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**ISRAEL**

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## ***1. Introduction***

The world in general and the State of Israel in particular are in the midst of an information revolution in parallel in its impact to preceding social and industrial revolutions. Information technology has the potential to assist in eliminating one of the crucial issues that we are dealing with today: How to improve the quality of life of our citizens and make the most efficient use of available and dwindling government infrastructure and resources. The key is to escape the current economic slow down thereby IT will promote newly realized economic growth. Enhancing human resources and positioning Israel as a world leader on the way to the Information Society. Recently, major steps in this direction have been taken, to insure the realization of these goals. This report will address the national goals including references to issues, fundamentals and strategy.

In 2003 two important events occurred: The deployment of the "Merkava" (government ERP) and the convening of the National Committee of Technology for the Information Society.

Beyond the achievements of "Merkava", the establishment of a new order of management in the operations of civil agencies, a first class goal was acquired in development of a broad cross ministry infrastructure for managing the information of the government. This is in essence the new policy of management based on a general holistic vision of the government as a complete entity. This concept helps to find the common denominator among the offices to create a common language, to maintain cooperation and collaboration cross agencies an removing the borders and limitations, between them, for the benefit of the State and it's citizens. In this framework, the "Merkava" model is scaled to hospital management, utilization of national geographic data and the development of an enterprise portal for government employees that enable the empowerment of personal and professional capabilities.

With the cultivation of the new policy a new important step in the same direction was taken: upgrade to a wider view from a vertical government arena to a general national one. The establishment of the National Technological Committee for the Information Society in the first place, enables the state and its leaders to realize the tremendous potential that exist in IT, in order to support the state in solving the fundamental issues of Israel and in achieving the national Goals. The committee began to deal with the issues of: reducing the digital divide, dealing with low social and economic populations, creation of grounds to new economic growth, integration of Ultra Orthodox fundamentalists in the workforce, and positioning of Israel as a world leader in the Information Society ,availability of legal information on the Web (chapter 7), the integration of all these plans force new issues and require a different approach to deal with data integrity and security (chapter 8).

In addition, there are a number of new areas that are in need of clarification: the design of a new generation of services for citizens based on CRM, the establishment of government procurement system, the preparation of a new generation for the municipal systems and solutions, all the above are detailed in chapter 9.

## **2. Goals**

In order to direct the IT activities and focus them to assist solving the most important issues of Israel, a number of main targets were set.

### ***2.1 Improving the Quality of Life of the Citizens of Israel***

Primarily there is a need to improve the quality of services offered to the citizens by the civil agencies; every citizen should feel as though the civil agencies and their systems are there to serve him. It is essential to increase citizen's awareness of these improved services. To enhance the quality of the services offered by the civil servants; minimize the time it takes to handle a variety of requests and complaints of citizens to the agencies, reach a point where the process handling of the requests will be comfortable, pleasant, available and especially faster.

### ***2.2 Changing the Government Management Systems***

The central issues that all the public civil systems deal with today is while trying to improve the quality of life of the citizens, is giving more for less cost. This problem is becoming critical especially because of the severe economic situation present in the country and the diminishing resources in all operations. IT might prove to be a major player in the solving of this complex equation. Accordingly, the public sector must adopt global views and conceptions and solutions, from the business sector, who constantly is faced with the issue of how to produce more with less. In order to improve the QoS there is a need to plan and fund a broad infrastructure for the service systems and management of the citizen government relationship, based on CRM (see chapter 9, sec 9.1). A new dimension of the necessary improvement is empowerment of the capabilities of the civil work force. It is possible to increase the personal and organizational effectiveness of the civil servants especially by using the enterprise portals and enterprise knowledge management system (see chapter 5, sec 5.4).

### ***2.3 Advantages for the Disadvantaged***

The help of the internet and the wide availability of E-gov services, doubtlessly make things easier for those who have access to the web. However, our attention must focus on those without web access. Minimizing the digital divide is our primary goal. The tendency is to invest in the low income population to assist them by enhancing personal and collective capabilities. In this area, there is much activity by public and voluntary groups. Here too, as a result of operational momentum, a situation has occurred causing duplication, waste and lack of coordination. The national committee took upon itself the responsibility to develop the top vision that was needed and to create a repository of resources (see chapter 7, sec 7.1).

### ***2.4 Leveraging New Economic Growth***

The essential changes that occurred in recent years by IT, telecommunication, internet, mobile and information services influence all areas of life in Israel and in the world with a force greater than all previous industrial or social revolutions. These changes require the integration of knowledge, innovation and human capabilities. It might create a competitive edge and high benefit. Investments in IT might provide a solution to present issues whereby creating infrastructure for a health society leading the

world's data revolution. This National Technological Committee of the Society of Data and Information took upon itself to locate the systems blockades and find solutions that promote economic leverage for new growth via IT( see chapter 7, sec 7.3).

## ***2.5 Cultivating Human Capital***

The question of revitalization of Israel's economy, naturally poses the question: what is the most important specialty and asset of the State of Israel. The broad consensus is human capital. There are a number of prominent and critical points that contribute to a person's success; the group he functions in, the organization he belongs to on every level; workplace, social and civil. The factors are knowledge, innovation, real learning and collaboration. The focus of activities that the committee has to deal with is; creating awareness, system wide thinking and development of an infrastructure that will enable and empower the capabilities of every member of Israeli society.

## ***2.6 Positioning Israel as a Global Leader in Promoting an Information Society***

Early signs testify, to the fact that the State of Israel is marked as one of the leading country in the world as far as realization of the vision of incorporating IT to attain national goals in areas of government and quality of life. This situation, if we are enlighten enough to develop and improve, will probably contribute to the integration process of the State of Israel in the Global arena, with all its positive benefits to the society, economy, foreign and the state's image.

The industrial nations recognize the technological force of Israel and its capability to lead, develop, and apply initiative and innovative solutions.

