7 Expected Benefit of the Project

7.1 Direct benefit

7.1.1 Re-education of managers on management and production technologies

a) A total of 120 to 200 managers of SMEs attend the seminars and workshops every year during the duration of the project component.
b) 10 managers of SMEs attend the study tour every year during the duration of the project component.
c) A study tour report which introduces and explains the essence of advanced factories based on the study tour is produced every year during the duration of the project component and is available from the office of the implementation body for the reference of SMEs.
d) Employment: two office staff are hired for this component.

7.1.2 Movement of diffusion for TQM/"Kaizen(Improvement)"

a) A total of 4 SMEs experience participatory activities for productivity improvement in their own factories every year during the duration of the project component.
b) A total of 60 to 100 SMEs are invited to the two seminars or workshops and are shown the concept of the movement and the results of on-site activities in the model factories every year during the duration of the project component.
c) Two reports on the on-site activities are produced every year during the duration of the project component and are available from the implementation body for the reference of SMEs.
d) Employment: two office staff are hired for this component.

7.1.3 Execution of traveling clinic services for SMEs

a) A total of 4 SMEs are provided with the traveling clinic services every year during the duration of the project component.
b) Employment: one office staff is hired for this component.

7.1.4 Establishment of an SMEs consulting center

a) A total of 100 to 150 consulting projects are performed by either registered local consultants or outside consultants every year during the

duration of the project component.

b) Around 20 registered local consultants are provided with the opportunity of on-the job training by joining the consulting projects performed by foreign consultants.

c) Employment: three full time office staff and 15 part time technical staff are hired for this component. (However, it may not mean new job creation for the part time technical staff because currently there are already several part time technical staff at NOT, the prospective implementation body.)

7.2 Indirect benefit

The expected indirect benefits of the entire project:

(1) SMEs, particularly leading SMEs, acquire brighter future prospects.

(2) SMEs recognize appropriate technologies to be acquired.

(3) Foundations or organizational bases to improve productivity are built among the SMEs participating in the program of the movement of diffusion for TQM/"Kaizen(Improvement)."

(4) Working knowledge of improving production processes is transferred to the SMEs in the traveling clinic services.

(5) Awareness of needs for improving management is created among the SMEs in Konin Province by information dissemination about the results of the model factory activities of both the movement of diffusion for TQM/"Kaizen(Improvement)" and the traveling clinic services.

(6) When local consultants are attached to the on-site activities of the movement of diffusion for TQM/"Kaizen(Improvement)" and the traveling clinic services, they can learn how to carry out such activities effectively.

(7) The implementation body of the SMEs consulting center can establish a trustworthy consultant database through performance review of its consulting projects.

8 Weakness of the Project

(1) Although each of the project components is effective for invigorating and upgrading SMEs, each requires at least more than two or three years duration before tangible results will materialize.

(2) All four components require either entire or part financial support from aid

organizations including PHARE of EU.

(3) For the components involving foreign experts, appropriateness of the experts and consensus within the expert teams regarding the purposes and implementation policies of the project components are critical for the successful implementation . These sometimes are not realized.

Project Design Matrix (PDM) for PID-3 ESTABLISHMENT OF AN SMEs SUPPORT SYSTEM

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Industry in Konin Province is diversified and invigorated.	Composition of industrial sub-sectors Number of enterprises	Data at the registration office for enterprises and the statistical office	
Project Purpose SMEs in Konin Province are invigorated and upgraded.	Number of SMEs in the industry sector in Konin Province	Data at the registration office for enterprises and the statistical office	
Output 1. Managers have opportunities to learn about corporate management and production technologies. 2. SMEs have opportunities to learn about productivity improvement. 3. SMEs have opportunities to learn working knowledge and know-how of management and production. 4. SMEs have access to consulting services for management and production.	1. Number of seminars and study tours Number of attendees of seminars and study tours 2. Number of model factories for TQM/"Kaizen (Improvement)" 3. Number of clients for traveling clinic services 4. Number of consulting services	1. Annual report regarding re-education of managers Reports of study tour results 2. Reports for model factory activities 3. Annual report of the traveling clinic services 4. Annual report of the technology consulting center	Experiences of (1)participants in study tours, (2)model factories for TQM/"Kaizen(Improvement)" diffusion and (3)clients of traveling clinic services are shared by SMEs in Konin Province.
Activities 1.1 Conduct seminars and workshops on management and production. 1.2 Conduct study tours to advanced factories. 2.1 Provide seminars on productivity improvement including TQM/"Kaizen(Improvement)". 2.2 Conduct model factory activities for diffusing the concept of TQM/"Kaizen(Improvement)". 3.1 Execute traveling clinic services for SMEs. 4.1 Build a local consultant pool. 4.2 Invite clients for technology consulting services. 4.3 Find and dispatch suitable consultants to the clients.	**Input** Manpower Full time staff: 8 to 10 people in total for the four project components Experts : 4 people (TQM/Kaizen), 4 people (Traveling clinic) Interpreters : A few people Fund requirement Re-education of managers : US$ 185,300(per annum) TQM/kaizen diffusion : US$ 461,900(per annum) Traveling clinic services : US$ 1,040,200(per annum) Technology consulting center : US$ 697,400(per annum) Facilities Offices for implementation bodies		

PID-4 Establishment of Financing Assistance Scheme for New Entrepreneurs (ID-5)

1. Rationale of the Proposed Project

For entrepreneurs in Konin Province, the difficulties in securing required funds continue to be a major management issue, as evidenced in the results of the questionnaire survey and the interview survey of the enterprises visited. Table1 summarizes responses to the question on "problems related to business operation" by ranking them in order of seriousness. The most frequently cited response was "unstable purchasing order of customers" (21.5% of the total) , followed by "difficulties in arranging loans or financing" (14.3%). It should be noted that most enterprises citing difficulties in financial access were small enterprises with 50 employees or under.

Table PID-4-1 MAJOR PROBLEMS ON BUSINESS OPERATION

No. of Emplyees	a	b	c	d	e	f	g	h	I
1~5	97	60	42	15	55	133	69	106	37
6~50	116	68	72	23	70	160	68	58	36
51~250	9	3	17	12	27	34	17	20	9
251~500	6	5	2	4	9	16	4	7	3
Total	228	136	133	54	161	343	158	191	85

Note : Respondents chose three items in order of seriousness.
a. Difficulties in borrowing of loan
b. Low technical capability and/ or job-hopping of employees
c. Increase in salaries and wages of employees
d. High import duties of raw materials, intermediates or parts
e. Obsolescence of production technology and/ or facilities
f. Unstable purchasing order of customers
g. Severe requirements of customers for quality,price
h. Difficulty in market development
I. Lack of reliable business partner

The questionnaire further asked respondents to define the problems related to difficulties in borrowing from financial institutions. Table2 summarizes the responses. Complexity in loan application procedures and a mortgage shortfall were mostly frequently cited. The former was mentioned mostly by enterprises with 6-50 employees, while the latter was most frequently cited by smaller enterprises with 5 employees or fewer. *(Note to Mr Maeda: Sentence deleted as repetitive)* This was confirmed when the Team visited and heard the same

responses from small and medium-scale enterprises. In particular, many enterprises experienced the borrowing problems right at the beginning when they were established (most of SMEs were founded in the 1990s).

Table PID-4-2 MAJOR PROBLEMS IN BORROWING A LOAN

No. of Emplyees	a	b	c	d	e	f
1~5	23	20	2	14	2	17
6~50	19	38	7	17	8	12
51~250	8	2	2	2	2	2
251~500	3	2	2	0	0	0
Total	53	62	13	33	12	31

Note : Respondents chose tow items in order of seriousness.
a. Insufficient mortgage or collateral to meet requirement
b. Complicated procedure
c. Lack of official credit guarantee system
d. Banks' passive atitude to finance SMEs
e. Banks don't finance the full amount of loan requirement
f. Others

Since the introduction of the market economy, the financial system in Poland has been recording rapid growth. Nevertheless, the amount of funds held by the banking industry is still small compared to the size of the national economy. On top of this, a rapid growth in financial demand in recent years alongside government policy to curtail money supply creates an unfavorable financial environment (with strict requirements) for both small enterprises with vulnerable financial bases and new entrepreneurs without sufficient collateral for borrowing. Although the need for an institutional financing scheme (or mechanism)[11] is recognized for fostering small and medium-scale enterprises, there is no prospect of introducing one as the government faces grave financial constraints. It is worth noting that eight governors of Wielkopolska[12] region agreed to promote the introduction of a financing scheme for SMEs development in September, 1997. However, there is no sign of a concrete plan on the horizon so far.

The situation is more or less the same in the financial market within the Province, which seems to limit financial access severely to small enterprises and new

[11] "Institutional Financing Scheme" in this case refers to the establishment of a government financial institution specializing in a loan and credit service for small and medium-scale enterprises with preferential conditions.

[12] Wielkopolska region consists of the provinces of Konin, Kalisz, Leszno, Poznan Pila Bydogoszcz Torun and Wloclawek.

ventures. At present, 18 branches of commercial banks operate in Konin Province. Their total loans made in 1997 are estimated at around 400 - 450 million PLN. The largest branch seems to have lent an estimated 100 million PLN, while small branches have not reached 10 million PLN.

Approximately 60% of corporate loans (both the number of cases and the amount of loan) are to enterprises with 6-50 employees, followed by those with 51-250 employees. In fact, enterprises with 6-250 employees account for 85-90% of corporate loans made by most of the branches. This makes a sharp contrast to the dominance of small enterprises with 1-5 employees, which account for 86% of all manufacturing enterprises in the province (on a registered basis).

The majority (55-60%) of loans are short-term with less than a year's repayment period. Medium-term loans - with a repayment period of one to three years - and long-term loans for more than three years account for 20% each in terms of value. In terms of number of loans, 90% are short-term. Table 3 shows the average loan amounts which companies, in the questionnaire, stated as the requirement for new investment. There are big differences between the actual loan amount by commercial banks and the amount required.

Table PID-4-3 AVERAGE LOAN REQUIREMENTS BY ENTERPRISES

No. of Employees	No. of Reply	No. of Loan Requirements	Average Loan Requirements	*note 1
1～5	135	54	77,646	48
6～50	134	65	310,991	58
51～250	30	15	2,850,833	12
251～500	11	7	4,700,000	6
Total	310	141		124

note1: Number of companies which concretely replied approximate amount

It is important to analyze the difficulties in borrowing or financing (*ie* strict conditions) cited by small enterprises, which are generally described as follows:

1) Complexity in loan application procedures

Notably, there seems to be little difference with other countries in the application form and documentation required. Also, the average examination period is, according to various financial institutions, one month, which is

considered not unduly long. Thus, the complexity for small enterprises seems to lie in time and effort required to prepare a business plan and arrange necessary documents. For preparation of business plans, each RDA provides assistance on a contract basis now. Expanding the scope of this service will facilitate loan negotiations between small enterprises and banks.

2) High mortgage requirements

At present, the amount of collateral required by financial institutions is often set between 140% and 300% of the amount of loan sought. Assets primarily offered as collateral are land, buildings and machinery, as well as motor vehicles because of the ease of resale. In addition to assets, loan guarantee by a surety is widely accepted. Farmland is generally appraised at 5% or less of its value, and in Konin Province where agriculture, used land and forest accounts for large portions (71%), there are a limited number of entrepreneurs who can offer land of sufficient value to cover the amount of loan.

3) High interest rates

At present, loan interest rates range between 24 - 30%, with the prevailing rate at 27%. The high interest rates clearly discourage small enterprises from applying for loans. Financial institutions set varying interest rates according to the prospect for repayment, and these are generally higher for small enterprises. As a result, some entrepreneurs borrow working capital from relatives and friends at a lower interest rate, but this makes it difficult to borrow sizeable amounts.

To help overcome the situation, the project proposes to provide financial support for entrepreneurs for the purpose of promoting new businesses in the Province. In particular, the project will focus on entrepreneurs who work for large-scale enterprises and who now intend to start their own business and have prepared an appropriate business plan. The project is designed to provide funds for these eligible entrepreneurs under favorable terms and conditions by combining public financing with supplemental mortgages from the enterprises which previously employed the entrepreneurs (loan applicants).

2. Purpose of the Project

The purpose of the project is to promote the start-up of new businesses by establishing an innovative financial assistance scheme.

3. Output of the Project

1) Emergence of new businesses (enterprises) in the Province

The new financial assistance system will help pay the way for starting up new businesses, leading to an increase in the number of enterprises operating in the Province.

2) Creation of employment opportunities

New enterprises will create new jobs, accompanied by additional employment in related activities such as service industries.

3) Reduction of the workforce of large companies

Providing loans to entrepreneurs spinning off from large enterprises will encourage the reduction of labor surplus.

4) Increase in local tax revenues

New ventures will increase the tax base of local government, including corporate income and property taxes.

4. Project Description

The outline of the proposed financial assistance scheme is summarized as follows:

1) Total amount of loans: 6,000,000PLN (not including administration costs, as the loan service is provided within the scope of ordinary bank business)

2) Implementation period: Loan is available from January 1999 to December 2001 (or when the total amount of loans is entirely disbursed, whichever is earlier)

3) Method of lending: Direct lending by local commercial banks. Reception desks will be set up at branch offices within the Province to accept loan applications. The banks will be responsible for examining applications, decisions, disbursement and collection.

4) Use of loan: Funds to purchase land, buildings, machinery and equipment in principle.

5) Qualification for a loan: Any person from a large enterprise (250 or more employees) participating in the financial assistance scheme, who plans to start up a new venture in manufacturing, mining, construction or service in the Province within a year of leaving.

The projects to be financed by this scheme should be set up (or located) in the area of local-government providing part finance.

6) Loan conditions

a. Maximum amount of loans: 100,000PLN per application

b. Interest rate: An interest rate decided by an applicable financial institution, with 5% subsidized by self local-government.

c. Repayment period: Maximum 3 years

d. Grace period: Maximum 6 months (for principal only)

e. Collateral/guarantee: According to regulations of an applicable financial institution. The borrower may offer additional collateral under the guarantee from the enterprise which previously employed him.

7) Assumption:

Granting of loan and local government finance assume that:

Interest rate of loan : 28% p.a. (normal) 23% p.a. (discounted)
Required mortgage coverage ratio : 200% (normal) 100% p.a.(discounted)

Term of repayment : 3 years 3 years (6 month grace)
Borrowers (entreprenurers) will be allowed loans only on the above conditions.

Average loan amount : 100,000zl. per project

Number of loan approval : 20 projects/year,
(60 projects for 3 years in total)

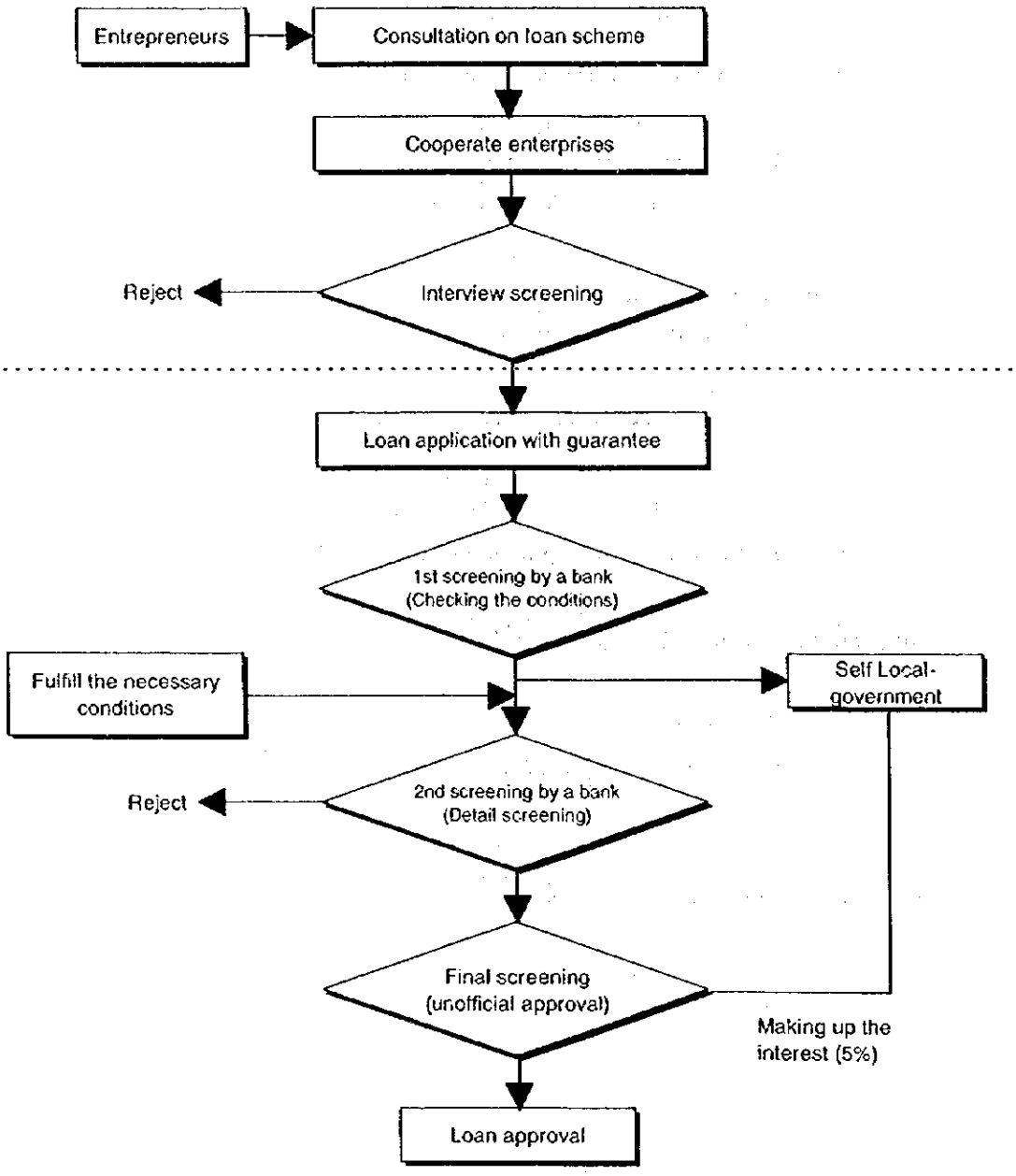
Total loan amount (average): 2,000,000zl./year
(6,000,000zl for 3 years)

Self local-government relief funds amount : 100,000 for a year
(in case of 5% subsidy), 300,000 for 3 years,
[*NOTE: Currency?]*
Expected direct job creation : 600 persons (10/project x 60 project) for 3 years

Expected tax earning in 2001: 4.2 million PLN
Average sales amount is 2 million PLN per project,
In this case, a profit is assumed around 300,000 PLN per project
300,000PLN x 35% x 40 projects = 4.2 million PLN(in the year of 2001)

General flow of the proposed loan scheme is shown in Figure 1.

Figure PID-4-1 PROCEDURE OF NEW ENTREPRENEURS LOAN SCHEME



5. Implementation Body and Financing Source

The implementation body of the project will be commercial banks with local branches in the Province.

The project has an advantage in using existing loan services of commercial banks, for it avoids the need to set up new financial institutions. Large enterprises and local self-government authorities supporting the scheme will need to make an agreement with the banks on implementation.

6. Activities

1) Detailed design of the new loan program

   a A basic agreement will be signed by participating banks, enterprises and local self-government.

   b The new loan scheme will be announced and inaugurated.

   c The participating enterprises will start the promotion.

2) Loan application and assessment.

3) Loans disbursed and new enterprises established.

4) The businesses employ workers and start activities.

5) The new enterprises report profits and pay taxes.

	1998	1999	2000	2001
Activities 1) – a				
1) – b				
1) – c		→	→	→
2)		→	→	→
3)		→	→	→
4)				→

7. Expected Benefits of the Project

Direct benefits

1) It is expected that around 60 enterprises will be established to employ 600-700 persons in total.

2) The enterprises will help increase the local tax base by paying income and property taxes.

Indirect benefits

1) Diversification of local industries in the province.

2) Reduction of the workforce of large enterprises.

8. Weaknesses of the Project

1) The maximum amount of loan per project will likely be smaller than that requested by most applicants.

2) Time required to obtain guarantee from large enterprises will vary greatly.

Project Design Matrix (PDM) for PID-4 ESTABLISHMENT OF FINANCING ASSISTANCE SCHEME FOR NEW ENTREPRENEURS

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Industry in Konin Province is diversified and invigorated.	Composition of industrial sub-sectors Number of enterprises	Data at the registration office for enterprises and the statistical office	
Project Purpose New businesses are started by local entrepreneurs.	No. of new business units which are established under the loan scheme.	No. of loan approvals	Other supporting programs for SMEs are also implemented.
Output 1. New business and enterprises are established in the province. 2. Reduction of the workforce of big enterprises is accelerated. 3. Job creation in the province is progressed. 4. Tax revenue for local municipalities is increased.	1. Number of enterprises 2. Number of workers in big enterprises 3. Number of new jobs created by enterprises which are established under the loan scheme 4. Tax revenue provided by the above enterprises	1. Statistical data 2. Annual report of the enterprises 3. Tax revenue of each Gmina	1. The head office of each implementing local bank supports and approves the scheme. 2. Budgeting for the scheme at cooperating gminas.
Activities 1. Define a loan scheme. 2. Prepare a new bank loan under the cooperation of big enterprises, private banks, local self-governments and the Office of the Konin Governor. 3. Promote the scheme for potential entrepreneurs. 4. Establish new enterprises in cooperation with big enterprises, banks and the Office of the Konin governor.	**Input** Manpower 1. Working staff of Gminas, private banks and big enterprises. 2. New entrepreneurs 3. Workers in the new enterprises Finance 1. Total fund amount US$1.7million		

PID-5 Organization of "Economic Forum 2010"(ID-10)

1. Rationale of the Proposed Project

In promoting economic development of Konin Province, a key factor in the success of the project is to ensure the support of leaders in areas and sectors to be developed and to explain the goals to local residents. At present, a forum is organized by representatives of various sectors as a joint initiative of the Office of the Konin Governor and the Self Local-Government Council.

