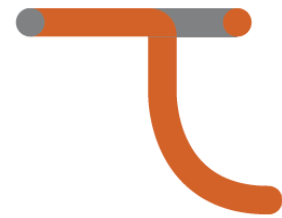
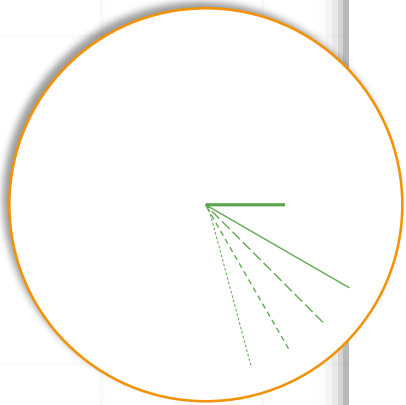




Bitemporaler Affront
Oder die Kampfansage der Quellschnittstelle

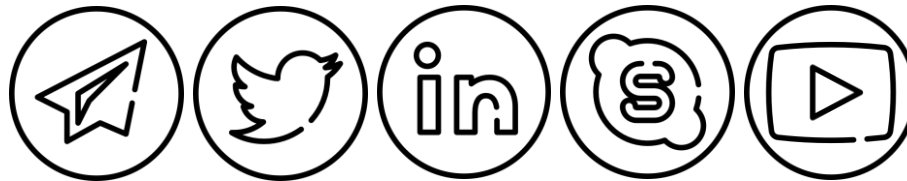
Dirk Lerner



TEDAMOH

THE DATA MODELLING HUB

@DV_Modeling
#DDVUG



MODULES

Coaching

