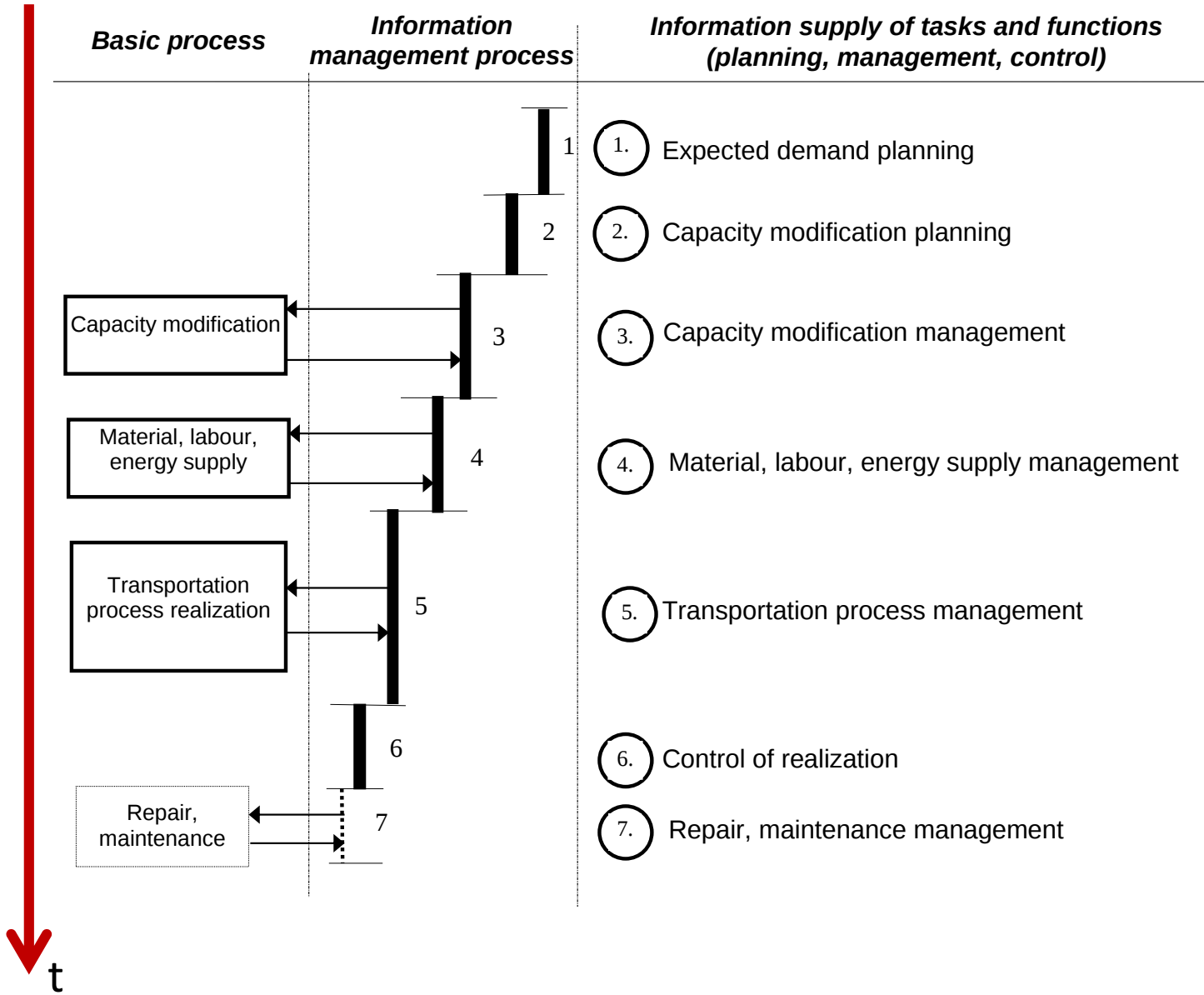


Operational models of transportation organizations

– temporal sequence of planning and realization

aims:

