

Updated  
with the latest  
SMRP metrics  
and EN15341  
indicators.



## GLOBAL METRICATORS

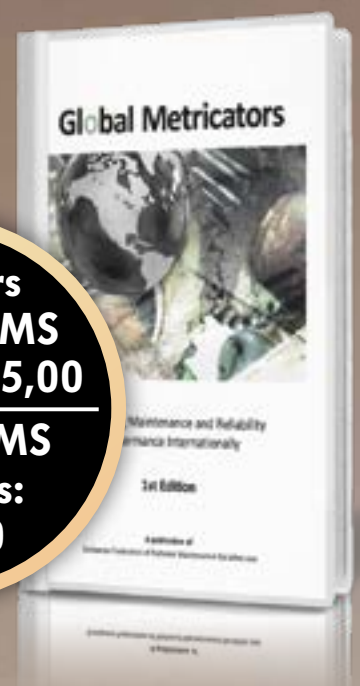
### GLOBAL MAINTENANCE AND RELIABILITY INDICATORS

The necessary tool for benchmarking in maintenance and availability

**ORDER POINT**  
The Global Metricators guidebook can be purchased  
and downloaded from the [EFMNS website](http://efnms.com)

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**When comparing Maintenance and Availability performance one needs a set of clearly defined and standardized indicators supported by definitions. In Europe we can use the indicators defined in EN 15341:2019. In North America one can take advantage of the SMRP metrics.**

If we want to compare and translate the different local indicators and definitions, you can use the “Global Metricators” guidebook with the harmonised indicators. The harmonised indicators are those which are similar between the SMRP and EN 15341:2019, and those for which any differences can be identified. The harmonised indicators provide a common platform for global organizations to benchmark their facilities across borders.

The “Global Metricators” guidebook includes 40 indicators and 36 metrics identified as harmonised.

Each indicator is documented by hands on examples on the calculation of the indicators to enhance understanding of the metrics.

The “Global Metricators” guidebook is extended with a table of Best in Class values suggested for some of the harmonised indicators. Recommendations for the use of the harmonised indicators to the maintenance processes are also offered to the readers in the guidebook.

## EXAMPLES OF HARMONISED INDICATORS:

EN 15341		SMRP	
Indicator No.	Indicator Ratio	Metric No.	Metric name
A&S1	Total Maintenance Cost x 100/Assets Replacement Value	1.5	Total Maintenance Cost per RAV
A&S12	Corrective maintenance cost x 100/Total Maintenance Cost	5.1.1	Corrective Maintenance Cost
E5	Total operating time x 100/Number of failures	3.5.1	MTBF
E3 combined with E7	Number of Systems Covered by Criticality Analysis x 100/Total Number of Systems	3.1	Systems Covered by Criticality Analysis
O&S5	Direct maintenance personnel on shift x 100/Total direct maintenance personnel	5.5.6	Craft Workers on Shift Ratio
O&S9	Corrective maintenance man hours x 100/Total maintenance man hours	5.1.2	Corrective Maintenance Hours

## SAMPLE CALCULATION FOR PREVENTIVE MAINTENANCE COST

The total maintenance cost for the month was \$567,345. The total cost of preventive work orders for company personnel was \$227,563, contractor purchase order amount for preventive work totaled \$23,587 and operator preventive work orders totaled \$7,300.

$$\begin{aligned}
 \text{Preventive Maintenance Cost (\%)} &= \frac{\text{Preventive Maintenance Costs} \times 100}{\text{Total Maintenance Costs}} \\
 \text{Preventive Maintenance Cost (\%)} &= \frac{(\$227,563 + \$23,587 + \$7,300) \times 100}{\$567,345} \\
 &= 45.55\%
 \end{aligned}$$

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