



Motion is Money[®]
Construction



Inefficient processes impact work by increasing task times, creating bottlenecks, duplicating efforts and increasing risk of overexertion injuries. They can directly impact project completion timing, material costs and labor needs. CNA's Motion is Money® provides strategies and solutions to enhance your workers' productivity and reduce risk factors. Motion is Money® uses a simple approach to identifying inefficient processes and improving them.



To summarize: Motion is Money® starts with recognizing and observing wasted motions within your operation. The wasted or non-value-added motions are quantified and annualized to highlight the cost to the organization. Solutions are developed based on the elimination of inefficient steps, impacting the work tasks and improving worker productivity.

- Spend 30 to 60 minutes observing your workers walking, bending, reaching and carrying.
- Remember, unnecessary movement affects productivity and efficiency.
- Don't criticize during this time, but learn and then coach.

Common Inefficient Work Steps

- Walking from staged materials
- Climbing steps
- Material/tool handling from the ground
- Lack of prefabrication
- Low emphasis on process flow and pre-planning
- Transportation of materials
- Wait times
- High rework tasks

Observations

Key factors:

When we annualize the amount of time associated with inefficient work steps, it becomes significant and impacts an organization's profitability. Inefficient work steps often involve the following:

- Bending to the floor – 3 seconds
- Walking 50 paces – 30 seconds
- Climbing up/down 8' ladder – 10 seconds

Annualize all measurements:

- Treasure hunting (look for tools and materials)
- Distance walked (to and from tool room, inventory, staging point, warehouse and component bins)
- Frequency of trips
- Reaching into bins
- Carrying parts and sub-assemblies to production lines
- Bending over to the floor or ground, and lifting
- Working overhead, reaching
- Body posture while palletizing and depalletizing

Motion is Money® Impact Analysis

Example:

Inefficient Walking Observation on a Job

WALKING:

Number of work days per year = **250**

Number of minutes walking = **10**

10 labor minutes × **250** work days = **2,500** minutes/60

= **42 labor hours**

Total number of employees performing job = **100**

42 labor hours × **100** employees = **4,200 labor hours per year**

WAGE RATE:

4,200 labor hours × **\$40** wage = **\$168,000** cost of walking

Worksheet:

Inefficient Walking Observation on a Job

WALKING (follow one employee):

Number of work days per year = _____

Number of minutes walking = _____

_____ labor minutes × _____ work days = _____ minutes/60

= _____ **labor hours**

Total number of employees performing job = _____

_____ labor hours × _____ employees = _____ **labor hours per year**

WAGE RATE:

_____ labor hours × \$ _____ wage = \$ _____ **cost of walking**



Key Points to Remember

Motion is Money® focuses on quantifying wasteful activities within work processes and highlighting their financial impact on an organization by annualizing the associated times.

This allows organizations to develop solutions that make work processes safer and more efficient, resulting in decreased fatigue, improved productivity, worker satisfaction and greater skilled labor retention.

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