

I have given a name to my
pain and it is “ETL”

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Content

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- The Data Warehouse presentation
- The Demonstration Data Warehouse
 - System Architecture
 - ETL and data risk analysis
- Tough Talk
 - Leadership
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- Conclusions

University of Limerick

- 13,000 Students
- 1500 Staff
- 2 Main Campuses



The Vision (1997 – 2014)

“Use IT to support high quality operations and management throughout the university”

That was our vision in 1997 ...

it's still our vision ...

we still haven't managed it ...

Why can't we “Just do it”?

- Political Issues
 - Lack of buy-in
 - We can't afford to do this,
 - But we can't afford not to ...
- Technical Issues
 - Architectural Issues
 - Data Quality
- Industry solved all these years ago!



Date

2005 - 2012

YEARS

20052006200720082009201020112012

faculty

AHS

BUS

EHS

INF

SEN

Department

HIS

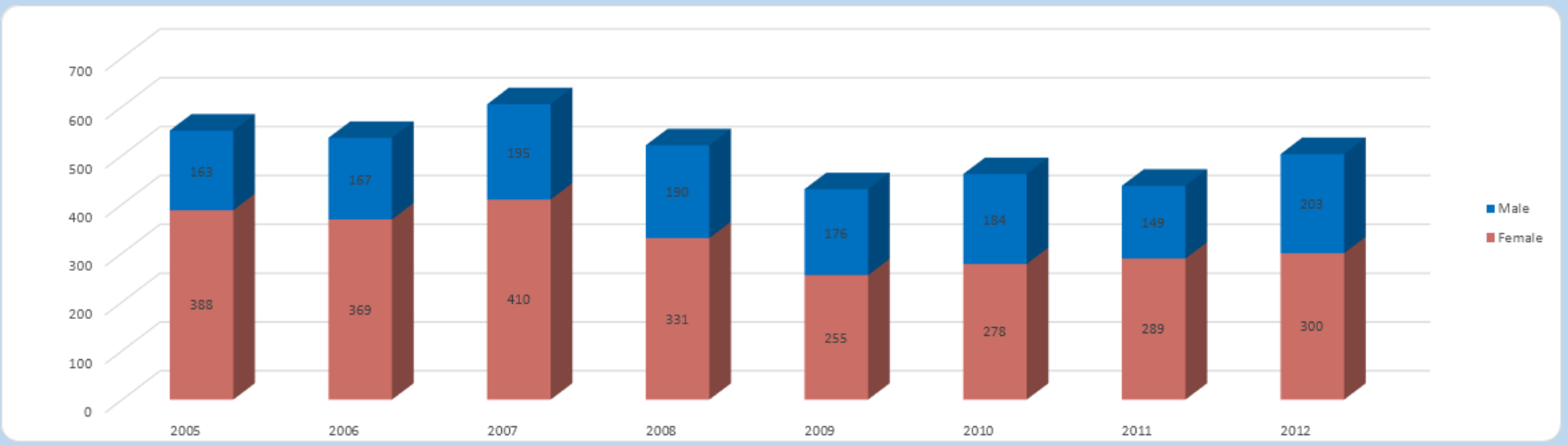
HUM

LAW

LCS

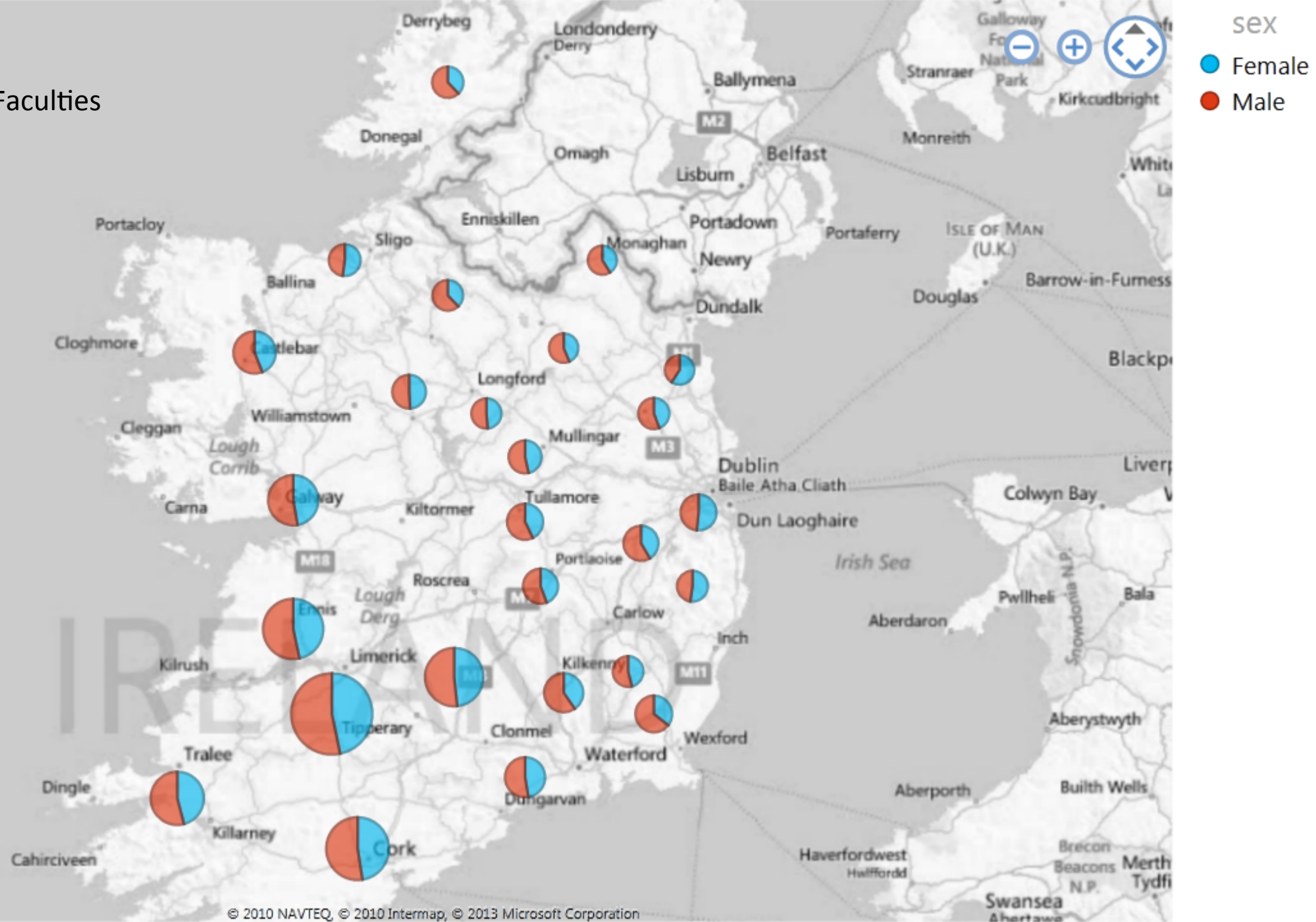
MIC

PPA



CAO Students		Gender		
Year				
		Female	Male	Year Total
2005		388	163	551
2006		369	167	536
2007		410	195	605
2008		331	190	521
2009		255	176	431
2010		278	184	462
2011		289	149	438
2012		300	203	503
Year Total		2620	1427	4047

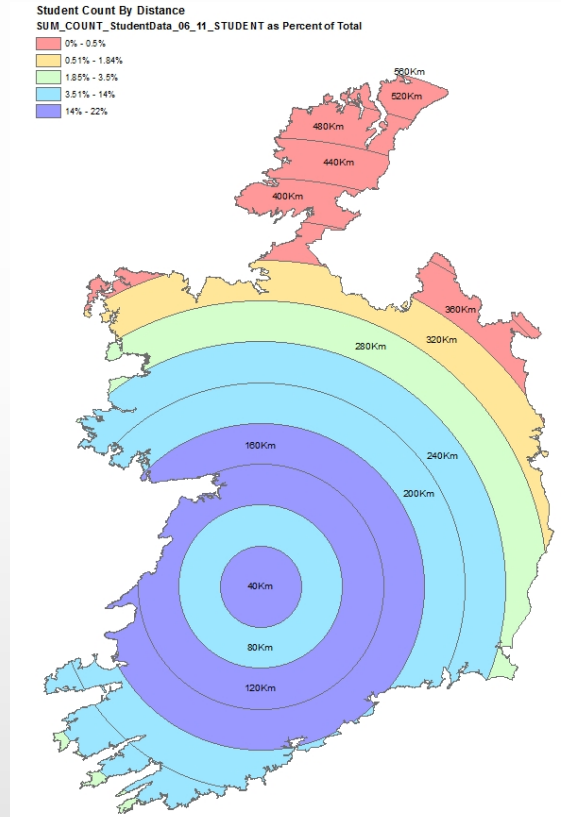
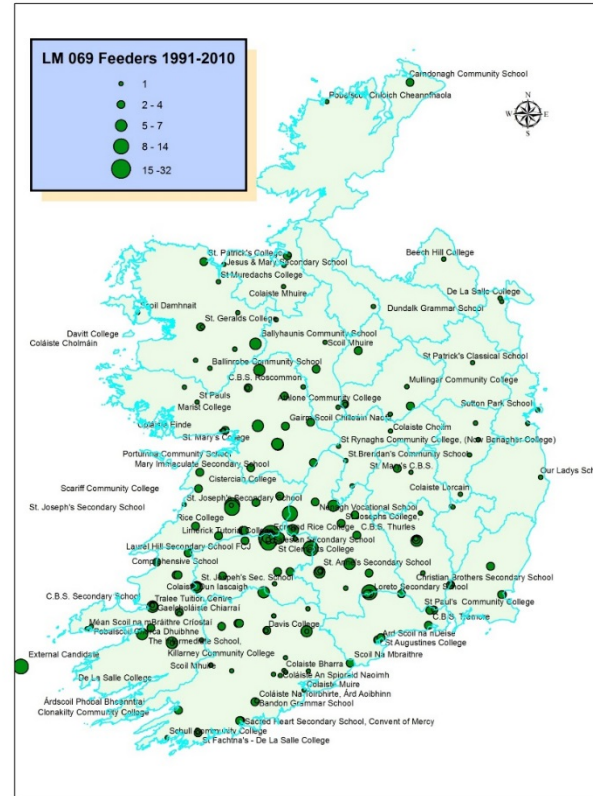
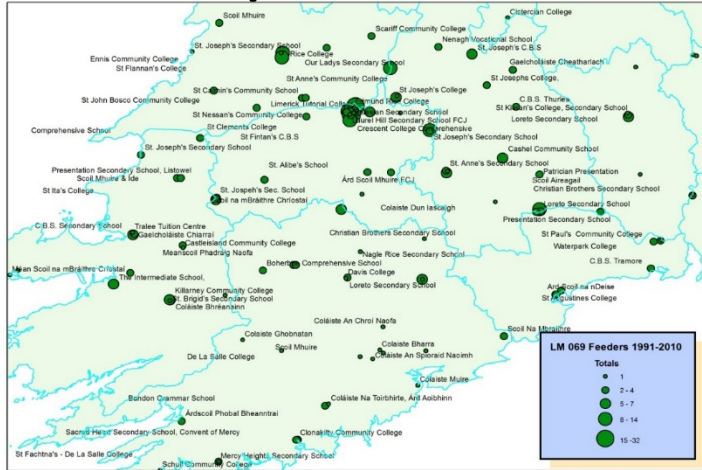
Gender Balance, Humanities
2005-2012



