The U.S. Trade and Development Agency,
The International Finance Corporation and
The World Bank present:

Armenia

Ancient Land–New Direction

Investor Conference

Plaza Hotel, New York City • May 9–11, 2001

IFC
INTERNATIONAL FINANCE CORPORATION
A Member of the World Bank Group

THE WORLD BANK

PROJECT RESOURCE GUIDE

Prepared by Koeppen, Elliott & Associates, Ltd.
in cooperation with Mr. Tribhuwan Narain, President, Service Associates International. Inc.

The U.S. Trade and Development Agency

The U.S. Trade and Development Agency assists in the creation of jobs for Americans by helping U.S. companies pursue overseas business opportunities. Through the funding of feasibility studies, orientation visits, training grants, conferences, and various forms of technical assistance, TDA enables American businesses to become involved in the planning stages of infrastructure and industrial projects in middle-income and developing countries. By doing this, the agency provides American firms with market entry, exposure, and information, helping them establish a position in markets that are otherwise difficult to penetrate.

This report was partially funded by the U.S. Trade and Development Agency (TDA) The opinions, findings, conclusions, or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of TDA or the U.S. Government.

Mailing and Delivery Address: 1621 North Kent Street, Suite 200, Arlington, VA. 22209-2131
Phone: 703-875-4357 * **Fax:** 703-875-4009 * **Web site:** www.tda.gov

INTERNATIONAL FINANCE CORPORATION

A Member of the World Bank Group

International Finance Corporation

The International Finance Corporation (IFC) is a member of the World Bank Group, which is composed of the International Bank of Reconstruction and Development (IBRD), International Finance Corporation (IFC), International Development Association (IDA), and Multilateral Guarantee Agency (MIGA). IFC was established in 1956 to encourage private sector activity in developing countries. It does this primarily through three types of activities: financing private sector projects, helping companies in the developing world to mobilize financing in the international financial markets, and providing advice and technical assistance to businesses and governments.

This report was partially funded by the International Finance Corporation (IFC). The opinions, findings, conclusions, or recommendations expressed in this document are those of the author(s) and do not necessarily represent the official position or policies of the IFC or the World Bank Group.

Address: 2121 Pennsylvania Avenue, N.W., Washington, D.C. 20433
Phone: (202) 477-1234 * Fax: (202) 974-4321 * **Web site**: www.ifc.org

Table of Contents

THE EMERGING ECONOMY[1]

Armenia's economic performance for the last several years has been mixed. In the mid- 1990s, the Government was rather successful in implementing its liberalization and stabilization programs and creating strong macroeconomic prerequisites for growth. By 1994, the Armenian Government had launched an ambitious IMF-sponsored economic program. This stabilization program also helped to establish a suitable policy framework for structural reforms that resulted in positive growth rates in 1995-99. Armenia has also slashed inflation and privatized most small- and medium-sized enterprises. The chronic energy shortages Armenia suffered in recent years have been largely offset by the energy supplied by its nuclear power plant at Metsamor. Continued Russian financial difficulties have hurt the trade sector especially, but have been offset by international aid, domestic restructuring, and foreign direct investment (FDI).

Recent Economic Developments:

Armenia's economy, growing for the last six years at an average of nearly 5%, has withstood considerable pressures since 1999. Inflation remains low at about 1% (1998-2000) and the exchange rate is stable, due in large part to a comfortable level of foreign reserves. Nevertheless, the public views the performance negatively: Armenians do not feel that they have gained much from this growth and they tend to be pessimistic about future economic prospects. Emigration, poverty, unemployment and inequality all remain extremely high. Recent social pressures have been a major source of both increased political instability and resistance to further reforms. However, it seems that the current growth may not be easily sustained without major structural changes to the economy and continued adjustments in economic policy. This is primarily indicated by: (a) low investment rate and thus weak ability to create new jobs; (b) low level of FDI; (c) low exports; (d) low rates of entry of new and restructured enterprises in core manufacturing; (e) an underdeveloped financial system; and (f) high income inequality.

Armenia's growth must be accompanied by greater generation, which is critical to re-establishing public trust in the Government's strategy and to halting the high rate of emigration. Reforms in the business and investment climate are now required, with emphasis on microeconomic issues and institution building in several core areas, including among others, social sectors. As seen in the EBRD's *Transition Report 2000* (pp 13-131), key challenges remain while significant progress has been made.

[1] These sections are culled from information made available, at various times during 2000-2001 by the offices of the World Bank (recent economic developments), EBRD (Transition Report 2000), IFC (internal project reviews, working files and databases), US Embassy Commercial Service (Investment Climate, BISNIS database), Armenian Development Agency (Investment Profile 2000), HSBC (Country Profile) in Yerevan.

Key Reform Challenges

- With high fiscal and current account deficits, restoration of tax discipline is needed to maintain fiscal balance while safeguarding core public services.
- After a year of paralyzing political uncertainty the reform process needs to regain momentum, including privatization of power distribution and measures to improve the investment climate.
- Non-transparent or inconsistent regulation, gaps in the legal framework and uneven application of the rule of law impede investment and call for the accelerated institutional reforms.

Liberalization, stabilization and privatization	Enterprises, infrastructure, finance and social reforms
1991 Land reform begins (Jan.); Small scale privatization begins (May); Independence from Soviet Union (Sept.)	
1992 VAT introduced (Jan); Foreign trade registration abolished (Jan); Privatization law adopted (Aug); Central bank law adopted (Dec)	
1993 New currency (Dram) introduced (Nov)	1993 Stock exchange established (May)
1994 First privatization program adopted (Jan); Tradability of land permitted (Feb); Cease-fire in Nagorno-Karabakh (May); Voucher privatization begins (Oct)	
1995 Large scale privatization begins (Apr); Export surrender requirement eliminated (Apr); Most prices liberalized (July); Treasury bills market initiated (Sept)	1995 Bankruptcy law adopted (May); Foreign bank ownership allowed (June); Banking crisis peaked (Sept).
	1996 First foreign bank opened (Mar); Banking law amended (June); IAS audit of banking system (July)
1997 Full current account convertibility introduced (May); Major tax reform (May); First international tenders launched (Nov); new privatization law adopted (Dec).	1997 Bankruptcy law enacted (Jan); Energy regulatory commission established (Jun); Energy law adopted (Jun); Financial rehabilitation plan for the energy sector adopted (July); National telecommunications operator privatized (Dec).
1998 New customs law adopted (Dec).	1998 Telecommunications law adopted (Feb); Transport law adopted (Feb); IAS accounting for banks introduced (March); Law on accountancy (May) adopted; Securities and Exchange Commission established (Nov).
1999 New law on property rights adopted (Apr); EU partnership agreement (June)	1999 New poverty benefits system introduced (Jan); New civil code introduced (Jan); Increase in energy tariffs (Jan); New reserve requirements for commercial banks (Apr).
2000 European Parliament approves Council of Europe accession (June); Law on privatization of power distribution passed (July).	2000 New securities market law adopted (Jun); First private management of water utility (July).

These reforms have not been achieved easily. In 1997-2000 the process was affected by political resistance, insufficient government capacity in several areas, external shocks, and considerable delays in extending the World Bank s Enhanced Structural Adjustment Facility arrangements and disbursement of tranches of the third Structural Adjustment Credit to Armenia (SAC III). However, their continuation has offset, in many ways, the political uncertainties of late 1999 and early 2000 that adversely impacted the economy. Annual GDP growth in 1999 amounted to only 3.3%, as the crisis of confidence resulted in a drastic reduction of investment activity, delays in finalizing several large investment projects, and a serious deterioration in tax and revenue collection, particularly by public utilities. Privatization continued in 1999-2000 but at a slower pace; no major strategic privatization bringing in considerable foreign investment was finalized. Still, several medium-size privatizations were completed successfully in 2000, including those in the chemicals, electronics and diamond-polishing sectors. The recent failure of the Armenian Government to successfully privatize Armenia s electricity distribution companies (distco) will delay the World Bank s release of SAC IV. However, the Government has indicated that it still plans to successfully privatize the distco by the end of 2001 and will announce these plans at the Conference.

Overall, despite considerable external pressures, the macroeconomic situation has remained rather stable when compared to other low-income countries in the Former Soviet Union (FSU). Armenia s relative stability, liberal legal and tax regime, skilled work force, and natural beauty together with a large, international Diaspora facilitate direct investment in Armenia. Armenia's recent admission to the European Parliament underscores its reform efforts.

The Government recognizes the urgent need to facilitate private investment and growth and remains committed to adjusting its policies to eliminate distortions in the business climate and strengthen its capacity for investment promotion. Since reviewing the obstacles to investment,[2] the authorities have set up a High-Level Business Council to support such reforms through a consultative process with the investor community. Actions taken to date in these areas are the focus of Government statements at the Conference.

In addition to investment, growth is expected from rising import demand in traditional markets (Russia and other countries of the FSU) as those economies recover, and from non-traditional markets, such as the Middle East and Western Europe. Export trend volatility reflects not only the specific nature of Armenia s main export products (e.g., jewelry and processed diamonds) but also private sector weakness and the instability of several of Armenia s major export markets. Strong export growth requires continued improvements in both the business environment and relations with Armenia s neighbors. Infrastructure investments to rehabilitate transport and communications linkages with neighboring countries will significantly facilitate growth in external trade and develop transit potential.

[2] FIAS — A Joint Service of IFC and The World Bank: "Armenia - Administrative Barriers to Investment", November 2000. Key recommendations from the study conducted at the request of the Office of the Prime Minister and the Minister of Industry and Trade were discussed in a workshop in Yerevan in October, 2000 and are scheduled to be discussed in the legal and tax session at the conference.

The ongoing conflict with Azerbaijan over the ethnic Armenian-dominated region of Nagorno-Karabakh and the breakup of the centrally directed economic system of the former Soviet Union contributed to a severe economic decline in the early 1990s. Recent progress in negotiations on the status of Nagorno-Karabakh provides some hope for a resolution of this conflict, which would further support political stability in Armenia and the whole region. Normalization of economic relations with its neighbors would bring major benefits to Armenia through lower investment risks, lower transportation costs, and stronger opportunities for trade and regional cooperation.

ARMENIA
BASIC AND COMPARATIVE DATA FOR INVESTORS[3]

Official Name: Republic of Armenia
Capital: Yerevan
Language: Armenian
Head of State: President Robert Kocharian
Head of Government: Prime Minister Andranik Margarian
Year of Independence: 1991
Next Presidential Elections: March 2003

Currency: Dram	US$1=532	US$1=547	US$1=535
Area: 29,800 square km	2001	2000	1999
Time: GMT +4			
Fiscal year: January to December			

Progress with Transition and Reforms (EBRD)	Armenia	Azerbaijan	Georgia	Kazakhstan
Mid-200 private sector share of GDP (%)	60	45	60	60
Privatization, large scale	3	2-	3+	3
Privatization, small scale	3+	3+	4	4
Governance and enterprise restructuring	2	2	2	2
Trade and foreign exchange system	4	3+	4+	3+
Banking reform and interest rate liberalization	2+	2	2+	2+

Legal Transition Indicators: Financial Regulations, 2000 (EBRD)	Overall	Extensiveness	Effectiveness
Armenia	2+	2	3
Azerbaijan	2	2	2-
Georgia	3-	3+	2
Kazakhstan	3	3	3-
Russia	3	3	3-

Labor Force	1999
	1.5million
In agriculture	55%
In services	25%
In mining, manufacturing and construction	20%

Labor Cost Competitiveness (EBRD)	1999	1997
Armenia	0.4	0.3
Azerbaijan	0.6	0.6
Kazakhstan	0.7	0.8
Ukraine	0.4	0.6
Russia	0.2	0.6

[3] These data are approximates for comparisons and illustration only. No attempt has been made to reconcile data across different sources. Investors may also appraise details and definitions in special reports and Country Investment Profiles published by European Bank for Reconstruction and Development, HSBC and Armenian Development Agency, Investment Climate Statement and Country Commercial Guide of the US Embassy in Yerevan and the IFC / World Bank Group web sites (partly reproduced here).

Infrastructure Transition Indicators, 2000	Armenia	Georgia	Azerbaijan	Kazakhstan
Telecommunications	2+	2+	1+	2+
Electric Power	3+	3+	2	3
Railway	2	3	2+	2+
Roads	2+	2	1+	2
Water and wastewater	2	n.a.	2	1+

Main Exports US$383 million (1999)	
Precious stones	(46%)
Base metals	(15%)
Mineral products	(12%)
Prepared foodstuffs	(7%)
Machinery	(7%)
Textiles/related	(4%)
Plastics and rubber	(3%)
Other	(6%)

Main Imports US$919 million (1999)	
Precious stones	(20%)
Chemicals	(9%)
Mineral products	(14%)
Prepared foodstuffs	(7%)
Machinery	(15%)
Vehicles	(3%)
Vegetable products	(12%)
Other	(21%)

Main Export Destinations	
Belgium	36%
Iran	15%
Russia	15%
USA	7%
Germany	4%
UK	4%

Main Sources of Imports	
Russia	17%
USA	11%
Belgium	11%
Iran	10%
UK	8%
UAE	5%

Share of Commodities in Total Exports of Goods

Armenia	Precious stones, minerals and metals	70
Azerbaijan	Oil, metal and cotton	79
Georgia	Metals, fuel and tea	59
Kazakhstan	Grains, metal and fuel	77
Russia	Metal and fuel	64

Foreign Direct Investment ($US m)	Est. for 2000	1999
Armenia	150	131
Azerbaijan	274	510
Georgia	109	96
Kazakhstan	1500	1584
Russia	2000	746

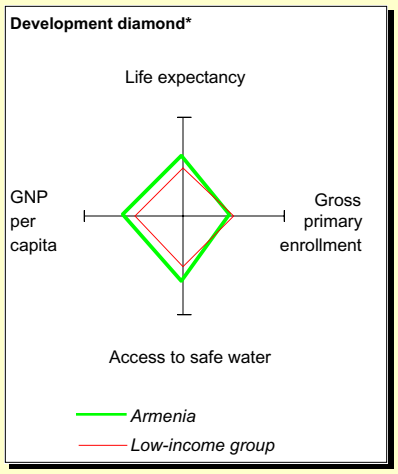
Foreign investors (1995-2001, $US m)

	Russia	52
(Pernod Ricard; Yerevan Brandy Company)	France	26
(OTE; ArmenTel)	Greece	12
	Luxembourg	11
(Fanfano Group; Diamond Co. of Armenia)	UK	9
(First Dynasty Mines)	Canada	9
(AK Development; Hotel Armenia)	USA	6
(RENCO spa; Hotel Yerevan)	Italy	5
	Cyprus	3
	Spain	2

Armenia at a glance

9/7/00

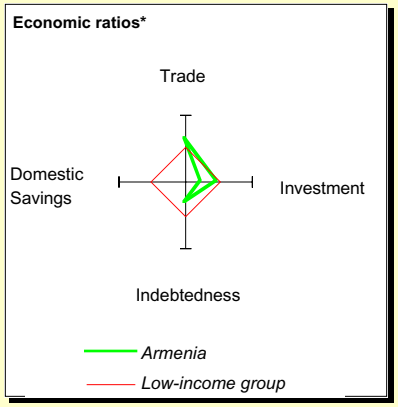
POVERTY and SOCIAL	Armenia	Europe & Central Asia	Low-income
1999			
Population, mid-year *(millions)*	3.8	475	2,417
GNP per capita *(Atlas method, US$)*	490	2,150	410
GNP *(Atlas method, US$ billions)*	1.9	1,022	988
Average annual growth, 1993-99			
Population *(%)*	0.2	0.1	1.9
Labor force *(%)*	-1.5	0.6	2.3
Most recent estimate (latest year available, 1993-99)			
Poverty *(% of population below national poverty line)*	55	..	..
Urban population *(% of total population)*	67	67	31
Life expectancy at birth *(years)*	73	69	60
Infant mortality *(per 1,000 live births)*	15	22	77
Child malnutrition *(% of children under 5)*	3	8	43
Access to improved water source *(% of population)*	85	..	64
Illiteracy *(% of population age 15+)*	1	3	39
Gross primary enrollment *(% of school-age population)*	90	100	96
Male	88	101	102
Female	93	99	86



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

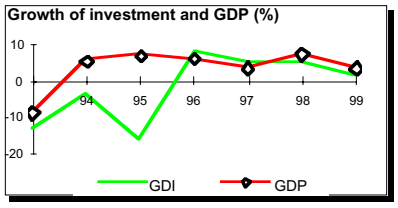
	1979	1989	1998	1999
GDP *(US$ billions)*	..	..	1.9	1.8
Gross domestic investment/GDP	..	..	19.1	19.5
Exports of goods and services/GDP	..	..	19.0	21.0
Gross domestic savings/GDP	..	..	-14.2	-9.3
Gross national savings/GDP	..	..	-4.8	3.1
Current account balance/GDP	..	..	-21.3	-16.6
Interest payments/GDP	..	..	0.8	0.8
Total debt/GDP	..	..	42.2	47.2
Total debt service/exports	..	..	8.9	14.6
Present value of debt/GDP	..	..	29.9	30.7
Present value of debt/exports	..	..	120.5	126.9

	1979-89	1989-99	1998	1999	1999-03
(average annual growth)					
GDP	..	-3.2	7.2	3.3	5.6
GNP per capita	..	-3.0	6.3	3.0	5.3
Exports of goods and services	..	-18.2	-0.1	17.6	11.0

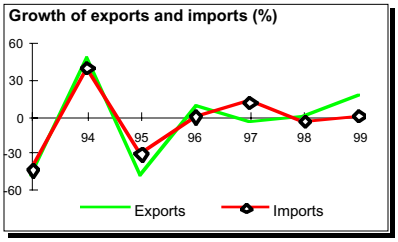


STRUCTURE of the ECONOMY

	1979	1989	1998	1999
(% of GDP)				
Agriculture	..	..	34.0	28.7
Industry	..	..	30.8	32.6
Manufacturing	..	..	21.9	23.0
Services	..	..	35.3	38.7
Private consumption	..	..	103.6	98.5
General government consumption	..	..	11.1	10.7
Imports of goods and services	..	..	52.8	49.7



	1979-89	1989-99	1998	1999
(average annual growth)				
Agriculture	..	..	12.6	1.3
Industry	..	..	1.0	5.9
Manufacturing	..	..	-2.7	5.2
Services	..	..	5.6	3.0
Private consumption	..	..	4.3	0.4
General government consumption	..	..	-2.4	-0.7
Gross domestic investment	..	..	5.0	1.1
Imports of goods and services	..	..	-4.4	0.1
Gross national product	..	..	6.5	2.7

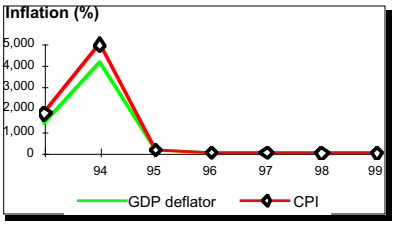


Note: 1999 data are preliminary estimates.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

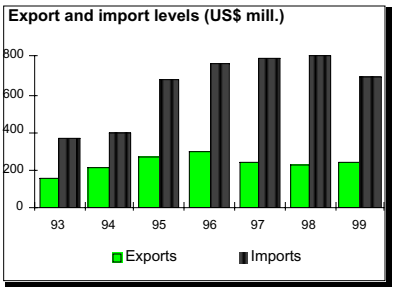
PRICES and GOVERNMENT FINANCE

	1979	1989	1998	1999
Domestic prices				
(% change)				
Consumer prices	..	..	8.7	0.7
Implicit GDP deflator	..	..	10.8	0.0
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	..	17.1	18.9
Current budget balance	..	..	1.2	-0.1
Overall surplus/deficit	..	..	-4.3	-6.1



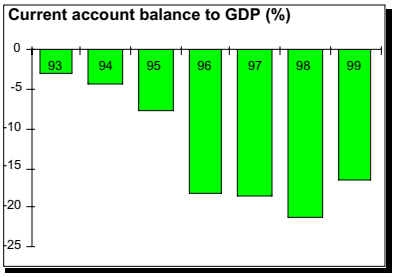
TRADE

	1979	1989	1998	1999
(US$ millions)				
Total exports (fob)	..	..	221	232
Copper mineral, concentrate	..	..	9	..
Molybdenum mineral, concentrate	..	..	8	..
Manufactures	..	..	102	..
Total imports (cif)	..	..	806	697
Food	..	..	201	129
Fuel and energy	..	..	203	..
Capital goods	..	..	113	80
Export price index *(1995=100)*	..	..	..	..
Import price index *(1995=100)*	..	..	..	..
Terms of trade *(1995=100)*	..	..	..	..



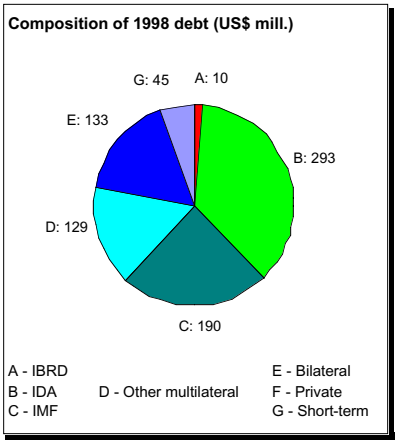
BALANCE of PAYMENTS

	1979	1989	1998	1999
(US$ millions)				
Exports of goods and services	..	..	360	383
Imports of goods and services	..	..	1,000	919
Resource balance	..	..	-640	-536
Net income	..	..	60	55
Net current transfers	..	..	177	174
Current account balance	..	..	-403	-307
Financing items (net)	..	..	406	312
Changes in net reserves	..	..	-4	-5
Memo:				
Reserves including gold *(US$ millions)*	..	..	292	305
Conversion rate *(DEC, local/US$)*	..	..	504.5	535.0



EXTERNAL DEBT and RESOURCE FLOWS

	1979	1989	1998	1999
(US$ millions)				
Total debt outstanding and disbursed	..	..	800	871
IBRD	..	..	10	9
IDA	..	..	293	352
Total debt service	..	..	42	65
IBRD	..	..	1	1
IDA	..	..	2	2
Composition of net resource flows				
Official grants	..	..	50	103
Official creditors	..	..	85	97
Private creditors	..	..	0	0
Foreign direct investment	..	..	232	96
Portfolio equity	..	..	..	4
World Bank program				
Commitments	..	..	125	48
Disbursements	..	..	43	66
Principal repayments	..	..	0	0
Net flows	..	..	43	66
Interest payments	..	..	2	3
Net transfers	..	..	40	63



ARMENIA AND ITS ENTERPRISES

Compact Technically Skilled Platforms at the Gateway to Former Soviet Union Markets

Armenian enterprises offer considerable potential —a technically skilled labor force and nearby export markets —to the Armenian Diaspora, as well as other strategic investors prospecting opportunities in the Former Soviet Union (FSU). In addition, where skilled labor adds value in technology-based supply chain — as in IT and software-- major international players have begun involving Armenian enterprises in their business plans to compete internationally.

Growing exports and foreign investments are helping to increasingly convert Armenian advantages into international profits, as reforms continue to offset the remaining adverse effects of past economic crises. Aided by the international community, reform efforts of the Government continue to stabilize the economy. With injections of small investments, Armenian enterprises are now poised to deliver strong, competitive international market performance. Locating and investing strategically in Armenia can help integrate larger FSU clients and markets, especially technology-based ones, into the global market place. Armenia's erstwhile position in the Soviet technology complex can be recaptured by infusing western competitive modes of production into FSU markets through Armenia. The experience of Pernod-Ricard and Yerevan Brandy Company illustrates this strategic vision in one non-technology area.

In the Soviet era, Armenia supplied both expertise and manufactured goods -- electronic equipment, machines, construction equipment, tools, optical and scientific instruments —an internationally competitive technical-industrial skill set. The core human assets are available today, even while large state-owned infrastructures remain to be privatized and rejuvenated. Those that have privatized, such as an avionics supplier, Mshak Co., offer modern technology centers for world-class numerical control technologies for onward sales and services in FSU.

Structural Reforms Have Brought Business Gains and Offer New Directions

During the 1990s a series of economic shocks brought down what was the fourth-highest per capita income in Soviet Union to a meager per capita GDP of about 500 dollars. During the last few years, growth has been impressive, particularly in the construction sector. Initially, public skepticism over the sustainability of market reforms rose as household surpluses and investments in local companies shrank, the resulting liquidity starving their business plans. This discouraged entrepreneurship and risk-taking, leaving small- and medium enterprises (SMEs) competing for funds with infrastructure and privatization prospects. Now a number of them are at different stages of progress -- GEC Alsthom is proposing to install a gas-turbine facility at Yerevan Thermal Power Plant as international economic activity picks up. The Nairit chemical complex recently returned to profitability with improved marketing and expanding exports of synthetic rubber. Nevertheless, even though Austrian Airlines has just started flying to Yerevan, a world- class cargo terminal building at the Zvartnots airport lies vacant. The mining, smelting and food-processing sectors have recorded gains subsequent to irrigation, transport and energy

sector projects and programs of the World Bank and the European Bank for Reconstruction and Development (EBRD).

