

Characteristics and categorization of transportation organizations

Organisational structure

functional unit – organisational
unit – sub-system

Activity (function) structure

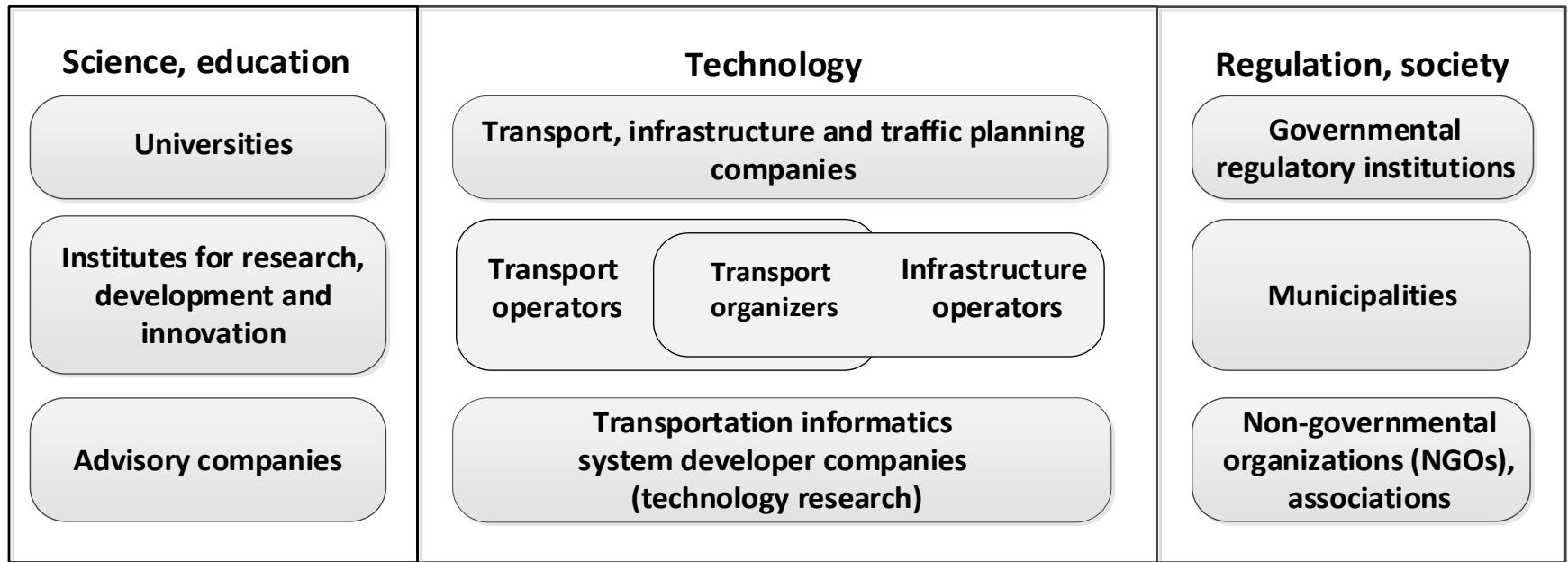
input, stored, output information

Adaptivity of the system

Comparison of transportation organisations by transport modes

FEATURES INFLUENCING INFORMATICS		RAIL TRANSPORT I.	SHIPPING II.	AIR TRANSPORT III.	ROAD TRANSPORT IV.
ORGANISATION	number of employees	ten thousands	some thousands	some thousands	hundred thousands, but few tens, hundreds per company
	type of organization (in Hungary)	highly centralized and hierarchical structure	centralized	centralized traffic control, but decentralized company management	decentralized

Classification of transportation organisations



Examples

Scientific, education background

Research institutes

Közlekedéstudományi Intézet
Nonprofit Kft.

Technological background

Transport and traffic planning companies

FŐMTERV Mérnöki tervező Zrt.
UVATERV Út- Vasúttervező Zrt.
Pro Urbe Mérnöki és Városrendezési Kft.
TRENECON COWI Tanácsadó és Tervező Kft.
KÖZLEKEDÉS Fővárosi Tervező Iroda Kft.

Regulatory, social background

Governmental regulatory institutions

Nemzeti Fejlesztési Minisztérium
Nemzeti Infrastruktúra Fejlesztő Zrt.
Nemzeti Fejlesztési Ügynökség
Nemzeti Közlekedési Hatóság*

Transport operation

VOLÁN Társaságok
MÁV-START Zrt.
GySEV Zrt.
Városi közlekedési cégek
Wizz Air Hungary Kft.

BKK Zrt.

