Transforming Governance

A Decade of eGovernance and the Next Wave of Governance Reforms

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FOREWORD

The core of Good Governance is based on reducing internal complexities in the functioning of the government, expediting procedures through electronic and digital means, reducing/eliminating unnecessary rules and creating an enabling environment. These changes if implemented can bring a paradigm shift in the way the government functions and it will increase the involvement of citizens.

In today’s technology enabled world, citizens expect quick results. Hence, every aspect of government functioning has to be in alignment with the rising expectations of the citizen and the society at large. There is also need for joined up functioning of government by adoption of smarter technologies.

The past decade of e-Governance has witnessed increase in transparency and accountability in the delivery of Government to Citizen and Government to Business services. However, as we move forward it is critical to evaluate the impact of previous implementations as well as their shortcomings and assimilate the learnings from them.

With this backdrop, on the occasion of 19th National conference on e-Governance, I am pleased that this report on “Transforming Governance - A Decade of e-Governance and the Next Wave of Governance Reforms” is being published. This report identifies and delves into key trends and transitions being experienced by Government and private stakeholders. The current transitions are expected to play a big role in future years as Governance adopts an insight driven and outcomes based approach.

I believe that this report will provide a new direction and resurgence to administrative reforms by leveraging the power of Digital Technologies and Channels.

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Foreword

Shri Devendra Chaudhary
Secretary
Department of Administrative Reforms & Public Grievances
Ministry of Personnel, Public Grievances & Pensions
Government of India

Governance and Administration often tend to be reactive, more so when it concerns addressing the needs of the citizen at the ground level. This then limits the course of actions possible to address Governance in a holistic manner with a long term perspective. Not surprisingly therefore, the Department of Administrative Reforms and Public Grievances (DAR&PG) has hitherto taken up reform initiatives as reactions to certain perceived needs of the citizens.

In fact, the Reforms reports emanating from various Ministries / Departments of the Government both in the Centre and the State – an estimated over 300 – have often seen more time on files than actual implementation on ground. There is therefore a need to have a fresh look at the whole approach to the reforms paradigm in the Government particularly in the context of the variegated fabric of the aspirations of the citizens for an Accountable, Responsive and Transparent government – the A.R.T. of Governance as so aptly coined by Hon Prime Minister on the occasion of the Civil Services Day on 21st April, 2015. Two key efforts are involved in this. The first concerns the need to truly link reforms to needs of the People, put in the right Processes and resources for meeting those needs in an effective and cost efficient manner and thereafter the Technology – the PPT – PEOPLE, PROCESS AND TECHNOLOGY - triad re-engineered to providing tangible outcomes desired for addressing the needs of the citizen. The DAR&PG is therefore seeking to reinvent itself into a PPT driven organisation wherein it strongly believes that technology enabled process grounded on analytics of the true citizen needs would be one of the key to improving the efficiency and effectiveness of Governance – the Ease of Governance - and render speed – GATI ((गठी)) - Governance with Accountability, Transparency and Innovation – to the reforms which the citizen of this country expects from the Government. This would lead to a value driven approach in Governance – Minimum Government – Maximum Governance (MGMG). A key technology tool for this has to be in the e-Commerce driven 21st Millennium nothing else but, e-Governance.

The past decade of e-Governance in India has witnessed an increasing effort to provide at best downloadable information. The true full transaction enabled payments facilitated end-to-end digitised processes are not yet in place for Citizen Centric Services. No wonder India is placed 119 out of 193 countries in the UN e-Government Index 2014. We have to change this. DAR&PG has inked a partnership with UNDP itself to reach the top 10 and not in too distant a future. The 19th edition of the National Conference on e-Governance here at Nagpur, the winter capital of the great Maratha state I believe, provides an ideal setting to start on this journey afresh and with vigour. The Report – “A Decade of e-Governance” – by NASSCOM endeavours into a self-analysis and the way forward for the first time to identify key trends and transitions being experienced by Government and citizens as well businesses which would play a transformational role in years to come, to providing Good Governance through an insight driven and outcomes based approach.

The, Report, I am sure, will provide a new direction and resurgence to Governance Reforms Mission of the DAR&PG towards fulfilling the citizen centric needs at the ground level through the powers of Digital Technologies along with value based Processes for the People of the country.

Jai Hind
Foreword

Digital India is the biggest platform that will empower every individual with access to digital information, knowledge and services. The Department of Electronics & Information Technology (DeitY) has a key role in implementation of Digital India.

In order to achieve the vision of Digital India and ensure delivery of government services to citizens the mobile platform needs to be leveraged to its full potential. It is also important to provide multi-lingual m-Gov services to enhance the accessibility of service delivery channels. Further, Aadhaar linked, mobile based authentication mechanism needs to be developed, as it has the potential to become a widely used channel for citizen authentication.

We also need to build capacity to manage and implement technology led transformation projects envisaged in eKranti, which can be facilitated by inducting talent from the private sector.

This report provides a snapshot of the journey of eGovernance, how it has been and how it will be in the coming years. It also provides an opportunity to various stakeholders to learn from good practices of the past and understand the priorities in the coming years.

Today the Technology Industry in India is setting new benchmarks for Innovation at Scale, and has been partnering with Central and State Governments to redefine how they deliver services to citizens and businesses.

