Moody's Analytics

Avoiding Multiple Versions of the Truth: Getting it right

How a good data consolidation strategy is critial for the success of risk management

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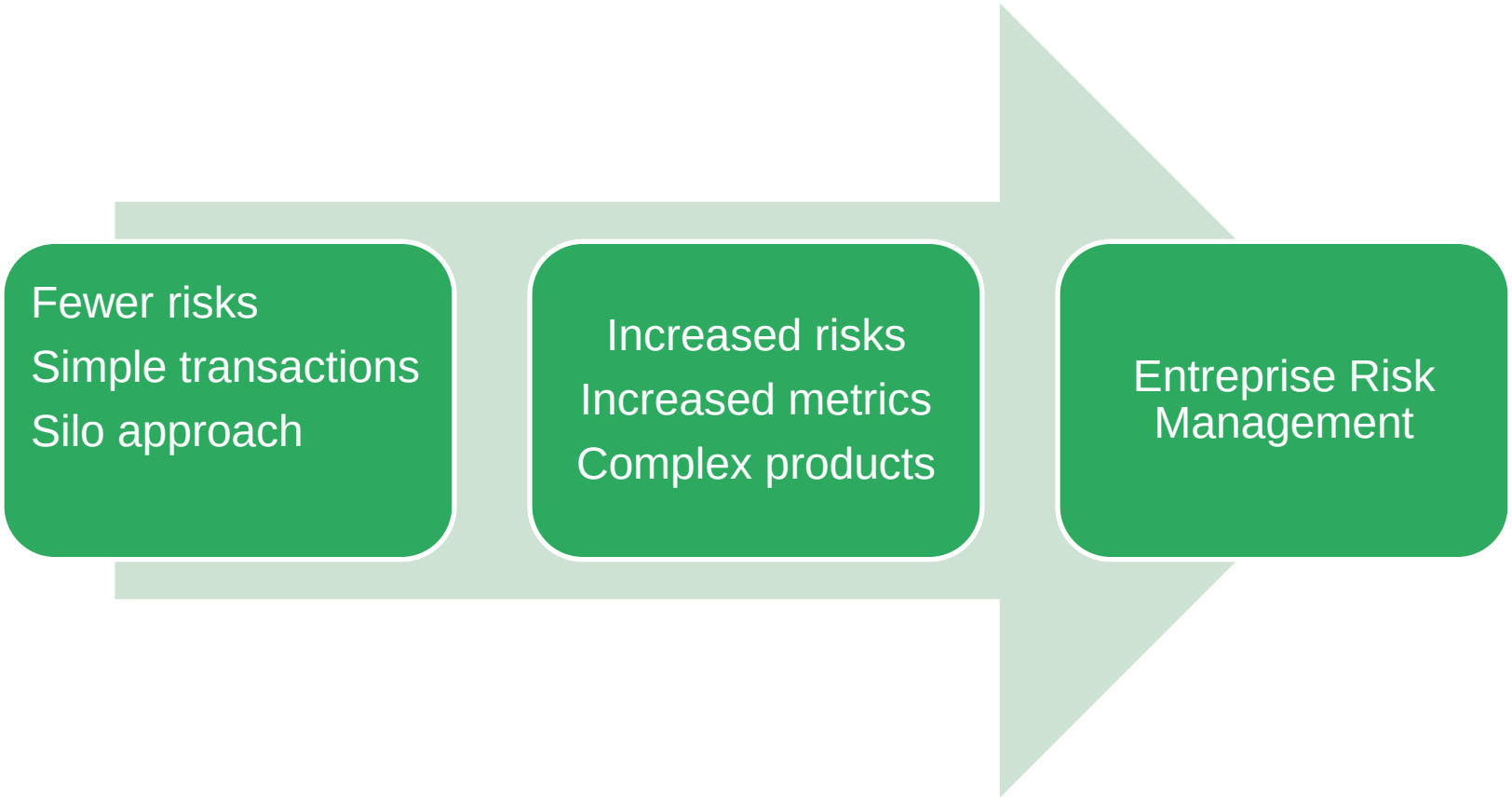
Data consolidation in the heart of enterprise risk management

