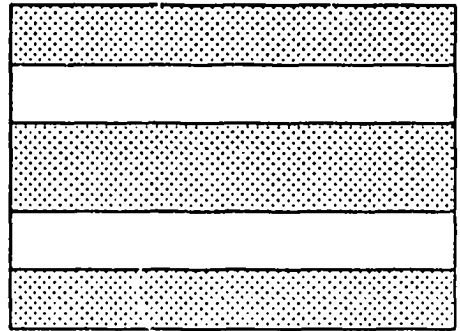
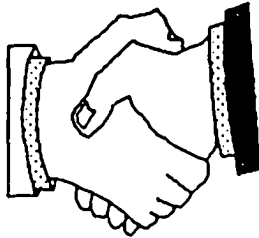
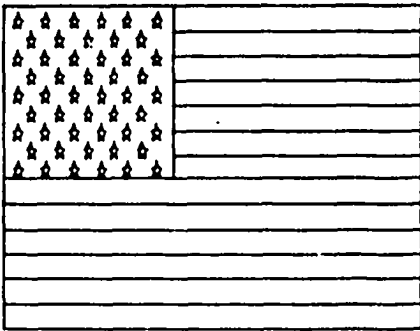


# *United States* *and* *Thailand*



*Development  
Partnership*

# **USAID/Thailand**

## **1991 Action Plan**

### **\* THAILAND DEVELOPMENT GOALS**

#### **\* Sustained Economic Growth**

- Maintain annual economic growth at 9%**

#### **\* Broaden the Benefits of Economic Growth**

- Create new jobs and increase incomes**

#### **\* Manage the Environment**

- Improve the quality of life and**
- Preserve the environment**

### **\* USAID RESPONSE**

- Human Capital and Technology**
- Environment**
- Private Sector Development**
- Financial Markets**

# **HUMAN CAPITAL AND TECHNOLOGY COMMERCIALIZATION**

**1991**

## **Development Problem:**

- Mismatch between large pool of unskilled rural labor with only sixth grade education and the work force needs of the booming modern industrial and service sectors.
- Critical shortages of skilled personnel in areas of engineering, scientific and technical disciplines, e.g., petrochemicals, polymers, information technology, and business management.
- Limited linkages between high quality university research capability and private sector needs for more technology-intensive products.
- Low private investment in research and development.

## **USAID Response:**

- U.S.-Thai university linkages in key engineering, technical and business sectors, to meet current and future Thai skill needs in technical and managerial disciplines.
- Cooperative education programs involving Thai students in U.S. businesses in the U.S. and Thailand; private and public sector initiatives to upgrade the labor force.
- Cooperative work-study programs involving U.S. or Thai universities or secondary schools and U.S. or Thai private sector firms or industrial associations, e.g. machine tools.
- Support for STDB's legal establishment as a sustainable institution encouraging the commercialization of technology in Thailand.
- U.S.-Thai business collaboration promoted through cooperation with the State of Maryland, ASACI and Joint U.S.-Thai business organization.

## **ENVIRONMENT**

**1991**

### **Development Problem:**

- Depletion of natural resource base: water, forests, fish, biodiversity.
- Environmental degradation, particularly in urban, industrial and tourist areas: air and water pollution; solid, toxic and hazardous waste disposal problems.
- Low public awareness of environmental issues and inadequate policy, legal and institutional structure for addressing them.
- RTG has thus designated environmental action as one of three goals under 7th 5-Year Plan.

### **USAID Response:**

- Generate and disseminate information to educate the public and RTG on critical environment/natural resource (ENR) issues relating to urban, industrial and tourism growth and biodiversity conservation, e.g. TV series sponsored by FTL.
- Assist RTG to formulate and implement policies and regulations particularly re air and water pollution, e.g. TDRI/HIID policy program, that led to adoption of "Polluter Must Pay" principle.
- Strengthen RTG staff capability (including provincial/municipal staff) to analyze and address ENR issues
- In selected tourist/industrial sites, assist local authorities and private firms to install appropriate environmental infrastructure and provide needed services in solid waste disposal systems, waste water treatment, hazardous waste control systems.

