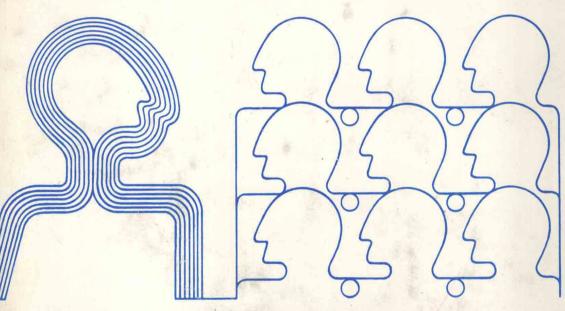
# STRATEGIC PLANING FOR MIS



Ephraim R.McLean & John V. Soden

## Strategic Planning for MIS

EPHRAIM R. McLEAN
University of California, Los Angeles

JOHN V. SODEN

McKinsey & Company, Inc.

With a Special Contribution by George A. Steiner

A WILEY-INTERSCIENCE PUBLICATION®

**JOHN WILEY & SONS** 

New York • Chichester • Brisbane • Toronto • Singapore

Copyright © 1977 by John Wiley & Sons, Inc.

All rights reserved. Published simultaneously in Canada.

Reproduction or translation of any part of this work beyond that permitted by Sections 107 or 108 of the 1976 United States Copyright Act without the permission of the copyright owner is unlawful. Requests for permission or further information should be addressed to the Permissions Department, John Wiley & Sons, Inc.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a competent professional person should be sought.

From a Declaration of Principles jointly adopted by a Committee of the American Bar Association and a Committee of Publishers.

#### Library of Congress Cataloging in Publication Data:

Main entry under title:

Strategic planning for MIS.

Papers of a conference held at the University of California, Los Angeles, in 1974 and sponsored by McKinsey & Company and the UCLA Graduate School of Management. "A Wiley Interscience publication."

Includes bibliographical references and index.

- 1. Management information systems—Congresses.
- I. McLean, Ephraim R. II. Soden, John V. III. McKinsey and Company. IV. California. University. University at Los Angeles. Graduate School of Management.

T58.6.S76 658.4'03 76-58483 ISBN 0-471-58562-9

Printed in the United States of America 20 19 18 17 16 15 14 13 12 11

## Conference Participants Planning for Information Services

April 10-11, 1974

Graduate School of Management University of California, Los Angeles

Mr. Roger W. Barbey, Manager Information Development Pacific Gas and Electric Company 245 Market Street San Francisco, California 94106

Morris F. Collen, M.D., Director Medical Methods Research The Permanente Medical Group 3779 Piedmont Avenue Oakland, California 94611

Mr. Anthony J. Craine, Director Management Services CIBA-GEIGY Corporation Ardsley, New York 10502

Mr. John R. Frey, Director Computer Services Consumers Power Company 212 West Michigan Avenue Jackson, Michigan 49201 Mr. Jack B. Gearhart, Vice President and Director, Management Systems TRW Systems Group One Space Park Redondo Beach, California 90278

Mr. Alan H. Gepfert, Manager Management Sciences Programs Department Mobil Oil Corporation 150 East 42nd Street New York, New York 10017

Mr. John C. Gilbert, Director Management Information Systems Headquarters, U. S. Army Material Command Department of the Army 5001 Eisenhower Avenue Alexandria, Virginia 22304 vi Foreword

tailored to the unique characteristics of each organization. As a consequence, there is no one best way to set up a long-range corporate planning system. Furthermore, any system, no matter how satisfactory it is considered to be, will inevitably change as circumstances change. Thus long-range information services planning, too, must be matched with the circumstances existing in each organization and must alter with evolving conditions.

We are still learning how to do better corporate long-range and information services planning. Nevertheless, we know today many of the processes which are most likely to produce effective plans. We also know much more about what not to do, if effective plans are to be achieved. This book is a rich mine of information for those who want such knowledge.

This book fills a gap in the literature about lessons of experience and current practice in making effective long-range information services plans. Thus it should be examined and studied by top managers who guide and direct such planning; management information managers and staff experts who should be deeply involved in long-range planning; staffs in other functional areas such as planning, finance, and marketing; professional consultants in the field; and academic scholars interested in the subject.

Those who read this book carefully and profit from the experience it contains will avoid "snarking" their information systems, to use a word coined by Lewis Carroll in "The Hunting of The Snark":

This was charming, no doubt: but they shortly found out

That the Captain they trusted so well
Had only one notion for crossing the
ocean,
And that was to tingle his bell.
He was thoughtful and grave—but the
orders he gave
Were enough to bewilder a crew.
When he cried 'Steer to starboard, but
keep her head larboard!'
What on earth was the helmsman to do?
Then the bowsprit got mixed with the
rudder sometimes:
A thing, as the Bellman remarked,

That frequently happens in tropical climes,

When a vessel is, so to speak, "snarked."

