Reference Model for Optimization of Cost Allocation and Planning for Management of Business Informatics

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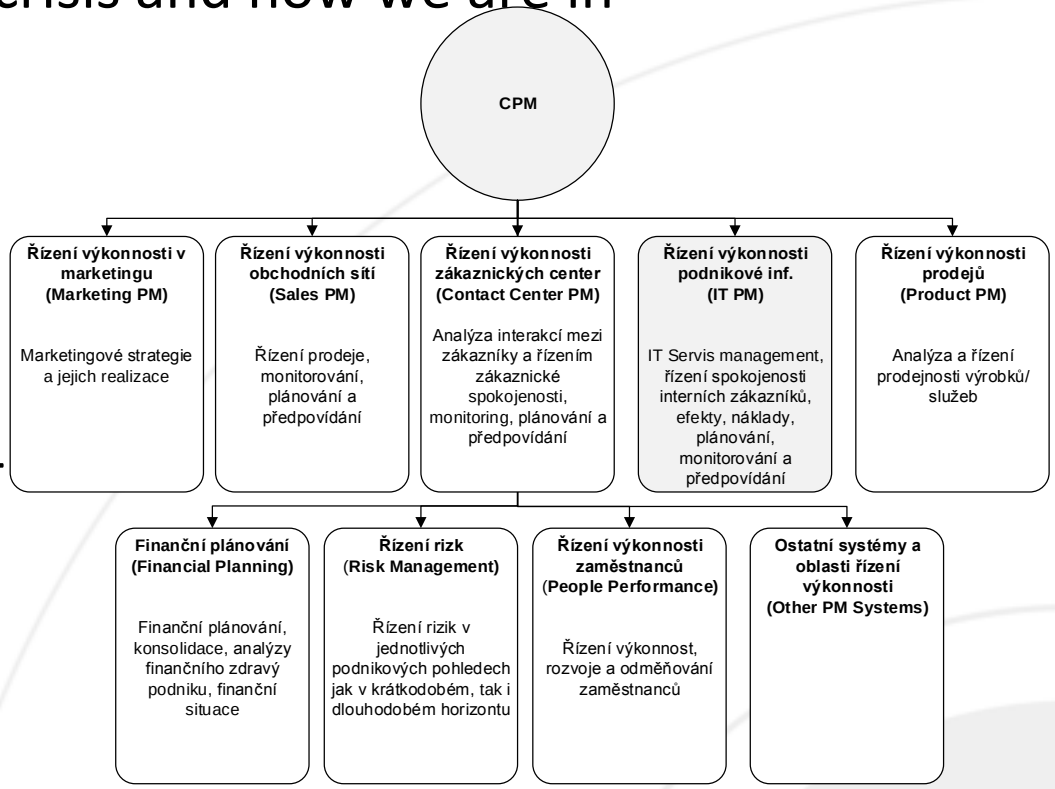
Agenda

- Introduction
- Goals
- Reference model
  - Conceptual model
  - Architecture
  - Data model
  - Application Layer
  - Cost Allocations
- Pilot validation
- Effects of the model

Introduction

- Economic growth at the end of 20th century and beginning of 21st century replaced by economic crisis and now we are in recovery phase
- Development and implementation of systems for company's performance management
- Omnibus name: Corporate Performance Management (CPM) – the most dynamical developing part of management in almost all companies
- Synthesis of knowledge from informatics, accounting, and management



