

**JD GRAY ASSOCIATES
CONTRACT INDUSTRIAL ENGINEERS**

**TEMPORARY INDUSTRIAL STAFFING
FOR
MANUFACTURING COMPANIES OR
DISTRIBUTION CENTERS**

Performance Based Payment System

PROPOSAL

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I. Introduction

I am a contract industrial engineer doing business over 30 years for 50 plus corporations involving approximately 200 productivity projects. I can either analyze an entire factory or distribution center to develop a cost reduction master plan prior to implementation or perform productivity projects within a factory or distribution center.

The factory analysis that I perform is a detailed modernization ROI exercise in the stockroom, fabrication, assembly, w-i-p and finished goods departments and addresses materials handling mechanization & product automation feasibility as well as direct labor control systems. This is an industrial engineering critique of plant wide operations and includes projected staffing based on 5 year sales forecast after my recommendations are installed, plant-wide/departmental/work station layout, equipment specs/RFQ/quotes, semi-automation tooling techniques such as pick & place robotics/precision vibratory grids/auto screw insertion/auto carton form & seal, detailed productivity recommendations, alternative material handling systems & phased modular segments of our recommended system.

My productivity projects are direct labor controls including time study, line balancing, layout, industrial engineered standards and methods, industrial incentives, short-interval-scheduling & labor reporting. My productivity specialization project is in the semi-automation of assembly operations using paced production lines and robotic work cells - I've installed over 100 production lines for over 1000 finished products. I also specialize in stockroom pick and pack systems with companies such as Dormer in Reading, PA whose system I designed and implemented in 1978 involving multiple retrieval carousels and a paced packing system that is still going strong.

Most recently, I've been involved in the creation of a plant-wide gain sharing system for a steel coil manufacturing facility in Massachusetts, an Army Depot tank transmission reassembly line in Alabama and two paced assembly lines for several refrigeration products in a Georgia factory. I also have associates throughout the USA that can assist my efforts depending on the job scope.

That said, I would like to work for you on a contractual basis where you would change your billing of temporary industrial workers from hourly to a Performance Based Payment System then share in the distributor (or manufacturer) savings that I would generate. Say for instance a staffing company pays their temporary workers by the hour at a local distribution company. *The staffing company would ask their client distributor if they would allow a productivity expert into their operation to get a feel of efficiency with a goal of replacing the current hourly method into a lower cost Performance Based Payment System...and to say further, there would be no cost to the distributor for this preliminary analysis/ recommendation and subsequent implementation proposal activity. But should the productivity expert discover potential savings, the client distributor would then be asked if they would allow implementation of a Performance Based Payment System to replace the existing straight hourly system for temporary workers... and if they were willing to (Option 1)*

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pay in full the staffing company's productivity expert's implementation fees, the staffing company would guarantee their client distributor a 10% decrease in what they are now paying the staffing company (or 10% increase in productivity)...but should the staffing company's productivity expert find additional savings, the staffing company would keep the difference or (Option 2) split the staffing company's productivity expert's implementation fees at a percentage to be agreed upon.

