

**Assessing Economic Efficiency
Using
Information Technologies
in the State Universities
of Saxony-Anhalt**

Contents

- 1. IT at the Level of State Administration**
- 2. Universities as an Indirect Form of State Administration**
- 3. Grounds for Auditing and Audit Objectives**
- 4. Audit Subject**
- 5. Audit Procedure**
- 6. Audit Findings**
- 7. Conclusions and Recommendations**
- 8. Implementation**



1. IT at the Level of State Administration

State Administration in Saxony-Anhalt

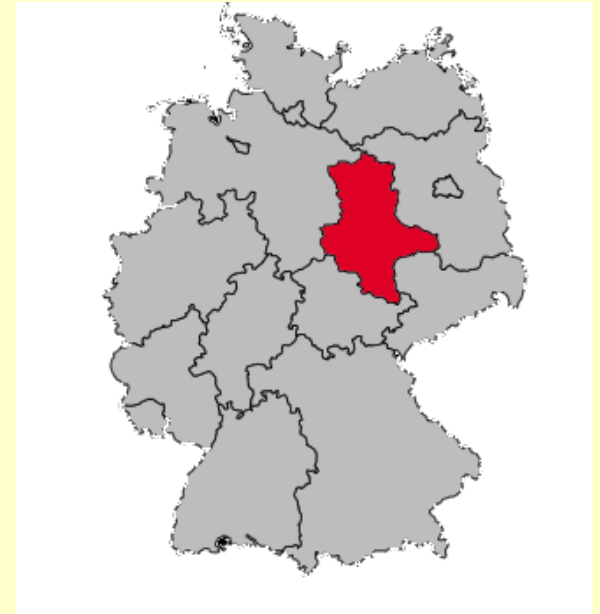
- 58,000 employees
- 25,000 IT work stations

Importance and Functions of IT

- functional IT is a necessity
- virtually every process requires IT
- state network "ITN-LSA" = life blood

• Areas of Conflict

- centralization versus sovereignty of departments
- economic efficiency versus technical opportunities
- resource supply versus resource demand



1. IT at the Level of State Administration

IT Strategy

➤ **objectives 2008**

- contribution of shared generic services through central IT service provider – state data centre
- focused and cross-departmental IT organisation
- joint IT standards and standardised workplace equipment
- central procurement

➤ **has only partly been implemented so far**

➤ **new 2012 : “Strategy Saxony-Anhalt digital 2020“**

- new data network (approx. € 243 m until 2019)
- accession to an external service provider (approx. € 800 m until 2020)

1. IT at the Level of State Administration

Budget

➤ **central allocation for the IT appropriations in state budget section 19**

➤ **sections**

- state data centre
- projects
- ministries (11)

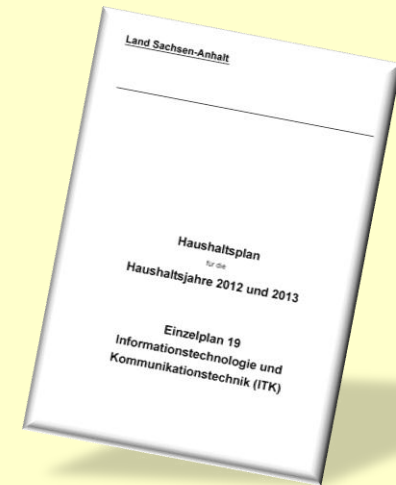
➤ **budget volume 2013: approx. € 84 m**

- excluding personnel (except data centre)

