THE ROADSIP PROGRAMME AND ITS USE OF COMMUNICATION TOOLS IN ITS IMPLEMENTATION

By

Hope N. Kasese

UNIVERSITY OF ZAMBIA LIBRARY

Submitted in partial fulfilment of the requirements for the degree of Master of Communication For Development offered by the Department of Mass Communication, The University of Zambia.

Declaration

I declare that this Practical Attachment Report has not been submitted for a Degree in this or any other University.

Full name: Hope Nkhatia Kasese

Signature: Kasese

Date: 26/05/00

Supervisor: Prof. Francis P. Kasoma

Signature: Kasoma

Date: May 26, 2000

Dedication

To Mum and Dad

Abstract

Most economies now rely heavily on road transport for passenger and goods movement. However, roads in many parts of the world are poorly managed and badly maintained, usually by bureaucratic government departments. In Africa which is a developing continent 60 to 80 percent of all passenger and freight transport moves by road and roads provide the main form of access to most rural communities.(Heggie and Vickers 1998). Zambia is a landlocked country and as such roads play a major role in the development of each and every sector of its economy. However, by the early 90's only about 20 percent of Zambia's road network was in good condition. In the early 90's, countries got together and tried to improve the road situation in their countries. From this effort, two major initiatives were launched to better understand the underlying causes of the poor road maintenance policies and to explore ways of establishing a secure and stable flow of funds for road maintenance. These are PROVIAL in Latin America and RMI in Africa. These programmes have discovered and explained why roads are poorly managed and underfinanced. Countries can now draw working conclusions about the most effective ways to promote sound policies for managing and financing road networks. In Zambia, the response has been the establishment of a road fund and the NRB to administer the fund and implement the ROADSIP programme. The ROADSIP programme is a ten-year programme designed to improve road management by trying to commercialise the road sector through introducing a fund comprised of road user fees and handling day-to-day management of this fund through a small secretariat subject to explicit legal regulations and technical and financial audits. This report tries to explore the performance of the ROADSIP programme in its quest to improve road management in the country. The report examines the communication strategies of the programme and tries to suggest and recommend that better communication strategies can greatly enhance the programmes success.

Acknowledgements

This practical attachment report was prepared by Hope N. Kasese under the direction and supervision of Prof. Francis P. Kasoma. The report is based on her experiences during her attachment to the National Roads Board.

Substantive inputs to the report were made by:

Prof. Francis P. Kasoma – he made tireless efforts to edit the report and give direction and guidance throughout the attachment period.

The entire staff at NRB for welcoming me so warmly and giving all the assistance I required – Nadarajah Gananadha, Beatrice Hamoonga, Raphael Mabenga, Stephen Mwale, Emmanuel Kaunda, Micah Chola, Neta Walima, Mark Stepens,Nawa Kutauka,Justin Malama, Modest Mulenga and Graham Williams.

My whole family for always being there for me but especially my sister Nancy for accepting to live with me even though I was never home and for all the suppers she used to keep for me.

Mike Dedula Khumalo for his moral support and patience in helping me with transport when I was commuting to and fro during the entire master's programme.
Mr. Chirwa and everybody at MLGH who assisted me.

To all my classmates but especially Ms. B, Millica and Stella for helping me understand the computer more.

Lastly, and the most important, God my Almighty Father for providing for me throughout my life.

I say Thank-you wholeheartedly to the above mentioned and to all those I may have forgotten to put down.

Hope N. Kasese The University of Zambia
25\05\00

Abbreviations

COF	Certificate of Fitness
CSO	Central Statistical Office
CTI	Community Transport Infrastructure
DISS	Department of Infrastructure and Support Services
DRT	Department of Road Transport
FedHaul	Federation of Zambian Hauliers
GDP	Gross Domestic Product
GRZ	Government of the Republic of Zambia
IDA	International Development Association
IMT	Intermediate Means of Transport
LA	Local Authorities
LCC	Lusaka City Council
MAFF	Ministry of Agriculture, Food and Fisheries
MCD	Master of Communication for Development
MCT	Ministry of Communication and Transport
MEWD	Ministry of Energy and Water Development
MICC	Mulungushi International Conference Centre
MLGH	Ministry of Local Government and Housing
MOFED	Ministry of Finance and Economic Development
MOT	Ministry of Tourism
MWS	Ministry of Works and Supply
NCC	National Council for Construction
NRB	National Roads Board
NRSC	National Road Safety Council
PRE's	Provincial Road Engineers
PSRP	Public Service Reform Programme
RD	Roads Department
RMI	Road Maintenance Initiative
ROADSIP	Road Sector Investment Programme
RTTP	Rural travel and transport Programme
SAP	Structural Adjustment Programme
SI	Statutory Instrument
SSATP	Sub-Saharan African Transport Programme
TAZA	Truckers Association of Zambia
UNZA	University of Zambia
UTTA	United Transport and Taxis Association
VOC's	Vehicle Operating Costs
ZNBC	Zambia National Broadcasting Corporation
ZNTB	Zambia National Tender Board

Table of contents

Chapter 1

Background

1.0. Introduction

Zambia is a landlocked country in southern Africa. It has an area of 753,000 sq.km and a population of about 9.5 million people.(CSO, 1996). The country has an annual population growth rate of about 3.2% per annum. Estimates show that 46% of the population lives in urban centres and 54% in rural areas. The average population density is about 13 inhabitants per square kilometre.

The Zambian economy in the past largely depended on the copper mining industry. About a third of GDP and over 70% of the annual foreign exchange earning in the mid 70's to early 80's originated from the copper sector. During this period, the National Development Plans focused on the construction of road links to neighbouring countries and from provinces to the capital. The length of the road network increased but there were little funds allocated to road maintenance.

The production and price of copper, however declined gradually and Zambia's economy started a downward slide. Over the 25 years since 1970, Zambia's GDP per capita income dropped from one of a middle-income country to one of the lowest. This economic decline further translated into the deterioration of the social and physical infrastructure especially that of transport.

