

# External consulting in public sector IT projects - Key questions and problems -

Lessons learnt in twenty years of IT auditing  
by the German SAI

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**1. Point of departure:  
IT use by German federal administration**

# Point of departure: IT use by German federal administration

Quote from the budget documents of a federal government department:

**“In recent years**

- the degree of IT integration in operative functions**
- the intensity of IT support**
- the connectivity between workplaces at branch offices and headquarters**
- information density**
- but also the dependence of stable operation and the high quality of IT systems**

**have steadily increased”.**

# General structure of IT use by German federal administration

- 15 departments (ministries) with a total of 435 agencies
- Staff: 211,000 (137,140 civil servants, 73,875 employees (without Armed Forces and Federal Employment Agency))
- Total expenditure in 2007: about € 260 billion
- Expenditure under title group 55 (=IT) : about € 2 billion  
further IT-related expenditure of an unknown amount is believed to have been stated under budget titles referring to building projects and operative functions
- **Level of IT equipment** (early 2007)
  - Departments (without Defence): 140,000 PC
  - Ministry of Defence: 135,000 PC
  - Federal Employment Agency: 95,000 PC
  - in the federal departments nearly 100 % of all workplaces
  - in the subordinated agencies more than 90 %
  - since 1999 fully networked (relocation of seat of Government and Parliament from Bonn to Berlin)

## Audit findings generated by the German SAI on general structural IT problems of German federal departments and agencies

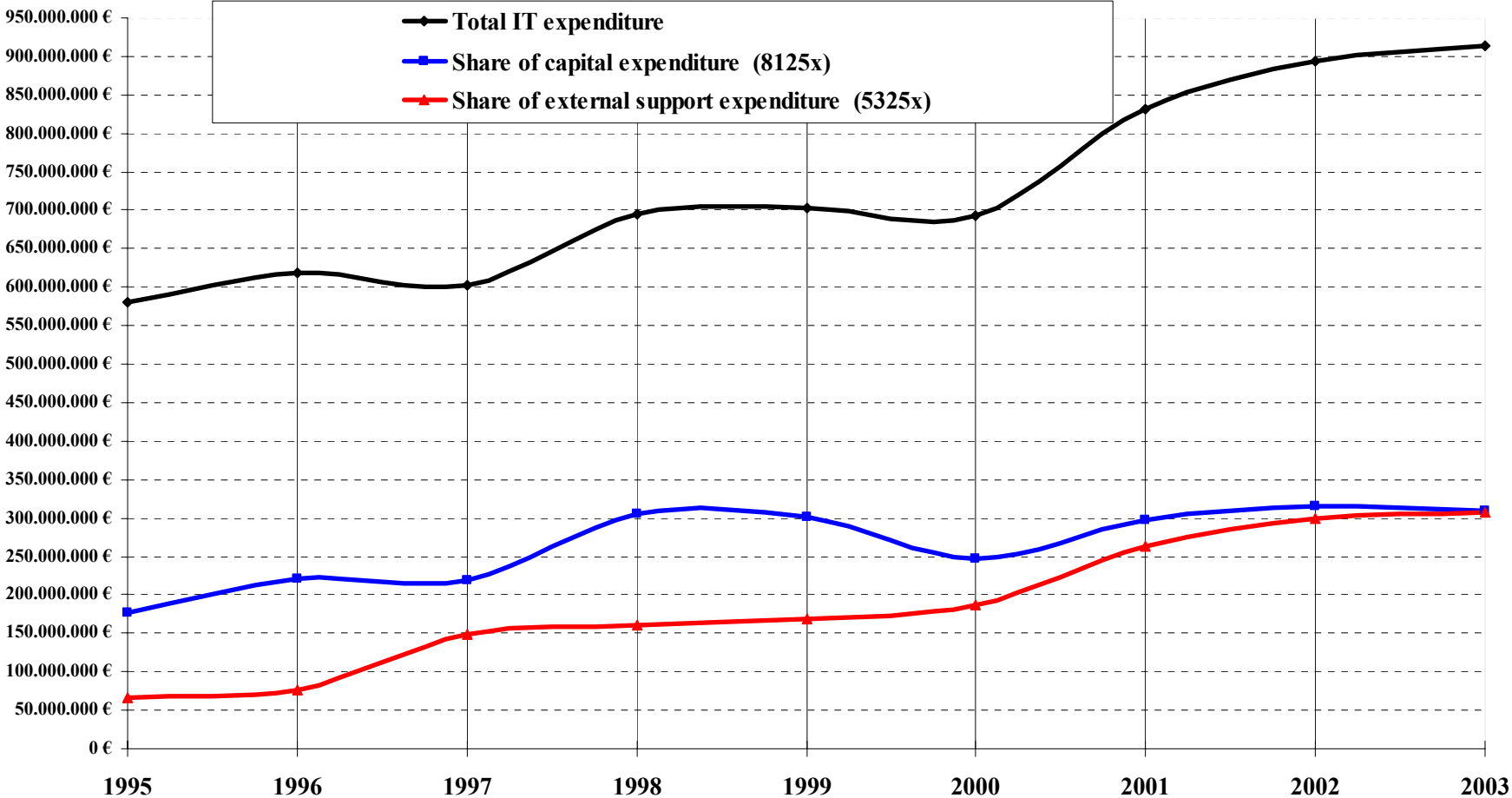
- IT services have become vital for government operations and transactions but
  - for many years, IT applications and structures have evolved as isolated solutions with an exclusive focus on the department or agency in question.
  - The ‚patchwork‘ grown over time had to be coordinated as compatibility problems of the applications and large number of (unused) functions resulted in a lack of acceptance and in ‘frictional loss’
  - System integration has become ever more important for suppliers and service providers but above all for the purchasers

