Game Changers for Transforming Government

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Abstract— Aim of Game Changers is to transform the Government and build the Government of a state/country as an innovation society of global repute. Also, the goal is to enhance the quality of life of Citizens, through technology revolution and process revolution by adopting the Game Changers that are described in the paper. This will help in improving the service delivery to the citizens and business which helps in enhancing the happiness Index of the Citizen.

Index Terms— Business, Technology, People, Process, Game Changers

I. INTRODUCTION

Game Changers or transformative initiatives radically change the way Government is run. Game Changers acts like a lever for transformational change in the way government services are conceived, designed, delivered & consumed. It helps the e-Governance to provide integrated services to its citizens through seamless flow of information across government departments.

Game Changers can be classified into four types: Business, Technology, People and Process.

Business and Technology based initiatives covers, services or business changes due to advancing technology. It helps in achieving high level of integration and coordination among various stakeholders.

People and Process based Game Changer addresses re-evaluating and reusing of business processes, sector processes, and complex government portfolios. This helps in making fundamental design changes to complex business processes and better service delivery to citizens.

The key Game Changers include, Social Collaborative Governance, Digital Inclusion, Mobility, Contact Centre, Cloud, Integrated Government, Datalytics, Open Data, Certificate Less Governance System, Security, Internet of Things, Interoperability, Gamification and Smart City.

The following fig describes the Overview of the Game Changers which are classified in Business, Technology, People and Process
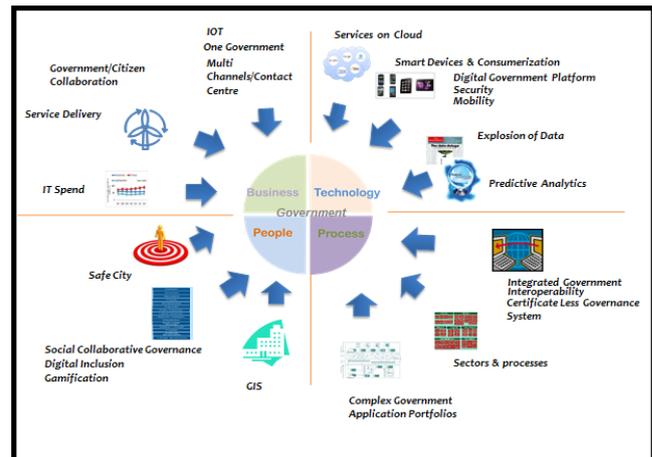

Fig 1: Game Changers Framework

II. SUMMARY OF GAME CHANGERS

A. Social Collaborative Governance

Collaborative governance is a Platform in which government actors are participants and/or objects of the processes. It covers problem-solving, broad participation, provisional solutions, the sharing of regulatory responsibility across the public-private divide.

Crowd sourcing tool is used as channel to gather information from citizens. It gathers innovative applications/solutions from the citizens.

Collaborative governance consists of two concepts:

- **Collaborative:** Achieve common goals working across boundaries in multi-sector relationships. Cooperation is based on the value of reciprocity.
- **Governance:** Steer the process that influences decisions and actions within the private, public, and Government sectors.

Social Collaborative Government helps in,

- Quick massive online information/solution from citizens
- Delivering resources to address public goals

Trend: By 2016, 1.2 million video minutes—the equivalent of 833 days (or over two years) —would travel the Internet every second - Cisco

B. Digital Inclusion

Digital Inclusion ensures citizens have access to Information

Technology so that they can benefit from the Government's growing knowledge and information society.

Digital Inclusion covers:

1. Digital skills - Ability to use computers, mobiles and internet to avail government services.
2. Connectivity – Access to Information Technology and Communication (IT and C) infrastructure.
3. Accessibility - Meeting IT and C service requirements of all citizens including those dependent on assistive technologies.

Digital Inclusion enables citizens avail government services through multiple electronic channels. Social media and mobile technology allows people to access services anywhere, anytime, and while on the move. It provides accessible information and tools so that citizens in underserved communities can improve their standard of living, make informed choices, and build assets. It offers government leaders an opportunity to create social and economic change with comprehensive leadership outreach, sound policies, program leadership and community involvement.

