WELCOME TO THE WORLD CLASS OPERATIONS WORKSHOP!

We of Competitive Action will strive to make this workshop enjoyable, exciting and educational. The "action approach" to improving competitiveness was developed by Competitive Action, Inc. It is based on the analysis of over 40 operations in the U.S., Singapore, Japan and Mexico that achieved major competitive improvements and over 25 operations that failed to make improvements.

By comparing successful and unsuccessful approaches and by considering the improvement rates achieved by the more successful groups, Competitive Action developed the "action approach" that is the basis of this workshop.

It is a combination of the best of JIT, OPT, TQC, CIM, STS and TEI. However, the approach is primarily based on what has worked in American companies. This involves analysis, problem solving, planning, and direct action.

This approach takes the mystery out of competitiveness.

We of Competitive Action appreciate this opportunity to present the "Competitive Action Model."
"SUKI: THE GAP"

IF YOU KNOW YOUR OPPONENT
AND YOU KNOW YOURSELF,
YOU WILL ALWAYS WIN;

IF YOU DON’T KNOW YOUR
OPPONENT, BUT YOU KNOW YOURSELF,
YOU WILL WIN ONLY HALF THE TIME,

IF YOU KNOW NEITHER YOUR
OPPONENT NOR YOURSELF,
YOU WILL ALWAYS LOSE.

SUN Tzu’S "ART OF WAR"
Operations Unit

Example of Operations Units:

- Product manufacturing organization
- Purchase requisition unit
- Engineering change unit
- Engineering development team
- Accounts receivable unit
- Fast food restaurant
- Dry cleaning establishment
- Auto service center
- Doctor's office
- Reliability test unit
COMPLETE BUSINESS OPERATIONS UNIT

OPERATIONS UNITS

MARKETING - FROM AWARENESS TO PROPOSAL
ENGINEERING - FROM PROPOSAL TO P.O.
SALES - PROPOSAL TO QUOTE TO P.O.
ORDER PROC. - P.O. TO S.O.P.
PURCHASING - P.O. TO P.R. TO RECEIPT TO MFG.
PRODUCTION - S.O.P. TO SHIP
ACCTS. REC. - SHIP TO RECEIPT OF PAYMENT
OPERATIONS AND STRATEGY

All work activity can be divided into two categories; Operations and Strategy

=> OPERATIONS
Operations consists of all activities that are repeated. Included are routines, methods, habits, processes, and procedures. Anytime you can say "That's the way we do it here", you are talking about Operations.

=> STRATEGY
Strategy consists of all activities that either design or change Operations. If change is not taking place, activities are largely Operations.

OPERATIONS UNITS

An Operations Unit consists of all the people, machines, and processes that are active in producing a unit of work for a customer.

=> COMMON OPERATIONS UNITS
Organizations contain many operations units. These units produce purchase orders, designs, billings, accounts receivables, shipping documents, engineering changes, customer services, maintenance, marketing proposals, components, subassemblies, assemblies, systems, software designs, medical diagnoses, fast food, sales letters, and many more.

=> WHO IS IN A TYPICAL OPERATIONS UNIT?
Suppose we name the unit that produces an engineering change, the Engineering Change Unit. This unit would include many people in the processing of a single engineering change. Clerks, managers, mailpersons, accountants, quality persons, manufacturing supervisors, production control supervisors, in addition to the engineers, become involved for brief periods at different times as the change works its way through the change process.

=> THE ROLE OF PEOPLE IN THE OPERATIONS UNIT
An individual in an organization may participate in many different operational units in any single day. Secretaries and managers may be involved in 10 or more different operational units in the course of one hour. In a large organization a large number of people, processes and machines are involved in the requisition, purchase, and delivery of a new part. Similarly, an engineering change, a maintenance action, providing a clinical checkup, or purchasing a home can involve dozens of individuals, procedures, forms, communications and transactions.
MAJOR CATEGORIES OF OPERATIONS UNITS

In larger organizations, operations units can be divided into four or more categories, i.e., Main Operations Units, Spur Operations Units, Service Operations Units, and Control Operations Units.

--> MAIN OPERATIONS UNITS
The main operations units of an organization are those central core units that directly produce the main outputs. In a fast food restaurant, the main operations unit would consist of the order taker, cook, order assembler, order deliverer, and cashier. In a new product development, the main operations unit may include (in rough chronological order), the marketing people required to define the opportunity, the engineers to specify the design, accountants to cost the design, salespersons to close the sale, engineers to design the product or service, toolmakers to build the prototype, etc.

Main Operations Units must be supplied, serviced, and controlled. They are supplied by Spur Operations Units, serviced by Service Operations Units, and controlled by Control Operations Units.

