

Optimising conversion costs in the existing market environment while maintaining CSR and G4B

ΚΩΣΤΑΣ ΛΑΛΑΚΟΣ

Manufacturing Manager
ΜΙΝΕΡΒΑ Α.Ε. ΕΛΑΙΟΥΡΓΙΚΩΝ ΕΠΙΧΕΙΡΗΣΕΩΝ & ΤΡΟΦΙΜΩΝ

Λίγα λόγια για την Μινέρβα

1904

2004

2017

100 χρόνια

13 χρόνια



Μια εταιρεία ελαιόλαδου



2004



2006



2008



2009



2010



2010



2011



2011



2012



2015

Μια εταιρεία τροφίμων

Κύριες κατηγορίες

Έλαια

Μαργαρίνες – Spreads

Βούτυρα

Τυρί

Ξύδι

Με παρουσία σε όλες τις μεγάλες
αλυσίδες και εξαγωγές σε πάνω
από 42 χώρες



PZ
Cussons



FMCG supply chain – Challenges & objectives

CHALLENGES

- Reduced lead times
- Improving freshness to customer
- Inventory reduction
- Unstable and unpredictable demand
- Increasing product variants

OBJECTIVE

- Gaining competitive advantage
- Reducing conversion costs
- Improve market share

RESULTING IN

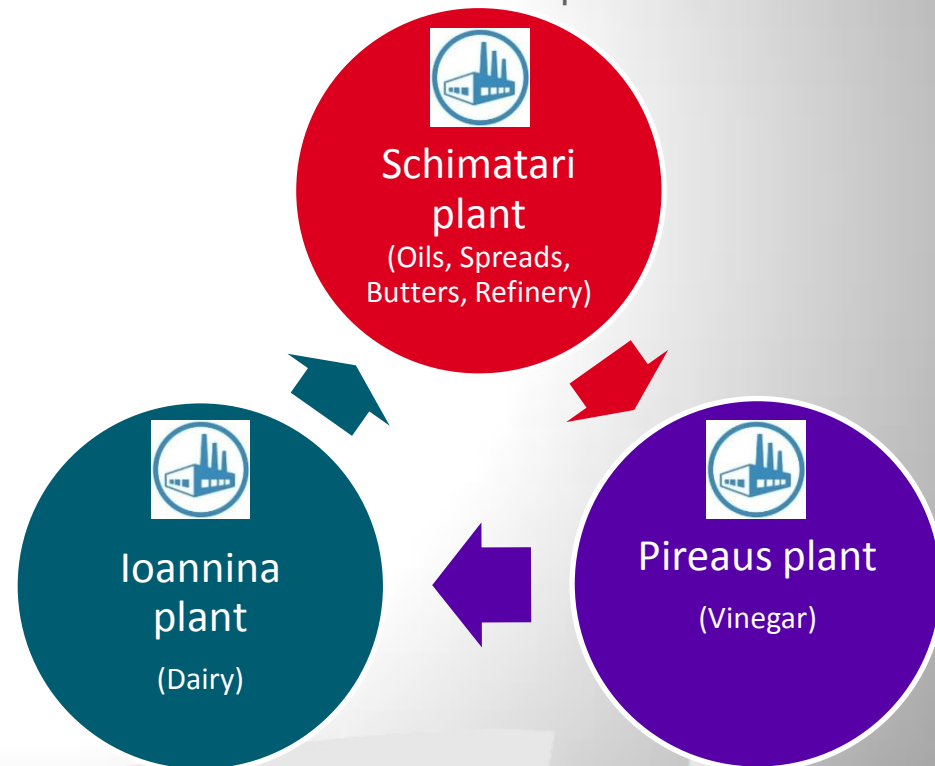
- Shorter runs/campaigns
- Increased number of changeovers
- Scheduling complexity
- Increased risk of failures

DEMANDS

- Optimised resource allocation
- Energy consumption optimisation
- Benchmarking with best in class

