THE PROCESS OF DETERMINING

VALUE TO THE CUSTOMER IN DOLLARS

"Value To The Customer" of General Electric Services
"Value To The Customer" of General Electric Product "Qualities"

So much is said to the customer by so many people of so many competing companies about "value to him", "extra value to him" and "extra values" to him that, as he accepts the water main as the "way of life" for bringing water to him, he accepts such phrases as the "way of life" for bringing his purchases of equipment to him.

Perhaps the words, through over-use and unmeaningful use, have lost their "moving ability" to him and no longer change his beliefs.

We believe that a vast untapped potential is at our fingertips, however, if we will but evaluate those "values" to him in dollars per year.

The word "values" as used with a customer has a meaning close to "functions."

What we are saying is...

> "Our company performs certain functions which are of value to you".
> "Our product performs certain functions which are of value to you."

Implicit also is the meaning that, at least in the long run, "the performance of these functions, by ourselves or our product, for you will increase your financial strength, your net worth, your dollar earnings."

It then becomes a next straight-forward step for us to tell the customer what each of these extra functions performed for him are, how much and when we expect he will benefit in dollars.

As it appears, the evaluation of two types of "values" or functions to the customer would bring most of the benefits:

company services
product "qualities"

VALUE TO THE CUSTOMER IN DOLLARS--SERVICES

Within the last month, through an opportunity to work for a few days with W. A. Sredenschek and his group, some significant progress was made. Although the second area was not excluded--because the first is of high importance in the Utility Sales area, it received first attention.

METHOD OF EVALUATING COMPANY SERVICES IN DOLLARS

The value of a General Electric service to a customer is the lowest cost alternative means by which the customer could achieve the same dollar benefits.

This is seen to have two parts...

1. What dollar benefits accrue to the customer?
2. In the absence of General Electric, how much would he have to pay for these benefits?

The evaluator studies such information as can be secured in answer to questions of this type.

1. What precisely is the function in this "value" which is useful to or desired by the customer?
2. How much has it benefitted the customer in dollars per year?
3. How much would it benefit the customer in dollars per year?
4. How much could it benefit the customer in dollars per year?
5. How much will it benefit the customer in dollars per year?
6. Without it, how much worse off would he now be per year?
7. Without it, how much worse off would he be in the future per year?
8. By what other means could the customer secure these dollars benefits? What would each of these other means cost him per year?

Some of these and similar questions which best bring each type of function into focus are used. Information which is unavailable is filled in by reasonable estimates.

It is worth noting that in no event does the cost to General Electric enter into the "value of the function to the customer in dollars." The evaluator's judgment should not be influenced by it.

Through this process can be developed a list of company services which can, by knowledgeable people in relation to each important customer, be supplied with an amount in dollars benefit to that customer per year.

The benefits will fall into three classes...

Benefits to the product--its efficiency, maintenance, operation, replacement.
Benefits to the customer personnel, procedures, products, organization, efficiency.
Benefits to the customer through services provided to the business environment in which he operates. Load building, etc.

The dollar benefits will vary from negative through zero into relatively high positive figures.

In the Sredenschek Plan, these definite functions to the customer which have positive dollars per year of value to him will be jelled up and will be discussed with the appropriate personnel in the customer company. Some of these valuable functions will be recognized by the executive head, some by men with load building responsibilities, some by engineering with technical responsibilities, some by public relations men with customer's image responsibilities, some by the operating superintendent with maintenance responsibilities, etc. Next, some suitable form of customer communication will be encouraged so that these functions which G. E. performs for various areas of the customer company take appropriate form on the Comparison Sheet which the purchasing agent or buyer uses in decision-making on individual orders.

The importance of this approach is emphasized by the valuable summary of W. R. Knoble of Cleveland dated March 5, 1962, page 3, paragraphs 4 and 5.

VALUE TO THE CUSTOMER IN DOLLARS--QUALITIES (Preliminary)

The customer buys products to accomplish the functions which he believes are important.

He will probably have these items on his comparison sheet and, using some predetermined frame of reference, adjust quoted prices plus or minus to, in his judgment, bring the lowest overall cost for those functions.

General Electric product departments, on the other hand, serving many customers, often include features or "qualities" that are not in a customer's values system.

The purpose of a study of value of "qualities" in dollars to the customer, is to bring those product "qualities" into his values system.

The sole cause for existence of any element, specification, or test, which adds cost, is to provide to the customer some function he needs or wants.

Accordingly, each General Electric product which is offered to the customer should be carefully studied from the following viewpoints.