Structural reforms have begun to take hold and to pass on economic gains to the business sector. Profits from successful fruit, vegetable and food processing operations now allow owners to divert some investment to newer technologies (e.g., Tetra-Pak and UHT, lengthening the shelf life of farm products) and ancillary operations. Nubar Goudsouzian, a Canadian Diaspora investor, started a tomato cannery — Karmir Lolik -- with a few hundred thousanddollars and now expects to raise $1.6 million from the EBRD to expand its market by meeting international and western food specifications. USDA and USAID have sponsored programs in agriculture, and most business infrastructure sectors have delivered IT, transport, energy and education-related assistance. In the energy sector, the privatization of distribution companies is expected to boost the service and ancillary cables, switching, and monitoring equipment industry. Tourism developments, following a construction boom, now offer increasing opportunities for its Diaspora to spend more time in Armenia. Investments in time-sharing town houses and bed and breakfast arrangements are being proposed.

Meanwhile, many skilled Armenians continue to emigrate, settling in Russia and elsewhere, hoping to remit cash wages. These problems of depleting human resources, especially in the IT sector, are compounded as enterprises get more isolated from regional and global markets. With only two open borders -- a short one with Iran (whose own international isolation renders it useless for further trans-shipment of goods to the West) and another with Georgia (where civil strife in Abkhazia and South Ossetia limits the value of overland routes to the Black Sea) -- the price of transporting goods to international markets partially offsets the advantages of low wages and tariff reductions. The cost of inputs and capital goods so crucial to becoming internationally competitive will continue to rise if regional transportation arrangements offering lower-cost and assured timely delivery arrangements are not in place.

Overall, job opportunities and consumer demand remain depressed as SMEs cater to a tiny domestic market. To emerge out of stagnation and inefficiency they hope to acquire modern techniques, as well as new internationally competitive skills, by using production modes commensurate with marketing globally competitive goods and services. With this strategy, they expect to find new ways to overcome the business constraints they face. The Government is doing its part to reduce barriers, and the private sector looks eagerly to integrate with the West, launching Armenia in a new direction.

Business Investments — The Potential and Record

Armenian enterprises cannot easily forge equity links, strategic alliances, licensing arrangements, and R&D partnerships with neighboring countries. Exports represent about 20% of GDP, but have shown more promise recently. The Russian financial crisis of 1998 rapidly reoriented Armenia's foreign trade, making the EU its predominant trading partner -- but largely in cut diamonds. Overall, this is not sustainable. Manufactured and semi-manufactured goods that offer Armenia the most promise still encounter difficulties penetrating Western markets. Consequently, foreign investment of capital, technology and international trade networks to

modernize them and their processes offers the maximum opportunity to enterprises. Although concessional loans and humanitarian assistance from the Diaspora have been significant, major investment of capital and technology into enterprises has not resulted. It has lagged behind most other FSU states and far behind others in Central and Eastern Europe.

The bulk of recent investments resulted from only a few transactions, of which the most significant one was the acquisition of Armentel by Greece's OTE. In spite of a dispute between OTE and the government over tariffs, and the resulting high costs of doing business for the IT sector, this was an advance in upgrading the telecommunications system critical for long-term development. Approximately 1,350 companies with foreign participation are registered in Armenia, with over 70 percent involved in trading activities. Multinational companies operating in Armenia include Coca-Cola, Huntsman, Marriott, ABB, Alcatel, Glaxo-Wellcome, HSBC, KPMG, and Pernod-Ricard. The annual foreign direct investment (FDI) during 1995-1997 ranged between $20-50 million and total FDI reached $500 million in January 2000, originating primarily from the Diaspora communities in the U.S., Russia, Iran, France, Greece, the UK, Germany, and Syria — far below the full potential of available opportunities.

During the early 1990s, only a handful of U.S. firms came in each year but over 15 U.S. firms invested in 1995 alone. Later, as Procter & Gamble, M&M-Mars, Xerox, Dell, IBM and others began supplying the Armenian market, three major hotels -- the Armenia, the Yerevan, and the Ani -- were privatized and sold to American investors. In 1996, Marriott International was contracted to manage the Armenia Hotel; that same year, a Greek-owned Coca-Cola bottling plant began production. The American Armenian Exploration Company has spent over $20 million on oil and gas exploration. An American-Armenian joint venture is upgrading wine and cognac production at the Ararat winery. Jermuk, an American-Armenian joint venture, produces one of the more popular brands of mineral water in Armenia. A number of projects, including electronic components, machine-made rugs, fruit juice processing and packaging, and the construction of hydropower plants, are currently in various stages of negotiation.

In general, modern-technology based infrastructure investments in which Western multinationals have already signaled an interest, such as telecommunications, software, electronics, medical diagnostics, food processing, and diamond cutting and polishing, testify to the appeal of Armenian enterprises. Western investors have recently given much attention to Armenia's software industry comparing it with India and Hungary for low-cost, high-quality code writers -- an asset conducive to the use of new Information Technology to overcome Armenia's geographic isolation. Larger scale investments, particularly those bringing modern means of adding a competitive edge to former Soviet-style modes of production and enterprise are essential if Armenia is to realize its potential.

This new direction, in which Armenia may claim the future, forms the thrust of the projects selected to demonstrate investment opportunities at this conference. Issues related to realizing the returns may be discussed in sector sessions attended by Armenian Government officials, as well as World Bank, IFC, TDA and other experts conversant with Armenia's investment terrain.

The Investment Terrain - Background and Sector Opportunities

Background

Most Armenian companies, once state owned enterprises (SOEs), were established to be the main suppliers of a specific range of products to FSU countries. As a result, they have large factories with plenty of space and infrastructure already installed. This allows new owners almost limitless land and space resources to cater to future needs. The most important asset of the manufacturing sector is, nevertheless, the technical skills of workers and educated professionals available to supervise manufacturing operations. This skill level allows investors to factor in a greatly reduced lead time to get idle workshops into full operating condition, provided funds to allow refurbishment of old equipment are made available.

Most operating enterprises have been acquired by Diaspora Armenians with reasonably long exposure as traders in the products they manufacture or as employees of similar companies in the West. This brought to the enterprises new avenues for marketing their products through existing business relationships. This linkage offers the Diaspora in the multinational firm an opportunity to act as an intra-preneur and seek out FSU markets through his Armenian links. Technology exchange and product development issues are to be discussed in the Technology Session at the Conference.

Organizations such as the U.S. Department of Agriculture s Marketing Assistance Program, the World Bank s Enterprise Development Project, and the International Executive Service Corps provide product, marketing and technical support to enterprises. These programs act to catalyze active consideration by potential foreign investors and foreign lending institutions. More recently the government has been working with the Lincy Foundation to direct investments into the private sector as the World Bank prepares another private sector development program to be presented at this Conference.

The Opportunities

In assessing the overall investment environment, IFC and TDA staff and consultants focused on investment fundamentals rather than on appraising the feasibility of specific projects. Matching investments proposed or sought with any explicit foreign investor interest —albeit not entirely from the Diaspora — was one important criterion. Although this was notsystematically adopted, as ideally needed for developing a robust investment portfolio, a sampling of opportunities that exist was identified. Needless to say, it is recommended that investors carry out their own "due diligence".

Based on a review, it is fair to say that numerous opportunities can be identified in the following sectors:

Agriculture:

The agricultural sector is the country s largest employer and accounts for over 25% of GDP. Armenia produces grain crops, vegetables, and high quality fruits including grapes, figs, pomegranates, apricots, peaches, potatoes as well as cash crops like tobacco, grains, essential oils (such as geranium), rose, peppermint and herbal teas. In the Soviet era, fruits and grapes predominated, but in the early transition years they were partly replaced with cereal crops. Grapes traditionally brought income from wine exports, and fruits were either canned or exported fresh. By 1998 the area under cereal crops had grown to the detriment of orchards and vineyards as Armenians strove towards self-sufficiency. In spite of this, the wine grape harvest rose and the main purchaser of grapes remains the Yerevan Brandy Plant. The development of the agricultural sector, hampered by fragmentation, inadequate distribution, and inefficient transport infrastructure, began with the rehabilitation of irrigation systems. As a result agribusiness, especially organized cultivation of fruits apples, peaches, plums and tomatoes, was immediately followed by extraction of concentrates and packaging of juices. These recorded a strong growth and production of various food products like jams, preserves, dairy products, confectionery and all areas of food processing saw resurgence. The main products are canned fruits and vegetables, milk and dairy products, meat and meat products, mixed feed, flour, bread, alcohol, soft drinks, mineral water, and cigarettes. With modern processing and packaging technologies, Armenia s fruit and vegetable products will have the potential to enter international markets. New packaging technologies and capital for long-term investment are needed to unlock the sector s potential, as most food processing plants and canneries are actively looking for foreign partners to increase their exports.

Armenian brandy has a long tradition and is of a high quality. In 1998 Pernod-Ricard (France) bought the Yerevan Brandy Winery for US$28 million. Pernod-Ricard has since launched a major sales and investment effort, spending US$10 million on developing viticulture and buying grapes, and another US$5 million in developing the winery itself. It produces Ararat brandy (three or five years old) and six brandies ranging from seven to 25 years old.

Armenia has about 700 natural springs producing high-quality mineral water. The most famous are at Jermuk, Arzni, Dilijan, Bjni, Hankavan and Sevan. Less than a fifth of the springs have been studied and recommended for use as drinking water. However, Armenian mineral waters have medicinal qualities and the potential to become an important export item. Currently, mineral water products are exported to markets including the US, Europe, the Near East and the CIS. However, despite abundant availability, mineral water production has

dropped because of difficulties in exporting and a decrease in domestic demand. Castel Group (France) has invested in a mineral water plant as well as a brewery. In November 1999 the Yerevan Brewery won the Gold Star at the Geneva Brewers Competition, surpassing 54 other countries. The brewery was privatized in 1997 and operates two production lines.

Hotels and Tourism

Tourism is one of the Armenia s most promising developing industries, offering good opportunities for foreign investment. Yerevan and several provincial cities and regions are becoming a focus for tourism. The richness of archaeological and historical sites and monuments offers a real opportunity to develop Armenia as a center for tourism. Before the break-up of the Soviet Union, approximately 700,000 tourists visited Armenia each year, of whom about 100,000 came from outside the Soviet Union. Since the recent economic downturn, tourism has gradually picked up, with 39,000 visitors contributing 1.9 per cent to GDP in 1999. In order to help boost prospects for the sector, the Government is actively encouraging foreign companies to invest in tourism. With relatively modest hotel accommodations[4] and inadequate local transportation, Armenia is not yet considered an attractive tourism destination by international operators. Recent assessments by Irish tourism experts indicate a strong tourism industry potential, given a well-managed marketing program and niche tourist developments supported by hotels.

Supported by its warm climate, Armenia s main tourist attractions include Lake Sevan set in the mountains, an Olympic skiing base at Tsakhkadzor, many archaeological sites, churches, monasteries and historical monuments, and health spas in Jermuk. There are facilities for water sports, winter skiing, mountaineering, caving, hiking, horse riding and fishing. Armenia has a number of spa resorts centered on medicinal springs that offer considerable potential for health cures. There are also opportunities for ecotourism , which includes educational/ recreational field trips for bird watchers and botanists. There is also potential for cultural, ecological, regional and religious tours. With the necessary infrastructure investments, Armenia's long history could support a large tourism industry.

[4] There are more than 90 hotels in Armenia, with over 12,000 beds —a fifth are in Yerevan. There are also newly built hotels offering additional accommodation. The Hotel Armenia, Hotel Ani and Hotel Yerevan, three of the largest in Yerevan, have been privatized and refurbished. In November 1999 the Overseas Private Investment Corporation (OPIC, US) approved a loan of US$ 18 million to AK Development (US), which won the international bid to buy the Hotel Armenia, the country s leading hotel. It was OPIC s first financing deal in Armenia. The IFC also approved a US$ 3.6 million equity investment in the hotel. Once fully renovated, the hotel will become part of the Marriott International chain. Ani Enterprises LLC (US), which bought the Ani Hotel, is to invest US$ 10 million in its renovation. Several more sizeable hotels are due to be privatized, the Hrazdan, Erebuni, Dvin, Arabkir, Sebastia and Shirak Hotels. In addition more hotel properties throughout the country have been approved for privatization and many others are being identified. The properties for sale are in prime locations in Yerevan and other main cities, as well as tourism centers such as Sevan, Vayots Dzor (Jermuk), and Kotayk. Most are not overstaffed, have little or no debts, and require minimal investment to maintain operations. There are also some unique opportunities to invest in uncompleted construction sites.

Other tourist locations include: Yerevan's many historic and religious sites (Geghard monastery, pagan temple at Garni, Echmiadzin church); sights to the south of Yerevan (Amaghou valley, Noravank monastery and the spas of Jermuk); Siunik (mountain scenery, Tatev monastery); Gyumri (mountains and lakes); and the Lake Sevan area and Dilijan, where there is potential for skiing. Armenia was the world's first country to adopt Christianity as a state religion and is celebrating its 1,700th anniversary this year with a series of cultural exhibitions and events.

Information Technology and Software

Armenia s IT industry has very strong prospects, and has a leading role to play in the country s long-term economic development not only as a profitable sector in itself, but also for its potential impact on other sectors. At present more than 40 Armenian and 12 foreign software companies employ more than 300 programmers. The biggest software firm in Armenia is HPL Armenia, a subsidiary of Silicon Valley-based Heuristics Physics Labs, Inc. Other leading firms include Hailink, Boomerang Software, Yeretron, and Credence. Because job opportunities are limited, a large number of programmers are unemployed or work as computer maintenance specialists or operators, rather than for software firms. However, software development has become so popular in Armenia that many mathematicians and physicists are changing their specialties to become software professionals. Many Armenian IT experts were previously employed in the defense industry. Low start-up costs combined with readily available, highly skilled, inexpensive labor offers ample opportunity for investment in IT and software development.

Building and Construction

There are five large construction firms that have survived since before independence as well as numerous new, smaller enterprises. The government and the international community provide funds for new houses in the earthquake zone and for some projects in Yerevan as well as for road construction, but few opportunities are offered to foreign firms. The privatized hotels are being refurbished by British, Italian and US firms as overall real estate activity gathers momentum and the price of land remains depressed. Araratcement, the largest producer, produces about 250,000 tons per year, but has capacity of 1.2 million tons. It plans to produce reinforced concrete goods for transport projects with investment requirements of under $5 million. Materials such as wall and floor tiles, insulation and other surface applications, as well as building components like heat, ventilation and air conditioning are indicating strong business prospects.

Industry and Technologies

Armenia's wide-ranging manufacturing industries produce metal-cutting machine tools, forging-pressing machines, electric motors, tires, knitwear, hosiery, shoes, silk fabric, washing machines, chemicals, trucks, watches, industrial tools, mainframe computers and microelectronics (previously sold to the Soviet defense industry). Armenia established itself as the key developer and producer of a third of the high-tech computer and other electronics for the Soviet defense and space systems, with the best-equipped enterprises with highly qualified personnel. These skilled specialists and infrastructure present good investment opportunities today.

Armenian firms are able to produce electronic chips, printed circuits for TVs, VCRs, computers, accessories, and consumer or industrial electronic goods, all with high export potential. Before independence, Armenia was a leading producer and exporter of high precision machine tools, power transformers, mobile power stations, alternators, hydraulic pumps, compressors, forklift trucks, forge-and-press equipment and instruments, all of which were exported to over 30 countries. It still offers competitive metal cutting and grinding machines for export and has retained its ability and capacity to make high precision machine tools, including stone cutting and processing machine tools, components, and spare parts. The automotive and aerospace venture Hrazdanaero assembles Russian Su-31 sport planes from components produced in Russia. Light industry focuses on textiles, clothing, and carpets and is well developed and exports to the US and western Europe. Its priority is to attract strategic investors, and their products are highly competitive on international markets.

Armenia Investor Conference

Project Information
Resource Guide

1. AGRINEX GREENHOUSE

Entering the European market with expanded operations -- Arrangements are in place with the Aalsmeer auction (trading) house in the Netherlands and management now seeks a strategic investor, partner or financier. Building on gains established under past World Bank, Lincy Fund financing and using up-to-date Dutch cut flower technologies, Agrinex now proposes to enter European markets.

Company: Agrinex CJSC

Amount: US$ 7,170,000

Tenor/Terms: Preliminary terms — US$ 2,000,000 equity financing and US$ 5,170,000 loan financing.

Documentation:
The following documentation may be reviewed during business meetings: Detailed feasibility study; Corporate Charter, Audited Financial Statements for 1999, 2000 and first quarter of 2001; Certificate of Ownership; Sales agreements —Naresh Floral Trading (UAE), Sikom (Moscow, Russia), Quotations by: (a) Agrisovgas (Gasprom subsidiary, Russia) for greenhouses construction; (b) packaging companies (Broekhof, Netherlands and Grand Sun, Armenia); (c) Euroterm, General Distributor of Osby Parca, Sweden and Weishaupt, Canada in Armenia for boiler delivery and assembly; (d) Intermotor Armenia, General Distributor for DaimlerChrysler in Armenia for Vito and Sprinter vans; (e) P.Kooij&Zonen B.V., Piet Schreurs de Kwakel B.V., Van Ruitten, Sunfield, Netherlands and Toscaflora, Italy for seeds and seedlings supply; (f) Armenian Airlines for air transporting flowers; (g) G.V.D.Put, Netherlands for domestic transport as well as Letter by Credit-Yerevan Bank, Armenia.

Use of Funds:

Greenhouses construction	5,140,000
Storehouses construction	250,000
Equipment (boilers and cool stores)	450,000
Transport	50,000
Assembly works and other	200,000
Consultancy	60,000
Total Investment	6,150,000
Purchase of plants and working capital	1,020,000
Grand Total	7,170,000

Investments will be required in tranches of 11-month duration.

Legal Status: Agrinex is incorporated as a CJSC with US$1,980,000 of its own capital.

Local/Strategic Partners: Sed Marsed Investment Consulting Company, Brabion Flora Service, Armenian Airlines, Intermotor Armenia Corp., Euroterm, Credit-Yerevan Bank.

Current Operations:
Agrinex CJSC currently grows flowers (carnations, chrysanthemums, lilies, cala lilies and gerberas) and vegetables. Total greenhouse area is 2.7 ha, about 70% of which is devoted to flowers. Until mid 2000, the company constructed greenhouses by stages. Total sales for year 2000 were US$185,000 and in the first quarter of 2001 —US$152,000. Projected sales for the year 2001 are estimated at US$890,000. About 80% of flowers were exported in year 2000, while vegetables (particularly tomatoes and cucumbers) were sold in the local market. Agrinex has now had three years of operational experience in producing and exporting floriculture products and has carried out a market analysis of Dutch, Russian and local markets.

Sales and Marketing Plan:
The overall marketing philosophy of Agrinex comprises: high quality production, sales and services, lower cost of production and sale, resulting overall lower prices, growing share in local and foreign markets and high competitiveness.

Beginning mid-2001 Agrinex plans to arrange regular trading in Aalsmeer flower auction (VBA) where over half of Dutch flower exports (est. NLG 7 billion) are traded. In 1999 two-thirds of the Aalsmeer auction sales (NLG 3 billion) were from cut flowers. Some 85-90% of Agrinex flowers will be exported to Europe and another 10-15% to Russia. Although recently Russian imports have dropped considerably, since 1998 Agrinex has had strategic local Russian partners and benefits from high-end prices in the Russian flower market (mainly Moscow and St. Petersburg). With project implementation, projected sales in 2003 are expected to average US$4 million annually. Of this, 50% from carnations, 17% from calas, and 12% from gerberas. About 8.5% of profits are expected from the sale of vegetables.

Business Plan:
The primary objectives are to expand the greenhouse area some 2.5 times (up to 7.7 ha) and enter the European markets. To support these, it is planned to purchase and build new greenhouses with help from a strategic investor. The associated improvements in quality, packaging, and up-to-date transportation to flower auctions are also planned. Agrinex has already reached preliminary agreements with Aalsmeer flower auction (Netherlands). As calculated, the annual return on sales is about 55% in the break-even year 2004, and return on assets is 25% with a corresponding return on equity of about 32% and the overall internal rate of return of the project is calculated at 19%.

Under a proposed second stage of development, the strategic plan for Agrinex considers establishing a holding to possibly include Hrazdan Greenhouse (formerly the largest greenhouse in Caucasus, Turkey, Iran and Middle East), a cargo and a trade companies. The holding company, will also mainly engage in exporting flowers, vegetables and fruits from Armenia, internationally.

Competition:

In European cut flowers Netherlands-based suppliers and traders dominate in 23 of top 25 largest markets. Along with potential Dutch competitors almost all large cut flowers exporters of the world, particularly from Israel and Ecuador, also are in the market so competition is international. Nevertheless the free competition is in the European flower market. Given its auctions, a large number of sellers and buyers can effectively trade in spite of Dutch traders predominance. Agrinex estimates that even selling the product at minimum auction prices will allow the company s profitability to be high. In addition, Agrinex' regular partners in the Russian market are expected to provide stable sales. Nevertheless, Russian market is considered as an alternative one, and in the domestic market the company takes exclusive position due to its significant volumes and low prices.

Investment, Capital Cost and Financing Structure Proposed:

Proposed equity financing is US$ 2,000,000 (July-August 2001)

Proforma size of dividends is set as 50% of net profit.

Long-term debt financing is US$ 5,170,000 assumed at 8% interest rate with loan redemption starting in September 2003 and repaid by October, 2007.

-- to be raised with the following schedule:

Tranche I -	US$ 4,450,000	(July-August 2001)
Tranche II -	US$ 270,000	(March-April 2002)
Tranche III -	US$ 450,000	(May-June 2002)

Regulatory Considerations:

According to government decision of June 1, 1997, customs duty is not imposed on exported flower product. No VAT is imposed on agricultural produce as well. According to the law of December 26, 2000, the profit tax rate is 20% on taxable profit (joint ventures don t pay profit tax during 2 years after their registration, and pay 50% of profit tax during next 8 year). There is no restriction for establishing joint ventures. Foreign exchange operations are wholly free with no restrictions on repatriating profits on capital invested. Armenia joined EC in January 2001 and the government programs supporting exports to Europe are expected to be rather favorable. Numerous inter-state trade, fiscal and customs agreements with the Russian Federation CIS countries will be taken advantage of and the currency and investment legislation of Armenia is one of the most liberal ones throughout the whole FSU.

Other Project Details:

The project implements the strategic vision of Agrinex: (a) to become a competitive worldwide producer; (b) consolidate its leading position in the domestic vegetable market; and (c) expand operations by reconstructing in areas with low employment. With the proposed expansion, Agrinex will (a) extend production capacities and reach 2.8 times the sales volume by 2004 to boost its supply to the largest international flower auctions of Netherlands (particularly Aalsmeer) beginning in mid 2001. Additional supplies to other European (Germany and France) markets will be possible in 2002 and 2003, from developing the Hrazdan Greenhouse in the Kotayk region. This business expansion will enable effectively upgrading and improving quality to compete with Dutch producers as latest technologies in modern greenhouses and production

culture, etc. will be deployed. This strategic development of the greenhouse area, 2.5 times by 2004, will enable Agrinex present market share to grow with entry into new markets.

Since 1996, the greenhouse development has been supported by share capital (US$ 650,000) and long-term loan of US$ 350,000 under the World Bank EDP project and the greenhouses operated on 0.5 hectares. Another 1 ha was put into operation in March 1999 using a US$ 900,000 loan from the Lincy Fund and US$ 100,000 from Agrinex' own capital.

The current financial position is as follows:

In US $	Jan 1, 2000	Jan 1, 2001	Mar 1, 2001
Current Assets	685 270	970 948	938 813
Fixed Assets	2 736 325	2 499 785	2 452 619
Assets	3 421 595	3 470 733	3 391 432
Current Liabilities	1 229 040	156 804	123 975
Long-term Liabilities	1 390 771	1 326 300	1 301 275
Equity Capital	801 784	1 987 629	1 966 181
Liabilities & Equity Capital	3 421 595	3 470 733	3 391 432

Mr. Vahagn Khachatryan is the General Director and Chairman of the Board of Directors; Mr. Mihran Nazaretyan is the Deputy Director and Ms. Larisa Simonyan, the Phytopathologist. Mr. Khatchatryan is a member of the Royal Horticultural Society (UK) and the Botanical Society (US). The financial and marketing partner is Sed Marsed Investment Consulting Co. Agrinex also works with Dutch companies supplying seeds and seedlings whose experts also function as Agrinex' technological and quality advisors.

The total projected production area is 7.7 ha yielding flowers and vegetables as shown below:

Flowers	Area occupied (ha)	Yield Kg/ sq m	Yield per season (Kg)
Cala lily	0,9	140	1 260 000
Carnation	2,8	280	7 840 000
Chrysanthemum	0,45	100	450 000
Rose	0,45	150	675 000
Lily	0,18	54	97 200
Gerbera	0,9	175	1 575 000
Vegetables	**Area occupied**	**Yield Kg/ sq m**	**Yield per season (Kg)**
Tomatoes	0.9	60	540 000
Cucumbers	0.9	30	270 000

Agrinex currently uses locally available packaging but plans purchase packaging materials, possibly from Broekhof or Grand Sun - strong double corrugated boxes with white wash and three color printed graphics, on an average costing US$1-2 each. Flights by Armenian Airlines to Amsterdam are twice a week so product can be stored for three days. Allowing two days for

picking, packing and freezing and Yerevan - Amsterdam flight of 4.5 hours, and one day for delivery by G.V.D. Put (Netherlands), the maximum "picking to selling" will be 7 or 8 days. This complies with international practices of 6-10 days. With no dearth of sunny days and heating period from mid November till mid March greenhouses yield 150 days per year but planning is based on energy costs assumed to rise at 5% per year. A total staff of 232 persons cost US$ 245,121and after the first phase will be 528, or 2.3 times. Because of its nature greenhouse production doesn't have negative environmental effects.