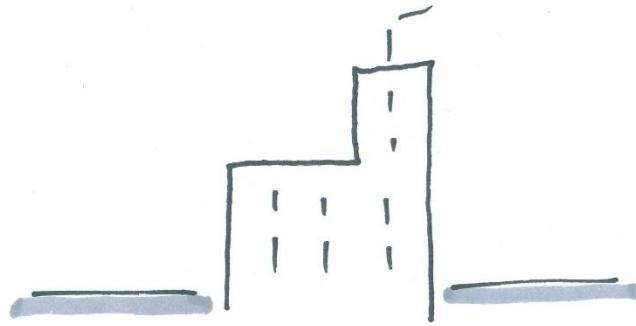
Data Architecture
&
Data Modeling

Data Model
Scorecard

Data Vault
&
FOM

Consulting

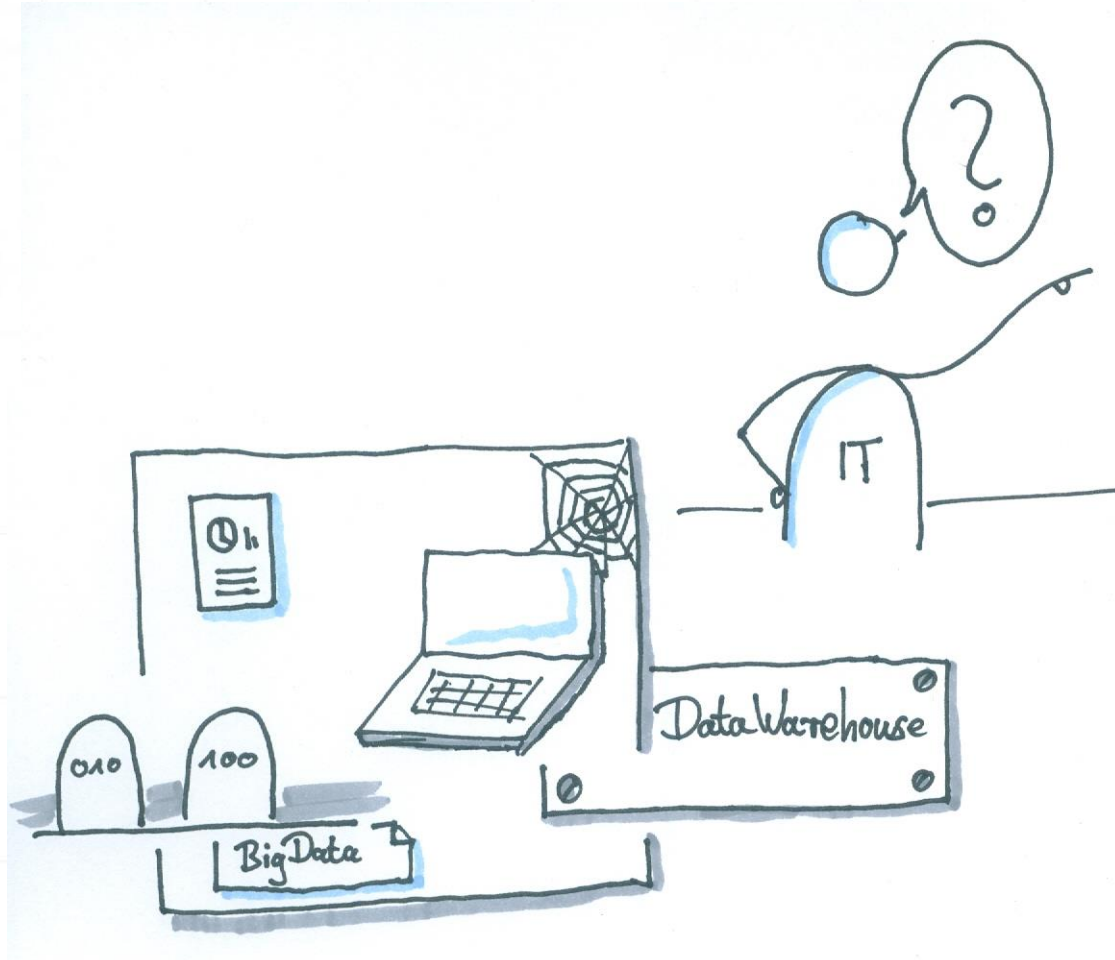
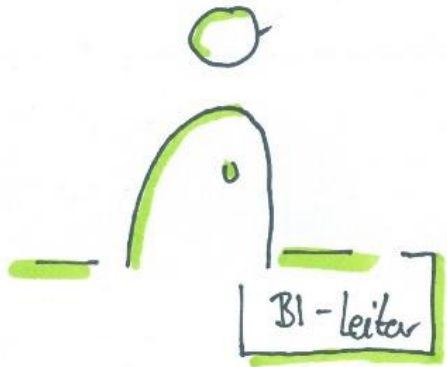
Temporal
Data

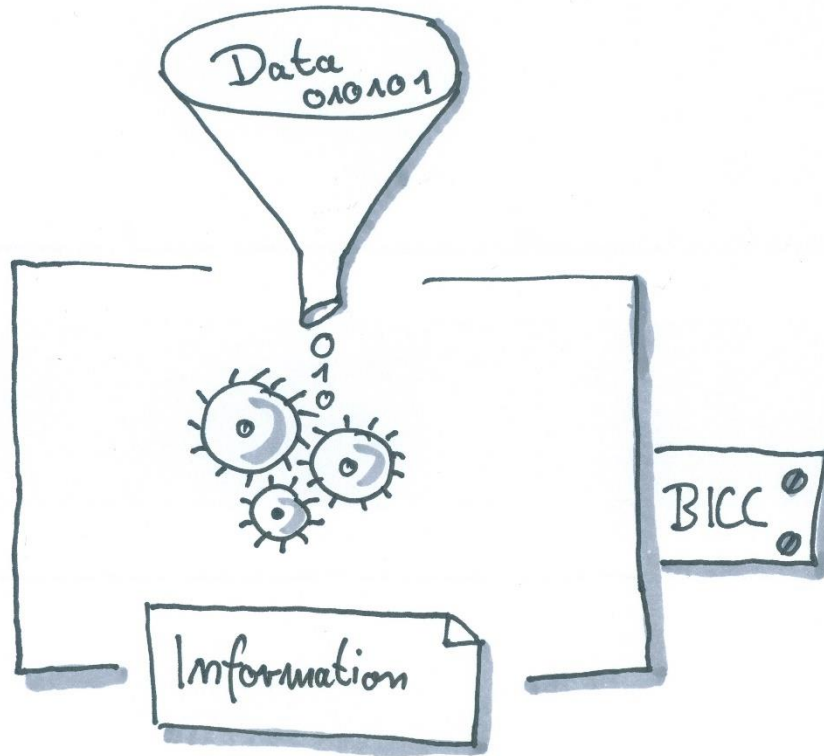
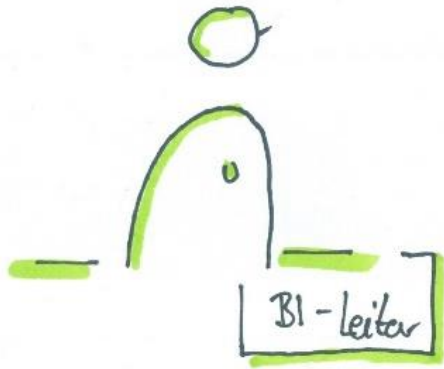


