Combined Performance Index

by
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Business Performance Management
Singapore

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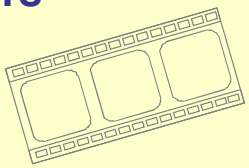
Combined Performance Indicators



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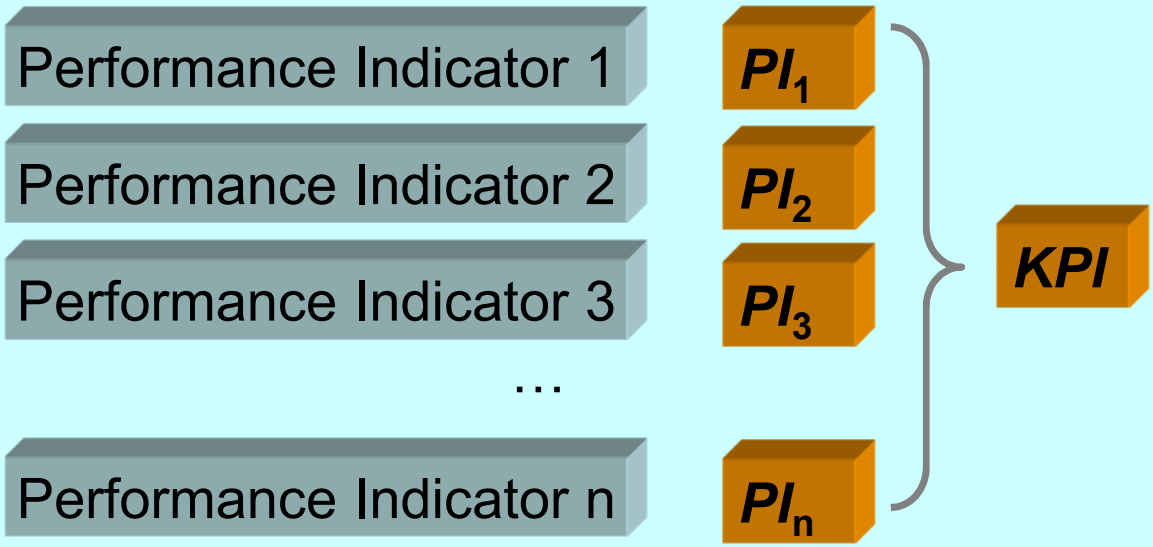
Setting up a combined performance indicator (PI)



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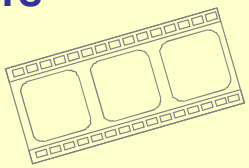
How to combine a set of performance indicators into one Key Performance Indicator?

Combined Performance Indicators



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How to combine a set of performance indicators into one Key Performance Indicator?

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Setting up a combined performance indicator (PI)

Step 1: Define for each PI a base and a target value

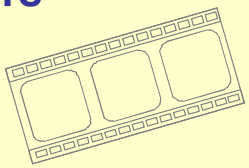
Step 2: Map each PI to a common index range

Step 3: Give each PI a weight

Step 4: Sum-up the weighted index values for each indicator

Step 5: Define the traffic light function for the combined index

Combined Performance Indicators



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How to combine a set of performance indicators into one Key Performance Indicator?

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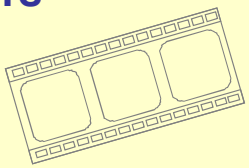
Use the combined index as KPI

Combined Performance Indicators



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Setting up a combined performance indicator (PI)

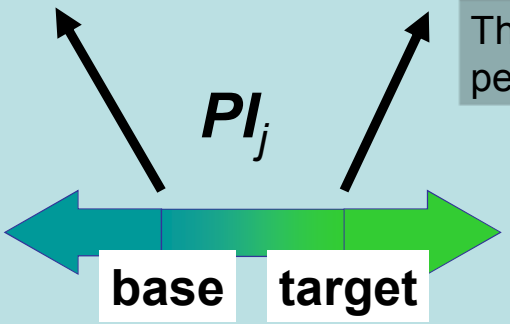
Step 1: Define for each PI a base and a target value

The base value is the critical acceptable value of the performance Indicator. Under no circumstances it should be missed, as it would have impact on the reputation and overall business.

Base value

Target value

The target value is the value of the performance indicator to be achieved



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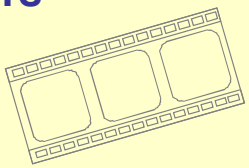

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Setting up a combined performance indicator