--> SPUR OPERATIONS UNITS
These units supply the human, material, machine, capital, and facility resources to the Main Operations Units.

--> SERVICE OPERATIONS UNITS
Units such as maintenance, cost accounting, scheduling, janitorial, food service, and data processing provide valuable services and information to Main Operations Units.

--> CONTROL OPERATIONS UNITS
These units provide control gates essential to the managing of the Main Operations Units. For example, accounts receivable makes a credit check before an order of a shipment is authorized. Quality control performs an audit of products to be shipped to guarantee conformance to customer requirements. Product Assurance tests and audits the design.
PERFORMANCE MEASURES OF OPERATIONS UNITS

-> SYSTEM CYCLE TIME
Sometimes called throughput time or process time. This
is the calendar time (or real time) from the first step
of the process to the last step of the process. If it takes
an average of two weeks to produce a quote after receipt of
a request for quote then the SCT for the RFQ to Quote
Operations Unit is 2 wks.

SCT consists of time when value is being added (VAT) and
time when no value is being added (NVAT).

-> DEFECT AND ERROR LEVEL
Includes all defects introduced into the operations unit
and all errors produced in the processing of the work in
the operations unit; measured in PPM (parts per million )
or incidences per # of units of work.

-> VALUE ADDED /COST RATIO
The Operations Unit should add whatever value that the
strategy specifies at the least cost possible. Activities
that add no value are called Non-Value Adding-Activities
or NVAA's.
UNDERSTANDING & PEOPLE PARTNERSHIP

SYSTEM CYCLE TIME REDUCTION

LESS DEFECTS & ERRORS

LEADS TO

LESS COST

DEFECTS & ERROR REDUCTION

LEADS TO

LESS COST

LEADS TO

INCREASED CUSTOMER SATISFACTION
HIGHER PROFIT/ROI
INCREASED JOB SECURITY

LEADS TO

LESS COST

LEADS TO

LESS COST
GETTING MORE COMPETITIVE

STAGE 0
DECIDING TO WORK TOGETHER TOWARDS COMMON, MUTUALLY BENEFICIAL OBJECTIVES.

STAGE 1
REDUCING CYCLE TIME, PRIMARILY NON-VALUE ADDED TIME.

STAGE 2
REDUCING TIME TO DETECT, TIME TO CORRECT, TIME TO PREVENT
IMPROVING TECHNOLOGY TO DETECT, TECHNOLOGY TO CORRECT, TECHNOLOGY TO PREVENT

STAGE 3
REDUCING VALUE ADDED COSTS.
ACHIEVING COMPETITIVE ADVANTAGE

MODEL

• MACRO (TOTAL TIME CYCLE) AND MICRO (REAL PROCESS TIME) RANGE.
• FRAMEWORK FOR ORGANIZING AND PRIORITIZING JIT, TQC, AND CIM ACTIVITIES.
• DESIGN NEW OPERATIONS OR REDESIGN EXISTING ONES.
• SIMPLE, ALL CAN UNDERSTAND, RELATE, AND ACT.

METHOD

• PROVIDES A ROADMAP FOR IMPROVEMENT ACTIVITIES.
• A STEP BY STEP METHOD THAT GETS RESULTS IN A TIMELY FASHION.
• MOBILIZES THE WHOLE ORGANIZATION.

MEASUREMENT

• PROVIDES A QUANTITATIVE MEASURE OF COMPETITIVENESS.
• PROGRESS CAN BE VISUALLY CHARTED.
• SETS BENCHMARKS FOR "FIRST IN CLASS" PERFORMANCE.
• DEFINES COMPETITIVENESS IN OPERATIONS.
ESSENCE
of the
COMPETITIVE ACTION
METHOD

Through
REAL TIME ANALYSIS,
teams identify
OBSTACLES
to competitiveness
and make
SURGICAL INTERVENTIONS
to reduce
CYCLE TIME, DEFECTS
and ERRORS, and COST.
NON-VALUE ADDED TIME ANALYSIS

* ACTION

NVAT 1 INCREASE CAPACITY
NVAT 2 REDUCE LOT SIZE
NVAT 3 REDUCE EXCESS INVENTORY
Interstage Analysis

