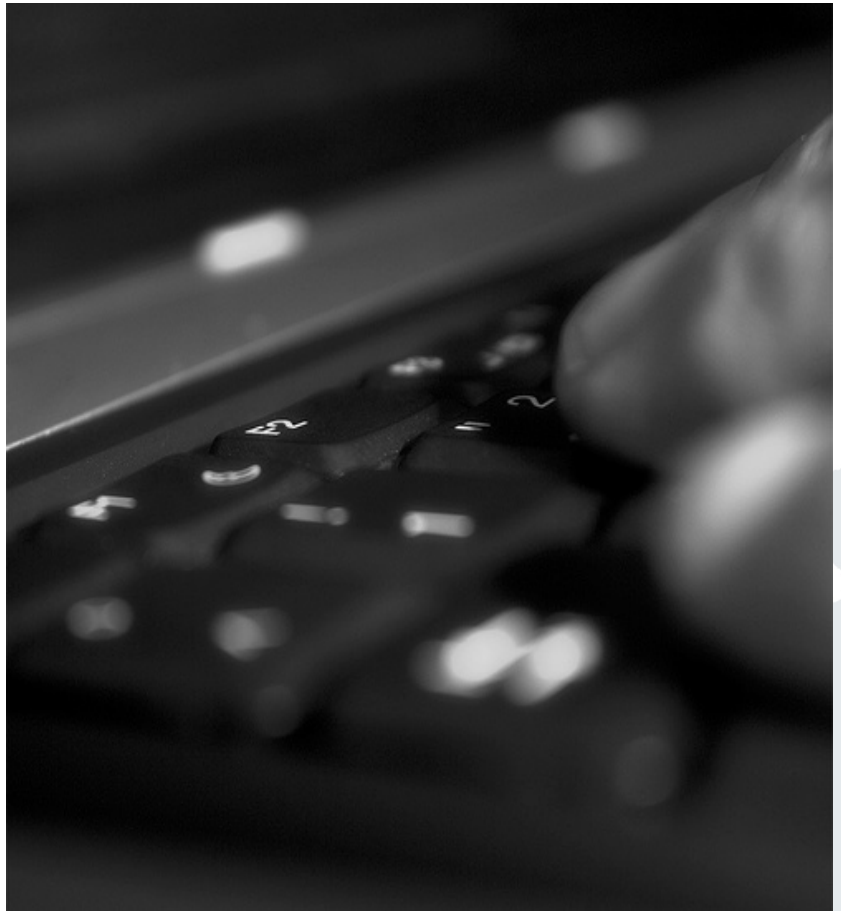mobile business

Mentorium 1
Business Informatics 2 (PWIN)

Course Organisation
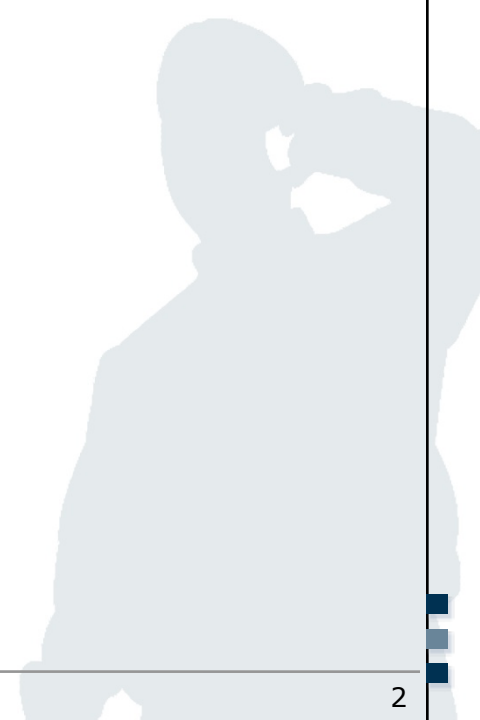## myPlace Scenario
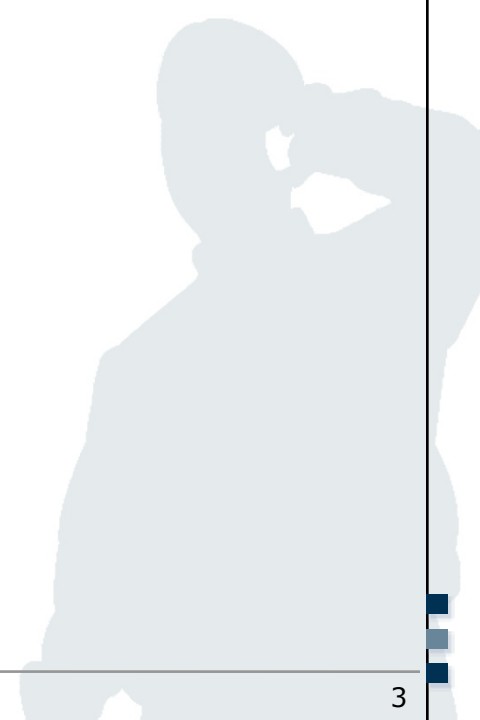## Information Systems

SS 2021

Peter Hamm
www.m-chair.de

Jenser (Flickr.com)

- Course Organisation

- myPlace – A mobile location-based service

- Information Systems

  - Information and Application Systems

  - Models and Meta-Models

  - Enterprise Modelling

Agenda

- **Course Organisation**

- myPlace – A mobile location-based service

- Information Systems

  - Information and Application Systems

 - Models and Meta-Models

  - Enterprise Modelling

For the Mentorium, there are 3 options:

- Option 1: Tuesday, 2pm (c.t.)
- Option 2: Thursdays, 10am (c.t.)
- Option 3: Thursdays, 2pm (c.t.)

