April 14, 1969

I am releasing the attached copy of the "Report of Stanford-SRI Study Committee," prepared by an ad hoc Study Committee of students and faculty under the chairmanship of Prof. Kenneth E. Scott.

The urgency of the situation on campus has caused me to make this report available in this form to the faculty, students, and university officers concerned.

Making it available in this manner has precluded study of the report by me and therefore I cannot say at this time whether or not I agree with any of its statements or conclusions.

Kenneth S. Pitzer,
President

CAMPUS REPORT SUPPLEMENT

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(NOTE: This report is being distributed to the Academic Council and some staff of Stanford University.)

April 11, 1969

REPORT OF STANFORD–SRI STUDY COMMITTEE

I. INTRODUCTION

The Stanford-SRI Study Committee was appointed on October 31, 1968 by then Acting President Robert J. Glaser "to explore in detail the relationships between Stanford University and the Stanford Research Institute (SRI)." The Committee was composed of five faculty members nominated to the President by the Committee on Committees of the Academic Senate: Barton J. Bernstein (History), William K. Linvill (Engineering-Economic Systems), David S. Nivison (Philosophy), Kenneth E. Scott (Law) and Ezra Solomon (Business School); five student members nominated to the President by the President of ASSU: Anne C. Bauer (Political Science), Harry M. Cleaver (Economics), Nick P. Falk (Business School), G. Victor Hori (Philosophy) and J. Patrick McMahon (Communications); and two members selected by the President: Frank B. W. Hawkinshire (Education) and Richard W. Lyman (Provost).

The major question to which the Committee was charged to direct its attention was whether the present relationship between Stanford and SRI should be maintained. The Committee was also directed to consider whether, if the relationship were to be maintained, existing arrangements should be altered. It was suggested that, in considering these questions, the Committee might review (a) the general nature of the activities carried on by SRI and their impact, if any, on the University, (b) the reasons that led to the establishment of SRI in 1946 by the University and the reasons why the relationship was organized as it was, and (c) the financial implications of the present relationship and any implications of an alteration of the relationship for the University.

The Committee was requested to render its report by April 1, 1969, a date that because it coincided with an end-of-quarter examination period was subsequently extended to April 15, 1969 in order to permit a full participation by the student members in the final portion of the Committee's work and preparation of its report. It was pointed out at the outset that although the Committee's report would be rendered to President Kenneth S. Pitzer, action on the Committee's recommendations would be the responsibility of the University's Board of Trustees.

In carrying out its charge, the Committee sought a considerable amount of information from SRI, and wishes to express its appreciation for the time and effort devoted to our needs by President Charles A. Anderson, Vice-President Rudolph K. Brunsvold and other officers and staff of SRI. The questionnaire which the Committee directed to SRI on December 31, 1968 and the responses received from SRI on January 16 and January 31, 1969, together with documents cited in this report and other written material submitted to or collected by the Committee, have been deposited in Meyer Memorial Library and are available to any member of the University Community at the reserve desk. Part II of this report attempts to organize and present portions of this information which are of general value in understanding the nature of SRI's activities and the different dimensions of its relationship to the University.

In addition, the Committee held numerous discussions with various persons connected with both the University and SRI. A questionnaire was sent by the Committee to selected members of the Stanford faculty, to obtain outside informed opinion on some of the issues under consideration. A public hearing at the University was held on December 5, 1968 and a meeting with the senior administration and staff of SRI was held on March 24, 1969. The Stanford Chapter of the American Association of University Professors conducted a public forum on SRI and Stanford's relations to it on February 6, 1969, in Memorial Auditorium.

The Committee also undertook to draw on somewhat analogous experiences at other institutions, including the decision in 1968 by Cornell University to sell Cornell Aeronautical Laboratory and the decision in 1967 to merge the Mellon Institute into the Carnegie Institute of Technology.

Lacking any staff or resources, however, beyond the time that the persons composing it were able to devote, the Committee was not able to pursue a number of pertinent matters beyond the preliminary level of analysis set forth in this report. The Committee regards this as a regrettably narrow constraint in studying issues of substantial complexity and magnitude for both the University and SRI, and would urge that more attention be given to this need in the creation of future ad hoc committees charged with reporting on matters of major import.

