

## ETL az üzleti fejlődés szolgálatában

ETL on service for business development

June 2013



## Dealogic

Dealogic is a platform used by global and regional Investment Banks worldwide.

Dealogic has over 25 years' experience and a deep knowledge of the Investment Banking and Capital Markets space.

Every one of the top 50 banks in the world utilizing the Dealogic platform.



# Activities

**Events** 

Conferences

Meetings

# **Entities**

**Investors** 

Companies

# Deals

**Equity Capital** 

Fixed Income

Merge & Acquisition

Loan



### 2. Data Sources

### **Applications**

- Controlled Datapoints
- Arbitrary Datapoints

#### Public sources

- Free and purchased feeds
- Govermental and commercial

#### Researchers

- Inspect and validate data
- Colaboration with clients
- Calculations

Private sources



### 3. Requirements

## Generic

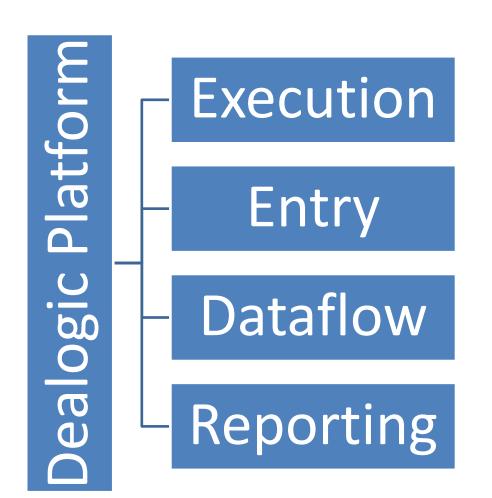
- Adhoc reports / Fix reports
- Analyze millions of rows / Be fast!
- Flexible / Robust

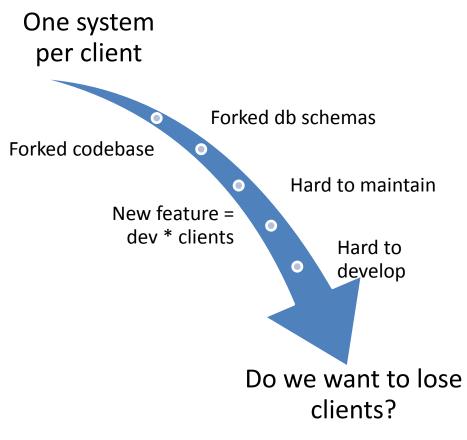
## Specific

- Private Data for every client (Companies, Investors)
- Client version of the data (Deals, Activities)
- Client specific aggregation / roll-up logic



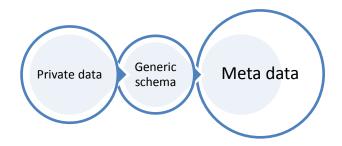
## 4. First Approach

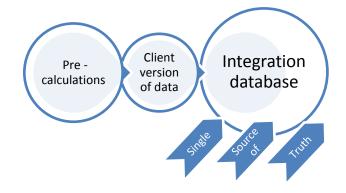


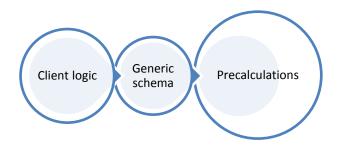


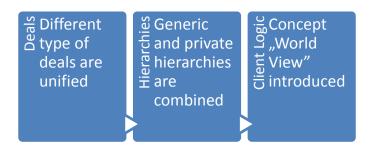


#### 5. Generalize











## 6. Integration database

#### World View

- Client logic
- Client version of data
- Custom hierarchies

#### Mapping

- No islands of data
- Everything is mapped together
- Every datapoint needs to be verified by human

