SOCIETY OF AMERICAN VALUE ENGINEERS



THE HISTORY OF THE FIRST FIVE YEARS OF THE SOCIETY

AND

THE DEVELOPMENT OF THE TECHNIQUE

HISTORIANS

Thru 1962

H. K. Davidson, Management Services Supervisor
Northrop Corporation
Hawthorne, California

1963-1964

J. H. Matthews, Sr. Project Engineer
Vickers Incorporated
Division of Sperry Rand
Detroit, Michigan

ORIGIN AND DEVELOPMENT OF THE VALUE ANALYSIS TECHNIQUE Value Analysis is Born

In 1947, Larry Miles, a General Electric Purchasing Agent, was assigned by Harry Erlicher-Vice President of Purchases-to develop a system which would significantly improve the results of the company's cost reduction efforts.

Mr. Erlicher and his associates recalled that wartime shortages had forced substitutions which often reduced cost without reducing usefulness. They concluded that a well organized study of alternate materials and processes would produce cost improvements that were presently being overlooked.

Mr. Miles had a degree in Electrical Engineering, a degree in Education, and had spent several years as a Design Engineer for G. E. prior to entering the Purchasing field. His strong desire to improve the company's economic position, his imaginative approach to procurement problems, plus his wealth of ideas had resulted in many improved purchasing techniques. It was acknowledged that improvements produced important savings for G. E. every year. Obviously, Larry Miles was a logical choice to make a study of methods for producing better cost improvement.

The study was begun, and two conclusions were soon apparent:

- Conventional approaches stifled the imagination by restricting one's thinking to existing objects and designs, and
- 2. Concentrating on functional requirements permitted greater mental freedom.

Further experimentation proved that thinking in terms of requirements rather than objects stimulated the imagination so that numerous methods of performing functions were visualized. The theories were tested on existing products, and the cost improvements were far better than anticipated. The long-sought, high-yield cost reduction technique had been created.

Management recognized both the enormous potential of Mr. Miles' creation, and the need for appropriate identification. Various terms were considered. The term VALUE ANALYSIS seemed most fitting, since reducing product costs without impairing quality or function represented increased value, and developing suitable alternates involved detailed analysis. Mr. Miles and his assistants evaluated numerous methods of analyzing and measuring value, and of providing necessary action to assure value on a company-wide scale.

Those proving least cumbersome and most productive were integrated into an organized method for identifying and removing unnecessary costs.

From this modest beginning Value Analysis was developed, and given appropriate status within its parent company. Mr. Miles is highly respected as the creator of a field of specialization that brought The Society of American Value Engineers into existence.

Growing Pains

Many road blocks were encountered--to some the spectacular results of Value Analysis appeared as exaggerated claims, others feared that its encroachment on their areas of responsibility would upset the operations of their departments.

To remove these roadblocks, a training program was planned for key personnel to give them an understanding of the various aspects of Value Analysis. In preparation for this program, the techniques, job plan, etc., were refined, through repeated testing and experimenting on products, into a systematic and highly effective method.

The first formal training for 60 General Electric employees began in October, 1952, and lasted four weeks. It included a demonstration lecture, with challenging illustrations of Value Analysis accomplishments, and a "VALUE ANALYSIS INSTRUCTION SERIES" including project workshops by teams, which set the pattern for present training. After returning to their regular jobs, many put the technique to work, providing a substantially-increased yield from all cost reduction efforts.

Value Analysis Expands its Boundaries

The reputation of Value Analysis at General Electric created interest in other companies. The G. E. staff helped to establish its value programs, thus the methodology gained a foothold in other industries.

In 1949, AMERICAN MACHINIST published the first major article on Value Analysis. In 1950 PURCHASING initated the subject into purchasing circles, and interest began to expand as more journals followed with articles.

