



# The Data Portal of the German Federal Ministry of Education and Research (BMBF)

as Part of the German Open Government Approach

EUNIS Conference, Riga 14 June 2013



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# Structure

- **About HIS**

who we are, what we do

- **Open Data Concept**

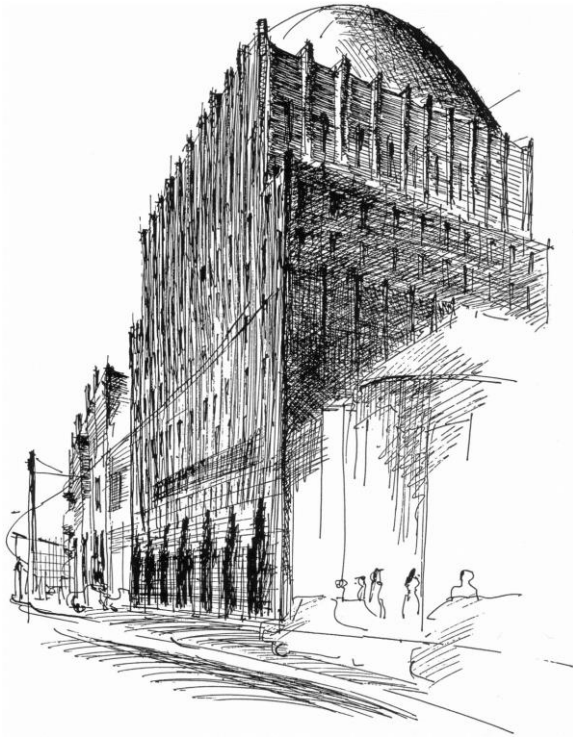
the German Open Government Approach

- **The Data Portal**

available information, structure

- **ICE / eduSTORE / HISinOne**

- the technology behind the Data Portal



## IT for Higher Education

Information technology for higher education  
(~ 180 Employees)

Customer: Universities

## Research on Higher Education

Studying, teaching, research, funding  
(~ 80 Employees)

Customer: States

## Higher Education Development

Buildings, resources, organisation  
(~ 50 Employees)

Customer: States / Universities

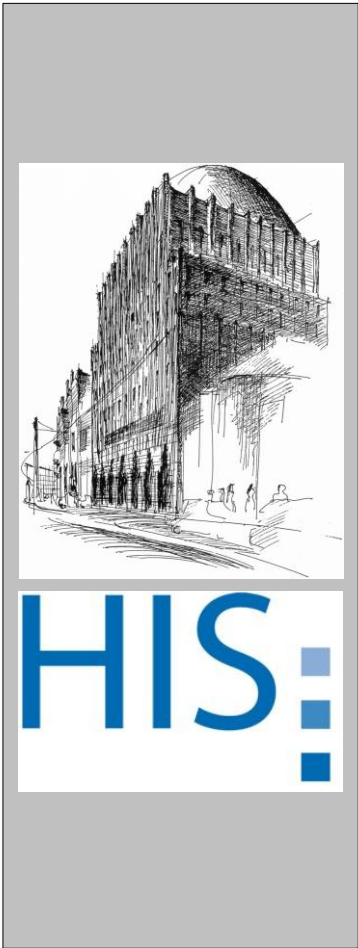


# HIS: - General Information (2)



- HIS was founded as a non-profit organization in 1969 and is jointly owned by the Federal Republic and the 16 *Länder* of Germany
- HIS is situated in Hannover, Germany
- HIS has around 340 employees
- HIS has an annual budget of 24 Million Euro
  - Government grants € 9 M
  - Project funds € 11 M
  - Revenues from service charges € 4 M

# owners and customers





# 2012 - International Year of **COOPERATIVES**



United Nations declared 2012 to be  
the international year of Cooperatives

„A cooperative is an autonomous association of persons [or institutions] who voluntarily cooperate for their mutual social, economic, and cultural benefit.“ Wikipedia

## **This could be one possible future of HIS:**

- cooperativ business model („customer partnership“)
- the main customers (e. g. the universities) are members of the cooperative
- decisions and influence follows the „golden rule“
- open processes, open products, **Open Source**



# Open Data – Ten Principles

1. Completeness
2. Primacy
3. Timeliness
4. Ease of Physical and Electronic Access
5. Machine readability
6. Non-discrimination
7. Use of Commonly Owned Standards
8. Licensing
9. Permanence
10. Usage Costs