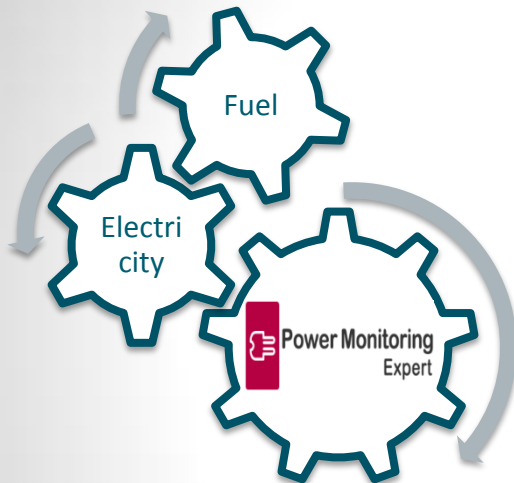
Our success story so far

- A number of projects over the years to keep energy efficiency up to date:
 - Replacing old chillers with new with better COP
 - Variable frequency drives for wide range of motors
 - Installing economisers and sensors to optimise efficiencies
 - Replacing light fixtures with LED / Using of solar tubes for daylight saving
 - A number of small scale projects that came from clever ideas from the shopfloor
- Engagement of people
 - Optimum start up/shut down procedures
- Ownership for
 - Areas/Machines/Equipment
 - Processes
 - Services/utilities
- Follow up & action plans to minimise gaps
 - Audits
 - Productivity reviews
 - Energy reviews
 - Engineering meetings
 - PDCA
- Ensure competitive energy tariffs
 - Negotiation
 - Accurate and consistent weekly/monthly forecast



Our toolbox

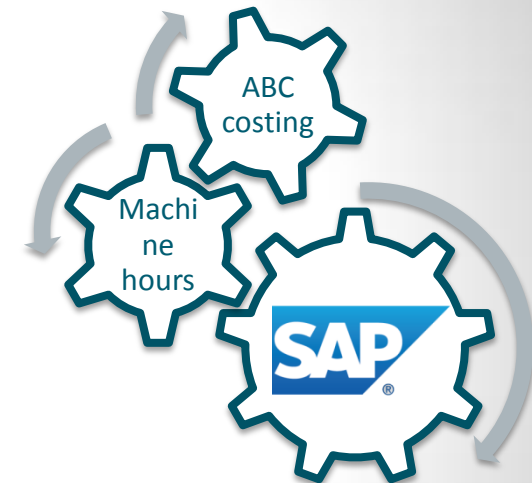
Energy monitoring



Actions - Benefits

- Online real time data
- Over 100 measuring nodes (fuel-electricity-water)
- Web interface
- Personalised views
- Compared periods
- Alarming