Problem Formulation

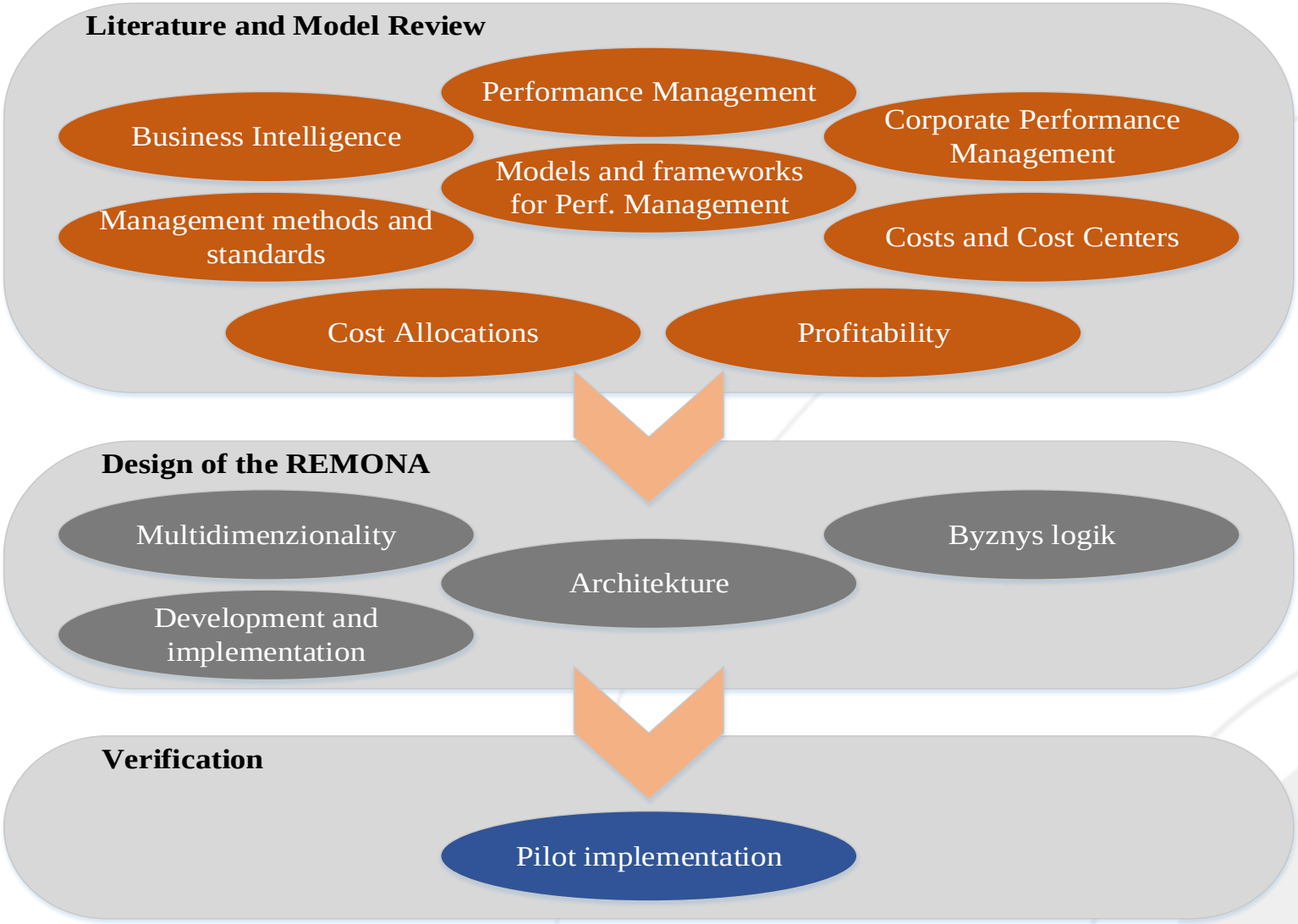
- Increasing costs on business informatics
- Missing transparent identification gains of services
- Allocation of costs between users of services
- Profitability management

- Costs have the main role in the field of business informatics because almost any manager´s decision results from comparison costs (how much money we have to pay) with profits (how much money we acquire).