Non-value added Activity

Non-value-added time

in exit stage #1

Non-value-added time

in entry stage #2

Value added Activity

Microcycle #1

Entry point to microcycle #2

Microcycle #2
IMPROVEMENT - STAGE II

PHASE I
REDUCE TIME TO DETECT
REDUCE TIME TO CORRECT
REDUCE TIME TO PREVENT

PHASE II
IMPROVE TECHNOLOGY TO DETECT
IMPROVE TECHNOLOGY TO CORRECT
IMPROVE TECHNOLOGY TO PREVENT
Step 2a

VALUE ADDED TIME ANALYSIS

INCLUDING NON-CONFORMANCE DENSITIES PLOTTED FROM THE POINT OF INTRODUCTION TO THE POINT OF DETECTION

*CUM. NON-CONF.*

START OF PROCESS

INSPECTION POINT

END OF PROCESS

TIME

* ACTION: REDUCE SYSTEM CYCLE TIME
WORLD CLASS DESIGN

MAJOR OBSTACLES

PACING OPERATIONS
WIP
DEFECTS & ERRORS
LINEAR DEPENDENCE
SEQUENCE
LOOPS
VARIANCE
LOT SIZE
SCHEDULING

{ DOWNTIME
STATISTICAL FLUCTUATION
LOADING
YEILDS

NVAA (Non-Value-Added Actitives)
IDENTIFYING ENABLERS THAT REDUCE

STRATEGIC
- VALUE ANALYSIS
- WASTE ANALYSIS (7 WASTES)
- QUALITY AT THE SOURCE ANALYSIS
  - ROOT CAUSE, 5 WHYS
- CREATIVITY TECHNOLOGY

TACTICAL
- WORK DESIGN
- PROBLEM SOLVING
- QUALITY AT THE SOURCE ANALYSIS
- INNOVATION TECHNOLOGY

BENCHMARKS "FIRST IN CLASS"

CYCLE TIME
DEFECTS, ERRORS
COST

TASK NECESSARY?
CAN IT BE
ELIMINATED?
REDUCED?
COMBINED?
SUBSTITUTED?
CORRECTED?
PREVENTED?

ELIMINATE WASTE
LEVEL BALANCED
LEVEL SCHEDULE
SIMPONIZE
SYNCHRONIZATION
PULL VS. PUSH
REDUCE LOT SIZE
PREVENTATIVE MAINTENANCE

CYCLE TIME
ERRORS, DEFECTS
COST
PERFORMANCE TO SCHEDULE
RETURN ON INVESTMENT
COMPETITIVE ACTION INC.-CONSULTING APPROACH

2. Management develops operational strategy.
3. Choose pilot areas for implementation.
   - Weight of impact
   - Scope of control
   - Probability of success
4. Select implementation team.
   Must include:
   - Principle stakeholders
   - Relevant skills and abilities
   - Progressive leadership
5. Competitive Action Inc. does preliminary analysis of selected areas.
6. Competitive Action workshop for implementation teams.
   - 2 days
7. Teamwork and high performance teams workshop for implementation teams plus responsible managers.
   - 1 day
8. Implement Competitive Action Method in selected project area.
9. Go to step 3 and repeat.
STRATEGIC IMPORTANCE OF BUSINESS SYSTEMS RESPONSE TIME

MARKET EXPECTATIONS

MARKET
OPPORTUNITY → SHIP
4 WKS

COMPANY #1: IN TROUBLE

MARKET
OPPORTUNITY → SHIP
6 WKS

CURRENT PERFORMANCE

• EXPEDITING, HOT JOBS FIRST.
• REACTIVE TO COMPETITORS MARKET INITIATIVES.
• CUSTOMER VIEWPOINT, SLOW RESPONDING, POOR ON-TIME DELIVERY PERFORMANCE.
• PROBLEMS, RECOVERY IS DIFFICULT OR IMPOSSIBLE.
STRATEGIC IMPORTANCE OF BUSINESS SYSTEMS RESPONSE TIME

MARKET EXPECTATIONS

MARKET
OPPORTUNITY ➔ SHIP
4 WKS

COMPANY #2: ADEQUATE PERFORMANCE

MARKET
OPPORTUNITY ➔ SHIP
4 WKS

CURRENT PERFORMANCE

• EXPEDITE ON EXCEPTION ONLY, FIFO JOBS SEQUENCE.
• CUSTOMER SEES US AS ON-TIME AND GOOD RESPONSE.
• IF PROBLEMS ARISE, RECOVERY CAN BE MADE THROUGH EXPEDITING.

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STRA TEGIC IMPORTANCE OF BUSINESS SYSTEMS RESPONSE TIME

MARKET EXPECTATIONS

Market Opportunity  ➔ Ship

4 WKS

COMPANY #3: MARKET LEADER

Market Opportunity  ➔ Ship

2 WKS

CURRENT PERFORMANCE

• NO EXPEDITING NEEDED, FIFO, CONTROLLED, ORDERLY FLOW.

• CUSTOMER VIEW YOU AS SUPER RESPONSIVE.

• USES WORLD CLASS SYSTEM CYCLE TIME AS A STRATEGIC WEAPON AGAINST COMPANIES 1 & 2