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CLOUD**SMART** Labor

INTRODUCTION

The mission of the CLOUD**SMART** development team is to disrupt the existing labor management market with lightweight data collection applications, low entry costs and streamlined data access. This document details the functions, features and capability of the CLOUD**SMART** Labor Tracking application and platform technology stack.

FEATURES

CLOUD**SMART** ships as two parts, CLOUD**SMART** Kiosk and CLOUD**SMART** Management. These two applications work harmoniously to accurately track and manage labor activity. With the unique capability of punch in to punch out, discreet activity time sheets, a holistic view of labor cost and productivity can be easily obtained. CLOUD**SMART** allows you to collect both direct and indirect activities; Direct activity being that which is directly connected to work volume for a customer and indirect being activity that is not, such as cleaning, meetings, and training.

CLOUDSMART Kiosk

The CLOUD**SMART** Kiosk dynamically engages the employee to collect and return only data that is important for the individual's immediate task, streamlining the activity sign on process.

Three basic steps to every activity sign on
1. Employee enters their unique ID
2. Employee chooses an activity
3. Employee chooses a business/client/customer they are doing the activity for

ACTIVITIES

There are a standard set of Activities (Appendix 1.1) and Activity Types (Appendix 1.2) that ship with CLOUD**SMART** Labor. The types range from basic time tracking to capturing measured tasks such as picking, packing and user entered volumes for things like cycle counting and receiving items. All activities are configurable and new ones can be added at any time to adapt and evolve at the speed of your business. The activities pertinent to the employee will be presented for selection navigating them quickly through the sign on process.

BUSINESS/CLIENT/CUSTOMER

Similar to Activities employees will be prompted to select who an activity is being done for, be it a business, client or customer. They choose from a list of recently used values or it is sourced directly from an integration within a measured activity. This simple step creates a data point to generate additional opportunity for categorized insights, performance analysis and reporting. All business/client/customer values are configurable and new ones can be added at any time to adapt and evolve at the speed of your business.

ADDITIONAL BUSINESS LOGIC

There are stand out features built into the kiosk that mitigate the need for a manager or supervisor to intervene when data needs to be captured for an employee that was either missed or wasn't available at the original time of activity sign on. These features reduce management time, establishes high levels of data integrity and champions accurate reporting. There are three key functions as defined below;

1. End Of Day (EOD) handling
  a. Prompts employee to enter a missed EOD punch at next activity sign on
      i. Removes need to manually edit
2. Missing integrated source
  a. Prompts employee to switch tracking modes
      i. Keeps employee on task, while still tracking every moment of their work date
3. User Entered Volumes
  a. Prompts employee to enter volume for previous activity
      i. This captures measurable tasks for non-integrated activities

CLOUDSMART MANAGEMENT

CLOUD**SMART** Management design and purpose is for managing and configuring the CLOUD**SMART** environment. Depending on user authentication and access permissions supervisors, managers and admin users can create, edit and review time sheets, create, edit and manage activities, customers, users and more.

TIMESHEETS

Time sheet management is critical to the data integrity across the platform. This is where managers and supervisors can clean employee data if needed and verify it is accurate for reporting. Simple displays allow for quick review and data editing. A summary of each employee is presented for each work date and supervisor/manager. Individual time sheet records can be added, deleted or updated with simple controls and intuitive application responses. In addition, the ability to create a time sheet completely from scratch is also available, which allows you to insert missed data for historical dates.

MAINTENANCE

Authenticated users with admin access permission can configure Activities, Business, Clients and Customers, Employees, and Users access. Configurable options are defined in the below table;

Function	Add	Edit	Assign
Activities			
Activity	x	x	x
Activity Type			x
Activity Category	x	x	x
Activity Unit of Measure (UOM)	x	x	x
Business/Client/Customer			
Business Detail	x	x	x
Business Type	x	x	
Employees			
Employee Detail	x	x	x
Employee Type	x	x	
Users			
User Detail	x	x	x
Performance			
Reasonable Expectancy	x	x	x

PERFORMANCE

Within the maintenance features there is the ability to set Reasonable Expectancy (RE's) values for each activity. RE's allow supervisor, managers and analyst to better understand the productivity and performance of each activity, business and employee. RE's are set by the configured unit of measure for each activity and combined with each business the activity is used on.

Example;
Client A uses the activity Pick and set a unit of measure of cases, while Client B uses the activity Pick and set a unit of measure of Eaches. These two clients would have significantly differing expectancies and should be treated differently when identifying employee productivity.

