

(00-27)

First Person Story

for submittal to READERS' DIGEST

An experience started in 1947 which was, in two years, to become so frustrating as to stop me with a heart attack and later to give me opportunity for a life of satisfaction.

My boss said, "Larry, it is becoming more and more important to have lower costs. When we must, we always learn how to keep quality and get lower costs -- but results are so slow and hard to get! There must be a better way to do it sooner."

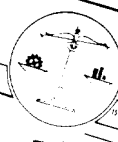
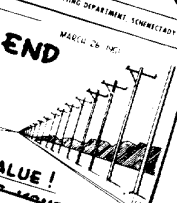
Within a year a different approach showed that there was little relation between actual costs of products and the needed cost. Twenty-five to forty percent of the cost of the products that have been made for years or fifty to seventy-five percent of the cost of newer products such as military gear could be removed or prevented.

My associates and I were at once startled and delighted but the shock was soon to come. People wouldn't use the new system of thought. They found extensive faults where no fault existed. Actions were even taken to prevent the use of the system in some cases.

Amazed, I proceeded to document case after case which proved the effectiveness of the techniques -- but belief was not forthcoming. Almost furiously I seized upon various forms of communication to tell the story -- such as a weekly "Value News" requiring only ten seconds of reading time. Critics said it was wasteful because I didn't "fill all of the space on the sheet". Examples are shown.



**value NEWS**  
ISSUED BY VALUE ANALYSIS DIVISION, PURCHASING DEPARTMENT, SCHENECTADY, N. Y.  
MARCH 26, 1952

**THERE IS NO END TO OPPORTUNITY TO IMPROVE VALUE!**

**value NEWS**  
ISSUED BY VALUE ANALYSIS UNIT, MATERIALS SERVICES DEPARTMENT, SCHENECTADY, NEW YORK  
JANUARY 15, 1953


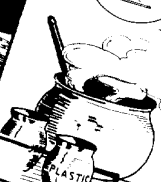
**Yesterday is Gone! BUT YESTERDAY'S IDEAS PERSIST**

**value NEWS**  
ISSUED BY VALUE ANALYSIS DIVISION, PURCHASING DEPARTMENT, SCHENECTADY, N. Y.  
JULY 2, 1952

**FANTASTIC but TRUE**

**CHEMICAL DEPARTMENT NOW MIXES RUBBER & PHENOLIC PLASTIC.**



**value NEWS**  
ISSUED BY VALUE ANALYSIS UNIT, PURCHASING DEPT., SCHENECTADY, N. Y.  
MARCH 24, 1952

**SAVE UNNECESSARY COST BY USING MORE VALUE**




**value NEWS**  
ISSUED BY VALUE ANALYSIS DIVISION, PURCHASING DEPARTMENT  
JUNE

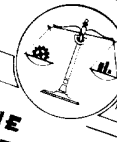

**Same shape, but new make-up!**

**value NEWS**  
ISSUED BY VALUE ANALYSIS DIVISION, PURCHASING DEPARTMENT, SCHENECTADY, N. Y.  
MAY 21, 1951

**THE IMPOSSIBLE AGAIN ACCOMPLISHED DAY AFTER DAY**

**CARBON STEEL EXTRUSIONS NOW AVAILABLE IN HUNDREDS OF FORMS IN PRODUCTION IN FRANCE.**

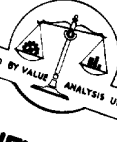

**value NEWS**  
ISSUED BY VALUE ANALYSIS UNIT, PURCHASING AND MATERIALS DEPARTMENT, SCHENECTADY, N. Y.  
JUNE 23, 1952




**value NEWS**  
ISSUED BY VALUE ANALYSIS UNIT, MATERIALS AND PURCHASING DEPT.



**THEY'VE SAWED HER IN HALF AGAIN**

**COST OF MILITARY PACKAGING CUT IN HALF**

**value NEWS**  
ISSUED BY VALUE ANALYSIS UNIT, PURCHASING DEPT., SCHENECTADY, N. Y.  
JUNE 16, 1952

**A NEW ENGINEERING SIMPLIFIES MANY DESIGN COST: ABOUT 27¢/LB**

**value NEWS**  
ISSUED BY VALUE ANALYSIS UNIT, PURCHASING AND MATERIALS DEPARTMENT, SCHENECTADY, N. Y.  
AUGUST 13, 1951