The forum's inception dates back to September 1996 when the discussion on "Development Direction of Konin Province" was held by the RDA Konin. These discussions led to a number of resolutions, one of which was to establish the forum to create a common ground of understanding on issues facing the region, to agree the direction of regional development, and to raise awareness of local leaders. The aim was to garner momentum for future development efforts. In response, the Konin Governor and the Chairman of the Regional Self-government Council jointly signed and sent a letter in January 1997 to representatives of various sectors in the Province, stating that they intended to establish the forum and inviting the representatives to participate to develop a "strategy for regional development in the state". In April, the Regional Self-government Council established the framework of the forum and it formally started in October, 1997.

The forum consists of the following six working groups, supervised by the coordination committee:

Group 1 Industry Structure Change - The future of the fuel energy sector
Group 2 Restructuring rural areas and agriculture - New income sources for rural people
Group 3 Increasing education and training
Group 4 Improvement of the environment
Group 5 Economic development - New industry
Group 6 Society and culture

So far, the working groups have held 2-4 meetings each, but no reports or records have been made. The activity level seems to vary with the groups, and some

groups have not met regularly. According to a source related to the forum, some members suggest that they should resume discussions until the results of the JICA study, which started in July 1997, are announced.

Having analyzed the forum's activities so far, the following problems are identified:

1) The status and role of the forum is not clear

While the forum was established under the joint initiatives of the Konin Governor and the Chairman of the Regional Self-government Council, the role of the forum in the development process is not clearly defined and the forum is only an informal gathering. In particular, it is not clear how the results of discussions at the forum will be reflected in future policy.

2) No budget is allocated for the forum's activities

As the forum is considered to be an informal gathering, its members are required to bear related expenses, including transportation and preparation of materials. As the forum becomes more active, these expenses will inevitably increase, but no budget has been allocated so far.

3) The forum does not include any representatives of the financial industry

The forum is unrepresented by any financial institutions that may be expected to support the development drive.

In recognition of the above problems and with the final report of the JICA study to be submitted soon, it is proposed to develop the informal gatherings of local leaders into a new forum, represented by all sectors, focusing on economic development in the region and tentatively named "Economic Forum 2010."

2. Purpose of the Project

The purpose of the project is to establish a formal organization to promote the regional development plan for the Konin State with the target year of 2010, and to monitor the progress of development projects.

3. Output of the Project

(1) A common ground of understanding on regional development in the state will be developed.

(2) A comprehensive regional development plan for the state will be made (including, "development visions," "important considerations in development," and "development actions").

(3) Projects related to regional development will be implemented.

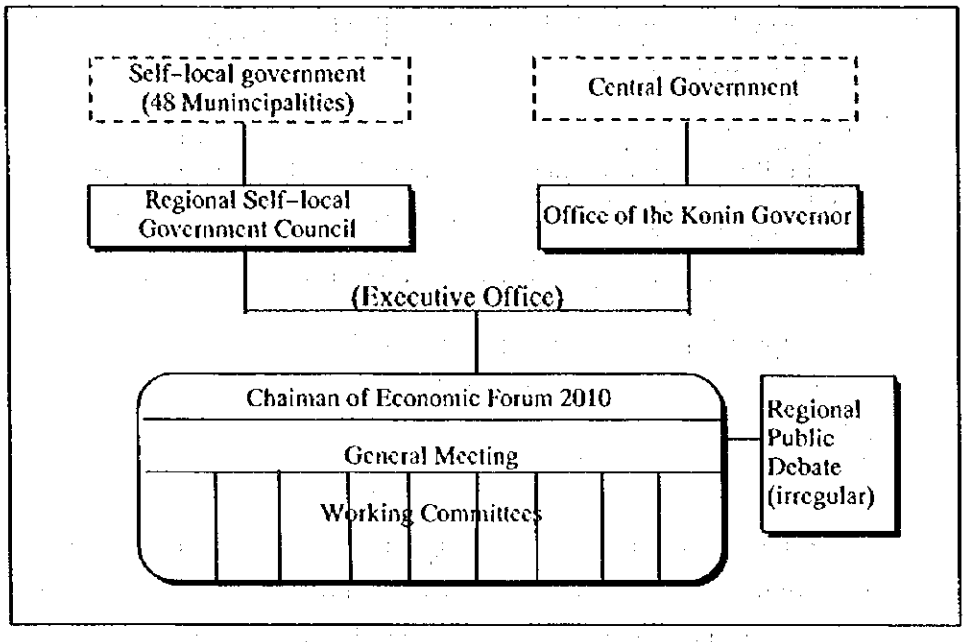
(4) The progress of regional development projects will be monitored.

4. Description of the Project

Based on the existing forum on "Formulation of Regional Development Strategies for the Konin State," a council to discuss regional development, tentatively named the "Economic Forum 2010," will be established under the Konin Governor and the Regional Self-Government Council. The council will have its own budget to cover operating costs and expenses and will be supported by a secretariat. It will be organized by formal members and will consult with outside experts as required. Each member will belong to six to eight different working groups. It will discuss very important agendas inquired by the Konin Governor and the Regional Self-government Council and make and submit reports. Fig.1 shows the general organization of the council.

The operating budget will cover a full-time secretary, printing, transportation and meeting costs, totaling an estimated 30,000 - 35,000PLN. The council will have its head office within the Office of the Konin Governor or the Regional Self-government Council.

Figure PID-5-1 COMPOSITION OF ECONOMIC FORUM 2010



5. Implementation Body and Financing Source

The Office of the Konin Governor and the Regional Self-government Council will be the implementation body and financing source.

6. Activities

(1) To secure the budget for operation and management of the council from the Office of the Konin Governor and the Regional Self-government Council.

(2) The council will be organized by representatives of various sectors in the province.

(3) The council will confer upon agendas as inquired by the Office of the Konin Governor and the Regional Self-government Council.

(4) The results of discussion at the council, including recommendations, will be reported in writing to the Office of the Konin Governor and the Regional Self-government Council.

(5) The council members and participants in the council's discussions will assume leadership in the development process according to their area of interest.

7. Expected Benefits of the Project

The project will not produce direct benefits, such as the creation of employment opportunities.

The project, however, is expected to produce indirect benefits, including:

(1) Local leaders will have a common ground of understanding on the major issues facing the province and a general direction of regional development.

(2) A regional development plan will be carried out to a detailed design stage.

(3) Local leaders will be encouraged and motivated to lead the development efforts.

(4) The above results will serve as a major impetus for the promotion of regional development.

8. Weaknesses of the Project

(1) The council's success will depend upon the commitment and determination of the leaders of the working group.

(2) Recommendations of the council will not have a direct impact on a spatial development plan to be prepared by each self-government.

Project Design Matrix (PDM) for PID-5 ORGANIZATION OF "ECONOMIC FORUM 2010"

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Economy in Konin Province is invigorated and developed.	1. Value added of the province 2. Production of the province 3. Composition of economic sub-sectors 4. Number of enterprises 5. Unemployment rate	Data at the registration office for enterprises and the statistical office	
Project Purpose A formal organization to promote the regional development plan for Konin State with the target completion year of 2010 is established and monitors the progress of development projects.	Institutional supporting measures including monitoring methods in Konin Province	1. Annual reports of institutions implementing supporting measures 2. Follow up reports of development projects	
Output 1. A future direction of economic development of Konin Province is defined. 2. Collective view on regional development of Konin is made. 3. Economic development measures in each sector is initiated. 4. Regional economic development is monitored.	1. Statements regarding the economic development of Konin Province 2. Master plan No. of planned projects 3. Number of economic development measures 4. Economic indicators and social indicators	1. Reports and news letters by the Forum 2. Master plan report Project reports 3. Public estimation by local people 4. Statistical data	Local people respect the Forum.
Activities 1. Organize the forum under the joint control of the Office of the Konin Governor and regional Self-government Council. 2. Select the members of the forum from opinion leaders (*Note - do you mean senior business people??) from each economic sector. 3. Periodically hold general meetings of all members and group meetings of working groups. 4. Prepare a report for the activities of each working group. 5. Officially announce the results of meetings.	**Input** Manpower 1. 30-40 members of the Forum (voluntary base) 2. One full-time secretary 3. Some advisers (timely) Finance 1. US$10,000 (for the first term)		The Economic Forum is authorized by Regional self-government and the Office of Konin Governor.

PDT-1Construction of a Distribution Center for Construction Materials(DT-1)

1. Rationale of the Proposed Project

1.1 Condition of construction industry

Construction is the third largest industry sector in the Polish economy and generated 6.5% of GDP in 1995 and 5.1% in 1996 respectively. It has also stimulated the development of other economic sectors. For example, increasing residential construction results in more demand for construction materials, household appliances and services as well. Table PDT1-1 shows annual growth rates of the construction industry in comparison with other industries between 1993 and 1997.

Table PDT-1-1 GROWTH RATE OF CONSTRUCTION INDUSTRY (%)

	1993	1994	1995	1996	Third Quarter 1997
Annual growth rates					
GDP	3.8	5.2	7.0	6.0	7.6
Industrial sales	6.4	12.1	9.7	8.5	7.8
Manufaturig	10.4	13.7	11.6	10.5	10.7
Construction	4.5	0.3	5.6	7.8	23.6

Source : Central Statistical Office(GUS)

After the economic revolution in 1989, the growth rate of the construction industry dropped by 10.7% in 1990. However, the output of the construction industry has been increasing since 1991. The construction industry has economic impact not only on other industries, but is itself also very sensitive to the fluctuating business environment.

As shown in the above Table, the growth rate of the construction industry was 0.3% in 1994. The main reason for this economic stagnation was the high interest rate which is the measure used to prevent high inflation. However, the interest rate on NBP(National Bank of Poland) credit to commercial banks was decreased from 33% in May 1994 to 25% in July 1996. As the interest rate decreased, signs of recovery in the construction industry have been observed, which have been emphasised by growth of 23.6% being achieved in the third

quarter of 1997. According to the Chamber of Construction, the demand of construction is increasing, and this trend is expected to continue.

The construction industry in Konin province accounted for 5.6% of value added to the economic structure in 1995, and this value is estimated to increase to 8.0% in 2010. The number of people employed in the industry was 8,300 in 1995, and this is estimated to rise to 10,000 in 2010.

1.2 Institutional scheme for promoting construction industry

A lack of institutional facilities is one of the obstructions for growth of the construction industry in Poland. According to conservative estimates by PAIZ, 5,000,000 new flats will be needed in the period 1995-2000. Another estimate by the governmental strategic center in Poznan which covered the Wielkopolska area including Konin province, indicated that 200,000 flats will be needed up to 2010. Clearly there is a big potential demand for housing in this area.

Housing is part of the construction industry. Private non-residential building have more share than housing needs. Table PDT1-2 shows the volume of building production. According to this data, the volume of new public building investment is relatively small with private non-residential buildings accounting for the highest proportion of volume.

On the other hand, public investment in the construction industry, such as the construction project of A-2 motorway which will commence within a year, is supposed to influence a variety of other investments. The construction project of the A-2 motorway does not only create a good traffic infrastructure but also stimulates the economy of the province.

Table PDT-1-2 VOLUME OF BUILDING CONSTRUCTION

Specification	Building production 1995	
	Million ECU	%
1.New buildings, including;	4.69	42.8
housing	1.23	11.2
private non-residential buildings	2.94	26.8
public non-residential buildings	0.52	4.8
2.Modernization and overhaul, including	4.36	39.2
housing	1.40	12.8
non-residential buildings	2.90	26.4
3.Industrial buildings	1.97	18.0
new buildings	1.52	13.9
overhaul and modernization	0.45	4.1
Total	10.96	100.0

Source: WIB

1.3 Construction companies and market trend in Konin

There are several companies which have been carrying out construction projects in Poland. Budimex is a one of major construction companies whose branch office is located in Liehen, Konin province. It is constructing a church which will be the 11th largest in the world. Budimex is also planning to construct a hotel beside the church for tourists and is interested in building a hotel along the A-2 motorway.

Table PDT1-3 illustrates the number of new building approvals in Konin province. In general, the number of new building applications has been increasing since 1996. According to Table PDT 1-3, demand for housing is much higher than for non-residential buildings. Considering the national statistical data above in Table PDT-1-2, individual customers should be targeted and, therefore, efforts focused on house building in Konin province, although it is understood that there is a much higher construction unit value in an industrial facility than in a detached house.

Table PDT-1-3 NUMBER OF NEW BUILDING APPROVAL

	1995	1996	1997
Detached house	1,151	1,289	1,198
Garage, storage of house	810	848	884
Malti-family house	10	9	15
Public building	45	54	72
Industrial facility	40	124	115

Source: Konin provincial office

According to an estimate by a private architect's office in Konin, the cost of housing is divided up, as shown in Table PDT-1-4.

Table PDT-1-4 BREAKDOWN OF THE COST OF HOUSING

	Construction elements	%	Cost(PLM)
1	Ground works	1.50%	4,500
2	Combined footing	2.50%	7,500
3	Construction walls	23.00%	69,000
4	Ceilings	11.00%	33,000
5	Roof construction	2.50%	7,500
6	Roof covering	4.00%	12,000
7	Partition wall	2.50%	7,500
8	Accessories	3.00%	9,000
9	Plaster	4.20%	12,600
10	Painting	2.00%	6,000
11	Woodwork -window	6.25%	18,750
12	Woodwork -door	4.15%	12,450
13	Floor	2.20%	6,600
14	Floor	6.30%	18,900
15	Electrical, water, sewage terminal	5.00%	15,000
16	Electrical installation	2.10%	6,300
17	Water sewage installation	3.80%	11,400
18	Central heating installation	9.00%	27,000
19	Facade (external)	4.00%	12,000
20	Locksmiths elements	1.00%	3,000
	Total	100.00%	300,000

Konin, 1998

*Land size;1,000m2, Housing size; 200m2

*Cost construction materials amount to around 64% to 67% of each construction element.

1.4 Distribution system of construction materials

Distribution system of construction materials differs according to the size of construction project.

(1) Large scale construction projects

The procurement of the majority of materials in large scale construction is carried out by specialized traders. The main distributor in Warsaw is still state-owned. Some of the others, for example, the Kurakow and Shechin units, were bought up by German Capital. The leading trading company of Wielkopolska was also formerly a state unit. It inherited the asset from the state. The head office is located in Poznan (with a 3ha inventory site) and a branch office is located in Konin city. At the same time, new enterprises are entering into the trading of construction materials. They have their own distribution centers in which they stock and display their commodities.

Construction companies purchase construction materials at such distribution centers who are in effect functioning as middlemen between producers and purchasers, which avoids inefficiency at the present time. However, in the case of basic building materials, these are purchased by being ordered directly from producers by telephone.

(2) Small building

Local house constructions are carried out by individual house owners. After documentation of the house is approved by the local government, owners purchase construction materials by themselves. At the present time, most producers of construction materials in Konin cater for the needs of individual house owners. However, the distribution system is undeveloped and costly. Local traders' stores dealing with construction materials are utilized by small to medium scale construction companies and individual customers alike. Since the trading stores purchase commodities in large quantities, they can negotiate with producers for discounts. Consequently, the sales prices to consumers become close to the factory prices, in some cases.

The traders having stores in Konin Province are listed in Table PDT-1-5.

Table PDT-1-5 TRADERS HAVING STORES IN KONIN PROVINCE

	Name of companies	Location	Remark
1	PCMB	Poznan Gniezno Kalisz Wagrowiec Konin Znin	Former state enterprise 190 employees Annual turnover 51.7 million PLN
2	Minimal	Konin	
3	LUXKON	Konin	

According to the questionnaire survey by the Study Team, 31% (91 out of 310) of manufacturers in Konin province are related with construction materials such as making of windows, furniture and concrete fences. Raw materials for construction such as clay, sand and gravel are plentifully in the province.

The major producers of construction materials are listed in Table PID-1-6.

Table PDT-1-6 COMPANIES PRODUCING THE CONSTRUCTION MATERIALS

	Name of companies	Location	Remark
1	FUTA Aluminum	Konin	aluminum
2	ANDREWEX-A.Oplatek	Turek	wooden construction material
3	PROFI Ltd.	Turek	office's chair
4	LINDA	Kolo	windows, door
5	MOSTOSTAL-Konin	Kazimierz	building, cnstruction
6	HONORKA	Konin	buildng ceramic products, brick
7	KON-BET	Konin	concreted products for building
8	OR-DOM -R.Oplatek	Turek	timber woods
9	Building Products Co.	Uniejow	ceramic products for building

Source: RDA

These companies are faced with difficulties in market development. Since clients are limited to local house owners, the sales volume does not increase very much. Local manufacturers need to develop sales outlets through trading companies in order to expand business activities. Some local manufacturers, however, hesitate to utilize middlemen for promoting sales volume since they eat into profits. There is a need to establish fair and functional market among the manufacturers, traders and end users.

(3) Productivity of trading companies handling construction materials

According to the annual report of WIB, the productivity of trading companies handling major construction materials are as in Table PDT-1-7

Table PDT-1-7 PRODUCTIVITY OF TRADING COMPANIES HANDLING MAJOR CONSTRUCTION MATERIALS

Name of company	1995		
	number of employees	turnover (PLN)	productivity (PLN)
Budmar	21	10,000,000	476,190
KOMFORT	45	20,000,000	444,444
Lech-Pol	16	4,200,000	262,500
PCMB	190	51,690,000	272,053
PROGRES	16	6,161,000	385,063
REIMPEX	17	4,322,353	254,256
	305	96,373,353	315,978

Source: WIB

The growth rate of construction industry is increasing and so is the turnover and productivity.

1.5 Background of proposed projects

Based on the above analysis, a project involving the building of a distribution center for construction materials is proposed. The following are results of analysis which help to support the implementation of this project.

- Potential demand in the construction industry seems to be high
- An institutional scheme for promoting the construction industry is under preparation
- Local manufacturers of construction materials are in a difficult situation with regard to market development
- Market demand for residential building in Konin province is high
- Sample sales are convenient for both end users and manufactures

2. Project Purpose

To fully utilize potential of the transportation infrastructure in Konin Province.

3. Output of the Project

This is expected to be as follows for the project:

(1) A construction material center is established

The initial activity of this project will be to involve producers and trading companies dealing with construction materials. The proposed project aims to expand sales volume of construction materials by gathering information for producers and traders. However, the survey conducted in this study discovered that the variety of construction materials produced in Konin is limited. To ensure a broader base of materials is available traders will be invited to set up stores and distribution outlets on the same site. By concentrating suppliers together in this way, the center will attract neighboring customers and advantages of sales promotion for both traders and producers will be obtained. The construction materials center will be equipped with modern storage facilities to allow for adequate control of goods in stock.

(2) Better information about construction materials will be available for Konin province

The center will have a major role in providing information and advertising producers' products. At the same time, the distribution center will be expected to standardize details of the construction materials available.

But information exchange in the center will not be restricted to construction materials. In order to provide comprehensive services, architects and consultants are invited to set up their branch offices. In the next stage of development, an area for the model houses of construction companies will be provided at the same site open to the public. Realistic information of this kind such as model houses will enable better promotion of the businesses.

(3) Distribution costs for end users are reduced

The distribution center of construction materials will offer a more efficient system. By standardization, the result for end-users will be a better service and reduced costs.

(4) Sales volume of construction materials which are produced in Konin province will increase

As a result of the above outputs, the sales volume of construction materials in Konin will increase. The distribution center will contribute to the development of both the construction industry and the manufacturing industry.

4. Project Description

4.1 Target customers of the construction material center

The target customers of this project are construction companies who are building detached houses and multi-family houses in the Wielkopolska region and individual house owners.
According to Table PDT1-3, the number of applications for such residential housing was approximately 1200 in 1997.

4.2 Administrative organization and personnel

Stare Miasto Gmina has responsibilities for initial land acquisition. Land preparation itself, however, shall be done by private investors who will open an office (or outlets) on the site. Therefore, financier for each project will be potential tenant companies.

4.3 Site and layout of the construction materials distribution center

(1) Site of the project

There is a new road connecting the end of the A-2 motorway and the E-30 national highway. The location of the project site is shown on the following map. This land has been used for agricultural purposes, however, land quality is Grade 4 and 5. One trader already decided to construct its distribution center in this area. The condition of physical distribution is suitable for the project, which is emphasised in Table PDT-1-8.