India is uniquely positioned to take advantage of digital technologies to bring in a paradigm shift in Governance by bringing the citizen centre-stage, while delivering public services.

We are privileged to support the Department of Administrative Reforms & Public Grievances in identifying major enablers that can actually bring about major transformation of governance in India. Our work aims to identify key imperatives for future success. Most of our hypotheses have been validated by industry experts and policy makers during the Stakeholder Consultations.

We require a proactive approach to Governance and adoption of technology. We do hope Central and State authorities consider the suggestions in this report, while formulating policies and programmes. We expect that the action agenda proposed in the report will help the Government in scaling services to citizens in partnership with Industry. We thank DARPG for this opportunity and compliment the KPMG team, which supported NASSCOM in developing this Report.
Foreword

Change is the only constant. In order to be competitive and one step ahead of everyone, it is necessary to think beyond what others don’t. The one who is able to see the wind of transition and work out the plan to handle it much earlier than others, will be in a better position to take advantage of that transition.

With the learnings from the past decade of eGovernance and current scenario, it is important for all the stakeholders to understand the consequences of these changes. It is more important for the Government to appreciate the trends as its actions have a larger impact on the society.

The report discusses various transitions such as the increasing penetration of digital devices and its impact on access to government services. It discusses the issues related to developing solutions for institutions as silos instead of developing solutions for connected Government. It talks about the relevance of inclusive decision making, interconnected system and support of strong leaders. The report also focuses on providing quality services to citizens by treating them as customer. In the same line it also focuses on encouraging equity in partnership by treating Businesses as partners.

It is expected that such transitions will make big impact in the future. Government must be ready to take actions. This report highlights some of the action items for the government for each transition. The action items in terms of policy, process, technology and initiatives will help Government in transforming the lives of citizens through eGovernance.

Shri Nilaya Varma
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Acknowledgements

The Report on Transforming Governance: A Decade of eGovernance and the Next Wave of Governance Reforms, is about analyzing the impact of eGovernance in transforming the governance landscape in India in the past decade. As a result of the analysis, and factoring in the disruptions in the technology landscape, report attempts to provide a roadmap for transformation in governance for the years ahead.

Department of Administrative reforms and Public Grievances (DARPG) of Government of India would like to express its appreciation and recognize various organizations and institutions for their valuable contributions, without which, this report would not have been possible.

DARPG, Government of India would like to thank its knowledge partner, NASSCOM for their efforts in making of this report. It would also like to thank KPMG, who have been the research partner to NASSCOM in this endeavor.

DARPG, Government of India, would like to thank Mr. R. Chandrashekhar, President, NASSCOM, Mr. J. Satyanarayana, IT Advisor, Government of A.P, Mr. R.S.Sharma, Chairman, TRAI, Mr. J.S. Deepak, Secretary, DeitY, Mr. V.K. Gautam, Principal Secretary, IT, Government of Maharashtra, Mr. Nilaya Verma, Partner, Government Advisory, KPMG and IT Industry leaders who have contributed in the development of this report.
Executive Summary

Good Governance is the fundamental promise of every elected Government in the world. Across the world, experience and studies have highlighted the role eGovernance has played in enabling and supporting Good Governance. It is for this reason eGovernance is often driven by the senior most leader role eGovernance has played in enabling and supporting Good Governance. The last decade – especially in the context of the development and implementation of the National eGovernance Plan (NeGP) starting in 2005/06, laid the foundation for the germination and growth of planned eGovernance in India.

As we celebrate the 19th edition of the National Conference on eGovernance (NCeG), Department of Administrative Reforms and Public Grievances (DARPG) and NASSCOM decided to look at the decade gone by to understand the developments in eGovernance for the learning it would provide and more importantly lay out the vision for the next five to ten years to become the cynosure of transforming India for the next decade. The vision will fashion the direction of eGovernance in India and meet the expectations set by the Honourable PM.

This Research Report sets the background for a plenary discussion on January 22, 2016 at the 19th edition of NCeG, on vision for eGovernance in India over the next five years. This vision is very aligned to and driven by the PM’s vision for Good Governance and his belief and recent call for action on “transformational change” as opposed to “incremental improvement”.

India has undergone a remarkable journey in the last 10 years of eGovernance, something it embarked upon in a programmatic way with the announcement of the NeGP in 2006. The outcome of this journey is best exemplified in contrast with events of the last decade. At the start of this journey one had to literally explain what was meant by eGovernance and seek leadership support to design and launch eGovernance projects – as they were seen “fashionable” or not core to “Governance”.

In contrast, today, the country’s Prime Minister is driving the agenda for eGovernance looking at the growing impatience of citizens to seek services “inline” or on “single windows”. For a citizen, it is more convenient if these services can be accessed online - a mode which perhaps today many consider a fundamental right!

A large number of successful projects have been implemented across center and states that bears testimony to the progress that has been made in the last decade. Some of these initiatives include Bhoomi in Karnataka, Sarita and Commercial Taxes in Maharashtra, Vahan and Sarathi across India, Income Tax, Passport Seva Kendra, MCA21, etc. This report looks at some of these projects in detail, along with the reasons contributing to their achievements, and shortfalls to deliver tangible benefits. We have also looked closely at projects where more needs to done, as very often these experiences provide us inputs for the future. While there are project specific learnings that we discuss in detail in the report, at an aggregate level, the last decade has clearly achieved some very important results.