#### **Calculations**

- Continous flow in
- Business overrides data frequently



## 7. Considered technologies

#### SSIS

- Maintainability
- Reusability
- Client logic
- Performance

#### Informatica

Integration

## Abinitio

- Specific scripting language
- Challenges



#### 8. Custom ETL

## Business requirements

- Predictible
- Robust & Flexible
- Performance
- Custom layering

## **Technical**

- Reverse enginered business logic
- ORM vs. SP
- Test strategies

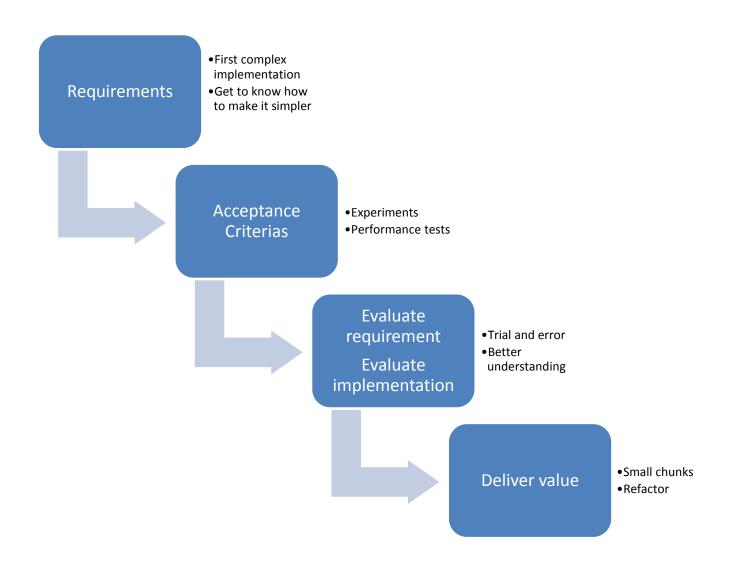


#### 9. Custom ETL

- Custom layering ETL runs by hourly basis
  - Latest Analysts
  - End of day Managers
  - Historical Executives
- Precalculation and Transformation
  - By precalculations ETL is simplified
  - Custom ETL is maintainable
- ORM or SP-s?
  - Objects vs. Indexes
  - Statistics
  - Generic vs. Performance
- Examples
  - Multi value fields
  - Codelists
- Test strategies Performance testing
  - Load testing
  - Stress testing
  - Endurance testing