- The aim of this Mentorium is to **practice and deepen** the contents of the *Business Informatics 2 (PWIN)* lecture based on a fictitious service for the mobile Internet.

- For this, fundamental concepts of the mobile service *myPlace* are going to be developed, presented and discussed within the six Mentorium sessions.

- Course Organisation

- myPlace – A mobile location-based service

- Information Systems

  - Information and Application Systems

  - Models and Meta-Models

  - Enterprise Modelling
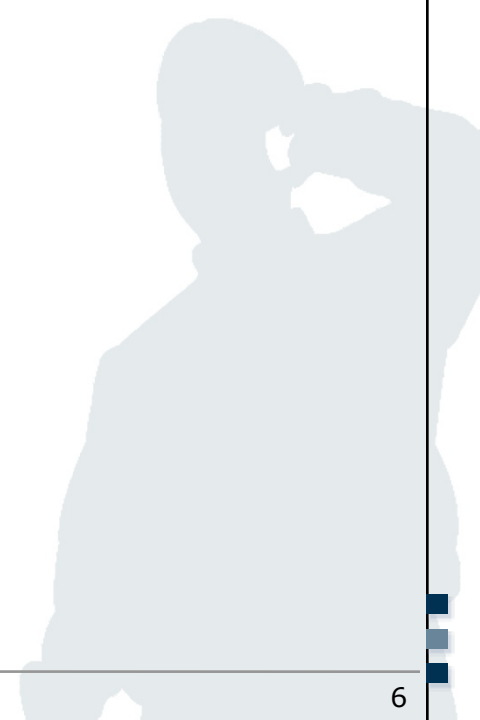
- *myPlace* service aims to enable users to search for and navigate to any **Point-of-Interest** (POI)

Features of myPlace service

- Users sign up for *myPlace* service using stationary online website

- *myPlace* service generates **user preference profile (UPP)**

- This profile contains e.g. user's gender, age, and personal interests (hobbies, favourite type of readings or movies, etc.)
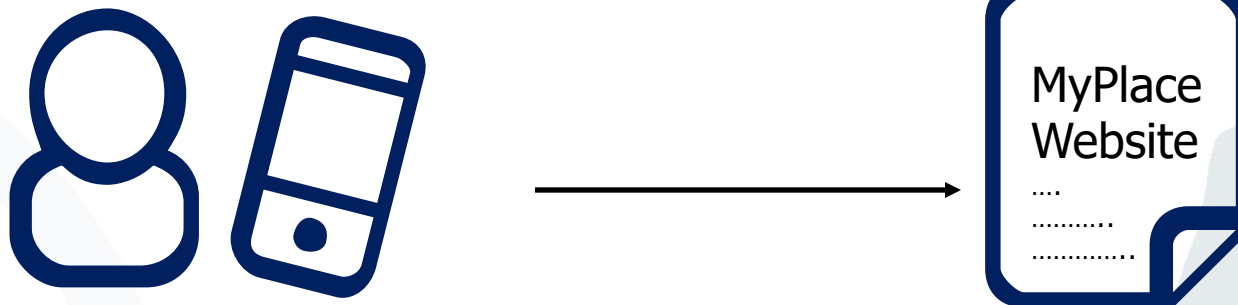
MyPlace
Website
....
....
....

Features of myPlace service

- When a user accesses the *myPlace* service, their mobile device is **identified** and automatically associated with the **corresponding user preference profile (UPP)**.

- **Current time** of use determined and…

- …(assuming the user's consent) the current **geographic location** is determined.

- All obtained information is aggregated to a **dynamic context-based user profile (DCUP)**
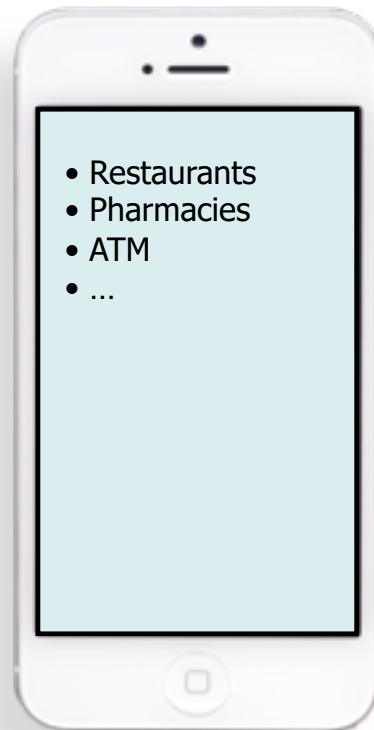

Location   Current time   User Preference Profile (UPP)

Dynamic Context-based User Profile (DCUP)

- When using *myPlace* service, user is presented with overview of **various POI categories** (restaurants, cinemas, etc.) or – alternatively - a text field for entering a **search query**