## ***3. Central Issues in the Systems Structure***

IT systems in the government and the public sector evolved over the years through a localized narrow view that mirrors trends in the development of governing organizations. Each organization was constructed independently as a lone governing fortress dedicated to deal with its assigned tasks. Every organization, authority, ministry or ministerial department, naturally established over the years IT systems that serve only themselves. It truth, there exists a broad common denominator and cross agency requirements. Owing to the fact that each government organization developed separate distinct systems caused much unnecessary duplication where by the same application was developed repeatedly even in the same organization. This fact caused much waste of dear resources.

Servicing citizens and solving their problems many times require communication and interaction of more then one authority. When problems of a citizen are complex and need intervention of a number of organizations the logistics of delegating the services among them can be very frustrating for the citizen. Lack of basic understanding of civil rights and requirements, concentrating the process and handling by the authorities, requires the citizen to wonder from agency to agency and to suffer the torturous path of bureaucracy.

## ***4. Data Resource Management Strategy***

The strategy is a subset of the national goals mentioned above, and a snapshot of current issues within the governmental arena that are waiting for a solution. The good news is that in the last years, decisions have been made which change completely the data resource management policy in the government. A few examples:

1. To develop a total cross agency, government vision of government data resources.
2. Consolidate and coordinate data resources in development of standard solutions for enterprise wide similar government systems.
3. When offering an enterprise solution, approach each agency just once.
4. Create partners of cooperation between agencies and ministries in order to advance shared goals.
5. Develop the personal and organizational potential of each government employee through knowledge management portals.
6. Outsource non core business processes, while maintaining competition between suppliers.
7. Guard and develop core business solutions in the government.

The new policies of IT in the government have major economic impact. Research has shown a ROI of 60% of the ministries' IT costs in the relevant areas. The nominal value is billions of shekels.

## ***5. Plans and Projects***

Following is a survey of central government projects to realize the above mentioned goals and execute the strategies defined.

### ***5.1 "Merkava" - The ERP platform.***

"Merkava", the ERP platform based on SAP software, is a Government-wide system for managing Financial, HR, Logistics and Real Estates operations across the Government of Israel. It is a long-term program designed to introduce significant improvement into the operations of the Israeli Government for the benefit of the state's citizens.

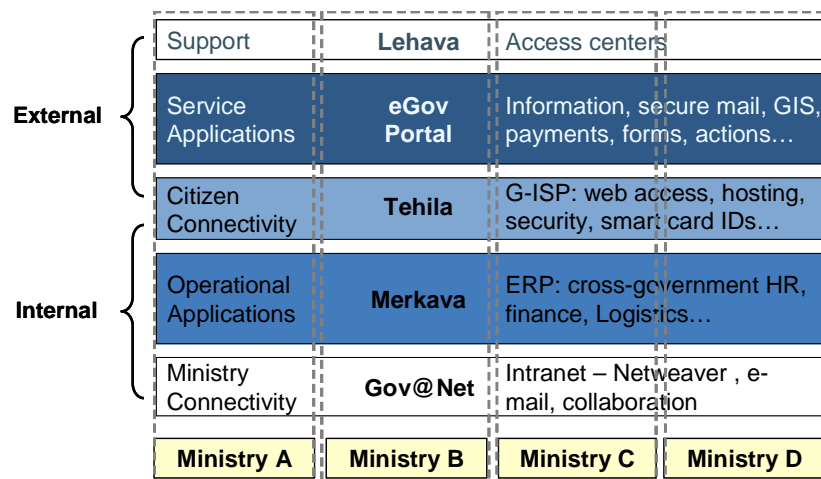
"Merkava" is offering governmental offices managerial solutions and information. The program enables reduced costs in executing governmental activities, especially in the field of physical assets, inventory, procurement and maintenance. Improving the level of service by shortcut procedures and improving the skills of Government employees and officials by offering them advanced tools. Removal of inter-organizational barriers in treating subjects that require collaboration between units in the organization, Collaboration with other Governments (globalization) and improved exploitation of information resources by finding standard solutions that will fit a wider variety of needs.

The key to the solution is found in superior planning, operations and auditing of all available basic resources: HR, Financial, Logistic and Real Estates. In the realm of HR operations include employee file management, enterprise organization chart and recruiting process. The financial model of "Merkava" allows activation of

accounting reform that emphasizes the fact the government will manage all its assets and resources as a financial organization. The asset management module will utilize advanced processes to handle real resources like procurement and inventory, this is the first time the government will operate a central catalog of products that will enable standardizing goods and services purchasing and maintenance for all the government agencies. In addition to improved management of each resource the "Merkava" will enable integration of all internal resource management: HR, Financial, Logistic and Real Estates. This constitutes a major improvement for these mentioned modules will be operated in a way which emphasizes the logical connection between the various processes. From the point of view of top management of agencies and their satellites, "Merkava" will delineate central and efficient customized policy, standardize and synchronize between ministries, and establish joint ventures between ministries and departments.

The roll-out of "Merkava" to the entire government is well underway and is currently planned for continued development through 2009. The core ERP template has been implemented in 32 agencies and is underway in various stages in approximately 5 others.

"Merkava" is part of a comprehensive e-Government initiative that includes the ERP system as one of five layers of new technologies and operational systems for enhanced internal operations and improved benefits and services to citizens. The layers build up from a government intranet (first layer) that supports the ERP (the second layer), plus a citizen connectivity (third) layer, with web access, security, identification, etc., linked to the government portal (fourth layer), plus a fifth layer of support and distributed citizen access centers. These layers are part of a multi-year strategic plan



Five Layer E-Government Model

The development roadmap includes a major emphasis on services oriented architecture (SOA) and enterprise services architecture (ESA) as the bases for further linking and integration.

## ***5.2 Hospitals Administration based on "Merkava"***

Hospitals are in fact complex industrial organizations, in order to succeed in management an integrative data management system is required which combines all the functionality to complete the equation of supplying better health with less resources. The necessity of an integrative ERP system proved without a doubt in industrial organizations is even more justified in hospitals where their complexity and sensitivity is usually greater than ordinary businesses.

