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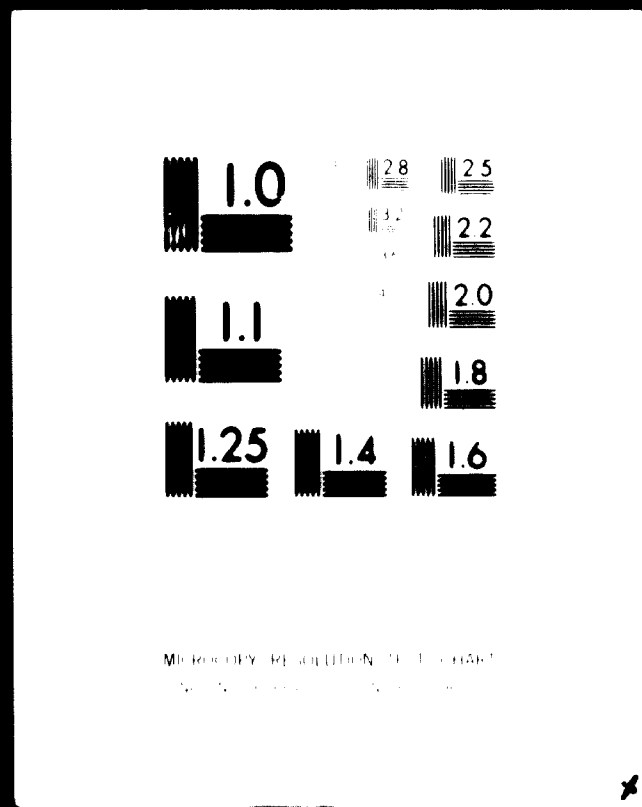
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FINAL REPORT

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Jugoslaviz.

ASSISTANCE IN MANAGEMENT

IN

ZENICA - PHASE II

UNIDO CONTRACT NO 72/35

PROJECT NO BR/YUG/70/511

P A International Management Consultants Ltd

July 1974

PREFACE

This was a co-operative project involving the Centre for Organisation and Development, P A International Management Consultants Ltd, and the enterprise RSK - Zenica. This project was the second phase of assistance provided by UNIDO to improve the management practices of the enterprise.

The aim of the project was to assist the enterprise and the Centre to examine and further develop the accepted programmes identified in the first phase of the project. The broad areas covered were as follows:

- Organisation Structure and Management Development
- Marketing and Planning
- Finance and Management Information Systems

The experts provided by P A International Management Consultants Ltd and their length of time in the Project Area were as follows:

J Therburn	Team Leader	26 weeks
A R Sanderson	Marketing Specialist	18 weeks
W M W Adam	Information System Specialist	26 weeks
	Total:	<u>70 weeks</u>

The project was completed on 30 June 1974.

For completeness and interest, two Annexes have been written and are attached to this report:

Annex 1 - A short history of "Workers' Participation in Management" in Yugoslavia

Annex 2 - A short extract from a report summarising the very successful project in Industrial Engineering, carried out concurrently with the project under review at RSK-Zenica by P A International Management Consultants Ltd, the Yugoslav Centre for Organisation and Development and staff from the enterprise.

This project was a direct contract project between the parties concerned, and although it did not involve UNIDO financial assistance, it could be said that it was UNIDO originated. It also commenced in September 1972 and is currently continuing.

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PART I

BACKGROUND TO THE PROJECT

- A Profile of H&B-Zenica**
- B Corporate aims and objectives**
- C Marketing Environment**
- D Effect of amendments to the self-management system**
- E General remarks**
- F Workers' Participation in Management**

A PROFILE OF RPK-ZENICA

1 Composition at Commencement of Project

At the commencement of the second phase of the project in September 1972, the composition of RPK-Zenica, as a result of mergers between the Iron and Steelworks Company at Zenica, and other companies, in 1968, 1969 and 1970, was as follows:

- Iron Ore Mines and Ironworks Companies (4)

These four companies are all located around the town of Zenica within a radius of 50 to 150 kilometers and are all engaged in mining iron ores and/or producing pig iron and iron castings. Each company enjoys substantial autonomy in the sense that it has its own General Manager and management board, but operates under the rules of the self-management agreements. Each company comprises one or more basic economic units or 'profit centres', although it may sell all, or practically all, its production to the Kombinat.

- Limestone Quarry (1) remarks as above

- Metal Product Manufacturers (6)

These companies were, in effect, formerly competitors of Zenica which has had a wire-making department in its own main plant since the 1920's. They purchase all their raw material requirements from Steelworks Zenica and sell their finished products more or less independently of Zenica.

- Screws and Bolts Manufacture (2) - remarks as above

- Steelworks Zenica

This is the parent and largest company in the group. It comprises Coke-ovens, blast furnaces, open-hearth furnaces, rolling mills, forge and machine shop. Main products from the rolling mills are mild and medium carbon steels in wire, rod and profile sections. Current capacity is about 1 million tons of steel ingots per annum. Production volume and products are as follows:

<u>Products</u>	<u>Production Volume ('000 metric tons)</u>					
	1966	1967	1968	1969	1970	1975 (planned)
White pig iron	666	713	706	617	745	1800
Raw steel	884	905	883	890	1000	2000
Final rolled products	679	711	725	752	776	1641
Forgings	12	9	11	12	11	36
Axle assemblies	9	9	8	8	9	9
Iron ore	2295	2219	2257	2488	2500	6200
Grey pig iron	103	82	40	54	74	242
Castings	55	44	44	53	74	139
Brown wire	45	36	43	55	59	94
Nails	12	11	7	7	11	15
Screws and bolts	10	7	9	10	10	20

The requirements for the 1975 plan include the construction of two new coke-oven batteries, two new blast furnaces, three L D converters, each of 100 tons capacity, plus continuous casting plant and two new rolling mills. This equipment is currently in the course of installation.

The company policy is slowly moving from a purely quantitative aspect to a qualitative aspect. One of the objectives is now to become a competitive steel maker and a leader in its own domestic market in terms of range of products, quality and service.

BDK's geographical position is excellent as regards the location of all raw materials (except coal) and domestic markets, but access to overseas markets could be more costly compared with plants located on the coast. Coking coal is obtained from 'comcon' countries, since none is available in Yugoslavia.

2 Organization Structure of the Kombinat (see Chart No 1)

In September 1972 the number of Basic Economic Units (operating units or profit-centres known as OOURs) making up the Kombinat, including Steelworks Zenica, numbered 14. The General Manager of each OOUR reported directly to the General Director of the Kombinat.

Also reporting directly to the General Director were three Directors (Technical, Financial & Economic), a Legal Assistant and seven Departmental Managers - all located at the Head Office. Thus, in all, some 26 executives reported directly to the General Director.

The 14 operating units are in no way uniform, nor can they operate in a completely independent manner. Some furnish raw materials exclusively and some make finished products using Steelworks Zenica steel. There is a very great disparity in the size and sophistication of the units. For the most part, they could not have established a profitable future for themselves if they had been left completely on their own.

These separate operating units - especially those which were, until the merger, independent companies - want to retain their identity, and they particularly place great value in preserving the relationships between their contribution to the Kombinat and their personal income - thus the name 'profit-centres'. This is a worthwhile feature which helps to motivate workers and managers, permitting them to share income in accordance with productivity. However, the fact that those operating units do not completely control their commercial activities, and particularly since they have no say over their selling prices since steel prices are controlled, profit is not the best criterion on which to measure the success of all operating units.

All operating units within the Kombinat cannot maintain complete technical staffs of adequate quality, and yet the best technical capability existing within the Kombinat must be made readily available wherever and whenever required by each operating unit. This is currently achieved in some measure by having a "staff" function at Kombinat level, comprising specialist Directors and their personnel advising in various fields, alongside the "line" organisation personnel responsible for the major functions - production, marketing and finance.

Production plans and quotas are based on past performance and negotiation rather than on true capacity as determined by engineering studies. As a result, plans are relatively easy to achieve and do not represent a uniformly high level of performance.

There is very little marketing effort at the Kombinat; greater profitability could perhaps be achieved by more effective marketing. To realise this, however, requires an accurate knowledge of costs, both actual and standard, which is not available.

Management information and business systems are weak points in the organisation at the Kombinat. Although there is a wealth of data available throughout the organisation it is not in the form that is most useful to management. There is no organisation unit in the Kombinat capable of developing and implementing business systems of the quality needed.

D CORPORATE AIMS AND OBJECTIVES

HPK Zenica possesses 5 and 15 year plans for its steel-making operations. These plans are expressed in terms of tons of steel, types of product produced, types of technology used and number of employees - they are not expressed anywhere in terms of return on investment or profit.

The enterprise has established no objectives for itself expressed in financial or marketing terms. Questions put to Directors and Senior Executives of the company during personal interviews, regarding corporate aims and objectives received the following typical answers:

- to develop Bosnia
- to satisfy the Nation's demand for steel
- to improve the remuneration of the enterprise's employees
- to provide better living conditions for employees, more flats, etc etc.

These objectives, although commendable, are too vague to be of service in resolving difficult decisions within the enterprise and to provide a basis for the development of action-oriented plans.

C MARKETING ENVIRONMENT

The market environment in which HPK-Zenica operates contains a number of specific features which tend to pre-determine the nature and mix of the marketing activities employed by the company, and even to relegate marketing to a position of relatively minor importance within the organisation. These features comprise:

1 The Absence of a Competitive Market

Steel, and for the most part, steel products, are in short supply within Yugoslavia. Domestic demand substantially exceeds production as shown in Chart No 2; as a consequence considerable quantities must currently be imported by users.

Importation requires the use of scarce foreign currency which steel consumers would prefer to reserve for the purchase of other items not produced in Yugoslavia. Accordingly, domestic steel producers, such as HPK-Zenica, find themselves in a seller's market with consumers anxious to buy whatever quantities of steel can be produced at whatever terms are asked for.

Competition between producers on quality, service etc therefore scarcely occurs.

The industry optimisation plans of the Union of Yugoslav Steel Producers (consisting of RPK-Zenica and the six other steelworks in Yugoslavia) have had the effect of further reducing competition within the industry. The Union has, in the national interest, divided the activities of its members in such a way as to permit production specialisation to occur. Thus, RPK-Zenica specialises in the production of mild and medium steel rollings, such as profiles and bars, while other steelworks specialise in alloy steels or in steel sheet and plate. This specialisation has had a side-effect - the elimination of the alternative sources of supply which customers can use to generate a competitive market.

The Kombinat's need for marketing skills and expertise to meet competitive pressures on steel sales is accordingly limited, at least at the present time. This situation could conceivably alter after 1975 when the current expansion plans of RPK-Zenica and other Yugoslav steelworks will result in sufficient plant capacity being available potentially to satisfy the domestic market.

At the present time, only six of the subsidiary companies of RPK-Zenica (Novi Sad, Bihać, Mrkonjić Grad, Bosanska Gradiška, Pirnjavor and Bosanski Kostajnica) producing finished metal products such as screws, chains, nuts and bolts, etc can be said to operate in anything approaching a competitive market environment. These companies account for less than 10% of the current external turnover of the Group.

2 The Presence of Price Control

In their efforts to control inflation, the Federal Executive Council and the Governments of the Republics have imposed price control on virtually every commodity. Prices for steel and steel products, being basic to the economy, are under rigid control, thus effectively eliminating the price element from the marketing aspects of the Kombinat's activities.

3 Limitations on the Number of Customers Available

As a developing country, Yugoslavia is not yet fully industrialised and the number of potential purchasers for the products of the Kombinat is limited.

This number effectively has been further reduced by the recurrent liquidity crises faced by Yugoslav industry. Through over-investment in stock, plant and personnel resources, and inadequate control over credit, many Yugoslav enterprises are faced with a liquidity shortage which prevents them paying for goods they have purchased.

The problem facing enterprises such as ISK-Zenica has therefore changed from finding potential customers who need steel and steel products, to finding potential customers who can pay for these products.

By necessity, the planning of how to get paid for the goods produced has become the major pre-occupation of the personnel who should be more properly engaged in planning marketing and sales operation.

Sales negotiations now principally involve discussion on terms of payment and the arrangement of "compensation" (a process of settling debts by contra, involving three or more parties).

Sales service principally involves the policing of earlier-made agreements regarding payment.

4 Conclusions

The enterprise's current need for marketing skills is of a very low order.

For basic steel products, the company operates in a virtually non-competitive market environment. Even when supply ultimately matches demand in Yugoslavia, the operations of the Union of Yugoslav Steel Producers will probably tend to regulate the market so as to eliminate "wasteful" competition. However, some added attention to marketing will probably be desirable after 1975.

Otherwise, the need for marketing expertise and skills is confined to:

- the finished steel products area, representing less than 10% of the current business
- the development of export markets
- increasing the cost-effectiveness of the existing marketing effort.

TABLE 1

TRADING ACCOUNT - NPK ZENICA

(Corrected to comply with current modern practice)

	<u>1971</u>	<u>1972</u>
	(Millions of dinars)	
External sales	2660	3038
Other sales revenue	<u>632</u>	<u>766</u>
<u>Sales revenue per year</u>	<u>3292</u>	<u>3804</u>
Closing stock	243	354
<u>Less opening stock</u>	<u>121</u>	<u>242</u>
<u>Change in stock levels</u>	<u>122</u>	<u>112</u>
<u>Value of Production</u>	3414	3916
Material issues	2386	2555
Other material costs	155	159
Cost of materials sold	249	351
Personal incomes	<u>556</u>	<u>702</u>
	<u>3346</u>	<u>3767</u>
<u>Less cost of internal services</u>	<u>739</u>	<u>862</u>
Labour and material costs	<u>2607</u>	<u>2905</u>
Operating margin	807	1011
Depreciation	334	469
Travel	19	20
Non Production Service	48	70
Insurance:	26	32
Loan internal	79	112
Other operating expenses	30	31
Transfer to building account	<u>22</u>	<u>28</u>
	<u>568</u>	<u>762</u>
Operating profit	239	249
Other income	61	24
<u>Less other expenses</u>	<u>39</u>	<u>83</u>
Other income & expenses	<u>22</u>	<u>41</u>
Profit before tax	261	290
Less taxes paid	<u>14</u>	<u>10</u>
Profit after tax	<u>247</u>	<u>280</u>

TABLE 2

SALES OF ZEPK ZENICA - 1972

Rolled steel products	615,000	tons
Forged products	12,700	"
Nails and accessories	49,700	"
Parts for railway wagons	7,300	"
Rolled steel tyres	3,400	"
Semi-finished products	18,300	"
Second quality materials	2,500	"
Castings	16,800	"
Drawings	81,100	"
Nails and wire	28,900	"
Pipes	10,800	"
Chains	300	"
Raw steel	89,800	"
Other steel products	320	"
<hr/>		
Coke	39,000	"
Iron ore	1226,200	"
By-products	362,000	"
Limestone	65,200	"
<hr/>		
Screws and nuts	35,234,000	dinars
Screws and wire cloth	15,274,000	"
Stoves, flue pipes, cooking equipment	19,574,000	"
Other products	5,608,000	"
Reinforcing mesh	15,787,000	square metres
<hr/>		

TABLE 3

EMPLOYMENT AT PLANT LOCATIONS - IRK ZENICA
FEBRUARY 1973

<u>Plant location</u>	<u>Persons employed</u>	
Zenica - steel works	12,955	
- head office	758	
Vares	2,271	
Ljubija	2,698	
Ilijas	3,066	
Sarajevo	1,112	
Novi Sad	686	
Bihac	410	
Mrkonjic Grad	368	
Bosanska Gradiska	194	
Prijedor	171	
Gornji Vakuf	132	
Deboj	214	
Bosanska Kostajnica	273	
Bijeljina	4	} under construction
Casin	3	
	<u>25,315</u>	

TABLE 4

PRODUCTION OF YUGOSLAV STEELWORKS - 1970

<u>Steelworks</u>	<u>Production volume</u> (000 tons)	<u>Revenue</u> (Millions of dinars)
Zenica	777 (39.7%)	3006 (43.8%)
Nikolic	137	536
Sisak	196	854
Skoplje	277	N/A
United Metal Enterprises in Slovenia	308	2166
Smederevo	60	303
	<hr/>	<hr/>
TOTAL	<u>1955</u>	<u>N/A</u>

TABLE 5

FORECAST PRODUCTION CAPACITY
YUGOSLAV STEELWORKS - 1975

Steelworks	Type of steel '000 tons					
	Profiles	Plates	Tubes	Rolled Products	Other	Total
Zenica	1340	-	-	120	45	1505
Niksic	77	27	-	26	-	130
Skoplje	-	955	-	-	-	955
United Metal Enterprises in Slovenia	195	320	-	90	67	670
Smederevo	-	200	100	-	-	300
Split	100	-	-	-	-	100
TOTAL	1710	1542	510	236	212	4210

TABLE 6

FORECAST DOMESTIC CONSUMPTION OF STEEL

YUGOSLAVIA - 1975

	Actual 1970 (tons)	Actual 1971 (tons)	Forecast 1975 (tons)
Railway lines	79,260	83,920	122,170
Hard profiles	101,410	109,350	150,560
Other profiles	N/A	N/A	1,144,540
Rolled wire	84,700	92,170	88,630
Semi products	70,100	81,240	97,950
Forging steel	33,700	33,950	96,500

TABLE 7

LIST OF THE OOUR'S FORMED AS A RESULT OF THE
SELF-MANAGEMENT AGREEMENTS

HPK ZENICA - 1973

<u>OOUR</u>	<u>PLANT LOCATION</u>
Coke plant Blast furnaces Steel melting shop Rolling mills Forge Transport Heat economy Maintenance Technical control Administration	Zenica
Mines Blast furnaces Foundry Maintenance Warehouse Transport Mechanical shop Administration	Varos
Main ore mine Eastern ore mine Repairs & maintenance Mine building work Canteen Administration	Ljubija
Electrical plant Foundry Maintenance & heat economy Metallurgical parts & construction Administration	Ilijas
Wire plant, "Alipasin Meat"	Sarajevo
Screw & wire products plant	Novi Sad
Wire processing plant	Bihac
Screw plant	Mrkonjic Grad
Metal products plant	Bosanska Gradiska

....cont'd

TABLE 7 (cont'd)

Chain plant	Prnjavor
Iron ore mine	Goraji Vakuf
Limestone mines	Doboj
Agricultural machinery plant	Des Kastajnica
Administration of RMK Zenica	Zenica Head Office

D SELF-MANAGEMENT SYSTEM AND AMENDMENTS

Control of business enterprises in Yugoslavia is deputed to their employees with the responsibility to manage and develop the enterprise in the interests of the nation.

Each employee of an enterprise participates in the election of its Workers' Council, which is the governing body of the enterprise and has total control of its plans, policies and actions.

1 Position in 1972

At the time of commencing the project, larger enterprises in Yugoslavia, because of their size, history or decentralised operation, were organised into smaller units (known as SOUR's) for the purpose of self-management, thus enabling greater worker participation in management and decision-making. SOUR's, each having their own individual representative workers' Collectives possessed a closer community of interest than the enterprise as a whole, and were responsible for their own profit performance and hence remuneration levels.

Thus, within RSK-Zenica, each plant location was a separate self-managing SOUR, with the Head Office at Zenica being formed into a 14th SOUR. The manufacturing SOUR's had, by agreement, deputed many management and administrative functions to the Kombinat SOUR, including

- finance
- selling and purchasing
- economic planning
- personnel and organisational services
- quality control
- transport
- new investment
- maintenance
- planning for production etc

This agreement enabled the Kombinat SOUR to act as a Head Office to the Group of companies, with the other SOUR's acting as manufacturing subsidiaries, responsible for their own profit performance. The Head Office SOUR was organised into a number of Divisions, as previously described, under the control of a General Director reporting to the Workers Council of the entire enterprise.

2 The New Amendments 1973

Amendments to the self-management legislation which became effective during 1973 were introduced in order to:

- provide groups of workers with greater autonomy over the work they carry out and the rewards they receive
- provide greater worker participation in management decision-making
- more closely relate the remuneration of the worker to the actual contribution he makes to the enterprise's well-being by establishing smaller profit centres
- forestall the growth of a management elite divorced from the worker and his problems

In effect, the new Amendments give the right of forming self-management units (known as OOUR's) to any aggregation of workers forming a group separate from others in terms of location, type of employment, product produced, process etc etc.

This right to form an OOUR is subject to two basic provisos:

- that the remainder of the employees in the enterprise do not oppose its formation
- that its operations are discreet so that separate balance sheets and accounts can be meaningfully prepared.

OOUR's can legally determine their own conditions of employment, remuneration, etc, and as separate profit centres, can purchase their own supplies, fix their own prices, market their own production, invest their own capital etc etc.

3 Consequences of the Amendments at RPK Zenica

Within RPK Zenica, the publication of the Amendments raised the following questions, on which a consensus had to be obtained:

- how many OOUR's were to be formed?
- what would be the inter-relationship between OOUR's, particularly in large plants such as Steelwerke Zenica where the output of individual OOUR's is inter-dependent and their activities need to be integrated as closely as possible to form a virtually continuous process?
- would the existing Head Office concept at RPK Zenica be retained? Would a Head Office OOUR be formed? What functions would it perform?

- what would be the form of the relationship between any Head Office OOUR and the various individual OOUR's it might serve? How would it be recompensed for its services?
- what functions would the individual OOUR's seek to perform for themselves?
- how could functions which are currently centralised in the interests of efficiency be decentralised without a major increase in cost and unnecessary duplication? Where could the necessary personnel be obtained? How could they be trained?

Obtaining answers to these and similar questions totally absorbed the decision-making capability of the Kombinat from November 1972 until the end of 1973.

As a consequence very few decisions were made by the enterprise on the recommendations generated by the project teams in organisation, marketing and finance, and without decisions accepting the recommendations little implementation has been able to be undertaken under the direct guidance of the foreign consultant project teams.

The project teams were, however, required repeatedly to give their advice on the many problems raised by the Amendments and thus contributed in many ways towards orienting the thinking of the various committees formed to consider them.

4 Main Results of the Amendments

While many details are not yet finalised, the following items summarise the outcome of the enterprise's deliberations on the self-management Amendments:

- BHK Zenica will comprise 39 OOURS (rising to 41 with the completion of the plants at Bijeljina and Cazin.
- Small manufacturing locations will constitute a single OOUR, but larger plants will be divided (for example, Steelworks Zenica will comprise 10 OOUR's, Vares 8, Ljubij 6 and Ilujas 5).
- The larger plants containing more than one OOUR will each constitute a ZOOUR (Union of OOURS) having a function to co-ordinate the activities of the component OOURS and to undertake certain activities at a community level.
- Separate financial accounts will be prepared for each OOUR, but in the case of the larger plants, these will be prepared at the level of the ZOOUR, rather than at OOUR level, as will the smaller plants.

- A Management OOUR ("Common Services") will be formed at Kombinat level to assume the role of a Head Office, to provide services for use in common by the individual OOURs and to provide co-ordination and advice. The "Common Services" OOUR will undertake these functions under contract to the individual OOURs and ZOURs.
- The OOURs will unionise part of their assets and funds to be administered by the "Common Services" OOUR.
- The "Common Services" OOUR will undertake the bulk of the operations presently conducted at Kombinat level.

The extent to which commercial, marketing, selling and purchasing functions will be undertaken by the "Common Services" OOUR has not yet been fully determined, but it is likely that the recommendations contained in Section D 1 of the Marketing Report will be fully accepted.

GENERAL REMARKS

- 1 The project was undertaken at a time when RPK-Zenica, in common with all other enterprises in Yugoslavia, was in the process of examining and interpreting the newly promulgated Amendments to the self-management laws of the country.

This involved RPK-Zenica in substantial internal discussion and negotiation regarding the redistribution of management control and decision-making powers within the various sections and companies of the enterprise, a process which continued throughout 1973 and into 1974.

The net effect was to slow the actual process of decision-making within the enterprise. As a consequence, the rate of implementation of the project teams' recommendations has been far slower than was anticipated at the time of commencement of the project.

- 2 The current short supply of steel, and for the most part, steel products within Yugoslavia, will not be overcome until at least 1975 and possibly even later. Until that time, when, and if, a truly competitive steel market will exist in Yugoslavia, the need of RPK-Zenica for sophisticated modern marketing techniques will be limited.

- 3 Delays in implementation of the various teams' recommendations did not represent a serious threat to the enterprise's immediate performance or well-being. Delays, in fact, have already proved advantageous because they have allowed greater time to be available for the development of individual professional skills within the client's staff.

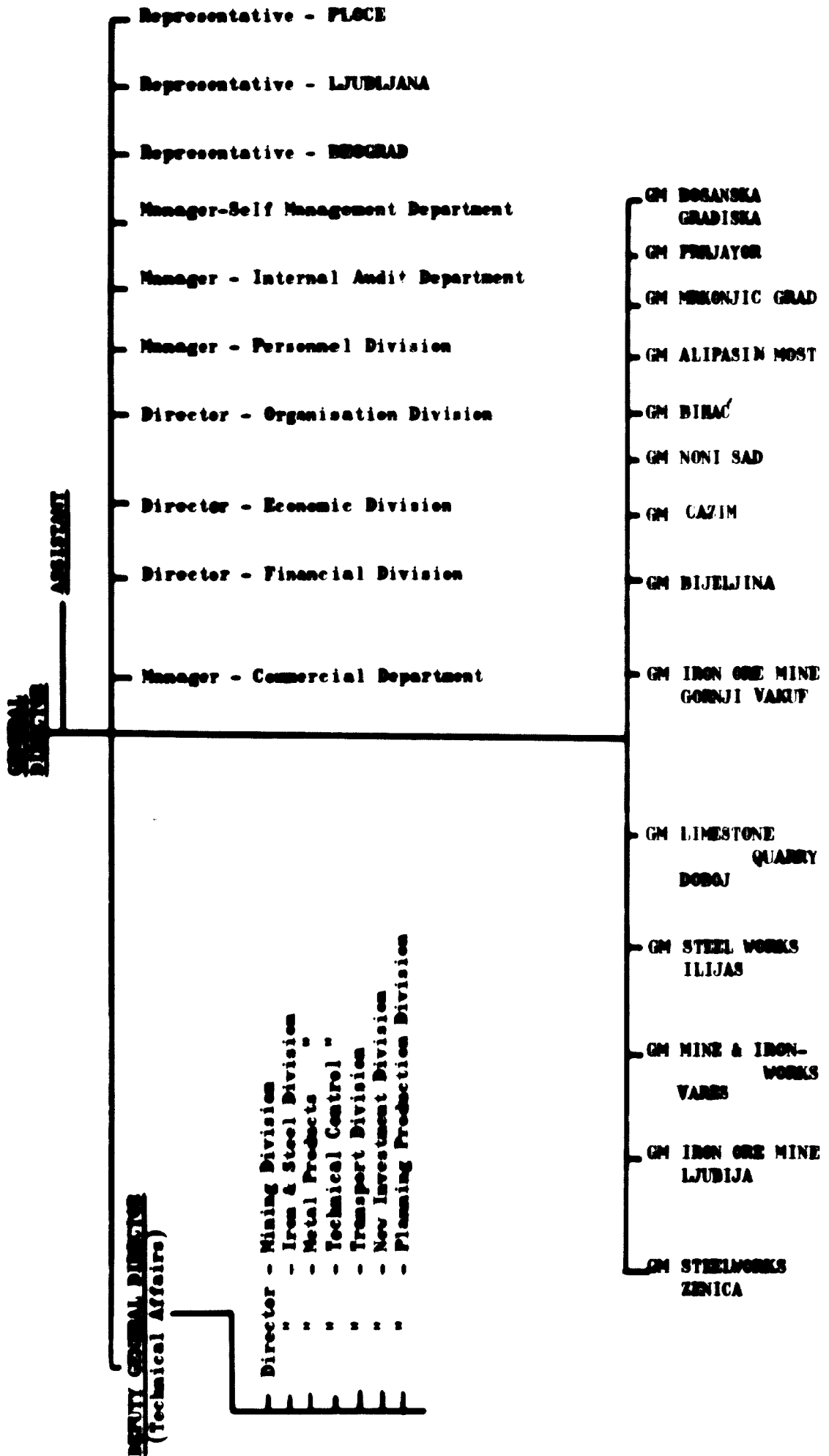
Similarly, additional time has been available for furthering the expertise of the YUCOR consultants engaged in the projects.

FACTORY ORGANISATION STRUCTURE

EXISTING IN SEPTEMBER 1972

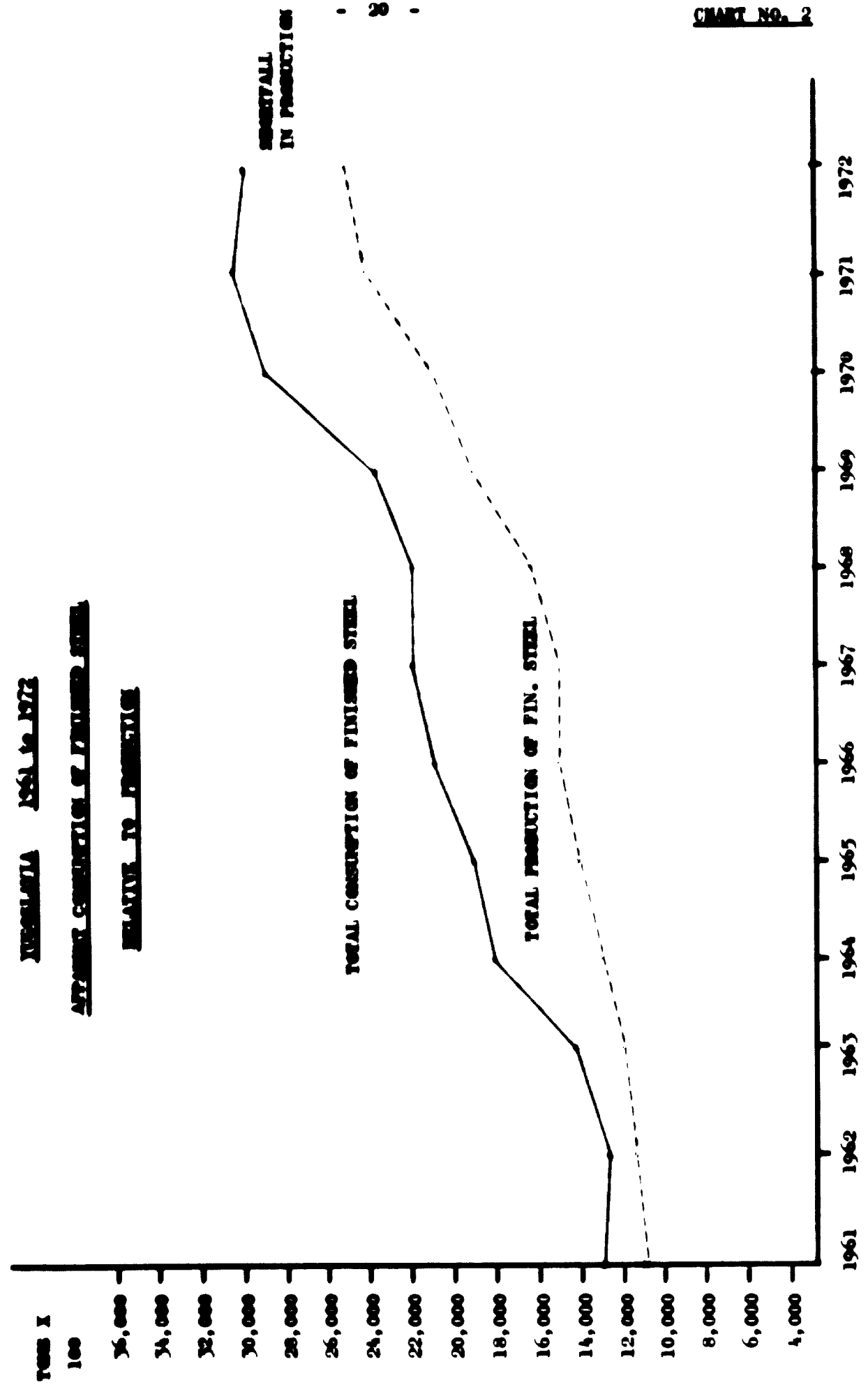
INA "TRINKA"

(29,643 Employees)



VERMONT 1961 to 1972
APPARENT CONSUMPTION OF FINISHED STEEL
RELATIVE TO PRODUCTION

CHART NO. 2



TOTAL CONSUMPTION OF FINISHED STEEL

TOTAL PRODUCTION OF FIN. STEEL

SHORTFALL
IN PRODUCTION

0 8 0

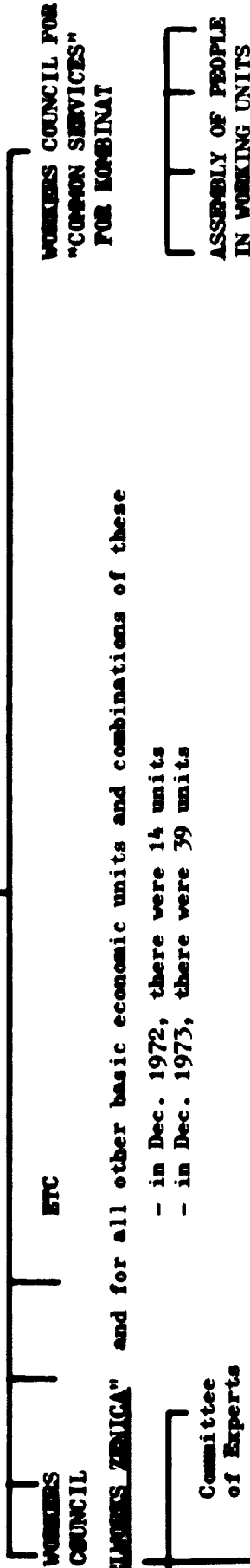
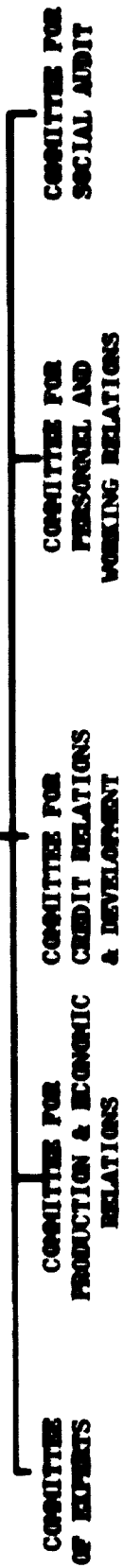
TONS

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1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972

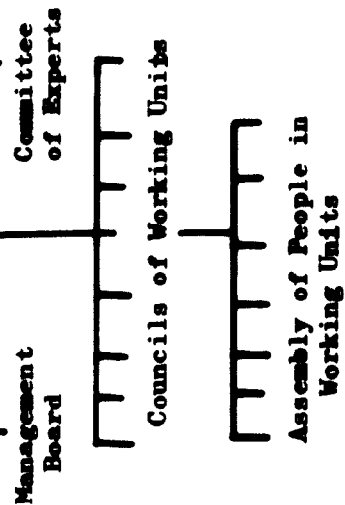
**SELF-MANAGEMENT ORGANISATION STRUCTURE
AT IM KOMBINAT "ZEMICA"**

**KOMBINAT WORKERS
COUNCIL**



"STREBARNIKS ZEMICA" and for all other basic economic units and combinations of these

- in Dec. 1972, there were 14 units
- in Dec. 1973, there were 39 units



F WORKERS' PARTICIPATION IN MANAGEMENT

1. INTRODUCTION

In reporting on the work carried out to investigate and develop a new macro-organisation structure at R.M.K.Zenica, it is necessary to know and understand a little about **WORKERS' PARTICIPATION IN MANAGEMENT** in Yugoslavia. This is so because the operation, and development - (ever since the project commenced) - of the self-management system has had a fundamental influence on macro and micro-structure investigations at this major iron and steel manufacturing complex, as it has had indeed, in all enterprises in Yugoslavia, particularly during 1973 and 1974 to date.

The evolution of workers' participation in management, through the system of self-management, can be divided into three periods:

2. Period 1. - 1947-52 - Management of the Economy by the State Administration

During this period, companies were fully controlled by the State and had little freedom of action. All important decisions regarding the operation and development of the company were taken by the State. Individual company action was limited to making proposals and observations. Workers' influence on management was exerted indirectly through the trade unions (every worker is eligible for membership of the appropriate trade union, and, as a rule, all members of the same company belong to the same union). The unions had the right to submit to the managing director of the company proposals for increasing productivity and improving working conditions.