## Audit findings generated by the German SAI on general structural IT problems of German federal departments and agencies

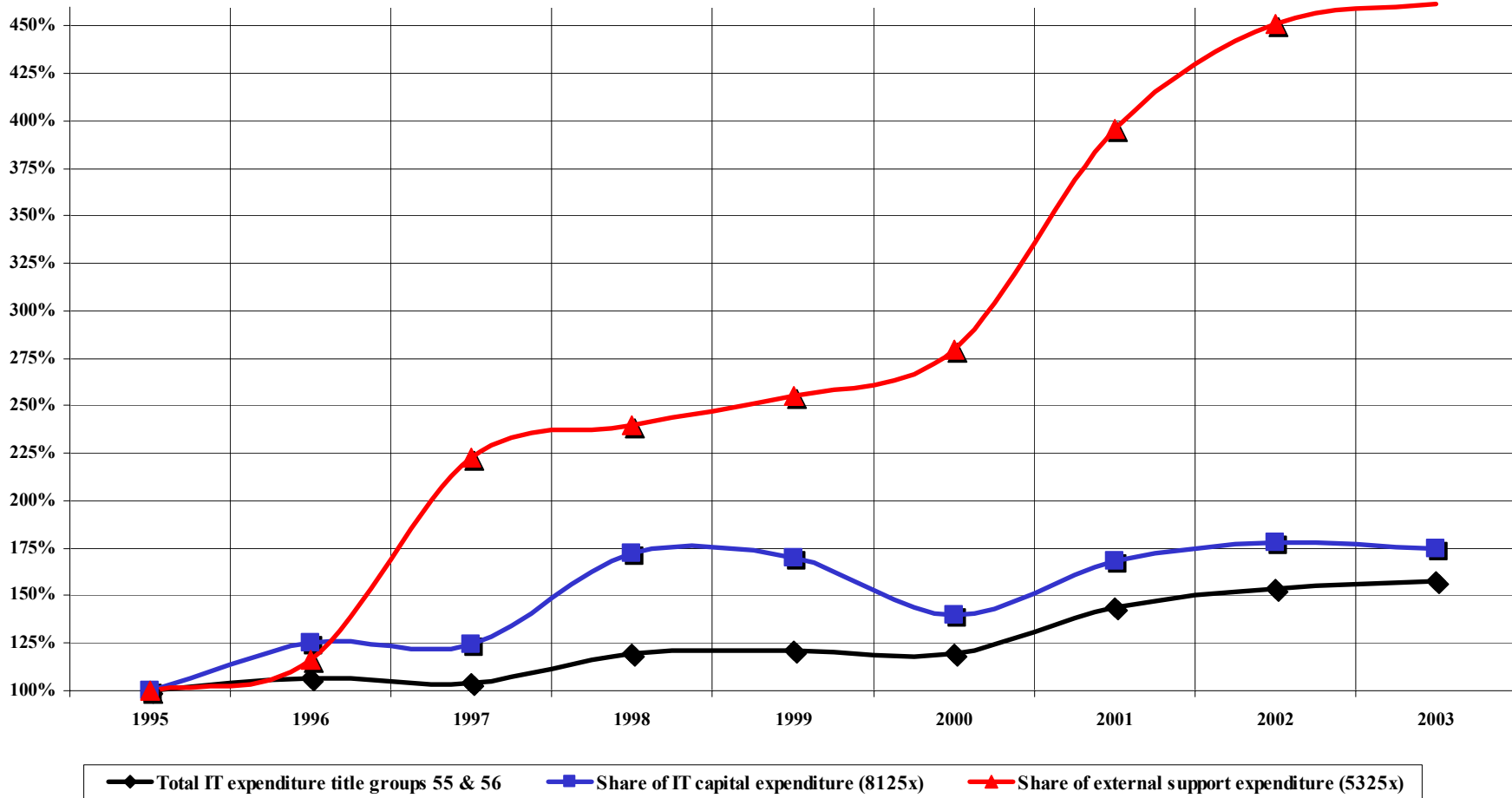
- 90% of the IT budget have been definitely allocated to operation and maintenance
- Problems of IT-related staffing
  - often quantitatively and qualitatively inadequate for meeting current requirements
  - number of posts is insufficient or posts are vacant
  - difficulties with recruiting adequately skilled staff

