وزارة الاقتـــصاد
الرقمــي والريادة

E-Government Implementation Framework

Implementation Framework

This section provides a definition of a general framework for e-government infrastructure components that is based on the concept of the e-Government Architecture Framework (eGAF) and Service Oriented Architecture (SOA) as well as two other major initiatives – e-Government Portal and Secure Government Network – that are major supporting infrastructure components for e-Services. In addition to other important initiatives like the e-Government Contact Center, National Payment gateway(EFAWATEERcom), Government Service Bus (GSB), and National E-gov Portal.
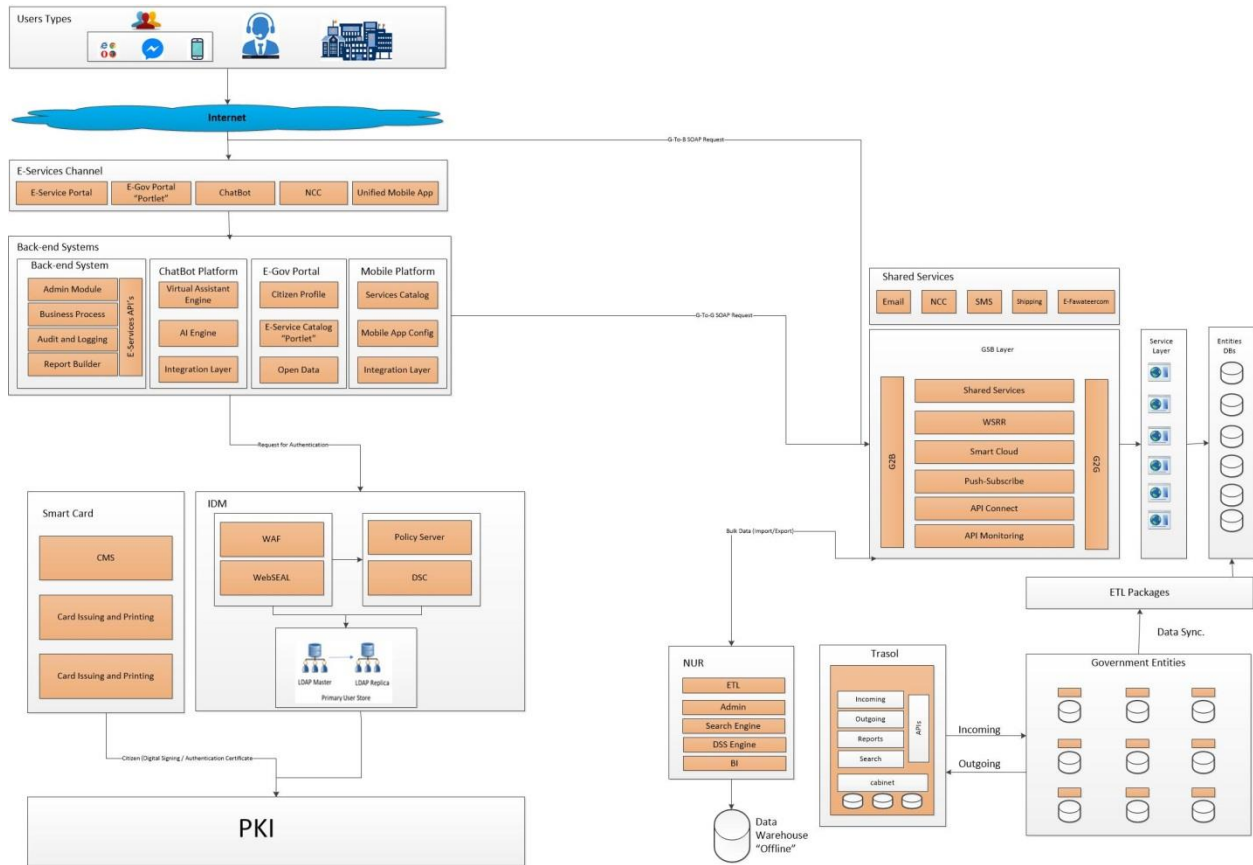
e-Government Architecture

As the facilitator of the implementation and delivery of governmental e-Services, the e-Government Program has been working diligently to define its target e-Government federated enterprise architecture, which is meant to enable seamless integration and secure interoperability of services between distributed entities cohesively and cost effectively using SOA. The responsibility of the implementation and delivery of government e-Services lies upon the government and its various entities:

The e-Government Program plays the role of the "e-Services enabler" by providing the components that constitute the Central e-Government Service Delivery Platform;

The other governmental entities (mainly ministries) play the role of the "e-Services providers" by composing and operating their e-Services, having the choice to either outsource these services, or operate them in-house.

