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NICE, HUH?

Dear Editor:
I wish to inform you that, as a relatively new member of SAVE, I have found your publication VALUE WORLD most interesting and informative. Your format and subject material are very good and I have forwarded a number of articles to persons in top management.

Leo M. Beckerman
Goodyear Aerospace Corporation
Litchfield Park, AZ

PROFESSIONAL DEVELOPMENT AND "BEST PAPER AWARD"

Dear Editor:
There are many of us in the profession who are trying to enhance the value analysis/engineering professional image.

We have found at "Space Systems Operations" that the VE component’s reputation has been enhanced by reducing the amount of flag waving and concentrating on the provision of an effective service. The project people involved in our studies receive justified credit and recognition. I only take credit for training and motivating our people. It is important as you know, to have cost savings audited by the Finance or Program Office so that the value engineer can quote official company records.

What this all adds up to is that we are satisfied at "Space Systems Operations" that there has been an improvement in our professional image as a result of acting as a sort of catalyst.

I would next like to refer to just one of your own excellent contributions. That is your outstanding work as Managing Editor of "Value World". Many of us are of the opinion that this publication has achieved a high professional standard.

Larry Davis
Space Systems Operation
General Electric Company

INVEST -

Dear Editor:
It gives me great pleasure to inform you, that in pursuance of the important role which Value Engineering has begun to play in India, and growing interest in this discipline, the Indian Value Engineering Society (INVEST) has come into being, and to start with already has over 50 members spread all over India.

INVEST has been formed, largely due to the efforts of its founder members, who are professionals dedicated to the furtherance of VE. It also has among its corporate members public organizations of the Government of India.

My colleagues in the Society have elected me to serve as the first National President of this Society. We look forward to developing exchanges in professional experience aimed at advancing the growth in VE and fostering international affiliations.

Should opportunities arise when you have occasion to visit India, it will be a pleasure for INVEST to provide such assistance and co-operation as may be required.

Ashok Kr. Sethi
President, INVEST
New Delhi, India

Diverse Methodology Leading to Criteria Differentiation
Determining Eligibility of Participatory Personnel Submissions in an Employee Suggestion System.

We thought we could use some suggestions.
We thought we had made our needs clear.
We brainstormed, committed and memoed
To set up a new system here.

We wanted Employee Suggestions.
Complaints were too often our due.
We hastened to speed education
On differences found 'tween these two.

Suggestions pose answers to problems.
A problem—just shared—is a complaint.
For if no solution is offered
You can bet, a suggestion, it ain't!

Bonnie Rogers
Editor of Publications
City of Hope National Medical Center
Duarte, CA

It used to be that people needed products to survive; now products need people to survive.

Nicholas Johnson
"WHY MAN CREATES"

Man began discovering and asking questions thousands of years ago. His ideas came from the things he saw. He began playing around with possibility and thought of ways to improve his surroundings.

Man creates to improve his society and live life more comfortably. He creates for admiration, the adventure and money. He creates to pass the time, to meet expectations and to obtain ideas and answers.

Sometimes discouragement comes and there might be a lack of ideas. Often an idea appears when it's least expected. Some ideas require years of work, and some ideas don't work at all.

Man creates by experiment. He creates by transferring and sometimes by accident. Man creates by organization, motivation and imagination. He, also, creates by persistence and imitation. Man even creates to learn to create.

A creation is a thought expressed. Everything in this world is somehow a creation. This composition is a creation. People often judge a creation. They either like it or they throw it out. Ideas can't really be thrown out. They just stay there until someone uses them.

Man can't help, but create. Often it happens because of fear or anguish, even greed. Something is being created every second. This could go on for eternity. Man has a creation fever. Once he has created something he creates something better and this cycle continues. Man lives to create and creates to live.

Ann Howard Parker
Daughter of Mr. & Mrs. Don Parker
Fairfax, VA

"THE WHEEL"

A wheel was formed some fifty-thousand years ago,
When glacial packs slid to and fro,
Across the vast and mighty tundra of the earth,
And man became aware of his own ingenious birth!

The wheel was round, with hub and spoke,
And rim of steel and friction's smoke!
"What is its function?" Man cried in mirth!
"What does it cost? What is its worth?"

The earth crashed onward at a wobbly pace,
Reeled and circled through infinite space!
Came then the sun and the glaciers ebbed,
The reptiles crawled from their deep rock bed!

Man rolled his wheel through the paleozoic age,
But shed no light on history's page!
"What is its function?" Neanderthal asked?
"What does it cost, what is its task?"

And the ages of Man crept slowly on,
Through eons of time to the coming dawn!
But when dawn ascended and Man's thoughts shown,
The function of the wheel to Man was known!

Man came then to his restless age;
Broke out of his tight confining cage!
He mounted a chassis on four of the wheels,
And began to move with zest and zeal!

To enhance the rush from here to there,
And to speed the wheels with restless care,
Freeways were laid on the prairie floor,
From sea—to—sea and shore—to—shore!

The four—wheeled chariots grew in number,
Were brightly colored in yellow and umber,
Others were black or brown or red,
Man used his wiles, but lost his head!

There were bumpers, fenders, engines and seals,
"Til the ribbons of concrete were clogged with wheels!
Confusion reigned and congestion deigned,
To arouse Man's temper to tantrums and pain!

From high up above the "Maker" looked down,
Upon the prairies, highways, villages and town!
Saw the chariots bumper—to—bumper, moving quite slow,
Saw them come to a halt, there was nary a flow.

The wheels then ceased to turn and roll,
Man looked to God with despairing soul!
Made the Sign—of—the—Cross and sighed, "Amen!"
And learned to walk all over again!

Man lost his genius and lost his ken!
It was back to the ice and darkness again!
But you can count on Man's own fever and zeal,
For he'll very well soon rediscover the wheel!

James Chinello
P.O. Box 49434
Los Angeles, CA 90049
EVER BEEN TO A TRADE SHOW AND GOT FLAT FEET WALKING PAST HUNDREDS OF EXHIBITS?

WELL-----SALES CONTACT CENTERS ARE MUCH LIKE TRADE SHOWS IN REVERSE.

YOU, ARE THE FOCUS OF ATTENTION AND THE SHOW MOVES PAST YOU.

THE OPPORTUNITY
Procurements are a large portion of the cost dollar for many manufacturing, service, and construction oriented businesses. This is particularly true if the product being marketed is a material intensive one.

Consequently, procurement costs must receive rigorous and continuing attention for a company to remain competitive in the marketplace.

One technique toward reducing costs is finding new dependable suppliers who will supply the needed products for less. Essentially, better value.

But, finding qualified vendors for either new products being introduced or existing products needing cost help, can be a slow and expensive process; i.e. visiting a prospective vendor's plant, scanning the registers, making calls or conducting happen-stance interviews -- some fruitful, some not.

The Connecticut Department of Commerce has developed a unique program to bring supplier and buyer together in an impressive manner. This concept is called a Sales Contact Center.
WHAT A SALES CONTACT CENTER IS
Sales Contact Centers are, in a very real sense, "supermarkets" for industrial purchasers.

In a single day and in a single place, cost conscious buyers can do some quick and efficient comparison shopping for their purchasing needs.

HOW THEY WORK
Once the purchasing needs of a participating company are determined, the company is invited to spend a day in Connecticut.

With the company’s needs in mind, the Department issues invitations to a Sales Contact Center to scores of Connecticut manufacturers. These firms are hand-picked by the Department for their ability to meet the needs of the purchaser. These are the kinds of highly skilled vendors that might take a major manufacturer months to discover on its own.

Then, at a convenient, centralized location, purchaser and producers are brought together to see if they can do some mutually profitable business.

WHAT THEY DO
For industrial purchasers, Sales Contact Center participation can develop new suppliers, reduce purchasing costs and increase value engineering.

WHAT THEY COST
For the OEM, quite minimal. All a company has to do is put some of its key purchasing personnel in Connecticut for a day and provide them with a display of purchased parts and/or blueprints and engineering specifications. The Connecticut Department of Commerce does the rest under the guidance of trained professionals working in the Department, with first-hand experience in all phases of industrial operations.

Information on Connecticut Sales Contact Centers, can be had by contacting:

DIRECTOR OF TECHNICAL SERVICES
CONNECTICUT DEPARTMENT OF COMMERCE
210 WASHINGTON ST., HARTFORD, CT 06106

(Above photo: George Chmael (right), Connecticut Department of Commerce, Tom King (center), Editor, Value World)
The people of Connecticut are my motivation, states Ella T. Grasso, Governor of the State of Connecticut.