exception

➤ **decentrally estimated für instance :**

- digital police radio approx. € 8 m
- universities **? €**



2. Universities as an Indirect Form of State Administration

➤ 7 state universities

- 2 universities
- 5 universities of applied sciences

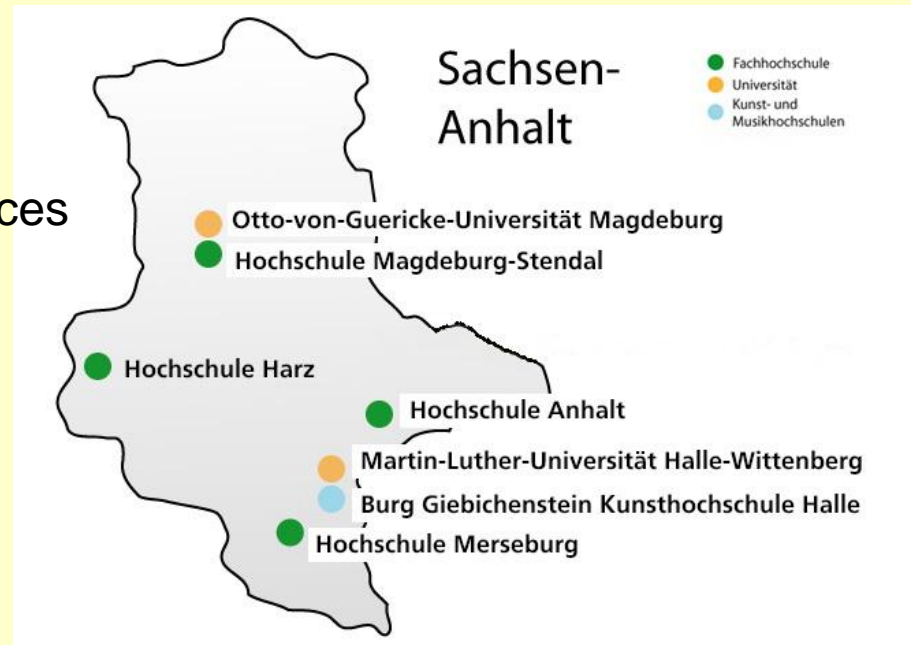
➤ approx. 55,000 students

➤ public corporations

➤ right of self-administration

➤ supervision by the ministry

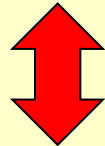
- legal supervisory ➡ matter of self-management
- professional supervisory ➡ commissioned issues



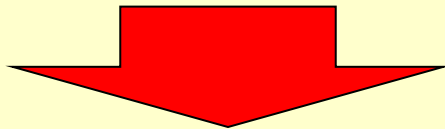
2. Universities as an Indirect Form of State Administration

Framework Conditions

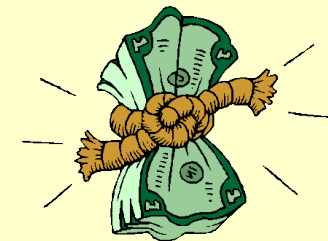
- freedom of teaching and research
- university autonomy / self-administration



- legal and professional supervisory over commissioned issues
- structural plan of the universities



- target agreements between the ministry and universities
- global budget / global grants
 - annually approx. € 285 m



3. Grounds for Auditing and Audit Objectives

Reason

- no information and data about IT use
- no budget-transparency about IT funds
- divergend procedures for :
 - planning
 - estimating
 - proof of IT funds
- no participation in the State's central IT procurement



3. Grounds for Auditing and Audit Objectives

Objectives

- **overview of the scope, the economic efficiency, the correctness and the safety of IT use**
- **identification of opportunities for improving the economic efficiency and safety of IT use**
- **findings for the involvement of universities with IT strategy of Saxony-Anhalt**
- **findings for the involvement of the ministry in the strategy and control of the IT use in universities**



4. Audit Subject

- **all of the 7 state universities**
- **IT use in sectors:**
 - rectorship / administration
 - central units
 - faculties or university departments
(not including departments of Medicine)
- **budget-years 2007 – 2009**
- **no audits:**
 - in research institutions or scientific institutions
 - in medical facilities



5. Audit Procedure

Planned Proceedings

- **2 auditors from the IT field**
- **7 months**
- **first phase (*orientation audit*)**
 - **aim: to get an overview regarding IT use by the universities**
(scope, economic efficiency, compliance, security, controlling)
with questionnaire (Microsoft Word-form via e-mail)
- **second phase (*cross section audit*)**
 - **auditing cross sections at prior selected universities**
(by interviewing using check lists, drawing random samples etc.)



5. Audit Procedure

Actual Proceedings

➤ **deviation from schedule**

- significant delays of questionnaire return
- delays because of missing information
- time consuming coordination

➤ **deviation from planned content**

- cancellation of the second phase

instead:

- auditing cross sections at all universities according to the questionnaire



Objective: Full Scale Comparison of IT Use

6. Audit Findings

Regarding the Original Position:

- IT are virtually used everywhere
- universities have spent about € 12 m per year (average) for IT, equalling about **4 %** of their budget
- only a fraction (approx. € 0.5 m of € 12 m) is disclosed in budget sections or businessplans
- the universities and the ministry in charge have little knowledge about
 - what they spent on IT incl. personnel
 - the scope of allocated IT applications and services



6. Audit Findings

Regarding Objectives of IT Use:

- **inadequate strategical planning of IT use**
- **concepts sometimes not up to date or no implementation of existing concepts**
- **IT strategy of Saxony-Anhalt not incorporated**



6. Audit Findings

Regarding the Economic Efficiency

- **matters of IT organization incl. human-resource allocation partly inefficient**
 - decentralized IT organization (data centres, administration, faculties) instead of maintaining a single operation
 - members of the faculties administer IT instead of IT specialists
 - led to higher costs regarding to education and training
 - extreme differences with regard to ratio of user assistance per student (from 1 for 165 up to 1 for 670 students)
- **rules and standards for using IT don't exist**
 - no general concept in order to set standards
 - no rules and standards for using IT
 - higher administration and procurement expenses than necessary



6. Audit Findings

Regarding the Economic Efficiency

- **no liscence management**
- **several IT structures serving one purpose**
 - universities and their faculties run multiple systems i.e. for e-mail or user-administration (example: a university maintains 8 different hard ware systems for e-mail services)
- **IT procurement partly inefficient**
 - uncoordinated procurement within the universities
 - decentral procurement of very small portions
 - benefits of framework contracts rarely utilized (cost reduction up to 50 % for consumable items)
- **missing cost-benefit analysis**
 - activities limited to choosing the lowest priced items within award procedure
 - no existing rules and controlling mechanisms