1.1. The road sector before the Structural Adjustment Programme

Between the years 1964 and 1993, emphasis of both government and donor funded road projects was on opening new areas for communication and economic development through construction of new roads. There was almost no attention paid to ensuring sustainable maintenance of the newly constructed roads. By the late 70's this neglect resulted in only about 40-50% of the Zambian roads remaining in good

condition. Funding of roads during the 80's and early 90's averaged only 10-20% of budgeted amounts and this had an adverse effect on the condition of the roads. Owing to neglect of maintenance, the value of Zambia's road network had shrunk to about US $1.5 in the early 90's from the previous US$ 2.3 billion in the 70's. At this time (early 90's) only about 20% of the road network was in good condition. Road agency expenditure concentrated on capital projects aimed at rehabilitating failed sections of roads. Little or no maintenance was performed.

1.2. The road sector since the Structural Adjustment Programme

Under the Structural Adjustment Programme (SAP), the transport sector like the rest of the Zambian economy has had to operate within the context of economic liberalisation. The watershed in Zambia's road sector reform development came when the Government joined the World Bank sponsored Road Maintenance Initiative (RMI) under the auspices of the Sub-Saharan African Transport Programme (SSATP) in 1993. Under the RMI reform programme, the biggest realisation made was that problems faced by road management institutions included serious human resource constraints, inadequate financing arrangements, lack of clarity in responsibilities amongst road agencies, inefficient structures and weak management systems.

A road maintenance policy reform seminar was held between 16 and 19 February, 1993 at the Mulungushi International Conference Centre (MICC) in Lusaka at which high level representatives of key stakeholder ministries and donors were invited.

The outcome of that workshop was a set of recommendations to establish a road fund dedicated for road maintenance and rehabilitation and to create a board to manage and administer the fund. Government established a road fund comprising a levy on fuel and subsequently, Statutory Instrument No.42 (SI.42) of 1994 established the National Roads Board (NRB) for the purpose of administering and managing the road fund. The NRB is private sector driven comprising of 12 members, of whom seven represent key private sector road transport organisations and five ex-officio members represent

stakeholder ministries. SI.42 provides for the road fund to also attract revenues considered as road user charges as government may determine from time to time.

The thrust since then has been to embark on policy initiatives to manage the roads on a fee-for-service basis and to increase efficiency in the use of resources in the sector through the adoption of commercial practices and procedures in contracting and implementing road works.

1.3. Zambia's road network and responsible authorities

Zambia's road network represents a very large investment upon which trade, agriculture, industry and the welfare of the community depend. If this network cannot be kept in good condition, the economy and the people of the country would suffer.

The road network in Zambia is estimated to contain 64,000 Km and maybe broadly divided into the following categories:

1. Main Roads - these consist of gazetted Trunk (T), Main (M), and District (D) roads totalling 19,138 Kms which are the responsibility of the Roads Department in the Ministry of Works and Supply. There are plans to replace pontoons and bridges by permanent bridges of adequate capacity in areas where access to parts of Zambia and neighbouring countries is dependent on the crossing of major rivers.
2. Urban Roads - an estimated length of 7000 Kms (mostly ungazetted) in urban and peri-urban areas which are the responsibility of city, municipal and district councils.
3. Feeder Roads - rural roads totalling 31,024 Kms (half of the total road network) which are the responsibility of local authorities under the Ministry of Local Government and Housing. Approximately 50% of these roads have been gazetted and the remainder are ungazetted.
4. Tourist Roads - an estimated length of 7000 Km in National Parks and Game Management areas (mostly ungazetted) under the jurisdiction of the Ministry of Tourism.

Ungazetted roads are in the form of motorable tracks, trails, footpaths and corresponding bridges and culverts. These sometimes act as a link to the core roads such as feeder roads, territorial and inter-territorial roads. These ungazetted roads do not fall under any road authority. This means that these roads do not receive any budgetary allocations from government for rehabilitation and maintenance. These are the roads, which provide access to settlements, agricultural areas and social services, and, therefore, they need to be maintained to improve the living conditions of Zambian communities.

(See Figures 1 and 2, which are maps of Zambian roads, pontoons and ferries in each of the nine provinces.)

1. 4. The ROADSIP and linkages among responsible organisations

To demonstrate its commitment to sound management of the country's roads, the Government of Zambia agreed to follow proven economic principles in road investment and maintenance. These principles are to:

1 concentrate available resources on road maintenance rather than on new construction, and maintenance efforts on the essential road network;
2 encourage greater use of non-government organisations in road maintenance; and,
3 increase the effectiveness of funding and of donor funding.

The Road Sector Investment Programme (ROADSIP) was, therefore, set up to solicit for funding for road rehabilitation from co-operating partners to supplement local resources which at present are not adequate to meet the requirement of the backlog of deferred maintenance and the subsequent desired levels of rehabilitation of the road network in the country.

The ROADSIP is a ten-year programme (1997- 2006) with an original estimated budget of US $ 860 million. The principal objectives are to: improve the condition of