With the indicated financing arrangements and business plans a high gross profit margin is forecast during the entire project period at 75%. Net profitability rises to 40% from 2003 and retained earnings by end 2008 expect to reach US$3,830,000. As a result NPV is estimated at US$2 million and an IRR of 19% is projected.

The project will be implemented from 2001 to 2008.

Stage	Time	
Pre-production	Start date	Completion date
Reconstruction of greenhouses	August 2001	March 2002
Building of greenhouses	August 2001	March 2002
Building of additional premises	August 2001	March 2002
Cultivation	Early April 2002	Mid April 2002

Construction and assembly will last 6 months under most extended time schedule as the mild climate of Armavir region will allow construction and assembly during winters. All revenue increases are projected to be realized from July 2001 (with 2 months probable lag for delayed financing). No clear-cut terms of strategic investor s exit are set and venture capital financing could be an option as well. Interest on term credit will be paid quarterly during the period from 2003 March till 2007 October at 8% annual rate. Principal redemption is planned in semi-annual equal payments to from September, 2003 to October 2007 allowing Agrinex an effective cash management policy.

Points of Contact:

Mr. Vahagn Khachatryan **Executive Director, Agrinex OJSC** **Yerevan Road 41** **378310 Echmiadzin** **Armenia** **Tel/Fax: 374-1-28 74 50** **Tel: 374-31-4 28 07** **Mobile: 374-9-40 79 04**	**Dr. Tigran Jrbashyan** **Managing Director & CEO** **Sed Marsed Investment Consulting** **2, 25/27 Nalbandyan Street** **Yerevan 375001** **Armenia** **Tel: 374-1-52 27 34** **Tel/Fax: 374-1-56 56 25** **URL: www.Sed-Marsed.am** **E-mail: sedmarsed@netsys.am**

2. SUGAR REFINERY - SPITAK SUGAR

Redeveloping the Spitak region with new investments for sugar beets processing —producing jobs and sugar for Armenia -- is currently estimated to require investments in the range of $110-135 million. TDA has assisted the Union of Consumer Societies (Hay Co-Op), to organize the Spitak Community efforts to re-establish the sugar industry by incorporating as Spitak Sugar Corporation, working with leading US Sugar industry consultants —FC Schaffer & Associates. A feasibility study to resurrect the sugar industry is currently being conducted for Hay Co-Op by Schaffer & Associates International, LLC. (SAIL) under the U.S. TDA Grant Agreement No: GH0820471.

The information presented below is preliminary as the study is due to be completed by July 2001. It briefly summarizes key aspects of the study and the information gathered thus far.

Company: Spitak Sugar Corporation Ltd. to be incorporated with Armenian and international ownership. Hay Co-Op, the feasibility study client expects to own a majority stake in the newly formed corporation

Amount: To be finalized after a majority of the engineering analysis is complete. Early indications, however, indicate the amount to be in the region of $110-$135 million.

Tenor/Terms: Range of equity participation considered appropriate at pre-feasibility stage: 15 - 25%. Debt funding for remaining 75-85 % expected from conventional term loans (approx. 20 years) -- anticipated blended rate: 7% -- 9%.

Documentation:
The Spitak Sugar Corporation Ltd. is currently being registered and will be associated with the newly formed Spitak Development Association (SDA). SDA is made up of representatives of the Spitak Town Authority, the Spitak Farming Community Union and an international organization, Environmental Preservation International Ltd. (EPIL). SDA will function to ensure that the farming community and the local town authorities coordinate with the Spitak Sugar Corporation Ltd. and assist with the management of beet development, beet contracts and labor provision. As this is a pre-feasibility stage, licenses and agreements are still in the draft stage.

Use of Funds:

	Range in US$ million
Factory (including processing equipment)	83.0 — 93.0
Agricultural Infrastructure and equipment	5.2 — 5.8
Beet crop development costs	3.4 — 3.8
Pre-project expenses	1.8 — 2.0
Interest during construction	2.0 — 2.5
Project fees	11.2 — 12.3
Project contingency 10%	10.7 — 12.5

Factory will consist of equipment to process 3,500 tons of beets per day with a refinery capability of approximately 500 tons sugar per day. This shall include all the main sugar processing equipment, together with all the ancillary equipment such as boilers, electrical generating equipment, rail and road access, effluent treatment and animal feed pelletizing plant. Agricultural equipment envisaged to be purchased should include tractors, harvesting machines, seed machines and general farming implements. Infrastructure requirements include capital provided to assist the farmers in re-establishment of infield irrigation and drainage channels, together with minor irrigation equipment. Funds are allocated to provide seed and operating capital to start developing the 6,000 ha for beet production. Project and Engineering Fees cover items such as engineering, project management, site construction management, freight, insurance, construction interest, etc.

Legal Status:
The Spitak Sugar Corporation Ltd. shall be a legally registered company in accordance with internationally accepted practices, stock ownership and equity participation.

Local Strategic Partners:
In parallel with the ongoing feasibility study, various Armenian and US entities have been approached for strategic partnerships. SAIL has expressed an interest in participating as the technical partner assisting in design and management of the factory. Additional partnerships are being solicited and developed with transporters of raw materials / finished product and distributors of refined sugar. Supply contracts will be set up with the local fruit canning and fruit juice industries. Once the feasibility nears completion other trade partnerships will be investigated for exporting and distributing refined sugar in neighboring countries. In addition partnerships with the local dairy and beef industries to supply high grade animal feed, and with local distillers to sell off the excess molasses are being pursued

Several international parties have also expressed a willingness to take up some equity. Once the feasibility study is completed, an extensive marketing effort shall be undertaken to identify further interested investors and financiers

Current Operations: None.

Sales and Marketing Plan:
It is anticipated that the factory will process 300,000 tons of beet per annum with an approximate sugar production of 42,000 tons in 110 days. Another 86,400 tons of refined sugar is expected to be refined from imported raw sugar. This represents a total of approximately 128,400 tons of sugar. A projection of annual official figures indicates that over next five years, sugar consumption will even out at between 80,000 and 100,000 tons annually, allowing approximately 30,000 tons to be exported to neighboring countries. The entire production is to be sold in 50 kg bags and distributed to the local retail market as Spitak Sugar Corporation Ltd. sugar. It is currently too early to determine the retail sugar price. The factory will also benefit from producing approximately 25,000 tons of high-grade animal-feed pellets that will compete with world market quality. This will largely replace costly animal feed and support the beef and dairy industries. A small amount of molasses, i.e., approximately 3,500 tons, will be produced and sold to distillers.

Business Plan:
After finalizing the technical aspects and the feasibility of the project, a business plan will be developed. Current indications suggest that full factory production could be anticipated in 5 years after commissioning with positive cash flows expected after the 3rd year of operation. Current IRRs and ROEs are expected between 14-18% and 40-46% respectively. Most importantly, the economic return of the project derives from generating urgently needed employment opportunities and obviating the need for costly imports. It is therefore anticipated that the economic rates of return will be approximately 60% -- the largest economic benefits accruing to the Spitak region.

Competition: Currently competition is from imported sugar brought in from Iran and other neighboring countries.

Investment, Capital Cost and Financing Structure Proposed: As detailed above, the estimated capital cost at this early stage is between $110-135 million. The financing structure will be developed in due course.

Regulatory Considerations:
It is expected that the Government will levy taxes on imported refined sugar for a period of 5 years thereby allowing domestic sugar industry to establish itself and grow thereafter. Subsequently, once international transport barriers are removed this protection is expected to be phased out.

Points of Contact:

Mr. Papin Ayvazyan **Chairman, Spitak Development Foundation** **or** **Mr. Bruce Tasker,** **Advisor International Affairs** **Hay Co-op, Union of Consumer Societies** **13 Khandjian Street** **375010 Yerevan, Armenia** **Tel: 374-1- 52 66 44** **Fax: 374-1-54 15 11** **E-mail: aspect@arminco.com**	**Geralyn Graphia,** **Chief Operating Officer or** **Arno R. Jansen,** **Technical Manager (Projects)** **F. C. Schaffer & Associates** **1020 Florida Boulevard** **Baton Rouge, Louisiana 70802** **USA** **Tel: 225-343-9262** **Fax: 225-343-0420** **E-mail: ggraphia@fcschaffer.com**

3. BOTTLED WATER EXPORTS AND PACKAGING - WATERLOK, LLC

Among Armenia's abundant natural resources is very high quality spring water. An investment of $6 million is being sought for developing the Canadian and US markets for bottled natural spring water -- Canadian approval and US contracts are in hand. Export quality packaging for shipping spring water to North America and juices, brandy, wines, and canned products to nearby international markets needs under $1 million investment. Gofropak will provide better cardboard boxes for Armenian producers.

Company: Waterlok LLC

Amount: $ 6,000,000

Tenor / Terms: 60% of equity

Documentation: Waterlok has firm contracts signed with two importers of spring water to the USA and Canada

Use of Funds:

Item	Capacity	Approximate price (US$)	Remark
Bottling line	7,000/h	1,000,000	B&H Labeling (UK)[5]
Labeling line	7,000/h	150,000	B&H Labeling (UK)
Pre-form manufacturing machine (1)	4,000/h	750,000	STEKA (Italy)
Pre-form manufacturing machine[6] (2)	4,000/h	750,000	STEKA (Italy)
Bottle blowing machine	7,000/h	1,000,000	SIDEL (France)
Plastic cap manufacturing machine	8,000/h	500,000	Presently does not manufacture
Filters	N/A	150,000	
Construction and modernization	N/A	300,000	
Raw materials	N/A	1,400,000	Granules and labels
	TOTAL	6,000,000	

Legal Status: Company with limited liability, proposes to transform to joint-stock company

Local / Strategic Partners:

- Econo Enterprises Inc., Mr. Harry Ghazalian, President.
  2245 Eglinton Ave. East, Toronto, Ontario, Canada Tel: 416- 759-9293
- Prodotti di Puglia, Mr. Frank Zuccaro, President.
  10 Benton Rd., Toronto (North York), Ontario, Canada Tel: 416-407-1750

[5] Manufacturers of machinery provided are tentative.
[6] The price for one 7,000/h machine would be the same as for the two. Purchasing two provides for more flexibility.

Current Operations:

Waterlok, established in 2000, presently bottles and exports fresh potable water. Hologram Plastic is another local company with 5-year experience of manufacturing PET pre-forms and plastic bottles for the domestic market, and supplies Waterlok with plastic bottles. Given that the export price of bottled water is very competitive, the company has established excellent relations with importers of water in several countries, and the water complies with technical standards. The project sponsors propose to merge the existing bottling (Waterlok) and plastic bottles manufacturing (Hologram Plastic, belongs to the same group of investors) capacities and to attract an equity investor (USD 6.0 million) to modernize and substantially increase the capacities and to expand the profit margin. For obtaining natural spring water the source pipe has been extended to the factory in Yerevan from Aparan (the water from this spring is well known for its taste). The company has exports contracts with large customers in Canada and has already shipped several containers.

Sales and Marketing Plan:

If operating at present capacities, the company plans to sell around US$1.5 million worth of water per annum. Its current capability does not allow for physically satisfying the existing demand. Initial plans are to sell water in North America. Later, sales to Middle East and Central Asia as well as small proportion to the domestic market are expected. In summer 2000, the company qualified for a $80,000 start-up loan by the USDA. Before that, the company had done market research, which demonstrated potential in Canada, USA, UAE, Cyprus and Turkmenistan. After having the trademark registered and the labels designed and printed in Canada, the company has signed firm contracts with two big food and beverage importers to the USA and Canada -- Prodotti di Puglia and Econo Enterprises Inc . The total amount of the first export contracts is about $1.42 million (220 forty foot containers, 27,000 bottles in each, at $2.90 per 12 one-liter packaged bottles CIF Toronto, Canada price). The company has the permissions from Canadian authorities to import the water. An experienced specialist from the US (ex-Senior Engineer in several famous soft drink companies[7]) has assisted Waterlok[8] and proposes to assist in bringing valuable technical and marketing expertise to the new company with ambitious plans for expansion.

Business Plan:

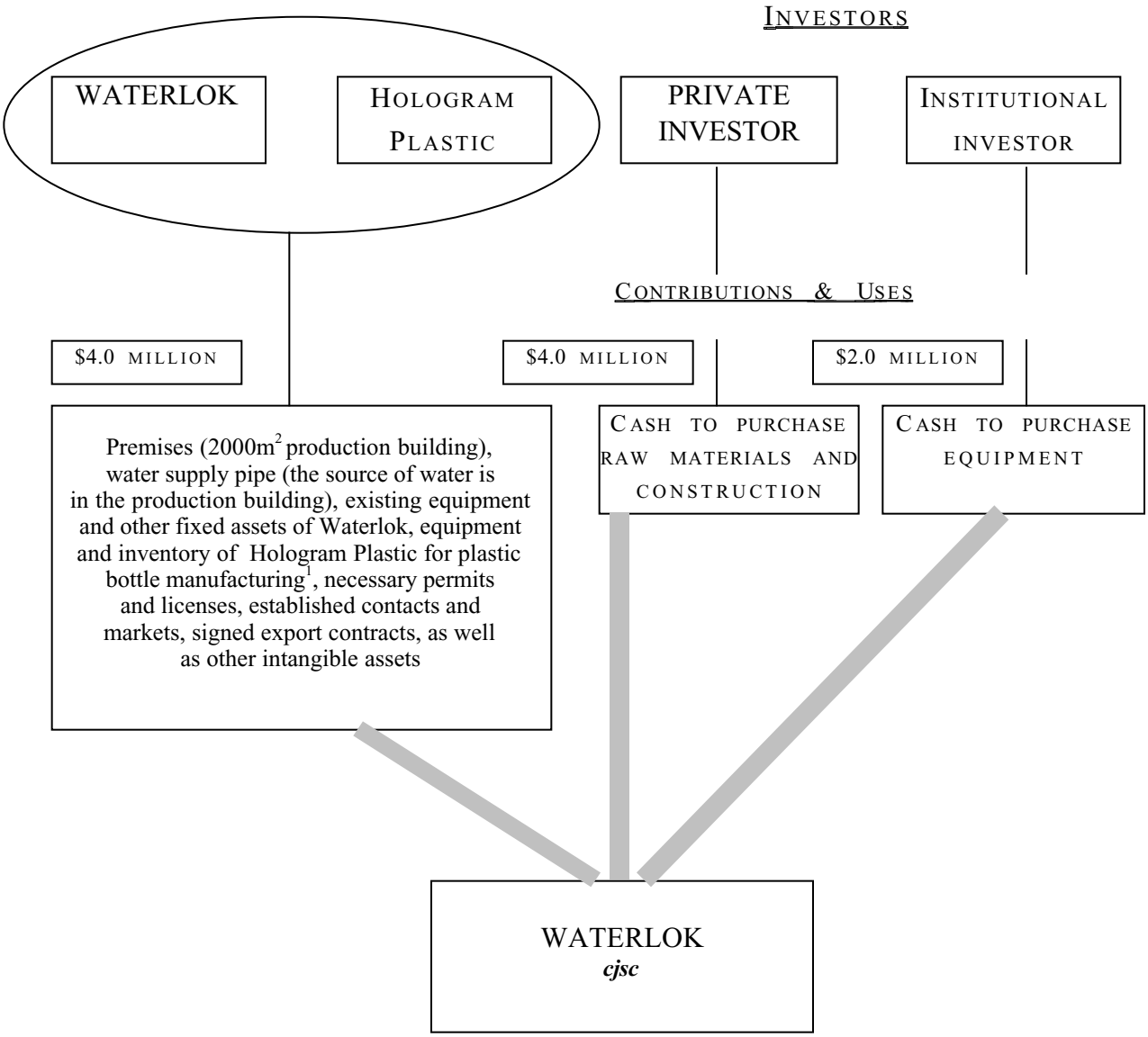
The company s strategy is exclusively export-oriented. The plan is to merge the existing bottling (Waterlok) and plastic bottles manufacturing (Hologram Plastic belongs to the same group of investors) capacities and to attract an equity investor to modernize and substantially increase the capacities and expand the profit margin.

[7] Such as Shasta Beverages, McKesson, etc
[8] Co-financed by IESC

Competition:
Only two companies in Armenia bottle spring water. One belongs to a large local industrial group and is called NOY , and the other one is bottled by local Coca-Cola Bottlers and is called Bonaqua . However, Waterlok's export plans do not expect any competition for the limited domestic market.

Regulatory Considerations:
There are few barriers (e.g. bureaucratic red tape) in levying export duties in Armenia. In addition, the USA (one of the potential markets) has a favorable trade regime for Armenian goods imports. Also, the investor may take advantage of a profit tax benefits for ten years after the investment is made.

Investment, Capital Cost and Financing Structure Proposed:



Company: The Gofropak Company

Amount: $ 800,000

Tenor/Terms: 80% equity

Documentation:
Details of supply contracts with major producers of wine, brandy, soft drinks, and canned products. Charter of Incorporation as limited liability company (for Waterlok)

Use of Funds:

$ 85,000	3 Cutting Machines (700boxes/hour)
$ 110,000	1 Flexoprinting Machine (2,500boxes/hour)
$ 45,000	1 Photocliche
$ 48,500	1 Rabbet-sticking machine (2,000boxes/hour)
$ 75,000	1 Recycling machine
$ 66,500	Construction works
$ 50,000	Computer design equipment
$ 480,000	Equipment and construction
$ 320,000	Working capital
$ 800,000	Total

Legal Status: Company with limited liability.

Local Strategic Partners:
Yerevan Brandy Plant (Pernod Ricard), Vaiots Dzor (Areni) Winery, Pharmatech, Bulvinos Chemicals, Abovian Brewery (Kotaik), Jermuk Co., Avshar Winery, SPS Cigaronne, Grand Tobacco, other hard liquor and soft drinks producers.

Current Operations:
Corrugated sheets are imported and cardboard boxes of various size and type are produced in the company. Main stages in the simple production lines are cutting, folding, gluing, and printing.

Sales and Marketing Plan:
Since the new company will be manufacturing cardboard boxes using both old and new equipment, it will retain 100% of Gofropack s existing market. In addition, new long-term contracts will be signed with the Brandy Plant, Coca Cola, Grand Tobacco and others. The sales volumes are planned to go up from the present 100,000 boxes per month on average to 350,000-400,000 boxes per month.

Business Plan:
The Company proposes to expand and enhance the quality of production to cover larger share in the local market and establish itself in the Georgian market as well. The new equipment will produce better boxes to meet the increasing standards of demand. Part of investment (40%) will be used to purchase raw materials at much lower cost also.

Competition:
The main competitor with 10% of the market is Gofrotara LLC. Another 4-5% is with small local workshops producing for very few specific small customers. The rest of the market demand is satisfied by direct imports by few processors and producers (for example, shoe manufacturers import boxes from Italy to then pack and export shoes in them).

Investment, Capital Cost and Financing Structure Proposed:
An equity investment of $ 800,000 is expected from the Investor, of which capital cost will $ 480,000 (60% of total investments), and the rest ($ 320,000) raw materials will be purchased.

Regulatory Considerations:
Tax benefits for investments of $1.0 million and more. No duties and taxes on imports of materials and on exports of finished products in Armenia.

Points of Contact:

Mr. Armen Antonyan **President** **Waterlok, LLC** **27 Fuchiki Street** **Yerevan 375108 Armenia** **Tel: 374-1-442400** **Fax: 374-1-442709** **Email: waterlok@netsys.am**	**Mr. Alexander Poghossian** **Managing Director** **Alpha Plus Consulting** **21 Baghramyan Avenue, Suite 8** **Yerevan 375078 Armenia** **Tel: 374-9-407565** **Fax: 374-1-271071** **Email: alex@interline.am**

4. FRUIT JUICES FROM YEREVAN BEER COMPANY

Extending gains from fruit production to CIS markets -- $500,000 investment in an established domestic brand name equips it with modern extraction and carbonation lines for adding natural flavor from ethers and essential oils. The makers of Kilikia Beer require German equipment to modernize lines and export a new product line after establishing success with beer in Moscow and Geneva.

Mr. Armand Pinarbasi, Managing Partner of Amyot Exco Armenia, will present the plans for diversifying the non-alcoholic beverage line of products planned by Beer of Yerevan (also known as the Yerevan Beer Company). Mr. Ashot Baghdasaryan, President of the Yerevan Beer Company is available for meetings and discussions to provide any additional details, such as product line pricing and technical issues, to interested investors or their representatives.

Company: Yerevan Beer JSC
Amount: $ 500,000
Tenor/Terms: Loan financing, 8-10% annual interest rate
Documentation:
License for beer and for soft drinks; Recent awards, medals and prizes for beer include: Golden Medal (1997), Moscow, Russia; Bronze Medal (1998), Sochi, Russia; The best beer for the year (1998), Moscow, Russia; The quality prize of ROA (1998), Yerevan; Golden Medal (1999) Sochi, Russia; Golden Star (1999), Geneva, Switzerland.

Use of funds:

$120,000	Purchase of automatic regulating CO2 production equipment for soft-drink carbonation and producing CO2 extractors. (Made in Germany)
$280,000	Working capital for raw material inventory.

Legal status of Company: Joint Stock Company

Local/strategic partners:
The main US distributors of the company are: Grand Beverage Co., Glendale, CA and Agency of Trade Development between USA and Armenia, Los Angeles, CA
Distributor in Russia is Great Ararat Co. Ltd., Sochi.

Current operations:
Established in 1952 to produce beer, beverages and soft drinks, the company started to produce dark beer in addition to light ones in 1997. Since 1998 it began producing soft drinks and then, produced natural fruit juices starting in 2000.

Sales and marketing plan:
The strategy of the Yerevan Beer Company is to become the top producer of beer, soft drinks, natural juices and nectars, as well as CO2 extractors in the region. The strategic sales policy of the company targets concentrating on customers needs and implementing a strong promotional campaign. It expects to use its established beer export and sales networks for promoting juices and beverages.

Business Plan:
After raising a US$500,000 loan from a financial institution, the company will implement its expansion project. Having recently established a new production line for natural fruit juices and nectars, new equipment for packaging and production of natural juices will be purchased and installed. Since the goal is to maximize capacity utilization, decrease production costs and improve profitability, the business plan relies on first developing the domestic market share substantially and then export production to USA and CIS markets and focusing on Moscow and St. Petersburg.

Given higher production of natural juices and nectars after expansion, Yerevan Beer will implement processing and production using CO2 extractors and ether oils from ground stones of apricot and peach, as well as tarragon, Thumus serpyllum, Mentha piperita, Artemicia Dracunculus, etc. These are expected to increase the quality help differentiate the product by adding new flavors to enhance natural tastes of the carbonated beverages. This is expected to ultimately expand exports further.

Competition:
The main domestic competitor in beer production is Kotayk Beer and in soft drink production- Coca-Cola Bottlers Armenia (CCBA) and Hay Cola. For natural juice production —Noyan and New Wave are brands that currently enjoy a medium sized share of the market. However, for beverages produced with CO2 extraction, there are no competitors.

Foreign competition to Yerevan Beer Company could be from most companies importing beer, soft drinks and natural juices to Armenia. In terms of planned exports to neighboring markets, pricing will play a key role in competing with expensive internationally established companies such as Philip Morris, Budweiser, etc. from US and all major European beer producers. These include Coca-Cola Company, Pepsi Cola Company, etc. for soft drinks. Companies in Florida and California for natural juices, and Dragoco Company in Austria as well as Lotier-Fis Company in France for carbon-dioxide extractors.

Investment, Capital Cost and Financing Structure Proposed:

$1,452,045	Company equity (includes natural juice & nectar project)
$ 650,000	Loan already received
$ 500,000	Funding sought
$2,602,045	Total

The total investment required for successful implementation of the current project proposed by Yerevan Beer JSC is $2,602,045. The funds will be used as follows:

$990,000	Purchase of juice packaging equipment from Combibloc Company (US$650,000 arranged).
$302,500	Construction of new production premises and aseptic storing warehouse
$343,000	Equipment & machinery for processing fruit mash and extracting vitamins from rose hip (includes transportation and installation costs).
$430,545	Procurement campaign of fruits of peach, apple, rose hip and sea buckthorn. (for the first year starting from September).
$36,000	Packaging material from Combibloc Company-300,000 units.
$120,000	Procurement of automat regulating regime equipment for production of CO^2 gas for soft drink production, as well as production of CO^2 extractors (from Germany).
$280,000	Working capital for raw material.

Points of Contact:

Mr. Ashot Baghdasaryan **President** **Kilikia Beer of Yerevan Company**	**Mr. Armand Pinarbasi** **Managing Partner** **Amyot Exco Armenia** **Grant Thornton International** **Vardanants 18 (Vernisage Entrance)** **375010 Yerevan, Armenia** **Tel: 374-1-58 63 73 / 52 24 01** **Fax: 374-1-58 44 19** **E-mail: amyot@arminco.com** **<u>Also in France:</u>** **104 avenue des Champs Elys es** **75008 Paris — France** **Tel: 331-44 70 30 03** **Fax: 331-42 93 32 16** **E-mail: erevan@club-internet.fr**

5. ISO9000 Certified Fruit and Vegetable Processing -- Artashat Cannery

Improving quality standards in the well established cannery business —ISO9000 certified production of juice brightening production facilities will allow scaling up Armenian cannery production for European export. Artashat Cannery proposes to process larger quantities of Armenian and Georgian produce to supply Austrian and German juice filling companies with international quality brightened juice concentrate.