1. Define for each PI a base and target value
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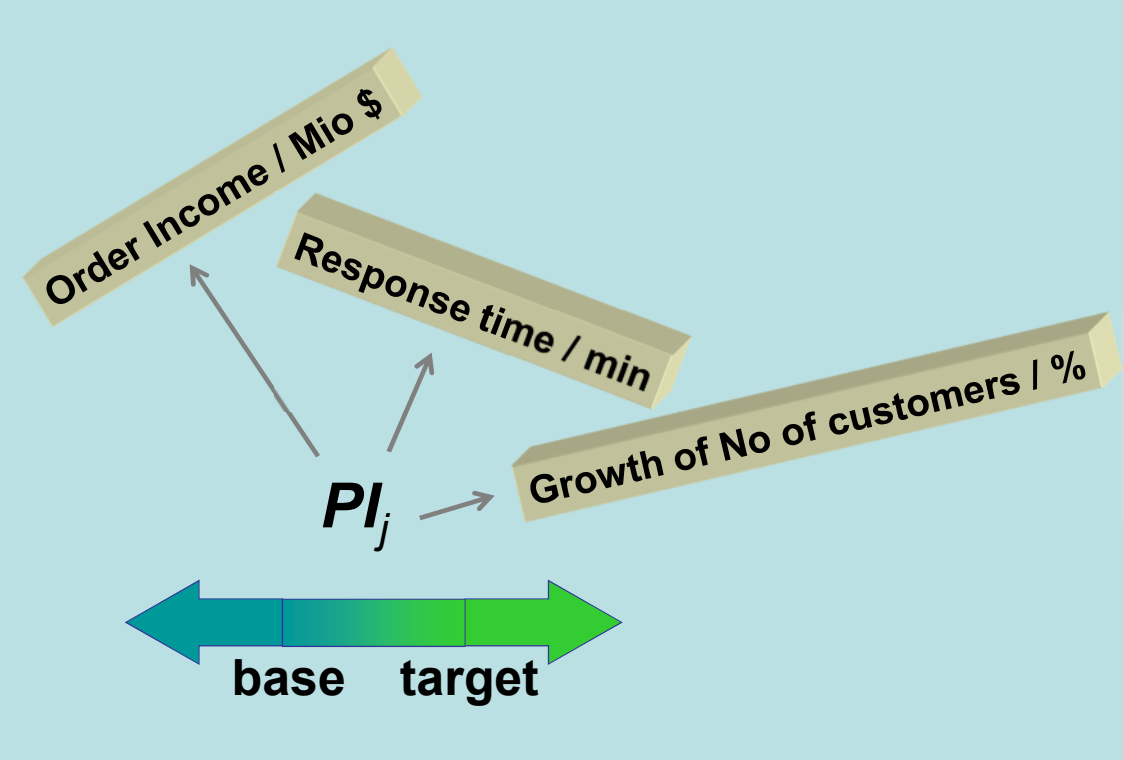
Mapping to a common Index Range

Step 2: Map each PI to a common index range



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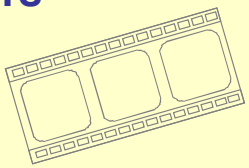

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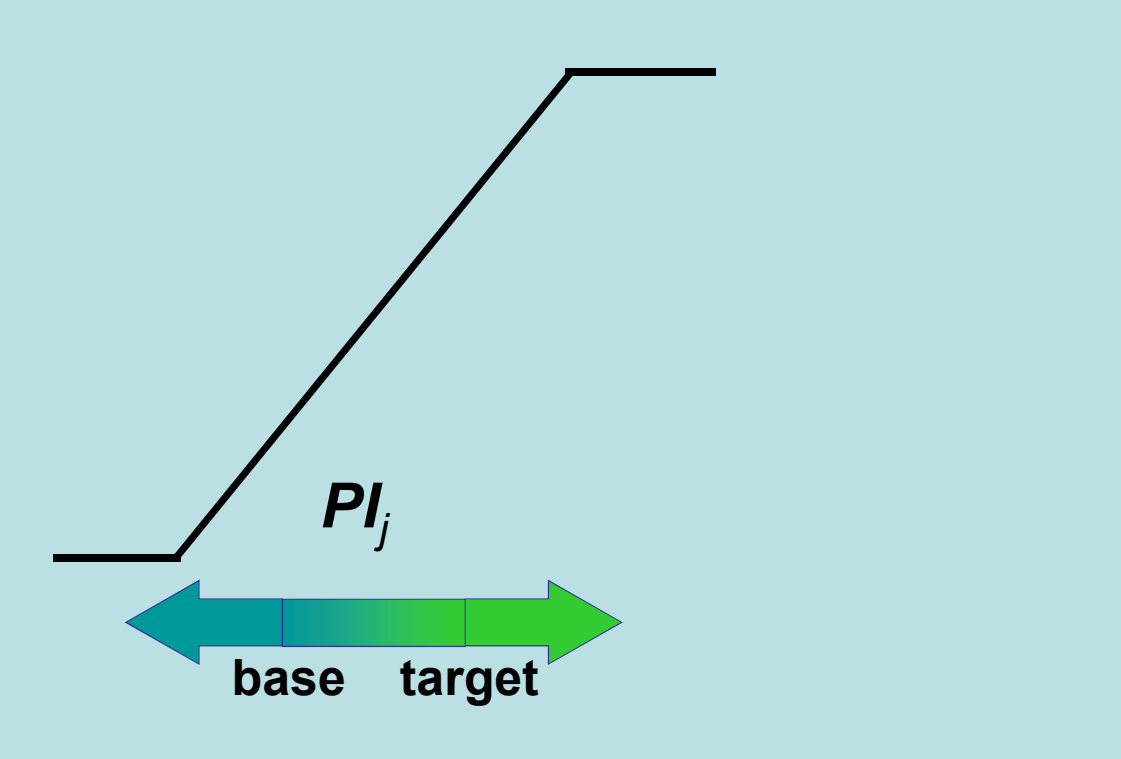

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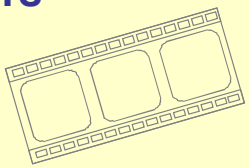

