



Database Design Contentious Issues

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Karen López, ISP

- Karen has 20+ years of data and information architecture experience on large, multi-project programs.
- She is a frequent speaker on data modeling, data-driven methodologies and pattern data models.
- She wants you to **love your data.**



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About this Presentation

We will be using an interactive format - you will be participating in informal polls about data modeling issues and best practices.

This is not an introductory presentation - a good knowledge of data modeling issues will be assumed.

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Why Contention?

...because people are contentious!

InfoAdvisors' Discussion Groups

- E-mail, web, RSS and newsgroup based discussion group
- Data Modeling, Frameworks, Tools Groups
- Over 3000 subscribers
- Moderated
- No Charge
- www.infoadvisors.com

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Agenda

- Contentious Issues
 - Background
 - Poll
 - Results & Analysis
- Resources

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Contentious Issues

Near-religious discussions and debates

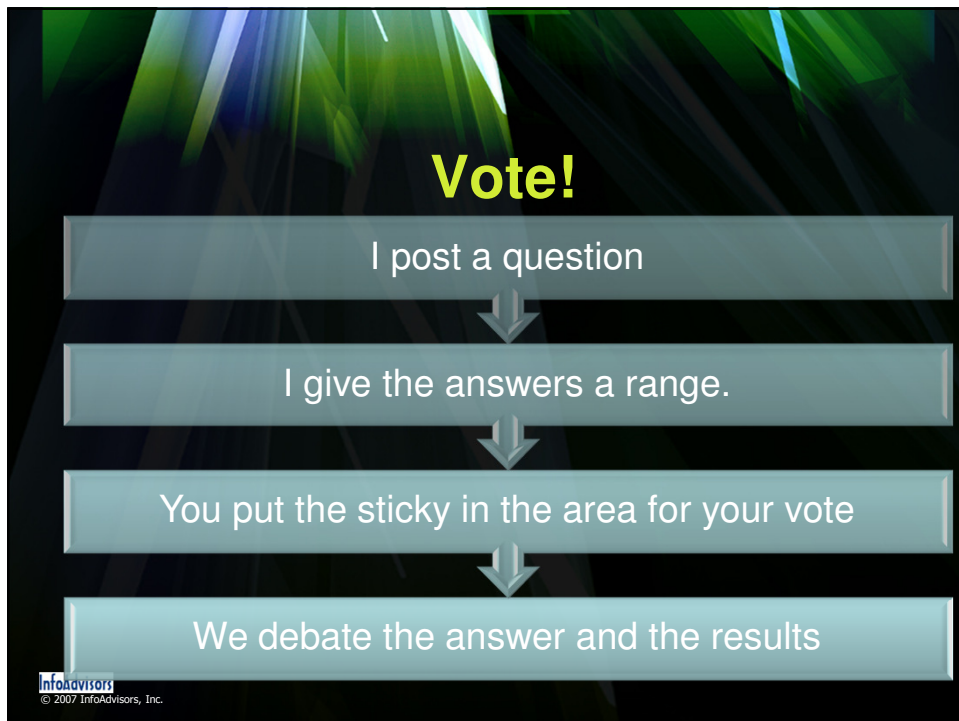
- People rarely change their minds based on this discussion
- The most successful discussions are ones where both sides learn something new about the other viewpoint.

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Logical and Physical

- **Logical Data Model:** A representation of requirements that are DBMS and Application independent
- **Physical Data Model:** A representation of requirements that are DBMS and usually application specific.
- **DDL:** Script that may be generated from a model or reverse engineered from DB

