

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

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
- Internal**
 - Employee / Managers
 - Board of Directors
 - External**
 - Vendors / Suppliers
 - Customers
- ### Secondary
- Internal**
 - Corporate Strategy
 - Operational Reports
 - External**
 - Third Party Providers
 - Competitor Reports

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

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

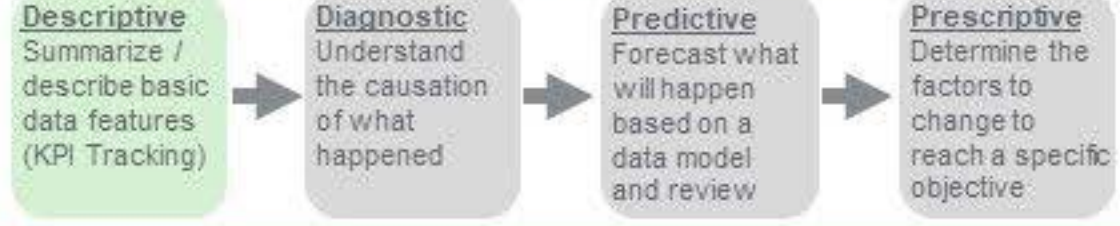
Needed data points for the calculation include:
 A – Date of Completion B – Date of final billing

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



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