Within the framework of the national outlook which is IT supported, in order to improve the health systems in Israel, the Ministry of Finance, Ministry of Health and the public hospitals decided to deploy the "Merkava" systems in the public hospitals and in the Ministry of Health. The goal of this project is to improve and make more efficient the national health systems via optimization of analysis and management of resources. The creation of a common dictionary between hospitals, the Ministry of Health and the Finance Ministry in respect to HR, financial and auditing, logistics and operation in the health systems.

The agenda is to deploy systems in two hospitals as a pilot. During 2006-2007 the deployment of the system in nine more public hospitals is planned.

## ***5.3 "Magal" – National Geographic Knowledge***

Substantive portions of information in the public sector (some say 80%) have a factor of geographical expanse. Geographical Information Systems (GIS) are potentially the most effective mean for coordination, communication and joint ventures between various organizations that are banded together in joint planning and execution of operational projects and financial, economic, national, physical and social infrastructure management. Many organizations in the Israeli public sector are deploying GIS systems. However, as we are aware in other areas every organization (ministry or department) built for itself a system reflecting its own localized view. In absence of a broader national outlook a Tower of Babel solution of diverse standards of measurement and units was used in cartographical work.

In the past year an infrastructure was analyzed and designed that would allow integration between "Merkava" and geographical information available. The premise being that the combination of the world of National GIS with organizational IT like "Merkava" can produce an exponential force that empowers the combined forces in these two central programs. A pilot of such project was built by the government housing authority.

The plan is based on developing a national wide view of knowledge systems in Israel. Another layer in the plan is an organizational move to establish a "Magal" leading crew, which will combine authorized key men from geographic knowledge consumers and their providers. The third leg will be the planning of a new generation of the needed infrastructure to manage services provision in the highest level, for all the bodies using geographic knowledge.

The initiative of "Magal" is intended to improve planning capabilities, determining a GIS policy of decision making at all government ministries, local authorities and other public organizations (the electric company, water, road, port administration and the Israel

Land Administration which is in charge of the management of more than 93% of the land in Israel). The aim of that is to establish standards for creation of a common language between the units, so all users will define the same geographic entity and location, synonymously. In this manner all government ministries can co-ordinate properly the management of the physical, economical and social entities of the state. Decision makers can perceive wide and integrative picture from different sources, which will bring about generating added value to the over whole national knowledge.

Other aspects of the “Magal” plan:

1. Executive integration between different authorities.
2. Combination of geographic location from different organizations will efficiently shorten the efficiently set-up and execution of infrastructure projects.
3. Improving the preparations to emergency situations.
4. Setting up of a uniform and coordinated policy for spreading information to the public.

#### ***5.4 Enterprise Portal for Government Employees.***

The government agencies run various systems and internet sites, however, management and employees on all levels in need of information frequently are drowning in an info glut and are unable to access it when they want it. The principle solution proposed is an enterprise portal. An Enterprise Portal is a means to allow all levels of functionaries, relative to their positions in the enterprise hierarchy, to access the relevant crucial data needed to do their job. A **one stop shop** to all the data in the enterprise. Concentration of relevant sources of information will be transparent to the user, including integration between applications, data and diverse users. It is important to note that an enterprise portal is not just another information system; it is a system to maximize the benefits of functional systems and infrastructure in any organization. The past year we have invested in planning and design of an enterprise portal in the Ministry of Justice. The pilot, that emphasized the concentration of general data services, is operational since last quarter of 2005.

The assumption is that the user will see one portal – of its ministry, its contents will come from several sources and probably the government portal, "Merkava" portal and ERP systems will be the main info suppliers, but also from the internet and other ministries, so that the employee will have all he needs.

The organizational portal's aim is to assist government managers and employees, to reach strategic targets and the ministry's aims where they operate and establishing stand as leading in its domain, by accessibility of information and knowledge it requires. The organizational portal will assist to improve the process of information gathering from various sources and its presentation to the relevant employees, including decision-makers and H.Q. staff. Using this portal will shorten the duration of decision-making and implementation in the ministry and will increase the capabilities of managers and employees.

The aim of the government portal is to deepen the use of the portal as a tool for managers and employees in government service while promoting new related technologies. The government portal will form the basis for knowledge and government

information and will contribute to the strengthening of the ministry organization portal, will share information and knowledge between ministries, will form a basis for managing inter-organizational processes, exchange of information and data between organizations and will reduce development costs of ministry portals while sharing resources. The government portal will serve as a basis of knowledge manpower and accumulation of experience for all ministries.

## ***6. eGovernment Services***

The above projects and programs focused on the improvement of operational applications and systems that are indirectly citizen service oriented. The eGov endeavor focuses on direct interactive service to all citizens and businesses, utilizing advantageously internet technology.

### ***6.1 eGov Service Portal***

The Israeli government's policy for the introduction of e-government is to enable the public to enter freely and draw information and services via the internet by connecting most government sites online.