Fast Change Co

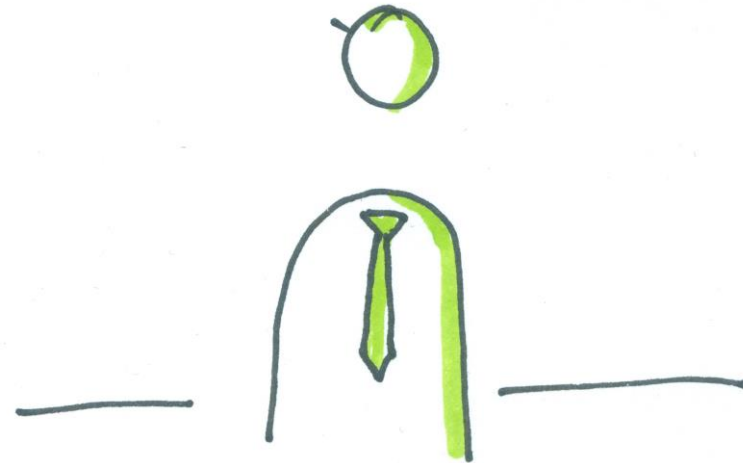


This is Michael Müller – the freshman at FastChangeCo and the new BI manager!





New Source



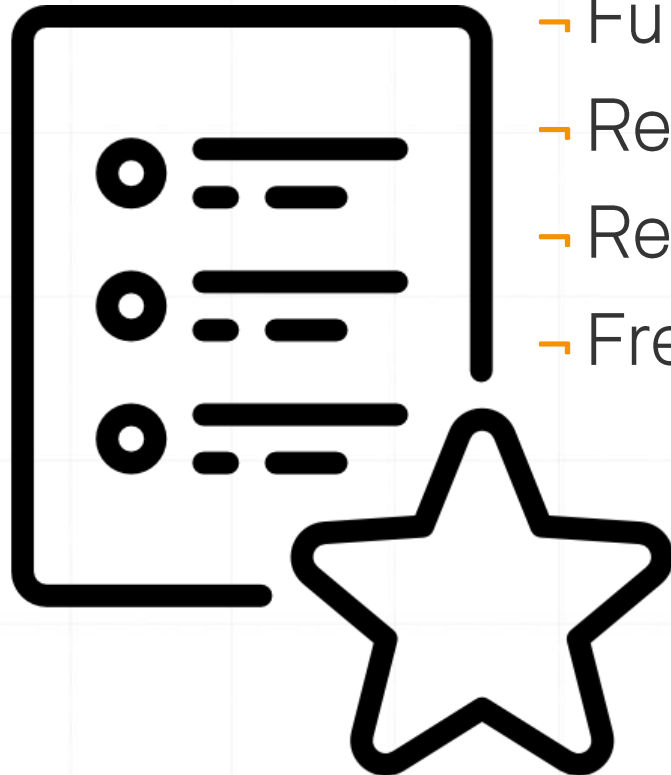
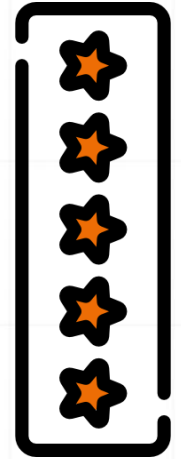