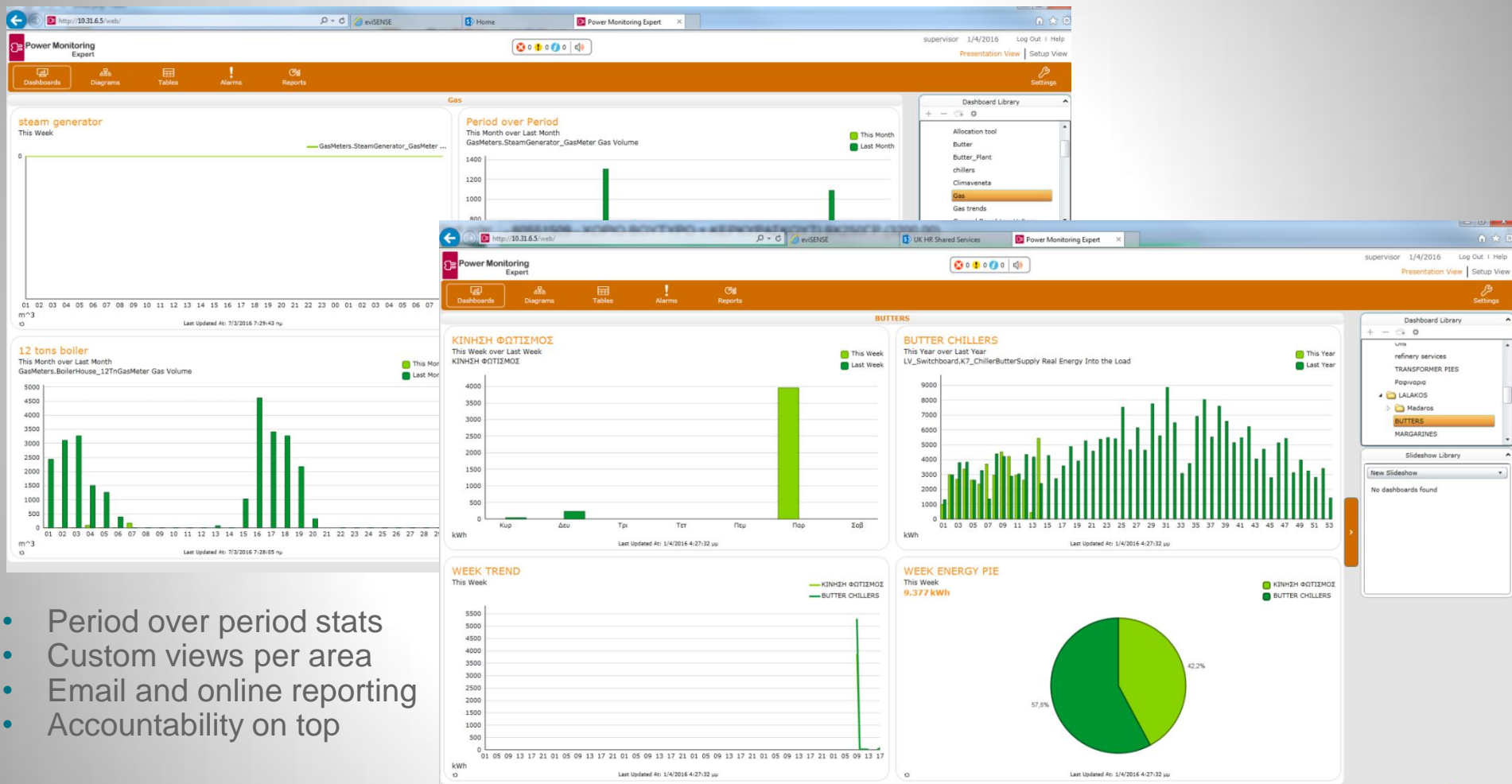
Integrated ERP



Actions - Benefits

- Integrated to each resource
- Online real time confirmations
- Build-in Activity Based Costing
- Actual vs std cost visibility

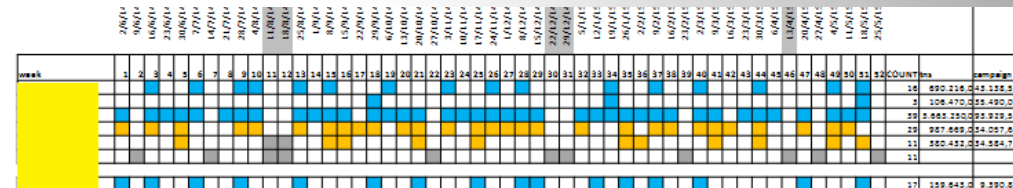
Online personalised views for energy usage



- Period over period stats
- Custom views per area
- Email and online reporting
- Accountability on top