The introduction of the first workers' councils, in December, 1949, was the starting point of abandonment of the administrative system of management of the economy. These councils had no powers of decision but had the right to make proposals which the managing director was bound to take into account. Disagreements between councils and directors were arbitrated by a State agency.

With the introduction of workers' self management, the direct influence of the State was abolished and the managing director's powers were controlled by the 'work collective', through elected bodies.

3. Period 2 - 1953-64 - Construction of the System of Workers' and Social Self Management

During this period, companies were gradually given the right to a share in their profits, after meeting their obligations to the State. This measure gave the company greater responsibility for its financial success. Sections of larger companies that had separate records and accounts were transformed into self-managing "work units". As these units acquired greater independence, antagonism developed between them and the central professional management, and also between the work units themselves.

Between 1952 and 1956 workers' self-management did not have much influence in the allocation of the income of companies, but workers did have a share in the profits, in addition to their salaries. In 1957, however, the fixing of salaries by the State was abolished and the company was free to allocate its net income, after taxation, to capital, welfare and workers' incomes.

4. Period 3 - 1965 and after - Consolidation of the Self-
Managing Society

The basic Law of 1965 on companies gave fuller expression to the concept of organisations as free associations of responsible work partners (as opposed to wage-earners) managing the organisation directly or through delegated bodies. The primary organisation for this purpose is the work unit. The legal powers of the work unit are to exercise the self-management rights, excepting those which, in the interest of the whole company, must be exercised by the whole collective of the company directly, or through management bodies.

One of the aims of the economic reform was to increase the share of personal income in the national income. The law provides criteria which companies should apply in allocating part of the net income to personal incomes. A minimum guaranteed income is laid down by Federal order.

5. Structure of Workers' Self Management

Self-Management of a company may be carried out at one, two or three levels, depending on whether the enterprise is small and simple, larger and complex or very large and very complex (R.M.K. Zenica is an example of the latter, where self-management operates at three levels - Kombinat, Company and Work Unit). Self-management at two levels shows the most important aspects of the practice, and is reasonably typical of the economy as a whole. It operates through the following institutions.

- First (company) level - the work collective; the workers' council; auxiliary bodies of the workers' council; the board of management of the company.
- Second (work unit) level - the workers' Assembly; the work unit council; the board of management of the work unit.

(R.M.K. Zenica has an additional Kombinat level where the workers' council consists of elected representatives from the workers' councils of the individual companies or basic economic units; company workers at Kombinat level are now constituted into a separate basic economic unit, usually known as "Common Services" which functions in the same way as any other unit)

A The Company Level

- (i) The Work Collective, through which direct self-management is carried out, comprises all the workers in the company. In small companies they participate directly in the decisions. In larger and more complex companies, the work collective operates through an elected workers council. As a member of the work collective, an employee is considered to be a worker-manager, sharing responsibility for the operation of the company. His job and remuneration (above the legal minimum wage,) depend not merely on how well he works, but on the financial success of the company.
- (ii) The Workers' Council is the basic management body of the company. It is elected by all the workers through secret ballot. Any member of the company (other than the managing director) may stand for election. Most councils consist of between 15 and 20 members depending on the size of the company. The usual term of office is two years, half the members being elected each year. The Workers' Council considers and adopts decisions on matters which have been placed under its competence by the statutes of the company. By law, these statutes and other general regulations are drafted by the council. Some specific duties of the Council are to prepare development plans and programmes, take decisions on business policy, and prepare the company balance sheet.
- (iii) Auxiliary Bodies of the Workers Council
The councils may appoint commissions to deal with such matters as recruitment for certain jobs, discipline and complaints. The councils may also appoint professional committees to give expert opinions on proposals such as development planning of the enterprise, and financial, commercial, personnel and social policies.
- (iv) The Board of Management of the Company
This is the executive body of the workers' council. It prepares draft statutes, regulations, plans and programmes for submission to the workers' council. It ensures observance of regulations and decisions of the council and, in general, directs the operation of the company. The board of management is elected by the workers' council from members of the work collective.
- (v) The Director of the Company ('Generalni' or 'Managing')
The Director is the only person in the company who participates in self-management as an individual. He is appointed by the workers' council following a public invitation for applications. He runs the business of the company, executes the decisions of the workers' council and boards of management and represents the company. He is personally responsible to the workers' council, the board of management and the work collective. Although he is bound to participate in the work of the workers' council, he has no right to vote.

(vi) Professional Managerial Staff

Professional Managers still exist in Yugoslav companies, even with the self-management system. They carry out day to day managerial activities in accordance with policies formulated or approved by the work collective.

D The Work Unit Level

Work Units are determined by the possibility of separate recording of costs and results, and the possibility for workers in the units to influence costs and results. There are generally two categories of work units in production and professional service.

- (i) The Assembly of Workers of the Work Unit is the whole work collective of the work Unit.
- (ii) The Work Unit Council. The members are elected by the Work Unit. The Council makes decisions that affect the Unit, and collaborates with other Work Unit Councils on matters which affect them all.
- (iii) The Work Unit Board of Management is elected by the Work Unit Council and acts as its executive.
- (iv) The Assembly of Workers of the Accounting Unit. A Work Unit may consist of a number of 'accounting units'. The Workers in an Accounting Unit constitutes its assembly.

Self management in small and simple companies takes place at the company level. In very big and complex companies, separate plants have their own workers' councils and boards of management, and participation takes place at three levels - company, separate plants and work units.

6. Degree of Workers' participation in Self Management

Workers participate to a considerable extent in the structures for self management. In 1968, about 6% of workers in companies with 70 or more employees were members of workers councils. From companies with a total of 750,000 workers, about 32% participated in various self-management bodies. There is a higher percentage of attendance at meetings of the Work Units than at meetings of the Collective. A large majority of the workers having the right to vote take part in the election of Workers' Councils.

The number of meetings of Workers' Councils ranges from 20 a year to more, the majority of Councils meetings between 11 and 20 times a year. Major items discussed are production and sales, internal organisation and personnel questions, investment and reconstruction, personal incomes and the apportionment of net income. Work Collectives tend to concentrate more on apportionment of company income and allocation of personal incomes than do Workers' Councils, but also give more attention to production, sales and labour productivity.

7. Problems of Participation

For Workers' Self Management to be effective, workers must be given adequate information about the decisions in which they are to participate, and this information must be given in a way in which the workers can understand it. The basic law

on companies gives workers the right to relevant information, but companies vary in the extent to which they provide for an information service in their statutes. Some workers' knowledge is deficient or non-existent; others select from the information available only what is relevant to the issues in which they are interested - personal incomes being the leading one.

As well as receiving information that they can understand, workers must be taught how to use it. Training for self-management is, therefore, necessary. However, bearing in mind the low educational level of workers in Yugoslavia after the Second World War, much has been achieved by the "workers universities". Training programmes concentrate firstly on education in management subjects and then on solving concrete problems of particular work organisations.

Under workers' self management, the organisational patterns of companies is becoming extremely complicated. It is becoming more and more difficult to co-ordinate the activities of the ever increasing steps and levels of decision making and to resolve economic relations between them. Conflicts arise not only on net income apportionment and workers' personal incomes, but also on investment and development.

There is still a tendency for "authority" in the form of the managing director of the company, to have considerable influence on the self management bodies. This causes dissatisfaction among workers who want complete self management.

8 Impacts of Workers' Self Management

Self management motivates all members of a company to do their best so as to increase the net income of the company and to gain the best possible rates of pay and working conditions. At the same time, they must share in the responsibility for the efficient operation of the company. Thus, each worker has an opportunity to develop his capacities and obtain personal fulfillment through his work.

In the early stages of workers' self management, the workers' council merely supervised and directed the old hierarchial managerial organisation. The next step was to distribute authority and influence among work groups. It is clear that these work units cannot successfully fit into the hierarchial system of management. There is conflict between the units themselves, the central bodies of self management, and the professional management.

While the authoritarian organisation has the problem of its relation to environment, the democratic organisation has, in addition, the problem of internal relations within the organisation. Each group has diverse interests, but realises that the possibility of achieving its interest is greater when the groups act together. Although this diversity of interests may lead to conflict, it

can also compel members to begin to think of common interests. This may mean compromise and a partial realisation of conflicting interests, but it could lead to co-operative activity.

Self-management is considered by the workers to have led to a more equitable distribution of income, improved welfare and conditions of work, better organisation of work and greater freedom of the worker as a producer.

Extracted and adapted from:

International Institute for Labour Studies' Bulletin No. 9 based on a study by D. Gorupić and I. Paj of the Ekonomski Institut, Zagreb, 1970.

PART II

ORGANISATION STRUCTURE AND MANAGEMENT DEVELOPMENT

- A Introduction**
- B Organisation and activities of the project team**
- C Proposals for new Macro-organisation structure**
 - 1 Introduction**
 - 2 Basis for designing the Macro-organisation structure**
 - 3 Organisation structure of functions: Annual operating plans**
 - 4 " " " Finance and marketing activities**
 - 5 " " " Future Development activities**
 - 6 " " " Co-ordination of Common Services**
 - 7 Future programme of work**
- D Reaction to proposals and present position**
- E Management development and training**

A INTRODUCTION

Part II of the Final Report details the results of the programme of consulting work in the macro-organisation structure area conducted at ~~RSK~~-Zenica, Yugoslavia, as part of UNIDO Project No DP/YUG/70/511, Contract No 72/35.

This organisation structure investigation was conducted by PA International Management Consultants Ltd in conjunction with the Yugoslav Centre for Organisation and Development and had as its general aims:

- the improvement of the management practices and profitability of ~~RSK~~-Zenica.
- the implementation of the recommendations concerning macro-organisation structure made as a result of the first phase of UNIDO assistance to the company.
- the examination and further development of the necessary changes in macro and micro structure in the company and the preparation of job descriptions.
- the institution of management development and training.

Details of the work undertaken by the Project Team in Organisation, the results obtained and the recommendations made, are discussed in the sections of the report which follow.

B ORGANISATION AND ACTIVITIES OF THE PROJECT TEAM

Work on the organisation structure section of Phase II of the total project was commenced at Zenica on 4 September 1972. The project team consisted of:

- Mr Predrag Matic', Senior Consultant from the Yugoslav Centre for Organisation and Development, who was also the Centre Project leader.
- Mr Infan Pasic', Director for Organisation and Development at ~~RSK~~-Zenica, and from time to time various members of his departmental staff.
- Mr James Thorburn, Senior Consultant from PA International Management Consultants Ltd, who was also the Project Director.

This team liaised closely throughout the project with the operating teams formed to undertake the consulting work in the Marketing and Finance areas.

The initial work of the organisation structure team consisted mainly of the fact gathering. During this stage, in total 33 Directors and General Managers of the Kombinat and its subsidiary companies were interviewed by the PA and YUCOR Project Leaders together with representatives of the Kombinat Organisation Department.

This interview programme involved a considerable amount of travel and, due to difficulties in making and keeping appointments with Kombinat and subsidiary Directors and Managers, was time-consuming.

Each interview lasted from one to two hours and followed the same format, namely

- 1 an introduction outlining the objectives of the project
- 2 a discussion of the interviewee's responsibilities and problems in carrying out his duties
- 3 a discussion about the advantages and disadvantages of the existing organisation structure
- 4 a request for his ideas, help and assistance in devising a new organisation structure

(It is interesting to observe that in spite of many reminders, only two Directors were sufficiently interested, or motivated, to provide us with their ideas on paper.)

C

PROPOSALS FOR A NEW MACRO-ORGANISATION STRUCTURE

As a result of these investigations which were carried out during the last quarter of 1972 and the first part of 1973, the following report was prepared by the Consultants. This outlined the proposed macro-organisation structure considered as suitable for the group of companies comprising NPK-Zenica as they were constituted during the investigations. The report was submitted in March 1973.

PROPOSED MACRO-ORGANISATION STRUCTURE

AT RPK ZENICA

SUMMARY

The existing Kombinat macro-organisation structure has two main basic weaknesses :

- the duties and responsibilities of individual managers are not clearly defined
- too many managers have a direct line of communication with the General Director in the performance of their duties

We propose that the top level of management at RPK should be re-organised in order that the General Director can delegate some duties and co-ordinating activities to deputies in three main areas :

- Annual operating plans
- Marketing and finance activities
- Future activities

The General Director should also delegate the duties of co-ordination of other work, common to the needs of the Basic Economic Units (OOURB) of the Kombinat, to two assistants :

- for organisation and personnel
- for self-management and general affairs

It is anticipated that this type of organisation will release the General Director so that all his efforts can be directed to solving the basic problems of the Kombinat's business, to formulating objectives, deciding policy and planning how the objectives can be achieved.

1 INTRODUCTION

During the diagnostic phase and investigation of the situation and functioning of the organisation system in RMK carried out in 1971, and also the additional investigations in this area carried out in the last months of 1972, it has been found that the existing macro-organisation structure of the Kombinat has two basic weaknesses:

- (i) The duties and areas of responsibility of individual managers are not precise and clear, so that often some work is duplicated; in addition, the individual areas of action of some managers are superimposed.
- (ii) Too many managers are in direct line of communication with the General Director (at the time of the diagnosis in 1971, there were 18 managers in direct line with the General Director; at the end of 1972, this number had increased to 26). It is obvious that with so many managers in direct line of communication, it is very difficult to co-ordinate all activities, and this is one of the reasons why RMK has not achieved better business results.

In the light of these main weaknesses in the existing macro-organisation structure, we developed the objectives of this proposal.

The first level of management at RMK should be re-organised to eliminate the weaknesses and release the General Director so that he might more easily direct the efforts of the other managers in the Kombinat, and rationalise their solutions to vital problems of the business. One possible solution (see Chart No 1) is that the duties and responsibilities of the General Director should be divided between 3 Deputies and 2 assistants as follows:

- Deputy for annual operating plans
- Deputy for marketing and finance
- Deputy for future activities
- Assistant for organisation and personnel affairs
- Assistant for self-management and general affairs

A further explanation is given later concerning the content of these functions, the duties and responsibilities of individual managers and the programme for further work in organisation development.

2 BASIS FOR DESIGNING THE MACRO-ORGANISATION STRUCTURE

The need for organisation exists everywhere where people are collected together to achieve some common objective; the greater the number of people who are collected together, the more complex the organisation becomes and the greater becomes the problem of co-ordinating the efforts of all members of the organisation. This co-ordination is the first principle of organisation. The requirements for co-ordination (that is, the work of the collected-together members of the organisation) must be decided and they limit the organisation structure and form.

IPK-Zenica is a large company by any standard - one of the largest in Yugoslavia - and that is the reason why the organisation structure will be complex. It should also have the most adequate structure to enable it to attain its objectives. Since it is a large company, IPK should use the benefits which come from this, especially in the following ways:

- to follow-up and to use the up-to-date results of science and technology in its business area, and in this way maintain its leading position among domestic iron and steel producers, and also to start building up the conditions necessary for entering international markets.
- to continue to merge with smaller companies and to monitor their development and in this way to accelerate the development of all regions where the company has its plants.
- to recruit around its programmes top level experts, who, in turn, will fulfil their ambitions.

In order to use these benefits in the long term, the organisation structure of the Kombinat must be constructed in accordance with the following principles:

- (i) The Kombinat is a unionised organisation with unionised objectives and self-management policies in all its parts.
- (ii) The common objectives which have been agreed should be achieved by decentralising the responsibility for business results in those parts of the Kombinat (OOURs) which are responsible for their own profit and its distribution. In order to put this basic national principle into effect, it is necessary to build a stronger relationship between personal income of the workers on the basis of individual performance and the overall financial results of the OOURs.
- (iii) At the Kombinat level, all functions should be grouped and centralised which would not be economic to have at the level of the OOURs, taking into account the common objectives of the Kombinat and its OOURs in achieving the best business results.

Starting from these principles, we divided all activities in the Kombinat into 4 main areas:

- Area for co-ordinating the annual operating plans
- Area for co-ordinating marketing and finance
- Area for co-ordinating future activities
- Area for co-ordinating the common affairs of the OOURs.

Overall co-ordination of all activities is the responsibility of the General Director of the Kombinat.

The General Director of the Kombinat will therefore be primarily responsible for:

- proposing to the self-management bodies the principles of the company's business policy, and after their decision, putting these policies into effect.
- putting forward the objectives of the Kombinat in its annual operating and long term plans, and when these objectives have been accepted by the self-management bodies, organising all the necessary action to achieve the plans.
- checking and controlling the achievement of the objectives of the Kombinat and of the OOURs and initiating any action necessary to ensure the achievement of the results.
- representing the Kombinat at Governmental level, in social institutions and in other public and business matters.
- initiating and creating the development of personnel and experts of all kinds, not only for the needs of the Kombinat and its OOURs, but also for the needs of the communities in which the various enterprises of the Kombinat are situated.

To assist the General Director in his duties, he will delegate certain responsibilities to:

- Deputy General Director for annual operating plans
- Deputy General Director for marketing and finance
- Deputy General Director for future activities
- Assistant General Director for organisation and personnel
- Assistant General Director for self-management and general affairs.

3 ORGANISATION STRUCTURE FOR THE FUNCTION "ANNUAL OPERATING PLANS"

A Definition

By the term "Annual Operating Plans" we mean the achievement of the monthly and yearly operating and sales plans. The primary objective of this function is to achieve the planned volume of production and sales in order to satisfy the customers' needs by efficient utilisation of materials and plant resources and to produce good financial results.

B Present Situation

According to the existing organisation structure and internal regulations of the Kombinat (which we have checked by detailed investigation) the main responsibility for achieving the production plans lies with :

- at OOUR level - Manager of the OOUR
- at ZOOOR - Manager of the ZOOOR
- at Kombinat level - General Director of the Kombinat

For the achievement of the sales plan, the normal line of responsibility is to the Director of the Commercial Department at Kombinat level, but, in effect, the responsibility is to the General Manager of the OOUR, or ZOOOR (this we conclude from the fact that profit has been accounted for at OOUR level)

The Technical Director and Departmental experts at Kombinat level are responsible for assisting the Managers of the OOURS and ZOOORS and the General Director to solve technical and technological problems which arise in the fulfilment of the Annual Operating Plans.

C Proposed Organisation Structure

Bearing in mind the existing situation, we propose (see Chart No. 2) to introduce new levels of management for co-ordinating all activities connected with achieving the annual operating plans :

- Deputy General Director - Annual Operating Plans
- Divisional Director - Mining Division
- Divisional Director - Iron and Steel Division
- Divisional Director - Metal Products Division

Existing Divisions, for example

- Division for Planning, Preparation & Development of Production
- Division for Maintenance
- Division for Technical and Quality Control, etc

will retain their present role, bearing in mind that it will be logical, in the framework of the Division for Planning, Preparation and Development of Production, to form the Department for co-ordinating all Industrial Engineering activities throughout the Kombinat.

The existing Transport Division should take responsibility for supplies, and in that way become the Division for Transport and Supplies.

Detailed investigations should be carried out in order to establish whether the present Mining, Metallurgical and Mechanical Departments should retain their positions under the Deputy General Manager for Annual Operating Plans, or should be responsible to the projected Divisional Directors. In this second case, these Departments would be the Staff Departments whose duties would be to assist the Divisional Directors to solve operating problems, and to initiate and formulate future development programmes and plans for the Divisions.

D Basic Duties of the Deputy General Manager for Annual Operating Plans

The basic function of the Deputy General Manager for Annual Operating Plans is to co-ordinate (plan, organise, manage and control) all activities within the Kombinat which are connected with the achievement of operating (monthly and yearly) plans, and to ensure that they are in accordance with the financial objectives of the Kombinat and with the programme and policy decided by the self-management bodies and General Director.

Specifically, the Deputy General Manager, will have the following duties :

- to refer to the General Director and inform the self-managing bodies of the Kombinat regarding all actions in connection with achieving the Annual Operating Plans and to prepare proposals to solve the problems which arise.

- to organize the preparatory work for, and to control the achievement of, the Annual Operating Plans, specifically in relation to the definition of objectives; to propose the policy in connection with material purchasing, capacity utilisation, introducing new technological procedures, introduction of new product development in the Kombinat and its enterprises, all the time bearing in mind the financial objectives of the Kombinat.
- to initiate programme-making procedures and participate in defining long-term objectives and development programmes for OGURS and ZOGRS.
- to direct and assist Managers of OGURS in solving technical and technological problems which arise during day-to-day operating and which could not be solved by their own staff

To fulfill these duties, the Deputy General Director for Annual Operating Plans will have help from the following :

Divisional Director - Mining Division

Divisional Director - Iron and Steel Division

Divisional Director - Metal Products Division

and also from the Directors of the Co-ordinating Divisions for :

- Planning, Preparation & Development of Production
- Maintenance
- Technical and Quality Control
- Transport & Delivery etc.

In principle, the duties and areas of responsibility of Divisional Directors are very similar to those of the Deputy General Manager, but for their own Division only. Their basic duty is to have day-to-day control of actual production results in fulfilling the plan for production and sales and also to have control of efficiency, utilisation of men, materials and machine capacity, operating always in accordance with financial objectives in deciding policy for their Divisions.

E Proposals for Further Work

We propose that the Kombinat should accept these proposals for macro-organisation structure as a basis for further detailed investigation into how to organise the function for Annual Operating Plans. In comparison with the existing organisation structure, the biggest changes will require to be made in the framework of the Division for Production Planning and Industrial Engineering since the Industrial Engineering Department will be new.

The primary objective of this proposal is to give to the Director who is responsible for Annual Operating Plans a practical tool to enable him to fulfill his duties more effectively. The Industrial Engineering Department at this level will have the following role :

- to co-ordinate all Industrial Engineering work throughout the Kombinat in each COUR and ZOCUR
- to consolidate the work of improvement and increase the knowledge of Industrial Engineering in the COURS and to introduce new methods and techniques in this work
- to assist the Directors of the Kombinat, ZOCURS and individual COURS to improve, principally :
 - production methods and control of production
 - maintenance methods
 - transport methods
 - capacity of plant and equipment utilisation
 - control of capacity utilisation
 - work measurement
 - plant layout
 - control of production costs
 - introduction of better schemes for workers incentives

Finally, the main objective of introducing this form of organisation is, that by better use of existing men, materials, and machine resources, to increase profits, and in this way, to help to fulfill the basic needs of all members who are working in the Kombinat and surrounding regions.

4. ORGANISATION OF MARKETING AND FINANCE FUNCTIONS

It is proposed that the General Director should delegate his duties in the Marketing and Finance areas to a Deputy General Director (see chart no. 3). It is understood that the General Director cannot delegate his responsibility as a whole, since he will still have overall responsibility for the business results of the Kombinat on which the marketing and finance functions have great impact. However, the General Director should and must delegate responsibility for day-to-day control of the activities which take place in the marketing and finance areas.

The basic function of the Deputy General Director for marketing and finance is to co-ordinate and manage all activities for programming, implementing and controlling the marketing and financial plans of the Kombinat in the form of yearly and long-range plans. By using these functions, the Deputy General Director for marketing and finance is specifically responsible for :

- assisting the General Director and Self-Management bodies by defining the objectives of the business policy and transferring these objectives into money terms
- reviewing all activities in the markets and organising the necessary research work as a result of changes in environmental conditions, in order to forecast the position of the Kombinat in future periods; investigating, analysing and putting forward the possibilities of entering new market areas and taking the necessary action in these fields.

- representing the Kombinat in its relations with social institutions, partners, banks and other bodies, drawing up contracts in accordance with the authorisation given by the Workers' Councils and General Director

In carrying out his duties, the Deputy General Director for Marketing and Finance will have the assistance of, and may delegate his duties and responsibilities, in certain areas to :

- Director of the Marketing Division
- Director of the Finance Division

A Organisation of the Marketing Division

It is recommended that the Kombinat Marketing Division should contain six sections (Chart No. 3)

- Market Research Department
- Sales Promotion Department
- Domestic Sales Department
- Domestic Purchasing Department
- Foreign Trade Department
- Commercial Operations Department

The major changes proposed in the new organisation are as follows:

- the creation of a specialised Foreign Trade Department embracing all import and export transactions
- the creation of a single Domestic Purchasing Department
- the creation of a Sales Promotion Department concerned with product and market promotion as well as with advertising
- the creation of a Commercial Operations Department concerned with transport, credit and compensation, clerical activities, etc

The basic function of the Kombinat Marketing Division is to assist and provide specialist services to OOURs for the work which could not be carried out by OOURs themselves economically, and to co-ordinate the activities of the OOURs for the common good.

Accordingly there must exist a number of functional links between each OOUR and the Kombinat through which co-ordination and liaison can take place. The more important of these in terms of marketing and commercial functions are itemised as follows :

OOUR
Activity

Kombinat Department liaising and
undertaking functional co-ordination

Warehousing	Commercial Operations Department
Transport	Commercial Operations Department and Director for Co-ordination of Transport and Supplies
Purchasing	Purchasing and Foreign Trade Departments
Sales Administration	Commercial Operations and Finance Depts
Product Manager	Sales, Sales Promotion, Market Research, Foreign Trade Departments and Long Range Planning Section

Co-ordination of the activities of the various OOUR Marketing Managers will be undertaken by the Kombinat Marketing Director. In a number of areas where product ranges are complementary, there will be a need for considerable liaison between different OOUR Marketing Managers.

The main change in our proposal for the Marketing organisation structure is the introduction of the function of Product Manager. Depending on the complexity of the product range and the market, the OOURS or ZOOURS could have one or more Product Managers

The basic functions of the Product Managers would be to ensure that the sales objectives for the products in his charge are achieved, and to act as a link between the OOUR and its market. Specifically, a Product Manager would :

- represent the OOUR at all negotiations with key customers and service these customers
- provide technical advice
- provide the OOUR with information concerning the changing technical requirements of its customers
- provide the OOUR with competitive market and economic intelligence
- develop, in conjunction with the Kombinat marketing personnel, specific marketing plans for the products under his control.
- develop, in conjunction with Kombinat personnel, specific advertising and promotional plans for the OOURS products
- promote the sale of the OOURS products in conjunction with Kombinat personnel by means of participation in trade fairs and seminars, preparation of technical literature, etc.

- request from the Kombinat such market research as is necessary for the successful marketing of the OOURS products
- participate in the product development programme of the entire Kombinat by identifying the needs of the users of his products and thereby identifying opportunities for his OOUR and the Kombinat

The proposed organisation structure of the marketing function of the Kombinat should be very flexible in order to fulfill the specific needs of individual OOURS and ZOOURS and also to provide sufficient warning and time to react to changes which take place in markets now and in the future.

1. Organisation of the Finance Division

1. Kombinat Level

The Finance Division at Kombinat level would cover the following range of operations : (Chart No. 3)

- Internal Bank - all functions in connection with planning, procuring, distributing and investing funds. This should include the provision of funds for new investment.
- Financial Operations - all transactions concerning foreign exchange. All debtors' and creditors' transactions including compensation.
- Book-keeping - co-ordinating and summarising booking for the OOURS; book-keeping for the Kombinat; OOUR and inter-OOUR accounting
- Management Accounting - overall responsibility for annual planning, costing systems, budgeting control and management information systems.
- Development and Technical Services - overall responsibility for the development of management information, budget and costing systems and the provision of technical aid and expertise as and when required by the financial departments of the OOURS.
- Administration and Personal Income - all administration and personal income services for the Finance Division

2. Application to the Operating Divisions

Within the Operating Divisions, the key unit is the OOUR, the higher levels of organisation merely being co-ordinating units, firstly at the ZOOUR level and eventually at Kombinat level. Each OOUR therefore requires to have its own Finance Section, which will cover the following wide range of financial and economic activities :

- Book-keeping and Accounting: all aspects of book-keeping and accounting including personal income, production accounting, material accounting, stock accounting, petty cash and continuous inventory.
- Management Accounting : all aspects of management accounting and control, including annual planning, costing systems, budgetary control and management information systems.

At ZOOOR level, where appropriate, a financial department will also be necessary to co-ordinate and summarise all the book-keeping and accounting activities of the individual OOURS. This Department should be relatively small since it is carrying out a co-ordinating and summarising function only.

Although full responsibility for the achievement of operating plans in financial terms lies with the Operating Divisions, there should be no co-ordinating financial department within the Operating Divisions at Kombinat level, this function being carried out within the Finance and Commercial Divisions.

3. Application to Future Development Activities

Two activities involving finance and economics, which are not within the scope of day-to-day operating are :

- Long Range Planning
- New Investment

In our opinion, both should be positioned in the Future Activities Division as the finance and economics aspects of these functions are only part of the multi-discipline techniques which should be applied there.

Long Range Planning should be concerned with the Year +2 onwards, the Year +1 being handled by the annual planning procedures.

All New Investment aspects should be incorporated in one department with the exception of the procurement facilities for materials, services and finance which should be carried out by the Finance and Commercial Departments.

C ORGANISATION OF THE FUNCTION - FUTURE ACTIVITIES

Activities which are connected with the position of the enterprise in the future, but which are being carried out at the present time, are very important for business results both in the short and long term. These activities are very complex and normally are multi-disciplinary. That is why we propose that all activities connected with the future development of the Kombinat, and which

are involved in forecasting the marketing, technological, economic and financial changes should be organised in separate units and made the responsibility of the Deputy General Director for Future Activities. This unit should comprise the organisation of the following activities: (see Chart No. 4)

- strategic market research
- new product development
- economic studies in connection with development plans
- economic evaluation of the effects of new projects
- economic analyses for investment programmes
- project planning and control
- design work for all kinds of projects in connection with the construction of new plant, including inspection
- servicing and co-ordinating all commercial and financial activities in connection with building new plant.
- general activities for new projects including general administration, project planning, maintenance, personnel, etc

1. Basic Duties of Deputy General Director for Future Activities

The basic function of the Deputy General Director for Future Activities is to co-ordinate (plan, organise, manage and control) all the activities within the Kombinat and its constituent companies, which are connected with the fulfillment of the development plans, in accordance with the objectives and policies approved by the self-management bodies and General Director of the Kombinat.

The specific responsibilities of the Deputy General Director for Future Activities are as follows :

- to ensure that the development objectives will be clearly defined and formulated, not only for the Kombinat as a whole, but also for each individual OOUR and ZOOUR
- to initiate and to organise the work and plans for development in the Kombinat and for individual OOURS and ZOOURS
- to propose these plans to the self-management bodies and when they are accepted, to organise all the necessary activities for the fulfillment of the plans.
- to be involved continuously in analysing the position of the Kombinat in the market, especially in cases where it is necessary for new policies to be formulated
- to lead and balance the development plans and progress in individual OOURS and to arrive at decisions in accordance with the financial position of the Kombinat
- to co-operate with external technologists and professional institutes.

In order to carry out these duties and other duties which will be specified later in a detailed Job Specification, the Deputy General Director for Future Activities will have the immediate assistance of, and be able to delegate some responsibilities to :

- Director of Department for Long Range Planning
- Director of New Investment Department

2. Basic Functions of the Department for Long Range Planning

The positioning of this Division at Kombinat level is deliberate since it is necessary to plan all the existing resources of the Kombinat and its constituent companies in order to reach the specified objectives in the given period of time. This means that the basic duty of this Department is to evaluate all the activities necessary to fulfill the objectives set by the self-management bodies of the Kombinat. By setting-up this Department, the Kombinat should obtain the following benefits :

- inside the Kombinat there will be created the atmosphere in which attention to changes will be a continuous regular activity, and not a "once-off" occasional happening
- management will be provided with adequate information regarding the present and future position of the Kombinat
- all creative people inside the Kombinat will be mobilised for defining, projecting and implementing the best possible alternatives for future development plans.

The final product of the work of this Department is the formulation of a long range plan for the development of the Kombinat - but it is not the final objective of this Department. Its duties are broad, and comprise the security that the Kombinat will use the alternative courses of development open to it in the best possible way, because management will be better informed.

The approach to the Long Range Plan should be systematic using appropriate techniques for problem solving as the occasion arises. The cycles through which the development plan will be managed and the work implemented are :

- Establishment of Objectives - by answering the question - "What does the Company wish to achieve?" in quantitative terms
- Estimating the Present Position - by analysing the Company's current position and control of the environmental factors, to answer the question "What is the Company's true position today?"

- Refining the Strategy - by finding the answer to the question - "How best can the Company bridge the distance between the present position and objectives?"
- Preparation and Implementation of Plans, that is transferring the strategy into action
- Continuous Control and Revision of Plans - to ensure that the plans will be modified in accordance with changes.

The micro-organisation structure of the Department will be designed later. Basically, the Department will have the following sections :

- strategic market research
- new product development
- economic study and analysis
- preparing and analysing programmes for investment and decision
- control of the efficiency of new projects

This type of organisation structure in the Department should ensure that all activities connected with future development will be successfully co-ordinated and should help ensure that the future development of the Kombinat will be successful.

3. Function of the New Investment Department

Realisation of investment is the final phase of development activities and this phase is very important for the business results of the enterprise. Large investment projects are in the majority in the Kombinat, are very complex and the present organisation structure does not make it easy to provide an efficient method for managing these types of projects. The Department's responsibility for :

- Project Planning
- Project and Design Work
- Construction of Buildings & Assembly of Plant
- Erection of Buildings and Plant

should be combined with general responsibility for the success of the project as a whole. This could be achieved by using the matrix type of organisation, on which the mutual responsibility of experts in some fields would be combined with the responsibility of project managers for co-ordinating all activities in order to achieve efficient results.

This type of organisation should facilitate the successful management of projects in the Kombinat through :

- ensuring the evaluation of programmes, timings of starts and length in planning terms
- ensuring adequate information especially regarding the availability of finance funds necessary for the project in each phase of its implementation, and the amount of work which should be accomplished within each phase
- ensuring adequate information regarding the relationship between the stage of work completed and the money spent
- ensuring that the consequence of any changes will be accounted for, especially concerning the following :
 - changes in conditions for financing
 - difficulties during implementation e.g. changes in building construction, equipment specifications, changes in installation etc
 - work which was not forecast and delays in completion

The proposed organisation should also ensure that successful management of individual projects is reached through :

- the use of appropriate methods for programming the activity of each of the individual experts engaged on the project (architects, engineers, constructional engineers and others) in order to carry out the required volume of work commensurate with the amount of money to be spent
- the design of simple and clear information systems, concerning the necessary activities and delivery dates for the work of each individual member of the team of experts engaged in the project and also the inter-communication between them
- the use of control information in order to have a clear picture of the amount of work and money which has been undertaken and spent, and also to be able to forecast the consequences in the case of eventual changes.

This information system for individual projects should be part of a uniform system for every project in the Kombinat (by the term 'project' is meant all the complex activities in constructing a new factory or plant - design work, contracting, constructing, buying equipment, assembly and plant erection)

When designing a new system, it is very essential to have an integrated system because :

- all programmes should be made at the level at which the activities take place; this means that each manager would have the type of information best suited for making decisions at his level.
- data which is collected regarding costs and delivery times should be the same for all levels; otherwise there would be confusion and chaos

Duties of the Project Manager

In order to improve the present organisation of the New Investment Department, it has been proposed to introduce the function of Project Manager. The responsibility of the Project Manager will be as follows :

- to decide the general strategy and to control all the activities connected with his projects, regardless of where the activities happen
- to assist in making the plans and to get the plans approved by all organisations involved with the project
- to control all activities and to take any necessary corrective action
- to request control reports regularly about activities; to take the necessary action for successful completion and to inform his superiors in case of necessity
- to be responsible for all expenditure connected with the activities of the project

In order to have a successful involvement in the duties listed above, the job of the Project Manager should be carried out by:

- experts with enough authority, who are ready to take the risk and responsibility for such duties; management of the Kombinat must have full confidence in these people and they should have some experience of management
- project managers should have the responsibility to manage their project - nothing else

To assist them in their duties, Project Managers should have the help of the experts in the New Investment Department. Sections in this Department will change in accordance with needs, but basically it would appear that the Kombinat should have, as permanent activities, the following :

- preparation and control of projects with financial and commercial service for Project Managers

- design work by mechanical, electrical, metallurgical and mining experts together with supervision of construction
- civil engineering design work with experts for general planning of layout etc and adequate experts in other necessary fields.
- design work for energy production and for automation and control

In order to increase the knowledge of the Project Managers, they should all be educated in using up-to-date management techniques, such as :

- operations research
- decision theory
- planning financial results
- cost planning & control
- value analysis
- network planning

By a systematic approach to the education of the experts who will undertake the above very important functions, it will be possible to build up an organisation which will be efficient in managing new investment projects in the Kombinat, in order to fulfill the objectives decided by the self-management bodies of the Kombinat and OOURS

6. ORGANISATION OF THE FUNCTION - CO-ORDINATION OF COMMON SERVICES

The term "Common Services" refers to jobs which are carried out at Kombinat level to satisfy the needs of the Kombinat and OOURS, for example :

- organisation development
- computer and information systems for the Kombinat
- personnel matters
- legal matters
- self-management affairs
- internal audit
- general affairs (security, publicity, protocol etc.)

