Why Mozart is going broke and Beethoven is not

And what we can learn from system theory about it

Eurosai Seminar 2009

Agenda

Case study

- Background
- Audit Question
- Sub-questions and Tasks
- Organizational Issues

Theory

- Basics: System Theory
- Construct your Reality
- Manage Complexity
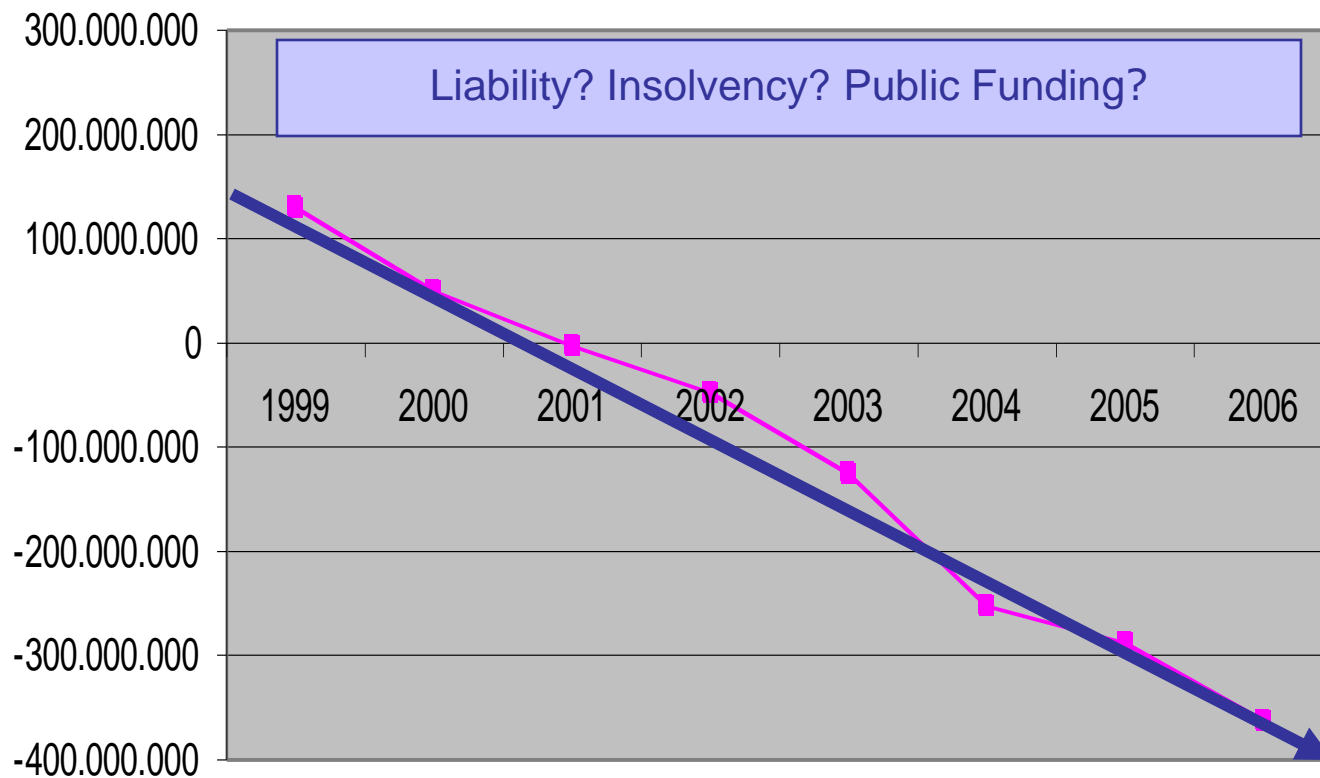- "Integration" of Auditee

"Brain Teasers"

Legal Background

- Mozart and Beethoven are **health care** institutions that operate under the **same legal regime**

- **Membership** is obligatory, Percentage of **income** paid for insurance is regulated by federal legislation

- **Level of Service**: Management buys "necessary and appropriate" services from doctors and pharmaceuticals

- **Management elected** by those who pay (Employees and Employers)