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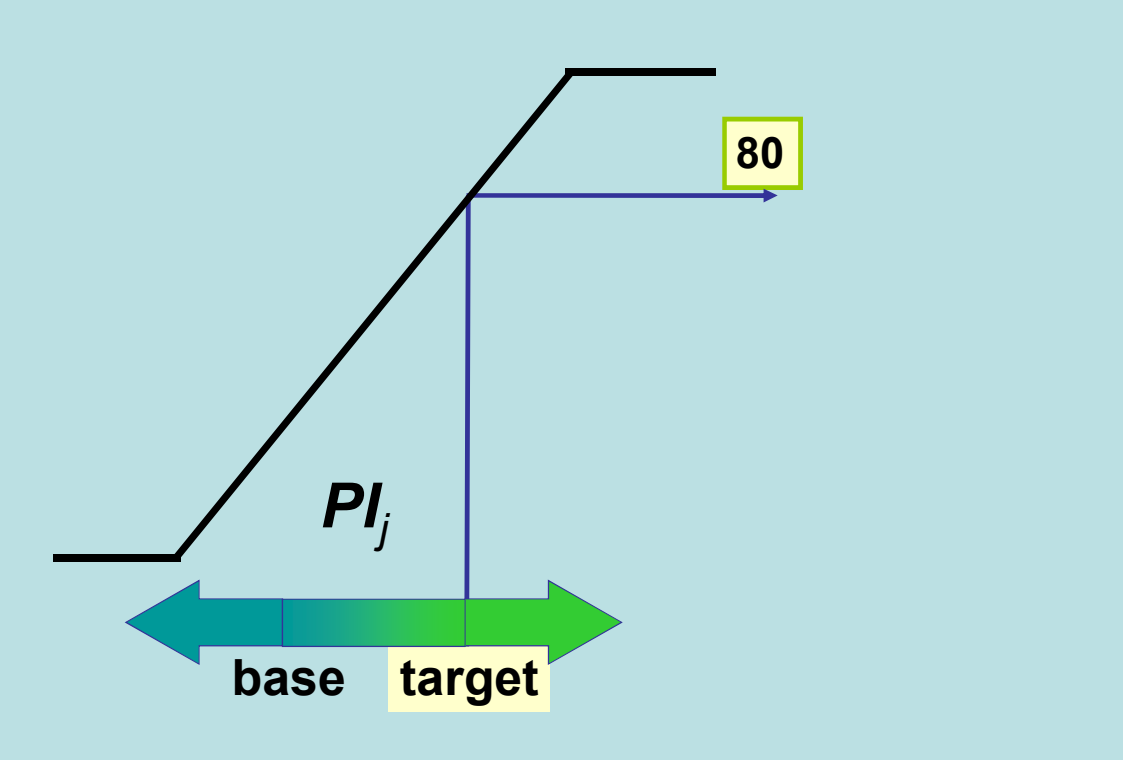
Setting up a combined performance indicator (PI)

Target value

Will get 80 points



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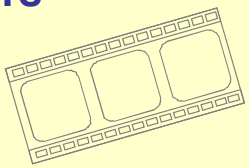

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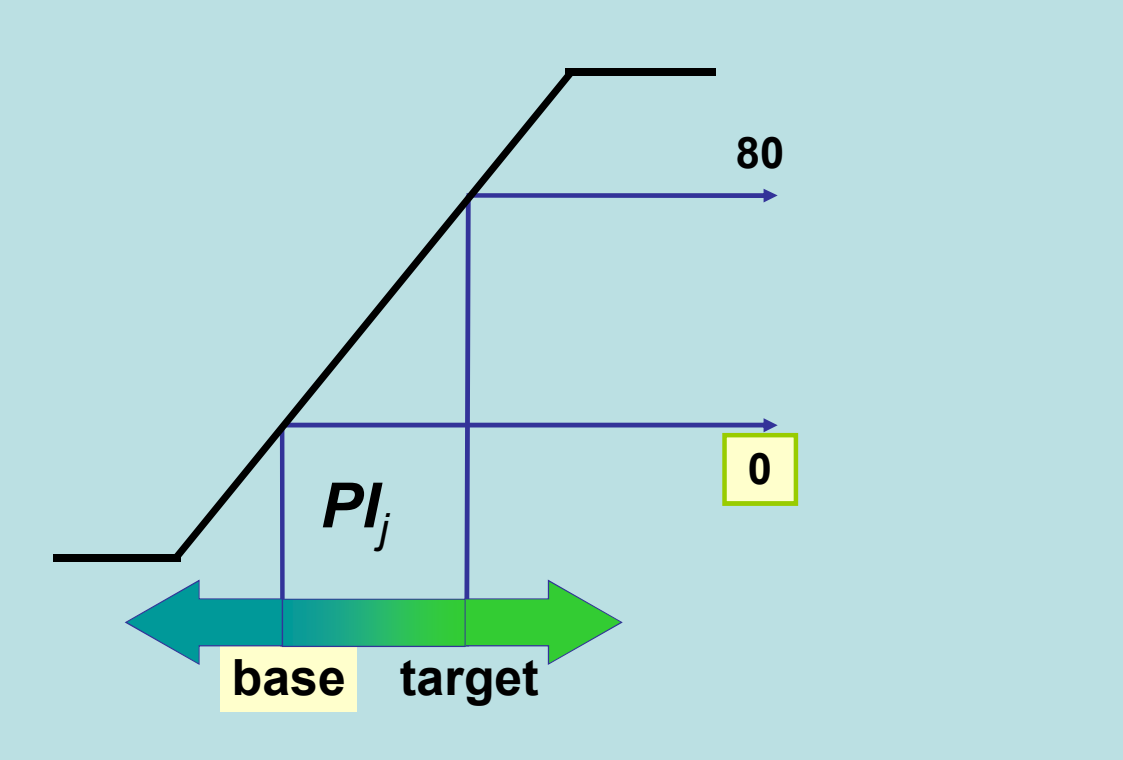
Setting up a combined performance indicator (PI)

Target value — Will get 80 points

Base value — Will get 0 points



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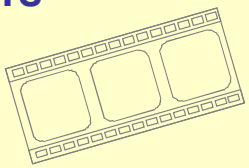

