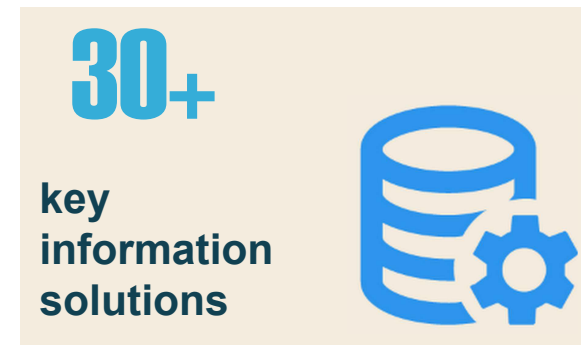REPUBLIC OF SLOVENIA
COURT OF AUDIT

IT support of the University Medical Centre Ljubljana (UMCL)

Audit report

Audit period: 1 January 2011 to 31 May 2015
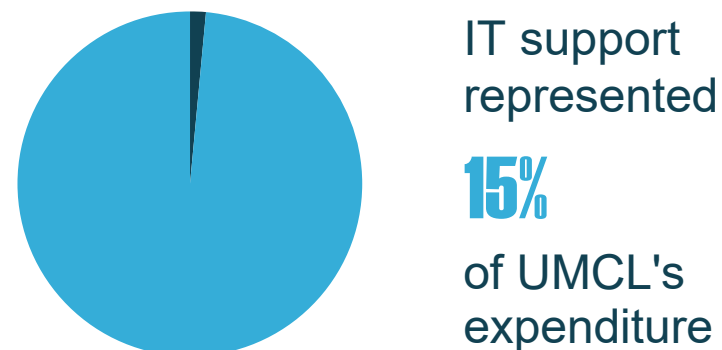
UMCL and its IT support

Scope

7,700+ employees

4,600+ medical staff

134 organisational units

24+ main locations

30+ key information solutions

Costs (average annual values in the period from 2011 to 2014)

Financial sources

Ministry of Health

€ 2.28 mio

€ € € €

UMCL

€ 6.77 mio

Share of total expenditure

IT support represented

15%

of UMCL's expenditure

UMCL and its IT support

Average annual values in the period from 2011 to 2014

2,178
hospital beds

average occupancy rate of hospital beds
68%

101,696
patients receiving hospital care

average time spent receiving hospital care
5.5 days

759,103
specialist medical treatments
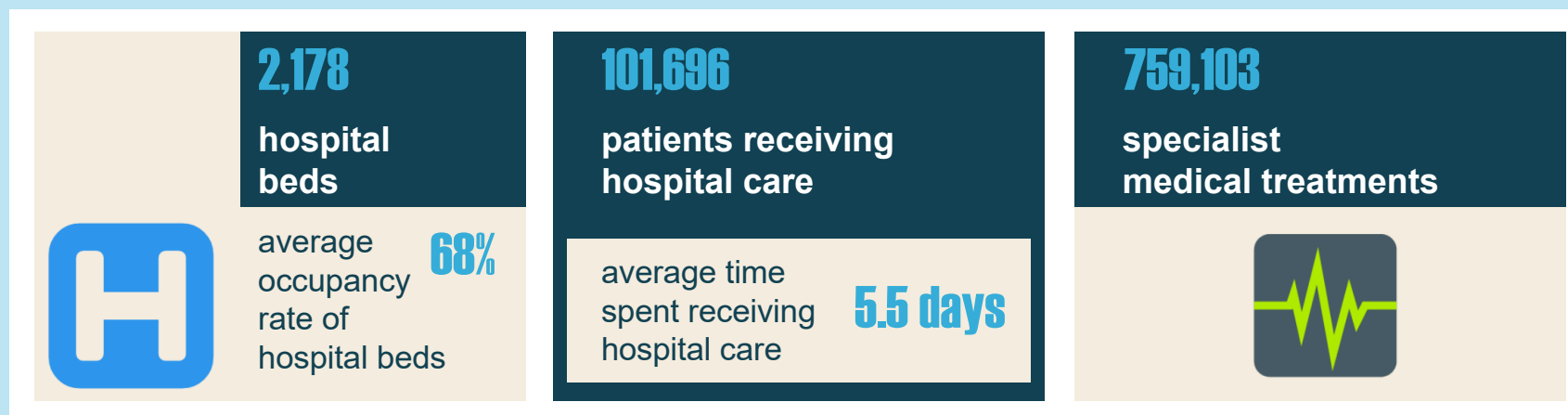
3 IT solutions supporting medical services

Hipokrat

between 2,500 and 3,500 users at 8 organisational units

BIRPIS and ISOZ21

between 2,000 and 2,500 users at 6 organisational units

Think!Med

between 1,000 and 1,500 users at 8 organisational units

IT solutions supporting medical services

Key audit findings

Interconnectivity

IT solutions of the UMCL were not connected and did not enable authorised access to data about patients.