Within its limited means, the Committee did attempt to evaluate the various aspects of the present relationship between the University and SRI, and this is set forth in Part III of this report. It had been consistently the plan and intention of the Committee to produce a single report, setting forth in a systematic way a variety of points of view and arguments and ending with a description of the positions favored by the different members. In the last week and day of the Committee's work, however, this proved impossible to attain. The various parts of the report and separate statements which follow, therefore, should be understood as not necessarily representing the views of anyone not indicated to be a signatory. In particular, the minority statement has not been seen by the other members of the Committee; those signing the minority statement did have access to and an influence upon drafts of the other parts of the report. On the final day of the Committee's work, the signatories of the minority statement indicated that they wished to withdraw association with the contents of all portions of the report save their own.

II. HISTORY AND DEVELOPMENT OF SRI

A. Formation

Stanford Research Institute (SRI) was formed in 1946 by the trustees of Stanford University in cooperation with a group of West Coast industrialists. The Institute grew out of what was perceived to be both a need and an opportunity for an organization to provide a wide range of research capabilities for growing Western business. There were already a number of such organizations in the East (e.g., Arthur D. Little, Inc., Battelle Memorial Institute, Armour Research Foundation) and the idea that useful results could accrue from an organized approach to industrial research had been spreading for over a decade. The end of the war and the economic boom which followed gave added impetus to the creation of such an organization in the West.

In 1945 two Stanford professors (Robert E. Swain and Philip A. Leighton) and a Stanford alumnus (H. Dudley Swim) were appointed as a University committee to study the possibility of creating a research institute under University auspices. The considerations that they weighed at the time are worth setting forth, not only for the light shed on the reasons that led to establishing SRI but also for assistance in evaluating that decision two decades later:

"Arguments for Stanford sponsorship:

a. A research institute connected with a university has educational functions. It trains men through giving them an opportunity to work, under expert direction, on actual industrial problems. Its staff members may hold faculty status and give lectures or courses in the University. It improves the usefulness of faculty members as teachers, through improving their understanding of industrial problems and industrial needs.

b. A research institute is a means of supporting basic research, both by its own staff and by grants and fellowships to the university.

c. It is a source of income.

d. It improves contacts and relations between the university and industry.

e. It provides the organization and means for attracting and accepting large government contracts.

f. It would give the University a leading part in the industrial and regional development of the Pacific Coast.

g. Both the physical location of Stanford and its standing as a University are favorable factors.

h. Research has come of age. Its social importance is now recognized, even by the man on the street. Large scale industrial and government support is not only in prospect, it is here. This support will be chiefly for projects which are more highly organized and on a larger scale than the highly individualized manner in which most University research has been carried on in the past. While opportunity for complete individual freedom in research must be preserved at all costs, the new emphasis on research, particularly on organized interrelated projects, must be recognized and a mechanism developed to meet and take advantage of this emphasis. The University that does not do this will be left on the shelf.

Argument against Stanford sponsorship:

a. The primary objective of an industrial research institute must be to serve industry. Its primary interest is the application of knowledge. The primary interest of a University is the advancement of knowledge, through basic research and education. These two primary interests cannot be mixed without loss to both. Can Stanford accept the commitments involved in sponsoring an Industrial Research Institute without reducing its level as a University? Is the gain worth the loss?

b. Scores of second and third rate colleges and universities are planning research institutes. Many of these ventures will fail. Will this create a situation which is best avoided by remaining out of the field, or should the field be entered with such strength and aggressiveness as to insure leadership and success?"

These "three musketeers" submitted their report to University President Tresidder on December 21, 1945. That report called for the creation of "Stanford Research Institute," separately incorporated as a non-profit corporation but under complete control by the University, including an arrangement

"whereby the Institute would pay, say, 50% of its annual earnings, after the first three years of operation, to the University in consideration of the use of the name 'Stanford,' the sponsorship by the University, and the use of the University's facilities. This would also afford a settled policy whereby one-half of the earnings would go to the research and/or general funds of the University and the other half would be 'plowed back' into the development of the Institute."

