

BI Study Case

Giving answers to the right questions in the University of Zaragoza

6th March 2014

CEO: You guys have a lot of data, don't you?

CIO: (er...) Well, basically yes

Can we make better use of them?

What for?

You know, taking better decisions, being more efficient, transparency, accountability, and all that stuff

A funny story
(any resemblance to reality is purely coincidental)

We can try... When do you say we need it?

What like in a few months this bundle, and in a couple of years the whole lot?

(ahem) And which additional resources do we have?

What for? Don't we have the data already? It is just using them, isn't it?

The Questions General Frame

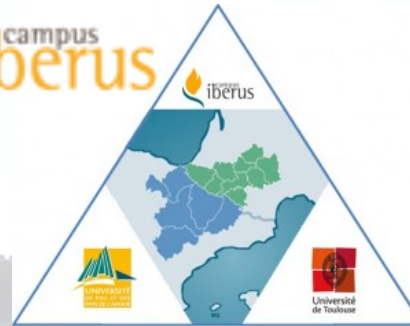
- University of Zaragoza
- Spanish Scenario
- Governance Challenges
- Is BI a Solution?
- **Goals**

The Answers The BI Process

- Premises
- BI Approach
- Organization
- Bottom-Up BI Vision
- BI Architecture
- BI Project
- Results
- Benefits



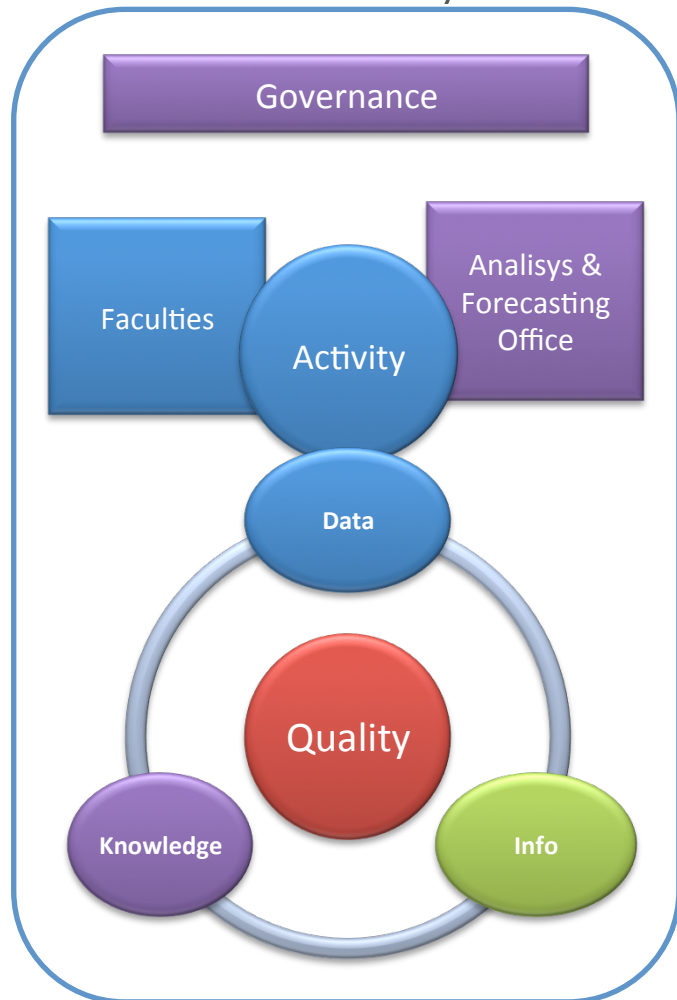
**Universidad
Zaragoza**



technological innovation
for universities

- **Established 1542**
- Within **Spanish Top 10** in all rankings
- **>50 EHEA grade courses** + master/doc + along-life
 - Engineerings & Architecture
 - Sciences
 - Biomed's
 - Social
 - Arts & humanities
- **~ 40k students & 4k academic staff**
- **~ 700 in / 900 out Erasmus students/year**
- **>200 structured research teams**

University



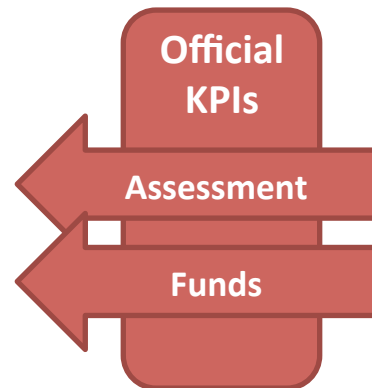
Decreasing students & grants
Increasing Fees
Increasing Competitiveness

Official Organisms

Spanish General State Administration



Autonomous Communities (Regions) Administration



Decreasing Budget
Increasing Quality levels required
Improving control tools

University Governance

Different players in the University are requesting information to facilitate their **decision-making** process:

- Rector
- Vice Rectors
- Heads of Faculties
- Etc.