Mr. Artak Eloghlyan of Alpha Plus Consulting presents quality enhancement and expansion plans of Artashat Cannery. Further project details and corporate information is available with him and with Mr. Sergo Karapetyan, President of Artashat Cannery, in business meetings during the conference.

Company:	Artashat Cannery OJSC
Amount:	$2,000,000
Tenor / Terms:	50% equity financing
Documentation:	Detailed project description and ISO900 certification plans; business plans and financial information
Use of funds:	The funds will be used for the purchase of fruit processing equipment, aseptic packages, and raw materials (apples)
Legal status:	Open Joint Stock Company
Proposed local/strategic partners:	To Be Determined
Current operations:	The Company prepares tomato paste, peach and apricot puree, fruit juices, pickled vegetables and jams and jellies.
Sales and marketing plan:	The prospective sales volume for the new product - Apple Juice Concentrate (AJC) are as following: 2,000 MT - 2001, 3,000 MT - 2002, 4,000 MT - 2003. The sales volume will not be more than 5000 MT over the next 5 years. The final product - AJC will be sold in Russia, Germany, Austria, etc
Business plan:	The Company proposes to set up a 50-50 joint venture to produce brightened apple˚juice concentrate. Its contribution will be a workshop with all necessary equipment˚for squashing, pasteurizing, sterilizing and pressing the apples, 40 aseptic tanks to keep the concentrate and infrastructure

(gas, transformers, steam etc.). The investor's contribution will be 1 ultra-filter, 2 press machines, inventory (apple crops) and some other stuff (in total-$2.0 million). The difference in price between the simple apple juice concentrate and the brightened one is about 40 cents, but the marginal cost is much less, so the rest of it is net profit. The program is not only to brighten the concentrate that the Company has been (and is) producing, but also to act as wholesale purchaser from Ararat Cannery and others (including a huge company in Gori, Georgia) and to refine their produce, thus keeping the new equipment operating all throughout the year.

Competition: The main competitor in Armenia is Ararat Cannery, but they do not have a brightenting facility. In the target markets, the Artashat will compete with local manufacturers and importers of the concentrate into Russia, Germany and Austria.

Investment, capital cost, and financing structure proposed:

2 apple presses ($100,000 each)	$200,000
Ultra-filtration equipment	$800,000
Aseptic machinery	$350,000
2 squashing machines ($50,000 each)	$100,000
Working capital (apples, aseptic packaging)	$550,000
TOTAL	$2,000,000

Regulatory considerations:

Tax benefits for investments of $1.0 million and more. No duties and taxes on imports of materials and on exports of finished products.

Points of contact:

Mr. Sergo Karapetyan **President** **Artashat Cannery OJSC** **23 Ogostosi Street,** **Artashat, Ararat Marz** **Armenia** **Tel: 374-35-26275** **Fax: 374-35-21308** **E-mail: office@alphaplusconsulting.com**	**Mr. Artak Eloghlyan** **Alpha Plus Consulting** **212 Baghramyan Avenue** **Yerevan 375078 Armenia** **Tel: 374-9-407565** **Fax: 374-1-271071** **Email: elogart@hotmail.com**

6. COPPER SMELTER & MINE DEVELOPMENT -- MANES & VALLEX

Manes and Vallex is the only producer of refined copper in the Caucasus. It proposes to construct a 30,000 tpy smelter to reconstruct the Alaverdi Copper Smelter and equip for the development of the Tekhout mine. The feasibility of this strategic opportunity is being studied in collaboration with Lurgi Metallurgie and Norddeutsche Affinerie of Germany.

Company: Manes Yev Vallex Inc.

Amount: $150m for North Armenian Mining and Metallurgical Complex:

Tenor/Terms: To be decided

Documentation:

- Tekhout Copper Deposit Development license for 25 years;
- Technical report on Tekhout Mine prepared by Mining Metallurgical Institute, Yerevan;
- Passport of Tekhout Copper-Molybdenum Deposit (resource of 454 Mt of averaging 0,36 % Cu and 0,02 % Mo);
- Cooperation Agreement between Lurgi Metallurgy and Manes yev Vallex for mining and metallurgical complex in Alaverdi, North Armenia.
- Letters of Intents between the Government of the Republic of Armenia, Manes yev Vallex and Lurgi Metallurgy, and Norddeutsche Affinerie.

Use of Funds:
Construction of 30,000 tpy copper smelter as the first stage of Alaverdi Copper Smelter reconstruction and extension project

Construction and equipment for Tekhout mine development facilities, including mine infrastructure, concentrator, tailings and etc.

Legal Status:
Manes Yev Vallex is a private company incorporated in Armenia. Vallex F.M. Establishment and Elecom A.G are the owners with 53.7% and 46.3%. shares respectively.

Local and Strategic Partners:
1. Lurgi Metallurgie GmbH, Frankfurt am Main, Germany
2. International Business Consultant Berlin, Berlin, Germany
3. Norddeutsche Affinerie, Germany

Current Operations:

M&V is an Armenian private company engaged in the discovery, development, production, processing and marketing of minerals and metals, specializing in diversified resources. M&V is a single producer of refined copper in the Caucasus. The company currently produces approx. 8,000 tpy of blister copper from national copper concentrates currently mined in South Armenia and copper scrap. The existing production facility is Alaverdi Copper Smelter located in Lori, North Armenia and have capacity up to 18,000 tpy. Since 1998 Company is also engaged in the acquisition, exploration and development of mining properties in Armenia. M&V currently controls mining exploration and development rights over several mining properties, including copper and molybdenum Tekhout (inferred resource is assumed of 454 Mt of copper, averaging 0,36 % Cu and 0,02% Mo) Hankadzor (1,6 % Cu), Hagvi (1,8 % Cu); and small gold deposits: Margahovit, Karaberd, Tandzut and Marts-Dzaghidzor .

Product	Quantity, tone per year	Market	Potential Buyer/ User
Copper concentrate (Cu 28%)	**98,000**	**Domestic**	**Alaverdi Smelter**
Concentrate containing Trioxide Mo	**1,600**	**Domestic**	**Pure Iron JSC**
Blister Copper	**20,000**	**Export**	**Nord Deutsche Affinerie, Germany**
Copper Cathodes	**10,000**	**Export/ Domestic**	**[Arm Cable]**
Sulfuric acid	**100,000**	**Export/Domestic**	**NA**

Business Plan:
North Armenian mining-metallurgical complex development constitutes two distinct projects.

1. Reconstruction and extension of the operating Alaverdi smelting plant through the construction of a new, cost-effective and ecologically friendly smelting facility with up to 60,000 tpy capacity treating of copper concentrate.

2. Simultaneous development of Tekhout copper mine (inferred resource is assumed of 454 Mt, averaging 0,36% Cu and 0,02% Mo) capable of mining and concentrating approximately 8,000,000 ton per annum to produce some 98,000 ton copper concentrate (Cu 28%).

It is envisaged that a bankable feasibility study will be commenced in 2001 after completion of a scoping Pre—FeasibilityStudy on Tekhout Mine and Technical Study on Alaverdi Smelter.

Investment, Capital Cost and Financing Structure Proposed:

Preliminary Estimated Capital Costs

Project Name	Capacity	Capital Cost
Tekhout Mine	98,000 tpy copper concentrate (Cu 28%)	$89 million
Alaverdi Smelter	30,000 tpy copper	$60 million

Other Project Details:

Alaverdi Copper Smelter Expansion Project.

Location/Infrastructure/Tradition. The Alaverdi copper smelter celebrated in the year 2000 their 230th anniversary of copper production at the same location. The long tradition and operation represent attractive infrastructure and skilled personnel. The smelter in the Lori-region in the north of Armenia has a good road and rail connection for the regional standards. The product is transported by rail to the port of Poti in neighboring Georgia. A few kilometers upstream along the river which runs through the premises is an operating hydro power station with 24 MW installed capacity. The river is a reliable source of water throughout the year.

The Copper Smelter. The copper smelter consists of the basic steps required to melt the concentrates and to convert the molten copper sulfide into blister copper of market quality. The concentrates are fed to the lateral walls of the reverb furnace. The front end side is equipped with fuel burners combusting heavy oil. The thermal energy passes from

the bottom of the reverb furnace into one layer of liquid copper and copper sulfides covered by another layer of slag low in copper content which is discarded:

Main reverb: 11m length 4m width

The lower copper containing phase is drained into containers which are then transported into the copper converters where the sulfur contained in the liquid phase is oxidized by air injected from the bottom of the converter into the liquid phase.

Converter dimension: 2.8 m diameter 5.0 m cyl. Length

This exothermal reaction in the converter keeps the produced copper in liquid form, which is casted in special forms as final product for export. The gas of the reverb furnace and the converter is vented after dilution with air through a stack without further treatment. The dedusting and desulfurization of these gases will be an integral part of the modernization program.

Modernization Program. The existing facilities would have an industrial life of up to five years, but urgently require modernization to improve production cost structure and comply with environmental standards.

Expansion Program and Copper Concentrate Supplies. Availability and reliability of locally mined copper concentrate supplies would be a critical precondition for the Alaverdi Copper Smelter Expansion program. Recent study of Armenia s copper mining-metallurgical industry conducted by IMC has indicated that currently operational mines in South Armenia without substantial investment would be able to produce approx. 20,000 to 30,000 tons per annum of copper, in concentrate. Taking into account anticipated production of approx. 30,000 to 35,000 tons per annum copper concentrate in new mines, (mainly Tekhout), and estimated availability of a copper-scrap in quantities up to 5,000 tons per annum, raw material supplies which would be available locally for copper production are predicted to reach 55,000 to 70,000 tons per annum in 2003.

Tekhout Mine Project.

The Tekhout copper-molybdenum deposit is located in northern Armenia, 35 km east of Alaverdi Copper Smelter.

The inferred mineral resource is assumed to be 454 Mt grading 0,36 % copper and 0,02 % molybdenum.

Ore producing and concentrating plant will comprise open-pit mine, concentrator (with tailings), and mine infrastructure as well.

The average ore production rate will be 8 Mt per annum grading 0.41% copper and 0.012% molybdenum.

The processing plant would have a design capacity of 98,728 tones per annum and would comprise primary crushing, Semi-Autogenous Grinding (SAG) milling, collectively-selective copper-molybdenum flotation, thickening and filtration.

The metallurgical testing program indicated that recoveries of 84.28% and 70.65% for copper and molybdenum respectively could be achieved to produce a concentrate averaging 28% copper and molybdenum trioxide grading of 54.5% molybdenum**.**

Points of Contact:

Mr. Valery Medzhlumyan **Chairman & General Director** **Manes Yev Vallex** **Yerevan** **Armenia** **Tel: 374-1-54 83 18** **Fax: 374-1-54 01 86** **E-mail: vallex@vallex.ru** **<u>In Moscow</u>** **Tel: 007-095-784 71 11** **007-095 784 71 71** **Fax: 007 -095-784-71 10**	**Prof. Dr. Johannes Dietmar Weisser** **International Business Consult Berlin** **Budapeter Strasse 11** **10787 Berlin** **Germany** **Tel: 49-30-257-97-192** **Fax: 49-30-257 97-191** **E-mail: intercoms@t-online.de** **<u>In Yerevan</u>** **19 Khanjayan Street, Yerevan** **Tel: 374-1-54 01 85** **Fax: 374-1-54-0186** **E-mail: vallex@vallex.am**

7. GEGAMA CABLES

An efficient aluminum and copper cable producer wishes to scale up production to compete regionally as additional copper processing and demand for cables, conductors and switchgear are both expected to rise. Gegama offers a strategic opportunity for investors to partner with a well functioning Armenian enterprise offering captive and competitive markets locally and regionally. In increasing sales by 50% from $2-3 million to $3-6 million, this recent recipient of Lincy financing projects a $17 million working capital requirement.

Company: Gegama OJSC

Amount: $ 17.0 m

Tenor/Terms: 10 year loan

Documentation:
Audited financial statements and basic documentation for financial institutions will be discussed at the conference. For example Gegama has operating cash flow and working capital projections supporting this financing requirement. The assumptions for this may be reviewed in meetings with Messrs. Kutchukian and Sinanyan.

Use of Funds:
The funds will be used as working capital since the company currently possesses all the necessary equipment to expand its operations.

Legal Status:
Gegama, the former Kamokabel (state enterprise), was established in 1960. In 1995 the enterprise was fully privatized and was reorganized into Gegama OJSC.

Current Operations:
Gegama is one of the leading cable companies in FSU and occupies a unique niche both in the Armenian and in other CIS markets. Currently 5% of its production is sold in Armenia and 95% in the CIS countries, mainly in Russia. It is one of very few companies in the CIS that supplies a complete range of high quality wiring products. Their customers are from various sectors -- construction, automobile industry, energy sector, etc.

Sales and Marketing Plan:
Gegama specializes in aluminum and copper wires and cables of different specifications. It assures its sustained market shares by delivering high quality products under strict quality control management and ISO9000 certification. Its highly skilled management and personnel as well as scalable production using equipment to produce very large volumes as well as using the latest designs and labeling techniques allows its production to remain competitive.

After working capital financing is assured, using its well-established network of clients and duty free sales in Russia it expects to raise its regional market share substantially.

Business Plan:
Currently 95% of the company s production is exported and Gegama plans to expand and capture larger parts of the existing consumer markets. In order to remain price competitive and expand market share Gegama is planning to secure lower cost raw material (aluminum and copper) to feed its 2000 and 600 tpy capacity requirements. Operating at higher capacity is expected to lower operating costs and enable debt servicing. Its operating costs are mainly for raw materials as illustrated below:

Raw Materials
81.00%

Electricity & water
1.85%

Direct Labor
0.45%

Fuel
0.67%

Depreciation
6.02%

Transportation
6.57%

Marketing
0.82%

General & Administrative
1.95%

Other expenses
0.67%

Gegama projects a gross margin of 16% over the next ten years (see table below).

Competition:
Gegama has little competition from Armenian producers, as its only plant operates continuously and produces a wide range of wiring products. The main competition is from several producers in Russia (Moskabelmet cjsc; Podolskkabel cjsc and Elektrokabel company), since its market is mainly outside Armenia.

Investment, Capital Cost and Financing Structure Proposed:
A loan of US$17,000,000 is needed to expand the current activities of the Company. The collateral for the loan may be the plant and equipment, as well as other fixed assets of Gegama ojsc.

Regulatory Considerations:

According to the Foreign Investment Law, in the event of a change in the legislation, the investor is protected by the option to remain for a five-year period under the regulation of the laws, which existed when the investment was made. Investments made by foreigners cannot be nationalized or confiscated, unless there are extraordinary circumstances declared by the government and approved by the court. In the case of confiscation, the foreign investor is to be fully compensated for any damage incurred to their investment, or for any loss of profit resulting from actions of State bodies or State officials.

Foreign citizens have no right to own the freehold of land; they may only lease it or temporarily use it by agreement. However, they have a right to own all other types of property, including the freehold of buildings, and have the same rights as Armenian citizens to establish various types of business entities. Exploitation of natural resources can only be made upon concession agreements with the government or other appropriate State bodies.

Summarized Projected Profit & Loss Statement

	2001 Project US$(000)	2002 Project US$	2003 Project US$	2004 Project US$	2005 Project US$	2006 Project US$	2007 Project US$	2008 Project US$	2009 Project US$	2010 Project US$
Revenue (excluding VAT)	45,986	52,654	53,707	53,976	54,245	54,517	54,789	55,063	55,338	55,615
Cost of Goods Sold	38,614	44,193	45,084	45,319	45,557	45,796	46,037	46,279	46,524	46,770
Operating and admini-strative expenses	6,823	6,824	6,824	6,824	6,824	6,810	6,810	6,811	6,810	6,810
Profit (Loss) after tax	(441)	278	425	450	537	664	812	990	1,169	1,347
Gross margin	*16%*	*16%*	*16%*	*16%*	*16%*	*16%*	*16%*	*16%*	*16%*	*16%*

Points of Contact:

Mr. Ruben Sinanyan **President and Executive Director** **Gegama OJSC** **5 Kabelagortsner Street** **Gavar 378630, Armenia** **Tel: 3741-151-543/28704** **Fax: 3741-151-543/287-040** **E-mail: gegama@arminco.com**	**Mr. Alan Kutchukian FCA** **Managing Director** **KPMG Armenia** **8 Hanrapetutian Street** **Yerevan 375010, Armenia** **Tel: 374-1-56 67 62** **E-mail: akutchukian@kpmg.co.am;** **general@kpmg.co.am** **<u>In the United Kingdom</u>** **8 Salisbury Square** **London EC4Y 8BB** **Tel: 44-207-694-3171** **Fax: 44-207-311 4242**

8. Shen Stone Tiles

Responding to the recent construction boom, Shen seeks $3.5m for equipment to manufacture high quality facing tiles. This acquisition of modern tile manufacturing equipment will allow it to export to regional, Middle East and US markets. Niche markets include earthquake reconstruction areas in Armenia and the internationally competitive overseas Diaspora requirements.

Company	Shen Concern CJSC
Amount	$ 3,525,000
Tenor/terms	To be determined
Documentation	Equipment specifications and technical details for mine quarrying and stone processing equipment.
Use of Funds	Purchase equipment - $ 3,050,000 Building Premises - $ 475,000
Legal status:	Closed Joint Stock Company

Local and Strategic Partners:
A number of foreign companies have been identified as capable of delivering the requested equipment solutions. Two Italian companies have been selected as potential suppliers of machinery -- Pelligrini, as the supplier of mine quarrying equipment and Pedrini, as the supplier of stone processing equipment. Both companies will train the Armenian specialists and workers to operate the machinery supplied by them. In addition, Pelligrini will design infrastructure facilities for the new mines where their machinery is installed.

Current Operations:
Production, export, import of construction materials for the domestic market.

Quarrying, as is the practice in Armenia is mainly done by blowing entire areas, a method that adds to the natural cracks in the rocks which further results in decreased volume and quality of stone suitable for processing. Moreover, the equipment currently utilized for processing the quarried stone has low productivity and precision. They therefore cannot manufacture a competitive range of stone products in the world markets. Technologically advanced equipment identified through market research is expected to make quarrying more efficient and productive overall.

The equipment supplied by the two Italian companies complies with the international standards set out by ECIP54 (EN 60529) regarding harmful omissions of dust, humidity and noise. With regard to the exploitation of new quarries, the equipment selected is protective and environmentally conservative by Western standards.

There are no import restrictions applicable to this industry in terms of supplies, spare parts, etc.

The ultimate stone processing, packaging as well as shipment are made in the premises of the company that maintains its own railway station. This station is 300 meters distance to the main railway terminal "Karmeer Beloor" which is a part of TRACECA (Transport Corridor Europe, Caucasus, Asia) program. The proposed stone processing plant will by far be the largest enterprise of its type in the country.

Sales and Marketing Plan:
Production of facing tiles made of Armenian natural stone such as tuff, felsite, granite, basalt, marble and travertine. Target markets are Armenia, Russian Federation and CIS countries, USA and UAE.

Worked and Finished Products
Market orientation
(% of sales)

	Armenia	**Russian Federation and CIS**	**USA**	**U.A.E.**
1. Tuff	70	20	10	
2. Felsite	70	20		10
3. Granite	20	30	40	10
4. Basalt	70	20	10	
5. Marble	20	30	40	10
6. Travertine	20	25	55	

Business Plan:
Shen s business plan focuses positioning the company as a leader in the construction materials industry in Armenia. Its corporate commitment is to increasing its export capacity for processed natural stone. Shen is determined to make investments in modern and technologically advanced equipment, necessary to be competitive in the international marketplace.

Investments will be made in quarry and processing equipment to produce tiles made of Armenian natural stone such as marble, granite, basalt, travertine and tuff.

Competition
In natural stone tile export markets the main competitors are: marble, granite and travertine from Italy, Turkey, Brazil, China, India, Mexico. Tuff, felsite and basalt —are not well known in the market and have no serious competition.

Capital Cost and Financing:
The total project cost is estimated at $3,525,000, including building construction of $475,000. Machinery and equipment costs are $3,050,000. The Shen Company proposes a joint venture structure for a future limited liability company with a 20-80% shareholding structure, expecting to buy back shares in 7 years. Already the Shen Company has invested $500,000. The project IRR is estimated at 16% over 7 years period. Net present value is estimated as $3,196,361. The average profit margin is projected 66-70% over 7 years of operation. Net profit margin is expected to reach 30% in 7^{th} year, achieved through reducing fixed costs.

Regulatory Considerations:
The project is in full compliance with Armenian Government policies in environment protection and natural resources utilization. It also will make a substantial contribution to export promotion by $1.5 million in first three years and job creation in the rural areas by 42.

The project will also be instrumental to the Armenian Government programs partially funded by the World Bank to reconstruct residential and industrial housing in the earthquake zone.
Critical macro economic factors governing project performance are the political situation, legislation, exchange rate and overall economic improvements.

Other project details:
Projected production volumes and unit prices for each facing stone for the first three years are:

Products	Production Volumes (sq. meters)				Price (US$/$m^2$)
	1st year	2nd year	3rd year	TOTAL for 3 years	
1. Tuff	8 000	10 000	25 000	43 000	7
2. Felsite	2 000	3 000	3 000	8 000	7
3. Granite	8 000	10 000	20 000	38 000	50
4. Basalt	4 000	5 000	10 000	19 000	8
5. Marble	4 000	5 000	15 000	24 000	30
6. Travertine	15 000	20 000	30 000	65 000	12
TOTAL	41 000	53 000	103 000	197 000	

Pricing is based on full-container orders and all prices are ex-factory. The estimated transportation costs are: a) to Russian Federation — $3-4/per sq. meter, b) to USA — $6/per sq. meter; and c) Europe — $5.5/per sq. meter.

Point of Contact:

Mr. Ara Hasratyan
Vice President
Shen Concern
Shiraki Street 2/2
Yerevan 375043, Armenia
Tel: 3741-46-01-01/42/33
Fax: 3741-46-01-01/42-33-92
Shen-concern@netsys.am

9. HYDROENERGIA CO. LTD.

Akhuryan Reservoir Mini-HPP

New directions as well as the energy sector strategy require more reliance on hydro-power. With a successful track record, Hydroenergia feeds the Armenergo grid and exploits hydro-potential with cost effective use of technology and local skills. Its proposed mini-hydro power plant (HPP) expects to cost $6.8 million.

Company: Hydroenergia Co.

Amount: $ 6,770,000

Tenor/Terms: 8 year loan at 7 % or equity participation

Documentation:
Hydroenergia license for construction Hydro Power Plants

Equipment specifications and cost proposals from:
Ossberger Gmbh (Germany);
Tyajmash (Syzran, Russia);
Uralgydromash (Ekaterinburg, Russia).

Use of funds:

$1,200,000	Generation (pressure pipeline) works
$5,120,000	Power House (5 radial-axial __-45-_-84 type turbine units)
$ 450,000	Static thyristor irritation system
$ 6,770,000	Total investment outlay

Legal Status: Limited Liability Company with 100% private ownership.

Local Strategic Partners Armenergo cjsc (Armenia) ; Ossberger GmbH (Germany); Tyajmash (Syzran, Russia); Uralgydromash (Ekaterinburg, Russia)

Current Operations:
Hydroenergia LLC, operating since August 1992, develops, constructs and operates renewable sources of electrical energy, namely, small HPPs, solar and wind power plants, while designing and manufacturing equipment for these plants. During 1994—2001Hydroenergia executed two mini-HPP projects at Yerevan reservoir and Kotayk irrigation canal s chute. Construction at Yerevan reservoir began in 1994 and including designing, surveying works, tests, start-up and adjustment works, finished in July 1996. Installed capacity of the station is 750 kW, average annual generation is 3.0 mln kWh. Three MEG-250 hydro-energy units equipped with propeller-type turbines (Russian, Alten, Ltd.) were installed. The total capital investments were $650,000 of which, $380,000 was for equipment

Construction of the mini-HPP at Kotayk canal s chute begun in 1998 and similarly completed in October 2000. Installed capacity is 1500 kW and average annual generation is 4.0 mln kWh. Seven MEG-315 hydro-energy units equipped with the Fransis-type turbines (Russian, Alten-

K) were installed at a total capital investment of $540,000 with $290,000 for equipment. The station has produced and delivered to the Armenergo network over 12 mln kWh reflecting a very high capacity utilization, highly skilled operation, and equipment reliability.

Business Plan:

Total capital outlay	$6,770,000
Monthly operating costs (in US$) include:	
Wages	3,167
Benefits@ 31 % wages	982
Amortization (estimated)	75,000
Maintenance	1,200
Variable costs	1,000
Administrative	520
Interest charges	1,485,161
(for the entire period of the loan)	

Taking into account the tariff allowed for new generation capacity installed ($0.036), to be accepted by the Commission on Energy for 10 years period, the average yearly profit from the sale of the electric power produced by Akhuryan Mini-HPP (estimated at $1,815,000), should vary from year to year, and reach a maximum between 2002 and 2006.

Competition:

Considering the present legislation, there is no competition for 15 years to sell the electricity, according to the prices set by the Commission on Energy.

After the expiration of state support (15 years) the company will have less risks in terms of competition, taking into account all the debt-servicing that would have taken place repaying debt and strengthening the company financial position over the period.