Foreword vii

But the principal failing occurred in the sailing,
And the Bellman perplexed and distressed,
Said he had hoped, at least, when the wind blew due East
That the ship would not travel due West!

GEORGE A. STEINER

Los Angeles, California July 1976

#### Acknowledgments

We would like to express our considerable thanks to the management consulting firm of McKinsey & Company, Inc., and in particular to Jack O. Vance, managing director of the firm's Los Angeles office, for providing the motivation and financial support that made possible the conference on long-range planning for information systems and thus this book. Also we wish to thank the UCLA Graduate School of Management and the GSM Office of Executive Education for acting as host for the conference, and we appreciate the efforts of Miss Maddie Contreras as conference program assistant.

In planning for the conference and in assisting in its deliberations, Prof. George A. Steiner, of the Graduate School of Management, was of immense help, with able participation by Prof. Richard O. Mason. Similarly, Charles C. Tucker and George M. Crandell, associates in the Los Angeles office of McKinsey & Company, played major roles in the conference, particularly with regard to the preparation and evaluation of the survey in which the conferees participated. And, of course, the conference itself would not have been possible without the interest and active participation on the part of the MIS executives who gave freely of their time and energies to attend the conference and to prepare the papers that appear in Parts II through IV.

As our efforts shifted from the conduct of the conference to the preparation of this book, Mrs. Del Sims and her colleagues in the Los Angeles office of McKinsey proved to be our mainstay. Her patience with our scribbled notes, her many hours of transcribing our ideas into typescript, and her general quiet competence were everywhere evident.

x Acknowledgments

Finally, we must thank our respective families, who accepted our long absences with forebearance and who welcomed us home with surprising good cheer.

EPHRAIM R. McLean John V. Soden

Los Angeles, California New York, New York July 1976

# Conference Participants Planning for Information Services

April 10-11, 1974

Graduate School of Management University of California, Los Angeles

Mr. Roger W. Barbey, Manager Information Development Pacific Gas and Electric Company 245 Market Street San Francisco, California 94106

Morris F. Collen, M.D., Director Medical Methods Research The Permanente Medical Group 3779 Piedmont Avenue Oakland, California 94611

Mr. Anthony J. Craine, Director Management Services CIBA-GEIGY Corporation Ardsley, New York 10502

Mr. John R. Frey, Director Computer Services Consumers Power Company 212 West Michigan Avenue Jackson, Michigan 49201 Mr. Jack B. Gearhart, Vice President and Director, Management Systems TRW Systems Group One Space Park Redondo Beach, California 90278

Mr. Alan H. Gepfert, Manager Management Sciences Programs Department Mobil Oil Corporation 150 East 42nd Street New York, New York 10017

Mr. John C. Gilbert, Director Management Information Systems Headquarters, U. S. Army Material Command Department of the Army 5001 Eisenhower Avenue Alexandria, Virginia 22304 Mr. F. A. Gitzendanner, Manage Information Systems Development Information Services Management Management Sciences Department Standard Oil Company (Indiana) P. O. Box 5910 A 200 East Randolph Drive Chicago, Illinois 60680

Mr. George Giaser, President American Federation of Information Processing Societies 225 Warren Road San Mateo, California 94402

Mr. Kent H. Gould, Chief EDP Control and Development Department of Finance State of California 1025 P. Street, Room 199 Sacramento, California 95814

Mr. Charles L. Hampton, Director Division of Data Processing Board of Governors of the Federal Reserve System 20th Street and Constitutional Avenue Washington, D. C. 20551

Dr. Richard O. Mason
Associate Professor of Information Systems
Assistant Dean, Professional Masters
Program
Graduate School of Management
University of California
Los Angeles, California 90024

Dr. Ephraim R. McLean Associate Professor of Information Systems Director, Center for Information Studies Graduate School of Management University of California Los Angeles, California 90024

Mr. Eldon G. Nicholson, Director Systems and Data Services Planning and Control Trans World Airlines, Inc. Administrative Center Kansas City, Missouri 64153

Dr. Thomas E. Reece, Assistant Superintendent

Management Information Division Los Angeles Unified School District G Building, Room 370 450 North Grand Avenue Los Angeles, California 90012

Mr. Carl H. Reynolds, Director Computing and Data Processing Hughes Aircraft Company 1901 West Malbern Fullerton, California 92634

Dr. Ward C: Sangren Coordinator of Computer Activities University of California Room 11A, University Hall 2200 University Avenue Berkeley, California 94720