II. Sequence of Events

- Upon arrival and after introductions, I would take a plant tour with the plant manager and/or department manager that were requesting improvement. After the tour, I would give a brief presentation to the plant manager and/or department manager regarding solutions to the problem areas observed from an industrial engineering point of view.
- I then would leave the facility and advise the staffing company as to rough savings potential and whether or not it would be worthwhile to proceed. Should staffing company decide not to proceed, project would terminate. Should staffing company decide to continue with the project, I would prepare a preliminary analysis/recommendations proposal that I would email to the plant manager and/or department manager for their electronic record, then return to the facility for presentation.
- Upon the facility management's decision to proceed with the preliminary analysis/recommendation proposal, I would then commence the activity of collecting data regarding the solutions to the problem areas observed, including leveled cycle times of operations related to the problem areas, identification of potential semi-automatic work cells, observation of work stations to determine time loss to balance while noting areas of immediate improvement. Leveled cycle times will reveal potential savings should an industrial engineered standards and methods system be installed.
- Once the data was collected I would leave the facility and prepare an implementation proposal which would include productivity recommendations to change work station methodologies, new standard development through the performance of detailed time studies of the jobs related to the problem areas, work-in-process adherence to standards methods such as short-interval-scheduling and labor reporting, line balancing if required, training devices such as the creation of work station instructions/visual aids/bill of material/tooling, follow-up period defined to ensure adherence to new methodologies and attainment of new standards, consulting activities defined/outlined/costed and compared to potential labor savings and return-on-investment identified. I would then email the implementation proposal to the plant manager and/or department manager for their electronic record then return to the facility for presentation.
- Upon the facility management's decision to proceed and pay for implementation of the recommendations cited above, said recommendations would then be installed by me, or by my associates if I were to move on to a potentially new Performance Based Payment System client.

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III. Proposal Phase - Fixed Cost

- Plant tour/presentation regarding solutions areas observed.
- Preparation/presentation of preliminary analysis/recommendations proposal.
- Data collection activity regarding the solutions to the problem areas observed, including leveled cycle times of operations related to the problem areas, identification of potential semi-automatic work cells, observation of work stations to determine time loss to balance while noting areas of immediate improvement.
- Preparation/presentation of implementation proposal to include development of, and detailed back-up for, the modular phases of standards and methods, short-interval-scheduling, labor reporting, paced assembly, materials handling and product semi-automation.

Consulting Fee, Expenses and Terms for the above - \$25,000 – Five \$5,000 weekly installments commencing with initial payment upon approval and purchase order assignment. Should project terminate after initial week it will be considered paid in full.

IV. Implementation Phase - Variable Cost

- Change workstation methodologies for each product family (different build sequence or unique group of operations).
- Detailed time studies to develop family standards and methods or short-interval-scheduling or labor reporting or paced assembly production line(s) or a materials handling system or a product semi-automation system. The selection of aforementioned improvement area determines the length of time and subsequent cost of the implementation phase.
- Dependent of the modular phase selected the line balance, final equipment specifications, and creation of workstation instructions/visual aids/bills of material/tooling for each product family.
- Follow-up on each product family to ensure adherence to new methodologies and attainment of new standards
- Range of Fees for above - \$25,000 to \$75,000 and would include all on-site expenses - Average \$50,000. Actual Consulting Fees, Expenses and Terms to be cited within Implementation Proposal.

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V. Example – Option 1

The productivity expert develops a new picking system for a distributor where 1000 orders can be picked in one week using 400 man-hours versus the 700 orders previously picked using identical man-hours (1000 orders represents a 30% increase over the previous picking rate). The increased order output is based on savings generated from modular phase implementation of standards and methods, short-interval-scheduling and labor reporting. The client distributor has agreement with staffing company to pay staffing company \$10 per hour for each of 400 weekly man-hours if a total of 800 orders (10% increase in productivity) are picked for the week. Staffing company has agreement with 10 temporary workers to pay them \$6 per hour if each worker picks 100 orders for the week. Distribution company pays \$4,000 to staffing company...Staffing company pays \$2,400 to temporary workers...Staffing company keeps \$1,600 per week.

A. Cost

Proposal Phase – Fixed Fee \$25,000. Implementation Phase – Average Fee \$50,000. Total Cost - \$75,000. \$50,000 paid by client distributor and \$25,000 paid by staffing company.