# **FACILITATING PRIVATE SECTOR CONTRIBUTIONS TO GROWTH WITH EQUITY**

**1991**

## **Development Problem:**

- **Despite rapid economic growth emanating largely from the modern industrial and service sectors, more than half the Thai labor force still derives its income from traditional agriculture. As a result, agricultural labor productivity is low and income disparities are widening, even while skilled and semi-skilled labor shortages hamper industrial/service competitiveness in the world economy.**
- **Overly centralized political and economic decision-making processes do not adequately reflect the views of rural farmers, urban labor or other largely disenfranchised groups. Moreover, the political system lacks strong democratic institutions to balance the power of vested interests over the longer term.**

## **USAID Response:**

- **Facilitate U.S. investment in Thailand to create jobs, expand income opportunities (particularly outside Bangkok) and address continuing development problems, e.g. environmental infrastructure, and opportunities, e.g. agribusiness. (JUST Business, ASACI, Maryland, etc.)**
- **Through U.S. PVOs, strengthen institutional capacity of elected national and local government to participate effectively in public policy debate, e.g., TAF grant.**
- **Through U.S. PVOs, increase the institutional, analytical and communication capabilities of private advocacy groups, particularly those representative of environmental, and democratic interests, e.g., PACT, AAFLI, and those addressing the AIDs epidemic, e.g. PATH, PDA.**

# **FINANCIAL MARKETS AND INFRASTRUCTURE FINANCE**

**1991**

## **Development Problem:**

- Massive shortfall of power, telecommunications, transport and environmental infrastructure requires substantial private investment in light of continuing cap on foreign public borrowing.
- Lack of long-term debt instruments, particularly at the municipal level, to mobilize investment for infrastructure.
- Stock Exchange of Thailand (SET) has limited ability to manage transaction clearances and settlements, share registration and self-regulation, and limited product line (no bonds or futures markets).

## **USAID Response:**

- Municipal/provincial environmental infrastructure projects identified, facilitated by USAID with involvement by U.S. A&E firms, equipment manufacturers and investment bankers, e.g. waste management, waste water treatment, hazardous waste control.
- Assistance to RTG by U.S. investment firms for management of funds generated under recently enacted Social Security legislation.
- Several small privatizations with U.S. investment bankers involved in managing the financial package.
- Bond issue underwritten by U.S. investment bankers, e.g. for power sector investments.
- Linkages between SET and U.S. exchanges, e.g. New York Stock Exchange and Chicago Board of Trade, to improve SET efficiency, expand product line to include futures markets.
- Linkages between U.S. and Thai organizations to upgrade skills of Thai investment professionals, e.g., Chartered Financial Analyst Program.

# **PARTNERSHIP AND TRANSACTIONS**

**\* PARTNERSHIP---**The approach will be to identify Thai development problems and issues, then seek solutions with U.S. expertise, know-how, technology, private sector services and investment.

**\* TRANSACTIONS---**The focus will be on outcomes in each area of emphasis---human capital and technology, environment, private sector development and financial markets. USAID will seek to structure a limited number of transactions that address the issues or problems in a way that builds synergism among USAID programs.

# **TRANSACTIONS**

## **CRITERIA**

**SEEK AND MATCH---Identify Thai problems and issues where U.S. has expertise and comparative advantage.**

**ACCESS---Seek a specific solution among a broad array of U.S. interests; induce competition.**

**LEVERAGE---Insist on a multiple of USAID funds. A \$1 of USAID funds should generate significant additional monies.**

**SUSTAINABILITY---Identify cost sharing, fees, and revenue streams early on. USAID is the catalyst, not the financier.**

**PERFORMANCE CONTRACTING---Charge contractors with outcomes: deals, transactions and agreements. Not reports.**



## **HUMAN CAPITAL AND TECHNOLOGY**

### **\*\* Chulalongkorn College of Petroleum Chemistry and Polymers**

The Chulalongkorn University Petrochemical College envisions a collaborative effort with American universities to create a Southeast Asian program of excellence in polymer sciences and petrochemistry. The college would produce about 40 graduate MSc. degrees per year, of which one third would be from other southeast asian countries. The program will be self-supporting based on a high tuition, university budgets and petroleum and polymer industry participation. U.S. based petroleum and chemical companies are expected to support the College for their manpower needs, research and development, as well as a setting in which to showcase their products. The University is currently investing \$4.2 million for construction of a building to house the college.