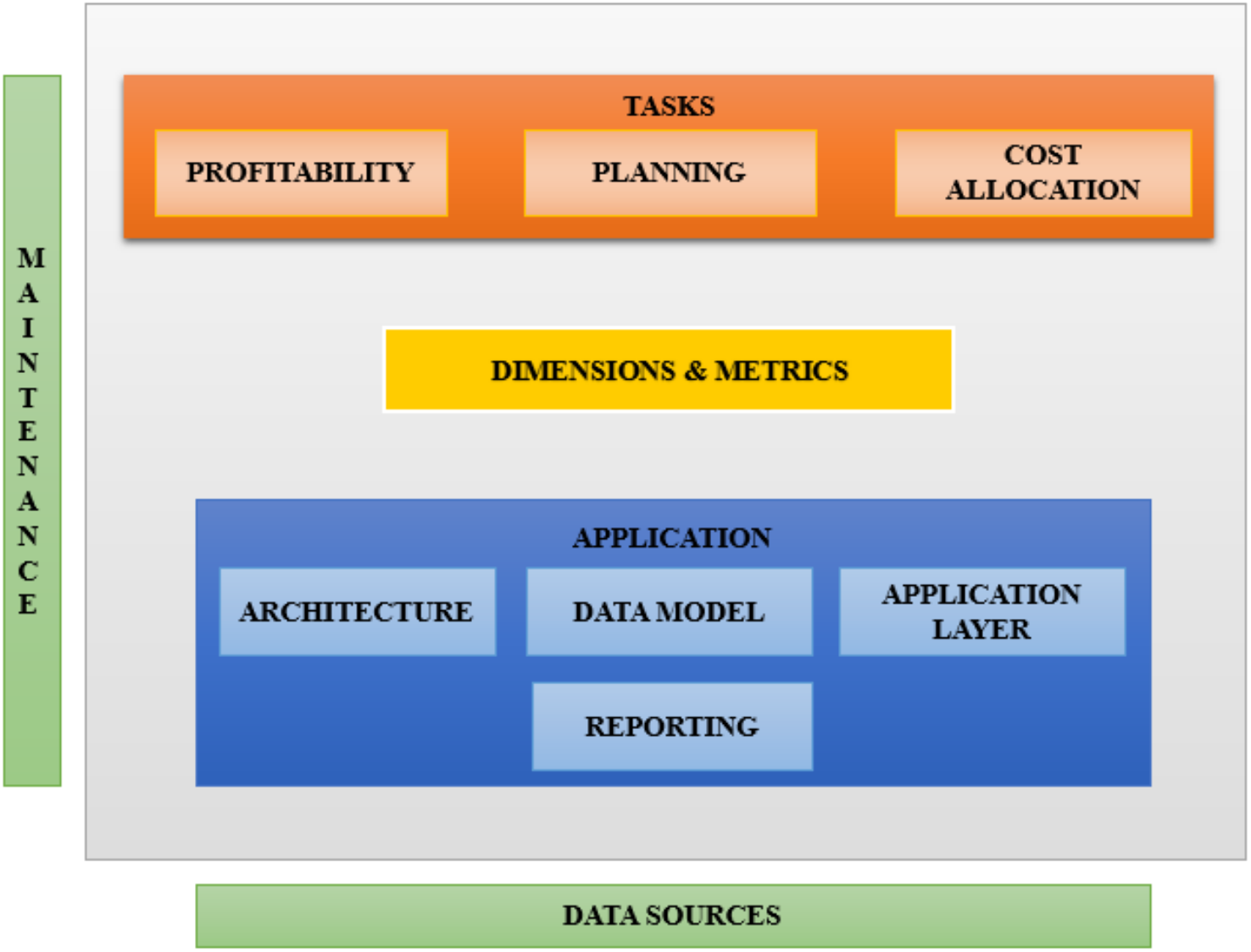
Goals and Target of the Project

- Main Goals:
  - Analysis of the CPM topic and topics regarding cost allocations, profitability management in the management of companies and companies informatics
  - Design of Reference Model for Optimization of Cost Allocation and Planning for Management of Business Informatics and it's pilot implementation
- Sub-Goals:
  - Detailed analysis of common models and trend in cost management, cost allocations and profitability management
  - Design of theoretical concept of the Reference Model for Optimization of Cost Allocation and Planning for Management of Business Informatics
  - Identification of reasons for implementation of the model into the company
  - Identification of factors that influence implementation of the model into the company
  - Identification and description of the phases for model implementation
  - Obtaining of knowledge and experience from implementation of the REMONA model