Recently, while on a business trip to Connecticut, Value World Editor Tom King was graciously granted an exclusive interview with the governor. The interview follows.
Interview With Governor Grasso
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RECENTLY AN IMPRESSIVE ARTICLE APPEARED IN BUSINESS WEEK'S APRIL ISSUE, ENTITLED "CONNECTICUT MAKES IT HAPPEN;" EDWARD STOCKTON, COMMISSIONER OF THE COMMERCE DEPARTMENT, MENTIONED THAT YOUR ACTIVE PARTICIPATION WAS A LARGE FACTOR IN SPURRING THE CONNECTICUT ECONOMY. QUESTION: IN WHAT WAY DO YOU PROVIDE THIS ACTIVE PARTICIPATION AND COMMITMENT?

Creating jobs for Connecticut citizens has been — and continues to be — the number one priority of my administration. It is my belief that this commitment has led to a growing number of new companies and jobs coming into our state resulting in a significant improvement in Connecticut’s business climate. During the past three fiscal years, approximately 260 new companies have moved into our state, and 72,000 jobs have been created and retained. This record has helped reduce the 8.4 percent unemployment rate which existed at the beginning of this administration to the current 4.5 percent.

It has been and still is my policy to maintain strict fiscal controls in state government and to operate government responsibly and efficiently to develop the confidence of the business investor. Commerce Commissioner Ed Stockton has always had my full support in his job-creating efforts, and I have met many times with business clients to demonstrate the state’s commitment to economic development.

EVERY DAY THE DOLLAR SEEMS TO BUY LESS AND LESS. THE PRICE OF AN AVERAGE HOME IS NOW SAID TO BE WELL BEYOND THE MEANS OF THE AVERAGE PERSON. PEOPLE ARE LEAVING LARGER TIPS IN RESTAURANTS THAN THE MENU PRICES WERE NOT TOO MANY YEARS AGO. QUESTION: CAN THE ECONOMY SURVIVE IF THIS TREND CONTINUES?

The rate at which inflation is rising is alarming, and our people must come to terms with the problem as quickly as possible. Holding down spending at all levels — particularly in state and federal governments — is one way to combat this problem, and we in Connecticut are attempting to do just that.

VALUE IN LIFE, OBVIOUSLY, IS NOT EXPRESSED IN TERMS OF ECONOMICS ALONE, AND IT IS REFLECTED IN YOUR WARM GREETING TO OUT-OF-STATE VISITORS ON THE OFFICIAL MAP. "PLEASE DRIVE CAREFULLY AS YOU ENJOY OUR STATE AND ITS BEAUTY." QUESTION: ARE WE AS A NATION MAKING HEADWAY TOWARDS IMPROVING THE QUALITY OF LIFE AND DIGNITY OF MAN/WOMAN?

The United States has been built on a tradition of seeking to improve the lot of every citizen. As we in government extend a greater level of services to each and every person, we are reminded that there are still those who cannot enjoy a high quality of life or experience the dignity for which we all strive. To improve the quality of living in our country is a paramount goal, and public servants must fulfill their responsibilities to achieve that goal.

VALUE ANALYSIS AND VALUE ENGINEERING ARE DISCIPLINES WHICH USE A SYSTEMATIC APPROACH TO PROVIDE REQUIRED FUNCTIONS OR SERVICES AT THE LOWEST COST. QUESTION: IS THE VALUE DISCIPLINE USED AT THE STATE LEVEL EITHER IN BUILDINGS, PROCUREMENT, OR RELATED PROGRAMS?

Management techniques which seek to economize but enhance state services are becoming more and more important in determining expenditures in Connecticut. The state is now putting into place the most comprehensive reorganization in its history in an effort to eliminate duplication, provide tighter control of expenses, and improve the state’s ability to deliver important services to its citizens.

DOES THE STATE OF CONNECTICUT HAVE A SUGGESTION SYSTEM OR SOME VEHICLE THROUGH WHICH INDIVIDUAL IDEAS CAN BE EXPRESSED AND CONSIDERED. IF SO, WHAT HAS BEEN THE RESULTS?

Connecticut has an extremely successful suggestion awards program through which state employees can help state government improve its level of services, save money, and enhance the state’s image. The program has awarded state employees nearly $100,000 for ideas that have saved our taxpayers more than $600,000. Each agency actively encourages its employees to submit ideas that will ultimately improve our services for the residents of the state.

CONNECTICUT, ALTHOUGH HAVING LARGE INDUSTRY, SEEMS BEST CHARACTERIZED TO A VISITOR BY ITS QUAIN'T BEAUTY, APPARENT INDIVIDUALISM, CRAFTS AND TRADIES, AND ITS SMALL SHOPS. QUESTION: HOW IS THIS FAVORABLE QUALITY OF LIFE MAINTAINED: BY UNGUIDED INDIVIDUAL STYLE OR BY CAREFUL PLANNING?

The people of Connecticut spend a great deal of time and effort improving their quality of life. A strong Yankee tradition of home rule and untiring determination add to this perspective. Our people carefully nurture a pleasant atmosphere in which to live and work because they have long recognized that it provides a healthy atmosphere to attract new business and institutions. This quality of life has also added to the formation of our strong industrial base.

WHAT IMPACT HAS THE POSSIBILITY OF UNAVAILABLE ENERGY SUPPLIES HAD ON THE LONG RANGE PLAN FOR BUSINESS GROWTH? HAVE YOU COPED WITH THAT POTENTIAL PROBLEM?

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ELLA T. GRASSO
Governor

We in Connecticut have long been concerned with the availability of energy and have worked with other states in the Northeast to convince the federal government of the need for equitable energy policies and new alternatives. I have appointed a Connecticut Solar Energy Alliance to mobilize our resources in the development of alternate sources of energy. Another strong point is the far-sighted utilities of our state who have assisted us in weathering energy shortage problems at a time when other states have had plant shutdowns. Nuclear-generated electricity is plentiful in Connecticut, and it has helped minimize increased energy costs in the state.

WHAT IS THE DERIVATION OF THE NAME - CONNECTICUT - AND HOW IT CAME TO BE KNOWN AS THE PROVISION STATE?

Connecticut comes from the Indian name "Quinnehtuk-qut," which means "Beside the Long Tidal River." This refers to the Connecticut River which runs through the middle of the state. Connecticut has had a lot of nicknames, but the "Provision State" came from Connecticut's ability during the Revolutionary War to arm our Colonial armies and to provide wool, agricultural staples, and industrial products through the colonies.

BUSINESS SEEMS PROACTIVE IN CO-OPERATING WITH GOVERNMENT TO DEVELOP WORK INCENTIVES FAVORABLE TO GROWTH; ONE OF THESE EFFORTS WHICH RECEIVED SOME ACCLAIM WAS THE CONNECTICUT ECONOMIC DEVELOPMENT CORPORATION (CEDC). WHAT EXACTLY IS CEDC?

Connecticut has been most fortunate in having extremely talented leaders of the state's business community join as partners with the state in stimulating economic development. The Connecticut Economic Development Corporation was formed by business and financial executives at my request to assist the State Department of Commerce to attract new business and industry to our state. The Corporation has helped fund our full-time office in Brussels, Belgium, and it was an active participant during our recent reverse investment mission to Japan. This arrangement has been working well, and it is further evidence of the commitment and concern of our state's business community to the economic growth and development of Connecticut.

GOVERNOR GRASSO, IT IS NO SECRET THAT YOU ARE A UNIQUE PERSON WITH VERY SPECIAL GIFTS. CERTAINLY, ALL OF US, ARE TO A LARGE EXTENT PRODUCTS OF OUR BACKGROUND, UPBRINGING AND DREAMS, BUT IN ADDITION TO THAT WAS THERE ANY PARTICULAR STIMULUS, INDIVIDUAL, OR EVENT THAT MOTIVATED YOU SO FORTHRIGHTLY TO MOVE INTO A ROLE OF LEADERSHIP?

The people of Connecticut are my motivation. The men, women and young people of our state are industrious, innovative, determined and sensitive to the needs of their fellow citizens. They take pride in the heritage of civic and community service that is so much a part of the Spirit of Connecticut. To be a part of that heritage and to be given the opportunity to serve in their state government is the highest honor.
MR. ZIG SWIERCZ is Supervisor of Employee Benefits and Compensation at Christie, Brown and Company, Limited, in Toronto Ontario. He is the President of the Golden Horseshoe Chapter of NASS.
Why Do Employees Suggest?