### **\*\* Association for Manufacturing Technology**

Rapid growth of manufacturing in Thailand has generated strong demand for machine tools and qualified labor to support this growth. U.S. machine tool technology is highly valued but U.S. market share is low despite competitive prices and good products. The U.S. Association for Manufacturing Technology has been actively seeking ways to increase the U.S. market share and is developing a program proposal which would acquaint and train Thais on U.S. machine tools and controls and position U.S. companies to participate in this fast-growing sector. U.S. firms have already pledged the donation of high-value equipment and training in a joint program with Thai training institutes. Tuition and industry contributions would make the program sustainable.

## **\*\* Cooperative Education Program**

Thailand's higher educational system needs to produce a highly qualified labor force to meet the needs of the economy but much of the training is too academic, especially in technical and engineering fields. Cooperative education opportunities to help bridge this gap are limited in Thailand. Northeastern University, with a long record of successful cooperative education programs, wishes to establish a pilot program which would allow up to 20 Thai students in the United States to undertake an internship (for academic credit) with American companies with operations in Thailand. The program addresses a need for a responsive work force and stronger, sustainable ties to U.S. academic institutions and companies active in the regional economy. U.S. businesses in Thailand are particularly interested in this program to help meet skills needs and are willing to bear the costs for the internships. The program could be expanded to include more U.S. and Thai universities. USAID assistance would help with costs of administering the pilot program, including matching of students and employers and program evaluation.

## **\*\* Information Technology Center (ITC) at Chulalongkorn University**

The ITC will grant undergraduate and graduate degrees in computer science and information technology. In support of this program, the university is investing in a campus wide computer network and a new building to house the Center. The project will use the optimal mix of English and Thai instruction and there are plans to expand the network to most of the Thai universities. Long-term collaboration with U.S. universities for curriculum development, exchange of faculties, and innovative technologies for distance education is desired. There is significant interest among U.S. computer companies in contributing to this program. USAID contributions could fund exposure of key staff to state of the art U.S. technology and explore further ways to facilitate sustainable links to U.S. universities and industries.

## **\*\* Process and Quality Control Center at a Private University**

U.S. manufacturers need a mechanism to upgrade the statistical quality control of Thai component manufacturers. The upgrading should focus on general elements of statistical process control and total quality control but may include custom, company-specific consulting and certification procedures. U.S. universities, including the University of Detroit and the Milwaukee School of Engineering (MSOE), have expressed interest in a collaborative program in Thailand with one or more private universities. Such a program could include cooperation with a local vocational school to upgrade both the management and the work force of companies that wish to improve their Total Quality Control. Potential Thai partner institutions include Assumption, Rangsit, or the Thai Chamber of Commerce Universities. Such a program would be run on a self-sustaining basis with a strong base of participation by Thai and U.S. industries. USAID funds could help with the development costs to design curricula, plan for U.S. faculty participation, and solicit support from private industry.

## **\*\* Certification Program in Production and Inventory Control**

Related to the area of statistical process and total quality control is the demand for stronger capabilities of small and medium manufacturers to plan and manage the production process. This is especially important for suppliers which produce components for industries and must meet stringent demands for quality and delivery times. The American Production and Inventory Control Society (APICS) provides training and certification in the key areas of production planning and management. APICS training materials (books, videos, interactive computer software) are available to conduct qualified training programs in Thailand. The testing and certification process provides a known standard of capability which is broadly recognized by training institutes and industry.

Such a program could be managed by APICS certified staff in collaboration with private industries and a local private university which offers an industrial engineering degree. The program would be established as a for-profit business, would fill an important need of industry, and would link the university and industry in a sustainable partnership with an American professional association. USAID assistance could help with the start-up costs of exchange visits and purchase of some of the course materials.

**\*\* Other Initiatives**

Telecommunications is undergoing phenomenal growth and at least one U.S. company is poised to provide training required to support the rapid expansion of telephone infrastructure. USAID is looking at ways to facilitate or complement this training, as an area of strong comparative advantage and with linkages to substantial future investments in the sector. Most employment opportunities created will be for outside plant technicians, who will be recruited from the ranks of low-skilled workers and provided with high quality technical training.

Numerous industry and educational initiatives are centered on areas outside of the Bangkok Metropolitan Area. For example, training which would facilitate the transfer of U.S. technology in controlled atmosphere processing and packaging for agricultural products to extend shelf life could stimulate increased trade and investment for fresh produce exports and provide new employment opportunities. USAID support for human capital elements in these initiatives could provide a further stimulus to more multipolar development and bring benefits to rural areas which have not shared equitably in the economic expansion.