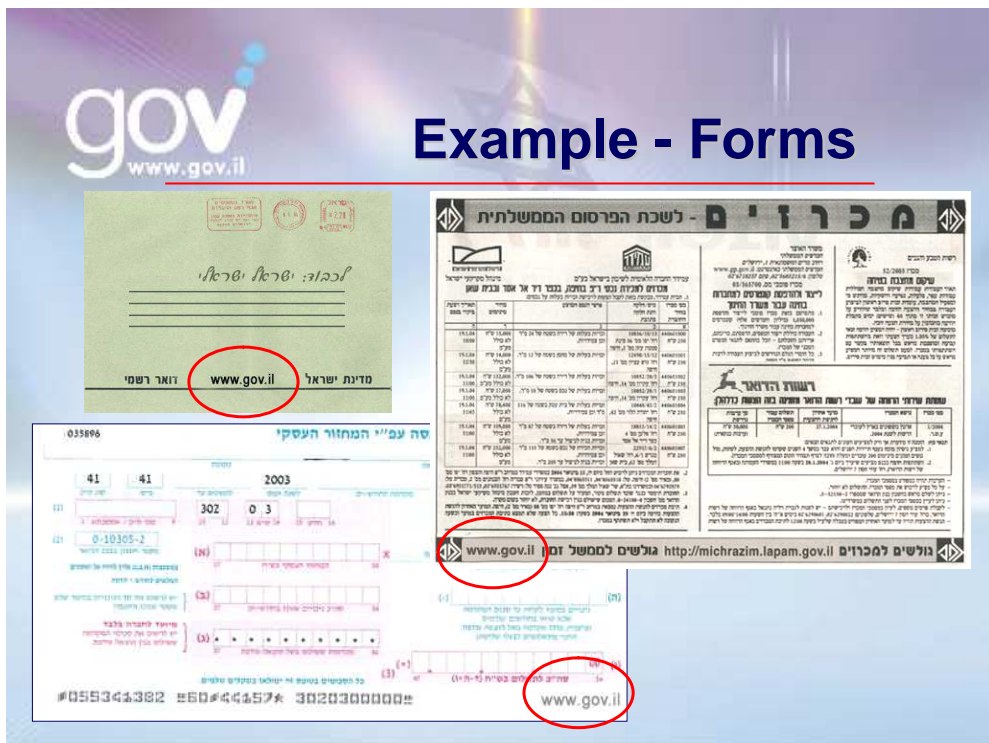
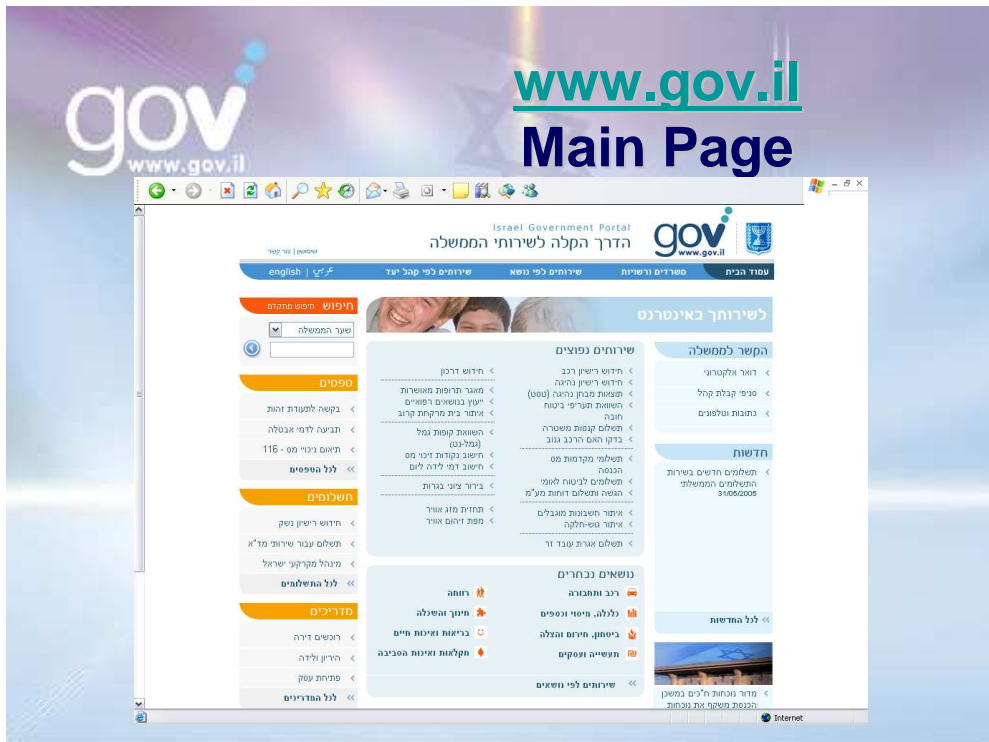
The Freedom of Information Law approved by the Kneset (parliament) requires the government to enable the citizen to access all non-classified information on its activities. All offices must put on their web sites an annual summary report as well as various other public reports.

The new Portal [www.gov.il](http://www.gov.il) and the new services provide to the public since 3/2005 improve of the quality of its public services while reducing administrative costs and complexities through the deployment of a unified inter-agency and public-facing e-government infrastructure.

The benefits of using the Portal are : saving time of waiting for answers at the phone or by sitting at the office , using Forms and fill them at home and send them by mail or post, execute payments and using credit-card to divide the payment to parts, delay the last day for payments and more.

At present the Israel Government provides access to 150 sites, which include information about all government activities, including connections to the local authorities sites. The sites include data and information about various aspects of the scope, responsibilities and activities of all offices as well as information on the economy and the social aspects of the country.

[WWW.GOV.IL](http://www.gov.il) → The easy way to Government Services



The following are few examples of the contents included in the site:

- General information about government departments
- Reports on studies of social and economic value as well as various publications needed by the people
- The annual budget of the Government
- State Comptroller's annual reports on the activities of all government offices
- Investment requirement as well as other commercial and industrial information
- Reports of conclusions and recommendations of government committees
- General economic data on the Israeli economy
- Tax information guide
- Emergency information in the case of mass casualties from terrorist acts
- Pay-Gov system

All information can be accessed via the new internet governmental gate. Information can be reached in both languages Hebrew and English.

Last year there were over 1.5 million requests for information via the internet. More than 50% of all Israeli families have the ability to use online communications to access national government sites. There are over 1.5 million customers

The main portal to the Israeli government sites allows citizens' easy access to various government sites .It is the central entrance point to the vast and diverse online government services available to citizens and businesses. Today citizens and businesses can access relevant data of the Ministries' operations and likewise purchase goods and data services. Access to these services via the web is 24/7 thereby always available. Planned for 2006 is a survey of services available to citizens and businesses, and development of a registration/authorization system for citizens that include digital certificate capabilities within the portal.

