Key Performance Indicators (KPIs) in Logistics

A useful way to measure performance is through the establishment of indicators for the key aspects of logistics activity, with the goal of evaluating the success of an ongoing process or particular activity.

Key Performance Indicators (KPIs) are quantifiable measurements of performance for key activities managed by organization or team. These include all the activities that are needed to keep an operation functioning on an ongoing basis.

A KPI consists of the following elements:

- **Identified Metric -** Anything the organization choses to measure is a metric. There are some metrics that the organization or teams classify as "key", those are the ones that becomes KPIs.
- **Ongoing Value -** The ongoing value is the running value of the defied metric when is measured at any given moment.
- **Target Value** - The target value is the minimum or maximum desirable value for the identified metric.
- **Unit of Measure -** The unit of modality of measurement and organization chooses to view and track an activity.
    - Numerical – a flat number that indicates a target number – Example: Number of beneficiaries receiving commodities.
    - Percent – a measurement of an activity as a percent of a whole – Example: % of orders delivered on time.
    - Rate – a measurement of activity referenced against another number – Example: dollar value per metric tonnage stored.

All the information needed to understand the KPI units of measure need to be clear for everyone involved, and when two or more variables are measured, this needs to be clearly defined.

By setting the KPIs, the *key areas* of the intervention are defined, using a predefined metric (as well as a target value) to *indicate* how that *key area* is *performing*. Thus, KPIs are used to measure the health of an organization and its respective teams and departments. KPIs are often thought of as "health metrics" because they give the vital signs and provide warning signs when the metrics are unusual.

Choosing the Right Indicators

While suitable performance measures provide the foundation for informed decision-making, improper ones can distort the conclusions and negatively impact efficiency by disguising critical issues and warning signs. Good metrics have several distinguishing characteristics:

- They are directly related to objectives and strategies.
- They must be understandable but not under-determining.
- They must be meaningful.
- They vary between locations and customer segments.
- They provide fast feedback.

One of the most complete indicators is the percentage of orders delivered in full, on time and error free (DIFOT).

On-time	Orders received on or before the date requested
In-full	Orders are complete in quantity
Error-free	Orders are complete with proper documentation, labelling, and without damage to items or packaging

However, there are a variety of other key indicator examples. Their selection will depend on the specific monitoring needs an organization might have. The following list is non-exhaustive:

- Information available for users (items, lead times, order status, etc.).
- Response time (order acknowledgement, queries, etc.).
- Number of claims and items returned.
- Number of stock-outs.
- Number of back-ordered lines.
- Average backorder time.

Suggested KPIs For Logistics Monitoring

Supply Chain	Total number of Framework/Long Term Agreements.
	% Of projects with Procurement Plans done.
	Total Number of staff with responsibility to sign a request.
	Average monthly forecast of logistics expenses.
	% Of In kind Donation with a donation reference.
Procurement	Monthly total number of Request.
	% Of Requests presented in ad-hoc regular meetings.
	% Of Requests correctly filled and with enough technical specifications.
	% Of Direct Purchase processes compliant and correctly archived.
	% Of Negotiated Processes compliant and correctly archived.
	Average needed time to process and complete a tender.
	% Of orders fulfilled on time.
	Total monthly expenditure.

Transport and Deliveries	% On time delivery.
	% Items damaged in transit.
	% Items lost in transit.
	Average cost per kg/m3.
	Average cost per kilometre.
	Total cargo transported in time frame (kg/m3).
	Average delivery time in days.
	% Of accurate deliveries (sent/received).
	% Of movements without Delivery and Reception Notes.
Stock	Cost per m2 of covered storage space.
	% Of stock lost due to theft, spoilage or damage.
	Number of stock outs per month.
	Average % of floor m2 space used per month / Average m3 used per month.
	Average time to release stock after pick order received.
	Number of pest controls per month.
	Average temperature / Average humidity.
	Number of temperature alerts.
	% Of unused stock (out of contingency or more than two years/projects old).
	% Of products not damaged or not compliant with specification upon receipt at facility.
Fleet Management	Total number of vehicles
	% Of movement planned in advance
	Total number of driver trainings
	% Of operating hours vehicles are fully booked
	% Of vehicles with the necessary tools
	% Of vehicle logbooks filled correctly
	Total number of maintenances per vehicle in a month
	Average fuel consumption (ltr/km) per vehicle per month
	% Of transport request met vs needed
	% Of vehicles that meet the mechanical and safety standards
	% Of fuel and rental/owned expensed budgeted
Equipment	% Of equipment correctly codified and labelled
	Total number of equipment items
	% Of equipment in use
	Number of old/obsolete/broke equipment dispose following the organization policy
Information and Communication Technology	Average backups done per month
	Total communication cost per month
	% Of movements without coverage during a part of the trip
	% Of computers with official software license

Energy	Total power needed
	Average hours without power
	Number of power backup system in place
	Average power back up maintenance per month
	Total electricity cost
	% Of equipment powered with stable voltage
	% Of installation properly earthed