Points of Contact:

Mr. Gevorg Paitian **Director** **Hydroenergia Co. Ltd.** **37/16 Tigran Metsi Ave.,** **Yerevan 375018, Armenia** **Tel: 374-1-23 24 49, 23 08 50** **Fax: 374-1-28 29 51** **E-mail: gev@lans.am**	**Mr. Alan Kutchukian FCA** **Managing Director** **KPMG Armenia** **8 Hanrapetutian Street** **Yerevan 375010, Armenia** **Tel: 374-1-56 67 62** **E-mail: akutchukian@kpmg.co.am;** **general@kpmg.co.am** **<u>In the United Kingdom</u>** **8 Salisbury Square** **London EC4Y 8BB** **Tel: 44=207-694-3171** **Fax: 44-207-311 4242**

10. WIND POWER PROJECT

Windpark Pushkin Pass — E-Connection

Commercializing modern wind energy conversion systems requires concerted investment action by governments, NGOs, scientific community and Diaspora. The Pushkin Windpark seeks $2.5 million equity from Armenian Diaspora to allow bilateral and multilateral funding to fall in place.

Company:	Windpark Pushkin Pass Ltd (To be established by E-Connecton Project BV)
Amount:	$2,500,000
Tenor/Terms:	Equity (10% of total needed financing); preferably from Diaspora
Documentation:	1. Memorandum of Understanding between the Governments Armenia & the Netherlands; 2. Wind Development & Business plan; 3. Wind resource assessment report.
Use of funds:	Purchase and install wind turbines, foundations & electrical infrastructure.
Legal Status:	Shareholder-company.
Local Strategic Partners:	Several thousand jobs are expected to be created during the construction of this wind park, in close co-operation with Energy Strategy Centre of Armenia. Armenian companies and staff will be selected for fabricating the steel towers, foundations and electrical infrastructure.
Current Operations:	Monitoring masts at 5 sites in Armenia since August 1999: wind data at 30m and 50m height; wind resource analysis according IEC- & IEA-standards.
Sales and Marketing Plan:	Power Purchase Agreement (PPA) of 0.045 US$/kWh with Energy Commission of Armenia.
Business Plan:	Installation in 2003 of a 20 MW grid-connected windpark at Pushkin Pass with a production of 62.2 million kWh.

Investment, Capital Cost and Financing Structure Proposed:	Gross investment:	$24.7 million;
	Equity Diaspora + E-Connection:	10% =$2.5 million;
	Equity-subsidy (The Netherlands):	35%= $8.6 million;
	Loans sought (e.g. IFC/EBRD)	55%=$13.6 million
	Loan conditions: interest 12% & period 10 yr	
	Income electricity-sales:	$2.8 million/yr
	Income CO_2-credits:	$0.3 million/yr
	Expenses O & M & Insur.	$0.4 million/yr
	IRR after 15 years = 15.3%	

Regulatory Considerations: Land-lease-agreement, construction license and grid-connection from the Armenian government; Power Purchase Agreement (PPA) of Energy Commission of Armenia;

Other project information and details:

E-Connection, established in 1986, is an independent private project developer of wind parks, with 12 experts and a net turnover of US$1.2 million (gross $12.5 million). It initially focused on wind energy projects and became market leader in The Netherlands with:

- Contracted windfarm-investments: USD 80 million.
- Windfarm developments in the Netherlands totalling 150 MW.
- Windfarm developments in United Kingdom totalling 50 MW.
- Supervision & operation: 10 windfarm sites, approximately 80 turbines, 27 MW.

E-Connection has carried out projects in Poland and Armenia commissioned by Senter, Agency of the Netherlands, Ministry of Economic Affairs.

The windpark proposed is to be installed under the responsibility of E-Connection, which will also educate and train local Armenian staff for the day-to-day maintenance and operations. If wanted by the other equity-partners or financiers E-Connection will take responsibility for the exploitation of the wind resources also.

As soon as Windpark Pushkin Pass is successfully commissioned, the next windpark investment will be sought at another potential site already dentified -- Karakhach Pass for installing 125 MW capacity at an estimated US$153.5 million. The production of turbine-towers, foundations and electrical infrastructure in Armenia offers an opportunity for exports to windpark-projects in neighbouring countries.

With Lagerweij 750 kW-wind turbines from the Netherlands (Dutch content condition for 35% equity-grant) a bench-mark analysis has shown that this wind turbine would be cost-competitive. The turbine-towers, roads, foundations, electrical components and installation works will be tendered to Armenian companies.

On Pushkin Pass the suitable sites for erection of a wind park are limited due to the steep slopes at both sides of the pass. The site-investigation concluded that a total wind park-row-length of approx. 3 to 4 km is suitable for erection of wind turbines.

The wind-measurements at Pushkin Pass have shown that wind only comes from a narrow sector of 45¡ from either NNE or the 180 ¡-opposite SSW direction through the pass (see Wind resource assessment report). Therefore the wind farm design should consists of WNW-ESE-turbines(s) perpendicular to the both prevailing wind directions. Given this narrow wind direction-sector the distance between the wind turbines can be as low as 2 rotor diameters so that the Pushkin Pass site can be used optimally.

For the LW50/750 with a rotor diameter of 50 m, this mutual distance (perpendicular to the prevailing wind direction) can be as low as 100 m - 150 m. Taking into consideration the reasonable accessible ridge length of 4 km and the gaps in the wind turbine-row at the crossings of the HV-lines, road and TV-tower, a row with 27 wind turbines of 750 kW could be installed at Pushkin Pass -- a wind park of 20 MW.

Taking into consideration the reduction due to the 20% lower air density in the mountain pass, the expected average electricity production is 2,6 million kWh/year (as documented in the Wind Resource Report).

Near each wind turbine of 750 kW a 690 V/ 10 kV-transformer will be built. A 110kV/10kV- or 220kV/10kV-transformer is proposed to be installed on the site transporting the electricity to the nearby HV-station of Vanadzor. The HV-station of Vanadzor offers connection options to two 110/220kV-transformers with a capacity of each 125 MVA.

The most important aspects of both windparks are summarised in the Table:

Aspect	Windpark Pushkin pass	Windpark Karakhach pass
Windspeed at 30m height (average):	8,2 m/s	8,2 m/s
Number of windturbines (of 750 kW):	27	166
Total installed power:	20,3 MW-el	124,5 MW-el
Net electricity production:	62,2 million kWh/year	376,7 million kWh/year
HV-line distance to HV-station:	10 km (Vanadzor)	30 km (Gyumri)
Gross investment:	24,7 million US$	153,5 million US$
Investment grants (MILIEV/ORET):	8,6 million US$	53,7 million US$
Net investment:	16,1 million US$	99,8 million US$
Financial scenario: tariff 0,045 $/kWh & loan: interest 12% / period 10 yr:	Pay-back period: 9,4 yr IRR over 10 yr: 4,5% IRR over 15 yr: 15,3%	Pay-back period: 9,7 yr IRR over 10 yr: 2,5% IRR over 15 yr: 14,4%
Total emission-reductions during lifetime of 20 years:	704 million kg CO2	2.264 million kg CO2
Employment Generation:	In thousands, for construction, installation, and maintenance.	In thousands, for construction, operation, installation and maintenance.

Point of Contact:

Mr. Henk J. den Boon
Engineer
E-Connection
P.O. Box 101
Bunnik, Ut. 3980CC Netherlands
Tel: 31-30-659-8000
Fax: 31-30-659-8001
Den.boon@econnection.nl

11. DIAGNOSTICA MEDICAL CORPORATION
A Technology-Based Healthcare Development Model for the Region

Modern equipment and tele-medicine allow medical diagnostic systems to be shared globally. As a potential hub for this East-West transfer of medical technology, Armenia boasts of Diagnostica. Upgrading its dated equipment not only implies better diagnostic care delivery but also enables world-class services to be provided and modeled in the region from Yerevan. To western suppliers of medical technology Diagnostica offers an attractive location for equipment testing, training, remanufacturing, sales and technical support for the FSU region. The small investment sought is $3.1 million.

Company: Diagnostica Medical Corporation (Diagnostica)

Amount: $ 3,100,000

Tenor/Terms: Equity participation preferable; equipment lease and other financing arrangements welcome.

Documentation: Corporate Charter; Annual Audited Financial statements and project cost details

Use of Funds:

Equipment & Technologies	$2,700,000
Rehabilitation and Construction Activities	$ 324,700
Training	$ 35,000
Marketing	$ 40,000
Total	$ 3,100,000

Equipment and technologies -- Approximately $1 million for Open MRI/Permanent magnet and Spiral CT Scanner and remainder for computerized EEG, Holter monitoring system, 2 Digital ultrasound systems, Video endoscopy Cabinet, PCR laboratory, Cath/Angio Lab/digital, Digital radiography system, R/F room, Mammography machine, Bone densitometer, Lithotripter/ w C-Arm, Miscellaneous laser and filming equipment and imagers, Endo- surgery cabinet, Operating room with table and light, 4 bed ICU including 4 lung ventilators, patient monitors, defibrillators each and Oxygen concentrator/bed side and General equipment for a 16 bed inpatient section. In addition other basic lab and telemedicine related equipment, personal computers, training equipment and other peripherals are needed.

Other details will be made available in one-on-one meetings.

Legal Status:
Corporation (31% employee-owned; 38% privately held and 31% government-owned) — chartered as an Open Joint Stock Company

Strategic Partners:
Professional / academic collaborations with University of Maryland s East West Space Science Center; US Medical Informatics and Technology Applications Consortium (partnership with NASA); Washington Hospital Center, Radiology Outreach Foundation; Applied Communication Concepts; Armenian International Radiology Society (USA); Center for Reproductive Medicine (France); National Cancer Center (Italy); McGill University (Canada). Recent International Awards include NASA Certificate of Recognition in International Tele-medicine; European Market Research Center Award nomination and cited as a success story in USAID/PricewaterhouseCoopers publications.

Current Operations:
Diagnostica is a leading medical institution in the region, specializing in providing multi-profile medical diagnostics and high technology based services. Strongly positioned with years of business experience and privately run, its professionals are Western style marketing and management oriented and operated it profitably for nine years establishing a track record of international cooperation.

Founded in 1984 and headquartered in Yerevan it piloted the multi-specialty diagnostic center in the former Soviet Union — a model still being emulated in the region. Many of its 330 employees, nearly 100 trained physicians, possess key medical qualifications that offer high-level contemporary technology backgrounds, some with prior training in the USA and Europe.

It delivers outpatient and limited in-patient diagnostic services relying on modern diagnostic technologies equipped by leading manufacturers like GE, Siemens, Picker, Olympus, Aloka, HP and Phillips. The equipment includes, among others, CT Scanner, MRI, Ultrasound, X-ray, Mammography, Endoscopy, ECG, Echocardiography, Stress-tests, Myography, Vascular Doppler, Electroencephalography, Diagnostic Spirography, Urodynamics and various laboratory analyses equipment for clinical chemistry, immunology, microbiology, pathology, etc. It participates in web-based international collaborative networks, focusing on diagnostic tele-medicine, distance learning, and operates other international and domestic links. As country s leading graduate training and research facility in medical diagnostics and telemedicine, Diagnostica serves as the major academic affiliate to the National Institute of Health and the National Academy of Sciences of Armenia.

Sales and Marketing Plan:
Diagnostica currently largely services the domestic market but aims to provide world-class services to regional health care systems given its direct contacts with institutions in the Former Soviet Union. Currently about 98% of the services are provided to the local market and 2% for neighboring countries. Future projections are to increase the share of medical diagnostic services, both outpatient and inpatient, provided to the clients from abroad up to 15%. It will require strong marketing efforts, primarily (but not exclusively) focused on regional markets of Georgia and Southern Russia and others. The enhanced international telemedicine service will play an additional and instrumental role for this market enlargement. Diagnostica also expects a significant increase in foreign exchange earnings through international training opportunities for medical doctors and engineers, both in-house and via distance learning. Finally, projections are made to

increase the income via exporting the model of technology-based, market-driven healthcare industry development.

Business Plan:
Diagnostica has maintained an average gross operating margin of 15% on its annual revenues of $500-600,000 during the last six years and re-invested most of its internally generated funds to invest in fixed assets to keep abreast with rapidly advancing health care technologies. This reduced its net income and dividends have fallen.

As the marketing plan indicates, it aims to raise financing to upgrade its equipment ($2.7 m) and building facilities ($0.4 m) to attract a growing number of regional (hard currency) clients providing cost-effective services to compete with European and Russian diagnostic service providers.

Based on the above plans —of equipping better to provide modern diagnostic services regionally — Diagnostica expects to gradually increase revenues totwice its current levels. It is proposed to provide internationally acceptable standards of medical diagnostic services to overseas clients so that the share of externally generated earnings grows to 15%. This requires strong marketing efforts focusing on Georgia, Turkey, Russia, Gulf States. With a low cost/quality ratio, comparable to that of Jordan in the Middle East, and giving due consideration to commercially exploiting the existing professional reputation of Diagnostica, enhanced tele-medicine connectivity is expected to play a key role in enlarging this market. In addition, Diagnostica will embark on imparting world-class training medical doctors and engineers, both in-house and via distance learning. For this it will itself, invest in technology development programs of its staff aimed at developing a sustained demand for its widened range of contemporary medical diagnostic services.

In summary, the range of market enlargement interventions include: (1) upgrading and improving existing outpatient diagnostic services; (2) increasing inpatient diagnostic service for specific diagnostic cases; (3) implementing specific treatment procedures, highly connected with modern diagnostic technologies and thus underused in the country/region; (4) expanding and commercializing international telemedicine service to attract patients in the country/region who cannot afford costly travels to the Western clinics; (5) creating highly attractive regional graduate training facility for medical doctors and technicians; (6) creating regional service/training center with major medical technology manufacturers; (7) creating a HMO-oriented network surrounding Diagnostica; (8) exporting the model of modern technology-based, market-driven healthcare industry development in the still predominantly state-owned and/or traditional healthcare environment of FSU (nearly 40 diagnostic centers created in FSU based-on Diagnostica s pilot experience may become efficient hubs for such expansion).

Investment, Capital Cost and Financing Structure Proposed:
As a corporation chartered to sell shares, the preferred option for raising capital would be through equity. However, since the majority of the investment is directed towards equipment purchase, Diagnostica would consider equipment based financing that includes technical

assistance and training contracts. It invites equity participation with major equipment manufacturers and suppliers, health care service providers and international managers of quality health care services to take up active participation —in management, marketing or advancing technology-based health care enterprises in the FSU and regional markets. The indicative business plan projects the following:

Five-Year Financial Projections (Post-Investment)
(US$, 000)

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Net Income	550	650	800	1000	1200
Net Profit	80	115	160	200	240
Net Profit Margin	15%	18%	20%	20%	20%

Point of Contact:

Mr. Saro Tsaturyan
General Director
Diagnostica Medical Corporation
6/1 Markaryan Street 375078
Yerevan, Armenia
Tel: 374-1-34 32 47
374-1-35 11 01
Fax: 374-1-39 35 79
E-mail: stsatur@dmc.am

12. MSHAK
Technology Innovation Center

To integrate Armenian skills with the western technologies, Mshak offers a unique platform. Its proposed innovation center will operate like a technical one-stop-shop providing a highly skilled gateway to enter FSU markets. High precision processes of National Semiconductor have already been cost-effectively outsourced to Mshak. Adapting state-of-the-art motion control technology allows western firms like Delta Tau to access FSU markets. Innovating cost-effectively will enable western firms to compete internationally and profit from Russian and CIS technology markets.

Company: Mshak JSC

Amount: $9.3m

Tenor/Terms: To be determined: Loan and/or equity participation or grants

Documentation:

Business plan for Technology Innovation Center
Distributorship agreements: Delta Tau Data Systems, Surfware and Solidworks (USA)
General contract & purchase order of National Semiconductors (USA)
Engagement letter of Sterlitamak Machine Tool Enterprise (Russia) for Mshak (Armenia) with Siemens and Heidenhain (Germany)

Use of funds:

Administration	$1.0 million
Export market development	$1.0 million
Research and Development	$3.2 million
Demonstrative workshop	$1.5 million
Design facility (RF/Wireless)	$0.6 million
Business integration (Armenian)	$2.0 million
Total	**$9.3 million**

Legal Status: Joint stock company

Technology Partners and Clients:

Delta-Tau Data Systems, Los Angeles, California (software, automation control projects in CIS countries);
National Semiconductor, Irvine, California (equipment and engineering service supply, design and research services); MTS, Minnesota (amplifiers and servomotors)
Numerous FSU industrial units such as GAZ and Nijhni-Novgorod Automobile Manufacturing Company

Current Operations:
Mshak modernizes and retrofits industrial equipment with computer controllers. It has a unique market for such equipment automation projects that require design and implementation of automation pilots, particularly for the machine tool manufacturers of the CIS region. In one project, it developed automation control components for complicated machines processing automobile spare parts for Nizhni-Novgorod Automobile Manufacturing company GAZ. Using Group CTO Machine Processing it collaborates with number of Russian manufacturing, processing technology, lubrication and cooling systems companies.

It also offers state-of-the-art design and testing of industrial software as well as integrates unique machine and production line automation solutions for international clients requiring specialized design and manufacturing of key high precision components. A recent contract develops special equipment for National Semiconductors that automates their print line in the production cycle of Low Temperature Co-fired Ceramics for housing semiconductor circuitry.

Sales and Marketing Plan:
During 2001-2006, Mshak plans to facilitate approximately $150 million in precision technology exports catalyzed by its Technology Center. By integrating the operations of (a) technology providers from Armenia; (b) operations of its functional lines; and (c) key western technologies acquired through clients and partners (e.g., numerical control systems) Mshak expects to generate direct and indirect profits from this $150 million exports (see business plan). As Mshak Technology Center will also offer a platform to develop high technology-based precision equipment and after-sales support service for world-class manufacturers prospecting the FSU markets, additional contract revenues could be generated. The business plan is designed to: (a) develop export markets; and (b) integrate domestic businesses.

The plan relies on investing to develop software, hardware, control and digital systems that integrate with both (a) industrial units in Former Soviet Union, and (b) high precision technology needs of major western firms Active in Russia, Mshak expects to expand its motion control device sales and its technical cooperation through established distribution networks. As most sophisticated projects require integrating computer-based controls in unique manufacturing applications, its business plan focuses on centrally providing R&D to site-support units to integrate western IT and technology solutions with yet-not-obsolete Soviet technologies, cost-effectively. Attaching a competitive edge to FSU technologies is a skill that Armenian engineers can readily re-orient with western advances at the Modern Technology Center.

With this plan Mshak expects to integrate technologies at three levels: (a) product (e.g., control systems for machine tooling), (b) project (e.g., multi-company level processing technology assessments for GAZ, Russia), and with the Modern Technology Center integrate these Armenia based functions with international industry (e.g., through distributorships and technology outsourcing arrangements for world-class suppliers like Delta Tau and National Semiconductor).

Business plan:
2001-2003: Establishment of the Technology Center (including domestic business support services)
2001-2006: Establishment of export marketing (Russia and USA)

The target markets of the project are the following:

Description
Markets
US$ m

Computer Numerical Control systems (software and hardware)
Armenia
0.5

CIS and Middle East countries
13

North America and Europe
-

Industrial Automation equipment
Armenia
0.5

CIS and Middle East countries
20

North America and Europe
47

Technical consultancy, training and support services
Armenia
0.5

CIS and Middle East countries
1.5

North America and Europe
3

Industrial computer aided design, engineering and manufacturing CAD/CAE/CAM services
Armenia
0.5

CIS and Middle East countries
3

North America and Europe
15

Dies and moulds
Armenia
1.5

CIS and Middle East countries
10

North America and Europe
11

Automobile parts
Armenia
-

CIS and Middle East countries
15

North America and Europe
10

Data above indicate the potential expected to be realized by Armenian companies using innovation center facilities. Armenian providers of turn-key solutions would be completely equipped to offer flexible design approaches used in solving integration problems that maximize the value of the project to leading western technology developers.

Additional details are available with Messrs. Levon Poghosian and Armen Gyokchyan.

Competition:
Mshak has replaced CNC drives and motors in FSU and competed successfully with leading manufacturers like Siemens, Fagor and Heidelhein. In other areas, National Semicondutor has awarded LTCC and wireless technology contracts in favor of Baccini (Italy), Darpa (USA) and Nikko (Japan) to Mshak.

Investment, Capital Cost and Financing Structure Proposed:
Details in business plan available with Mr. Levon Poghosyan, President, Mshak jsc

Other Project Details:
The strategic objective of the Center is to act as an international corporate catalyst for industrial development --- optimally integrating available domestic human, capital and technology resources with state-of-the art technologies provided by western technology leaders. This advances the long-standing technical expertise and industry recognition of Mshak s pool of engineers and avionics industry experts from FSU into modern-day competitive numerical and precision machine processing industry sectors of the west.

Mshak, currently operating at the premises of the famous Yerevan Institute of Mathematical Machines, will establish and expand new and existing infrastructure as an operational technology transfer gateway to FSU market. Its market strategy relies on a pool of old-Soviet trained engineers and new-western trained managers to jointly harness the technology experience and potential of Armenia. To offer Armenian intellectual value-additions for modern internationally competitive technology seekers Mshak will integrate resources at the proposed center by developing the operating structure that already serves the following functions:

Upgrading yet-not-obsolete technical resources of Armenia and the FSU by integrating advanced computerization-led applications developed in the west;

In-sourcing internationally competitive high-tech contracts from world-class companies for cost-effective servicing from Armenia;

Distributing a combination of product, project and systems related services to clients in both FSU and North America.

The current operating revenues of Mshak during 2001 are expected to be $4.0 m of which $1.5 m are from exports of computer controlled systems to machine tooling operations in Russia and Ukraine and $ 2.5 from high precision technology development contracts with USA based companies. Based on the above strategy the various components of the Technology Innovation Center are expected to develop technology exports from Armenia and generate incomes as follows:

Marketing and Export Development Facility revenues (5 year estimate: $0.875m) would be realized from enterprises with export potential as fees for developing export plans and international business consulting.

Research and Development revenues (5 year estimate: $6m) for the centre would be realized from training in CAD, CAE, CAM and fast prototyping services.

Demonstration Workshop Revenues (5 year estimates: $6.8m from automobile spare parts and $4.7m from Dies and Moulds): provides a space for testing solutions in real manufacturing processes and to pilot successful implementation. Based on the marketing research of international clients and the demand for automobile parts and moulds would be initially exploited.

Radio Frequency and Wireless Design Facility revenues (5 year estimate: $0.9m) are expected from contracts (e.g. for international firms like Raytheon, Northrop Grumman, Ericsson and Cisco for marketing low-cost upgrades to installed aviation and communications systems in FSU). It is planned to become self-financing after one year and be acquired by an international firm.

Business Integration Service revenues (5 year estimate $1.7m) from supporting and developing small and medium size companies to become internationally and commercially oriented. Financed appropriately, its consulting and technology-solution services would be aimed at increasing competitiveness and export volumes of Armenian enterprises.

Point of Contact:

Mr. Levon Poghosyan, President
Mr. Armen Gyokchyan, VP Finance & International Relations
Mshak JSC
#3 H. Hagopian Street
375033 Yerevan
Armenia
Tel: 374-1-27 69 91
374-1-27 85 37
Fax: 374-1-27 40 70
URL: www.mshak.am
E-mail: levon@mshak.am
agyokch@mshak.am

13. CENTER FOR INFORMATION TECHNOLOGY (CIT)

A recognized supplier of advanced IT services in Armenia goes off-shore. CIT offers a business development port in USA for the smart "plug and work" buildings in Yerevan. Marketing software development inwards takes Armenian skills to the global IT marketplace.

Company:	Centre for Information Technologies
Amount:	$340,000
Tenor/Terms:	40% equity in the US Subsidiary and 30% equity in CIT
Use of Funds:	The funds will be used to finance the establishment and initial operation of CIT representative office in the US (Boston), and marketing of CIT products and services. Part of the funds will be used to co-finance the expansion of the business in Armenia.
Legal Status:	Limited Liability Company

Strategic Partners/ Clients:
Epson Electronics (Oracle based projects)
Lowermybills.com (Java, XML).

Current Operations
CIT develops custom-made software on demand, and own software products. Main specialization is in JAVA, ORACLE, C/C++, PHP. CIT primarily cooperates with US companies (direct clients for custom-made software development and/or intermediaries) as USA is its main market. Special assignments are carried out for European and Asian Markets (marketing of CIT software products, comprehensive management and maintenance tools for utility operators, Oracle). Small portion of work is done for domestic clients (www.export.am). The company employs 25 programmers and managers, as well as 9 interns.

Sales and Marketing Plan:
Achieve target sales of $500,000 in 2001 (expected sales according to existing contracts are $300,000-400,000), $735,000 in 2002, $1.4m in 2003, $1.9 m in 2004, and $2.3 in 2005 from its main market - USA. Marketing will be done through the Boston subsidiary. Direct marketing (10% of the revenue) is envisioned: meetings, presentations, mail, publications, articles, strategic location, etc.

Business Plan:
A staffing scheme of 1 US manager - 2 Local Managers, 5 Local Senior-Programmers and 15 Programmers is envisioned. Hourly average rates US$ 9, 10, 15, 15, 16 for number of employees (conservative plan) - 26, 34, 46, 58, and 69 respectively for 2001 through 2005. Initially one office will be established in Boston, USA (in process), and a second office will be established in 2003.

CIT has invested considerably in building of appropriate infrastructure in Armenia: equipped offices, firmware, comprehensive management information system, IT capacities in terms of

servers, communication networks/lines and reliable power supply, as well as in-house training center. CIT is a licensed internet provider, and a training center.