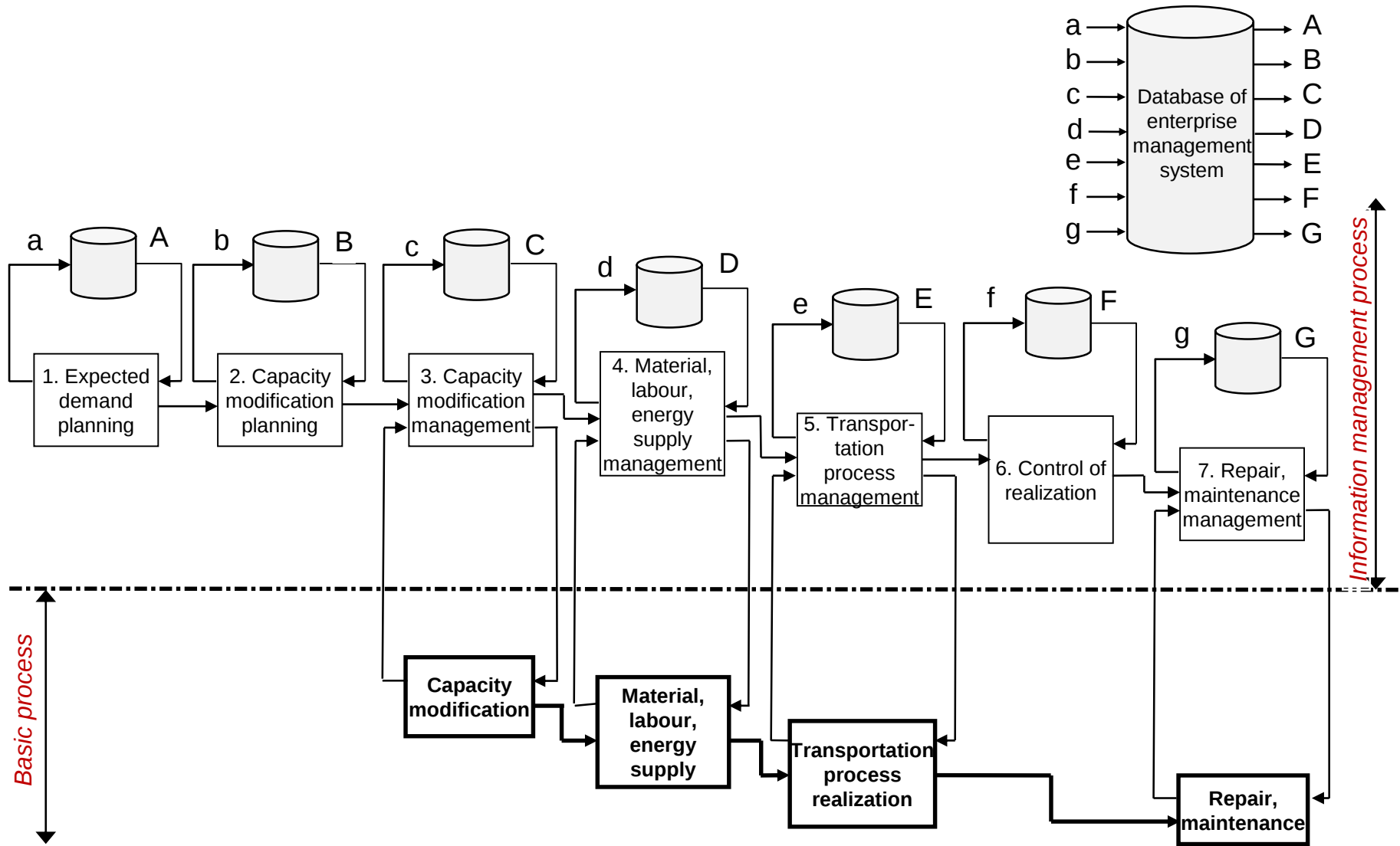
maximum performance
minimum expenditure
highest revenue
highest security
greatest perceived
travel quality, etc.