About the same time a San Francisco industrialist, Atholl McBean, had asked Dr. Henry Heald, President of the Illinois Institute of Technology, to study the idea of establishing a research foundation in California to serve the Pacific Coast area. Heald presented his conclusions to a group of business executives on January 24, 1946, in San Francisco. His report was very positive: "I, therefore, suggest that the industrialists interested in the establishment of a research organization ask Stanford University to organize it, provide the University with moral support for the project, and arrange to provide an initial gift of $500,000 to be used to finance operations, space and equipment . . . " About a month after the Heald report, the University trustees decided in principle that Stanford would found a research institute.

By October 24, 1946 the Articles of Incorproation, or charter, had been drawn up and it was filed on November 6th. Under the charter the University Trustees were designated the sole general members of the corporation and given the power to appoint the Board of Directors of SRI. They met for that purpose on December 13th and appointed the first eleven-man Board of Directors of SRI. When those eleven men met on the Stanford campus for the first time on January 8, 1947, Stanford Research Institute had become a reality.

B. Objectives

The objectives of the different groups involved in the founding of SRI were varied. One dominant theme was that of providing a valuable service to business and thereby assisting West Coast industrial development. In their report to Dr. Tresidder the "Three Musketeers" recommended against including the term "industrial" in the name as too limiting but did think it desirable to advertise its creation as "The Far West's first industrial research institute."

Heald in his report to McBean was very explicit:

"The need for a first-class research organization to serve Pacific Coast industry seems to be well established. The rapid growth of industrial development to its present substantial volume plus the prospect of a continued increase creates a substantial demand for such services. Such an organization can be of real value in assisting in the industrial development of the area."

The University press release of September 27, 1946, announcing the formation of SRI emphasized this role: "The institute plans to do the kind of research that industry itself might do if each company could set up its own comprehensive research organization, supported by the resources of a great university."

The Articles of Incorporation state that one purpose of SRI, among others, is "To promote and foster the application of science in the development of commerce, trade and industry, the discovery and development of methods for the beneficial utilization of natural resources, the industrialization of the western United States of America . . . "

The initial purpose stated in SRI's charter, however, is "To promote the educational purposes of the Leland Stanford Junior University by encouraging, fostering and conducting scientific investigations and pure and applied research in the physical, biological and social sciences, engineering and the mechanic arts . . . " This theme is carried out by further references to SRI as intended "to devote its resources . . . to the assistance of the Leland Stanford Junior University in the promotion and extension of learning and knowledge" and to "provide, equip and maintain laboratories . . . and to make such facilities available to the Leland Stanford Junior University [and others] for the conduct of research and investigation."

It seems to have been a general view at the time, that funds for research within the University would be sparse and difficult to obtain, and that an industrial research organization might afford some opportunities that would otherwise be totally lacking. This would be true only if the Institute could attract sufficient commercial business, and it began with a clear orientation to that end. Of the first eleven directors appointed, nine were prominent in industry (including three University trustees) and only two were full-time university people: the President and Vice-President of Stanford.

C. Legal Structure of SRI-University Affiliation

The essential structure of the Institute's relationship to the University is laid out in its Articles of Incorporation:

1) SRI is wholly controlled by the University: " . . . the members of the corporation shall be the members of the Board of Trustees of Leland Stanford Junior University as from time to time constituted." The Stanford trustees, as SRI's general members, have the sole voice in selecting SRI's board of directors.
2) SRI's board of directors in turn has full authority over its operations: " . . . the powers of the corporation shall be exercised, its property controlled and its affairs conducted by the directors."
3) Although "ownership" is a more tangled concept in the case of a non-profit corporation, in an ultimate sense it can be said that Stanford University owns SRI: "Upon the dissolution or winding up of the corporation, all funds and property remaining after paying or adequately providing for the debts and obligations of the corporation shall be distributed to the Board of Trustees of the Leland Stanford Junior University for the use and benefit of the Leland Stanford Junior University." It is, in short, reasonably accurate to express the Stanford-SRI affiliation as essentially a parent-subsidiary relationship.