Figure 1.1: Map of Zambia showing the SATCC routes with main and district roads

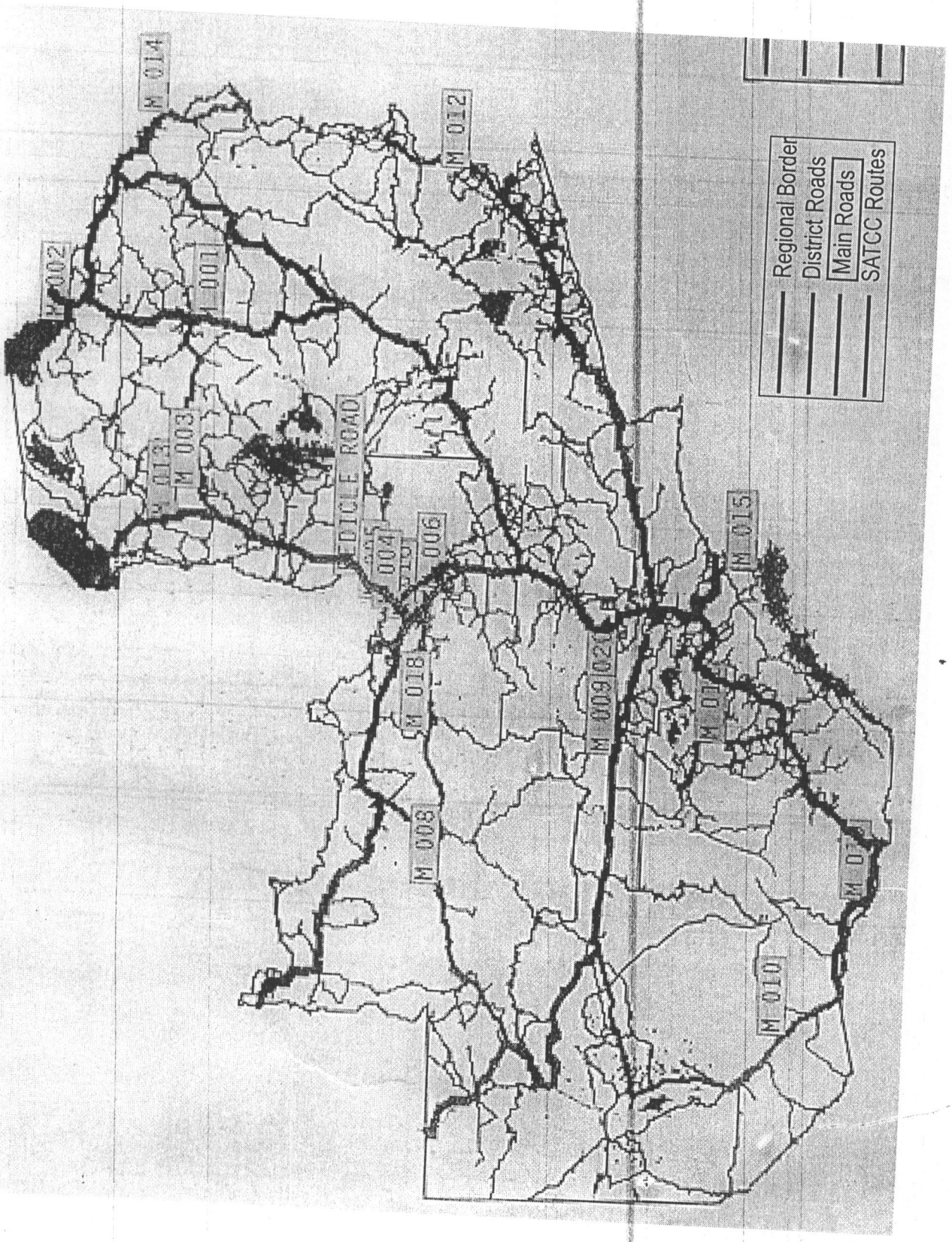


Figure 1.2: *Zambia's pontoons and ferries*

the core network of roads; strengthen the management of the road sector; create employment opportunities, improve road safety; improve environmental management; improve rural transport services; and improve community roads. The programme was conceived in mid 1995 with the broad objective of continuing and consolidating support to the road sector in Zambia. The programme is divided into two phases ROADSIP I (1997-2001) and ROADSIP II (2002-2006).

1.4.1 Funding

Funding for ROADSIP consists of the following:

i) the Road Fund;

ii) GRZ counterpart funding and direct subventions; and

iii) external financing agencies - these include EU, UNDP, JICA, NORAD, WB, IFAD, and Germany.

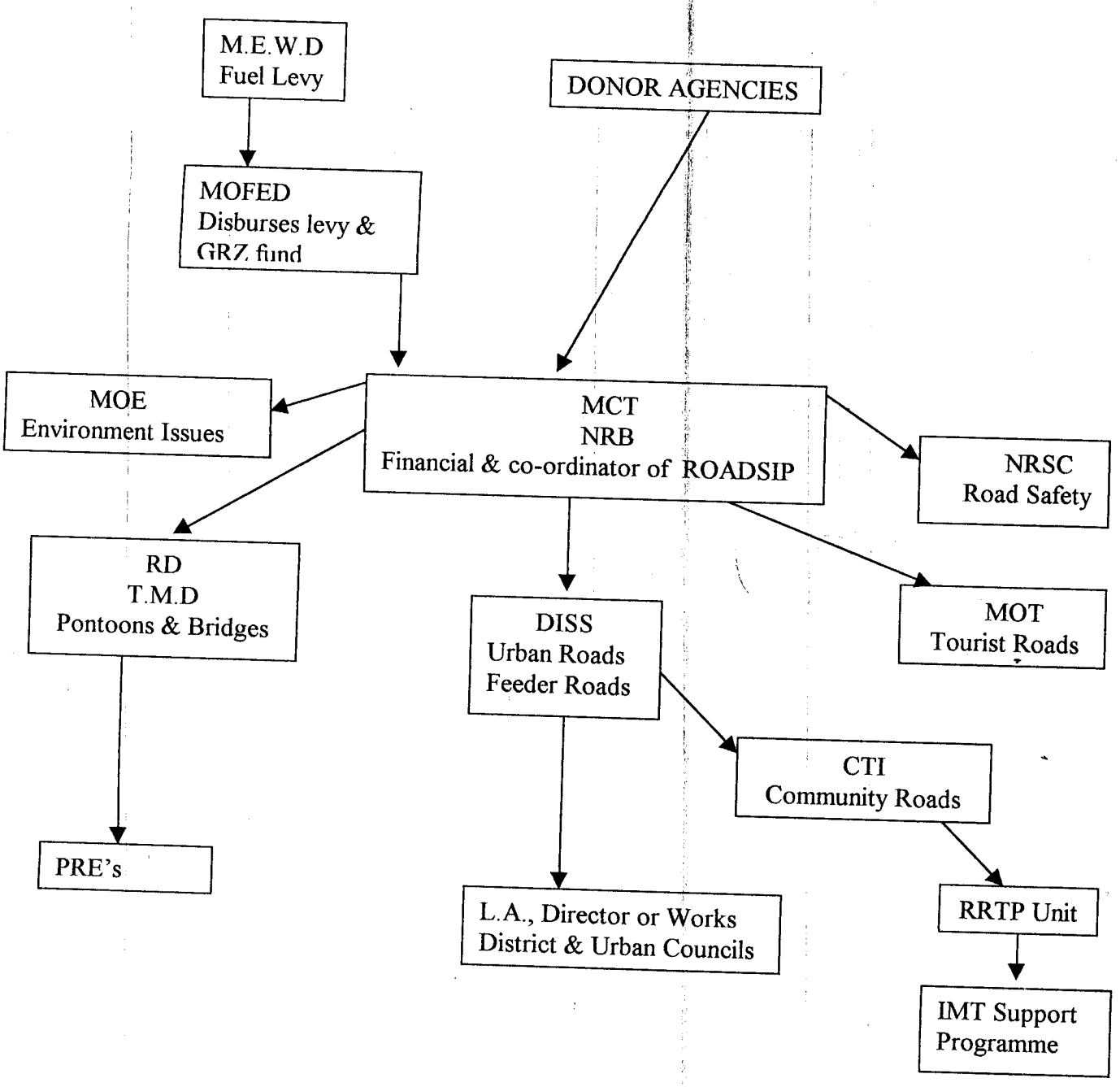
Almost half of the cost of ROADSIP will come from the road fund and Government with external financing agencies adding the rest of the amount.