Mr. Swiercz is the Supervisor of Employee Benefits and Compensation at Christie, Brown and Company, Ltd., Toronto, Canada. This material is based on material available in the Key Program, a NASS publication.

One of the great things about a suggestion system is that it is the most tangible vehicle which covers all the motivational "bases" management has available to use in building a strong, productive, well-motivated workforce. Let us look at 12 key reasons that motivate people.

1. The Opportunity to Be Heard

People want to work for an organization where good communication is stressed. Management needs the good ideas of employees to surface ... to be communicated. The opposite of a climate which fosters communication is that of isolation. Isolation is perhaps the cruelest form of punishment. People want to be involved, to be able to participate; they want a piece of the action.

What we need are not satisfied employees ... we need dissatisfied people ... but those who are dissatisfied about the right things! We need people who are "dissatisfied" with:

- Problems — we need problem solvers.
- Under Achievement — we need people who achieve, succeed, and grow through a steady realization of predetermined goals based on personal improvement.
- Negative Thinkers - positive thinking stimulates creativity.
- The "Status Quo" — we need people who challenge everything and come up with a better way, communicated via the suggestion form.
- Rear-View Mirror Thinking — people who only know how it used to be done and why it won't work. We need people of forward-looking insight.
- Rut-Dwellers — those unfortunate people who, as President Theodore Roosevelt put it, "... live in that twilight zone that knows neither victory nor defeat".

We need creative people of vision, courage and curiosity ... people who want to win!

2. Involvement

One of the desired job factors of employees is to "feel in on things". People possess a degree of loyalty to their employer and as a result, want to be informed on what is going on in their organization: its goals and objectives; financial status; direction; and future plans. Some ill-thinking managers really fear giving employees too much information. Actually, the better people are informed, the more committed to the organization they will become. Employees will be more involved and committed to their organization as a result of their developing and presenting suggestions.

3. Participation

Closely allied to involvement, participation has more of an active thrust; it is the second stage of involvement — the action stage. Employees will be more committed to the organization and to meeting their own goals if they have had a hand in developing these goals. Through participating in the management process and submitting operations improving ideas, the employee will be more highly motivated to improve their own performance. Some managers fear employee participation and involvement because they feel a loss of control. A suggestion system makes good sense: it provides an established, controllable plan of action for getting good ideas into operation ... with the added benefit that suggestors feel a real part of the organization's employee "team".

4. Expression of Creative Ability

Everyone possesses an inherent creative "genius" — it's just that some have developed and sharpened their creative skills more than others. People also want the opportunity to express — to demonstrate — their creativity. This is a fundamental human need. Hobbies reflect this need; volunteering for various projects and civic duties, etc., do also. All provide an expression vehicle for the creative instinct: and so does a suggestion system.
Why Do Employees Suggest?
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5. Challenge
The challenge of facing a problem “head on” is yet another reason why suggestors “suggest”. A sense of achievement results when a challenge is met and conquered. People want to contribute, and a challenge provides them the opportunity to do so. More importantly, the suggestion system gives the employee the means to deal with challenge. Challenges make people “stretch”: a suggestion system provides the vehicle to overcome challenges and the ability to provide for — and meet — new “stretching opportunities!” Individual “challenges” can be provided by the suggestor who is able to recognize them and dig them out without help, or by these “challenges” being communicated by the system manager. For example, by pointing out general areas of bottlenecks, problems, etc., we can communicate challenges to tackle.

6. Problem-Solving Capability
This is a key characteristic of all good managers. We are all paid to solve problems of one kind or another: no problems ... no work! By being able to demonstrate an ability to develop solutions to problems, suggestors are making themselves and their decision-making ability more known to management. The result is improved promotion potential.

The band-aid was the result of a suggestion ... whose suggestor became the president of multi-billion dollar corporation.

Successfully solving problems creates a sense of real satisfaction for a “job well done” in the hearts and minds of suggestors. From that standpoint, it is a motivative factor in itself.

7. Appreciation
Employees generally rank “Full Appreciation of Work Done” in the uppermost echelon of desirable job conditions. Suggestors get a sense of appreciation from communication and support generated primarily by supervision and certainly supported by a suggestion system department. Suggestors feel particularly appreciative when top management actively demonstrates its appreciation to the suggestor for doing his or her part. It is up to the Suggestion System Manager to ensure that “full appreciation” is shown to all suggestors.

8. Growth
This element generates suggestion performance, as it is tied in with the achievement of goals and improved promotability. “Deadend” streets are nice to live on . . . they are quiet; safe for the kids, etc.; ... but who wants to work in a position where the future is housed on a dead-end street? People want to progress ... to do a better job tomorrow than today ... and this directly relates to success. Growth comes about through a definite feeling of a sense of expanded contribution ... and an expanded sense of contribution comes about through adopted suggestions.

9. Responsibility
With growth comes increased responsibility. Employees not only want to do a better job at their current position, but want to touch more areas of decision-making opportunities within the organization. Responsibility is a “moral obligation to perform”. More of these “moral obligations” are viewed by employees as greater total involvement in the organization and a higher degree of participation in the decision-making process throughout the mobility to be certain ... but it also occurs as a suggestor’s idea touches more areas in the organization’s operations ... and they see the results of productive labor; a suggestion in operation.

10. (Earned) Recognition
This element is one of the most important reasons why an individual suggests. Any suggestion system which does not specifically provide for ample suggestor recognition is not only “missing the boat” and retarding system success ... it is probably not a suggestion system at all! Again, isolation is the most severe form of punishment. People don’t grow on punishment; they thrive on being recognized for desirable activities or traits. People won’t do what you want them to do simply by telling them a whole series of things not to do. Clearly, the “want to do” is more important than telling them what not to do.

Recognition has to be: (1) earned — otherwise it becomes superficial; and (2) adequate. The most powerful recognition, from a motivation climate standpoint, comes from the “peer group” — equals, co-workers, etc. The second best type of recognition group is superiors. Keep this in mind as you operate the suggestion system. Adequacy of recognition should be in relation to contribution; big contribution — big recognition ... just a little contribution — much less recognition.
The suggestion system is a good vehicle for recognizing that "little person" ... that individual of not much responsibility, not much pay, etc. Recognition through the suggestion system provides an opportunity for even the person at the lowest job level to be king ... or queen!

11. Money
It is a fundamental principle of our society to compensate people according to their contribution to corporate and organizational objectives. A suggestion award (not reward ... a reward or "winnings" denotes an element of chance, or luck) pays people in relation to their extra contribution to the organization. There haven't been, are not now, and probably never will be, any really effective results — producing suggestion systems have a monetary incentive as a basic element. (Trips, prizes, etc., are considered monetary.) An insufficient level of money (salary) will demotivate people. Likewise, employees feel they have been taken advantage of when a monetary payout for suggestions is non-existent or too low. A well run suggestion system must be fair and equitable. More importantly, suggestors must agree that it is! This requires a reasonable payout for good ideas.

12. Achievement
Achievement is a basic building block in a climate of motivation and productivity. Productive people want — and need to — achieve.
Mr. Hunter has been involved full time in Value work for eighteen years and is presently Corporate Manager of Value Analysis for Emerson Electric Co. In this position, he has responsibility for Emerson's multi-plant Value program. Before joining Emerson's Corporate staff he was Senior Value Engineer and Administrator of Cost Improvement for E. L. Wiegand Division, Emerson.

Mr. Hunter was a senior instructor and course coordinator for the Fundamentals of Value Control at the University of Pittsburgh's Graduate School of Business where he received his formal training in mechanical engineering and administration. He is a director and past president of both the St. Louis and Pittsburgh SAVE chapters.

This paper will detail what has proven to be a most efficient approach to the analysis of non-hardware or organizational value problems. No inventions or revelations are used just the innovative recombination of known, and in most cases, published value techniques.

The O.V.A.L. approach is used first to logically establish the objective and sequence of required functions necessary to support the organization. Second, tasks performed by the organization are matched with identified functions highlighting any unmatched tasks not directly supporting organizational objectives.

To use O.V.A.L. requires, only, that the analyst define the objective of the organization and have access to details of its operation. Savings in the 25%-up range are commonplace due, in part, to the increased visibility provided.