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Vote! LDM & PDM

1	2	3	4	5
 LDM ----- PDM	-----	-----	-----	----- 

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Vote! General

1	2	3	4	5
LDM ----- PDM	----- 	-----	-----	-----

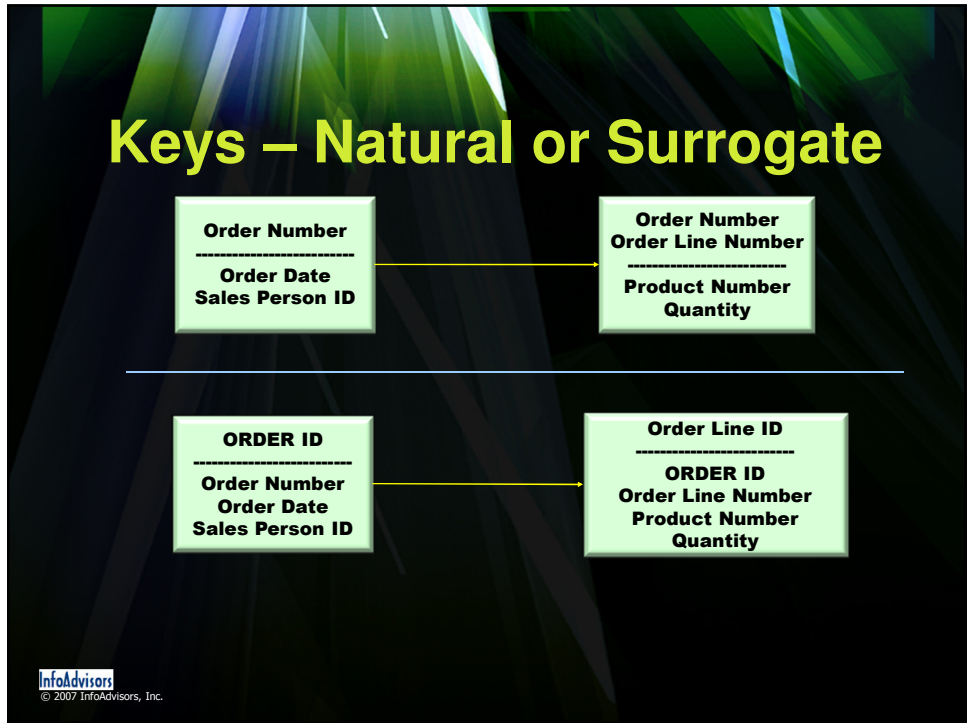
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An abstract graphic with a dark background and vibrant, multi-colored rays of light in shades of blue, green, and purple, similar to the one above.

Keys - Natural or Surrogate

- Just what you call them may show your true colors....
 - Surrogate, Non-intelligent, Unnatural, Dataless or Meaningless
 - Natural, Intelligent, Normal, Cluttered

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Surrogate <> Identity Property

- Identity may or may not be used for surrogate key
- Surrogate key may be assigned some other way

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Keys - Natural or Surrogate - Vote

What best describes your approach in an LDM / PDM?

1. Surrogate Keys? We don't need surrogate keys - we have natural identifiers
- 2.
- 3.
- 4.
5. Every entity deserves its own surrogate key.

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Surrogate Keys

TIP!

Every decision is ultimately made based on cost, benefit, and risk. Be prepared to analyze all three.



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Do we need Classwords?

- A traditional naming convention
- Usually means there's a standard classword list
- Some tools can check for standards compliance
- Examples: Date, Amount, Count, Quantity

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Attribute/Column Names

- Customer First **Name** / Customer **First Name**
- Order **Effective Date**
- Order Effective
- **E-mail Address**
- Email
- Item / Item **ID**

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...not the same as

- Domains
- Data Types
- UDTs

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Not Class Words

- Char
- Varchar
- Numeric (but Number might be)
- Text (but Description might be)
- Data (it's all data)
- Info

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Do we need Class Words- Vote

In a Logical and Physical data model, should we require class words?

1. Yes, they clarify what the data is
- 2.
- 3.
- 4.
5. No, we don't need them

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When To Use Varchar?

- Variable in length
- Extra storage
- Some trick for managing
- Varchar(1)?
- Varchar(2)?
- Varchar(8)?

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Varchar -Vote

What makes sense?

1. Whatever anyone wants (1, 2, 3 is fine)
- 2.
- 3.
- 4.
5. There is a minimum number where varchar should not be used

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Identity Property as a Surrogate Key

- Often used as a surrogate key
- Limitations
- 1,2,3,4,5,6,7,8,9,etc.

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Identity Property - Vote

What makes sense?

1. Always – Double Rainbows and Unicorns
- 2.
- 3.
- 4.
5. Never, it is Evil Spawned over and over


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How Long Should Object Names Be?

- Tables, Columns, etc.
- 18?
- 3?
- 128?


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Name Lengths - Vote

What's the limit?