To co-ordinate these activities throughout the Kombinat, the General Director will delegate responsibility to two Assistants:

- Assistant General Director for Organisation & Personnel
- Assistant General Director for General Affairs & Self-Management Matters

1. Function of Assistant General Director for Organisation and Personnel

The basic function of this position is to co-ordinate (plan, organise, manage and control) all activities in the Kombinat and its constituent parts connected with the development of efficiency of organisation and education of personnel for successful work, in order to fulfill the objectives and policies laid down by the Self-Management bodies and General Director of the Kombinat.

The Assistant General Director has the following specific duties :

- to propose to the General Director and Self-Management bodies, objectives, policy and concrete plans for the development of the organisation of the Kombinat and OOURS
- to propose to the General Director and Self-Management bodies, policy and plans for the development of personnel in accordance with the long range interests of the Kombinat and regions where the Kombinat has its plants. He is responsible for planning how to reach these objectives.
- to organise the co-operation with scientists, experts, professional institutions and other bodies and to co-ordinate the necessary action to develop organisation and personnel in the Kombinat.
- to organise and co-ordinate all activities in connection with the safety of workers and improving working and living conditions.

In order to fulfill this function, the Assistant General Director will have the assistance of, and will delegate some of his responsibilities to

- Manager for Organisation and Development
- Manager for Personnel

2. Function of Assistant General Director for Self-Management and General Affairs.

The basic function of this position is to co-ordinate (plan, organise, manage and control) all activities in connection with the development of the self management system in the Kombinat and its constituent parts, the inter-relationship between OOURS and ZOOURS, and also in connection with relations of the Kombinat with Government, social and local authorities and other bodies outside the Kombinat, in accordance with the objectives and policy decided by the self management bodies and the General Director of the Kombinat.

The Assistant General Director has the following specific duties:

- to organise all activities connected with the work of the self-management bodies at the Kombinat level and to instruct the responsible bodies in OOURS and ZOOURS.
- to organise information about all legal regulations, to control the internal application of these regulations and to check the implementation of all decisions of the self-management bodies.
- to represent the Kombinat in the Law Courts in the case of conflict of interest.
- to organise and co-ordinate all activities necessary for security and all activities connected with the military service of employees.

In order to fulfill this function, the Assistant General Director will have the assistance of, and will delegate some of his responsibilities to:

- Manager of Self-management Affairs
- Manager of Internal Audit Department
- Manager of Legal Affairs
- Manager of General Affairs

7. FUTURE PROGRAMME OF WORK

The acceptance of this macro-organisation structure proposal with basic divisional responsibility at top level of management will enable further work to be carried out on the following activities:

- the preparation of job descriptions including a definition of the basic functions, responsibility for planning, managing and controlling work, for certain key managerial positions at Kombinat level. This would be carried out in co-operation with the men who will be appointed to the jobs.
- the design of the concept of micro-organisation structures for certain departments at Kombinat level and the preparation of job descriptions for some important jobs inside these departments.

As a result of the acceptance of the proposals, we expect:

1. To build a Kombinat macro-organisation structure which will be able to create more efficient work in the Kombinat, together with improving the stability of the business.
2. To obtain an organisation structure which will be flexible enough to react to outside changes and to manage the Kombinat in the light of these changes.
3. To improve the co-ordination and co-operation between individual Directors and Managers and organisational units by having a clearer definition of responsibilities and duties for individual positions.
4. To create the opportunity for achieving better results in all areas in the Kombinat, and in this way to improve the operation and efficiency of the self-management system.

D. REACTION TO PROPOSALS

This report on the proposed macro-organisation structure was eventually considered at a 3 day meeting of the full Collegium (elected Board of Management) towards the end of July, 1973. The following conclusions were conveyed to the

Consultants in writing:

1. "The proposed macro-organisation structure shows some improvements compared with the present one, but it is not completely framed in accordance with the current socio-economic and self-management conditions; in addition, there are personnel problems in filling some of the newly-created positions (that is, there is no suitable Director available).

Bearing in mind these constrictions and the point that any improvement in organisation should be the result of historical evolution, an alternative structure is given in the appended chart, (chart No.5) which contains the following proposals:

- (i) The General Director should be in direct communication with the General Managers of OOURS and ZOOURS and Deputies for certain groups of functions or activities.
 - (ii) All common functions should be centralised in a "Common Services" OOUR.
 - (iii) Under present conditions, it is best for the Kombinat that the General Director should also be the General Manager of the Common Services OOUR.
 - (iv) The Deputies to the General Director should be:
 - (a) Deputy for Technical Affairs
 - (b) Deputy for Economic Affairs
 - (c) Deputy for Organisation, Personnel and General Affairs.
- Activities connected with the self-management system and internal audit should be the direct responsibility of the General Director, and these Departments should work along vertical and horizontal lines of communication.
- (v) The Managers of Divisions and Departments in OOURS and ZOOURS should be the members of expert co-ordinating committees within the framework of their respective divisions (that is Technical, Commercial, Financial, Economic etc.)
 - (vi) The function of purchasing equipment and selecting suppliers should be carried out at Kombinat level for all OOURS and ZOOURS.
 - (vii) New Investment activities such as construction work, (including project control and management) should be decentralised to OOUR and ZOOUR level, with functional limits to the respective Divisions (Mining, Iron and Steel and Metal Products).

2. In addition, the following items require further investigation and clarification before a final decision can be reached:

- (i) Should the commercial work in connection with the new investment be located in -

Commercial Division (but complete in order to have a uniform commercial function)?

or Technical Division (in the Maintenance or Investment Department)?
- (ii) Should one part of Industrial Engineering be located in the Technical Division (Department for Planning and Preparation) and another part in the Organisation Division? If so, the details of what should be in each must be decided.
- (iii) Should the Marketing Division retain the title Commercial Division because it is more adequate for the present situation, and since in this Division there will be other activities as well as those concerned with marketing?
- (iv) Should the administrative jobs and stocks in the Commercial Division be decentralised and the jobs delegated to the respective OOURS AND ZOURS?
- (v) Should the Managers of the Commercial Departments in the OOURS and ZOURS also at the same time be the Product Managers?
- (vi) Should the financial activities for new investment be located in the Financial Division?
- (vii) Should there be more rationalisation of the technical administrative work of the Internal Bank?
- (viii) Should the activities connected with strategic market research and long-range planning be delegated to the Economic Division, as well as internal economics?
- (ix) Should the Job Evaluation function be located in the Economic, Personnel or Organisation Divisions?
- (x) Should there be formed in the Economic Division, a section for analysing the Government's economic system and decisions?
- (xi) Should the Company's representatives, located in various parts of the country, be responsible to the Commercial Division or to the Deputy of the General Manager for Economic Affairs?

- (xii) Should the organisation Department be responsible to the Deputy for Organisation, Personnel and General Affairs?
- (xiii) Should the Computer Centre be located outside the organisation Division, or should it stay within the framework of this Division for the time being?
- (xiv) Should the Management Information System be located in the Computer Centre (Organisation Division) or in the Financial Division?
- (xv) Should the Department dealing with General Affairs be separated from Personnel?
- (xvi) Should the administrative, technical-research work for the further development of the self-management system, some of which is currently being carried out by the Organisation Department, all be carried out by the Department for Self-Management Affairs?"

It was disappointing to note that many of the innovations to the organisation structure which we considered would be most valuable to the Kombinat, and which are almost standard practice in many large Iron and Steel Companies throughout the western world, were not acceptable. The reasons, of course, for this were partly political (internal), partly due to the mode of operation of the self-management system and the amendments being introduced during this period, and, as stated by the Collegium, partly due to the lack of executives with sufficient experience and ability to fill certain key positions in the organisation.

Although dissatisfied and disappointed with many of the counter-proposals put forward, we had no alternative but to accept the decisions of the Collegium. A further set of proposals incorporating their suggestions was therefore prepared and submitted at the end of September, 1973.

Since then detailed investigations have been made from time to time by members of the Kombinat Organisation Department staff released to work with us. This assistance, however, has been so sporadic that progress has been limited to investigating in detail and providing the answers to many of the questions put forward by the Collegium. A start was made by the YUCOR Consultant on the project of defining the duties and responsibilities of individual managers but this has had to be discontinued for the time being due to lack of counterpart support from the client and lack of decisions regarding many aspects of the proposed macro-organisation structure.

The current situation is that the client is slowly implementing some of the macro-organisation proposals put forward in the amended report. However, changing conditions and personnel

probably mean that, without continuing consultant pressure and active assistance, several years will elapse before any real impact is felt at Kombinat level.

E. MANAGEMENT DEVELOPMENT AND TRAINING

The emphasis of the work of the PA/YUCOR teams in Organisation, Marketing and Finance has principally been on providing new organisational and other modern concepts for the enterprise and on equipping it with the necessary basic skills and techniques.

However, in undertaking this work, certain deficiencies have become apparent in the basic management attitudes and philosophies of the enterprise; the main deficiencies identified are as follows:

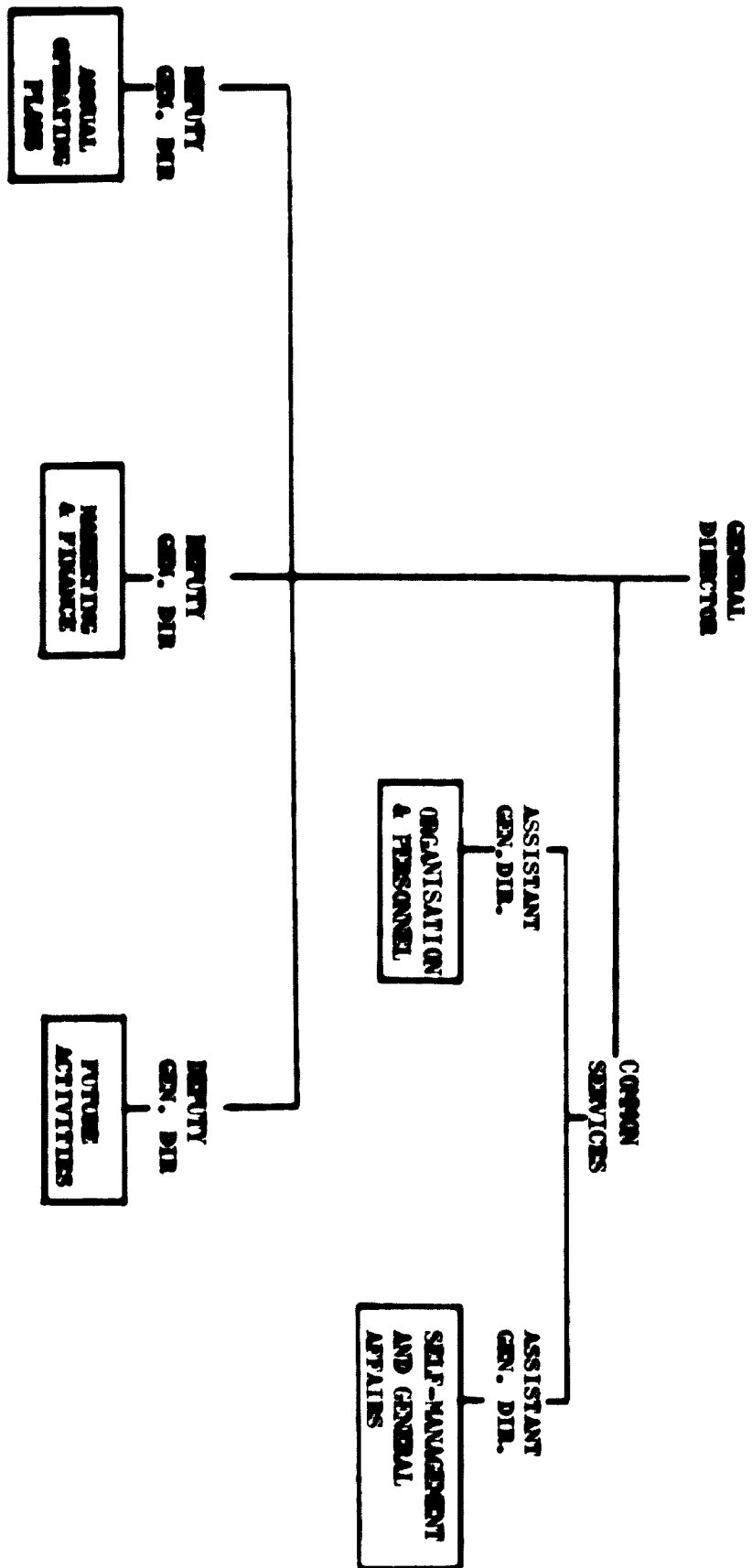
- a frequent failure to think of the enterprise and its operations in financial and profit terms.
- an unawareness of the fundamentals of management and the mechanisms of sound planning and control.
- an unwillingness to make commitments and to accept responsibility on a personal, individual basis.
- a tendency to over-formalise and over-structure relationships and operations resulting in a loss of flexibility and initiative.
- a lack of understanding of human work motivation and the needs of the individual for personal job satisfaction.

The training and management development undertaken by the three teams has therefore been extended to correct these deficiencies wherever practicable.

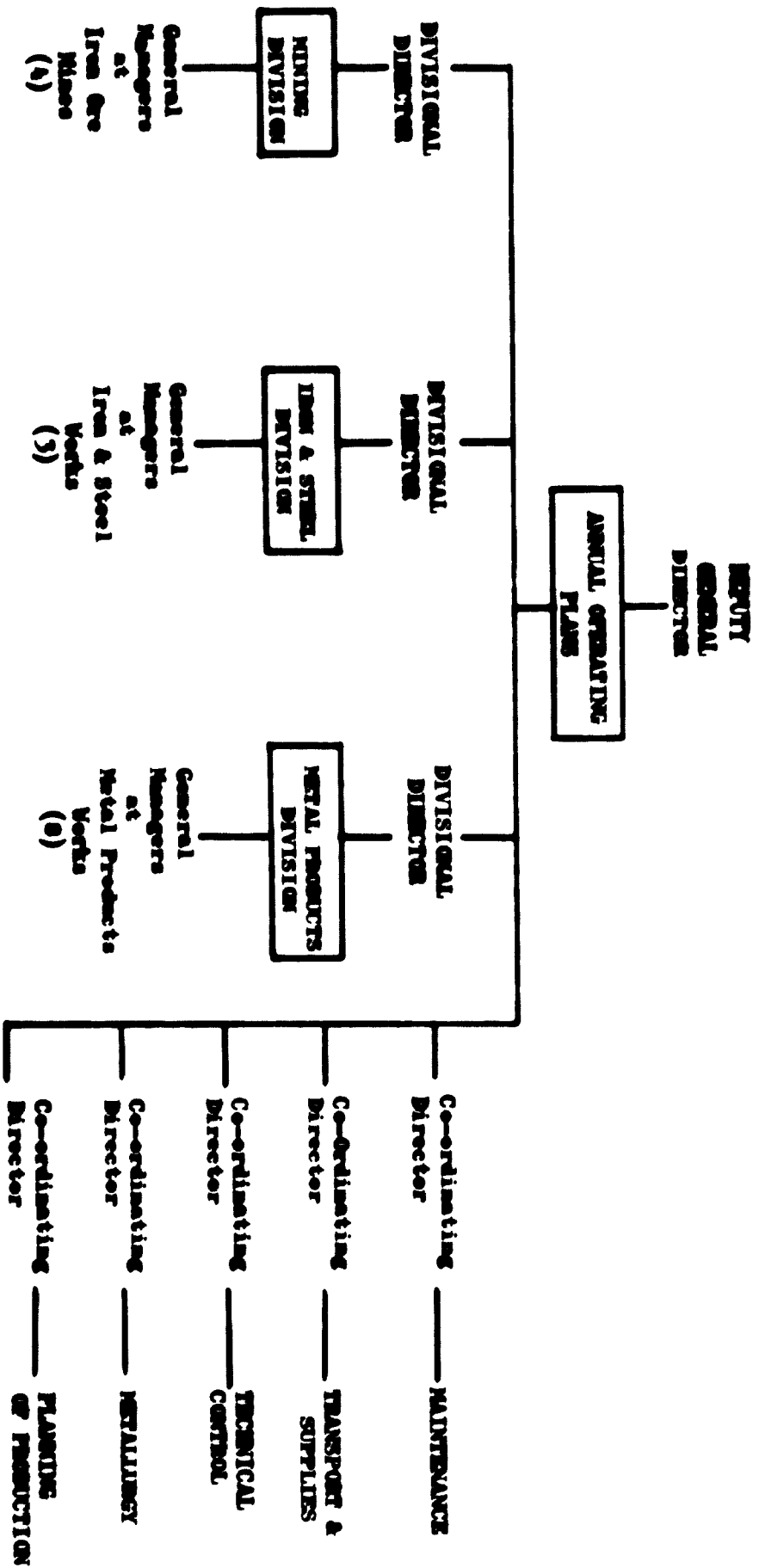
In terms of general attitudes, receptivity of new ideas, interest, in, and understanding of the various techniques used, there was a marked difference between the younger staff members of the enterprise and the more senior personnel. Staff under 35 were generally better educated and of course, had spent the bulk of their working life in the more liberalised environment which has existed in Yugoslavia since 1963. These personnel have derived maximum benefit from the work of the teams.

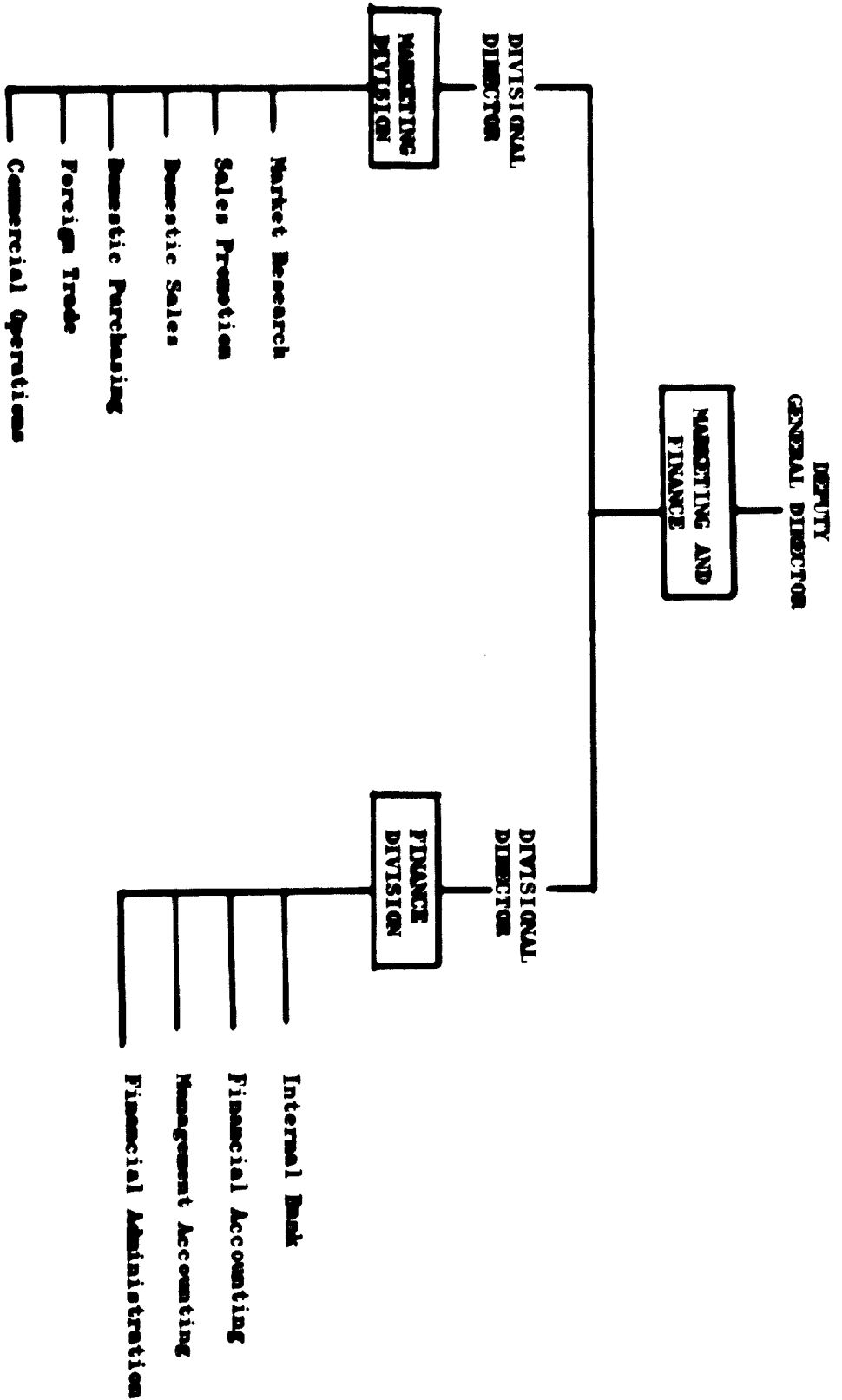
Thus, much of the work in the area of management development and training was principally undertaken on an individual basis, or with the groups of no more than three members of the Company's staff. This enabled the creation of an informal environment permitting free discussion and allowed individual attention to be given to the specific weaknesses of individual staff members.

Formal presentations played only a small part in this aspect of the project because the teams were concerned to avoid the didactic approach of the foreign expert.

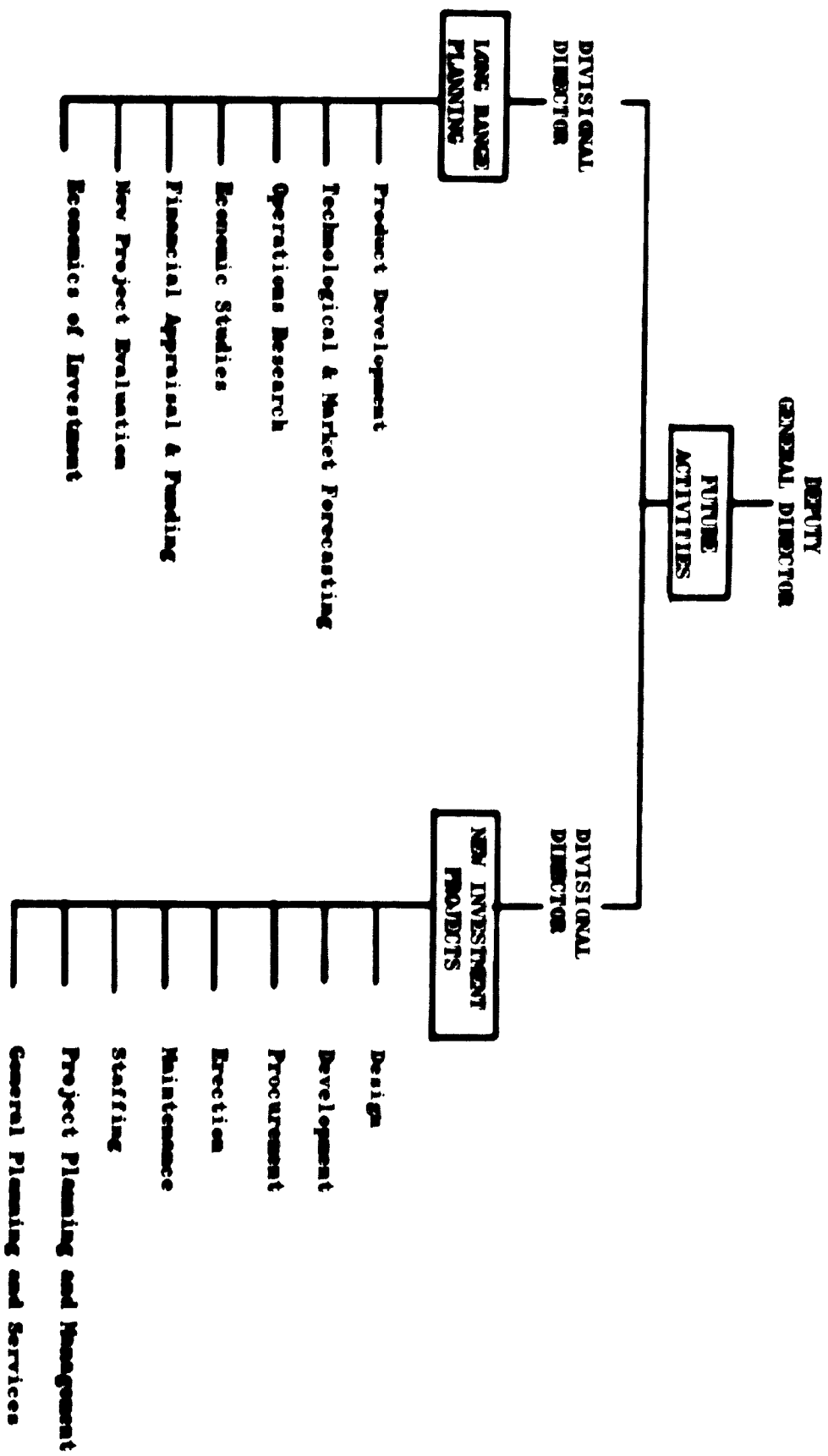


PART II. Chart No. 1.





PART II. Chart No. 3



PART III

MARKETING AND PLANNING

- A INTRODUCTION
- B ORGANISATION AND ACTIVITIES OF THE PROJECT TEAM
- C THE EXISTING MARKETING SITUATION AT RAK-Zenica
 - 1 Marketing Orientation of the Enterprise
 - 2 Existing marketing organisation
 - 3 Sales operations & the Marketing mix
- D RESULTS AND RECOMMENDATIONS
 - 1 Organisation for Marketing
 - 2 Marketing Strategies & Objectives
 - 3 Product Policy & Product Development
 - 4 Marketing Research and Forecasting
 - 5 Costing and Pricing
 - 6 Channels of Distribution
 - 7 Sales Operations and Technical Service
 - 8 Advertising and Sales Promotion
 - 9 Marketing Information System
 - 10 Management Development and Training

APPENDIX - Tables 1 to 10 - Statistical Data etc. supporting text.

A. INTRODUCTION

Part III of the Final Report details the results of the programme of consulting work in the marketing area conducted at R.M.K.-Zenica, Yugoslavia, as part of UNIDO Project No. DP/YUG70/511, Contract No. 72/32.

This marketing consulting work was conducted by P.A. International Management Consultants Limited in conjunction with the Yugoslav Centre for Organisation and Development and had as its general aims:

- the improvement of the management practices and profitability of R.M.K.-Zenica.
- the implementation of the recommendations regarding marketing, made as a result of the first phase of UNIDO assistance to R.M.K.-Zenica.
- the diagnosis and implementation of other necessary changes at R.M.K.-Zenica to improve its marketing performance and effectiveness.
- the training of R.M.K.-Zenica staff in relevant techniques of modern marketing practice.
- the further development of the marketing expertise and consulting skills of the YUCOR Consultant engaged on the project.

Details of the work undertaken by the Project Team in marketing, the results obtained and the recommendations made, are discussed in the sections of the report which follow.

ORGANISATION AND ACTIVITIES OF THE PROJECT TEAM

Work on the marketing section of phase II of the total project was commenced at Zenica on 12th September 1972. The project team for marketing consisted of:

- Mr. Radevan Knesević of the Yugoslav Centre for organisation and Development, under the guidance of the YUCOB team leader Mr. Predrag Matic.
- Messrs. Dusan Urosović (subsequently appointed as the new Commercial Director of R.M.K.-Zenica, Mohammed Aliefendić, and Mehmedalija Krodzalić, of the Commercial Department, R.M.K.-Zenica.
- Mr. Anthony Randerson of P.A. International Management Consultants Limited under the supervision of the P.A. Project Leader, Mr. James Thorburn.

This team liaised closely throughout the project with similar combined operating teams formed to undertake consulting work in the areas of Management Organisation and Finance.

The work of the marketing team was programmed and undertaken in four main stages as follows:

- 1 Fact Gathering
- 2 Analysis and Diagnosis
- 3 Presentation of Recommendations
- 4 Implementation and Education

C THE EXISTING SITUATION AT R.M.K.-ZENICA

Details of the present operations of R.M.K.-Zenica, relevant as background to the project and its recommendations, are provided under the following headings:

- 1 Marketing Orientation of the Enterprise
- 2 Present Marketing Organisation
- 3 Sales Operations and the Marketing Mix

1 Marketing Orientation of the Enterprise

As a consequence of the market environment in which the enterprise operates, it is far more oriented towards production than to marketing.

A tendency also exists in some sections of the organisation to view marketing as being irrelevant to Yugoslav conditions and to see it as being the product of an alien ideology.

Others view marketing and marketing personnel with suspicion. This has arisen through the actions of certain marketing personnel no longer with the enterprise, who attempted to use the marketing concept as an excuse to expand their personal power and prestige within the enterprise.

At some levels of the enterprise, there appears to be a belief that the enterprise (irrespective of needs or benefits) "ought to have marketing" in the same way as it "ought to have" computers or operations research i.e. for prestige reasons.

Overall there exists little recognition of the need for, or advantage to be obtained from, sound marketing management using modern techniques.

The enterprise needs to develop an increased awareness of, and contact with, its customers and its needs.

It can however, never be a market-oriented company in the same way as producers of cosmetics, detergents or soft drinks. The very nature of the steel industry with its high technology and intensive capital investment precludes this. Steel is a basic industrial commodity, not a consumer product to be bought on impulse. Marketing must act as the guide and servant of production not vice-versa.

2 Present Marketing Organisation

In place of a conventional head office Marketing Department R.M.K.-Zenica currently has a Commercial Section which administers the following operations at the head office level.

- Sales planning
- Sales negotiation
- Sales service
- Sales promotion
- Advertising
- Market research and analysis

- Pricing research and analysis
- External freight, transport and Insurance
- Export sales
- Imports
- Purchasing

The Sector, because of its location at Zenica, also undertakes the invoicing functions on behalf of the Zenica steelworks.

The combination of sales and purchasing activities within a single department is customary in Yugoslavia and is unlikely to change in the immediate future because it offers benefits in organising payment for debts via "compensation".

The Purchasing Department accounts for approximately 40% of the total number of people employed by the Sector. Staffing details of the Sector and of its various departments are shown in Appendix 1. It should be noted that the bulk of the Sector's personnel are engaged on clerical and administrative duties.

The current organisation structure of the Sector is as follows:

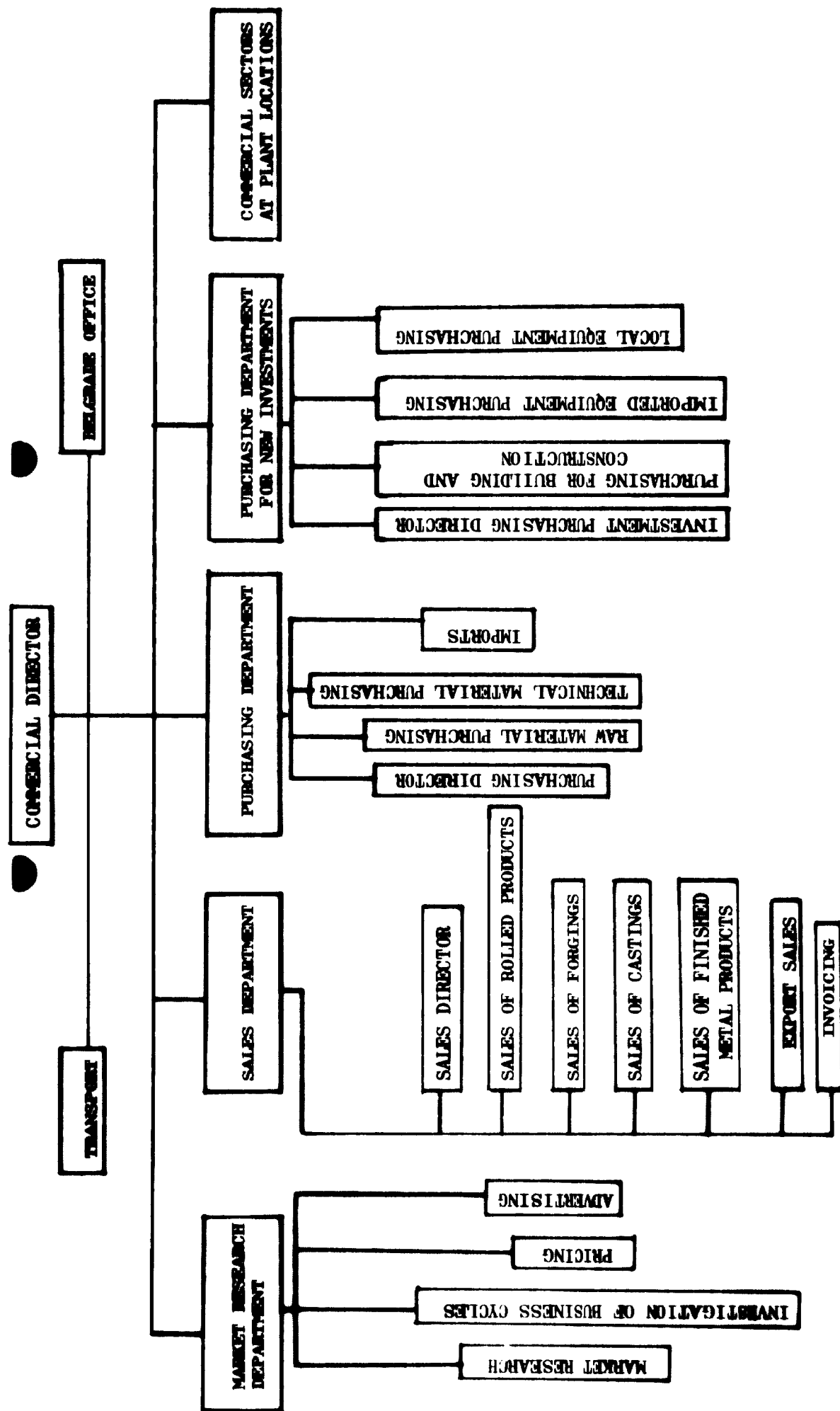


Figure 1. Organisation Structure of Existing Commercial Sector - ZENICA - Zenica

In addition, each plant location has, attached to it, sales and purchasing personnel under the functional control of the head office Commercial Sector. These people are, however, directly responsible to the management of the particular plant in which they operate and form part of the Commercial Sector of that plant. This function is essentially clerical.

The size of the Commercial Sectors in the plants varies considerably, depending on the volume of production and hence warehousing facilities (see Appendix 1). Typically, these sectors are organised as follows:

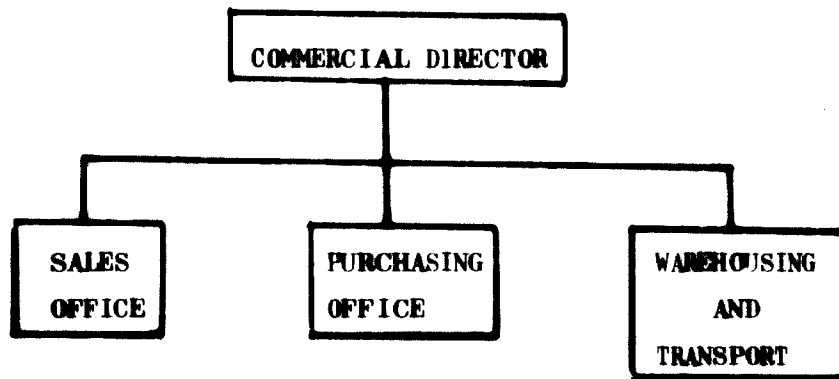


Figure 2 Generalised Structure of Commercial Sectors Currently at Plant Locations

The recent Yugoslav Self-Management Amendments potentially necessitate a considerable re-distribution of duties and responsibilities between the commercial sectors at head office and plant levels. The practical implication of these amendments was discussed in PART I of the Final Report.