The methodology spread quite slowly until 1954, when the U. S. Navy Bureau of Ships adopted the concept under the management of Rear Admiral Leggett, Chief of the Bureau of Ships, and his assistant Real Admiral R. S. Mandlekorn. They followed the General Electric Value Analysis pattern and called upon their staff for training. However, believing it inappropriate to copy the G. E. terminology, they coined the name Value Engineering since the Bureau of Ships' primary function was engineering.

For his work, Mr. Miles was awarded the Navy's highest civilian honor - the Distinguished Public Service Award. He was also given General Electric's highest award for outstanding personal achievement.

In 1955, the Watervliet Arsenal called upon Mr. Miles for assistance in starting a Value Analysis Program.

In September, 1958, Brig. Gen. F. J. McMorrow, Chief, Industrial Division, Office Chief of Ordnance, recommended that each commander establish a Value Analysis program. In 1959, an Ordnance Corps Technical Instruction was issued. By that time Value Analysis was gaining recognition in major industries throughout the country, and the program was also established in the following additional Government activities: Air Force, Army Signal Corps, Bureau of Weapons, Coast Guard, Maritime Administration and the Military Sea Transportation Service.

FORMATION OF THE SOCIETY OF AMERICAN VALUE ENGINEERS

The Need for National Recognition

During the early development of Value Analysis at General Electric, Mr. Bernard (Barney) W. Eades had known and watched the originators struggle for expansion within their parent company. As he became more aware of the technology, he realized that the big problem was recognition - the discipline needed identity and status. Eades gave it much thought, but could find no solution until 1957 when he became actively involved with the Stromberg-Carlson Value Program, and the Bureau of Ships.

He found Mr. Alexander Sikorsky to be a strong supporter of his views, and together they began to plan for a national organization. Eades talked with literally hundreds of people, all of whom thought the idea was excellent, but it was months before he found supporters willing to organize and promote such a society.

At Sikorsky's suggestion, Capt. Henry E. Bernstein (USN Ret.) and Lt. Col. M. N. Abramovitch (USAF) were enlisted to gain the support of E. I. A. (Electronics Industries Association). However, it was about a year later before they were successful, and Capt. Christian H. Engleman (USN Ret.) and Morgan D. Roderick of the Bureau of Ships joined forces and actively supported the movement.

Slow Acceptance

In spite of vigorous efforts to enlarge the membership, apathy and little more than passing interest was expressed by eligible candidates. A few felt that Eades was trying to create an organization for his own personal benefit. It seemed that the society was doomed to die before it was born, and on numerous occasions Eades would have abandoned it except for Roderick's continuous encouragement.

Success is Imminent

Following this period of frustration and discouragement, a few heartening signs began to appear. In an effort to organize the society and start it moving, Eades called a meeting in Engleman's Washington office on March 17, 1959. Messrs. Eades, Engleman and his staff of J. H. Adams, accountant; E. Hogan, attorney; and Mrs. M. P. Lyman, recording secretary, were present. The Society was becoming a reality at last.

The following pro-tem officers were appointed to remain in office until there were 25 members in the organization:

Barney Eades Christian Engleman J. H. Adams E. Hogan

- President Pro TemVice President Pro Tem
 - Treasurer Pro Tem - Secretary Pro Tem

A constitution and by-laws would then be created.

Symbol of Identity

Eades had early recognized the need for a name which would characterize the Society's purpose.

After much study, the name THE SOCIETY OF AMERICAN VALUE ENGINEERS emerged. It was a natural choice since the initials S. A. V. E. symbolized the money-saving purpose of the society. At the first meeting the group adopted S. A. V. E. as the official trademark of the Society, the two fine vertical lines through the S. representing dollars saved. To protect its name and the trade mark, usage was necessary; therefore, a letterhead was provided for correspondence with prospective members.

S. A. V. E. is Launched

The next day - March 18, 1959 - Eades formally announced to the Electronics Industries Association (E.I.A.) Value Engineering Sub-Committee (which had been in existence since June, 1958) that S. A. V. E. was a reality, and that incorporation proceedings had been initiated. The E. I. A. - V. E. Sub-Committee, under the chairmanship of Rear Adm. R. E. Mandelkorn, had recognized that without strong support, the society might never develop. Members of the V. E. Sub-Committee

were encouraged to support the budding society, and a campaign for charter memberships was launched. E.I.A. continued to promote the Value Engineering cause by presenting three oneday orientation seminars between 1959 and 1962.