Infrastructure operation

Magyar Közút Nonprofit Zrt.
Nemzeti Útdíjfizetési Szolgáltató Zrt.
MÁV Pályavasút
BKK Közút Zrt.
HungaroControl Zrt.
Budapest Airport Zrt.

Universities

BME, Közlekedésmérnöki és
Járműmérnöki Kar
Széchenyi István Egyetem,
Műszaki Tudományi Kar

Transportation informatics system developer (*technological research*) companies

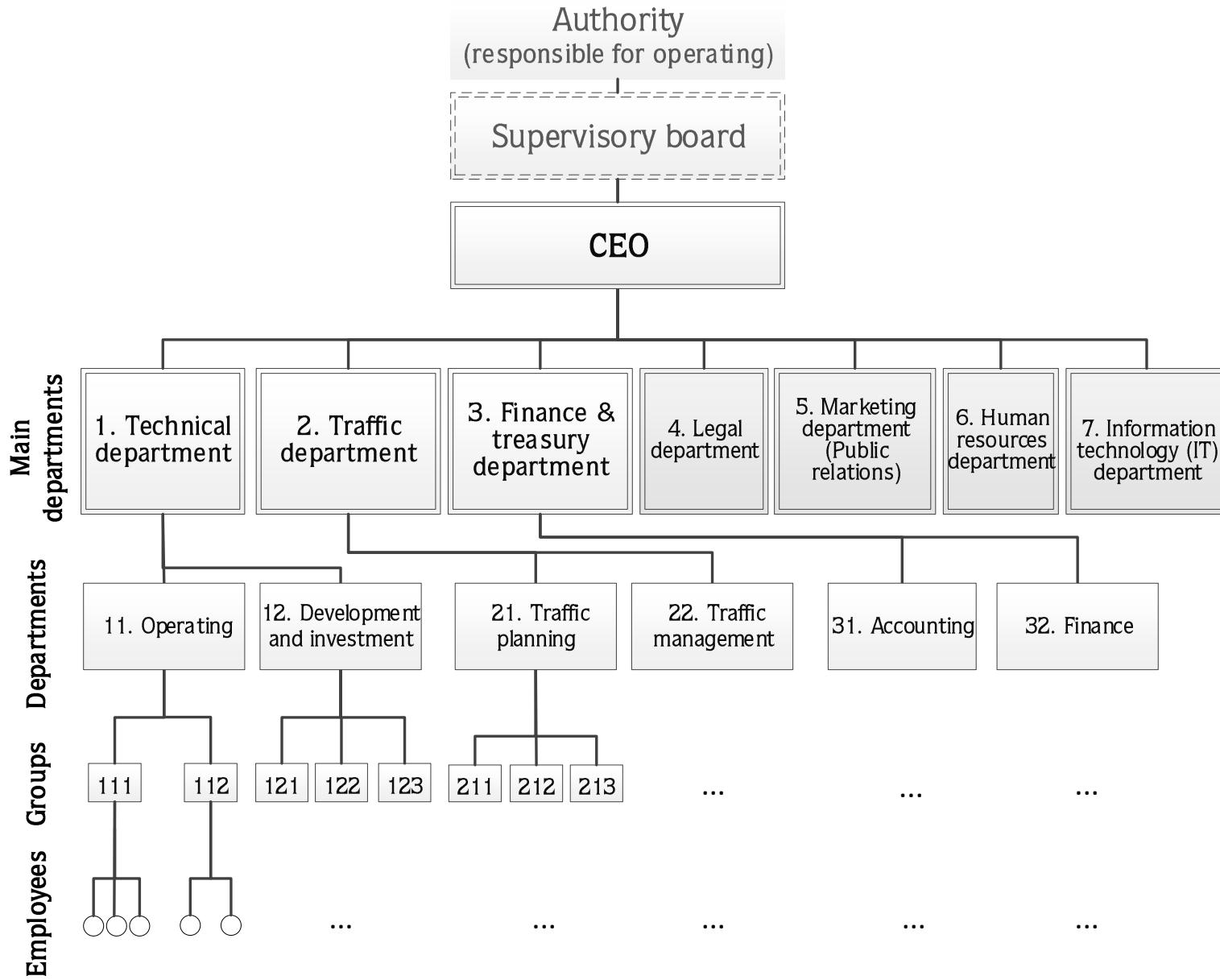
Synergon Informatikai NyRt.
T-Systems Magyarország Zrt.
MÁV Szolgáltató Központ Zrt.
i-cell Kft.
Best Way Kft.
SZTAKI
Bay Zoltán Alkalmazott Kutatási Közhasznú Nonprofit Kft.