Feeder Schools, LM118 2005-2012

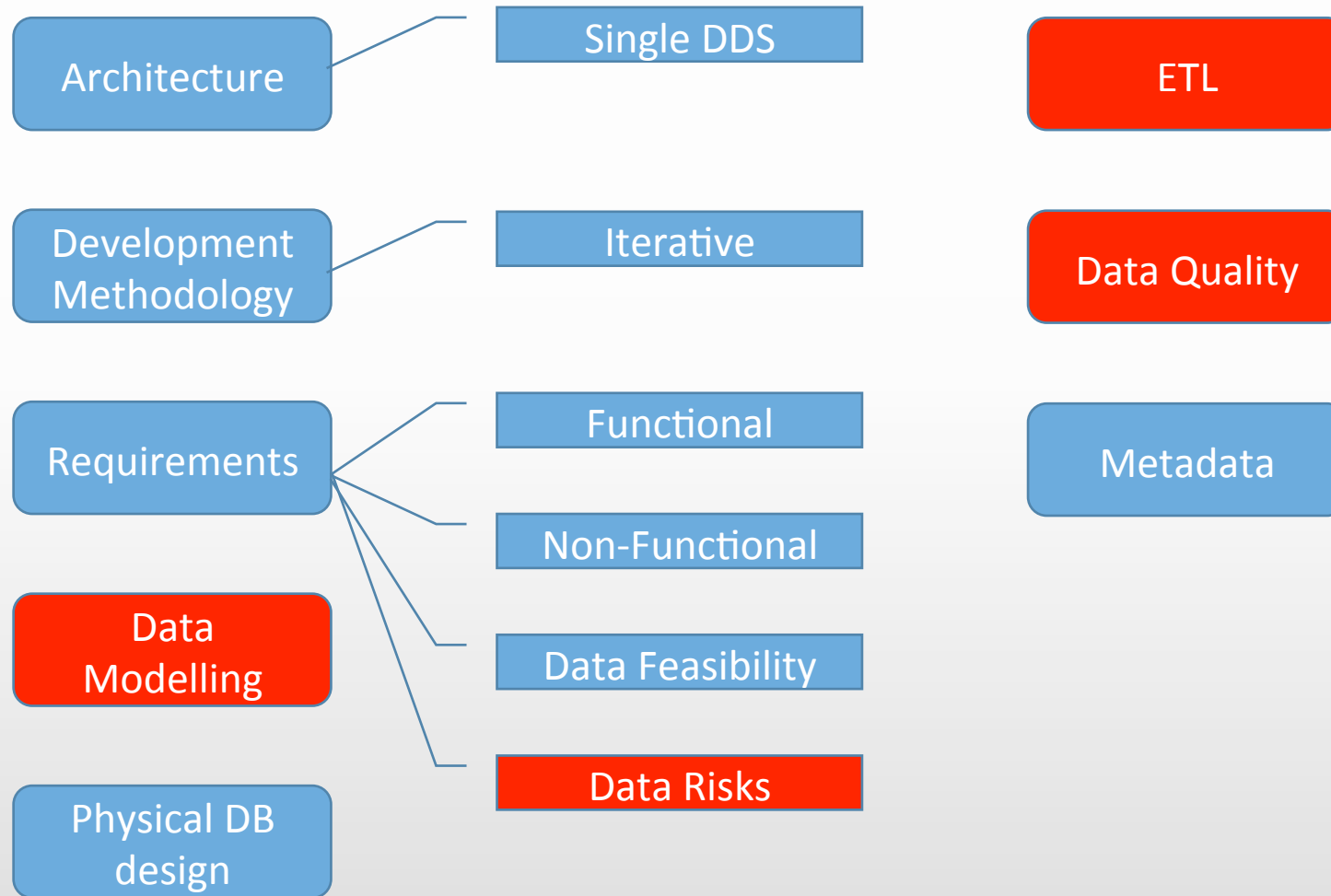


Gap between a demo and the real thing.