Table PDT-1-8 CONDITION OF THE SITE

Condition	Remark
Land size	around 20ha
Transport infrastructure	close to A-20, E-30
Economic infrastructure	water, electricity, etc.
Environment	grade 4, 5

(2) The layout of the project

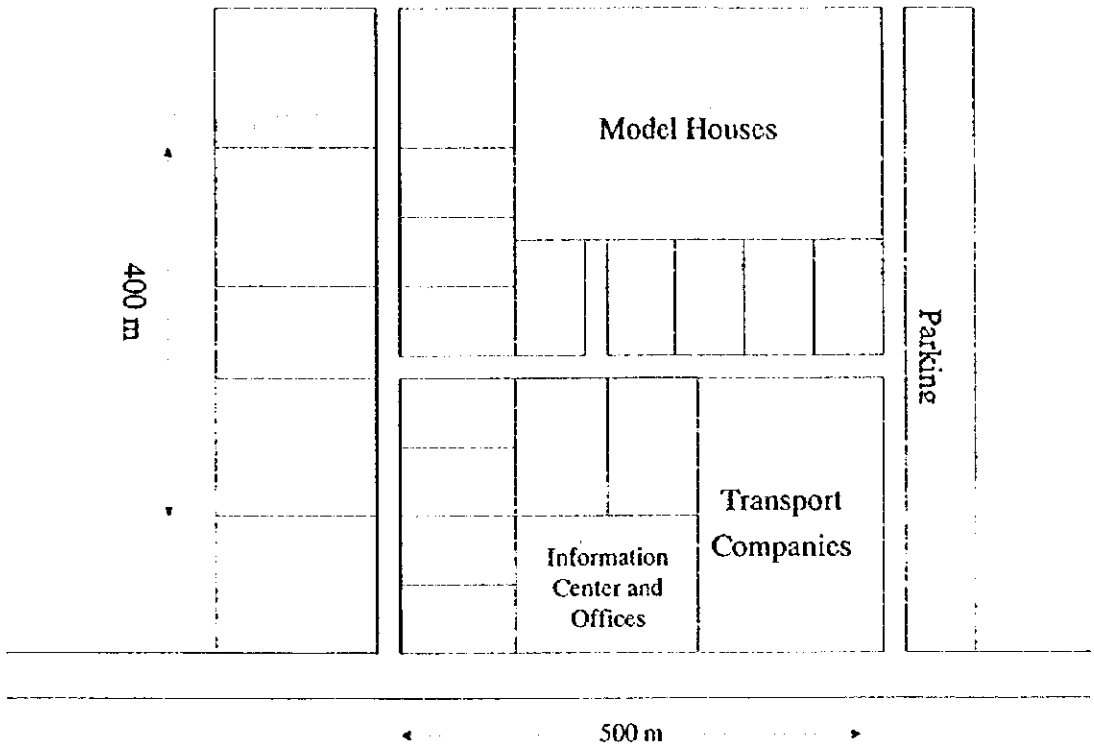
Expected tenant companies by type together with total areas at the final stage are indicated in Table PDT-1-9.

Table PDT-1-9 EXPECTED TENANT COMPANIES

	number	m2/enterprise	total area(ha)
Trading company	10	5,000~20,000	7.0
Producer	10	1,000~2,000	1.5
Transport company	3	5,000	4.0
Office building			1.
Restraint	2		0.5
Construction Co.	10	1,000	4.0
Others	35		2.5
			20.0

The planned layout of the project site is shown in Figure PDT-1-1.

Figure PDT-1-1 LAYOUT OF THE PROJECT SITE



4.4 Project cost

Basically, this project investment will be met by each investor who opens an outlet on the site. After dividing the site up for each investor, they construct their facility by themselves. A rough estimate has been made which indicates the total investment cost in the site by all tenant companies, but without consideration of construction specification by each investor. This is shown in Table PDT-1-10.

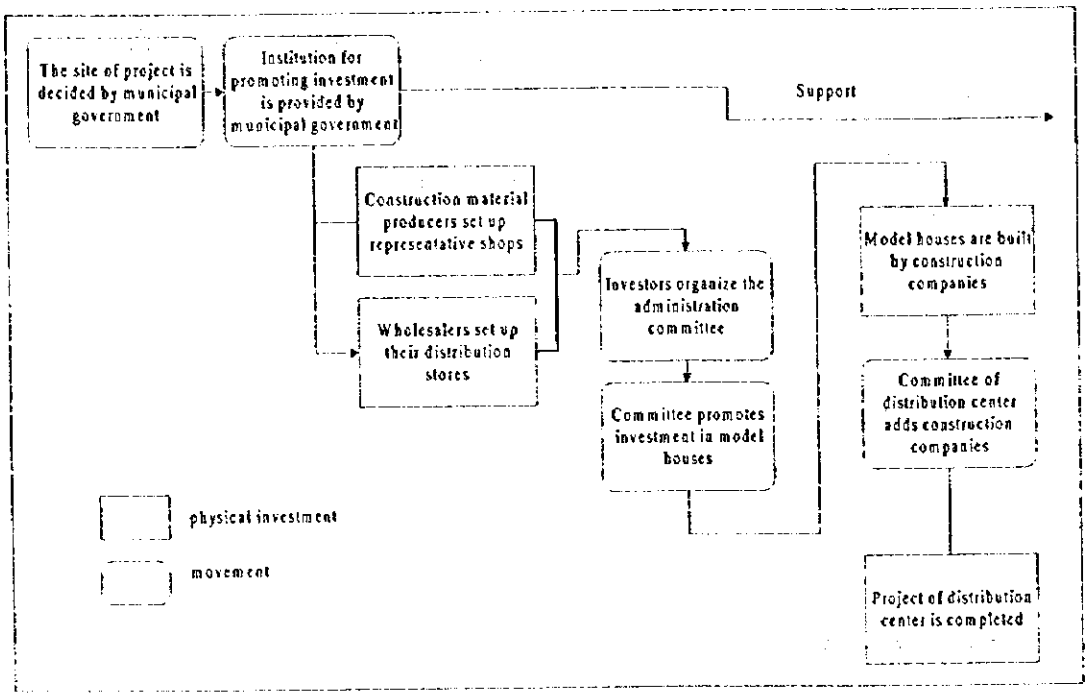
Table PDT-1-10 TOTAL COST OF THE PROJECT

		unit	US$
1.	Land acquisition cost	20ha	350,000
2.	Road & infra cost	(main road only)	1,700,000
3.	Building cost	15ha	64,500,000
	Total		66,550,000

4.5 Flow chart of implementation

The implementation procedure of the project is illustrated in the flow chart in Figure PDT-1-2.

Figure PDT-1-2 PROJECT IMPLEMENTATION PROCEDURE



4.6 Schedule of implementation

The implementation schedule is shown in Figure PDT-1-3.

Figure PDT-1-3 IMPLEMENTATION SCHEDULE

	1	2	3	4	5	6	7	8	9	10	11	12
Detailed design												
Land acquisition												
Rezoning												
Road construction												
Civil engineering												
Construction of the building												
Installation of the equipment												
Construction of model houses												

5. Implementation Body and Financing Source

5.1 Implementation body

Land acquisition will be conducted by Konin Gmina.
After land is sold to investors, they will become the implementation bodies of their sites.

5.2 Financing source

In principle, participating investors prepare financing source by themselves.

6. Activities

1-1 To acquire the land of project site
1-2 To sell the land in lots to traders and producers of construction materials
1-3 To build construction material stores and warehouses at each individual lot
1-4 To construct model houses of participating general contractors for promotion of houses

2-1 To show the samples of construction materials
2-2 To improve the standardization of construction materials
2-3 To establish the relationship among the producers, traders and construction companies
2-4 To provide an information service to the customers

3-1 To invite freight companies to set up the stores at the site
3-2 To work together with participating companies for convenient physical distribution

4-1 To attract the customers in Konin province
4-2 To improve the system of coping with claims for damages

7. Expected Benefit of the Project

7.1 Direct benefit

(1) Prospective sales volume

The average cost of detached houses is estimated at 300,000PLN (200m2). Cost of construction materials make up about 65% of this according to local construction companies. Consequently, total construction materials cost for 200m2 detached houses totals 195,000PLN, and that means there is a market need equivalent to 234 million PLN (67million US$) per year for the construction materials only for the construction of detached houses in Konin Province. This amount is almost equal to the estimated investment cost. Of course, it is impossible to meet to all this demand by the construction of just a material center, but the feasibility of the project indicates that it will be a good prospect even though distribution margin is rated around 15% to 20%.

It is also expected that potential customers in neighboring provinces will utilize the construction material center as well. Furthermore, if the sales volume of construction materials for garages, industrial facilities and furniture is added to the estimates, sales volume could be further increased.

(2) Expected employment

Table PDT-1-11 shows expected employment opportunities.

Table PDT-1-11 EXPECTED EMPLOYMENT

	Number of enterprises	Number of employees per enterprise	Total
Trading company	10	20	200
Producers	10	2	20
Transport company	3	10	30
Offices (Information, Architects, etc.)	10	5	50
Restraint	2	10	20
Construction Co.	10	3	30
Others			50
Grand total			400

8. Weakness of the Project

8.1 Difficulty of inviting participating companies

This project fulfills its function under the condition that many trading companies do business at the same site. If the number of participating companies are incomplete, the variety of commodities will not be enough. The only way to attract customers is to keep a rich assortment of goods in stock. In order to fulfill customers' expectations, trading companies have to cooperate to establish the center and then compete each other.

In general, trading companies do not prefer to compete with each other in one location. They try to open branches in areas that are away from their competitors. On the other hand, the customers wish to have a trading center which sells a rich assortment of goods. It is very convenient for the customers to visit such center. The customers prefer to visit the center instead of visiting individual and isolated shops because it saves them time.

The traders are required to change their strategies and aim for a dynamic distribution revolution. The project aims at the multiplier effect of sales promotion.

8.2 Importance of participation

Individual enterprises will carry out their business at the project site. However, at the site, business rules should be established by the enterprises. It is very important to organize a project execution committee composed of representatives from participating enterprises.
Participating enterprises should recognise and obey the fair trade rule.

8.3 Competition with foreign capital traders

As mentioned above, customers prefer to visit a center which has a rich assortment of goods. In order to compete successfully against traders with foreign capital, the project has to have distinguishing and attractive characteristics.

Project Design Matrix (PDM) for PDT-1 CONSTRUCTION OF DISTRIBUTION CENTER FOR A CONSTRUCTION MATERIALS

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal An efficient distribution and transportation system corresponding to market economy is established.	1. Number of cars going through Konin Province in a year 2. Number of distribution and transportation enterpirses	1. Statistical data 2. Data at the registration office for enterprises	
Project Purpose Potential in transportation infrastructure in Konin Province is utilized.	1. Number of traders 2. Sales amount	1. Statistical data	
Output 1. A construction material center is established 2. Construction materials are provided. 3. Distribution cost for professional constructors and consumers are reduced 4. Sales volume of construction materials which are produced in Konin province is increased	1. Number of tenants 2. Variety of construction materials 3. Total operation cost 4. Sales volume	1. Annual report of the project 2. Product catalogue 3. Annual report of the project (Financial statements) 4. Annual report of the project (Financial statements)	Construction of National Highway A-2 is not delay
Activities 1.1 To acquire the land of project site. 1.2 To sell the land in lots to traders and producers of construction materials. 1.3 To construct construction material stores and warehouses at each individual lot. 1.4 To construct model houses of participated general constructors for promotion of houses. 2.1 To show the samples of construction materials 2.2 To improve the standardization of construction materials 2.3 To establish the relationship among the producers, traders and construction companies 2.4 To provide an information service to customers 3.1 To invite the freight companies to set up offices at the site 4.1 To attract the customers in Konin Province 4.2 To improve the system of dealing with claims for damages	**Input** Manpower Trading companies 10 Manufacturing companies 10 Transport companies 3 Architecture office 3 Restaurant and café 2 Construction companies 10 Fund Total initial cost of construction material center Land acquisition cost Facilities Building Offices		Interest rate of housing loan is not increased so high.

PDT-2 Construction of a Service Area for Long Distance Drivers (DT-2)

1. Rationale of the Proposed Project

1.1 Construction of National Highway A-2

The task of physical integration with the European Union countries as well as maintaining dynamic economic growth of Poland should be carried out concurrently with the construction of motorways which will ensure an efficient transport system both within Poland and along the main transport corridors of Europe. For this direction, the government decision was made for the implementation of motorways as toll roads of 2,600 km total length and the Agency for Motorway Construction and Operation was established under the Act on Toll Motorways of 27 October 1994.

The toll motorway construction program in Poland has already commenced. The process of issuing siting decisions and concession tender procedures for part of the network are in progress. The concession agreement for Swiecko - Strykow section (362 km length) of A-2 Motorway was signed with Autostrada Wielkopolska S.A. on 12 September 1997.

For financing the Motorway program including the construction of service areas, the government will prepare preparatory works and right-of-way purchase and issue concessions to an economic entity for the construction and operation of a motorway for a specific. period of time (20 to 30 years). The concessionaire will have to prepare a detailed design of the motorway, raise appropriate funds and construct/operate/maintain the motorway segment for which the concession was granted. During the operation period, the concessionaire covers from its annual revenue for expenses of taxes, operating and maintenance costs, and repayment of the concessionaire's liabilities.

Concerning the locations of motorway service areas, the Agency for Motorway Construction and Operation has designated 8 locations for the Poznan - Konin section in addition to existing two service areas in Osiecza of Rzgow Gmina and 12 locations for Konin - Lodz section. Among them, 5 locations including existing service area at Osiecza are specified for the location of 3rd type service

area, the atructure of which shall have full functions to fulfil needs of motorway users.

1.2 Increase of Traffic Volume

The number of vehicles going through Konin Province has recorded approximately 11,300 vehicles per day in 1995, and forecasted to reach 37,700 vehicles in the year 2020.

1.3 Long Distance Driving

Total number of persons crossing the border has been increasing from 79 million in 1900 to 215 million in 1994. The number of foreign citizens crossing border are more than double of its number of Polish citizens. Out of the total border traffic, 62% or 134 million is recorded at the German border in 1994. The users of hotel accommodation at existing service area at Osiecza are mostly foreign long distance drivers, including 40% for East European drivers, 40% for West European and 20% for Polish. The relatively small number of Polish drivers are, understandable since either their origins or destinations are located within Poland and they do not require any accommodation along the motorway. The increase of informational traffic will certainly raise the requirement of service areas with hotel accommodation for foreign long distance drivers.

1.4 Serious Traffic Accidents

The rate of death accidents in Poland is three times higher than those in western European countries. The road section between Warsaw and Poznan is regarded as the worst sectioning the major roads in Poland. The drivers require places to rest. Once the traffic accident occur on the A-2 motorway or E-30 national road it is required to provide traffic information to drivers giving information for diversion routes or on the condition of traffic jam.

2. Project Purpose

To fully utilize potentials in transport infrastructure in Konin Province.

3. Output of the Project

The output of the project are expected as follows:

1) A service area is constructed

In order to provide the resting and eating place and other services for long distance drivers, a service area will be constructed along the A-2 motorway at one of designated locations by the Agency for Motorway Construction and Operation. The 3rd type service area which is designed preliminarily by the Agency has facilities of rest rooms, restaurant(s), petrol station, car repair facility, shopping center, and a sanitary facility. The provision of meteorological and traffic information services is also indispensable to the service area on the motorway.

2) Tenants of the service area are determined

Concessionaire will directly operate facilities at the service area, but may invite tenants to operate some facilities of the service area such as restaurant(s), petrol station, car repair facility, and shopping center.

3) Services are provided at the service area

Since A-2 motorway is one of the trans-European trunk routes, services of international standard are to be provided at the service area.

4. Project Description

4.1 The Service Area Program in the Motorway Contract

The contract of A-2 construction project was signed between the Agency for Motorway Construction and Operation and the concessionaire Autostrada Wielkopolska S.A. in November 1997. The construction of service areas is also stipulated in the contract. The basic conditions of service area construction are as follows:

1) The service areas of 3rd type with full functions are to be constructed at following locations:

No.	Location (km of Motorway)	Position at Motorway	Remarks
1.	177km + 250	southern side (Kleszczewo)	
2.	216km + 500	northern side (Wrzesnia)	
3.	251km + 100	southern side (Rzgow)	existing
4.	287km + 400	northern side	within Konin
5.	331km + 300	southern side	

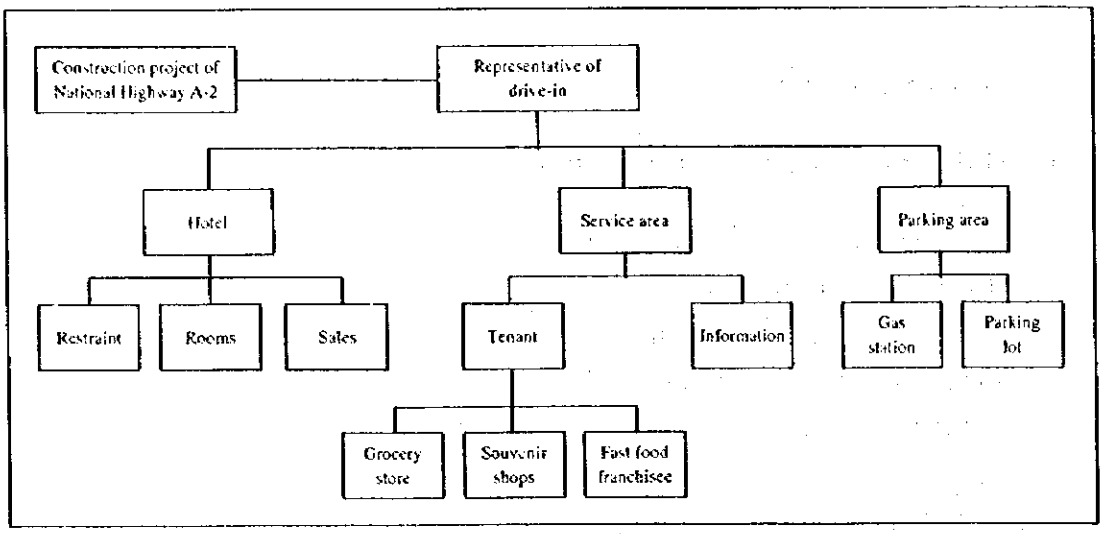
Among them, the location at 287km +400 is situated within Konin Province and the possible site for the current project.

2) The existing service area along the National Highway A-2
The existing service area of 251km + 100 at Osiecza, Rzgow Gmina, will continue to function as a service area after the completion of the motorway. But the existing access road to the service area from local road network will be used only for service vehicles to the service area since access to the servic.e area is only available from the motorway.

4.2 Administrative Organization and Personnel

Proposed organization of the service area will be consisted of three functional divisions, namely Divisions of Hotel, Service area, and Parkingo area as is in the Figure PDT-2-1.

Figure PDT-2-1 ORGANIZATION OF PROPOSED SERVICE AREA



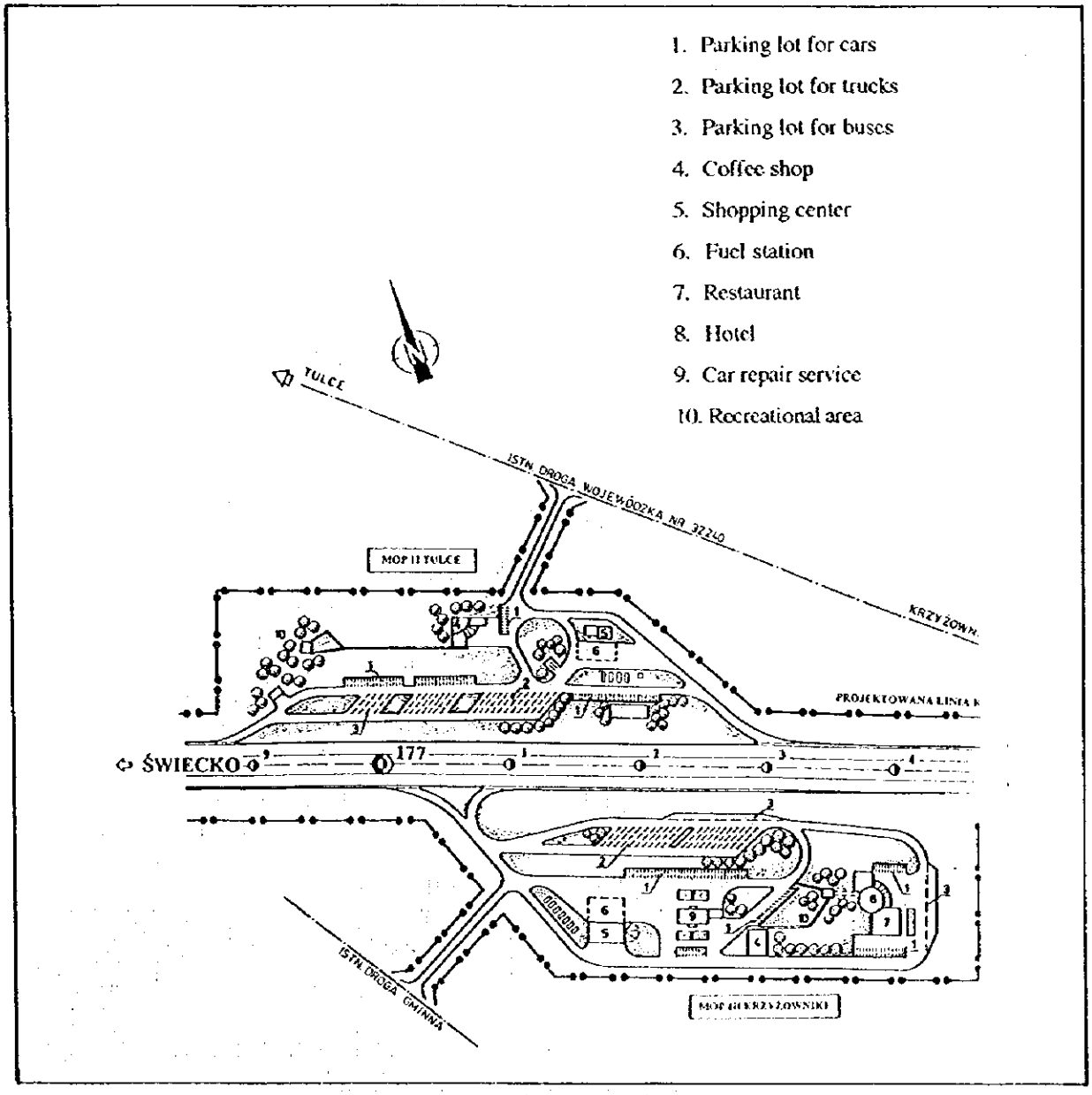
The composition of required persons for each Division of the service area will be as follows:

Hotel Division:	40
Service. Area Division:	40
Parking Area Division:	10

4.3 Layout of the Service Area

The schematic layout of proposed service area will be as is in the Figure PDT-2-2, which is included in the preliminary survey document prepared by the Agency for Motorway Construction and Operation. The concessionaire is required to prepare a detailed design of it and to get approval of the Agency, which is the basis for the concessionaire to obtain a license for the construction works.