NGOs, associations

Magyar Közlekedési Klub
Magyar Kerékpáros Klub
Levegő Munkacsoport
Közlekedéstudományi Egyesület
ITS Hungary Egyesület
VEKE

*NKH: responsible for the legality of the technical quality of infrastructure and transportation means, technical and transportation knowledge trainings.

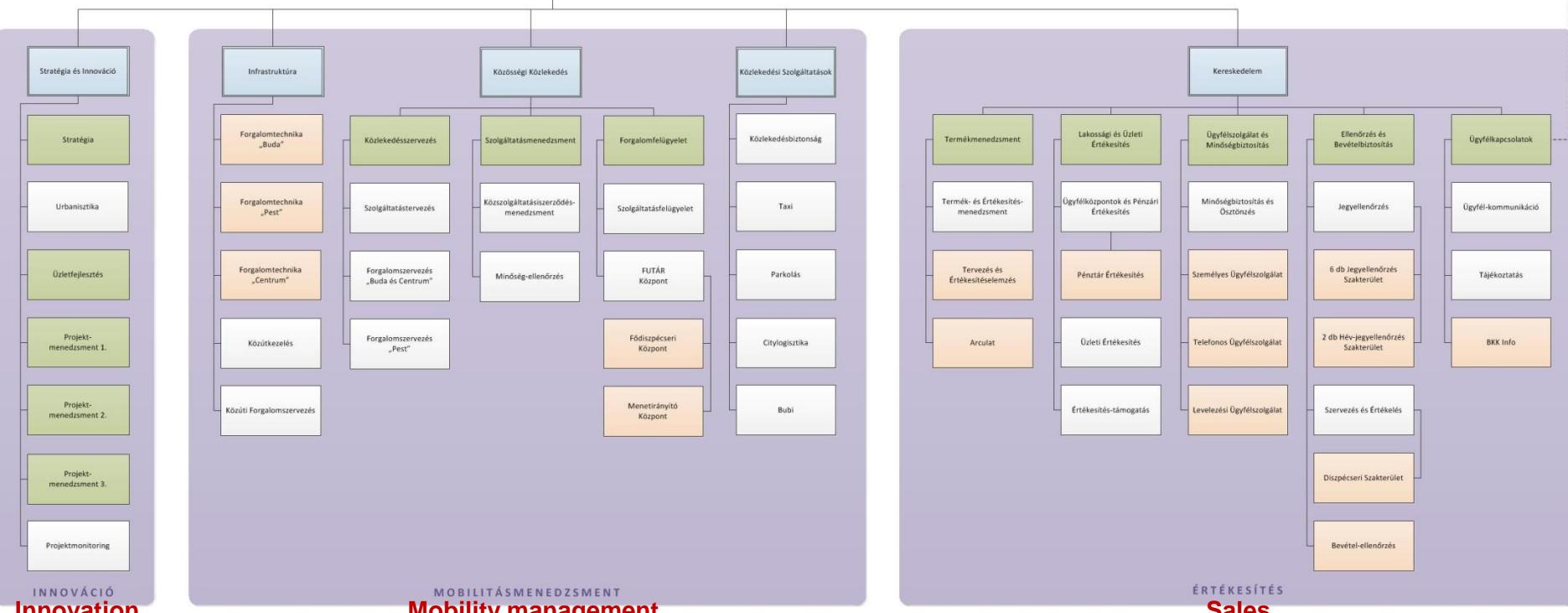
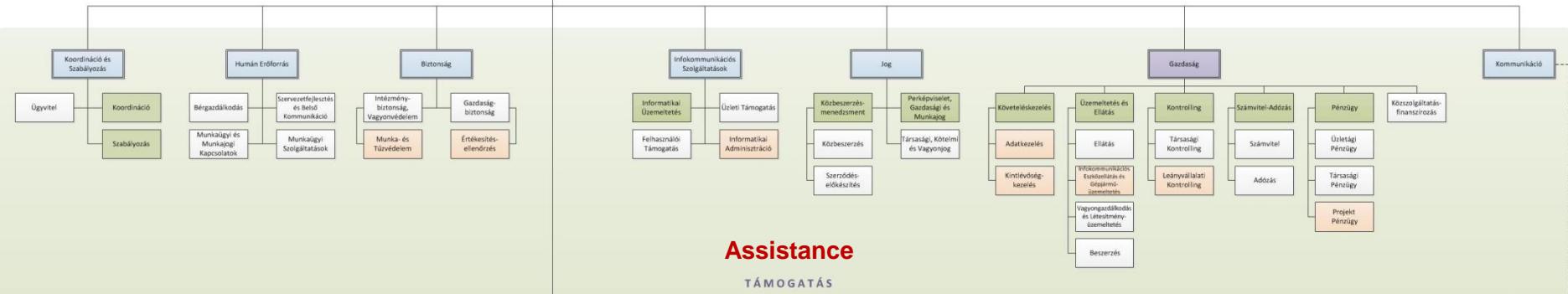
Typical structure of transportation organisations