**NOW WE'VE SEEN EVERYTHING!**



**A TAPPED BUSHING... WITHOUT DRILLING! WITHOUT TAPPING!**

**ONE OF OUR SPECIALIST STAMPING SUPPLIERS**

**FIRST** → **THEN** →


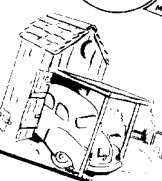
- BLANKS
- BUSHINGS
- COILS

**THE RESULT IS A FUNCTIONAL PART AT A FRACTION OF FORMER COST. SEE YOUR BUYER OR TOOLING SPECIALIST.**

**value NEWS**  
ISSUED BY VALUE ANALYSIS UNIT, MATERIALS & PURCHASING DEPT., SCHENECTADY, N. Y.  
JUNE 16, 1952

**THE HABITS OF OUR FATHERS LIVE WITH US**






**value NEWS**  
ISSUED BY VALUE ANALYSIS UNIT, MATERIALS SERVICES DEPARTMENT, SCHENECTADY, NEW YORK  
JANUARY 12, 1953

**PROFESSIONAL VALUE TECHNIQUES PAY OFF AGAIN**

**Latest Value Analysis On Kettle Body Will Mean Large Annual Savings For Barrie**

**LEFT POLISHING SAME QUALITY PRODUCT**

**TEN TO ONE THERE IS SOMETHING BETTER!**



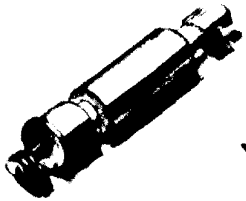
Evidence cards were prepared and provided to all who would take them -- to luncheon meetings, on trains, planes, to cocktail parts -- to show to others.

Examples are shown.

---how Value Specialists are helping  
all of us do our jobs better

Control Shaft

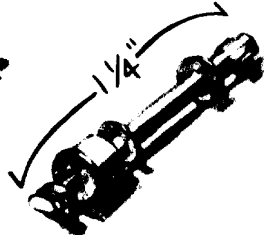
FROM



7¢

Steel Screw Machine  
Shaft

TO



1-1/2¢

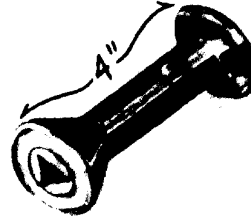
Zinc Miniature Die  
Cast Shaft

SAVINGS -- \$25,000/yr

Value Specialists are helping  
our jobs better

Ball Stud

TO



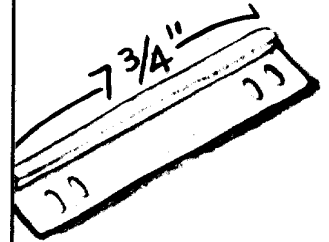
12-1/2¢

Hot headed

\$80,000/yr

Value Specialists are helping  
jobs better

TO



27¢

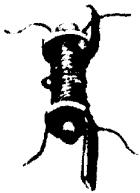
Roll Formed  
Strip Part

\$50,000/year

---how Value Specialists are helping  
all of us do our jobs better

R. F. Transformer

FROM



37¢

TO



17-1/2¢

Design  
Simplified for  
Manufacturing

SAVINGS -- \$39,000/yr

Value Specialists are helping  
our jobs better

Tube Support

TO



1¢

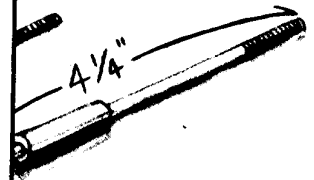
Gun Squirted  
Rubber Gasket

\$46,000/yr.

Value Specialists are helping  
jobs better

Stud

TO



2-1/2¢

Upset and Roll-  
thread Stud plus  
Rolled Spacer

\$52,000/yr.