The paper assumes the reader's knowledge of basic value analysis and, therefore, will dispense with the traditional definitions of V.A., function, job plan, etc.

The purpose of O.V.A.L. is to assure the cost effectiveness of company activities which support the product. In brief, to deal effectively with all except direct material costs. Previous analytical techniques used in this area were less than a complete success for several reasons . . .

- Organizational size restricted the investigation. Personal interviews or long minute-by-minute diaries were needed.
- The analyst never fully understood the logic or purpose of the organization. He usually worked to refine tasks in existence at the time of the analysis.
- The analyst would probably not have all the skills necessary to suggest alternates for the many tasks in a large organization. Therefore, the tendency to work only in an area of his expertise regardless that it may not be contributing value to the organization.
- Using the O.V.A.L. avoids problems suggested above since it relies on the present organization only to answer certain structured questions. Answers can be cross-checked against job descriptions when any conflict is encountered.

To begin the analysis, an organization is selected and its objective is established. Then the logic diagram is made. Properly constructed it will reveal all the required secondary functions. To illustrate the construction of the logic diagram we will use the supermarket example. Knowing what organization is to be analyzed, we must now determine its objective. How about "sell-product"? - No!, there are any number of Quick Shops and Ma and Pa stores that sell products. The supermarket's objective must indicate that special feature or service that makes its existence possible. However, since sell product clearly is a function of the supermarket, it may be usable in the logic diagram to develop the objective. Using logic (how-why) questioning, what function is determined when we ask, why sell product? There are several . . .

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LOGIC DIAGRAM SUPERMARKET

- Make Money
- Provide Convenience
- Satisfy Customer
- Etc.

Considering that the organization's objective must be that special reason that causes or allows it to exist, we might select (with parameters) "provide convenience". A further test would be to ask, why provide a convenience? This would perhaps yield the very general category "be competitive" and let the analyst know he has probably found that specific objective (sometimes called next higher order function) for which supermarkets are organized, i.e., provide convenience.

Working from this objective the entire logic diagram is completed. (Reference: Fast Diagrams — SAVE proceedings, 1971). Only the "sell-product" function has been fully developed here to illustrate the procedure. Note, also, that when the logic diagram shows that the objective is accomplished by only one basic function plus its attendant second degree functions, the carrier method should be used to complete the analysis. (Reference - carrier method, SAVE proceedings, 1967, P. 93).

The most difficult area of the O.V.A.L. analysis is the preparation of the logic or F.A.S.T. diagram. Unless this is done correctly the remainder of the procedure will have little value. The problem lies in choosing the proper level of function. For example let's say our stockman from the supermarket example makes a display of breakfast food in aisle #3A. We could define this functionally as "provide-access" since he has made the shoppers chore of obtaining the product easier. However, what he may have in mind is to make this particular brand over accessible. To shove it in front of the customer in hopes that he will buy impulsively rather than search for a lower cost equally nourishing type. In that case, could we say the function was to increase sales? Of course, simply increasing sales is meaningless unless profits result - perhaps the function is to increase profits. But, isn't that what everyone in the supermarket does? So the operable function lies somewhere between provide access and increase profits, but where?

Let's return to some basic V.A. theory for the answer. Function is not an end in itself. It's a tool that helps us to seek alternatives. When an operable function is being sought the analyst should always ask himself, "is this function going to allow the right number of alternatives - not too many or too few?" If not, he should discard it for one that will. As a rule of thumb, always use the highest level function that will retain the basic identity of the task.

Function levels can best be defined in terms of the alternatives they suggest. Low level functions allow very few alternatives. High level functions may allow more, so many that in some cases the function itself becomes useless since the analyst could never evaluate all the alternate methods suggested, i.e., the function "support-weight" is useless as an alternative stimulator since everything supports weight. In order to benefit from "support-weight" as a function, some parameters must be attached, such as more than 40#/ less than 100#/ or the function level must be lowered.

Function levels can be lowered by asking the question, how are we "supporting-weight"? The answer must remain abstract. One suggestion would be "applying-tension" as is the case in any cable supported system -window sash cords, elevator cables, etc.

To raise function level use the question, why do we "apply-tension"? Each time a new function is identified the change in the number of alternatives is usually by an order of magnitude. The final test of function level comes in the creative phase. If 25 creative ideas on alternative means to perform the function can be found in not less than 15 minutes or more than 45 minutes the level is correct.

The next step is the completion of the Work Analysis Chart. While developing the logic diagram it was established that "cash checks" was a basic function required to support the objective "provide convenience". Therefore, the Work Analysis Chart (figure 2) lists that function together with the other five basic functions from the logic chart under the heading REQUIRED FUNCTIONS. Names, titles and pay rates of all members of the organization are placed in the appropriate space. It is now the responsibility of the analyst (or V.A. team) to establish what each member of the organization does (tasks) to support the required basic functions. All tasks currently being performed by the organization's members are listed under the person's name performing them and across from the basic function they support. Further help in identifying tasks should also come from the logic diagram. Tasks supporting the basic function should be the actualization of (or doing) the secondary functions. For example, what are the tasks the stockman does to provide the secondary function DISPLAY-PRODUCT? Answer, he arranges the stock on the shelves (3½ hrs./week), maintains shelf inventory (16½ hrs./week), and secures stock-outs for customers (2 hrs./week). A task must be found for all secondary functions shown on the logic diagram.

Tasks being performed by organization members that do not support second degree functions or support functions from some other organization are not to be listed on the Work Analysis Chart.
ANALYSIS OF THE WAC:

When the Work Analysis Chart is complete, all the tasks being performed in support of the logic diagram plus the time or costs involved should be shown. The analysis is then carried out as follows:

1. Search for redundancy. One of the reasons for the use of functional language is to highlight redundant activities. See how many times any one function is being performed. Find ways to combine or reduce that number.

2. Shift responsibility. Try to get another qualified member of the organization to perform required tasks from a lower-wage group.

3. Non-Supportive Time. If each member of the organization is spending all his time to support the functions of the organization, the total time at the bottom of his particular column on the WAC sheet will be or exceed the standard weekly amount. When this is not the case it does not necessarily indicate a goof-off. Effort may be directed at functions that are required to support other organizations. This situation should, however, be questioned and management made aware that personnel in one budget area are in fact, doing work which supports another objective. This could highlight an inter-departmental redundancy.

Speculation would then focus on alternate tasks that would educate the customer. Some examples...

- A tape recording giving details of how the meat is divided to yield the various cuts which could also include price and cooking instructions.
- A meat cutting chart showing details similar to the above.
- Hand-outs with answers to “most often asked questions”.
- Classes for 1 hr./week where the supermarket butcher could give helpful tips on cuts, when to buy and how to cook.
- And so on...

Each of these creative ideas would tend to reduce the time required by the butcher while still providing the needed “educate customer” function. The successful idea, of course, would have to survive normal V.A. evaluation and implementation phases.

5. Are there any needed functions that are not supported by tasks? When the logic diagram indicates a needed function and no member of the organization can be identified as performing a task that supports that function, a problem has been identified. (Care should be taken that an interfacing organization is not performing the task.)

At this point a word of caution. The supermarket example was chosen since most of us can, to some degree, relate to the analysis. The accuracy of the required functions in the logic diagram and the tasks shown in the WAC reflect only the author’s understanding of supermarkets and should not be used to judge the relevance of O.V.A.L.

6. Use “ranking” of required functions. Many ranking techniques are available. The author used numerical evaluation, SAVE proceedings, 1967, P 111. They will allow the analyst to arrange basic functions in descending order of importance relative to the organization’s objective of - “Provide Convenience” and compare their rank with their cost to provide. This can be done (see figure 3) separately by team members (assuming the team approach is being used) and the results combined to show a consensus of group opinion, and whether any team members hold substantial differences of opinion in order of importance. Upon completion of the ranking, the functions are listed in descending order of importance (figure 4) and their cost to provide added. Cost to provide is determined by adding together the incremental-task costs from the WAC. To complete this analysis we can add a “worth” for each function. Much has been written on just how to arrive at worth. Whatever techniques you prefer should be used. I shall say only, worth should be the sum of use and esteem divided by cost value.

Reviewing the tabular data, then, from figure 4 logic would seem to indicate the increase of both cost and worth with importance would be normal. When this is not found to be the case the analyst should seek the reasons.