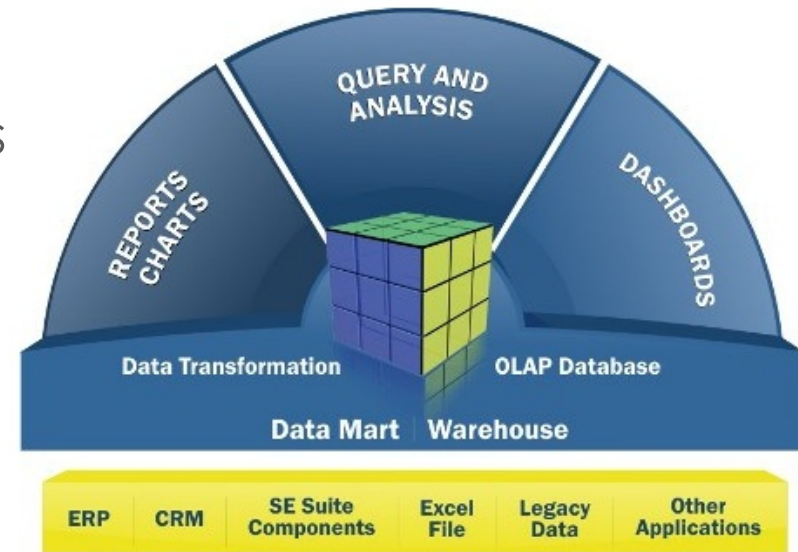
Governance challenges

- Increasing number of inquirers (inside & outside the university)
- Different criteria when demanding information
- Data analysis from different information systems
- Generation of official statistics
- Transparency / Accountability



BI tools are good to:

- Help the management boards take the right **decisions**
- Meet the demands for **accountability**
- Support the strategy of **transparency** and **PSI reuse**