Figure PDT-2-2 CONCEPTUAL LAYOUT OF THE SERVICE AREA



Source: The Agency for Motorway Construction and Operation

4.4 Project Cost

Since the right-of-way designated for the motorway construction including the land required for the service area is purchased by the Agency for Motorway Construction and Operation for the State Treasury, which will later handed over to the concessionaire, the land acquisition cost is not included in the project cost. Other cost components for the construction of the service area include as is in Table PDT-2-1.

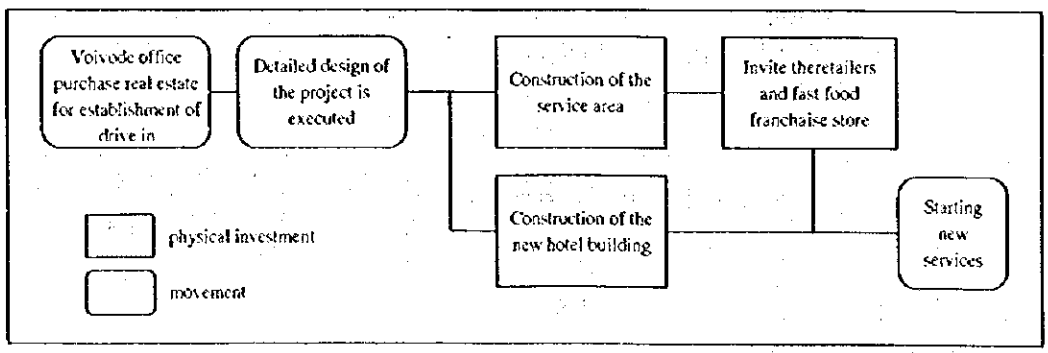
Table PDT-2-1 REQUIRED PROJECT COSTS

Item	Unit	Cost
1. Land acquisition cost	5 ha	prepared
2. Hotel (50 rooms)	2,000 m2	2,400
3. Restaurant (50 tables)	300 m2	310
4. Fuel station	200 m2	860
5. Car repair service station	300 m2	210
6. Shopping center	600 m2	430
7. Sanitary facilities	60 m2	50
8. Offices (inc. Information center)	100 m2	60
9. Parking lot	5,000 m2	290
10. Gardens	3 ha	820
		5,430

4.5 Flow Chart of Implementation

The procedure of implementation of the project is as illustrated in the Figure PDT-2-3.

Figure PDT-2-3 FLOW CHART OF IMPLEMENTATION



4.6 Schedule of Implementation

The required project period will be four years from the commencement of a detailed design for the construction works as is in Figure PDT-2-4. The key for the success of the project will be the invitation of reliable tenant shops, which will start from second year of the project implementation as soon as the construction works of the service area commence.

Figure PDT-2-4 SCHEDULE OF IMPLEMENTATION

(Year)

Work items	1	2	3	4
Detailed design				
Construction of the service area				
Interior decoration/equipment installing				
Inviting the tenant shops				

5. Implementation body and Financing Source

5.1 Implementation Body

The construction works of the National Highway A-2 is already commissioned to the concessionaire, Autostrada Wielkopolska S.A., which is responsible to prepare technical documentation necessary to commence the motorway construction including that of the service area, to obtain the construction permits and required approvals, to comply with the regulations on environmental and cultural heritage protection, and implement the project according to the schedule. Therefore, the implementation body of the project including the construction of the service area is the concessionaire. The operation of each shops could be further sub-concessioned to private tenants.

The preparation of infrastructures including connecting road to the service area, sewage system, solid waste disposal system will be implemented by the Gmina where the service area exists.

5.2 Financing Source

The concessionaire is oblized to raise financial means for the construction and commencement of motorway operation. The concessionaire is also stipulated as an investor who prepares and carries out entire construction and operation process. The concessionaire can use the following sources of financing:

1) the concessionaire's own funds,
2) loans provided by commercial banks,
3) loans from international financial institutions obtained directly by the concessionaire.
4) the State treasury which covers the costs of right-of-way purchase for the construction of the. motorway and service areas, and
5) the infrastructures of connecting Gmina roads, sewage system, solid wastedisposal system, etc. are provided by the Gmina.

The financing of the construction of the service area is tentatively planned as following:

The concessionaire's own fund	30%
Loans from banks, etc.	70%

6. Activities

1.1 The Agency for Motorway Construction and Operation purchase land for the State Treasury
1.2 Contact with a general contractor
1.3 The constructs infrastructures of connecting roads, sewage, etc.

2.1 Invite potential tenants to the service area
2.2 Contacts tenants

3.1 I Prepare equipment for the service area
3.2 Hire and train staff for the. operation of the service area

7. Expected Benefit of the Project

7.1 Direct Benefit

1) Creation of employment

The service area will absorb labour force of Konin Province who want to work in the service sector. The number of persons to be employed is 90 for all Divisions of the service area (c.f.4.3).

2) Sales for the service area

The possible sales of services at the service area in a year is calculated as follows:

Hotel	(PLN 175 per room)	= US$ 1,530,000
Restaurant	(PLN 25 per person)	= US$ 2,610,000
Fuel station	(PLN 50 per vehicle)	= US$ 2,090,000
Shopping center	(PLN 20 per user)	= US$ 1,670,000
Car repair service	(PLN100 per user)	= US$ 200,000
Total		US$ 8,100,000

7.2 Indirect Benefit

1) Development of the service sector

The services provided in the service area are the typical and growing ones in the service sector, which is developed in the countries of market economy but not yet fully developed in Poland. Since National Highway A-2 connects Poland with western European countries, services provided by Polish service areas along the Highway are always compared with standards of those countries and face with a hard competition. This situation will stimulate, the service sector of Konin Province and promote the sector in international standards.

2) Publicizing new image of Konin Province

One of problems preventing the economic development of Konin Province is the Polish people's fixed image of it as a polluted industrial area. Through the publicities of Konin and Konin's products presented at the service area, Konin is able to advertise new image of the Province.

8. Weak Points of the Project

l) Potentials of economic transformation in eastern European countries

This is one of the few projects which does not have an evident weak point for the implementation of the project. However, its profitability depends to a certain extent on the pace of economic transformation in eastern European countries, i.e. if the transformation of economy of those countries into market-oriented one proceeds smoothly, the traffic demand of those countries with western European countries will grow rapidly. This will certainly secure the financial viability of the project. While the transformation will not proceed smoothly, it will influence the financial viability of the project.

Project Design Matrix (PDM) for PDT-2 CONSTRUCTION OF A SERVICE AREA FOR LONG DISTANCE DRIVERS

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal An efficient distribution and transportation system corresponding to market economy is established.	1. Number of cars going through Konin Province in a year 2. Number of distribution and transportation enterprises	1. Statistical data 2. Data at the registration office for enterprises	
Project Purpose Potential in transport infrastructure in Konin Province is utilized.	1. Number of cars going through Konin Province in a year	1. Statistical data 2. Traffic survey	National policy for transport is not changed.
Output 1. A service area is constructed. 2. Tenants of the service area are determined. 3. Services are provided at the service area.	1. Buildings and the area 2. Operation plan 3. Sales volume	1. Site visit 2. Business plan 3. Annual report of the project (Financial statements)	Construction of National Highway A-2 is not delayed.
Activities 1.1 Purchase land for the service area. 1.2 Contract with a general contractor. 1.3 Construction of infrastructure for connecting roads, sewerage, etc. 2.1 Invite potential tenants to the service area. 2.2 Contract with tenants. 3.1 Prepare equipment for the service area. 3.2 Hire and train staff for the operation of the service area.	**Input** Manpower 90 persons for the project Fund Construction cost of US$ 5,430,000 of which: 30% is financed by investor's own fund. The remaining 70% is to be financed by credit. Facilities Hotel Restaurant Fuel station Car repair shop Shopping center Sanitary facilities Office Parking lot		Interest rate is not raised.

PDT-3 Construction of a Distribution Center for Fruit and Vegetables (DT-7)

1. Rationale of the Proposed Project

1.1 Marketing channels of agricultural products

As mentioned in Sector Report (vol. 3) 1. Agriculture, the agricultural sector in Konin province has been facing difficulty in marketing its products. According to the results of the questionnaire survey for the agricultural sector in Konin, producers are depressed by low selling-prices and lack of markets. The reasons for these difficulties, mentioned by producers, are as follows;

- Since producers in Konin province are involved in small-scale farming, trading on a large scale is not possible.
- Since producers have no means of transport, they do not have access to consumer markets by themselves.
- Since the quality is not consistent, they can not develop and build a regular market.

Producers' difficulties are caused not only by external market conditions but also by their own responsibilities .

1.2 Demand for agricultural products

During the survey of demand for agricultural products, it was identified that the demand does not always match the volume available. Retailers are looking for domestic agricultural products which are appropriate for them to sell. They are dissatisfied with the current distribution system of agricultural products, especially in fruit and vegetables. Although they constantly purchase foreign fruit and vegetables from wholesalers, it is difficult to find regular suppliers of domestic produce.

From the farming viewpoint, prices of fruit and vegetables are low because of over-supply. However, from the retailing point of view, the major causes of low prices are poor quality and an underdeveloped and over-complicated distribution system. A proper handling system of domestic fruit and vegetables has not yet

been developed. Since quality control of domestic products during distribution is inadequate, the demands in both the domestic and international markets are met by foreign products.

1.3 Current wholesale markets for fruit and vegetables

Since the outline of the distribution system of each economic sector is mentioned in the Sector Report (vol. 3) 4. Physical Distribution and Transportation, 4.4 Characteristics of Each Economic Sector, we focus on the markets of fruit and vegetables.

After 1990, in order to promote agricultural trading and stabilize prices, construction projects for wholesale markets were set up in Poland. According to the farming surveys conducted by the JICA study team, farmers who produce fruit and vegetables sell 58.4% of their products directly to buyers of various categories, and more than 6.3% of products are sold through the markets. The products sold directly to retailers amount to 4.2%.

Producers and retailers in Konin province utilize the wholesale markets in Kalisz and Poznan. However, neither fulfils the function of a wholesale market effectively. The opinions of farmers and retailers on current wholesale markets are as follows:

From the farmers' point of view:

- In order to carry their products to the markets, they need the means of long distance transportation.
- Carrying the products to the markets is time-consuming
- While selling at the markets, they have to look after the store
- They are uncertain whether customers purchase their commodities on the same day
- The farmers can not afford to rent stalls at the wholesale markets permanently
- Prices are influenced by market conditions day by day
- Prices can vary between morning and afternoon

From the retailers' point of view;

- There is no guarantee that they can purchase the required volume of produce at the markets

- Since the quality is not consistent, they have to check the produce at the markets
- They have to negotiate with unknown farmers whenever produce is purchased
- Since the farmers do not rent stalls at the market permanently, it is hard to make a complaint about commodities
- It is easier to purchase foreign fruit and vegetables as the wholesalers open their stalls at the markets and guarantee the quality and the quantity of their produce.

1.4 Competitiveness of fruit and vegetables

Poland is preparing to participate in the EU, so the agricultural market is much influenced by that of neighboring countries. People would prefer to accept the EU standard, such as in distribution systems and in the technology of handling agricultural products, even if they circulate their products mainly to the domestic market. Observation of the current situation in international markets is very important for the Polish people dealing with agricultural products.

According to the survey of Polish international trade, the balance of exports and imports dropped to a deficit in 1996 with exports of US$288 million and imports of US$310 million. The main reason for this was the decreasing value and quantity of exports of soft fruit and apples. The sales of soft fruit abroad were less profitable and, in the case of apples, Poland has lost considerable share of her main export market in East Europe.

Looking at the domestic market, 26,400 tons of apples were imported to Poland. But volume of imported apples is decreasing from the peak of 45,300 tons in 1993. However, the volumes of imported citrus fruit and bananas increased to 267,800 tons and 255,600 tons, respectively. The main competition in domestic fruits is not necessarily in imported apples but in citrus fruit and bananas.
The detail of Polish international trade in agricultural products is presented in the Sector Report 4.4 Characteristics of Each Economic Sector. The following data in tables PDT-3-1 and 2 is taken from the table in the Sector Report.

Table PDT-3-1 EXPORT OF HORTICULTURE PRODUCTS FROM POLAND

('000 tons)

Product	1992	1993	1994	1995	1996
Fresh and chilled fruit					
-apples	112.6	176.1	115.1	141.3	95.9
-strawberries	23.6	17.3	13.9	21.7	21.7
-raspberries	9.4	17.0	14.3	16.2	19.5
-black currants	10.7	7.8	6.8	10.4	14.6
Fresh vegetable					
-onions	106.3	152.2	146.3	86.5	100.9
-cabbages	14.4	37.1	39.2	32.1	27.3

Source: Polish international trade in agricultural and food products in 1996 , FAPA

Table PDT-3-2 IMPORT OF HORTICULTURE PRODUCTS FROM POLAND

('000 tons)

Product	1992	1993	1994	1995	1996
Fresh and chilled fruit					
-oranges	133.1	105.4	91.2	107.9	95.8
-mandarins	37.8	64.9	76.9	96.6	94.1
-lemons	74.4	72.5	66.4	74.1	78
-bananas	199.5	144.7	177.8	245.3	255.6
-grapes	26.2	32.6	38.3	39.8	67.4
-apples	16.2	45.3	29.5	28.6	26.4
-peaches	22.2	13.3	23.6	17.2	28.7
Fresh vegetable					
-tomatoes	37.3	49.1	47.4	55.1	52.9
-onions	4.7	18.3	24.7	35.1	9.6
-cabbages	14.9	22.3	4.8	7.1	1.3

Source: Polish international trade in agricultural and food products in 1996 , FAPA

1.5 Trading seasons of fruit and vegetables

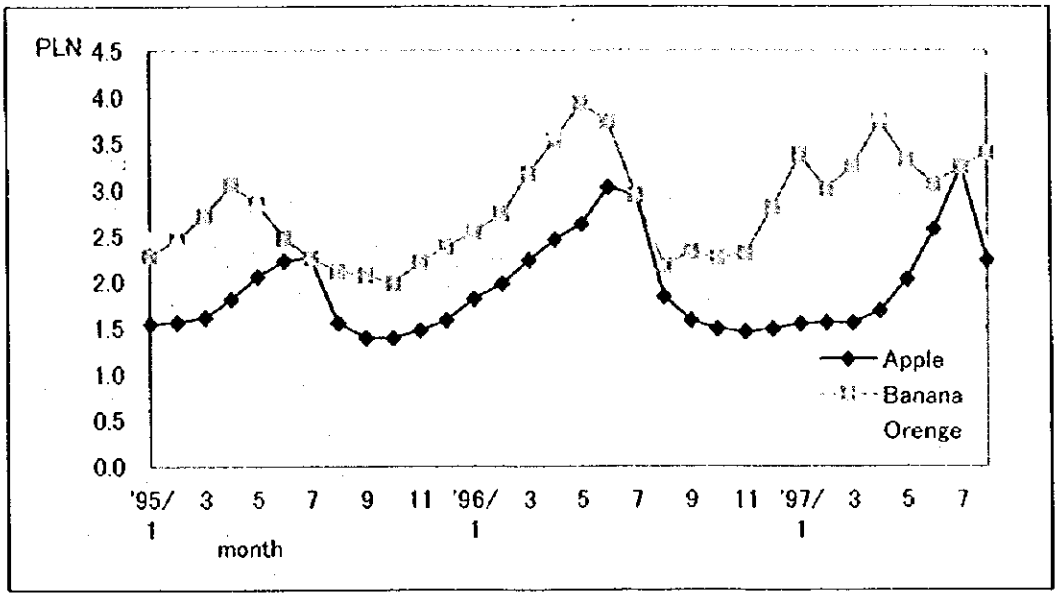
Trading seasons of domestic fruit and vegetables are restricted according to their harvest period. Since some farmers introduced warehouses with air conditioning, the fluctuation in apple prices has been stabilized for a longer period than in previous years. However, the price is still high from May to August. (Figure PDT-3-1)

The price fluctuation of imported bananas and oranges is different from that of apples. Although bananas had been regarded as a substitute for apples in 1995, importers started adjusting the market. Imported oranges are no longer influenced

by the season.

The adjustment of products shipment became common knowledge in Poland.

Figure PDT-3-1 MARKET PRICE FLUCTUATION



1.6 Background of the proposed project

Following the above comprehensive analysis of 1)market channels of agricultural products, 2)demand for agricultural products, 3)current wholesale markets for fruit and vegetables, 4)competitiveness of fruit and vegetables and 5)trading seasons of fruit and vegetables, the proposed project is based on the following reasons:-

- Farmers face difficulties in finding sales channels
- Wholesale markets are inefficient for both producers and retailers
- Distribution system and technology for handling domestic horticultural products are more primitive than for foreign products
- Post-harvest technology, quality control and standardization are necessary for modernization of distribution system
- Domestic products tend to be influenced by international market conditions
- Warehouses with air conditioning for market adjustment become indispensible

2. Project Purpose

To promote agricultural trade and transactions in Konin Province

3. Output of the Project

These are expected to be as follows;

(1) The distribution center is constructed

The project starts from the formation of an association consisting of traders and farmers, to establish a company to run the distribution center. The company constructs facilities at the distribution center and installs equipment. Infrastructures, such as connecting roads, sewage and solid waste disposal systems, are to be prepared by the Gmina.

(2) The distribution center sorts produce according to quality

In order to sell the agricultural commodities advantageously, it is important to sort fruit and vegetables according to their quality. When standardization of agricultural products is improved, people will be able to order by phone or through the internet. With a modern sorting system, customers will trust the produce sold at the center. Due to contracts formed with regular customers, the market conditions will be improved.

(3) Quality is maintained during the process of distribution

Although the foreign fruit and vegetables are packed in corrugated cartons, the domestic ones circulated in Poland are distributed loose by returnable wooden containers. Since people do not handle the products carefully, the fruit and vegetables are easily damaged during the process of physical distribution. It is necessary to handle the sensitive fruit and vegetables carefully in order to maintain the quality and price. Introducing a packaging system using corrugated cartons will improve handling and be easier and long distance trading will become possible.

(4) Collection/dispatch schedule is managed by the center according to the market condition

Since the collection period converges on an entire harvest season, the schedule must be controlled by the distribution center. When they manage

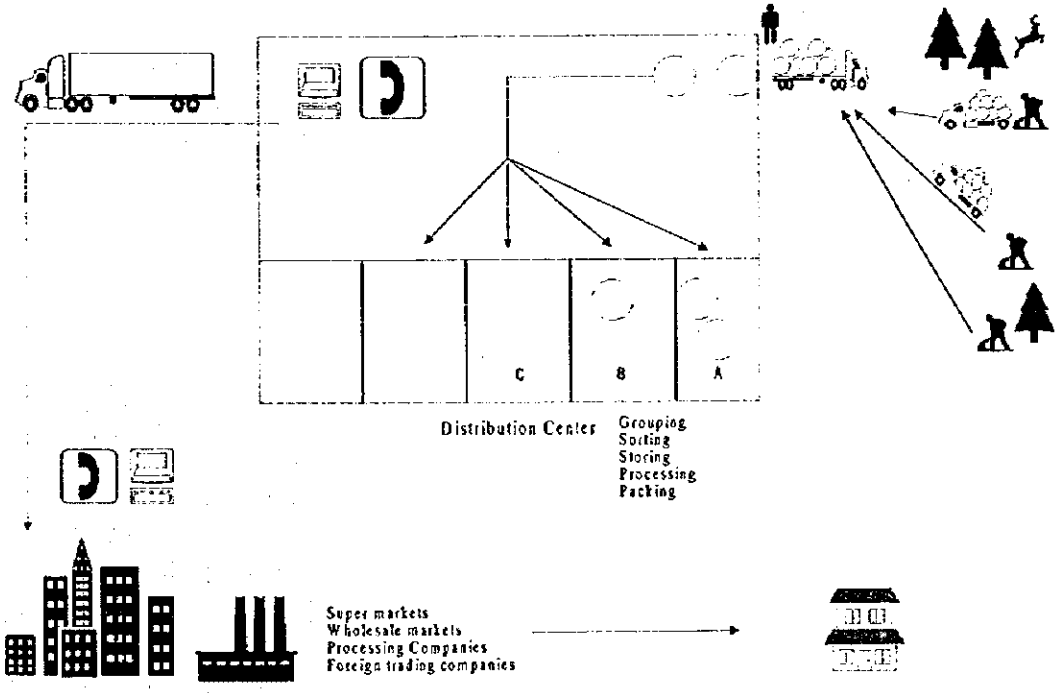
the collection schedule, the movement of goods between center and farms will become more efficient.

