Information Technology

Infrastructure Check-Up

Table of Content

Introduction

This IT-Check provides a standardized procedure to show the management of LEPL SESA the situation regarding the state of the Information Technology within the organisation. On the basis of the developed checklist, a systematic recording of the current inventory and condition takes place.

The information necessary for the check-up must be provided by LEPL SESA. The expert evaluation is carried out by means of a traffic light display with the states green (ok), yellow (partially ok), red (not ok) and white (irrelevant). The recording and evaluation are based on a layer model.
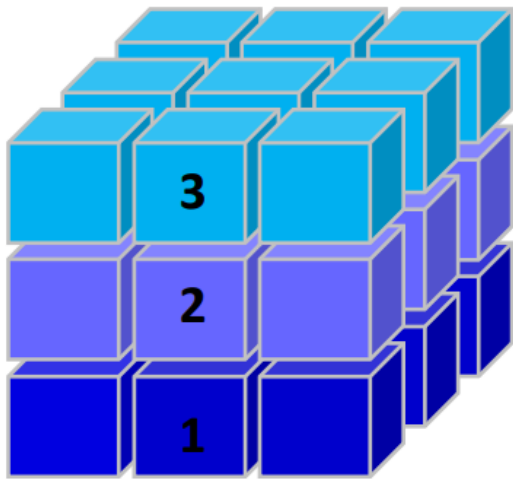
Layer 6: Subjective assessment of the IT situation by the company

Layer 5: Costs and benefits of the IT

Layer 4: IT-Security

Layer 3: Public-Employment Service specific Application Systems

Layer 2: public – sector neutral Application Systems

Layer 1: Technical Base

1 Basic data

1.1 Basic data of the LEPL SESA

SESA: State Employment Support Agency

Legal form: LEPL What does the abbreviation LEPL stands for?

Address of the Headquarter:
Chief Executive Officer (CEO):
Contact data of the CEO:
Number of Employees:
Number of Branches and Location:

1.2 IT-Organisation

Chief Information Officer (CIO):
or Chief Digital Officer (CXO)
Contact Data of the CIO:
Number of IT-Employees:
External IT-Partners and Service Level Agreements (SLA):

1.3 Current Problems in IT-Operations

Examples

- No Updates installed: xxx
- No Anti-Virus System installed
- Data Back-up not checked
- Insufficient data backup, no active-directory
- No uninterruptable power supply
- No IT-Documentation
- No emergency plan in place
- No Care Pack for Server available
- No incident management process in place
- Redundant Array of Independent Disk (RAID) System is isn`t consistent
- Low Performance
- Low Reliability
- High costs of failure

The list does not claim to be complete.

1.4 IT-Setting

- IT-Strategy:
- IT-Governance:
- Backup- / Restore Concept:
- Management of Licenses and Contracts:
- User Participation:
- Training:

2 Technical Base

2.1 Geographical situation/room safety

- Location
- Internal Security (Climate, Fire, Water)
- Access Security
- Appropriateness
- Documentation
- Traceability
- Adaptability
- Scalability
- Orientation towards future

2.2 Network Structure internal / external

- Cabling/Wiring
- Plug
- Socket boxes
- Switches
- External data connection

- Virtual Private Network
- external workstations

2.3 Computing Power internal / external Sources
- Appropriateness
- Suitability
- Security

2.4 Hardware
(Up-to-date, completeness, homogeneity, integration, consistency, Future orientation, expandability, adaptability)
- Uninterruptable power supply
- Server
- Memory Systems
- Data Protection
- Clients
- Screens
- Mouse
- Notebooks
- Personal Digital Assistant Device
- Smartphone
- Printer
- Scanner
- Photocopier
- Signature Pad

2.5 Operating System Software and Configuration of OS
(Up-to-date, completeness, homogeneity, integration, consistency, Future orientation, expandability, adaptability)
OS Provider:
- Linux
- Windows

Type of OS:
- Batch Operating System
- Multiprogramming Operating System
- Single/Multitasking Operating System
- Multiprocessing Operating System
- Real time Operating System
- Distributed Operating System
- Clustered Operating System
- Single/Multi User System
- Interactive Operating System

Version of OS
Virtualisation
Terminal Server
Web-Server

4

2.6 Authorisations- and Role Concept
(Appropriateness, Suitability, Traceability, Documentation)

- Types of Authorisations
- Types of Roles
- Rules
- Administration
- Incoming/Outgoing
- Function Change

2.7 Telephony Services
- Classic Telephony
- VOIP-Telephony
- Computer-Telephony

3 Sector-Neutral Applications/Programs

3.1 Office/Mail/Internet/Intranet/Extranet
(Up-to-date, completeness, homogeneity, integration, consistency, Future orientation, expandability, adaptability)
- Products in use
- Versions
- Services
- Trainings

3.2 Finance, Accounting, Controlling
(Up-to-date, completeness, homogeneity, integration, consistency, Future orientation, expandability, adaptability)
- Products in use
- Versions
- Services
- Trainings