Through the e-government portal, the Israel public has a single entry point to more than 1,000 public services, which they can access anytime and anywhere in a fast, simple and secure manner. The portal also provides access to government employment opportunities, a search engine for all government sites, and specialized sites for target audiences such as students, immigrants and seniors. There are also "yellow pages" of government addresses, telephones numbers and e-mail addresses.

These solutions are making citizens' lives easier when dealing with the government as they do away with the long waits in different offices. It's easier for the system to provide efficient and rapid service.

The Government has appointed an Internet Committee to co-ordinate all online activities in the national administration. The policy is based on the idea of avoiding duplication and thus saving funds. The promotion of the use of online services is guided by the Internet Committee. It brings to the attention of the public the option of getting services online. The Committee steers the implementation of these services by issuing standards for communication and helps establish sites and online services. Seminars and lectures have been and are being given to educate and train both the public and the civil servants.

## 6.2 "Shoham" - Pay Government

As reported last year the Pay Government project, a technological infrastructure for e-commerce transactions, is in production. The project enables the citizen to make payments to the government via the Internet. The system includes acceptance of payments for taxes (vat, income tax), charges, fines, etc.

"Shoham" supplies one standard interface to perform e-payment and e-commerce tasks. Twenty-four agencies opened online teller services on "Shoham". The site hosts a web service to perform online monetary transactions with the government with no transaction limit. The multi year plan of "Shoham" is to facilitate payment of all fines, dues and service invoices using credit card, monthly payment orders and digital signature capabilities. The ROI of "Shoham" come from time saved from citizens and business by eliminating the required visit to the bank to make the above transactions, reduction of transaction processing government work-hours and the reduction of bank processing charges.

It also includes purchasing of publications, tenders, services, maps, books, self-education courses from all ministries and other payments for government services. The project is a joint venture of all government offices and is coordinated by an Inter Ministerial Committee, headed by a representative of the Accountant General Office. The Committee includes also a representative of the Ministry of Justice in order to facilitate the changes needed in the laws and by-laws so that the Pay Government system can operate legally and properly.

The following services are available:

- Advance payments of income tax.
- Issue of land registry extract (Ministry of Justice).
- Advance payment of V.A.T.
- Payment of annual fee to the fellowships registrar.
- Payment of annual fee by fiscal services.
- Paying royalties to chief scientist of "Tmurah" foundation.
- Payment of communication frequencies fees.
- Payment of insurance companies fees.
- Ministry of Foreign Affairs – Payments for situation room and ministry employees.
- Completion of development of the electronic receipt for payments receipt of income tax certificate. including
- In advanced stages of development: Link to Discout Bank, Mizrachi and the "Merkava" and "Bochan" systems.
- In various development stages another 18 new systems.

A Clearing Office was made via that Internet site which enables payments without any sum limitation. That is being done via the Internet sites of the Israeli commercial banks and with their full co-operation.

### **6.3 Government eForms**

The Forms System is a central one and as such enables each business and citizen to forward requests and forms online from home or place of work. Each one has the ability to follow the handling status of the form. The system includes a search engine for all forms available in government and local government websites.

Some of the forms, which do not need signature, can be filled online via the internet and send back for further treatment (request for changing address, the request for birth certificate etc.).

All available forms can be reached through the governmental form service [www.forms.gov.il](http://www.forms.gov.il)

The public sector administration produces a large number of forms. Downloading forms from the web reduce processing time and eliminates the necessity of citizens to visit the ministries or request the forms by mail or fax. A recent government order requires access to all significant government forms on the web. The citizen benefits from reduction of processing time from form service request to form service reply. The multi-year target is to complete the application for form status display and include all forms from all the government agencies. In addition, to enable interactive submission of 80% of all government forms. Development priorities are set according to agencies with the highest G2C orientation. Planned for 2006 adoption of an off the shelf form generating tool as part of the service.

It is already possible for the public to receive forms via the Forms Service. for example, Internal Revenue, Customs, Social Security, Civil Service applications for government jobs. There are over 500 forms available via the internet. Signed forms still have to be delivered to the specific office as before. However, with the recent passage of the law for electronic signature (ES) recognition, the ability to send certain signed forms via the internet will be implemented soon.

### **6.4 CyberSafe – Personal & Secure File Safe for Citizens and Business**

Cyber communications between citizens, business and the government is potentially a user-friendly way to improve services and reduce costs. The CyberSafe project facilitates the transfer and secure saving of authorized documents, digitally signed and submitted forms, payment receipts and sensitive personal data from government agencies to citizens and business. The transfer is done via a central virtual cyber vault with individual private cyber safes for citizen and business.

The "CyberSafe" system will serve ministries for safe transfer of messages between government and businesses and citizens by using a smart ID and advanced technologies. The holder of the SC will be able to draw forms via the internet, fill in the details, sign it electronically and send it to the right official who will check the form's validity, sign it electronically and acknowledge its acceptance or even its validity and approval of specific requests. It is expected that over 1.500.000 private safe boxes will be issued to the public.

### **6.5 "Tamar", "Tamuz", "Telem" (smart ID cards for citizens, business, government employees)**

The acute issue of secure identification/authorization for access control to governmental systems and applications has become a prerequisite to electronic C2G and G2C. Smart cards with digital certificates embedded are essential for citizens and business. The cards can store much data essential to the citizens' needs. The data can originate from a number of sources (identity card, driver's license, mini medical records, etc.). The multi-year plan is to complete "Tamar", "Tamuz", "Telem", in order to establish a secure smart card based identification mechanism for citizens, business, government employees, by the end of 2006, and at the same time adopt digital signature recognition in all the government offices.

Distribution of Smart Cards, including cards for identification and Electronic Signature, for businesses and citizens enables identification and signing from far away to the internet government service counters. The card enables to obtain personal information in a secure and discreet manner from government institutions.