The ROADSIP is financed and co-ordinated by the NRB. NRB administers the road fund and acts as a co-ordinating institution for all road programmes in the country.

The Roads Department renders technical support to all road agencies that may require its services apart from its designated function of maintaining trunk, main, and district roads.

The Department of Infrastructure and Support Services (DISS) through local authorities renders technical support to all road agencies that may require its services apart from its designated function of maintaining urban and feeder roads. DISS also provides technical support to communities during maintenance of Community Transport infrastructure (CTI) (Figure 1.3.)

Figure 1.3: *The ROADSIP's implementation Structure*



NOTE: *Zambia National Tender Board (ZNTB) is the organisation mandated to approve tender documents, bid evaluations, draft contracts after NRB has given a "no objection."*

1. 5. Specific roles and responsibilities

Under the ROADSIP, the specific roles and responsibilities of organisations which are involved in the project implementation are organised around six main functions which are:

1 preparatory works - selection of roads, field assessments, preparing tenders etc;
2 tendering and awarding - issuing tender notices, contract negotiation and awarding tenders;
3 implementation organisation - obtaining contractors work programmes and mobilising staff;
4 Supervision - day- to- day monitoring of physical progress of works;
5 monitoring - checking on supervision consultants to ensure compliance with technical specifications; and,
6 evaluation - evaluation of progress in relation to plans made.

The ROADSIP has three different guidelines for procurement. These are:

1 GRZ (ZNTB) procurement guidelines;
2 IDA procurement guidelines; and,
3 Other donors' procurement guidelines.

1.6. Conclusion

The chapter has given us an introduction to and the background of road sector reforms in Zambia. It gives the scenarios of the road sector before and after SAP. It explains the conditions of the roads at present and explains why road sector reforms have become necessary. It then explains the ROADSIP programme and the different implementing agencies involved in it. Finally, it talks about the specific roles and responsibilities of the different organisations responsible for the implementation of ROADSIP.

CHAPTER 2

The Attachment Process

2.0 Why attachee went to NRB

The attachee went to NRB so that she could be actively involved in NRB activities for a period of four months. This was done as a learning period for the Attachee. She learnt how NRB operates, how ROADSIP is managed and by who.

The attachee acted as a participant observer for four months. She was involved in practically every activity that went on at NRB. Her biggest role, however, was to be fully involved in the publicity ventures of NRB. She was involved in organising the advertising of the Boards activities through television and radio and documentaries of road works funded by the Board. The television and radio advertisements and documentaries were televised every second day and they were entitled "National Roads Board: Better roads, Safer lives".

The attachee was also given the task of writing articles for NRB in the Quarterly Journal of the Chartered Institute of Transport. She was involved in arranging the publishing of the NRB 1998 Annual Report which is a report submitted in fulfilment of the Board's requirement to inform all stakeholders in the road sector of he performance of the Board.

The attachee was given the task of making a library of photographs, films and publications of the Board. Perhaps one of the most enlightening activities the attachee encountered was her involvement in the preparation and participation of the ROADSIP I Annual Review Meeting and National Workshop on ROADSIP II. At this workshop the various stakeholders presented papers on their performance in ROADSIP I and the rationale and justification for ROADSIP II.

Finally, the attachee talked to representatives of all stakeholder organisations in ROADSIP and the road sector as a whole. Their co-operation and support was of great help to her work.

2.1 Methodology used in the Attachment

The attachment took place over a period of four months from 19 July to 12 November 1999. The attachee used the participant observer approach. This meant that the attachee got involved in NRB activities to get a thorough understanding of what ROADSIP is about through participation in activities, personal interviews with various stakeholders as well as performing other chores together with the members of staff of NRB and other organisations involved in ROADSIP.

The attachee also tried to act as an independent problem-solver among the different organisations, which are involved in ROADSIP.

2.2 Justification of the Attachment

The Master of Communication for Development (MCD) degree is a developmental course whose aim is to teach communication skills and strategies as a way of trying to solve organisation's communication problems.

The ROADSIP is a road sector development reform programme, which is aimed at improving the road network in Zambia. Its main objective is development of roads. As a development agent, this student chose to be attached to ROADSIP since it is a development programme, which is trying to develop Zambia's roads. The student's aim in the attachment was to assess whether the implementers of ROADSIP have incorporated the theory and concept of communication as a way of ensuring the programme's success. It this was not done, the student's mission was to come up with specific recommendations on the way forward for the programme in the area of using communication for the development of the road network in Zambia.