First and foremost – Making eGovernance integral to Government reform. Today, no governance reform program can be planned or designed without considering eGovernance at the core of its solution. Take for example, the recent push of Government of India on ease of doing business – a closer look at the good practices circulated by DIPP for ease of doing business has eGovernance and ICT at its core.

Secondly, we have substantially moved the dial within Government departments from buying hardware or software to buying services and solutions. This is not a mean achievement given the change management challenge, and that too in a relatively short span of time. The focus of most well designed projects in eGovernance is on buying services, outcomes linked to driving service level agreements that directly benefit the citizens/business – Mee Seva, MCA21, Passport Seva Kendra, Income Tax eFiling are some shining examples of this change.

Thirdly, we have created an infrastructure that can help scale up and meet the need for the next five years. While, in hind sight, there has been considerable discussion on the efficiency and utilization of common infrastructure (SWAN, SDC, CSCs, UID) created under NeGP and beyond – the fact remains that this infrastructure creation by itself, is a great achievement and will help to drive the next wave of transformation.

Finally, the last decade provides many great examples of private sector involvement and leveraging India’s IT talent to create innovative solutions – both in terms of the kind of partnership model as well as ownership models. This includes the creation of GSTN, MahaOnline or ITD CPC.
The Glass half full?

Like with all things in life, there is clearly much more that can be done or indeed needs to be done. What has been achieved so far, serves as the stepping stone towards larger success that is “pervasive” and not select examples of work well done. In that context, the experience of the last decade does provide us some great learnings that we need to recognize and leverage, as we go about implementing the vision for the next five years.

One of the biggest learnings (which we need to recognize) of the last decade, has been that a mere “go live” of an eGovernance project or “availability of services online”, does not necessarily lead to benefits for citizens or businesses. There are a litany of projects that are delayed or have not as yet delivered results. At the core of this problem, lies project design. Projects were designed in a siloed manner (sometimes for a division within a department) not considering the big picture with reference to delivering services to citizens or businesses. While trying to deal with problems in a piecemeal fashion i.e. by doing easy things first, one tends to lose sight of the goal and hence very often eGovernance projects end up driving internal efficiency and not service improvement and consequently process reforms do not happen, remain on paper or end up being superficial. A typical situation where the means to solving a problem is seen as an end in itself. A good example of this is perhaps the Paperless office project.

Another learning, as cited by many of our interviewees, is the inadequate focus on capacity building and leadership development to manage large technology projects. Capacity building was seen as “insourcing resources” through “outsourcing”. This was at best staff augmentation, that too sourcing project specific technical resources, wherein the need was for leadership and functional experts within Government. The problem of capacity within the government to design projects that deliver outcomes continues to be a challenge. Another aspect of this lack of capacity relates to the role of Technical Agencies of the Government – Central and State. In current form, they tend to be advisors, implementers, monitors and adjudicators of project implementation. This not only makes them loose focus and not develop expertise but also makes them less impactful. Further, in a rapidly changing world of technology, with little new talent infusion or professional training opportunities, the Nodal agencies cannot stay at the cutting edge of delivering transformation through technology or meet expectations of various stakeholders and Government Leadership. It also places them against the private sector in the war for talent – a war that public sector very often loses in India.

“It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things.”.

Niccolo Machiavelli,
The Prince (1532)

The vision of the Hon PM for Transformational Governance cannot be realized only with innovative deployment of Technology and Transformational Thinking.

The next wave of Governance Reforms will be driven by Technology and Innovation which would provide GATI (HIC) – Governance with Accountability, Transparency and Innovation to the process of Governance and Administration.

With e-Commerce expected to log 100 billion US dollars worth transactions by 2020, the enterprise of the private start-ups would be crucial to realizing the goal of providing end-to-end full transaction enabled government services the e-Commerce way.

The Trinity of JanDhan, Aadhar and Mobile – JAM, along with SMAC would drive the delivery of government public services in the next 5 years to enable a Certificate less government to the common man.

Shri Devendra Chaudhary
Secretary –DARPG

“Government has limited capacity to manage technology led transformation projects, hence it is important to induct talent from private sector. Efforts are being made to leverage private sector expertise for design of technology projects of Government.”

Shri J S Deepak
Secretary –DitY
Another issue that the experience of the last decade brings to fore is the continued disengagement of large Indian or Global players to be part of eGovernance transformational projects. Today, it is no secret that attracting three bids for large transformation programs is in itself seen as an achievement. At the core of this reality is the inability of the procurement model to appreciate what it takes to deliver an eGovernance project (such as seeking fixed price for an IT project without clearly defining the boundaries) and no accountability on the part of the Government for timely decision making and fulfilling their obligations. Further, even where partnership and PPP projects are designed with user charges to cover investments and returns, the payment model assumes the Government ownership – wherein government still collects money and then decides payment. This being the case even though payment of user charges implicitly assumes satisfactory dispensation of services being provided. This means projects are seeking private sector funding for government expenditure with an expectation that all risks will be borne by the private sector. This approach is clearly unsustainable and what we see today in terms of limited interest of private sector to eGovernance projects is a mere reflection of this poor design.