- **Government as "watchdog"** - can take over management in case of abuse
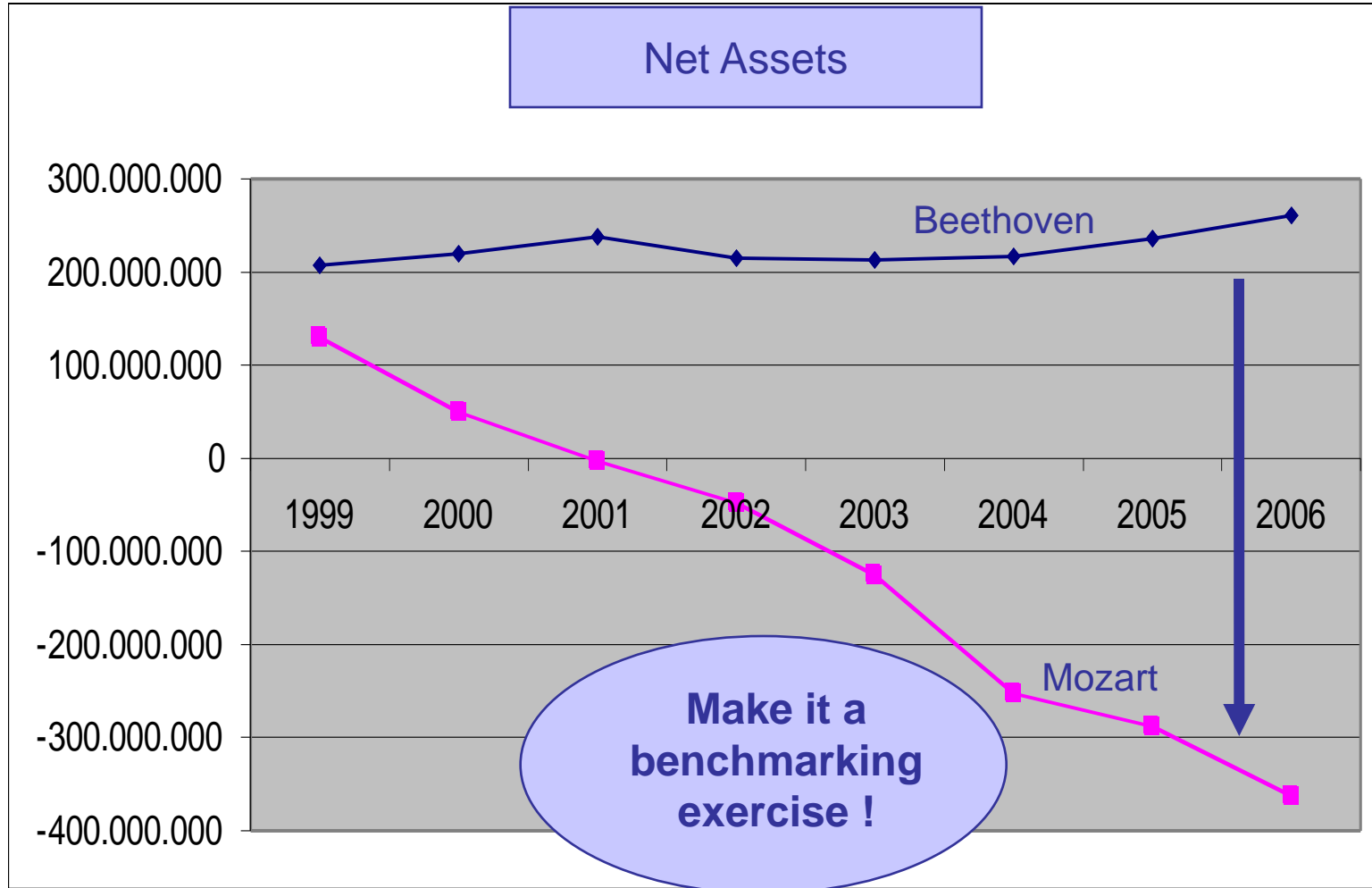
Economic Background

Net Assets Mozart

Liability? Insolvency? Public Funding?

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |

(Chart y-axis: 300.000.000 to -400.000.000)