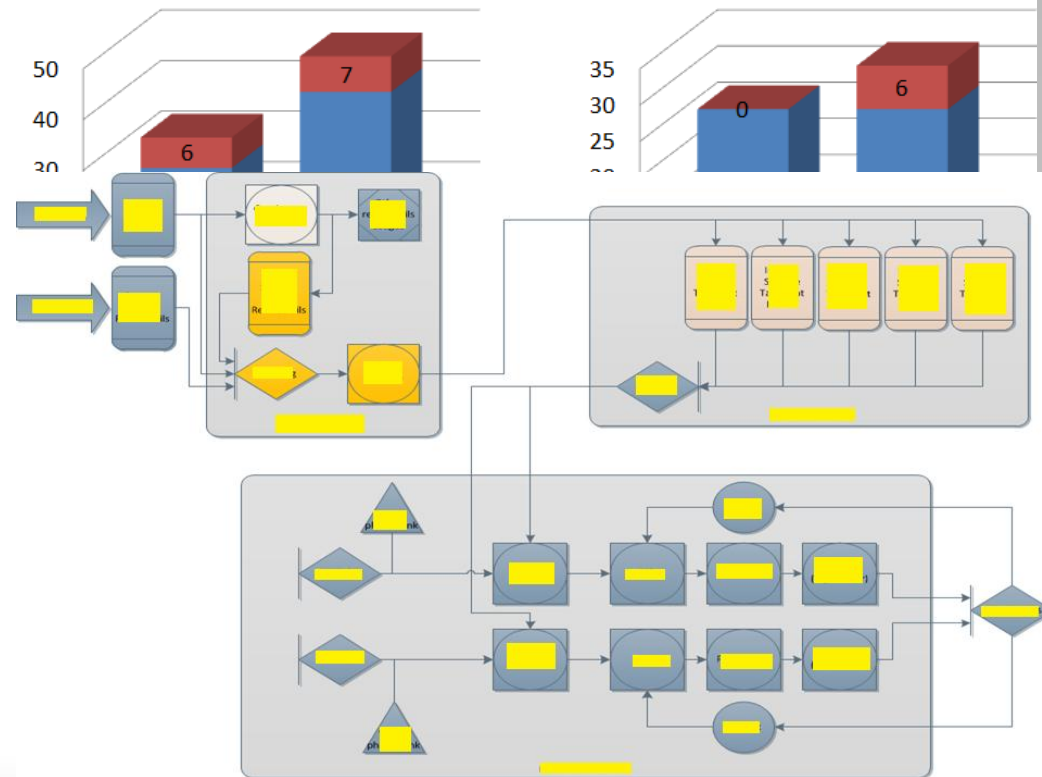
Processes optimisation

- Campaigns/runs sequencing analysis and detailed scheduling
- Capacity levelling & optimisation
- Utilise full campaigns for high energy consumers (moto: if we are going to pay for start up and shut down, make it worth it)
- Process redesign to accommodate future needs and changes
- Engineering upgrading/downgrading or merging projects for major changes
- Forward thinking and not letting anything to chance