Trend: By 2016, there are expected to be 3.4 billion Internet users — about 45 percent of the world's projected population according to United Nations estimates- Cisco

C. Mobility

As mobile usage rises, citizens are demanding more exclusively mobile experiences from their governments—ones that move beyond basic apps and optimizing web pages for devices. To better serve mobile stakeholders, governments will be required to adopt a mobile-centric approach as part of an overall digital, e-government strategy.

Using the mobile web sites and mobile apps all the citizens can access the Government services offline from smart phones, tablets or other devices at anywhere and anytime. This will be more users friendly and helpful to the citizens and will increase the use of services by the citizens and improve the customer engagement. Citizens benefit from increased connectedness away from the place.

Mobility in e-Governance helps in,

- Fast reachability to all places of citizens
- As an add-on or enhanced feature to an existing product
- As a way to improve business processes and services
- Provide value to the citizens
- Ease of use and quality performance
- Improve citizen engagement
- Cultivate citizen loyalty

The suitability of government services to be delivered over a mobile channel depends on a combination of demographics, frequency and recurrence of use, immediacy and urgency of use, potential level of automation, relevance of location information for service delivery, and how compelling the use of the service is.

Trend: The number of consumer mobile transactions is due to rise 65% between now and 2016 –Open Text

D. Contact Centre

The goal of Contact Centre is to provide a consistent, high-quality customer experience at every touch point, regardless of how and where a citizen chooses to interact with Government.

The Contact Centre is not only for receiving or transmitting a large volume of requests by telephone, compare with the traditional citizen self-service, it has more benefits such as migrate agent-based assisted service to interactive voice response (IVR) flows resulting in reduced costs, computer telephony integration (CTI) for helping citizen be more efficient. Through complete multimedia and cross channel citizen interactions, Contact Centre can achieve single call resolution with functionality that lets agents communicate with citizens effectively using voice, SMS, video, web chat, email, fax, instant messaging and work items.

Trend: Next-generation contact centers will transform customer interactions by providing fast, reliable and accurate customer information across channels - CTS

E. Cloud

Cloud is a platform that, when combined with the internet and a growing access to powerful personal devices, will make the Digital Economy truly possible.

Cloud technology constitutes a change in computing and knowledge management, with hosted IT services delivered on a shared, internet-based platform. The real value is the ability to use that platform to combine data access and exchange with access to low-cost computing and applications to provide efficiency and flexibility.

To realize the benefits of cloud three core elements should be used to provide evidence of this shift

- the development of a cloud strategy
- the testing of a proof of concept
- the partial implementation of a cloud environment

The main objectives of cloud adoption in Government are cost reduction, speed of procurement and deployment, and responsiveness to regulations and needs for cost cutting. Aim of the Government is to reduce its IT infrastructure investment and cut costs by lowering the total cost of ownership (TCO), and cutting down on overall spend on IT administration. Government is inclined to adopt cloud based technologies, and move critical applications including data and analytics, consumer-facing services to cloud Environment.

Trend: Cloud Computing will constitute the bulk of IT spending by 2016. Cloud Market in India would reach over 3 billion USD by 2017 - Gartner

F. Integrated Government

IT departments are constantly under pressure to deliver new functionality and enabling new apps, products, business models and processes. The integration of existing

applications is often low on the agenda, resulting in loss of efficiency, integration errors and extended time-to-market. Integration acts as a neural network of the government departments, to which all systems can connect. Integration is a core component in the Integrated Government that helps in achieving many of the objectives like One Government, Data-sharing, Single-Source-of Truth, Cross-cutting services, and Common Applications. It helps to move towards a "Certificate-less society" or, ideally towards "Service-less Services"

Trend: We need both highways and i-ways in India. I want to connect all 6 lakh villages in India via fiber optic cables. People today live in places where infrastructure is present unlike past when water was the reason. Soon we might live in places where there is good connectivity. – Narendra Modi, PM, India

G. DataLytics

DataLytics application is an integrated Business Intelligence and Data Analytics system which includes conventional and Big Data. Analytical engine takes data from various government department databases, internet, sensors, machine logs and other sources, transforms them and presents them in an analyze-able format. DataLytics provides tools for performing analysis on the data, and gain insights, make data-based predictions, and identify best course of action for improving operational efficiency and governance.