After sorting and packing, the fruit and vegetable should be stored in the warehouses which can control temperature and humidity. By introducing modern warehouses, the distribution center will be able to manage the dispatch period.

4. Project Description

4.1 The products handled by the distribution center

The distribution center under consideration deals in fruit and vegetables. The concept of the distribution system is illustrated in the figure below.

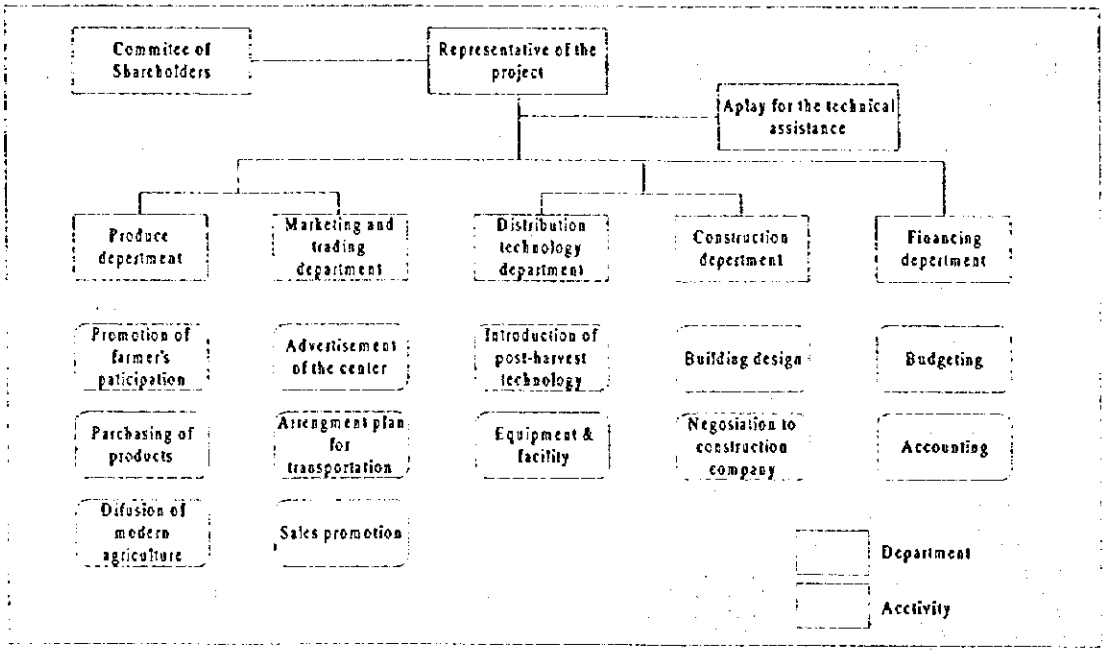


4.2 Administrative organization and personnel

The project will be implemented by a private company organized by the association of traders and producers with necessary support and assistance from the public sector. Shareholders will be organized by traders and producers. Such a partnership between traders and producers will realize an innovative of agricultural market. Development of a distribution system can not be successful without the cooperation of both producers and traders. Producers and traders ought to provide skills and knowledge based on their background and experiences.

The following organization chart is an idea for realizing the construction of the distribution center for fruit and vegetables.

Figure PDT-3-2 PROPOSED ORGANIZATION CHART



4.3 Site of the fruit and vegetables distribution center

The candidate site is to be chosen by the company formed by individual members of farmers and traders. Since there are wholesale markets in Kalisz and Poznan, Konin would have a distribution center rather than another wholesale market. The site for the distribution center for fruit and vegetables would need to satisfy the following conditions:

Condition	Remark
Land size	10 ha
Transport infrastructure	close to A-2, E-30 Gmina's connecting roads are to be constructed to the site
Economic infrastructure	sewage, solid waste disposal system, water supply, electricity, heating system are completed
Environment	farmland of low quality soils
Other	use of land restricted to agricultural purpose

4.4 Project cost

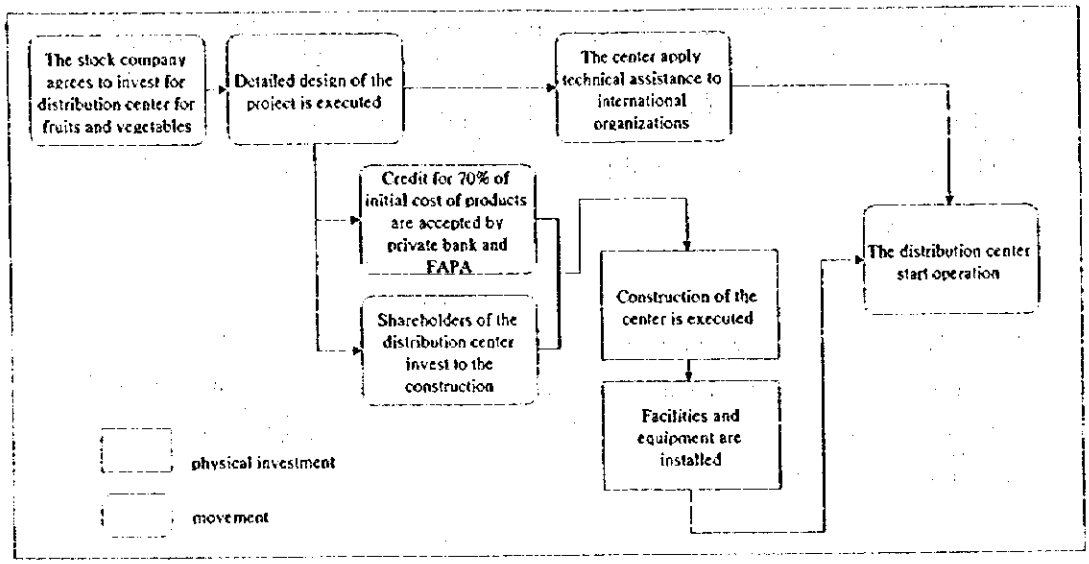
Basically, this project's investment should be implemented by new created company. The municipal office will provide some incentive for new investors such as tax incentives and preferential credits. Total cost of the projects is estimated as follows;

		unit	US$
1.	Land acquisition cost	10ha	140,000
2.	Road pavement cost		Expected to be prepared by Gmina
3.	Building cost	5,000m2	2,200,000
	-Facility for collecting		
	-Facility for sorting		
	-Facility for pre-cooling		
	-Facility for packing		
	-Facility for warehouse		
	-Office		
4.	Equipment cost		
	-Sorting machine		200,000
	-Packing machine		200,000
	-Air condition for warehouse		50,000
	-Computer		10,000
	Total		2,800,000

4.5 Flow chart of implementation

The procedure for implementing of the project is illustrated in the following flow chart.

Figure PDT-3-3 FLOW CHART OF IMPLEMENTATION



4.6 Schedule of implementation

	1	2	3	4
Detailed design	———			
Construction of the building		———	———	
Installation of the equipment			———	———

5. Implementation Body and Financing Source

5.1 Implementation body

A private company established by the association of buyers and producers

5.2 Financing source

The shareholders of the company	30%
Credit of Bank	70%

6. Activities

1-1 Organize an association of traders and producers
1-2 Establish a company from this association to run the distribution center
1-3 Construct the distribution center with a cold warehouse located near to National Highway
1-4 Construct necessary infrastructure of access roads, sewage and solid waste disposal system
2-1 Introduce equipment for sorting produce in the distribution center.
3-1 Introduce a new packing system
3-2 Guarantee the quality standards of produce handled in the center to customers
4-1 Prepare the collection/dispatch schedules according to orders from customers
4-2 Realize the cooperation between traders and local farmers through utilization of modern distribution facilities.

7. Expected Benefit of the Project

7.1 Direct benefit

(1) Reduction of distribution cost

By means of a rational distribution network system, the cost of distribution is reduced.

(2) Modernizing the distribution technology

Introduction of modern sorting equipment and warehouses improves the quality of producers' agricultural produce.

(3) Creating employment opportunity

The expected employees for the distribution center will be created as follows;

	Number of enterprises
Produce department	20
Marketing and trading department	10
Distribution technology department	10
Financing department	3
Total	43

(4) Benefit of the distribution center

We have assumed the volume of fruit traded at the center as 3,000 tons/year, with the average sales price of fruit (apples) at 1.5 PLN/kg. The other commodities to be handled at the center are 4,000 tons/year of vegetables, the weighted average sales price of them being 1.00PLN/kg. The purchasing prices of them are assumed at 0.8PLN/kg and 0.5PLN/kg, respectively.

The expected benefit is as follows;

Item	PLN
Sales of fruit and vegetables	8,500,000
Expenditure for purchasing	4,400,000
Operation expenses	2,000,000
Total	2,100,000

7.2 Indirect benefit

(1) Creating sales channels for producers

The distribution center is one of the sales channels for producers. Producers who are looking for sales channels will sell their products to the distribution center. The distribution center will support the farmers' sales promotions.

(2) Development of agricultural technology

The rational sorting system makes producers realize the importance of quality. The modern post-harvest technology stimulates producers' awareness.

8. Weakness of the Project

8.1 The price of agriculture influenced by the market condition

The price of agriculture is decided by the market condition. If the distribution center does not collect information about the market carefully, the business will not succeed.

8.2 Importance of cooperation between traders and producers

Producers often consider they are exploited by traders. If each of them does not recognize its role in the community, the project does not work.

8.3 Long term policy

In order to contract regular customers, a long term business policy is important for the administration. If the manager is in a hurry for success, it is difficult to establish a relationship of mutual trust.

Project Design Matrix (PDM) for PDT-3 CONSTRUCTION OF A DISTRIBUTION CENTER FOR FRUITS AND VEGETABLES

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal An efficient distribution and transportation system corresponding to the market economy is established.	1. Number of cars going through Konin Province in a year 2. Number of distribution and transportation enterprises	1. Statistical data 2. Data at the registration office for enterprises	
Project Purpose Agricultural trade and transactions in Konin Province are promoted.	1. Agricultural sales volume	1. Statistical data in Konin Province	National policy for agriculture is not changed.
Output 1. The distribution center is constructed. 2. The distribution center sorts products according to their quality. 3. Quality is maintained throughout the process of distribution. 4. Collection/ dispatch schedule is managed by the center according to the market.	1. Buildings and equipment 2. Sales volume based on the quality classification 3. Number of complaints about quality 4. Record of collection and dispatch schedule	1. Site visit 2. Annual report of the project (Financial statements) 3. Interviews with customers 4. Annual report of the project	Construction of National Highway A-2 is not delayed.
Activities 1.1 Organize an association of traders and producers. 1.2 Establish the distribution center through this association . 1.3 Construct the distribution center with cold warehouse, located near to National Highway. 1.4 Construct the necessary infrastructure of roads, sewerage and solid waste disposal systems. 2.1 Introduce a new packing system. 3.1 Introduce a new packing system. 3.2 Guarantee the standards of products handled in the center to customers. 4.1 Prepare the collection/dispatch schedules according to orders from customers. 4.2 Realize the cooperation between the traders and the local farmers through utilization of modern distribution facilities.	**Input** Manpower 43 persons for the project Fund Construction cost of US$ 2,800,000 of which: 30% is financed by investor's own fund. The remaining 70% is to be financed by credit. Facilities Building with a cold warehouse Sorting machine Packing machine		Interest rate is not raised.

PTR-1 Development of Hot Spring Resources (TR 4)

1 Rationale of the Proposed Project

1.1 Background

There are now forty spas in Poland which are located mostly in southern Tatra mountain region such as Duszniki-Zdroj (Walbrzych Province.). Krynica (Nowy Sacz). Kudowa-Zdroj (Walbrzych), Rabka-Zdroj (Nowy Sacz), etc. In central lowland of Poland, that in Ciechocinek of Wloclawek Province is most important and developed as a health resort since 1840s, about 160 years ago. These spas offer medical treatment and rest to those who seek them. Treatment in a spa generally includes mineral water baths, therapeutic mud baths, drinking mineral waters, therapeutic exercises, etc.

Geothermal resources in Poland are accumulated in underground waters reservoired at various depths in the Polish lowlands, in the Tatra mountains and in the Carpathians. Studies conducted by the specialists of the Fossil Fuels Department of the University of Mining and Metallurgy, Krakow , indicate that underground geothermal waters show temperatures between 80 - 1000℃ at wellheads and can be utilized as heating medium, heated water for domestic usage, for balneological and recreational purposes, for the heating of greenhouses and fish farms. Most promising underground waters are water levels found in both Lower Jurassic and Lower Cretaceous sandstones in Szczecin - Lodz Mesozoic sub-basin.

Konin Province is located just on this Szczecin - Lodz Mesozoic sub-basin. The existence of geothermal water is already confirmed since 1970s at several locations in the Konin Province including Uniejow, Dabie, Kolo, Slesin and Wilczyn. However, the use of geothermal water in the Province has not made any progress since the discovery of resources owing mainly to following factors:

(1) Konin Province has developed as mining and industrial center of brown coal exploitation, power generation and aluminum production and the development of geothermal water resource is not considered as an urgent issue; and

(2) The development of geothermal water involves huge initial investment cost for drilling and taking it from 2,500 - 3,000 meters depth, while there is a less expensive method of heating by using hard and brown coals.

Although the initial investment cost is still huge for the development of geothermal water, other conditions have considerably changed recently, including:

(1) The future prospect for the brown coal production in Konin Province is in downward trend, and it is required to search for alternative sources of employment and income for the future economy of the Province. The use of geothermal water resources including touristic purpose is considered as one of promising source of employment and income in the Province;
(2) The consideration on environmental impact has become an important and urgent issue and the use of pollution-free geothermal water resource for heating purpose is considered as a promising alternative to the use of polluting coals; and
(3) The subsidies from the National and Provincial Fund for Environmental Protection are expected to be available since the development of geothermal water resource is that of pollution-free source of energy and, therefore, the initial investment cost is not necessarily intact.

Based on the above-mentioned consideration, the development of hot spring resort is designed.

1.2 Number of Visitors to Hot Spring Resort

It will be appropriate to compare the possible number of visitors with the existing demand in Ciechocinek which is the nearest hot spring resort in central lowland in Poland. However, the detailed demand information or statistics of visitors in Ciechocinek is not available but can be roughly estimated as following:

Number of Visitors to Ciechocinek

(1) Number of beds:	4,000 beds
(2) Average days for 1 cycle of treatment:	20 days
(3) Total number of visitors:	70,000 visitors (= (1) x 365/(2))
(4) Total number of visitor-nights	1,400,000 visitor-nights

Most of visitors to Ciechocinek have more or less health problems and come to Ciechocinek for curing. They are sent by Provincial Commission of Health and stay the assigned sanatorium for about three weeks.

Konin's advantage is its easy access from major cities such as Warsaw, Lodz and Poznan by A-2 motorway which is fully available in five years time and by Warsaw-Poznan-Berlin trunk line of Polish Railway. Konin may reasonably be able to expect certain number of weekend and day-trip visitors who enjoy sports and recreational activities and/or one-day cycle of treatment. The development concept of Konin's hot spring resort should, therefore, target different strata of visitors compared with those to Ciechocinek. Konin's resort should target the more recreation oriented and high income strata. Even in the strata of traditional treatment oriented visitors its target would be those with lighter health problems and of rest purpose and not those required to have intensive health care.

The target number of visitors to major facilities of Konin's hot spring resort at the beginning of its operation is conservatively counted as following:

(1) Hotels (100 rooms and 200 beds)

200 persons x 50 % x 365 days = 36,500 visitor-nights/year

(2) Restaurants (50 tables and 200 seats)

200 seats x 4 rotations (weekend) = 800 visitors for each weekend
200 seats x 2 rotations (weekday) = 400 visitors for each weekday
(800 x 100 days + 400 x 260 days) = 184,000 visitors/year

(3) Golf course

4 visitors x 10 times (weekend) = 40 visitors for each weekend
4 visitors x 6 times (weekday) = 24 visitors for each weekday
(40 x 90 days + 24 x 180 days + 0 x 90 days*) = 7,920 visitors/year
(*indicates unplayable period by the cold weather)

2 Project Purpose

The project purpose will be described as "local hot spring resources are utilized for expanding tourism".

3 Output of the Project

The project covers the whole process of hot spring resource development from the initial formulation of geothermal water development policy by the Gmina to the establishment of hot spring resort by the private investor. Outputs of the project can be considered as following:

3-1 A policy for the development of geothermal water resource for touristic purpose is established.

3-2 Promotion measures to attract investors are implemented.

3-3 Pre-investment study is conducted.

3-4 Private investment to establish a hot spring resort is made.

3-5 The hot spring resort is constructed and operated.

4 Project Description

4.1 Possible Locations for Hot Spring Resort

The geothermal water resources development will be implemented at five possible locations in Konin Province, namely Uniejow. Dabie, Kolo. Slesin and Wilczyn, all of which have already been confirmed the existence of geothermal water resources. Out of them Kolo is currently considering exclusively for the use of heating purpose and, therefore, will be appropriate to exclude from the scope of current analysis since our focus is on the touristic use.

The natural condition and stage of development of four possible sites for geothermal water resources development are different each other. Major characteristics of those four sites are as shown in Table PTR-1-1.

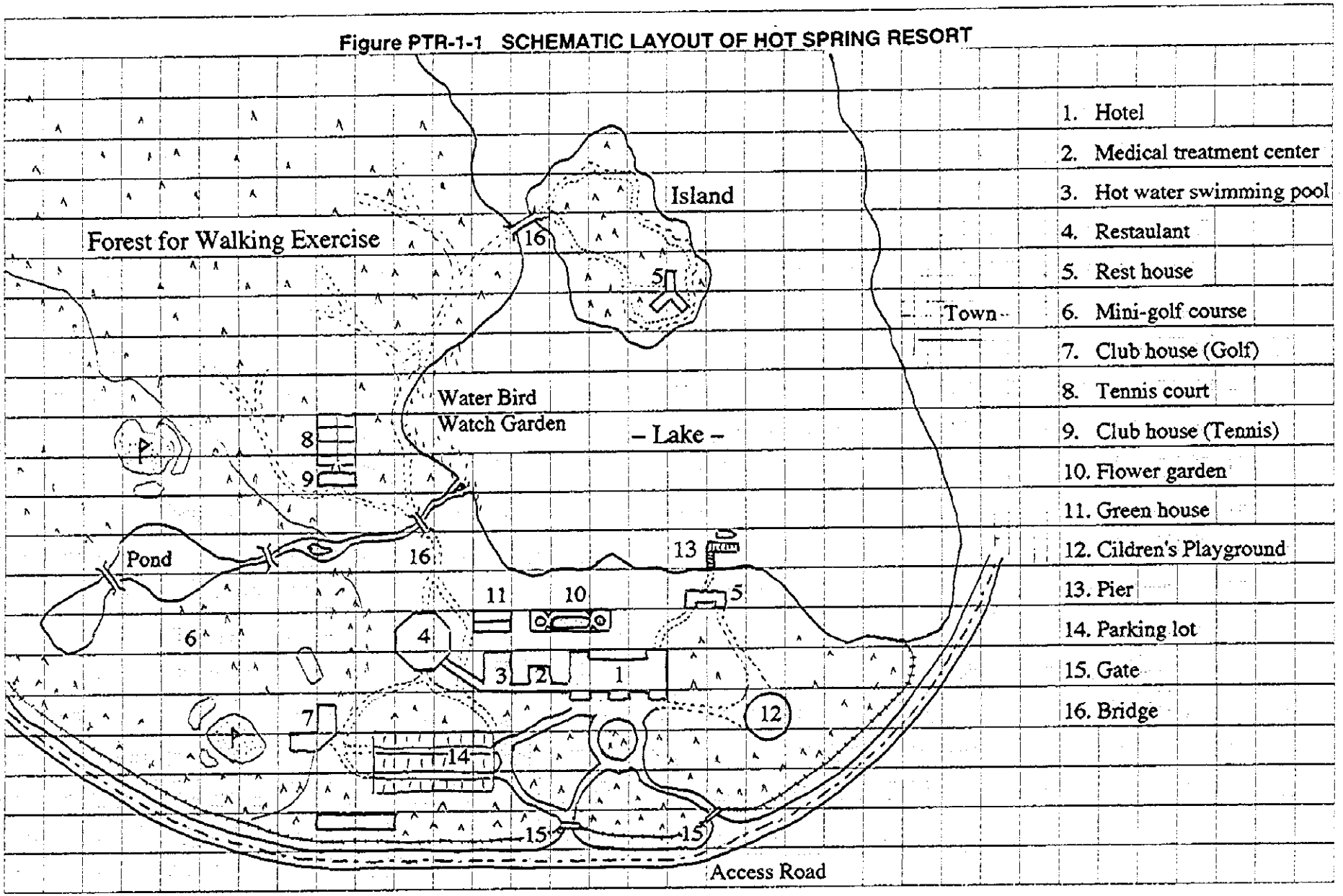
4.2 Services Provided by the Hot Spring Resort

The proposed hot spring resort is basically a touristic resort rather than traditional treatment facilities and provides various sports and recreational services as is shown in a schematic layout plan of Figure PTR-1-1. The plan is shown to be situated along the lake but it is not a necessary or sufficient condition for such resort.