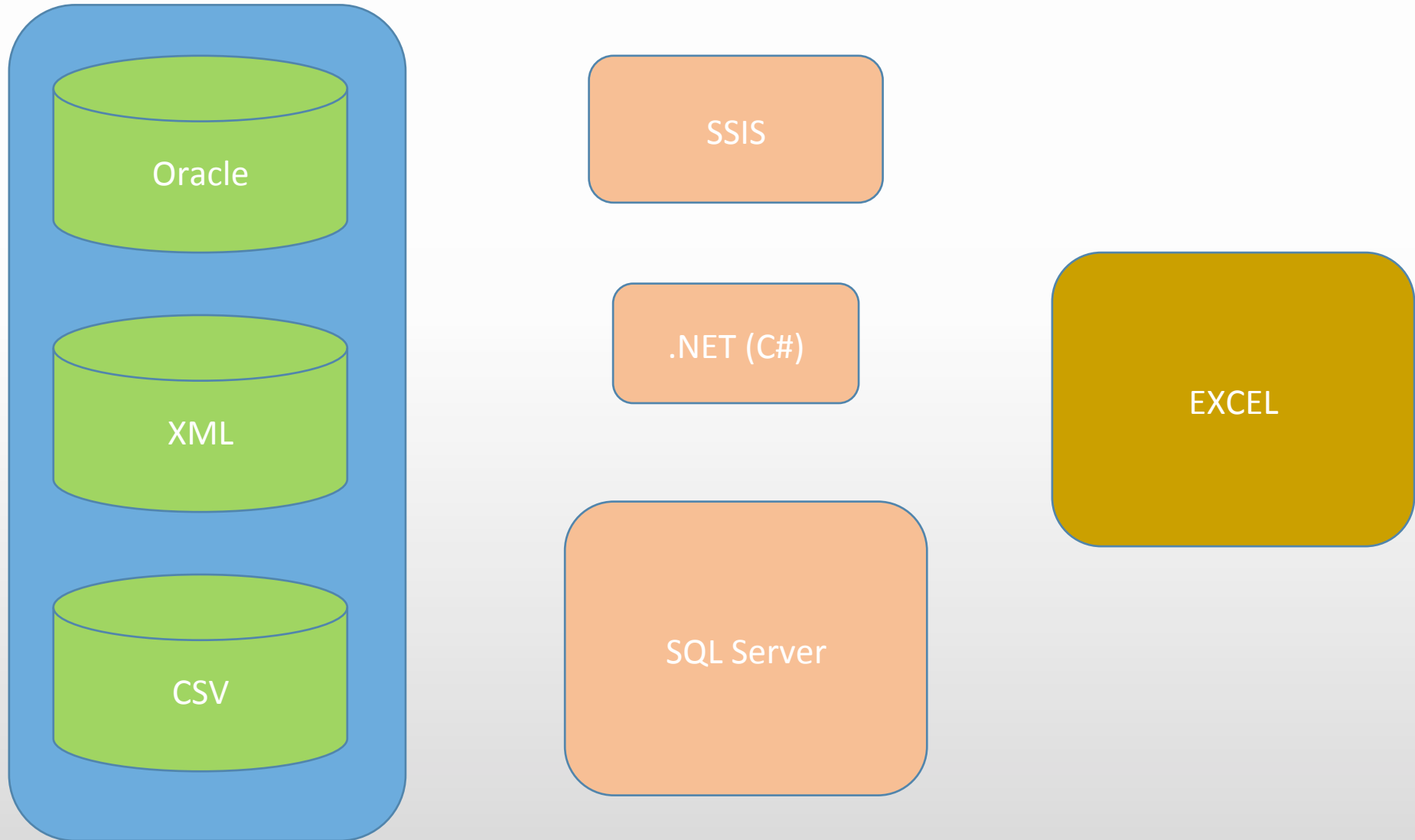


The gap in our case is the lack of a properly organised Data Warehouse

The Process According to Rainardi



The Component Parts



Microsoft and BI

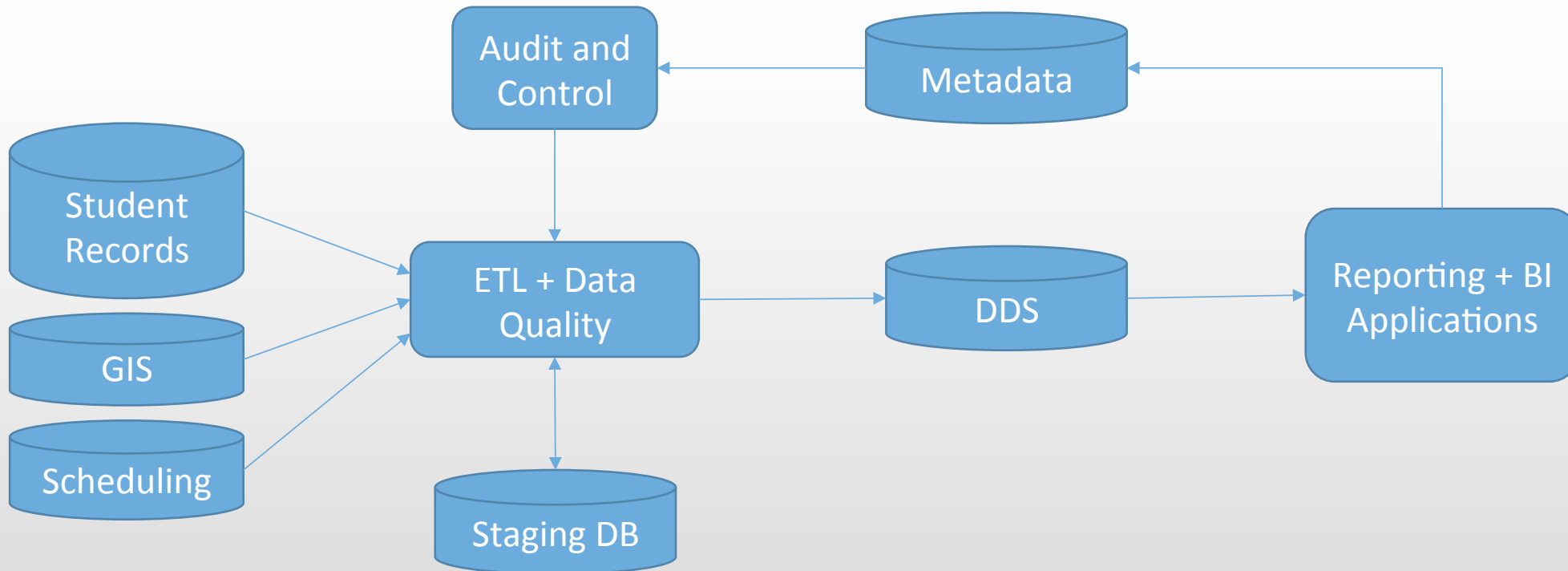


Source: Gartner (February 2014)

- Microsoft are now a serious BI player
- Excel has become a serious BI tool
- Spreadmarts are still a seriously bad idea

