# [ • •] Matrix International (UK) LTD.

Special Material Handling & Logistics Industry considerations & Standards

## Brief Material Handling & Logistics Industry Overview

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#### 1 Material Handling & Logistics Standards

#### 1.1 The ISO ICS 53 Standard

ISO ICS 53 includes lifting equipment, lifts and escalators, Continuous handling equipment including conveyors, industrial trucks including fork-lift trucks, sliding platforms and AGVs, Trucks and trailers, storage equipment including loading devices, shelves, etc., storing and warehousing, installations for storage of agricultural produce, Shelving for shops, Earth-moving machinery including tractors, excavators, loaders, graders, etc. and equipment for manual handling including shovels, spades, crowbars, picks, etc.

Primary concerns of the ISO ICS 53 standard include:

- Quality
- Cost
- Delivery
- Performance
- Safety
- Development
- Production

#### 1.2 Implementation

To enable these improvements, ISO ICS 53 works in tandem with a quality management system such as ISO 9001 which operates in a loop of what can be abstracted to Leadership  $\rightarrow$  Planning  $\rightarrow$  Support  $\rightarrow$  Operation  $\rightarrow$  Performance  $\rightarrow$  Evaluation  $\rightarrow$  Improvement which then loops back round to the Leadership to implement such improvements for the next iterative cycle.

#### 1.3 Limitation and Extentions

Despite a generalised standard, each implementation is different. Hence Matrix develops a specific mode of operation specific to each task borrowing from other complementary standards which may apply to the system as well as incorporating any standard the customer requests.

This ensures effective work beyond the minimum of the international Material Handling & Logistics Standards.

#### 2 Material Handling & Logistics Integration Concerns

#### 2.1 Existing Computer Systems & Protocols

Wheter on site mining or propspecting, an industrial control system must interact with other computerised systems. Integrating with these seamlessly can often require adapting to and understanding said bespoke systems.

Hence, Matrix employs a Agile stratgy of work with development operations being flexible to fit around specific or changing customer requirements.

#### 2.2 Maintenence & Support

The Material Handling & Logistics is a demanding one, inso far as it operates 24/7.

To Aid such operation, Matrix offer increased compterised maintence protocols and 24/7 support for all implementations as well as an extensive method statement portofilio for each project which is delieved along with each implementation to aid on site maintence work to tackle common issues.

#### 3 Upgrading & Adapting & Analysing

As with most industires, the Material Handling & Logistics industry is everchanging.

To help improve systems, Matrix offers an integrating analysis platform with each product so that the customer can track quality management as per the international standards independently of Matrix.

This aids the customer in planning upgrades and seeing where one would be benefical. With Computer APIs, rigourous documentation and build in extensibility, upgrades are easy to be do internally or from any external vendor.