Further recognition was given to the Society by the Value Analysis and Standardization Committee (VASCO) of the purchasing Agents' Association. They recognized the benefits of the society and urged their members to participate in S.A.V.E. activities.

On October 22, 1959, the Certificate of Incorporation was formally signed by Capt. C. L. Engleman and his legal staff, Robert C. Peden and Clair L. Stout.

On March 1, 1960, the By-Laws of the Society came into effect, and with them interest in the Society increased. On March 22, 1960, a group of value engineers met in New York City to discuss the steps necessary to implement the new organization further. It was decided that a small committee, consisting of Messrs. Eades, Ambramovitch, Kryzmowski, Roderick, and Schaefer, would propse a slate of prominent and interested men to serve as an Advisory Council to guide S.A.V.E. through its first year of operation.

Following the March 1, 1960 meeting Charter Membership Cards were issued to:

- 1. C. L. Engleman Engleman & Co. Inc.
- Robert C. Peden Engleman & Co. Inc.
- 3. Clair L. Stout
 Dow, Lohnes and Albertson
- 4. B. W. Eades Stromberg- Carlson
- 5. Morgan D. Roderick BuShips-V. E.
- 6. Adm. R. S. Mandelkorn Harris Transducer Co.
- 7. E. D. Heller Convair, General Dynamics Corp.

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8. F. S. Sherwin
Raytheon Company

- 9. L. D. Miles
 General Electric Company
- 10. W. D. Froyland Gibbs and Cox
- 11. J. N. Gifford New York Naval Shipyard
- 12. C. T. G. Murphy New York Naval Shipyard
- 13. L. J. Marcon Philco Corp.
- 14. Lt. Col. M. N. Abramovitch U. S. Navy Dept.
- 15. M. N. Schaefer U. S. Army
- 16. E. J. Breiding I. B. M.
- 17. Walter Kryzmowski The Martin Company
- 18. Frank Lee U. S. Navy
- 20. Raymond J. Spenard Watervliet Arsenal

GROWTH OF THE SOCIETY

The First Board of Directors

On August 10, 1960 a letter from the acting secretary M. D. Roderick, to the charter members of S.A.V.E. (49 members at that time) gave a status report on the society and proposed a slate of directors for the 1960-1961 period. C. L. Engleman, W. D. Legget, H. L. Lowers, R. S. Mandelkorn and L. D. Miles were unanimously elected.

On December 5, 1960 the New Board of Directors met with the temporary officers-Eades, Engleman and Roderick. The main business of this meeting was the election of Society Officers to replace the temporary officers as follows:

President - Mr. L. D. Miles

Vice Presidents - Mr. Fred Sherwin - Northeast

Mr. Al Sikorsky - East

Mr. Bernard Eades- Middle Continent

Mr. Anthony Tocco- West Coast

Secretary - Mr. Morgan Roderick

Assistant - Mr. Howard Leslie

Treasurer - Capt. E. Engleman

Assistant - Mr. J. H. Adams

Value Engineering Weekly Supports S.A.V.E.

Ed O'Connell, editor of Value Engineering Weekly, proved to be another staunch supporter of S.A.V.E.

"Until communication between Value Engineers is set up on an organized basis by means of professional society, I believe Value Engineering will remain without status. ... As far as VALUE ENGINEERING WEEKLY is concerned, we stand ready to provide such a society free office space adjacent to our offices in Washington, to give publicity to its program, to publish its notices, papers, etc."

VALUE ENGINEERING WEEKLY has continued to serve as a house organ and newspaper. O'Connell's provocative editorials have stimulated the organization into taking positive action to further the Value movement, and the paper has served as a buffer for differing viewpoints of many readers and contributors.