The justification of the attachment is that through this report, the student has contributed to the body of knowledge in the science of communication for development. It is hoped that this report will not only be circulated in academic circles but also among development communication activists. It is also hoped the same document will be used both as a reference and a working document to improve the communication for development approach of the NRB and ROADSIP programme.

2.3 Limitations of the attachment

It must be acknowledged that in undertaking this attachment, the student experienced a number of limitations. These limitations included transport constraints in trying t acquire all the relevant and necessary data from the various organisations which are involved in ROADSIP, the lack of full co-operation from some sources contacted for data, and the time allowance for preparing and presenting this report.

Another important limitation to this report is the review of relevant literature. It was revealed that apart from the student's work, there was very little documented evidence of other studies on ROADSIP and road sector reforms in Zambia.

Despite these limitations, the student endeavoured, in the most objective and insightful manner, to provide a report on critical issues facing the road sector reforms programme in Zambia.

2.4 Literature review

There is presently a limited amount of published literature on road sector reform programmes in Zambia. The only available literature is from World Bank studies, technical and discussion papers and NRB reports.

Notably, however, studies conducted by various World Bank technical committees unanimously agree that the road sector is big business and business should be managed like a business. Heggie and Vickers (1998) point out that if main road agencies were publicly listed companies, they would rank among the Fortune Global 500. The Japan Highway Corporation manages assets roughly equal in value to those of General Motors, the UK Highways Agency is in the same league as IBM and AT & T, while a relatively small road agency like the Roads Department in South Africa is in the same league as Northwest Airlines. Given the size and importance of the road business, it is extraordinary that these agencies are still managed through a government department and financed through general budget allocations - in the same way that governments manage the health and education sectors. They keep their accounts on a cash basis, have no balance sheet, and are subjected to little market discipline. And yet what is often a country's largest business is perfectly capable of standing on its own.

Most government departments do not have a commercial orientation and general budgets were not designed to finance a major business. They should be brought into the marketplace and put on a fee-for-service basis. In other words, the road sector should be commercialised. This involves creating an arm's-length agency to manage at least the main road network on a commercial basis, introducing an explicit road tariff, making sure that road users pay for extra spending on roads, depositing the proceeds from the road tariff into a road fund, appointing a representative public and private board to oversee management of the road fund, establishing a small secretariat to manage the day-to-day affairs of the road fund and ensuring that all works financed from the road funds are subject to rigorous technical and financial auditing.(Heggie and Vickers, 1998: v).

The Heggie (1998) study was a follow up study on the World Bank's policy, *Road Deterioration in Developing countries* by Harral and Faiz (1998). According to that policy study in the 85 countries that had received World Bank assistance for roads, allocation for roads maintenance had been so low that nearly 15% of the capital invested in main roads had eroded because of poor maintenance. As a result, a quarter of the main paved road network, together with a third of the main unimproved network, had to be

reconstructed. Reconstruction - costing $40 to $45 billion worldwide - could have been avoided by spending only $12 billion on preventive maintenance. The study also argued that if countries did not improve road management, the eventual costs of restoration would increase two to three times and theVOC's even more.

There are several reasons for this calamity. Road authorities were not directly affected by road deterioration and came under no immediate pressure to prevent it. Road users on the other hand, were slow to see the link between poor road conditions and higher VOC's and even when they did were rarely organised to act. The cause of the problem was a lack of public accountability - which could not be solved by additional financial resources alone. The institutional base of the road sector had to be reformed, including organisation, staffing and performance.

Harral and Faiz (1988) was an important milestone in the debate on road maintenance policies. It gave impetus to a number of initiatives designed to understand the underlying causes of poor road management. It also encouraged road agencies to address these institutional issues through a clearly articulated reform programme. The road Maintenance Initiative (RMI), a major component of the sub-Sahara Africa Transport Policy Programme (SSATP) was one of these initiatives, as was the PROVIAL ("for roads") programme in Latin America. These programmes did a great deal to improve the understanding of why roads were poorly managed and underfinanced. (Heggie and Vickers,1998: 7).

Developed countries like the US and Japan have responded to the expansion in demand for a well maintained road network by establishing commercially managed road funds. The concept of "user pay" stood behind the establishment of such funds - the road user pays certain road-related taxes and the government credits the proceeds directly to a special highway account.

2.4.1 Japan: Road Improvement Special Account

Japan introduced a special funding system for roads in 1954, coinciding with the introduction of the first five-year road improvement programme. At the end of the war, *there were about 130,000* motor vehicles in Japan, but this jumped to one million by 1953, and it became clear that the network - which was outdated and in poor condition - had to be improved.

These five-year rolling programmes were designed to bring the Japanese road system into the twentieth century and to adjust to the rapid growth in motor vehicles. Since then, the five-year road improvement programmes have been renewed and implemented continuously to provide people living in urban areas with better access to the countryside. (Heggie and Vickers,1998: 139)

The new funding system for roads involved earmarking certain road-related taxes and depositing them into a special account, or road fund. This funding system was introduced to meet the needs of the post-war road improvement programme and was "based on the concept that road users who enjoy the benefits of improved roads should bear the burden for their improvement" (that, it was based on the user pay concept).

The road fund employs an elaborate system of earmarked national and local taxes to finance the maintenance, improvement and construction of national, perceptual, and local roads. At the national level tax revenues earmarked for roads are allocated among the various road authorities. At the local level tax revenues earmarked for roads are also allocated among the various road authorities. (Heggie and Vickers,1998: passim).

Earmarked revenues at both the national and local levels are supplemented by general tax revenues and in the case of the national government, are also deposited into the Road Improvement Special Account to ensure comprehensive management of the funds. Revenue from user fees in 1995 was roughly $30 billion. Funds from the Roads Improvement Special Account is provided to road authorities on a cost-share basis. The

central government finances half the cost of maintaining directly managed national highways. Prefectural governments and designate large cities finance the remaining costs. The central government also finances two-thirds of the costs of improving directly manage national highways, 70% of the national expressway network, and 50% of subsidised national highways, main local (prefectural) roads, and main local (municipal) roads. (Heggie and Vickers,1998: passim).