Time is Right and NOW!

Digital India provides a new paradigm to what is possible and for us to envision a future that bears little semblance to the past and allow the next wave of eGovernance to really allow transformation of Governance.

Today, technology is all pervasive and mobility provides a platform that allows almost every Indian access and interface without the need for “technical capacity” to participate in the Digital World. The telecom advancement (mobility) including future plan for rollout (reasonable price for data services), path breaking IT development platform, Analytics, IoT, Cloud, etc., together with success of key initiatives of the Government such as Unique ID, Jan Dhan accounts and Digital Locker provides us an opportunity to break from the past and envisage and deliver eGovernance solutions that are truly citizen centric in form and spirit.

Vision for the next five year!

In the background of the experience of the last decade, global trends, recent announcements and the vision the Government has set for the country for Good Governance, we see the next five years witnessing a paradigm shift in the way things work. This report suggests seven changes in paradigm over the next five years. For this, the Government will need to redesign its strategies and bring major process reforms. This report lists down various action items, which if undertaken by the Government, will place it in a better position to handle this transition.

In arriving at these seven emerging paradigms, we interviewed a number of thought leaders from the field of eGovernance. The expert panel included various stakeholders such as policy makers, ICT experts, and industry leaders. The first-round of interviews were conducted, which was guided by a questionnaire, developed keeping the emerging trend in focus. After analysing the results of these interviews and conducting additional corroborating research, a second round of interviews were conducted with experts’ feedback on initial findings.

Before we discuss the seven paradigms, we want to clarify that this knowledge paper is not a comprehensive survey of eGovernance status in India. Rather, this report is a synthesis of leading expert’s thoughts on emerging trends and major transitions in eGovernance, and attempts to lay out a future state of eGovernance as is currently understood by leading practitioners. The fundamental premise of the seven paradigms are that the Government needs to present a unified face, where every department will work in collaboration with each other in a well-defined manner, enabled by technology.

Additionally, each paradigm will also challenge the basic premise with which eGovernance projects are designed. The objective till now was to provide better services, however the approach was top-down. In this approach, solutions were designed for government agencies to provide assisted services to citizens. Moreover, Government used to drive the policy with limited inputs from stakeholders such as citizens, businesses and civil society. This approach may have allowed fast tracking many eGov projects but in the long run was less impactful in meeting both Government’s and Citizen’s expectations. However, there has been some changes of late. With more awareness and the advent of latest technologies, meeting citizen’s expectations is becoming an imperative.

The table overleaf captures the changing paradigm that the next five years will see unfold.

“We have a great opportunity for a transformative leap in Governance given the unique combination of societal readiness and technological advancement that exists in the country today. Partnerships, especially PPPs with sustainable business models are the only way we can deliver innovation and impact at the scale and speed needed”

Shri R. Chandrashekar
President, NASSCOM
Previously Secretary IT and Telecom
From Last Decade of eGovernance | To Vision for next 5 years
---|---
1 Assisted Service | Mobile First, if not Mobile Only
2 Solutions for Departments/Ministries | Solutions for Citizens / Businesses
3 Management Driven Policy | Enabling Inclusive Decision Making
4 Large and Stand-alone System | Smart and Integrated System
5 Individual Initiatives | Institutional Initiatives
6 Multiple Download of Information | Need fulfilment of G2C Services Online
7 Outsourcing and Deferred Payment | Shared Services and PPP

While the emerging paradigms are self-explanatory and detailed in the subsequent chapters, the vision for next five years for each of the seven paradigms are summarized below:

1 Assisted Service to Mobile First, If not Mobile Only

To avail services, citizens have to travel all the way to Government offices or CSC, wherever possible. However with the penetration of mobile phones, increased use of smart phones and reasonable cost of data – citizens can access Government services from the comfort of their homes. To really transform Governance, Government needs to set itself a goal of providing all services, including those that are transactional in nature, on mobile – this will force process transformation. We believe with JAM (Jan Dhan, Aadhaar and Mobile) together with Digital Locker, this is not only possible but the need of the hour for Transformational Governance.

2 Solutions for Departments/Ministries to Solutions for Citizens /Businesses

Most program designs have traditionally focused on digitization of internal processes of departments / ministries to improve citizen services. This approach has a basic flaw in terms of a) it does not keep citizens/businesses at the core of project design, b) limits integration and c) delivers incremental changes. It also perpetuates silos in government. The focus going forward needs to be to understand the need of citizens/ businesses and then converge various Government departments (digitally if not in the physical world) into a single unit with the aim to provide better service to citizens.
Management Driven Policy to Enabling Inclusive Decision Making

Worldwide, there has been an increasing involvement of citizens in policy and decision making both from traditional and social media. There has been a paradigm shift from leaders/managers deciding policy for everyone to everyone helping government design policy. The recent initiatives of the Government in the form of MyGov; Mann ki Baat, coupled with transparency brought in by RTI, CPGRAM, etc. provides a perfect platform to enable this change in paradigm. eParticipation should become an inherent component of all eGovernance project designs.

