

# Resource Efficiency in Knowledge-Based Economy and KPI's

How we could use the KPI's to optimize resource planning and usage

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# Resource Efficiency in Knowledge-Based Economy and KPI's

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1. Introduction
2. Voice of the customer
3. Voice of the business
4. KPI benefits
5. KPI structure
6. KPI development process
7. Dashboards

# Resource Efficiency in Knowledge-Based Economy and KPI's

What do companies want?

1. Deliver products on time
2. No failures in the products



Voice of the customer

3. Increase incomes
4. Decrease costs
5. Evaluate the Impact of changes
6. Evaluate the Non-conformities



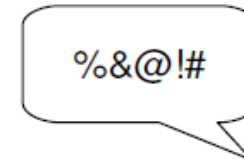
Voice of the business

# Resource Efficiency in Knowledge-Based Economy and KPI's

Another look of the voice of the business and voice of the customers

## 1. Voice of the customer

- ❑ The goods or services that your customer receives is an output of your process. Customers want goods and services:
  - On Time
  - With High Quality
  - At Low Price



Effective

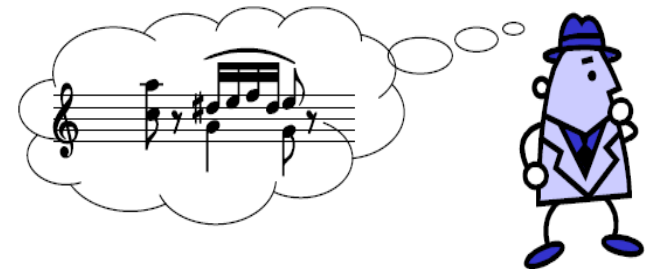
# Resource Efficiency in Knowledge-Based Economy and KPI's

Another look of the voice of the business and voice of the customers

## 2. Voice of the business

- ❑ In order to remain profitable, a business must deliver goods and services such that their cost is lower than their price.
- ❑ The Business systems must operate:
  - At high speed
  - With low cost
  - With minimal resources

**Efficient**



# Resource Efficiency in Knowledge-Based Economy and KPI's

KPI benefits. All managers would like to have a reliable information:

1. They would like to predict the future problems
2. They would like to know, where are the bottle necks of processes in the companies
3. They would like to evaluate the customer behavior
4. They would like to reduce the cost of the work products
5. They would like to increase the benefits
6. ....
7. ....
8. ....

All the need information could be find in the appropriate defined and working metrics or key performance indicators.

# Resource Efficiency in Knowledge-Based Economy and KPI's

What are the main areas of one metrics and when one metric become a KPI:

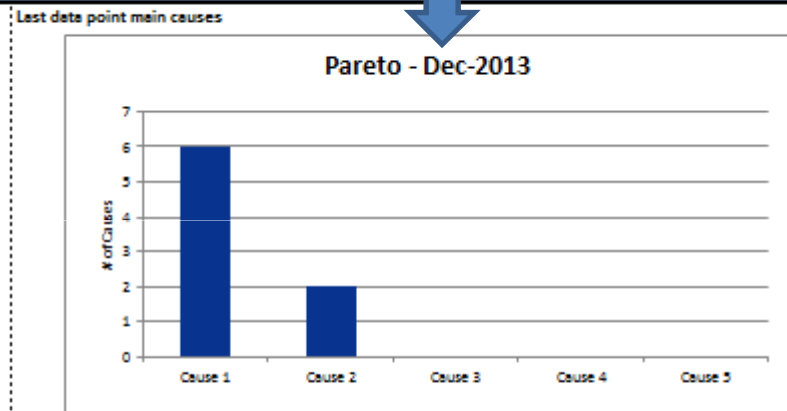
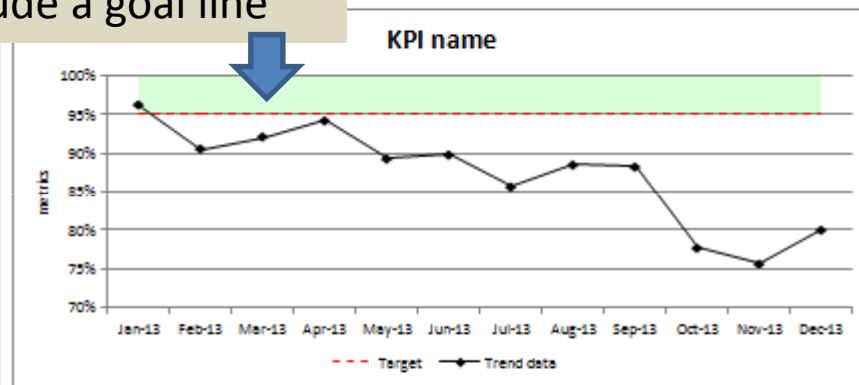
1. Metrics structure
  - Trend
  - Pareto of last month
  - Paynter chart
  - Action tracking
2. A metric become a KPI, when it is used for the company improvement