Worked with specialist supplier utilizing his  
simplified but functional design which elimi-  
nated washers and threading small wires  
through holes.

ts rubber gaskets  
was brought into the  
s process for our use.

"holding something  
ating something"  
functional parts.

Nine out of ten of the comments made about the system remained critical.

My boss and a few others helped much by awarding to me the Charles A. Coffin Award, one of the company's highest awards for extra achievement. Still men would not believe. Derogatory statements continued. Some examples follow:

... "Value Analysis is an organized system for finding fault with existing functional work."

... "Value Analysis is a crutch."

... "Value Analysis is just another name for what we're already doing."

... "No place in the organization for Value Analysis."

... "Value Analysis would hold up our work."

... "The Value Analysis system is 'to do it wrong first, then change it'."

... "Value Analysis is really needed only when work has been neglected."

... "Value Analysis won't work here."

Apparently this was too much for me to absorb. My body reacted with a coronary. After a month in bed, a period of convalescence, return to work first fifteen minutes a day, then gradually back to full service, I believe I have built a life philosophy based upon what had been learned -- the hard way.

Human beings want to learn and to change at their pace. To attempt change faster is as to attempt to shorten the earth's period of rotation, as from twenty-four to twenty-three hours.

I then could understand and believe the statement of Thomas Edison: "It required the average person seven years to accept a different, proved solution to a problem."

... And the experience of Dr. James Esdaile who, in 1840, prior to the development of anesthesia, found hypnosis during surgery a boon to mankind, only to have it ridiculed and its use deferred one hundred years by the medical profession.

... Also the experience of dentist Horace Wells who in 1845 discovered that the use of "laughing gas" drastically reduced the excruciating pain of tooth extraction. In 1846 he engaged the amphitheater of the Massachusetts General Hospital, invited doctors and dentists to its capacity, started to administer gas for an extraction and was driven from the building by a tumultuous and continuous, "Quack, quack, quack." Completely dejected, he committed suicide.

The message was clear: slow down to the "people pace;" develop the technology at that rate. Just make sure that each month shows a little progress.

Two discoveries to me, of a magnitude that I would call startling, were:

- 1 - The enormous yield, not only of lower costs, but of all sorts of benefits if any situation in product design, manufacture, sale or management was brought clearly into view and some circumstances created which forced even short periods of intense thought by creative people.
- 2 - How little is required to stop so many.

For an example of the latter... even a clerk in the library could stop many technical people. I asked an engineer in training to arrange for a reference volume so that I could help him use it for two hours to accomplish a special task. He appeared without it. He said, "We can't take it from the library." Asked who said so, he replied: "The file girl." In order to teach him even the simplest lesson in overcoming obstacles, I said, "Take me to her."

I told her we wanted to use the reference for two hours. She said, "It is against rules to take it out." I asked her to dial her supervisor. She did. I told him of our needs. He said, "Sure thing; just tell the girl where you are taking it."

Similar experiences by the score taught us that our problem was seventy-five percent "people" and only twenty-five percent technical.

Good men were ~~secured~~, trained, ~~then~~ they developed ~~good~~ training. Generally, men with five to twenty-five years of experience in engineering, manufacturing, ~~and~~ purchasing were trained. About twenty percent were enthusiastic and more than doubled their competence. Two percent were antagonistic; one said his "Competence and Effectiveness" had been improved 0.000%. All others varied between these extremes.

At this time Admiral Leggett, famed head of the Bureau of Ships, saw in the future such reduced numbers of ships because of high cost that he investigated industry systems to correct it. When he selected it as the best approach, his action pumped new blood into the veins of the infant technology. ~~Two groups of~~ his men were trained and formed a ~~Value~~ Engineering organization reporting to him. Results were developed by his good men. Great satisfaction came to me as the Secretary of the Navy learned the effectiveness of the system and presented me with the Distinguished Public Service Award.

But -- the Navy, too, is managed by men, so history repeated itself. Criticism, detraction, negative statements came from many personnel, some in the higher responsibility areas.

