KEY PERFORMANCE INDICATORS: CONSTRUCTION INDUSTRY

RSM

Fin/Ops Metrics

Cash
Day cash on hand / quick ratio
Cash conversion cycle
Time to produce ST cashflow
Gross cash burn rate
% Cash or checks to electronic format

Payroll
Cycle time to process payroll
Payroll disbursements per FTE
% Time records submitted online
% Employees using direct deposit
% Timesheets created w/o an error

Sales
% Sales growth (include by type)
# Sales pipeline velocity
% Lead conversion rate
% Marketing/Sales qualified leads
$ Sales revenue over time

Procurement
Purchase order cycle time
% Supplier/vendor performance rate
# Product lead times by vendor
% Cost savings from procurement
% Supplier diversity
% Product/supplier concentrations

Human Resources
Time to fill a vacant position (days)
Employee turnover rate
$ Total cost per new hire
% Time spent absent from work
% Time on training/development

Collections
Days sales outstanding
Cycle time from invoice to payment
% Uncollectable to AR and revenue
# Current AR ratio
% Error free invoices and receipts

Payment
% Invoices paid on time
% Discounts available taken
# Cycle time to enter invoices
# Cycle time from invoice to payment
# Invoices processed per FTE

Accounting
Working capital ratio
% Gross profit margin
% EBITDA margin
# Operating cash flow ratio
# Labor multiplier
% Budget to actual variance

Information Technology
% Downtime for unplanned outages
# Mean time to repair
% Change success rate
# Security breach/incident frequency
# Response time to user requests
% Application capacity utilization

Marketing
$ Customer acquisition costs
% Net promoter score
# Website traffic (time and bounce)
# Social media engagement
# Brand Awareness and recognition
$ Cost per lead

Establishment

KPI's
Quantifiable measures of performance of objectives over time

SMART Objectives
Specific: Make objectives narrow
Measurable: Define making progress
Achievable: Make sure they are achievable
Relevant: Make sure they align with your values
Time-Bound: Set an end date

Naming Conventions Define the Symbols — % Percentage of — # Rate of — $ Value of

KPI Value Add

Clarity
Establish a clear strategy for success

Improvement
Monitoring progress toward success

Accountability
Hold teams to specific goals

Communication
Provides a common basis for discussion

Focus
Determines what matters

Efficiency
Creates enhanced productivity

Visualizations

Bar chart
Most useful for comparison of groups of data

Line chart
Tracks changes over times

Multi Bar Chart
Two or more comparisons over time

Box Plot
Depict data distribution for various groups

Sparklines
Show trends in a series of values

Waterfall
Show initial value changing over time

Gauge
Shows current status vs target expectation

Objective to KPI

Determine Objective	Increase contracts in pipeline
Define Success	15% increase in opportunities
Determine Timeframe	By Fiscal Year End
Responsible Party	Marketing Director
KPI Determination	Sales Qualified Leads (SQL)
Establish KPI(s)	Gain 10 new SQL's per month

Sources of Data

	Primary		Secondary	
Internal	Employee / Managers	Board of Directors	Corporate Strategy	Operational Reports
External	Vendors / Suppliers	★★☆ Customers	Third Party Providers	Competitor Reports

Categories of KPIs

Strategic
High-level view on Company performance

Operational
Short-time span focus on monthly, daily, hourly objectives

Functional
Specific to a department or function within an organization

Example KPI Detailing

KPI Quality of Closeout

Definition

Measures the time between achieving substantial completion of the project to final punch-list and billing

How to Calculate

Needed data points for the calculation include:
A – Date of Completion B – Date of final billing

Calculation Formula	*Type of KPI*	*Goal?*
(B – A)	#	Lower is better

Target Thresholds

Achieving Goal	*Mediocre*	*Needs to Improve*
< 30 days	30 - 75 days	> 75 days

Data Analysis Journey

Descriptive Summarize / describe basic data features (KPI Tracking) → **Diagnostic** Understand the causation of what happened → **Predictive** Forecast what will happen based on a data model and review → **Prescriptive** Determine the factors to change to reach a specific objective

Construction Metrics

Labor Performance
% Labor margin
% Labor utilization rates
$ Average revenue per hour worked
# Hour's variance (budget to actual)
# Labor productivity
% Overtime usage rates

Job Performance
Project schedule variance
$ Cost performance index
# Change order frequency
$ Planned value remaining
% Labor utilization rates
# Quality of job close-out
# Change order turn around time
% On-time service delivery
$ Backlog per employee

Quality
Time to rectify defects
% Site inspection pass rates
$ Total cost of rework
% Error rates in bid/drawing sets
# Defects per unit of work completed
% Compliance specification rate
% Warranty claim rate

Safety
Total recordable incident rate
Lost time incident rate
Near-miss incidents
Safety training hours per FTE
Number of safety audits/inspections
% PPE compliance rates

Sales / Development
% Deal close ratio
# Backlog remaining (months)
# Average deal size
# Proposals submitted / active
# Time spent per proposal
# Time to close
$ Sales pipeline by type

Equipment Performance
% Equipment utilization rates
$ Transportation costs of equipment
% Percentage of equipment downtime
$ Cost to operate each machine
# Mean time to repair

Financial Performance
$ Work completed but unbilled
$ Average fee per hour
$ Gross margin by type of work
$ Backlog per employee

Macro Economic
Housing starts and permits
$ Median existing/new home price
% 30-year mortgage rates
# Mortgage application rates
# Months of supply of housing
# Total real estate sales
# Months of backlog
$ Average hourly wage rate
$ Spend by construction type
# Job openings
% Unemployment rate
% Average material price growth

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