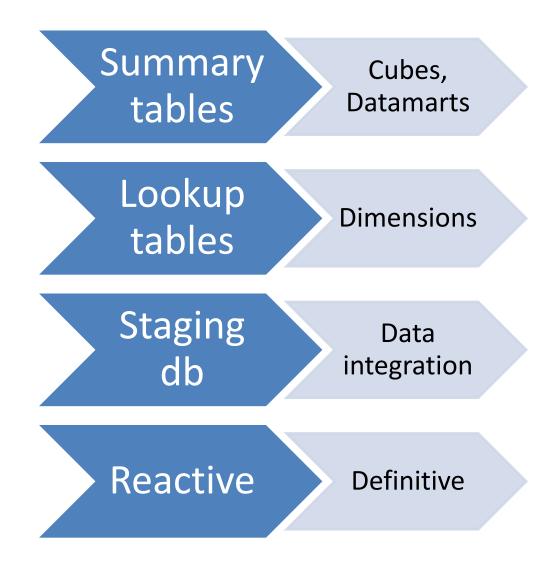


## 10. Approach





## 11. Flexibility of Mind - Agile





#### Example ©

Name	A	Pending Change	User	_
	usp_ETL_DIMENSION_TRANCHE_DATES_LOAN.sql			
	usp_ETL_DIMENSION_TRANCHE_DATES_MNA.sql			
	usp_ETL_DIMENSION_TRANCHE_DCM.sql			
	usp_ETL_DIMENSION_TRANCHE_DETAILS_DCM.sql			
	usp_ETL_DIMENSION_TRANCHE_DETAILS_ECM.sql			
_	usp_ETL_DIMENSION_TRANCHE_DETAILS_GROUPS_DCM.sql			
	usp_ETL_DIMENSION_TRANCHE_DETAILS_GROUPS_ECM.sql			
	usp_ETL_DIMENSION_TRANCHE_DETAILS_GROUPS_LOAN.sql			
	usp_ETL_DIMENSION_TRANCHE_DETAILS_GROUPS_MNA.sql			
_	usp_ETL_DIMENSION_TRANCHE_DETAILS_LOAN.sql			
	usp_ETL_DIMENSION_TRANCHE_DETAILS_MNA.sql			
	usp_ETL_DIMENSION_TRANCHE_ECM.sql			
_	usp_ETL_DIMENSION_TRANCHE_INDUSTRYREGION_DCM.sql			
_	usp_ETL_DIMENSION_TRANCHE_INDUSTRYREGION_ECM.sql			
	usp_ETL_DIMENSION_TRANCHE_INDUSTRYREGION_LOAN.sql			
	usp_ETL_DIMENSION_TRANCHE_INDUSTRYREGION_MNA.sql			
	usp_ETL_DIMENSION_TRANCHE_LOAN.sql			
	usp_ETL_DIMENSION_TRANCHE_MNA.sql			
	usp_ETL_DIMENSION_VALUES_DCM.sql			
	usp_ETL_DIMENSION_VALUES_ECM.sql			
	usp_ETL_DIMENSION_VALUES_LOAN.sql			
_	usp ETL DIMENSION VALUES MNA.sql			
_	usp_ETL_ENTITY_BG_INDEX_DIMENSION_ENTITY_INDEX.sql			
	usp_ETL_ENTITY_BG_INDEX_GROUP.sql			
	usp_ETL_ENTITY_BG_NAICS_DIMENSION_ENTITY_NAICS.sql			
	usp_ETL_ENTITY_BG_NAICS_GROUP.sql			
	usp_ETL_ENTITY_DIMENSION_ENTITY_DEALOGIC.sql			
	usp_ETL_ENTITY_PARENT_MASTER.sql			
	usp_ETL_ENTITY_SEEDLOOKUP.sql			
	usp_ETL_FACT_DEAL_INSTITUTION_ENTITY_BG_INDEX_DIMENSION_ENTITY_INDEX.sql			
	usp_ETL_FACT_DEAL_INSTITUTION_ENTITY_BG_INDEX_GROUP.sql			
	usp_ETL_FACT_DEAL_INSTITUTION_ENTITY_BG_NAICS_DIMENSION_ENTITY_NAICS.sql			
	usp_ETL_FACT_DEAL_INSTITUTION_ENTITY_BG_NAICS_GROUP.sql			
	usp_ETL_FACT_DEAL_INSTITUTION_ISIN_BG_GROUP_ECM.sql			
	usp_ETL_FACT_DEAL_INSTITUTION_PROCEEDS_BG_DIMENSION_PROCEEDS_ECM.sql			
	usp_ETL_FACT_DEAL_INSTITUTION_PROCEEDS_BG_GROUP_ECM.sql			
	usp_ETL_FACT_VALUE_BG_TRANCHE_INSTR_TYPE_GROUPS_DCM.sql			
	usp_ETL_FACT_VALUE_BG_TRANCHE_INSTR_TYPE_GROUPS_ECM.sql			
	usp_ETL_FACT_VALUE_BG_TRANCHE_INSTR_TYPE_GROUPS_LOAN.sql			
	usp_ETL_FACT_VALUE_BG_TRANCHE_INSTR_TYPE_GROUPS_MNA.sql			
_	usp_ETL_FACT_VALUE_BG_TRANCHE_INSTR_TYPE_LOAN.sql			
	usp_ETL_FACT_VALUE_ISIN_BG_DIMENSION_ISIN_DCM.sql			
	usp_ETL_FACT_VALUE_ISIN_BG_GROUP_DCM.sql			
	usp_ETL_FACT_VALUE_ISIN_BG_GROUP_ECM.sql			
	usp_ETL_FACT_VALUE_ISIN_BG_GROUP_LOAN.sql			
_	usp_ETL_FACT_VALUE_ISIN_BG_GROUP_MNA.sql			
	usp_ETL_FACT_VALUE_ISSUE_CHARACTERISTICS_BG_DIMENSION_ISSUE_CHARACTERISTICS_DCM.sql			
	usp_ETL_FACT_VALUE_ISSUE_CHARACTERISTICS_BG_GROUP_DCM.sql			w
4			<b>•</b>	

```
-- IMPORTANT: The order of columns selected must match the order of columns in the temporary table in the master dimension
  WITH [cte] AS
               ROW_NUMBER() OVER(PARTITION BY ME.TRANCHE_NO_DD order by (select 0)) as rn,
            ME.TRANCHE_NO_DD,
ME.DEAL_NO_AS_DEAL_ANALYTICS_DEAL_NO,
ME.DEAL_NO_DD_AS_DEAL_GIB_DEAL_NO,
DT.TRANCHE_ID_AS_ANALYTICS_TRANCHE_ID,
              ED.GBL_AMT_FINAL_W_OA_US AS DEAL_GLOBAL_VALUE_USD,