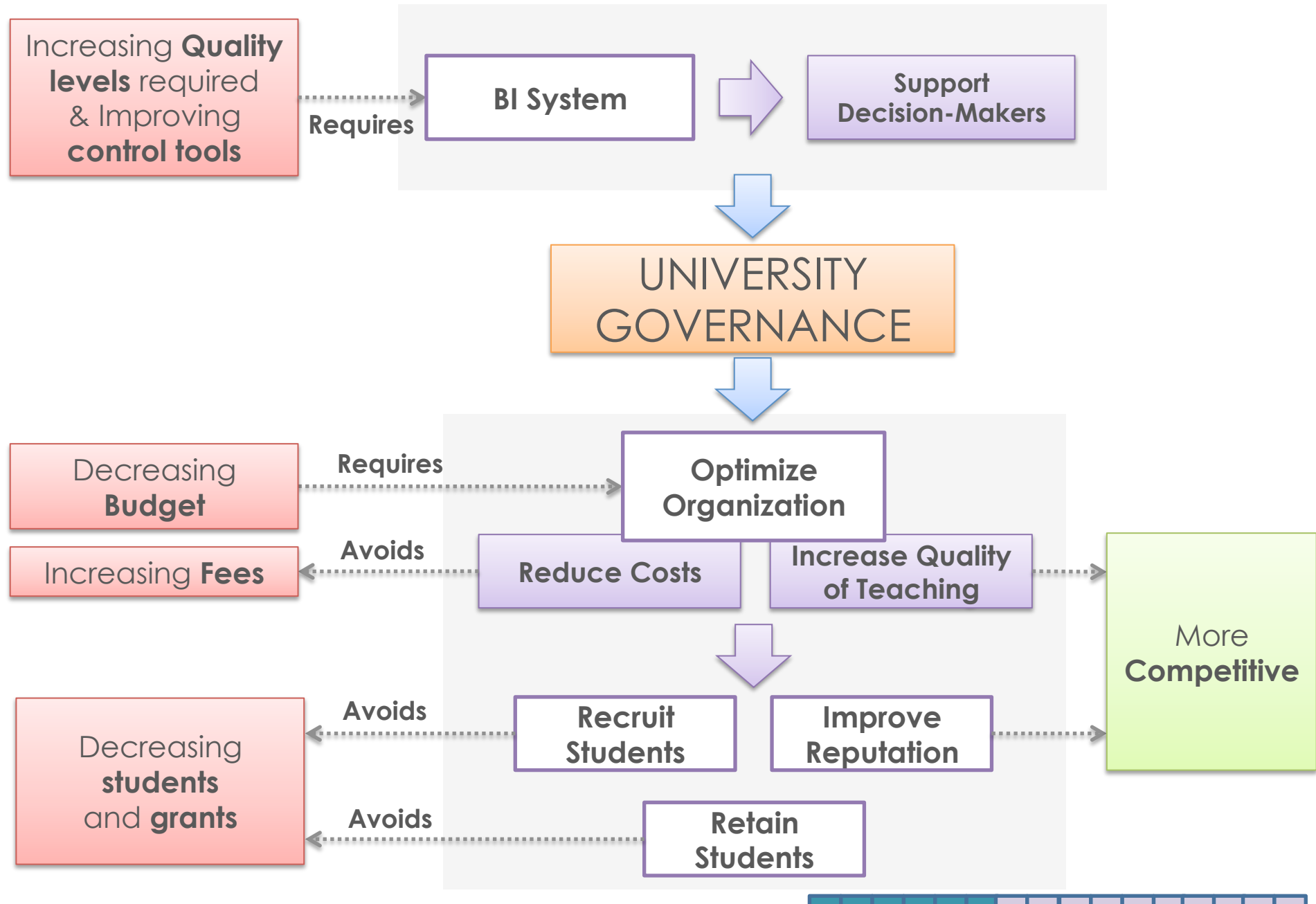


But there are some difficulties:

- Quality of the data
- Lack of transparency of data owners
- Poor data integration across systems
- Global view of data, complex and interconnected

They must be faced, otherwise:

- Too complicated and not always satisfying BI solutions
- Finally needing extra specific queries, reports, Excel files ...



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Full functionality?

→ cover all main areas of the University:

- Academic (students)
- Human Resources
- R+D+i
- Financial
- Teaching

**Transparency + Collaboration?**

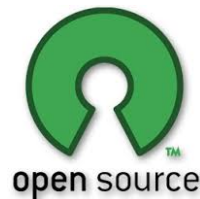
→ give extensive access to the system

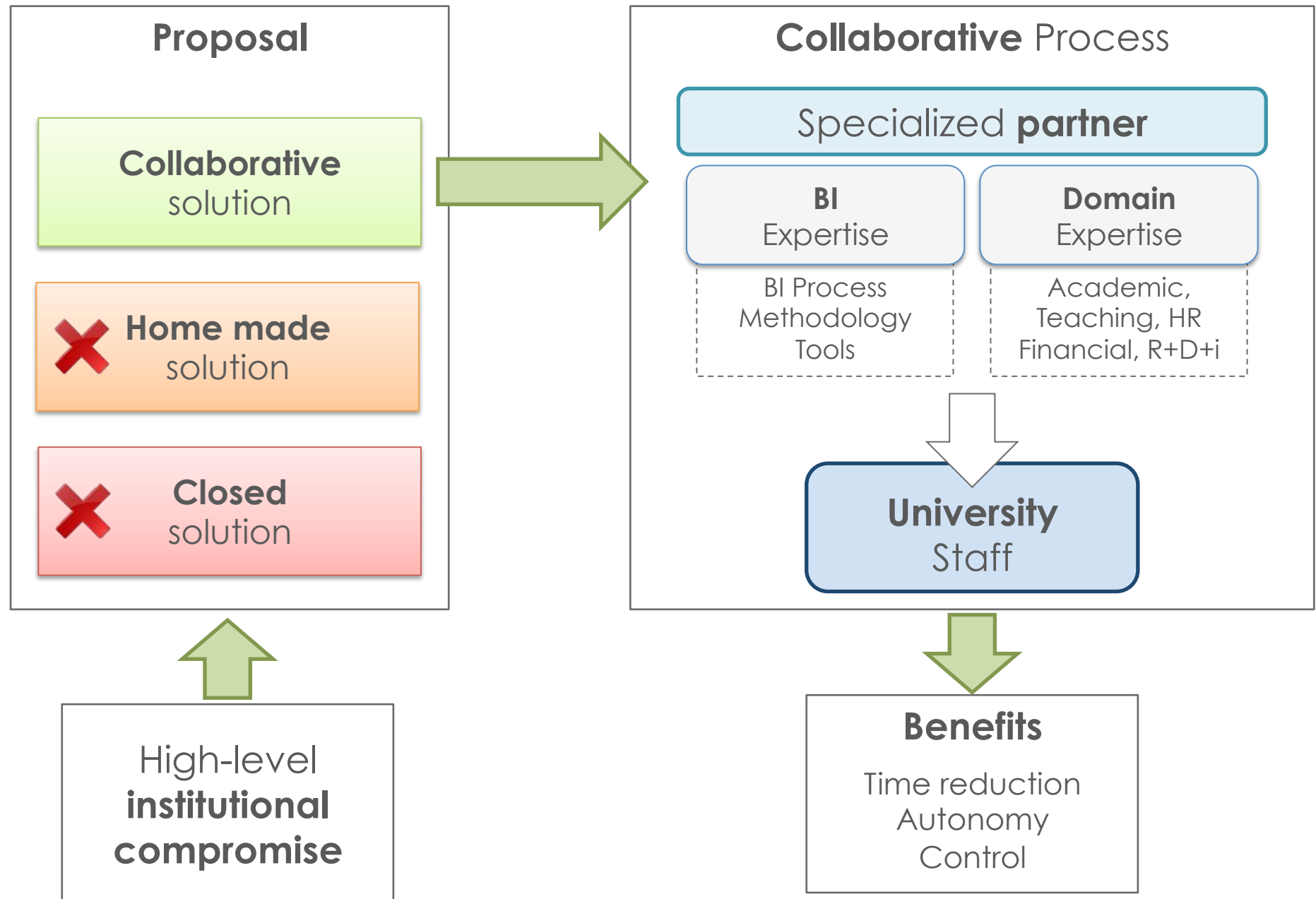
Time reduction, Autonomy & Control?