- Restaurants
- Pharmacies
- ATM
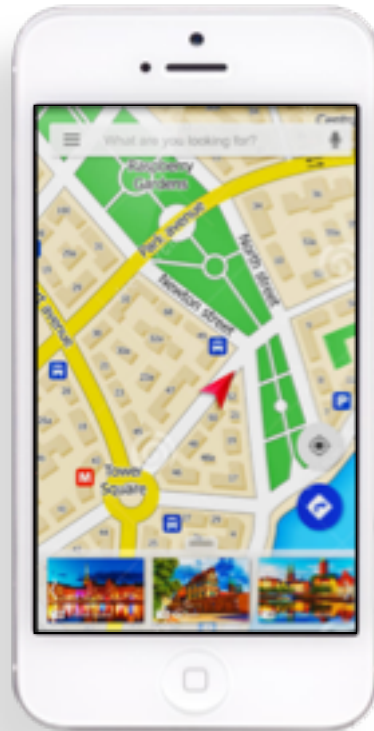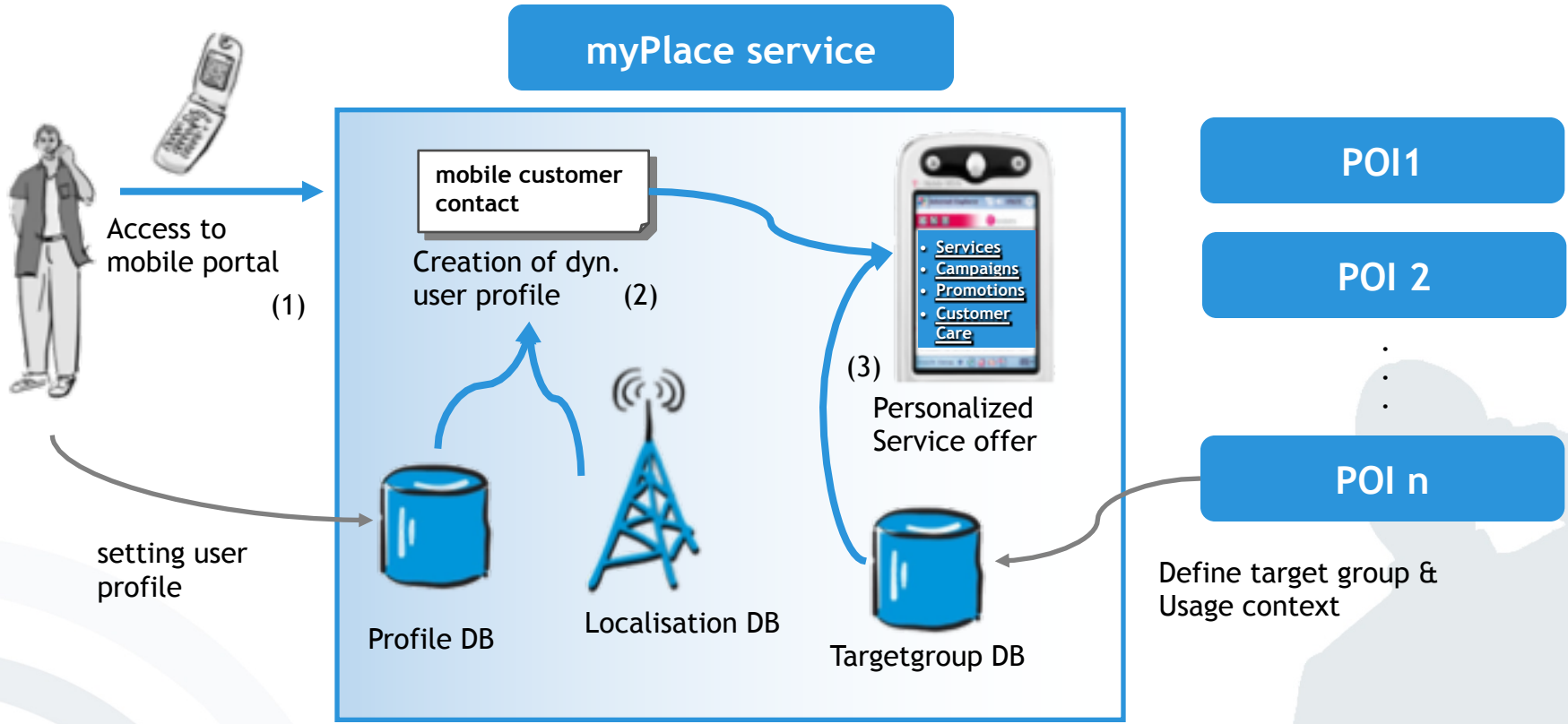- …

Features of myPlace service

- User sends out a **POI request** for a category of choice

- *myPlace* service generates a **list of potential POIs** based on user's DCUP

- Only POIs in **close proximity**, **open** at the current time of day and **matching to the user's preference profile** are returned as search results

- Restaurant 1
- Restaurant 2
- Restaurant 3
- Restaurant 4
- …

Features of myPlace service
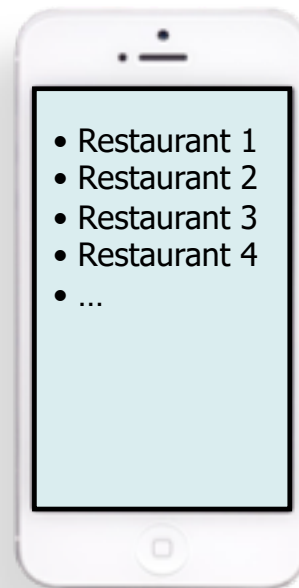
- When user selects a POI from the results list, the mobile device presents **POI location**, **map** and **navigation directions**.

myPlace service

Access to
mobile portal
(1)

mobile customer
contact

Creation of dyn.
user profile   (2)

(3)

Personalized
Service offer

POI1

POI 2

.
.
.