What is the minimum function-producing unit which probably satisfies the customer's needs?

What is the minimum function-producing unit which probably satisfies the customer's belief of his need?

What is each individual "quality" which the product contains above this minimum?

Classify each "quality"... Is it a "quality" which causes the product to perform a customer task ("use" function), or a "quality" which should bring to him satisfaction and pleasure, which should please the customer ("esteem" function)?

How much in $ per year benefit do we believe accrues to the customer because of each "use" quality, and of each "esteem" quality?

How much does it save for the customer each year?
How much could it save for the customer each year?
How much does it earn for the customer each year?
How much could it earn for the customer each year?

What alternative means does the customer have of getting that $/year benefit--and what would the alternatives cost him?

Which additional "qualities" does this customer want and want to pay for?

Who in the customer organization will recognize the value in dollars to the customer for each individual function or quality?

L. D. Miles/M
4-12-62

FUNCTIONS OF A SUPPLIER
Which have value to a customer

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
I. Oriented to the operation, maintenance, efficiency and improvement of products	1st Rev.	2nd Rev.		
1. Provide a product of appropriate performance and competitive cost	12065			
2. Improve the product and keep it suitable	300		2000	

Permalex insulation system
FORMEX - RECTANGULAR WIRE
40 KN
SEALED OT TANIC
Capacitor Isokraft paper

Production line impulse testing of distribution transformers

Electronic test unit for meters to improve quality and accuracy

Magne-valve LA lower protective levels - improved efficiency

Grain oriented cold rolled steel
Basic patents held by GE

Tank sealing improvements

PYRANOL

Sample testing of meters
one utility saved 600,000/yr
(smaller all utilities could be 70,000,000)

3. Advance the art and develop future products	VALUE OF THE FUNCTION Estimate - Annual $1000's Cost to GE (1) 1st Rev.	2nd Rev.	GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	300	2000		

Pad mounted transformer with INTERNAL HV switch

Vacuum breaker

Air blast breaker

Repcon cable

Gas load break cut out

Hi Bute 60 molded instrument transformers

65° C rise distribution transformer

(1) Improved manufacturing techniques de burning silicone steel shaving copper conductor

Extra high voltage equipment

POLITRAN
ENCAPSULATED TRANSF. (95 BIL)
UNIVERSAL TRANS.

VALUE OF THE FUNCTION

Estimate - Annual $1000's			
Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
1st Rev.	2nd Rev.		
75	200		

4. Provide readily available source of product knowledge
Inform customer about product
Keep customer & self abreast of changes

5 Sales Engineers

2 Sales Managers

Handbooks, Bulletins, Instruction Books

Advertising & technical articles

Distribution Magazine

Presentations at technical meetings

Sample equipments

Display vans
- Tran-Van
- Voltage Van
- Apparatus train

	VALUE OF THE FUNCTION			
	Estimate / - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
4. Provide product Application Engineering assistance	100	1000		
2 Application Engineers				
1 Application Engineer - Manager				
Factory product application engineers				
Stability studies				
Lightning arresters - line dropping evaluation				
Grounding transformer characteristics study				
Grounding reactor study for 220 KV application				
Application of HV capacitors to sub transmission				
Transfer trip relays - carrier application				
Economic design of auxiliary systems				
Analysis of system and generation outages				

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
5. Process customer's orders rapidly - Meet unusual delivery requirements - Provide readily accessible stock	300	200		
Compute directed ordering techniques				
Large and diversified local warehouse stock				
Automatic rapid stock replenishment				
Direct teletype order equipment				
Direct teletype communication with entire GE Co. all locations				
Competent inside men always available				
Leased trucks immediately available				
Expert warehouse personnel				
Greatly shortened manufacturing time cycles				
Examples of recent prompt service				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
6. Provide service facilities Provide prompt maintenance	100	300		
Factory trained service engineers				
Service Shop				
Inspection service for new equipment				
Factory personnel and repair facilities				

	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
7. Handle complaints expeditiously and accept appropriate complaint costs	100		100	
Replace with new distribution transformer all in warranty failures				
I&SE personnel on 24-hour call				
Negotiate out of warranty complaints				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
8. Prevent unnecessary obsolescense of customer's equipment	40		200	
25-year data retention				
Maintain spare parts for estimated life DT 25 years				
Economical modernization programs for older equipment				

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
9. Develop knowledge of customer's facilities Know customer's needs Transmit to product departments, customer's needs	50		250	
Pad mounted transformer with HV switch				
Re-design capacitor equipment to meet unique California requirements				
Lightnig arrester - ground disconnect				
Re-design recording instrument inking system				
Extra high voltage program				
Preferred KVA series distribution transformers				