Description method of information supply

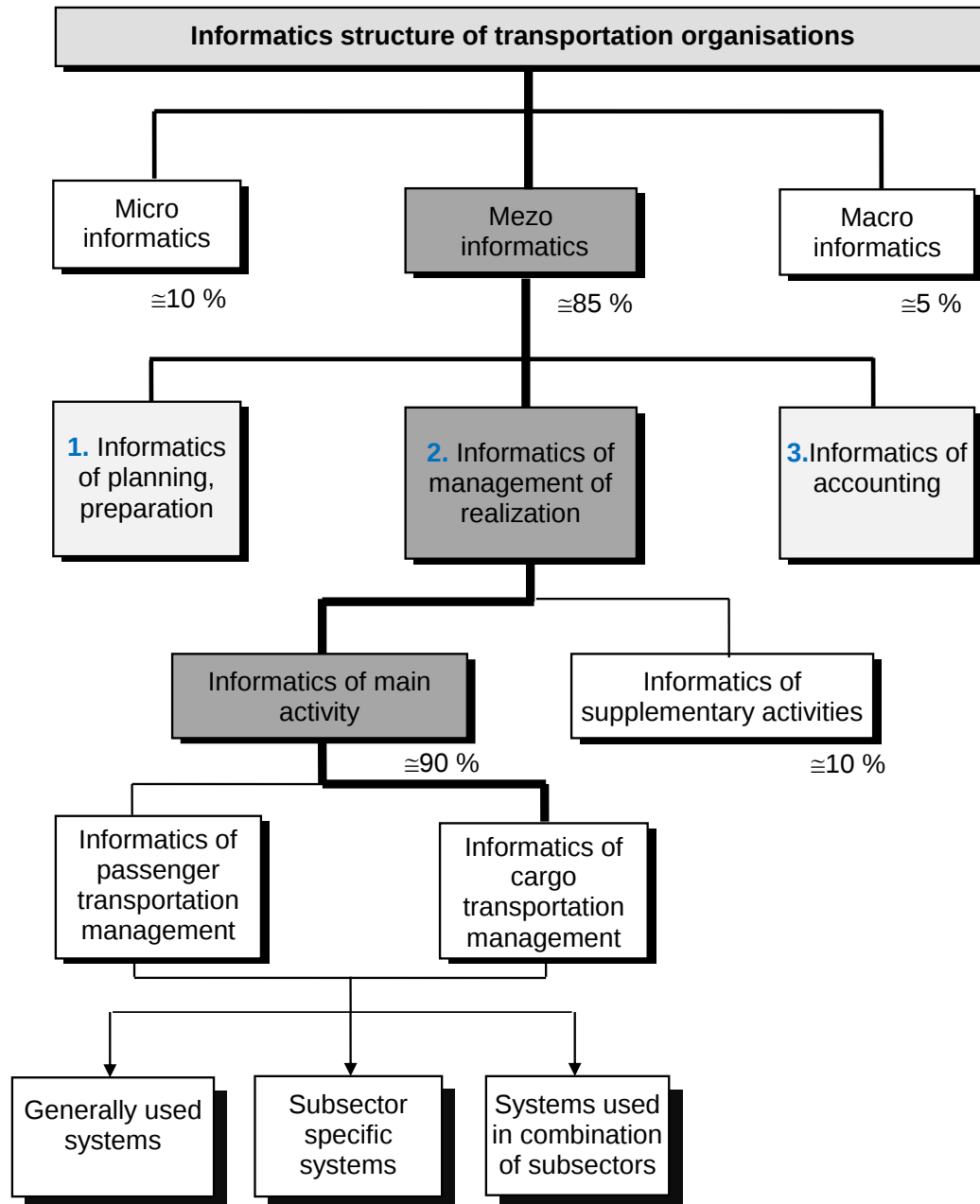
Tasks and functions	Input information	Stored information	Information management	Output information
1. Demand planning				
2. Capacity modification planning				
3. Capacity modification management				
4. Material, labour, energy supply management				
5. Transportation process management				
6. Performance control				
7. Repair, maintenance management				