The following diagram presents a high-level view of the various e-Government stakeholders, and depicts the federated, customer-centric nature of the e-Government architecture[1]:
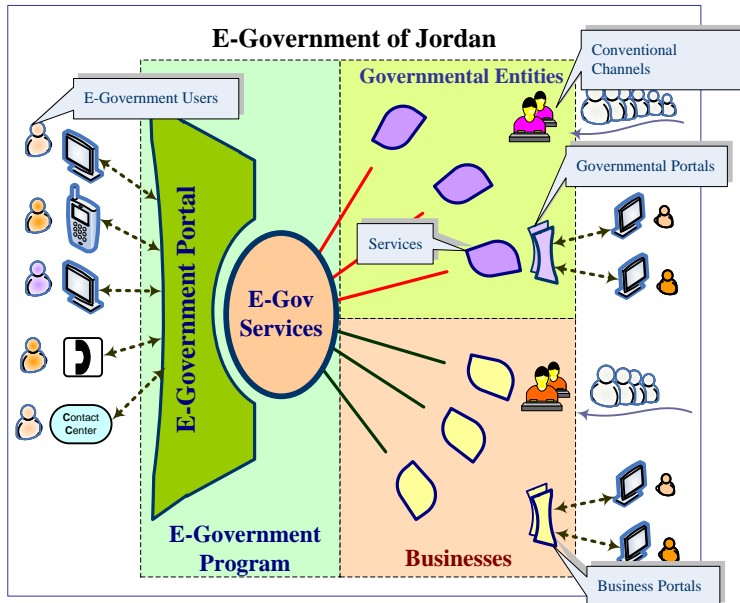

Figure 5.5.1: e-Government of Jordan High-level View

The e-Government portal of Jordan is customer-centric, i.e. all e-Services are centered on customers' needs. Currently, the e-Government Web Portal, which constitutes the central web informational portal of the e-Government, co-exists with a number of other governmental portals. Ultimately, the e-government's portal will turn into a multi-channel, one-stop-shop for all government e-Services, and will support various access and delivery channels (e.g. Web, SMS, Kiosks, etc.).

The following diagram depicts the main building blocks for the e-Government target architecture:

[1] The diagram is meant to present a high-level view of the e-Government from a business perspective; hence many businesses and technical details do not appear for the sake of the overall understanding.
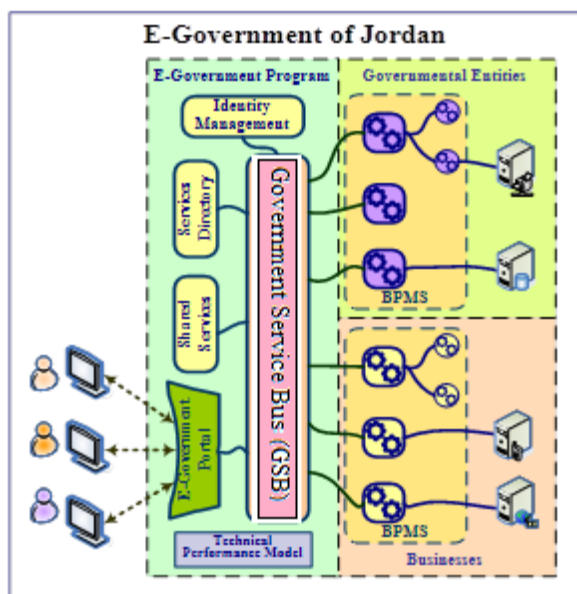
Figure 5.5.2: e-Government Architecture High-level View

As shown in the above diagram, the e-Government Program will provide a central Government Service Bus (GSB) that will serve as a unique point of traffic. It will take care of routing service invocations towards service providers and of returning responses back to the service clients (which could be the portal or some other service as in the case of cross-organizational e-Services). The e-Government Program will also provide a set of shared services (for instance National Payment Gateway ,EFAWATEERcom, notification gateway, etc.) that can be invoked from within the context of any e-Service, promoting reuse of components across the government and thus reducing the costs by eliminating the needs for dedicated implementations of components that perform the same functionalities offered by any of the central shared functionalities at the entities side. The services directory will maintain an active list of all available services as well as their interface specifications. A central identity management solution will be used to federate identities, provide (when applicable) single-sign-on, facilitate propagation of user identities and attributes across the e-Government trust domain, and enable account provisioning. Finally, a central technical performance model will be put in place to enable concerned technical stakeholder at the e-Government Program to monitor the health and performance of the overall e-Government and identify issues and bottlenecks as well as potential areas for improvement. In order to prevent winning bidder lock-in, all of the above components will be built solely upon open standards, such as Web Services, SOAP. Where necessary, all service providers shall conform to the above standards in order to interoperate with other components within the e-Government framework.

