

# Smart Weighment System For Cement Industry



## OPERATOR LESS

Automated weighing eliminating manpower requirements



## COST OPTIMAL

Due to reduction of cost for manpower, losses due to errors increased productivity and speed



## SECURE

Through stringent checks and balances across the weighing process



## INTEGRATED

Seamlessly across the enterprise with ERP, facilitating real-time information for operations and decision-making



## CUSTOMER SATISFACTION

Eliminating manual errors and malpractices, bringing in transparency and predictability in delivery.



**CMMI** DEV | ML5  
APPRAISED

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## The Need

Weighing in a cement factory is critical and integral to the business, right from the inward movement of raw material to outward movement of finished goods. At each stage, while the system needs to maintain consistency and accuracy and ensure that there are no losses, it also needs to satisfy the most important stakeholder, the customer. Traditionally customers are concerned about the reliance on operators, as this presents an opportunity for manipulation.

## What is Smart Weighment

Smart Weighment System is one of the most sought after and proven weighing solutions available in the industry. Designed for 24x7 heavy-duty operations in industries requiring bulk weighing, especially Cement, Agriculture, Steel, Mining, Sugar, Fertilizer and Construction. Smart weighing solution offers a robust, scalable option, which is independent of human interface.



## Manual System

Most plants working on manual or semi-automated systems can be beset with potential risks ranging from slippages in the process, weighing duplication, to wilful frauds and accidental errors. Due to the high degree of dependence on manual operators, as well as on systems fully or partially disconnected from the rest of the plant operations, each stage can have additional bottlenecks and gaps.

## Drawbacks

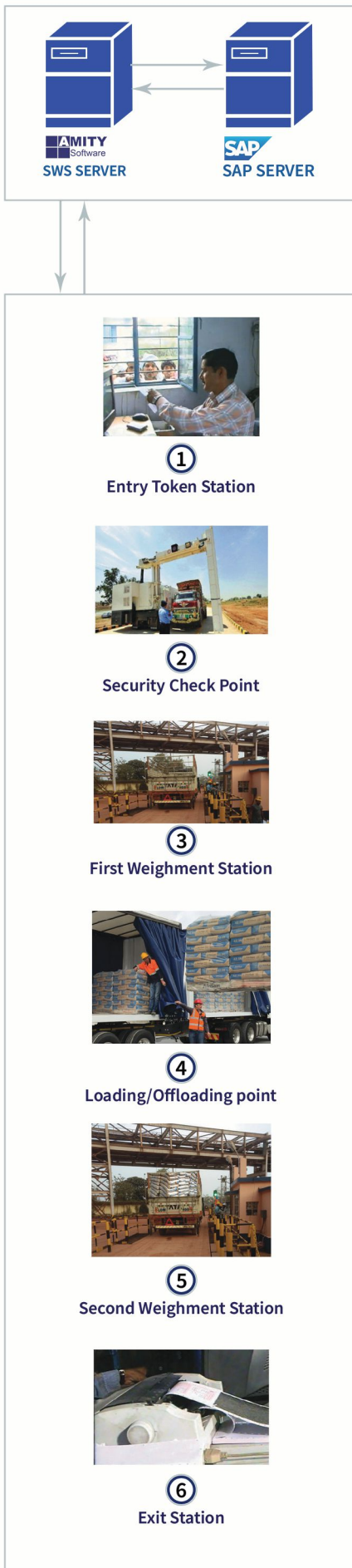
Typically, each weighing transaction takes time leading to slow clearance of the vehicles. To manage the required load, this needs several weighbridges to be functional simultaneously. The operations being manual, there is a need for operators and supervisors, as well, to be available round the clock. This leads to inordinate delays and exorbitant costs.

Additionally, since manual weighbridge operations are not centralized, it is preferred to weigh both Gross and Tare on the same weighbridge, which can add to both complexities as well as delays. There is a further delay in printing, also required at each station.

The difficulty to cross-reference transactions or to get the real-time alerts presents a further opportunity for malpractices, which are difficult to detect and address. This poses a significant risk of ethical as well as managerial grounds for the organization.

The data collected from the weighbridge system also needs to be incorporated into the central ERP, (such as SAP, Oracle Financials and other custom-built ERP systems), for processing and operations, as well as for critical management information and decision making. However, in a manual system, this is neither seamless nor validated, due to the risks outlined above, rendering any information suspect.