1. Data consolidation in the heart of enterprise risk management
2. Ensuring internal and external data excellence
3. Servicing multiple risk management engines with centralized data

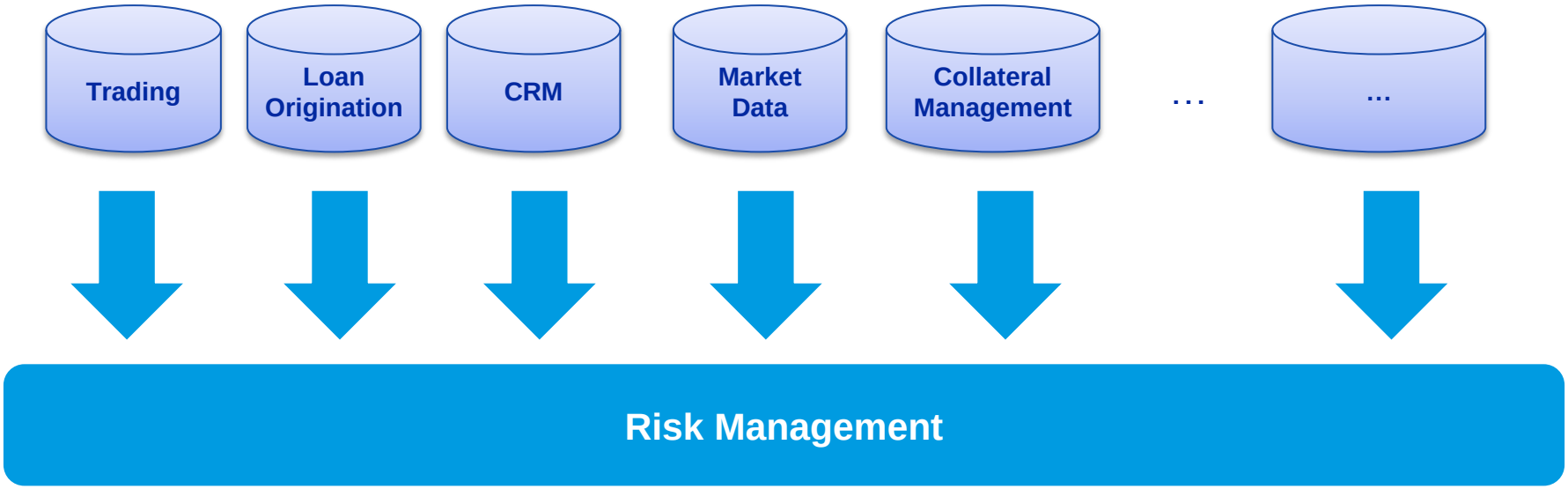
Source: The Economist 27 Feb 2010

The Evolution of Risk Management

Through the time the need for more data and more integration has increased



ERM puts Risk Management is at the crossroad of bank's data



Question :

- What do you consider as the most challenging “Data” issue ?
  - A - Unique Customer Identification across the institution ?
  - B - Risk Aggregation (eg : How to merge a daily-VaR and 1Y-Credit Risk) ?
  - C - Reconciling the output numbers from Risk and from Finance ?
  - D - Running consistent scenarios on Margin and Capital ?

Basic example of the silos' effect in daily decisions

Risk and Performance are very often measured separately

- Different systems, Different teams :
  - Performance is based on accounting indicators
    - Eg : Operating Profit = Revenues vs costs
  - Capital allocated to risky assets does not care about their profitability
    - Basel 2 RegCap = 8% * RWA
- Not "Industrial" tool to help capital allocation process ("Granularity" issue)