Data comes from numerous sources including historical, video, audio, cell phones, geospatial, imagery, sensors, and social media.

From crime prevention to transportation, defense, national security, revenue management, environmental stewardship and social services, governments must wrestle every day with collecting, protecting, analyzing and using this data.

Trend: 90% of the data in the world today was created in the last 2 years -IBM

H. Open Data

Government collects processes and generates a large amount of data in its day-to-day functioning. But a large quantum of government data remains inaccessible to citizens, civil society, although most of such data may be non-sensitive in nature and could be used by public for social, economic and developmental purposes. Opening up of government data in open formats would enhance transparency and accountability while encouraging public engagement. The government data in open formats has a huge potential for innovation building various types of Apps, mash-ups and services around the published datasets.

A dataset is said to be open if anyone is free to use, reuse, and redistribute it. Open Data shall be machine readable and it should also be easily accessible. Open data is not free. For most government agencies, open data programmes are an unfunded or underfunded cost centre. The 'value' of open data must become tangible to government in terms of how its

availability can quantifiably contribute to operational efficiency or effectiveness.

Trend: By 2018, more than 30% of digital government projects will treat any data as open data - Gartner.

I. Certificate less Governance System (CLGS)

Current Government processes are centered on physical verification of paper based certificates, which is a cumbersome activity in terms of money, time and environment. Target CLGS system helps to abolish most of the certificates and establishes a Certificate Less Society across Government. It minimizes usage of physical documents (no scan/photocopies, no physical papers) via electronic formats and sharing across agencies. It also eliminates usage of fake documents (no fake government/degree certificates, no fake usage of someone else's certificate) via a mechanism to verify "authenticity" of government issued documents online.

Typical characteristics of developed Certificate-less Governance System are,
   a) Anytime, anywhere online access
   b) Eliminate need for the citizens to maintain hard copy of government issued documents.
   c) Reduce administrative burden, service fulfillment time, and costs by enabling paperless transactions Eliminate need for the citizen to produce (in hard format) government issued documents, while applying for services.

Steps are being taken to issue 113 types of certificates in digital format on-line- Chief Minister, AP, India

J. Security

Cybersecurity is an integral part of cross-functional services of IT. It can be classified as three major security categories,

- Data protection (encryption, cloud security, access control and authentication, secure data sharing)
- Network protection
- Device protection (server, desktop, laptop, mobile and industrial controls)

Government departments/agencies need to implement more encryption technologies that enable departments to protect the data and transmit that data securely.

Trend: The cyber threat to critical infrastructure continues to grow and represents one of the most serious national security challenges we must confront - President Barack Obama

K. Internet of Things (IOT)

IOT is the network of physical objects (fixed or mobile) that contains embedded technology to communicate, monitor, sense or interact with multiple environments. Government agencies can expect IOT-driven changes in several different

areas, including environmental or public infrastructure monitoring, emergency response, supply chain inspection, asset and fleet management, and traffic safety.

IoT is used to evaluate how a growing base of intelligent objects and equipment can be combined with traditional internet and IT systems to support breakthrough innovations in operational performance or public service delivery.

Trend: IoT market is on track to hit $7.1 trillion in 2020-IDC

L.   Smart City

In developing countries urban population is increasing at exponential rates along with its lion share of GDP. That highlights the need of making our cities smarter which can't wait any further. There are three pillars of smart city concept that is competitive by attracting investors and residents, sustainable in social, financial and environmental aspects and, capital rich from human and social perspective.

Various instruments will be used to build smart cities such as use of clean and green technologies, wide spread use of ICT, PPP model for efficiency and good governance.

Key features of smart cities are:

- Good governance – citizen centric services, participative governance
- Physical infrastructure – 24x7 availability of high quality utility services such as water, power, multi-modal transport, cyber connectivity, energy efficiency, sewerage, solid waste management
- Social infrastructure – entertainment, safety and security, healthcare, education, skill development, inclusive planning
- Economic infrastructure – GDP contribution, job creation, livelihoods

Trend: Global smart city technology market is expected to be worth more than $27.5 billion annually by 2023 - Navigant Research

ACKNOWLEDGMENT

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DISCLAIMER

The views expressed in this paper are the authors' alone and do not necessarily reflect an official position of Wipro or any other organization.

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