POI n

setting user
profile

Profile DB

Localisation DB

Targetgroup DB

Define target group &
Usage context

Services
Campaigns
Promotions
Customer
Care

- Course Organisation

- myPlace – A mobile location-based service

- Information Systems
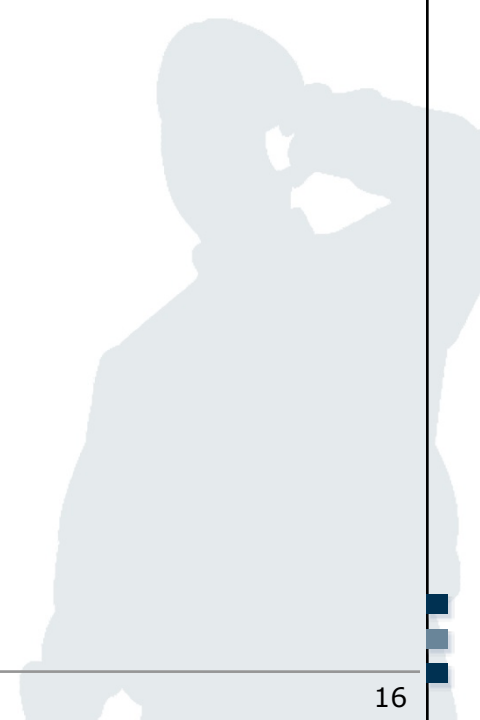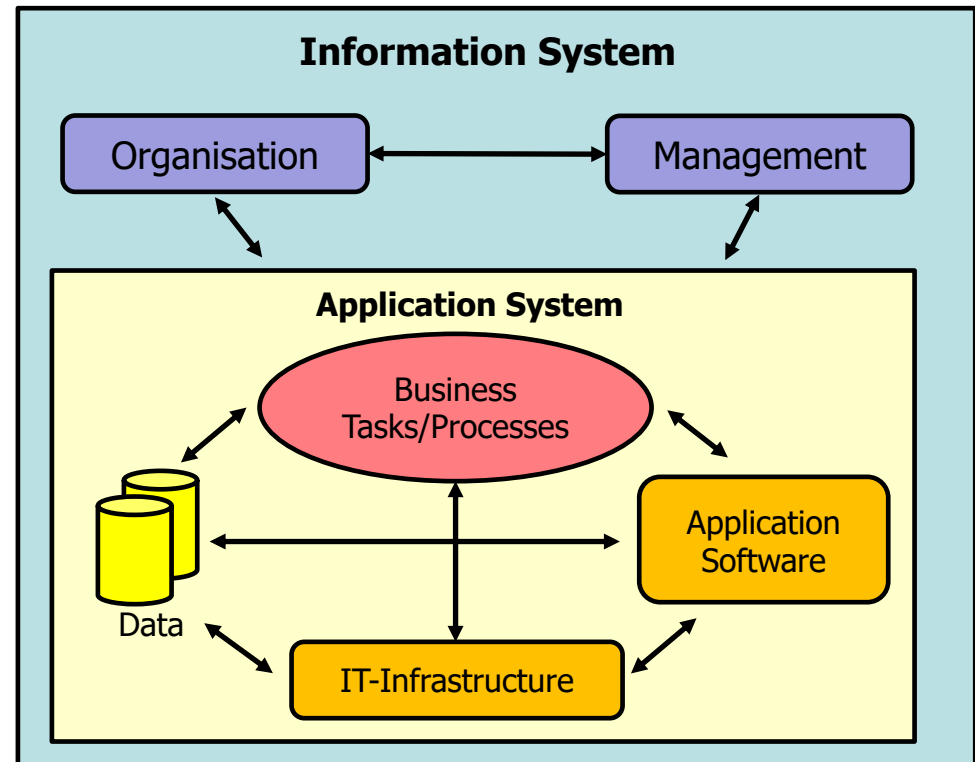
  - Information and Application Systems
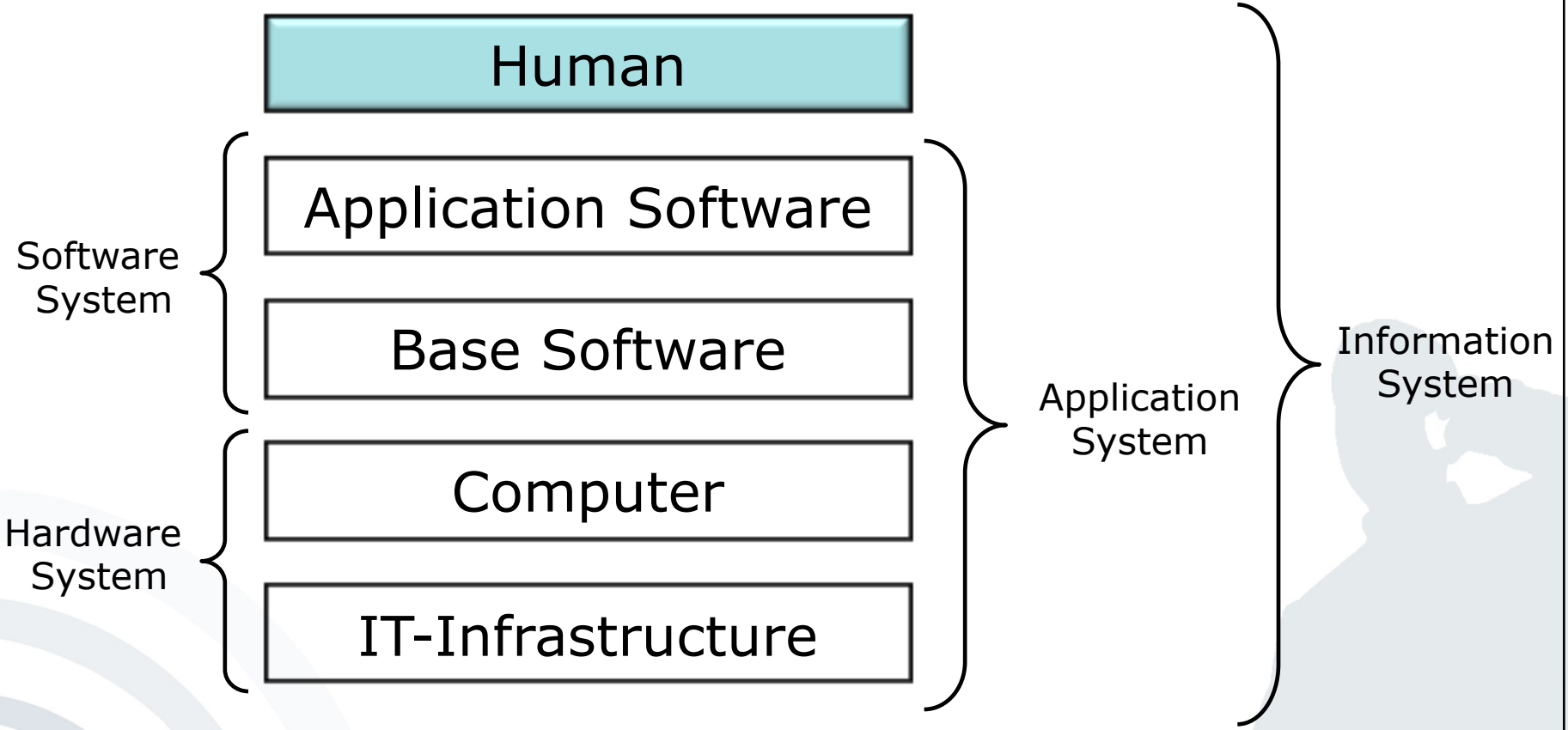
  - Models