The long period was in progress which was to have the usual three characteristic phases:

First...the phase of being ignored;

Second...the phase of being resisted;

Third...the phase of being accepted.

Articles were written decrying the new technology as ~~g~~"crutch", "payroll padding", "Sunday afternoon quarterbacking", "Why invent a profession?" A few published partial quotations are:

"...Gimmick to shock engineers...."

"...Approach every decent engineer should use seven days a week..."

"...Bunch of 'smart' boys...."

"...Nothing but another name...."

"...Is commonly known as payroll engineering. Have a new job set up, make it glamorous, indicate enormous saving...set up a new department."

"...Warmed-over hash...."

Meanwhile a few sensitive areas in Europe, scanning the periodic articles in the press perceived its effectiveness. The University of Birmingham got all available literature and added it to their curriculum for engineers. ~~In France,~~  
~~the purchasing publication said:~~



More articles appeared under titles such as, "Worthwhile or Waste?"

Administrations changed in the Bureau of Ships and the work was downgraded. It is almost a parallel to the cycle of life in the plant kingdom in which a seed germinates, flourishes and dies so that a thousand new seeds may be created. The effective work of many dedicated navy men had scattered the seed. The Navy Bureau of Ordnance and the Army Ordnance Corps ~~had scattered~~ solid growing centers of knowledge in the new technology. The monthly growth of understanding and support in these branches of the service was to become a vital factor in the task of securing enough weapons for the nation's defense.

Demand arose for a textbook on the subject. The McGraw-Hill Book Company said, "We are going to have one--either you write it or we must have someone else." On Saturdays and Sundays from 7 a. m. until 3 p. m. for a year it was written, and last year was published.

Now, although we still hear, "It's nothing new;" "It won't work in our business;" "It's just a new name for work we ought to do anyhow;" the score sheet shows significant Army, Navy, and Air Force procurement areas have learned that high cost means an inadequate number of weapons and that the use of the Value Analysis techniques means more weapons. They are including contract clauses which require knowledge of and use of the techniques and which pay a part of the benefit gained to the contractor, for his skills in the use of these new techniques.

The National Purchasing Agents' Association has included Value Analysis leadership in one of its committees.

Permanent "Value Engineering" (as the use of the Value Analysis techniques was called in the Bureau of Ships) committees are in operation in both the Electronic

Industries Association and the American Ordnance Association.

Numerous companies in the American industry and military production areas are using their own internal books and training their people. Some illustrations are shown:

Two groups of my former associates have formed their own companies and are heavily scheduled teaching and consulting dozens of industries as well as several government groups. The textbook is in its second printing and is being translated into some foreign languages.

European industry, hungry for this new approach in England, Germany, Holland, and France, is buying training and consultation.

Special courses in value analysis and engineering techniques are being included in the curriculum of the University of California at Los Angeles, Southern Methodist University, Northeastern University, Boston University, Madison University, University of Michigan, University of Wisconsin, and others.

Magazines such as Purchasing Magazine, American Machinist Magazine, Dunn's Review, and many others now report as indicated by the following:

June 1959, Purchasing Magazine--Paul Farrell, Editor

"Value Analysis as a specialized activity is a new and powerful idea."

October 1962, Dunn's Review

"...quietly revolutionizing conventional cost-cutting methods...."

July 1959, American Machinist--Tom Johnson

"Because the program has been such a huge success...this special report (is written)."

A "Value Engineering Weekly" is now published.

The Society of American Value Engineers is in operation already with 500 members. It has already published its first Journal.

Now the "point of no return" is passed. Too many people have seen too many results and know too much about it.

But the events of man move slowly -- and sometimes on the stepping stones of near tragedy. In American industry and government as a whole, not more than 5% of the potential benefits of Value Analysis techniques have been harnessed. Ninety-five percent of business, technical and professional men do not in actuality know what the techniques are and less than one percent of technical, commercial and management people have sufficient depth of training and experience to use them.

Much more goods to many more people from each measure of nature's material and men's work is now available as fast as the "people" pace can absorb it.