The set-up of smart cards systems has been completed in the following ministries: Finance, Justice. The development and compatibility of the smart card has been completed for systems of Microsoft, NOVELL, Cisco, Check Point.

The process of examination and adaptation of the smart card and electronic signature is taking place. Over 15,000 smart cards were given to governmental employees. The planning of a central system for the identification and government electronic signature project has been completed. In both projects, "Merkava" and the Court Authority, everyone uses smart card in order to work with the operational IT systems for identification.

The Ministry of Finance has carried out this year some internet on-line tender using Smart Card and Electronic Signature. In addition some other suppliers reporting confidential and sensitive data to the government start to use smart card and electronic signature.

The government has also issued every civil servant a Digital Government Worker certificate based on smart card and electronic signature technology. All citizens and organizations are also being given a digital identity card to be used for digital signature and identification when receiving personal online information and services. Microsoft Active Directory and Certificate Services, both within the Windows Server 2003 environment, provided a way to set up and manage the public key infrastructure (PKI) required for the establishment of a central identity bank.

### **6.6 Secure Government Communications Network**

Above all, Israel's e-government infrastructure addresses major concerns about computer security and misidentification. The intranet replaces all external connectivity that existed between agencies so it is no longer possible for a hacker who might succeed in entering one governmental network to use it as a bridge to enter a more secured network.

"Tehila" protects government web sites against cyber-attacks. On a typical day, the system checks 150,000 e-mails, stops 1,000 viruses and thwarts 400 hacking attempts. No government web site hosted by "Tehila" has yet to be breached or violated.

Employees in all ministries access the internet through Tehila,". This connection is secure enough to allow them to surf from the same workstations they use for their work applications, their e-mail, and their calendar. Previously connectivity to the internet involved complicated and costly solutions like providing employees with two computers or placing an internet station in the library.

"Tehilah" project enables an establishment of payment systems infrastructure, forms, electronic signature apparatus vs. the public, establishment of secure interfaces program between governmental data systems and the public. It will enables a secure internet surfing by each employee and receipt and dispatch of E\_mail.

The inter-governmental infrastructure enables the possibility of a unified platform for secure and reliable communication between government and the public. The "Tehila" solution provides a secure environment for the publication of government information and services on the internet. It also enables secure connectivity of internal government networks to the internet, allowing employees to use online resources and email. In short, "Tehila" acts as an ISP (Internet Service Provider) and web host for government ministries.

Another service allows for the online completion and submission of hundreds of government forms, and an "E-SAFE" project provides citizens and organizations with a secure mailbox in which they can receive and manage personal governmental information.

This infrastructure will guarantee secure interconnectivity of government internal communication systems in order to exchange secure messaging between government agencies on the secret/top secret level and designate one point of connectivity to external parties like banks and mail services. Here too a concentration of resources and consolidation of agencies' communications network to one network will save millions. Procurement from local industry of network components whenever possible is recommended.

## ***7. The National Committee of Technology for the Information Society***

The Israel government has established a central IT committee "The national committee for technology for the information Society". The committee includes representatives from the academy, IT providers, Private industry, NGO and the major ministries.

This committee's major role is to function on a nation-wide basis to harness information technology and communication so as to achieve the social goals of the state of Israel. The committee will determine the recommended solutions goals for the national computation and support developing a more progressive and established

society. A society that will introduce new dimensions to the quality of life of citizens and the Government to ensure individual rights and protecting privacy.

The committee's strategy is to strengthen the infrastructure that will help all citizens to develop new personal abilities. Allow study, widen horizon, enlarge abilities and achievements and grant the tools to direct his life path and improve it's quality. The committee's actions will focus on underprivileged populations, emphasizing the reduction of inequalities, preventing discrimination and producing equal opportunities.

Furthermore the committee will outline a comprehension policy nation wide, and will form a coordinative and consulting body to the political organs that take decisions at different junctions in the life of the state. The committee will advice and develop in other directions, co-ordinate and communicate between the organizations and offices, establishing a constant dialog between these bodies while keeping the policy determined by the government. The committee will upgrade the state standards to those of the advanced countries, and will place Israel among the IT leading countries.

### ***7.1 Bridging the Digital Divide***

Alongside the data technology advancements and improved services of eGovernment, the social and economic chasm of weaker sectors in society, who have no access to a computer for whatever the reason, is broadening. The digital divide remains the weakest link of Israeli society and its economy, disturbing the potential realization of civil productivity, harm the competitive advantage and strength of the State of Israel. In order to cope with this issue, a group within the national committee deals with the various topics:

- Defining national goals and measured target values to bridge the digital divide.
- Setting goals for various organizations involved
- Complying supply and demand of infrastructure skill needed
- Building a task plan with action items, deadlines and quality assessment
- Auditing the decisions execution to goals previously set
- Developing new ways and means for reducing the digital divide

### ***7.2 "Shachar" – The Welfare Portal***

The current economic situation of Israel is bringing more and more people to hardship. All the authorities meant to assist these people are doing their best. However, these problems cross-ministerial boundaries and require broad based knowledge and information and cause the person in distress to repeat the same process a number of times for each agency a fact which extends and heightens the suffering.

The "Shachar" program is meant to improve the capabilities of the workers and managers in welfare services, in all authorities, to handle those requiring service. The solution is based on an organizational info portal which is at the info front, which will collate all data and info needed by those people carrying out their function, through the professional community and all systems, documents and internet webs and will present to them the situation picture in a way to enable decision – making and doing their job quickly and at the required quality. "Shachar" will assist the employee and the welfare

team to communicate with various factors within and outside the organization, to improve the team work essential to solving problems, to make direct use of the collective experience accumulated and forward quickly and efficiently the required information to the various authorities, all in order to ensure the best treatment. "Shachar" will first serve all the workers in the field but will also serve as a reliable information basis for the managerial and strategical level in all organizations. Another component in the program is a designated portal for the citizen to enable him to obtain concentrated information on rights and duties and will assist him in his contacts with the authorities by simplifying forms, obtaining status of his application etc.