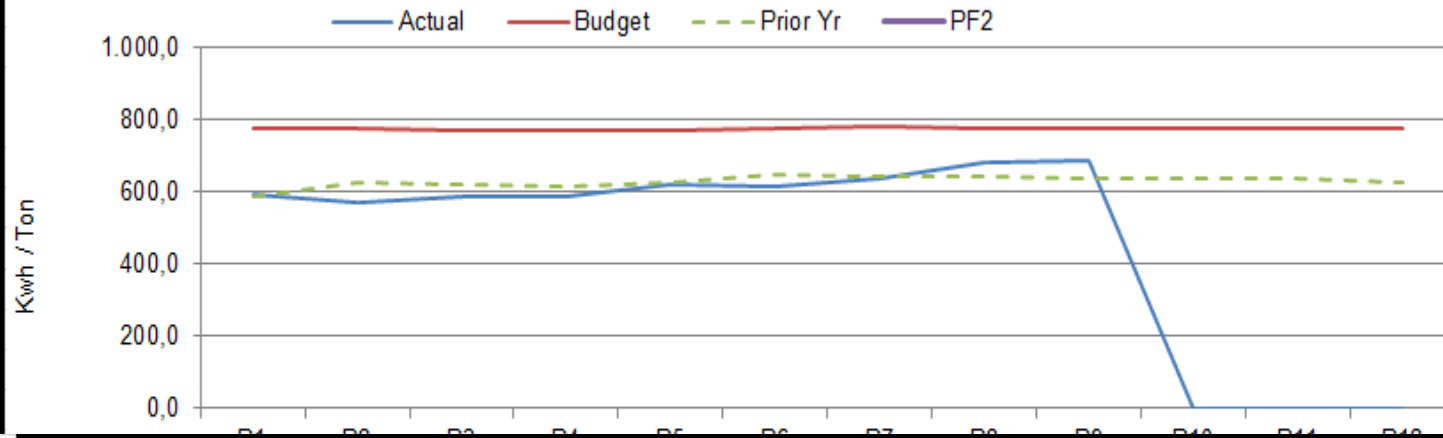
As is

Where we want to be



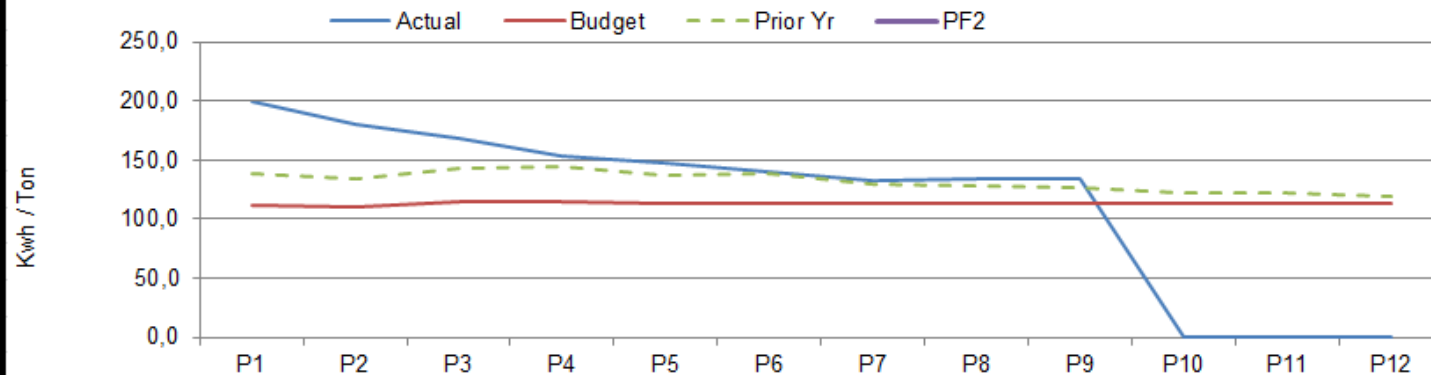
Monitoring performance

YTD FUEL



	Cost
Actual YTD	888.476 €
Budget YTD	888.476 €
Gap	0,00 €
Due to Volume	0,00 €
Due to Price	0,00 €
Due to Performance	0,00 €
	-

YTD ELECTRICITY



	Cost
Actual YTD	1.200,00 €
Budget YTD	1.200,00 €
Gap	0,00 €
Due to Volume	0,00 €
Due to Price	0,00 €
Due to Performance	0,00 €
	-

Kwh/Ton YTD

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
Actual	199,2	180,8	168,7	154,3	147,7	139,6	133,4	134,8	134,1	0,0	0,0	0,0
Budget	111,2	110,9	114,7	114,2	113,0	113,1	113,8	113,9	113,2	113,0	113,2	112,8

Matrix form for ABC allocation of costs

Energy
meters

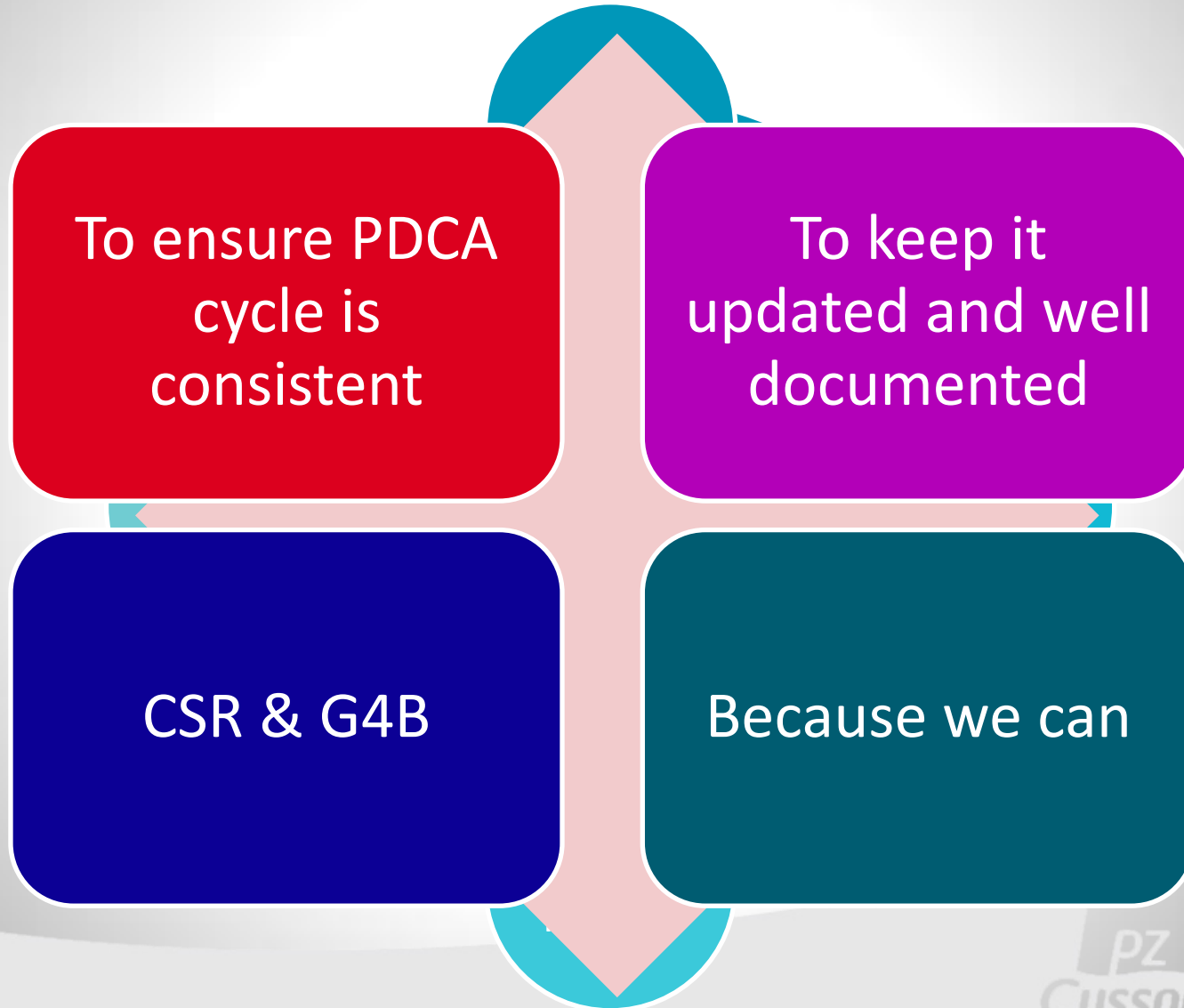
SAP populated data
Machine hours / produced cases/kgs etc