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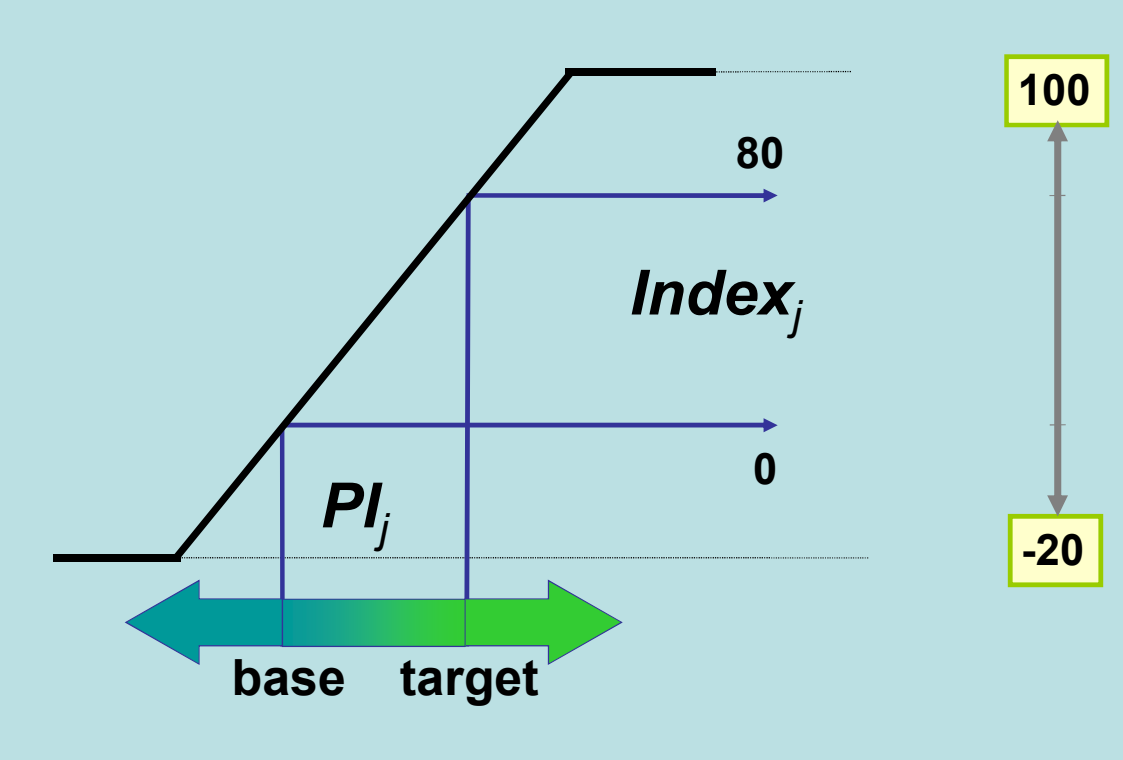
Setting up a combined performance indicator (PI)

Total index range From -20 to +100



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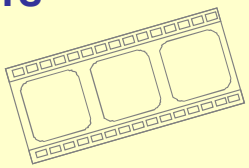

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Setting up a combined performance indicator (PI)

Formula for mapping

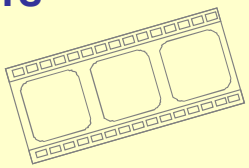
$$IC = \min\left(\max\left(80 * \frac{(PI - Base)}{(Target - Base)}\right), -20\right); 100)$$

- Max: $80 * \frac{(PI - Base)}{(Target - Base)}$
- -20: Lowest Index value
- 100: Highest Index value

Formula In Excel:

```
= MIN( MAX( 80*(PI - Base)/(Target - Base); -20); 100)
```

Combined Performance Indicators



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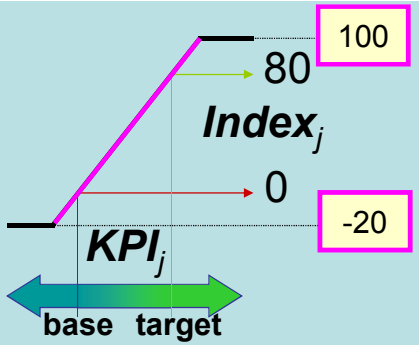
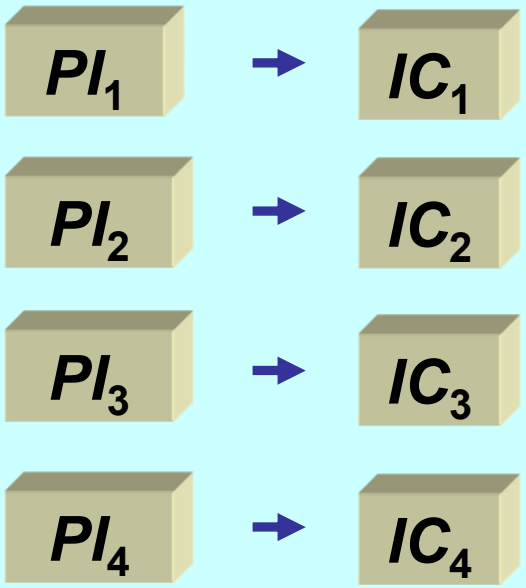


Setting up a combined performance indicator (PI)



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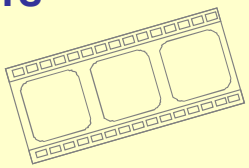

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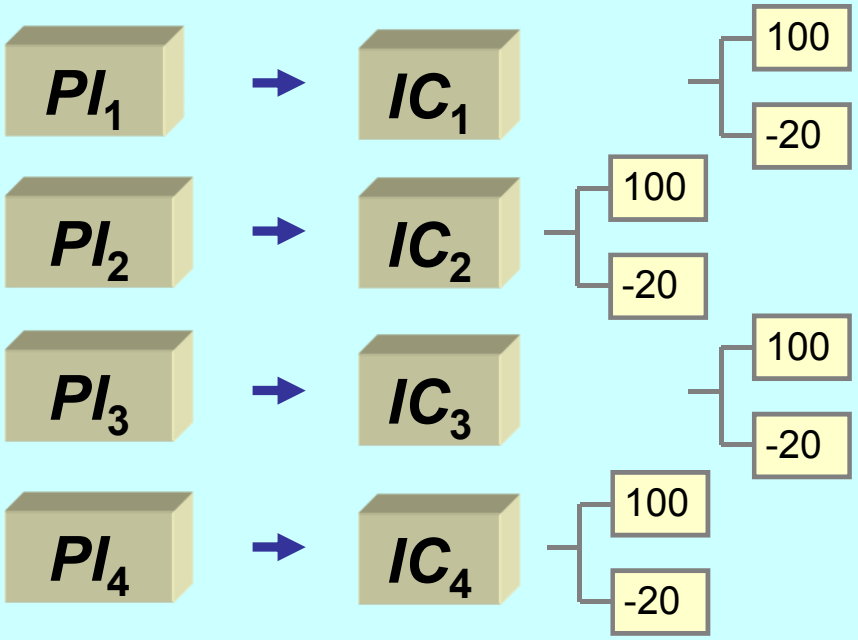
Mapping to a common Index Range