# Resource Efficiency in Knowledge-Based Economy and KPI's

KPI example.

A trend chart should include a goal line

A Pareto chart is a rank-ordered histogram or bar chart showing relative frequency or size



Target:  
Indicator description:  
Comments:  
Indicator leader:  
Paynter chart

A Paynter chart is a table showing categorized data versus time and is used to validate effectiveness of actions taken.

Charts Data		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Total
<i>Select one month for the Pareto</i>														
Cause 1		0	0	0	1	1	2	1	3	2	0	6	6	22
Cause 2		0	0	0	2	4	2	5	5	5	2	2	2	29
Cause 3		0	0	0	0	0	0	0	0	0	1	1	0	2
Cause 4		0	0	0	0	0	0	0	0	0	3	0	0	3
Cause 5		0	0	0	0	0	0	0	0	0	0	0	0	0
Trend data		96%	91%	92%	94%	89%	90%	86%	89%	88%	78%	76%	80%	
Target		95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	
Max Value	100%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	
		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	



# Resource Efficiency in Knowledge-Based Economy and KPI's

## KPI development- main steps

1. Define measurement needs
2. Define the measurement documentation
3. Collect data
4. Analyze collected data
5. Present the results
6. Store the collected data and the analysis

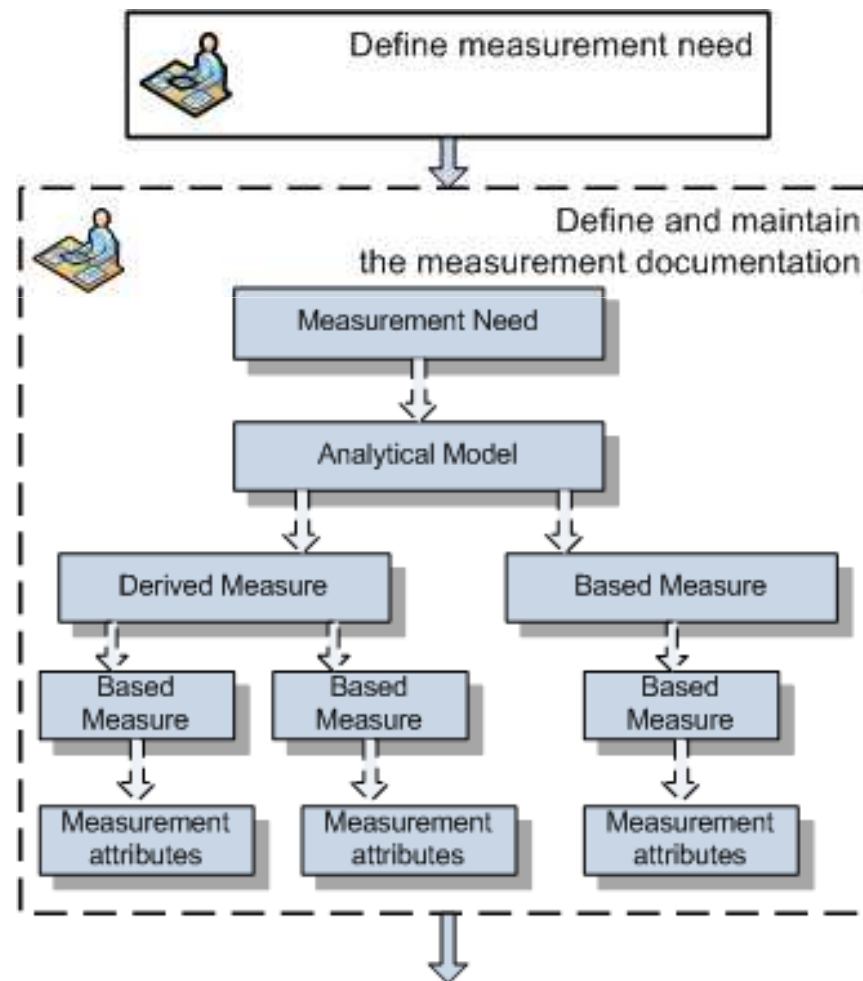
# Resource Efficiency in Knowledge-Based Economy and KPI's