The present organisation of the Commercial Sector reflects the nature of the marketing environment in which the enterprise currently operates and is essentially well adapted to it.

Emphasis is on sales negotiation and administration, rather than on marketing, as is to be expected in a non competitive supply-starved market.

The marketing expertise of the company is concentrated in the head office Market Research Department from which nucleus a full modern Marketing Department can be developed when the need arises.

The Market Research Department currently undertakes activities such as the following:

- Advertising
- Long range demand forecasting
- Distribution studies
- Determination of market potential for new products
- Studies on the effect of altering terms and conditions of sale etc.
- Preparation of cases for submission to Government price control tribunals.
- Monitoring foreign supply and price fluctuations
- Analysis of factors affecting domestic demand
- Management education in marketing philosophies and techniques.

Much of the work is however undertaken on a sporadic, occasional, basis because of a lack of staff.

3 Sales Operations and the Marketing Mix

The current sales operations of the enterprise and its use of the various elements of the marketing mix (product, price, place and promotion) are described under the following headings :

- a Product Range and Quality
- b Sales Planning
- c Method of Sale
- d Use of Distributors
- e Prices, Discounts and Conditions of Sale
- f Advertising, Sales Promotion and Service
- g Export Sales

a Product Range and Quality

Under the production specialisation arrangements organised by the Union of Yugoslav Steel Producers, the enterprise does not offer a complete range of basic steel products. For instance, no sheet or alloy steels are produced.

Within its own area of specialisation - rolled mild steel products - the range of products offered is further severely restricted. As an example, because of the shortage of production capacity and the small size of the Yugoslav market, only two angled steel profiles are produced for the construction industry, whereas well over 100 are produced by West German steel producers.

In the finished metal products area, ranges tend to be more complete or at least adequate to satisfy the major part of Yugoslav demand. Significant gaps still occur however as, for instance, with seat springs for automobiles when the enterprise offers only a single large spring and not the smaller companion springs necessary to complete the seat assembly.

Deficiencies such as these and the general short supply of its basic steel products are well recognised within the enterprise and are the origin of many of its expansion plans such as those for the steelworks at Zenica and Ljubija and for wire production at Alipasin Most, Sarajevo.

The products produced normally comply with Yugoslav, German or other recognised standards. However, in areas where production facilities are poor (as in Prnjavor), or where the plants have been established in under-developed areas, without labour of the necessary skills being available, compliance with these standards has proved difficult and reports of poor quality control have been received.

In essence, production limitations are responsible for the current deficiencies on product range and quality as well as output. Marketing can currently be of little assistance except by way of reinforcing within the organisation the already perceived need for improved and extended production facilities.

This situation will change in the future, but under the present circumstances, the task facing R.M.K. marketing personnel can only be to facilitate and optimise the sale of whatever can be physically produced.

b Sales Planning

Sales planning is subservient to production planning.

In the preparation of the enterprise's annual operating plans, a production plan is first prepared, aimed at optimising available plant capacity. This indicates the volume of each product type which the plant will make available for sale.

A provisional sales plan is then prepared, by the commercial sector using average net selling prices set by the Collegij (or Management Board of the enterprise). This provisional plan details the quantity to be sold within each product type (i.e. volume of particular sizes, shapes, specifications etc.) on the basis of the previous year's sales to specific customers.

This interim sales plan is then reviewed in the light of production optimisation needs and of the overall revenue generated, to produce the final operating plan.

The quantities available in this final operating plan are then allocated to customers and distributors selected on the basis of the following criteria

- their total potential usage of R.M.K. products
- their ability to pay
- the extent of reciprocal business
- the customer's past relationship with and loyalty to, R.M.K.

Contracts are then negotiated with these selected customers. Any balance of production remaining is:

- exported
- OR - exchanged with other steel producers in the Eastern Bloc in return for other steel products more saleable in Yugoslavia
- OR - passed back by head office to the plant for sale as and when opportunity arises.

Method of Sale

The products of R.M.K.-Zenica are all sold under contract, generally on an annual basis. Negotiations with customers are normally undertaken in November for supply during the following year and generally take place at the Zenica Head Office, or at one of the R.M.K. Plants. It is noteworthy that, despite difficult internal transport within Yugoslavia, the customers come to the producer rather than vice-versa. This reflects the dominant status of the producer in a non-competitive, under-supplied market.

Contracts are negotiated between senior personnel, generally at Director level. The company does not employ salesmen or possess any form of field sales force.

The annual contracts negotiated are for the supply of an agreed total tonnage with specifications and delivery schedules flexible. A rise and fall clause is inserted to allow for changes in the government-fixed prices. Contracts are received every three months when detailed, firm, specifications and delivery schedules are agreed.

Should a customer require products from more than one plant separate contracts for each plant are prepared. Details of the number of contracts negotiated for 1973 are shown in Appendix 1.

Contract negotiations for 1973 have been disrupted because of the current industrial liquidity crises and the Kombinat's unwillingness to enter into supply contracts with customers who are likely to prove unable to pay for the goods supplied.

d Use of Distributors

R.M.K. Zenica, in common with the other Yugoslavian steel producers, is heavily reliant on distributors, sales to whom account for over 60% of total turnover, This practice has arisen in order to:

- provide economy in terms of order and delivery size
- transfer the risk of bad-debts away from the producer
- reduce the capital invested in factory stocks by transferring responsibility for stockholding away from the producer.

Distributors are classified into four categories dependent on purchase volume and the industry they serve. Each category receives slightly different conditions of purchase and terms of settlement which are agreed annually by the Union of Yugoslav Steel Producers.

Sales to distributors of scarce concrete-reinforcing steel is made conditional on their ordering from R.M.K. specific quantities of finished metal products such as screws or nuts and bolts, which could be more advantageously purchased elsewhere because of the competitiveness of the market.

e. Prices, Discounts and Conditions of Sale

Maximum prices for virtually all products are fixed by either the Federal Executive Council or the Governments of the various Republics. Prices for rolled steel products were formally fixed on the basis of a formula related to average West European steel prices, but the use of this has been suspended as an anti-inflationary measure. Trends in price for representative steel products are given in Appendix I.

Quantity rebates apply to most products except rolled steel which is supplied at the fixed price irrespective of quantity. The quantity rebates are based on annual usage and are paid as a single sum once a year.

Discounts are not given to distributors who instead are allowed to add freight costs onto the base price and then impose a government regulation surcharge of between 3 and 7% dependent on whether the goods were consigned direct from R.M.K. to the end-user or were sold ex-stock by the distributor. Distributors are sometimes forced by market pressure to themselves give discounts to users of certain finished metal products. This discount is provided from the surcharge applied by the distributor or from the quantity rebates received.

Terms of payment vary with product, season and the industry of the user. Rebates are offered for early payment and surcharges applied for late payment. Cash with order is insisted for non-standard production runs.

Virtually all goods sold for domestic consumption are offered and supplied on an F.O.R. basis.

Non-standard production items normally require cash with order and special surcharges are applied where pricing regulations permit.

f Advertising, Sales Promotion and Service

The company has a 1973 advertising budget at 5,000,000 Dinars representing approximately 0.15% of current external sales. As shown in Appendix I this expenditure covers corporate advertising, product advertising and participation in trade fairs etc.

Beyond the preparation of a catalogue, technical brochures and occasional participation in seminars etc., little by way of sales promotion is conducted unless over-production of a particular line has occurred.

Customer contact is minimal apart from the annual negotiations and quarterly contract reviews (also generally held on the suppliers premises) unless a supply, quality, or payment problem arises.

Technical service is provided by the relevant production or technical department as needs arise. Production of defective quality is never accepted for return, but becomes the subject of negotiation for a price reduction.

Export Sales

R.M.K. Zenica has established no offices of its own in foreign centres and is represented abroad by the Yugoslav enterprise "Progres"

The enterprise's effort to date has been intermittent due to the pressures of local demand. Details of recent exports are shown in Appendix I

Approximately 120,000 tons of steel products, chiefly railway lines and cast iron pipes are exported annually to Eastern Bloc countries in direct exchange (i.e. no currency changes hands) for steel products such as beams and rolled-steel sections in short supply in Yugoslavia.

An office is maintained in Belgrade to undertake:

- negotiations and contacts with Eastern Bloc steel producers
- organisation of foreign transport and insurance on export sales and imports
- liaison with "Progres" etc.

D Recommendations and Results

The recommendations arising from the work of the P.A./YUCOR team in marketing and the suggestions made towards implementing these recommendations are detailed in the following sections:

1. Organization for Marketing
2. Marketing Policies, Strategies and Objectives
3. Product Policy and Product Development
4. Marketing Research and Forecasting
5. Costing and Pricing
6. Channels of Distribution
7. Sales Operations and After Sales Service
8. Advertising and Sales Promotion
9. Marketing Information System
10. Management Development and Training

1. Organisation for Marketing

The P.A./YUCOR project team on Organisation and Management Development has submitted to R.M.K.-Zenica its recommendations on the most suitable macro-structure for the organisation of the head office OOUR of the enterprise in the light of the Self-Management Amendments. In common with most other recommendations made by the P.A./YUCOR teams, these have yet to be implemented although their ultimate acceptance in a modified form appears highly probably.

These recommendations allow for the creation of a new Marketing Sector to replace the existing Commercial Sector. The new Marketing Sector would be under the control of a Marketing Director reporting directly to the Deputy General Director, Finance and Marketing.

This section of the report details the proposals of the P.A./YUCOR project teams in marketing for the internal structure of similar sectors at plant OOUR and ZOOOR levels.

These recommendations have been arrived at after considerable discussion of the needs and current problems of the organisation with:

- Departmental Heads and staffs of the existing commercial sector of R.M.K.-Zenica.
- Directors and staffs of commercial sectors of the plant OOURs
- The R.M.K.-Zenica Organisation Sector
- Directors of relevant sectors of the R.M.K.-Zenica Organisation likely to be affected by any of the proposed changes.

The structure proposed has been designed with the following aims in mind.

- To implement the modifications made necessary by the amendments to the Self Management laws of Yugoslavia.
- To give a structure capable of absorbing and fostering the future development of the enterprise, and the people within it, without needing major modification in the future.
- To implement the best aspects of modern organisational and marketing practices bearing in mind the current and likely future business and social environment of Yugoslavia.

The structure developed in accordance with these aims is described in the following sections:

- a. Basic Approach and Philosophy
- b. Macro-Structure of the Marketing Sector within the Head Office OOUR
- c. Marketing Sectors of OOUR's - Not Forming Part of a ZOOUR.
- d. Marketing Sectors of OOUR's - Forming Part of a ZOOUR.
- e. Marketing Sectors at ZOOUR Level
- f. Head Office Marketing Research Department
- g. Head Office Sales Promotion Department
- h. Head Office Domestic Sales Department.
- i. Head Office Domestic Purchasing Department.
- j. Head Office Foreign Trade Department
- k. Head Office Commercial Operations Department
- l. Implementation.

a. Basic Approach and Philosophy

The approach adopted has been to consider the likely needs of R.M.K.-Zenica when it has expanded its production to satisfy Yugoslav demand and when it has secured greater control over its markets i.e. when the proportion of its sales made to distributors has fallen to about 40 to 45% of total sales. At this time the number of direct customers the enterprise will be servicing will have risen substantially and will be of the order of 2000 or more accounts.

No specific cognizance has been taken of the possibility of R.M.K.-Zenica acquiring or establishing its own distribution network and operating steel service centres such as exist in Europe and North America (see Section 06). Such outlets, if established, would be separate OOURs and their organisation structure would be independent of the structure of the Marketing Sector of the Head Office OOUR or of the commercial/marketing sections of the present manufacturing OOURs AND ZOURs.

The structure proposed can tolerate wide variations in the level of usage, by individual manufacturing OOURs, of the facilities provided by the Marketing Sector of the Head Office OOUR.

A basic concept to the proposed structure is the classification of users of steel and steel products into three categories - minor, medium and key.

Minor users are those whose total potential purchases of R.M.K.-Zenica products are so small as to render servicing them uneconomic. These users constitute that share of the business which will always be serviced by distributors.

Key users are the pareto-purchasers of a particular product, the loss of even one of which would severely impair the profit performance of an individual OOUR or ZOUR. Key users must remain direct customers of the enterprise and must be provided with a high level of service. It is highly desirable that both the OOUR/ZOUR itself and the Head Office OOUR/Marketing Sector are involved in negotiating with, and servicing, these accounts.

Medium users are economically significant purchasers of a product, who do not fall into either of the above categories. Their service needs on a particular product are probably lower than those of key customers. They can therefore be serviced by non-specialist staff from the Head Office Marketing Sector without assistance from the manufacturing OOUR, ZOUR.

It should be noted that a particular customer may be a key user for one particular product from a specific manufacturing OOUR/ZOOUR, but only a medium or minor user for other products. Such a customer would then receive specialised service on the one product and non-specialised service on the remainder.

Equally a single customer may be a key user of the products of three or four OOUR/ZOOURS. He would then receive specialist service from each of those OOUR/ZOOURS.

This concept of key, medium and minor users is of particular use in establishing, at the customer level, the relationship between the OOUR/ZOOUR marketing personnel and those of the Head Office OOUR. It hence assists in defining the roles and necessary organisation structure of each.

Essentially the proposal is for the OOUR/ZOOUR to service its key customers with specialist staff in conjunction with senior personnel from the Head Office Marketing Sector.

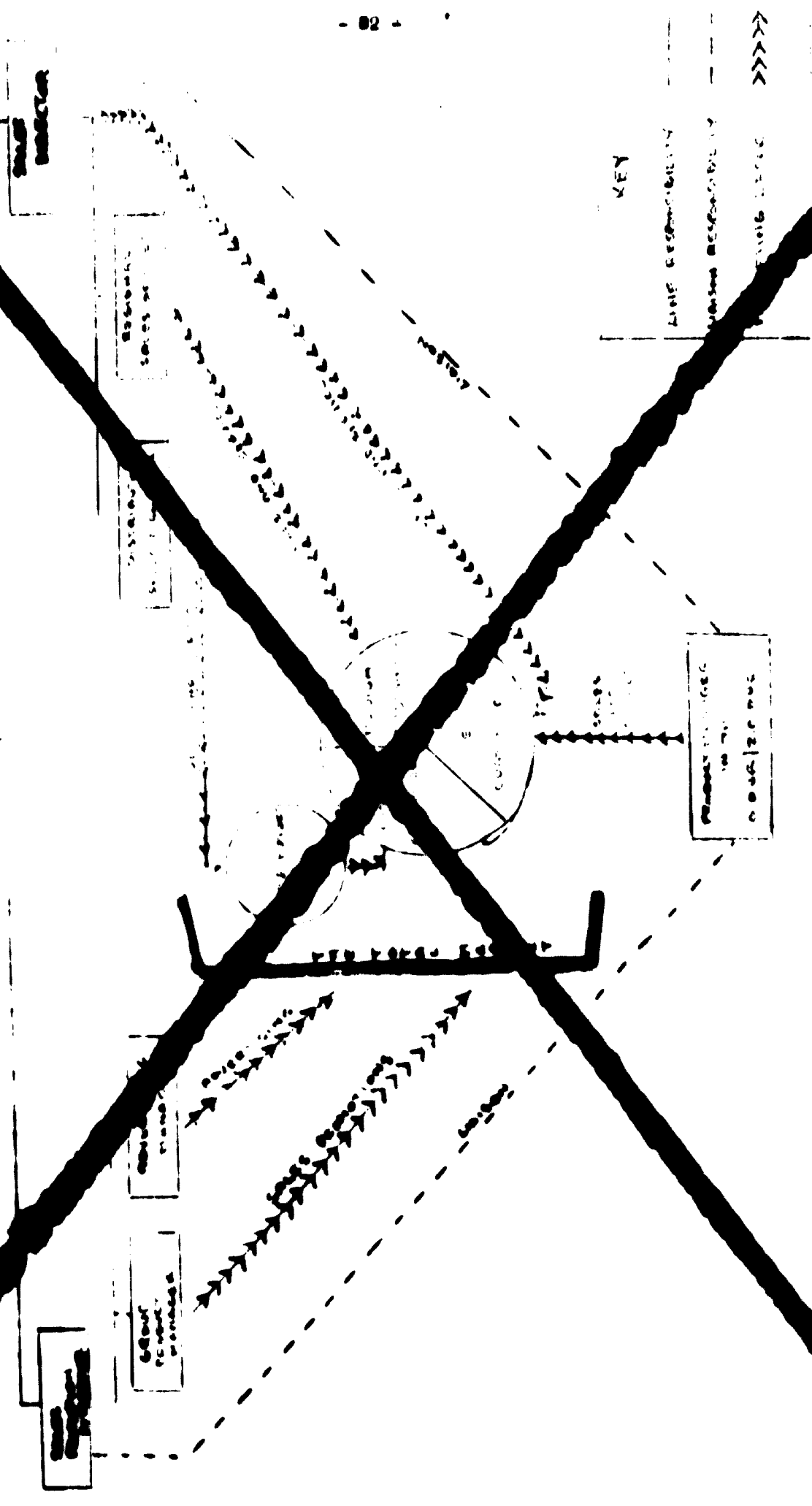
Medium users would be serviced by generalist staff provided by the Head Office Marketing Sector, probably ultimately organised on a regional basis in the interests of economy.

Minor customers would only deal through distributors.

It should be noted that the actual definition of key and medium customers can be different for each particular product or market and can therefore, be agreed on an individual basis between the Head Office Marketing Sector and each OOUR ZOOUR.

The application of the concept of key, medium and minor customers to the proposed organisation structure contained in later parts of this report is shown in the following diagram:

Area of Responsibility



KEY

▲▲▲▲▲

▲▲▲▲▲

▲▲▲▲▲

Area of Responsibility of Subordinate

Area of Responsibility of Supervisor

b. Macro-Structure of the Marketing Sector within the Head Office OOUR

The following is recommended as the macro-structure of the Marketing Sector within the Head office OOUR,

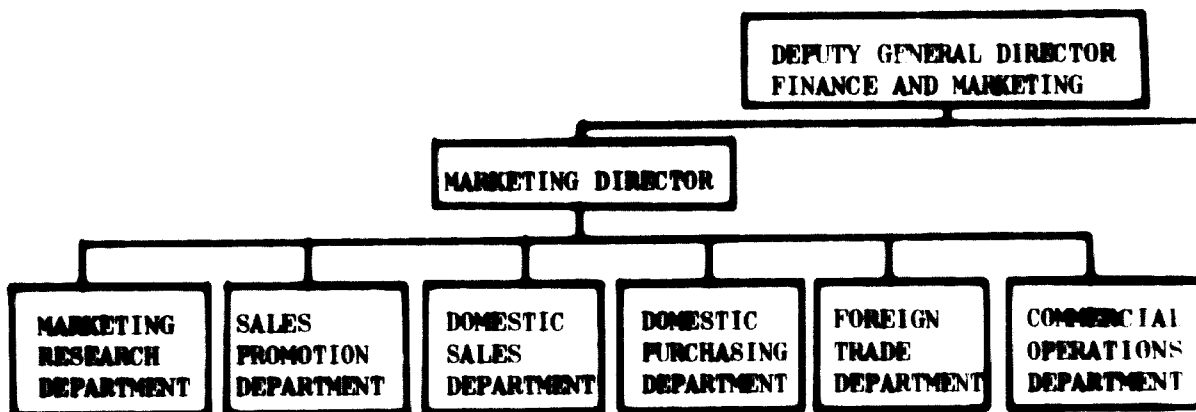


Figure 4 Recommended Structure of Head Office Marketing Sector

The decision to retain purchasing as a function of the Marketing Sector was taken only after considerable discussion. This practise is virtually standard throughout Yugoslavia and provides a mechanism whereby reciprocal trading can be facilitated and the payment of debts by "compensation" (i.e. by contra involving many parties) can be better organised.

This arrangement constitutes an interesting extension of the modern marketing concept in as much as it combines all the enterprise's dealings with the market-place (i.e. both buying and selling) under a single, market-oriented authority.

Compared to the former commercial sector, the major changes recommended are as follows:

- the creation of a specialised Foreign Trade Department embracing both import and export transactions.
- the creation of a single Domestic Purchasing Department in place of the two former sections.
- the creation of a Sales Promotion Department concerned with product and market promotion as well as advertising.
- the creation of a Commercial Operations Department concerned with transport, credit and compensation, clerical activities etc.

The reasoning behind these changes is described in later parts of this report dealing with the organisation of each specific department.

c. Marketing Sectors of OOURS Not Forming Part of a ZOOOR

Figure 5 shows the structure proposed for the commercial/marketing sectors in the immediate future, for those OOURS who do not form part of a community of OOURS (ZOOOR). It should be noted that the structure can be varied within wide limits to meet the specific needs of individual plants.

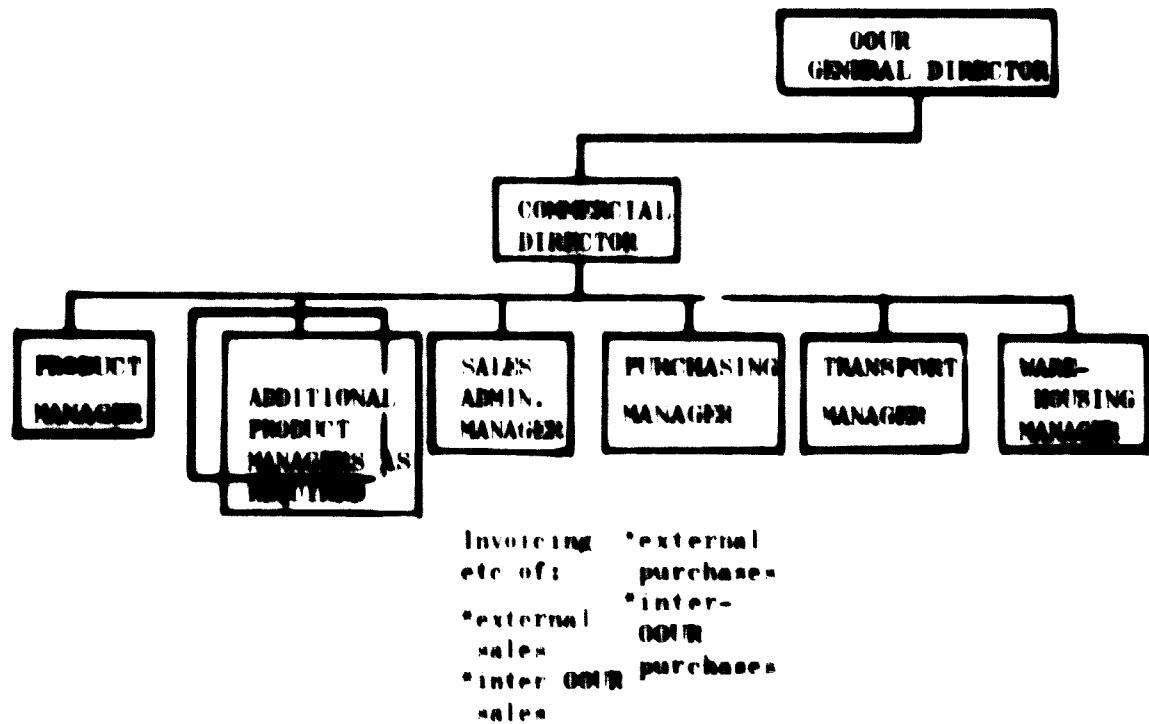


Figure 5 Recommended Organisation of the Commercial/Marketing Functions for an Independent OOUR in the Immediate Future

The principal innovation suggested in Figure 5 is the creation of Product Managers. Depending on the complexity of the product range an OOUR may elect to have more than one Product Manager.

The basic functions of the Product Managers would be to ensure that the sales objectives for the products in his charge are achieved and to act as a direct link between the OOUR and its markets. Specifically a Product Manager would:

- represent the OOUR at all negotiations with key customers and service these customers
- provide technical service
- inform the factory, of the changing technical requirements of its customers
- provide the OOUR with competitive, market and economic intelligence.
- develop, in conjunction with Head Office Marketing personnel, specific marketing plans for the products under his control
- develop, in conjunction with Head Office personnel, specific advertising and promotional plans for the OOURS products.
- promote the sale of the OOURS products in conjunction with Head Office personnel via participation in trade fairs and seminars, preparation of technical literature etc.
- commission from the Head Office such marketing research as is necessary for the successful marketing of the OOURS products
- participate in the product development programme of the entire company by identifying the needs of the users of the products and thereby identify opportunities for both his OOUR and the enterprise at large

In relationship to the OOURS, the basic function of the Head Office Marketing Section is to provide specialised services which the individual OOURS alone could not economically justify and to co-ordinate the activities of the OOURS for the common good.

Accordingly, there must exist a number of functional links between each OOUR and the Head Office through which co-ordination and liaison can take place. The more important of these in terms of marketing and commercial functions are itemised in Figure 6.

FIGURE 6

Functional Links in Marketing Areas between OOUR and Head Office

OOUR ACTIVITY	Head Office Section Entering and undertaking functional co-ordination
Warehousing	Commercial Operations Department
Transport	Commercial Operations Department and Director for Co-ordination of Transport and Supplies

OOBR ACTIVITY	Head Office Section Liaising and undertaking functional co-ordination
Purchasing	Purchasing Department, Foreign Trade Department
Sales Administration	Commercial Operations Department, Finance Sector
Product Manager	Sales Department, Sales Promotion Department, Marketing Research Department, Foreign Trade Department, Long Range Planning Sector

In the middle to long term, as marketing expertise develops within individual OOBRs it is recommended that the Organisational structure shown in Figure 7 should be modified through the creation of the post of Marketing Director as shown in Figure 7.

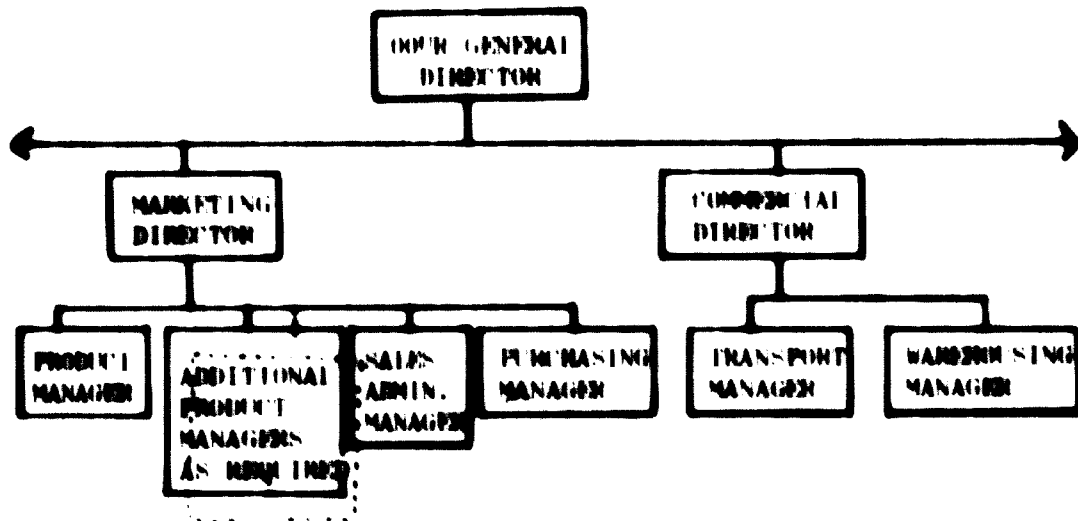


Figure 7. Middle to long term Organization of the Commercial and Marketing Functions in OOBRs

Co-ordination of the activities of the OOBR Marketing Directors will be undertaken via the Head Office Marketing Director. In a number of areas where product ranges are complementary there will be a need for considerable direct liaison between OOBR Marketing Directors.

d. Marketing Sectors of OOURS Forming Part of a ZOOUR

Individual OOURS banding together to form a ZOOUR (or community of OOURS) will delegate their marketing and commercial responsibilities to the ZOOUR.

They will, therefore, not have a marketing sector.

They may, however, retain some authority over warehousing and materials control. This will need co-ordination at the ZOOUR level as outlined in Section e which follows.

• Marketing Sectors at ZOOOR Level

It is recommended that, at the community of OOUR level, the marketing/commercial functions conducted on behalf of the individual OOURS should be organised on a basis identical with that shown earlier in Figures 5 and 7 for independent OOURS.

Transport, purchasing, sales administration and the product manager functions will, therefore, be undertaken by the ZOOOR. In addition it will be necessary to co-ordinate the warehousing and materials control functions performed by individual OOURS. A Warehousing Co-ordinator will, therefore be necessary as shown in Figure 8.

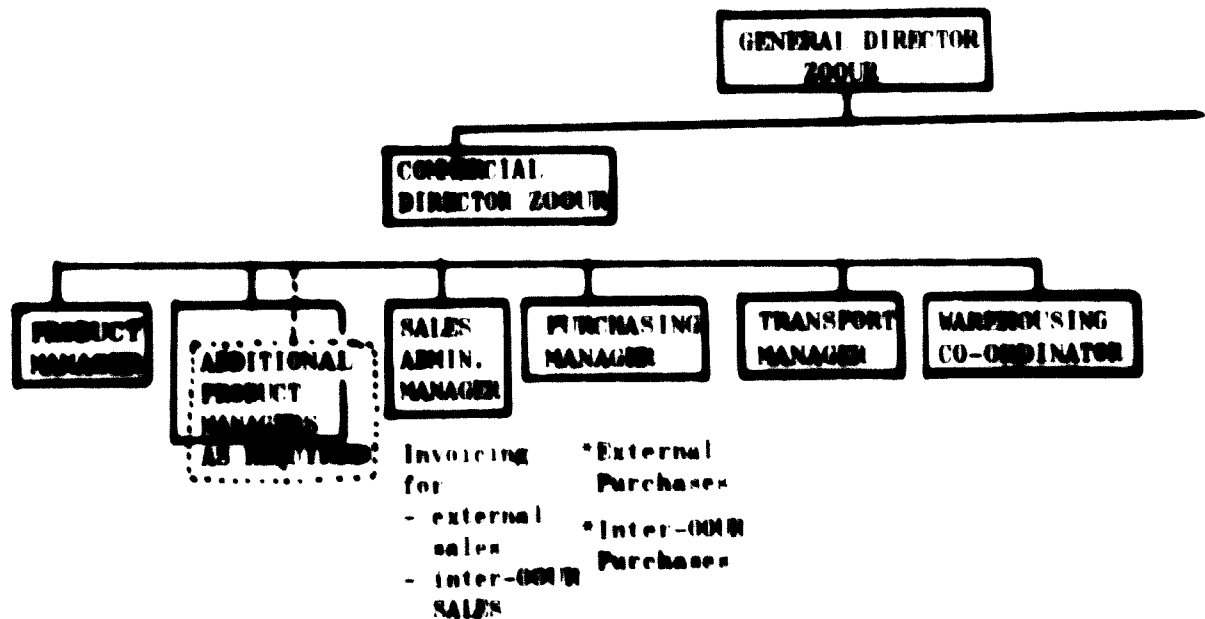


Figure 8 Recommended Organisation of the Commercial/Marketing function of a ZOOOR in the immediate future

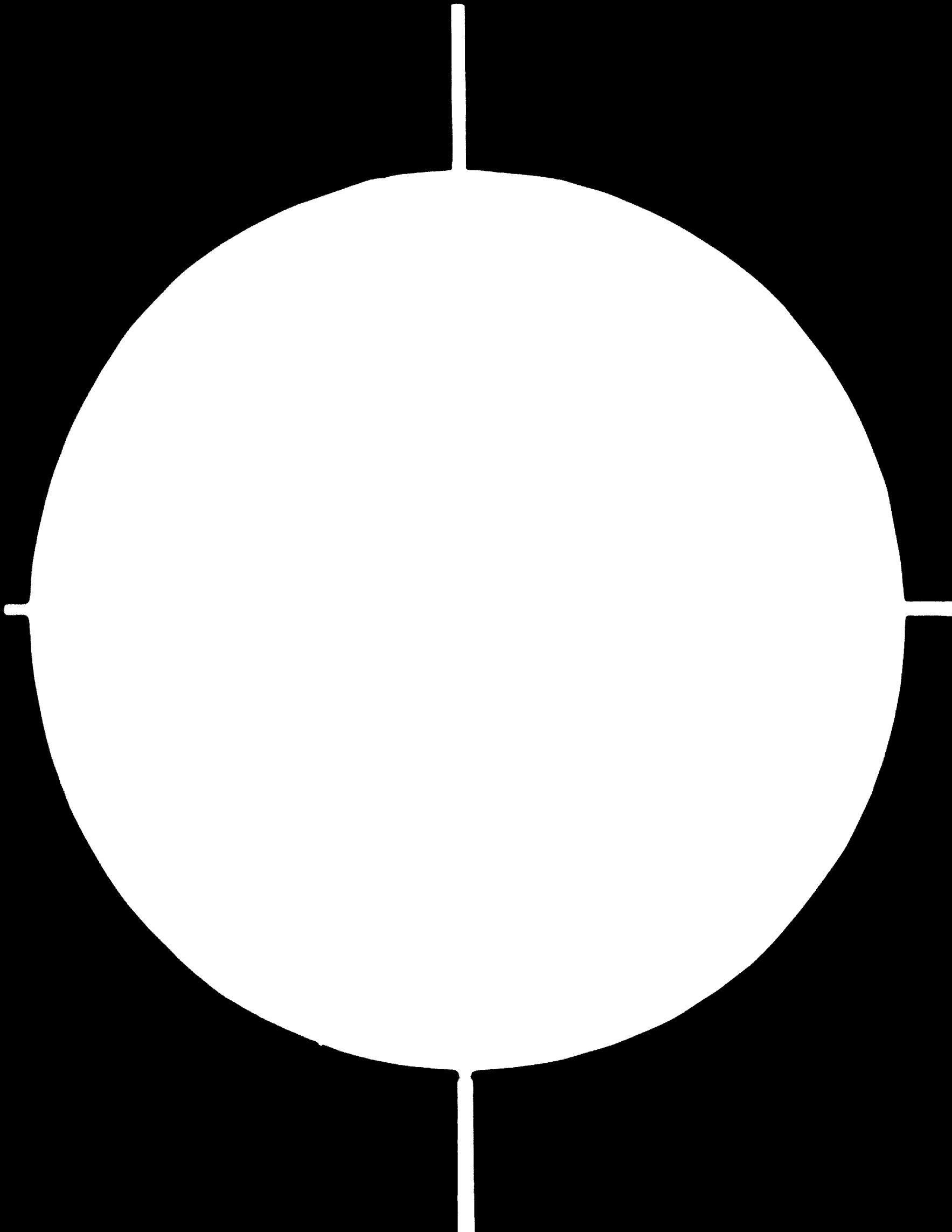
As with independent OOURS, the above structure may be modified in the future to create the post of Marketing Director.

The interaction of this structure with staff at the Head Office level will be identical with that shown earlier in Figure 6.