## Process Overview



## Amity Smart Weighment System



Amity's Smart Weighment System, (SWS) is built on a reengineered and efficient workflow, designed to eliminate excessive reliance on manpower, duplications and unproductive processes. At the same time, SWS brings in stringent checks and controls to ensure seamless and accurate weighing.

### Key Components

- Entry Token Station
- Security Check Point
- First Weighment Station
- Loading/Offloading Point
- Second Weighment Station
- Exit Station

### Key Features and Benefits

- **Automated Operator-less Operations:** Eliminates manpower and opportunity for manual manipulation. Brings in transparency.
- **Enhanced Customer Satisfaction:** By addressing the fundamental concern of customers of fair weighing.
- **Cost Optimization:** Through a reduction in workforce, printouts, speed and efficiency, as well as maximization of yield. The checks and controls further eliminate losses due to weighing related errors.
- **Issuance of Radio Tokens:** To eliminate multiple printouts, reducing document handling.
- **Electronic Transactions:** For instant, accurate and error-free data transmission.
- **Seamless Integration with existing SAP/other ERP systems:** Allows centralized weighbridge operations, facilitating real-time information available for decision-making and analytics.
- **Enhanced Productivity and Efficiency:** Typical increase between 30 - 40% of the number of vehicles being weighed, and from fewer weighbridge platforms.
- **Surveillance Camera at Weighing Station:** Eliminates the possibility of malpractices.
- **Smooth Vehicular Traffic Flow:** Enabled by speedy and accurate weighing.
- **Checks and Controls:** Automatic capture of standard tare weight on a centralized system, eliminates the possibility of duplicate or underload/overload weighing. Potential cost savings of 5-10%.
- **System-managed Queue for all Despatches:** For outgoing finished goods, ensuring transparent and fair despatch process across customers.
- **System-generated Real Time SMS/Email Alerts:** To customers and other stakeholders across the complete purchase process.
- **Scalable:** Modular architecture eases adding of components.
- **Solution Components:** Modular components permit scaling up and adjustment of operations to meet load and flow requirements.

## About Amity

Amity Software was founded with a focus to provide technology-driven solutions in line with industry best practices. Pioneers in providing Software & Smart Card technology-based products and solutions, Amity's solutions are tailored to meet the specific requirements and in use across a wide range of industries including Sugar, Steel, Cement, Agriculture, Insurance, Retail, Health, etc.

We are SAP implementation partners for US, India and East Africa. Our expertise and experience are specially geared for the end-to-end execution of projects, from Conceptualization, Design, Solution Architecture, Process Re-engineering, Development, through till Installation, Testing and Commissioning. Our project execution methodology is backed by matured processes and secured work methods, as is evidenced in our CMMI Level 5, ISO 27001 and ISO 20000 certifications.

At the leading edge of System Integration Technologies, our success hinges on our unparalleled domain expertise spanning diverse industry verticals, in each of which we have designed and implemented path-breaking, first-of-their-kind, mission-critical solutions. Amity enjoys a reputation for developing innovative turnkey customized solutions, delivered on time and within budget. Testimony to this lies in close to 100% of our customers, from across user segments, industry verticals and geographies, entrusting us with ongoing and repeat business.

Our management team draws technocrats with experience across a wide cross-section of industries. A customer centric enterprise, the employee comprises of software engineers, R&D engineers, SAP consultants and technology specialists, have helped us deliver to our customers the best cost-performance advantage.

## Our Smart Weighment Clients (Cement and Metal Industry)

- Century Cement (Chhattisgarh)
- Dungsam Cement Corporation (Bhutan)
- Hindalco - Mahan Aluminium (M.P.)
- Kenya Seed Company Limited (Kenya)
- Manikgarh Cement (Maharashtra)
- Century Pulp and Paper (U.K.)
- Grasim Industries - Harihar (Karnataka)
- Hindalco - Muri Works (Jharkhand)
- KR Pulp and Paper (U.P.)
- Neyveli Lignite Corporation (Rajasthan)
- Dangote Cement (Ethiopia)
- Hindalco - Aditya Aluminium Sambalpur (Odisha)
- Hindalco - Renusagar Power Plant (U.P.)
- Maihar Cement (M.P.)



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