Functional chain model based on control theory

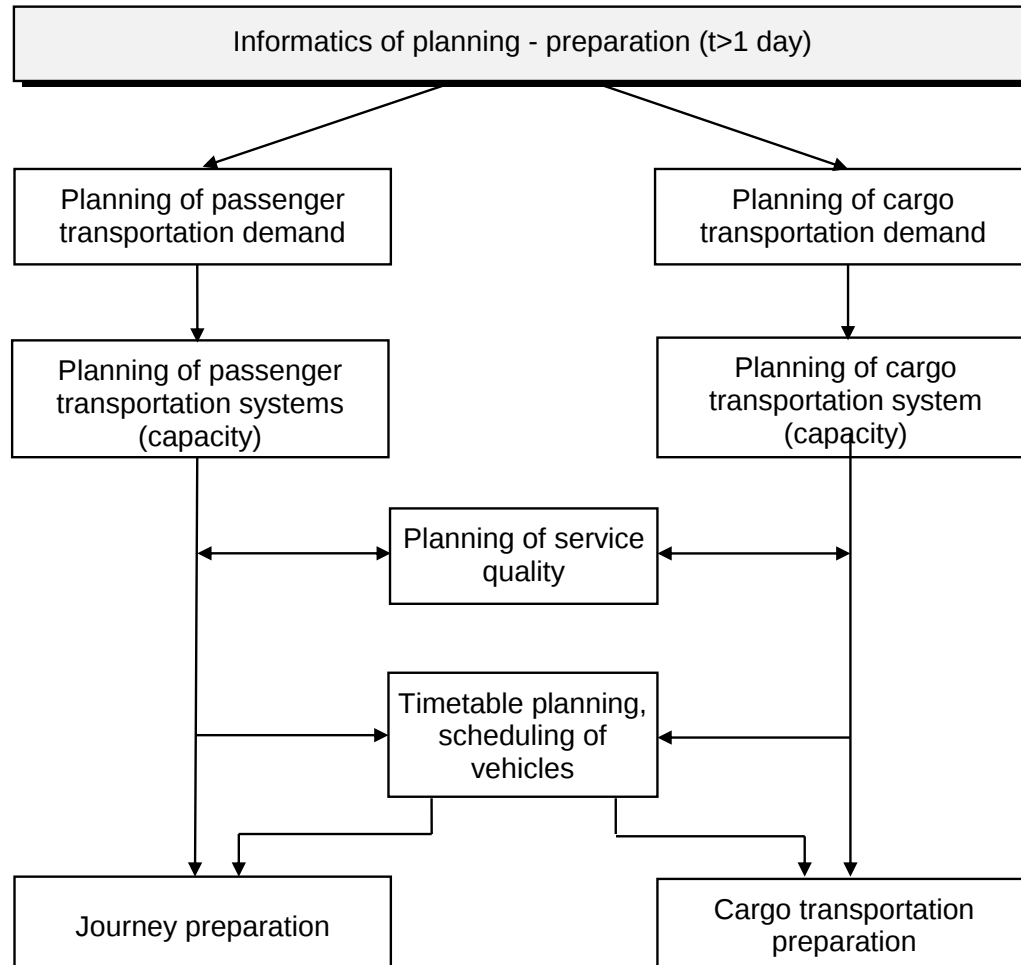


An example: participants in the railway transportation process

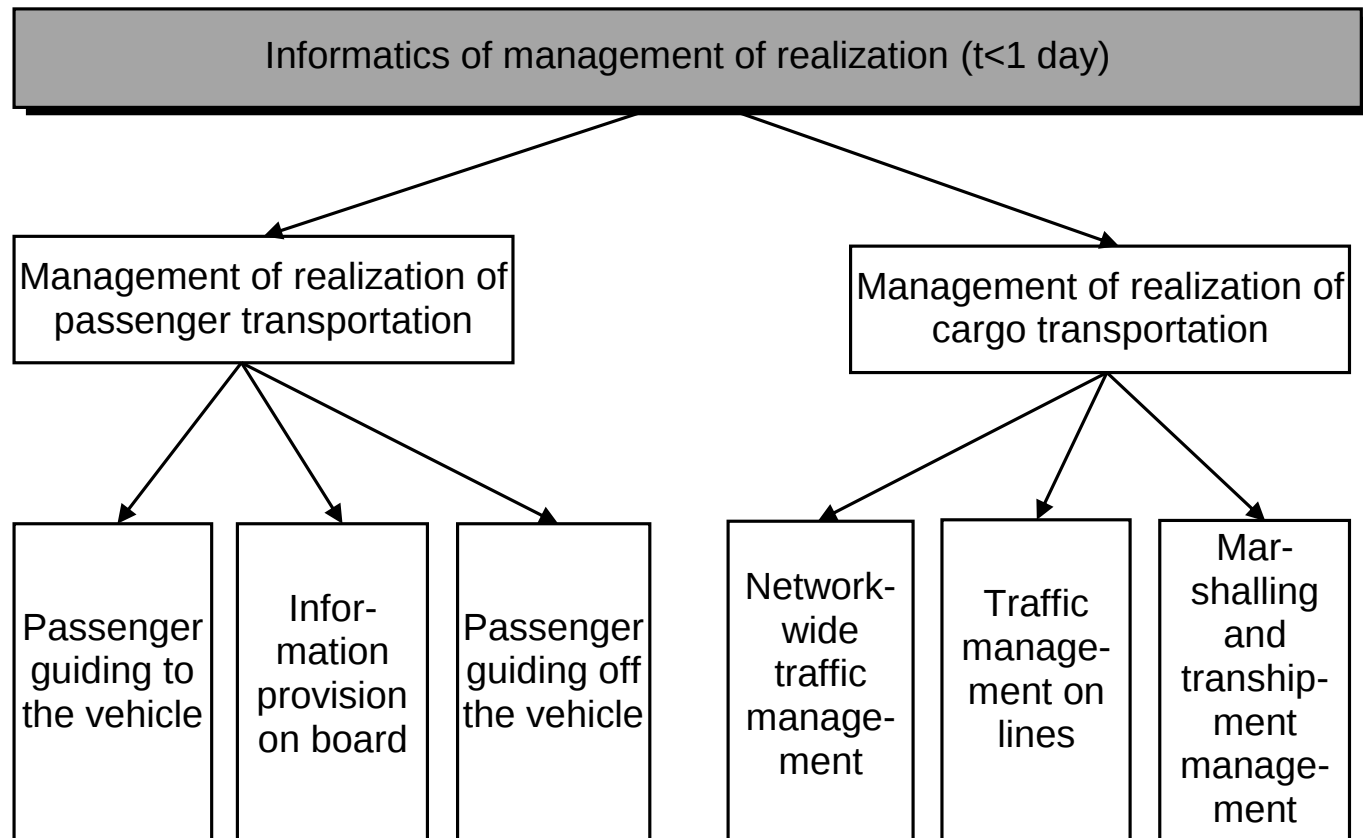
- Rail infrastructure division
 - receiving demands regarding schedule, allocation of track capacity, creating timetable
 - realization of traffic (operation of the passenger information system at the stations)
- Mechanical engineering division
 - providing the traction capacity and maintenance of the locs and the carriages
- Passenger transportation division
 - revealing of travel demands
 - service planning (service types, timetable)
 - pricing (business regulations, discounts)
 - providing means (e.g. fleet)
 - identification of demands regarding traction and paths
 - providing staff
 - human resource assignment
 - providing the labour (education, recruitment, dismissal)
 - providing passenger transportation services (vehicle maintenance)
 - service and ticket sales
 - passenger service
 - customer service