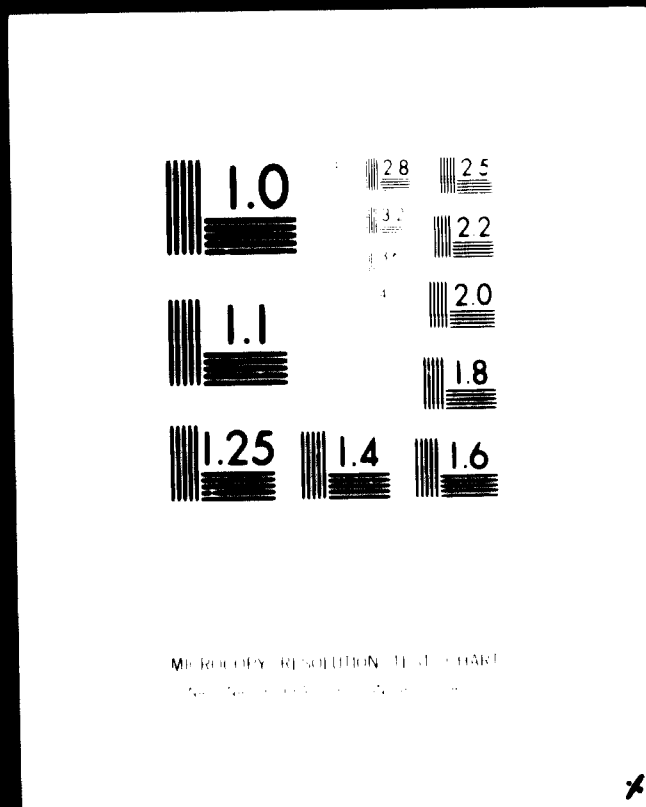
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k Head Office Commercial Operations Department

The recommended structure of this new Department is as follows:

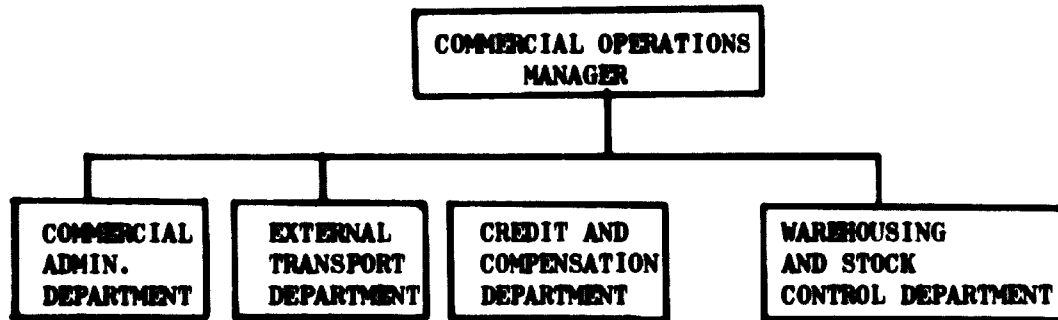


Figure 14 Recommended Structure of Head Office Commercial Operations Department

The functions of this department are all concerned with advising on, and co-ordinating activities at the OOUR and ZOOUR level. The Credit and Compensation Department will act as advisor to the whole enterprise on these matters which require close liaison with the Finance Sector of the Head Office OOUR.

f. Head Office Marketing Research Department

The current Market Research Department embraces advertising as one of its major functions. It is recommended that the function should in future be undertaken as part of the responsibilities of the new Sales Promotion Department. The recommended organisation of the modified Marketing Research Department is shown in Figure 9.

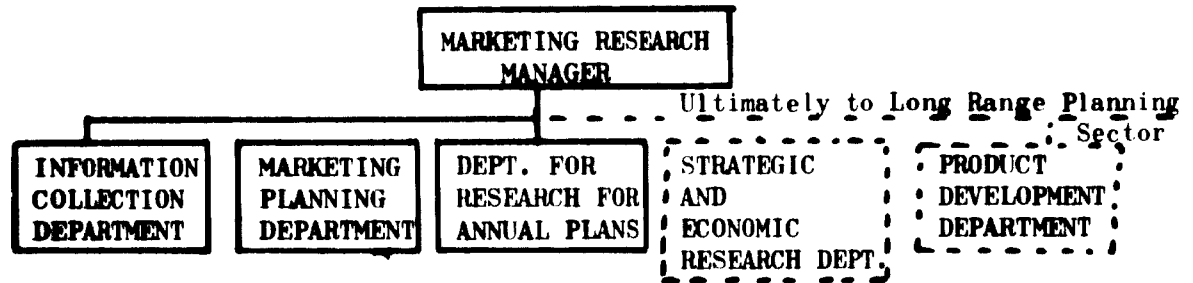


Figure 9 Recommended Structure of Head Office Marketing Research Department

The above organisation reflects the need to distinguish clearly between research and planning for current operations and the research and planning for future activities.

The operations which the enterprise must undertake are of two types.

- Operations concerned with the day to day running of the enterprise and achieving its annual plans.
- Operations concerned with the future activities of the company, its development and its long term plans.

When a function encompasses both types of operation, as happens at the moment, it is virtually inevitable that day to day problems take precedence over, and are undertaken at the expense of, problems regarding the future.

It is for this basic reason that the P.A./YUCOB team in Organisation and Management Development has recommended the formation within the Head Office OOUR of a Long Term Planning Sector dealing exclusively with the future development of the enterprise.

This Long Term Planning Sector must include certain marketing elements notably product development and strategic and economic research.

Suitable personnel for these functions are however, difficult to obtain in Yugoslavia. For this reason these functions have been temporarily located within the Marketing Research Department of the Marketing Sector to allow personnel to be developed and groomed for these specific roles.

Such temporary positioning will also facilitate later liaison and co-operation in both an informal and formal basis between the Marketing Sector and the Long Range Planning Sector.

In the Long Term, the basic responsibility of the Marketing Research Department will be to research and develop the annual marketing plans of the total enterprise.

Through the Information Collection Department, it is envisaged that the enterprise will be equipped with facilities to undertake its own field research necessary for product and marketing planning. The department would act as advisor to all sections of the enterprise on the efficient collection and use of field data.

The Department for Research into Annual Plans would undertake all marketing research required by the enterprise for the development and successful implementation of the annual plan. It would undertake the bulk of the marketing research currently conducted by the existing Market Research Section (see Section C 1). It would be responsible for providing regular markets and competitive information on all factors which might affect the achievement of the annual plan.

The Marketing Planning Department would undertake the actual development of operational marketing plans on behalf of the OOURS and the enterprise at large. It would also establish control systems to monitor the operation of the plans developed and to ensure that the necessary action is taken.

g. Head Office Sales Promotion Department

The task of this newly created Department would be to promote the enterprises' products through planned promotion, advertising and customer service. It is proposed that Group Product Managers be appointed to take charge of specific product groups such as:

- Mineral products
- rolled steel products
- wire products
- finished metal products
- etc. etc.

The Group Product Managers would work in association with the Product Managers in the OOURS and ZOURS but would promote the total product range available from the enterprise as a whole.

Organisation of the Department would be as follows:

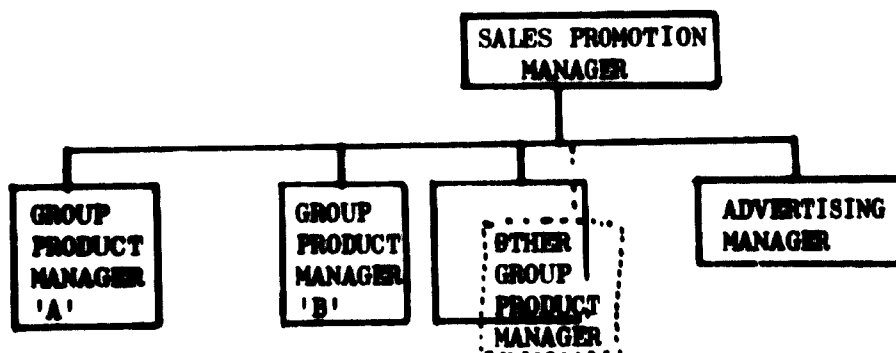


Figure 10 Recommended Structure of the Head Office Sales Promotion Department

Specific activities of the Group Product Managers would be:

- advising on and implementing special policies and marketing plans relevant to the products within their area of responsibility.
- co-ordinating the marketing mixes of the individual OOURS and ZOURS.

- participation in seminars, exhibitions, trade fairs, special promotions etc.
- preparation of technical literature
- participation in field promotions, market development, technical and after-sales service.

The advertising function would be carried on as at present, with the possible addition of a professional journalist to undertake the preparation of public relations type press releases thus meeting a current pressing need of the section.

h. Head Office Domestic Sales Department

This department will have the responsibility, in conjunction with the product managers at the OOUR and ZOOUR level, of implementing the enterprises Yugoslav sales plan.

As outlined in Section D.1.a. a major innovation likely to be necessary in the future will be the creation of Regional Sales Offices. These will facilitate the level of customer contact necessary to the enterprise when it finds itself in a more competitive market environment.

These regional offices would best be located at Republic Capitals or on the premises of certain strategically located OOURS such as Novi Sad. They would provide a service to all OOURS by dealing with medium customers on a common basis rather than have the OOURS deal with these non-pareto customers individually. Costs would, therefore, be reduced but the enterprises total marketing effort would become more effective by having closer geographic contact with its customers.

The organisation structure recommended for this Department is as follows.



Figure 11 Recommended Structure of the Head Office Domestic Sales Department

The Domestic Sales Manager and the Head Office Support Staff in conjunction with the various OOUR and ZOOUR Product Managers would negotiate with key customers of the enterprise.

The Regional Sales Offices would negotiate and service the medium customers of the enterprise.

The Distributor Sales Manager would sell to and service those Distributors having the role of servicing those minor customers whose size does not warrant direct service by R.M.K.-Zenica.

The concept of a Distribution Sales Manager is another innovation. Currently Distributors account for over 60% of the sales of R.M.K.-Zenica, and the enterprise is obviously highly dependent on their good-will for the future. As a class of customer they differ significantly in their needs and problems from the direct steel user. Accordingly a separate selling force has been recommended to the enterprise to deal with them.

Filling the post of Distributor Sales Manager is of much greater importance at this point in time (See Sec. D6) than the creation of regional sales offices. Pending the creation of the latter offices, their role of selling to medium customers can be undertaken virtually immediately by the product-oriented sales sections currently in existence in the Head Office Commercial Sector (Section C 1).

i Head Office Domestic Purchasing Department

It is envisaged that this Department will have the following structure:

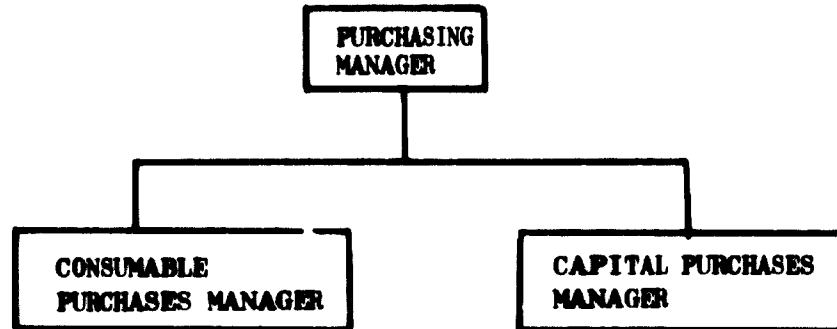


Figure 12 Recommended Structure of Head Office Domestic Purchasing Department

This Department contains the existing Purchasing Service and commercial service for investment with the exclusion of staff transferred to the purchasing sections in the OOURS and those staff concerned with foreign trade.

The Consumable Purchases Section will have the task of co-ordinating the purchasing activities of the OOURS and the "communities of OOURS". In addition it will directly negotiate with suppliers whenever it is apparent that better prices or service can be obtained by consolidating together the separate individual purchases of the OOURS.

The Capital Purchases Section is essentially a purchasing agent acting on behalf of the New Investment Sector and its project teams. Its role will be to negotiate for, and administer, the supply of goods within the specifications laid down by the New Investment Sector.

j Head Office Foreign Trade Department

The structure recommended for this Department dealing with both import and export is as follows:

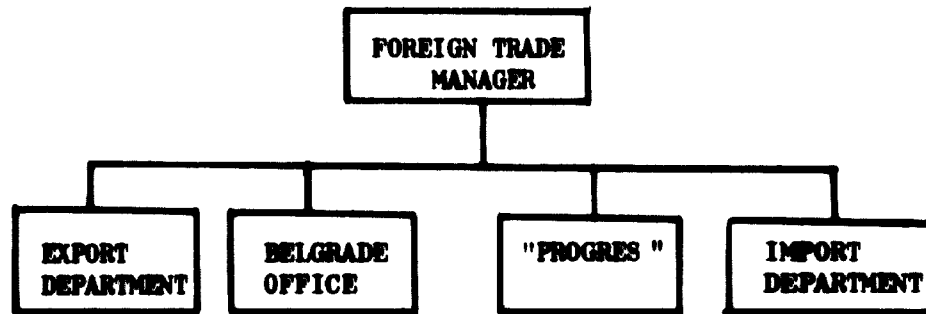


Figure 13 Recommended Structure of Head Office Foreign Trade Department

The objective of this restructuring of existing departments is to consolidate the foreign trade expertise of the company into a common service so as to facilitate .

- the exchange of goods with the Eastern Bloc
- the export of goods to the Western Bloc
- the funding of imports requiring hard currency
- the ultimate establishment of joint import/export offices in key foreign centres.

The Import Department would contain the present Section for Purchasing Imported Equipment.(from the Purchasing Department for New Investment) and the Imports Section (from the Purchasing Department). The Export Department consists of the present section located in the Sales Department.

1 Implementation

Implementation of the organisational recommendations contained in this section requires the following steps to be undertaken by R.M.K.-Zenica

- Step 1. Finalisation of the internal deliberations regarding the self-management amendments
- Step 2. Agreement on the P.A./YUCOR Macro-Organisational proposals for R.M.K.-Zenica.
- Step 3. Acceptance of the proposals contained herein for the detailed organisation of the proposed Marketing Sector.
- Step 4. Preparation of Job Specifications
- Step 5. Agreement on Salary levels, conditions etc.
- Step 6. Selection or recruitment of suitable staff to fill vacancies.
- Step 7. Training of staff in the job-skills required.

In the absence of firm final decisions on the basic steps 1, 2 and 3 the P.A./YUCOR team in marketing has concentrated its efforts on:

- informal management development and education sessions with selected members of the existing commercial staff of R.M.K.-Zenica likely to fill key posts within the new organisation.
- introduction of new techniques for marketing research, product development etc. likely to be of use within the new organisation's framework.
- participation in formal seminars held within R.M.K.-Zenica on marketing planning techniques and marketing organisation.
- discussions on methods of implementing the proposals including the preparation of tentative timetables for implementing the changes, discussion on training budgets, salary levels, basic skills required by personnel etc.
- the preparation of formal training courses ready to be given at a suitable later date to personnel such as OOUR/ZOOUR product managers and department heads.

This work will be continued by the YUCOR marketing consultant until proper implementation can commence and on-job training can be conducted.

2. Marketing Strategies and Objectives

The 1973 commercial and marketing policies of R.M.K.-Zenica embraced the following strategies:

- To optimise the enterprises liquidity rather than its sales volume during 1973. This has been dictated by the current liquidity crises within Yugoslav industry. In effect it implies refusing to supply domestic customers of doubtful liquidity. Production unsold will be held over as stock or exported rather than sold in the domestic market so that the organisation's financial health will not be put at risk.
- To establish regular representation and supply on certain key foreign markets. Earlier export effort has been irregular and haphazard. In the past, export orders fulfilled in one year were unable, for supply reasons, to be duplicated in the year following. The enterprise now intends to allocate regular supplies each year to certain key potential markets in the Middle East and Africa. This will prepare the way for a major increase in exports following the expansion of plant capacity in 1975/76. In 1973 exports are being greatly assisted by the current world steel shortage.
- To influence the government to re-introduce the parity of Yugoslav steel prices with those of Western Europe. Yugoslav prices are currently 10-15% below those of Western Europe. A corresponding price increase would be of major advantage to the enterprise and its expansion plans. Parity is, however, seen as being of particular importance in the future. Any future imbalance favouring other European Producers could potentially disrupt the financial health of the enterprise.
- To research and prepare the market for the new products which will eventuate from the enterprises expansion plans.
- To minimise raw material and consumable stocks held by the enterprise to improve its liquidity position.

The company has established as a long-term strategy the reduction of its dependence on distributors from 60% to 40%. Action on this has, however, been temporarily suspended because of the liquidity crisis. It is considered preferable to have distributors carry the potential financial risks rather than R.M.K.-Zenica itself.

The P.A./YUCOR team has examined these strategies in depth and considers them to be basically sound. However, as in the case of the corporate aims and objectives, little financial or market quantification has been undertaken.

There is, therefore, no way of measuring the enterprise's success or otherwise in achieving these objectives.

The failure to quantify objectives can be attributed in part to a number of causes such as:

- the lack of valid financial and cost data (Section D5)
- the subservience of sales and marketing planning to production planning (Section C.4.b)
- the lack of an adequate management information system (Section D 9)

However, the major reason is undoubtedly a failure on the part of the whole organisation either to understand the processes of systematic management and control (Figure 15) or an inability to incorporate these into the self-management system.

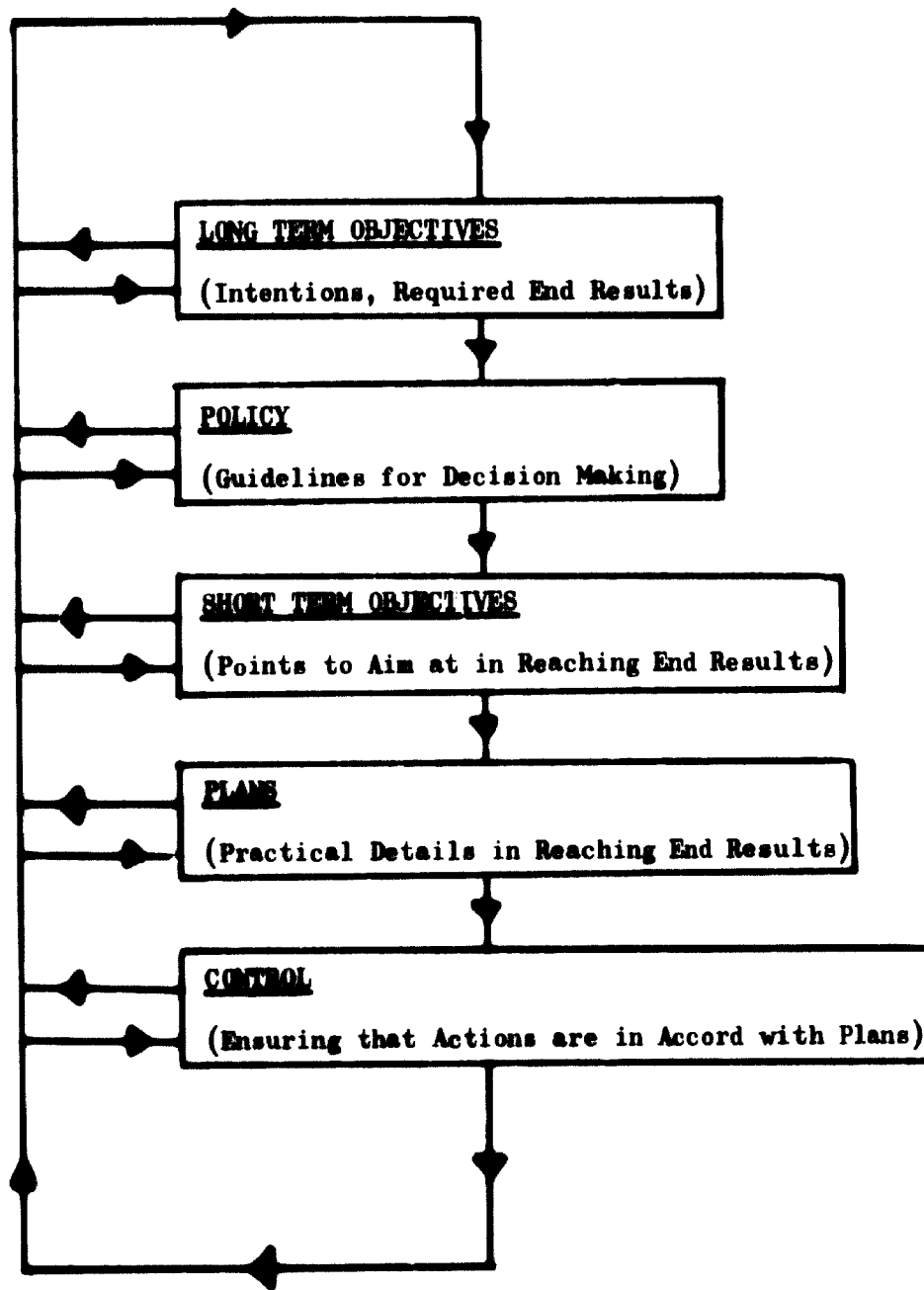


Figure 15. Automatic Management Process

The basic problem has been identified independently by all P.A./YUCOR teams engaged in the project. Every conceivable opportunity has been used to improve the understanding of the enterprise's personnel on planning central processes, but progress has been slow.

Quantification of objectives and controlling to them implies acceptance of a degree of personal responsibility which appears unacceptable to many members of the organisation who are used to reaching decisions and accepting responsibility only on a collective basis.

In order to effect long-term improvements in this regard, the creation of a special Marketing Planning Department has been recommended (Section D.7.f.) This Department, ideally to be managed by one of the R.M.K.-Zenica staff members attached to the consulting team, will represent a nucleus from which the concepts of sound planning, control, and the acceptance of personal responsibility can be spread throughout the marketing organisation of the enterprise.

3. Product Policy and Product Development

a. The present Situation

New products for the steel producing and mining operations of the enterprise pose few problems. The enterprise has long-term plans involving heavy capital investment to lift its capacity and hence to offer an increased range of basic steel products.

The company does however need new products in the area of finished metal products in order to:

- provide growth potential for OOURS manufacturing products in competitive areas such as nuts, bolts screws etc.
- create new industries and hence employment opportunities for under-developed regions within Yugoslavia. This is viewed as a duty.
- provide replacement employment for employees displaced by the increasing productivity of its manufacturing units.

Product Development in this area is currently the responsibility of the Metal Products Sector of the Kombinat Head Office, though frequently, individual OOURS take the initiative in this matter and launch new products without Head Office involvement.

The product development record of the enterprise has tended to be haphazard and the following problems have been reported to the P.A./YUCOR team:

- a shortage of new product ideas.
- unsound, prejudiced, screening and decision processes on new product ideas.
(e.g. "I'll vote for your idea, if you vote for mine.")
- a lack of funds for development. No separate budget exists for this activity.
- a shortage of staff to develop the new product ideas and the necessary processes (the shortage of engineering staff reflects a national problem).
- failure to undertake any investigation of the market potential of new product ideas (In some instances this was attributed to the lack of market research personnel to carry out the work)

- instances where the results obtained from market investigations have been ignored when they were adverse.
- failures to obtain detailed specifications from the market regarding its actual needs. As a consequence useful new products have been produced in the wrong sizes or using the wrong type of steel or the wrong quality.
- undue delays in the development of new products caused by the present compartmentalisation of the activities of the enterprise and the lack of overall supervision and control of development effort.
- instances where new products have been successfully developed and produced without staff being prepared or available to launch them.

b. Diagnoses

These problems all indicate the need for:

- a clear separation of day to day activities from activities concerned with the future development of the enterprise.
- a formal development organisation and formal review procedures, operated within previously agreed responsibility budgets.
- the close involvement of marketing personnel in all aspects of product development.
- a planned, systematic approach to new product idea generation.
- a project management system of controlling and progressing development project.

c. Detailed Recommendations

The P.A./ YUCOR recommendations on product development involve the establishment of:

- A Long Range Planning Sector within the Head Office OOUR, under the control of a Long Range Planning Director. This Sector would embrace all activities regarding the future development of this enterprise.
- A Product Development Committee at Workers Council level to approve product development projects, allocate funds and review progress made on the projects.
- A Product Development Department ultimately to be located within the Long Range Planning Sector but temporarily positioned in the new Head Office

Marketing Sector (See Section D.1.f.). This Department would have as its principal responsibilities:

- idea-generation involving such techniques as brainstorming, attribute listing, morphological analysis, technological forecasting etc. etc.
 - recommending new product objectives and programmes.
 - screening and initial testing of the feasibility of new product ideas.
 - preparation of preliminary cost and market statistics.
 - recommending new product ideas for subsequent development within the Long Range Planning Sector.
- Project Managers to be appointed to organise, manage and control specific development projects approved and funded by the Project Development Committee. The project managers would head-up project teams undertaking the actual development work.

The size and content of each project team would depend on the nature and complexity of the particular project. Participation in these project teams would principally be undertaken by specialised staff from the Long Range Planning Division. However, the Long Range Planning Director should be empowered to temporarily second suitable people from any section of the enterprise to form these teams, should the need arise. For all but major projects, membership of these teams would be for a specific limited period only

The following diagram details the operations of the recommended development process and indicates the activities and responsibilities of the personnel involved in product development:

DEVELOPMENT STAGE	RESPONSIBILITY	ASSISTANCE TO BE PROVIDED BY	ACTIVITIES/TECHNIQUES INVOLVED
IDEA GENERATION AND COLLECTION	Product Development Department	All sections of the enterprise, particularly OOUR/ZOOUR Product Managers	<ul style="list-style-type: none"> - Brainstorming - Technological Forecasting - Attribute Listing - Morphological Analysis - Analysis of Customer Needs - Analysis of Competitive product ranges - Value Analysis - etc. etc.

DEVELOPMENT STAGE	RESPONSIBILITY	ASSISTANCE TO BE PROVIDED BY	ACTIVITIES/TECHNIQUES INVOLVED
SCREENING AND INITIAL TESTING OF IDEAS	Long Range Planning Director and Product Development Department	Finance Sector, Marketing Research Department, technical Sectors, OOURS/ZOOURS etc. as required	<ul style="list-style-type: none"> - Preliminary cost and market studies - Comparison with enterprise objectives - Technical feasibility studies
DECISION TO UNDERTAKE SPECIFIC DEVELOPMENT	Product Development Committee of Workers Council	Long Range Planning Director, Product Development Department	<ul style="list-style-type: none"> - Preliminary cost/benefit analysis including discounted cash flow analysis
UNDERTAKE DEVELOPMENT	Long Range Planning Director	Project Manager and Project Team (drawn as required from throughout the enterprise)	<ul style="list-style-type: none"> - Product and process design - Prototype testing - Detailed market studies - Detailed cost and profit study - Preparation of detailed market and manufacturing specification
DECISION TO MANUFACTURE AND MARKET	Workers Council and Collegij of Directors	Product Development Committee, Long Range Planning Director, Project Manager	<p>Final cost/benefit analysis including D.C.F. analysis</p>
PREPARATION TO MANUFACTURE AND MARKET	Project Manager, Specific OOUR/ZOOUR involved	Full resources of enterprise as required	<ul style="list-style-type: none"> - Undertake new - Tooling etc. - Establish production facilities - Establish prices - Develop marketing plan - Establish quality control and industrial engineering standards - etc. etc.

d. Implementation

Pending decisions by R.M.K.-Zenica, the P.A./YUCOR team in marketing has concentrated its efforts on the role and duties of the proposed Product Development Department. Initially this will be located in the Marketing Research Department and it appears likely to be staffed, at least in part, by members of the present market research staff.

Attention has been principally focussed on idea-generation techniques, creative thinking, brainstorming and technological forecasting. Informal discussion groups on these subjects have been conducted and a course of recommended reading material prepared. Translation and language barriers have, however, posed problems in this regard.

The formal course prepared for OOUR/ZOOUR Product Managers contains special sessions devoted to creative thinking techniques and practical sessions and brainstorming.

4. Marketing Research and Forecasting

The current Market Research Section of the Head Office Commercial Sector contains a nucleus of well qualified personnel capable of occupying key roles in the expanded Marketing Sector proposed for the Head Office OOUR in Section D1 of this report.

The P.A./YUCOR team closely examined the marketing research and forecasting currently being undertaken and considers it to be of high quality. The major deficiency is that not enough work of this nature has been undertaken to satisfy the immediate future needs of the enterprise, despite the frequent use of external consultant institutes.

The following actions should be undertaken immediately by the enterprise:

- the appointment of additional staff to undertake data gathering, analysis and forecasting.
- the re-organisation of the Market Research Section as recommended in Section D1f of this report
- elimination of the salary differential which exists between graduate economists and engineers employed in the Commercial Sector of the enterprise, compared to those employed in financially better endowed sections, such as Production.
- the provision of additional computational facilities - preferably, adequate access should be provided for mathematical computation on the I.C.L. Computer currently being installed. Otherwise freer access should be given to external E.D.P. facilities. The bulk of the section's work is currently being undertaken on manual or electric adding machines.

The P.A./YUCOR team has spent considerable time with the various personnel in the section, discussing techniques for the field collection and interpretation of data, econometric forecasting, statistical demand analysis and the construction of elementary marketing models which should prove of benefit to future operations of the enterprise.

Arising from these discussions, one highly significant potential defect was identified in the demand forecasts currently in use by the enterprise and the Yugoslav steel industry at large.

The currently available forecasts are all based on historical Yugoslav consumption. (For examples see Appendix 1). Such past consumption has in large measure been restricted through lack of supply. It therefore probably does not provide a sound basis for extrapolating the future demand for steel in Yugoslavia under conditions of free supply.

It is conceivable that the matching of supply with demand in 1975/76 (or whenever the current expansion plans of the Yugoslav steel industry come to fruition) will only be a temporary phenomena. The apparent free availability of steel at that time may prompt current users of steel substitutes (such as concrete, timber or in the case of packaging, plastic and glass) to switch to steel, thus re-creating a short supply situation.

The implications of this defect are currently being considered by the Commercial Sector.

5. Costing and Pricing

Within the marketing area, accurate cost data should be available for such operations as:

- the preparation of cases for increased prices for submission to Government price-regulatory agencies.
- the preparation of export quotations
- the evaluation of the net effect on profit of altering the level of expenditure on marketing inputs such as advertising, promotional effort sales effort etc.
- the evaluation of alternative channels of distribution.
- the establishment of realistic quantity rebate and discount schemes.
- the profit optimisation of the annual sales plan.
- product policy decisions particularly regarding extensions and reductions of the product range.

Product costs currently available to the Commercial Sector are prepared annually by the Economic Sector of R.M.K.-Zenica using an absorbed-costing system which relies on the arbitrary allocation of indirect costs. Accordingly they do not permit the above operations to be adequately performed.

The task of introducing a direct-costing system within R.M.K.-Zenica is being undertaken by the P.A./YUCOR team in finance.

In co-operation with this team, the P.A./YUCOR team in marketing have expounded on the operation and advantages of a direct costing system to marketing personnel in informal management development sessions. In addition, the formal training course prepared for OOUR Product Managers devotes a session to the use of the concept of contribution in optimising marketing decision-making.

Implementation of the concept must, however, await the availability of the direct product costs which will result from the work of the P.A./YUCOR finance teams, and the establishment of a system of responsibility budgeting.

Government price control currently allows the enterprise little selling-price flexibility. The autonomy given to the present Commercial Sector of R.M.K.-Zenica with regard to discounting these prices is currently minimal. Maximum permissible discounts on individual products are set by the Collegij of the enterprise, who also set target average selling prices for the Commercial Sector.

The introduction of a direct costing system and an action-oriented management information system should permit greater autonomy regarding discounts to be given to marketing personnel in the future.

6. Channels of Distribution

a. The Present Situation

R.M.K.-Zenica is heavily reliant on Merchants and Distributors for the sale of its products. Reliance on distributors is close to 100% on the following products.

- concrete steel
- screws
- chains
- agricultural implements
- stoves and fluepipes

In general terms, reliance on distributors is greatest for final metal products and least for mineral products. Overall 60% of the enterprises sales are to Distributors and Wholesalers.

The use of distributors provides R.M.K.-Zenica with significant advantages (see Section C.2.d) particularly during the current liquidity crisis faced by Yugoslav industry. On the other hand it presents the organisation with some long term problems in view of the fact that:

- the enterprise does not have access to, or direct control over, such a major share of its market.
- the distributors possess a low level of loyalty to domestic steel producers. In 1967, when world steel prices were lower than those in Yugoslavia, and import restrictions were temporarily modified, distributors had no hesitation in switching their supply from local steelworks to foreign producers.
- the use of distributors tends to divorce the enterprise from the needs of its consumers. This is a particular problem in terms of generating new ideas for product development.
- the distributors, due to the low margins available on steel as a result of government regulations, and also to the poor supply and service of the steel producers, are tending to lose interest in distributing steel. Whereas 10 years ago steel represented about 50% of a typical distributor's business, it now represents less than 10%.

b. Recommendations and Actions

The P.A./YUCOR team has recommended actions to the enterprise in the following matters:

- that it should immediately create a special sales section to negotiate with and provide sales support to Distributors. This recommendation is embodied in

the organisational recommendations for the Domestic Sales Department of the Head Office Marketing Section contained in Section D.l.h. of this report. The major task of this section would be to increase distribution loyalty. No action has yet been possible towards establishing this section.

- that the enterprise should examine the relative costs associated with different levels of reliance on distributors. The Commercial Sector currently believes that sales to distributors at the level of 40% of total sales represents the strategic optimum but has no knowledge of the costs likely to be incurred by implementing such a policy. Methods of gathering the necessary information have been recommended by the P.A./YUCOR team, but no action has been taken by R.M.K.-Zenica as yet.
- that the enterprise should examine the possibility of acquiring its own distribution network, leading ultimately to the establishment of steel service centres similar to those currently in operation in Europe and North America. The limited range of steels produced by R.M.K.-Zenica might prevent such centres offering a full range of products unless agreements were reached with the other steel producers in Yugoslavia.

Establishment of such distribution and service centres would present R.M.K.-Zenica with the following opportunities.

- closer contact with the market and greater control over it.
- the ability to itself import special steels on behalf of its customers, which it is currently precluded from doing by legislation
- the ability to increase its profitability on many sales from the imposition of the 7% surcharge allowed under price control legislation, to distributors.
- the opportunity to greatly increase the enterprise's total contribution per ton on steel produced. On the basis of North American experience there is considerably more profit in cutting, welding or drilling a ton of steel in a Steel Service Centre than is available from producing a ton of steel in a steelworks.

The Commercial Sector has viewed this suggestion with interest and has, we understand, commissioned a Yugoslav Consulting Institute to examine the possibilities of this proposal. Available details of the operations of Steel Service Centres in the U.S.A. have been supplied by the P.A./YUCOR consultant team.

7. Sales Operations and After Sales Service

a. Sales Operations

Within the present market environment sales skills are scarcely required. Customer contacts are limited except at the time of annual contract negotiations or when problems regarding supply or payment arise. When such contacts are made they appear to be conducted with professional competence.

The expansion of production and the enterprise's intention to reduce its dependence on distributors, both indicate that this lack of direct sales effort will need to change in the future. The organisational recommendations contained in Section D.1. of this report, therefore, allow for the possible future creation of regional offices undertaking conventional sales operations within the regions they serve. The OOUR/ZOOUR Product Managers particularly those in the competitive finished metal products area, are also likely to need a high level of selling skills in order to secure the key customers of the enterprise.

Acceptance of this is, however, far from universal within R.M.K.-Zenica. Opposition to the concept of selling and to the idea of salesmen or representatives appears to rest on:

- ideological grounds
- conservatism and an unwillingness to face the prospect of change. In the words of the R.M.K.-Zenica Sales Director - "We have done it this way for 55 years; no change will be necessary".

The P.A./YUCOR team has conducted informal management development sessions on:

- selling skills
- sales force organisation and management
- territory organisation and control
- salesforce motivation etc.

with the Market Research Department of the Commercial Sector. The extension of these sessions to the Sales Department has not been possible through lack of interest.

From these sessions the principal potential problem areas with regard to establishing a conventional sales force were identified as being:

- the low prestige and status associated with being a salesman in Yugoslavia
- the problem of motivation in terms of getting salesmen to accept individual responsibility for the results in their territory.
- the problem of providing adequate remuneration to attract the right sort of personnel.
- the ideological reluctance of the industrial system to provide company vehicles for the use of salesmen.
- a similar reluctance to accept the concept of individual rather than group incentives.
- the possible reluctance of customers, used to negotiating with Directors of the enterprise, to deal with personnel such as salesmen who might be lower in the enterprises hierarchy.
- the problem of providing the representatives with sufficient technical knowledge to perform their role adequately.

One particular area of need was recognised - that of providing personnel to assist distributors and export agents to train their own sales personnel in the use and sales potential of R.M.K.-Zenica products.

Any further implementation in the above areas must await the appointment of suitable personnel.

b. After Sales Service

The organisation currently has no personnel whose function is the provision of after-sales service.

Queries and complaints are currently handled by personnel in the Sales Department. Where the problems are technical or involve product quality these are normally referred to the relevant technical sectors of the organisation.

No records are kept of queries or complaints received by the Sales Department, except when they lead to negotiations for price-reductions arising from quality defects. A valuable source of action-oriented product data is therefore being ignored and it has been recommended that complete records are kept in future.

Current need for after-sales service by customers is apparently low, although this need may well increase in the future with the increasing sophistication of the product range. It is envisaged that after-sales service in the new organisation would be provided jointly by the Domestic Sales Department and the Sales Promotion Department.

8. Advertising and Sales Promotion

a. Advertising

Current expenditure on direct advertising represents approximately 0.15% of external sales, or 1.7% of the net profit before tax. Details of the 1973 advertising budget are given in Appendix 1.