Mr. John J. Shea, Vice President Systems Planning Fireman's Fund Insurance Company P. O. Box 3395 San Francisco, California 94119

Dr. John V. Soden, Partner McKinsey & Company, Inc. 245 Park Avenue New York, New York 10017

Dr. George A. Steiner
Professor of Management and Public Policy
Director, Center for Research and Dialogue
on Business in Society
Graduate School of Mangement
University of California
Los Angeles, California 90024

Mr. Donald E. Stiling, Manager System Services The Procter & Gamble Company P. O. Box 599 Cincinnati, Ohio 45201

Mr. Francis A. Stroble, Director Management Information and Systems Monsanto Company 800 North Lindbergh Boulevard St. Louis, Missouri 63166 Mr. Charles C. Tucker, Associate McKinsey & Company, Inc. 611 West Sixth Street Los Angleles, California 90017

Mr. Robert E. Umbaugh Manager of Data Processing Southern California Edison Company P. O. Box 410 100 Long Beach Boulevard Long Beach, California 90801 Mr. P. Duane Walker Manager of Business Systems IBM Corporation 133 Westchester Avenue White Plains, New York 10604

Mr. Laurence S. Weinstein Corporate Systems Controller Xerox Corporation High Ridge Park Stamford, Connecticut 06904

## Contents

Co	Conference Participants		
	PART I INTRODUCTION		
1	The Planning Challenge for MIS	3	
2	Comprehensive Managerial Planning	31	
	George A. Steiner		
3	A Survey of Information Services Planning Practices	64	
4	Strategic Planning for Information Services	79	
	PART II INFORMATION SERVICES PLANNING IN THE PRIVATE SECTOR		
5	CIBA—GEIGY Corporation	109	
	Anthony J. Craine		
6	TRW Systems Group	122	
	Jack B. Gearhart		
7	Hughes Aircraft Company	139	
	Carl H. Reynolds		

xii		Contents
8	Mobil Oil Corporation	145
	Alan H. Gepfert	
9	Standard Oil Company (Indiana)	159
	F. A. Gitzendanner	
10	International Business Machines Corporation	168
	P. Duane Walker	
11	Xerox Corporation	182
	Laurence S. Weinstein	
	PART III INFORMATION SERVICES PLANNING IN THE REGULATED OR QUASI-PRIVATE SECTOR	
12	Consumers Power Company	201
	John R. Frey	
13	Pacific Gas and Electric Company	217
	Roger W. Barbey	
14	Trans World Airlines, Inc.	230
	Eldon G. Nicholson	
15	The Permanente Medical Group and Kaiser Foundation Research Institute	257
	Morris F. Collen, M.D.	
	PART IV INFORMATION SERVICES PLANNING IN THE PUBLIC SECTOR	
16	Board of Governors, Federal Reserve System	279
	Charles L. Hampton	
17	U. S. Army Materiel Command	300
	John C. Gilbert	
18	Los Angeles City Unified School District	307
	Thomas E. Reece	

#### Contents

19	State of California	316
	Kent H. Gould	
20	University of California	327
	Ward C. Sangren	
	APPENDICES	
A	IBM Corporation Information Systems Planning Requirements	341
В	Mobil Oil Corporation Planning Documents	378
C	U. S. Army Materiel Command ADP and MIS Plan	387
D	Xerox Corporation Information Systems Long-Range Plan	446
E	Survey Questionnaire Forms	459
	Initial Questionnaire on Long-Range Planning for Information Systems	460
	Follow-Up Questionnaire on Planning for Information	465
	Systems	467
	ABOUT THE CONTRIBUTORS	475
	INDEX	481

Introduction

1

### The Planning Challenge for MIS

Mark Twain's remark about the weather might well be applied to planning: "Everyone talks about it, but nobody does anything about it." The importance of planning for improved managerial effectiveness is widely endorsed by practitioners and academics alike. In fact, given the accelerating pace of change in almost every aspect of the economy, planning is frequently touted as the key to success, if not to survival. But as our paraphrase implies, the gap between interest and achievement in the planning area is great. Faced with the pressing problems of day-to-day operations, many executives have neither the time nor the inclination to invest in planning for the longer term. However a number of major organizations in the United States are doing something about planning—in particular, about planning for management information services. This book is about their efforts.

The term "MIS," standing for either management information systems or management information services, is being used increasingly throughout the world to refer to the cluster of activities that surround the computer and its supporting personnel. However it is more than the data processing department alone, for it includes the planning, analysis, and design activities, as well as the operational functions, which are necessary for effective computer-based information systems to serve corporate needs. For this reason, many MIS groups go under the broader title of "management services," incorporating not only the