SPI	KPI	KPI Value Formula*	KPI_{MinReq}	KPI_{Target}	PI
Health and Safety Management and Performance	Flawless Port state control performance	$\frac{A}{B}$	0.33	1	A: Number of PSC inspections resulting in zero deficiencies
					B: Number of PSC inspections
	Lost Time Injury Frequency	$\frac{A+B+C+D}{E*10^{-6}}$	2.5	0.5	A: Number of fatalities due to injuries
					B: Number of lost workday cases
					C: Number of permanent total disabilities (PTD)
					D: Number of permanent partial disabilities
					E: Total exposure hours
	Health and Safety deficiencies	$\frac{A}{B}$	5	0	A: Number of health and safety related deficiencies
					B: Number of recorded external inspections
	Lost Time Sickness Frequency	$\frac{A+B}{C*10^{-6}}$	2.5	0.5	A: Number of cases where a crew member is sick for more than 24 hours
					B: Number of fatalities due to sickness
					C: Total exposure hours
	Passenger Injury Ratio	$\frac{A}{B}$	2	0.2	A: Number of passengers injured
					B: Passenger exposure hours
HR Management Performance	Crew disciplinary frequency	$\frac{A+B+C+D+E}{F}*24*365$	0.02	0	A: Number of absconded crew
					B: Number of charges of criminal offences
					C: Number of cases where drugs or alcohol is abused
					D: Number of dismissed crew
					E: Number of logged warnings
					F: Total exposure hours
	Crew planning	$A+B$	15	0	A: Number of crew not relieved on time
					B: Number of violation of rest hours
	HR deficiencies	$\frac{A}{B}$	5	0	A: Number of HR related deficiencies
					B: Number of recorded external inspections
	Cadets per vessel	$\frac{A}{B}$	0	3	A: Number of cadets under training with the ship manager
					B: Number of vessels under technical management (DOC)
	Officer retention rate	$\frac{A-(B+C)}{D}*100\%$	70	95	A: Number of officer terminations from whatever cause
					B: Number of unavoidable officer terminations
					C: Number of beneficial officer terminations
					D: Average number of officers employed
	Officers experience rate	$\frac{A}{4*B}$	60	90	A: Number of officer experience points
					B: Number of officers onboard
	Training days per officer	$\frac{A}{B}$	0	0.03	A: Number of officer trainee man days
					B: Number of officer days onboard all vessels under technical management (DOC)
Environmental Performance	Releases of substances as def by MARPOL Annex 1-6	$A+B$	1	0	A: Number of releases of substances covered by MARPOL, to the environment
					B: Number of severe spills of bulk liquid
	Ballast water management violations	A	1	0	A: Number of ballast water management violations
	Contained spills	A	3	0	A: Number of contained spills of bulk liquid
	Environmental deficiencies	$\frac{A}{B}$	5	0	A: Number of environmental related deficiencies
					B: Number of recorded external inspections
Navigational Safety Performance	Navigational deficiencies	$\frac{A}{B}$	5	0	A: Number of navigational related deficiencies
					B: Number of recorded external inspections
	Navigational incidents	$2A+B+2C$	1	0	A: Number of collisions
					B: Number of allisions
					C: Number of groundings
Operational Performance	Budget performance	$\frac{\lvert A-(B-C)\rvert}{A}*100\%$	10	2	A: Last year's running cost budget
					B: Last year's actual running costs and accruals
					C: Last year's AAE (Additional Authorized Expenses)
	Drydocking planning performance**	$\left(\left\lvert\frac{B-A}{A}\right\rvert+\left\lvert\frac{D-C}{C}\right\rvert\right)*100$	10	2	A: Agreed drydocking duration
					B: Actual drydocking duration
					C: Agreed drydocking costs
					D: Actual drydocking costs
	Cargo related incidents	A	2	0	A: Number of cargo related incidents
	Operational deficiencies	$\frac{A}{B}$	5	0	A: Number of operational related deficiencies
					B: Number of recorded external inspections
	Passenger injury ratio	$\frac{A}{B}$	2	0.2	A: Number of passengers injured
					B: Passenger exposure hours
	Port state control detention	A	1	0	A: Number of PSC inspections resulting in a detention
	Vessel availability	$\frac{(24*365-B)-A}{24*365-B}*100\%$	97	100	A: Actual unavailability
					B: Planned unavailability
	Vetting deficiencies	$\frac{A}{B}$	5	0	A: Number of vetting deficiencies
					B: Number of vetting inspections
Security Performance	Flawless Port State Control performance	$\frac{A}{B}$	0.33	1	A: Number of PSC inspections resulting in zero deficiencies
					B: Number of PSC inspections
	Security deficiencies	$\frac{A}{B}$	1	0	A: Number of security related deficiencies
					B: Number of recorded external inspections
Technical Performance	Condition of class	A	1	0	A: Number of conditions of class
	Failure of critical equipment and systems	A	1	0	A: Number of failures of critical equipment and systems

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SPI	KPI	KPI Value Formula	$KPI_{Min\ Req}$	KPI_{Target}	PI
These KPIs has no association to an SPI	CO2 efficiency [g/tonmile]	$\frac{A}{B * 10^{-6}}$	84	36	A: Emitted mass of CO2[ton] B: Transport work
	Fire and Explosions	$A + B$	1	0	A: Number of fire incidents B: Number of explosion incidents
	NOx efficiency [g/tonmile]	$\frac{A}{B * 10^{-3}}$	2.2	0.9	A: Emitted mass of NOx[kg] B: Transport work
	Port state control deficiency ratio	$\frac{A}{B}$	8	0	A: Number of PSC deficiencies B: Number of PSC inspections
	SOx efficiency [g/tonmile]	$\frac{A}{B * 10^{-3}}$	1.5	0.6	A: Emitted mass of SOx[kg] B: Transport work

The Rating and Aggregation formulas

KPI Rating Formula	$KPI_{Rating} = 100 * \frac{KPI_{Value} - KPI_{MinReq}}{KPI_{Target} - KPI_{MinReq}}$	The KPI_{rating} formula is valid for all KPI_{values} and will convert the KPI_{value} into a rating between 0-100.
SPI	$SPI = \frac{1}{n} * \sum_{i=1}^{n} KPI_i$	An SPI is calculated as the average of the KPI_{rating} which is incorporated in the SPI

NOTE:

KPI_{Target} is the KPI_{value} which give KPI_{rating} =100

$KPI_{Min\ Req}$ is the KPI_{value} which give KPI_{rating} =0

* To see the reporting and calculation periods, please refer to the www.shipping-kpi.org

Need more info ?

For further information about the standard please refer to the web site	www.shipping-kpi.org
In case of questions, please use the feedback form on the website or email us.	support@shipping-kpi.org