Prior audits

- **4 prior audits** (2 by CPA, 2 by a ministry)
- **No conclusive result**
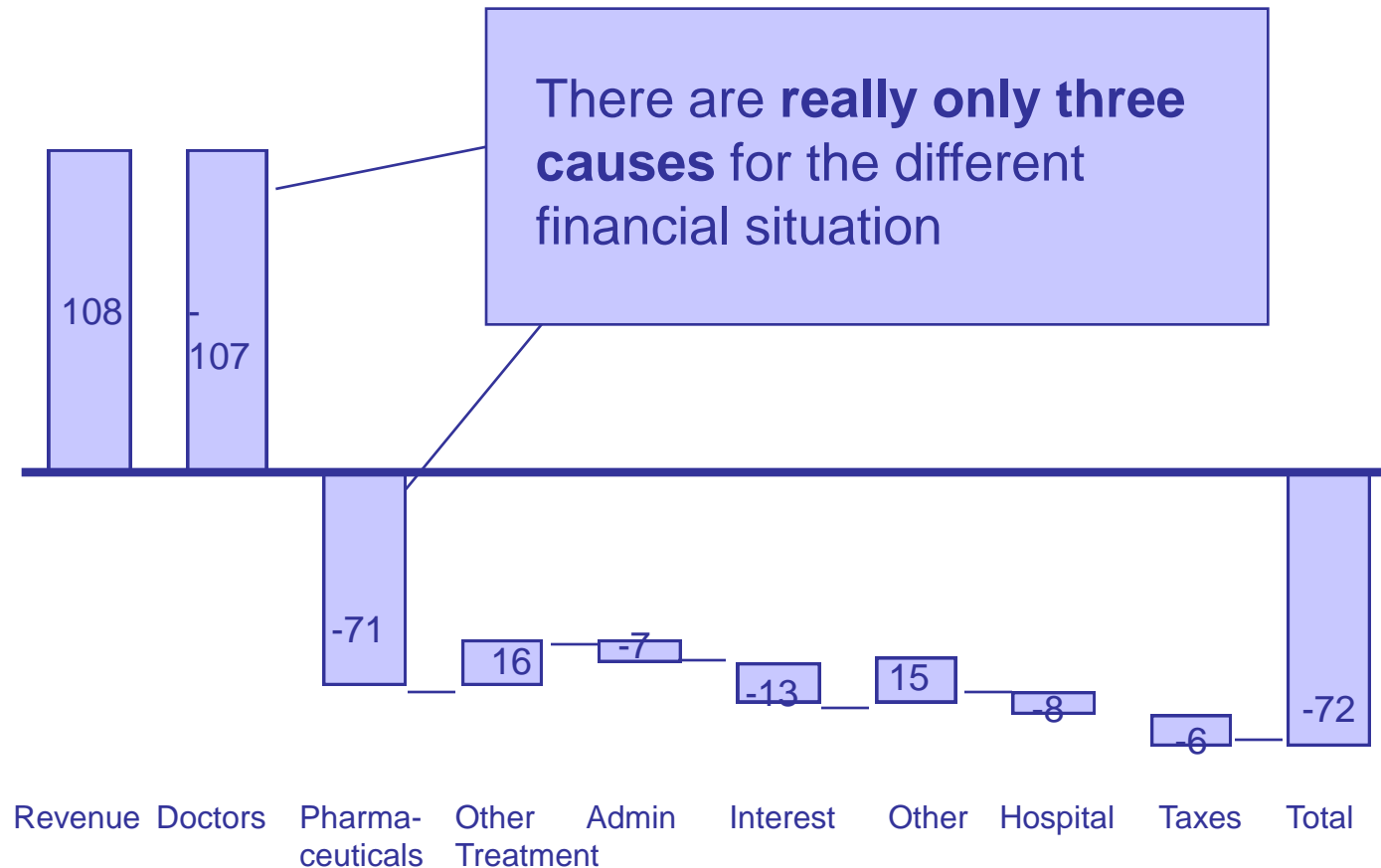
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# How to phrase the audit question?

Define a benchmark

Net Assets

Beethoven

Mozart

Make it a benchmarking exercise !

Define main levers

Delta Mozart to Beethoven in EUR per Caput

There are **really only three causes** for the different financial situation

| 108 | -107 | -71 | 16 | -7 | -13 | 15 | -8 | -6 | -72 |

Revenue Doctors Pharma-ceuticals Other Treatment Admin Interest Other Hospital Taxes Total
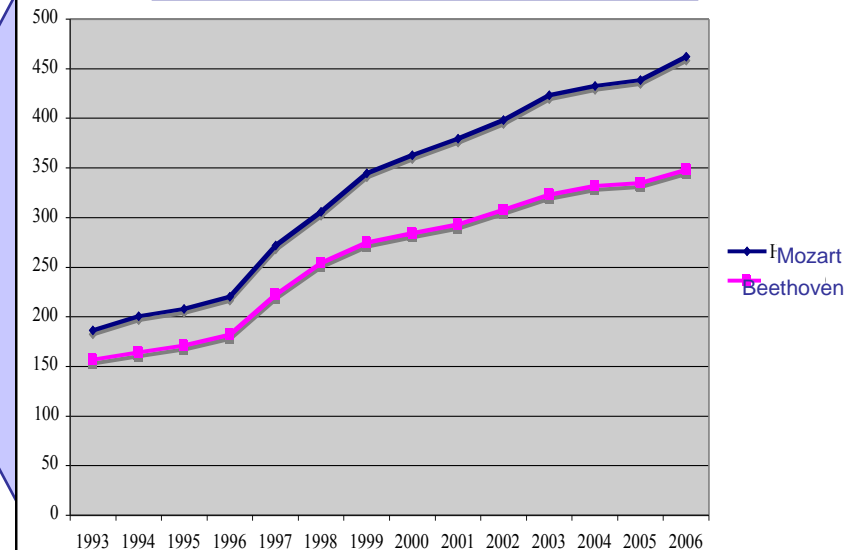
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Look at relative change