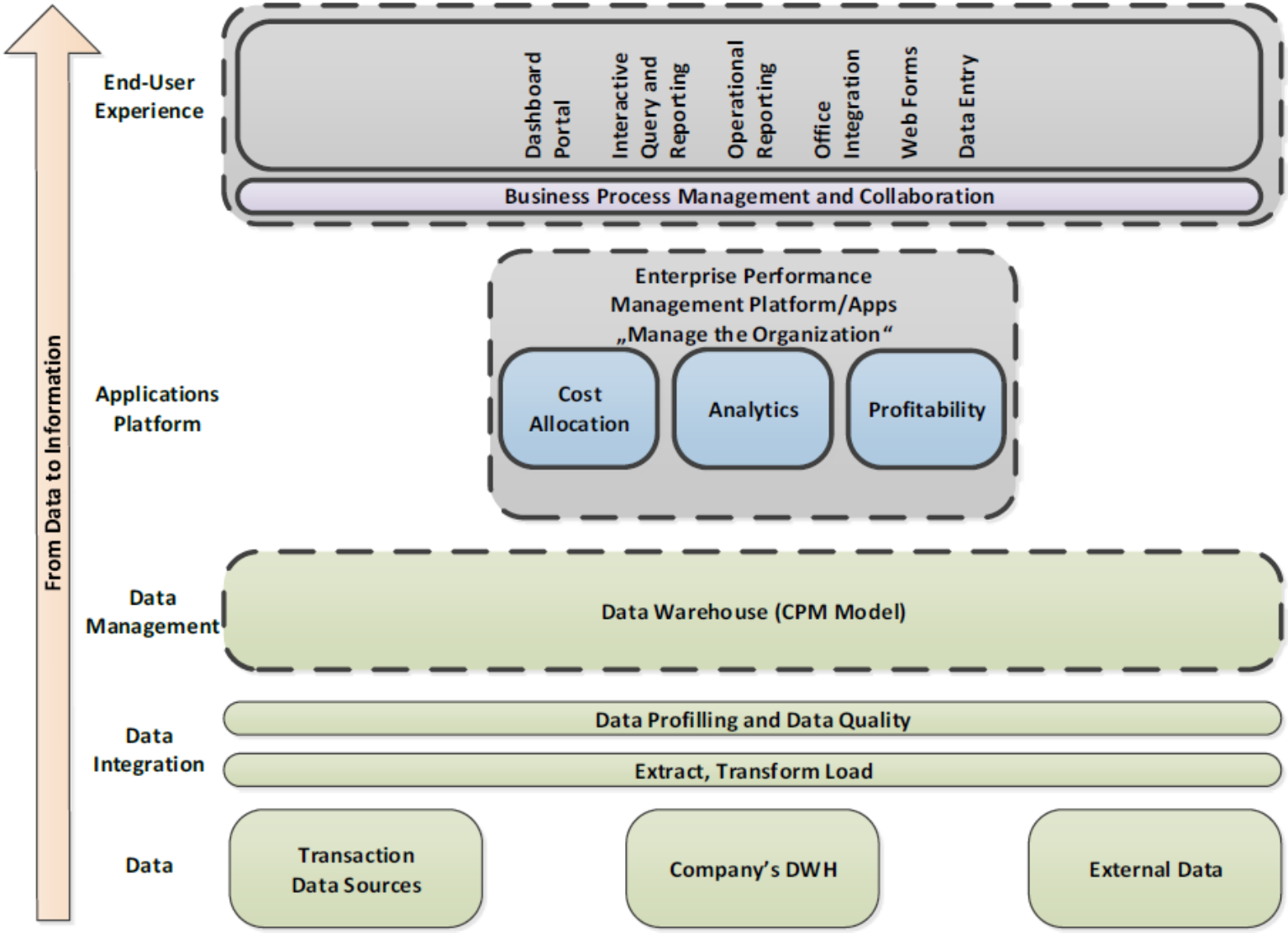
Structure of the Project

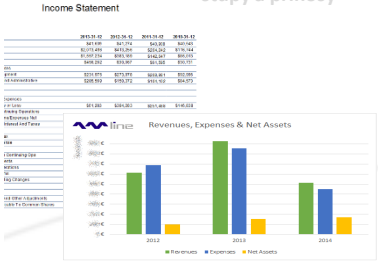


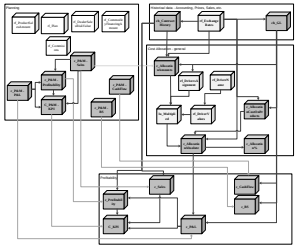
Model REMONA – conceptual diagram

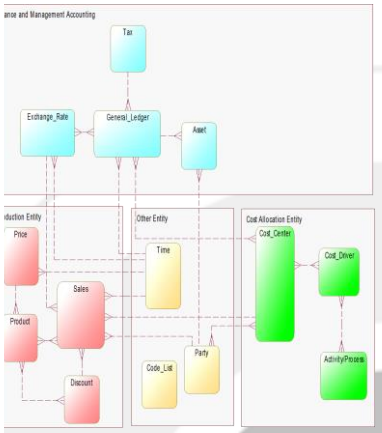


Architecture REMONA



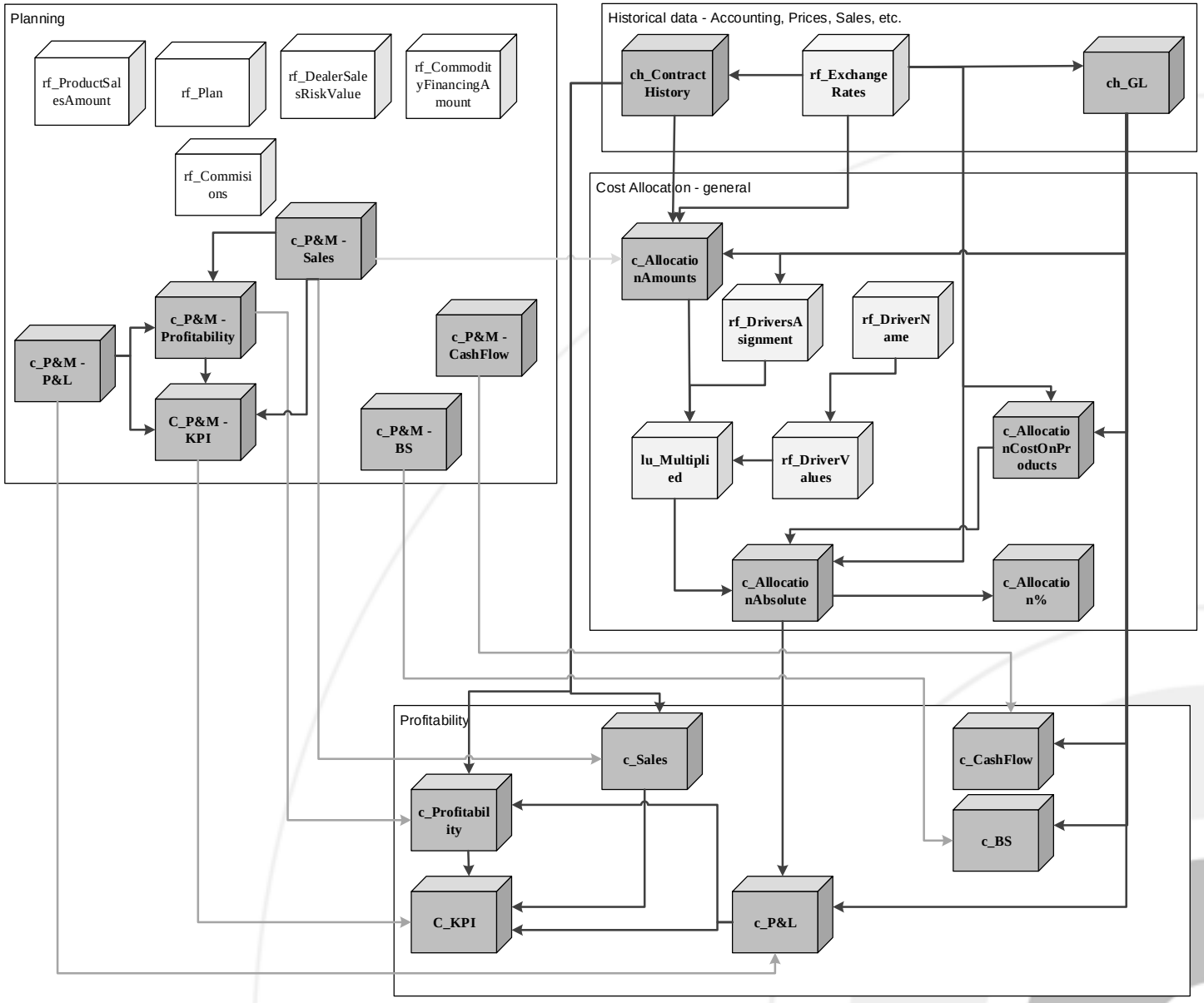






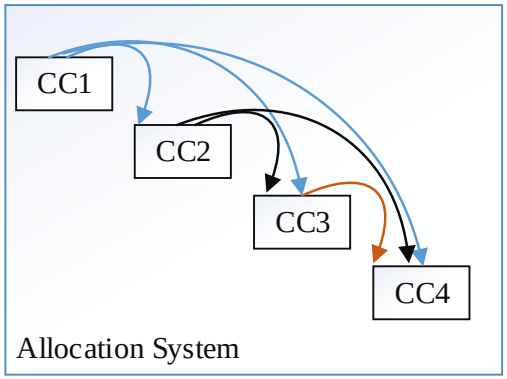
Application layer - REMONA