Approach to a solution: use of external staff (?)

# Trend of federal IT expenditure (I)



# Trend of federal IT expenditure (II)



# Key problems of major IT projects run by the German federal administration

# German SAI: Recurring problems and factors critical to the success of IT projects (II)

- **Clear project mission / (sensible) project objectives**
  - content, use of resources, value added
  - specific requests / compromise with the biggest common multiple
  - deadlines set first without stating how to accomplish the objective
  - staff with operational responsibilities was not asked / did not clearly state their preferences,
  - no investment appraisal
- **Controlling, Risk management**

Excess implementation period: (Given ever shorter innovation cycles, major IT projects are subject to the risk that specifications laid down initially are soon outdated and obsolete)

## Management consultants: recurring problems - factors critical to the success of IT projects

Further problems emphasised by management consulting firms:

- Management of external resources
  - required in-house skills
  - expertise on procurement and contract-awarding procedure
  - steering expertise,
  - later transfer of expertise
- Change request procedures and management (*“skills hardly found in the public sector”*)
  - inadequate computer literacy
  - experience with suppliers
  - experience with legal practices

## Audit results generated by the German SAI on problems with the availability of staff

problem: **Qualification of project team** (qualification and skills required)

- **Project staff do not have adequate skills**
- **Project leader does not have any solid experience**
- **Staff are not released from their previous functions**
- **Staff assigned to the project for different periods**
  
- **Successful support by a coach would have required intensive participation, steering and acceptance of the services delivered**
- **Lack of a clear strategy about skills needed in-house**
- **Transfer of consultants' expertise not stipulated in an extra contract**

# On the importance of external consultancy for public-sector IT projects

# German SAI: Recurring problems and factors critical to the success of IT projects (I)

- Point of departure: increasing complexity of and necessary input for the implementation of projects owing to:
  - higher quality requirements
  - widening scope of functions to be performed
  - more parties involved
  - existing IT systems to be taken into account
  - stronger integration into other IT systems
- Conflicting project objectives
  - performance
  - time
  - resources

# Definition of “external consultancy”

- So far, no generally valid definitions for the German federal administration

“Experts“ (Budget title 526.2)

“Support services“ (Co-ordination and Advisory Agency of the Federal Government for Information Technology)

- Other terms with multiple underlying concepts
  - assessor,
  - business advisor,
  - consultant,
  - coach

# Definition of “external consultancy”

German SAI's definition (2005) agreed with Fed. Ministry of Finance

## **“The subject of external consultancy is**

**– the provision of a service against remuneration**

**– with the objective of**

**– developing,**

**– assessing and**

**– imparting to the decision-makers**

**• practical recommendations**

**• with respect to concrete decisions to be taken**

**• by the contracting authorities**

**– and, where appropriate, to provide further advice during implementation“**

- Recipients of the service: federal departments and agencies, QUANGOS, grant recipients
- Service provider: a natural or legal person active outside this field
- The following is not part of consultancy: Answers to questions relating to current administrative operations, experts' opinions on matters of research promotion, scientific reports, consultancy ex-post

