systems Architectures,

<https://pubs.opengroup.org/architecture/togaf91-doc/arch/chap09.html>) to better understand the requirements in this phase of your EA challenge.

Obviously, the ski resort needs to define the application architecture that serves the planned “Tracking Tool”. The main challenge here, is to define application components that are required to run the app and data objects required to provide the intended services, namely:

* tracking of group members
* provision of route suggestions
* emergency notifications
* suggesting and agreeing on the meeting points

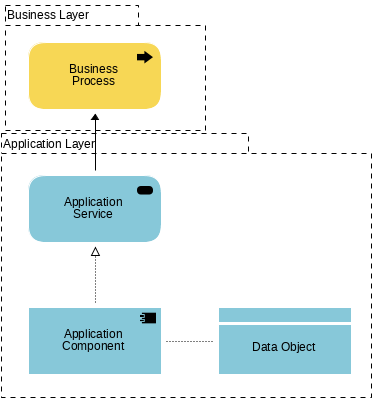


Figure 1 – A viewpoint for mapping the application architecture

**Figure 1** shows the viewpoint that is going to be used for the above-mentioned scenario. Data objects are connected to the application component with the relation “access”, which can either be of type “read”, “write” or both. Application components provide application services. In case of the tracking app, application services such as the bespoken “track group members”, “raise emergency notifications” and “agree on meeting point” are offered.

The new tracking app would ideally be embedded into the existing application architecture of the ski resort. Not all the data that is required for running the app, and thus for providing its intended services comes from the app itself. Many of the data objects – i.e. those that represent data structured for automated processing – may be held in other application components of the ski resort application architecture.

Examples for application components that are already a part of the existing application landscape are:

* salesforce, the ski resort application for maintaining customer data,
* MailChimp, the application for email marketing,
* SkiMap, the application of the ski resort that provides maps of its slopes and other important location information,
* emergency LAN, web-based, mobile friendly emergency management system that provides tools for shared situational awareness, workflow-based information management, and real-time communication,
* skiPOS, the electronic point-of-sale system of the ski resort.

The application component

* “Tracking App” is the smart phone app used by the guests and
* “SensorIT” is the central application supporting communication and configuration to the actual collection of the tracking data.
* SkiManager is the application component that provides the business logic and information to support the application services that are offered by the Tracking App.