The Bylaws spell out the procedural rules of operation for the members and directors as well as delineating the power of the board:

1) Concerning election of directors: "the president of the Leland Stanford Junior University and the president of the Board of Trustees of the Leland Stanford Junior University, by virtue of their offices, shall be members of the board of directors. Other directors shall be elected by the general members who may, at their discretion, elect not more than four (4) directors who are members of the administrative or teaching staff of the Leland Stanford Junior University." The number of directors has been increased over the years, from the original 11 to 42 today; in 1968, 9 of the 42 were trustees of Stanford, and one was a member of its administrative or teaching staff.

2) Concerning powers of directors: The directors are endowed with the usual power over finances, budgets and property accorded most corporate boards. This includes the power to "appoint and remove at pleasure the officers of the corporation . . . " The board also "shall appoint a president" who "shall have the power to employ and discharge all employees." The board is specifically empowered to review and determine "The amounts which from time to time shall be devoted to, given or turned over to the board of trustees of the Leland Stanford Junior University in furtherance of its general educational purposes . . . "

Despite the University's unquestioned power of legal control over the Institute, it has in practice largely allowed the Institute's management to chart its own course. This was not true in the early years, when SRI was losing money and the University had to make advances to it of over $600,000 (repaid by 1965), nor was it entirely true in 1965 when the fund-raising activities of SRI came into conflict with those of the University. But apart from such episodes of concern over the financial losses SRI might cause the University, the Stanford Board of Trustees appears to have made no formal exercise of its power to establish the direction of SRI activities or implement the purposes that underlay SRI's formation by the University. The result, predictably enough, was to leave SRI's management and directors free to a considerable degree to pursue the Institute's own interests as an independent entity. How this has worked out is depicted in the next section.

D. Aspects of Growth and Development

1. Growth and Size of the Institute

The story of SRI in the over twenty years of its existence has been one of rapid expansion in staff and contracts and, more recently, in financial strength. The table below shows the growth of SRI's employment over the years:

Year	SRI Staff
1947	43
1952	535
1957	1,340
1962	1,980
1968	3,068

Located originally in a few buildings in the old Stanford Village in Menlo Park, permanent SRI personnel are now working in offices in five different states in the U.S. and in at least eleven foreign countries, occupying over a million square feet of building space.

As of December 1968 the breakdown of SRI staff by personnel classification was as follows:

Administrative	180
Professional	1,512
Technical	524
Non-technical	232
Clerical	620
Total	3,068

These persons are distributed throughout the organization in four major research divisions: Physical and Life Sciences, Engineering, Economics, and Management and Systems Sciences. The organization chart of SRI is set forth on the next page.

The growth of annual research volume achieved by the Institute has also been dramatic:

Annual Project Revenue

Year	Dollars (in thousands)
1947	81
1950	2,000
1955	9,900
1960	26,000
1968	64,210

Finally, the expansion in number of new projects undertaken is another index of the Institute's steady growth.