The CIT business plan incorporates:

- A vision to partner for success in the new economy.
- The goal to be a leading software development company in the region by satisfying the demand of international and domestic clients in world class and exceptional quality services and products.
- The value of staff employed (25 programmers and managers currently). By providing timely and innovative solutions and support, CIT proactively helps clients to create and realize value. It meets the highest demand and challenges of the global marketplace by virtue of the best cadres employed both in Armenia and internationally. CIT believes in people being the best corporate asset, and depends upon its team culture and spirit in building up corporate competitiveness.
- Past success based on the experience, knowledge and proven skills of managers, engineers, programmers, professional designers and technicians. CIT pays special attention to the development of next generation specialists and provides best on-the-job training to employees and young interns. Its success is proven by references from clients in US, Asia, Europe, and Armenia, and by the track record of 9 years of uninterrupted growth.

Competition:

Both domestic and international competition exists. Domestically CIT competes for best cadres of employees. CIT offers an employee share option scheme as corporate incentives to retain its best cadres and ensure high level of motivation. Internationally CIT competes with former Soviet Union software development companies (mostly Russian). As CIT grows it expects competition with India, Ireland, Israel and other countries heavily investing in the development of IT sector and software development in particular. The strategy is to meet international challenges in delivering excellent quality products and services, supported with aggressive and cost- conscious marketing, and the feasible specializations in activities.

Investment, Capital Cost and Financing Structure Proposed:

Investment - 30% participation in the company, and 40% participation in the US Subsidiary.

Points of Contact:

Mr. Gagik Yeghiazarian **KPartners cjsc, Chairman and CEO** **12/6 Markarian nrb., 375036 Yerevan** **Tel/Fax: 374-1-34 51 11** **E-mail: gy@kpartners.am**	**Mr. Gagik Karapetyan,** **President, Center for Information Technology** **Abelian St. 6/1, Yerevan** **Tel: 374-1 35 03 90** **Fax: (8852) 350251** **E-mail: gagik@cit.am**

14. SIRIUS
Mobile Phones and Software

Developing software coded mobile phone chips and intelligent components for European vendors — Sirius stages its investments to cope with unavailability of political risk guarantees to investors working with its partner Annova Ltd. (UK).

Company: Sirius JSC

Amount: $500,000 (Phase I — design work and training);
$4.7 million (Phase II — trial production; international certification)
Higher investment levels have been sought and discussed with prospective investors.

Tenor/Terms: To be decided
Higher levels of investment require investors to be guaranteed against any transfer restrictions, expropriation, breach of contract, war and or civil disturbances.

Documentation:
A detailed business proposal for larger scale production facility being investigated by investor partners of Annova can be reviewed with prospective investors.

Use of Funds:

Design	$0.2 m
Training	$0.3 m
Certification	$0.3 m
Equipment	$4.4 m

(Facility expansion for large scale production estimated up to $10 m)

Legal Status: Joint Stock Company

Strategic Partners:
The main partner of Sirius JSC is Annova Ltd.which already finances a part of the first stage with equity investment. At the same time Sirius collaborates with Wintex Ltd. and its other partners include Atlantic Electrics (UK), Anand International Ltd, Lexus Telecom Ltd, Ag International (RSA); Shankar s Emporium (Singapore).

Current Operations:
Currently Sirius designs and tests electronics and software. It has an arrangement with Annova Ltd. to market software products as well as Sirius' capabilities in software programming in Europe and USA. Sirius has already done various projects for other companies in e-Commerce, call billing systems, software packages for product delivery systems, web graphic design, erasing

and re-programming chips, WAP Technologies. Annova Ltd. finances a part of the first phase of the proposed design and software development project that focuses on mobile phone software and intelligent components.

Sales and Marketing Plan:
As the global mobile phone markets restructure due to competition, Sirius plans to focus on expanding in the niche low-cost components and software market where own programs need to be developed, integrated into components and sold to vendors of quality mobile phone systems in Europe.

Through Annova's prospective clients and partners a wide range of market contacts are available to Sirius in Europe, Middle East, far East and USA. Regionally, Sirius plans to initially penetrate markets in Turkey, Iran and Russia.

In the event high quality production levels compatible with international standards are achieved, investor-partners of Annova could easily market higher volumes.

While there are no plans to enter the large scale production of mobile phones unless investment and buying arrangements are secure, the design, software development and certified production of components are in themselves expected to be significant revenue earners to attract low-cost producers from Far East.

Business Plan:
Sirius has already started the First Phase, partly financed by Annova. An additional $500,000 will complete Phase I that will design the software, develop the chip and the molding and acquire certification of international component buyers and OEMs in Europe.

Other Project Details:
Sirius JSC was founded in 1963 as a scientific production facility for electronic components, electric devices, modulators and programming devices. It currently produces programming chips - EPROM, EEPROM, PROM 27CXX and 28CXX series, The Universal Programmer for Intel Micro controller (IMCS-48, IMCS-51, IMCS-96), programming debugging hardware-software system with emulator for Intel micro controllers MCS-48, MCS-96 and Intel 8086, 8088 processors. In addition it produced electronic components, such as resistors, varistors and PCB.

Its staff is highly qualified in mathematics, software programming and electronics. In software -- C/C++, SQL, CGI Scripts, ASP, PHP3, Java, JavaScript, VBScript, HTML & DHTML, Flash, XML & XSL, CSS, etc. with a strong complement of object oriented approach, relational database development, client/server technology, and application design. Languages:

Microsoft Assembler 6.0, Turbo Assembler, Clipper 5.2, Visual Basic 6.0, Turbo Pascal, Visual J++, jdk Java, Jscript, VBSscript, HTML & DHTML 4.0, XML, XSL, C, C++, Perl, PHP3, UNIX Shell Scripting, SQL.

Thus current operations of Sirius allow it to take on emerging web and communications programming and software development in combination with electronic component developments. Its skilled expertise set in software and electronics allows it to integrate them and produce intelligent electronic components with extreme sophistication. It also produces moulds for plastic parts, like audio-cassette, videotapes, TV cabinet and others. This gives it a skill complement that bodes well for eventually manufacturing new technology products like CD ROMS, AV remotes, mobile phone components etc.

In addition Sirius can develop other products using the following technologies fundamental to world-class electronics manufacturing:

- Integral circuit - crystal, obtained through planner technology (photolithography, dusting), is assembled in metal base through micro welding and hermetically sealed off;

- Integral Hybrid Schemes: The components, through micro welding, are mounted on glass ceramic board, which is obtained through planner technology and hermetically sealed off;

- Dies-crystal: obtained through planner technology is mounted on metal pins through micro welding and hermetically sealed by plastic.

- Printed Circuit Board - Single layer, double side and multi layer-- are made of epoxy glass (drilling, moralizing, routing and photolithography), using film photo resist, film and liquid masks and are tested. Resistors- Ceramic pipe, after treatment, metallized by dusting with special alloys and reinforced by pins, colored, ring-shape marked.

- Variable Resistors - 0.25, 0.5 and 1.0 Watt. Wire resistive element (obtained through loading) together with rotary contact. Unit is assembled on plastic basis, enforced by pins and is placed within the enameled body. Mould, stamps are made of various materials (steel, aluminum).

- Galvanization -Nickel plating; zinc plating; tin plating; copper plating; chromium plating; anodic oxidization, chemical oxidization technologies.

Points of Contact:

Mr. Hayk Mezhlumyan, President **SIRIUS** **11, Sevan St.** **378510 Abovyan** **Armenia** **Tel: 374-22- 2 41 51** **Fax: 374-22- 2 33 97** **E-mail: sirius@sirius.am** **URL: http://www.sirius.am**	**Mr. Shandip Popat** **Annova Ltd.** **48 Trinity House** **Heather Park Drive** **Middlesex HAO 1SX England** **Tel: 44-77-8-539-8637** **Tel: 44-02-08-909-2694** **Email: shan@annova.plus.com**

15. RENCO
Tsakhadzor Resort Center

The former Olympic ski training location is being reconstructed as a resort village. With a well-functioning hotel and a mountain lodge for summer tourism and a ski lift system supporting winter vacationers, Tsakhadzor expects to boost tourism all year round. The Italian RENCO construction group, after its successful Hotel Yerevan project, is investing $5 million. Government's participation through Lincy Foundation is expected; $6 million are being raised through private investors.

Company: Tsakhkadzor Ski Resort Center

Amount: $ 6,000,000

Tenor/Terms: Equity Financing — 26 % of the Company s shares

Use of Funds:

Ski lifting systems	$11.0 mln
Hotel reconstruction	$ 7.9 mln
Mountain hut construction	$ 1.0 mln
New artificial snow spraying system	$ 1.6 mln
Two snow cats	$ 0.4 mln
Equipment & Inventory	$ 0.5 mln
Pre-operational expenses	$ 0.5 mln

Legal Status: Private Company

Local/Strategic Partners: General Sport Complex Tsakhkadzor CJSC (Private Company)

Sales and Marketing Plan:
The key marketing plan goal is to achieve highest possible level of the Ski Resort Center utilization and therefore develop a strategy that is flexible and client oriented —namely focus on all year round utilization as a resort rather than just as a skiing resort.

The strategic mission of the Ski Resort Center is to become a leisure destination for local and international clients seeking affordable alternatives to Europe Therefore the marketing strategy will focus on (a) making Tsakhadzor a regionally accessible resort; (b) a cost-effective alternative to European destinations; (c) marketed aggressively in travel packages; and (d) focusing on CIS / Mid-East clients.

Business Plan:
Amyot Exco s consulting team prepared a business plan at the request of the management of RENCO and will assist in raising the needed financing. It contains comments of the Consultant for the proposed Ski Resort Center, including the construction works and Center launching process. It provides results of a market survey conducted and the assumptions made for the preparation of the financial statements for the period of six years.

The business plan contains recommendations for possible project enlargement —developing and diversifying the skiing areas from Tsakhkadzor to Mountain Aragats and Geghama Mountains.

These will make the skiing more advantageous and attractive for the ski lovers and hence, attract more foreign tourists to Armenia.

Enlargement of the skiing areas throughout two other marzes (regions) of Armenia, will contribute to tourism infrastructure establishment and development, hence enhance the economic development of also the Gegharkunik and Aragatsotni regions in addition to Kotayk region.

The business plan is available with Mr. Gasparini.

Competition:
Tsakhkadzor Ski Resort Center with its proposed ski-lift system and other offered services for hotel/accommodation would face little domestic competition. Its main competitors would be considered as Ski Resort Centers in the South Caucasus Region and those in Russia and Ukraine. Other indirect foreign competitors could include the less expensive European winter resorts.

Investment, Capital Cost and Financing Structure Proposed:
An investment of US$6m is needed for the construction and commissioning of the Resort Center in Tsakhkadzor. RENCO is contributing US$5m toward the overall project cost, estimated at $23m.

Sources of Financing:
General Sport Complex Tsakhkadzor CJSC - $12m;
Renco Spa - $5m;
Financial Institution - $6m.

Investment Category:

Ski Plant Construction — $15m — Equity Financing
General Sport Complex Tsakhkadzor CJSC — $11.9m;
Renco Spa - $3.1m.

Hotel Reconstruction — $ 7.9m — Equity Financing
Renco Spa - $1.9m;
Financial Institution — $6m.

Hotel Building — $ 0.1m — Equity Financing
General Sport Complex Tsakhkadzor CJSC — $0.1m.

Other Project Details:
Given the importance of developing Armenia s tourism infrastructure, modernizing Tsakhkadzor is essential. A traditionally well-known mountain resort with relatively good infrastructure, the town of Tsakhkadzor, (population 1,500) could potentially benfit from 280 jobs that would be created. The project would contribute to the socio-economic welfare and development of Kotayk region as it is expected that foreign clients in the first year of operation would number approximately 17,000, and gross income generated from the first year of operation is forecast to be about $4.6m.

Tsakhkadzor Ski Resort Center project also has future development perspectives. If the project is enlarged towards Aragatsotni and Gegharqunik regions, it will have considerable impact on the economy development of these regions as well.

These planned enlargements could involve:

- Constructing a heliport (for three helicopters) to organize heli - ski and heli- hiking tours towards Mount Aragats (Aragatsotni region) and Geghama Mountains (Gegharqunik region).
- Constructing a mini satellite station for summer skiing at the South slope of Aragats, connected to the mother station in Tsakhkadzor by existing asphalt roads or by helicopters (10 minutes flight).

Points of Contact:

Mr. Rinaldo Gasparini **Chairman, RENCO** **Or** **Mr. Paolo Paganucci** **Commercial Activities Manager** **v.le Venezia, 53** **61100 Peasaro** **Italy** **Tel: 39-0721-433 31** **Fax: 39-0721-400 924** **E-mail: rencospa@renco.it**	**Mr. Armand Pinarbasi** **Managing Partner** **Amyot Exco Armenia** **Grant Thornton International** **Vardanants 18 (Vernisage Entrance)** **375010 Yerevan, Armenia** **Tel: 374-1-58 63 73 / 52 24 01** **Fax: 374-1-58 44 19** **E-mail:** amyot@arminco.com **Also in France:** **104 avenue des Champs Elys es** **75008 Paris — France** **Tel 331-44 70 30 03** **Fax: 331-42 93 32 16** **E-mail: erevan@club-internet.fr**

16. HOVNANIAN INTERNATIONAL LTD.
Regional Bed & Breakfast Hotels

Armenian Diaspora, particularly from US, need a second home as tourists. Homes and hotels with western style construction are particularly desirable.

Company: Hovnanian International

Amount: $14,000,000

Tenor/Terms: 10-year loan at eight (8%) percent interest

Documentation: A memorandum of understanding can be negotiated at any time during the conference.

Use of Funds:
The funds will be utilized for the construction of lodging units and common facilities, in a style similar to American hotel suites. These individual units will be constructed at ten (10) historically significant sites, which are already under lifetime leases, throughout Armenia.

Legal Status: Hovnanian International Ltd. is a registered corporation in Armenia.

Local Strategic Partners: None.

Current Operations:
Hovnanian International is currently constructing a 700+ unit single family and multifamily housing development in Yerevan, known as Vahakni. The homes are in the American style, using Western construction techniques and materials. However, buyers can request traditional building materials and have them incorporated into the building as well. Hovnanian International is also constructing the first nine-hole golf course in Armenia located within the housing development.

Sales and Marketing Plan:
$2,000,000 of the financing amount requested will be utilized for advertising these sites. The target markets for advertising are Europe, North America and the Middle East. The former Soviet Republics will also receive advertising attention, in media that will reach citizens of Armenian descent.

The primary market will be tourists, and the Armenian Diaspora, from Europe, the former Soviet countries, North America and the Middle East. The former Soviet nations, just recently out of communism, are just being introduced to Western vacation markets and places of historic and recreation significance. There is no reason that Armenia should not be looked at in these countries as a major destination. Armenia s geography provides incredible opportunities for

recreation vacations which can attract significant numbers of tourists: hiking; mountain climbing; fishing; skiing, and; archeology.

Another market will be religious / Christian tours, building on Armenia s well know religious sites and significance in the Christian world. Armenia is celebrating its 1700 years of Christianity, and is well known as the first nation to adopt Christianity as a state religion.

The key concept of Hovnanian International is that interaction in these tourism sites at the local village level it is promotes Armenia s most precious commodities, its people and their hospitality, to the world. These markets can be reached through the good offices of the National Armenian Tourism Development Agency (NATDA), which is a supporter of this project. The NATDA recently held its first convention in Berlin to promote tourism in Armenia, which Mr. Hovnanian attended on behalf of Hovnanian International and its projects. The next convention is set for the fall, to be held in England.

Business plan:
By being the only source for tourists housing at most of these historically significant sites, Hovnanian International will have the entire market share at the outset. Competition will be welcomed, however, since Mr. Hovnanian strongly believes that the growth of tourism is a key ingredient to the development of the Armenian economy.

At present, tourists visiting these sites endure long bus rides from hotels in major cities located some distance away. They can spend only a short amount of time exploring the site, and little or no time in the surrounding villages and area. The tourists return the same day, only hours after their arrival.

These individual housing units will promote long visits and family travel, which are very difficult if not impossible under current conditions.

Competition: At present, none in the sites selected.

Investment, capital cost and financing structure proposed: Hovnanian International is looking for a lender to fund the $14 million necessary to construct all ten (10) sites. The lender will be repaid from operating revenue or from a permanent end loan.

Regulatory considerations: Hovnanian International has received all known government permits and approvals for this project. The leases for the sites that have already been signed evidence the Armenian government s support.

Both Hovnanian International and the Armenian government view this project as being critical to the future growth of the Armenian economy through foreign investment. Directly, tourism is an enormously untapped business for Armenia. There is no foreseeable reason why an increase in tourism should not be expected with a minimal marketing effort. Indirectly, as potential and actual foreign investors come to Armenia, including the Diaspora, they will expect to see accommodations that at lease minimally

meet their customary expectations. Further, if facilities are available at historic locales many business trips can be taken to these locations. To combine business with a sense of Armenian history and culture.

Points of Contact:

Mr. Haroutyun Khachatryan **Director** **Hovnanian International, Ltd.** **50 G Chaushi, Yerevan** **Tel: 374-1-39 01 02** **Fax: 374-1-39 55 03** **E-mail: hovint@freenet.am**	**Mr. Vahak S. Hovnanian** **Chief Executive Officer** **Hovnanian International** **Suite 12, Village Mall** **Freehold, New Jersey, 07728 USA** **Tel: 732-462-8200** **Fax: 732-462-0943** **Email: vahak@vshovnaniangroup.com**

17. DSA GROUP
YEREVAN, SEVAN HOTELS

New directions in tourism demand new style hotels —adding modern hotel bed capacity to key locations of Yerevan and Sevan will connect tourist traffic well with the growing number of regional bed and breakfast hotels. Filling the tourist beds requires seasoned operators with tie-ups with airlines and tour operators furnishing tourist traffic to utilize new and emerging locations. The DSA Group is strategically allied with hotel operators and proposes to market tourism in Armenia taking this integrated approach.

Company: DSA Group (as project promoter)

Amount: $ 8.10 million

Tenor/Terms: 9 year loan (2 years moratorium + 7 year repayment)
@ LIBOR + 125 basis points

Documentation: The DSA Group is negotiating terms of partnership with major brands of hotel operators from India and USA

Use of Funds:

Land	
Buildings	4,339,040
Plant & machinery	1,689,510
Misc. fixed assets	880,000
Pre-Operating expenses	978,250
Technical know-how fees	216,950
Working capital margin	
Total	8,103,760

Legal Status: A limited liability company is proposed to be incorporated in Armenia

Local Strategic Partners: Hotel Operators such as Holiday Inn (US) and Sarovar Park Plaza (India)

Current Operations:
DSA Group Promoters are one of the leading firms in India associated with the construction of hotels. They have to their credit 32 hotels of all leading chains like Holiday Inn, Oberoi s, Indian Hotels (The Taj Group), The Meridien, Ramada Renaissance, Sheraton and many more.

Sales and Marketing Plan:

- Offer the hotel to a chain operator taking advantage of their marketing organization;
- Manage travel agent tie ups;
- Implement loyalty programmes /membership schemes for corporate clients;
- Promote Armenia as a potential holiday destination in India;

- Manage airline tie ups.

Business Plan:

- To construct and successfully operate two international standard hotels, one each in Yerevan (Grand Hotel) and Lake Sevan area (Holiday Resort).
- To create a benchmark for standards in the hospitality sector in Armenia.
- To provide the correct mix of leisure, sport, entertainment and business in the same premises.
- Redefine service standards currently provided in the hotel industry in Armenia.
- To achieve recognition for Armenia in the international hotel industry through these hotels.

Competition: None at present in the Sevan area.

Investment, Capital Cost and Financing Structure Proposed:
DSA plans to invest 10% of the total project cost of $8.1m. Along with the investment, DSA brings in international skills and expertise in the construction of hotels and also capitalizes on its relationships with international hotel operating chains.

DSA plans to raise the balance 90% through financial/strategic investors. The project has an impressive return to offer to individual or consortium investors. The initial security for the investors would be the real estate, i.e., land and the building to be constructed.

Regulatory considerations:
The Law on Foreign Investments, effective since 1994, provides guarantees to foreign investors, as well as grand fathering for five years.

Foreign investor companies are subject to the same tax regime as Armenian companies. Foreign investment in excess of Dram 500 million (approx. US$ 920,000) are exempt from profit tax in the first two years of operations, and a 50 percent profit tax reduction thereafter, up to the eight year of operation.

Other Foreign Investment Incentives
100 percent ownership permitted.
Long-term land lease freely permitted.
No duties on import of statutory capital, raw materials and equipment.
No export duty.
Losses may be carried forward indefinitely.
Free operation of foreign currency accounts.
Foreign investors may freely repatriate their property, profits or other assets that result from their investment after payment of all due taxes.
No restrictions on remittances.
Investment guarantees including five-year protection clause and MIGA membership

All forms of property and citizens rights to own and use property are protected under the Constitution. The April 1999 Law on Property registration regulates issues relating to registration of property rights. Under the Foreign Investment Law, in the event of a change in foreign investment legislation, foreign investments, in accordance with the investor s preference, may be subject to the laws existing at the time when the investments were made, for a period of up to five years. Foreign investments cannot be nationalized, confiscated or expropriated, except in extreme cases of a natural or state emergency, upon a decision by the courts and with full mandatory compensation.

Other project details:

Looking at the growing economy and future inflow of businesses into Armenia, the promoters feel that the capital city of Yerevan is in need of a state-of-the-art business hotel that would offer more choice and total flexibility to the business traveler. The proposedfacilities would also house a large banquet / conference hall for meetings, seminars, parties etc. The hotel would be designed in a manner that a particular wing of the building also caters to the tourists and their needs in Yerevan.

The intention is to construct a world-class holiday resort by Lake Sevan. It would be advertised as a holiday destination in its own right offering all facilities and amenities that a beach resort in Mauritius or Bali or Nice would offer to its guests during summer. The resort would be designed by a leading Indian architect in a manner that a beach ambience is created around the lake that will help the Armenians overcome the psychology of being a land-locked country.

The mountains of Tzakhadzor and Dilijan, close to Lake Sevan, are ideal for skiing and other winter sports but need to be promoted as such. The promoters, with assistance from the Government of Armenia, intend to develop the area and market it as a tourist destination throughout the year.

Point of Contact:

Mr. Vineet Singh Walia
Partner
DSA Group
16-A, Maya Mahal, 17th Road Khar
Mumbai, 400 052 India
Tel: 91-22-631-4082/6314
Fax: 91-22-631-4028/91-11-62
Email: vineet101@hotmail.com

18. LEASING OF TRANSPORT VEHICLES
Intermotor Armenia

Project Plus, member of HB Holding CJSC, together with the Daimler Chrysler Corporation and Intermotor Armenia, the local representative of Daimler Chrysler, has developed this project for establishing a leasing company in Armenia -- First Leasing and Finance (FLF).

Introduction:
Armenia is enjoying sustained economic growth, and there is an emerging demand for productive loans and complementary sources for funding of capital assets. However, the market of funding the capital assets is limited to commercial banks, which provide loans on the short-term basis, with high interest rates, and with strict collateral policies. There is no well-established market for financial intermediary services offering alternatives to loan financing of capital assets.

The introduction of a well functioning system of lease finance will facilitate the development of private as well as public transportation sectors, providing better terms and conditions for procurement of vehicles, agricultural and construction equipment.

Concept:
FLF will be established as a financial intermediary company dedicated to developing better financial solutions, mainly leasing services, for private and governmental businesses. The founders of the Project are *Intermotor Armenia* (the local representative of Daimler Chrysler in Armenia) and *MB Leasing* (Mercedes Benz Leasing), together with *Daimler Chrysler New Corporate Business Projects Department* and *Daimler Chrysler Moscow Regional Office*.

The legal framework governing leasing activities in Armenia provides adequate regulation only for leasing services in the transportation sector, currently.

Hence, FLF will start its operations in the car-leasing segment of the market, basically offering Mercedes-Benz vehicles. With the development of the adequate regulatory framework, the Company will expand its operations and provide financial leasing services for the industrial, agricultural, construction vehicles, and then in the other sectors.

The target markets for the Company at this stage are taxi companies, car rental companies, tourism companies, passenger and cargo transportation companies operating in the whole territory of Armenia.

The brand name of the Mercedes-Benz cars, that the FLF is going to lease to its customers, will serve as a highly valuable reputational asset for the Company. The Mercedes Benz brand also has the advantage of a highly qualified service center available in Yerevan.

An important economic benefit of the project will be its vital contribution to the development of all economic and commercial sectors, specifically, the industrial, tourism, transportation, and service sectors of Armenia, with significant impact on employment and infrastructure development.

Operations:
The Company will provide financial leasing services for passenger cars, vans, buses, and trucks, mainly used as commercial vehicles, with the following conditions:

Leasing without purchase right*:* This will be a zero accounting leasing. The lessee will pay a low monthly fee, but the vehicles will remain the property of the lessor. These vehicles will be replaced by new vehicle every 3 years.

Leasing of vehicles with purchase right: The lessee will pay a down payment and higher monthly rate compared with the previous option. But the vehicle will become his property at the end of the contract, in a three-year period.

For the case of taxi leasing besides above mentioned two cases, two more options are also assumed in the calculations:

Single owner*,* when car will be given to one driver; and,
Two owners*,* when two drivers will own the car; each of them will operate the car for 12 hours and pay half the daily rate.

The Financial Plan:
To start its leasing services the Company needs to raise 15 million EUR, during the first four years. The project will be implemented as four subprojects over four years. The amount of capital needed for the first year of the Company s operations is 4 million EUR, and the remainder is needed during the subsequent three years. It is proposed that the founders of the Company will initially invest an equity capital of up to 5 million EUR.