BKK organisation structure (2015)

CEO

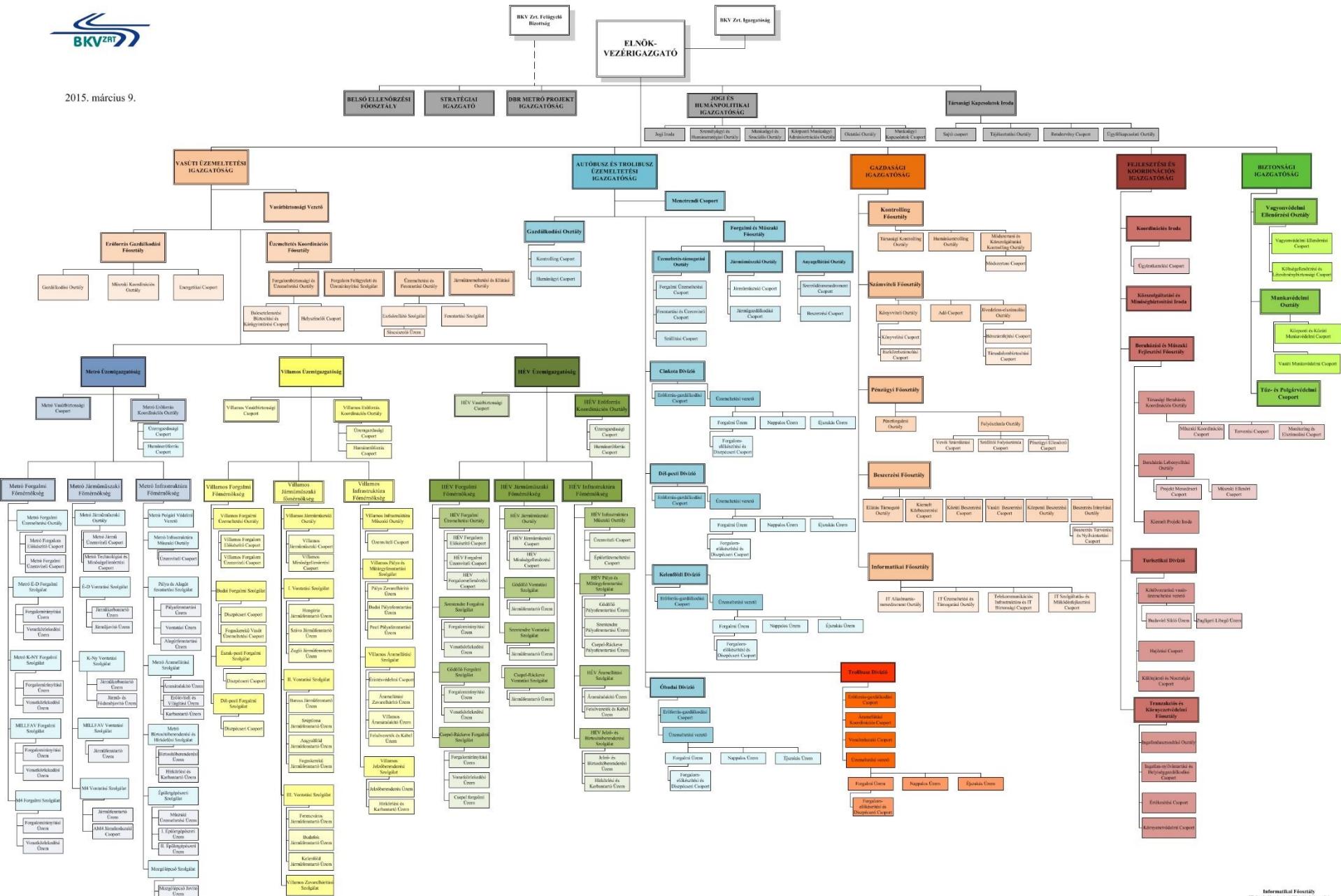
Supervisory board



BKV Zrt. organisation structure (2015)



2015. március 9.