7. Serendipity - the following are additional benefits from the completed WAC:

Continued from page 16

Continued on page 18
Continued from page 17

- The WAC could be used to verify written job descriptions or suggest addition, rearrangement, or deletion of unneeded tasks.
- Shown to employees, it could act as a communication tool letting them see how the tasks they perform fit together to support others, hence the complete organization.

- Management could use the tasks, in descending order of importance, to base a performance review.
- WAC as the basic document used to justify budget requests.

In this example we have used a hypothetical organization to illustrate O.V.A.L. techniques. This technique is based on numerous actual organizational studies including the analysis of manufacturing and assembly processes. Savings are not unlike traditional V.A. hardware projects. O.V.A.L. is seen as the complete answer to non-hardware V.A. It allows the analysis of procedures, departments, or entire Companies with a new economy of effort not seen or demonstrated heretofore.

RANKING OF FUNCTIONS
FIGURE 3

<table>
<thead>
<tr>
<th>CODE</th>
<th>LETTER</th>
<th>FUNCTION</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B-3</td>
<td>Cash Checks</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>C-3</td>
<td>Resolve Complaints</td>
<td>6</td>
</tr>
<tr>
<td>C</td>
<td>A-1</td>
<td>Sell Product</td>
<td>14</td>
</tr>
<tr>
<td>D</td>
<td>B-2</td>
<td>Pay Utilities</td>
<td>0</td>
</tr>
<tr>
<td>E</td>
<td>B-1</td>
<td>Provide Parking</td>
<td>4</td>
</tr>
<tr>
<td>F</td>
<td>F-3</td>
<td>Provide Economy</td>
<td>12</td>
</tr>
</tbody>
</table>

WORTH VS. COST OF FUNCTIONS PERFORMED
FIGURE 4

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>COST</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sell Product</td>
<td>1,204</td>
<td>900</td>
</tr>
<tr>
<td>Provide Economy</td>
<td>141</td>
<td>135</td>
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<tr>
<td>Resolve Complaints</td>
<td>213</td>
<td>50</td>
</tr>
<tr>
<td>Provide Parking</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Cash Checks</td>
<td>110</td>
<td>5</td>
</tr>
<tr>
<td>Pay Utilities</td>
<td>45</td>
<td>45</td>
</tr>
</tbody>
</table>
IS DATA PROCESSING FOR YOU?

by

K. Dennis Anderson

K. DENNIS ANDERSON is a Senior Industrial Engineer at GTE Sylvania, in St. Mary's, Pennsylvania. Mr. Anderson was educated at Penn State University and is a member of the National Association of Suggestion Systems (NASS), AIIE and the MTM Association.

For several years I had entertained thoughts of computerizing our suggestion reporting system, however, it was one of those projects that lends itself well to procrastination. Initially, undertaking such a project requires considerable thought as to what one ultimately wishes to accomplish. Then, careful planning is necessary to insure that sufficient information is provided to achieve the desired results. Finally, some knowledge of the methods to be employed in attaining these results is essential.

My six years of experience with the suggestion system convinced me that our existing system had become obsolete and that a modern approach was needed to revitalize it. Prior to using the computer to compile and print the reports, the conventional manual methods of writing and typing were utilized for logging, cross filing, tally sheets, and reporting. Up to five separate entries were required for each suggestion received. It was a monumental task requiring hours of writing and typing that could have been better utilized elsewhere.

For example, when a suggestion was received it was first entered into the master log where all pertinent information was recorded. Included in the master log was the suggestion number, suggester's name, date submitted, a brief description of the idea, to whom it was assigned for investigation, and, after the investigation was completed, an entry noting whether or not it had been accepted. Next, usually on a monthly basis, the suggestions received during the month were cross filed by department and by suggester on 3" x 5" cards. Cross filing proved to be very useful for locating duplicate suggestions and maintaining a history of each employee's participation in the program. These cards were a definite asset, but maintaining them was very tedious and laborious.

The next step in processing the suggestion was the investigation procedure. This was normally done by assigning the idea to a department head for evaluation. After assignment, each suggestions progress had to be monitored if the program was to be a viable one. To provide a continuing status or situation update, a tally sheet listing each department head and the suggestions assigned to him proved adequate. However, adding and lining out suggestions when they were assigned or returned continued to be an unpleasant task involving more paperwork. Furthermore, suggestions are seldom at the top of the priority list of those people investigating them. Sometimes a "little" prompting is required to remind them that certain suggestions have been assigned to them for evaluation. A short memo to each department head usually sufficed. But again, memos generated more paperwork and more writing.

The logs, cards, and memos were adequate for administering the system, but what about reporting to management? Morale affects production and the status of suggestions affects morale. Therefore, management must be kept informed of suggestion system matters, especially unprocessed suggestions. To accomplish this, a monthly report was distributed listing the non-processed suggestions and other appropriate information such as the date submitted and to whom it was assigned for evaluation. It was effective, but was also time consuming to update. Suggestions processed during the month had to be lined out and the new submissions typed in. Of course, if one were a neatness fanatic and wished to make a good presentation to manage-
ment, the entire report had to be retyped monthly.

We already had the system. The logs, reports, and memos had proven themselves over the years. It was the monthly writing, typing, cross indexing, and retyping that was hampering the effectiveness of the system by consuming time that could have been better utilized in administration. What it amounted to was that most of the effort was duplication - a sure waste of administrative and secretarial time and skills. Somehow the labor had to be reduced without affecting the quality or quantity of the reporting methods. What was needed was something that was faster than a speeding typist, more powerful than a desk top calculator, and able to leap mountains of paperwork with a single bound! The obvious solution to these superhuman requirements was the computer. By placing all the information relating to each suggestion on a single punched card, the computer could sort, total, categorize, compile, and print the information in any preferred way, shape, or form.

Simple is functional, and that is the best way to describe our system. The entire automated reporting system is based on data cards. One suggestion - one card. From the condensed information contained on a single card, seven different reports are generated.

Since the card punching is often done outside of the originating department, a forms analysis sheet is very useful in preparing the information for keypunching (Figure 1). The format is similar to a data card which ensures that the categorical information remains within the assigned columns. Because a data card as 80 columns, only 80 columns are used on the form. These columns are then divided into ten categories: suggestion number, suggester, clock number, submission date, condensed description, the department or piece of equipment concerned, the investigator's initials, the eventual resolution; and for those accepted, the net savings and award. Code numbers have been assigned to departments and equipment in the interest of keeping the number of category columns to a minimum. Also, the suffix letter 'S' is inserted after the department number if the suggestion pertains to safety. The disposition, savings, and award are punched when the suggestion is closed.

After the information has been printed on the analysis form, it is given to the data processing department for keypunching onto data cards, (Figure 2). The cards are then punched exactly as the information appears on the analysis form - letter for letter, space for space - with this stack of cards becoming the master data deck. A printout of this deck provides the suggestion log (Figure 3). Contained in this report is all the information relevant to the suggestions plus year to date savings and award totals. In addition, the top suggester-for-the-year and awards exceeding $1,000 can be easily identified by scanning the award column.

The second report generated using the same deck of cards is the suggester's history, (Figure 4). This is accomplished by sorting the cards using the employee's clock number and printing all of those suggestions on one report. The savings and awards credited to each employee over the years are totaled. This report is also valuable when an employee requests that an old suggestion be reviewed. Admittedly, the 3" x 5" card system was satisfactory for this, but only five suggestions could be recorded on the card, whereas, twenty-five can be recorded on a page of computer paper. Consequently, search time has been greatly reduced.

Another report generated is suggestions by department, (Figure 5). The plant has been divided into twenty-seven departments, and in some instances, large departments have been subdivided into pieces of equipment. Each department or machine is assigned a code number. The suggestions are then sorted and compiled by number, with a resulting report being printed for each department. This list is very useful for locating duplicate suggestions.

The fourth report is a list of all accepted suggestions, (Figure 6). This report is simply assembled by running the master deck through the sorter which selects all cards having an 'A' punched in the disposition column. Once again, the savings and award columns are totaled, making this report a very useful tool for reporting the savings generated by the suggestion system.

The next report is safety suggestions, (Figure 7). It is processed similar to the accepted suggestion report with the exception that the cards are selected by the letter 'S' in the department suffix column.