First Annual Meeting of S.A.V.E.

The first annual meeting was held on March 2,1961 at the Sheraton-Carlton Hotel in Washington, D. C. with an official attendance of 26 persons. Discussions were held regarding the suitability of the present name of S.A.V.E. industry sponsorship, the Certificate of Incorporation and the Rules and By-Laws. Presentations were made by commander J. A. Baker of U. S. Navy Bureau of Ships describing their efforts to co-ordinate Quality, Reliability, Standardization and Value Engineering in Industry; and Mr. G. E. Martin on the Martin Company approach to Value Engineering.

In view of the recent election it was agreed that the present directors and officers continue for the forthcoming year (to March 2, 1962.)

Slow Progress

On October 19, 1961 a meeting was called by the president, Mr. L. D. Miles, to review reports of committee chairmen and regional vice-presidents. It was recommended that 1) the Rules and By-Laws Committee review the Constitution and By-Laws, 2) consideration be given to changing the name of the Society to include a broader scope of membership than only engineers per se, and 3) a quarterly journal be sent to each member.

On October 23, 1961, President Miles sent a letter to all members giving complete details of the Society's structure, scope and aims. A second letter to members, dated December 29, 1961, showed marked progress in all activities. The Membership Committee reported that the membership had increased from 140 in October 1961 to 200 in December 1961.

The Second Annual Meeting

On March 6 and 7 1962 the Second Annual Meeting of S.A.V.E. convened at the Marriott Motor Hotel in Washington D. C. It attracted approximately 80 members from various geographical locations. Elected as Board of Directors were:

Charles W. Doyle, Jr. George W. Gebhardt Edward O. Greeson Marvin Kaplan Morgan D. Roderick

Horace R. Lowers
R. Adm. R. S. Mandelkorn
(USN Ret)
Lawrence D. Miles

The Board then, elected the following as officers:

E. D. Heller.....Secretary W. R. Feichtinger.....Treasurer

D. E. Redmon..... Assistant Treasurer

Fred Sherwin continued to serve as Vice President of the Northeast Area.

Constitutional Convolutions

As the Society grew, numerous suggested revisions to the Constitution and By-Laws were received by the Board. During 1962, the Rules and By-Laws Committee, with E. T. O'Connell as chairman, submitted a revised Constitution to the Board of Directors. With the Board's approval, it was submitted to the membership and approved. However, many comments were received indicating that further revision was necessary. A committee, with E. O. Greeson as chairman, recommended further constitutional revisions, which were approved by the Board of Directors, and submitted to the membership in April, 1964.

The proposed revisions were rejected by the membership, leaving the previous objections unresolved. The Society By-Laws were also being revised, but could not be finalized until the Constitutional changes were completed. At this point the Board reviewed previous recommendations by the Constitution and By-Laws committees. They directed the committee to rewrite the Constitution and By-Laws completely with a target completion of early 1965.

Expanding Horizons Through Journalism

As the practice of Value Engineering continued to spread, the need to circulate the increasing number of lectures, papers, chapter announcements, etc., became more acute. To meet this need, the Board of Directors authorized the "S.A.V.E. Journal of Value Engineering" as the official publication of the Society. The Journal, a quarterly publication, was first issued in September, 1962 with Marvin Kaplan as editor and with the financial support of his employer, Loral Electronics of New York. Mr. Kaplan continued as Editor until June, 1963, when he could no longer spare the necessary time from his regular work. Marvin Kaplan received the 1963-1964 National Individual Recognition Award for the development of "The Journal of Value Engineering" and will be remembered as its founding Editor. W. M. Thompson of Bendix, Los Angeles was appointed to replace him as Executive Editor beginning with the October, 1963 issue.