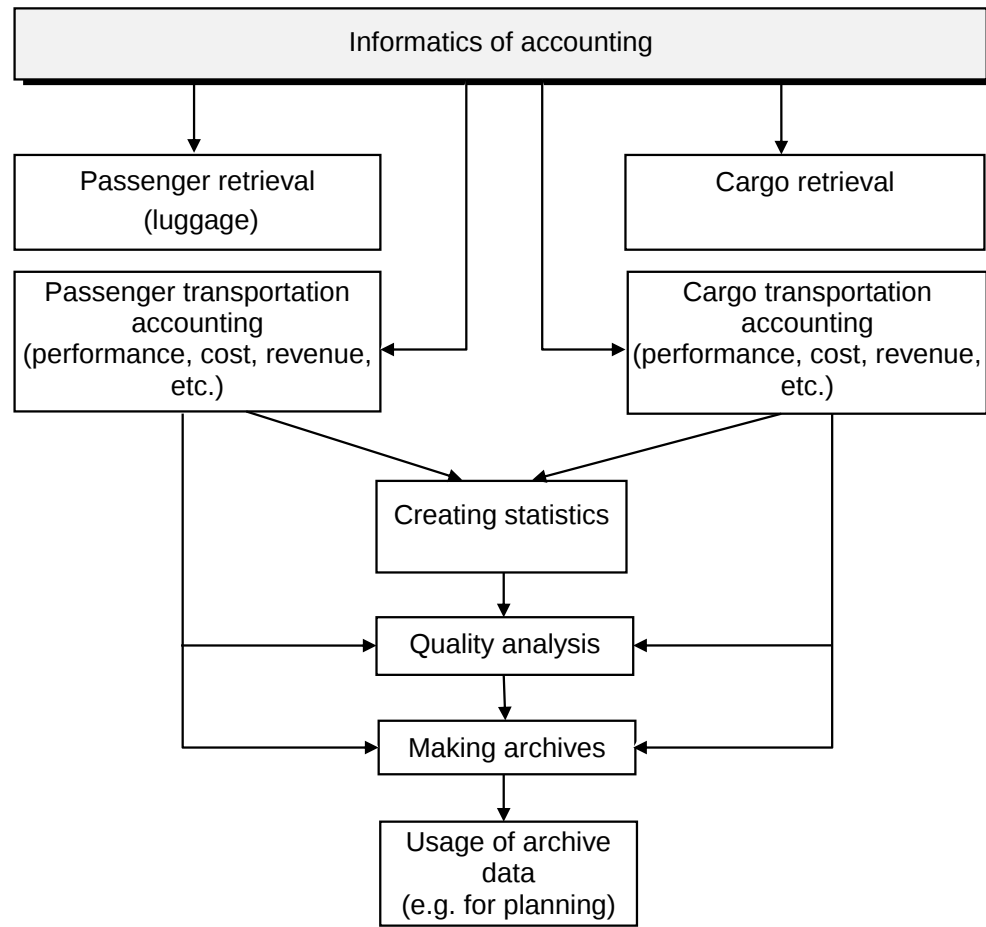
1. planning - preparation



2. realization



3. accounting



Informatics of supplementary activities

Supplementary activities:

- Research (development)
- Construction
- **Repair, maintenance**
- Infocommunication services