Corporate advertising, principally on television, constitutes over 40% of the total expenditure. The benefits, if any, derived from this are clearly intangible although the advertisements probably achieve their stated objective of showing the Yugoslav people the size and structure of the enterprise.

The balance of the expenditure is on product advertising catalogues, technical brochures, trade fairs etc., and the output appears to represent good value for money spent.

Advertising agencies of any real professional competence are a rarity in Yugoslavia and accordingly R.M.K.-Zenica (in common with many other Yugoslav enterprises) undertakes its own creative work, media selection and media placement.

In these operations the R.M.K.-Zenica advertising department is handicapped by the lack of advertising test facilities, and the absence of useful audience survey and readership statistics regarding the local media.

The generation of frequent public-relations-type press releases, expected of Yugoslav enterprises of the size of R.M.K. Zenica, represents a current problem to the department. The acquisition of a professional journalist to undertake this work, as recommended in Section D.7.g. of this report, is of high priority.

The product catalogues, technical bulletins etc. produced by the department are of high quality, though clear shortcomings exist in their distribution. The P.A./YUCOR team has suggested that the current distribution be extended to reach:

- technical students at University level
- Yugoslav Embassies and Legations throughout the world.
- Foreign Embassies, Consulates and Trade Legations located in Yugoslavia.

At present, virtually no literature is made available to R.M.K.-Zenica Distributors for subsequent distribution to their customers nor is any form of advertising support given to distributors. Advertising schedules are not circulated at all. It has been suggested that these defects should be promptly remedied.

b. Sales Promotion

In a supply-starved market such as exists at present for most products, sales promotion is of minor importance and has received little attention, except for:

- the publication of product catalogues and technical bulletins (see above)
- participation in occasional trade fairs and technical exhibitions.

As additional production capacity becomes available for export, greater use of the latter media will become necessary in support of the enterprises export agent 'Progres'.

Increased sales promotional activity within Yugoslavia will also be necessary if the enterprise is to obtain rapid and permanent benefits from the expansion of its capacity and product range.

Within the relatively unsophisticated industrial economy of Yugoslavia, R.M.K.-Zenica stands as a technological leader. Products the enterprise chooses to introduce in future, though perhaps well established in West European markets, will represent genuine innovations to Yugoslavia. To maximise the benefits obtainable from these future products, considerable market development work and sales promotion will need to be undertaken.

In the longer-term the Yugoslav steel industry, as elsewhere, can expect to have to face mounting competition from substitute materials, such as plastics and aluminium. Meeting challenges from these materials will require considerable effort in promoting the advantages of steel.

For these reasons the P.A./YUCOR team has recommended the establishment of the Sales Promotion Department outlined in Section D.1.g.

The basic problem facing the enterprise regarding the establishment of this Department is that of obtaining suitable personnel. At current salary levels, suitable technical graduates with an interest in market development will not be attracted to the R.M.K.-Zenica Marketing Departments. The enterprise must therefore re-examine its remuneration structures to solve this problem.

9. Marketing Information System

Details of the reports which comprise the present marketing information system of H.M.K.-Zenica are given in Appendix 1. The current system suffers from the following defects:

- the reports present all the available data on a subject rather than the few key facts on which action can be taken.
- various reports arrive too late or too infrequently for effective action to be taken.
- some of the reports fail to make any comparison with the planned performance.
- reports do not exist in many areas where marketing management needs regular data for decision purposes and action e.g. customer complaints and marketing expenses.

Preliminary work has been undertaken by the P.A./YUCOR team towards designing a marketing information system compatible with the organisational recommendations made in this report. Figure 17 shows the likely distribution of information within the revised organisation.

Further implementation in this area must await:

- acceptance of the recommended organisation structure.
- acceptance of the management information system for the total organisation prepared by the other P.A./YUCOR teams. The marketing information system must be an integral part of the total management information system of the enterprise.
- the ready availability of the expense and standard cost data which will be generated through the system of direct costs and responsibility budgets being installed by the P.A./YUCOR teams in finance
- the actual appointment of staff to positions within the new organisation. The human factor is vital in the design and operation of an effective M.I.S. The fine detail of the system cannot be designed without a knowledge of the individual needs and skills of the people who are to actually use the system.

REPORT	HEAD OFFICE MARKETING SECTION										000R	2000R
	Marketing Director	Market Research Dept.	Advertising Department	Group Product Manager	Sales Director	Distribution Sales Manager	Regional Sales Managers	Foreign Trade Dept.	Commercial Operation Dept.	000R Marketing Director	2000R Product Manager	
Marketing Expense Reports	X											
- Summary												
- Individual Departmental												
- Distribution Cost			X									
Sales Analysis including Key Customers	X	X		X	X	X	X	X	X	X	X	X
- Summary					X	X	X	X	X		X	X
- By Region					X	X	X	X	X		X	X
- By Product Group					X	X	X	X	X		X	X
- By End Use					X	X	X	X	X		X	X
- By Channel					X	X	X	X	X		X	X
Representatives Sales Reports	X	X		X	X	X	X	X	X	X	X	X
Customer Complaint Analysis												
Listing of Contracts needing re-negotiation												
Customer Fulfillment of Contract (Exception only)												
Overdue Accounts Report	X				X	X	X	X	X	X	X	X
Competitive Intelligence Report	X	X		X	X	X	X	X	X	X	X	X
Stock Levels Report												
Foreign Price Trends and Supply	X	X										
Volume of Imports	X				X							

Figure 17 Tentative Distribution of Reports within Marketing Information System.

10. Management Development and Training

a. The Client's Staff

Reference has been made in the preceding sections of this report to the principal areas in which training in Marketing Management[®] and its techniques have been given. These include:

- Marketing planning techniques
- Selling techniques and methods
- Sales force organisation and control
- Methods of sales promotion
- Forecasting techniques
- Field data collection and interpretation
- Product development organisation[®] and methods
- Creative thinking and idea generation techniques
- Advertising strategies and objectives
- Distribution strategies
- Physical distribution policies
- Credit control methods
- Inventory control
- Direct costing systems and the use of the concept of contribution
- Control of Marketing expenses
- Competitive pricing strategies
- Marginal costing for export markets
- Foreign trade promotion
- Organisation of export offices
- Purchasing policies
- Use of management information

Additionally, time has been devoted to comparing the operations, product ranges offered and marketing methods of the steel industries in the U.K., Australia and U.S.A. with those of Yugoslav steel producers.

Formal presentations on various aspects of the work have proved necessary on a number of occasions, including:

- lectures at a seminar held by R.M.K.-Zenica on Marketing Organisations and Marketing Planning.
- presentations of the project's work to the commercial staffs of individual OOURS
- presentations to gatherings of the Commercial Directors of all the OOUR/ZOOURS.
- presentations to selected members of the enterprises Collegij of Directors.

A formal training course in marketing to be conducted over a three day period has been prepared by the P.A./ YUCOR team. This course has been specifically designed to meet the needs of new Product Managers when they are appointed. The course will also be repeated for new and existing members of the Head Office Marketing Sector.

The programme for the course contains the following sessions:

1. Marketing and the Marketing concept.
2. Product Policies and Product Planning
3. Creative Thinking, Brainstorming and Product Development.
4. Buyer Behaviour and Motivation.
5. Sales Forecasting.
6. Financial Aspects of Marketing and the use of the concept of contribution.
7. Distribution Planning
8. Advertising and Sales Promotion.
9. Marketing Research.
10. Management Control in Marketing and the use of Information Systems.
11. Organisation and control of Marketing.
12. The Role and Duties of the Product Manager
13. Discussion and Summary.

This Course will be given principally by the YUCOR marketing consultant. Certain sessions will, however, be given by R.M.K.-Zenica personnel as part of their own training and development.

Informal training and management development sessions will continue to be given by the YUCOR consultant until actual on-job training can be commenced.

b. The YUCOR Consultant

The assignment, because of the size and complexity of the organisation and the continued close client exposure, has provided the YUCOR consultant with excellent practical experience in consulting and in the nature and operation of industrial markets within Yugoslavia.

The YUCOR consultant, through his active participation in every management development session, has undoubtedly derived greater benefit from the assignment than any individual member of the client staff.

The standard P.A. course in marketing and management consultancy has been undertaken by the YUCOR consultant during the assignment and Courses for further reading have been provided. Copies of control documents, books, articles etc. have been provided for his use on future assignments.

We consider he is now equipped to complete the implementation of therecommendations of the R.M.K.-Zenica assignment and to undertake general marketing consulting in Yugoslavia.

APPENDIX I

**Statistical Data, Tables etc. Supplementing
the Text of the Report**

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TABLE 1

Production Plan Steelworks Zepica

- 1975

	<u>Domestic Market (tons)</u>	<u>Export Market (tons)</u>	<u>TOTAL (tons)</u>
Railway Track	120,000	60,000	180,000
Hard Profiles	60,000	10,000	70,000
Other Profiles	970,000	60,000	1,030,000
Rolled Wire	46,000	10,000	56,000
Semi Products	199,000	-	199,000
Forging Steel	96,250	-	96,250

TABLE 2

Distribution of Internal and External Sales
R.M.K.-Zenica 1971

<u>Plant Location</u>	<u>% by value</u> <u>Sales within</u> <u>R.M.K.-Zenica</u>	<u>% by value</u> <u>Sales to</u> <u>External Customers</u>
Zenica	31	69
Vamoš	59	41
Ljubija	61	39
Tiljaš	30	70
Sarajevo	33	67
Novi Sad	10	90
Bihać	9	91
Mrkonjić Grad	17	83
Gornji Vakuf	97	3
Deboj	93	7

TABLE 3

Relative Importance of Plant Locations in terms of value of
External Sales
R.M.K.-Zenica 1971

<u>Plant Location</u>	<u>\$/ by value of Kombinat External Sales</u>	<u>\$/ by value of Kombinat Export Sales</u>
Zenica	67.3	72.8
Sarajevo	9.0	-
Ilijaš	7.6	18.8
Ljubija	4.5	5.5
Bihać	4.0	-
Vareš	3.9	0.3
Novi Sad	3.0	2.6
Mrkonjić Grad	0.7	negligible
Doboј	Negligible	-
Gornji Vakuf	Negligible	-

TABLE A

Staffing of Head Office Commercial Sector

B.M.K.-Zenica 1972

<u>Function</u>	<u>Number of Employees</u>	
	<u>On Establishment</u>	<u>Actual October 1972</u>
Sector Management & Administration	10	8
Belgrade Representative Office	10	9
Market Research Section	20	14
Advertising	4	4
Domestic Sales	35	29
Export Sales	10	8
Invoice Office (for Zenica Plant only)	16	16
External Transport	17	15
Purchasing (Yugoslavia)	57	47
Purchasing (Imports)	20	19
	<hr/>	<hr/>
TOTAL	199	169

TABLE 1

Staffing of Commercial Section at Individual
Plant Locations - 1972

<u>Commercial Sector at Plant</u>	<u>No. of Staff engaged as</u>			
	<u>Sales</u>	<u>Production</u>	<u>Warehousing & Transport</u>	<u>Other i.e. Administration</u>
Zenica	-	8	309	21
Vareš	7	12	150	6
Ljubija	4	12	42	5
Ilijas	15	15	104	6
Sarajevo	7	14	50	2
Novi Sad	11	4	45	5
Bihac	6	5	42	2
Mrkonjic Grad	4	2	9	1
Bosanska Gradiska	5	6	18	1
Prijedor	2	1	-	1
Gornji Vakuf	2	1	12	1
Bobaj	5	1	7	1

TABLE 6

Number of External Customers under Contract

R.M.K. Zenica - 1972

<u>Plant Location</u>	<u>Contracts with Users</u>	<u>Contracts with Distributors</u>	<u>Total</u>
Zenica	113	65	178
Vareš	27	29	56
Ljubija	4	-	4
Ilijaš	50	42	92
Sarajevo	49	56	105
Novi Sad	23	57	80
Bihać	26	52	78
Mrkonjić Grad	2	34	36
Bosanska Gradiška	-	24	24
Prijedor	-	15	15
Gornji Vakuf	1	-	1
Boboj	6	-	6

TABLE 7

Trends in Yugoslav Steel Prices for Representative
Products - 1965-1972

Base 1965 prices = 100

Price Index for

<u>Year</u>	<u>Concrete Reinforcing Steel</u>	<u>Round Steel Bars</u>	<u>Joists</u>	<u>Railway Lines</u>	<u>Ordinary Drawn Wire</u>
1965	100	100	100	100	100
1966	100	100	100	100	100
1967	100	100	100	100	100
1968	100	100	100	100	100
1969	108.9	108.2	108.1	108.1	108.2
1970	133.2	134.5	129.8	135.1	122.3
1971	167.9	155.4	163.3	162.2	149.2
1972	22.62	176.5	185.2	184.2	169.5

TABLE 8

Projected Advertising Expenditure

1973

Corporate Advertising

T.V.	800,000 Dénars
Films	300,000 Dénars
Publications	600,000 Dénars
Other	400,000 Dénars

Product Advertising

Professional and trade journals, newspapers catalogues, pamphlets seminars etc.	2,350,000 Dénars
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Expenditure on Trade Fairs

Zagreb, Belgrade and Foreign	400,000 Dénars
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Miscellaneous

150,000 Dénars
<hr/>
5,000,000 Dénars

TABLE 9

Volume & Value of Exports - R.M.K.-Zenica 1972

Exports for Convertible Currency

1\$ (U.S.) = 16.75 Denars

PRODUCT	COUNTRY OF DESTINATION	TONNAGE	VALUE '000 Denars
Steel Beams	Iran	4,882	11,195
Axles	Poland	160	5,217
Cast Iron Pipes	U.S.S.R.	3,140	8,736
Cast Iron Pipes	Italy	67	222
Cast Iron Pipes	Pakistan	676	1,832
Other Castings	East Germany	17	114
Other Castings	Italy	2	18
Pipes for Chemical Industry	Czechoslovakia	26	295
Netting Wire	Austria	30	363
Nails	U.S.A.	280	1,044
TOTAL	All countries	9,280	29,036

**Volume and Value of Goods Exchanged with Eastern Bloc Steel Producers
- 1972**

COUNTRY	TONNAGE	NOMINAL VALUE '000 Denars
Bulgaria	18,452	54,633
U.S.S.R.	34,633	75,193
Rumania	32,045	144,984
Poland	8,857	26,335
Czechoslovakia	6,037	17,197
Hungary	5	57
TOTAL	120,029	318,399

TABLE 10

Current Marketing Information System R.M.K.-Zenica
1973

From Plant Locations to Head Office Sales Department

- Stocks, Production and Delivery Report (WEEKLY)
- Stock and Delivery Summary for Quarter (QUARTERLY)
- Contract Fulfilment (OCCASIONAL)

From Head Office Department to Commercial Director

- Stocks, Production and Delivery Report (MONTHLY)
- Sales Analysis by Customers (QUARTERLY)
- Sales Problems (MONTHLY)
- Reports on Business Trips (OCCASIONAL)

From Market Research Department to Interested Parties

- Price Changes on Overseas Markets (MONTHLY)
- Fluctuations in Domestic Supply and Demand (MONTHLY)
- Fluctuations - Foreign Supply and Demand (MONTHLY)
- Market Studies and Analyses (OCCASIONAL)

Commercial Director to Workers Council

- General Report (OCCASIONAL)

P A R T I V

F I N A N C E

- A. INTRODUCTION
- B. ORGANISATION AND ACTIVITIES OF THE PROJECT TEAM
- C. PROGRAMME OF WORK
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 - 2. Proposed Financial Organisation
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 - 6. Future Programme

A. INTRODUCTION

Part IV of the final report details the results of the programme of financial consulting work carried out at R.M.K.-Zenica, Yugoslavia, as part of the UNIDO Project. No. DP/YUG/70/511, Contract No. 72/35.

This financial work was carried out by P.A. International Management Consultants Limited in conjunction with the Yugoslav Centre for Organisation and Development (YUCOR) and had the following as its general aims.

- To assist in the design and implementation of sound management accounting procedures.
- To assist in designing and implementing an effective budgetary control system.
- To assist with the examination and implementation of necessary changes in financial forecasting procedures in order to evaluate the Company forecasts and plans in money terms.
- To assist in the development and implementation of management information systems to cover all aspects of the Company's operations.
- To train Company staff and centre team staff in all the above activities.

Details of the work carried out under these headings are included in the sections of the report which follow.

B. ORGANISATION AND ACTIVITIES OF PROJECT TEAM

Work on the financial section of Phase II of the total project was commenced at Zenica on 4th September, 1972. Initially the project team consisted of:

- Dr. Ljubovoj Blagović, Consultant from the Yugoslav Centre for Organisation and Development.
- Mr. Asim Hadziselmović from the Organisation Department of R.M.K. Zenica.
- Mr. W.M.W. Adam of P.A. International Management Consultants Limited under the supervision of P.A.'s project leader Mr. James Thorburn.

Early in the project the amount of time that Dr. Blagović was prepared to contribute was found to be unsatisfactory and after two and a half months he was subsequently replaced by Mr. Zivota Janković. Later a further change was made, in January, 1974; YUCOR replaced Mr. Janković with Mr. Milan Nesić.

Similarly, R.M.K. Zenica found difficulty in releasing Mr. Hadziselmović from his normal duties; he too was withdrawn from the project and replaced by a Steering Committee of Directors who were to lend their support to the project as required. The Steering Committee was comprised as follows:

- Mr. Surjelić, Kombinat, Director of Financial Operations
- Mr. Pe lindrović, Kombinat Director of the Internal Bank
- Mr. Odić, Kombinat Director of Book-keeping.

(These three directors are the three deputies of Mr. Frundić, the Kombinat Financial Director).

and

- Mr. Kreso, Financial Director of ZOOOR-Zenica.

Frequent changes in members of project teams is a common occurrence in Yugoslavia. Such changes cause considerable difficulty in operating and seriously affect the continuity and results of the project.

From time to time throughout the project, teams were formed to carry out specific sub projects. Further details of these teams are given in the appropriate sections of the report.

Throughout the project the financial team liaised closely with the marketing and organisation teams.

C. PROGRAMME OF WORK

The scope of the financial project was outlined in very general terms and covered nearly all aspects of management accounting and financial management techniques. In order to be of practical assistance to R.M.K. Zenica it was, therefore, necessary to limit these objectives. The adoption of limited objectives was especially necessary for the following reasons.

- 26 weeks of consulting time is a very short period in which to register an impact on a company which has a turnover of between 250 and 300 million dollars.
- The various changes in the YUCOR and client project teams
- The implementation throughout the assignment of the new self management legislation which had a significant effect on the financial organisation structure of all enterprises in Yugoslavia.

We therefore, narrowed the objectives of the assignment down to the following:

- To provide the enterprise with every assistance to ensure the smooth introduction of the new self management system.
- To train YUCOR consultants in all aspects of modern management accounting techniques.
- To train members of the client's project team in the relevant management accounting techniques.
- To give an appreciation of the modern management accounting techniques available to as wide a range of management within the enterprise as possible.
- To demonstrate management accounting techniques by taking case studies from a section of the enterprise, and using actual figures when presenting the findings to management.
- To form a client project team under the direction of the YUCOR consultant.

This team to carry out further case studies based on actual results, and jointly present their findings to management.
- To draw up a future programme of implementation which can be carried out by the enterprise under the direction of the YUCOR consultant.

We believe that, due to the differing business, financial and legal environments between Yugoslavia and western countries, full implementation can only be effectively carried out by a Yugoslav national. Foreign consultant aid was therefore concentrated on pre-training before implementation and technical back up during the implementation stage.

D. EXISTING FINANCIAL SITUATION

1. Introduction

As in all Yugoslav companies, the financial function of R.M.K. Zenica is split between the Financial Division and the Economics Division, both divisions are headed up by senior directors.

The main duties of the Financial Division are as follows:

- To prepare accounts based on historical data in a manner to conform with "S.D.K." requirements. ("S.D.K." is the Social Accounting Service which is a government body which performs an audit function).
- To control the liquid position of the enterprise. Liquidity control within a company is a complex operation in Yugoslavia in view of the poor liquid position of many Yugoslav companies and the widely used practice of compensation for settling debts.
- To control the level and distribution of Personal Incomes. The payment of personal incomes must conform to the detailed laws and controls governing distribution of income.
- To obtain and allocate funds for New Investment. Again the statutory regulations governing the control of New Investments are complex.

In short, therefore, the Finance Division carries out all the book-keeping functions of the enterprise and controls its cash flow position.

Within the Economics Division one of the main departments is the section for Planning and Analysis. The main duties of this section are as follows:

- To co-ordinate and consolidate the annual plan for the total enterprise.
- To prepare on a regular basis actual performances against the plan and other statistical data.
- To prepare five year and other long range plans as required.

The Economics Division, therefore, is nearer to performing a management accounting function than the Finance Division.

2. Financial Organisation

The changes in the self management legislation which took place in Yugoslavia during the course of the project considerably affected the structure of the financial function within the enterprise. As a result, therefore, it is only practical to consider the structure of the Finance Division in brief.

At Kombinat level there was a Finance Director who reported to the General Director; the Finance Director had three deputy directors controlling the three main functions of his division.

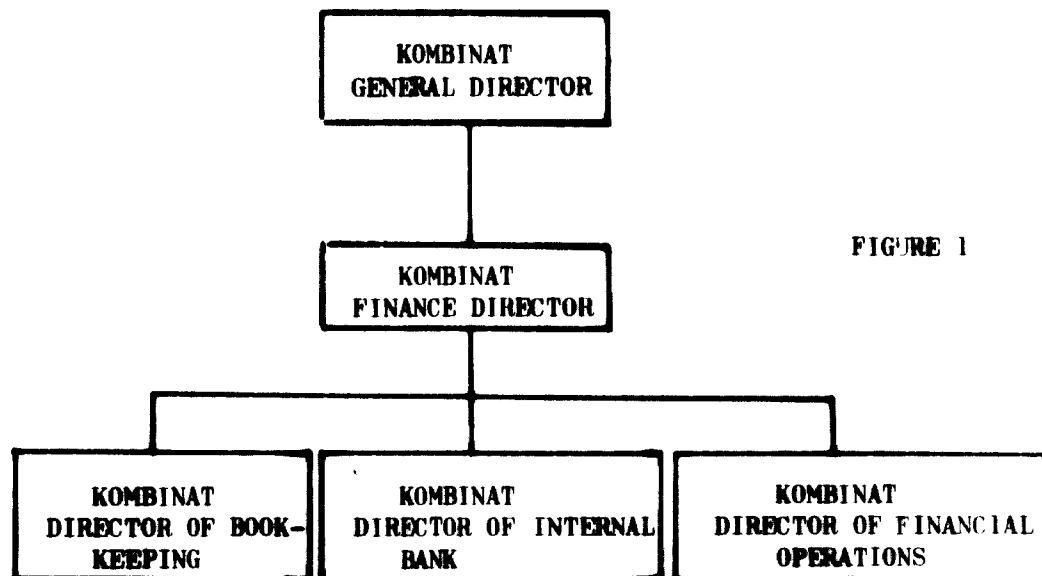


FIGURE 1

Within the three functions shown in Figure 1, the following are the main duties which were carried out.

2:1 Book-keeping

- Kombinat book-keeping
- Co-ordination of book-keeping for all units within the company in order to prepare a set of overall accounts for the enterprise.

2:2 Financial Operations

- Foreign Exchange transactions
- Control of Debtors
- Control of Creditors

- Administration of Compensation (Compensation is a system of settling Debtors and Creditors by contra. Often there are several links before the contra is achieved. The system is widely used in Yugoslavia in view of the poor liquid position of many companies).

2.3 Internal Bank

- Planning of Funds
- Procurement of Funds
- Distribution of Funds-
- Investment of Funds

At SOGUR level there was a financial director who was responsible jointly to the SOGUR General Director and the Kombinat Finance Director.

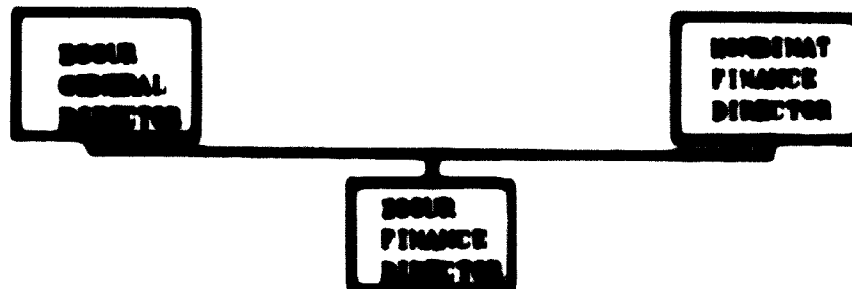


FIGURE 2.

Under the SOGUR Finance Director there were Directors of Book-keeping and Financial Operations. The Internal Bank is a centralized function at Kombinat level.

In each OGUR within the SOGUR there was a financial chief with a small staff who collected basic information and who administered the personal incomes for the OGUR.

At both Kombinat and SOGUR levels a planning and analysis department functioned within the Economics Division.

1. Management Accounting Procedures

At B.N.E. Zenica no separate system of management accounting is operated. The build-up of costs and the provision of management information is entirely based on the financial accounting system. In Yugoslavia all accounts must be prepared to a standard format as laid down by S.D.K. Each enterprise, therefore, has a standard or near standard cost structure, no attempt is made to tailor the system to suit the individual needs of an enterprise. As a result, therefore, the relevance and usefulness of all financial and costing information prepared by B.N.E. is suspect and, is therefore, of little use for management decision making.

In addition, each ZOVH is sub-divided into sections and each section is then treated as a profit or cost centre. In order to make the sections profit centres, a complex system of transfer prices is needed. The introduction of these transfer prices completely distorts available accounting data so that the true costs are not known.

For example, ZOVH Zenica is divided into 16 main sections which are sub-divided into 93 sub-sections. As shown in Table I the 93 sub-sections split into 71 profit centres and 22 cost centres. The actual results of the 16 sections for 1971 are shown in Table II whilst Table III shows the build up to the Kombinat figures for the same year.

4. Budgetary Control

All expenditure is included in the annual plans and subsequently as each month passes, information is prepared comparing the actual result with the plan, both on a cumulative to date and previous month basis. The system does, however, have the following faults.

- Expenditure categories are too broad to be meaningful.
- Planned figures are based on previous years' scale adjusted for volume and cost of living. Previous inefficiencies are, therefore, built-in since no attempt is made to budget from first principles.
- The information is produced too long after the actual events have taken place; the time lag is approximately four weeks.
- Interpretation of results is difficult due to intermingling of fixed and variable costs.
- Variances requiring attention are not highlighted.
- Management has not been trained to interpret and take action to correct variances.
- Responsibilities for individual expense items have not been allocated to managers.

5. Forecasting Procedures

In Yugoslavia annual plans are based on a standard system. The degree of detail gone into does, however, depend on the individual enterprise. Plans are prepared by R.M.K.-Zenica in line with the structure of the accounts; this is illustrated in Tables I, II and III. The plans, however, suffer from the following disadvantages.

- The plans have been developed from the format used when Government Central Planning was in operation and they are, therefore, heavily production orientated. Most information is in tons and hours instead of being in money value.
- Production of individual units is the starting point of the plans; all other plans are moulded around the production plans. The individual plans are then built up to provide total plans.
- The basis of all plans is achievements previously attained; there is no forecasting or budgeting from first principles; previous inefficiencies are therefore incorporated automatically in the new plans.
- The plans are not unified to show a total objective. Each plan tends to be presented on its own without reference to the part it plays in the build up of the total picture.

6. Management Information

There is a surfeit of information within R.M.K.-Zenica. Each section of information has been built up individually to meet a need at a certain time and has been continued since that date without revision. The information available to management, therefore, suffers from the following faults:

- There is no unified information system. Each section of information stands on its own.
- The base on which the information is founded is often dubious.
- Duplication of information is common, but no attempt is made to reconcile the two or more sources of information.
- The information is not presented to management in a way in which it could be used effectively. Points requiring attention are not highlighted and it is often produced too late to be of any real use.

7. Training Needs

There is no accounting profession in Yugoslavia. There is, therefore, a void in thinking between the book-keeper who records historical facts according to the standard format, and the economist who is interested in the broader and longer term aspects of the results. The void, therefore, covers the field of financial management. We found that there was a basic lack of understanding of the concept of financial control. We considered, therefore, that in the initial stages, training should be confined to the broader aspects of financial control.

E. RESULTS AND RECOMMENDATIONS

1. Introduction

The project was carried out against a background of change. At the start of the assignment the main unit of self management was the SOUR which was a total company which operated within a loose association of companies known as a Kombinat. By 1972, however Yugoslavia had adopted the OOUR as the basic unit of self management. An OOUR is a self sufficient economic unit. Each SOUR was, therefore, broken down into a number of OOURS where necessary. The company, therefore, now had three levels in its corporate hierachy.

- The OOUR which is a basic economic unit.
- The ZOOUR which is a union of OOURS and which is identical to the former SOUR.
- The Kombinat which is a union of all OOURS.

The bulk of our time was spent on the project between September 1972 and February, 1973. During this time much management effort was being put into the design of the new self management structure. From time to time our opinions were sought regarding the criteria and pitfalls of establishing individual OOURS. We identified the basic possible problem areas of sub-dividing a complete process unit into individual units as follows:

- The artificial creation of inter plant transfer prices
- The methods of allocation of indirect costs.
- Stock build-ups due to the differing objectives of individual units.
- Subdivision of central services tending to lead to increased costs.
- The position of one OOUR relative to the others could alter substantially due to changes outwith the control of the individual OOUR.
- The size of the units would still be too big to improve the stimulation resulting from smaller self management units.
- There would be numerous disputes over planning procedures.

As each OOUR had the option to look after its own financial affairs or to opt for finance to be handled at ZOOUR or Kombinat level, our advice was also sought regarding a revised organisational structure for the enterprise.

2. Proposed Organisation for Finance

When designing the proposed organisation structure for finance we took the following criteria into account:

2:1 New Amendments

The new amendments brought a third level into the self management hierarchy.

2:2 Proposed Macro Structure

The proposed macro structure recommended three principal divisions:

- Finance and Commercial
- Operations
- Future Activities

2:3 The Provision of Management Information

A more effective information service could be provided for management if the Finance and Economic Divisions were combined restructured and developed.

The functions of the Finance Division are as follows:

- The Internal Bank. The Internal Bank deals with all functions in connection with Planning, Procuring, Distributing and Investing Funds. This includes the provision of funds for new investment. We proposed that the Internal Bank should remain as a Kombinat function positioned within the Finance and Commercial Department, with the exception of the section for evaluation of new investment projects which we recommended should be included in the Future Activities division
- Financial Operations. The Financial Operations Department deals with foreign exchange transactions, debtors, creditors and compensation. We proposed that this should also be kept at Kombinat level in view of the rigid laws regarding imports and exports and the need to ensure that the enterprise settles as many debts as possible through the system of compensation.
- Administration and Personal Incomes. A section dealing with personal incomes and administration should be present at every self management level. The sections at ZOOOR and Kombinat level will, however, largely perform co-ordinating functions.

- **Book-keeping.** A book-keeping section should again be present at every self management level. At OOUR level only the basic book-keeping will be carried out. At ZOOUR level, book-keeping for the ZOOUR will be carried out and also co-ordinating book-keeping for each OOUR within the ZOOUR. Finally, at Kombinat level books will be kept for Kombinat administration and central services and also the co-ordinating book-keeping combining all OOURS.
- **Management Accounting.** The management accounting function is not at present carried out by the enterprise. Under the department of management accounting we would envisage the following sections:-

Long Range Planning

Annual Planning

Costing

Budgetary Control

Management Information.

The two planning functions are currently carried out in part by the Economics Section. We would envisage under the proposed structure a split in the planning responsibilities. We believe that long range planning should be carried out by the Future Activities Division at Kombinat level and that annual planning should be carried out by the Finance Division at all three self management levels.

There is no costing department at present, and indeed no costing system exists other than the documentation required to build up figures for the statutory accounting system. We would propose, therefore, that a costing department should be introduced at all self management levels. Also within the management accounting section we would propose that budgeting control and management information sections be introduced at all three levels.

- **Development and Technical.** In view of the complex accounting procedures necessary within the enterprise we propose that a Development and Technical Service section should be incorporated within the Financial Division. The Development section should operate at Kombinat level and be responsible for developing all systems within the enterprise. The Technical Service section should be at ZOOUR level and, should provide technical back-up to the existing systems for all OOURS within the ZOOUR.

In order to clarify the various structural relationships we have illustrated our proposals diagrammatically in Table IV

3. Financial Training

The first training task was to train the YUCOR consultant in the various management accounting techniques. The training consisted of reading, exercises and general discussion. During training the following subjects were covered.

- The need for Management Information
- The characteristics of Financial Information
- The need for Objectives
- The concept of Control
- The circulation of Money
- The need for Profit
- The need for Planning
- Profit Optimisation
- Fixed and Variable Costs
- The concept of Contribution
- The concept of Standard Costs
- The analysis of Variances
- The concept of Budgetary Control
- The concept of Liquidity Planning
- The evaluation of New Investments
- The need for Management Involvement
- Getting Results.

After the YUCOR consultant had been trained some provisional training material was prepared for presentation to the Steering Committee. The information prepared consisted of the following.

- A write up on the basic concept of financial control geared as far as possible to meet the Yugoslav situation. In addition to the short write-up, diagrams were drawn up to show the relationships of:
 - a) Objectives and Means
 - b) Planning Procedures
 - c) Achieving the Plan

The write up is included in the report as Table V

- A write-up on the basic concept of liquidity control. The write up is included in the Report as Table VI.
- A write-up on the basic concepts of control of new investments, included in the report as Appendix VII.

This information was translated and presented to the Steering Committee who accepted the various concepts. Further meetings were then held with members of the Kombinat and ZOOOR Zenica Finance and Economics Divisions and also with the Directors of ZOOOR Zenica. As a result of these meetings it was agreed to prepare a case study using actual data from one of the OOORS in order to demonstrate the techniques.

In addition to meetings held to discuss the basic concepts, a series of appreciation talks were held for a selection of Finance and Economic Division personnel. Six, two hour sessions were held, covering the following subjects:

- The need for Profit and Profit Planning
- Direct costing and contribution theory.
- Standard Costs and Responsibility Budgets.
- Achieving the Plan.
- Control of Liquidity and Working Capital.
- Control of New Investment.

To illustrate how the subjects were covered a copy of the notes referring to the session on Direct Costing and Contribution Theory are incorporated as Table VIII.

Meetings were also held with financial and general management personnel at enterprises away from Zenica to discuss the general concepts. During the project the following locations were visited :

Novi Sad

Vareš

Alipašići Mort

Ilijaš

4. Coke Plant Project

The first project to be carried out was in the Coke Plant. The Coke Plant was selected as it was the first process plant in the line at Zenica and also because it was a relatively simple process with one main product and several by-products. A simple situation was selected as there was a need to demonstrate the techniques quickly. To assist in the project two members of the Kombinat Organisation Department were allocated to the project, Nada Popović and Ivor Lubović.

The objectives of the project were as follows. To utilise the information already available within the Coke Plant to produce information which could be used to aid management decision making. The period chosen to illustrate the concepts was the 9 months to 30th September, 1972.

The various stages of the project were as follows:

- To discuss and explain the purpose, of the exercise to the General Directors of the Coke Plant and other relevant senior management.
- To gain the co-operation of the chief of the Financial Sector and his staff
- To prepare a standard cost for coke from the available technical and financial data in the annual plans, based on direct costs only.
- To prepare a profit plan based on the information contained in the annual plan.
- To pro-rate the annual plan down to a nine month period.
- To calculate the actual result for the nine months and present a profit statement.
- To calculate the variances between actual and standard for the nine month period.
- To calculate the differences between planned and actual fixed costs.
- To calculate the same information for the month of September, 1972
- To design suitable report forms.
- To prepare and present findings.

The work carried out in the coke plant is detailed in Table IX which includes a short write-up.

The main points illustrated by the presentation were as follows:

- Most of the required information already exists within the enterprise although not in the correct form.
- The information must be presented in a way which highlights the key points requiring management attention. For example, detailing the reasons for the difference between the planned profit and the actual profit, first of all in general terms and then in more detail on the subsidiary sheets.
- The concept of direct costing, contribution and variance analysis.
- The concept of budgetary control.