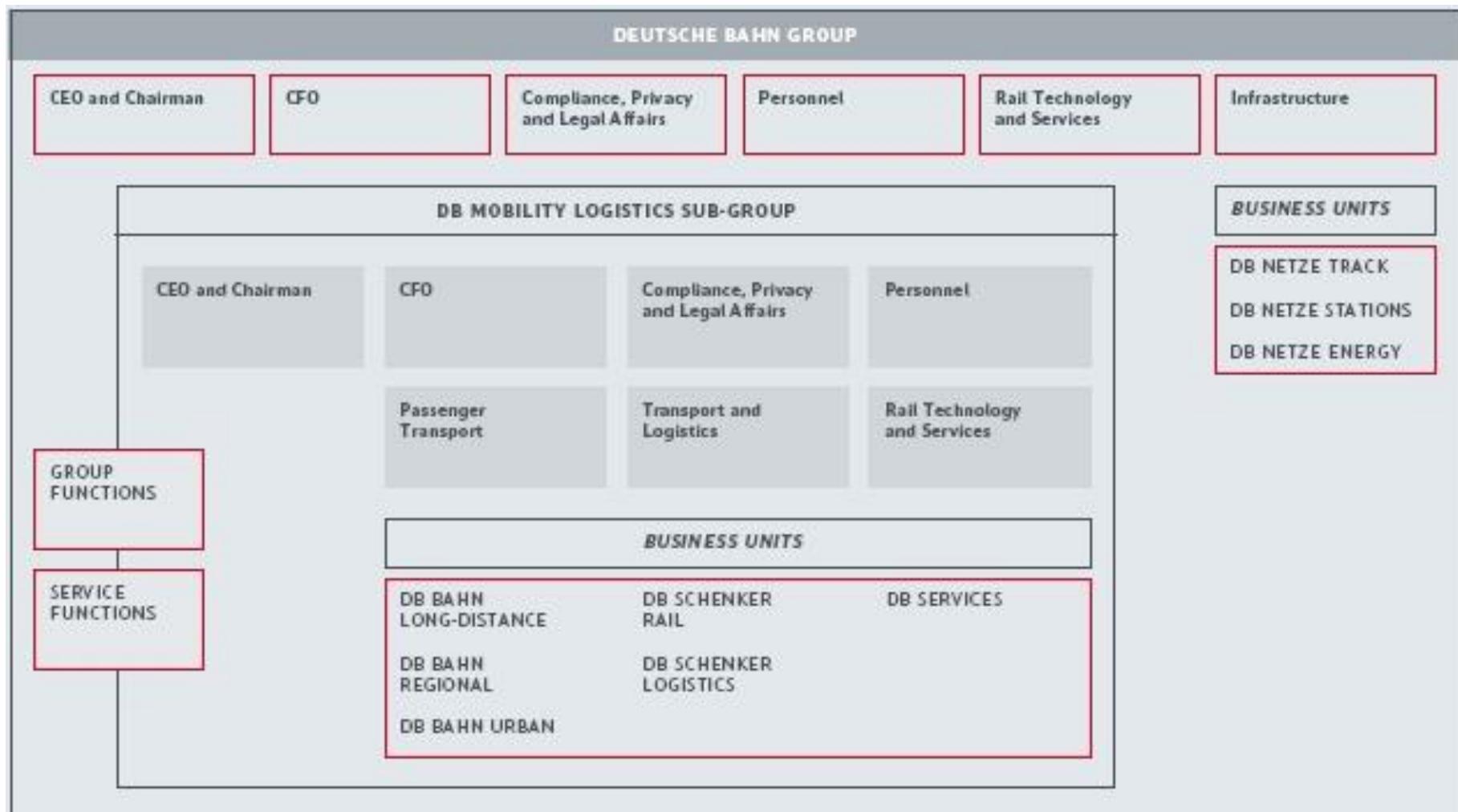


Volán Group (Association), Volán „companies”, MÁV-group

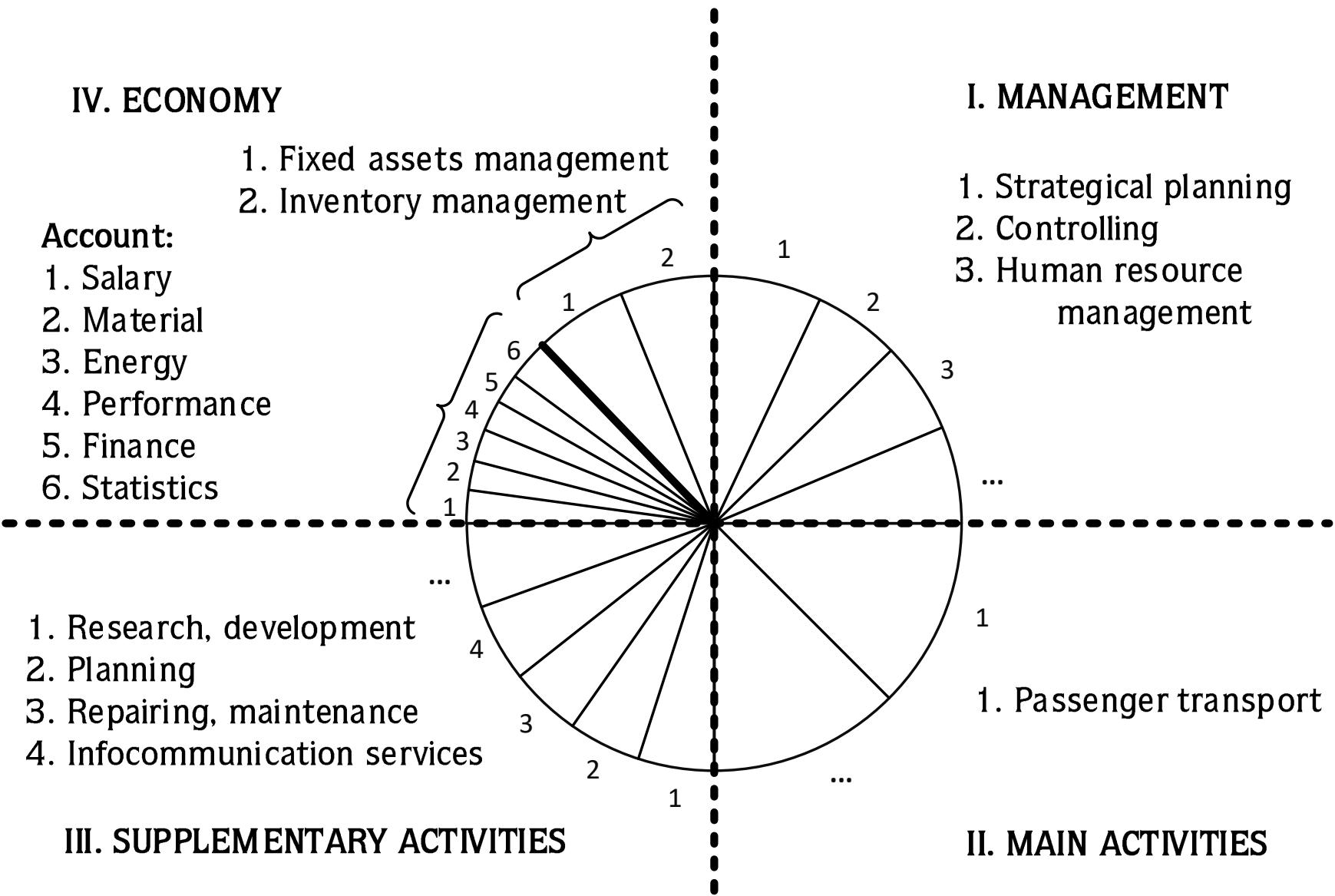
ÖBB organisation structure



DB organisation structure