Resources
Production lines/
Process plants

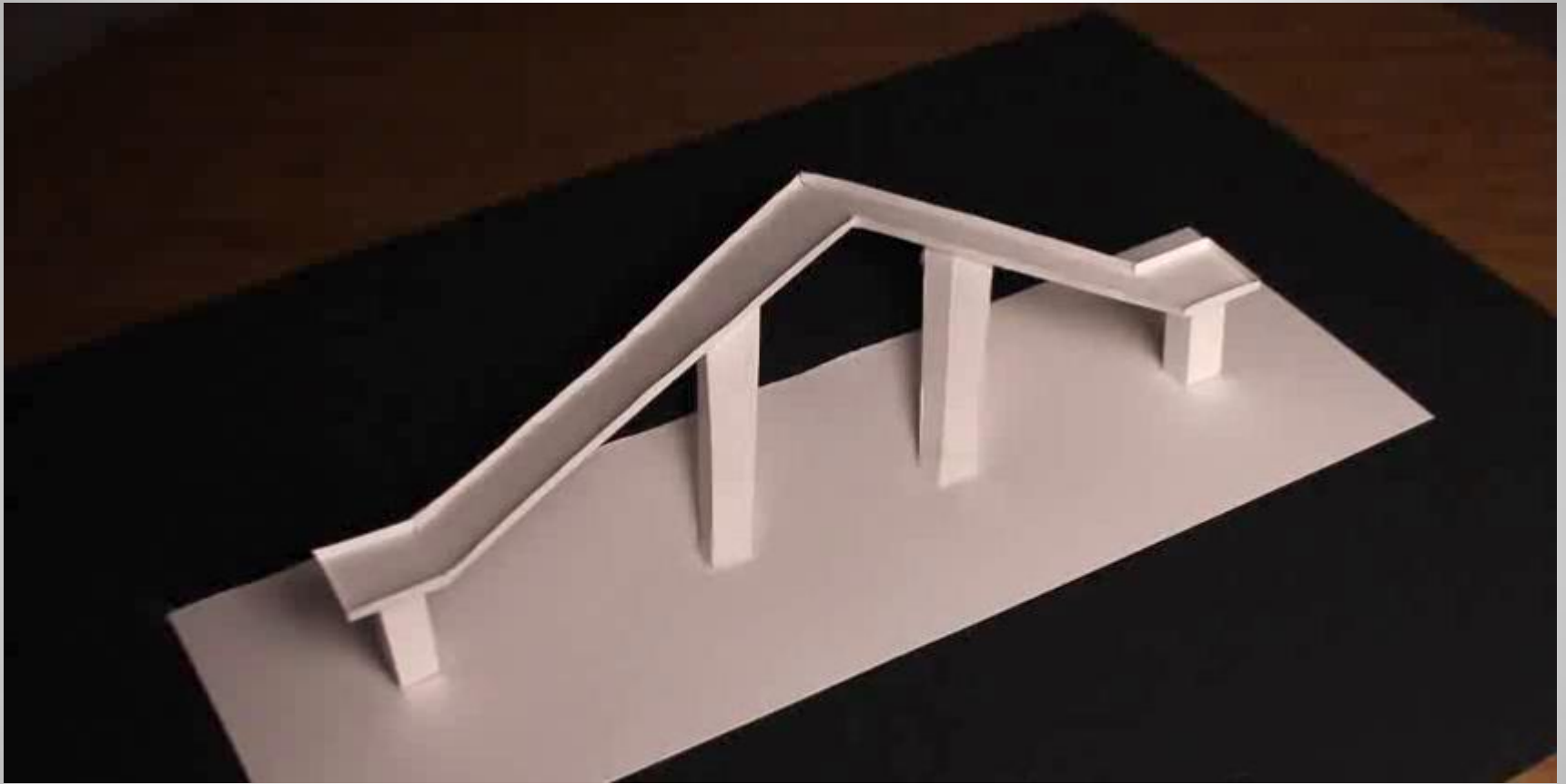
ABC allocation
of costs to each
resource