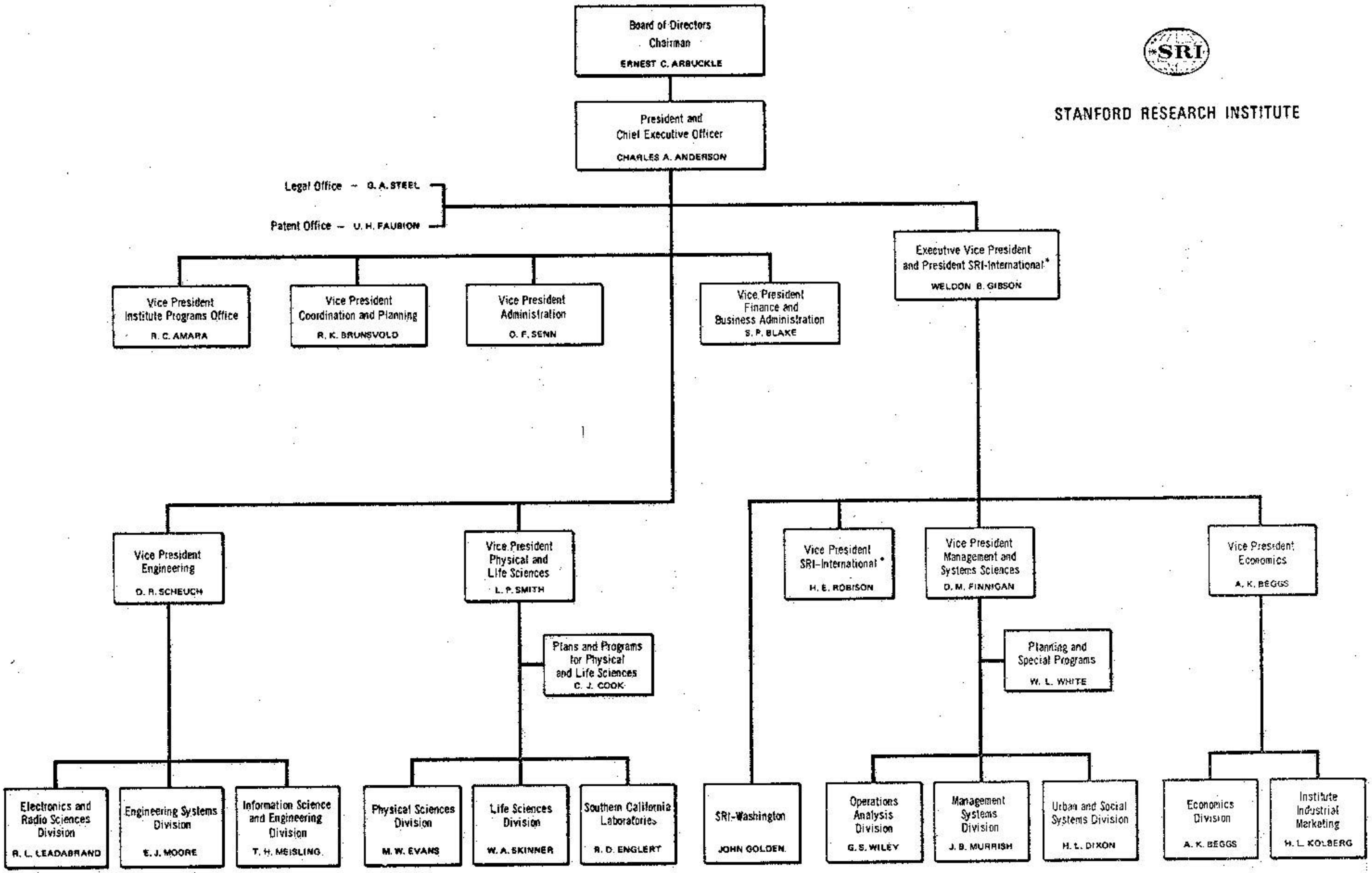
New Projects

1950	124
1955	309
1960	397
1965	503
1968	681

2. Evolution in Sources of Support and Composition of Research

One of the most striking developments in the growth of SRI is the shift in its research from private industry to government sponsorship. Originally dedicated to "industrial research" yet leaving open the possibility of government contracts so as not to limit its scope, it soon found itself expanding rapidly in the area of government research.

STANFORD RESEARCH INSTITUTE



INSTITUTE COMMITTEES

Institute Policy Committee	C. A. Anderson, Chairman
Institute Research Committee	C. A. Anderson, Chairman
Institute International Committee	W. B. Gibson, Chairman
Institute Administrative Committee	O. F. Senn, Chairman

* Institute-wide Functions as per SRI-International Plan

November 1968

In its 1948 Annual Report, the Institute reaffirmed its dedication to private industry:

> "The Institute was established to make applied research available to industry, particularly industry of the eleven Western states. Although a major portion of its projects are carried on in the field of industrial research, it has undertaken a number of government contracts of importance to national prosperity and defense. . . . Its facilities are available to large and small enterprises alike."

By the 1949 Annual Report government work seemed to be a more integral part of SRI's purpose. "The Institute's major purpose – the primary service it can perform – is to apply fundamental scientific knowledge to the technologic and economic problems of industry and government."

A year later the importance of government sponsored research (in dollar terms) had grown to substantial proportions (40%) and by 1960 it had become dominant in the Institute (63%).

Sponsorship of SRI Research

	Government	Commercial
1950	40%	60%
1955	43	57
1960	63	37
1965	82	18
1968	71	29

The expansion of government sponsored research was stimulated in the period of the early fifties by the Korean war, and military research seems always to have constituted the major portion of government contracts.