3.3 Human Resources
(Up-to-date, completeness, homogeneity, integration, consistency, Future orientation, expandability, adaptability)
- Products in use
- Versions
- Services
- Trainings

3.4 Other (necessary) Applications/Programs
(Up-to-date, completeness, homogeneity, integration, consistency, Future orientation, expandability, adaptability)
- Enterprise Resource Planning System

- Supply Chain Management System
- Document Management System
- Content Management System
- Central Electronic Archiving System
- Workflow Management System
- Process Management System
- Data Warehouse/Knowledge Center
- Management Information System
- SQL-Databases
- No-SQL Databases
- ETL-Software
- Quality Management
- Risk Management
- HR Software
- Planning Software
- Controlling Software
- Management Information System Software

3.5 Sector-specific Applications

(Types of products, Versions, Services, Support, Maintenance, Training, Functional scope, existing problems, stability, performance, up-to-date, adaptability)
- Job Board
- Software Application for Job-Brokers and Counselors
- Matching Algorithm

3.6 PES-Specific Classifications

(Up-to-date, completeness, adaption to the georgian market, integration, consistency, Future orientation, expandability)
- ISCO (International Standard Classification of Occupations) by ILO (International Labour Organisation) ISCED (International Standard Classification of Education) by UNESCO
- ISCE (International Classification of Status in Employment) by ILO
- ISIC (International Standard Industrial Classification) by United Nations Statistics Division
- NACE (Statistical classification of economic activities in the European Community) by EU
- ESCO (European Classification of Skills/Competences, Qualifications and Occupations) by EU
- EQF (European Qualification Framework) by EU

4 IT-Security

4.1 Legal Basics
- Cybersecurity Law
- Data Protection Act

4.2 Other Country-Specific Foundations
- Country IT-Strategy
- IT-Architecture Directive for Public Services

4.3 International Standards and Frameworks

(Types of Standards/Frameworks, Versions, Training, Functional scope, existing problems, stability, performance, up-to-date, adaptability)

- IEC (International Electronical Commission)
- ISO (International Organisation for Standardisation)
- ITIL (Information Technology Infrastructure Library - Is the most widely recognized framework of best practices for delivering IT services. ITIL's systematic approach to IT service management helps organisations manage risk, strengthen customer relations, establish cost-effective practices, and build a stable IT environment that allows for growth, scale and change.
- COBIT (Control Objectives for Information and Related Technologies) is a framework created by ISACA for information technology (IT) management and IT governance.
- CMMI (Capability Maturity Model Integration) is a process level improvement training and appraisal program. Administered by the CMMI Institute, a subsidiary of ISACA.

   The list does not claim to be complete.

4.4 Need for Protection

Topic: Confidentiality:

- Does damage occur to customers, employees or the organization if data is not treated confidentially or Topic misused?
- Is there any data from which a third party could benefit?

Topic: Integrity

- Could falsified or incorrect data lead to serious consequences or wrong management decisions?
- Could data manipulation change financially effective data in a way that would cause financial damage?

Topic: Availability

- Would the failure of IT systems or IT applications impair the provision of services or their management?
- Does the failure of IT systems or applications result in financial losses due to delayed payments? (including loss of interest)

4.5 Risks

(Appropriateness, Suitability, Security, Traceability, Documentation, Adaptability, Future Orientation)

- Contents worthy of protection
- Risk-Analysis
- Responsibilities

4.6 IT-Security and Disaster Recovery Concept

(Appropriateness, Suitability, Security, Traceability, Documentation, Adaptability, Future Orientation)

- Firewall
- Anti-Virus Protection

- Spam Filter
- Security in the human resources area
- Instructions for IT staff and general staff
- Access Control
- Passwords
- Disaster Control
- Network Security

4.7 Further Security Measures
- IT-Security Directive
- Service Level Agreements
- Encryption
- Failure Concept
- Business Continuity Concept
- Responsibility for the compliance with relevant legal acts

5 IT Costs and Benefits

5.1 Planning and Recording of IT costs and expenses
- Investments in hardware
  - purchase of equipment
  - Leasing of equipment
- Investments in software
  - Purchase of software
  - Creation of software
  - Licence costs
- Personnel costs
  - Internal Staff
  - Training Costs for internal Staff
  - Costs for service providers
- Service Provider Costs
- System Operating costs
- Maintenance costs

5.2 Planning and recording of benefits and profitability in the IT Domain
- Planned benefit
  - Increased User Numbers (Jobseekers, Employers)
  - Increased Number of Partnerships (Employers, Training Providers)
  - Saved Resources per Jobseeker
  - Increased Availability
  - Increased Reliability
  - Improved Public Value
  - Improved Reputation
  - Improved Capabilities of the Organisation
  - Improved Robustness in times of Crises like COVID
  - Improved Future Fit
- Realized benefit

6 Subjective assessment of the IT situation by the management

- <u>Organisational setting</u>
    - o How important is the improvement of the organisational setting for you?
    - o How satisfied are you currently with the situation?