Volumes (kg)		GR106002		GR106003		GR106004		GR106006		GR106008		GR106007		GR106008		GR106009		GR106010		GR106011		GR106012		GR106013		GR106014		GR106016		GR106017		GR106018		GR106019		TOTAL	
Volumes (kg)	Volumes (kg)	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	10,488,594	
Percentage within cell 1 (%)	78.07%	19.73%	2.19%	61.04%	30.05%	8.91%	0.00%	74.19%	25.81%	78.99%	15.73%	1.78%	5.52%	0.00%	4.50%	95.50%																					
Percentage within cell 2 (%)																																					
Percentage crosscell 1 (%)	70.00%																																			30.00%	
Percentage crosscell 2 (%)																																					
Percentage crosscell 3 (%)																																					
Percentage packing per case					20.87%	10.27%	3.05%	0.00%		42.72%	8.73%	0.95%	3.05%	0.00%	0.46%	9.55%																					
Real Energy into the Load (kWh)		GR106002	GR106003	GR106004	GR106006	GR106008	GR106007	GR106008	GR106009	GR106010	GR106011	GR106012	GR106013	GR106014	GR106016	GR106017	GR106018	GR106019	TOTAL																		
0.00																			0.00																		
32,154.00																			32,154.00																		
10,837.00																			10,837.00																		
0.00																			0.00																		
2,589,487.00																			2,589,487.00																		
322,284.00					39,015.97	29,035.62	8,814.33	1.28	167,375.26	38,223.34									322,284.00																		
314,906.00																			314,906.00																		
0.00																			0.00																		
344,471.00																			344,471.00																		
779,525.00																			779,525.00																		
179,327.00					33,747.77	17,398.66	3,217.96	0.77			72,190.66	14,933.44	1,674.31	3,230.46	0.00	785.33	16,897.44		179,327.00																		
127,420.00																5,504.40	116,915.60		127,420.00																		
203,917.00																			203,917.00																		
8,436.00																			8,436.00																		
24,907.00																			24,907.00																		
234.00																			234.00																		
66,315.00																			66,315.00																		
5,735.00																			5,735.00																		
2,863.00																			2,863.00																		
414,609.00																			414,609.00																		
15,006.00																			15,006.00																		
13,905.00																			13,905.00																		
597.00																			597.00																		
206,949.00					206,949.00														206,949.00																		
35,276.00																			35,276.00																		
27,212.00																			27,212.00																		
18,937.00																			18,937.00																		
1,338,929.00																			1,338,929.00																		
67,660.00																			67,660.00																		
7,146.00																			7,146.00																		
552,316.00																			552,316.00																		
88,359.00																			88,359.00																		

Why ISO 50001 (in progress)



Future challenges



- Sometimes it is a matter of perspective
- If you always look and compare in the same way you may end up missing the reality

Thank you