New Source

Incoming Interface – Rating

Data Delivery Rating - Quality from 1 to 5 star

- > Structur
- > Data Definition
- > Fully (temporal) consistent
- > Responsibility
- > Reliability
- > Frequency



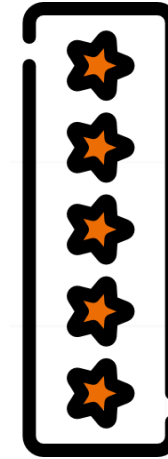
The **fewer** stars in the rating,
the **more** effort in the implementation!

Incoming Interface - Expected Definition

Testing Bitemporal Hub Satellite

<<SL - Volatile Zone>> Currency All	
Base Currency Code	char(3)
Target Currency Code	char(3)
Exchange Type	char(4)
Exchange Rate	DECIMAL(18,8)
Valid From	datetime
Valid To	datetime

<<Volatile Zone View>> View Currency All	
Base Currency Code	
Target Currency Code	
Exchange Type	
Exchange Rate	
StateTimeFrom	
StateTimeBefore	
PrecedingStateTimeFrom	
FollowingStateTimeFrom	
<input type="checkbox"/> VolatileZone.CurrencyAll	



Incoming Interface - Profiling

Source Data

Oct19		GBP		EUR		X		1.51
Sep19		GBP		EUR		X		1.54
Jun19		GBP		EUR		X		1.54

Incoming Interface - Clarification

Business Meeting defines temporality as

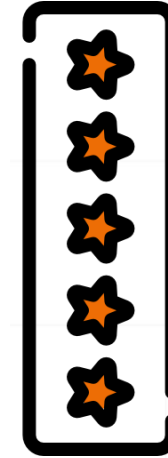
- Defined time period, even there is only the Begin State Time available
- Before State Time is
 - Infinity, if it is the latest time period in Source and DWH
 - Successor Begin State Time, if a Successor already exist in DWH
- Each Delta Delivery has to be recorded. Even when the context data is identical. Due to update of context data.

Incoming Interface - Revised

Testing Bitemporal Hub Satellite

<<SL - Volatile Zone>> Currency All	
Base Currency Code	char(3)
Target Currency Code	char(3)
Exchange Type	char(4)
Exchange Rate	DECIMAL(18,8)
Valid From	datetime
Valid To	datetime

<<Volatile Zone View>> View Currency All	
Base Currency Code	
Target Currency Code	
Exchange Type	
Exchange Rate	
StateTimeFrom	
StateTimeBefore	
PrecedingStateTimeFrom	
FollowingStateTimeFrom	
<input type="checkbox"/>	VolatileZone.CurrencyAll



Populate data

Target Data

Jun19 | Aug19 | GBP | EUR | X | 1.51

Historization as usual!

Aug19 | Oct19 | GBP | EUR | X | 1.61

New row!

Oct19 | ∞ | GBP | EUR | X | 1.61

No compare of context!

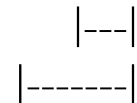
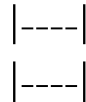
Source Data

Sep19 | GBP | EUR | X | 1.54

Jun19 | GBP | EUR | X | 1.54

Equals

Finishes



Populate data

Target Data

Jun19 | Aug19 | GBP | EUR | X | 1.51
~~Aug19 | Oct19 | GBP | EUR | X | 1.61~~
Aug19 | Sep19 | GBP | EUR | X | 1.61
Sep19 | Oct19 | GBP | EUR | X | 1.54
Oct19 | ∞ | GBP | EUR | X | 1.61

Inherit STB!

Historization as usual!

Old context (decoalesce)!

New row!

Source Data

Jun19 | GBP | EUR | X | 1.54

Equals

Populate data

Target Data

Inherit STB!

Jun19	Aug19	GBP	EUR	X	1.51
Jun19	Aug19	GBP	EUR	X	1.54
Aug19	Oct19	GBP	EUR	X	1.61
Aug19	Sep19	GBP	EUR	X	1.61
Sep19	Oct19	GBP	EUR	X	1.54
Oct19	∞	GBP	EUR	X	1.61

Historization as usual!