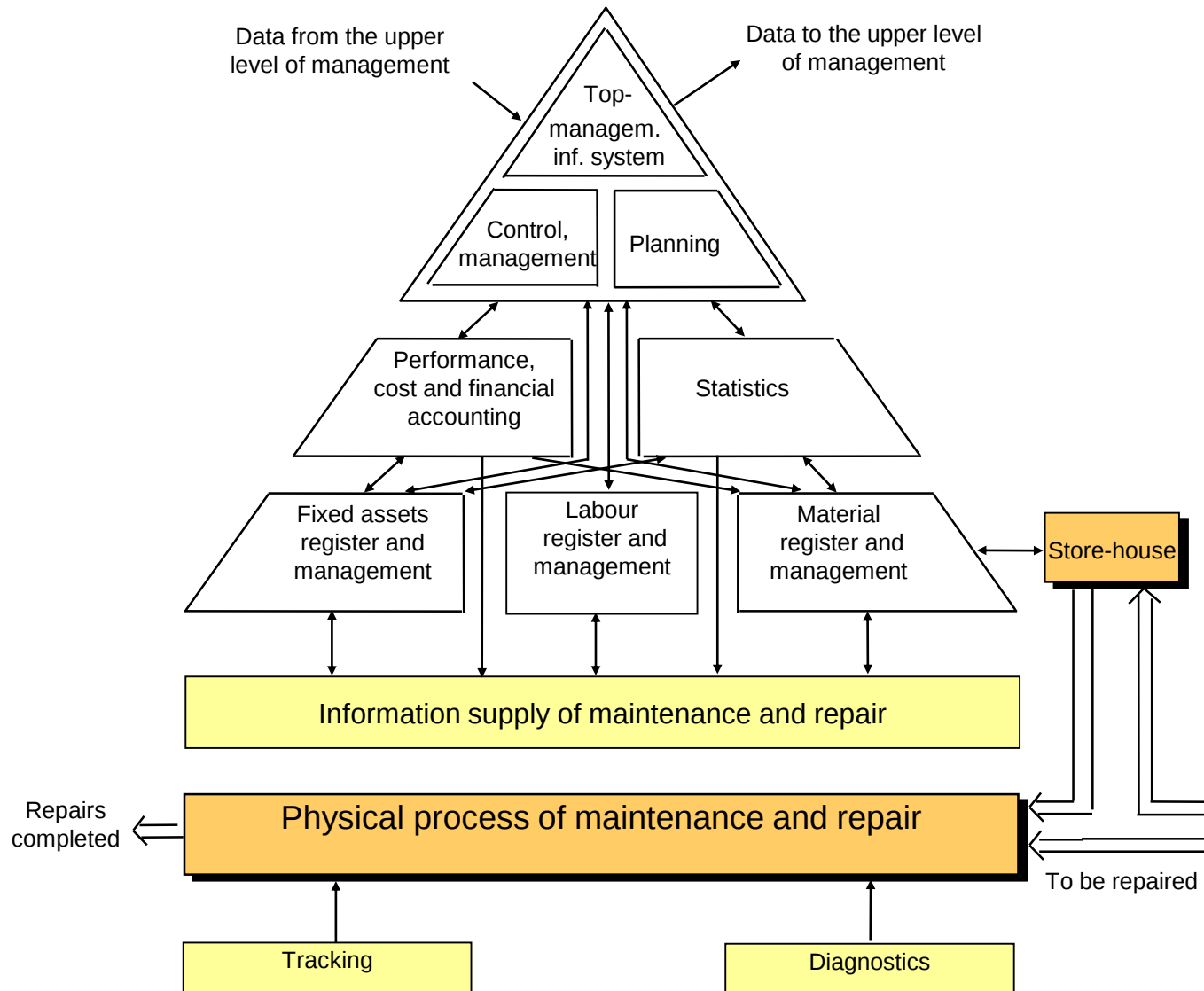
Informatics of repair and maintenance *(strongly subsector-specific in details)*

- Predictable
 - based on performance data
 - depending on cycle time
- Non-predictable
 - unforeseen occurring

Main data groups of repair and maintenance

- Basic data
 - Installed equipments
 - Vehicles
 - Labour
- Material, mountings register
 - Technical parameters
 - Inventories
 - Purchasing, reordering
- Standards (norm), capacity data
 - Time standards
 - Operational standards
 - Set standards
 - Material standards
- Workshop details data
 - Automatic data recording
 - Manual data recording
- Data of accomplished tasks
 - Performance data
 - Cost, financial data

Information supply system of maintenance and repair



Official registries (information systems)

Subjects of registries:

- vehicles
- owners
- insurances
- police events

User organizations:

- police
- insurance companies
- municipalities
- transport supervisory authorities

Aims:

- control
- penalty (enforcement)
- compensation
- statistical tasks