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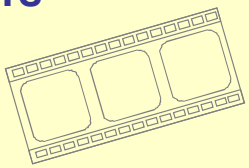

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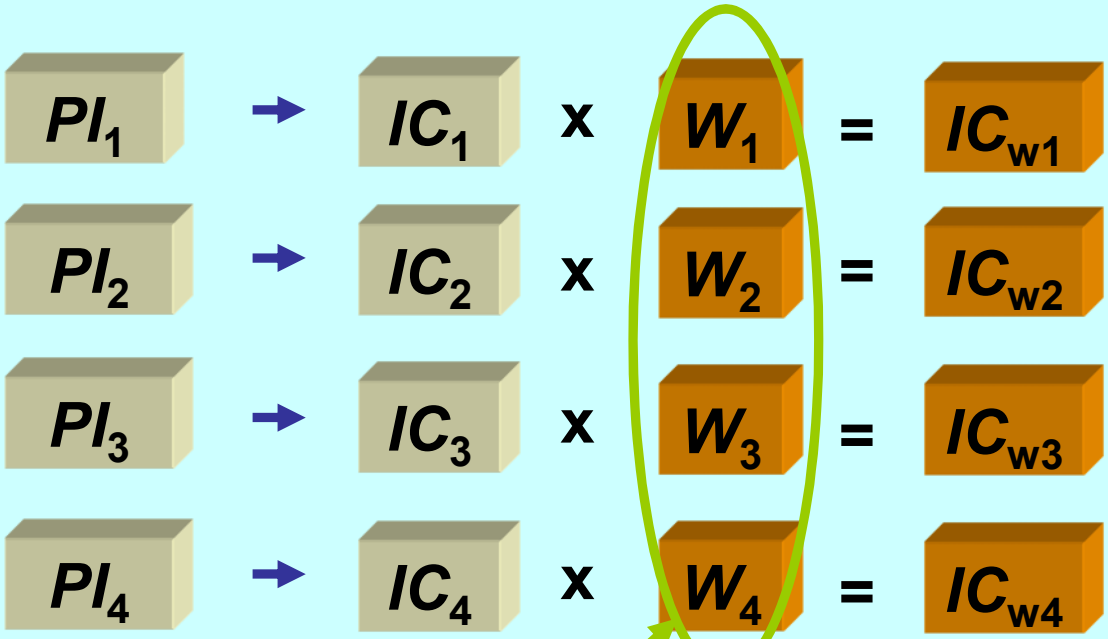
Setting up a combined performance indicator (PI)

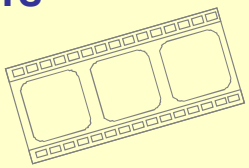
Step 3: Give each PI a weight



Sum of weighting factors = 100%

Weighted Index components

Combined Performance Indicators



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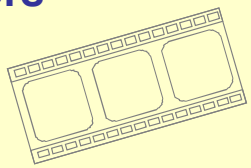
Setting up a combined performance indicator (PI)

Step 4: Sum-up the weighted index values for each indicator

PI_1	→	IC_1	x	W_1	=	IC_{w1}
PI_2	→	IC_2	x	W_1	=	IC_{w2}
PI_3	→	IC_3	x	W_1	=	IC_{w3}
PI_4	→	IC_4	x	W_1	=	IC_{w4}

combined index → ***KPI***

Combined Performance Indicators



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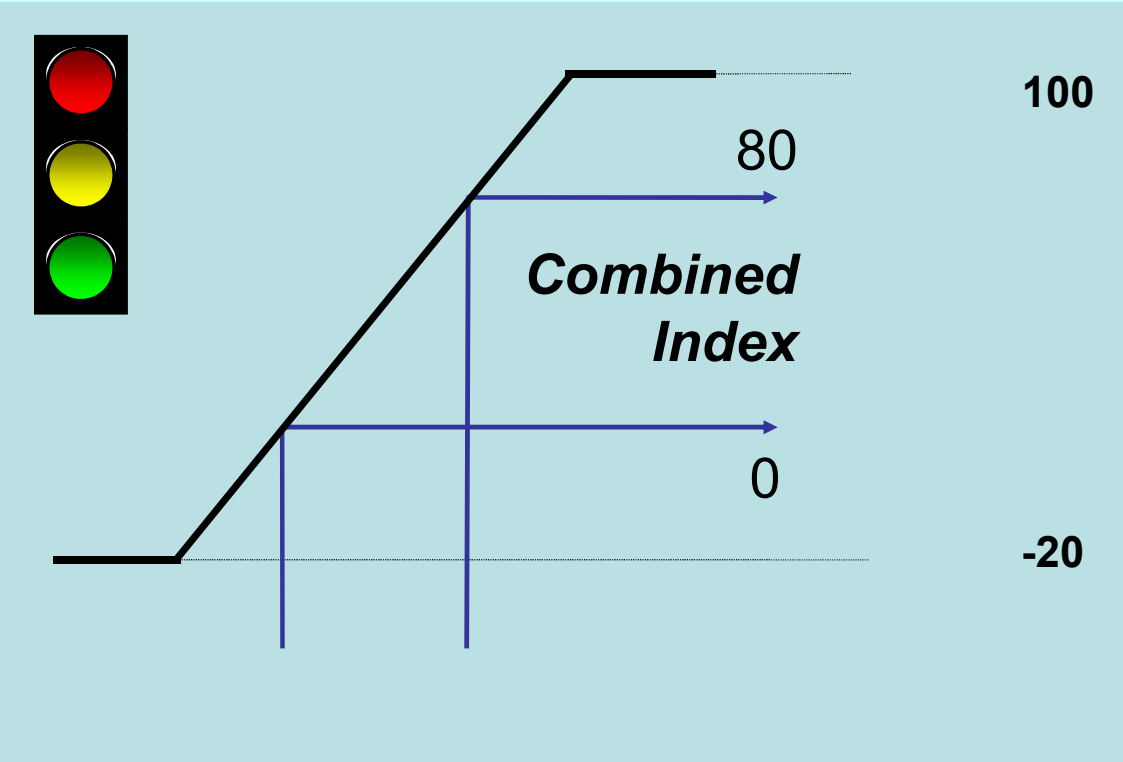
Setting up a combined performance indicator (PI)