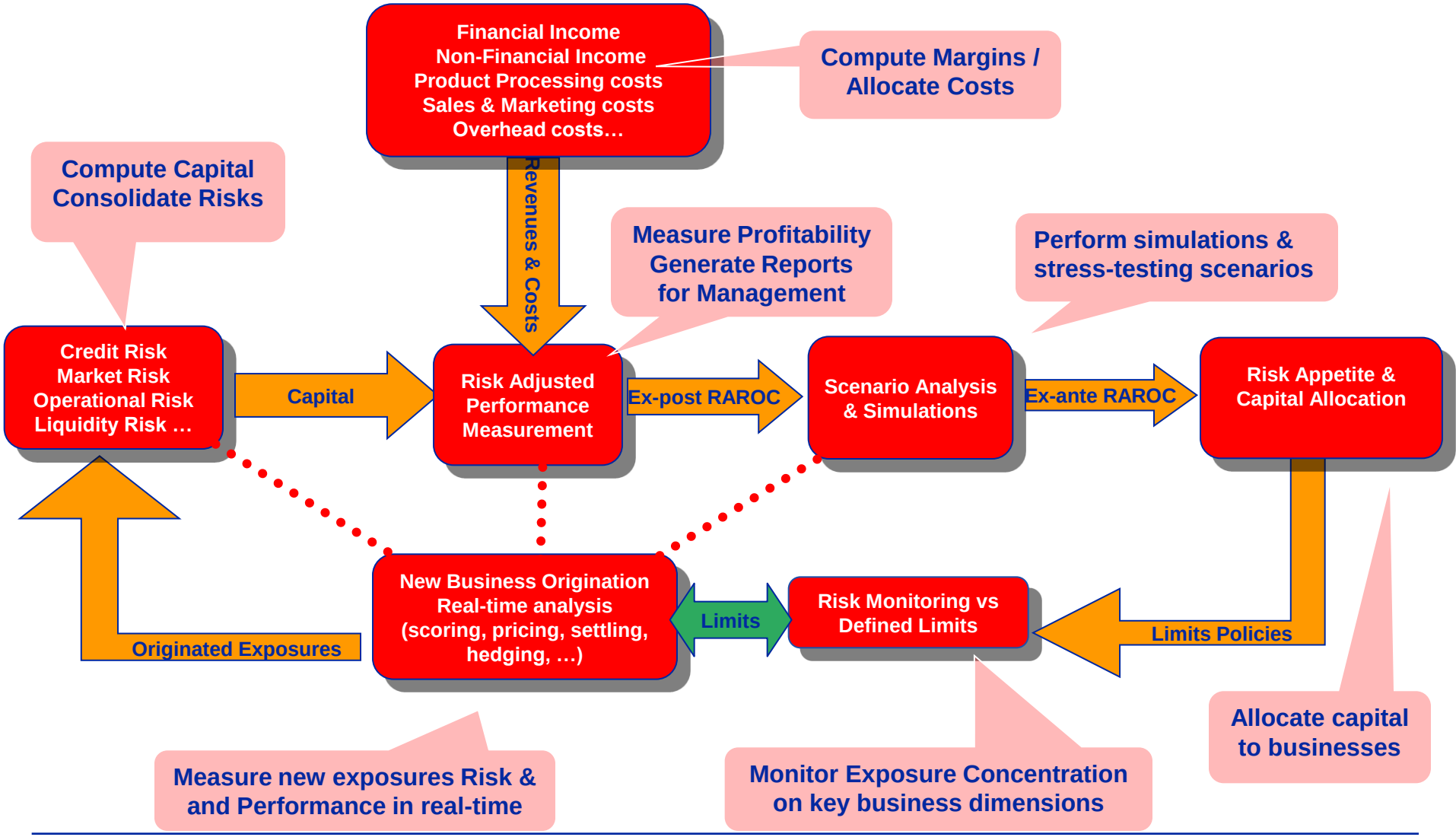
But Adequate pricing requires information across silos

- How can I choose between 2 deals with limited capital available ?
- Where should the bank allocate capital :
  - Which business line? Which country ?
  - Which customer segment ? Which product line ?
  - When ?

It’s easier said than done

- Challenge 1 : Find the right source
  - Relevant data is buried into multiple systems and units
  - Silos never get synchronized
- Challenge 2 : Transform disparate data into meaningful information
  - All silos have a partial version of the truth
  - Information structure is never homogeneous across systems
  - Data consistency is a challenge
- Challenge 3 : Present the right information to the right people
  - Risk measures cannot be simply added.
  - Static indicators vs Dynamic indicators : It’s not just about reporting
  - What level of aggregation/detail should be available ?