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
10. Provide climate for idea exchange	25		50	
EHV Project consultants				
Switchgear design committee				
Utility conference technique				
Electric utility executive meetings				
Support industry meetings				
Factory personnel visits for idea exchange				
Transformer design seminar				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Costs GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to customer
	1st Rev.	2nd Rev.		
11. Provide broad product performance responsibility	10		50	
Switchgear - Relays				
Distribution transformer circuit breaker				
Relay - Fuse - C/B coordination				

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
12. Provide product economic alternatives	10		400	
No-tap transformers - capacitor equal tapped transformer				
Oil C/B vs. air blast				
Bids on attractive economic alternates				
Modified distribution transformers vs. subway				
Repcon vs. direct buried vs. cable in conduit				
Primary vs. secondary capacitors				
Metering - 8 terminal vs. 5 terminal polyphase V-3 V-62				
Induction vs. step regulators				
Forced cooling vs. self cooling transformers				
Reduced BIL transformers with better lightning arresters				

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
13. Promote suitable product standards	25		1500	
Universal register for WHM				
Insulation levels				
Noise levels				

NOTE:

Analyze: How much has it benefited customer
How much would it benefit customer
How much could it benefit customer

Without - how much worse off

II. Oriented to the customer's organization. Improved operation, efficiency, well-being and profitability.	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
1. Generate economic system improvements Develop future plans for customer's benefit	200		1000	
Distribution system study of C. Brown to utilize no-tap transformers and capacitors				
Integration of Hydro & Steam				
System relaying				
Computer control systems				
Application of lightning arresters				
Load-Loss study				
Distribution system computer study				
Automatic meter readings and billing evaluation				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
2. Assist customer in devloping and using more economic systems, procedures and management techniques	Cost to GE (1) 1st Rev.	Cost to GE (1) 2nd Rev.	GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	300		250	

Maginnis Loss Formula Program

Value Analysis

Management consultation
Messrs. Cordiner, Smiddy, Boulware

EHV Study for Edison by Phil Light

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
3. Identify for him sources of specialized knowledge Provide responsible and readily available guidance on scientific matters	100		100	

Research Laboratory Personnel

Guy Suits
Pierre Abetti
Vince Schaeffer

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
4. Provide text books on subjects important to the customer	25			

Economic System Operation
Kerchmayer - 2 books

Relaying - Mason

System stability - Edith Clark
2 books

Electric Utility Systems and
Practices - Bob Treat

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
5. Help integrate customer's people promote harmonious relations Provide customer personnel training	75		40	

Electric Utility Systems & Practices Course - Started 1955 - 158 Edison Personnel

Operating Dept.	1
Comm. Div.	4
Dist. Div	21
Hydro Gen.	11
Steam Gen.	19
Subst. Div.	18
System Oper. Div.	21
Trans. Div.	7
Engr. Dept.	36
Org. & Proc.	2
Apparatus Div.	4
Planning Div.	5
Law Dept.	1
Valuation Dept.	1
Purch. Dept.	1
Commer. Dept.	4
Power Supply	1
1961	23
Shop & Test	1
	158

Nuclear Power Course
1960 Executive Seminar - Davenport

Meter Course

Technical Seminar - Chadwick Henderson & Gould

Relay Seminar - Phoenix
Cort Lowerison - Bill Schlinger - Dec. 1959

District Computer Concepts Course

5. (continued)

Distribution Data Book

EHV Participation - Fred Klumb

Sample Testing Seminars
Frank Redding
A. D. Irion

Electric Utility Executives Conference

POWER SYSTEMS ENGINEERING COURSE

J. H. Drake	1950
C. E. Stine	1955
D. W. Hodges	1958
E. C. Clark	1959
E. L. Keller	1961

DISTRIBUTION SYSTEM PLANNING CONFERENCE

H. E. Jung	April 1955
P. M. McCann	May 1956
J. Lummis	Sept. 1957
M. R. Mosquini	Oct. 1958
E. H. Clark	May 1959
J. E. Conner	Oct. 1959

ROTECTIVE RELAYING CONFERENCE

C. Lewerison	1955
F. V. Gillum	1958

5. (continued)

DIGITAL COMPUTER COURSE

H. Wood	**Sept. 1956**
A. Klopenstein	**Sept. 1961**

Out door lighting
Institute

Sampling meter testing
Techniques Seminar -

8000 hour token meter
course -

Demand metering school

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
6. Cooperate with customer personnel in development of technical papers and literature	25		5	

Lightning arrester paper

Tapless transformer AIEE

Why not more?