Step 5: Define the traffic light function for the combined index



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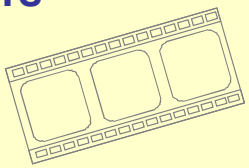

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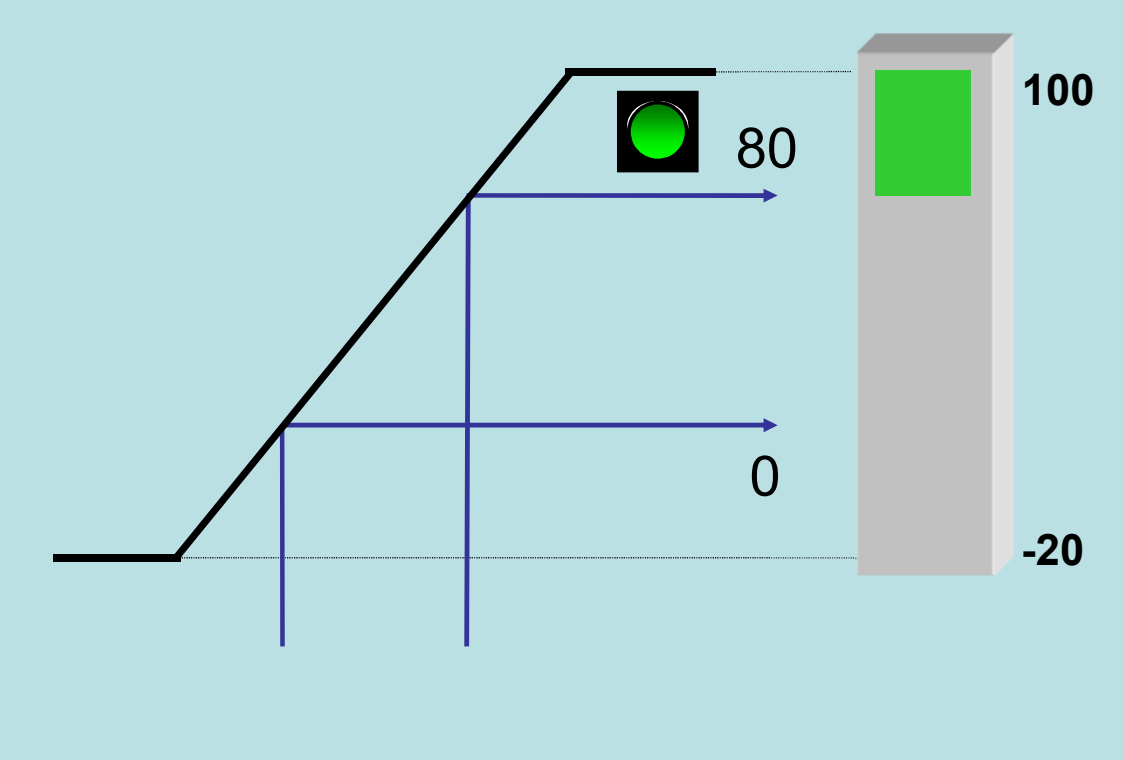
Setting up a combined performance indicator (PI)

Traffic light

Green above 80



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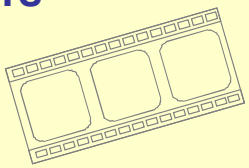

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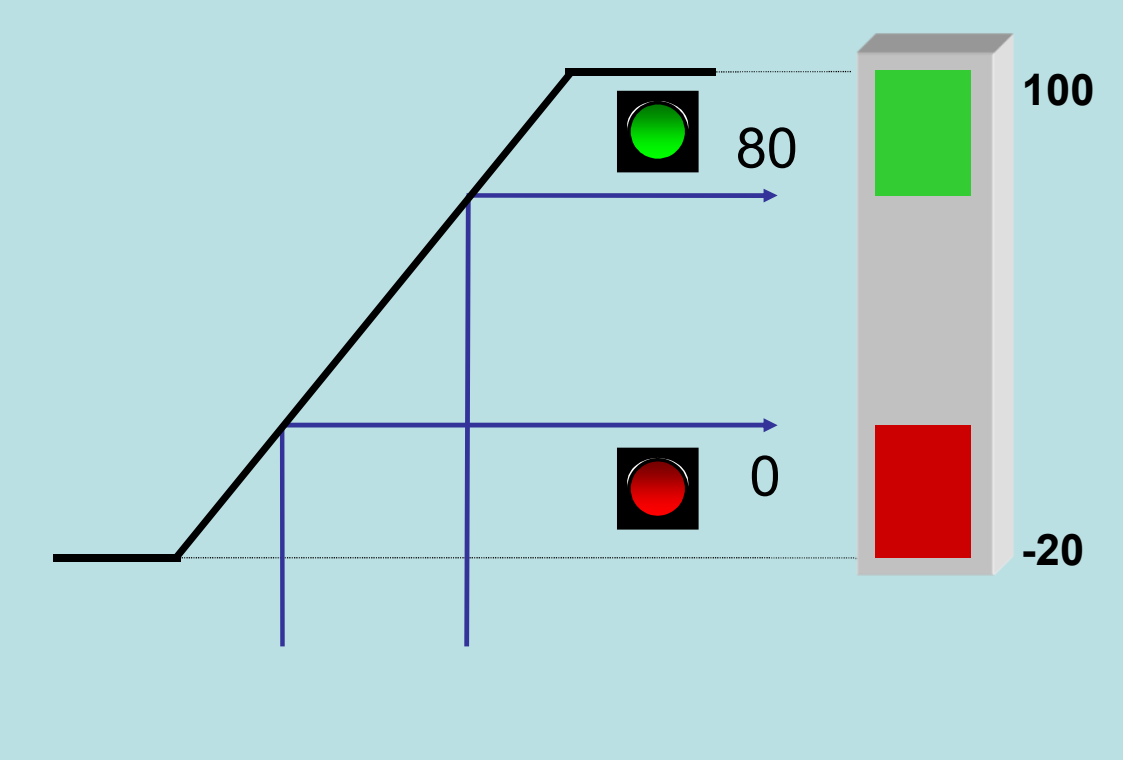
Setting up a combined performance indicator (PI)