The portal and the integration technology Netweaver will assist in creating an overall process to solve the citizen's problem dividing organizations and applications. In the frame of this integration, data and messages will be transferred between the applications of the various authorities. A verification and updating of common data will be done once for all authorities. Info required will be shared between authorities for problem solving. It will be possible to see and notice at which stage the process stands. All this will shorten the overall length of the process of problem solving.

This solution is in essence a subset of the government enterprise portal (see chapter 5 sec 5.4). "Shachar" will assist people to connect to the different functionaries within and without the organization, in order to improve the positive team effort to solve problems and directly assist in the collective endeavor to share the data and information necessary between the various agencies.

### ***7.3 Leveraging Renewed Economic Growth***

The economic depression produces an imbalance and influences fundamental processes that are liable to long-term damages. Human resources for instance, the problem of unemployed high tech workers, caused a double-digit reduction of students registered in the appropriate educational disciplines. The stock market is in its own slump. The banks are having a difficult time funding as before and venture capital activities have decreased, the result R&D has virtually stopped.

The National Committee appointed a technologically oriented business development team. The teams mandate is to deal with the economic and business issues of the information era and to develop concrete ideas and projects. These actions were designed to leverage positive upward chain reaction in the direction of economic growth.

### ***7.4 Integrating the Ultra Orthodox fundamentalists in the Work Force***

The current economic situation, is bring the ultra orthodox, who did not work in the past, to try and assimilate in the work place. Information technology is one of the sectors where the ultra orthodox will find it comfortable to work by taking advantage of the creativity found in the essence of ultra orthodox, a trait necessary in order to excel in information technology. "Ultra orthodox leveraging activity" is a team within the framework of the National Committee, responsible to deal with the issues involved in integrating the ultra orthodox in the work place, the Israeli economy and society as a prerequisite to enter the information era.

## ***7.5 Leveraging Israel as one of the world leader of the Information Age***

The past year saw much activity in developing contacts and connections with organizations and other countries because of a presence at international conferences. A positive presence of Israel at these conferences and positioning of Israeli delegates at various forums is a great opportunity for the state to present its achievements in this area and to cultivate connections with the family of nations to achieve political and economic advantages and to improve Israel's image in the world.

Choice goals:

- The presentation of Israel's endeavors and successes, dedicating technology to service human resource development, as a foundation for cooperation with other countries, to the advancement of infrastructure in an information society.
- Basing on the Israeli experiment to advance the model of global joint venture in the information age.
- Creating and developing opportunities to cultivate political and economic contacts of state.
- Improving Israel's world image as a country that adopts and applies information society values.
- Being part of the design and delivery of the international framework destined to become the workplace environment of the information age in the coming years.

## ***7.6 "Mazor" – National Medical Record***

It is impossible for medical staff today to access all patient data at any contact points with the patient. Every hospital has its own medical records. Frequently within the same hospital, two different departments manage separate sets of medical records. Current communication technology is incapable to bridge the diverse platforms and technologies. The applications were prepared differently without adherence the same standards. Therefore, it is almost impossible to have a complete medical history of a patient.

### ***The "Mazor" program***

The idea is that whoever comes to hospital will not have to recall the medical history and the doctor by entering the patient's I.D. number will obtain the information required. The medical picture has to be integrated, up-to-date and available without infringing the privacy law. This requires a long-term strategy.

A National Medical Record is not a technological project, but a national project of concentrating medical information and administrative information focused and relevant to the caregiver at the right time and place by information technology. As such, the state is charged with initiating, creating and supervising it, and its managers have to carry out a thorough analysis of the subject, to examine all consequences, to accurately define the applicable methodology, to characterize the processes and only after that to examine the way of technology materialization.

A National Medical Record is a linkage between all existing medical records in all medical establishments by rules and standards set by the state. Concentration of medical information created about the patient in various locations (clinics, hospitals, laboratories and institutes) and its presentation to the caregiver at the place of treatment.

Concentration of clinical and administrative data – Minimal Data Set, are essential in order to ensure continuity of treatment to the patient, reduce medical errors by the caregiver and create an integrated medical picture. Presentation to an authorized caregiver while strictly ensuring security of information as part of professional confidentiality – this is a National Medical Record.

### ***7.7 Availability of Legal Information on the Web***

It is the right of every citizen of Israel to know and understand all the regulations and laws. Ignorance of the law does not release a citizen of his obligations. However, availability of worthwhile legal information is hard to come by for the general public. Complete legal information generally is available in public authority offices, whose accessibility is difficult and time wasting. Legal court decisions are published in the web site of every individual legal authority. There is no one government or public site where the Israeli public has complete accessibility without payment to the information even if there exist laws and regulations for reference only.

Recommendations:

- To allow complete accessibility to all public of records (law books, set of all regulations, compendium of all publicized material) on the internet for free.
- To insure that all the laws accessible on the web are maintained and are kept up to date; information which today requires publication in newspapers and in the authorities offices.

## ***8. Data Security Program***

The vast systems for management of national information, produces new challenges in the field of data security. As the rate of publication and information distribution to government employees and citizens' increase, the threats to data security and integrity intensify. It is possible to a number of components of the problem:

- External risks from hostile sources that are capable to access strategic infrastructure information (a good example; a detailed map of the electricity infrastructure layout, or the government housing thru NGIS)
- Disruption and corruption of critical management programs like "Merkava".
- Embezzlements of funds from ecommerce projects.

To be fully prepared to cope with the above risks a government data security project (GDS) was initiated to be completed during 2004. The plan is designed to supply the secure layer for the new programs, taking maximum advantage of existing infrastructure within these systems and reducing costs by consolidating horizontal security services expenditures. The project is done in conjunction with the CA software company that specializes in data security and a local group of experts.