Individual Initiatives to Institutional Initiatives

eGovernance Projects have often failed when there is a frequent change of project leadership and key stakeholders. It is important to segregate “leadership sponsorship” with “individual initiatives”. While leadership sponsorship provides strength to a project, individual initiative makes the project / change brittle. Thus, in projects driven by individual initiatives, change in project implementation teams results in change in requirements, understanding and scope which in turn delays or stalls the overall implementation of the project. It is critically important that we build institutional capacity to take up eGovernance projects spanning Ministries, Department and Centre-State.

Outsourcing and Deferred Payment to Shared Services and PPP

The current model for delivering eGovernance solutions requires significant changes. Development of Government wide shared service centers will help build capacity and increase efficiency. At the same time, a win-win partnership with private players that is based on equality will help scale up eGovernance and make it all pervasive.

Large and stand-alone systems will pave way for smart and interconnected systems such as Cloud, Internet of Things, and Mobile Internet. In India, although technological advancement has drastically changed the way e-governance is perceived and carried out, now there is a need to move towards “Innovative solutions from Collaborative technologies”. Hence, the next phase should focus on the adoption of smarter technologies as compared to complex large systems, with Governance-IT alignment through simplified and standardized enterprise architecture.

Today projection and tracking of mere services online obfuscates the effectiveness of services online. We see example after example of citizens and businesses coming to government offices or availing information/services through online medium. This needs to change. The Government has increasingly all the data of the needy citizens to reach out to them and provide support rather than people reaching out to Government for support.

In conclusion, India has been recognized as a power house of IT services across the world. The private sector is at the forefront of this growth. However, it is now the turn of the public sector in India, to forge a strategic partnership and realize the goal of Governance Transformation enabled by technology. In order to achieve this, Government will have to push past boundaries, set bold vision and take strong actions to conquer inherent challenges of the past. The time is right for the Government and Government must make full use of it.
Recapitulating the past decade gone by
Recapitulating the past decade gone by

1. Sectors that received maximum focus in the last decade

A large number of sectors have been recognized and initiatives, majorly by central ministries & departments and state governments have been given awards. An analysis of the different sectors that have received the National eGovernance awards is as provided below:

Some of the prominent sectors which have received more than 5 awards in the last decade are:

i. Finance
ii. Agriculture
iii. Health
iv. Education
v. Administration
vi. Administrative Reforms
vii. Mining
viii. Information Technology
ix. Planning

Similarly, the sectors that received less than 3 awards in the last decade are:

i. Land Management
ii. Disaster Management
iii. Sports
iv. Corporate Affairs
v. Earth Sciences
vi. Legislative and legal services

Although, the awarded projects in various sectors cover a variety of domain areas, right from process automation, delivery of citizen centric services to implementation of GIS, it is quite clear that in certain sectors the adoption and proliferation of IT and eGovernance is high and multiple projects are awarded on a year on year basis. At the same time, important sectors such as disaster management, legislative and legal services have had only 2 projects (under each category) being awarded in the last decade. This shows that there is a need to promote sector specific strategies for eGovernance, with special focus on laggard sectors.

It may also be noted that, of the different projects that have been awarded there are very few Mission Mode Projects. Majority of the projects that have been awarded are either leader / individual driven or department driven.

Based on this, following are some of the observations:

i. Majority of the projects that were awarded were independent initiatives. These were designed in a siloed manner not considering the holistic approach with reference to development of integrated systems for delivering services to citizens or businesses. At the same time, it can be noted that such siloed projects have limited success in achievement of desired outcomes and have a number of discussion and debate surrounding them.

ii. Somewhere it also reflects slow progress made by Mission Mode Projects (MMPs) in achieving the desired outcomes. Multiple issues have been identified in implementation of these MMPs/larger program level initiatives. Some of these are listed below:
   a) Delay in contracting and contract management of program level initiatives resulting in adverse outcomes
   b) Delay in approvals from the Government departments / State Governments

The national eGovernance awards may consider some of these issues in implementation of majority eGovernance projects and can recognize exemplary efforts in resolving such issues that are a bottleneck in successful implementation. It is important to provide recognition to such issues as well, over and above considering the outcomes that are achieved.
2. States that received maximum focus in the last decade

Looking at the awards given to various State Governments, it can be inferred that there is a huge variation among states in terms of adoption and usage of IT and eGovernance. An analysis of the states that received the National eGovernance awards is as provided below.

The states that received more than 5 awards in the last decade are:

i. Andhra Pradesh
ii. Bihar
iii. Delhi
iv. Gujarat
v. Haryana
vi. Jharkhand
vii. Karnataka
viii. Kerala
ix. Maharashtra
x. Madhya Pradesh
xi. Rajasthan
xii. Uttar Pradesh
xiii. West Bengal

The states/UTs that received less than 3 awards in the last decade are:

i. Andaman & Nicobar
ii. Assam
iii. Chandigarh
iv. Jammu & Kashmir
v. Odisha
vi. Punjab
vii. Tripura

The analysis of awards received by the states shows varying results with Delhi getting more than 20+ awards in the last decade. This could be attributed to the fact that awards received by the projects of central ministries / departments are also classified under Delhi. Punjab has received only one award in the last 10 years and except Assam and Tripura no northeastern state has received awards in the last decade and these two states have received very few awards. By looking at the state wise distribution of awards, it can be inferred that there is a need to focus on the laggard states, also it is important to consider specific regions such as North East for promotion of eGovernance.