Traffic light

Red below 0



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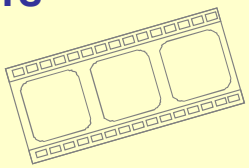

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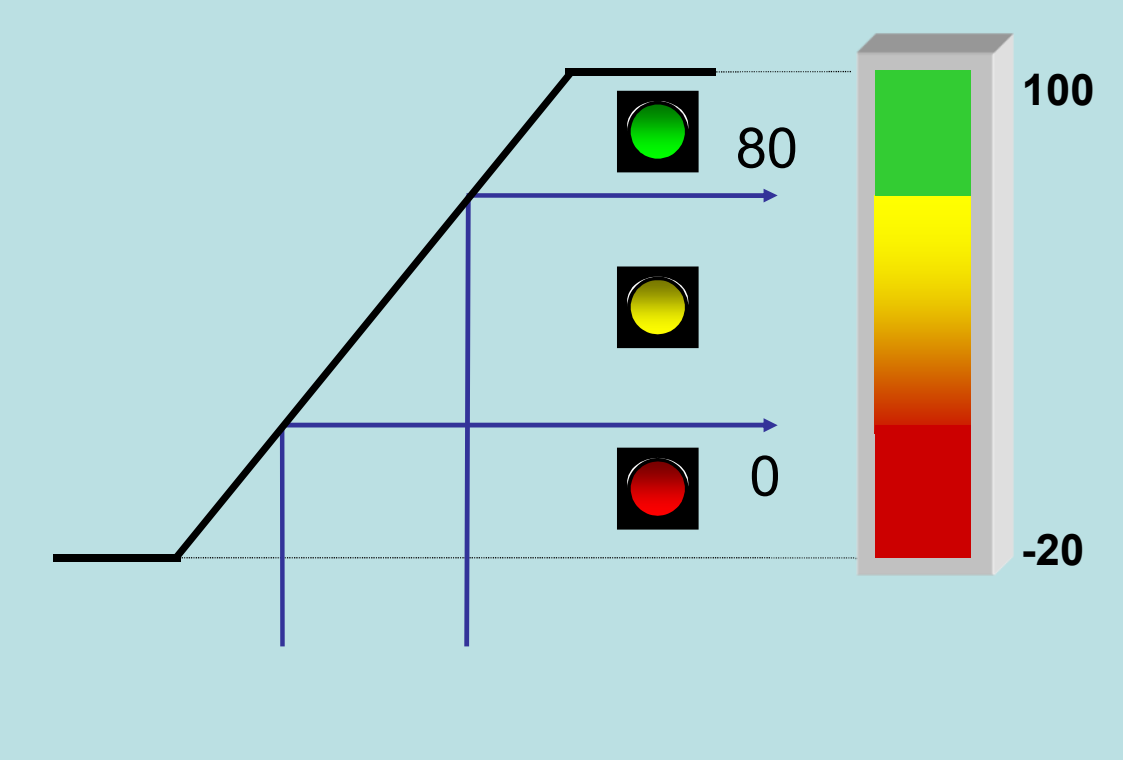
Setting up a combined performance indicator (PI)

Traffic light

Yellow betw. 0 and 80



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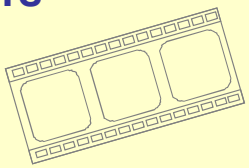

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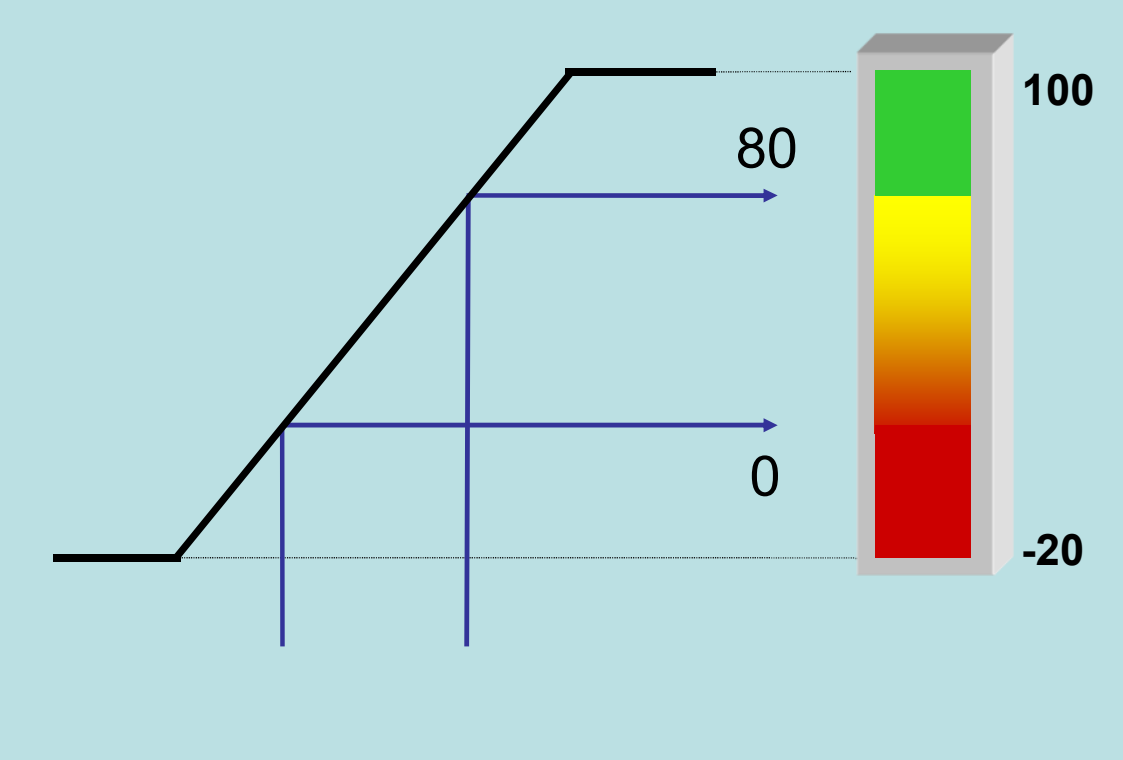