The sixth report lists all unprocessed suggestions, (Figure 8). A list of all suggestions that have not been returned by the investigators is provided. This report is assembled by selecting those cards not having an 'A' or 'R' in the disposition column. Since the system is anonymous during the investigation procedure, the suggester's name is not printed. Although this report is primarily for the administrator's use, distributing it monthly to the Plant Manager, Manufacturing Superintendent, and the Personnel Supervisor has been beneficial. As previously stated, unprocessed suggestions adversely affect morale and production. A continuing awareness of the unprocessed suggestion backlog, as provided by this report on a routine basis, successfully keeps the backlog to a minimum level. Assisting even further in this respect is the computer's counting and printing of the total number of suggestions on this report.

The final report is probably the most useful. It is the unprocessed suggestion report by assignment, (Figure 9). Assigning the suggestions to the department heads presumes a fair and proficient evaluation of the idea. However, they do have other responsibilities with production goals, shrinkage, and employee relations which are usually given higher priority. Important as the other priorities are, we as suggestion administrators must not let management lose sight of the suggestion program. That is the purpose of this report - to serve as a reminder and as a checklist for the investigator. The master deck is run through the sorter, and the cards are assembled according to the initials in the investigator column. The computer then prints those suggestions assigned to each investigator on a separate page, and the respective pages can be distributed to the individuals. While the suggester's name is not printed on this report, the date of submission,
### SUGGESTIONS 1977

**DEC 31, 1977**

<table>
<thead>
<tr>
<th>SUGG. NUMBER</th>
<th>EMP. NAME</th>
<th>CLOCK NO.</th>
<th>DATE SUB.</th>
<th>SUGGESTION</th>
<th>DEPT</th>
<th>S</th>
<th>C</th>
<th>INV</th>
<th>D</th>
<th>NET</th>
<th>SAVE</th>
<th>AWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-1</td>
<td>M SCHREI</td>
<td>1217</td>
<td>0104</td>
<td>PACKER STOP BUTTON AT L/U REEL</td>
<td>10</td>
<td>whl</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77-2</td>
<td>M SCHREI</td>
<td>1217</td>
<td>0104</td>
<td>REVISE L/U REEL INSPIR TABLE-#94</td>
<td>10</td>
<td>whl</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77-3</td>
<td>M SCHREI</td>
<td>1217</td>
<td>0104</td>
<td>A SHIELD AT L/U REEL DISC-#94</td>
<td>10</td>
<td>whl</td>
<td>r</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>77-4</td>
<td>M WACHOR</td>
<td>0857</td>
<td>0117</td>
<td>SPRINGLOAD THE PULLDOWN HEIM ROD</td>
<td>3</td>
<td>gek</td>
<td>r</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>77-5</td>
<td>G EHRFNS</td>
<td>0557</td>
<td>0119</td>
<td>AIR STREAM ON ELECTROSTAT CODER</td>
<td>10</td>
<td>whl</td>
<td>r</td>
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<tr>
<td>77-6</td>
<td>P SHEARE</td>
<td>0924</td>
<td>0121</td>
<td>COMPRESS SIDE FLAPS AT DATE CODER</td>
<td>12</td>
<td>whl</td>
<td>a</td>
<td>335</td>
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### INDIVIDUAL SUGGESTIONS 1977

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<th>DATE SUB.</th>
<th>SUGGESTION</th>
<th>DEPT</th>
<th>S</th>
<th>C</th>
<th>INV</th>
<th>D</th>
<th>NET</th>
<th>SAVE</th>
<th>AWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>76-47</td>
<td>R MARSHA</td>
<td>0354</td>
<td>0229</td>
<td>5 POSITION SWITCH INSTEAD OF LT</td>
<td>1</td>
<td>msd</td>
<td>a</td>
<td>675</td>
<td>90</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>76-121</td>
<td>R MARSHA</td>
<td>0354</td>
<td>1001</td>
<td>HOISTING DEVICE ON ROD</td>
<td>60</td>
<td>whl</td>
<td>a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76-132</td>
<td>R MARSHA</td>
<td>0354</td>
<td>0625</td>
<td>FLEX TIPPING SEALER AIR LINES</td>
<td>2</td>
<td>msd</td>
<td>r</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>76-137</td>
<td>R MARSHA</td>
<td>0354</td>
<td>0628</td>
<td>PULL TYPE TERMINAL REEL BRUSHES</td>
<td>10</td>
<td>whl</td>
<td>a</td>
<td>925</td>
<td>90</td>
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### SUGGESTIONS BY DEPARTMENT 1976

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<th>EMP. NAME</th>
<th>CLOCK NO.</th>
<th>DATE SUB.</th>
<th>SUGGESTION</th>
<th>DEPT</th>
<th>S</th>
<th>C</th>
<th>INV</th>
<th>D</th>
<th>NET</th>
<th>SAVE</th>
<th>AWARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>74-87</td>
<td>D SHANNON</td>
<td>0905</td>
<td>0417</td>
<td>LATCH FOR WRAPPER SELECTION GUARD</td>
<td>10</td>
<td>s</td>
<td>kda</td>
<td>a</td>
<td>0</td>
<td>15</td>
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</tr>
<tr>
<td>74-88</td>
<td>D EIKFN</td>
<td>1045</td>
<td>0418</td>
<td>EMERGENCY STOP BUTTON-LITEUP REEL</td>
<td>10</td>
<td>s</td>
<td>kda</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>74-93</td>
<td>G HER7IN</td>
<td>0679</td>
<td>0502</td>
<td>REMOVE MULTIPACKER JIG CORD</td>
<td>10</td>
<td>whl</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>74-101</td>
<td>D HANSON</td>
<td>0471</td>
<td>0523</td>
<td>MOUNT CONTROL BOX TO SWIVEL-RED'N</td>
<td>10</td>
<td>whl</td>
<td>r</td>
<td></td>
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<tr>
<td>74-107</td>
<td>G SLNAN</td>
<td>0265</td>
<td>0621</td>
<td>TIME DELAY STARTERS ON PACKERS</td>
<td>10</td>
<td>s</td>
<td>kda</td>
<td>r</td>
<td></td>
<td></td>
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<tr>
<td>74-119</td>
<td>M NICKLA</td>
<td>0951</td>
<td>0623</td>
<td>ELIM 1 LABEL ON 96 PK</td>
<td>10</td>
<td>whl</td>
<td>a</td>
<td>50</td>
<td>15</td>
<td></td>
<td></td>
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<tr>
<td>74-124</td>
<td>W CHEATL</td>
<td>0914</td>
<td>0830</td>
<td>MICRO SWITCH AT STUFFER GUIDE</td>
<td>10</td>
<td>whl</td>
<td>a</td>
<td>1309</td>
<td>196</td>
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<tr>
<td>74-126</td>
<td>R FRITZ</td>
<td>0765</td>
<td>0905</td>
<td>HINGE THE WRAPPER GUIDE RAIL</td>
<td>10</td>
<td>whl</td>
<td>r</td>
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<td></td>
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<tr>
<td>74-128</td>
<td>F HABFRR</td>
<td>0656</td>
<td>0830</td>
<td>STACKING GUIDES ON AUTO STACKER</td>
<td>10</td>
<td>whl</td>
<td>r</td>
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</tr>
</tbody>
</table>
### Figure 6.
**Accepted Suggestions 1977**

**As of - Dec 31, 1977**

<table>
<thead>
<tr>
<th>Sugg. Number</th>
<th>Emp. Name</th>
<th>Clock No.</th>
<th>Date Sub.</th>
<th>Suggestion</th>
<th>Dept</th>
<th>C Inv D</th>
<th>Net Save</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-A</td>
<td>P. Shepp</td>
<td>0024</td>
<td>0121</td>
<td>Compress Side Flaps at Date Cover</td>
<td>12</td>
<td>WHL A</td>
<td>335</td>
<td>60</td>
</tr>
<tr>
<td>77-14</td>
<td>T. Wilson</td>
<td>0846</td>
<td>0204</td>
<td>Steel Rushing Pivot Wire Cutters</td>
<td>1</td>
<td>NBD A</td>
<td>226</td>
<td>40</td>
</tr>
<tr>
<td>77-17</td>
<td>H. Remick</td>
<td>0213</td>
<td>0207</td>
<td>Attach Nozzle To 100 Ft Fire Hose</td>
<td>80</td>
<td>GFR A</td>
<td>0</td>
<td>35</td>
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<tr>
<td>77-24</td>
<td>C. Angel</td>
<td>0543</td>
<td>0214</td>
<td>Improve Head Check Access</td>
<td>60</td>
<td>XPH A</td>
<td>D</td>
<td>25</td>
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<tr>
<td>77-27</td>
<td>N. Shannah</td>
<td>0095</td>
<td>0216</td>
<td>Move Rotation Rubber - Adj. Cuts</td>
<td>30</td>
<td>GGR A</td>
<td>1487</td>
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### Figure 7.
**Safety Suggestions 1976**