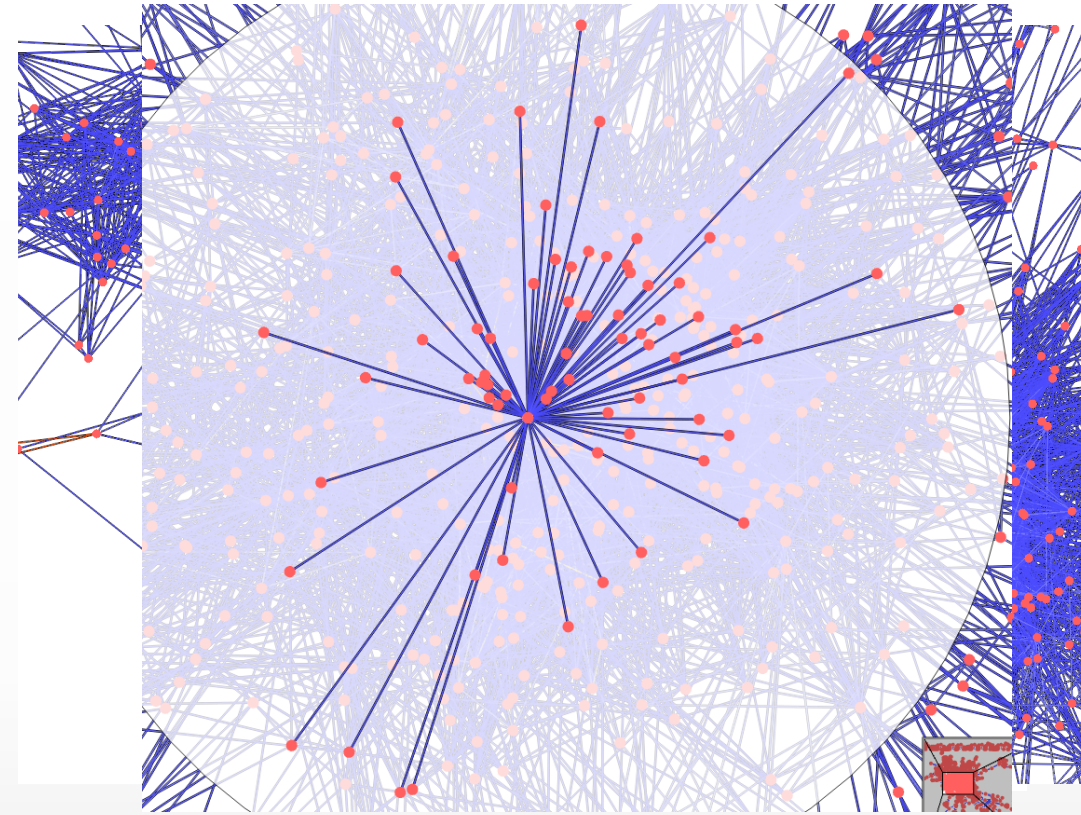
Our Simple Data Warehouse

Building a data-warehouse with examples in SQL Server –
Vincent Rainardi



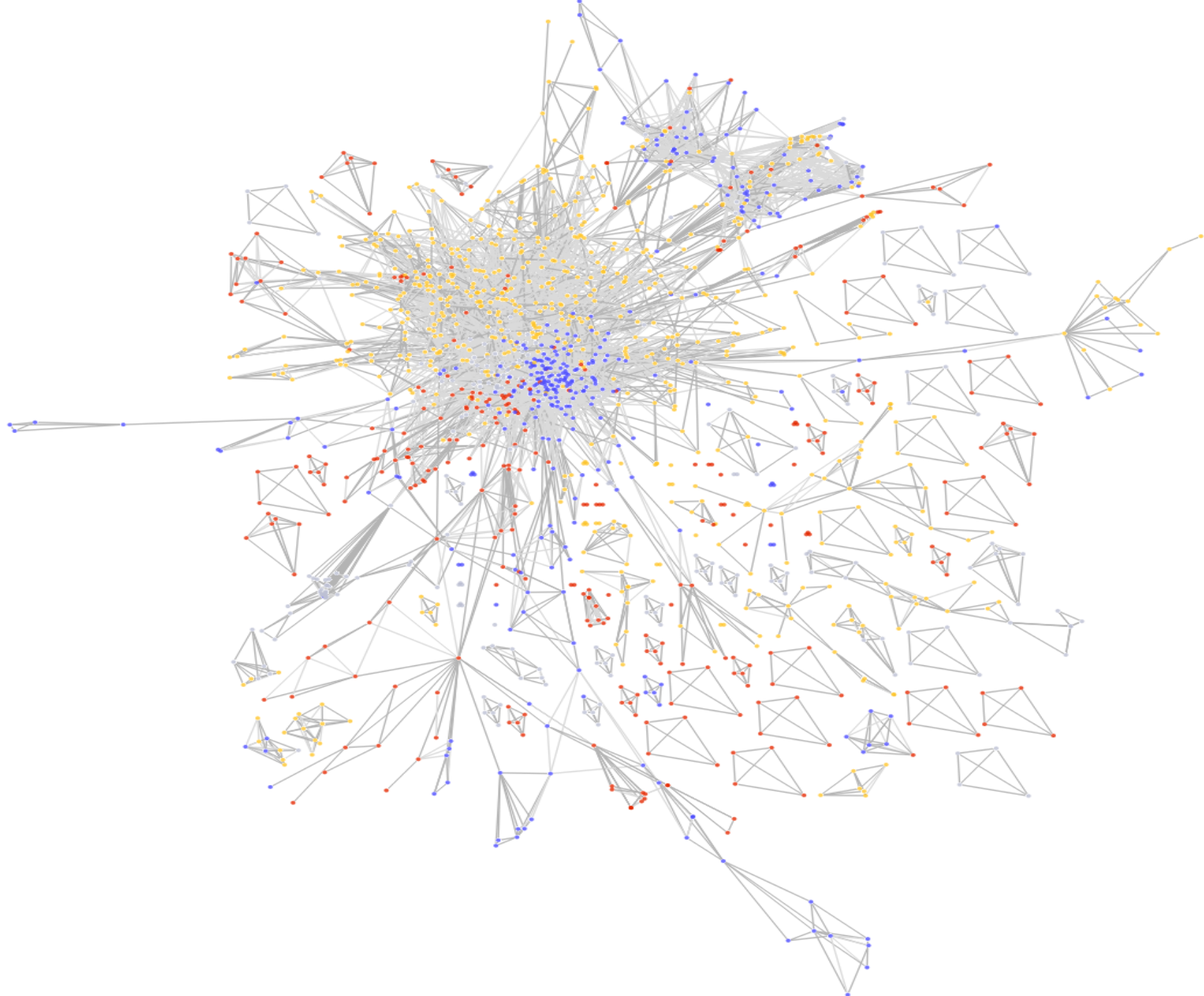
Data Risk and Feasibility

- Protects the institution ... from itself
- Highlights weaknesses