No attempt was made to alter or change the basic planning data against which the actual results were measured. We believe that basic management thinking must first of all be channelled in the right direction before any such improvements can be made.

The full findings were presented at OOUR, ZOOUR and Kombinat level. As a result of these presentations the general feeling was that while the concepts had been proved in a simple straight forward situation it was not yet clear how they would operate in a complex situation such as the Rolling Mills. It was, therefore, decided that a further project should be carried out in the Rolling Mills at Zenica which is one of the most complex OOURS in the whole enterprise.

5. Rolling Mill Project

The rolling mill project was carried out with the minimum assistance from the PA Consultant. The project was started up by Mr. Zivota Janković of YUCOR who had working for him the following team from B.M.K. Zenica :

Ivonka Vickajlović, Kombinat Organisation Department

Mladen Vuletić, Kombinat Economics Department

Ibrahim Dizdar, Financial Chief of Rolling Mills

Dragutin Kilibarda, Kombinat Economics Department

Mirjana Nikodijević, ZOCOR Zenica Economics Department

Mersur Dizdanević, ZOCOR Zenica, Economics Department

Work on the project commenced in December, 1973 and ran through to March, 1974. In January 1974 Mr. Milan Mesić replaced Mr. Janković, as project leader.

The project included all sections of the Rolling Mills. Data was therefore prepared for the following units :

- Blooming
- Heavy Mill
- Medium Mill
- Small Mill
- Wire Mill
- Light Mill
- Adjustment Mill
- Rail adjustment Mill

The review period chosen was January to October 1973. In addition to each individual unit, data was also prepared for the rolling mills in total.

All write ups and documentations were prepared in Serbo Croat; no full translation into English was deemed to be necessary. In general terms the report embraces the following.

- Section 1 covers the general objectives of the project.
- Section 2 recapitulates on the concepts of management accounting
- Section 3 is the data produced as a result of the project
- Section 4 is the proposed future programme.

Within section three the following documentation has been prepared, for each unit.

- An analysis of the difference between planned and actual costs showing the variances caused by contribution, personal income and indirect costs.
- An analysis of the reasons for the variance in contribution.
- A profit and loss account for the section showing the financial result.
- Financial statistics and other relevant data comparing actual achieved performance with planned performance.
- An analysis of product groups.

2. Business Programs

As a result of the financial work carried out at Sonira the following position has been reached.

- Now, when the VVOB consultant is fully trained in Management Accounting techniques.
- Within the Kombinat there is a group of people who are capable of producing accounting information for management, namely the team who assisted in the Billing Hills Project.
- The need is recognized at Sonira for the preparation of control data on a regular basis to assist management decision making.

The immediate plan, therefore, is to build as quickly as possible on this base. As a first step, therefore, it is essential to establish a management accounting section within the Financial Division. We believe that first of all management accounting should be established as a Kombinat function and then reported downwards to ZSRS and GRS level. The future programme of work envisaged is as follows:

- Appointment of a Director of Management Accounting at Kombinat level. The position should report directly to the Kombinat Financial Director.
- Recruitment and training of a small team of management accounting staff.
- Drawing up and agreement of programmes for implementation at GRS level.
- Carrying out the implementation at GRS level and introducing co-ordinating data at ZSRS and Kombinat levels.

The implementation stage will consist of the following steps.

- Explain to Senior Management
- Train financial section personnel in new duties
- Set up routines for the preparation of the new data.
- Allocate duties and responsibilities to appropriate members of the financial section.
- Prepare and present first set of data
- Train management to interpret and take action on the new data.
- Carry out spot checks to ensure procedures are being carried out effectively.

These procedures should be implemented gradually in all OOURS within the enterprise, both in Zenica and at other locations. The speed with which the system can be implemented depends solely on the amount of personnel allocated to the management accounting section by R.M.K. Zenica. Once the procedures have been installed, understood and utilised, work can then start on Phase II of implementation. It is envisaged that Phase II would incorporate revisions in the planning and budgeting procedures. Planning and budgeting would then be carried out from first principles, therefore, eliminating the slack in the current system representing previous inefficiencies; thus it would provide a realistic basis against which to exercise effective control and so produce tangible benefits for the enterprise.

T A B L E S

- I Profit and Cost Centres of Z00UR Zenica
- II Analysis of Results of Z00UR Zenica, 1971
- III Analysis of Results of R.M.K. Zenica, 1971
- IV Finance Function, Organisation Structure
- V Financial Control
- VI Financial Control, Liquidity
- VII Financial Control, New Investment
- VIII Direct Costing and Contribution Theory
- IX Coke Plant Information System

TABLE I PROFIT AND COST CENTRES IN ZOOOUR ZENICA

NO.	SECTION	PROFIT CENTRE	COST CENTRE	TOTAL
1	Coke Oven	2	1	3
2	Blast Furnace	1	5	6
3	Steelworks	3	3	6
4	Rolling Mills	8	2	10
5	Forge	4	1	5
6	Power	11	1	12
7	Transport	7	5	12
8	Machine Maintenance	2	1	3
9	Electric Equipment Maintenance	3	1	4
10	Stock Control	6	0	6
11	Welding Instrument Maintenance	1	1	2
12	Small Tool Maintenance	6	1	7
13	Commercial Department	1	0	1
14	Financial Department	1	0	1
15	Directors	2	0	2
16	Administration	13	0	13
	TOTAL	71	22	93

TABLE III

ANALYSIS OF RESULTS OF J.M.A. ZENICA, 1971

Millions of ND

	SALES	TOTAL COSTS	PROFIT (LOSS)
1. ZENICA Per Table II	8667	8514	153
Adjustments to take into account internal transactions and final adjustments to accounts	(6071)	(6107)	36
2. ALIPAŠIN MOST	296	267	109
3. ILIJAS	334	317	17
4. LJUBIJA	292	289	3
5. VAREŠ	273	252	21
6. VAREŠ	250	260	(10)
7. BINAČ	113	107	6
8. P. DRAPIN	86	67	19
9. KORDINAT	51	51	10
10. KRONIC GRAD	22	19	3
11. (KUNI VAREŠ	20	19	1
11. BINAČ	18	16	2
	6057	5814	243
Less Adjustments to cancel internal transactions	(799)	(799)	-
FINAL RESULTS	5258	5015	243

TABLE IV

FINANCE FUNCTION ORGANIZATION STRUCTURE

FUNCTION	SECTION	DIVISION	LEVEL		
			MANAGERIAL	WORKER	OPERATIVE
INTERNAL BANK	Planning of Funds Procurement of Funds Distribution of Funds New Investment Evaluation	FINANCE	•		
		Future activities	•		
FINANCIAL OPERATIONS	Foreign Exchange Debtors Creditors Competition	FINANCE	•		
			•		
ADMINISTRATION AND PERSONNEL INDEX			•	•	•
BOOK KEEPING			•	•	•
MANAGEMENT ACCOUNTING	Long Range Planning Annual Planning Costing Budgetary Control Management Information	Future activities	•		
		FINANCE	•	•	•
DEVELOPMENT AND TECHNICAL	System Development Technical Service		•	•	

• = Section required

TABLE V

FINANCIAL CONTROL

When we ask "What are the financial problems of the Kombinat?" we receive the following answers:

- Liquidity
- New Investments
- Profitability

Instead of discussing the relative merits of these problems, let us consider the situation in a different way.

What are the objectives of the Kombinat?

The objectives of the Kombinat and its SOURs are two fold:

- To develop Bosnia through New Investments, and to
- Provide a high level of Personal Income for the employees.

To do this the Kombinat must have sufficient liquid funds, i.e. cash.

Cash can be obtained from two sources, either internally or externally.

The supply of external cash is restricted due to the liquidity situation in Yugoslavia.

Great attention must, therefore, be paid to the generation of Internal Cash. Internal cash is generated through making profits, i.e. Cash Surpluses. One possible drain on cash supplies however is Working Capital. Strict control should therefore be kept on Working Capital, i.e. stocks, etc.

The main area of control is however on profitability.

What factors affect profitability?

- Volume
- Price
- Cost

Price you will eliminate as it is ostensibly Government Controlled. The Kombinat can therefore be said to operate in a controlled Price situation.

Volume: The Kombinat operates in a sellers market therefore all production is sold. Volume therefore is only important from the point of view of production output.

Take the two factors together however, Price and Volume, and we now have a Mix of Sales. Is the same profit earned from any mix of sales? It is most unlikely that profitabilities will be fixed even in a controlled price situation.

The best mix can therefore only be determined by a costing system which is designed to show Product Profitability.

We now come to the third profit factor which is Cost. There are fundamentally two types of cost.

- Variable Cost
- Fixed Costs

Variable Costs are costs which vary with production levels.

Fixed Costs are costs which do not vary with Production.

Why make the distinction between Fixed and Variable Costs?

The distinction is made between fixed and variable costs because when costs are allocated on a full absorption method, they will only be fully recovered when all factors regarding mix, volume and cost coincide with budget.

We have now reached a stage therefore where we have five factors affecting the objectives of the enterprise.

- Product Mix
- Level of Variable Costs
- Level of Fixed Costs
- Level of Working Assets
- Level of Investment

So far we have discussed objectives and worked backwards through the financial systems to obtain five factors which we believe are the factors which affect the objectives of the enterprise.

What we must now consider is the quantification of objectives

The first stage in achieving an objective is to have a Plan and indeed the Kombinat already has a sophisticated system of planning procedures. We believe, however, that not enough attention is being paid to the financial and overall objectives of the company.

The stages in planning which we see are as follows:

- State, quantify and agree objectives. Objectives should be prepared by the General Manager's Committee and agreed by the Workers' Council.
- The Profit needed to provide the funds to meet the objectives should then be calculated by the Finance and Economics Department.

In order to calculate the acceptable level of profit for one year it will be necessary to consider the medium and long term objectives of the enterprises possibly up to 10 years in advance in order to ensure that a reasonable profit progress is achieved throughout the years.

- The third stage is then to prepare a detailed marketing plan which is the responsibility of the Commercial Department
- Once the marketing division has prepared this plan the Production Sectors can then prepare their Production Plans. At this stage there should be some liaison between Commercial and Production Functions in order to co-ordinate the plans.
- The fifth stage in planning is to prepare standard costs using variable costs only. As selling prices will be known the relative profitability of each product will be known in terms of contribution.

Contribution is Sales Price less Variable Cost. The term contribution is used as it is the contribution to fixed overheads and profit.

By multiplying the sales volume by the unit contribution the total contribution of each product is calculated and by adding the product contributions together the total enterprise contribution is computed.

- Based on the Marketing and Production Plans, Debtors, Stocks and Creditors' requirements can be calculated which form the need for Working Capital which in turn becomes part of the Cash Flow Plan at a later stage.
- In addition, when activity levels are known Fixed Cost Budgets can be prepared which is in fact the Budgetary Control System.

- The first moment of truth has arrived. Does the Planned Profit equal the Objective. If it does not the shortfall should be assessed and the plans revised accordingly, starting again from the first stage of Profit Planning-the marketing Plan.

If the plan does meet the objective profit the next stage is to consider Cash Flow. Working Capital and New Investment requirements should be matched against the generation of Cash from Profits in order to ensure that sufficient Cash is available to carry out the other plans.

If the generation of cash falls short of the needs, again plans should be revised from the market plan stage.

If there is sufficient Cash the plan can go forward and be approved.

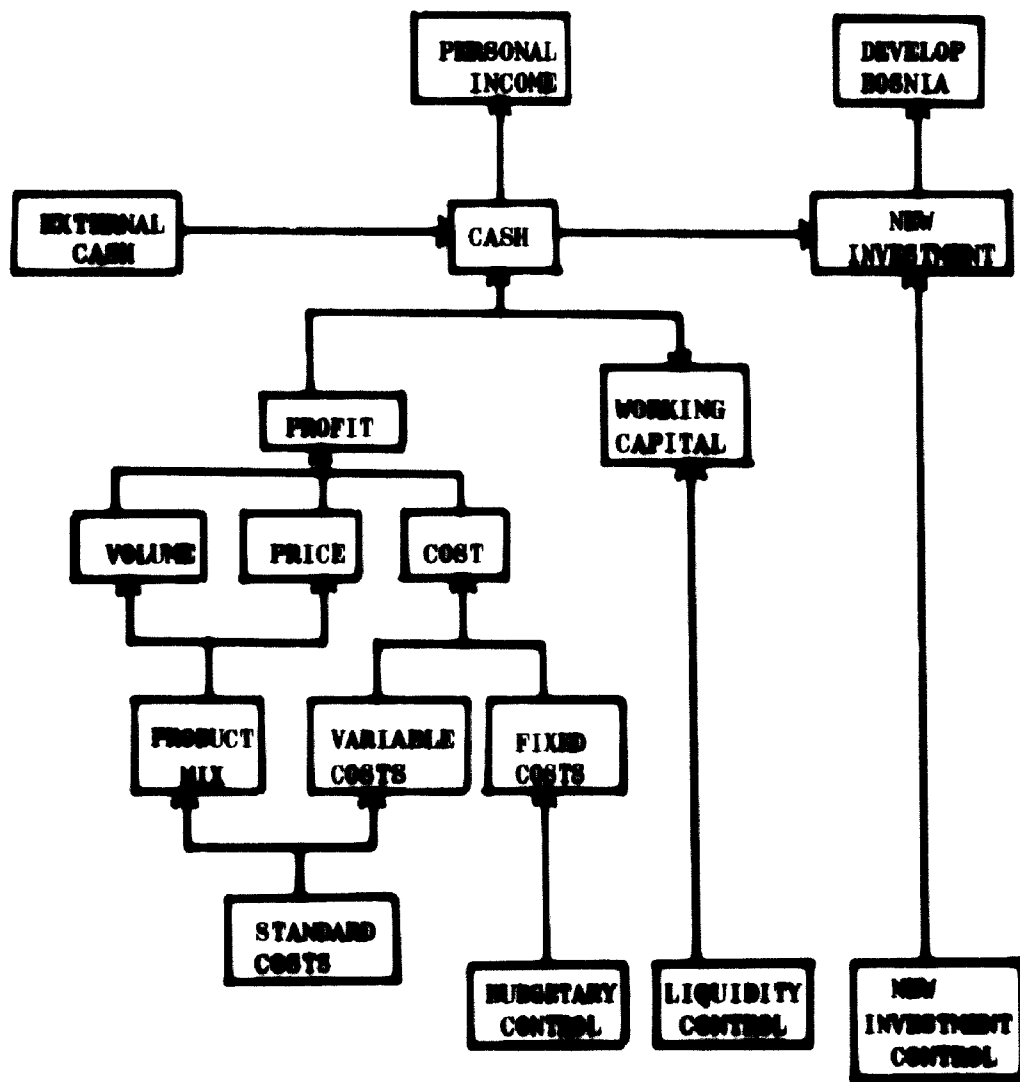
Once the objectives have been set and the plan prepared, the next task for management is the achievement of the plan.

The achievement of the plan will not happen automatically; all management must work towards the common goal of achieving the plan.

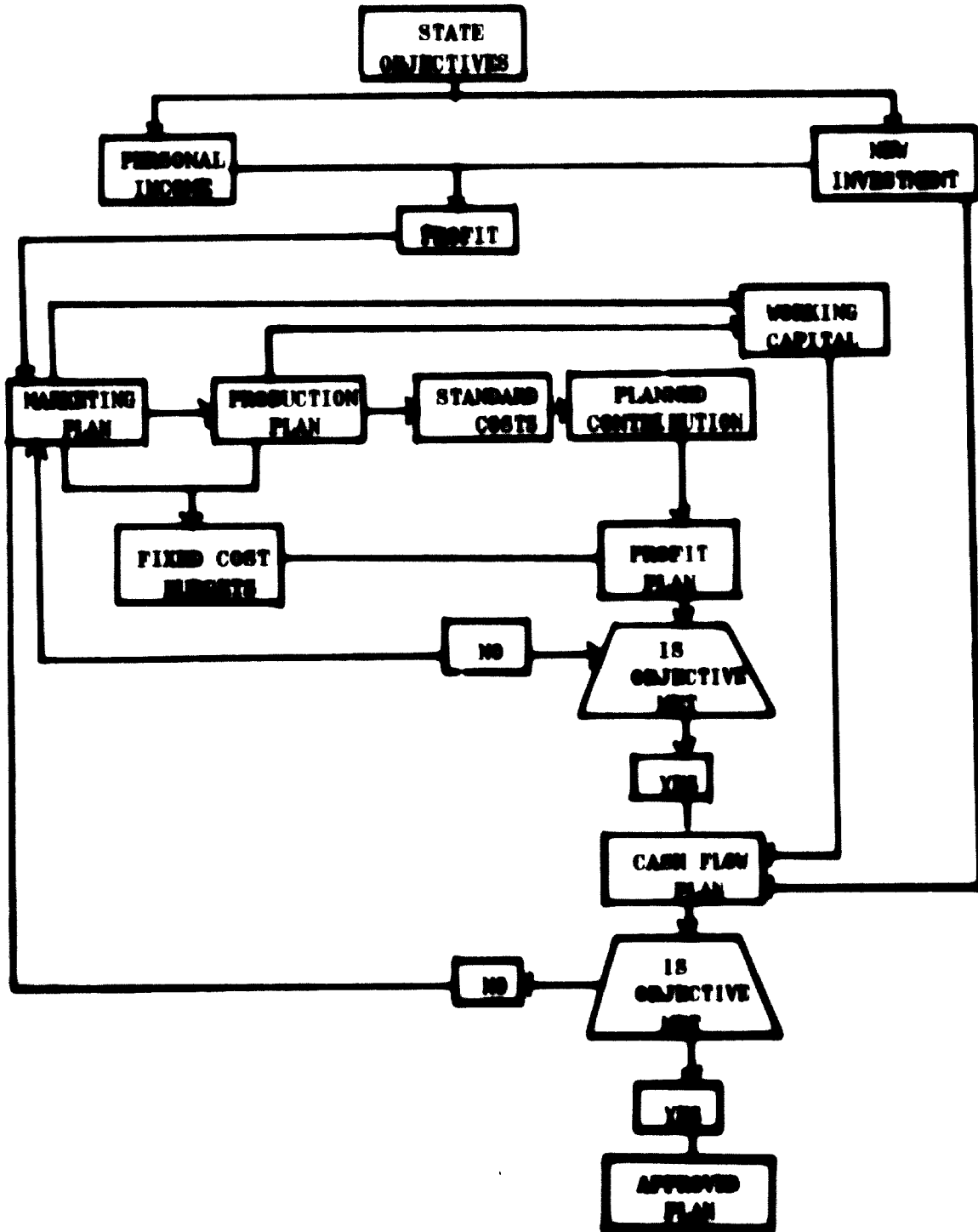
The various sectors of the plan should be subdivided and responsibility for each section allocated to individual managers. These individual managers should therefore become responsible for achieving their part of the plan.

In order to assist them to achieve the plan, data should be provided on a regular basis daily, weekly or monthly on their actual performance against the plan. It is only when they have this information that they can react to the ever changing situation within a business. Management Action is essential to the achievement of the plan.

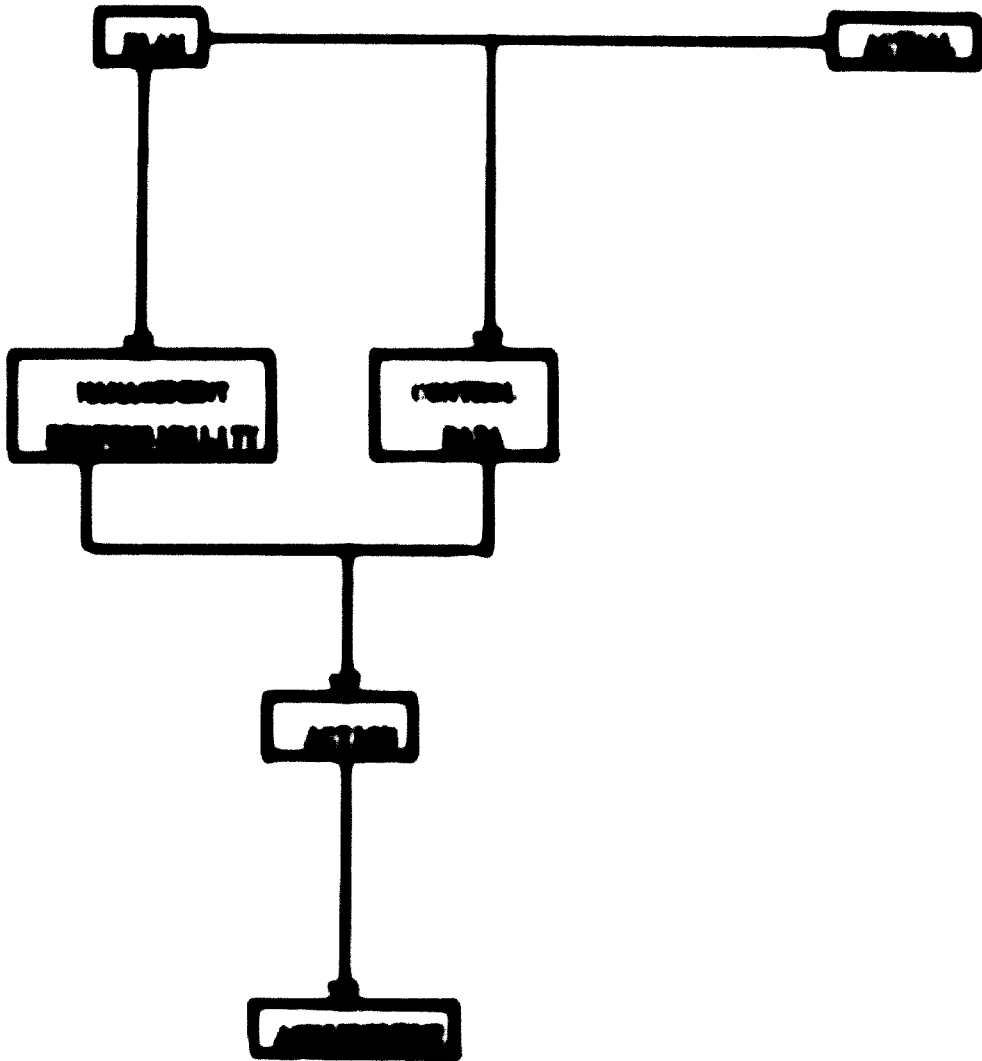
OBJECTIVES AND MEANS



PLANNING PROCEDURES



MANAGEMENT PLAN



CHAPTER 1

FINANCIAL STATEMENTS AND FINANCIAL STATEMENTS

DEFINITIONS

Essential to the success of any business is an adequate supply of working capital

Working capital is the funds required for:

"Paying checks and holding back the amounts owed to creditors"

or in other words,

"The amount of capital necessary to meet the day to day normal financial requirements of an enterprise".

INTERNAL SOURCES OF WORKING CAPITAL

Working capital can be obtained from two sources.

- 1. Internally through the generation of profits
- 2. Internally by obtaining additional loans.

The provision of additional working capital from internal sources requires the generation of profits. All profits are not however, used for increasing the available working capital. There are several uses for the allocation of profits. The following list contains the major allocations:

- 1. The provision of additional personal loans
- 2. The building of housing and the provision of additional new equipment.

The amount of the profit allocated to these two areas is a distribution of profit from the enterprise. The balance of profit which represents the undistributed portion of profits is an increase to the total capital of the enterprise.

In any growing business additional fixed capital is needed for the expansion of the facilities of the enterprise. A proportion of this additional capital should be financed internally from profits in order to give the enterprise stability. In this case we are talking about an increase to the facilities of the enterprise. If the assets purchased are used to replace those that have been financed from profits otherwise a reduction in the capital of the enterprise has taken place.

Similarly additional working capital is required for the following reasons.

- To maintain the existing level of trading in times of inflation. Additional capital is required when inflation occurs as the stock, Debtors to Creditors ratio is normally approximately 2:1. Internal finance must not be used to maintain the capital otherwise a reduction in the real value of the capital of the enterprise has taken place.
- To provide increased working capital in a dynamic situation of expansion. Again this additional need occurs due to the relationship of stocks and Debtors to Creditors of approximately 2:1. As far as fixed assets a proportion of the increase in capital necessary should be financed internally in order to provide stability to the finances of the enterprise.

The relative importance of these demands on profit can be assessed as follows:

- 1. To provide additional working capital necessary through inflation to maintain existing levels of trading.
- 2. To provide adequate depreciation and additional reserves for the maintenance and replacement of fixed assets of the business in order to maintain existing levels of trading.

The provision of this additional capital is essential towards maintaining the 'stake out' of the company in order to achieve this the return on capital employed must be equal to or in excess of the rate of inflation within the industry group.

Return on Capital Employed is expressed as a percentage and is calculated in the following manner:

$$\frac{\text{Net Profit}}{\text{Total Assets}} \times 100$$

Net Profit is defined as the surplus earned over costs after the deduction of all costs including personnel salaries and taxes.

Total Net Assets are defined as the total of fixed and working assets less the current liabilities.

- 3. To provide additional working capital to increase the trading activity of the enterprise.
- 4. To provide capital to finance additional investment in fixed assets to increase the trading activity of the enterprise.

Growth is essential to the success of any company.

In order to provide financial stability part of this growth should be financed from the internal generation of profit. This, therefore represents the second demand on the profits of the enterprise.

- 1. The provision of additional financial income.
- 2. The provision of housing and additional social facilities.

Only when sufficient profits are available to cover inflation, growth and the future financial stability of the enterprise should profits be distributed to this third group.

CONTROL OF INVESTMENT

In order to ensure that the optimum use is being made of the working capital available at any one time should be kept in stock, stores and vehicles. The following outlines therefore illustrate the key controlling factors in these areas.

CONTROL OF STOCKS

The control of stocks falls into two stages so, the control of stocks and higher levels and the detailed control within the plants.

At the higher levels a suitable control system is the stock turnover. This should be used divided by hand change, etc.

Time of sales	Number of items the stock
Value of stocks	is turned over per year

This of course is only an indicator and should not be taken as a further investigation is necessary. The key indicator at plant level is each stock holding card. The number of hand stocks of each item should be increased according to:

- Lead time for supply
- Reliability of supply
- Size of the supply
- Discounts for quantity buying.

Control at this level should therefore be carried out by comparing the budgeted stock holdings with the actual stocks held. Excess stocks create an increase in working assets and therefore, the need for more funds. Stock holdings are money and control is therefore essential.

In areas where there are also moving or obsolete stocks, consideration should be given to their saleable value. If they have a value they should be sold even though the value is less than book value as the effect is to release funds which can be used more profitably.

STOCKS

The main value which indicates the control of stocks is the stocks turnover ratio which is calculated as follows:

$$\frac{\text{Value of Sales}}{\text{Number of Days of credit given}}$$

The acceptable number of days of credit depends on the normal term of credit given to customers. Where credit limits are variable special consideration should be given to which categories are the most advantageous to the enterprise so that the bulk of the sales are handled into these credit categories, so that the greatest benefits are derived. When there are changes in the enterprise's liquid position, the most beneficial credit limit need not be constant and the approach should be altered to suit changing conditions.

As part of the general control, each month the stocks should be divided into two groups:

- 1. High turnover and low stocks
- 2. Low turnover

For each area the number of stocks should be employed to estimate and the length of time with date of the return, being taken in each category. Following selected credit items their funds are being used as efficiently and that they are earning no benefits to the enterprise. Some of these are possibly inherent losses which are a consequence of there is a liquidity problem within the enterprise.

STOCKS

The two key points in controlling the level of stockholding to optimize are as follows:

- To ensure that the full credit is taken up and to ensure that money is not paid out too quickly.

- To ensure that payments are made timely to gain the maximum discount or to avoid penalty interests.

There is, therefore, a correct time to pay every invoice and this should be strictly adhered to in order to derive the maximum benefit to the enterprise.

LIQUIDITY RATIOS

There are two other control ratios which indicate the effectiveness of overall control of Working Capital.

These are the "Liquidity Ratio" and the "Current Asset Ratio."

The Liquidity Ratio is calculated as follows:

$$\frac{\text{Liquid Assets}}{\text{Current Liabilities}}$$

Liquid assets are all current assets except stocks. Under normal conditions the level of this ratio could be around 1.0.

The Current Asset Ratio is calculated as follows:

$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Under normal conditions the level of this ratio could be approximately 2.0.

STOCK FLOW

The control of the flow of stock within an enterprise is also essential both in a short term and long term basis to ensure that it is in line with the enterprise's use of funds.

There are two methods of calculating stock flow. The first method is more suitable for short term planning and can be reviewed the year for forward planning of up to one year ahead. The second method is more global in approach, less detailed and therefore should be used for forward planning from two years forward onwards.

First Method. The inflows of stock from all sources are listed and totalled for each month individually. The same thing is done with the outflows of stock for each month. It is then possible to calculate the increase or decrease in stock each month. In month one, this figure is adjusted by the stock held at the start of the year to give the stock position at the end of the month. This figure is then used to adjust the stock position of month two and so on. The forecast stock position for each month can, therefore, be ascertained.

Second Method. For forecast of longer than one year, monthly figures are not necessary and it is possible to generally forecast the inputs and outputs on a yearly basis. What it is possible to do, however, is to forecast:

- Profitability
- Level of trading
- The investment

The total cash flow into the business can be assessed by adding together Profit and Depreciation. Depreciation is added to profit as it is a non-cash expense. Then by adding the anticipated cash at the start of the period under review the total available cash can be calculated. The next step is then to deduct from this figure the increased value of cash needed by taking the following into consideration.

The investment:

- Increased working capital due to
 - Inflation
 - Increased trading activity
- Loss of assets.

The difference between these two figures will, therefore, represent the cash situation at the end of the period under review.

TABLE VII

FINANCIAL CONTROL - INVESTMENT

INTRODUCTION

In our dynamic economy the investment is of major importance. The investment Policy plays a vital role in the future fortunes of an enterprise. It is, therefore, essential to select only those projects which are going to yield high financial benefits to the company. Even if it has been decided to select a project it is equally essential to ensure that the investment programme is completed within the planned cost or exactly the same amount or minimal day to day running costs must be kept within budget. Finally when a project has been completed it must produce results which are in line with the original project evaluation.

The control of the investment, therefore, falls into three distinct stages.

- **Selection:** The initial evaluation of an investment project and the decision to proceed with the investment.
- **Implementation:** The construction stage covers all actions from taking the investment decision to getting the investment operational.
- **Evaluation:** The final evaluation when the investment becomes operational to ensure that the assumptions and forecasts made in the initial evaluation are achieved.

CONCLUSIONS

The key points of control at the evaluation stage should be as follows:

- A standard basis for economic assessment should be used so that all projects can be assessed on the same scale. Preferably the basis used should be based on Discounted Cash Flow which considers the rate of return of the investment taking into account that money has a time value.
- A minimum rate of return on investment should be fixed which is in line with the overall corporate objectives of the enterprise. An investment should be considered since evaluation does not yield in excess of the minimum rate of return.
- The investment projects selected upon where a choice exists should be the projects which yield the highest rate of return. Occasionally, however, deviations from this practice may be necessary due to reasons of internal company policy. Where such actions take place the opportunity cost should be assessed.

Opportunity costs are the difference between the benefits of our project and another where the project with the lower cost benefits has been chosen for reasons which are other than economic.

CONSTRUCTION

There are two aspects of control at the construction stage. These are:

- Cost control. Keeping the total project costs below the budget allocation.
- Dates. Keeping the project up to or ahead of time. If a project falls behind it means that the benefits to be derived on its completion will be delayed which represents a loss to the enterprise.

In this enterprise our projects will be very large. The total cost allocation should, therefore, be split down into Departmental Budgets in the same manner as the operating costs. The only difference being that instead of controlling costs by item alone, the costs are controlled by item and degree of completion.

OPERATION

When a new project starts into use the results which it produces should be monitored closely during the early stages of its operation to ensure that the forecast benefits are actually achieved. It would suggest that detailed reports should be prepared after six months, three months and one year's operation.

QUESTION

QUESTION

What is a direct cost?

Direct costs are costs which vary directly in accordance with the level of production.

How do you decide which costs are variable?

In the short term all costs are fixed, but in the long term all costs are variable. It is, therefore, necessary to closely define the criteria for considering which costs are variable and which costs are fixed. For example the criteria would be within one year, the cost effect of a 10% increase or decrease in production level.

What are the advantages of using a direct costing system?

1. Costs are comparable at all levels of production.
2. No arbitrary allocation of fixed costs is needed.
3. Product profitability can easily be compared as a contribution basis. Contribution is selling price less variable costs. It is called contribution as it represents the contribution which is made towards the recovery of fixed costs and the generation of profit.
4. The system of standard costs is simplified as the variance analysis is much less complex and more meaningful.
5. The preparation of control data and the allocation of responsibilities for individual cost items is simplified.
6. Cost effects of any deviation from plans is clearly highlighted.
7. Accurate information is obtained which is not necessarily true of the traditional full absorption method of costing. This aspect is illustrated below.

ANSWER

An enterprise manufactures three products; an analysis of the previous year's accounts shows up the following information:

	A	B	C
Selling Price	100	200	300
Material Cost	200	50	100
Labour & Overhead Cost	150	150	150
	100	200	250
Profit - Loss	00	-50	50
Quantity Sold	1000	1000	2000
Total	100,000	100,000	150,000

The basis of allocation of overheads and labour cost to divide by the number of units.

$$\frac{100,000}{10,000 \text{ units}} = 100 \text{ Rs per hour}$$

From the analysis of this information Product B was a loss maker and, therefore, should be dropped from production.

Is this necessarily correct?

The answer is obviously NO as the division of labour and overheads is not on a realistic basis. The first thing to consider is the split up of labour and overheads into fixed and variable costs and then to consider the variable costs applicable to each product.

If labour and overheads split up as follows, just each product to determine which product is the most profitable.

	Cost per hour	Number of hours	Total
Direct Labour	50	1000	500,000
"	20	1000	200,000
"	100	2000	200,000
Fixed overheads	50	1000	500,000
"	20	1000	200,000
"	10	2000	200,000
Total Variable Costs			1,100,000
Fixed Costs			500,000
			1,600,000

	A	B	C
	Units	Units	Units
Material	200	200	100
Direct Labour	60	20	10
Overhead Material	40	20	10
	<hr/>	<hr/>	<hr/>
	280	140	220
Selling Price	100	200	50
	<hr/>	<hr/>	<hr/>
Contribution	40	60	10
	<hr/>	<hr/>	<hr/>

Is it good to consider fixed costs in order to obtain the relative profitability of the products?

No, the level of contribution determines the level of profitability; there is, therefore, no reason to add fixed costs into products.

Does this costing necessarily give you the correct answer?

Not necessarily; in every plant there must be a limiting factor regarding the quantity produced. If filling capacity is no problem is it enough to consider contribution per unit of quantity? What would be a better alternative?

In order to maximize total contribution, it is necessary to maximize the contribution per hour of the limiting factor. The weights should, therefore, be based on the contribution per hour of the limiting factor.

It is correct, therefore, that total produced per hour are as follows:

- Product A 1 ton per hour
- Product B 1 ton per hour
- Product C 10 tons per hour

The costing would, therefore, are to calculated as follows:

	A	B	C
Contribution per ton	20	30	10
Tons per hour	1	1	10
Contribution per hour	20	30	100

We have not carried out a costing on three different bases and have got three different answers.

Method 1 Product A was most profitable

Method 2 Products A and B were equally most profitable

Method 3 Product C was most profitable.

Which costing gives the correct answer?

In almost all cases Method 1 gives the correct answer. Only when serious long term difficulties regarding filling capacity are being encountered should Method 2 be used. In no circumstances should Method 3 be used.

An important point is providing management with financial information because apparent here and that is the use to which the information is going to be put. This should always have high consideration as it can often have a serious effect on the method of calculation adopted and hence the result obtained.

So far we have described contribution as being selling price less variable costs. How else could contribution be defined?

Fixed Overhead plus Profit.

Using the same data as before calculate the target selling prices of Products A, B and C if the annual profit target was £20,000 0.0.

	£
Profit	20,000
Fixed Cost	<u>1,000,000</u>
Total Contribution	<u>1,020,000</u>
Total Sales	1,000
Contribution required per Unit	<u>1,020</u>

	Product A	Product B	Product C
Price per Unit	1	1	10
Contribution per Unit	775	200	65
Variable Costs	<u>225</u>	<u>120</u>	<u>35</u>
<u>Minimum Selling Price per Unit</u>	<u>650</u>	<u>120</u>	<u>100</u>

Conversely, therefore, target selling prices can be built up from profit targets and costs in a simple manner.