0: not important/very unsatisfied   10: very important/very satisfied

0	1	2	3	4	5	6	7	8	9	10

- <u>Technical Basis</u>
    - o How important is the improvement of the technical basis for you?
    - o How satisfied are you currently with the situation?

0: not important/very unsatisfied   10: very important/very satisfied

0	1	2	3	4	5	6	7	8	9	10

- <u>Sector-Neutral Applications</u>
    - o How important is the availability of sector-neutral applications for you?
    - o How satisfied are you currently with the situation?

0: not important/very unsatisfied   10: very important/very satisfied

0	1	2	3	4	5	6	7	8	9	10

- Public Employment Service Specific Software
  - How important is the availability of Public Employment Service specific Software for you?
  - How satisfied are you currently with the situation?

0: not important/very unsatisfied   10: very important/very satisfied

0	1	2	3	4	5	6	7	8	9	10

- PES-Specific Classifications
  - How important is the use of sector-specific classifications for you?
  - How satisfied are you currently with the situation?

0: not important/very unsatisfied   10: very important/very satisfied

0	1	2	3	4	5	6	7	8	9	10

- IT-Security
  - How important is IT-Security for you?
  - How satisfied are you currently with the situation?

0: not important/very unsatisfied   10: very important/very satisfied

0	1	2	3	4	5	6	7	8	9	10

- Relation between IT-Costs and Benefits
  - How important is the relation between IT-Costs and Benefits for you?
  - How satisfied are you currently with the situation?

0: not important/very unsatisfied   10: very important/very satisfied

0	1	2	3	4	5	6	7	8	9	10

- <u>Quality of IT-Service Providers</u>
  - o How important is the Quality of external IT-Service Providers for you?
  - o How satisfied are you currently with the situation?

0: not important/very unsatisfied   10: very important/very satisfied

0	1	2	3	4	5	6	7	8	9	10

7 Result

7.1 Evaluation of the actual status

[Wecken Sie das Interesse Ihrer Leser mit einem passenden Zitat aus dem Dokument, oder verwenden Sie diesen Platz, um eine Kernaussage zu betonen. Um das Textfeld an einer beliebigen Stelle auf der Seite zu platzieren, ziehen Sie es einfach.]

7.2 Recommendations with Priorisation

Prioritization is vital in times of resources scarcity. The Priority defines the importance of the implementation of a recommended measure. In IT- Service Model, the most common prioritization model involves understanding **impact** and **urgency**. ITIL defines impact as a measure of the effect of a change on business processes.

This **impact** could be <u>positive</u>: a return on investment or customer satisfaction such as a new feature or improvement to a product. <u>Conversely</u>, it could be very negative based on the degree of damage or cost that results. Loss of revenue, manhours, or customers following IT service downtime or poor performance are all negative effects. Usually, impact would not be expressed in absolute terms, but rather a range or degree that is subject to the interpretation of the organisation's context. This range might include:

- Number of customers/users affected
- Amount of lost revenue or incurred costs
- Number of IT systems/services/elements involved

A variety of terms helps to identify the impact, or effect implementing recommendations:

- High, medium, low
- Enterprise-wide, extensive/widespread, moderate/multi-user, individual/single user
- Critical, significant, minor

Urgency is not about effect as much as it is about time. A function of time, urgency depends on the speed at which the business or the customer would expect or want something. That might be restoring service to normal operation, or developing, deploying, and delivering a new or updated service or product. Anything that significantly affects your organisation from an operational, compliance, or financial perspective is generally more pressing than impacts on other aspects.

Priority is the intersection of impact and urgency. Considering impact and urgency offers the organisation a clearer understanding of what is more important when it comes to the evaluation of implementation need. Remember that priority is relative: it defines what actions you'll take, but these are never set in stone—they can vary as the context shifts. Correlating impact and urgency can be easily done in a simple matrix (Example below).

Priority scales are usually defined as:

- Critical/severe
- Major/high
- Medium
- Minor/low

Recommended Measures:
1. Organisational Setting:

    Impact:

    Urgency:

    Priority:

2. Technical Basis:

    Impact:

    Urgency:

    Priority:

3. Sector-Neutral Applications

    Impact:

    Urgency:

    Priority:

4. Public-Employment Service Specific Applications e.g.

    Impact:

    Urgency:

    Priority:

5. IT-Security

Impact:

Urgency:

Priority:

Graphic: Impact, Urgency & Priority Matrix

		Impact		
	Priority	Low	Medium	High
Urgency	High	Medium	High	High
	Medium	Low	Medium	High
	Low	Low	Low	Medium

Source: https://www.bmc.com/blogs/impact-urgency-priority/

Appendices
Appendix 1: Questionnaire for Managers
Appendix 2: IT inventory Hardware and Software