KPI

Development

workflow

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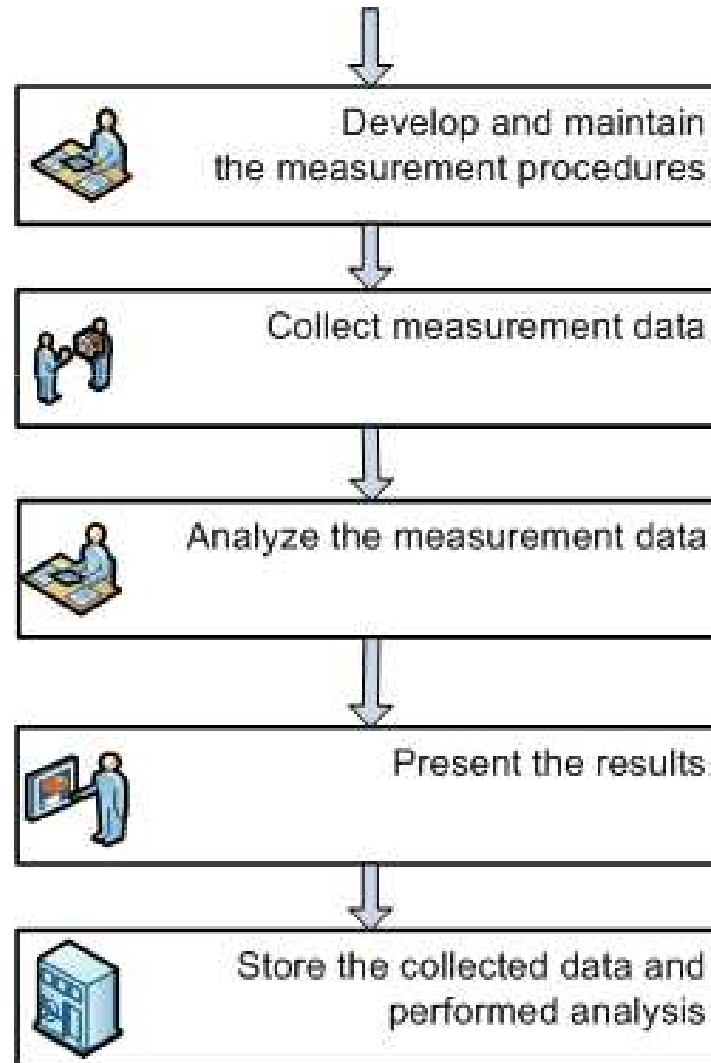


# Resource Efficiency in Knowledge-Based Economy and KPI's

KPI

Development

workflow



# Resource Efficiency in Knowledge-Based Economy and KPI's

Dashboards - Dashboard are KPIs grouped by common characteristics

KPI Matrix

	A	B	C	D	E	F
Category	<b>EMPLOYEE ENGAGEMENT</b>	<b>PROCESS COMPLIANCE</b>	<b>ENGINEERING EFFICIENCY</b>	<b>ENGINEERING EXECUTION</b>	<b>PRODUCT COMPLIANCE</b>	<b>PRODUCT QUALITY</b>
Goal	Fully engage all employees within the organization globally	Completely follow the applicable process tailored to the project	Improve engineering efficiency through the elimination of waste and reduction of costs	Complete engineering activities ontime and at the expected level of quality	Execute all designs with first pass design success in all skills	Zero internal and external customer quality incidences

Level 1 KPIs	<b>KPI 1</b>	<b>KPI 2</b>	<b>KPI 3</b>	<b>KPI 4</b>	<b>KPI 5</b>	<b>KPI 6</b>
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Level 2 KPIs	<b>KPI 1</b>	<b>KPI 2</b>	<b>KPI 3</b>	<b>KPI 4</b>	<b>KPI 5</b>	<b>KPI 6</b>
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# Resource Efficiency in Knowledge-Based Economy and KPI's

*Questions?*