Road spending in Japan is based on five-year road improvement programmes prepared by the Ministry of construction. The process worked well up until the start of the Ninth Road Improvement Programme. Programmes were prepared and approved, and corresponding tax rates were then written into a new proper tax law, which ensured that the road fund generated sufficient funds to cover costs during the next five-year period. But in 1982 a concerted effort was made to abolish the road and replace it with allocations from the government's consolidated budget. Although a roads board was in place - the Japan Road Council - up to the point it had played a relatively nominal role relative to the fund. The role and duties of the council are laid down in Article 77 of the Road Law. The law held that the Ministry of Construction must establish a Council at the request of the Minister. Among other things, the Council is asked to, "deliberate on management of the road fund and on toll road financing and advise the Minister on changes necessary to reorient road financing. Faced with this crisis of the road fund, the Ministry of Construction asked the Road Council to conduct an inquiry and make recommendations regarding how the overall road network should be developed as the country approached the twenty-first century. Their report, *Proposal for Road Improvement Approaching 21st Century*, not only set the future direction of the road programme but also saved the road fund and established the credibility of the Road Council. Since then, the Ministry of Construction has always asked the Road Council to submit its views on a long-term strategy for road improvement as part of the preparations for the Five-Year Road Improvement Programme.

The Council was established in 1952 and consists of a chairperson and 12 other members. The members are nominated by the director general of roads and are appointed by the

Minister of Construction. The chairperson has traditionally been the president of Japan Road Association (always a former under-secretary from the Ministry of Construction), but is currently the former president and chairperson of Nissan Corporation. Board members include representatives of the motor industry, business community, and trade unions, academic and local government. Three subcommittees carry out much of the Council's substantive work: one deals with road policy, one with toll roads and the other with environmental issues. The Council has no permanent secretariat but is serviced by staff from the Roads Bureau of the Ministry of Construction. (Heggie and Vickers,1998: 140).

The General Affairs Division of the Roads Bureau carries out day-to-day management of the road. They have about 12 staff who is responsible for forecasting revenues, liasing with Ministry of Finance and monitoring use of funds by the other divisions of the Roads Bureau and the prefectures. Each of these divisions (for example, the Expressway Corporation and the Highway Division) and the prefectures have two or more accountants who monitor the expenditure programmes and report back to the General Affairs Division. Expenditures on roads in cities, towns, and villages are monitored by the prefectures that then report back to the General Affairs Division on programmes supported by the road fund.

The road fund acts like a line of credit. Once parliament has approved the overall spending limits, the Ministry of Construction can draw down the funds regardless of the actual revenue in the road fund account at the central bank (that is, the government provides working capital). Constructors are paid direct after work has been inspected by an experienced Ministry of Construction engineer who has not been involved in planning or implementing the work. Work carried out by prefecturals and designated cities are also inspected by Ministry of Construction engineers. (Heggie and Vickers,1998: passim).

All works financed from the road fund is subject to an audit by the Japanese Institute of Audits, which is independent of the government and influential amongst the public. The

audit team visits the work office, examines control procedures and financial records, and dispatches civil engineers to inspect the selected work sites. Problems and queries are solved with the Ministry of Construction and the audit report is then submitted to parliament. (Heggie and Vickers,1998:139 – 140).

2.4.2. US Federal Highway Trust Fund

The Trust Fund was introduced in 1956 to finance construction of the interstate highway network. The fund is based on the user-pay concept, which is well established in the United States. All but six states now dedicate their state-level user-fee revenues to special highway or transportation accounts. The Trust Fund revenue derive from a variety of highway user taxes, including motor fuel taxes on gasoline, diesel and gasohol; a graduated tax on tires weighing 40 pounds or more; a 12% retail tax on selected new trucks and trailers; and a heavy-vehicle use tax on all trucks with a gross vehicles weigh more than 55,000 pounds. Total revenue raised through these was $21 billion in 1995, most coming from the tax on gasoline. Tax rates adjusted as part of the regular budgetary process. (Heggie and Vickers,1998: 25).

Revenues from the highway portion of the Trust Fund are used to reimburse states, on a cost-share basis, for expenditures on approved projects. These include periodic maintenance, road improvement, new construction, road safety, road studies, and other highway-related expenditures except for routine maintenance. Since 1982 a portion of the Fund has also been used to finance mass transit projects and since 1991, its mandate has been extended to supporting other land transport modes. About 3,00 staff manage the federal - aid highway programme. They are stationed in Washington, DC and in each of the states. (Heggie and Vickers,1998: 144).

Developing countries have also put up programmes to improve the road management is. The PROVIAL of Latin America and the RMI of Africa are two such examples.

2.4.3 PROVIAL in Latin America

The objectives of the PROVIAL programmes are similar to those of the RMI: creating awareness of the need for proper road maintenance, encouraging adequate and timely funding for road maintenance, promoting the concept of accountability in government, and encouraging the transfer of results from research and development to improve managerial and construction techniques.

PROVIAL has relied heavily on seminars to disseminate its message and to enable a dialogue among Latin America and Caribbean countries and between the Latin American countries and Caribbean countries and the donor communities. Between 1992 and 1995, PROVIAL organised 17 seminars, seven of which were regional and the rest for special countries. The last such seminar held in Puerto Rico, concluded that PROVIAL had effectively enabled engineers and technicians from the region to share professional know-how. But it had made insufficient progress in improving road maintenance management. Public debate had to be expanded to involve pertinent public institutions and road users in the reform and decision-making. Country representatives suggested that PROVIAL addresses issues, such as consensus building, decentralisation of road network management, identification of appropriate financial instruments, options for public-private partnerships, road safety environmental concerns, and ways to harmonise regional legislation and regulations. (Heggie and Vickers,1998: 15 – 16).