## Main stages of consultancy

**Based on the German SAI's audits experience, consultants are primarily relied on in the following stages of IT projects:**

- identification of requirements**
- drawing up of specifications**
- valuation / estimates of costs and expenditure**
- negotiations with contractors**
- change request procedure**
- review and revision, risk assessment**
- test, acceptance**

# Good reasons given by the administration for reliance on consultancy services

- Accelerated funding: funding for “procurement” is easier to obtain than funding for hiring staff
- Time savings: - Better chance of project approval, if time constraints are imposed
  - faster implementation
  - overcoming internal conflicts
- External legitimating, enhancement of prestige
- Other options, new ideas
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- Rare: Trouble shooter

Audit findings generated by the German SAI on general IT-related staffing problems in German federal departments and agencies

repercussions of the increasing use of external staff

- company staff are used for long periods of time to perform inherently administrative functions
- trend to contract out even sophisticated and conceptual IT functions to private sector
- in the IT field, external staff permanently perform functions of ever-increasing importance

# Repercussions of general IT-related staffing problems in the German federal administration

Consequences of use of external staff in order to evade staffing problems

- High and increasing dependence on external expertise in an environment of rapid technological change
- Departments and agencies increasingly lose the ability to assess and act upon emerging issues

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Declining budgets, increased cost pressure and shortage of staff resources increasingly restrict the scope for government action.

# Shortcomings found by the German SAI concerning the use of consultants

## General:

- reliance on consultants also for core functions
- inadequate competence for controlling

## Major error-prone stages:

- planning of use of consultants: need?
- performance (value for money)
- contract award procedure
- project results evaluation
- implementation and use of results

## Further audit experience in connection with the implementation of results generated by consultancy

- In a number of cases, the German SAI has had doubts as to whether results generated by consultancy
  - had the intended effect or
  - were suitable for serving as a basis for decisions  
(criterion: successful necessary consultancy should have a clear influence on further action, current and future decision-making)
- Verification by scientific study in the public sector :
  - feasibility of problem solution is most important criterion for selection (80%), but is met in only 50% of the cases reviewed
  - proposed solution implemented only “to a small extent”; in nearly one third of the cases consultants had to remain active during implementation
  - the expected know-how was transferred in only two third of the cases reviewed

# Summary and outlook (2)

(Core) functions that should be reserved to the public sector *(Hoch i.a. 2005)*

- **IT strategy**
- **IT portfolio**
- **IT architecture**
- **IT standards**
- **IT controlling, reporting**
- **IT procurement**
- **Management of IT interfaces**

# **Key issues for relying on external consultants for public- sector IT projects**

# **Factors critical to the success of and measures necessary in connection with the use of consultants for IT projects; "Key points" formulated by the German SAI with respect to the use of external consultants**

- 1 Definition of problems and objectives**
- 2 Necessity of consultancy**
- 3 Performance (value for money)**
- 4 Specification of requirements**
- 5 Award of contract for consultancy services**
- 6 Working out of contractual provisions**
- 7 Monitoring, steering and acceptance**
- 8 Implementation of the results generated by consultancy**

# *(1) Describing the problem and setting the objective*

- To address a problem, the administration should accurately analyse and determine
  - the current situation,
  - the objective to be accomplished and
  - the difficulties emerging or identified in achieving the objective.
- The German SAI's audit findings highlight the fact that,
  - on the whole, the decisions about the use of external consultants are too rarely based on a sound and sensible analysis of the problem
  - Objectives and criteria were not determined in a way permitting project evaluation.