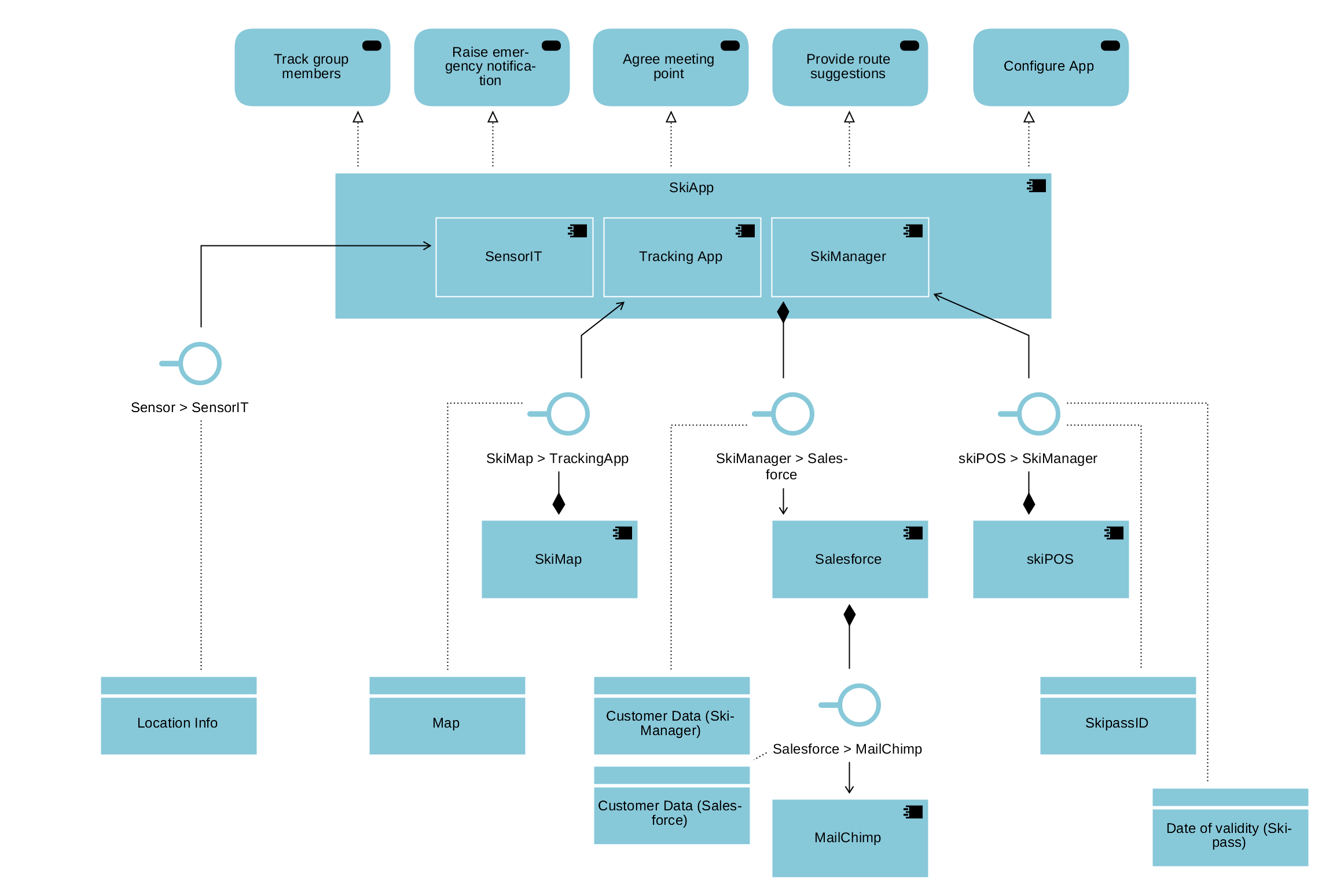


Figure 2 The application architecture of the tracking app

In order to demonstrate the alignment with the business architecture, the viewpoint depicted in **Figure 2** is used. It puts the focus on the intersection of business and application architectures. Business processes use the application services provided by the application components. Some of the application services are directly used by the customer.

The data objects maintained by the various applications and exchanged via application interfaces are condensed into business objects. For example, the physical data objects “Customer Data (Ski Manager)” and “Customer Data (Salesforce)” represent the conceptual business object “Customer”.

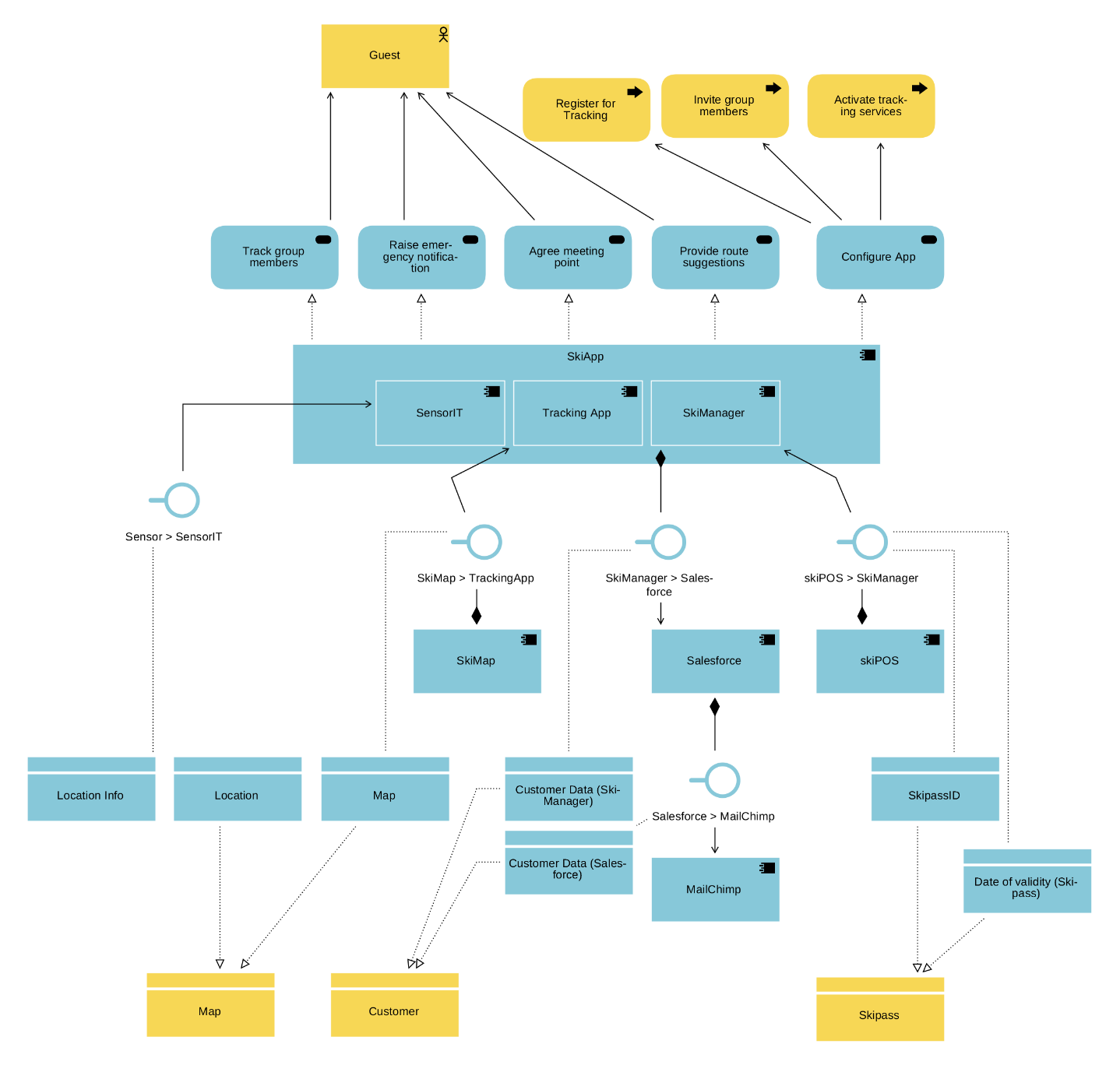


Figure 3 Alignment with the business architecture – A cross-layer viewpoint

In the next step, the technology architecture needs to be defined. The design of the technology architecture with its technology services and devices is discussed in the upcoming assignment.