REASONABLE EXPECTANCY CREATION

A reasonable expectancy can be created in a few ways. The time commitment involved greatly depends on the complexity of work processes and activities within the business. The below outlines two highly used methods to identifying accurate RE's.

1. Analyzing datasets and reporting (Calculating high, low and avg)
2. Process engineered time study

We recommend using a combination of the fore mentioned methods. Utilizing analysis to identify baselines and using time study to validate. These methods can be further augmented by process improvement efforts before the RE creation process. This way you are establishing expectations on refined process vs those suspected of carrying waste. Once RE's are established, focus should shift to sustaining accuracy. To sustain accurate RE's the process of analysis and time study validation should be done cyclically or when a known process change has been identified. Being diligent about this process and communicating on it regularly will keep data confidence high as well as increased morale as trust is established with the process and the resulting values.

INTEGRATION

Enhance your data analytics by augmenting CLOUD**SMART** with existing systems and applications. In particular for tracking labor integrations for order volume and operational type tasks increases data accuracy and streamlines employee assignment to that activity. In addition to tracking more direct activity it also increases accuracy as it limits the human interaction with the data creating opportunity for error. The CLOUD**SMART** backend is built on the well-known Microsoft SQL Server Database software and integration services. This allows for a wide range of integration, migration, extraction, transformation and data loading process options.

INTEGRATION TASKS

The list of optional integration tasks include but not limited to;
• Dataflow (database to database or file to database)
• Execute Adhoc SQL
• Bulk Insert
• File System task
• FTP Task upload/download
• Web Service / API tasks

Depending on the complexity of the legacy systems and integrations needed, connections can be configured and deployed very rapidly. The knowledge base of the CLOUD**SMART** team accepts the use of raw datasets limiting the need for curating datasets by local IT, fast tracking the integration data flow.

Reporting

Business intelligence, reporting and dashboards can deliver data driven decision making and validated learning across an enterprise. CLOUD**SMART** curates the collected datasets so that it can be portable and easily extracted to a data warehouse or a business intelligence platform. CLOUD**SMART** promotes the use of Microsoft's Power BI, and offers base templates for reporting and dashboards. The level of integration with Power Bi can be as little or as much as desired. It can be used stand alone or can be integrated across an organization.

REPORTING TEMPLATES
• Categories
       o Performance
       o Volume
       o Labor
• Groupings
       o Business/Client/Customer
       o Activity
       o Employee
• Timeframe
       o Today
       o Week
       o Month
       o Quarter

The above templates are only a starting point and can be developed overtime.

DEPLOYMENT
CLOUD**SMART** was designed and built with the ability to be deployed in a variety of ways on minimal resources. On premises and cloud-based deployment are supported, and the choice of either is dependent on the business need and requirements. Each path requires a detailed project plan for execution in which software, hardware, network access, and employee engagement requirements must be defined.

MILESTONES
• Application Configuration
• Training of staff and management
• Onsite and remote support

TIMELINE
Estimated deployment depending on site readiness, estimation is a range of 80 - 120 hours.

ROI
Based on historical data a typical deployment of a Labor management system will return anywhere from 5 –15% overall labor cost. Most experts agree you gain the majority of this by the simple fact that the employee becomes aware they are being tracked. The remainder is by driving standardize metrics and sustaining them over time. Large labor management applications typically come with a burden of high license and integration costs with a list of features that are never or seldom used. In contrast CLOUD**SMART** delivers lean applications keeping costs connected directly to the feature sets that return the highest value.

CONTACT
CLOUD**SMART** was designed and developed by the independent consultants at Technical Innovations Corp. Operating within the Twin Cities metro for 30+ years, supplying infrastructure, networking, hardware, software and data services.

CONSULTING SERVICES

Architecture	Data warehousing	Application development
SQL Server	Business Intelligence	Hardware Integration
Business Analysis	Software Migration	Network & Security

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Appendix

1.1 Activity Types (Default values)

ActivityTypeId	ActivityType
1	Unmeasured
2	Measured
3	User Entry
4	Break
5	EOD

1.2 Activity (Default values)

ActivityId	ActivityDescription
1	Pick
2	Pack
3	Cycle Count
4	Meter
5	Unload
6	Putaway
7	Quality
8	Cleaning
9	Support
10	Maintenance
11	Training
12	Meeting
13	Break
14	Lunch
15	EOD
16	Out