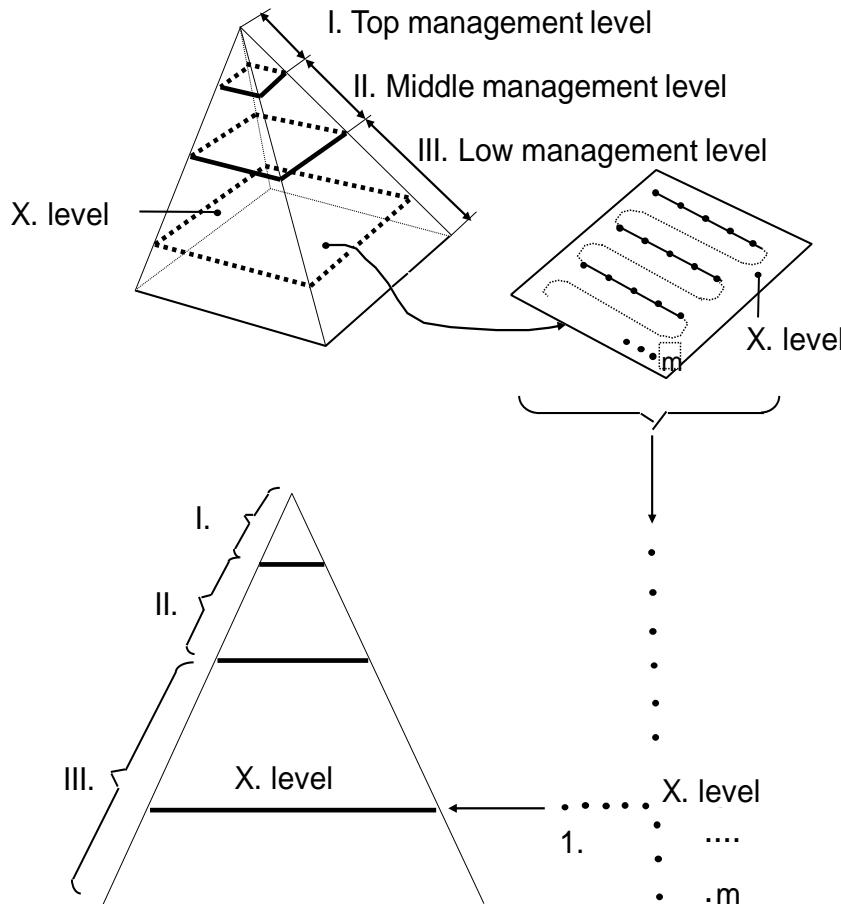


Activity structure of transportation companies (functional pie-chart)



functions of management levels and characteristics of information handling

Structure of management levels