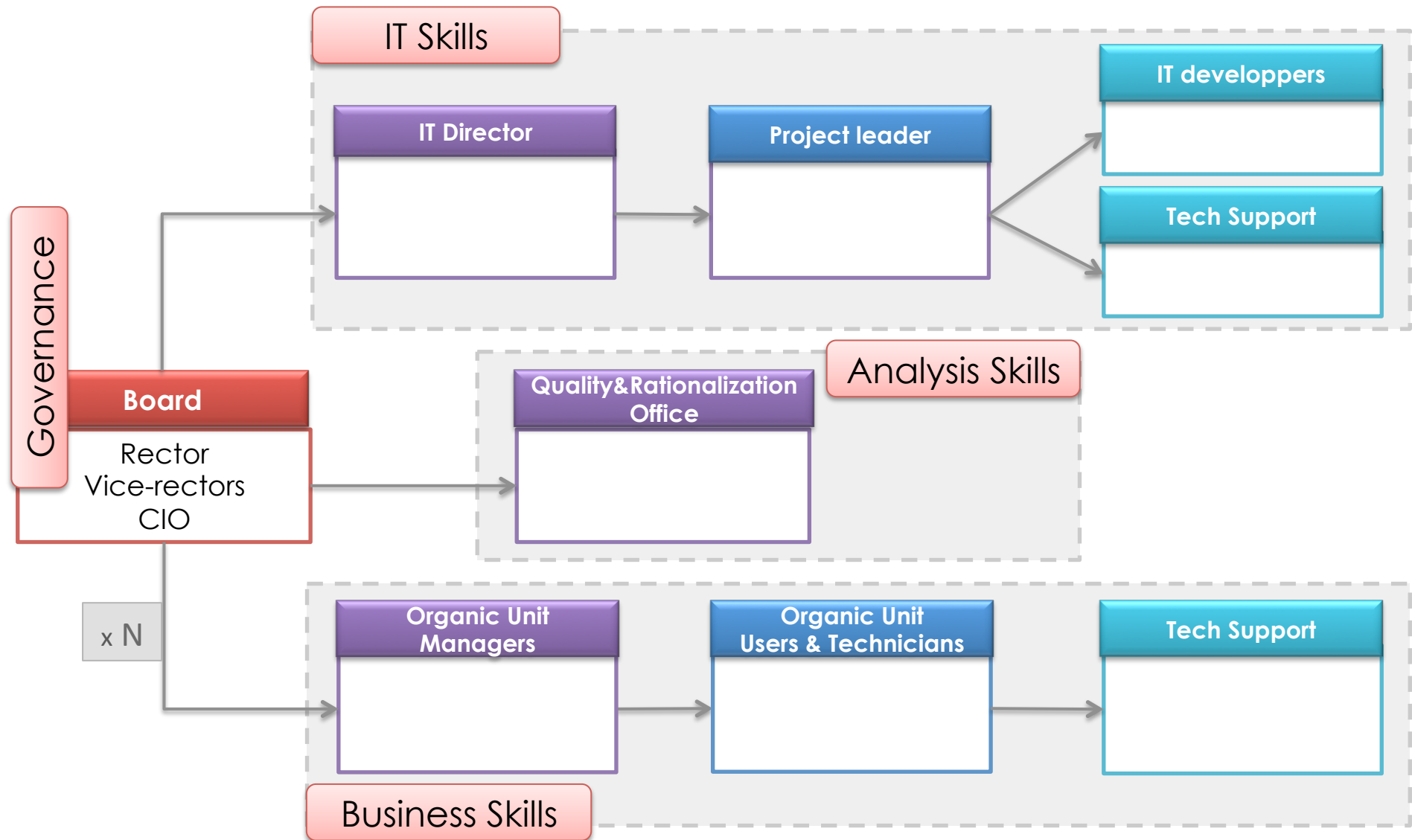
→ Agile development & acquiring expertise