Table PTR-1-1 COMPARISON OF GIMINAS WITH HOT SPRING RESOURCES

Item	Uniejow	Dabie	Slesin	Wilczyn
1. Geothermal water resources	- Existence of resource confirmed - 3 wells for taking hot water have been dug - Temperature: 70 centigrade - Volume: 90 cubic meter per hour - Mineral contents: salty	- Existence of resource confirmed - Temperature: 60 centigrade - Volume: 70 cubic meter per hour - Mineral contents: salty	- Existence of resource confirmed - Temperature: 82 centigrade - Volume: - Mineral contents: salty	- Existence of resource confirmed - Temperature: 64 centigrade - Volume: 40 cubic meter per hour - Mineral contents: 93 g per liter, salty
2. Environment	- Close to town of 3,100 population - Along Warta River - Exist well preserved castle which currently used as hotel and restaurant	- Outskirts of a town of 1,600 pop. - Along Ner River which is polluted - Surrounded by low grade farm land - Close to forest (270 ha) which could be developed for recreational purpose	- Close to town of 2,800 population - Along Slesinskie Lake - Already developed as recreational area with hotels and cottages surrounded by forest	- Close to a village - Between lakes of Wilczynskie and Kownackie surrounded by forest which is in the process of developing as a recreational area
3. Access to/from tourism markets	- Close to interchange of A-2 motorway (20 minutes)	- Close to interchange of A-2 motorway (10 minutes) - Close to Kolo Town	- Within 30 minutes from railway station and A-2 motorway interchange - Close to Konin City	- Within 1 hour from railway station and A-2 motorway interchange
4. Use of resources	- Use for heating of town - Pipeline links to existing hotels - A feasibility study prepared in 1998	- Hot water resource usage policy not yet determined	- Use for heating of town and - Downstream of pipeline leads to recreational area	- Use for recreational purpose
5. Others	- Local voluntary group of utilizing hot water established in 1985			

Figure PTR-1-1 SCHEMATIC LAYOUT OF HOT SPRING RESORT



Major facilities required for the resort includes:

(1) Hotel (100 rooms, 200 beds)
(2) Medical treatment center (for mainly a light treatment)
(3) Swimming pool (used for recreational and curing purposes)
(4) Restaurant (a high standard one with 50 tables, 200 seats)
(5) 2 Rest houses (for cold and hot drinks and light meals are served)
(6) 9 holes mini-golf course with a club house (later expanded to a full 18 holes course)
(7) 8 tennis court with a club house
(8) Flower garden
(9) Greenhouse (to utilize hot water resource)
(10) Children's playground
(11) Pier and boats
(12) Parking lot
(13) Parks and forest for walking exercise

4.3 Flow of Project Implementation

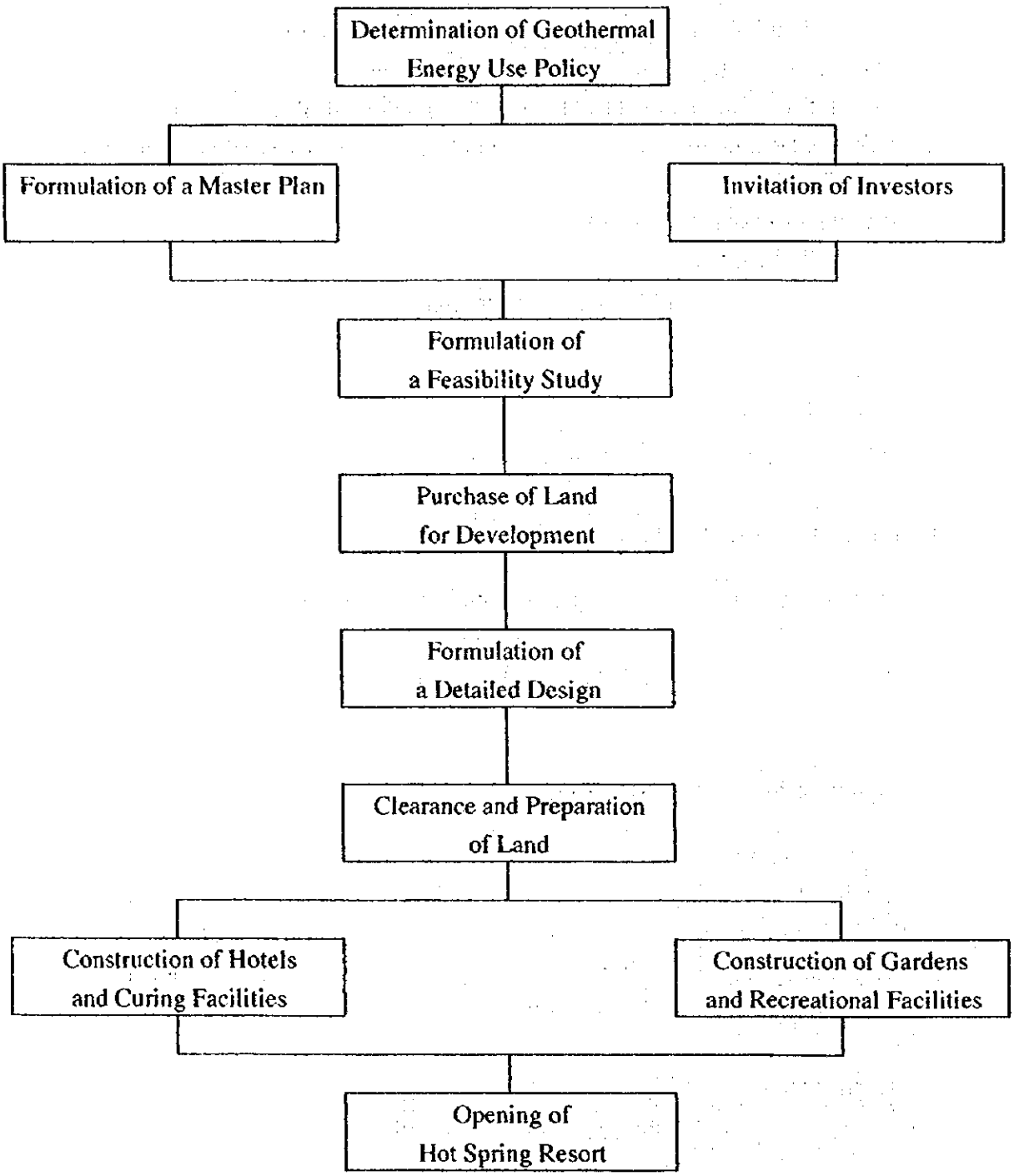
The project will be implemented according to Figure PTR-1-2. Activities in the top three boxes are conducted by Gmina, while activities in the box of "Formulation of a Feasibility Studies" and those of lower than that are implemented by the investor.

4. 4 Organization and Employment

The hot spring resort is to be planned, invested and implemented by the private investor. The organization of the resort depends on the concept of development by the investor. The resort is consisted of three units, namely Hotel Unit which include Medical Care Sub-Unit, Catering Unit and Recreation Unit, and the number of staff in each unit is as following:

(1) Hotel Unit	Hotel	50
	Medical treatment center	10
	Swimming pool	8
	Parking lot and gates	12
(2) Catering Unit	Restaurant	30
	Rest Houses	20

Figure PTR-1-2 FLOW OF HOT SPRING RESORT PROJECT



(3) Recreation Unit	Golf course	10
	Tennis court	6
	Pier and boat	4
	Playgrounds	2
	Flower garden/greenhouse	2
	Forest and other sites	6
Total		160

4.5 Development Cost for the Project

The most expensive part of the development will be the digging of wells to reach to the usable geothermal hot water horizon which is around 2,500-3,000 meters depth and cost about 3.0 - 4.5 million USD for two wells, one for taking hot water from the underground, the other for returning the used water of high mineral contents to the underground which cannot legally be allowed to discharge them to rivers or lakes. To meet the high investment cost for taking the geothermal water resources, the use of the water would be coordinated with the heating of residential area, which is considered as environment-friendly method of heating compared with the ordinary coal-based heating method and is expected to be available subsidies from National and Provincial Funds for Environmental Protection for such development project. The use of geothermal water resources for heating purpose would, therefore, be financed not only through Gmina budget but also by subsidies from those funds for environmental protection as well as other environment-oriented funds such as Ecofund.

The use of geothermal hot water for recreational purpose is to utilize the down-stream waters which are primarily used for heating of residential area and the development cost of taking hot water for recreational use can be considered additional. The development cost for digging wells for taking geothermal hot water is, therefore, excluded from the cost items of the hot spring resort development project although it depends on the pricing policy of each Gmina.

Required cost for the hot spring resort development project is exhibited in the Table PTR-1-2.

Table PTR-1-2 DEVELOPMENT COST OF HOT SPRING RESORT

	Cost Items	Gmina	Investor	Total
1.	Decision for the use of Geothermal hot water	0.00	0.00	0.00
2.	Formulation of a Development Master Plan	15.00	0.00	15.00
3.	Preparation of pamphlets for inviting investors	3.00	0.00	3.00
4.	Formulation of a Feasibility Study	5.00	25.00	30.00
5.	Purchase of land for development	0.00	150.00	150.00
6.	Formulation of a Detailed Design	0.00	50.00	50.00
7.	Clearance and preparation of land	0.00	200.00	200.00
8.	Construction of hotel and curing facilities	0.00	5,000.00	5,000.00
9.	Construction of gardens and recreational facilities	0.00	3,000.00	3,000.00
10.	Opening of the hot spring resort	2.00	300.00	302.00
11.	Pre-Operation Expenses {(4~10) x 5%}	0.00	436.00	436.00
12.	Initial Working Capital {(4~11) x 5%}	0.00	458.00	458.00
	Total Capital Requirement	25.00	9,619.00	9,644.00

The above cost is calculated based on the assumption that the new hotel is to be constructed at the resort, some gminas can utilize the existing accommodation and reduce the total investment cost: e.g. Uniejow can utilize the existing castle as a hotel and restaurant by additional renovations; Slesin also has several accommodations, but requires substantial investment for attracting international tourists.

4. 6 Implementation Schedule

The schedule of the development of hot spring resort is as exhibited in Figure PTR-1-3. The development of heating systems in the town, which connect to the resort as well, is not included in the project but an important premise for the project. Since Warsaw, Lodz and Poznan are all indispensable market for the resort, works of A-2 motorway should be completed by the opening of the resort, which is the 6th year from the initiation of the project.

5 Implementation Body and Financing Source

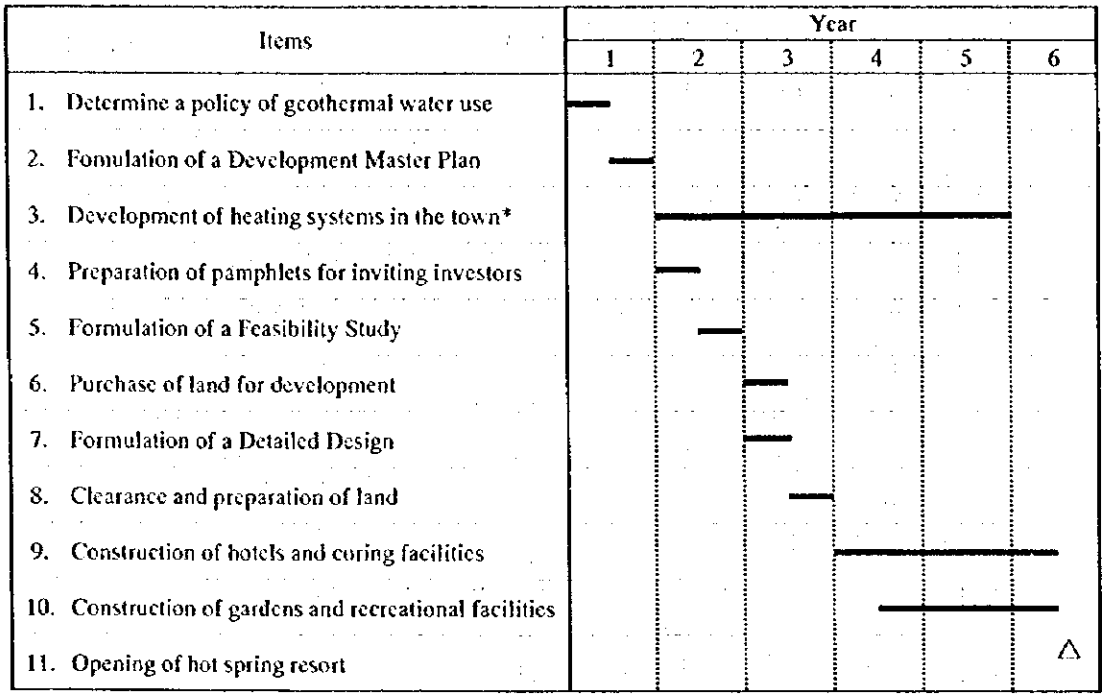
For the implementation of the project, participation and collaboration of two bodies, namely Gmina and private investors, are expected. The Gmina determines the direction of development for the use of geothermal resources, secures the acquisition of necessary land area from private and public sectors and invites

investors, while private investors conduct feasibility studies based on their own concepts of development confirming their profitabilities and, if they are found profitable, invest for the project and develop the purchased land area for a geothermal water resource based resort.

6 Activities

1-1 Determine a policy for the use of geothermal water resources.
1-2 Prepare a master plan of geothermal water resources development in the Gmina.
1-3 Designate the area of tourism development.
1-4 Obtain approval for the use of state-owned land/forest, if applicable.
2-1 Determine incentive measures for inviting investors.
2-2 Prepare pamphlets for inviting investors.
3-1 Hire consultants/experts for a feasibility study.
3-2 Prepare a feasibility study for the investment.
4-1 Purchase lands for the development.
4-2 Prepare a detailed design for the construction works.
4-3 Prepare lands for the development.
4-4 Construct buildings and facilities.
4-5 Purchase equipments.
5-1 Advertise the resort to potential visitors.
5-2 Start operations of the resort.

Figure PTR-1-3 DEVELOPMENT SCHEDULE



Note: *indicates the item which cost is not included in the current project.

7 Expected Benefit of the Project

7.1 Direct Benefit

(1) Increase of employment in the region (160 people) and decrease of the unemployed, particularly those of young generation.

(2) Increase of regional income by the expense of visitors from other regions in Poland and foreign countries at the resort and local shops.

(3) Increase of regional income through the purchase by the hot spring resort from the local market.

7.2 Indirect Benefit

(1) Development of a new tourism pattern, use of geothermal water resources and realization of a hot spring resort, which is a stimulus to the future development of tourism in the Province.

(2) Increase in number of employment by the multiplier effect.

(3) Increase in product sales in the Province by the multiplier effect.

(4) Increase in foreign visitors to the region which will promote the cultural exchange of people.

8 Weakness of the Project

(1) The shortage of available investment fund might often realize low grade facilities. However, visitors to the touristic and recreational resort will not choose the resort with such low grade facilities. It might sound a little paradoxical, but the successful way to the project is to target the clients of higher strata even though the price may be in a higher side, since such facilities are not readily available in Poland and clients in this strata is looking for the place to satisfy their demands.

Project Design Matrix (PDM) for PTR-1 DEVELOPMENT OF HOT SPRING RESOURCES

Narrative Summary	Verification Indicator	Means of Verification	Important Assumption
Overall Goal Full utilization of tourism attractions in Konin Province	Increase of number of tourists	Annual survey by Provincial Office	
Project Purpose New tourist patterns are developed.	Number of tourism entities which utilize hot spring	Report of Gmina Office	
Output 1 A policy for the development of geothermal water for touristic purpose is established. 2 Promotion measures to attract investors are implemented. 3 Pre-investment study is conducted. 4 Private investment to establish a hot spring resort is made. 5 The hot spring resort is constructed and operated.	1 Policy document 2 Printed materials 3 F/S report 4 Land purchase and start of construction works 5 Completion construction	1 Policy document 2 Printed materials 3 Feasibility of the project 4 Registration to Gmina and Provincial Office 5 Opening ceremony	– Geothermal water use for heating is undertaken by the Gmina. – The ownership transfer of state-owned land and forest to the investor is approved.
Activities 1-1 Determine a policy for the use of geothermal water. 1-2 Prepare a Master Plan. 1-3 Designate land area for tourism development. 2-1 Determine incentive measures for inviting investors. 2-2 Prepare pamphlets for inviting investors. 3-1 Prepare a feasibility study for the investment. 4-1 Purchase land for the development. 4-2 Prepare lands for the development. 4-3 Construct buildings and facilities. 4-4 Purchase equipents. 5-1 Start operations of the resort.	**Input** Manpower: 1) Personnel for the geothermal water development (Gmina) : 2 persons 2) Consultants/experts – Feasibility Study : 2 persons x 4 months – Detailed Design : 4 persons x 6 months Finance: 1) Pre-investment cost (Gmina) : 25,000 USD 2) Investment cost (Investor) : 9,619,000 USD		

PLD-1 Betterment of Transportation Infrastructure (LD-7, LD-8, LD-10)

1. RATIONAL OF THE PROPOSED PROJECT

(1) Background

Road transportation systems occupy an important function for the means of the flow of goods and services in Konin rather than the railroad systems. They function not only for domestic transportation within the province, but for international cargo transportation between European countries and Former Soviet Union ones. Particularly, national highway No.2, which runs horizontally through the center of the province functions as a trunk route serving both cargo and passenger transportation. At the same time, International Highway A-2, which is now under construction but completed only between Wrzesnia in Poznan province and the outside of Konin City, also has a major role as a means of international cargo transportation. Since completion of A-2 construction all the way through Konin Province is expected in 5 years, it is creating traffic congestion at several intersections in the province. Particularly the issue of traffic congestion at the intersection between International Highway A-2 and national highway No. 2 and 25, which is located outside of Konin, should be raised as the most serious and urgent one.

Both urban and urban-rural municipalities are mostly located along national highways No. 2 and No. 25. Social mobility including flow of goods and services within and through municipalities through these existing highways is fairly well established. On the contrary, rural municipality is mostly located further away from the highways. And mobility and accessibility between municipalities are poorly established. These are due to poorly prepared existing roads which connect above major cities. It is creating serious issues on mobility and accessibility of commuting people as well as transportation of goods and services.

Among major cities in the province, Turek is considered in a different position from the transportation network viewpoint. As the city is isolated from railroad network system, obtaining easy access to other cities as well

as major national highways is urgently required. And dissolving the current traffic congestion problem of the intersection in Turek has to be raised as an serious issue.

Among 49 municipalities in Konin, there are approximately 90 so called municipal bridges. Most bridges were built during the Poviat period (the smallest administrative unit taken prior to current administration) which was finished in 1975, and financed by both the former Department of Agriculture and Department of Communication during that period. Since the new Physical Planning Act came into force in 1995, all municipalities are obligated to construct and maintain bridges with their own funds. Most bridges were built between 20 and 30 years ago, but left without appropriate maintenance works. Particularly, those bridges over the Warta River and its tributaries have serious problems with allowing heavily loaded trucks to pass through during the agricultural harvest seasons due to floods and muddy road conditions in evidence in that period of time.

(2) Demand and Supply Conditions

1) Demand Conditions

a. Improvement of access roads

To amplify the present condition of traffic congestion, the following tables indicate the volumes of traffic by dividing it into flow by year between the major cities and by highway.

Table PLD-1.1 Volume of traffics between major cities (Highway A-2)

Cities and towns / Major highways	Wrzesnia - Slupca			Slupca - Konin		
International Highway A-2	1990	1995	Ratio (%)	1990	1995	Ratio (%)
Total	5,400	11,800	119	5,700	10,400	82

(Unit: number in average per day)

(Number of indicates grow th rate during five years.)

(Source: Ministry of Transport and Maritime Economy)

Table PLD-1.2 Volume of traffics between major cities (National Highway No.2)

Cities and towns / Major highways	Wrzesnia - Strzalkowo			Strzalkowo - Slupca		
National Highway No.2	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	2,100	4,400	110	2,500	3,600	44
Cities and towns / Major highways	**Slupca - Golina**			**Golina - Konin**		
National Highway No.2	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	3,600	5,400	50	4,300	7,200	67
Cities and towns / Major highways	**Konin - Kolo**			**Kolo - Klodawa**		
National Highway No.2	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	8,500	11,500	35	6,000	10,600	77
Cities and towns / Major highways	**Klodawa - Krosniewice**					
National Highway No.2	1990	1995	Ratio(%)			
Total	5,400	9,900	83			

(Unit: number of cars in average per day)

(Ratio indicates grow th rate during five years.)