How many systems do you need to…



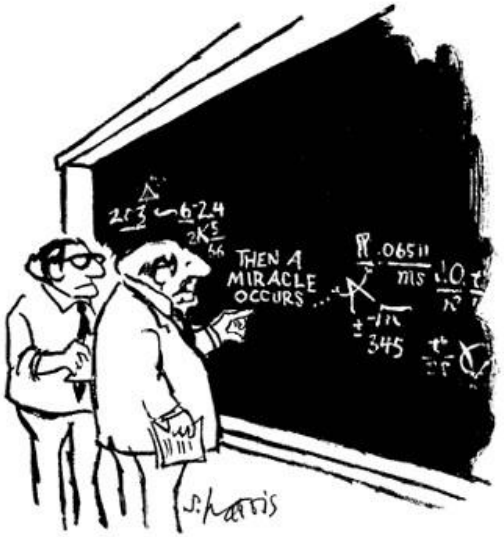
Consolidating data – from silos to a data mart

Multiple sources of data…

- Credit Risks (Default, Transfer, Securitization, Concentration, Residual, Settlement Risks)
- Market risk (IR, Positions, Forex, Options, Commodities risks,…)
- Interest Rate Risk in the banking book, Liquidity Risk, …
- Operational risk
- Other risks (Strategic, Reputation, Capital, Pension risks,…)