# The Data Portal

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Enter a search term



Bundesministerium  
für Bildung  
und Forschung

Ministry

High-Tech Strategy

Education

Research

Academia

International Affairs

## Data Portal Home

[Introduction](#)

[Brochure "Education and Research in Figures 2013"](#)

[Federal Report on Research and Innovation 2012](#)

[Table Selection](#)

[Keyword Search](#)

[Glossary / List of Abbreviations](#)

## BMBF's Data Portal

The Data Portal contains facts and figures to the topic areas, such as Science, Research, Development and Innovation on the one hand, and Education on the other, complemented by the **International Comparison** section.

The topic area **Research and Innovation** comprises, amongst others, statistics on Federal Government and economy's expenditure on research, as well as on R&D-Personnel and Patents.

The topic area **Education** contains, amongst others, statistics on Pre-primary Education facilities, such as Kindergartens, Day Care Centres and Schools, as well as statistics on Higher Education Institutions (Students, Higher Education Staff), Continuing Education and Training Assistance (BAföG, Meister-BAföG)

## PUBLICATIONS

### Education and Research in Figures 2013



Selected Information from the BMBF's Data Portal

2013, 108 Pages

[Download](#)  
[PDF - 4,92 MB]

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# What is ICE / eduSTORE?

- **A Data Warehouse!**

- An information system, a management information system, a (H)(E)MIS, a **system to support decisions (DSS)**, a business/institutional intelligence solution (BI/II), ...

- The information system of the statistical department of the German **Federal Ministry of Education and Research**

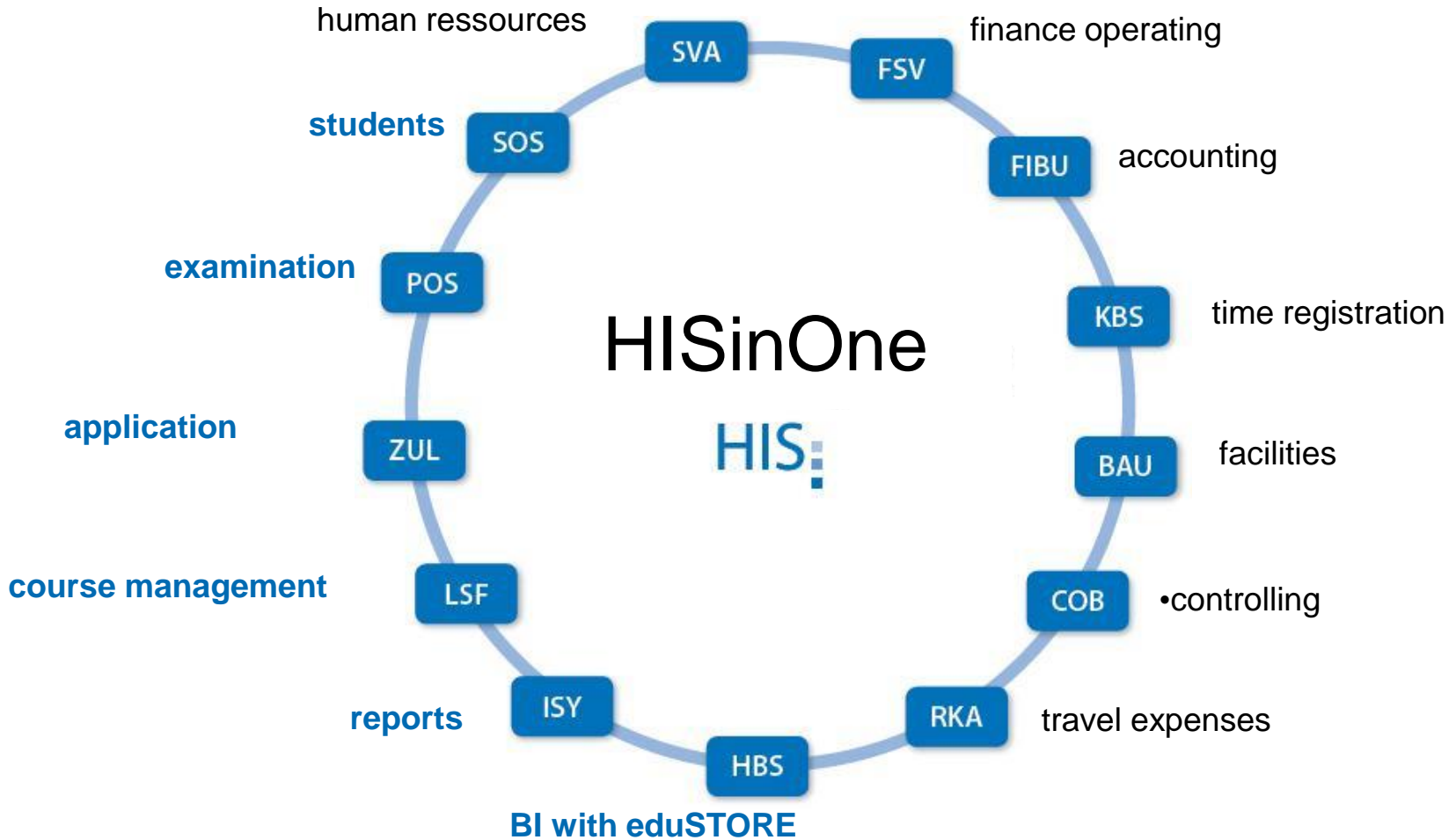
- The information system of the **Ministries of Higher Education and Research of the Länder**