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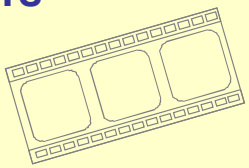

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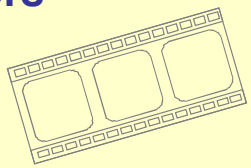
Implementation in Excel

Example

	A	B	C	D	E	F	G	H
	Performance Indicator	**Unit**	**Base**	**Target**	**Actual**	**Index Points**	**Weight**	**Weighted Points**

Combined Performance Indicators



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Excel Implementation

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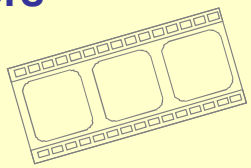
Example

	A	B	C	D	E	F	G	H
	Performance Indicator	**Unit**	**Base**	**Target**	**Actual**	**Index Points**	**Weight**	**Weighted Points**
	Delivery Time	Day	5	2	**3.5**			
	Order size	kEuro	10	15	**9**			
	Growth	%	0%	10%	**12%**			
	No of orders	1	20	50	**35**			

Combined Performance Indicators



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	A	B	C	D	E	F	G	H
	Performance Indicator	**Unit**	**Base**	**Target**	**Actual**	**Index Points**	**Weight**	**Weighted Points**
	Delivery Time	Day	5	2	**3.5**	**40**		
	Order size	kEuro	10	15	**9**	**-16**		
	Growth	%	0%	10%	**12%**	**96**		
	No of orders	1	20	50	**35**	**40**		

= MIN(MAX(80*(*Actual*- *Base*)/(*Target* - *Base*); -20); 100)

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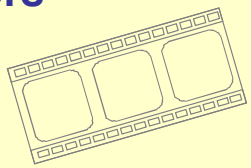

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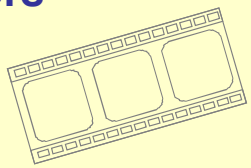
	A	B	C	D	E	F	G	H
	Performance Indicator	**Unit**	**Base**	**Target**	**Actual**	**Index Points**	**Weight**	**Weighted Points**
	Delivery Time	Day	5	2	**3.5**	**40**	40%	**16**
	Order size	kEuro	10	15	**9**	**-16**	10%	**-2**
	Growth	%	0%	10%	**12%**	**96**	30%	**29**
	No of orders	1	20	50	**35**	**40**	20%	**8**
							100%	

= Index Points * Weight

Combined Performance Indicators



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Excel Implementation

1. Define for each PI a base and target value
2. Map each PI to a common index range
3. Give each PI a weight
4. Sum-up the weighted index values for each indicator
5. Define the traffic light function for the combined index

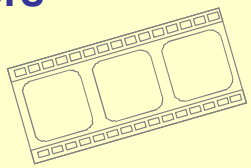
Implementation in Excel

Example

	A	B	C	D	E	F	G	H
	Performance Indicator	**Unit**	**Base**	**Target**	**Actual**	**Index Points**	**Weight**	**Weighted Points**
	Delivery time	Day	5	2	**3.5**	**40**	40%	**16**
	Order size	kEuro	10	15	**9**	**-16**	10%	**-2**
	Growth	%	0%	10%	**12%**	**96**	30%	**29**
	No of orders	1	20	50	**35**	**40**	20%	**8**
							100%	

KPI	**51**

Combined Performance Indicators



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Excel Implementation

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Implementation in Excel

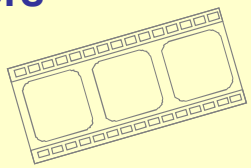
Example

	A	B	C	D	E	F	G	H
	Performance Indicator	**Unit**	**Base**	**Target**	**Actual**	**Index Points**	**Weight**	**Weighted Points**
	Delivery time	Day	5	2	**3.5**	**40**	40%	**16**
	Order size	kEuro	10	15	**9**	**-16**	10%	**-2**
	Growth	%	0%	10%	**12%**	**96**	30%	**29**
	No of orders	1	20	50	**35**	**40**	20%	**8**
							100%	

Using conditional formatting for the traffic light function

KPI **51**

Combined Performance Indicators



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Excel Implementation

1. Define for each PI a base and target value
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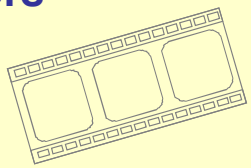
3. Give each PI a weight
4. Sum-up the weighted index values for each indicator
5. Define the traffic light function for the combined index

For more information please visit http://bpmsg.com

Business Performance Management
Singapore

Combined Performance Indicators



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