The Board of Directors realized that the task of producing the Journal was becoming too great for a part-time staff, and began to seach for a suitable, professional technical publisher and manager. A National Publication Committee, headed by W. M. Thompson, Editor of the Journal, received proposals from numerous publishers, and made recommendations to the Board in October, 1964. After approval by the Board, an agreement was signed on November 1, 1964, making Value Engineering Publications - an affiliate of Space Age Publications - the official publisher and advertising representative for the Journal of Value Engineering. One more step had been taken to establish the Journal as an effective, professional magazine.

S. A. V. E. Offers Support to DOD

During July, 1962, President Tocco recognized the Department of Defense effort to establish an economic structure second to none. He solicited the aid of E. T. O'Connell, Editor of Value Engineering Weekly, and together they prepared a proposal, "War on Waste". This was presented to the Secretary of Labor, Arthur J. Goldberg, and members of President Kennedy's staff as an extension into other fields of Secretary McNamara's cost reduction drive. As a result S.A.V.E. became an important factor in the defense cost reduction program.

In August, 1962 the Logistics Management Institute requested data for a report to the Department of Defense entitled "Development of Motivational Techniques for Value Engineering." President Tocco was appointed as Technical Director for the study, and many S.A.V.E. members participated.

The report was well received and the president of L.M.I. stated that the accelerated pace of value engineering activity within the Department of Defense would provide further opportunities for assisting with cost reduction in the defense program. His letter was published in the S.A.V.E. Journal of March 1963.

"A New Climate in Defense Procurement"

The Third Annual Convention of the Society was attended by more than 300 persons in the Americana Hotel, New York City, on April 25 and 26, 1963. The increasing influence and stature of the Society is evidenced by the subjects covered in the various papers and the featured speakers. The session entitled "V. E. Administration" was directed by Larry Miles and included papers on:

The Executives' Role in V. E.
Applying V. E. to Small Business
V. E. Mil Specifications
and a panel entitled:
V. E. in Military Contracts

The session directed by Fred Sherwin covered "V. E. Standards" with papers entitled:

V. E. in Cost Target Programs
Standard Parts and Catalog Items in V. E.
Professional Techniques in Estimating V. E. Savings
and a panel discussion on:
The Relationship of V. E. with Engineering

In the session on "V. E. Applications", directed by Jules Rensen, papers were presented on:

V. E. Applied to Q. C. and Reliability
V. E. Applied to Purchasing
When and Where to Apply V. E.
 and a panel discussed:
Liaison Between S.A.V.E. and Other Professional Societies

Bob Gillespie directed the session on "V. E. Aids", where the papers covered:

Improved V. E. Training
Value Standards
Manufacturing Aids for Value Engineers
the panel discussion covered:
The Problems of V. E. Education

The featured speakers were:

Barry J. Shillito, President of Logistics Management Institute, who discussed "The Value Engineers Role in Defense Industry"

The Hon. Thomas D. Morris, Ass't. Secretary of Defense (I&L) speaking on "The New Climate in Defense Procurement"

and

George T. Fouch, Deputy Ass't Secretary of Defense presenting "The V.E. Program of the Department of Defense"

Installed as the newly - elected officers were:

President:

Anthony R. Tocco

Space Technology Labratories Inc.

Secretary:

Fred S. Sherwin Raytheon Company

Treasurer:

Charles E. Harris

Pentagon

Regional Directory

Northeast

Dave Fram

Sperry Gyroscope Co.

Southeast

Robert Bidwell Martin Company

North Central Paul Radcliffe

ITT-Kellogg Communications

South Central Dean L. Gleeson

Precision Screw Products Co.

Northwest

L. James Levisee Hyster Company

Hyster Compa

Southwest Edward Heller

General Dynamics/Astronautics

S. A. V. E. COMMUNICATIONS

Communications between chapters and with the national officers took a firm step forward early in 1964. President Sherwin accepted the offer of the Florida State Chapter to publish the National Newsletter. By October 30, 1964, the Newsletter Committee, headed by R. L. Bidwell of Martin Co., Orlando, Florida, and assisted by J. J. Kaufman (The National Secretary), had completed its planning and issued the following outline together with a request for material to make it a reality:

Page 1 President's Message
Page 2 Other Communications from the President
Page 3 Communications from National Secretary -

National Board Meeting Minutes, Etc.