The Company plans to start returning the invested amounts to the shareholders from the fourth year. The average payback period is 9 years, and the IRR of the project is 21%.

The average lease rate is expected to be in the range from 15 EUR (for taxies) to 170 EUR (for trucks and buses) per day. The average lease period will be 3 years for passenger cars and 5 years for trucks and buses.

Key Project Indicators:

Total Project Full Scale cost:	15 million EUR
Investment needed in the first year:	4 million EUR
Project start date:	January 2002
Project implementation period:	Four years
Full Pay back period:	Nine years
IRR	**21.12%s**
NPV	**7,732,989.38 EUR**
ROE	252.26%
ROI	188.36%.

During the first three years of operations the Company intends to sell about 500 Mercedes-Benz passenger cars, trucks, buses, and mini-buses. This number will increase at about 20 percent of its annual number of vehicles, starting from the fourth year of operations.

Additional sources of financing could include *the International Finance Corporation*, *the European Bank for Reconstruction and Development*, *the Overseas Private Investment Corporation (OPIC)*, *The Caucasus Fund*, the capital market, and international banks. They may help the Company to gain equity and low-interest debt financing; as well as by their participation will add credibility and confidence to the Company business. Local and foreign banks, as well as insurance companies operating in Armenia will also be considered as potential minority shareholders and future partners. Preliminary agreement was reached with the *Deutsche Bank* for funding the project.

Based on the emerging demand for lease financing schemes in the Armenian market and the preliminary financial estimations, the Project is considered not only a profitable business opportunity but also a first step in investigating the whole financial leasing industry of Armenia.

Point of Contact:

Mr. Levon Arevshatyan
General Manager
Intermotor Armenia JV CJSC
General Distributor to Daimler Chrysler in Armenia
Gai Ave 14/3
375062 Yerevan, Armenia
Tel: 374-1-58 12 75, 52 80 85, 63 85 97
Fax: 374-1-56 51 79
E-mail: levon-arevshatyan@mercedez-benz.am
intmot@mercedez-benz.am

SUPPLEMENTAL
PROJECT GUIDES

THE ENERGY SECTOR
NEW COMBINED CYCLE UNIT AT YEREVAN TPP

Objectives and Scope: Efficient electricity production, application of new technologies
Duration and cost estimate:

Expected financing, US$	118,000,000
Yerevan TPP share	20,000,000
ALSTOM Power share	68,000,000
Co-financing required	30,000,000
Equity participation:	Up to 100% private
Payback period, years	15 years

- Construction — 18 month

Outcomes expected:
- Implementation of Armenian Least Cost Generation Plan
- Yerevan TPP renovation
- Ensuring reduction of specific fuel consumption
- Ensuring reduction of electricity and thermal energy generation tariff on TTP s
- Increasing the reliability of the power system

The Republic of Armenia is importing fuel for energy purposes. Within this context, the effective utilization of energy resources is an urgent task. Yerevan TPP was put in operation during 1963-1966 and the main equipment is more than 35 year old and received the permissible margin of resources utilization, which affects negatively the specific fuel consumption for electricity generation. Hence, it is necessary to introduce new, effective energy facilities of high maneuverability into the energy system of the Republic, among which is the Combined Cycle unit. The latter ensures high efficiency and readiness for quick start-up within wide range of working regimes. The construction of Combined Cycle will promote:

- the satisfaction of increasing demand for electricity;
- more efficient production of electricity and thermal energy;
- decrease of import volumes of energy resources (organic fuels);
- increase of the reliability of the power system;
- Improvement of ecological conditions.

Extension of Hydropower Capacity on the Base of Small HPPs

Project Description:	**Location:** Small HPPs (total installed capacity 72.69 MW). **Objectives and Scope:** development of Armenia s hydropower potential in an optimal manner, with construction of new hydropower plants. **Duration and cost estimate:** Estimated Total Cost: $78.6 million Duration: 2-6 years **Expected Benefits:** Economic: developing indigenous energy sources and reducing the reliance on imported energy sources, Social: countering the effects of future energy crises, Technical: domestic industry development supporting 258m kWh for new small HPPs. **Risks:** hydroelectricity production was reduced in the year 1996 mainly at the Sevan-Hrazdan Cascade of HPPs, in an attempt to keep the level of Lake Sevan constant. Accurate estimates of economic and financial indicators for different components of the project will require feasibility studies.	
Main Data of the Project:	Expected financing, US$	Small HPPs —78,630,000
	Loan: annual interest rate, %	
	Equity participation: share, %	100 % private property
	Payback period, years	8-10 years

Point of Contact:
Mr. Alexander Kocharyan
Chief Expert of Development Department of MoE
Ministry of Energy of RA
375001, Government Building 2, Republic Square, Yerevan, Armenia
Tel: 3742) 528 534
Fax: 3742151 687

TECHNOLOGY INCUBATOR
SolarEn International, USA

Project Description:

SolarEn, LLC is looking for opportunities to utilize indigenous intellectual and manpower resources in Armenia for creation of intellectual property, new jobs, and to promote export of products and services from Armenia. Incubation of clean energy & information technologies and companies, manufacturing, and project development are major activities of the company.

Technology Incubator:

SolarEn incubates a fuel cell (FC) company, that will develop and manufacture low-cost fuel cell components, and will eventually establish an assembly line of finished fuel cell systems for application in both stationary systems and fuel cell electric vehicles (FCEV). It will kick-off the development of infrastructure for hydrogen economy in Armenia. The company currently concentrates on the following three projects that offer the best potential for rapid commercialization:

- Low-cost polymer-graphite composite based, injection molded bipolar plates for Proton Exchange Membrane (PEM) fuel cells.

- Enrichment of oxygen content of air for more efficient operation of fuel cells (PEM, alkaline, molten carbonate, solid oxide and phosphoric acid), and technology for carbon dioxide adsorption resulting in extended life span of alkaline fuel cells.

- Computer controlled test station for evaluation of fuel cells various operational parameters.

The technology incubator plans to expand into information technologies and other high-tech areas in the near future

Manufacturing:

- SolarEn manufactures and installs solar thermal collectors for water heating for residential and institutional buildings.
- The company designs and manufactures Solar Photovoltaic (PV) modules, installs them as both grid-connected and off-grid power supply systems, as well as implements their maintenance and after sale services.

Project Development:

SolarEn, LLC is implementing a wind potential assessment project in several regions of the country, and prepares to launch Armenia s wind atlas project in cooperation with US National Renewable Energy Laboratory (NREL).

Having established the area with most wind resource, SolarEn has already acquired land there, and began a wind farm commercial development project. Possibilities of selling the energy to be generated by the wind farm to the grid or directly to the customers will be contemplated.

Project Management:

SolarEn, LLC is a wholly owned Armenian subsidiary of SolarEn International Corporation of Minnesota, itself founded by Cafesjian Family Foundation of Florida, USA. SolarEn, LLC is a private company registered in the Republic of Armenia in February 2000.

SolarEn s staff was carefully selected for the best fit. Many of the technical and scientific personnel have a quarter century of experience in clean energy science, engineering, and implementation. SolarEn s staff has more than two hundred publications and dozens of patents of USSR, Japan, Germany, Australia, Italy, France, and USA.

These scientists are surrounded with MBAs to augment their scientific skills with marketing, financing, accounting, recruitment, and other commercial skills. Many current and future employees are placed in strategic locations in the United States to receive practical training, and thus keep the incubator aligned with best practices of western management and benefit from resulting contacts for business development, concept formulation, and next stage financing.

SolarEn, LLC actively seeks and establishes new strategic alliances with centers of technological excellence and reputable international companies (stars) and for bringing technological know-how, advice, exchange of ideas, and training of employees. A strategic partnership has been established with US National Renewable Energy Laboratory (NREL) to ensure qualified support for SolarEn s clean-energy related activities. Relations are developing with IC^2Institute/Austin Technology Incubator to bring expertise for SolarEn s technology incubator.

Market and Sales:

SolarEn is mostly an export-oriented company. The fuel cell products will be targeted primarily toward markets located outside Armenia —in developed Western countries, Japan, as well as some of the fast-growing Asian economies. The same applies to markets for future expansion of SolarEn into IT area.

At the same time, understanding the Armenia has limited indigenous conventional fuel and energy resources, and that existing power plants, power grid and equipment are rapidly reaching the end of their economic lifecycle, SolarEn envisions Armenia's energy generation mix in the future to have certain portion of power generation utilize wind and solar energy, as well as an important role for fuel cells for electricity and heat generation within Armenia.

By 2003, SolarEn, LLC anticipates to have sales of about $1 million, of which $500 thousand in bipolar plates, $400 thousand in O_2 enrichment and CO_2 removal systems, and $100 thousand in test stations. These estimates are based on the following assumptions:

- SolarEn will achieve US Department of Energy target cost per plate - $10/kW, which brings the cost per plate to $0.5. Markup of 50% on cost is then applied, so price per plate will be $0.75. It is assumed that about 650-660 thousand bipolar plates will be sold in 2003, bringing revenue of $500 thousand.
- Average price of $400 per oxygen enrichment (or CO_2 removal) system (including $100 markup), 1000 systems sold in 2003.
- Average price of $5000 per test station ($3000 of which is the cost), 20 test stations sold in 2003.

Given these assumptions, SolarEn thus anticipates around $305,000 in gross profits in 2003. Due to lower operational costs, SolarEn anticipates higher markups and thereby faster return on invested capital as compared to its competitors.

Primary customers of SolarEn s fuel cell products are fuel cell manufacturers and fuel cell system assemblers. Later on auto manufacturers, utilities and eventually households will become customers.

For marketing and distribution of its products the company will use its advantageous relations with centers of technological excellence and star companies of the industry, strategic partnership with which is actively sought and established currently.

Oxygen enrichment /CO2 removal gas adsorption technology of SolarEn is based on zeolite, a mineral abundantly available in Armenia. Besides, most of raw materials, components and parts necessary for manufacturing of bipolar plates and FC test systems can be easily produced locally. Generally, the increased reliance on clean energy recourses will reduce unsustainable imports or practices and increase exports.

The direct competitors of SolarEn s clean energy products are:

- Companies producing bipolar plates for their own fuel cells and/or for selling them to FC assemblers (Ballard, Energy Partners, Honeywell, SGL Carbon, etc);
- Companies producing and promoting fuel cell types other than PEM (SOFC, PAFC, MCFC, etc.), where bipolar plates are not used at all.
- Companies involved in processing, production and storage of gases.
- Companies offering industrial test systems, including FC test stations.
- Companies involved in development and commercialization of renewable energy.

Indirect competition comes from conventional energy industry, since nowadays they are still able to produce power at lower price per kilowatt than fuel cells and some of the other clean energy sources. Generally, Armenia s tariffs, custom duties and other import/export restrictions do not affect SolarEn s current and future products. There are only few exceptions:

- The custom duty of 10% on import of all kinds of glasses affects SolarEn s production of solar collectors and PV modules, where special low iron tempered glasses are used.
- A concern is related to the ambiguity of custom code regarding generating sets - it is not clear whether wind turbines are considered generating sets which appear to be subject to custom duty.
- There is also certain ambiguity for other articles of aluminum subject to 10% custom duty. It is not clear whether aluminum components used in solar collectors and PV modules are included in the list, or what constitutes the list, for that matter.

Government support and regulations:

The multi-faceted activities of the company will produce convergence and synergy effect not only within incubator, its graduates and associates, but also in the related industries of Armenia and possibly, the national economy. Increased reliance on indigenous renewable energy resources and efficient IT technologies will improve the so-called country risk by reducing reliance on unsustainable imports or practices and increasing exports. Furthermore, SolarEn, LLC will become a role model for western way of doing business and set the standards for others.

OIL AND GAS EXPLORATION
Armenian American Exploration Company

Summary:

Armenian American Exploration Company, Inc. (AAEC) currently holds the West Armenia Hydrocarbon Exploration Licence.

AAEC signed a Production Sharing Agreement in 1997 with the Armenian Ministry of Energy. It maintains a small office in Yerevan, and owns a Skytop Brewster drilling rig and associated camp, currently located at the Azat-1 well location near Garni, east of Yerevan. The services of local Armenian contractors, particularly in the seismic, geological, gravity and construction fields, have been used wherever possible. A warehouse with excellent road and rail connections has also been set up; it contains much of the materials and equipment required for subsequent drilling activities.

The licence area occupies nearly 43% of the Republic of Armenia and covers most of the territory which is prospective for hydrocarbons. In petroleum exploration terms the area comprises a series of virtually unexplored frontier basins, but with clearly identified potential for oil and gas. Over 200 kilometers of new 2D reflection seismic data, using a vibroseis energy source, were recorded during 1997/8 over the two most prospective basins —Near Yerevan (Garni-Shorakhpiur-Aramus area) (oil prone) and Hoktemberyan (gas prone). One exploration well - Azat-1 - was drilled to 3,524 meters in the former basin, using AAEC s own Skytop Brewster drilling rig, camp and crew. The well encountered minor oil traces.

Before further exploratory wells are drilled, further seismic data should be obtained. Previous analyses, not performed by AAEC, concluded that average resource-in-place prospects of 70 million barrels of oil exist in the Garni-Shorakhpiur (oil prone) area (east of Yerevan), and 144 bcf gas resource-in-place prospects in the Hoktemberyan area (south west of Armavir). Recent technical work, using new ideas, confirms the presence of five structures with commercial gas potential in the Hoktemberyan area. (Oil and gas prospects are available with Mr. Tim Papworth and operational details can be viewed on www.aaec.com.)

AAEC has had very high start-up costs associated with having to initiate operations in Armenia, which lacks normal oil industry infrastructure and support companies. Future expenditure will be much less.

Introduction

The territory of Armenia is about 29,800 square kilometers in area, of which the AAEC West Armenia license area of 12,700 square kilometers covers most of the more hydrocarbon prospective western half.

There are two principal means of access to Armenia for petroleum-related equipment and materials coming from outside the country. Heavy equipment and supplies can be sent by sea to

the Black Sea ports of Poti and Batumi in Georgia, and thence loaded on road or rail transport, entering Armenia by the northern border with Georgia. The AAEC drilling rig was mobilized from France by this means. Other drilling materials, such as casing, came via the Black Sea and through Georgia from Ukraine.

Personnel and smaller cargoes of materials can fly directly to Yerevan International (Zvartnots) Airport, without problems. This airport currently benefits from at least ten passenger flights per week from West European air terminals such as London, Paris, Zurich, Vienna, Frankfurt and Amsterdam, via airlines such as Armenian Airlines, Austrian Airlines, British Airways and Swissair.

Petroleum Legislation

The Ministry of Energy of the Republic of Armenia recognized from very early on the need to attract foreign investment into the country s energy sector, and in particular for the development of potential indigenous hydrocarbons. It embarked on a program of legislative reform, aimed at making Armenia an attractive place for foreign exploration companies to invest. Simultaneously, it participated in a European Union (Tacis) sponsored project, aimed at establishing a databank of all petroleum related information, a technical summary of the hydrocarbon potential, and a production-sharing- type licensing policy. As a result, the business climate for foreign companies wishing to participate in petroleum exploration in Armenia has been radically improved, and negotiation processes streamlined.

A single state entity, Geoenergy, formerly PPIU (Petroleum Project Implementation Unit), has been established to act as the focal point for relations with foreign investors in the petroleum sector. It also holds and permits access to the database of key information previously established during the European Union (Tacis) project. AAEC holds frequent meetings with Geoenergy and from time to time with Energy Minister Dr. Garen Galustian (appointed 20th May 2000). Relations between AAEC, Geoenergy and the Ministry of Energy are very cordial and co-operative.

AAEC has signed a Production Sharing Agreement with the Ministry of Energy for an initial period of 5 years. It was subsequently approved by Parliament and therefore has the force of law. Its Effective Date is 6th February 1997.

License and Production Sharing Agreement Details

The location of AAEC s West Armenia license area covers effectively the western half of the country, including within it the capital city of Yerevan. Operations within the license area are governed by a Production Sharing Agreement which provides for rapid recovery of sunk costs. The key points are summarized below:

Date of Parliamentary Approval: 27th January 1997

Date of Presidential Signature and Effective Date: 6th February 1997

End of Initial Five Year Term: (will probably be extended) 5th February 2002

Renewal Period: Five years

Area: 12,700 square kilometres

Relinquishment Obligation: 25% at the end of the initial 5-year term

* **Minimum Financial Commitment:** 10 million US Dollars

** **Minimum Work Program:** Three wells and 60 kilometres of 2D seismic within one year

Production Split (Profit Oil) After Deduction of Cost Oil	Aggregate Production (MMbbls oil equiv.)	Government (per cent)	AAEC (per cent)
	0 to 19	50	50
	19 to 50	55	45
	50 to 1,200	60	40
	over 1,200	99	1

Cost Oil: Past costs recovered out of 70% of petroleum remaining after recovery of 100% of on-going production operating expenses.

The terms of the License and Production Sharing Agreement are considered by AAEC to be very favorable. It provides for rapid recovery of sunk costs and an attractive split of Profit Oil.

* The minimum financial commitment has already been met.

** The minimum seismic commitment has already been met.
The Ministry of Energy has agreed to reschedule the timing of the drilling commitment to allow for the drilling of one well per year. The drilling of Azat-1 fulfilled the drilling commitment for 1998.

Invitation to Participate:

AAEC is seeking partner(s) for the its West Armenia license area, as described above.

Enquiries and expressions of interest should be addressed to:

Mr. Steve Dechant,
Chief Financial Officer,
Armenian American Exploration Company Inc.,
P.O. Box 675908,
Rancho Santa Fe,
California 92067 United States of America

Tel. no. 01 858 759 5990
Fax no. 01 858 756 3194
E-mail: sdechant@email.msn.com

and to (also for specific technical information):

Tim Papworth,
General Manager,
Armenian American Exploration Company,
2, Khnko-Aper Street,
(near American University of Armenia)
Yerevan 375019,
Republic of Armenia

Tel. no. (3749) 404561 (mobile)
Tel. nos. (office) (3741) 548259, 225563
Evening tel. no. (3741) 228971
Fax no. (3741) 151174
E-mail: timpap@arminco.com

Detailed technical information, including operational photographs, can be reviewed on AAEC s website at **www.aaec.am.**

INVESTOR PERSPECTIVES
LM Ericcsson AB, Sweden MiniPLMN
Market Segment Solutions and Roll-Out Strategies

General

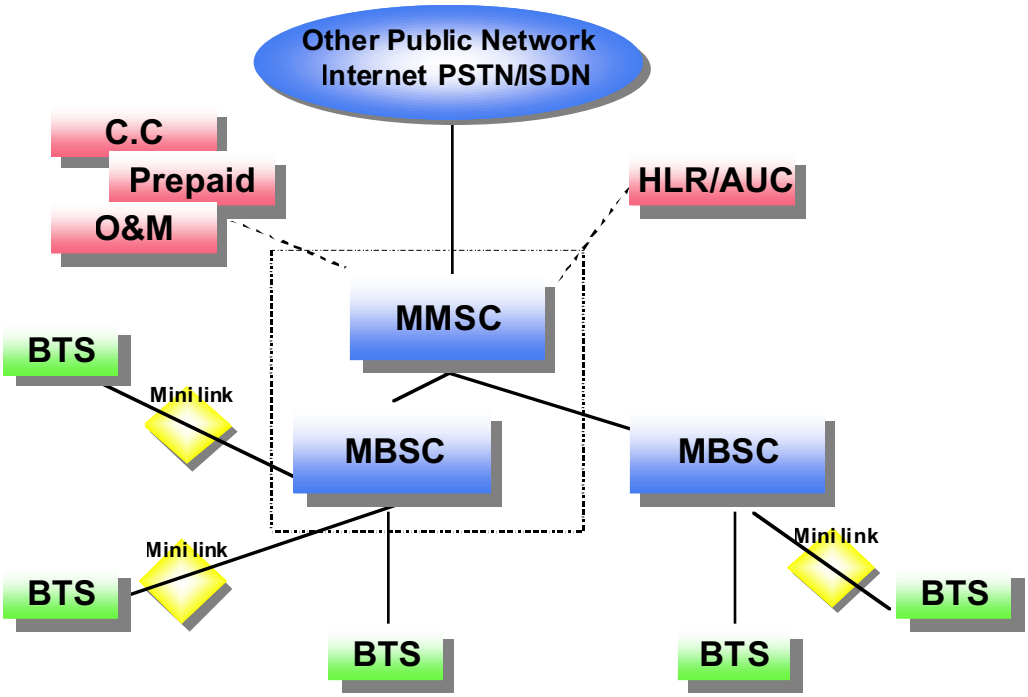
Penetration rates in rural areas of most developing countries are very low. About 5 billion people do not have access to telecommunications. One major reason for that is that telecommunication has traditionally meant heavy investments up front and big systems to make an acceptable pay back time of the investment. This huge up-front investment is a too tough hurdle for the 5 billion. From another side the contribution of a telephone to GDP is greater the lower is the GDP *per capita,* see ITU Handbook *New development in rural areas* .

One of recommended network technologies models for planning of networks in rural and remote areas is related to Digital cellular systems. The aim of this contribution is to propose businesslike models for the introduction of Universal Access in rural areas based on use of the standard GSM technology.

This requires changes in attitude amongst the telecommunication vendors, the operators and the countries issuing license for telecommunication system.

There is a huge unutilized demand for telephony in the regional/rural areas of the today s world. Due to the fact that those areas mostly are thinly populated areas they neither can afford the costs nor need the capacity of a ordinary built Public Land Mobile Network (PLMN), instead there is a need of low-capacity & low-cost switching systems with the ability of good area coverage. It would be excellent if the system is easy and cost-effective to expand afterwards, both regarding capacity and coverage.

In this document a MiniPLMN is a Mini version of a PLMN which can handle up to 5K subscribers and which is independent of chosen standard (NMT, GSM, TDMA, etc.) A MiniPLMN might be of many shapes and in several similar configurations, but will, in general, look like this:



Purpose

The purpose of this document is to act as a short description of some ways to establish a MiniPLMN, based on alternative ways of connecting the downsized AXE10 (5K subscriber capacity) and/or other capacity/costs adapted products.

Basic Functionality

- **LOCAL SWITCHING**

One of the big advantage in Local Switching is the minimizing of needed transmission and corresponding saving of costs (rented lines, interconnect fee etc). Instead of a fixed-line network — based on copper wire - we can use cost adapted components of a ordinary cellular mobile system to achieve a similar functionality (MOC). True local switching does not exist in mobile telephony, it is a expression used in fixed-line telephony networks. The expression is in the cellular telephone world a synonym for a cross connection between the PLMN and a PSTN of a local (geographical limited) point of view. In a NMT system the MTX can t establish such a cross connection without support from both a local Exchange and a local Remote Subscriber Stage (RSS). In a GSM system the MSC only needs support from a local RSS.

- **STAND-ALONE**

One way of using a MiniPLMN and/or a downsized AXE10 will be as a stand-alone solution. This will be the case when regional/rural coverage is needed in low population areas and a standard configuration will be far too expensive (for example when no telephony exists and a new small business operator will start-up). This stand-alone approach will sometimes be utilized in combination with add-on functionality and may —in the long run —prepare for standard high capacity system deliveries.

Similar configurations may also be used in Military and/or Disaster response solutions, in those later cases these stand-alone systems it might be useful to connect them to and managed by a

private network . Another possibility is to connect them to a existing public network, i.e. by MicroWave Link or by satellite communication.

- **ADD-ON**

A guess is that, to a substantial amount, the MiniPLMN s and/or down-sized AXE10 will act as add-ons to existing (or new) standard PLMN s. This will be the case when a regional/rural coverage is needed in low population areas and a standard configuration will be too expensive. This feature may be used in regional/rural areas where no copper lines are available, in those cases the MiniPLMN may connect to the PLMN or to the PSTN via MicroWave Links. A similar configuration may also be used as a Shipping solution or as a Oil platform solution, connected to and managed by a larger already existing network.