  - Enterprise Modelling
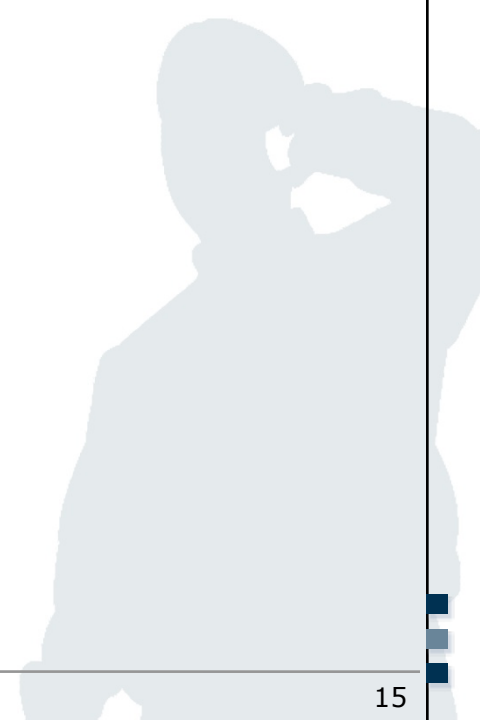
Referring to the MyPlace, give an example for an Information System as well as an Application System and describe their relation to each other.

- **Information System (IS):**
  A system which was built to be used in a part of an enterprise. It contains all relevant application systems and is embedded into the organisation and management of an enterprise.

- **Application System (AS):**
  A system, which consists of business tasks and processes it supports, the underlying IT-infrastructure, the application software and the data it required in order to accomplish its objectives.

Source: Laudon, K.C., Laudon, J.P., Schoder, D. (2010)

Source: Teubner (1999)

Process overview of the myPlace service

myPlace service

mobile customer contact

Access to mobile portal (1)

Creation of dyn. user profile (2)

setting user profile

Profile DB

Localisation DB

(3)

Personalized Service offer

Targetgroup DB

- Services
- Campaigns
- Promotions
- Customer Care

POI1

POI 2

...