the organising principle is
the internal information
needs of organizations

multi-level planning

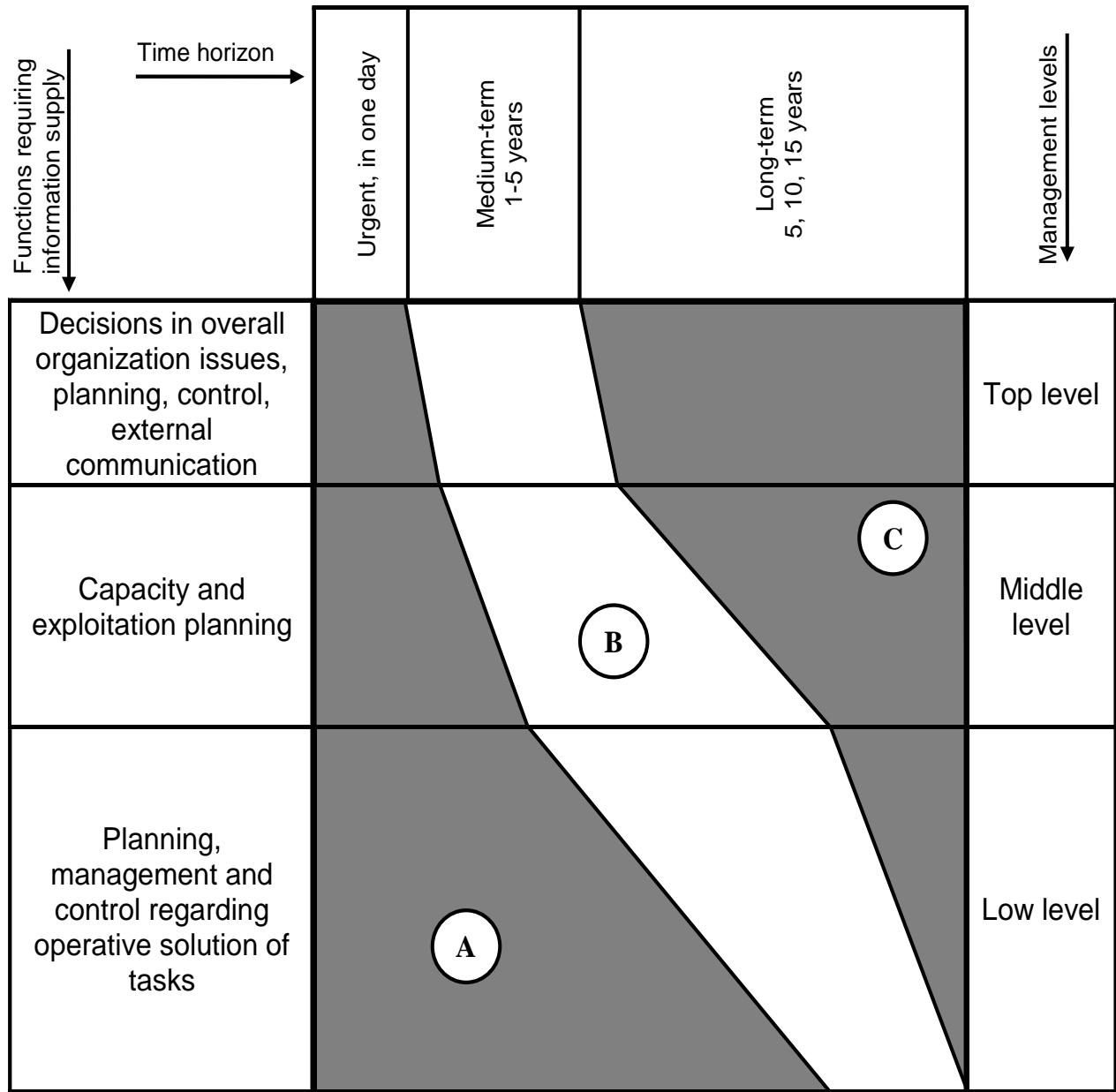
functional analysis
process analysis

aim – function – system
(representation on planes)