- Likely to cause short-term pain
- Necessary for long-term gain
- Can have much wider implications than people realise



Elsa's Rule

“Don't talk to senior management until you can talk tough”



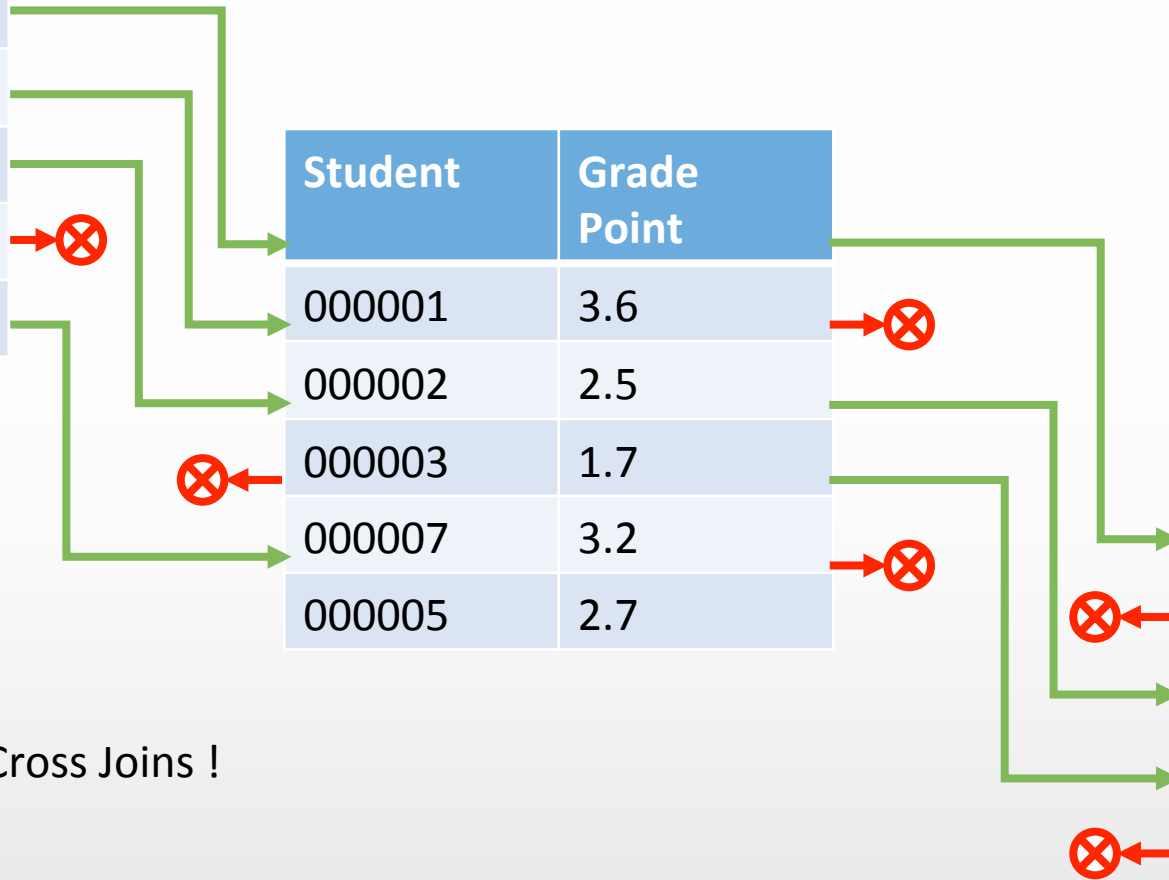
Referential Integrity not enforced by the system