1. As short as physically possible
- 2.
- 3.
- 4.
5. Use meaningful, long names, even up to 128

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NoSQL

- Not really about SQL
- Trend in non-relational databases
- Semantic Web/Technologies related

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Non-relational Databases

- New approaches, methods, techniques
- Often large investments
- Often large returns
- Often large risks
- May be planned with or without data architectures... and architects

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Vote: Non-relational DBs

How will these new approaches affect your DM goals?

1. More Work / Budget / Focus
- 2.
- 3.
- 4.
5. Less Work / Budget / Focus

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Who Gets to Update the Model?

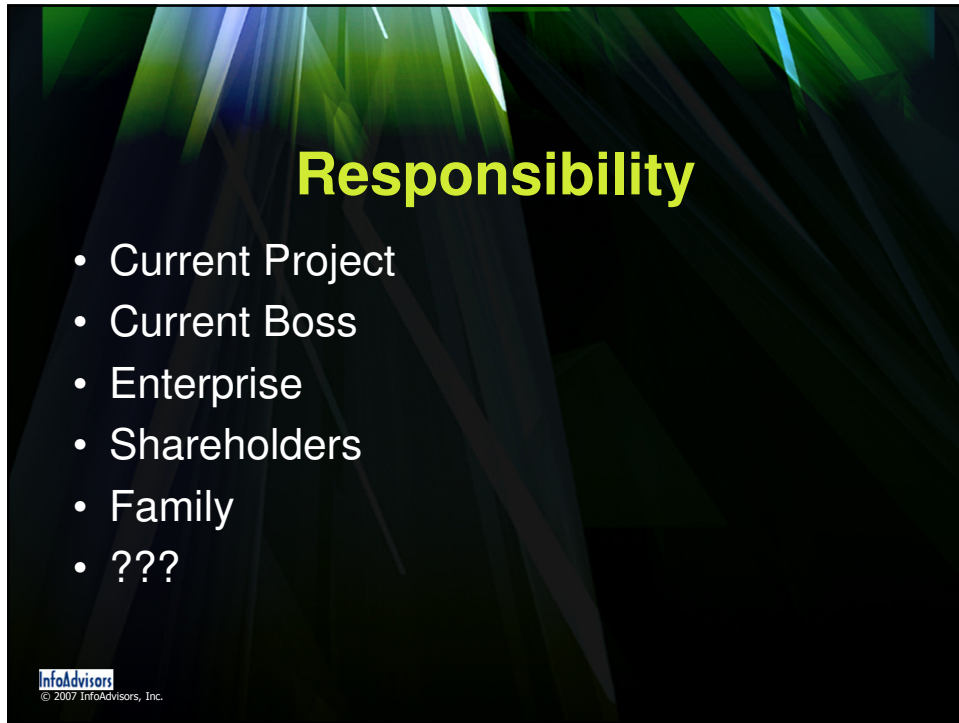
- Many marketing pitches portray a team of developers, modelers, DBAs, etc., happily working on the model
- Is it “More hands make for less work” or “Too many cooks spoil the soup”?

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Who Gets to Update the Model

1. Only seasoned Data Modeling Professionals
- 2.
- 3.
- 4.
5. Everybody – we’re all professionals here

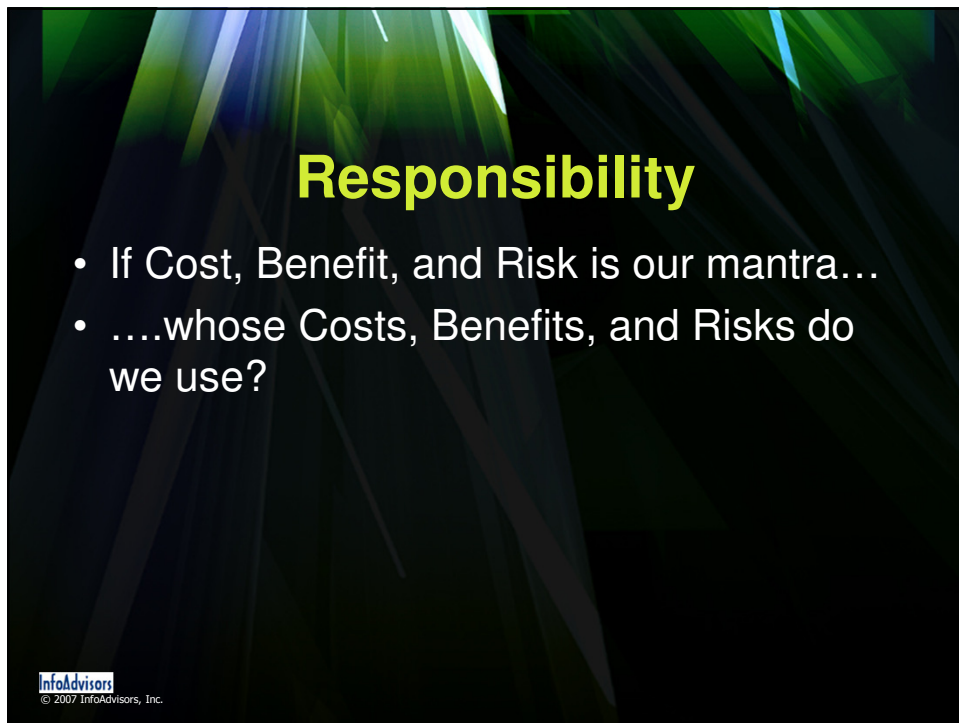
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Responsibility