<table>
<thead>
<tr>
<th>Sugg. Number</th>
<th>Emp. Name</th>
<th>Clock No.</th>
<th>Date Sub.</th>
<th>Suggestion</th>
<th>Dept</th>
<th>C Inv D</th>
<th>Net Save</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>76-117</td>
<td>F. Harfrb</td>
<td>0656</td>
<td>0615</td>
<td>A Cup To Collect FF8 LPS-Salvage</td>
<td>90</td>
<td>WHL A</td>
<td>113</td>
<td>25</td>
</tr>
<tr>
<td>76-119</td>
<td>W. Benson</td>
<td>0918</td>
<td>0616</td>
<td>Paint Whse Beams Orange</td>
<td>50</td>
<td>WAS A</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>76-123</td>
<td>E. Levend</td>
<td>0568</td>
<td>0621</td>
<td>Emergency Shut Off FF8 Cover Cutr</td>
<td>90</td>
<td>KPA A</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>76-124</td>
<td>E. Levend</td>
<td>0568</td>
<td>0621</td>
<td>Interlock FF8 Cutter Guard-Drive</td>
<td>90</td>
<td>KPA A</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>76-130</td>
<td>H. Binnan</td>
<td>1249</td>
<td>0624</td>
<td>Inform Opr-Treat'Hot Melt Burns</td>
<td>12</td>
<td>WHL A</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>76-133</td>
<td>T. Hanes</td>
<td>0890</td>
<td>0628</td>
<td>Relocate Bub Bell Down Rail</td>
<td>2</td>
<td>GGR A</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>76-134</td>
<td>T. Hanes</td>
<td>0890</td>
<td>0628</td>
<td>Relocate Base Bell To Exh Machine</td>
<td>3</td>
<td>GGR A</td>
<td>0</td>
<td>25</td>
</tr>
</tbody>
</table>

### Figure 8.
**Unprocessed Suggestion Report**

**Feb 26, 1978**

<table>
<thead>
<tr>
<th>Sugg. Number</th>
<th>Date Sub.</th>
<th>Suggestion</th>
<th>Dept</th>
<th>C Inv D</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-203</td>
<td>1102</td>
<td>Hand Cream For The Mechanics</td>
<td>80</td>
<td>WAS</td>
</tr>
<tr>
<td>77-208</td>
<td>1115</td>
<td>Detector Pulldowns Atop Fin'g Mac</td>
<td>3</td>
<td>MGF</td>
</tr>
<tr>
<td>78-1</td>
<td>0106</td>
<td>Tray For Bases At Repair Machine</td>
<td>8</td>
<td>GGR</td>
</tr>
<tr>
<td>78-4</td>
<td>0111</td>
<td>Relocate Mt Blowout Position</td>
<td>2</td>
<td>GGR</td>
</tr>
<tr>
<td>78-5</td>
<td>0111</td>
<td>Guard At L.U. Reel Lamp Ejection</td>
<td>13</td>
<td>WHL</td>
</tr>
<tr>
<td>79-R</td>
<td>0124</td>
<td>SS Jars For Silver Getter</td>
<td>80</td>
<td>CJS</td>
</tr>
</tbody>
</table>

### Figure 9.
**Unprocessed Suggestion Report By Assignment**

**Feb 28, 1978**

Records indicate that the following suggestions have been assigned to you for investigation and have not been returned or have been accepted and returned but not yet put into effect. Please process them as quickly as possible and return to the suggestion secretary. Remember - the success of the system depends upon your prompt action and accurate completion of the investigation form.

<table>
<thead>
<tr>
<th>Sugg. Number</th>
<th>Date Sub.</th>
<th>Suggestion</th>
<th>Dept</th>
<th>C Inv D</th>
</tr>
</thead>
<tbody>
<tr>
<td>76-29</td>
<td>0326</td>
<td>Lead Box Holder On Automount</td>
<td>1</td>
<td>GEK</td>
</tr>
<tr>
<td>76-99</td>
<td>0527</td>
<td>Increase Lift &amp; Hand Trucks</td>
<td>3</td>
<td>GEK</td>
</tr>
<tr>
<td>76-122</td>
<td>0621</td>
<td>Cover Rework Chute With Formica</td>
<td>7</td>
<td>GEK</td>
</tr>
<tr>
<td>76-184</td>
<td>0903</td>
<td>Water Fountain Near Unit 19</td>
<td>80</td>
<td>GEK</td>
</tr>
<tr>
<td>77-13</td>
<td>0201</td>
<td>Longer Arms-LP Det'n Switch-Bases</td>
<td>2</td>
<td>GEK</td>
</tr>
</tbody>
</table>
description, department code number, safety idea or not, and, the investigator's initials are included. Everything needed to identify the suggestion is provided.

Many benefits have been derived from automating the system, including some that were not initially anticipated.

First — Reduced Costs
Our primary goal was to reduce time. The results exceeded our highest expectations. Recordkeeping and reporting have been reduced by more than one-half. Paper costs and copying time have also been reduced. The computer prints five copies of each report, thereby eliminating the necessity of making photocopies for distribution.

Second — Improved Accuracy
If the information punched on the card is correct, all seven of the reports will be correct. The computer's train of thought is never interrupted, causing it to forget a suggestion or to line out the wrong one.

Third — Improved Efficiency
To run the monthly program requires about fifteen minutes of computer time. In addition, the reports normally can be run within hours of the request or within the same day. This is much better than having to wait an indefinite period for your secretary to find time or for someone from the steno pool to be given the assignment. Also, everyone is assured of getting all reports every month. No month, nor report is missed due to a secretary being too busy, sick, or on vacation. And how about neatness? With the computer doing the printing there is no illegible handwriting, typographical errors, or misspelled words. If it is spelled correctly on the card, it is going to be correct thereafter.

Fourth — Faster Data Retrieval
All information is at one's fingertips. The monumental task of thumbing through files, handwritten notes, and data cards has been eliminated. All reports can be indexed in an 8½" x 11" looseleaf binder, and it is only a matter of flipping the index tab to find the desired information. One binder can contain 1200 suggestions in report form. What better way to carry the information to a meeting!

The programming itself is very unsophisticated. Approximately fifty cards are needed to provide the report and column headings, date, and totals. The number will vary depending upon the programming language.

Alterations to the reports shown here may be desired, depending on individual company requirements or preferences. For example, it might be advantageous to have a column on the unprocessed report showing the age of each suggestion. This should be kept in mind when developing a program. All types of variations are possible, and the report format devised is limited only by one's imagination.

While an automated system, in all probability, will not increase the submission rate, place more suggestions in the acceptable category, or ease the burden of writing rejection letters, it will definitely enhance a suggestion system by providing more accurate, timely, and efficient information.
AN INNOVATIVE APPROACH TO ORGANIZING VALUE ENGINEERING TEAMS

by

Fred C. Schwarz

University of Wisconsin-Extension
INTRODUCTION

The traditional approach to selecting a value engineering task group is to choose people who have been trained in value engineering and then group the team members by various criteria.

One technique is to select members from the same organizational level in order to avoid superior-subordinate dominance. Another method is to select people with background knowledge of the project. A third criteria is to have the functional areas of the organization represented on the team. These may be design, research, production, procurement, cost accounting, etc. Research in the area of creative thinking indicates that an odd number of persons, preferably five maximum, should comprise a team. Value program managers try to get individuals who are considered to be creative on the project team because creativity is important for successful project results.

We do not have much data to identify creativity in people except patent awards, opinions of supervisors, frequent ideas offered to the suggestion system and seat of the pants guessing. In addition, we do not have a method for determining compatibility or conflict resolution between team members.

A NEW TOOL FOR VALUE ENGINEERING TASK ORGANIZATION.

There is an instrument which the value program manager can now use to assist him or her in making the selection and team organization more systematic. It is called a Life Styles Summary Profile. The profile can be taken by the participant in forty minutes and scored by a secretary in thirty minutes. It is the result of ten years of development and application with thousands of people. It is an evaluation system which identifies twelve characteristics of the individual. It is based on many years of research by Rensis Likert and David McClelland. The instrument has been used in employment selection and placement and problem solving team selection and organization and is represented by a circle that can be divided into two quadrants which measure concerns. Figure 1 illustrates the two quadrants.