PROBLEM 1

Prepare a Profit Plan from the following data.

1. **Capacity** 100 hours per week
10 Weeks per Year
80% Efficiency

2. **Production**

Item	Product A	Product B	Product C	Product D
Steel Plates	100	100	100	100
Steel Beams	100	100	100	100
Bill of Materials	100	100	100	100

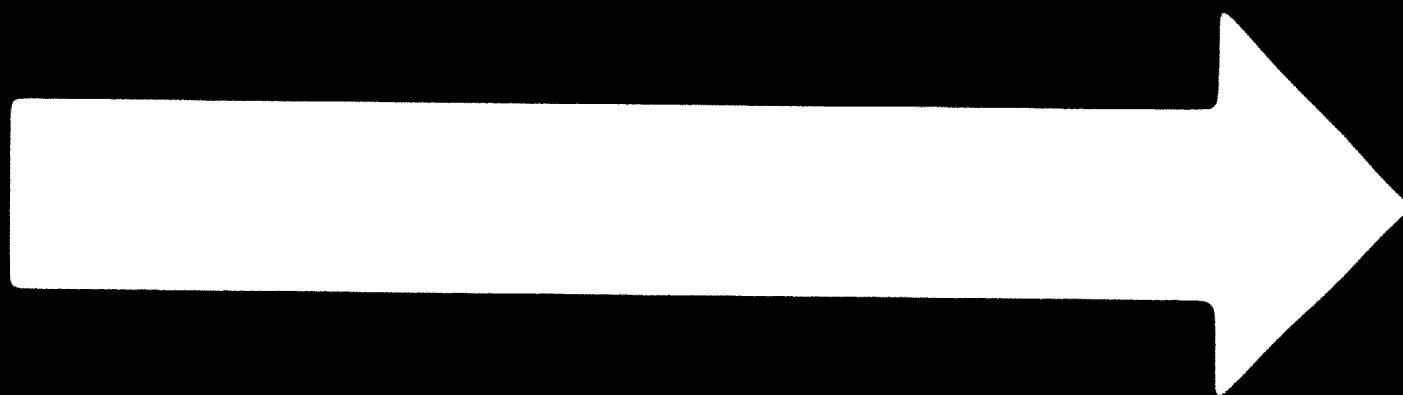
3. **Price**

	Product A	Product B	Product C	Product D
Price	10,000	20,000	10,000	10,000
Selling Price (10,000)	100	100	1,000	100

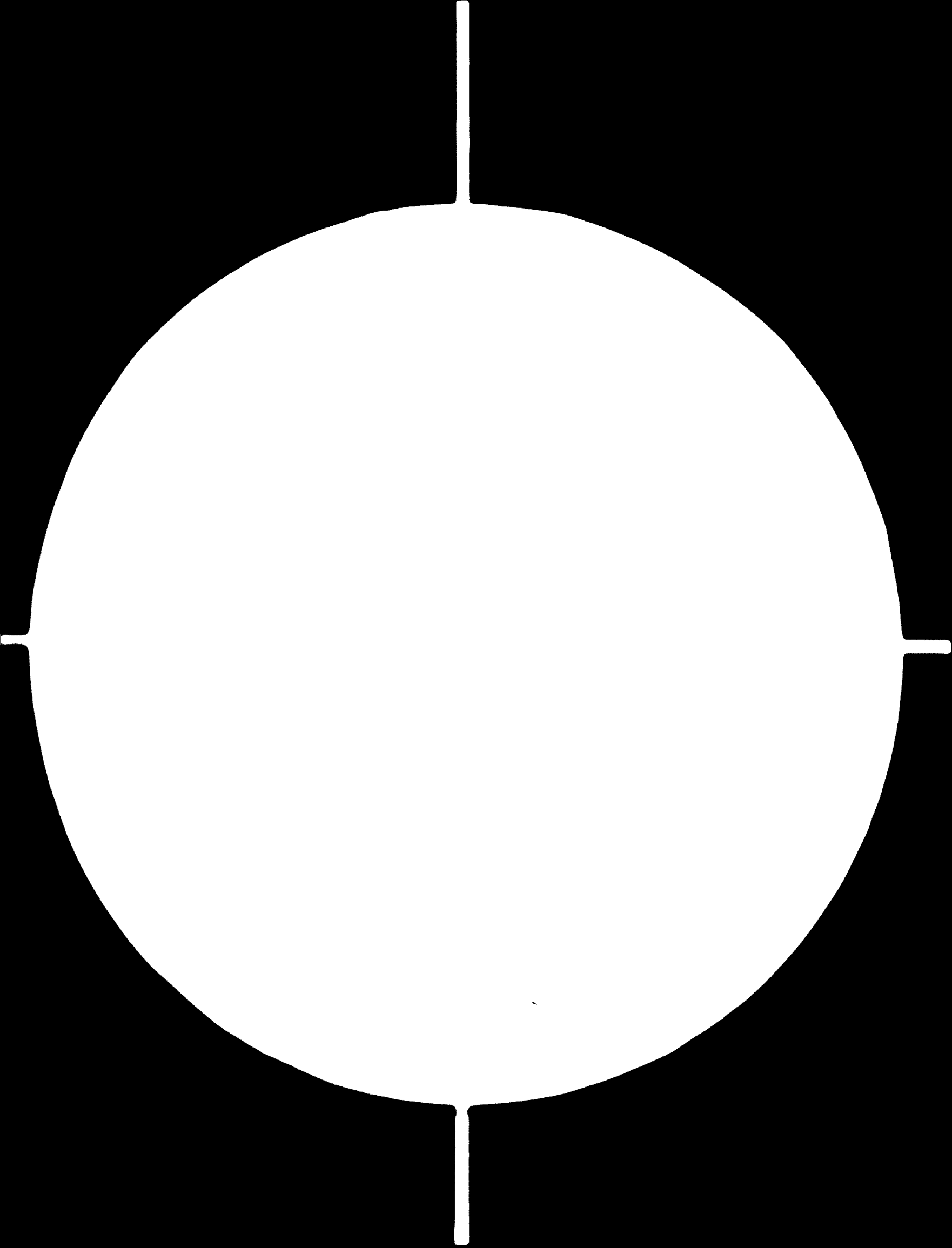
4. **Variable Costs (10,000)**

	Product A	Product B	Product C	Product D
Steel Plates	10	10	10	10
Steel Beams	100	100	100	100
Selling Price	100	100	100	100

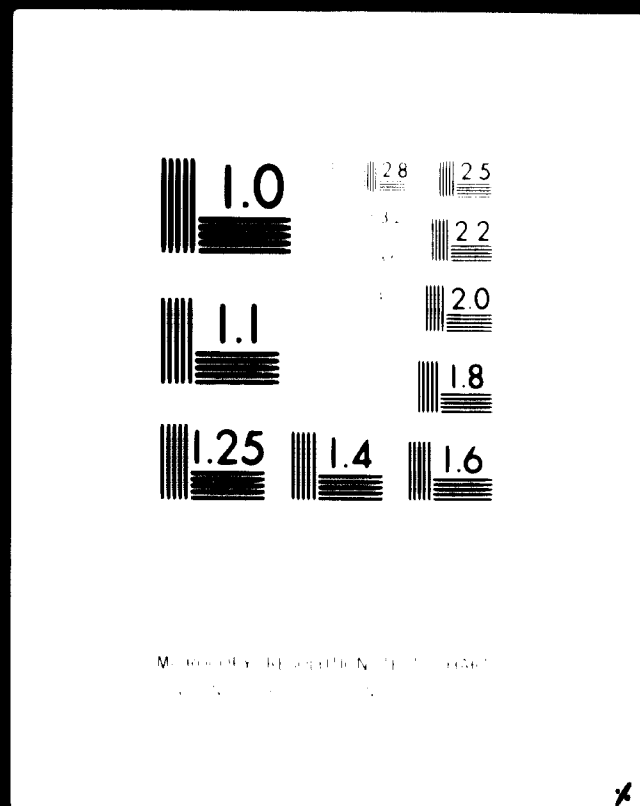
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3 OF 3



24 x E

5. Fixed Overheads (millions N.D.)

Blast Furnace	50
Steelworks	100
Roll Mills	46

SOLUTION EXERCISE I

1. From an examination of the Production Outputs the Steelworks is the bottle neck factor.

2. **Calculation of Bottle Neck hours available**

100 hours per week x 50 weeks = 5000 hours

at 80% efficiency = 4000 productive hours

3. **Calculation of Capacity required to produce sales (bottle neck hours)**

PRODUCT	VOLUME	TONS PER HOUR	HOURS
A	300,000	300	1,000
B	200,000	100	2,000
C	400,000	400	1,000
D	100,000	200	500
TOTAL			4,500
AVAILABLE			4,000
SHORTFALL			500

4. **Product Costs (N.D.)**

	PRODUCT <u>A</u>	PRODUCT <u>B</u>	PRODUCT <u>C</u>	PRODUCT <u>D</u>
Sales Price	600	500	1000	800
<u>Less variable Costs</u>	<u>350</u>	<u>260</u>	<u>610</u>	<u>510</u>
Contribution per ton	<u>250</u>	<u>240</u>	<u>390</u>	<u>290</u>
Tons per hour at bottle neck	300	100	400	200
Contribution per hour (000 N.D.)	75	24	156	58

5. Restriction of Sales

As B is the least profitable, sales of Product B should be restricted to balance sales and production capacity

500 hours at 100 tons per hour = 50,000 tons

Sales of Product B would be reduced to 150,000 Tons.

6. Profit Plan (millions N.D.)

	PRODUCT A	PRODUCT B	PRODUCT C	PRODUCT D	TOTAL
VOLUME (000 TONS)	300	150	400	100	950
CONTRIBUTION PER TON	250	240	390	290	-
TOTAL CONTRIBUTION	75	36	156	29	296
<u>LESS</u> FIXED COSTS					196
<u>PROFIT</u>					100

TABLE IX

COKE PLANT INFORMATION SYSTEM

From the global scheme already prepared Profit was established as being the key factor in achieving defined objectives.

Our definition of Profit is as follows:

"The surplus remaining after the deduction from income of all costs and obligations including personal income"

At the end of each year detailed Planning is carried out for the following year. From this information, therefore, it is possible to assess the Profit Objectives for that year. The information contained in the plan can, therefore, be rearranged as a Profit Plan, its achievement being the responsibility of the appropriate management.

In order to assist management in the achievement of this Profit Objective, information must be presented to management on a regular basis in order to guide their day to day decision making in an ever changing business situation.

The normal criteria in the presentation of such information is as follows:

- Information should be prepared promptly and accurately as soon as possible after the actual circumstance has occurred.
- The information should be simple, easy to understand and should highlight the key areas requiring management attention.

What information is, therefore, required for the Coke Plant?

First of all Cost Standards should be prepared for each product produced so that when actually producing during the period in which the standards operate, performance can be assessed.

What costs should be included in the Cost Standards?

In our view only variable costs should be included since when volume fluctuates it is essential to compare like with like in order to maintain control.

Our definition of variable costs is, therefore, as follows:

"Costs which will not be incurred if the plant is not in operation".

Which costs fall into this category in the Coke Plant?

In our view only Prime Material Costs and Energy. The only

other variables being as follows:

- Selling Price of Coke; caused by mix of Sales.
- Selling Prices of By-Products
- Rate of generation of By-Products.

By comparing therefore, the actual results during a given period, variances in terms of losses or gains on profit can be calculated. Appendix I lists the variances which can be calculated and illustrates the basis of the calculation.

How, therefore, should the other costs be controlled?

The other costs should be controlled by a system of Fixed Cost Budgetting with responsibilities for the control of individual items allocated to the appropriate managers.

What are the various categories of Fixed Costs?

They are as follows:-

- Personal Income. Costs should be split up into departments with a further subdivision into direct and indirect costs in the case of production departments.
- Controllable Fixed Costs. Costs which are fixed in terms of production volume but whose level can be controlled by management.
- Other Fixed Costs. Costs which are within the plant over which management have no control. Depreciation would fall into this category.
- Allocated Fixed Costs. Costs which are not within the scope of the plant, but which are allocated to all plants in an overall distribution.

The allocation of fixed costs can be split up into these cost headings from the current planning information and monthly accounts. In the interest of good control, however, it would be beneficial if each cost heading was based on first principles rather than being related to historical data.

The following illustrates the detail of this approach.

<u>Cost Heading:</u>	<u>Industrial Gloves</u>
----------------------	--------------------------

Calculation

- 100 men require gloves:
- gloves should last 6 months
- 200 pair per year required
- Cost per pair 50 dinars
- Plan 1,000

This is preferable as previous cost inefficiencies are not built into the system.

In addition fixed cost expenditure should be budgetted for in the month it is expected to occur rather than the monthly figure being 1/12th of the year. This also greatly facilitates the extent of the control.

How should this information be presented to Management?

The first thing that management will want to know is "Have we beaten our Profit Target". Then whether they have or have not; Why there was a difference? In general terms the differences can be caused by:

- Variances
- Personal Income
- Controlable Fixed Costs
- Other Fixed Costs
- Allocated Fixed Costs

The first sheet of information should, therefore, contain this data.

The remaining sheets one for each heading will, therefore, contain the detailed build up of the differences. The attention of management can, therefore, be directed immediately towards the key areas.

APPENDIX I

VARIANCES

1. Volume

(Actual Tonnage - Standard Tonnage) x Standard Contribution

2. Coke Sales Price

Actual Sales - (Actual Volume x Standard Selling Price)

3. By Product Sales Price

Actual Sales - (Actual Volume x Standard Selling Price)

4. Tar Production)

5. Benzol Production)

6. Sulphate Production)

(Actual Volume - Standard Volume) x Standard Contribution

7. Electricity)

8. Coke Gas)

9. V.P. Gas)

10. Steam)

11. Water)

12. Compressed Air)

Actual Cost - (Standard Cost per Ton x Actual Tons)

13. Coal)

14. Sulphuric Acid)

Actual Cost - (Standard Cost per Ton x Actual Tons)

COKE PLANT
PROFIT STATEMENT

SEPTEMBER 1972	Planned Profit Less Actual Profit <u>DIFFERENCE</u>	CUMULATIVE TO DATE
823 (104)	Planned Profit Less Actual Profit	8219 16594
(927)	<u>DIFFERENCE</u>	7775
<u>Represented By</u>		
(408)	Variable Costs	6636
4	Personal Income	(170)
389	Controllable Fixed Costs	3633
(912)	Other fixed costs	(2326)
-	Allocated Costs	2
(927)		7775

**COKE PLANT
VARIANCES**

**SEPTEMBER
1972**

**CUMULATIVE
TO
DATE**

7569	Planned Contribution	69120
<u>7161</u>	Less Actual Contribution	<u>75756</u>
<u>(408)</u>	DIFFERENCE	<u>6636</u>

Represented by

79	Volume	82
(470)	Coke Sales Price	6259
30	By Product Sales Price	373
77	Tar Production	644
(19)	Sulphate Production	(21)
(154)	Benzol Production	(1035)
58	Gas Production	249
22	Electricity	131
19	Coke Gas	(1060)
(120)	Blast Furnace Gas	1032
127	Steam	296
13	Water	84
(18)	Compressed Air	(172)
14	Coal	117
<u>(66)</u>	Sulphuric Acid	<u>(343)</u>
<u>(408)</u>		<u>6636</u>

**COKE PLANT
PERSONAL INCOME**

SEPTEMBER 1972	
Actual	Diff.
37	
106	
306	
160	
5	
614	
14	
26	
8	
12	
6	
66	
680	
345	
1023	4

POSLOVODE

VK

KV

PK

NK

RADNICI

RUKOVOD

V S

V Š

SS

NS

SLUZH SA RUKOVOD

UKUPNO KOKSARA

ADD DEDUCTIONS

BRUTO L D

CUMULATIVE TO DATE	
Actual	Diff.
332	
862	
2974	
1497	
29	
5694	
141	
174	
85	
115	
57	
571	
6265	
3162	
9427	(17D)

COKE PLANT
CONTROLLABLE COSTS

SEPTEMBER 1972	
Actual	Diff
1	12
223	34
(2)	2
310	(7)
29	51
26	(19)
108	(21)
4	150
	7
	21
5	190
	5
15	27
1	83
63	(63)
194	9
386	(52)
7	1
26	(1)
1	
53	(53)
1450	376

CUMULATIVE TO DATE	
Actual	Diff
125	(8)
2215	98
22	(22)
2768	(41)
426	294
405	(342)
845	(62)
51	1335
3	40
15	174
24	1731
39	6
277	101
18	738
492	(492)
1777	50
10	(10)
2909	97
70	2
230	(5)
4	5
135	(135)
2878	3556

C/F

SEPTEMBER 1972	
Actual	Diff
1460	376
1	(1)
6	(6)
2	(2)
	1
	1
39	(20)
52	30
5	
15	
-	5
215	34
212	(34)
90	-
	5
52	
2139	389

B/f

CUMULATIVE TO DATE	
Actual	Diff
12878	3536
9	(9)
49	(49)
16	(16)
2	7
5	4
223	(52)
645	93
45	-
135	-
	45
1936	305
1908	(306)
807	3
	45
18678	3626

**COKE PLANT
OTHER COSTS**

SEPTEMBER 1972	
Actual	Diff
-	-
13	(7)
19	15
-	6
68	-
2755	(1170)
688	211
115	(115)
21	(1)
1	5
60	
5	10
	113
3627	(912)

CUMULATIVE TO DATE	
Actual	Diff
14	(14)
34	20
100	206
26	28
394	2
7751	(3306)
4938	633
1026	(1026)
183	(3)
64	26
369	(9)
44	91
	1026
24,943	(2386)

COKE PLANT ALLOCABLE COSTS

SEPTEMBER 1972	
Actual	Diff
418	-
117	-
141	-
676	-

CUMULATIVE TO DATE	
Actual	Diff
3760	2
1055	(2)
1267	2
6082	2

STANDARDNI TROSKOVI

	<u>KOKS</u> <u>Per ton</u>	<u>KATLAN</u> <u>Per Ton</u>	<u>SULFAT</u> <u>Per Ton</u>	<u>BENZOL</u> <u>Per Ton</u>
Prodajna Cijena	543.00	528.00	460.00	370.00
<u>MINUS</u>				
Direktan Materijal	450.87		432.88	21.16
Elektro Energija	1.55	32.82	1-.16	2.25
Koksni Plin	9.52			
Visoko - Pećni Plin	19.32			26.58
Tehroska Paro	.78	113.18	215.81	58.03
Industrijska Voda	.14	24.26	3.60	1.70
Komprimirani Zrab	.57		4.04	
	<hr/>	<hr/>	<hr/>	<hr/>
<u>OKUPNO DIREKJNI TROSKOVI</u>	482.75	170.26	666.49	104.72
	<hr/>	<hr/>	<hr/>	<hr/>
	60.25	357.74	206.49	265.28

Plin	$\frac{40,000, \text{orr}}{730,000}$	$\frac{23,400}{730,000}$	$\frac{6700}{730,000}$	$\frac{5270}{730,000}$	$\frac{.72\%}{730,000}$
Katran		11.45			
Sulfat		(1.90)			
Benzol		1.91			

CONTRIBUTION

126.50

PROFIT PLAN

Coke Plant
JANUARY - SEPTEMBER, 1972

	<u>YEAR</u>	<u>STD COST</u>	<u>ACTUAL COST</u>	<u>VARIANCE COST</u>	<u>SEPT ACTUAL</u>	<u>PLAN ACTUAL</u>	<u>DIFFERENCE</u>
Sale Price of Coke	396,388	297,027	303,286	6,259	32,321	32,791	(470)
Sale Price of By Products	17,387	12,536	12,909	373	1,464	1,434	30
	413,775	309,563	316,195	6,632	33,785	34,225	(52)
<u>Less Raw Material</u>	332,146	248,834	249,060	(226)	27,589	27,537	52
<u>Less Gas</u>	40,000	29,076	30,225	249	3,370	3,312	58
	292,146	218,838	218,835		24,219	24,225	
<u>Energy</u>	29,264	21,915	21,604	311	2,405	2,448	(43)
	332,410	240,773	240,439		26,624	26,673	
<u>CONTRIBUTION</u>	91,365	60,790	75,756	6,966	7,161	7,552	

Volume Variances

Coke	(82)	82	(79)	79
Tar	(644)	644	(77)	77
Sulphate	21	(21)	19	(19)
Benzol	1035	(1035)	154	(154)
	69,120	6,636	7,569	(408)

Less Fixed Costs

Personnel Income	12,342	9,257	9,427	(170)	1,025	1,029	4
Controllable Fixed Costs	29,794	22,343	18,710	3,633	2,139	2,528	389
Other Fixed Costs	30,152	22,617	24,943	(2,326)	3,425	2,515	(912)
Allocated Fixed Costs	8,108	6,084	6,082	2	676	676	-
	80,396	60,301	59,162	1,139	7,265	6,746	(519)
<u>NET</u>	11,969	8,819	16,594	7,775	(104)	823	(927)

CHEM. PLANT
JANUARY - SEPTEMBER, 1972

VOLUME AND PRICE VARIANCES

	ACTUAL VOLUME TONS	STANDARD VOLUME TONS	VARIANCE TONS	STANDARD CONTRIBUTION VALUE	VARIANCE 00 RD
Volume Variance	547,947	546,400	617	126.5	82
	ACTUAL VALUE 00RD	ACTUAL VOLUME 00 TONS	STANDARD PRICE PER TON	ACTUAL VALUE AT STANDARD 00 RD	VARIANCE 00RD
Price Variance	303,386	547	545	297.027	6259
	ACTUAL VALUE 00 RD	ACTUAL VOLUME 00 TONS	STANDARD PRICE PER TON	ACTUAL VALUE AT STANDARD 00 RD	VARIANCE 00 RD
<u>By Product Price Variance</u>					
TAR	9,571	19.3	528	10,190	(619)
SULPHATE	3,338	5.1	460	2,346	992
	<u>12,909</u>			<u>12,536</u>	<u>373</u>
TOTAL	<u>20,165</u>			<u>12,536</u>	<u>7,627</u>

CASE FINE
JANUARY - SEPTEMBER, 1972

BY PRODUCT VARIANCE

CASE PRODUCT 000 TONS	STANDARD BY PRODUCT 000 TONS	ACTUAL BY PRODUCTS 000 TONS	VARIANCE 000 TONS	CONTRIBUTION PER TON	VARIANCE 000 ND	BY PRODUCT		
						STANDARD PRICE PER 000 CINS	STANDARD VALUE 000 ND	ACTUAL VALUE 000 ND
TAR	17.5	19.5	1.8	357.74	644			
SULPHATE	5.0	5.1	.1	(206.49)	(21)			
WELSON	3.9	-	(3.9)	265.28	(1035)			
GAS	257.781	125	29,976	30,225	249			

547

COKE PLANT

JANUARY - SEPTEMBER, 1972

MATERIAL USAGE VARIANCES

	<u>ACTUAL</u> <u>000 ND</u>	<u>ACTUAL</u> <u>000 TONS</u>	<u>ND</u> <u>PER TON</u>	<u>STD</u> <u>000 ND</u>	<u>VARIANCE</u> <u>000 ND</u>
COAL	246509	547	450.87	246,626	+ 117
SULPHURIC ACID	2551	5.1	732.88	2,208	(343)
	<u>249060</u>			<u>248,834</u>	<u>(226)</u>

**EFFECT ON PROFITS
OF A 1% CHANGE IN**

	000 ND
Change in Price of Coke	3964
Change in Price of Gas	400
Change in Price of Tar	123
Change in Price of Sulphate	31
Change in Price of Coke	924
Change in Price of Gas	400
Change in Price of Tar	84
Change in Price of Sulphate	14
Change in Price of Coal	3291
Change in Price of Sulphuric Acid	29
Change in Price of Electricity	2
Change in Price of Coke Oven Gas	7
Change in Price of VP Gas	14
Change in Price of Steam	5
Change in Price of Water	1
Change in Price of Compressed Air	-
Change in Personal Income	123
Change in Variable Fuel Costs	298
Change in Variable Costs	302
Change in Fixed Costs	8

KEY AREA FOR INCREASED PROFITABILITY

1. INCREASE IN TONNAGE

Tonnage per Year - 730,000 Tons

1% Increase - 7,300 Tons

Contribution per Ton (based
on external sales of large
cokes) - 343.5 ND per Ton

ADDITIONAL PROFIT - 2,507,550 ND per annum

KEY AREA FOR LOSS OF PROFITABILITY

2. PLANT SHUTDOWN

Tons per Hour - $\frac{\text{Tons per Year}}{\text{Days per Year} \times \text{Hours per day}}$

- $\frac{730,000}{366 \times 24}$

- 83.1 Tons per hour

Contribution per ton
(based on external sales
of large cokes) - 28545 ND per hour

P A R T V

GENERAL CONCLUSIONS

1. A substantial amount of work, which has been extremely valuable in re-orienting the business and commercial outlook of many members of the Kombinat, has been carried out in the fields of organisation structure, marketing and finance by the P.A. and YUCOR Consultants. However, throughout the project, the Consultants continually had to exert much pressure on the Kombinat Directors to obtain the use of counterpart staff. The staff seconded to work with the Consultants were not engaged full-time, and there were many changes in personnel. Although disadvantageous and time wasting in some respects this had the very important advantage that many more of the Kombinat staff received some training and gained some experience of the Consultants' techniques and approach, than would otherwise have been the case.
2. The Kombinat is such a large and diverse group of companies, and the problems to be solved in the organisation structure, marketing and finance functions so numerous and complex, that a foreign consultant input of 70 consultant weeks could do little more than attempt to make the Kombinat Directors and staff aware that such problems did exist, and were capable of solution through the application and implementation of the techniques demonstrated by the Consultants.
3. Problems related to production matters, for example, technical and technological developments, investment in new plant and machinery, increases in production and productivity, labour and material cost reductions etc., are of much more interest to all levels of management in the Kombinat than problems concerned with corporate objectives. This was demonstrated by the much greater interest created by the Industrial Engineering Project described in Annex 2, which has already had many mentions in the Company Newspaper, has been reported in the National Press and has been the subject of a short national television programme.
4. Costing, budgeting and financial control techniques are now becoming much more widely known and accepted by Kombinat Directors. There is a wide field of application for these techniques; in this project, the Consultants have provided the training, demonstrated the implementation and shown the way for extension throughout the enterprise.
5. There is little possibility of introducing line and staff organisational concepts such as are operating in western and other developing countries. This has been amply demonstrated in many other projects in Yugoslavia and is endemic to the self-management system.
6. Motivation of management, particularly middle management, to accept increased responsibility or to make decisions, is almost completely lacking.

7. **Methods of decision-making and co-ordination of activities in the self-management system between Boards of Management, Workers' Councils and Executive Managers are slow and cumbersome. This aspect of management in Yugoslavia must be the subject of much more detailed attention and investigation if management itself is to become more effective.**

8. **As a result of the above conclusions the introduction of such techniques as Management Development, Management by Objectives and Corporate Planning requires a completely different approach from that adopted in western countries if any value is to be obtained from them.**

INDUSTRIAL ENGINEERING PROJECT AT
R.M.K.-ZENICA

At the end of April, 1974, a report was prepared for the Client outlining the progress made in the Industrial Engineering Project since its commencement in September, 1972. At this time, industrial engineering techniques had been introduced by the P.A. and YUCOR consultants into the four largest companies in the group and into two of the smaller metal-product making subsidiaries. In all, more than 50 members of the Client's staff are now permanently engaged in carrying out industrial engineering work.

In order to illustrate the progress which has been made and some of the problems encountered in this essentially production-oriented field, it was considered that it might be useful to quote parts of the conclusions to the above report, in order to round-off a total project, which if not completely UNIDO financed, had its origins in the original diagnostic phase.

"CONCLUSIONS" - EXTRACTED FROM REPORT TO
R.M.K.-ZENICA - DATED MAY 1974

1. General

The original direct contract between P.A. International Management Consultants Ltd., and R.M.K.-Zenica was completed on 31st March, 1974 and the new contract with Steelworks - Zenica is anticipated to finish in December, 1974.

At the beginning of the project in September, 1972, progress was slow, both in terms of project work commenced and in gaining acceptance by managers of the need for industrial engineering. Now, however, in Steelworks-Zenica, Steelworks-Ilijas and at Iron-ore Mine-Ljubija, firm foundations for the future of the function of Industrial Engineering have been laid, even if progress at these locations is a little slower than anticipated.

This satisfactory situation, must not, however, be the occasion for complacency; in each enterprise an enormous amount of work has yet to be started, both in terms of projects and in educating management to understand and use the data which industrial engineering is providing. It is essential, therefore, that the relationships which have been established to date, between members of the Industrial Engineering Department and senior managers in the Kombinat and subsidiary companies, are continued and strengthened in the future so that all levels of management understand the importance and far-reaching effects of the work.

2. Financial

As a result of the investigations already completed, partly implemented and/or in progress at this time, estimates of annual financial benefits have been made wherever possible and are as follows:

<u>LOCATION</u>	<u>ESTIMATED ANNUAL FINANCIAL BENEFIT</u>
<u>Steelworks - Zenica</u>	0
- Blooming Mill	720,000
- Transport	127,000
<u>Steelworks - Ilings</u>	
- Material Usage	24,000
- Labour Resources	47,000
- Casting Tools	31,000
- Machine Shop	194,000
<u>Iron-ore Mine - Linbale</u>	
- Overall	1,000,000
TOTAL	<u>2,145,000 0 per year</u>

From our experience so far in working at H.M.K.-Zenica, we believe that the overall financial benefits which should be available eventually to the Kombinat and its subsidiary companies each year, as a result of the application and implementation of industrial engineering techniques, covering all enterprises, and including investigations into work organisation and methods in administrative functions, should be excess of:

1,000,000 0 PER YEAR

3. Recommendations

Although management can be satisfied with the progress made to date in the introduction of industrial engineering throughout the Kombinat, a look at the immediate short-term and the longer-term future shows that there are a number of points which give rise to considerable concern. These include the very slow growth of the necessary industrial engineering control staff at Kombinat level and the extension and development of major project work into the maintenance area.

Our comments and recommendations regarding these problems are as follows:

At the present time the Department for Industrial Engineering at Kombinat level has only two staff members with the necessary training and experience to lead and develop industrial engineering work in the Kombinat enterprises. With the present program of expansion of this work, this coverage is totally inadequate. Inevitably, as these resources are spread across more and more projects the quality of the work will be reduced and this will ultimately lead to unsatisfactory results. We recommend that immediate action be taken to rectify this situation and provide the Department with a group of at least five people possessing the necessary attributes. These people must be trained and be given the opportunity to direct projects in various technical processes, covering different industrial engineering techniques, under consultant supervision.

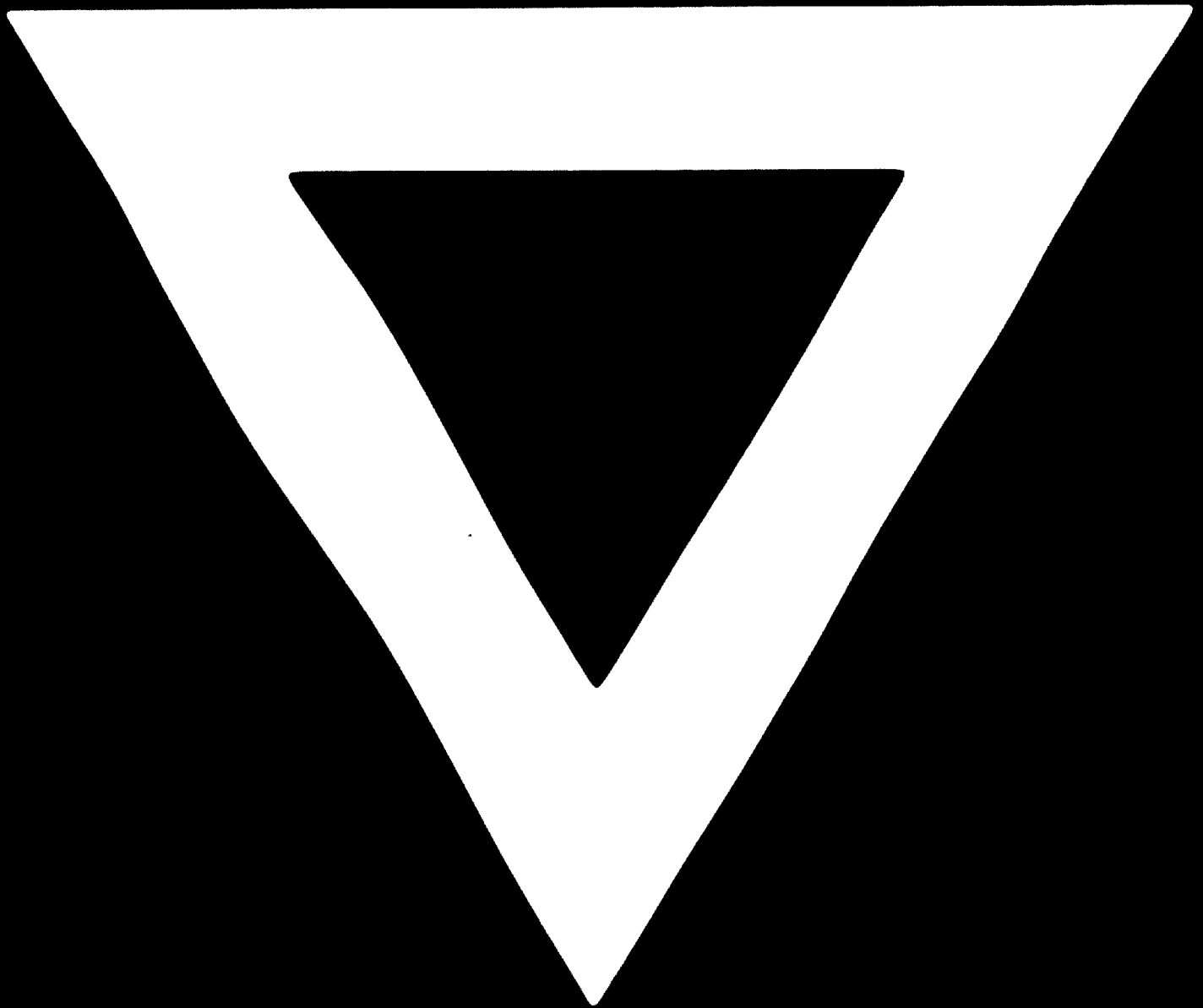
The present and future programs of work which have been planned for industrial engineering within the Kombinat call for continuous supervision and guidance of staff in order that objectives will be fully achieved. To this end we recommend that the Kombinat retain the services of P.A. International Management Consultants Ltd., on a part-time basis during 1979 and later, in order that the experience and expertise acquired during many years of management consultancy projects in the iron and steel industry can be passed to the Yugoslav consultants and Kombinat Industrial Engineering Staff.

To date, industrial engineering work in the maintenance field has been limited to two projects of Steelworks-Zenica. We consider that it is vitally necessary that a major programme of investigation, including maintenance organization, planning, work-scheduling and control, should be undertaken, initially at Steelworks-Zenica and eventually in other major enterprises within the Kombinat. Such projects would not only lead to increased efficiency in all enterprises, but could also be used to provide a valuable nucleus of skilled maintenance men for the new plants which are being built. We believe that this project is an important and extensive one that it will require the full-time assistance of P.A. and Yugoslav consultants skilled in the application of maintenance techniques in steelworks. As a result we recommend that a separate proposal covering this work be submitted for management's approval.

In one original form of reference we were asked to assist management with the introduction of procedures aimed at improving administrative efficiency within the Kombinat offices. To date, however, work in this area has been extremely limited due to the absence of Kombinat staff to undertake any training or project work. We consider that in an enterprise the size of S.M.S.-Zenica, this is an major an exercise as was the initial introduction of industrial engineering into the Kombinat in 1978. In order to ensure that such

a project will have the necessary impetus, direction, control and applied expertise, we recommend the full-time assistance of P.A. and Yugoslav Consultants, and that a proposal setting out the benefits which are likely to accrue as a result of this action is submitted separately for management's approval.

C - 821



82.06.22