POI n

Define target group & Usage context
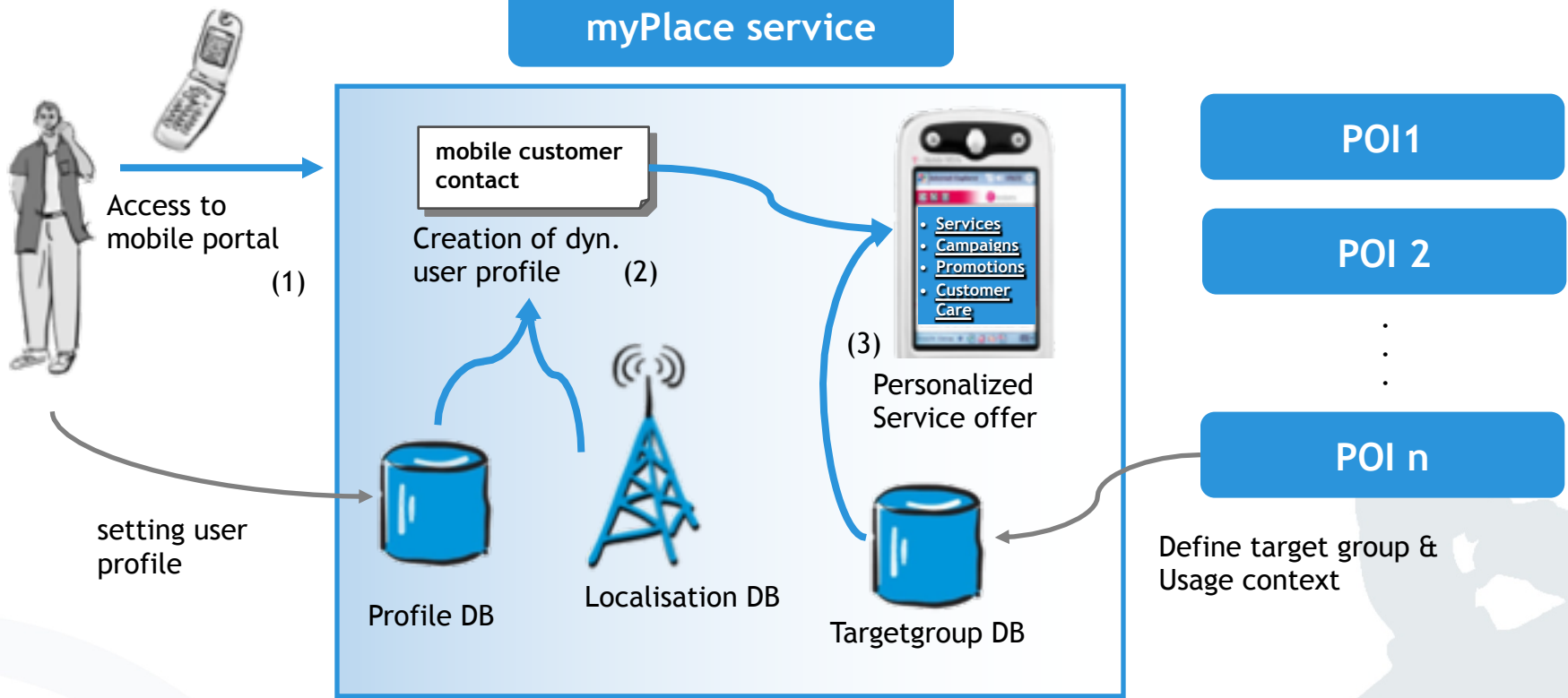
Application System

Information System

- **Course Organisation**

- **myPlace – A mobile location-based service**

- **Information Systems**

 - Information and Application Systems

  - Models

  - Enterprise Modelling

a) What is a **model?** Give an example in relation to the myPlace service.

b) Explain briefly the abstraction mechanisms "aggregation" and "generalisation" in the modelling context. In addition, give an example for each of the two mechanisms with regard to MyPlace.

a) What is a **model?** Give an example in relation to the myPlace service.
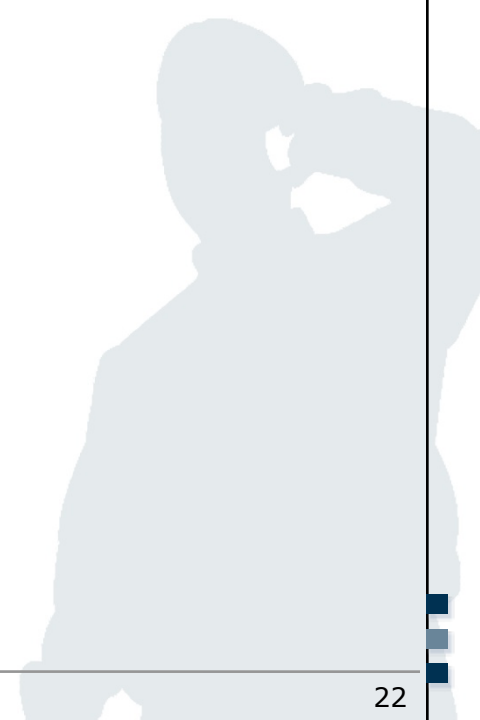
- A model is a representation of a the real world with the following properties
    - **Representation:** A model is always representation of natural or artificial objects, which themselves can be models.
    - **Abstraction:** Models are typically an excerpt of reality.
    - **Pragmatism:** The contents of a model are relativized through the following questions: For whom? Why? For what?

- *Example for MyPlace:*
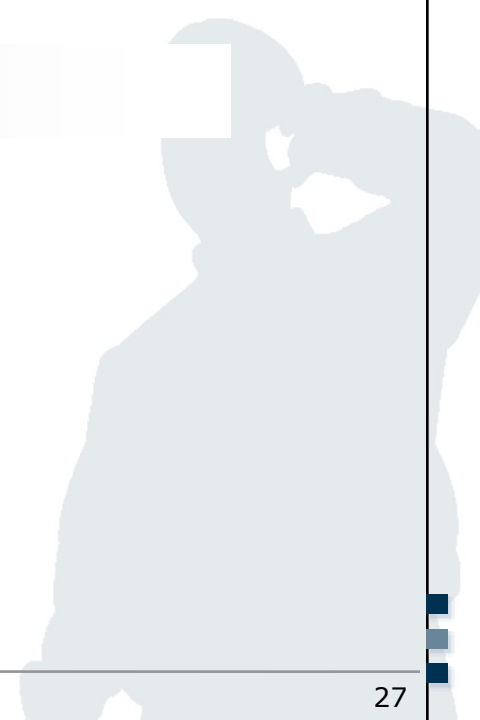   - Real life directions vs. app navigation

b) Explain briefly the abstraction mechanisms "aggregation" and "generalisation" in the modelling context. In addition, give an example for each of the two mechanisms with regard to MyPlace.