(Source: Ministry of Transport and Maritime Economy)

Table PLD-1.3 Volume of traffics between major cities (Natioanl Highway No.25)

Cities and towns / Major highways	Skulsk - Konin			Konin - Rychwal			Rychwal - Stawiszn		
National Highway No.25	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	2,241	3,700	65	1,011	3,600	256	1,622	4,100	153

(Unit: number in average per day)

(Number of indicates grow th rate during five years.)

(Source: Ministry of Transport and Maritime Economy)

b. Expansion of connecting roads

To further amplify the problems of traffic congestion, current volumes of

traffic at the major intersections are shown in the following tables.

Table PLD-1.4 Volume of Traffics in Major Intersections in each City

Intersection / Crossing Highways	Slupca									Slupca Total		
	263			466			2					
Traffics	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	1,400	1,800	29	800	1,400	75	3,300	5,400	64	5,500	8,600	56
Intersection / Crossing Highways	Konin(1)											
	2			25			266					
Traffics	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)			
Total	5,614	11,500	105	8,756	11,300	29	2,600	3,400	31			
Intersection / Crossing Highways	Konin(2)											
	469			263			A-2			Total		
Traffics	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	3,200	4,400	38	1,400	3,100	121	1,011	3,600	256	22581	37,300	65
Intersection / Crossing Highways	Kolo									Konin Total		
	2			473			270					
Traffics	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	8,500	14,100	66	1,700	2,500	47	1,400	1,600	14	11,600	18,200	57
Intersection / Crossing Highways	Slesin									Slesin Total		
	263			25								
	1990	1995	Ratio(%)	1990	1995	Ratio(%)				1990	1995	Ratio(%)
Total	850	1,400	65	4,700	5,200	11				5,550	6,600	19
Intersection / Crossing Highways	Sompolno									Sompolno Total		
	263			266			271					
	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	1,700	1,300	-24	1,400	1,100	-21	550	1,800	227	3,650	4,200	15
Intersection / Crossing Highways	Turek									Turek Total		
	469			470			472					
	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)	1990	1995	Ratio(%)
Total	2,800	6,000	114	2,500	6,700	168	2,200	3,100	41	7,500	15,800	111

(Unit: Number in average per day)
(Number of indicates growth rate during five years)
(Source: Ministry of Transport and Maritime Economy)

From above tables, it is quite clear that there are urgent demands for improvement to and expansion of access roads to the main roads and connecting roads between the main cities in the province. It is very important to note that most existing roads are two lanes throughout the province.

c. Rehabilitation of municipal bridges

The following table shows the number and years since construction of municipal bridges, and the number of bridges in municipalities that need to be rehabilitated within the next 2 to 3 years. According to the table below, 31 bridges out of 87 are required to be rehabilitated within the next 2 to 3 years.

Table PLD-1.5 Conditions of Gmina Bridges in the Province

Specification / Voivodship	Number of Municipal Bridges	Years since Constructed	Bridges need to be Rehabilitated in 2 to 3 years
Voivodship Total	87		31
Urban Municipalities Total	10		3
1. Kolo	0	-	-
2. Konin	3	40	1
3. Slupca	7	30 - 35	2
4. Turek	0	-	-
Urban and rural Municipalities Total	16		10
5. Dabie	5	15 - 20	5
6. Dobra	0	-	-
7. Golina	0	-	-
8. Kleczew	0	-	-
9. Klodawa			
10. Pryzdry	2	50 - 60	2
11. Przedecz	0	-	-
12. Rychwal	0	-	-
13. Slesin	1	40	1
14. Sompolno	0	-	-
15. Tuliszkow	0	-	-
16. Uniejow	0	-	-
17. Witkowo	0	-	-
18. Zagorow	8	20 - 30	2
Rural Municipalities	61		18
19. Babiak	0	-	-
20. Brudzew	3	20	3
21. Chodow	0	-	-
22. Grabow	0	-	-
23. Grodziec	7	30	2
24. Grzegorzew	4	30 - 40	1
25. Kaweczyn	2	40	0
26. Kazimierz Biskupi	2	20	0
27. Kolo	1	30	1
28. Koscielec	6	30	1
29. Kramsk	1	70	1
30. Krzymow	3	16	0
31. Ladek	0	-	-
32. Malanow	0	-	-
33. Olszowka	2	2	0
34. Orchowo			
35. Osiek Maly	1	30 - 40	1
36. Ostrowite	0	-	-
37. Powidz	0	-	-
38. Przykona	13	30 - 32	0
39. Rzgow	4	20	2
40. Skulsk	0	-	-
41. Slupca	5	22	2
42. Stare Miasto	3	30	3
43. Strzalkowo	0	-	-
44. Swinice Warckie	0	-	0
45. Turek	4	25	1
46. Wierzbinek	0	-	-
47. Wilczyn	0	-	-
48. Wladyslawow	0	-	-

(Unit: in number as of February, 1998)
(Source: Gmina office based on survery by the Study Team)

2) Supply Conditions

a. Improvement of access roads and expansion of connecting roads

Although road transportation systems occupy more important functions

than railroads in Konin, neither extension nor construction plans on the above indicated highways and intersections are made at present. And no matter how the provincial government appeals to central government, only plans for some road widening and enhancement work have been done so far. The Province needs strong support from central government and should emphasise the importance of the highways to central government hence showing them the reality of the situation. Particularly, problems on traffic congestion along highway 2 should be considered as a national level issue.

b. Rehabilitation of municipal bridges

Although requirement on rehabilitation of those bridges are raised from each municipality, they cannot be managed properly due to the lack of sufficient funds.

(3) Proposed Reasons

1) The project is proposed to relieve traffic congestion at the intersection area between national road No. 2, 25, and other national roads which are raised as serious issues on traffic jams in those areas. It is also proposed to strengthen linkages among Konin, Turek, Slupca, and Kolo by increasing flows of goods and services.
2) The project is proposed to increase mobility and accessibility between rural municipalities and urban/urban-rural municipalities.
3) The project will allow heavily loaded transportation vehicles including trucks, busses, and tank lorries to pass through municipal roads.

2. PROJECT PURPOSE

To prepare transportation infrastructure and relieve traffic congestion, increase mobility and accessibility of goods and services in the province.

3. OUTPUT OF THE PROJECT

a) Construct detour route at major intersections.
b) Expand and widen existing major intersections in certain cities.
c) Construct or rehabilitate the selected municipal bridges.

4. PROJECT DESCRIPTION

4-1. Development area

(1) Intersection of Konin

1) To make detour routes along National Highway 25 without passing through the centre of Konin City.

2) To make a traffic circle at the crossing sections, and widen and enlarge the size of the roads, in particular where roads such as National Roads 2, 25 with the A-2 junction, and 469 intersect 3 km away from Konin City. (See Figure PLD-1.1 in the last part of this section.)

(2) Intersection of Kolo

1) To make detour routes from National Road 270 to National Highway 2 without passing through the centre of Kolo City.

2) To extend National Road 270 northwest by going through the city of Kolo to Osiek Maly and the Kramsk region. The extended route should be merged with National Road 270 approximately 5 km away at the northwest point of the city. This extension road is planned to be an alternative route between Kolo and Konin in case of emergency such as a natural disaster occurring on National Highway 2, and for national defense purposes. (See Figure PLD-1.2 in the last part of this section.)

(3) Intersection in Slesin

1) To make detour routes on National Highway 25 without passing through the centre of the city of Slesin.

2) To make an intersection with 4 way traffic lights at the merging point between the new projected detour routes and National Road 263. (See Figure PLD-1.3 in the last part of this section.)

(4) Intersection in Turek

a) To make loop lines to allow national road 469 (both ways), 470 (both ways), and 472 without passing through the centre of the city of Turek. National Road 469 has a very important function as this is the only one

major route as incoming to and outgoing from Konin and International Highway A-2 between Turek.

b) National Road 470 is also important since it functions as a major link between Turek and Kolo to the north and Kaisz to the south.

c) National Road 472 serves as major link between Turek and Lodz.

d) To make a total of 4 intersections with 4 way traffic lights at the merging points of those major roads and connect with the existing detour route between National Roads 469 and 470. (Refer to Figure PLD-1.4 in the last part of this section.)

(5) Intersection in Sompolno

a) To make detour routes on National Road 266 without passing through the centre of the city of Sompolno. National Road 266 has an important function since it connects with National Highway 25 at Konin city toward the south.

b) To make an intersection with 4 way traffic lights at the merging point between the new projected detour routes and National Road 263. (See Figure PLD-1.5 in the last part of this section.)

(6) Rehabilitation of municipal bridges

There are 31 municipal bridges which need to be newly constructed or rehabilitated and the location of these are scattered throughout the province. The decision as to whether bridges are to be newly constructed or rehabilitated depends on conditions of each bridge and the funding facilities of each municipality. Figure PLD-1.6 shows the number of municipal bridges needing to be newly constructed or rehabilitated within the next two to three years.

4-2. Implementation and operation

It is necessary to divide the implementation and operation of project PLD-1 into two parts; improvement of access roads and the expansion of connecting roads and rehabilitation of municipal bridges.

(1) Improvement of access roads and expansion of connecting roads

The Ministry of Transport and Maritime Economy is wholly responsible for

preparation of the highway transportation infrastructure.

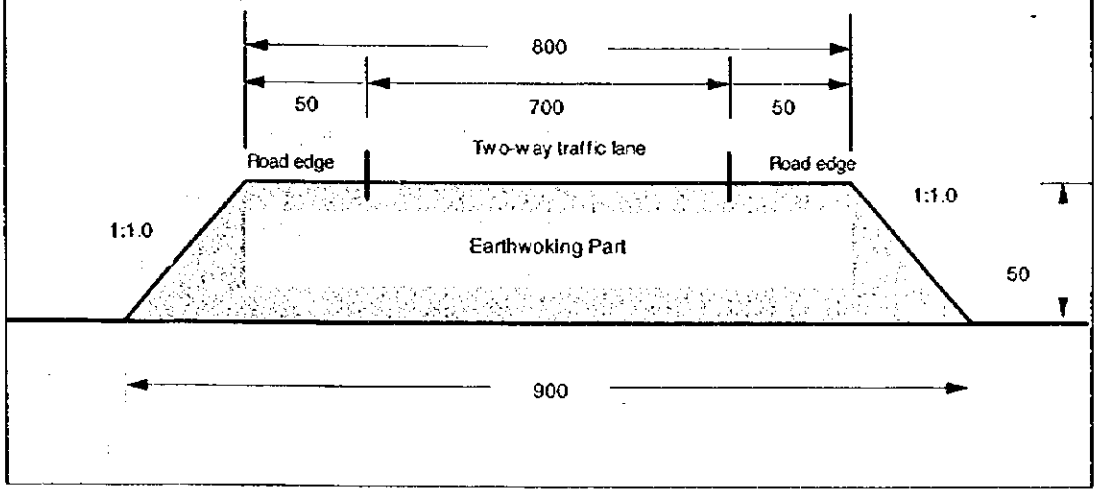
(2) Rehabilitation of municipal bridges

Municipality is wholly responsible for construction and rehabilitation of the bridges.

4-3. Structure of the road

The following is a proposed conceptual structure of the road showing the cross section of the proposed detour route.

Figure PLD-1.6 Cross Section of Proposed Detour Route



(Note: Unit in centimeters)

4-4. Implementation Schedule

(1) Improvement of access roads and expansion of connecting roads

Table PLD-1.6 Implementation Schedule of Intersection in Konin, Kolo, and Turek

Working Item \ Schedule (Month)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
(Konin)																	
1. Selection of proposed routes																	
2. Hold public hearings																	
3. Geological survey																	
4. Selection of actual routes																	
5. Land acquisition																	
6. Land development, zoning, design																	
7. Construction																	
(Kolo)																	
1. Selection of proposed routes																	
2. Hold public hearings																	
3. Geological survey																	
4. Selection of actual routes																	
5. Land acquisition																	
6. Land development, zoning, design																	
7. Construction																	
(Turek)																	
1. Selection of proposed routes																	
2. Hold public hearings																	
3. Geological survey																	
4. Selection of actual routes																	
5. Land acquisition																	
6. Land development, zoning, design																	
7. Construction																	
Schedule (Month)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34

Table PLD-1.7 Implementation Schedule of Intersection in Siesin and Sompolno

Working Item \ Schedule (Month)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
(Siesin)																	
1. Investigation of current status																	
2. Hold public hearings																	
3. Geological survey,reallocation of residents																	
4. Land acquisition																	
5. Land development, zoning, design																	
6. Construction																	
(Sompolno)																	
1. Investigation of current status																	
2. Hold public hearings																	
3. Geological survey,reallocation of residents																	
4. Land acquisition																	
5. Land development, zoning, design																	
6. Construction																	
Schedule (Month)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34

(2) Rehabilitation of municipal bridges

Table PLD-1.8 Implementation Schedule of Gmina Bridge

Working Item \ Schedule (Month)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
(Gmina Bridges)																	
1. Survey conditions, Set Gmina budget																	
2. Land development, zoning, design																	
3. Construction																	
Schedule (Month)	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34

4-2. Estimated capital requirement

Table PLD-1.9 shows estimates for construction of a detour road that will enable an estimate to be made of the total capital requirement. However, construction and rehabilitation of municipal bridges are omitted.

Table PLD-1.9 Preconditions of Cost Estimate for Road Construction

Work	Quantity	Unit Cost		Cost (UD$)
		Yen	US $	
Earthwork	4.3 m^3/m	2,000	6.00	26.00
Pavement	7.0 m^2/m	6,000	18.00	126.00
Total				152.00

In the above table it is shown 4.3 m^3 of materials are required to fill the earthwork part of the road per meter. From the figure of cross section of the proposed detour route identified previously, the width of the pavement part is 7 meters and the area of it will be 7.0 m^2 per meter. The unit costs shown are a cost comparison between Japanese Yen and U.S. Dollars. The Study Team roughly estimated that the unit cost in Poland will be one third that of Japan and the USA by measuring economic conditions, material costs, and labor costs. As a result the construction cost in Poland is estimated at the equivalent of 150 U.S. Dollars per meter. In the estimation the costs of equipment, construction raw materials, labor costs, and other miscellaneous costs are included. However, the costs of land acquisition and the construction of new bridges are not included. Also the roads are to be constructed on normal foundations and should not be built on reclaimed ground such as swamp areas.

(1) Improvement of access roads and expansion of connecting roads

Table PLD-1.10 Estimated Capital Requirement
(US$,000)

Construction Site / Cost	Konin		Kolo		Turek	
	Required Land	Cost	Required Land	Cost	Required Land	Cost
A. Road construction	14,000 m.	2,100	28,000 m.	4,200	12,000 m.	1,800
B. Land aquisition*1)	12.6 ha.	113.4	25.2 ha.	226.8	10.8 ha.	97.2
C. Site Preparation*2)	-	126	-	201.6	-	108
D. Setting traffic lights*3	-	6	-	9	-	12
E. Miscellaneous Cost*4	-	23.5	-	46.4	-	20.2
Total		2,369		4,684		2,037

Construction Site / Cost	Sompolno		Slesin		**Project Total**	
	Required Land	Cost	Required Land	Cost	Required Land	Cost
A. Road construction	6,500 m.	1,950	6,000 m.	900	66,500 m.	10,950
B. Land aquisition*1)	5.85 ha.	35.1	5.4 ha.	32.4	59.85 ha.	505
C. Site Preparation*2)	-	41.0	-	37.8	-	514.4
D. Setting traffic lights*3	-	6	-	6	-	39
E. Miscellaneous Cost*4	-	20.3	-	9.8	-	120.1
Total		2,052		986		12,128

Note: *1 Costs for land acquisition per ha. is estimated and calculated as the followings; Konin($ 9000), Kolo($ 9000), Turek($ 9000),Slesin($6000), and Sompolno($6000).

*2 Costs for site preparation includes evacuation fee and preparation of alternative lands, guarantee fee of business, ect. for present residents.
And the cost per ha. is estimated and calculated as the followings; Konin($ 10,000), Kolo($ 8,000), Turek($ 10,000),Slesin($7,000), and Sompolno($7,000).

*3 Cost for setting of traffic lights is calculated as $3,000 per location and the number of set per location are the followings; Konin(2), Kolo(3), Turek(4), Slesin(2), and Sompolno(2).

*4 Miscellaneous cost is calculated as 1 % of above total costs from A to D.)

(2) Rehabilitation of municipal bridges

Table PLD-1.11 ESTIMATED CAPITAL REQUIREMENTS FOR 31BRIDGES
(US$)

Construction Site / Cost	Per Bridge		Total	
	Required Land	Cost	Required Land	Cost
A. Survey of bridges	-	500	-	15,500
B. Surface pavement*1	7 m.	210	217 m.	6,510
C. Site Preparation*2	100 m^2.	2,000	3100 m^2.	96,100
D. Foundation of bridge	-	10,000		310,000
E. Bridge sleeves	-	2,000		62,000
F. Miscellaneous Cost*3	-	127		3,940
Total		14,837		**494,050**

Note: *1 Costs for surface pavement is estimated $ 30 per meter.

*2 Costs for site preparation is estimated at $ 20 per m^2.

*3 Miscellaneous cost is calculated as 1 % of above total costs from A to E

5. IMPLEMENTATION BODY AND FINANCING SOURCE

5.1 Implementation Body

The Ministry of Transport and Maritime Economy, which is part of central government is wholly responsible for maintenance and development of the transportation infrastructure, therefore, it should be the main implementation body. Some parts of the highways, however, belong to the province, for example highways passing through the centre of the city or part of the intersection area. In these cases, Office of the Konin Governor should cooperate with central government. Regarding the municipal bridges' projects, each municipalities should act as an implementation body since the building and rehabilitation of the bridges are the responsibility of each municipality.

5.2 Financial source

The Ministry of Transport and Maritime Economy is obliged to take the whole responsibility for financing the expansion of access roads to the major highways. Bridge construction and rehabilitation costs should be wholly financed by municipality to which they belong.

6. ACTIVITIES

(1) Construct detour routes in major intersections.

a) To select prospective detour routes by investigating geographical conditions, current status of the land, conditions of land use, strength of the ground, influences on the surrounding natural environment, etc.

b) To hold public hearings to obtain the consensus of residents close to the projected site.

c) To initiate geological survey of the prospective routes to find the most adequate for the detour road.

d) To set up exact route and start negotiation with landowners for acquisition of the required land.

e) To draw up a blueprint and start construction.

(2) Expand and widen existing major intersections in selected cities.

a) To investigate current status of the land use of the neighboring area, strength of the ground, and influences on the surrounding natural environment and other geographical conditions

b) It is important to hold public hearings to obtain local consensus because most existing intersection areas are mainly commercial. It is highly likely that compulsory evacuation will be required by municipal statute.

c) To start negotiation with landowners for acquisition of the land.

d) To initiate geological surveys of the prospective sites to set up the most adequate layout of the site.

e) To draw up a blueprint and start construction.

(3) Construct or rehabilitate the municipal bridges.

a) To gather information such as the year of construction of all existing bridges, conditions, loading capacity of the traffic, frequency of bridge use by type of transportation, etc.

b) To set the criteria by which bridges are to be rehabilitated or newly constructed.

c) To set the municipal budget or collect funds from other sources.

d) Based on the information collected during the first stage of the project, decide whether those should be rehabilitated or reinforced bridge foundations or bridge girder of the selected bridge. Then start construction.

7. EXPECTED BENEFIT OF THE PROJECT

7.1 DIRECT BENEFIT

a) Increase mobility and accessibility not only within the province but to other regions of the country.

b) Smooth flow of human traffic and goods and services between major cities in the province.

c) Avoid natural disasters such as floods of the river when transporting agricultural goods over the bridges.

d) To provide increased safety for drivers and pedestrians by reducing the number of accidents.

7.2 INDIRECT BENEFIT

a) To be able to use as a fundamental tool of new land use planning, such as city planning, urban development, commercial and residential area settings in the projected area.

b) Can be used as a new route in emergencies for transporting goods and rescue teams to the disaster area.

c) Production volume of building and construction material will increase.

d) Competition among building material manufacturers and suppliers will increase in the province.

e) Creation of employment in construction and building material manufacturers and suppliers will increase.

8. WEAKNESS OF THE PROJECT

a) Central government gives a low priority to the development of highways in Konin compared with other provinces.

b) Municipality will have difficulty in raising funds for rehabilitation of bridges.