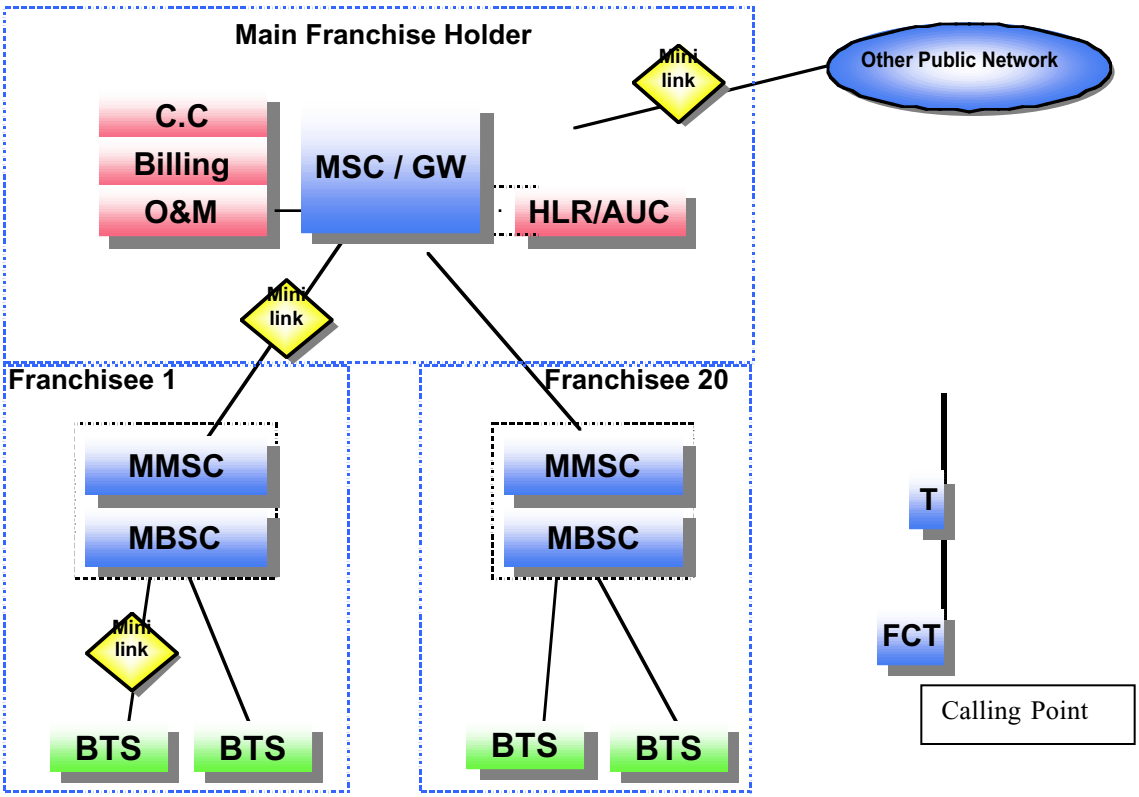
Solutions

- **THE MICRO OPERATOR CONCEPT**

The MOC (Micro Operator Concept) is a business concept - a Solution - and utilizes a combination of Local Switching and Stand-alone functionality (some basic functionality is managed by the top level Operator).

The MOC relies on the same basic financing principles as the world wide well known franchising concept and involves (besides the suppliers of equipment and of external services) three kinds of players: Main Franchise Holder (MFH) as the franchiser, the Micro Operator (MO) as the franchisee and People who want a Phone (or at least want to make phone calls at certain Calling Points).

A Main Franchise Holder is the owner of and is responsible for the overall network functionality.



This includes Customer Care services , Billing/ Prepaid administration, Operation & Maintenance, Number plan and Inter-connect management, Services & Spare parts etc.

The Micro Operator is a small company who owns (or rents) all the Micro Operator equipment needed to run the local business (MMSC, MBSC, BTS, MiniLink, service Computer, Power and so on), all other functionality are leased from the MFH.

In this concept all MFH costs must be shared by a number of MO s (approx. 10 —20 MO s) in order to be a cost effective one. In the future there might be low-end, low-capacity and more cost effective support systems available from Ericsson.

When the customer base has reached a certain level of penetration there might be a need of more switching and radio traffic capacity within the MiniPLMN. At that stage you will be able to add up to five radio base stations (full load=180 Erlang) to already existing MiniPLMN combination. More switching capacity is achieved by adding one or more MMSC/MBSC combinations (by sacrificing one RBS connection) to the existing network.

Another way of adding switching capacity (more then 10K subscribers) is to replace existing 5K MMSC/MBSC combination(s) by one or more standard capacity AXE10 switches. In this scenario you will be able to move the 5K MMSC/MBSC combination further out in the overall network, to reuse the former investment within new rural areas.

- **STAND-ALONE**

From a technical point of view there is no major difference between the Micro Operator Concept and a Stand-alone application (solution). However from an economical (business case) point of view there is a difference, due to the fact that the cost of a full functionality supporting system of today will be adequate, in a single stand-alone low-capacity application.

However, if a support system with reduced functionality (i.e. WinFiol from Ericsson) in combination with a low end & low cost Billing/Prepaid system will be used, a more cost effective solution will be achieved (look at the figure in paragraph 1, General).

A stand-alone solution might be used in Military and/or Disaster response solutions or as an on-board telephone network in the Shipping and/or Oil platform industry. It might also be used as temporary telephone solutions at some major sports events.

In all applications mentioned above the MiniPLMN will be low-capacity, low-cost, pre-configured, pre-tested and ready to run at delivery.

- **ADD-ON**

An add-on situation appears when you add a MiniPLMN to a existing PLMN, in order to expand the mobile telephone network into thinly populated areas who can t afford a standard high capacity solution.
The add-on solution utilizes already existing back-bone and service functionality of the existing PLMN and might therefore be a very cost-effective way to expand the network into the regional/rural areas.

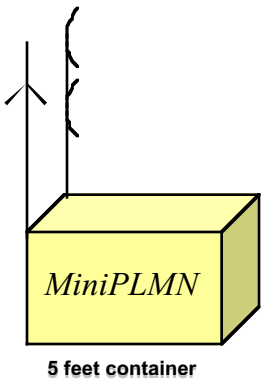
When and if, the subscriber penetration rises to a certain level the MinPLMN configuration and/or the downsized AXE10 might be replaced by standard high capacity switches and moved further out in the overall system, in order to expand the PLMN.

- **CONTAINERS**

In order to get a fully pre-configured, pre-tested, cost-optimized, supply-efficient and easy movable solution Ericsson has developed both a MiniPLMN technical and a Yellow Phone calling point container.

- *Technical container*

The technical container will fit in both the MOC solution and in the stand-alone solution, but may of course also be used in an add-on solution as well.

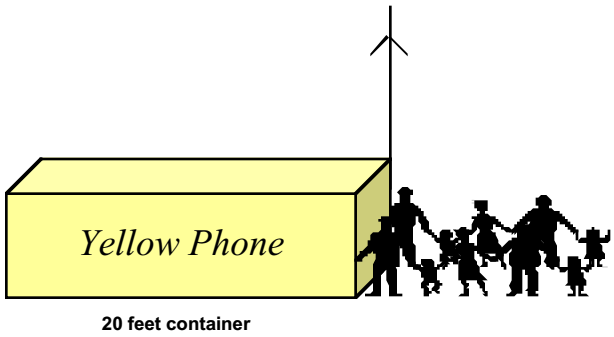


This container will house the Switching functionality (MMSC and MBSC), one of the or five possible Radio base stations, two MiniLink equipments, in-house Cooling equipment, DDF functionality, from 220/380VAC to 24/48VDC converter, Back-up batteries, internal cabling, some external connectors, antennas (RBS and MiniLink) etc.

- *Calling point container*

The calling point container will be used in a MOC solution, when a pre-designed and easy installable equipment is preferable.

This container will house all fixed line telephone equipment needed to act as a calling point and utilities to communicate to the technical container, in order to manage that one (from a Micro Operator point of view).



There might also be some entertainment equipment in the container —in order to act as an attractive business center —and there might be some other business possibilities as well (i.e. marketing of movable cellular phones , prepaid SIM cards etc).

Roll-out Strategies

The general strategy of a MiniPLMN is to act as a cost-effective way of establishing fixed-line-telephony in regional/rural areas of the world. At the same time, penetrating those areas in such a way that Ericsson will get a foot-print in those countries in order to later on be able to sell standard fixed-line and/or cellular mobile systems as a natural next step in the target countries extension strategy.

TUFENKIAN HOTEL CHAIN
Tufenkian Hospitality Ltd, USA

PROJECT MISSION

The mission of the Tufenkian hotel chain is to reawaken Armenian traditions and culture that were forgotten during the Soviet era, as well as to impulse economic development in the Armenian province. The hotel chain must become one more manifestation of the Tufenkian core business philosophy — ***refinement of the modern through interpretation and recognition of the past heritage.***

The goal of the project is to create an Armenia-wide network of ethnical-cultural tourist sites, in each of which pristine Armenian environment, millennial Armenian culture and traditions, and state-of —the-art hospitality standards will be harmoniously integrated**.** At each of the Tufenkian hotel properties, visitors will not only enjoy the high-standard lodging and recreation, but also will explore the Armenian traditional culture and art. They will make their contribution to the cultural and economic reawakening of the Armenian villages by staying at the Tufenkian hotels, participation in the national festivals and fairs, buying the crafts at the Tufenkian craft centers, and a number of other entertainments.

PROJECT OBJECTIVES

The basic purpose of the *Tufenkian Hotels Chain* is to provide to its customers state-of —the-art hospitality, providing them with live experiences of pure Armenian environment and millennial Armenian culture and traditions, in each of the hotel properties throughout the country. The following sub segments of visitors to Armenia that will be targeted:

1. Armenian Diasporans
2. Business travelers
3. Ecological tourists
4. Culture / ethnical tourists
5. *Adventure tourists*

Within these subcategories, Armenian Diasporans are naturally expected to provide more customers, and on this sub segment the core marketing and promotional efforts in the first 1-3 years of operation will be concentrated. With the introduction of the regional hotels of the chain (in Tsapatagh, Lori, Eghegnadzor, and Goris) and with the parallel development of system of *locally subcontracted ecological and adventure tourism and network of local craftsmen*, the marketing focus will be gradually expanded to the ecological and adventure tourists.

PROJECT DESCRIPTION

The tourists will be offered wide range of sightseeing activities, fishing, boat trips, picnics, etc. They will acquaint themselves with the traditions of Armenian province. They will have an opportunity to observe and participate in the traditional Armenian rituals an holidays during the folk festivals, see and buy items of traditional arts at the Craft Center, participate in the fair of Armenian crafts, taste and prepare Armenian pastry and food during their sightseeing trips through the village. The summary of the services / entertainment is attached.

ADVANTAGES OF TUFENKIAN HOTEL CHAIN

The advantages of Tufenkian hotels are the following:

- The regional chain of hotels concentrates complete ***lodging / tourism / entertainment / craft sales*** cycle in one place. This may also give us more flexibility in pricing of the tour packages and ability to provide advantageous bunch of additional services for the clients.

- Targeting the categories of tourists, which are not specially targeted by the competitors. The high-class hotels situated in some of the most beautiful places in Armenia will attract
    - § Cultural / ethnical tourists
    - § Ecological tourists
    - § Adventure tourists

- Standard high quality of accommodation service both in Yerevan and in the regional hotels. An aura of exclusivity that will surround the visitors to the Tufenkian hotels will be created by the specially designed and hand-made furniture, accessories, and amenities in hotel rooms, Armenian traditional entertainment and kitchen, and individual approach to achievement of every client s satisfaction.

- High quality service, corresponding with the international standards for the hotels of its kind

- Free transportation to the center of the city by hotel vehicles.

- At the request of the tourists, tours to the carpet gallery at the Yerevan manufacturing site might be organized. The tourists will have the unique opportunity to see how the famous luxury Tufenkian carpets are made, observe all the processes of the hand-made manufacturing and design, visit carpet gallery (see the attachment) as well as to order and buy at the place Tufenkian Armenian carpets.

- Wide choice of complimentary Armenian snacks — 24 hours a day.

REGIONAL TRANSPORT PROJECT

Seaborne International, USA

Concept

This plan was developed two years ago by Seaborne International, Inc., of Los Angeles. Based on this concept, Seaborne now invites fresh ideas and new paertners to take advantage of emerging opportunities. The concept is to create and operate a comprehensive regional freight transportation and distribution service company in the three countries of the TransCaucasus based on a network of four strategically located freight terminals and distribution centers; at Poti, Tbilisi, Yerevan and Baku and a fleet of suitable company owned vehicles. The company will be integrated into several international transport alliances so as to provide reliable and efficient multi-modal freight movement services between the region and anywhere in the world.

The company will consist of five inter-dependent regional companies, operating under the management umbrella of Seaborne International (Caucasus Holdings) Ltd (see Organization Chart at Annex A). The subsidiary companies will be:

a. Seaborne International, jv. jsc., Yerevan, Armenia - (SAM) - formed Oct 1997
b. Seaborne International, (GE) Ltd., Tbilisi, Georgia - (SIG)
    (a) Seaborne International Roadway Ltd., Tbilisi, Georgia - (SIR)
    (b) Seaborne Port Services Ltd., Poti, Georgia - (SPS)
c. Seaborne International, (AZ) Ltd., Baku, Azerbaijan - (SAZ)

This will be the first of three planned stages. The first stage (Stage 1) will involve the development and/or expansion of the group in the TransCaucasus, with some matching expansion in the USA and Europe. Seaborne s goal is to become the leading multi-modal transport and logistics company in the Caucasus region within a period of three years and to continue building thereafter.

Objective

Seaborne International is seeking the necessary funds from an equity investor(s) to create and develop the group s infrastructure needed to provide a full range of transport and logistical support services.

Rationale

Essential to commercial development is the availability of efficient multi-modal freight transport and distribution services. In Georgia, Armenia and Azerbaijan, reliable and efficient transport services are not easily accessible.

The burgeoning regional markets, and prospective energy and infrastructure projects surrounding the Caspian Sea through to Central present very attractive opportunities for multi-modal transport and logistical support service providers. Due to the virtual absence of any properly

equipped and efficient transport companies in the region, market leaders have not yet emerged and customer loyalty has not yet been established. Such a transport company must cater to the needs of all sizes of company, especially small to medium sized companies, which are the economic engine of most industrialized countries. Transport and ancillary services must be easy for merchants to buy and no piece of freight will be too big or too small.

As one of the primary pillars of commerce, transportation is an essential ingredient in developing the TransCaucasian regional economy. The better the quality of the transport and ancillary services, the more likely will private foreign investment be made in the region. To accomplish this, adequate financial investment from institutional investors along with willing and qualified management expertise is needed to implement a viable business plan.

Historical Background

The TransCaucasian corridor running between the Black Sea and Caspian Sea, sandwiched between Russia to the North, and Turkey and Iran to the South have been and will continue to be an important strategic thoroughfare. This is the path of the legendary Silk Route of old. Today the European Union is resurrecting the Silk Route under the guise of the new TRACECA highway passing through the TransCaucasus and beyond into central Asia. The three countries of Georgia, Armenia and Azerbaijan have a combined total of 17 million people. In spite of the uniting legacy of their Soviet experience and Russian the *lingua franca*, each country is distinctly different from the other. Georgia for example, is largely agricultural and with its Black Sea ports, is also set to become the transport gateway to the Caucasus and Trans-Caspian destinations. Armenia is industrial with well-educated and technically capable people plus a wealthy and motivated Diaspora. Azerbaijan has oil and gas, centered on Baku and has the largest expatriate community. In spite of the dispute over Nagorno Karabakh between Azerbaijan and Armenia, the region is making strides, albeit slowly, to achieve free democratic market economies and benefiting from the momentum of commercial development.

Seaborne s Experience in the Region

Seaborne has had four years operating experience in Armenia and Georgia. Steve Robinson, President and founder of Seaborne International, Inc., recognised this opportunity when he secured a two-year transport management contract in 1996 shipping construction equipment and materials from the USA, Egypt and Hong Kong for the EBRD funded air cargo terminal at Yerevan airport, Armenia. In the process, he realized that a professionally managed comprehensive multi-modal transportation company could quickly become the region s market leader. In October 1997, Seaborne International entered the market directly by opening an office in Armenia and now has a growing and profitable import/export air, sea and road freight customer base.

The Company and Stage 1 Development Sequence

The parent company, Seaborne International, Inc., of Los Angeles, California is a fully licensed and bonded FMC freight forwarder, NVOCC and IATA air cargo agent in business since 1987. Today, as well as providing general air and ocean freight transportation services, Seaborne specializes in moving project and heavy lift cargo. For example, Seaborne is contracted to deliver decommissioned US Naval and US Coast Guard vessels to foreign navies.

Using the experience gained in Armenia, Stage 1 calls for the formation and development of three regional companies plus a trucking and a port services companies under the umbrella of a new off-shore company (yet to be formed), called Seaborne International (Caucasus Holdings) Ltd., operationally based in Tbilisi, Georgia. The intended development sequence of the sub-stages is:

a. Sub-Stage 1 - Form Seaborne International (Caucasus Holdings), Ltd. Locate and hire suitably qualified personnel.

b. Sub-Stage 2 - Form Seaborne International (GE) Ltd., with an office co-located with the regional head office at Tbilisi, Georgia. Locate and hire suitably qualified personnel.

c. Sub-Stage 3 - Form a regional / inter-city trucking company, Seaborne International Roadway, Ltd. (SIR) at Tbilisi, Georgia to serve the group throughout the Caucasus. Locate and hire suitably qualified personnel.

d. Sub-stage 4 - Form a joint venture company, Seaborne Port Services Ltd. (SPS) with our port partner at Poti, Georgia Express Transshipment Services (ETS) who will collateralize their 20% share with their own 3.4 hectare container terminal.

e. Sub-stage 5 - Form Seaborne International (AZ) Ltd., at Baku, Azerbaijan. Locate and hire suitably qualified personnel.

f. Sub-Stage 6 - Establish four cargo-handling terminals at Poti, Tbilisi, Yerevan and Baku.

g. Sub-stage 7 - Simultaneously set up both the US and a UK/Europe based support operation offices will be a relatively easy, but a necessary and integral part of the TransCaucasian development.

The Services

Seaborne will provide a complete range of transport and ancillary services (each one a profit center), namely:

a. Inter and intra regional road transport services (Between Europe and the TransCaucasus); both truck load (TL) and less than truck load (LTL) (cargo consolidation)
b. Regional inter-city road services.
c. Container depot and cargo handling operations.
d. Container Freight Station (CFS) / de-consolidation services.
e. Ocean and airfreight forwarding services.
f. Customs clearance.
g. Transportation of sea containers and oversize loads, to and from inland cities and ports in the Caucasus and Trans-Caspian hinterland, by road and rail.
h. Port agency services for shipping companies (vessel owners / operators).
i. Bulk cargo handling and transportation by ship, rail and road.
j. Bond store operations.
k. Warehousing and distribution.
l. Local cartage (pick-up and delivery) — possible agency of major soft cargo / courier company.
m. Transshipment and on-carriage services to other CIS destinations.
n. Export packing and crating.
o. Marine cargo insurance (Seaborne sells Lloyds cargo insurance cover).
p. Special projects and chartering.
q. Terminal for truckers with European standard accommodation and amenities.
r. Truck sales and after sales services and parts sales.
s. Ad hoc trading activities; sourcing products for regional buyers

The Target Market

An aggressive marketing and sales plan will be implemented and pursued vigorously in the region and selected overseas markets, especially targeting the following types of customers:

a. Importers and exporters in need of consolidated cargo (groupage) services; Less full than Truck or Container Load (LTL or LCL).

b. Importers and exporters in need of full truck load services by road or sea.

c. Importers and exporters in need of airfreight services.

d. International construction companies moving heavy-lift and project cargo to the TransCaucasus and Trans-Caspian destinations of Central Asia.

e. Foreign embassies, government delegations, NGO s and other expatriates needing Household Goods and personal effects packing and removals into and out the region.

f. Overseas based companies needing regional warehousing and distribution of their products from pre-positioned inventory (stock) (Pick n Pak operation).

g. Shipping Lines and ship operators; needing port and container handling services, maintenance and on-carriage.

h. Airline operators, needing general sales agency, ground handling, interlining and road feeder services.

i. Transportation and freight forwarding companies around the world in need of reliable and efficient regional handling services.

j. Potential truck and trailer buyers; sales, after sales and maintenance of trucks and port equipment.

Competition

Throughout the region no market leaders have yet emerged and competition is diverse, uneven and often unreliable.

Marketing and Sales Strategy

A vigorous marketing and sales plan will be implemented by a result oriented sales team, supported by professional sales literature, advertising and promotional campaign in all target market locations.

Seaborne will overcome the existing competition by creating a measurably superior level of customer service and performance in the following manner:

a. Offering the most comprehensive range of international freight services. For example, in conjunction with the world s largest ocean freight consolidator (ECU Line), Seaborne will offer a regular road freight consolidation service from Antwerp to Tbilisi, Yerevan and Baku. This will enable Seaborne to provide blanket coverage for cargo originating from or destined to over 100 countries around the world as well as to or from practically any location in Europe. As demand grows consolidation other services will be added from other locations in Europe.

b. Maximum utilization of Internet Ecommerce business-to-business systems, company web site and all other modern methods of information technology.

c. Superior management provided by a professionally qualified and experienced team.

d. Modern company operated or owned cargo handling and freight distribution facilities in the region located at strategic locations namely, Tbilisi, Poti, Yerevan and Baku.

e. Standard international business practices, effective operational procedures and customer service that Western customers are already familiar with.

f. Modern communications and computerized cargo management systems.

g. A reliable and efficient international agency network.

h. A strong marketing emphasis on increasing customers productivity.

i. A coordinated marketing program that will be fined tuned for effectiveness.

j. Professional attitudes of openness, truthfulness, willingness and sincerity.

k. Consistent quality assurance (to ISO 9000 standards) and training programs.

Seaborne International has built up a good professional reputation in the USA and its extension into the Caucasus will be a positive marketing name on which to build the company. Building and promoting the company under the Seaborne brand name identity at both ends of the transit will carry with it valuable goodwill.

Transportation accounts are secured primarily through pre-qualified face-to-face sales meetings, backed-up by targeted advertising campaigns, sales literature, telemarketing, informative seminars and via the company s Internet Web site and Internet interface for RFQ s, bookings and cargo tracking. As there are two ends in the transportation of goods, shipments are frequently secured in conjunction with overseas agents promoting and selling the service at their end of the transit.

Operational Facilities and Equipment Needed (with notional costs)

Seaborne s operational set-up in the region will be based on the following facilities and equipment, with a breakdown of estimated costs (expressed as $ million):

a.	4 x freight handling and distribution terminals, at Tbilisi (main regional terminal), plus one each at Poti port, Yerevan and Baku.	$ 4.0
b.	5 x operations and sales offices, wherever possible located within the terminal, plus business district city offices in Tbilisi (Regional Head Office and Seaborne Georgia co-located), Yerevan and Baku.	$ 2.5
c.	10 trucks, 20 assorted trailers (tilt, flatbed, low-bed, car carrier, reefer), 2 inter-city 6-meter Vans (Bobtails) and 4 city vans.	$ 1.8
d.	Terminal equipment; 1 x Container reach-stacker, 3 x 6 tons container forklift, 8 container forklifts, 4 high reach forklifts, weighing equipment.	$ 2.0
e.	Integrated computer system equipment; hardware and software.	$ 0.5
f.	Office equipment and furniture.	$ 0.3
g.	Development of Houston and Antwerp branches and reserve fund	$ 0.9
	Total estimated cost:	$12.0

Management Team and Staff

Steve Robinson will move to Tbilisi to manage and develop the company in the region for at least two years. Robinson will take charge of the implementation of Stage 1. This will include selecting his management team and premises, setting up the basic structure of the company, marketing, operational systems, procedures and staff training.

Robinson brings over 30 years of international transport and logistics experience gained in over 60 countries around the world; including 25 years of setting up, managing and operating his own international freight companies in Australia and the USA. Robinson graduated from the School of Transport and Logistics in England in 1970 and subsequently served in the British Military forces for 9 years prior to his commercial career.

A full time SICH management team consisting of well-qualified individual experts will operate from Tbilisi on a day-to-day basis. They will be a synergistic Mastermind result oriented team to push the company forward as rapidly and professionally as possible. It is expected that most of this team will be found in the USA, UK and other European countries. Even though they will together on a daily basis, there will be regular meetings and all report to the Managing Director.

The Managing Director will report the progress on a regularly basis to a board of directors for Seaborne International, (Caucasus Holding) Ltd., (SICH) whose membership is yet to be determined, but will probably consist of Steve Robinson, Equity Investor (1 or 2 members), and some or all of the members of the management team. The board will meet at regular intervals to be agreed. There will be a high degree of accountability and transparency in all respects.

Priority number one after funding will be to assemble a properly qualified management team to be based in Tbilisi, to fill the following positions:

a. Chief Accountant (CPA / Chartered Accountant) — Director of Finance and Accounting
b. Marketing Director
c. Operations Director
d. Management Information Systems (IT) Director
e. *Executive Director handling all legal, administrative and quality assurance matters (ISO 9000)
f. *Human Resources Director

Note: *It is probable that that this position may initially be held by the same person.

It is expected that the group will employ about 80 local staff from the region by the end of two years.

The Future and Exit Strategy

Shortly after stage 1 is implemented and operating efficiently, further development calls for the company to expand in two stages. Stage 2 is Russia and key central Asian states and Iran; Stage 3 is UAE, Turkey, Iraq and Syria. Completion of these 3 stages is estimated to take about 5 years from funding. Assuming the company increases its markets share with a sizable customer base, Seaborne is destined to become a dominant and valuable player in the market. The company by then will have a presence in all of the Central Asian countries as well as other Middle Eastern countries. In this case the company s value will make it an attractive take-over target in about ten years times, if the equity investor wishes to exit the company.

Financials

As there are no previous financial figures on which to base projected sales figures, any projections are conjecture. However, we are confident tat the timing is right. We expect reasonably rapid growth, with estimated sales revenues in the vicinity of $5, $7 and $10 million at the end of years 1, 2 and 3. The growth of the company will continue exponentially thereafter and will be likely to lead to further expansion. It is intended that future profits will be reinvested for expansion rather than for profit taking by shareholders, funding growth internally rather than through additional investment beyond that currently sought.

Funds Sought and Utilization

The company anticipates only one round of equity financing of $12 million being sought from one or two investors in return for a 35% stake in Seaborne International (Caucasus Holdings) Ltd., and a seat(s) on the Board of Directors. The equity investor is expected to hold their shares in the company for ten years at which time the other shareholders of Seaborne will purchase the stock or may offer them to another strategic investor. The funds will be utilized gradually on a phased-in basis as needed to procure premises, vehicles, and equipment, hire staff, marketing activities and working capital.

CONFERENCE NOTES