- Models are used for the purpose of **simplification and complexity reduction**

- Abstracting mechanisms in this regard are:
  - *Aggregation* (vs. Disaggregation): Different objects are combined to a new object.
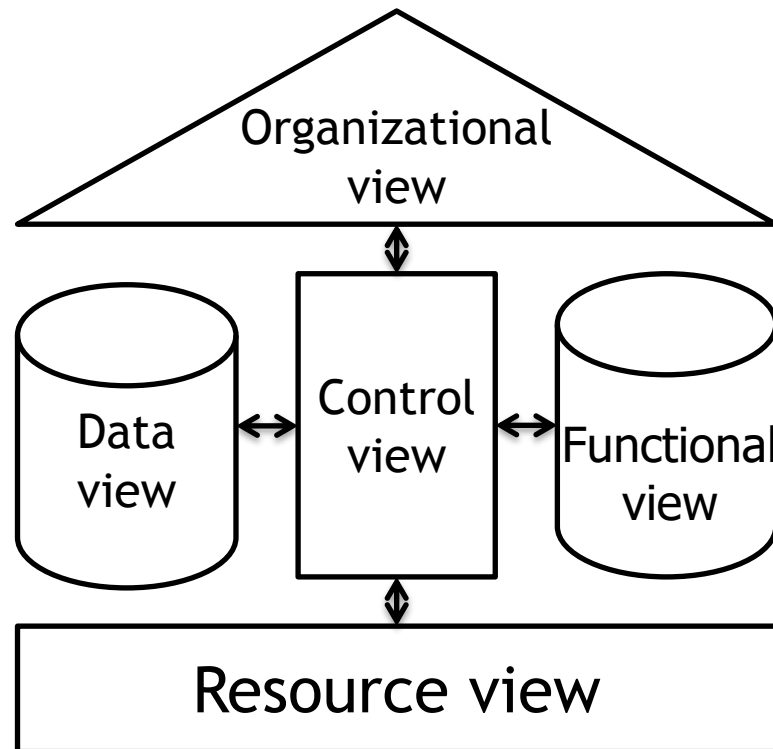 - *Generalisation* (vs. Specialisation): Similar objects are abstracted to become a new high-level object.

- Models are used for the purpose of **simplification and complexity reduction**

- Abstracting mechanisms in this regard are:
  - *Aggregation* (vs. Disaggregation): Different objects are combined to a new object.
  - *Generalisation* (vs. Specialisation): Similar objects are abstracted to become a new high-level object.

- myPlace Examples
  - *Aggregation*: Map, location, directions, Smartphone
    → Mobile Navigation
  - *Generalisation*: Restaurants, pharmacies, ATMs
    → Point of Interests

- Course Organisation

- myPlace – A mobile location-based service

- Information Systems

  - Information and Application Systems

  - Models

  - Enterprise Modelling

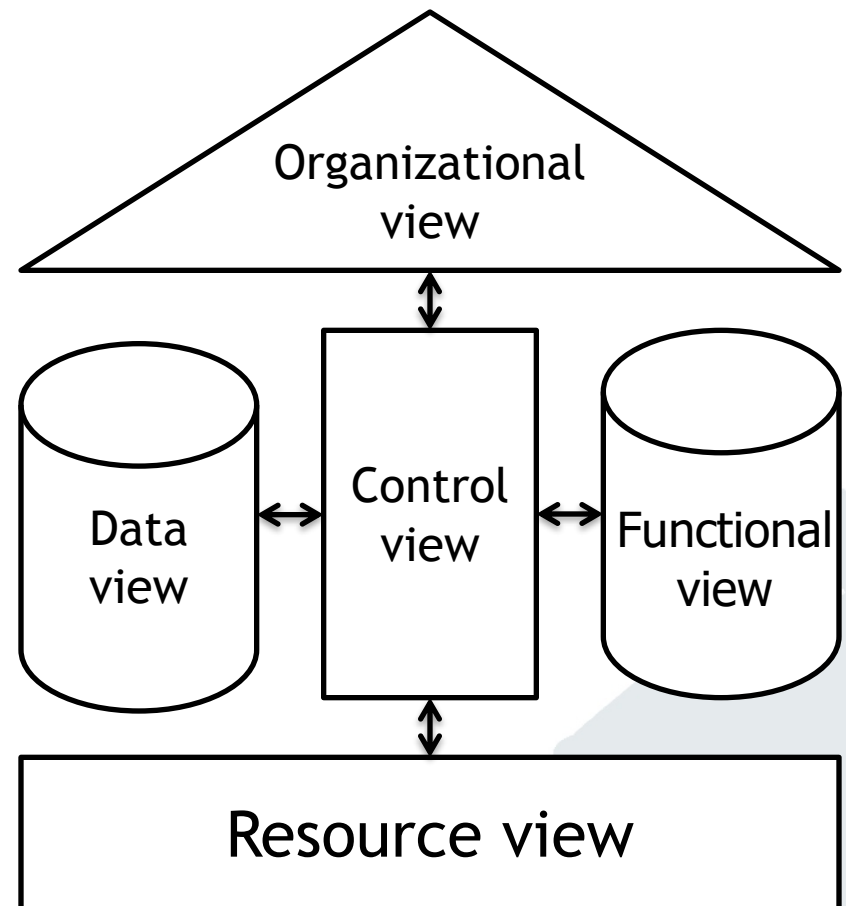- Develop a high-level Enterprise Model of the myPlace Service using the ARIS approach.