Page 4-5 Other National News

Page 6-7 National Committee Reports and Chapter News

The first issue of Save Communications, published in December, 1964, showed the project was off to a good start.

"A Profession Responds to a National Challenge"

On April 23 and 24, 1964 the Fourth Annual Meeting of the Society was held in the Ambassador Hotel, Los Angeles. The more than 350 attendees heard a keynote address by Mr. Oscar T. Lawler, Senior Vice President and Vice Chairman of the Security First National Bank of Los Angeles and President of the Los Angeles Chamber of Commerce.

At the banquet, Mr. Walter L. Lingle, Junior Deputy
Associate Administrator of NASA, presented "NASA's Program
for Cost Control and Cost Reduction", and the spotlight speaker,
Mr. Charles F. Horne, President General Dynamics/Pomona and
President Electronic Industries Association, spoke on "An
Industry Responds to President Johnson's Cost Reduction Request."

These papers were presented at ten sessions covering various facets of V.E.:

Understanding Value Engineering Session Chairman: L. D. Miles The Total Strategy Techniques of Tactics

The Expanding Professional Stature
Session Chairman: F. S. Sherwin
Professional Designation in Value Engineering
Potentials for Research in Value Engineering
The Professional Value Engineer's Contribution to
Business

- "Organizing for Effective Value Engineering"
 Session Chairman: R. L. Bidwell
 Establishing the Need for Effective V. E.
 Experiences in Organizing a V.E. program
 Bringing an Established Program up-to-date
 - "Overcoming Resistance to Change"

 Session Chairman: G. D. Hart

 Induced and Inherent Resistance

 A New Look at The Resistance to Change
 - "Criteria for Applying V. E. Effort"
 Session Chairman: J. L. Yoscak
 Cost Data Development
 Let's Value-Analyze Our V.E. Effort
- "Measuring the Accomplishments of a V.E. Program"

 Session Chairman: H. J. Smith

 How Aerojet Management Evaluates V. E.

 Criteria for Measuring the Effectiveness of V.E.

 A System for Evaluating V.E. Program Efforts
- "Application of Mathematical Techniques in V. E."

 Session Chairman: Carlos Fallon
 Relationship of V.E. and Systems Effectiveness
 Application of Values and Utilities to Design
 Making in Design
 A Value Tool for Economic Justification of New
 Manufacturing Equipment
- "Advancement in Techniques for Improving Creativity"

 Session Chairman: R. J. Gillespie

 The Practical Use of Creative Techniques in the V.E. Job Plan

 Creativity and the Individual
- "Effective Use of V.E. Prior to Initial Design"
 Session Chairman: Harold Knight
 Application and Measurement of V.E. in R&D
 The Impact of V.E. on Industrial Marketing
 Marketing and V.E.: Friends or Foes
- "Application of V.E. in Government Programs"
 Session Chairman: George E. Fouch
 Contractual Aspects of V.E.
 V.E. in Program Definition Contracts
 V.E. in Process Operations

The following newly-elected officers were installed:

President Frederick S. Sherwin

Raytheon Company

Secretary J. Jerry Kaufman

Honeywell Incorporated

Treasurer Charles E. Harris

Pentagon

Regional Directors

Northeast Robert J. Gillespie

Sylvania Electronic Products

Southeast Frank J. Johnson

Lockheed Georgia Company

North Central Paul A. Radcliffe

ITT-Kellogg Communications

South Central Jack W. Edwards

Dresser Industries

Northwest Duane B. Burton

Boeing Company

Southwest E. D. Heller

General Dynamics/Astronautics

Establishment of a S.A.V.E. National Office

By October, 1963, the Society business had increased so that the National Secretary Fred Sherwin was instructed to investigate and have a specific proposal for a national office, to be considered at the next Board Meeting. In January, 1964, the Board approved the secretary's recommendation, and in February, 1964, the National Office was established in Washington, D. C. with Courtesy Associates. The services included directory listing, telephone answering service, secretarial service and facilities for Board Meetings.