New row!

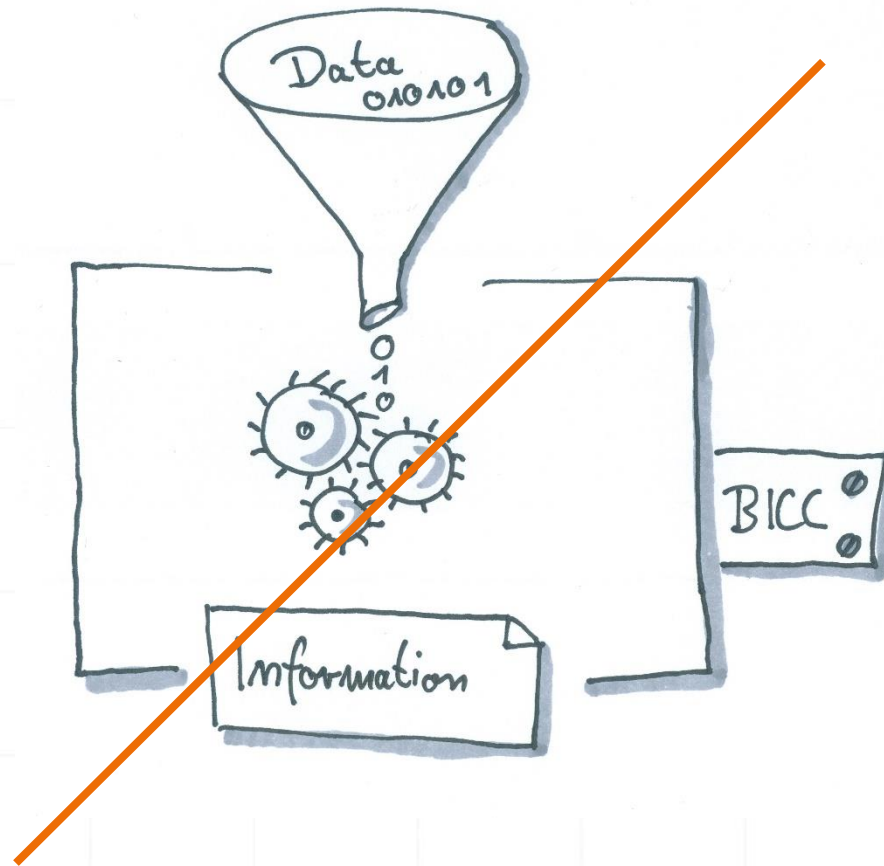
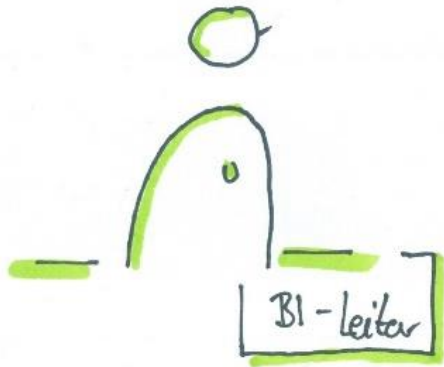
Source Data

Bitemporal – New Process

- Defined time period, even there is only the Begin State Time available
- Each Delta Delivery has to be recorded. Even when the context data is identical. Due to update of context data.
- Before State Time is
 - Infinity, if it is the latest time period in Source and DWH
 - Successor Begin State Time, if a Successor already exist in DWH

New Pattern for

```
[Includes (Equals, Finishes) ]
[ |--1--|--2--|--3--|--5--|--6--8 No Compare! ]
[      |--4--|      |-7--|      Inherit STB! ]
[      |--8--|      Inherit STB! ]
```



Timeline Condence

Don't Forget
To
Fill Timeline Gaps
And
Condence Rows

Incoming Interface - Clarification

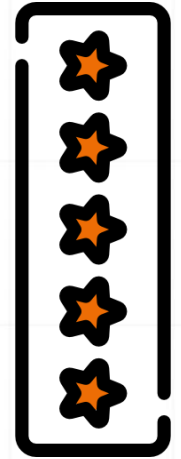
Business Meeting defines temporal timeline condense as

- After a defined time period, the bitemporal timeline can be condensed.
- After 180 day no updates of time periods are expected.