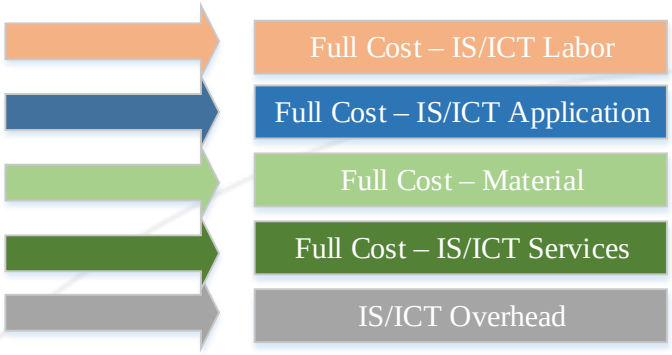
- Profitability
- Planning
- Cost Allocation

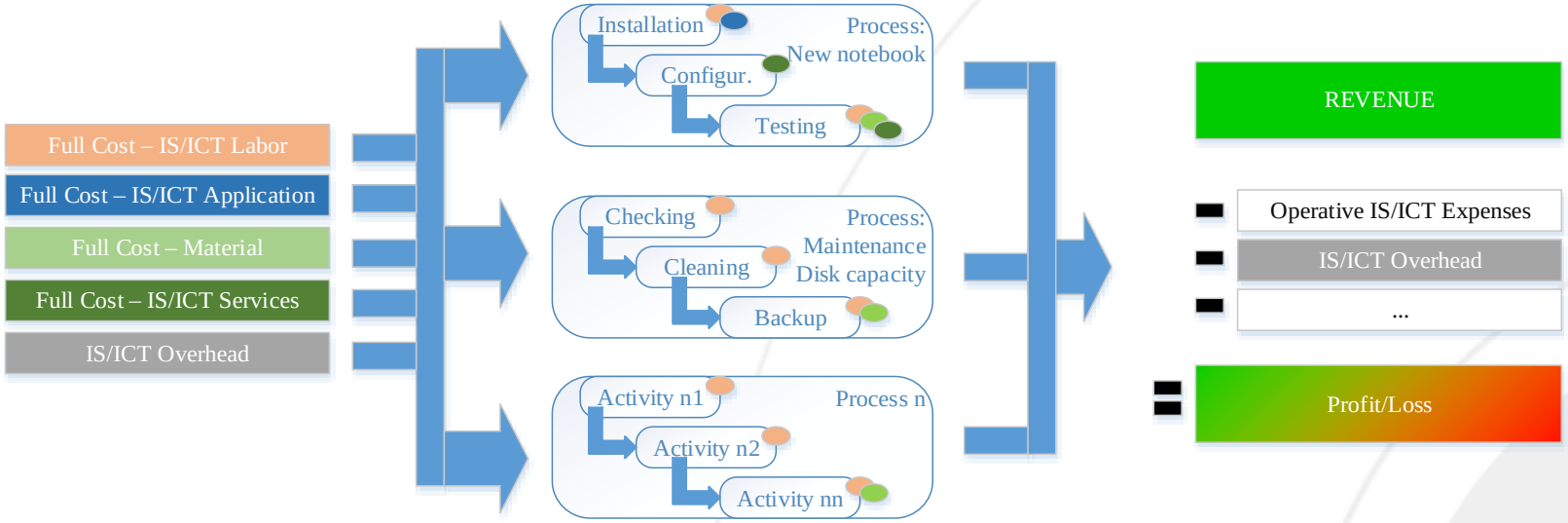


Cost Allocation in REMONA

Cost\Cost center (CC)	CC1	CC2	CC3	CC4	CCn
Employees					
Hardware					
Software					
Trainings					
Energy					
…1					
…2					
Sum					







Pilot Implementation: Tesla Motors, Inc.