Exceptions

IT solutions did not support services of some organisational units, therefore they developed their own additional IT solutions.

Information sharing

UMCL did not define rules about sharing information, thus IT solutions did not support information sharing even within one IT solution.

Medical documentation

Working with patients was mainly based on paper documentation.

Data

Key audit findings

National project eHealth

Ministry of Health provided health centres with electronic exchange of medical documentation.
Even though the UMCL met technical requirements, only one organisational unit joined.
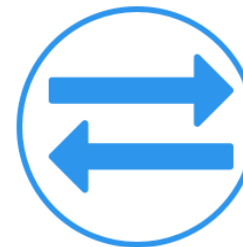
Health centres exchanged medical documentation by post or patients took care of their documentation.

Data collection

The employees had to fill in many forms manually and later had to type the data for the IT solution needs.
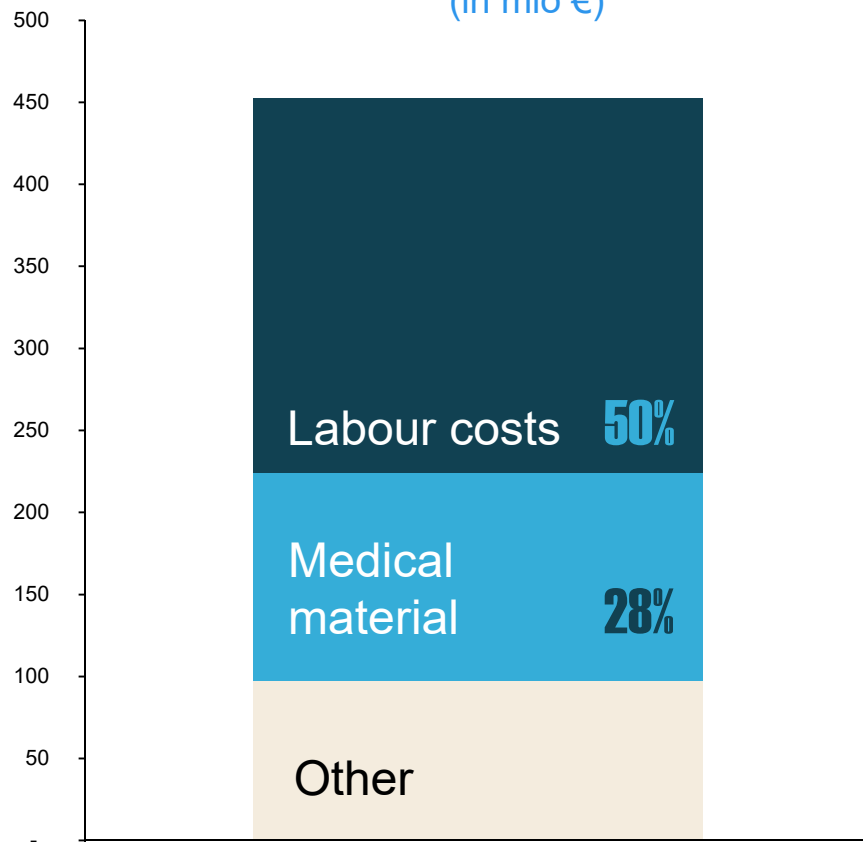
Internal data transfer

Several IT solutions did not enable electronic data exchange; therefore the employees had to type them.

Controlling costs

Key audit findings

Main groups of UMCL's expenditure
(in mio €)

- Labour costs **50%**
- Medical material **28%**
- Other

Average annual expenditure in the period from 2011 to 2014

E-records of main groups of UMCL's expenditure

UMCL used 3 non-interlinked IT solutions for recording working time.