- Enterprise Model

  - An enterprise model is a representation of the structure, activities, processes, information, resources, people, behaviour, goals, and constraints of a business, government, or other enterprises.
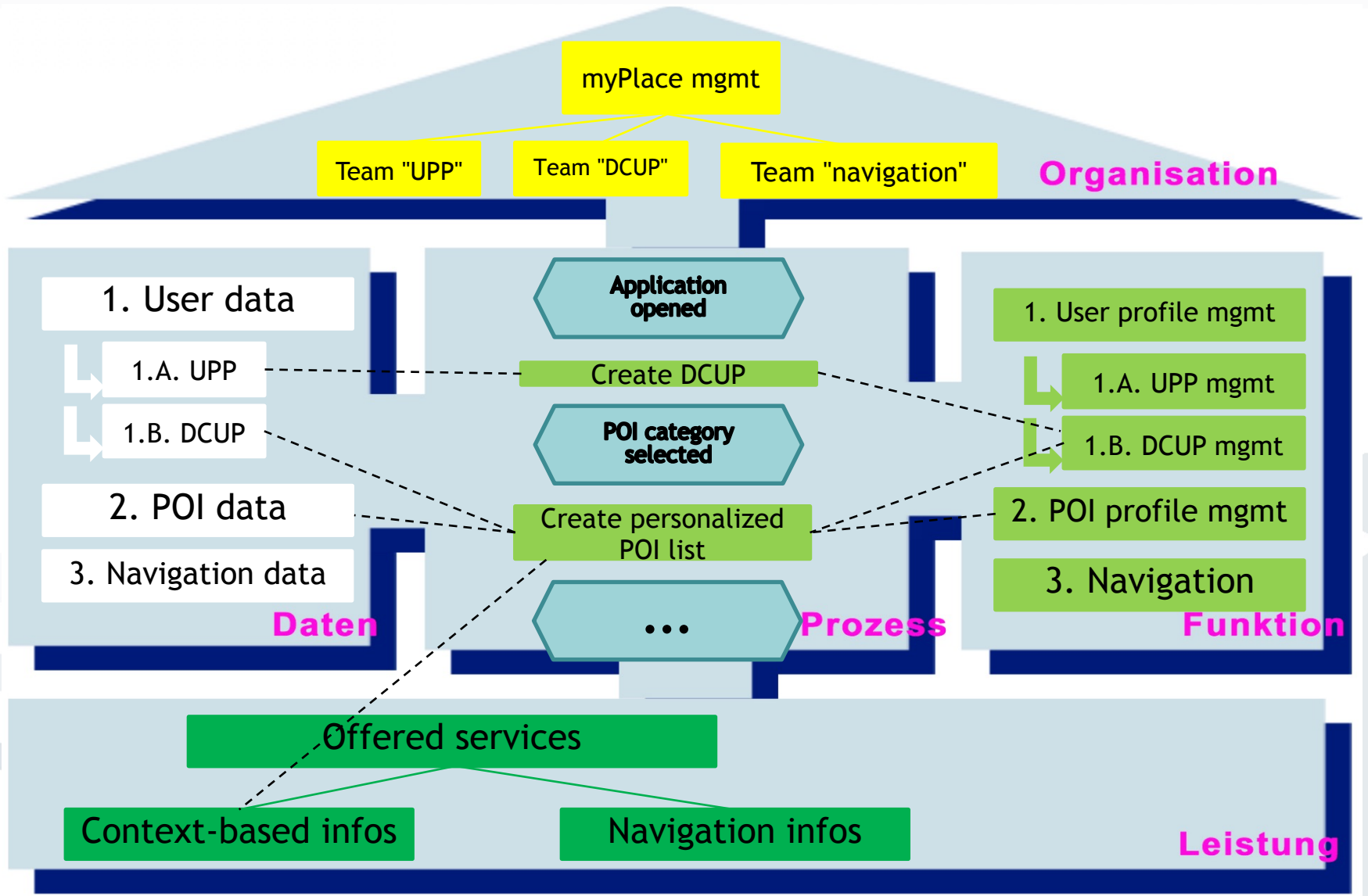
    (Source: F.B. Vernadat 1997)

- **Organisational View**
  - Resources of company's organisational structure (humans, machines, hardware, etc.)
  - Organisational Chart
- **Functional View**
  - All processes generating output as well as their relation to each other
  - Function Tree
- **Data View**
  - All events generating data (e.g. documents, e-mails, etc.)
  - Entity-Relationship Model
- **Control View**
  - Integration of all other views into a logic process
  - Event-driven Process Chains
- **Resource View**
  - Services, Products and Financial Assets
  - Product Tree

Organizational view

Data view ↔ Control view ↔ Functional view

Resource view

Exercise 3: Enterprise Modelling

Organisation

myPlace mgmt
- Team "UPP"
- Team "DCUP"
- Team "navigation"

Daten

1. User data
  - 1.A. UPP
  - 1.B. DCUP
2. POI data
3. Navigation data

Prozess

- Application opened
- Create DCUP
- POI category selected
- Create personalized POI list
- . . .

Funktion

1. User profile mgmt
  - 1.A. UPP mgmt
  - 1.B. DCUP mgmt
2. POI profile mgmt
3. Navigation

Leistung

Offered services
- Context-based infos
- Navigation infos

Thank you!