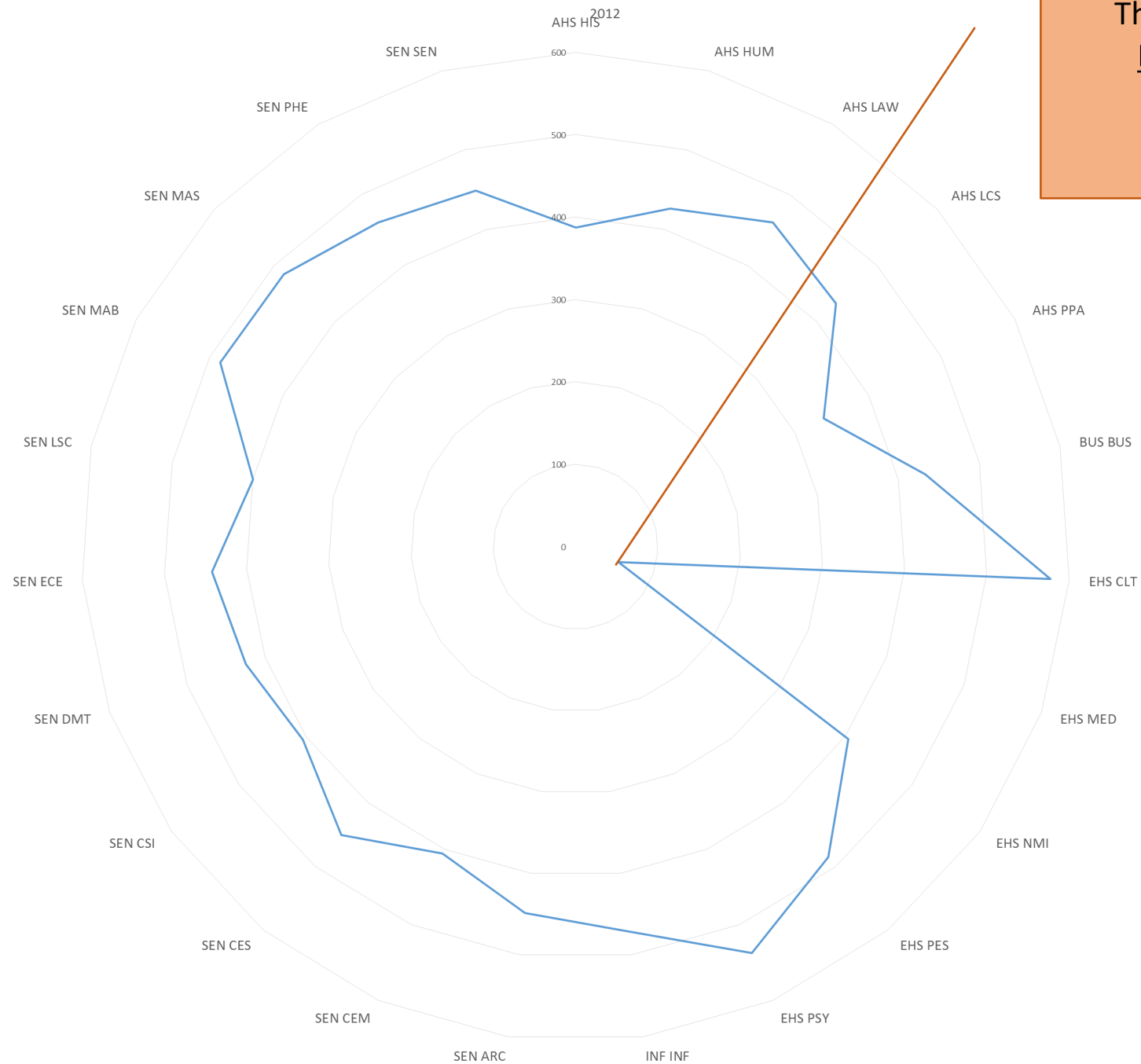
Student	Name
000001	Anne
000002	Joseph
000003	Frederick
000004	Anton
000005	Jane

Student	Grade Point
000001	3.6
000002	2.5
000003	1.7
000007	3.2
000005	2.7

Student	Award
000001	First
000004	Second
000003	Fail
000007	Second
000006	Pass

Cartesian Products – Cross Joins !