- Current Project
- Current Boss
- Enterprise
- Shareholders
- Family
- ???

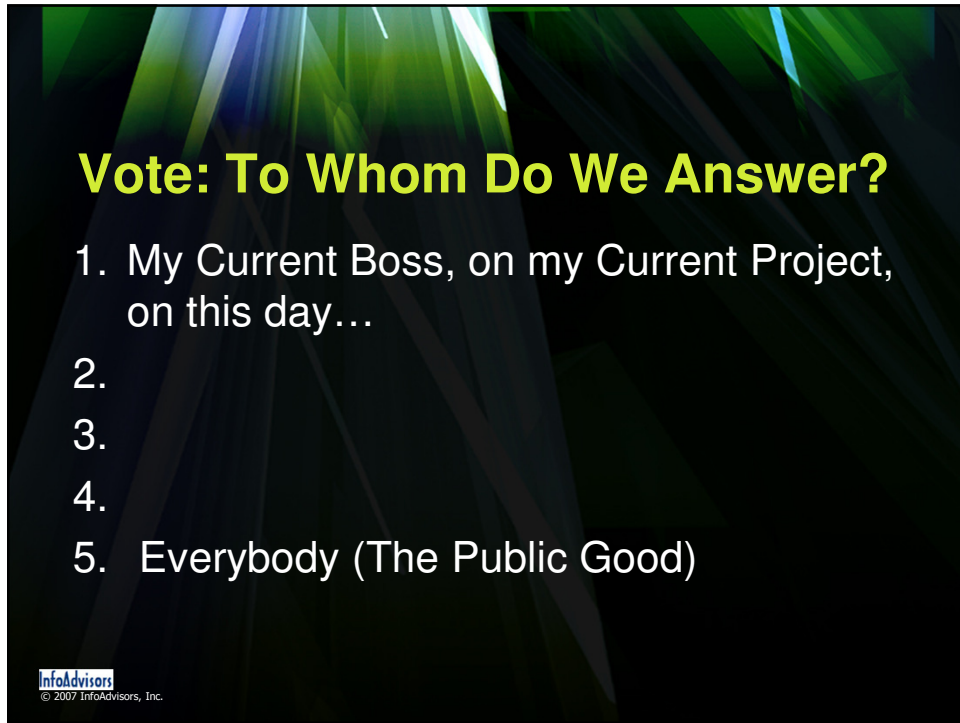
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Responsibility

- If Cost, Benefit, and Risk is our mantra...
-whose Costs, Benefits, and Risks do we use?

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Vote: To Whom Do We Answer?

1. My Current Boss, on my Current Project, on this day...
- 2.
- 3.
- 4.
5. Everybody (The Public Good)

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What Are Your Issues?

Is that with one “L” or Two?

How is it spelled?

1. Modeling/Modeler
2. Modelling/Modeller
3. It depends on my mood...

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What did we learn?

Contentious Issues & Collaboration

Near-religious discussions and debates

- People rarely change their minds based on this discussion
- The most successful discussions are ones where both sides learn something new about the other viewpoint.

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Contentious Issues & Collaboration

...and that we have a long way to go....

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Contentious Issues & Collaboration

If we can't collaborate well with other data professionals, we don't stand a chance of collaborating well with Project Managers, Developers, Testers – or users.

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Thank you!

I'd appreciate feedback of any type about this presentation.

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