



**FINANŠU UN  
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# Experience of implementing XBRL data collection

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FCMC, Latvia  
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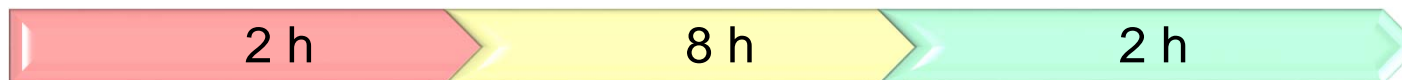
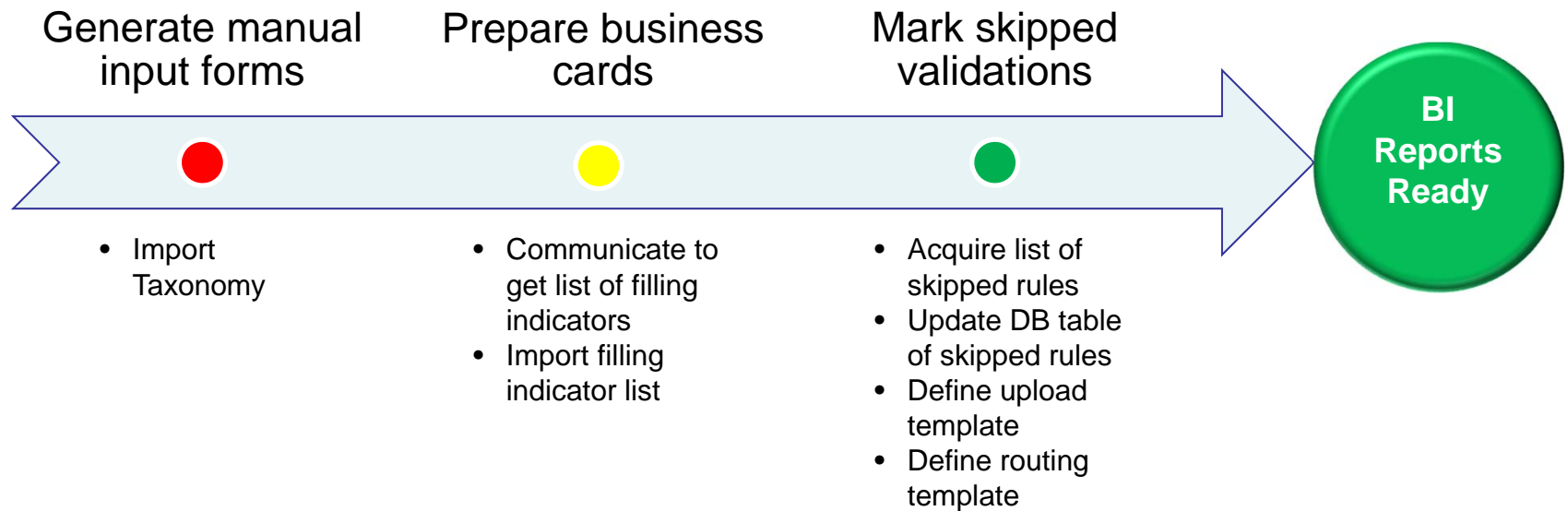


## Why/What could be interesting for you

- Manual data input tool available.
- Rapid implementation of new taxonomies.
- High efficiency (nice cost/benefit ratio).
- Taxonomy driven concept.



# Implementation of new taxonomy



Overall it takes 2 days involving 2 persons staff.