Relative Change - not structural difference, not historical change, but difference in change

Doctors
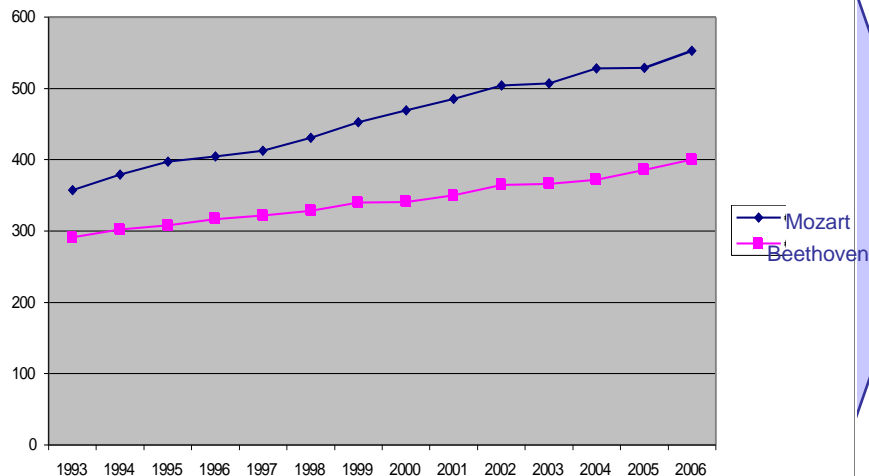
Pharma

Sub-Questions and Tasks

Complex Analysis, simple communication

Communicate: simple price comparisons

effect

Non linear Analysis

- **Including price, quantity and structural effects**

- **Selection of detailed objects of analyses**

Radiology
- CT/MR:
M: 105/155 EUR
B: 97/129 EUR

5,4 Mill EUR

Eye specialists
- Tonometrical Diagnosis:
M: 9,60
B: 2,74

2,4 Mill EUR

General
- Written reports:
M: 14,08
B: 5,80 - 6,60

10 Mill EUR

Internal Medicine
- Ergometrics:
M: 67
B: 45

1 Mill EUR