B. Savings

Existing System - 700 orders using 400 man-hours = .571 man-hour per order X 1000 orders = 571 man-hours. New System 1000 orders using 400 man-hours Weekly Savings – 171 man-hours. Annual Savings – 8,892 man-hours or \$88,920

C. Payback

Factor	Distribution Co	Staffing Co	Total
% of Savings	10%	20%	30%
% of Total Savings	33%	67%	100%
Prorated \$ Savings	\$29,344	\$59,576	\$88,920
Investment	\$50,000 Average	\$25,000 Fixed	\$75,000
1st Year ROI	N/A	\$34,576	\$34,576
2 nd Year ROI	\$20,656	\$59,576	\$88,920
3 RD Year and Extended ROI	\$29,344	\$59,576	\$88,920
Payback in months	20.5 [\$50,000 Ave Cost / \$2,445 Savings per month (\$29,344 / 12)]	5.0 [\$25,000 Fixed Cost / \$4,965 Savings per month (\$59,576 / 12)]	10.1 [\$75,000 Ave Cost / \$7410 Savings per month (\$88,920 / 12)]

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VI. Article

Similar to manufacturing objectives, warehousing and distribution objectives are to minimize cost - Industrial Timestudy Institute



Productivity improvement and cost reduction are the bottom line for warehousing and distribution operations. Generally, expenditures for labor are the largest single cost component of warehousing and distribution.

A critical first step for improving productivity and reducing costs is developing engineered labor standards. Engineered labor standards establish a baseline productivity measurement. They are also used to measure productivity levels in key cost areas such as: order picking, packing, shipping, receiving and put away.

Work measurement, time studies, methods engineering, and standardized work are all tools that can be used to develop work content and labor cost comparisons that help choose the best handling and storage methods.

Productivity analysis/evaluations can determine how employees spend their time and what they spend it on, as well as determine the amount of productive vs. non-productive time.

Engineered Labor Standards Development

Labor Standards are at the heart of any successful labor management environment. Calculation of Work Content and comparisons of labor costs are required when choosing the best methods for work practices.

Standards become key components for all warehousing and distribution areas:

- Labor Scheduling & Budgeting - Accurate labor standards ensure the right labor hours are generated for the operations weekly schedules and labor budgets.
- Performance Reporting - Evaluating warehouse/distribution performance against standards becomes a critical component for identifying opportunities for labor savings.
- Best Practice & ROI Analysis -- The standards developed will allow you to estimate improvement potential for process changes and equipment investments.

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VII. AGREEMENT

A. Proposal Phase - Fixed Cost

- Plant tour/presentation regarding solutions areas observed.
- Preparation/presentation of preliminary analysis/recommendations proposal.
- Data collection activity regarding the solutions to the problem areas observed, including leveled cycle times of operations related to the problem areas, identification of potential semi-automatic work cells, observation of work stations to determine time loss to balance while noting areas of immediate improvement.
- Preparation/presentation of implementation proposal to include development of, and detailed back-up for, the modular phases of standards and methods, short-interval-scheduling, labor reporting, paced assembly, materials handling and product semi-automation.
- Consulting Fee, Expenses and Terms for the above - \$25,000 – Five \$5,000 weekly installments commencing with initial payment upon approval and purchase order assignment. Should project terminate after initial week it will be considered paid in full.
- Quotation Number Q1803

B. JD Gray Associates shall submit detailed service fee invoices to staffing company. Said invoices shall contain a detailed itemization of the date(s) on which services were provided and a description of tasks completed during the period with respect to dates of the invoice submitted. Each compensation payment made by company to JD Gray Associates shall be upon receipt of invoice.

C. Client to supply transportation and driver to/from airport and hotel, hotel and factory, factory and airport.

D. Company Property – JD Gray Associates agrees that any confidential information furnished by staffing company's client to JD Gray Associates or acquired by JD Gray Associates during the period in which JD Gray Associates is retained by staffing company's client shall remain the sole and exclusive property of staffing company's client and shall be placed in the hands of staffing company's client by JD Gray Associates upon termination of this Agreement including any copies made thereof.

E. Confidentiality – JD Gray Associates agrees that at no time, either during or after the period in which staffing company retains JD Gray Associates shall JD Gray Associates utilize or disclose to any third party any of the confidential information of staffing company's client.

Company: _____ Date: _____

Company Official: _____ Purchase Order Number: _____

Company Address _____