Apart from this, it can also be seen that a number of the state government projects that have been awarded are successful because of the initiative of a leader. It has been observed that eGovernance Projects have often failed when there is a frequent change of project leadership and key stakeholders. While leadership sponsorship provides strength to a project, in projects driven by individual initiatives, change in project implementation teams results in change in requirements, understanding and scope which in turn delays or stalls the overall implementation of the project. Hence, it is critically important that we build institutional capacity to take up eGovernance projects spanning Ministries, Departments and Centre-State.
3. Improvement brought by eGovernance projects that have been awarded

The national eGovernance awards recognize and promote excellence in implementation of e-governance initiatives.

In order to analyse the improvement brought in by these awards, certain projects that have been awarded in the past are illustrated below:

**Bhoomi:**
Launched in 2001, Bhoomi is a computerized system for delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka. Key features of Bhoomi are as follows:

i. Computerised kiosks offer farmers two critical services - procurement of land records and requests for changes to land title. About 20 million records, previously being manually maintained by village officials, are being legally maintained in the digital format.

ii. A biometric fingerprint authentication system, to ensure authenticity of data management, was used for the first time in an eGovernance project in India.

A number of benefits were attached to the success of such an initiative; the sanction of crop loans, reduction in delay in the disposal of court litigation due to non-availability of records. Bhoomi was a noteworthy effort that set an example for other projects in its approach towards piloting a project, as well as its rolling out and sustenance.

**TDS Reconciliation, Analysis & Correction Enabling System (TRACES), Income Tax Department**

The Income Tax Department, Government of India in February 2013 initiated a state-of-the-art Central Processing Center for efficient administration and processing of Tax Deducted at Source (TDS). It enables:

i. Real-time reconciliation of TDS filings and refund claims
ii. Instant detection of erroneous claims and faster payment of verified claims
iii. Significant savings for the government through reduction in the interest accumulated on delayed tax refunds
iv. End-to-end 'Anytime-Anywhere' access

The system forms the backbone of overall TDS administration in the Income Tax Department.

Listed below are some of notable success factors of the project:

i. More than 4 crores Taxpayers including corporates, individuals, business entities and others. 35 banks are linked to the CPC-TDS
ii. Processing capacity of more than 1 crore deductee records in 24 hours
iii. Processing capacity of nearly 30,000 outbound intimations in a day
iv. Substantial reduction in processing time - from 1 year to 3 days

**COLIS (Collector Information system)**

COLIS is a web based District Administration Portal conceptualized by the Collector Office and implemented by NIC team of Kolhapur. COLIS being web based is accessible from anywhere, with just a computer and internet connectivity. It was envisaged considering the requirement of Collector offices, SubDivision Offices, Tahsil Offices and Other Revenue Offices in the district. COLIS encompasses the following modules:

i. eRevCourt
ii. eWebPublication
iii. eGoDown
iv. eElection
v. eGRecovery
vi. ePension
vii. eCOLISAdministration
viii. eAuction/eTendering of sand deposits

It is also integrated with the SMS gateway, which helps in disseminating information to users through SMSs.

Listed below are some of notable success factors of the project:

i. Final judgment copy uploaded on the web portal for easy accessibility
ii. Use of digital signature on judgment reduces time and expenses incurred for getting certified copies
iii. Final judgment & hearing postponement is now communicated through SMS resulting in ease of communication
iv. Information of all branches and offices are available at a single place thus reducing the effort of citizens in obtaining them

An analysis of these initiatives which are awarded in the past shows that these are isolated systems, hence the key improvement area that emerges out of it is the need for smart and interconnected systems which leverages technologies such as Cloud, Internet of Things, and Mobile Internet. There is a need to move towards "Innovative solutions from Collaborative technologies". Hence, the next phase should focus on the adoption of smarter technologies and integrated systems.
4. Initiatives of DeitY

The formulation of National e-Governance Plan (NeGP) by the Department of Electronics and Information Technology (DeitY) and Department of Administrative Reforms and Public Grievances (DAR&PG) in 2006 has significantly enhanced the eGovernance sector. DeitY has a key role in implementation of NeGP, which includes 11 Central, 13 State and 7 Integrated MMPs. DeitY also has an important role in implementation of the ambitious Digital India Program.

In order to expedite and standardize the procurement process being followed for eGovernance projects, DeitY has come up with model RFPs, to help in streamlining the procurement process, bringing transparency and minimizing issues with the bidders / SIs during the bidding / implementation phases.

DeitY has a role in defining policies and facilitating rollout of eGovernance projects in other ministries / departments and at state government levels. Hence, DeitY has very few projects that are awarded in the last decade.

Further, it is important to understand that many MMPs have not been able to achieve the expected outcomes. Some of the reasons that can be attributed to it include lack of clarity regarding the mission objectives, operational autonomy, and strategic accountability, design and implementation of Monitoring and Evaluation (M&E) mechanisms, etc.

In view of this, conscious efforts need to be made to recognize and reward successful efforts in the implementation of MMPs / program level initiatives involving multiple stakeholders.