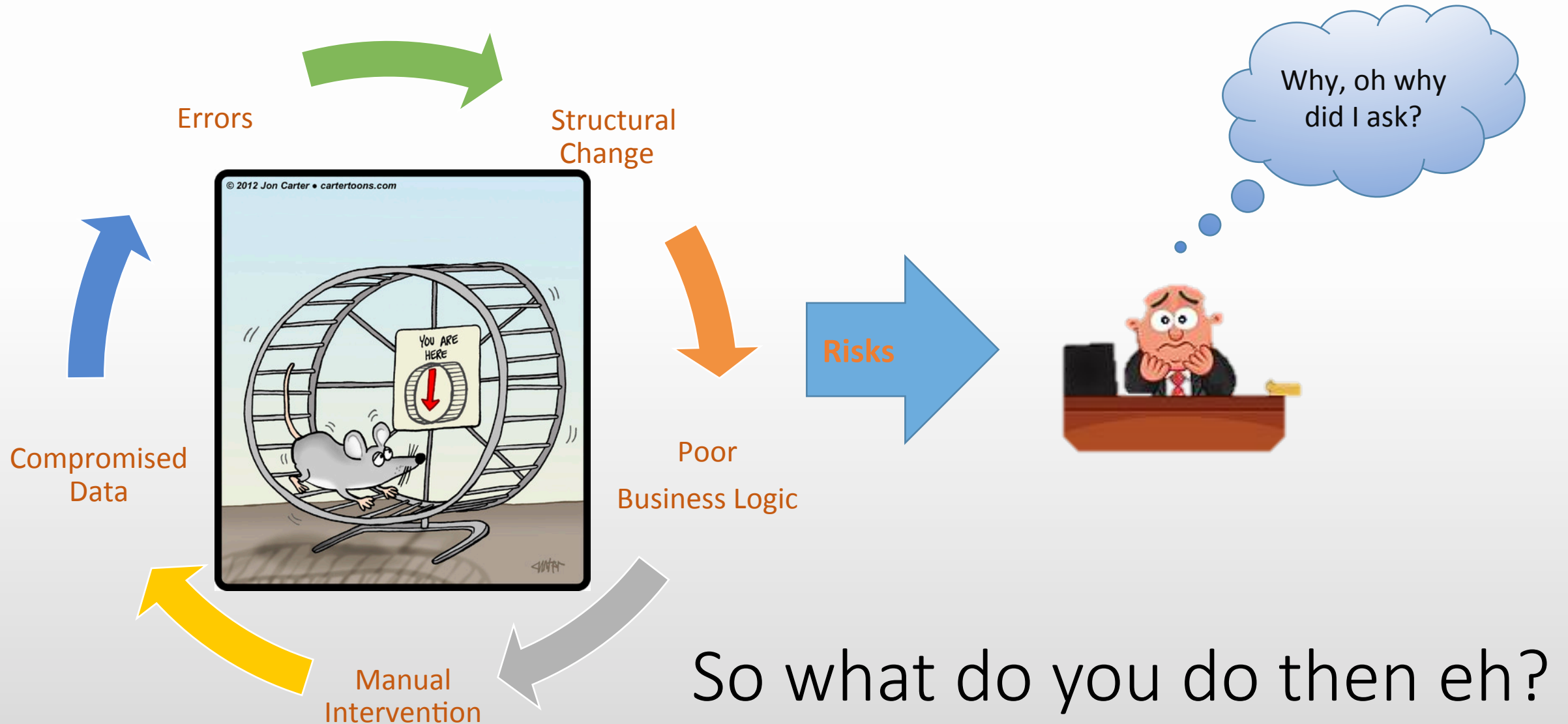


These are not points they are GAMSAT values.
But they are stored in the CAO points field.
This = Havoc !!

Hybrid Coupling

Year
2012

It may not be a pretty picture ...



Talking Tough



“Us and them” will probably not help

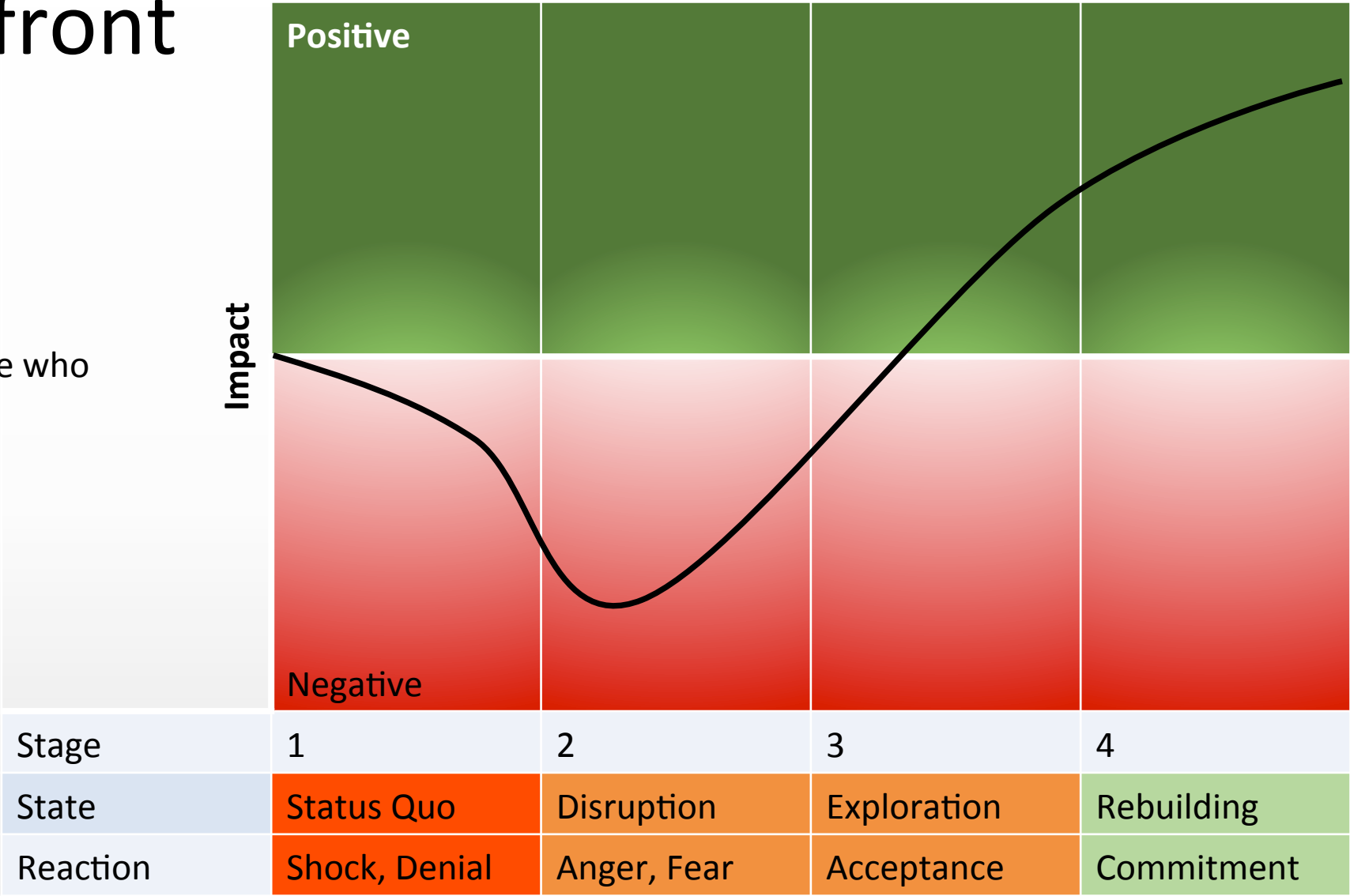
There is a broad spectrum of people affected

1. Never surprise
2. Never delay
3. Don't hide facts
4. Always write it down
5. Justify everything
6. Look for a silver lining
7. Bring solutions
8. Remember multiple audiences
9. Follow up and follow through
10. Treat people with respect and dignity

Lead from the front

How do we move people from stage 1 to stage 4?

Don't forget :
It's not only senior people who may be hurt by this.



Kübler-Ross model



Conclusions

- Implementing a prototype DW is
 - Quick and Inexpensive
 - Likely to challenge your institution
 - A useful exercise
- Implementers need
 - To diplomatically address any issues that arise
 - Patience
- Sponsors need
 - To support their implementers
 - To be prepared to hear both positive and negative messages