- The technological basis of **Lower Saxony's Higher Education Indicators System**

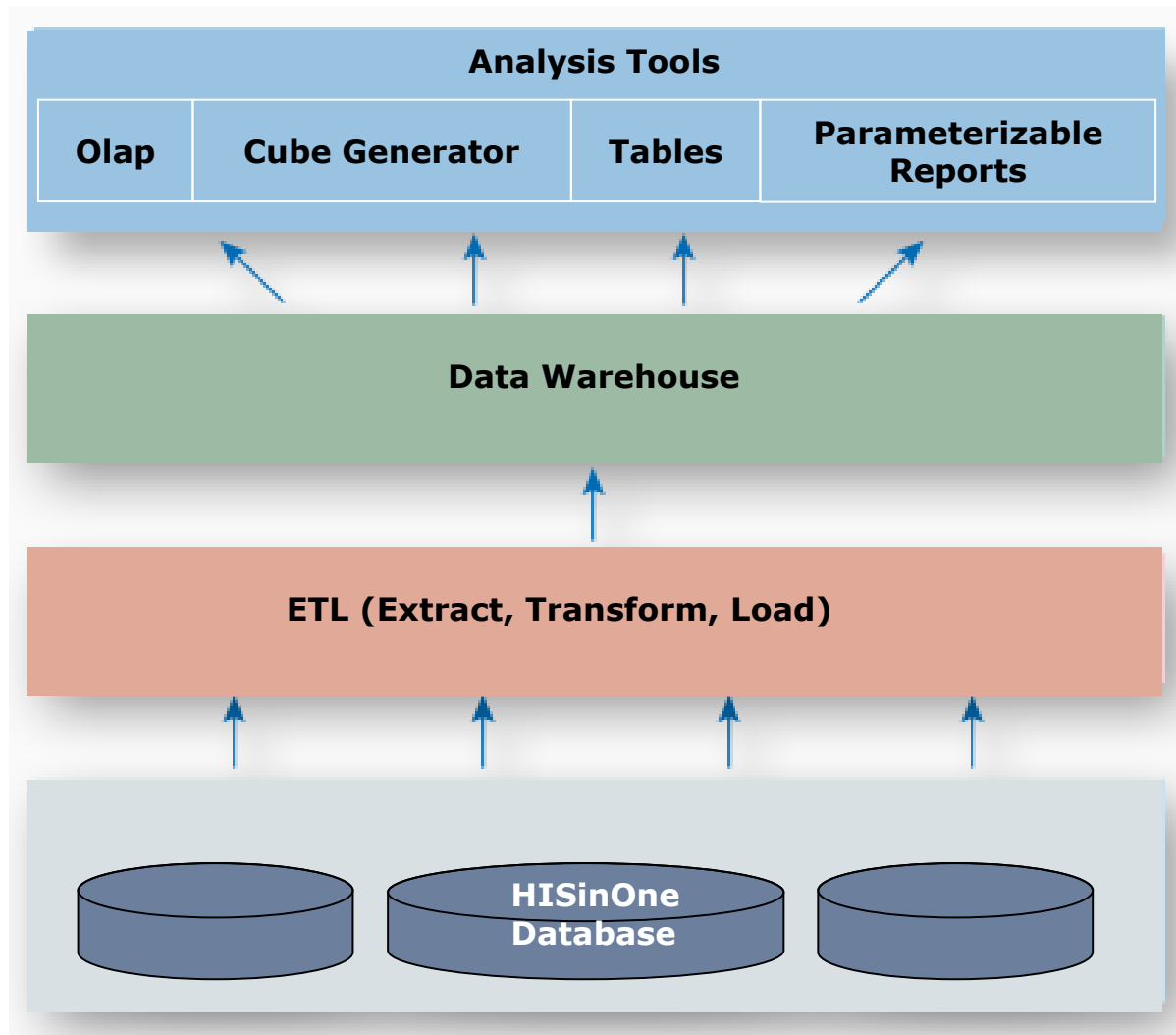
- The **BI of HISinOne**



# functional range



# ICE / eduSTORE – Technical Construction



# EduSTORE / ICE– Main System Features

- **Web application:** Access via Java capable web browser
- **Open architecture** - platform independence
- **Operation system:**
  - Server-side: Linux, Sun OS, MS Windows
  - Client-side: all commonly-used platforms
- **Database:**
  - Commercial databases:  
Oracle, Informix
  - Open source databases:  
MySQL, PostgreSQL



# Flexibility

## 1. Flexible data import

- aggregated data
- individual data / pseudo individual data
- of any kind of structure and depth of structure

## 2. Flexible data export

by using the Flexible Data Analyzer (FleDA)

## 3. Flexible data illustration

by using the integrated HIS Reporting Framework (HRF)

- XML → HTML, MS Excel, Gnumeric, PDF, LaTeX u. a.

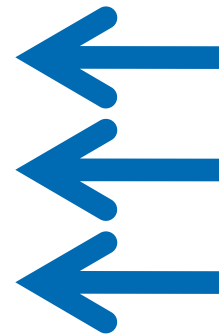


# Data integration

- Data harmonization with an **integrated key system**
- **Centrally maintained** uniform eduSTORE key system
- **Equivalence rules**
- System knows **internal key hierarchies**