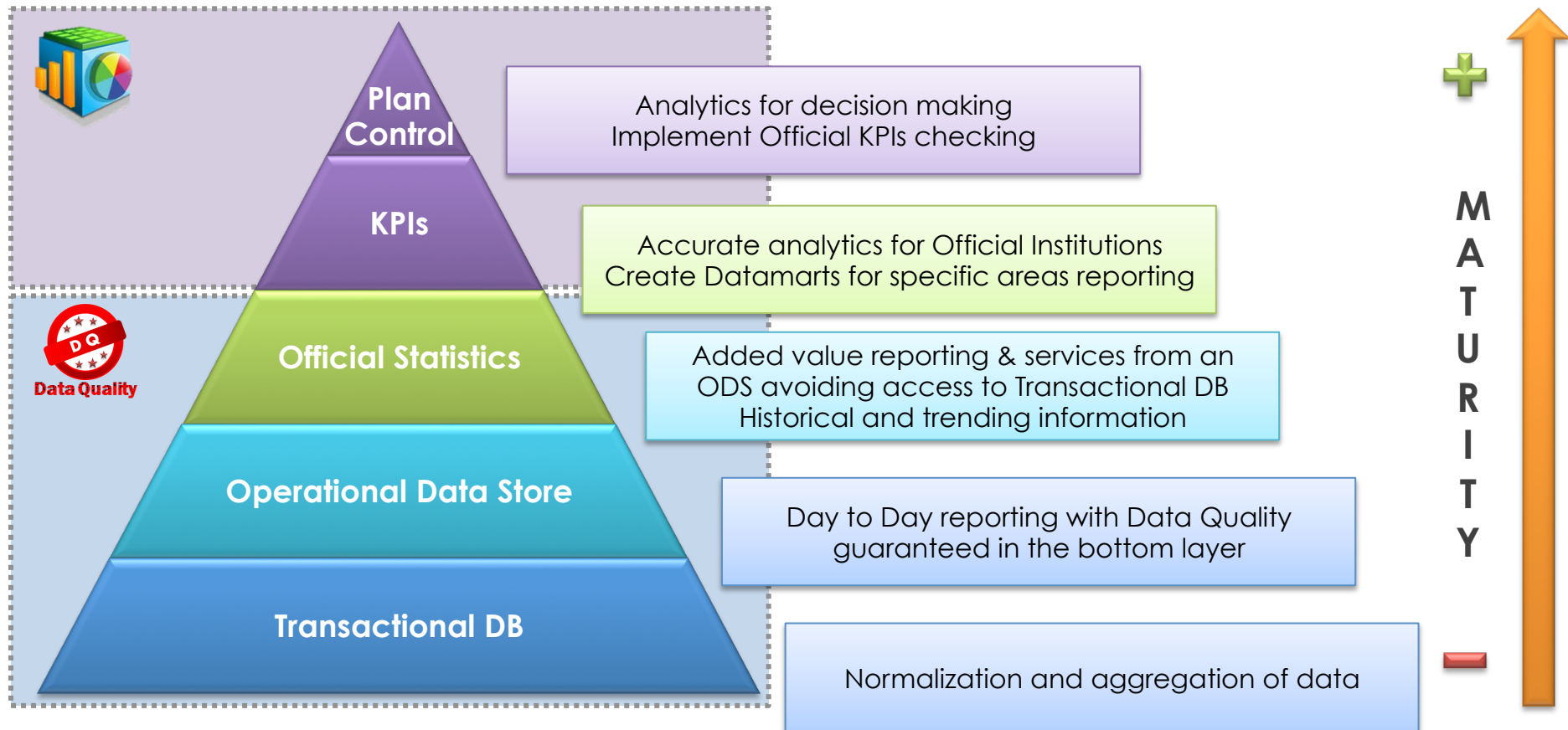
Cost reduction?

