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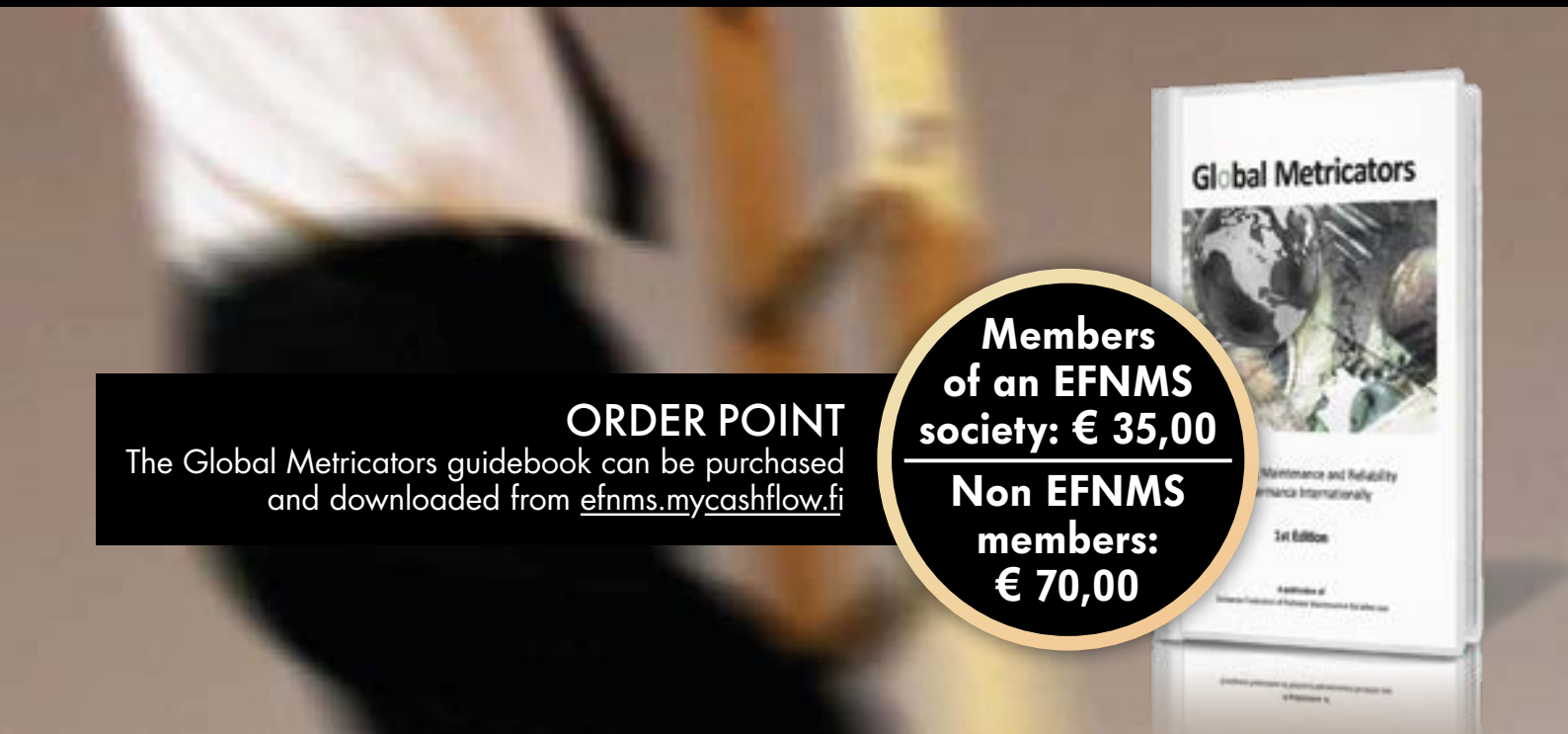
Updated with the latest SMRP metrics and EN15341 indicators.

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 efnms.mycashflow.fi

Members of an EFNMS society: € 35,00

Non EFNMS members: € 70,00

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.

$$\textbf{Preventive Maintenance Cost (\%)} = \frac{\text{Preventive Maintenance Costs} \times 100}{\text{Total Maintenance Costs}}$$

$$\textbf{Preventive Maintenance Cost (\%)} = \frac{(\$227{,}563 + \$23{,}587 + \$7{,}300) \times 100}{\$567{,}345}$$

$$= 45.55\%$$

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EFNMS is recognized as the leading European network for knowledge and experience in maintenance and physical asset management – That means that EFNMS has competencies in Maintenance but also in Physical Asset Management which includes Design, Configuration, Operation, Continuous Improvement and Disposal. Please visit www.efnms.org

STATEMENTS FROM THE READERS:

Per Schjølberg (NFV)

We in the Norwegian Maintenance] Society (NFV) are very active within education and projects.

We have developed a leading and future education course called "World Class Maintenance". Within education it is extremely important to have the best and most approved terminology.

Therefor we are using the "The Global Metricators" as a guidebook (GloMe) for terminology.

About 350 people have participated in program. Both the participants and NFV are very satisfied with the documents.

The World Class Maintenance program is approved by accredited certification body, Norsk Sertifisering AS, as a theoretical basis for accredited certification of maintenance managers.

Antoine Despujols (Chairman of the French standardization Committee (AFNOR/X60G))

To be among the best in a business sector, it is essential to measure the performance of the maintenance processes and results on the assets. For this, the choice of indicators and improvement actions carried out according to their measurements are decisive. All maintenance managers know how important and difficult this task is and that is why they will greatly appreciate the GloMe guidebook.

GloMe not only gives a list of relevant KPIs used in Europe and the USA, but it gives many indications on their calculation, objectives and use. It also provides very useful explanations on the definitions of the concepts used (e.g. availability and times) so that there is no confusion about their understanding. This GloMe Guidebook is an excellent maintenance tool for maintenance managers.

Herman Baets (CFO, EFNMS)

Quote for the global metricators guidebook

Measuring the results of production is quite simple. Measuring the results of reliability and maintenance is much more difficult.

This handbook supplies not only a set of metricators/indicators, but also the relation and explanation "how to use it".

Herewith, every reliability and maintenance professional is able to create, in function of his objectives, a coherent set of indicators to follow and act on it.