Clear Logic Trees

Delta Mozart/Beethoven in EUR/Person insured

•EUR/Person

77 EUR*

•„Normal" Illnesses

51

•„Special" Illnesses

26
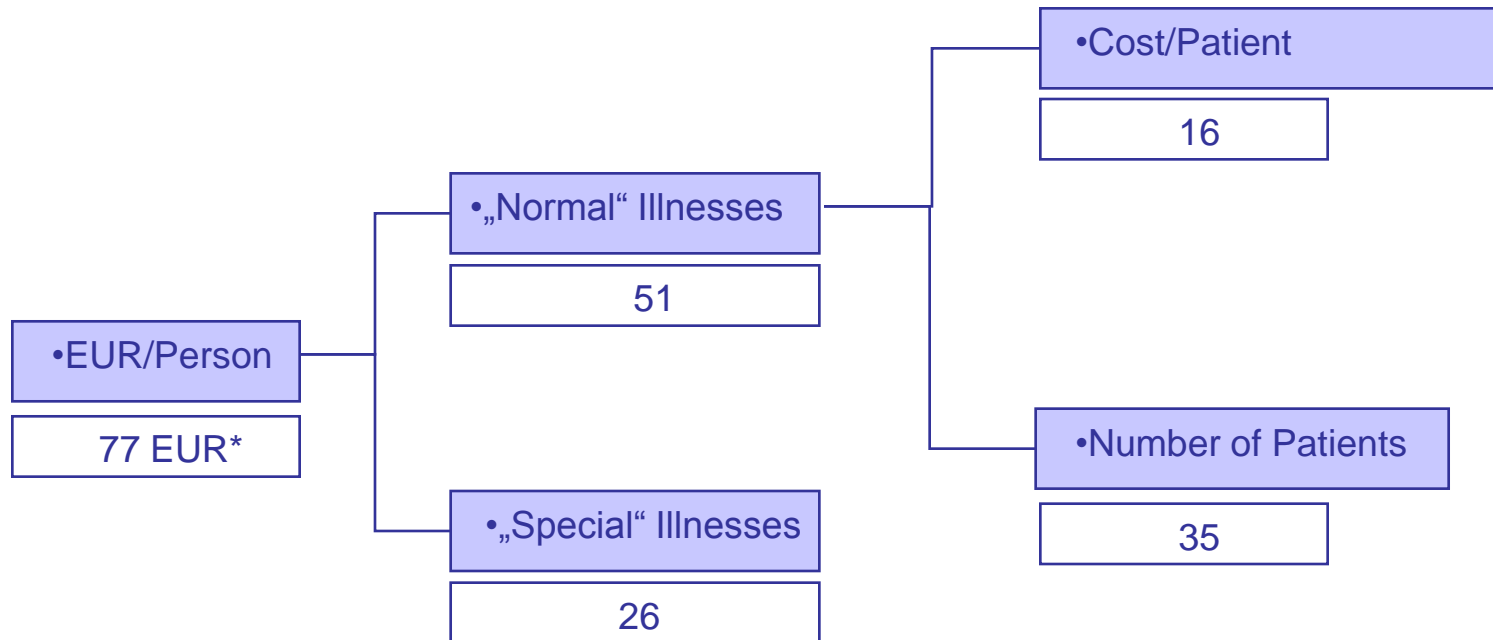
Drug Abuse (6,34); HIV
(5,93); etc

•Cost/Patient

16

•Number of Patients
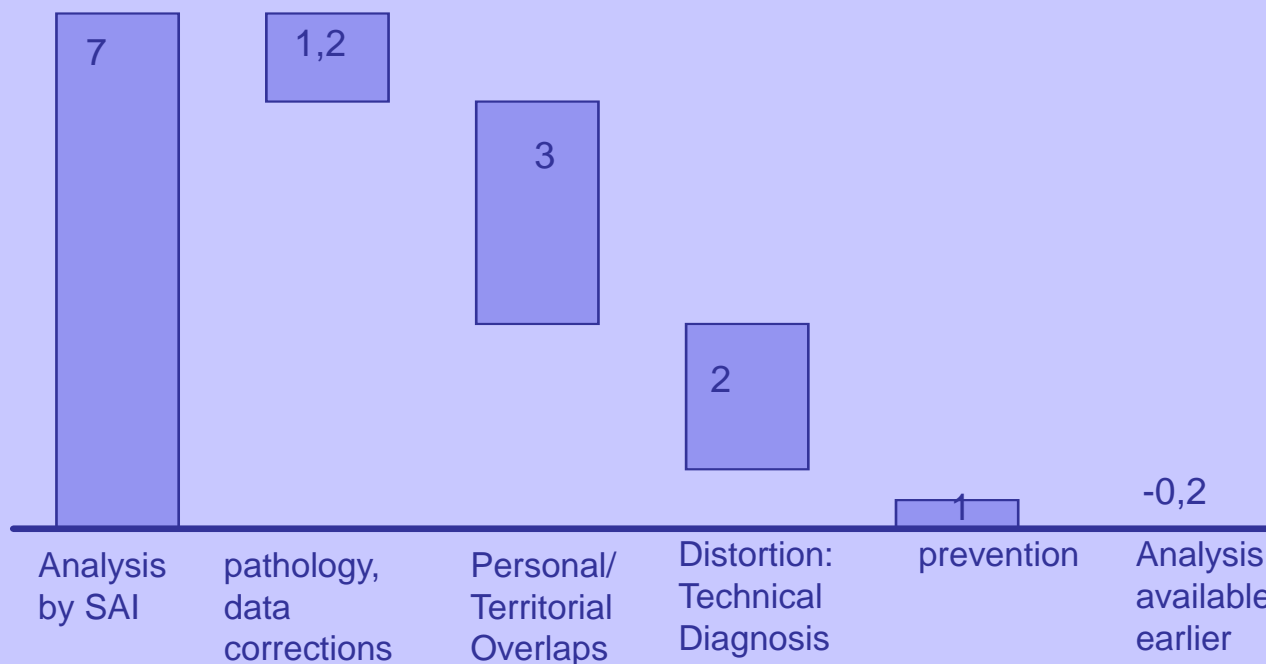
35

"Client Relationship" - Organizational Factors

•**Building rapport**: we included legislative measures that worsened the situation of both auditees => "we can help you, not just blame you"

•**Using rapport**: The technical expertise of both auditees was decisive for the detailed analyses => (Team member, sounding board vs. "just" auditee ?)