The e-Government of Jordan Program will also provide Government Entities with an Enterprise Architecture Framework and methodology to help them in building their Enterprise Architecture in respect of the above principles. The e-Government Program will also provide help and support on how to apply this framework to aid the entities during the course of the framework implementation.

The e-Government Program will provide all necessary documentation and support in order to enable project implementers to produce deliverables that are in line with the e-Government architecture vision in the form of a Reference Model Winning PSPs shall have to access the necessary documentation.

E-GAF & SOA

The primary delivery models for e-government are:

- Government-to-Citizen (G2C)
- Government-to-Business (G2B)
- Government-to-Government (G2G)

Jordan e-government program is capitalizing over the G2G, G2B, and G2C service models in order to provide information integration between the different government entities to improve government processes efficiency, easy end users accessibility, increase transparency and reduce total cost of ownership.

The following figure depicts the different parties involved in the integration.
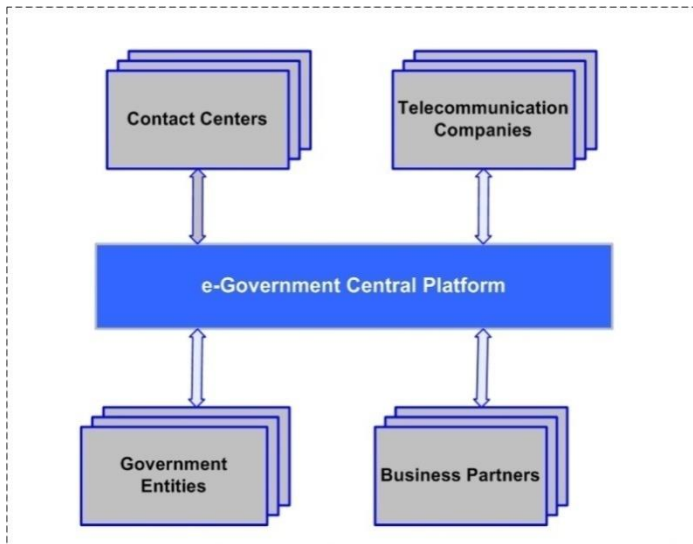

Figure 5.5.3: Government of Jordan Integrating Participating Parties

As seen in the figure above the following parties are involved in integration:

- **Government entities**: Government entities form the major customer and beneficiary for the business integration service provided by the e-government central platform. G2G integration model shall introduce efficient mechanism for integrating the government entities in order to deliver G2C, G2E and G2B services.
- **Telecommunication companies**: Telecommunication companies are considered business partners. The program will be responsible for providing the G2B integration services between those companies and the government entities. One example of such services can be the SMS notification.
- **Business partners:** The program will be responsible for providing the G2B integration service between business partners and government entities. Example for such business partners: payment service providers (PSP) and private banks.
- **Contact center:** Contact center's business is to serve the government entities end users. The program will be responsible for providing the G2B integration services between those contact centers and the government entities.

The IT infrastructure in the government entities and other business partners in Jordan is heterogeneous across operating systems, applications and software packages. Existing applications are used to run current business processes; so starting from scratch to build new infrastructure is a

very expensive and non-practical option. Hence; government entities should quickly respond to business changes with agility; leverage existing investments in applications and application

Infrastructure in order to address newer business requirements; support new channels of interactions with clients and partners (other government entities); and feature an architecture that supports business oriented model.

SOA is efficient for large and distributed systems where other types of integration are more complex and costly.

Jordan e-Government Business Integration Patterns

The business integration patterns that will be enabled by the central platform infrastructure are:

- Vertical e-Services integration pattern: defines the pattern in which services are provided end-to-end by one government entity. It's true that such services are provided by one government entity but their integration pattern may use some of the e-government central platform shared services such as authentication, online payment, notification, contact center … etc.

- Cross organizational e-Services integration pattern: defines the pattern in which a government service requires the involvement of several government entities in order to be delivered.

- Composite e-Services integration pattern: defines the pattern in which a service flows across multiple government entities and contribute to e-Government overall objectives (e.g. GRP).

- Shared e-Services integration pattern: shared services are defined as the ''enablers'', providing technology-based functionality that are central to the provision of vertical and cross-organizational services. Their ultimate ownership belongs to the e-government central platform as part of the federated architecture framework.

Jordan Information Interoperability Framework (IIF)

The Jordan e-government program has initiated an information interoperability framework that will manage and standardize the exchange of common and shared information between the different parties involved in the e-government of Jordan such as the government entities, central platform and business partners.

The IIF mandates that all the parties should speak the same language and this includes:

- Protocol: SOAP/HTTP(s)
- Content type: XML
- Standards: Jordan e-government standards
- Format: IIF format