## **8.1 Security Goals**

- Enabling overall program execution and eliminating risks and attacks on the national computer systems.
- Insuring business continuity and recovery of critical systems in case of system failure or attack.
- Enabling exposure and distribution of information to citizens and public sector employees from the applications referenced above, while maintaining personal rights, state security and adherence to state law.
- Crystallizing a policy of government data security, to propose compatible solutions.

## **8.2 Tactics**

Analysis of security requirements and a risk assessment survey (information value vs. risk) that will take into account all the new programs listed above, and specifically analyze the new risks respective of these programs from an ethical point of view emphasizing individual privacy issues.

- Defining means and measures of the quality of security
- Performing a Gap Analysis of generic security requirements and solutions from leading vendors.
- Performing a cost effectiveness analysis of proposed solutions (or cost / risk )

# **9. New Programs**

## **9.1 G2C Management System**

The central component that influences the QOS to the citizen to decrease request processing time is a service management system. The various agencies developed or purchased like systems in the past years, each one tuned to the individual office. The results similar to the systems in other areas: no common language, inefficiency, redundancy and wasted resources. In conclusion again in this area there is a need for a broad general solution in planning and developing infra structure standards for all the ministries and agencies.

The idea is to accommodate the citizens with a number of channels, where he can apply to solve any issue or request for services that he is entitled. A person can initiate his request via the internet or any media: phone, fax, email, post. The request is routed by the specific service management system from there he will receive feedback and status information of the process's progression, stage by stage. From the point of view of the service provider, there is an opportunity to considerably decrease service request processing time, audit exceptions, supply feedback on status of requests, and escalate severity of request without forgoing responsibility and post request fulfillment auditing. Concentration of data about problems and their solutions gradually produce a basis for enterprise knowledge management that is priceless.

## ***9.2 Government Procurement***

The government's civil economy spends about 30 million shekel for procurement of goods and services. The major problems in the process are:

- a. Every ministry or agency procures its goods and services independently; therefore, the advantage the government has in its size is lost.
- b. The procurement process of the government is bureaucratic and paper producing, not enough is done to benefit from technology and ecommerce.
- c. There is no information available on a management level of total government expenditures.
- d. Lack of incentives for purchasing frugality ( the current structure forces spending every last cent for fear of losing the allotment in the next year's budget).

The prevailing opinion is that the development of a central advanced procurement system can bring a minimum cost saving of 10% in expenditures. "Merkava" is the first step in improving the process. The central product catalog used by all the government has standardized products procured, and helps manage parts of the necessary information.

### ***9.2.1 Central Catalog Assistance***

In reality, there are currently small-midsize offices with no existing procurement infrastructure who will adopt the central catalog automatically. On the other hand, the large offices (police, health) established their own proprietary procurement infrastructure to manage purchasing and maintain a catalog. However, the Central Comptroller's office decided to make the "Merkava" catalog the definitive standard for items in joint government purchases. The dilemma is in deployment in the field of this decision. The point is to solve two issues: a. supplying an accessible user-friendly interface to the catalog. b. increasing the effectiveness of the search engine in the catalog.

### ***9.2.2 Preparing a Collaborative Information Base***

A collaborative information base of all the government agencies including: suppliers, products, pricing, contracts, RFPs and tenders greatly assist every agency in negotiating effectively with suppliers to significantly reduce costs. The benefits will be more prominent to small-midsize organizations that have no advantage in size.

### ***9.2.3 Utilizing eCommerce in the Procurement Process***

eCommerce and cyber marketplaces can reduce significantly processing time, efficient the workload and target part of the process expenditures to the suppliers themselves thereby reducing costs.

### ***9.2.4 Creating a Key Performance Indicators Picture of the Expenditure Structure***

Implement analysis tools of BI (business intelligence) that will assist management to better understand the significance of the information at hand and will help them recognize trends from raw data found in the enterprise database. Specifically, the data about the scope of purchases, supplier activity, compliance etc. The information is also available to employees in the field for informed last minute decisions.

### ***9.2.5 Government Procurement Governance***

It is necessary to note that the reduction of costs in government purchases demands a systematic and holistic approach of all aspects of procurement management in large organizations. Notwithstanding the essential aspect of data infrastructure, the issue has to be approached from an enterprise standpoint while emphasizing the establishment government procurement staff that will operate like corporate procurement.

### ***9.3 Local Government Management – "My Home"***

The management mechanism of the municipalities is based on legacy IT systems that reflect mindsets from a previous era. Large cities invest huge resources to build, design, and manage municipal operational systems. Smaller cities and town cannot bear the costs of building and maintaining modern systems and applications to meet the challenges faced by municipal authorities today. The municipal systems do not exist as a lone entity. They are part of the central government's fabric both in management policy, resource management and services provided. Accordingly it is essential to promote a broad cross authority point of view enabling system integration between the central government's and the local municipality's systems.

The first compelling step is the design of a new system model for cities and municipalities. The model has the following foundations:

- a. ERP infrastructure for municipal resource planning that integrates with (parallel to "Merkava")
- b. GIS on a city level fully integrated with municipal ERP similar to NGIS and "Merkava" (chapter 5.2)
- c. Citizen relationship management based on the national CRM (chapter .9.1)
- d. eGov systems on a municipal level

All these infrastructures must operate with a broad point of view fully integrated in internal systems and various departments in the municipality.

## ***10. Conclusions***

The most important message presented in this document is the huge potential hidden in IT as a solution to cardinal problems and issues of the state in realizing its goals. Once decision makers will understand the spark between national goals and IT they could ignite the process start. The recognition that human capital is our most valuable resource, and IT is the vehicle to achieve maximum realization of this resource and new understanding of the question in which infrastructure to invest.

The capability to solve issues simultaneously like unemployment, improvement of quality of life, dealing with low socio-economic sectors or groups with special needs, maintaining a fair distribution of resources, encouragement of sectors to join the workforce, encouragement of entrepreneur creativity, increasing productivity of the public and private sector. Dealing with how to do more with less and positioning Israel as one of the world leaders in the information society becoming a winning combination of opportunity and capabilities not to be missed.