•**Integration and Empowerment**: health economics departments of both auditees not only cooperated but actively delivered conceptual input to the model

Why everybody was wrong before

logical rigor, **independence** (don't assume prior analyses are correct)
integration of auditee expertise

Difference between prior analyses of stakeholders and our analysis in EUR/Case

7	1,2	3	2	1	-0,2
Analysis by SAI	pathology, data corrections	Personal/ Territorial Overlaps	Distortion: Technical Diagnosis	prevention	Analysis available earlier

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System Theory Basics

System Theory: Essentials
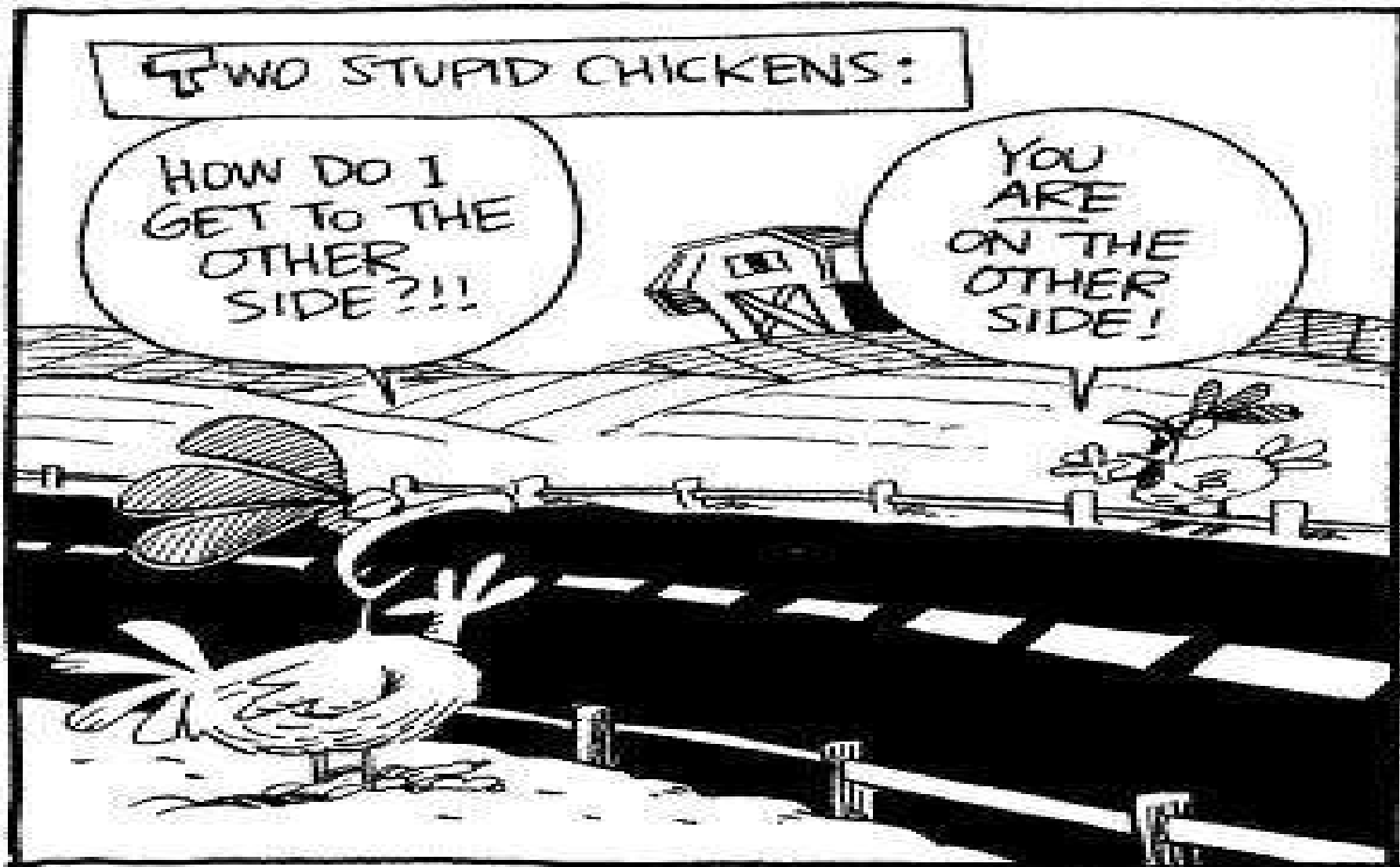
What theory tells us

- **Circularity vs. direct causality:** humans are path dependant (if I tell the same joke twice...)

- **Constructivism - who looks at an issue is relevant** („An Austrian says all Austrians are lying...")