The other useful interventions include: Identifying and appointing mission leaders with dedicated project teams; agreement on detailed action plans with measurable and verifiable outcomes along with the timelines to achieve them; regularly monitoring progress against action plans; holding mission leaders accountable for making progress and accordingly incentivizing and rewarding them.

5. Independent initiatives of States

A significant trend observed over the past decade has been state governments conceptualizing and driving innovative projects which were not part of the NeGP. Three state governments, namely Gujarat, Karnataka and MP, took a lead in it and have also won the largest number of awards in the past decade. Most of these projects have been well thought of, sustainable and replicable.

APonline (Andhra Pradesh) – APonline provides an online digital gateway for offering e-Services. It provides an institutional framework and mechanism for quick rollout of citizen services provided online and at the doorsteps of citizens. The initiative was one of its kind in the country when it was conceptualized, and has succeeded in being in vogue even after a decade. Similar initiatives were later taken by states like Maharashtra, MP, highlighting the replicability of the model.

Value Added Tax Information System - VATIS (Gujarat) – VATIS provides a digital platform for efficient, effective, economical and transparent Tax Administration. The project was implemented post introduction of VAT and was one of the first successful eGovernance projects in Commercial Tax department in the country. Similar projects were later on implemented by other state governments, followed by the introduction of the commercial tax mission mode project under NeGP.

Khazane (Karnataka) – This was one of the first complex eGovernance projects in the country which aimed at bringing about a more transparent and accountable system of financial transactions and also discipline in operations and management, resulting in efficiency and cost savings for the government. With more than a decade of implementation, similar projects have now been rolled out in other states to bring in efficiency in Treasury. However, not all of them have met with the same degree of success as this project.

While some of the state government driven initiatives in the past have been department centric, going forward we would see a shift in the trend to being more integrated in approach with a clear focus on enterprise architecture. In the next decade, we would expect to see more projects using cloud infrastructure and being optimal in utilization of resources.
6. Global Best Practices

When we talk about eGovernance, the global perspective is to move towards integrated governments where several departments’ application and databases seamlessly connect and communicate to each other. Thereafter, complemented by techniques such as data warehousing, data mining analytics along with business intelligence capabilities, government and policy makers can formulate policy and take prompt decisions by foreseeing the future.

Governments across the world are moving towards implementing smart solutions using cutting edge technology enablers like GIS, RFID, NFC, etc. and are transforming themselves from eGovernment to Smart Government. Smart Governments gather intelligence through multiple databases and thousands of real-time sensors allowing them to take proactive decisions. Also, Smart Governments believe in preventing the problem altogether rather than solving them as and when they surface.

Some of the global best practices in alignment with the identified seven strategic areas elaborated in the report are:

**Mobile Service Delivery Platform (MSDP):** Mobile governance (m-Governance) is the next wave of eGovernance. Mobile based service delivery ecosystems have been operational in many countries bringing various government services to citizens on Mobile Devices. The need is to setup a Mobile Service Delivery Platform (MSDP) which can be used to deliver public services through the various channels available on mobile phones. Dubai Police App is an excellent example of m-Governance wherein multiple services are provided to UAE residents on their mobile phones. This enables them to independently complete activities without visiting the police station and without any manual intervention. In India, implementation of CCTNS is a step towards building an electronic service delivery channel which can later be transformed to a mobile service delivery platform.

**Single Delivery Channel for Citizen/Business Centric Solutions:** The purpose of citizen centric solutions is to make government services easy to access, convenient, and seamless using single-window service delivery.

In essence, single-window service delivery brings government services and information together, and improves accessibility by offering a single gateway to government, improves convenience by providing a one-stop shop for all services, and breaks down barriers by linking services in a seamless manner. Internationally, Service Canada, a good example of a single delivery channel for public services, operates as a citizen-centered business model. Service Canada aims to provide high-quality and efficient services to Canadians through a citizen-centered, multi-jurisdictional and multi-channel delivery system. The creation of Service Canada resulted in a clear point of accountability for service in the federal government.

**Mandatory National Identification Number:** A national identification number, national identity number, or national insurance number is used by governments of many countries as a means of tracking their citizens, permanent residents, and temporary residents for the purposes of work, taxation, government benefits, health care, and other governmentally-related functions. The number appears on identity documents issued by several of the countries. Example: National Number in Belgium, Fiscal Number in Italy, Birth Number in Norway. This number will act as the primary key for integrating different department databases. In India, the Aadhaar number is the closest match, but is not mandatory.

**Inclusive Decision Making:** Governments across the world are seeking greater citizen / community involvement for the success, effectiveness and sustainability of government initiatives. UK Government has adopted Code of Practice on Consultations which sets out detailed approach that the Government should take for a formal, written, public consultation exercise. To enable inclusive decision making, need is to develop e-participation policy to ensure government ministries / departments promote e-information, e-consultation and e-decision making. One of the well acknowledged implementations in this regard is that of the Fishbowl Government, Colombia. “Fishbowl policy” of the Colombian government, which is imbibed in the National Development Plan 2010–2014, intended to promote prosperity for all through the eight pillars -economic growth, regional development, equal opportunity, innovation, peace consolidation, environmental sustainability, good government and international relevance.
3D GIS Mapping: Singapore Land Authority’s (SLA) vision to create a World’s Best Practice 3D Map is underway. SLA has long held detailed geospatial layers of Singapore, but these are soon to be extended into a third dimension. The project will provide Singapore authorities with the capability to extend their analysis and visualization to include height. The new layers include accurate terrain, detailed surface models and high resolution imagery. SLA also wants to create high quality photorealistic building models of Singapore’s urban areas. The 3D buildings will be both spatially correct and highly photorealistic to meet the diverse range of needs of various authorities. Given the limited land constraint of Singapore, it will be used to run 3D simulations to understand how a future development may impact its surroundings and create scenarios to optimize this. For instance, Singapore runs micro-climatic studies to understand how a development can improve wind flows around buildings and reduce heat for pedestrians.