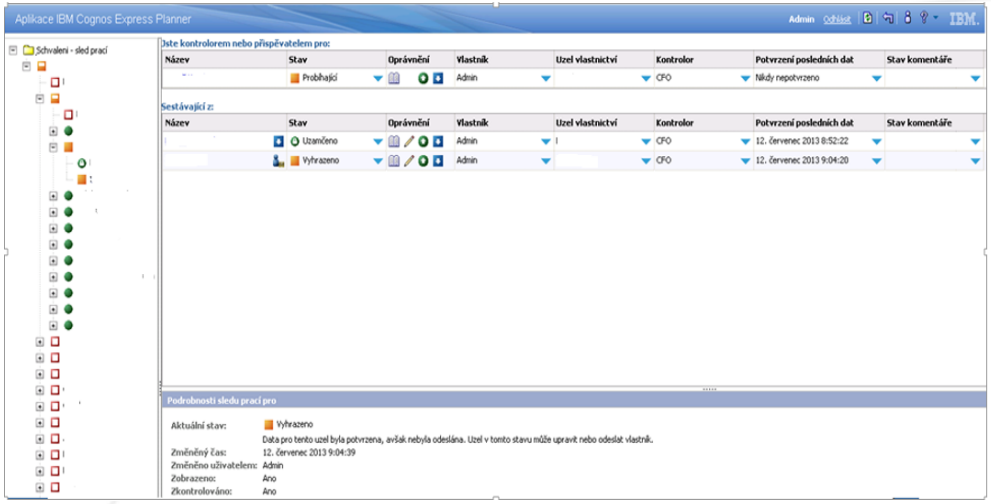
- Consulting project: Business Analysis and Design of DWH

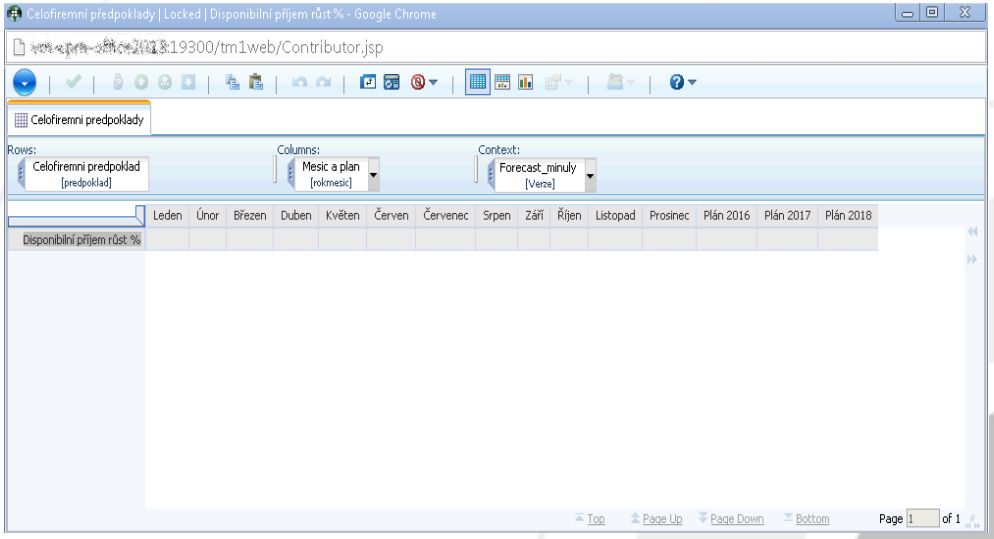
Cost Analysis		Activity poools: Robotics		Poduction SetUp		Technical Support		Product Design		Advertising Campaign		Unallocated	
	$	%	$	%	$	%	$	%	$	%	$	%	$
Direct Materials	$740 000 000	0%	$0	0%	$0	0%	$0	0%	$0	0%	$0	0%	$0
Direct Labor	$180 000 000	0%	$0	0%	$0	0%	$0	0%	$0	0%	$0	0%	$0
Indirect Labor	$30 000 000	40%	$12 000 000	20%	$6 000 000	10%	$3 000 000	15%	$4 500 000	0%	$0	15%	$4 500 000
Indirect Material	$25 000 000	20%	$5 000 000	35%	$8 750 000	5%	$1 250 000	20%	$5 000 000	5%	$1 250 000	15%	$3 750 000
Factory Maintenance	$18 000 000	25%	$4 500 000	30%	$5 400 000	0%	$0	5%	$900 000	0%	$0	40%	$7 200 000
Robotics Lease	$200 000 000	100%	$200 000 000	0%	$0	0%	$0	0%	$0	0%	$0	0%	$0
Insurance	$14 000 000	25%	$3 500 000	20%	$2 800 000	10%	$1 400 000	0%	$0	0%	$0	45%	$6 300 000
Other	$24 000 000	50%	$12 000 000	30%	$7 200 000	10%	$2 400 000	5%	$1 200 000	5%	$1 200 000	0%	$0
Total Product costs	**$1 231 000 000**		**$237 000 000**		**$30 150 000**		**$8 050 000**		**$11 600 000**		**$2 450 000**		**$21 750 000**
SG&A													
Management Salaries	$8 000 000	10%	$800 000	10%	$800 000	20%	$1 600 000	20%	$1 600 000	25%	$2 000 000	15%	$1 200 000
Selling Expenses	$5 000 000	0%	$0	0%	$0	15%	$750 000	15%	$750 000	60%	$3 000 000	10%	$500 000
Design and engineering	$9 000 000	5%	$450 000	5%	$450 000	15%	$1 350 000	75%	$6 750 000	0%	$0	0%	$0
Campaign	$30 000 000	0%	$0	0%	$0	0%	$0	0%	$0	100%	$30 000 000	0%	$0
Business Office Rent	$2 000 000	0%	$0	0%	$0	35%	$700 000	25%	$500 000	5%	$100 000	35%	$700 000
Accounting	$6 000 000	5%	$300 000	5%	$300 000	10%	$600 000	5%	$300 000	10%	$600 000	65%	$3 900 000
Total Period Costs	**$60 000 000**		**$1 550 000**		**$1 550 000**		**$5 000 000**		**$9 900 000**		**$35 700 000**		**$6 300 000**
Total Costs	**$1 291 000 000**		**$238 550 000**		**$31 700 000**		**$13 050 000**		**$21 500 000**		**$38 150 000**		**$28 050 000**