## **ENVIRONMENT**

### **\*\* Chao Phrya River Cleanup**

**The Chai Pattana Foundation (H.M. the King's Development Foundation) has committed the prestige of the Royal Family to environment, through a campaign to clean-up the country's primary river. This will entail a multi-million dollar long term effort to deal with urban sewerage and industrial waste. The investment in waste water treatment alone is estimated to be a billion dollars over an eight to ten year period. The King's Foundation has asked for short-term assistance to carry out a thorough review of current Thai programs and international experience in waste water treatment and river clean-up and to help formulate policy, regulatory, technical, and administrative recommendations which will set the pattern for water quality, not just for Bangkok, but for the entire nation. We are also being asked to arrange a tour for H.R.H. Crown Princess Sirindhorn, senior government and private sector leaders to visit the United States and see first hand rivers that have been cleaned up successfully. The short term technical assistance and the tour by the Princess and prominent public and private sector leaders is an excellent opportunity to influence major decisions that will result in the application of U.S technology, business opportunities for equipment manufacturers and the demand for U.S. consulting services.**

### **\*\* Hazardous and Toxic Waste Disposal**

**The National Environment Board (NEB), following from its TDP-funded "National Hazardous Wastes Management Strategy" (1989), has received MANRES support to work with other concerned agencies to prepare a National Action Plan for Hazardous Wastes Management.**

The Ministry of Industry, following through on previously agreed priorities consistent with the NEB's National Action Plan, is ready to proceed with design of four industrial waste water treatment centers and four industrial hazardous waste treatment and disposal centers -- all to be under private operators and sustained on a fee-based system. The World Bank is providing a \$700,000 grant for design of a couple of the waste water centers and the Japanese have been approached to provide financing for another. We have been asked to consider assisting with the design of one or more of the industrial waste water or hazardous waste centers. This will be an opportunity to orient designs toward U.S. technology and open up investment opportunities in an area where the U.S. has considerable experience and expertise.

**\*\* Provincial Cities Environmental Initiatives**

As a result of the World Bank's Regional Cities Project, some 35 urban infrastructure projects have been identified. Both the Department of Local Administration and World Bank are seeking USAID support for the design of six solid waste or waste water treatment facilities. The investment costs could approach 50 to 75 million dollars. This will be an opportunity to influence the design of facilities that will use U.S. technology and equipment. Since the facilities are to be privately operated and sustained on a fee basis, it will result in attractive opportunities for U.S. investors.

**\*\* Federation of Thai Industries (FTI)**

USAID is helping FTI to, inter alia, establish a base of technical information regarding American technologies and technical services for industrial environmental management and to stimulate the production of joint-venture pollution-control industries in Thailand to serve the Southeast Asia region. Under a planned agreement with the World Environment Center (WEC), major U.S. manufacturing companies will work with Thai industries to share expertise and technology.

These linkages between U.S. industries and their Thai counterparts will hopefully result in joint-ventures and other investment opportunities as well as the sale of U.S. equipment and material.

**\*\* U.S.-Thai Energy Conservation**

In January, 1990 the RTG National Energy Administration (NEA) developed an energy conservation plan for the industrial, commercial, and residential sectors. NEA expects that the National Energy Conservation Act will be passed in a few weeks by the new Thai Government. The Act calls for the establishment of testing facilities for materials and equipment, research and development, training of technical staff for energy auditing and enforcement of building codes, procuring software and hardware for use in program planning, and design of conservation incentive schemes. NEA has asked USAID to provide one to two person-months of technical assistance to develop a 3-5 year action plan, as well as recommend a U.S. entity to assist NEA with planning and implementation of the Act. NEA has \$10 million earmarked for procurement of expert services to contract with a U.S. organization such as the Tennessee Valley Authority or the California Energy Commission.