By October, 1964 the Society business had outgrown the services available from Courtesy. A proposal from Davies Associates for office space, and office manager, stenographer and other clerical help as required was approved by the board. On December 14, 1964, President Sherwin and Secretary Kaufman signed a formal agreement with Davies and plans were being made to divert much of the Society busines to the National Office.

Chapter Development and Membership Growth

By late 1961 growing interest in S.A.V.E. was apparent by the formation of local chapters in the Dallas-Fort Worth Area, Los Angeles, Utica-Syracuse, Boston, Washington, D.C., and Watervliet Arsenal. During 1962 the number of chapters increased to 12, with the formation of Chapters in New York, San Diego, Atlanta, Chicago, Salt Lake City and Delaware Valley (Philadelphia).

By the end of 1963, Chapters were forming in Minneapolis-St. Paul, St. Louis, San Francisco, Detroit, Michigan-Indiana area, Buffalo, Florida, Seattle, and Connecticut, making a total of 21.

The growth continued in 1964 with chapters in Northern Ohio, Portland, Sacramento, Houston, Wisconsin, and Huntsville, Alabama, making a total of 27. A roster of chapters is given in the Appendix.

MEMBERSHIP GROWTH 1960 - 1964

Mar.	1960	20 CHARTER	MEMBERS		<u> </u>	
Aug.	1960	49				
Oct.	1961	140				1
Dec.	1961	200				
May	1962	The state of the s	400			
May	1963	The state of the s		850		
May	1964		The state of the s	erricanista interestrativa en la	165	0
Oct.	1964	and the second rate is the best lives	M. Leanan Provided Marro	and the second second	Company of the Compan	2141

APPENDIX

ROSTER OF CHAPTERS IN ORDER OF FORMATION

DALLAS FORT-WORTH CHAPTER
Formed November, 1960
1964 Membership - 46
Present Chairman
C. W. (Smokey) Doyle
General Dynamics/ Convair
Fort Worth, Texas
Phone: (817) PE-24811 Ext. 2722

Los Angeles Chapter
Formed September, 1961
1964 Membership - 217
Present Chairman
H. K. Davidson
Value Engineering Inc.
Long Beach 8, California
Phone: (213) HA-95301

MID-NEW YORK STATE CHAPTER Formed September, 1961 1964 Membership - 33 Present Chairman Raymond K. Armstrong Carrier Corporation Syracuse, New York Phone: (305) HO-38411

PAUL REVERE CHAPTER
Formed September, 1961
1964 Membership - 116
Present Chairman
Donald Madden
Madden Electronics Inc.,
Weston, Massachusetts
Phone: (617) 894-7878

NATIONAL CAPITAL CHAPTER Formed October, 1961 1964 Membership - 102 Present Chairman Walt Prichard Atlantic Research Corp. Alexandria, Virginia Phone: (703) FL-43400

MOHAWK-BERKSHIRE CHAPTER Formed November, 1961 Present Chairman Morris Lapidus Watervliet Arsenal Watervliet, New York Phone: (518) AR-34610 METRO NEW YORK CHAPTER Formed February, 1962 Present Chairman Clyde Winstead Huyck Systems Co., Long Island, New York Phone: (516) HA-77500

SAN DIEGO CHAPTER
Formed March, 1962
1964 Membership -65
Present Chairman
H. P. Williams
General Dynamics/ Convair
San Diego, California
Phone: (714) 296-6611 Ext. 1294

ATLANTA CHAPTER
Formed April , 1962
1964 Membership - 40
Present Chairman
Phillip E. Spindell
Dept. 72-18
Lockheed Georgia Company
Marietta, Georgia
Phone: (404) 424-5041