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
7. Make facilities available to inform customer on new techniques	15		250	

EHV

Factory visits

J. H. Vivian
J. Conner
E. H. Clark

Test Laboratory standards improvements

E. R. Peterson - Somersworth

Data Handling

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
8. Provide national industry information.	25		10	

NEAR system - J. Smith, J. Conner

Application Engineer visits

Marty Gangel, Regulators-Capacitors

Van Wormer, Distribution System

Lou Kennedy, Computer Control

Phil Light, Generation Systems

Norm Schultz, Economic system design

Sandy McClure, Energy Sources

Prominent authorities on many subjects

as speakers at AIEE and ASME Meetings.

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
9. Assist customer increase revenue				
Assist customer in developing more new loads				
Provide tools to help sell customer's product	20		200	

RMDO - Work with Utility Sales Contractors - Rossmoor Project

Street Lighting Promotion

Films
More Power to America Series
Clean Waters

Provide publications

Develop new utilization products

Heat pump

Hair dryer

Toaster oven

Tooth brush

Can opener

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd		
10. Promote suitable industry and system standardization	100		250	
Participate in industry committee work				
NEMA				
ASA				
AIEE				
EEI				
ASME				
PCEA				
65° C Distribution transformer				
Secondary voltages				
Primary voltages - Edison 16340 standard				
Preferred KVA series				
Oppose capacitor standard				
Oppose pad mounted transformer				

III. Oriented to the environment functions which improve it - keep it healthy and beneficial to the customer's business	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
1. Promote customer	10			
Advertising good customer practices				
Encourage GE personnel to support Edison				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
2. Stimulate new business for the customer	125			
Provide tools to help sell customer's products				
Sell lamps - better lighting				
LIVE BETTER ELECTRICALLY				
Residential Market Development OPeration				
More Power to America				
Television program advertising				
Medallion Home Program				
Private lighting program Residential lighting program				
Major Appliances				
Promote Air conditioning load				

	VALUE OF THE FUNCTION Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
3. Support the customer's industry Help increase its stature	125			
Advertising space and television				
Regulatory body information **Sample testing for meters in California**				
Support technical societies				
Local AIEE Activities				
AIEE CHAIRMEN - 1934-35 1956-57				
1961-62		**1960-61**		**1959-60**
Officers & Executive Committee				
Moody **Kimball** **Kashmar (TEMPO, Santa Barbara)**				**Moody**
Management Division				
Turpen				**Scaife**
Professional Activities Committee				
Kimball **Moody**		**Moody**		
Student Relations				
Carson **Fletcher** **Main**		**Carson**		**Carson**

3. (continued)

Power Division		
Gorzegno	Gorzegno	Gorzegno Turpen
Arrangements Committee		
	Nix	Gorzegno
Membership		
Nix	Morton	Geidt Morton
Program		
Dorey Turpen	Kimball Dorey Reed	Kimball
Publicity		
Barry		Barry Graven
Reception & Attendance		
McAllister	Savage	Reed Spafford

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
4. Promote better legislation	25			
Encourage personnel to be active politically				
Practical Politics Course				
Anti-Communism School				
Economic fundamentals				
Take stand on important issues				
Right to work				
L. Boulware - Labor Legislation				
Encourage personnel to write representatives				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
5. Provide community leadership and support civic betterment projects.			20	
Junior Achievement - GE man President				
Jury Duty pay				
Encourage employees to serve community				
School Boards				
Council members				
Company contributions to				
AID				
RED CROSS				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
6. Take risks necessary to preserve free enterprise system	125			
Atomic Power - Dresden plant				
Vallecitos Laboratory				
EHV project				
Space Communication System proposal				
Command Computer for the President				
Resistance to consent decree				

Private instead of public utility
St Lawrence Economy

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
7. Help to promote free enterprise system		20		
Junior Achievement				
HOBSO				
Speech Bureau				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
8. Support advanced technical education		50		
Alumni Matching Fund				
Educational Grant Program				
Graduate Study Support Program (Employee)				
Provide laboratory equipment at reduced prices				

	VALUE OF THE FUNCTION			
	Estimate - Annual $1000's			
	Cost to GE (1)		GE Est. Value to Customer (2)	Probable Cust. Est. of Value to Customer
	1st Rev.	2nd Rev.		
9. Promote interests of young people in science			10	
High School Science Bulletin				
Comic book program				
Scientific booklets				
Educational consturction kits				
House of Magic Show				
High School student counselling				