## **FINANCIAL MARKETS DEVELOPMENT PROGRAM**

### **\*\* Chartered Financial Analyst Program**

The members of the Stock Exchange of Thailand recognizing that the quality of information and the ethical standards of financial analysts are central to investor confidence in Thailand's emerging securities market have approached the Association for Investment Management and Research (AIMR), an American not-for profit organization of 20,000 investment professionals, to assist in establishing an educational program for financial analysts in Thailand. The program which is managed by the Institute of Certified Financial Analysts (ICFA) of the AIMR aims at the development, examination and certification of a level of knowledge prescribed for high educational standards in the application of the investment decision making process. The Securities Analysts Association (SAA) of Thailand with assistance from USAID will enter into an agreement with AIMR/ICFA to develop a three level certification process. Candidates who pass the level III examination will receive the coveted Chartered Financial Analyst (CFA) designation. The ICFA will assist in curriculum design, candidate preparation, examinations, examination grading, initial staffing and study materials.

### **\*\* Stock Exchange of Thailand Technical Exchange Program With The New York Stock Exchange And Other U.S. Financial Institutions**

The management of the Stock Exchange of Thailand (SET) has requested USAID assistance in establishing a program of technical exchange with the New York Stock Exchange (NYSE) and other U.S. securities industry institutions. The SET until the Gulf conflict was among the fastest growing exchanges in the world. The next boom cycle will outstrip the SET's capacity to handle share and other transactions. The SET has requested assistance in modernization of its clearance, settlements and custody of securities procedures.



As a self regulated market, like the NYSE, the SET would like a technical exchange with the NYSE on trading surveillance and market regulation. Also the SET would like assistance to plan for sophisticated risk management tools such as futures contracts.

## **\*\* Privatization Fund**

USAID in conjunction with APRE/I has initiated discussions with the Industrial Finance Corporation of Thailand (IFCT) to establish a Privatization Fund (Development Facility of Thailand). The Fund would provide guarantees for up to 50 percent of the financing of privatization projects in Thailand. Projects eligible for access to the facility would range from divestiture of all or part of a state owned enterprise to start up of a private enterprise in an area of activity generally undertaken by the public sector in the past. The Fund may complement other transactions such as the Chiang Mai and Phuket solid waste management projects that USAID is developing with local governments. These activities would in principle be eligible for finance from the fund.

## **\*\* Asset Management**

Professional asset management of pooled funds in Thailand is constrained by RTG regulations and inexperienced asset managers. Two transactions will start the process of relaxing regulatory constraints and providing an opportunity for bringing experienced professional asset management to bear on pooled funds in Thailand. The first transaction is a study that will be undertaken with the Industrial Finance Corporation of Thailand (IFCT) and a U.S. asset management firm to identify pooled funds; examine legal and regulatory restrictions on how the funds are invested; analyze present management of pooled funds; and recommend changes that would improve returns on investment of pooled funds.

**The second transaction is a longer term technical assistance program that would help the tripartite committee (labor, employers and government) that has been tasked to plan and implement Thailand's new national social insurance scheme to formulate and implement an asset management program for the funds generated by the new program. The technical expertise would be drawn from among U.S. professional managers of state pension funds, state government staff responsible for the funds and technical experts that advise them on actuarial and legal aspects of managing the funds.**

**\*\* Investment Banking and Infrastructure Finance**

**Development of active primary and secondary markets for long term debt instruments has been identified as the highest priority for Thai financial markets in the 1990s. A number of mega transactions are underway with which USAID has had contact through exploration of possible USAID participation in feasibility studies and/or training. An outgrowth of these explorations has been preliminary discussions with U.S. participants about the possibility of raising some of the funds required for the investments through issuing bonds. The bond issues would be facilitated by working with RTG committees tasked with bond market development. U.S. companies that might be interested are AT&T, Fluor Daniel, Bechtel, and Black and Veatch; among the projects are \$6 billion contract for installation of 3 million telephone lines; contracts for \$800 million of waste water treatment facilities in Bangkok, contracts for 12 private cogeneration facilities of up to 300 megawatts each.**

**\*\* Chiang Mai and Phuket Solid Waste Management** Double digit growth has resulted in environmental problems that are particularly severe in tourist destinations. Pollution in Chiang Mai and Phuket have threatened their respective cultural and natural resource bases which have fueled rapid development. Both municipalities cite solid waste collection and disposal as their number one environmental problem and quickly concede that they cannot sustain growth without addressing this problem. Both municipalities also look to the private sector to replace their inadequate municipal services and greatly respect American technologies and management. Initial investment could range from \$10.0 to \$20.0 million. Given this opportunity, USAID will: (a) provide technical assistance to both cities to develop action plans, prepare tender documents and evaluate responses, and develop revenue streams following the "polluter pays" principle; and (b) ensure maximum US private sector participation in the competitive selection process.