CHICAGO METROPOLITAN CHAPTER Formed May, 1962
1964 Membership - 88
Present Chairman
Mr. Leo Swerbinsky
Hotpoint Div. of G.E.
Chicago 44, Illinois
Phone: (312) 854-3087

UTAH CHAPTER
Formed October, 1962
1964 Membership - 19
Present Chairman
David B. Davis
5026 Stardust Dr.
Salt Lake City 7, Utah

DELAWARE VALLEY CHAPTER Formed October, 1962 Present Chairman Ervin Leshner Building 2-6 Radio Corp'n of America Camden 2, New Jersey TWIN CITY CHAPTER (MINNEAPOLIS)
Formed February, 1963
1964 Membership - 19
Present Chairman
Wendell Wilson
Honeywell Ordnance
Hopkins, Minnesota
Phnne: (612) WE-55158 Ext. 8591

ST. LOUIS GATEWAY CHAPTER Chartered February, 1963 Present Chairman Vic Frank Sta. 2675 Emerson Electric Co. 8100 W. Florissant St. Louis, Missouri

SAN FRANCISCO BAY AREA CHAPTER Formed March, 1963
1964 Membership - 108
Present Chairman
Harold W. Adams, Director
Value Analysis
FMC Corporation
333 W. Julian
San Jose, California

DETROIT CHAPTER
Formed March, 1963
1964 Membership - 54
Present Chairman
Jerry W. Moon
LTV. Michigan Division
Warren, Michigan
Phone: (313) 539-0300 Ext. 566

MICHIANA CHAPTER
Formed April, 1963
1964 Membership - 78
Present Chairman
David A. Johnson
Cost Reduction Manager
Laundry, Whirlpool Corp.
St. Joseph, Michigan

Niagara Frontier (Buffalo)
Formed May, 1963
1964 Membership - 35
Present Chairman
Jim Allis
37 Colonial Drive
Snyder 26, New York

1964 Membership - 57

Present Chairman

J. J. Kaufman

Honeywell, Inc.

St. Petersburg, Fl rida

Phone: (813) 528-1121 Ext. 3926

Seattle Chapter
Chartered November, 1963
1964 Membership -75
Present Chairman
Lee Stafford
Puget Sound Naval Shipyard
Bremerton, Washington
Phone: (206) 478-3711

FLORIDA STATE CHAPTER Formed August, 1963

CONNECTICUT CHAPTER
Formed December, 1963
1964 Membership -100
Present Chairman
Henry Halverson
Sikorsky Aircraft
Stratford, Connecticut
Phone: (203) 378-6361 Ext.1715

NORTHERN OHIO CHAPTER Formed January, 1964 1964 Membership -64 <u>Present Chairman</u> R. F. Grandjean Diebold Inc. Canton 2, Ohio Phone: (213) 543-4592

PORTLAND CHAPTER
Formed February, 1964
1964 Membership - 68
Present Chairman
H. G. Kempster, Jr.
Williamette Tug & Barge Co.
Portland 3, Oregon
Phone: (503) 285-9111

SACRAMENTO "PONY EXPRESS" CHAPTER Formed , 1964
1964 Membership - 61
Present Chairman
R. L. Denig, Jr.
Aerojet General Corporation
Sacramento, California
Phone: (916) 355-5447

HOUSTON CHAPTER
Formed April, 1964
1964 Membership - 25
Present Chairman
Dan W. Lewis
McEvoy Company
Houston, Texas
Phone: (713) CA-51381

WISCONSIN CHAPTER
Formed May, 1964
1964 Membership - 37
Present Chairman
Russell C. Brannen
AC Spark Plug Electronics Div.
Milwaukee, Wisconsin
Phone: (414) 762-7000 Ext. 2386

REDSTONE CHAPTER
Formed July, 1964
1964 Membership - 36
Present Chairman
Arthur E. Harvey, Jr., Chief
Redstone Arsenal
Huntsville, Alabama
Phone: (205) 876-1162

CHAPTERS BEING FORMED

North Jersey Chapter
Present Chairman
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