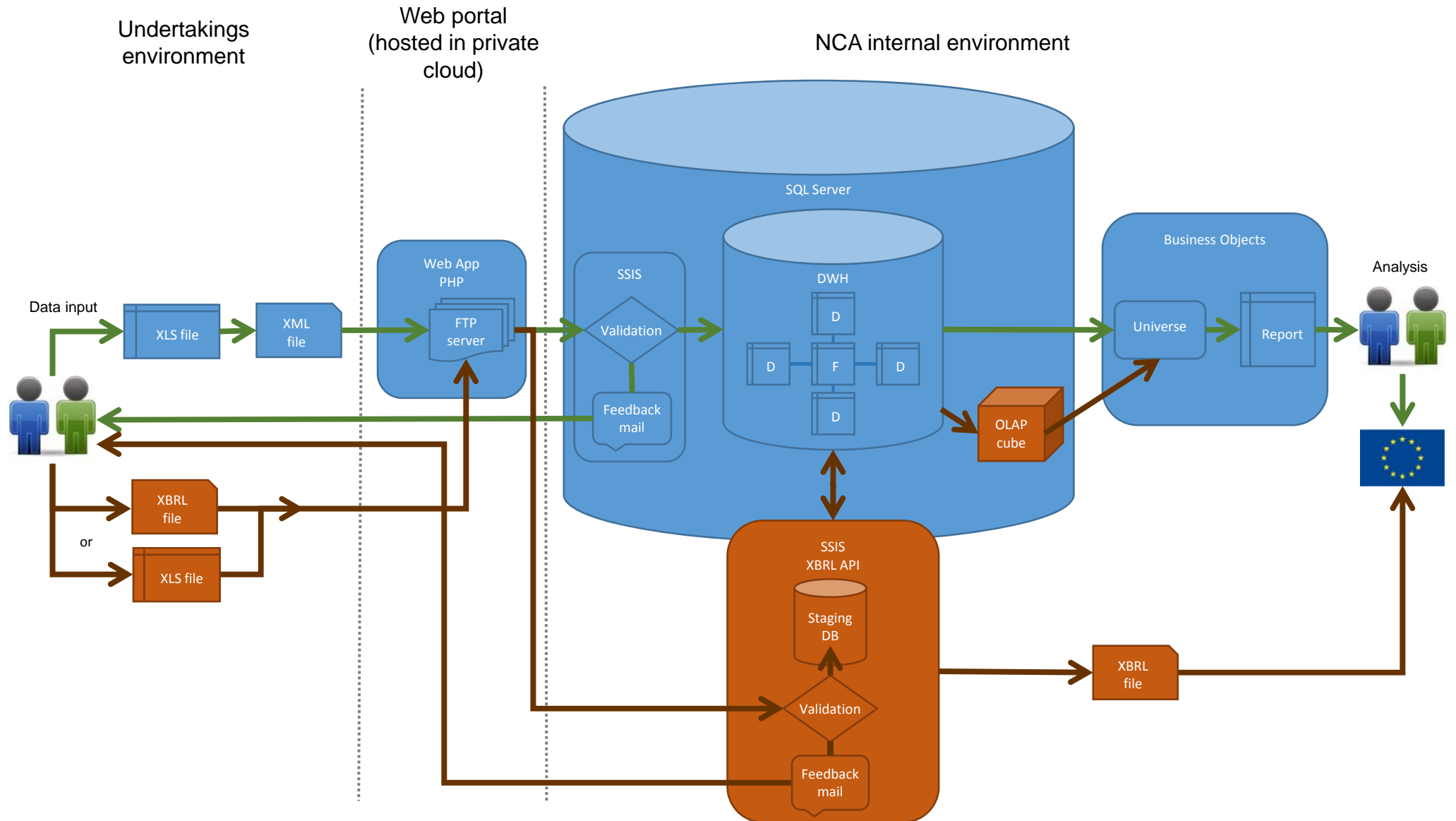


# Manual data input tool - MS Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	C 05.01 (CA 5.01) Capital Adequacy - Transitional provisions: Summary												
2									Adjustments to CET1	Adjustments to AT1	Adjustments to T2	Adjustments included in RWAs	Appl
3													perce
4													
5									010	020	030	040	0
6													
7	1. TOTAL ADJUSTMENTS								010				
8	1.1 GRANDFATHERED INSTRUMENTS								020				-
9	1.1.1 Grandfathered instruments: Instruments constituting state aid								030				-
10	1.1.1.1 Instruments that qualified as own funds according to 2006/48/EC								040				-
11	1.1.1.2 Instruments issued by institutions that are incorporated in a Member State that is subject to an Economic Adjustment Programme								050				-
12	1.1.2 Instruments not constituting state aid								060				-
13	1.2 MINORITY INTERESTS AND EQUIVALENTS								070				-
14	1.2.1 Capital instruments and items that do not qualify as minority interests								080		-	-	-
15	1.2.2 Transitional recognition in consolidated own funds of minority interests								090		-	-	-
16	1.2.3 Transitional recognition in consolidated own funds of qualifying Additional Tier 1 capital								091	-		-	-
17	1.2.4 Transitional recognition in consolidated own funds of qualifying Tier 2 capital								092	-	-		-
18	1.3 OTHER TRANSITIONAL ADJUSTMENTS								100				
19	1.3.1 Unrealised gains and losses								110		-	-	-
20	1.3.1.1 Unrealised gains								120		-	-	-
21	1.3.1.2 Unrealised losses								130		-	-	-
22	1.3.1.3 Unrealised gains on exposures to central governments classified in the "Available for sale" category of EU-endorsed IAS39								133		-	-	-
	1.3.1.4 Unrealised losses on exposures to central governments classified in the "Available for sale" category of EU-endorsed								136		-	-	-