**\*\* Bangkok Waste Water Treatment** With over 8 million people, Bangkok is one of the world's largest cities without a sewerage system. Rapid economic growth and intensified land use have made traditional disposal methods unreliable and created unsustainable environmental conditions. Yet the costs of building a sewerage system from scratch are immense. A USAID study suggested private financing for and operation of waste water collection and treatment systems. The government has accepted this and is now in the process of soliciting private interest in constructing and operating a system for 220 sq. km. of the inner city with a population of 2.6 million and an estimated capital cost of \$800 million. Given this opportunity USAID will follow a similar approach to municipal solid waste management in providing technical services to the Bangkok municipality to prepare and evaluate tender documents and ensure maximum US private sector participation in the process of selecting a concessionaire.

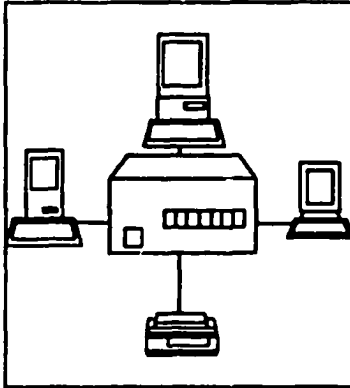
**\*\* Private Power** Rapid industrialization, tourism growth and modernization have placed great demands on the electricity supply in Thailand. EGAT, the state-owned electricity generating authority, which had a comfortable reserve margin just a few years ago, now strains to keep up with demand. The government cap on foreign borrowings cannot accommodate the estimated \$1 billion annual capital costs of new generating capacity. Consequently, private solutions have been explored, with USAID support. In the first major breakthrough, the government has agreed to allow private firms to cogenerate and sell private power. In the first such instance, a 250 MW plant costing \$250 million, will be erected and all three firms in the bidding have US management or ownership. USAID assistance will now focus on: (a) cost sharing feasibility studies for American private power investors; and (b) supporting efforts by EGAT to consider other means to private operations.

**1/ Suspension of the USAID program following the February 23 military coup is giving our industrial competitors an opportunity to improve their strategic positions in Thailand. The Germans (at the behest of their private sector) may step in to assist Bangkok municipality with the private waste water project. The Swedes are financing a privatization management audit for EGAT - a study USAID was asked to support. And the Japanese and Taiwanese remain interested in solid waste disposal for Chiang Mai.**

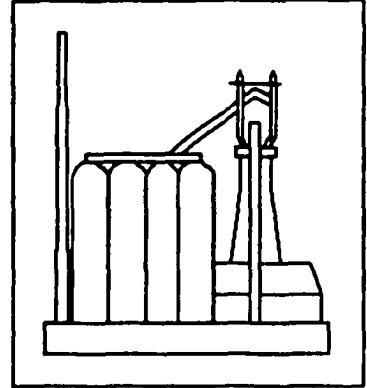
# *PARTNERSHIP*



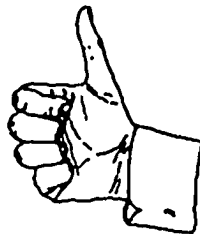
**US Expertise**



**Technology**



**Infrastructure**



**The Window**



**Hum Cap**

**Fin Mkt**

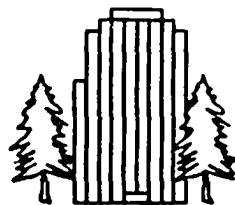
**Infrast**

# MANRES Project

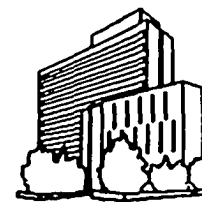
## New Financial Management



US Treasury



FED/NY

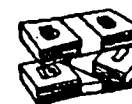


Bank of Thailand

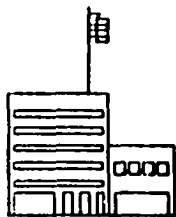


Dollar Account  
for debt service payment to

1. AID
2. ADB
3. IBRD



Baht Account  
Ministry of Finance



USAID



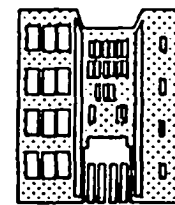
AGREEMENT



Workplan & Policy Agenda



DTEC



Implement Agencies