- The **system defines its own reaction** (kick a stone, kick a dog)

- **Communication** is not „done", it **„happens"** - cooperation sender and receiver required

- **There is no static equilibrium** - find the sand corn that makes the scales tip
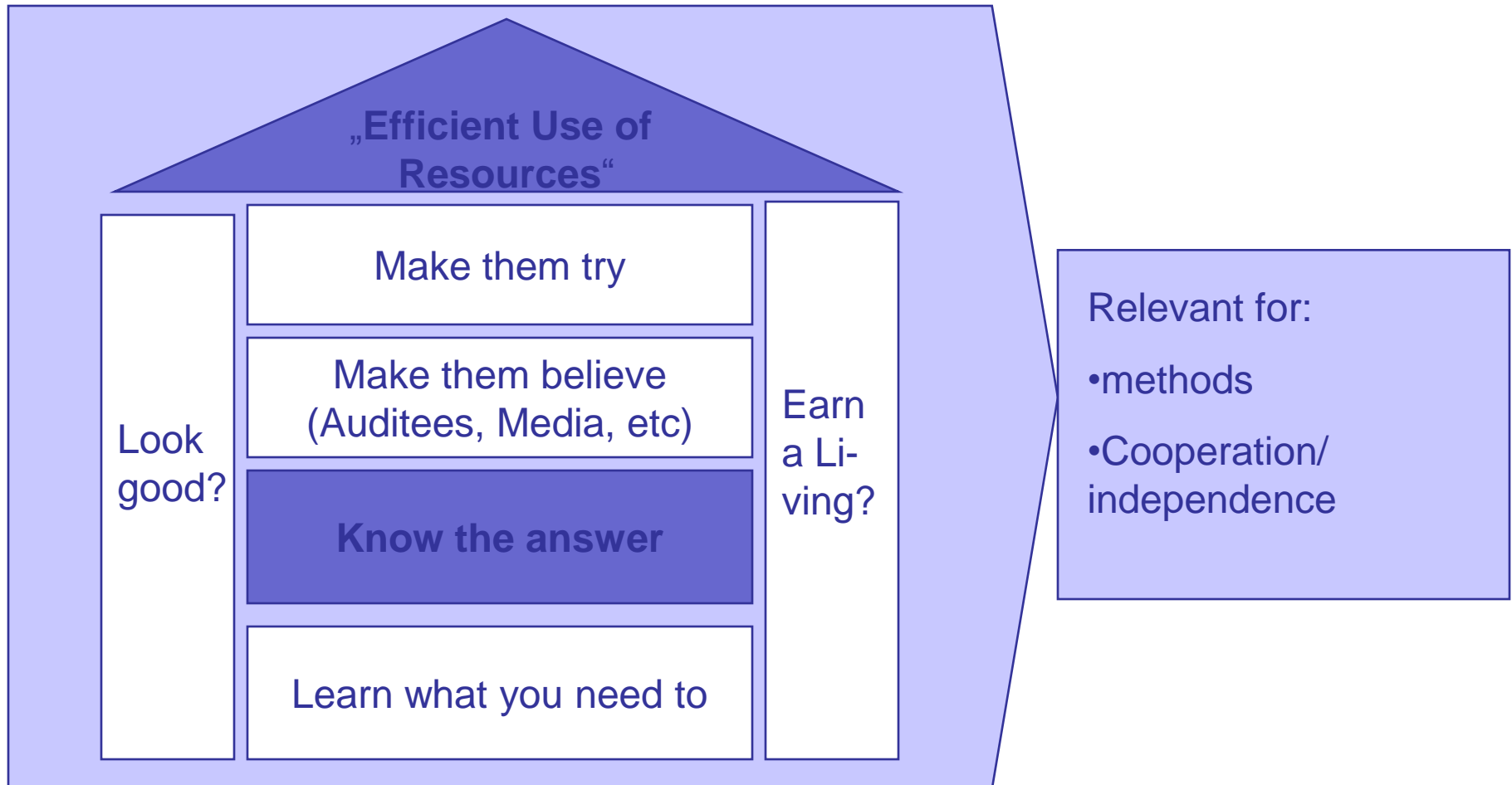
What we can do with it

- Consciously construct **your reality and context**

- Reduce and create **complexity** to connect to the context

- Management of dynamics (people count)

Construct your Reality - and communicate it

Realities: Goals of an audit

„Efficient Use of Resources"

Look good?

Make them try

Make them believe (Auditees, Media, etc)

Know the answer

Learn what you need to

Earn a Li-ving?

