

OFFICE AUTOMATION

An Essential Management Strategy

Susan Curran
and
Horace Mitchell



MACMILLAN PRESS
LONDON

Contents

| | |
|--|-------------|
| <i>List of Figures and Tables</i> | <i>viii</i> |
| <i>Acknowledgements</i> | <i>ix</i> |
| <i>Introduction</i> Why Bother the Board? | 1 |
| 1 THE GROWTH AND SIGNIFICANCE OF THE OFFICE | 5 |
| The growth of white-collar work | 5 |
| Technology and information | 7 |
| Attitudes to the office | 10 |
| The role of the office | 12 |
| The new office professions | 15 |
| Summary | 19 |
| 2 NEW TECHNOLOGY: UNDERSTANDING THE IMPACT | 20 |
| The pressure of change | 20 |
| Microelectronics | 21 |
| Information: the key resource | 26 |
| Telecommunications: the new highway | 26 |
| Databases and databanks | 30 |
| Techniques of selection and retrieval | 34 |
| Summary | 38 |
| 3 THE PURPOSE OF OFFICE SYSTEMS | 40 |
| The management of complexity | 40 |
| Employee and employer: a changing relationship | 43 |
| Information flow: the impact of computing | 45 |
| The information paradox | 49 |
| Towards a solution | 52 |
| Summary | 54 |

| | | |
|---|--|-----|
| 4 | TECHNOLOGY IN THE OFFICE 1: THE MECHANISATION PHASE | 56 |
| | The mainframe monster? | 56 |
| | Systems development: a pattern of fragmentation | 59 |
| | Mechanisation: the task concept | 62 |
| | The proliferation of machines | 64 |
| | The burden on management | 66 |
| | Summary | 68 |
| 5 | TASKS AND TECHNIQUES: OFFICE TECHNOLOGY AS A TOOL FOR MANAGEMENT | 69 |
| | The nature of management work | 69 |
| | A growing role for technology | 73 |
| | Evolution in computing | 75 |
| | Management interaction with the computer | 80 |
| | The all-purpose terminal? | 83 |
| | Summary | 86 |
| 6 | FORM AND FUNCTION: AN APPROACH TO THE AUTOMATED OFFICE | 87 |
| | Defining the problem: input, processing and output | 87 |
| | Processing | 90 |
| | Output | 92 |
| | Automating the office | 93 |
| | The network | 95 |
| | The emerging pattern | 97 |
| | The automation revolution | 100 |
| | Summary | 101 |
| 7 | TECHNOLOGY IN THE OFFICE 2: FRONTIERS AND BARRIERS | 102 |
| | The pace of development: too fast – or too slow? | 102 |
| | New developments in technology | 103 |
| | New approaches to input | 104 |
| | Processing and storage | 106 |
| | Communications: opportunities and constraints | 110 |
| | The paperless office? | 112 |
| | Image and sound: a new dimension of choice | 114 |
| | The development gap | 116 |
| | User-implemented systems | 120 |
| | Summary | 121 |

| | |
|---|------------|
| 8 THE HUMAN FACTOR: A MATTER OF CHOICE | 123 |
| Attitudes to change: the uncertainty factors | 123 |
| The collapse of work? | 124 |
| Growth factors and the shift in resources | 125 |
| Ability constraints and skill development | 126 |
| Job design and careers | 128 |
| Participation in design | 130 |
| Built-in desirability | 131 |
| Productivity – or results? | 132 |
| The management of change | 133 |
| Summary | 135 |
| | |
| 9 THE NEED FOR A MANAGEMENT STRATEGY | 137 |
| Separation of responsibilities | 137 |
| Technology-centred v. people-centred | 138 |
| Ownership of the system | 141 |
| Skill shortages | 142 |
| Reasons for low investment | 144 |
| Difficulties of evaluation | 147 |
| Strategy v. tactics | 152 |
| Summary | 153 |
| | |
| 10 A STRATEGY FOR OFFICE AUTOMATION | 155 |
| Ingredients of the strategy | 155 |
| The decision structure | 158 |
| Implementation structure: the two-levels approach | 159 |
| Designing the future | 161 |
| Equipment selection: establishing the right rules | 163 |
| Supplier selection | 164 |
| Equipment costs: overhauling the budget process | 166 |
| Investment levels and the learning curve | 167 |
| Managing in the new environment | 169 |
| Assessing the unmeasurable | 172 |
| Summary | 178 |
| | |
| <i>Conclusion</i> The Case for Executive Action | 179 |
| | |
| <i>Bibliography</i> | 183 |
| | |
| <i>Index</i> | 186 |