              ED.GBL_AMT_FINAL_W_OA_US_BAND_AS_DEAL_GLOBAL_VALUE_USD_BAND,
ED.GBL_AMT_FINAL_W_OA_EUR_AS_DEAL_GLOBAL_VALUE_EURO,
              ED.GBL_AMT_FINAL_W_OA_FOREX_AS_DEAL_GLOBAL_VALUE_FOREX.
ED.TOT_AMT_FINAL_W_OA_US_AS_DEAL_TOTAL_VALUE_USD,
              ED.TOT_AMT_FINAL_W_OA_EUR AS DEAL_TOTAL_VALUE_EURO,
ED.TOT_AMT_FINAL_W_OA_FOREX_AS_DEAL_TOTAL_VALUE_FOREX,
               ED.GBL_AMT_FILED_CUR_US_AS_DEAL_GLOBAL_VALUE_CURRENT_USD,
              ED.GBL_AMT_FILED_CUR_EUR_AS DEAL_GLOBAL_VALUE_CURRENT_EURO,
ED.GBL_AMT_FILED_CUR_FOREX_AS DEAL_GLOBAL_VALUE_CURRENT_FOREX,
               -- PRO FORMA VALUE
              ISNULL(ED.PRO_FORMA_US, 0) AS DEAL_GLOBAL_VALUE_PROFORMA_USD,
              ISNULL(ED.PRO_FORMA_EUR, 0) AS DEAL_GLOBAL_VALUE_PROFORMA_EURO,
ISNULL(ED.PRO_FORMA_FOREX, 0) AS DEAL_GLOBAL_VALUE_PROFORMA_FOREX,
              -- Face Values
ED.GBL_ANT_FINAL_W_OA_US AS DEAL_GLOBAL_VALUE_FACE_USD,
              ED.GBL_AMT_FINAL_W_OA_EUR_AS_DEAL_GLOBAL_VALUE_FACE_EURO,
ED.GBL_AMT_FINAL_W_OA_FOREX_AS_DEAL_GLOBAL_VALUE_FACE_FOREX,
               ED.TOT_ANT_FINAL_W_OA_US AS DEAL_TOTAL_VALUE_FACE_USD,
              ED.TOT_AMT_FINAL W_OA_EUR AS DEAL_TOTAL_VALUE_FACE_EURO,
ED.TOT_AMT_FINAL W_OA_FOREX_AS_DEAL_TOTAL_VALUE_FACE_FOREX.
            ,DT.TRANCHE_AMT_GROSS_FEE_ALL_AS_TRANCHE_GROSS_FEE_ALL_LOCAL
            DT.TRANCHE AMT GROSS FEE ALL EUR AS TRANCHE GROSS FEE ALL EURO
DT.TRANCHE AMT GROSS FEE ALL FOREX AS TRANCHE GROSS FEE ALL FOREX
             DT. TRANCHE AMT GROSS FEE ALL US AS TRANCHE GROSS FEE ALL USD
            ,DT.TRANCHE_AMT_GROSS_FEE_DISC_AS_TRANCHE_GROSS_FEE_DISC_LOCAL
,DT.TRANCHE_AMT_GROSS_FEE_DISC_EUR_AS_TRANCHE_GROSS_FEE_DISC_EURO
            DT.TRANCHE ANT GROSS FEE DISC FOREX AS TRANCHE GROSS FEE DISC FOREX
DT.TRANCHE ANT GROSS FEE DISC US AS TRANCHE GROSS FEE DISC USD
            ,DT.TRANCHE_AMT_GROSS_FEE_MODEL_AS TRANCHE_GROSS_FEE_MODEL_LOCAL
            DT. TRANCHE AMT GROSS FEE MODEL US AS TRANCHE GROSS FEE MODEL USD
DT. TRANCHE AMT GROSS FEE MODEL EUR AS TRANCHE GROSS FEE MODEL EURO
            DT.TRANCHE AMT GROSS FEE MODEL FOREX AS TRANCHE GROSS FEE MODEL FOREX
           DDT.GROSS_FEE_PCT_AS_DEAL_GROSS_FEE_PERCENT_DISCLOSED
           DT.GROSS_FEE_PCT_AS_TRANCHE_GROSS_FEE_PERCENT_DISCLOSED,
           DT. GROSS FEE PCT MODEL AS TRANCHE GROSS FEE PERCENT MODEL
           DT.GROSS FEE PCT_ALL AS TRANCHE GROSS FEE PCT_ALL,
           --Shares by Issuer and shares by shareholder cast(round (ED.SHARES_BY_ISSR_PCT,2)as float ) AS DEAL_SHARES_BY_ISSUER_PERCENT, cast(round (ED.SHARES_BY_SH_PCT,2) as float) AS DEAL_SHARES_BY_SHAREHOLDER_PERCENT
      INNER JOIN ECM_DEAL ED ON ME.DEAL_NO = ED.DEAL_NO
INNER JOIN ECM_DEALTRANCHE DT ON ED.DEAL_NO = DT.DEAL_NO AND ME.TRANCHE_ID = DT.TRANCHE_ID
     LEFT JOIN ECM DEALTRANCHE DOT ON ED.DEAL_NO = DOT.DEAL_NO AND DOT.TRANCHE_ID =1
LEFT JOIN ECM_TRANCHE_PRICEBOOK_TK_VIEW TK ON ED.DEAL_NO = TK.DEAL_NO AND TK.TRANCHE_ID = 1
SELECT * FROM cte WHERE rn = 1
```

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