Data available for recent years indicates a moderate reversal of this trend:

	Government as % of Total	Military as % of Gov. (approx.)
1965	82%	78%
1966	78%	73%
1967	78%	74%
1968	71%	73%

3. Military Research

In the beginning there was no perceived cause for concern over a growing incidence of military work. Indeed industrial research and military work were seen in the 1951 Annual Report as quite compatible:

> ". . . military demands for research closely parallel industrial needs. The Institute therefore, found its skills and facilities immediately applicable to military programs, whether technical or logistic, and could actually participate in the national defense programs."

In recent years, however, concern has been evidenced at SRI about undue dependence on government work in general and military work in particular in the Institute's research contracts. 1965 was the peak year for both in percentage terms and the Institute has been engaged since in a conscious effort to expand other sectors and reduce its dependence on this kind of work. The figures in the previous table reflect the success achieved to date, but SRI military research activity is still large and diversified and constitutes about 50% of its total work. It is mostly classified, and a substantial part of the research results and knowledge thereby acquired is not generally available. The Committee could not undertake, therefore, any sort of project review procedure, since the necessary information could not have been made available to all its members.

Research on chemical and biological warfare (CBW) and counter-insurgency measures has been a source of particular controversy. In 1968, CBW research at SRI amounted to about $400,000 or .6% of total research revenue; of a February 28, 1969, total contract backlog of approximately $25 million, roughly $50,000 or 2/10 of 1% was in the CBW field. Past activity of SRI in this area is greater than these current figures would suggest, and has involved substantial studies of aerosol behavior and dissemination of chemical agents. A statement to the Committee on this subject by SRI is as follows:

> The Institute has conducted and is conducting research for agencies of the Government which have a preparedness mission in the field of chemical and biological warfare. The current level of work at the Institute in support of those agencies and their missions is minimal, the current backlog being approximately $50,000, which is roughly equivalent to a one-man-year effort. The general thrust of the work in this program concerns the detection, dissemination and defensive aspects of such activity.

In connection with both CW and BW research, it has been the policy of the Institute not to have weapons or materials at our facilities which, through accident or inadvertence, could possibly create a danger or health hazard for the local community. Because of its special sensitivity, I think it is important to emphasize that there are no biological agents at Institute facilities.

"Counter-insurgency" research is less easily defined, since as the term is sometimes used it can range from military techniques especially adapted for use against armed guerrillas to any social or economic study or project which might strengthen the existing order in an Asian, African or Latin American country. Approaching this subject from a slightly different angle, the amount of military research directly related to Southeast Asia performed by SRI in 1968 amounted to $6¼ million or about 10% of SRI's total work. Counter-insurgency projects have included research on such matters as "strategic hamlets" in Vietnam, jungle communications and intrusion sensors in Thailand, and the advisability of operational assistance to Government forces in Peru.

4. Development of SRI International Operations

The growth of SRI's international operations is one of the more important long term trends of Institute development.

In the early fifties the Institute considered its specific aims in international operations to be to "widen SRI's sphere of knowledge and capabilities so as to serve industry and government (at home and abroad) more effectively assist in solving some of the world's economic development problems, strengthen the security of the free world, enhance professional development of the staff, contribute to international exchange of scientific information, and increase prestige and influence of the Institute."[1]

Already in 1949 the Institute had been urged by its directors to move abroad. One of its first projects in 1950 was an economic survey of Cuba, undertaken for the Cuban Government under the auspices of the World Bank. From 1950 to 1955 over one hundred members of the SRI staff travelled abroad to work on 67 projects, which ranged from assisting in planning the industrialization of Israel to an economic feasibility study on the reopening of Pacific purveyor service for Matson Navigation Co.

SRI also began to move into the two areas of the world which have been the center of its efforts ever since: the Pacific Basin and Western Europe. About this time an SRI director put the basis for Institute expansion in these terms: "the next decade will surely bring many opportunities for the advancement of free enterprise around the world . . . the move to further internationalization of business is unmistakable. . . . in its own interests and in keeping with the times, SRI should extend its operations in a major way into the international field."[2]

The growth in SRI international activities culminated in 1966 in the formation of a new internal management entity "SRI-International," as part of a plan to increase the Institute's international operations from 15% to 30% of the total. At present, international activities account for about one fifth of SRI's total business, divided among private business (35%), public development (20%) and military projects (45%).