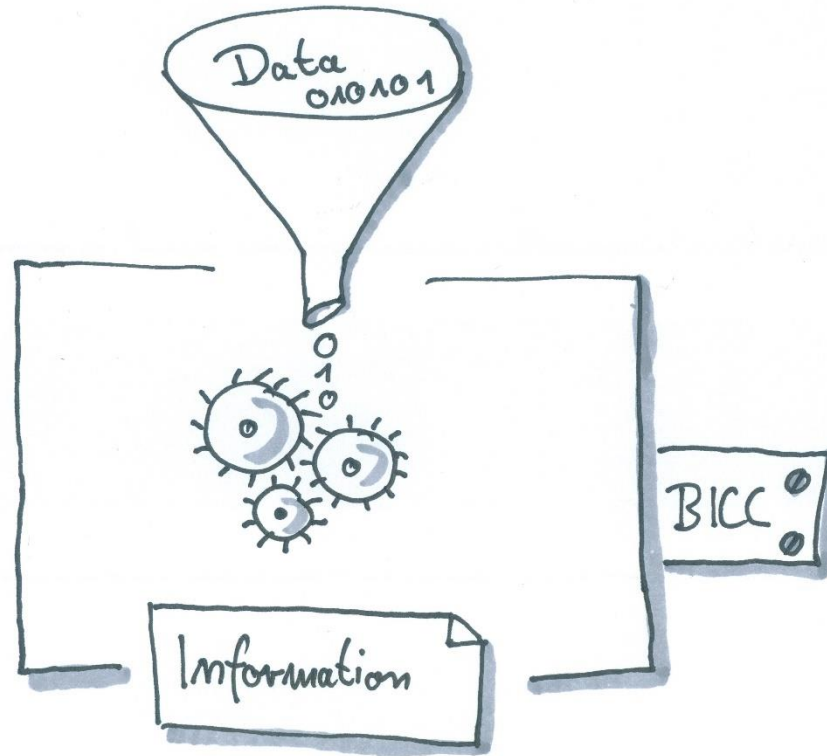
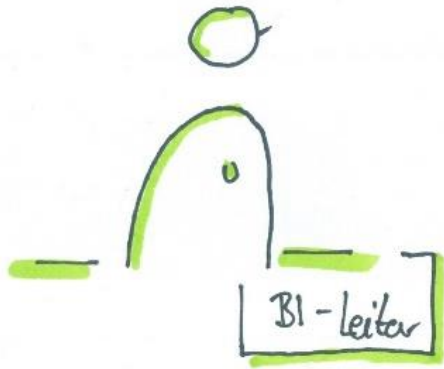
Incoming Interface – Rating

Data Delivery Rating - Quality from 1 to 5 star

- Fully (temporal) consistent
- Reliability



The **fewer** stars in the rating,
the **more** effort in the implementation!





Temporal data in a fast-changing world!

The Big Business Man smiled.

Time, he said, ***is what keeps everything from happening at once.***

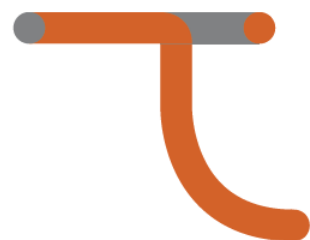
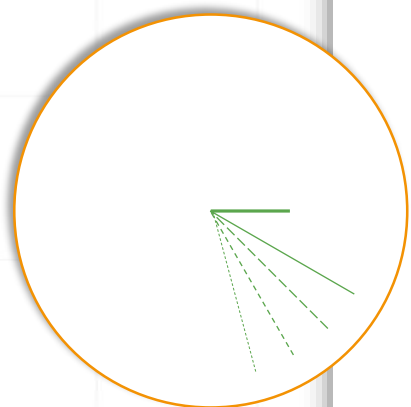
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FOUNDER