→ Open Source



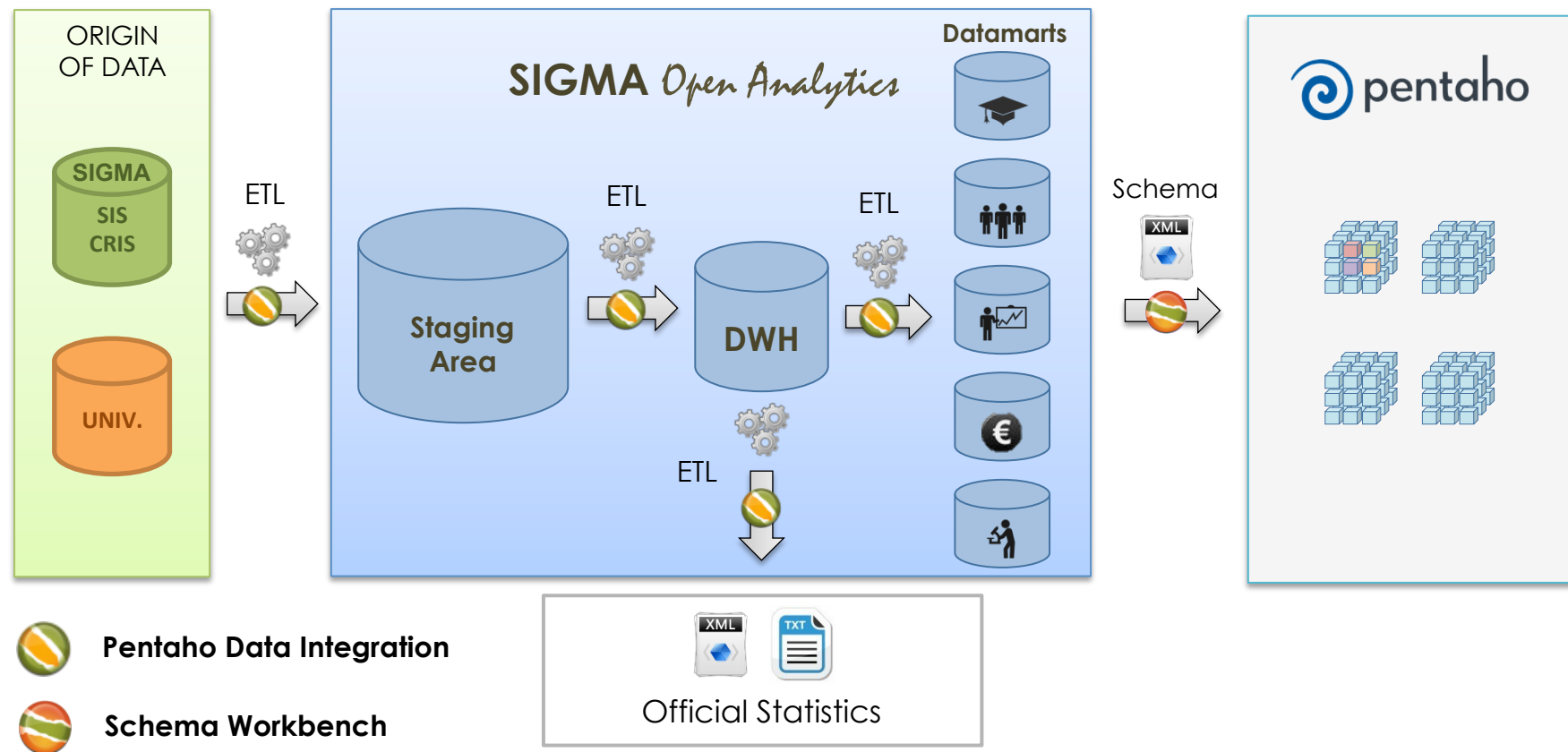












Progressive **question-driven process**, applying data quality in origin, to provide right answers to increasingly complex inquiries