THE CONCERN FOR SATISFACTION: The upper half of the circle from 10 to 2 represents behavior that is motivated by a concern for satisfaction. As one learns how to effectively meet his need for security (i.e., his innate sense of worth becomes stronger) he is "freed", in a sense to focus more and more of this attention on satisfaction. Satisfaction here means the sense of well-being that comes from doing things for their own sake. The 12 style of behavior (self actualized) is not motivated by a need to protect worth as in the 6 style, nor to gain approval or status as in the 3 and 9 styles. Since a person of this style is not distracted by self-defeating concerns, and because he does things for their own sake, he is effective at what he does, and paradoxically, tends to achieve the security, the approval, and the power that others seek but seldom achieve.

THE CONCERN FOR SECURITY: While all the styles are affected to some extent by a concern for security, the styles represented in the bottom half of the circle, 3 - 9, are significantly affected by high degrees of security needs. At 6, the concern is maximal. In fact, so great is the need for security in this portion of the Field, that the person experiences anxiety, i.e., tension plus the fear that the need for security cannot, or will not be satisfied. This anxiety is manifested by certain types of defensive behavior (e.g. withdrawal) which plays a predominant role in his interpersonal relations. If security (i.e. a prevailing sense of self worth) is the salient issue in a person's relations with others, the interactions with a colleague, subordinate or superior will be an implied risk to his sense of self worth and he will move to avoid that threat as he will with most of life's problems. Consequently, the 6 position is called Avoidance.

Figure 2 represents the profile of an individual who will have a tendency to be effective in a team situation. Note the high profile on achievement, self-actualization and humanistic. Analysis of many thousands of cases indicates that individuals with this type of profile, when grouped in problem task group, will produce consistently more successful solutions than task groups with a profile like that shown in figure 3.

Dr. J. Clayton Lafferty and his staff have conducted thousands of workshops on achievement motivation using consensus decision making, and measuring the synergistic results of teams. The research and practical application of the concept in workshops has resulted in a .85 correlation of successful prediction with the instrument. I have witnessed hundreds of these workshops in which Dr. Lafferty has organized teams of five persons in a competitive workshop based on the Life Styles Summary Profiles of the team members. He then predicted which teams would win in competition on a problem and which would not succeed. The predictions have been spectacular. The problems are simulations of survival in the desert or the arctic following the crash of an aircraft. Another more complex recent exercise which has been used for cost problem solving is a case study of a company which is in financial trouble. It is similar to situations which we find in value engineering. It requires the task teams to analyze the entire company.

The avoidance style as well as the other styles, 3 through 9 tend to be quite self-defeating in that they do not deal with problems directly or constructively. Therefore, they are all essentially undesirable Life Styles.

characteristics taken from the Life Styles Summary Profile developed by Dr. J. Clayton Lafferty of Human Synergistics is included. The characteristics taken from the top half of the profile, namely achievement, self-actualization, humanistic, competence, affiliation and approval were added to the matrix. Figure 2 shows the profile for high performers in problem solving task teams. Figure 3 shows the profile for low performers in problem solving task teams. Individuals with scores above 29 in achievement, above 25 in self-actualization and above 26 in humanistic and with scores close to 27 in affiliative and around 15 in competence with low scores in approval, conventional, dependent, avoidance, oppositional, power and competitive would be ideal task team members.

Since you will have individuals with scores which present a profile similar to figure 3 how will you handle them? Do not place those individuals all on the same team! They will generally not succeed in a team problem solving situation. Distribute them on teams with a predominance of profiles similar to figure 2. If you have a choice, do not use them on a value engineering task team.

The ideal situation would be for the profile to be administered prior to individuals attending the value engineering training teams. Later the profiles would be used to select task teams for problem projects. It will be important to indicate to employees that the test is optional, confidential and will only be used to organize value engineering teams. The scoring and interpretation is self-administering which enhances the confidentiality. A value program manager could learn to use the profile in two hours. Plans have been made to offer a course in 1977 at the University of Wisconsin-Extension Management Institute in the administration and understanding of the application of this instrument.
The value engineering profession has reached the present state of the art by its desire to set high standards, innovate and create. Although our present method of selecting and organizing value engineering task teams has produced great results, the author is offering another technique which should improve the results. Our present approach determines the team composition primarily by homogenous organization level, experience and knowledge mix, and opinion of personality compatibility of the group.

The Life Styles Summary Profile offers a new tool which is more sophisticated than opinion for determining team effectiveness. Although it has not been used in organizing value engineering task teams to date, it has been used in numerous executive development and productivity workshops to predict winning teams on problem situations with .85 accuracy. My challenge to our profession is to learn how to use this tool to scientifically organize more effective value engineering teams.
announcing the

INTERNATIONAL
CONFERENCE OF
WORLD VALUE

May 23-26, 1979
Washington, D.C.

presented by
Society of American Value Engineers

CALL FOR PAPER PROPOSALS

Paper proposals are now being received in the three program categories of Construction, Purchasing and Industry. Proposals for papers are due: September 15, 1978. Proposals for papers shall contain the following information:

ABSTRACT — Approximately 400 word summary of the proposed paper.

DESCRIPTION OF ATTACHMENTS — A list and description of attachments, charts, tables, illustrations and photographs that will accompany the final paper. Also include translation and audio/visual aid requirements.

BIOGRAPHY — A one page biographical synopsis outlining education, experience, professional achievements and present position and title of the author.

PHOTOGRAPH — A glossy black and white photograph showing head and shoulders of the author.

REGISTRATION INFORMATION

Registration fee for the 1979 SAVE conference:

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>International attendees</td>
<td>$175.00</td>
</tr>
<tr>
<td>U.S. SAVE members</td>
<td>$195.00</td>
</tr>
<tr>
<td>U.S. non-members</td>
<td>$235.00</td>
</tr>
</tbody>
</table>

Register early and save $10.00 from each of the above rates. Registration must be received by April 1, 1979, and must be accompanied by payment in full or an approved purchase order to receive the discount. Make checks payable to “SAVE 1979 Conference.”

Registration includes one copy of the conference proceedings, two formal conference luncheons, the banquet, all technical sessions, coffee breaks, and access to the exhibit area.

CANCELLATIONS

Cancellations will be accepted up through May 15, 1979, after which no refunds will be made. However, substitutions may be designated.

HOTEL ACCOMMODATIONS

A block of rooms has been set aside at the conference hotel, The Capital Hilton Hotel, 16th and K Streets, N.W., Washington, DC. Registrants will be mailed a hotel registration card which they can mail to the hotel. If hotel registrations are arranged by telephone, you should identify yourself as a registrant at the SAVE Conference. The hotel telephone is: 202-393-1000.

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For information on exhibiting the 1979 SAVE Conference contact Bob Askew, Defense Logistics Agency, Cameron Station, Alexandria, VA 22314. Tel: 202-274-7751.

The criteria for paper selection will be originality, quality, and relationship of the subject matter to the stated program. Authors of accepted papers will be notified by not later than November 1, 1978. Manuscripts for completed papers are due on February 1, 1979.

Submit proposals for papers to:

SAVE 1979 Committee
P.O. Box 14265
Washington, DC 20044

INFORMATION

Additional information concerning any aspect of the conference can be obtained from the General Chairman:

Donald E. Parker
Director, Value Management
General Services Administration (PCV)
18th and F Streets, N.W.
Washington, D.C. 20405
Tel: 202-566-1011
POSITION WANTED

Suggestion System Administrator with 20 years’ experience seeks position with company desiring to set up a program or update and revitalize an existing program. Will relocate for right opportunity. Please reply to Box B, National Association of Suggestion Systems, 435 North Michigan Avenue, Chicago, Illinois 60611.

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To receive resume contact:

National Association of Suggestion Systems
Box C
435 North Michigan Avenue
Chicago, Illinois 60611
(312) 644-0075

POSITION WANTED

Certified Suggestion System Administrator seeks challenge of setting up new, or revitalizing existing, Suggestion Plan. Six years of experience includes originating and managing suggestion and zero defects programs for multi-plant company. Has authored article published in professional journal, served as a Director of the National Association of Suggestion Systems, and has instructed at the Suggestion System Administrator’s Academy in Evansville, Indiana for the past two years. One and one-half years completed toward LLB degree. Please reply to Box A, National Association of Suggestion Systems, 435 North Michigan Avenue, Chicago, Illinois 60611.