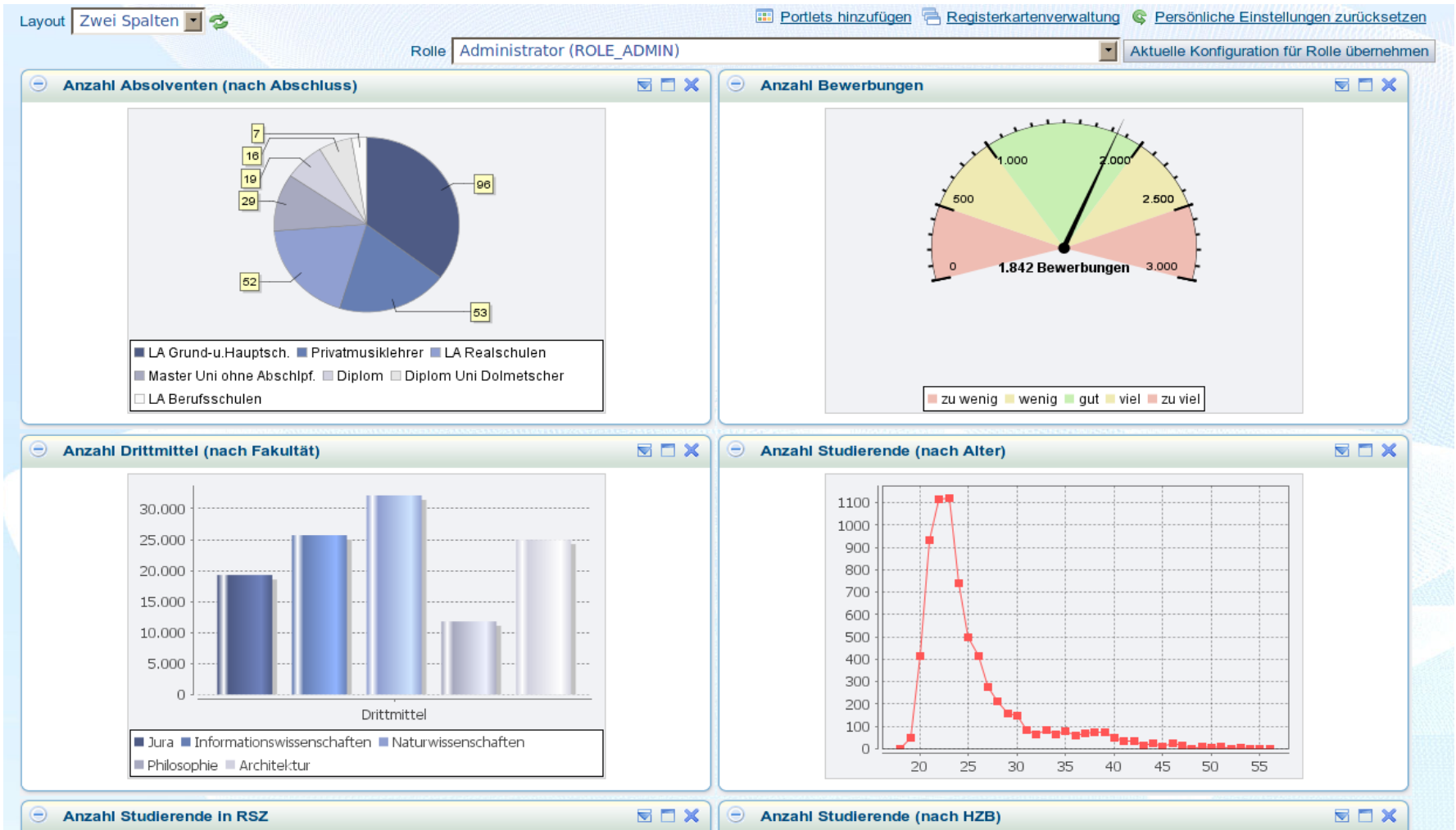


# Access Paths to eduSTORE






# Access Path 5: Management Cockpit






# Flexible Data Analyzer

**HISinOne**  **Standardtabellen**

Pfad: ▶ [Startseite](#) ▶ [Übersicht](#) ▶ [Tabellensammlung Vertrieb](#) ▶ [Themenbereich Studienbetrieb](#)

### Standardtabellen

Nummer	Titel	Formate
Tab.BC001:	Lehrnachfrage (Studierende) nach Stichtag (Studierende) (Aktuelle Zahlen), Zeitpunkt semesterweise, Geschlecht, Studienfach (intern)	  
Tab.BC002:	Test	
Tab.BC003:	18.06.09 Test	
Tab.BC004:	Lehrnachfrage (Studierende) nach Stichtag (Studierende) (Aktuelle semesterweise	
Tab.BC005:	Lehrnachfrage (Studierende) nach Stichtag (Studierende) (Aktuelle Geschlecht, Studienfach (intern)	
Tab.BC006:	TEst 24.06.09	
Tab.BC007:	Testtabelle Hamburg	
Tab.BC008:	Lehrnachfrage (Studierende) nach Stichtag (Studierende) (Aktuelle	
Tab.BC009:	Lehrnachfrage (Studierende) nach Geschlecht, Zeitpunkt semesterweise (Zahlen)	

**HIS:** Hochschul-Informations-System GmbH, Hannover  
 Letzte Änderung: 13. November 2009

**Tabellengenerierung**

Tabellen Bearbeiten Tabellendefinition Hilfe

Tabellendefinition 1

Teiltable 1		Spaltenüberschriften
Lehrnachfrage		
Studierende		
Studiensem. nach Hochschulsem.		

Bestand 1	
Merkmale	Ausprägungen
Bundesland (Deutschland)	LE Nicht zugeordnet
Regelstudienzeit	Leer
Hochschul-Zugangsberechtigung	
Heimatwohnsitz (Staat)	
Heimatwohnsitz (Kreis d. Erwerbs)	
Semesterwohnsitz (Staat)	
Semesterwohnsitz (Kreis d. Erwerbs)	
Hörerstatus (intern)	
Einschreib/Rückmeldestatus	
Art des Studiums (intern)	

**Zeilensüberschriften**  
 Teiltable 1  
 Lehrnachfrage (intern)  
 Alle

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