2.4.4 Road Maintenance Initiative in Africa

RMI has sought to identify the underlying causes of poor road maintenance policies and to develop an agenda for reforming them within Africa. Relying primarily on subregional seminars, the initial phase of the RMI raised awareness of the need of sound road maintenance policies and identified why approaches were ineffective and unsustainable. The second phase then encouraged country initiatives in Kenya, Madagascar, Nigeria, Tanzania, Uganda, Zambia and Zimbabwe. The country

programmes focused initially only on main roads concentrated on promoting reforms in three main areas: planning, programming, and financing; operational efficiency; and institutional and human resource development.(Heggie and Vickers,1998: 14).

During the initial stages of the programme the police dialogue quickly led to three important insights. First, it had always been assumed that the Ministry of Finance would play a key role in developing sustainable road maintenance policies. So strong was this belief that some country initiatives sought to interest the ministry in road maintenance by exploring the basic financial issues through public expenditure reviews. But it quickly became apparent that involving the private sector was the key to success, the ministry of finance did not hold the key. The private sector after all, used and paid for the roads and clearly had the most to win or lose. Their representative organisations - chambers of commerce, road freight and passenger transport association, and agricultural orangisations - were strong and influential. Their support could often overcome bureaucratic resistance whether from the Ministry of Works of the Ministry of Finance.

Second, many systematic problems associated with poor road maintenance policies - weak programming and budgeting, undue emphasis on work using in-house staff and equipment, and inefficient plant pools - were merely symptoms of an underlying institutional problem. The real problems were weak or unsuitable institutional arrangements for managing and financing roads and the impact these arrangements had on staff incentives and motivation, as well as on managerial accountability. Until the institutional framework is strengthened, it will be almost impossible to overcome the numerous technical, organisational, and human resource problems that hamper sound road maintenance policies.

Third attempts to improve road maintenance policies cannot be limited to maintenance alone or to the maintenance of main roads. Poor roads maintenance policies are a subset of the wider issues of managing and financing roads. Moreover, the problems tend to be most serious at the regional and district levels; institutional weaknesses are more acute and finances scarce.

These insights opened the two-way dialogue between the RMI programme and the participating countries to a wider debate about the institutional arrangements for managing and financing all types of roads. RMI's message has been disseminated through various media, including regional and sub-regional policy seminars, country workshops, study tours, annual meetings of all country representatives and participating donors, newsletters, and visits by RMI staff. The result was a programme that held to promote a number of major policy reforms in several African countries. Zambia has set up a road fund and a National Roads Boards that is trying to address all the above mentioned issues.

2.5. Conclusion

The RMI, the PROVIAL programme in Latin America and similar country initiatives in Asia and the Middle East have shown that roads are poorly managed and underfinanced because of weak institutional frameworks. Road construction and finance are not market -driven, and there is no clear price for roads, as road expenditures are usually financed from general tax reserves. Roads are procured through appropriations and compete against other claims. Other weaknesses also prevail in the road sector: poor terms and conditions of employment, lack of clearly defined responsibilities, ineffective and weak management structures and little managerial accountability. A compelling remedy is real or surrogate market disciples, in the form of competition, that motivate road agency managers to cut waste, improve operational performance and allocate resources efficiently.

The strategic mechanism for promoting competition is commercialisation: bring roads into the marketplace, put them on a fee-for-service basis, and manage them like a business. This is not the same as earmarking general budget revenues as a means of capturing more of the government overall budget for the road sector. Earmarking is not enough. Commercialisation is different and requires complementary reforms in four other important areas. These four basic building blocks focus on: clarifying

responsibility by assigning roles definitively; creating ownership by involving road users in the management of roads to encourage better management, to win public support for road funding and to constrain spending to what is affordable road financing by securing an adequate and stable flow of funds; and strengthening management of roads by introducing sound business practices and improving managerial accountability.

Developed countries like Japan and US have responded to the expansion in demand for a well-maintained road network by establishing commercially managed Road Funds. The concept of "user pay" stood behind the establishment of such funds - the road user pays certain road-related taxes and the government credits the proceeds directly to a special highway account. Zambia is continually modelling its Road Fund to be a commercially managed Road Fund.

CHAPTER 3

Conceptual framework

The aim of this chapter is to develop definitions for the basic concepts or conceptual material the student will use throughout this report and relate it to the attachment experience. The student's attachment theme is the principle of communication for development and this principle rests on the premise that there can be no development without communication.

3.0. What is communication?

There is no author who has been satisfied with another author's definition of the concept 'communication'. This is because there is no single approach to the study of communication. Definitions differ on matters such as whether communication has occurred if a source did not intend to send a message, whether communication is a linear process (a source sending a message in a channel to a receiver who then reacts), or whether a transactional perspective is more accurate (emphasising the relationships between people and how they constantly and mutually influence one another). Another factor in the lack of agreement is that the study of communication is not a precise science.

Measurement in communication research, as well as in other social sciences is inexact. Since people have free choice and active minds, some of theorists believe that predicting human behaviour is qualitatively different from predictions about other phenomena. These theorists believe that we will never be able to make predictions about communication behaviour that are as accurate as predictions about the physical world, no matter how sophisticated our theories become or how accurate our measuring instruments are. *What this discussion means in terms of defining communication is that people* disagree on definitions of communication because they disagree on the nature of communication.

But perhaps the best starting point in the definition of communication is to mention that communication occurs when humans manipulate symbols to stimulate meaning in other humans (Infante, Rancer and Womack, 1997). Stevens (1950) defines communication as the discriminatory response of an organism to a stimulus. Berelson and Steven (1964) define it as the transmission of information, ideas, emotions, skills etc., by the use of symbols - words, pictures, figures, graphs etc. Dance (1997) adds on to say communication is the eliciting of response through verbal symbols. Miller (1966) says communication has its central interest those behavioural situations in which a source transmits a message to a receiver(s) with conscious intent to affect the latter's behaviour. Cronkhite (1976) points out that human communication has occurred when a human being responds to a symbol.