Relevant for:
- methods
- Cooperation/ independence

Chelimsky, The Coming Transformations in Evaluation (1997): Program Improvement, Accountability, Knowledge Generation (modified)

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Realities: Methods of an audit

„Conceptional Framework"

Financial Audit

Compliance Audit

"My study"

Performance Audit
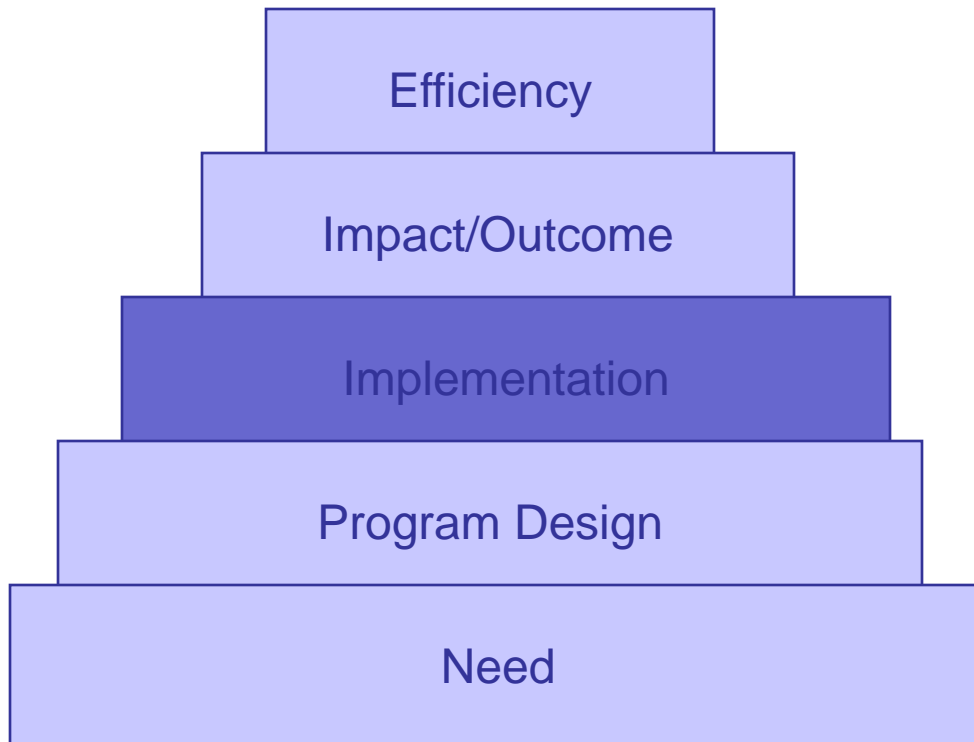
„So what?"

- Be specific in goals and requirements

- Be aware of your power to shape expectations

- Most studies include financials, compliance and performance

- Audit requirements (Sampling, documentation, etc) are different

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Realities: Objects of audit

Efficiency	How do results and resources fit?
Impact/Outcome	What are the results of actions?
Implementation	How is the program implemented?
Program Design	"Program Theory" - the logic that connects activities to its intended outcomes
Need	What problem shall be solved ?

Reduce and create Complexity

Management of Complexity

Theory

- A system is defined by elements and their relationship - a "**Code**"

- Code defines the **level of complexity needed to interact with the context**

- => Information can be **too complex**

- => Information can be **not complex enough**

Example

- System: Heating in my office

- => Code: if temperature goes below x, heating turns on, if temperature goes above y, heating turns of

- War or peace, summer or winter, pre-election or post-election, don't matter

- If temperature is excluded, the system does not work

Complexity Management applied

- **Talk business, not finance**: doctors and pharmaceuticals "shut off" when hearing too much finance talk

- **Talk experience, not math**: The nonlinear model about Behavior of Patients and Doctors did not reach the audience

- **Talk prices, not sociology**: Its about **prices** for specific single treatments, not patient behavior (this is what people really talk about)

- **Talk facts, not medicine** - you don't have credibility for speculation what is necessary, but you can say that two opposites are not usually both true

Integration and Empowerment

"Integration"

- A performance audit creates a lot of work - not only for the auditors, also for auditees and sometimes for third parties

- All stakeholders will form their own opinion on what you are doing (strategically, but also operative)

- There is a great potential for misunderstandings by "Chinese whispering"

- "Integration" means: define common objectives, procedures, organizational structures for all involved (make them part of the effort)

- Be aware of the limits - independence, conflicts of interest, etc. but don't overestimate them

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Conclusion

What can we do with system theory?

- **It is non - exclusive and can work with most other concepts**

  - "Viability" - every species that survives is "strong enough" - it doesn't make sense to argue between ants and lions

- **It allows you to respect the complexity of the real world as well as choose simple forms of communication**

- **There is a lot more to it than in this presentation**