	Units	Set Ups	Calls	Designs	Markets
Tesla Roadster	900 000	500	300 000	1	17
Tesla S	1 100 000	900	430 000	1	15
Tesla X	1 900 000	1 300	200 000	1	20
TOTAL ACTIVITY QUANTITY	3 900 000	2 700	930 000	3	52
ACTIVITY COST PER MEASURE	**$61**	**$11 741**	**$14**	**$7 166 667**	**$733 654**

Income Statement

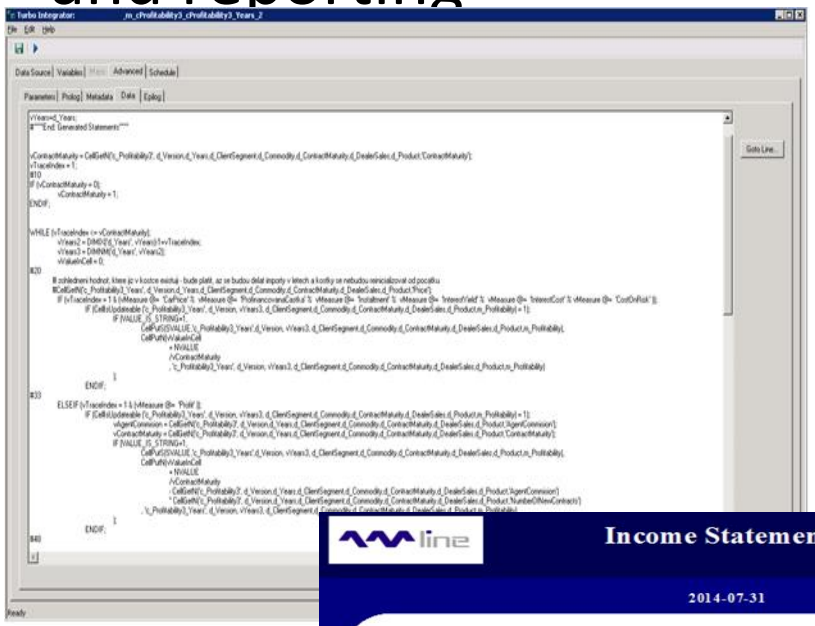
	2013-31-12	2012-31-12	2011-31-12	2010-31-12
Period Ending	$41,639	$41,274	$40,908	$40,543
Total Revenue	$2,013,496	$413,256	$204,242	$116,744
Cost of Revenue	$1,557,234	$383,189	$142,647	$86,013
Gross Profit	$456,262	$30,067	$61,595	$30,731
Operating Expenses				
Research Development	$231,976	$273,978	$208,981	$92,996
Selling General and Administrative	$285,569	$150,372	$104,102	$84,573
Non Recurring				
Others				
Total Operating Expenses				
Operating Income or Loss	$61,283	$394,283	$251,488	$146,838
Income from Continuing Operations				
Total Other Income/Expenses Net	$22,791	$154	$2,391	$6,325
Earnings Before Interest And Taxes	$38,492	$395,823	$253,879	$153,163
Interest Expense	$32,934	$254	$43	$992
Income Before Tax	$71,426	$396,077	$253,922	$154,155
Income Tax Expense	$2,588	$136	$489	$173
Minority Interest				
Net Income From Continuing Ops	$74,014	$396,213	$254,411	$154,328
Non-recurring Events				
Discontinued Operations				
Extraordinary Items				
Effect Of Accounting Changes				
Other Items				
Net Income	$74,014	$396,213	$254,411	$154,328
Preferred Stock And Other Adjustments				
Net Income Applicable To Common Shares	$74,014	$396,213	$254,411	$154,328