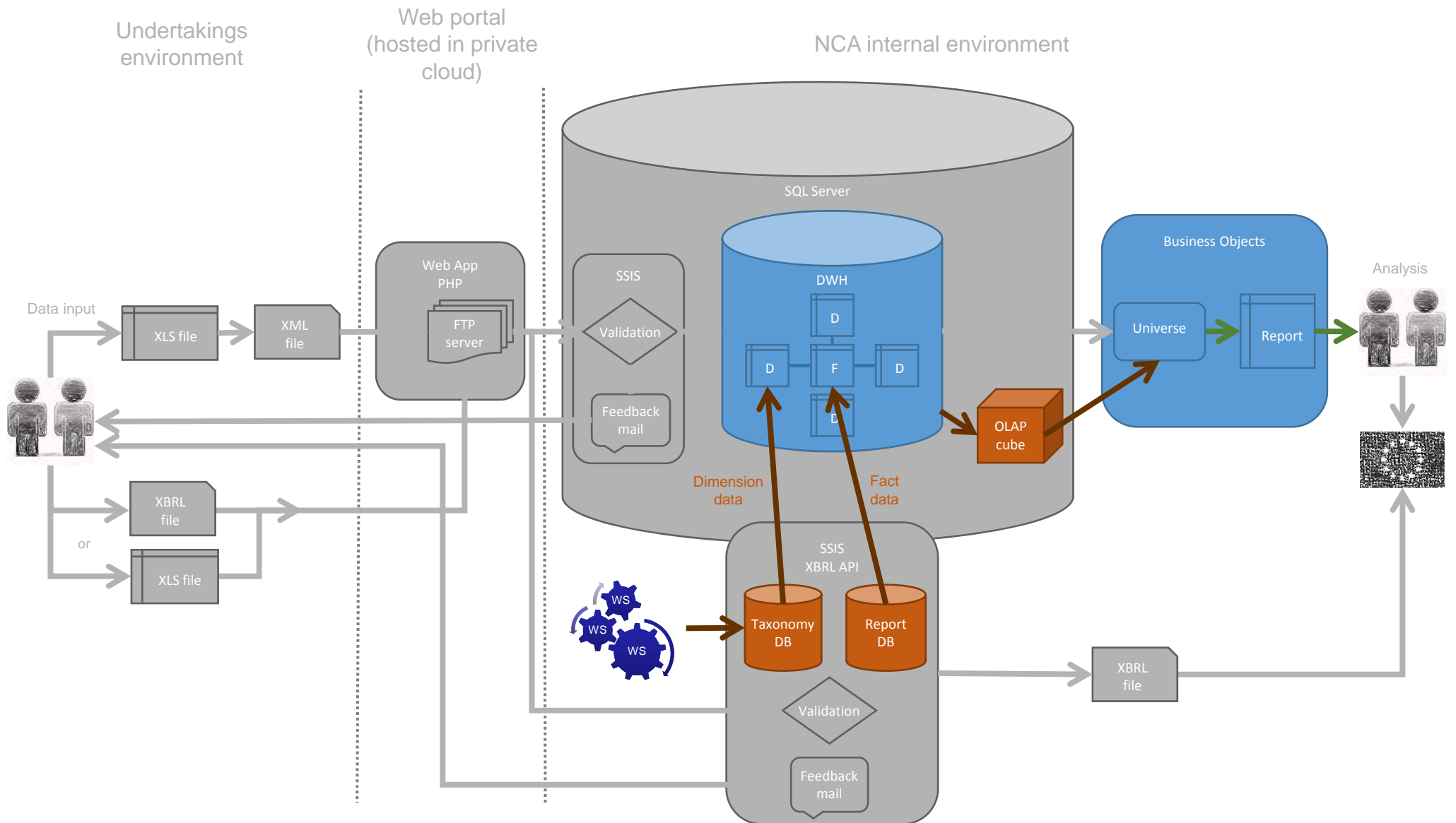
# System architecture





# Taxonomy driven approach

- No coding.
- All table reports ready at once.





# Reports – how it works



## Lessons learned (from management perspective)

- Huge benefit from **centralised taxonomies** (less local implementation activities),
- **Fast, cheap** and **qualitative** implementation is possible, but with consequences to testing and documentation (limited amount of them should be compensated),
- No **manual** (simplified) **data input**, no chance for small markets,
- Benefits from **data centric** approach (automatization of data collection, validation, rendering)





# Lessons learned (from technical perspective)

Facilities offered by an **OLAP cube** for XBRL data rendering

- Parent-Child hierarchies for dimensions,
- Rich calculation functionality of MDX
  - Row level security
  - Calculated members
  - Unary operators
  - etc.



Challenges with OLAP cubes

- Balancing between cube **processing** and **querying performances**,
  - ↳ Currently, provide new data additions every 10 minutes
  - ↳ Select data for a complete review of each XBRL report module takes 1 to 2 minutes, for individual table it takes few seconds (large processor L2 cache size is useful)
- There is no other data type than **text** in OLAP cubes for dimension data - no date, no number
  - ↳ For merging XBRL data with other data in SAP Business Objects environment, it is necessary to query DWH database directly

## Advantages



## Challenges



Benefits of **In-Memory** database

- Much faster cube processing time,
- Much faster data retrieval in direct DWH querying scenario.



Limitations of used In-Memory technologies

- **Index count** per table
  - ↳ Need to split columns in separate tables
- **Index size**
  - ↳ Currently no workaround, inserts may fail in particular situations
- **Single database access** for ETL that's load In-Memory tables
  - ↳ Need for additional staging area in DWH database

## Advantages



## Challenges





Thank you,  
Any «**?**»

**FINANCIAL AND CAPITAL MARKET  
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