6. Audit Findings

Regarding an Adequate Controlling Mechanism

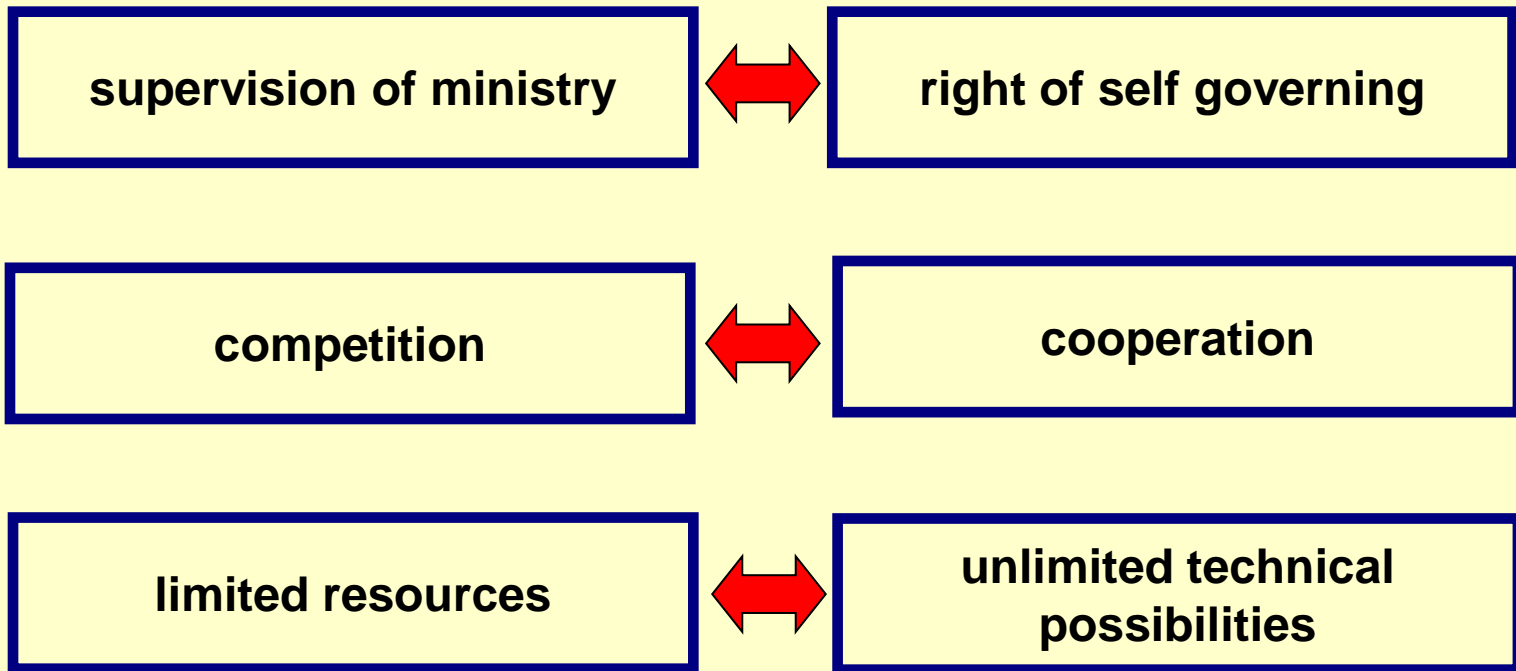
- **the responsible ministry has no sufficient control of IT use in the universities because of:**
 - lack of information
 - lack of personnel

- **coordination and moderation of universities insufficient**
 - lack of sponsoring or coordination of overall cooperation among universities
 - no information regarding IT use in state administration outside the universities
 - no proliferation of best-practice
 - no outline agreement with a federal and state institution regarding software procurement



7. Conclusions und Recommendations

➤ Conflicting Areas



7. Conclusions and Recommendations

➤ Court of Audit of the Federate State of Saxony-Anhalt recommends:

- evaluate the original position and status quo
- develop strategies and redefine your concepts
- utilize potential within and among universities by
 - setting standards and optimizing current IT facilities
 - internal consolidation of IT use
 - cooperation (shared-service facilities, benchmarking)



There is significant potential for enhancing economic efficiency!

7. Conclusions and Recommendations

➤ Court of Audit of the Federate State of Saxony-Anhalt recommends:

- use a single standard to disclose the entire sum of IT expenditures
- the ministry has to coordinate and manage the IT use among the universities
- comparable and accordingly similar IT structures among the universities have to be implemented



The results of this audit as well as our recommendations have been published in our Annual Report of 2011 - Part One

8. Implementation

➤ **the universities have expressed their commitment to:**

- expand cooperation in order to optimize IT use by:
i.e. sharing experiences, services and procurement
- develop strategies and redefining current IT concepts
- change the way, how IT is being administered by:
i.e. (partly) reorganization, internal consolidation and benchmarking



➤ **the ministry has agreed to :**

- use a single standard to disclose the entire sum of IT expenditures in future budgets
- establish a joint task force together with the universities in order to find solutions regarding
i.e. data security, cloud computing, storage, hard and software virtualization
- integrate the science departments to gather necessary know how

Thank you for your attention!