Figure PLD-1.1 PROPOSED DETOUR ROUTE AND TRAFFIC CIRCLE IN KONIN

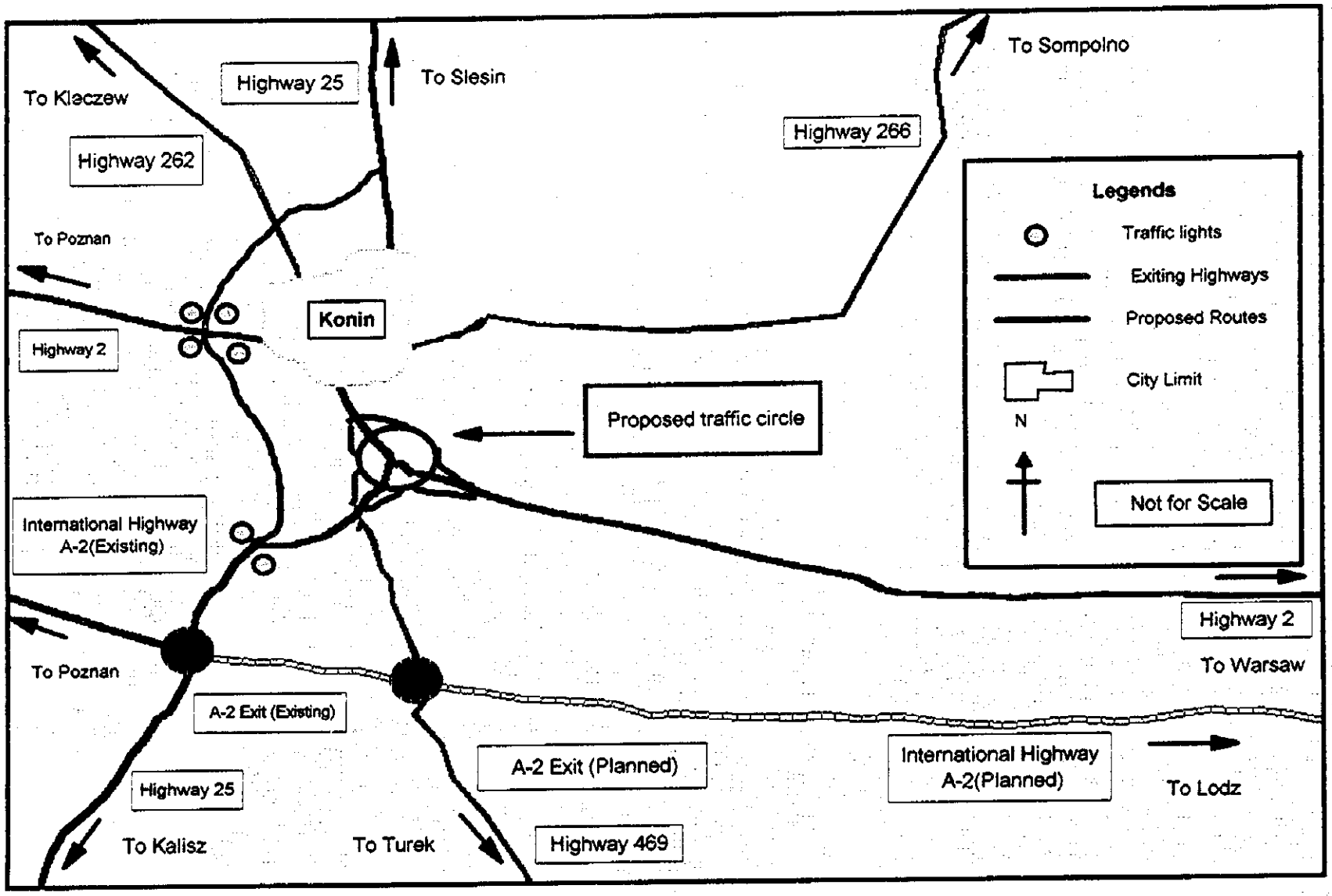


Figure PLD-1.2 PROPOSED DETOUR AND EXPANSION ROUTE IN KOLO

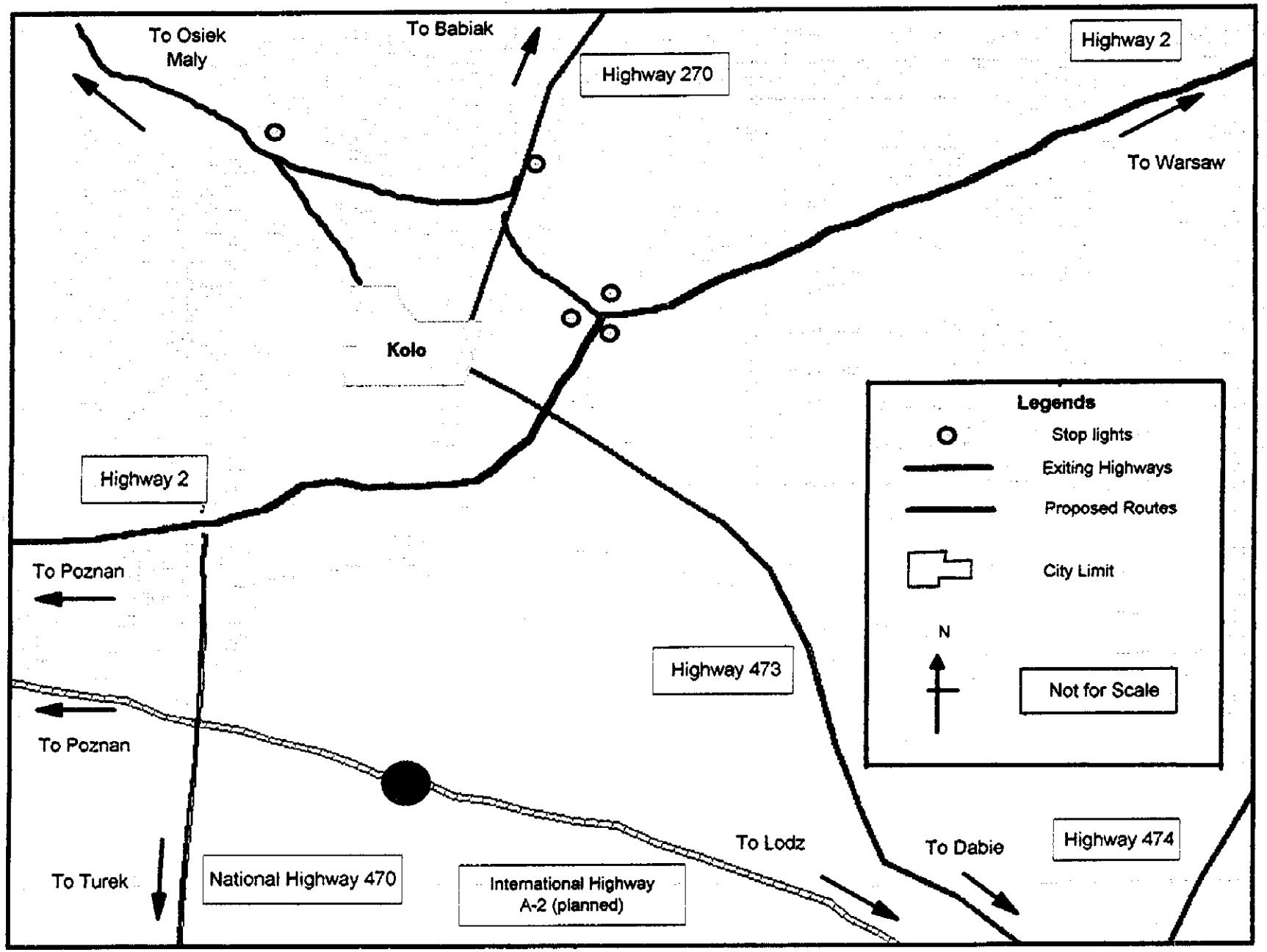


Figure PLD-1.3 PROPOSED DETOUT ROUTE IN SLESIN

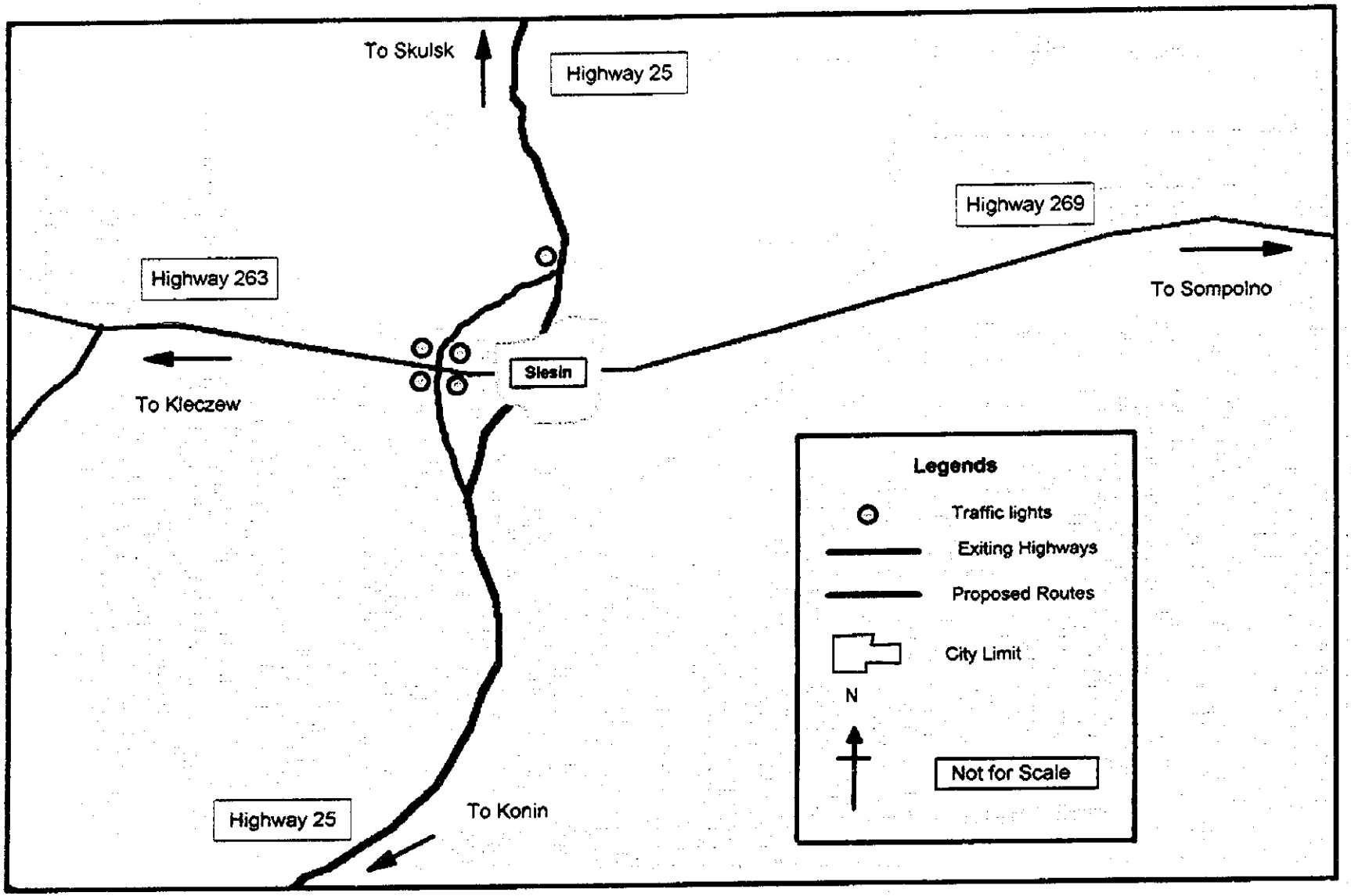


Figure PLD-1.4 PROPOSED DETOUR ROUTE IN TUREK

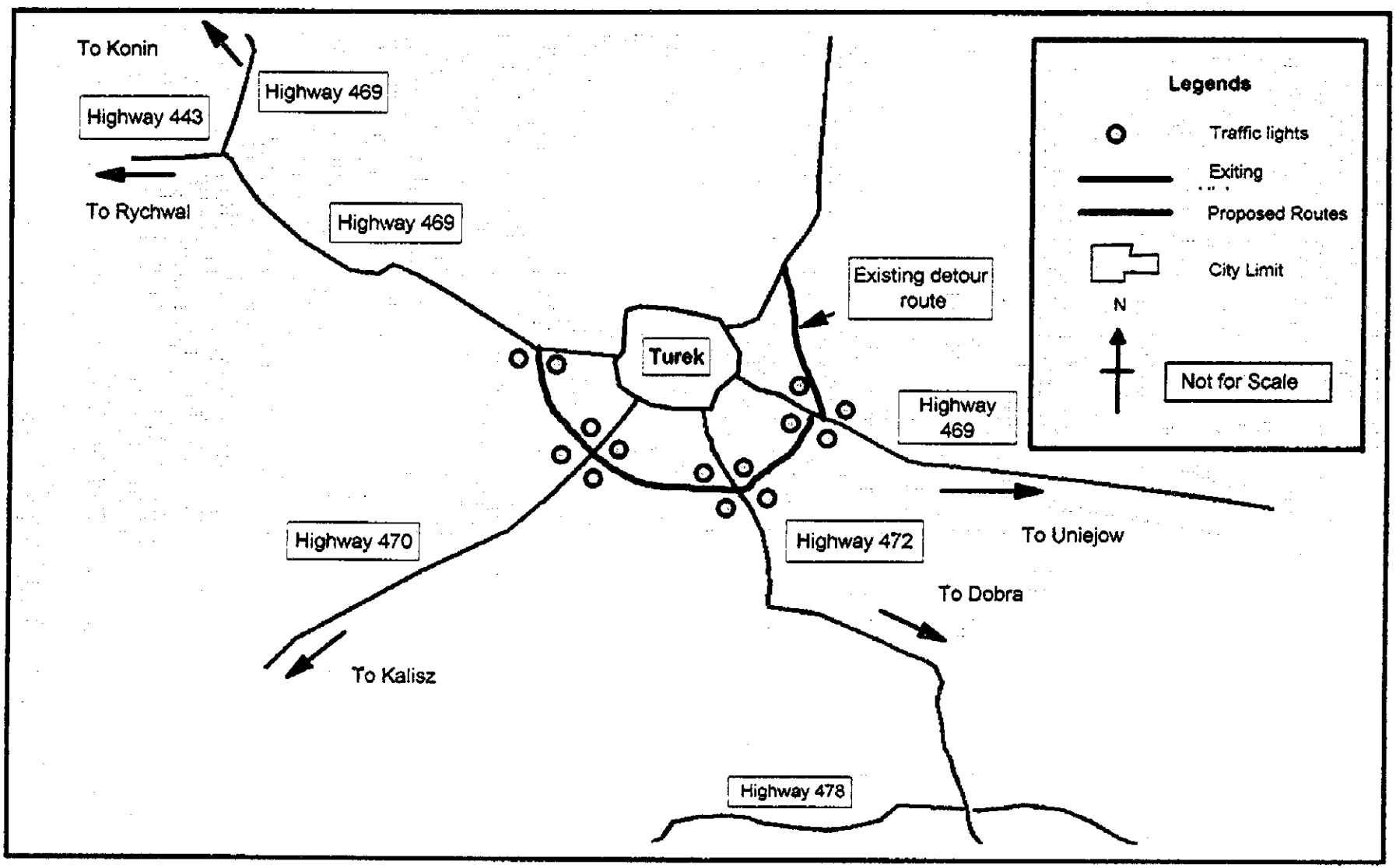


Figure PLD-1.5 PROPOSED DETOUR ROUTE IN SOMPOLNO

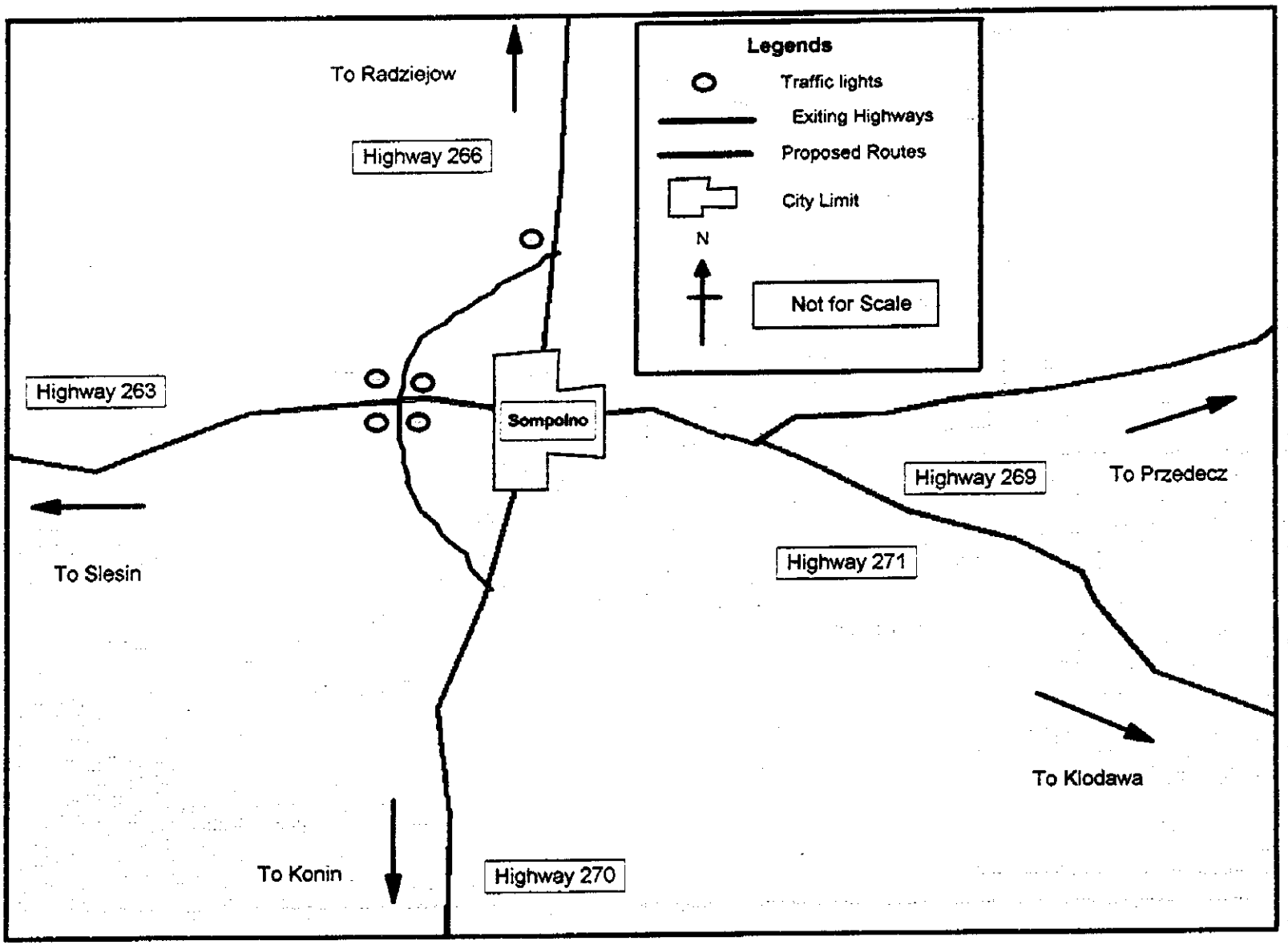


Table PLD-1.12 PDM: BETTERMENT OF TRANSPORTATION INFRASTRUCTURE (LD7,8,10)

Narrative Summary	Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Transportation Infrastructure in Konin is improved.	- Smooth flow of traffics	Periodical survey on flow of traffics.	
Project Purpose To prepare transportation infrastructure and relieve traffic congestion, increase mobility and accessibility of goods and services in Konin.	Time consumed to pass through between two certain points per traffic.	Research on traffic volume	
Output 1. Construct detour route in major intersections. 2. Expand and widen existing major intersections in certain cities. 3. Construct or rehabilitate the selected Gmina bridges.	1. Number of traffic volumes in major intersections. 2. Number of traffic volumes in major citie 3. Capacity of existing bridges.	1. Research and detailed plan. 2. Reserch and detailed plan. 3. Research and detailed plan.	Construction of International Highway A-2 should be on schedule Existing plan should be implemented without delay.
Activities 1-1. To select detour routes, investigate geographical conditions, current land status, land use conditions, and influences to the natural environment. 1-2. To hold public hearings to obtain consensus from the residents. 1-3. To initiate geological survey of the prospected routes. 1-4. To set up exact route and start negotiation with land owners for land acquisition. 1-5. To draw blue prints and start construction. 2-1. To investigate current status of the land use of the neighboring area. 2-2. To hold public hearings to obtain consensus from the residents. 2-3. To start negotiation with land owners for acquisition of the land. 2-4. To initiate geological survey to setup the most adequate layout of routes. 2-5. To draw blue prints and start construction. 3-1. To gather information on existing bridges, e.g. conditions, ages, etc. 3-2. To set priorities on bridges. 3-3. To set Gmina budget or collect funds from other sources. 3-4. Based on the information collected, decide the bridges should be newly constructed, rehabilitated, or reinforced. 3-5. Start construction.	**Input** Cost for improvement of access road and expansion of connecting road.(US $,000) A. Road Construction 10,950 B. Land Acquisition 505 C. Site Preparation 514.4 D. Setting Traffic lights 39 E. Miscellaneous Cost 120.1 **Total 12,128** Cost for rehabilitation of 31 bridges (US $) A. Survey of Bridges 15,500 B. Surface Pavement 6,510 C. Site Preparation 96,100 D. Foundation of Bridges 310,000 E. Bridge Sleeves 62,000 F. Miscellaneous Cost 3,940 **Total 494,050**		- Need consensus among the residents in the project area. - Gmina is to set the priority on budget for rehabilitation of bridges. Pre-conditions - Central government should set priority on development of the roads in Konin.