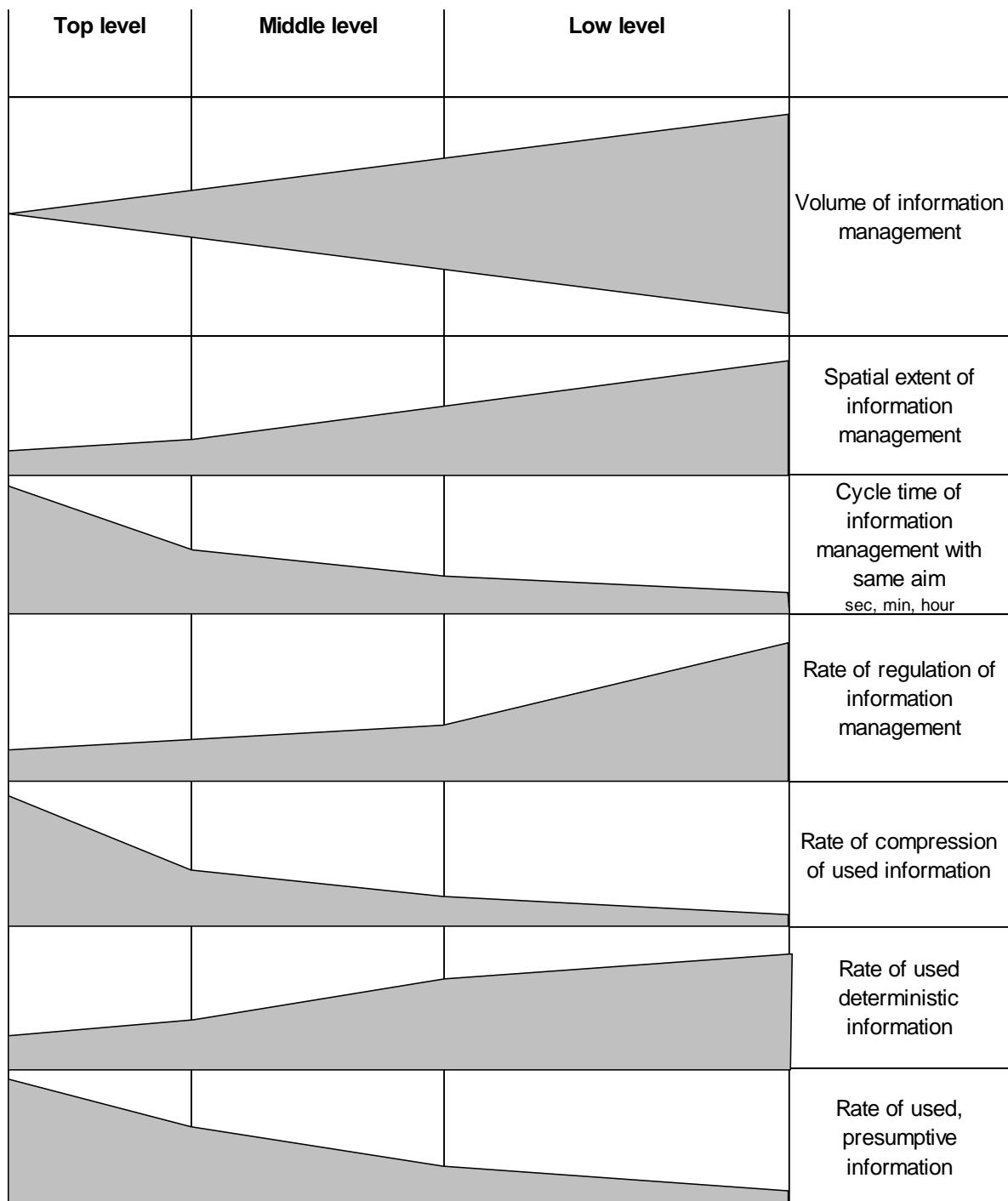
information management system=
departments + machine (ICT) systems

Proportion of timeliness of information supply on management levels

- A – short-term cycle information management
- B – middle-term cycle information management
- C – long-term cycle information management



Relative information supply characteristics of management levels



Change of the accuracy of transportation demand data