The system architecture includes a general DWH which serves the different datamarts for OLAP analysis and also allows report generation



2013				2014			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Global Analysis ✓ 	Develop. Academic (students) HR ✓ 		Analysis R+D+i ✓ 	Development R+D+i ⏻ 		To be defined	

Academic (students)

- Admission
- Registration
- Performance
- Graduated
- Cohorts



HR

- Researchers
- Staff
- Work place
- Position



R+D+i

- Groups & Institutes
- Projects & contracts
- Intellectual property
- Scientific production
- Entrepreneurship
- Mobility of researchers



Universidad de Zaragoza – Open Analytical Solution



~2.5/5 areas covered
(academic – HR – R+D+i)

> 100 KPIs

3 Dashboards with KPIs

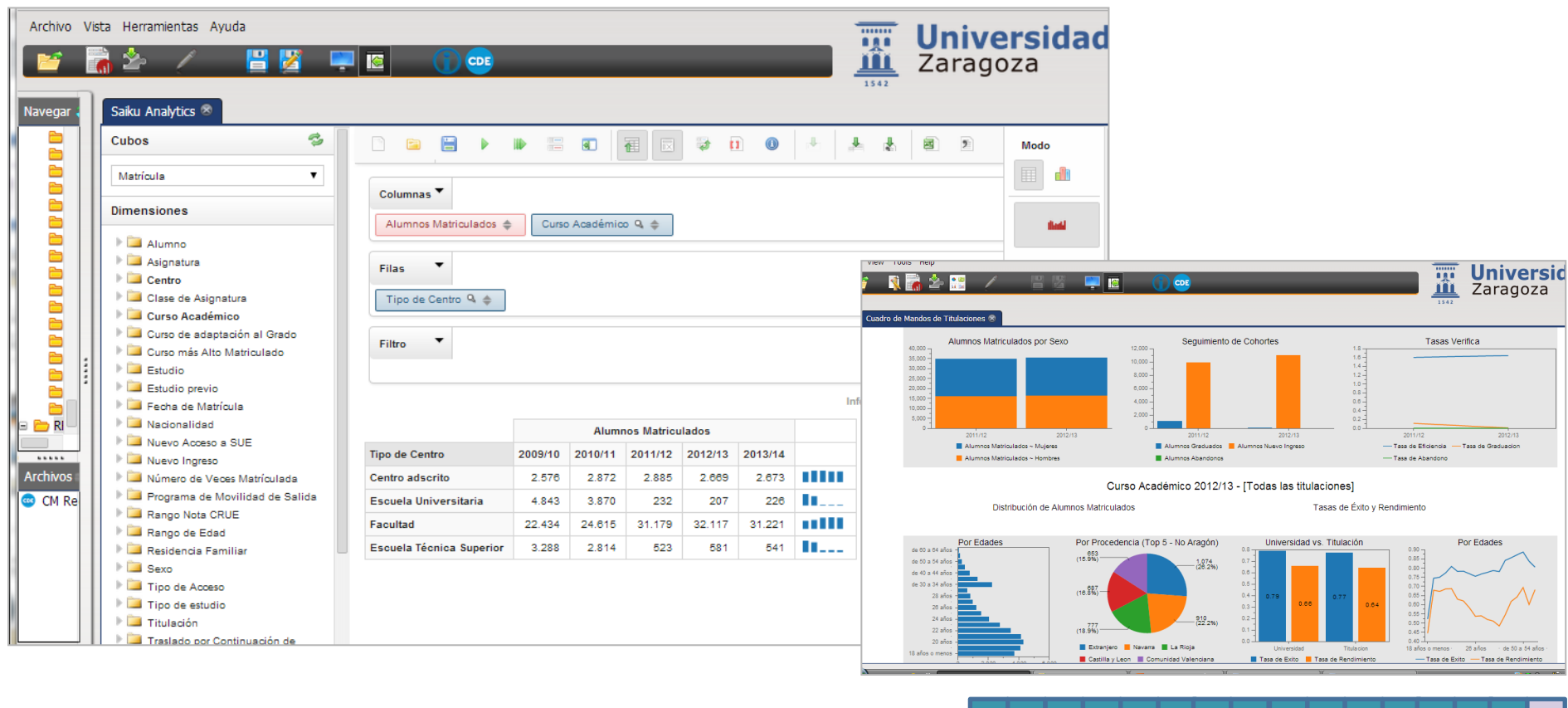
> **6k users** with access to the system:

4 admin

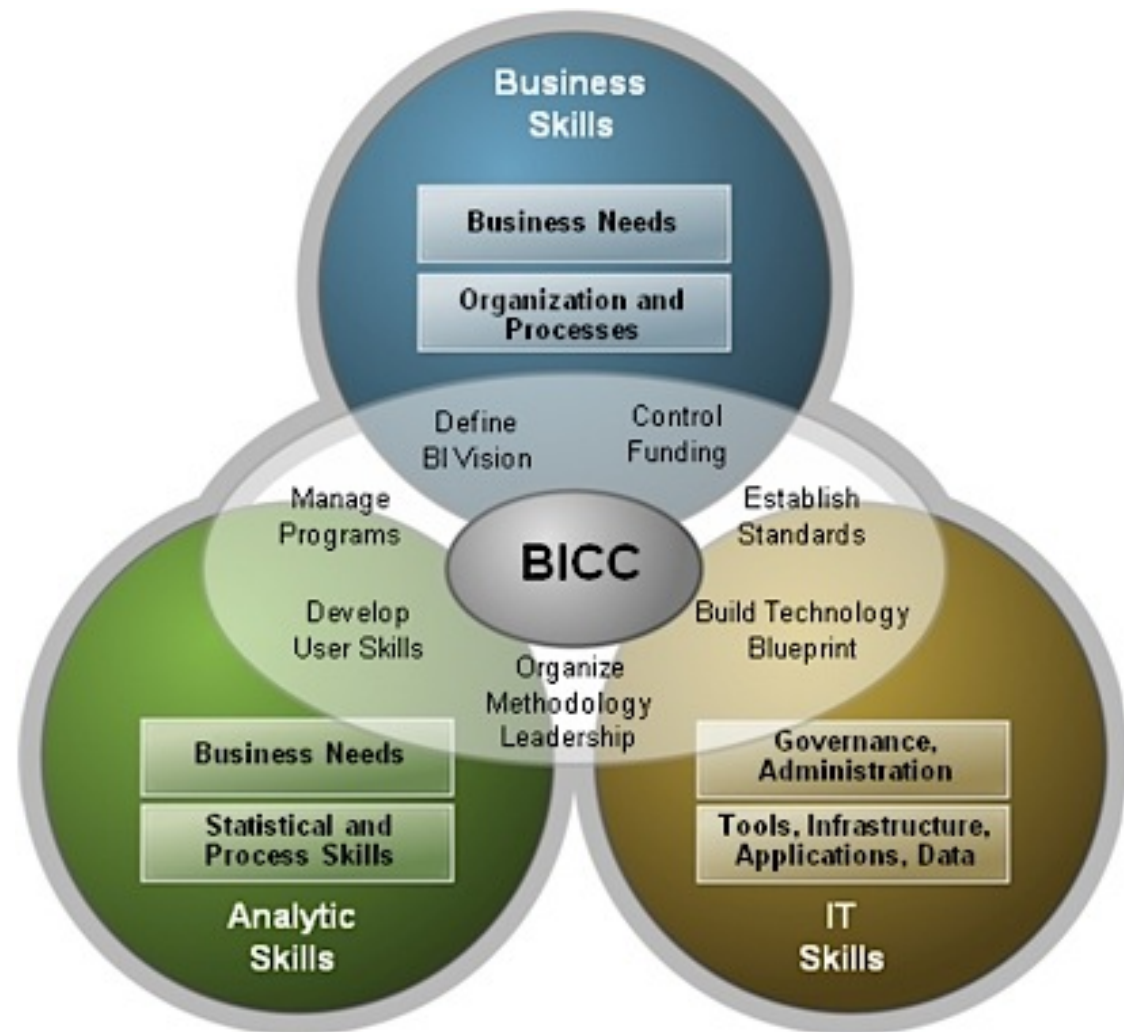
>10 advanced

>200 area-specialized

>6k general (potential)



- **Institutional alignment** in all the process
- Close **collaboration** between different areas of the University
- Consolidated **BI Competency Center** (BICC)
- **Information transparency**
- Collateral **improvement of data quality and integration**





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www.unizar.es

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