

BI in University of Zaragoza ... Getting Started

Enrique Teruel, Juan Souto & Toni Borrallo





Spanish Scenario



Decreasing students & grants Increasing Fees Increasing Competitiveness

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

The Questions

- 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

Transparency / Accountability



BI tools are good to:

The Questions

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



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 ...



The Questions General Frame

- 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

Full functionality?

The Questions

- \rightarrow cover all main areas of the University:
 - Academic (students)
 - Human Resources
 - R+D+i
 - Financial
 - Teaching



Transparency + Collaboration?

ightarrow give extensive access to the system



Time reduction, Autonomy & Control?

 \rightarrow Agile development & acquiring expertise

Cost reduction? → Open Source









BI Architecture

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







Results

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)

Archivo Vista Herramientas Ayuda Image: Second se										1542	Universid Zaragoza	ad		
Navegar		Saiku Analytics 🗞	D 🗃 🔚 🕨	▶ =						1 L	Modo	_		
		Matrícula V	Columnas ▼ Alumnos Matriculados ¢ Curso Acsdémico Q ¢											
		Alumno Asignatura Centro Clase de Asignatura Curso Académico	Filas Tipo de Centro Q 💠											
		Curso de adaptación al Grado Curso más Alto Matriculado Estudio Estudio previo Estudio previo Estudio previo	Filtro 🔻						Ir	40,000 35,000 20,000 20,000 10,000 15,000 10,000 5,000 0 0	Alumnos Matriculados por Sexo	12.000 10.000 8.000 4.000 4.000	de Cohortes	Tasas Verifica
		Ascionalidad Muevo Acceso a SUE		Alumnos Matriculados							2011/12 2012/	13 2,000 - 2011/12 Alumons Graduatos	2012/13	0.4 0.2 2011/12 2012/13
		 Nuevo Ingreso Número de Veces Matrículada Programa de Movilidad de Salida 	Tipo de Centro	2009/10	2010/11	2011/12	2012/13	2013/14			Alumnos Matriculados ~ Hombres	Alumnos Abandonos		Tasa de Abandono
Archivos			Centro adscrito	2.576	2.872	2.885	2.669	2.673				Curso Académico 2012/1	3 - [Todas las titulaciones]	
🥶 CM Re			Escuela Universitaria	4.843	3.870	232	207	226	II		Distribución de Alumnos Mat	nos Matriculados	Tasas de Éxite	y Rendimiento
		Rango Nota CRUE	Facultad	22.434	24.615	31.179	32.117	31.221						
		Residencia Familiar	Escuela Técnica Superior	3.288	2.814	523	581	541	II	1	de 60 a 64 años	Por Procedencia (Top 5 - No Aragón)	Universidad vs. Titulación	Por Edades
		 Sexo Tipo de Acceso Tipo de estudio Tipo de estudio Titulación Traslado por Continuación de 			•		·	·	·		e to 20 e 4 años de 50 a 24 años de 50 a 24 años 20 años 22 años 20 años	(15 9%) (15 9%	0.7 0.6 0.4 0.7 0.5 0.7 0.5 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7	
										<u>x</u>	15 anos o menos	Castilla y Leon Comunidad Valenciana	Tasa de Exito Tasa de Rendimier	nto — Tasa de Exito — Tasa de Rendimiento

Institutional alignment in all the process

The Questions

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





technological innovation for universities



www.sigmaaie.org