## *(2) Examine the need for the use of consultants*

- Before considering the award of a contract to external service providers, the administration should critically examine whether it can perform the service itself.
- Audit findings generated by the SAI:
  - **In many cases, departments and agencies give reasons for the use of consultants that are not directly connected with the problem to be solved, e.g.**
    - “Opening up other perspectives“ or**
    - “Better way of convincing the policy-making level of the validity of results [generated by third parties on which action should be taken“.**
  - **Such reasons often were more important than the need to compensate for a lack of professional or technical expertise.**

### ***(3) Identify performance (value for money)***

- **In the course of an investment appraisal, all alternative options need to be stated and evaluated.**
- **The Bundesrechnungshof found that,**
  - **preliminary to awarding contracts to external consultants, investment appraisals, necessary tools for verifying compliance with the requirements of efficiency and effectiveness, have rarely been carried out.**
  - **There are the following alternatives to commissioning external private-sector consultants**
    - **apart from performance of the service by the department or agency itself**
    - **e.g. support by internal consultancy teams of the public administration from**
      - **the own government department or**
      - **another government department.**

## *(4) Unambiguously describe service to be performed*

- **If the external consultant is the most cost-effective option, the administration has to unambiguously and comprehensively describe the consulting service to be performed.**
- **Findings of Bundesrechnungshof**
  - **If the administration itself is not capable of describing the service required, this is evidence of the fact that the project is not yet suitable for calling in external expertise.**
  - **Where the department or agency in question is not able to describe the problem to be solved or – as frequently observed – needs a third party to describe the problem, it is not able to verify whether a specification of requirements drawn up by the external consultant actually meets the demand of the department or agency.**

## *(5) Publish an invitation for bids for the service*

- **As matter of principle, a public invitation to bid must be issued and, where appropriate, such invitation has to be published throughout the European Union.**
- **A contract award by negotiated procedure is admissible in few exceptional cases only.**

**but**

- **In most of the cases audited by the German SAI, contracts for consultancy services were awarded without competition.**

## (6) *Word contracts unambiguously*

- **Contracts must be worded so as to ensure that the content and timing of the service are described unambiguously in a way permitting verification.**
- **Prior to awarding a contract for consultancy services, there should be full understanding about the essential contents of the contract.**
- **This includes the description**
  - **of both the service to be provided and**
  - **of the results aimed at.**
  - **Sound evaluation criteria and milestones defined in detail should be available at an early stage.**

## *(7) Monitor, steer and accept service*

- **By appropriate monitoring and steering of the consultancy activities, the administration can make a substantial contribution to their success.**
- **The results generated by consultancy have to be accepted on a timely basis in order to safeguard the possibility of claiming damages for breach of contract or poor performance.**
- **The Bundesrechnungshof has found that**
  - **only in a few cases did the administration adequately monitor and steer the consultancy projects;**
  - **the acceptance of the service was frequently delayed.**
- **Ambiguous specifications such as “support of the contracting authority with ... “ or “... will be available as consultant beyond that period“ hamper an effective monitoring of service provision. They are no appropriate basis for accepting the service.**

## *(8) Carry out final programme results evaluation*

- **A reliable and transparent project results evaluation should be carried out on concluding the consultancy project.**
- **In many cases, the results evaluations required under budgetary law were non-existent.**
- **The German SAI often had doubts as to whether results generated by consultancy had the desired effects or whether they were used at all as a basis for decision-making.**
- **On balance, budget funds were spent on consultancy work whose results added no or little value; due to omitting the final results evaluations, no lessons were learnt to prevent deficiencies in future similar cases.**

## **(9) *Document entire procedure***

- **The administration needs to transparently document each successive step from the description of the problem via the verification of needs to the implementation of the results generated by consultancy.**
- **This is a must for project results evaluation.**
- **In the course of its audits, the German SAI frequently found inadequate and incomplete records.**
- **Comprehensive documentation avoids duplication and provides essential information for the staff assigned to an IT project later on and for the planning of future projects.**

# Summary and outlook

## Summary and outlook (1)

- **The use of consultants may effectively support administrative activities in cases where problems cannot be solved inhouse.**
- **The extent to which external consultants are used will continue to increase, especially in the case of major IT projects.**
- **Nevertheless, the risks and potential errors are as manifold as the possibilities for making use of external expertise.**
- **The decisive factor is the ability of the contracting authority,**
  - **to identify its needs**
  - **to monitor the provision and success of the service purchased**

## Summary and outlook (3)

- **Consultancy services are not a commodity whose choice is merely governed by its price (as in the case of hardware or IT infrastructure services).**
- **An essential factor is the awareness of the decision-makers that the principles of economy and efficiency also apply to the use of external expertise (need, efficiency, competition, evaluation of results).**
- **Alternative options would be service centres within the administration having the necessary special skills and expertise needed to cover the entire remit of a department or even performing cross-cutting functions.**