In a recent SRI-International publication, its director made clear his view of the Institute's international purposes:

> "SRI is dedicated to these . . . two objectives: economic progress, and the strengthening of private business on an international scale. These are good and noble causes and we are proud to stand with international companies the world over in the pursuit of the fundamentals involved. Our objective is to do everything within our power to develop the private sector as the basic factor in economic strength and progress."[3]

5. Financial History

The foregoing story of SRI's growth and development is reflected in and summarized by the record of its financial statements.

As the following table shows, SRI achieved the transition from substantial operating losses to profitable operation in the early 1950's, and its rate of growth since then has been remarkable. Project revenues have climbed sharply, and so has accumulated capital. The balance sheets and operating statements for 1967 and 1968 (without accompanying notes) follow the table, and give the most current data.

[1] SRI Journal, Dec. 1966, p. 32. This is a special issue, devoted to the history of SRI's first twenty years.

[2] Id. at 33.

[3] SRI-International, Number 11, 1969.

STANFORD RESEARCH INSTITUTE

Selected Financial data: 1950, 1955, 1960 and 1965

(Thousands of Dollars)*

Assets (Year-end)	1950	1955	1960	1965
Current Assets	613	2,694	6,114	13,642
Plant & Equipment (at cost, less accumulated depreciation)	388	1,920	9,046	13,889
Total Assets**	1,020	4,773	15,544	27,531
Liabilities (Year-end)				
Current Liabilities	344	1,093	3,999	8,211
Long-Term Liabilities***	950	1,100	2,485	2,023
Capital Contributions	177	1,825	2,603	3,066
Net Worth (retained earnings)	(451)	755	6,457	14,230
Total Liabilities and Equities	1,020	4,773	15,544	27,531
Revenues, Expenses & Income				
Project Revenues	1,990	10,029	25,953	52,030
Direct & Overhead Expenses	2,049	9,704	24,292	49,111
Operating Income	(58)	325	1,661	2,919
Other Income	–	–	(44)	4
Total Income before Taxes	(58)	325	1,617	2,923
Provisions for Federal Taxes	–	–	–	610
Total Income after Taxes	(58)	325	1,617	2,313
Depreciation & amortization allowance	94	372	1,034	1,320
Total Cash-Flow after Taxes	36	697	2,651	3,633

Notes: * Details may not add due to rounding.
** Includes other assets not shown separately.
*** Includes $500,000 4% no-maturity loan from Stanford University prior to 1965.

STANFORD RESEARCH INSTITUTE (A Nonprofit California Corporation)

BALANCE SHEET, DECEMBER 28, 1968 AND DECEMBER 30, 1967

ASSETS	1968	1967
CURRENT ASSETS:		
Cash	$ 1,572,300	$ 890,400
Receivables:		
United States Government prime contracts (including contractual retentions and deferred billings of $4,500,500, 1968)	11,081,500	10,563,600
Other contract and publication receivables (including contractual retentions and deferred billings of $1,725,500, 1968)	4,295,000	3,316,400
Recoverable project costs	1,248,600	336,000
Current portion of long-term note	100,000	
Employees and others	29,600	75,000
	16,754,700	14,291,000
Less allowance for uncollectible accounts	545,400	400,000
	16,209,300	13,891,000
Inventories of consumable supplies and equipment, at cost	212,400	166,300
Prepaid expenses and other assets	744,400	792,000
Total current assets	18,738,400	15,739,700
PLANT AND EQUIPMENT, AT COST:		
Buildings	18,244,300	17,031,100
Machinery and equipment	9,261,600	9,317,800
	27,505,900	26,348,900
Less accumulated depreciation	9,354,900	8,356,300
	18,151,000	17,992,600
Leasehold improvements, net of amortization of $214,301, 1968	187,500	172,700
Land (Note 2)	1,886,900	1,718,800
Plant and equipment, net	20,225,400	19,884,100
LONG-TERM NOTE RECEIVABLE (noncurrent portion)	100,000	
	$39,063,800	$35,623,800