Some organisational units recorded working time manually.

Data on working time had to be manually transferred to IT solution for accounting payments.

UMCL did not keep complete e-records of medical material per organisational unit.

Controlling costs of IT support

Key audit findings

Duplication

UMCL used several IT solutions with duplicated or similar functionalities.

Suspended solutions

UMCL purchased several IT solutions that were not used or started using them several years later or suspended them after a short while.

Copyright

UMCL ordered development of several IT solutions, while the copyrights were kept by the external providers. UMCL was therefore not able to outsource maintenance and upgrading by using public procurement procedures to reach most favourable prices.

Hardware

A part of the hardware purchase was made outside the public procurement procedure, furthermore UMCL failed to recognise who received and who used the purchased hardware.

IT security

Key audit findings

Authority

UMCL failed to unambiguously define responsibilities for IT security.

Access rights

A part of the active user access belonged to former employees or it was not possible to identify who had the access rights.

Outsourcing

UMCL failed to systematically record all outworkers (service providers) who were able to access sensitive medical data while performing their tasks.
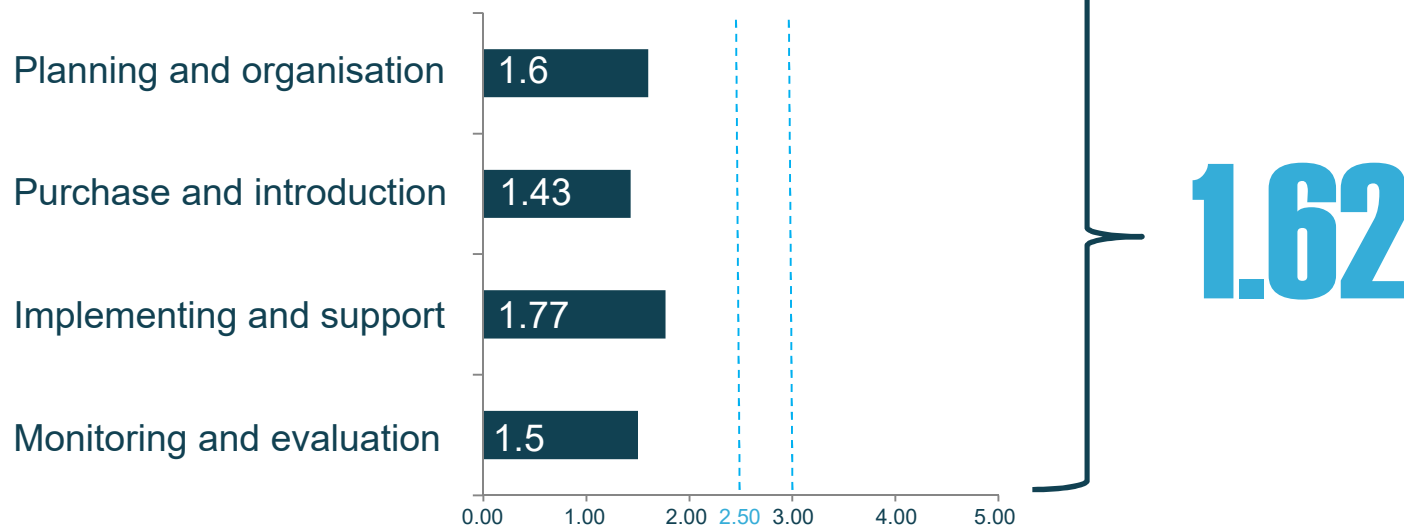
Upgrading

UMCL failed to provide for security updates and systematic upgrades of software and databases tools.

Audit opinion

Assessment of **34** processes of COBIT 4.1

Maturity model for assessing processes: scale from **0 – non-existing** to **5 – optimised**

Opinion: UMCL failed to provide the IT solutions to efficiently support its operations.

Way ahead

Key demands of the Court of Audit

Procedures

UMCL must clearly define procedures and responsibilities for strategic planning of IT support, project management, purchases and IT security.

Strategy

UMCL must plan information environment for the future, i.e. IT solutions and their integration.

Security

UMCL must improve procedures for providing IT security.

Purchase

UMCL must improve purchasing procedures of IT support, namely making contracts of high quality to protect interests of UMCL and providing transfer of copyrights to UMCL after updates being developed.