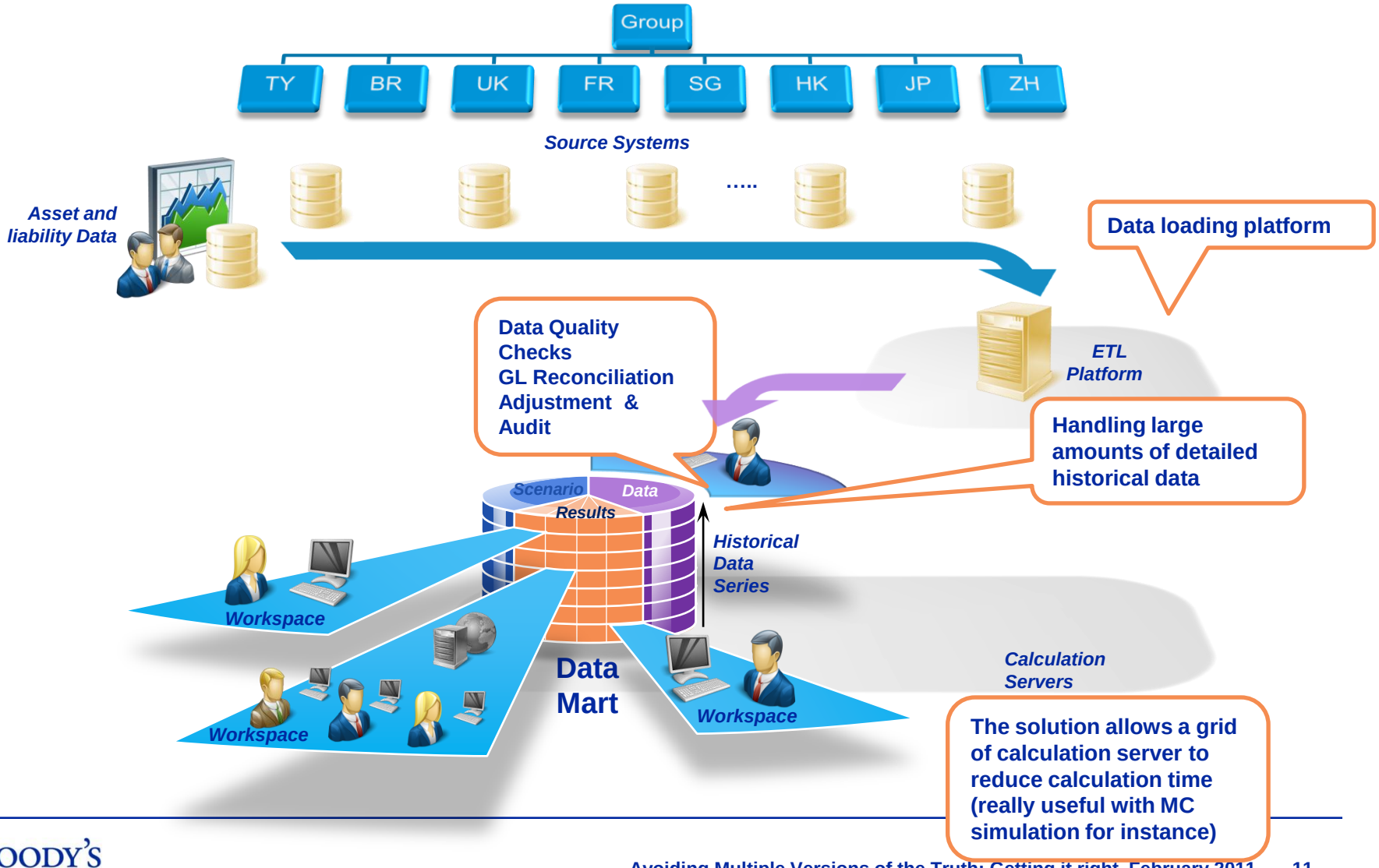
…Need to feed a single data mart

- Data needs to be correctly represented (customer data, transaction data)
- Data mapping should be performed by experts



"I think you should be more explicit here in step two."

A consolidated platform requires key features



Data consolidation is not enough - Ensuring data quality is critical

- Data coming from several sources may have errors
  - Source systems may contain inaccurate data
  - Data may be corrupted during the interfacing process

- Quality of data is critical
  - Garbage in, garbage out – no matter the quality of the calculation engines, if it is not based on good data, the results will not be correct

- Data quality checking should be performed at data mart level
  - Centralizing the rules enable best management and organization

How to guarantee good data quality?

Correct Data Modeling → Internal data quality → External data quality

- Contract level checks for missing fields
  - Is the currency code present?
  - Are all the required amounts informed?

- Contract level checks for coherency of fields
  - Are the two legs of the swap informed? Are they different?
  - Is maturity date after trade date?
  - Does the customer code belong to the customer table?

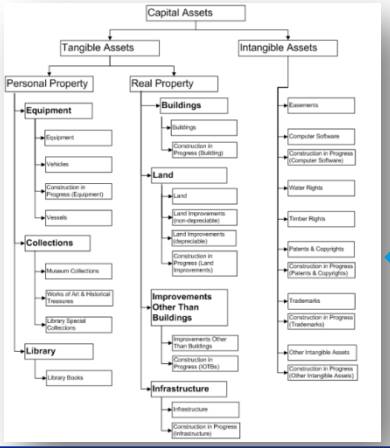
- External data checking to verify completeness and consistency of data

The ultimate quality check – General Ledger Reconciliation

Contract 001	Contract 002	Contract 003	….
• Account xxxxx - 9999 • Account yyyyy - 9999 • Account zzzzz – 99999* • …..	• Account xxxxx - 9999 • Account yyyyy - 9999 • Account zzzzz – 99999* • …..	• Account xxxxx - 9999 • Account yyyyy - 9999 • Account zzzzz – 99999* • …..	• …. • …. • ….

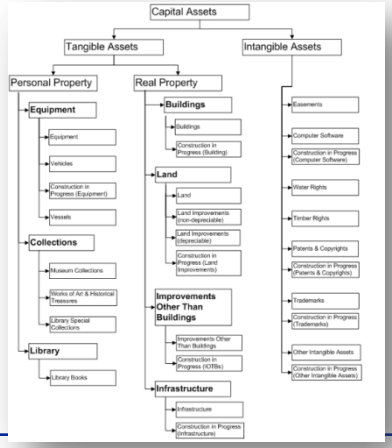
Aggregation process by account number

Generated GL



GL reconciliation

Bank's GL



Benefits of a good data management

- Project trust throughout the company
  - 70% of risk projects fail because of data modelling
  - Calculations engine can be state of the art, but wrong data will always give wrong results
  - Good data management will gather supporters to the project. Bad data management will gather enemies against it
- Establishment of a « single point of truth »
  - No more endless searches for the correct source of data
  - No more endless reconciliations between several sources of data
- Consolidate data view
  - Immediate reporting on products and exposures

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