Each definition emphasises a slight different aspect of communication. Steven's definition emphasises the response made by someone who receives stimulus. Berelson and Steven focus attention on the transmission of symbols. Dance's and Cronkhite's definition combines the receivers response with symbols chosen by the sender. Miller includes the idea of symbolism and receiver's response, but he also emphasises the intentional nature of communication.

Communication is a social, symbolic process, which occurs in a context (Infante et al 1997). Communication involves two individual's mutual awareness of each other, involves individual interpretation and involves shared meaning. This means therefore, that communication is distinctive to a degree because of where it occurs. This means that the meaning derived from a message in context can be substantially different from what is experienced in another context.

Communication has three functions that are generally accepted by all communication scholars. The first function has been termed the *linking* function. This means that communication is used to establish relationships between the individual and the

environment. The mentation function means communication stimulates the development of higher mental processes. The regulatory function develops as persons and other things in the environment influence the individual.

3.0.1 Communication contexts

Communication contexts include the following:

a) Interpersonal i.e. communication between two or more people;
b) Small group i.e. communication involving several people;
c) Organisational i.e. communication within and between organisations;
d) Public i.e. a speaker addressing a large audience;
e) Mass i.e. communication which is mediated by technological devices or machines;
f) Intercultural i.e. communication between people of different cultures;
g) Family i.e. communication between families;
h) Health i.e. communication involving health care providers and health care receivers; and
i) Political i.e. communication involving the governing part of our society.(Figure 3.1).

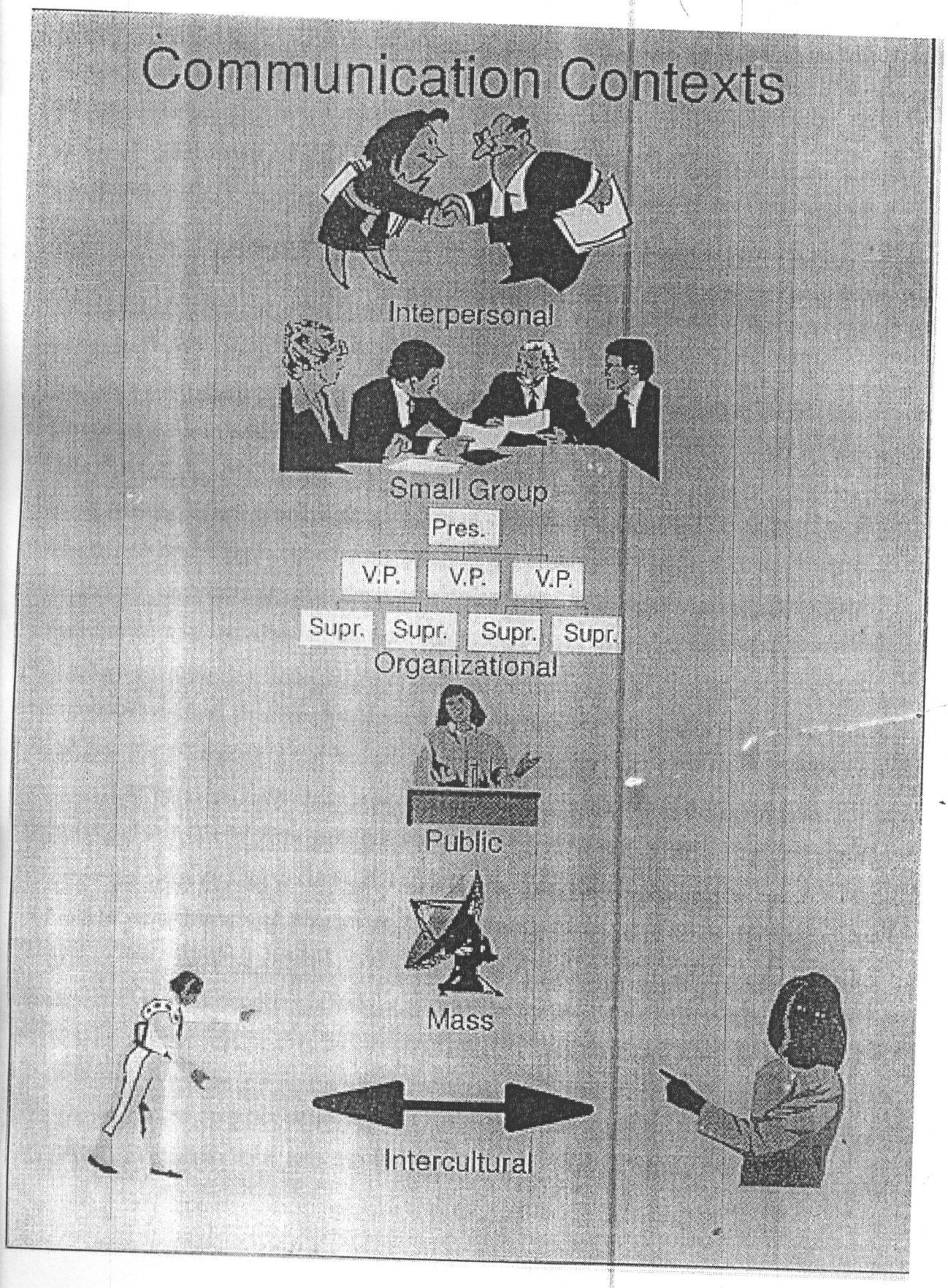
The student's attachment, however, focused on one form of communication, which is organisational communication.

3.1. Development of organisational communication

Before the Industrial Revolution in England, most businesses were small, family-operated enterprises. The owner and the employees knew each other well. After the increased mechanisation brought about by the Industrial Revolution, manufacturing business grew much larger.

With this expansion came the rise of a class of managers hired by the owner to make a business run smoothly.

Figure 3.1: *Communication contexts*



Source: *Infante, Dominic. A., A.S. Rancer and D.F. Womack (1997) 'Building Communication Theory'*