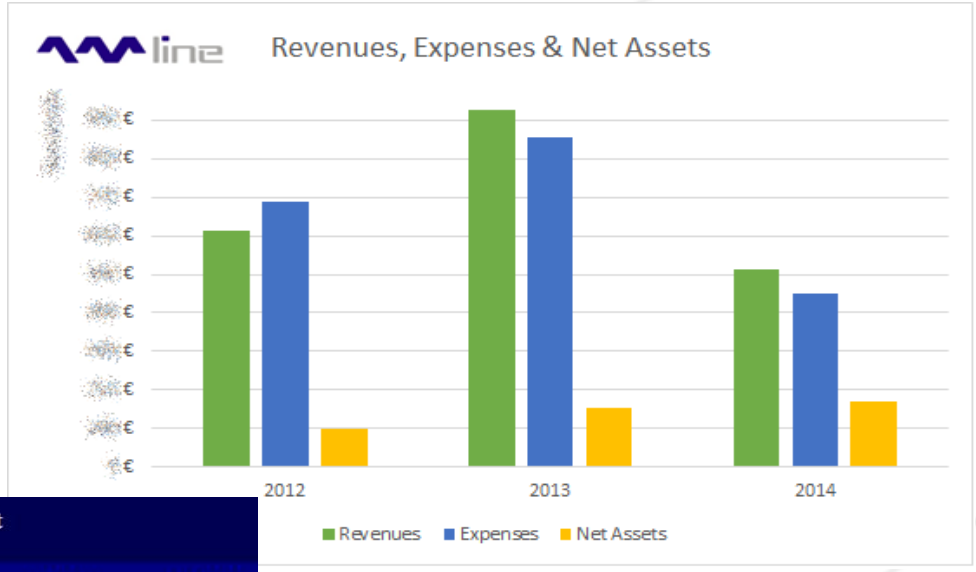


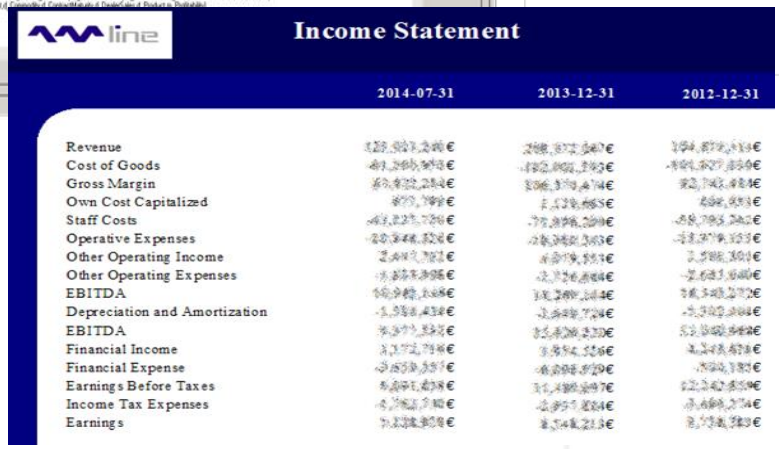


Pilot Implementation: : AM-Line, GmbH

- Design of DWH
- Improvement and making more transparent financial processes and reporting







line

Income Statement

	2014-07-31	2013-12-31	2012-12-31
Revenue	[illegible]	[illegible]	[illegible]
Cost of Goods	[illegible]	[illegible]	[illegible]
Gross Margin	[illegible]	[illegible]	[illegible]
Own Cost Capitalized	[illegible]	[illegible]	[illegible]
Staff Costs	[illegible]	[illegible]	[illegible]
Operative Expenses	[illegible]	[illegible]	[illegible]
Other Operating Income	[illegible]	[illegible]	[illegible]
Other Operating Expenses	[illegible]	[illegible]	[illegible]
EBITDA	[illegible]	[illegible]	[illegible]
Depreciation and Amortization	[illegible]	[illegible]	[illegible]
EBITDA	[illegible]	[illegible]	[illegible]
Financial Income	[illegible]	[illegible]	[illegible]
Financial Expense	[illegible]	[illegible]	[illegible]
Earnings Before Taxes	[illegible]	[illegible]	[illegible]
Income Tax Expenses	[illegible]	[illegible]	[illegible]
Earnings	[illegible]	[illegible]	[illegible]

Pilot Implementation: AM-Line, GmbH - Effects

- **Financial results from all subsidiaries available:**
  - New solution: second day after closing
  - Old solution: 8 working days after closing
- **Real-time reporting over all subsidiaries:**
  - Employees workload
  - Travel expenses
  - Available project budget
- **Unified processes in reporting without dependency on human factor**
- **We saved 1,2 FTE – automatized reporting**

Conclusions

- **Analyzed topic of CPM, cost optimization and cost allocation and planning**
- **Designed and developed model that was verified in the practice:**
  - Concept of planning
  - Concept of cost allocation and profitability management
  - Planning and cost allocation tasks
  - Reporting
  - Dimensions and metrics
  - Multidimensionality
  - Architecture of the model
- **Practice**
  - **Configurable model**– configuration especially in ETL, code lists, metrics etc.
  - Model based on the best practices from existing models
  - Effects: faster and more precise solution, on-line, cost saving.
- **Theory and science**
  - **Selection of the best methods and models related to the topic and their interconnection**
  - Identification of dimensions and metrics suitable for selected tasks
  - **Pilot implementation**
  - **Identification of limits of the model**

Questions/Discussion

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