Electronic Health Record (EHR): It is an official health record for an individual that is shared among multiple facilities and agencies. Digitized health information systems are expected to improve efficiency and quality of care and, ultimately, reduce costs. EHRs can contain a diverse range of data, including but not limited to: allergies and adverse drug reactions, chronic diseases, family history, illnesses and hospitalizations, imaging reports (e.g. X-ray, ultrasound, MRI), laboratory test results, medications and dosing, prescription record, surgeries and other procedures, vaccinations and Observations of Daily Living (ODLs). Example: National Electronic Health Record (NEHR) systems, Singapore and National e-Health Records system, Australia.

7. Gaps in implementation of eGovernance initiatives

Over the years, technology has greatly shaped the way eGovernance is delivered in India. If we observe the impact of technology in the eGovernance sphere, we will realize that application of technology is more government-centric than being more holistic and citizen-centric. The use of technology has to evolve from being restricted to only computerization of government processes to development of integrated smart systems. There is also an increasing need for public’s interaction with the government to have minimum dependency on manual interventions, such as e-mails and telephone.

Some of the prominent gaps that are a bottlenecks in implementation of eGovernance initiatives include:

i. Implementation of process reforms in a time bound manner to enhance service delivery

ii. Capacity of the Government to manage large technology projects

iii. Alignment of the procurement model to the needs of delivery of eGovernance projects

iv. Ability to handle deviations and adoption of effective change request process

v. Approvals of key action items

vi. Obsolescence of technology early on during the large life cycle of eGovernance projects

vii. Reduced participation of leading System Integrators in the bidding / implementation of eGovernance projects.

In view of the above, it is important to identify interventions that can overcome the gap areas. Some of these interventions can be creation of a CIO cadre in Government, defining tenure and outcomes of project leaders and mechanism of reward and recognition to recognize achievements of individuals/projects.
8. Challenges and Opportunities

There is a need to understand what has been the challenges so far, so that it can act as learnings for future eGovernance projects as we go about implementing the vision for the next five years.

One of the biggest challenge has been the approach for Project development. Projects have been designed in a siloed manner for one department, not considering citizens needs or integration requirements with other departments.

Secondly, only a handful of eGovernance projects have prepared detailed action plans as part of their initial scoping. This compounds the problem of lack of continuity of leadership and dedicated team by adding another layer of uncertainty for successful implementation of the project.

Thirdly, there is inadequate focus on capacity building and leadership development to manage e-Governance projects. The problem of capacity within the government to design projects that deliver outcomes continues to be a challenge.

Fourthly, in today’s scenario it can be seen that many large IT companies are losing interest in participating in eGovernance projects because even if PPP projects are designed with user charges to cover investments and returns, the payment model assumes the Government ownership – wherein government still collects money and then decides payment. This means projects are seeking private sector funding for government expenditure with an expectation that all risks will be borne by the private sector. This approach is demotivating and discourages the private sector to participate in eGovernance projects.

It may also be noted that in many eGovernance projects designed and implemented, there has been a complete absence of incentive or disincentives for effective implementation. IT projects were low on the priority of policy makers.

Finally, in a rapidly changing world of technology, there is a need for continuous technology skills up gradation to manage large transformation projects. But with less talent infusion or professional training opportunities, the eGovernance nodal agencies are not up-to-date in meeting the expectations of various stakeholders and Government Leadership.

However, with the Digital India Programme we now have an opportunity to provide a renewed focus to the future of eGovernance to truly transform Governance. In today's world technology is all pervasive and mobility provides a platform that allows almost every Indian access and interface without the need for training on technical skills to participate in the Digital World. The telecom advancement (mobility) including future plan for rollout (reasonable price for data services), path breaking IT development platform, Analytics, IO, Cloud, etc., together with success of key initiatives of the Government such as Unique ID, Jan Dhan accounts and Digital Locker provide us an opportunity to break from the past and envisage and deliver eGovernance solutions that are truly citizen centric in form and spirit.

This report suggests seven changes in paradigm or opportunities that the Government needs to focus on over the next five year in order to enable implementation of successful eGovernance projects in India.
9. Suggestive action plan for the next decade of eGovernance

Some of the specific action items for the Government in the coming years are elaborated in the subsequent sections of this report, which includes various strategies and interventions at policy, process, technology and initiative levels for implementation of identified strategies. In summary, the Government should:

i. Integrate back-end systems for unified experience to users and to minimize redundant efforts

ii. Enable collaborations between multiple departments / sub-departments within a department for developing citizen centric solutions

iii. Ensure citizen engagement throughout all stages of project/policy development and implementation

iv. Award and recognize successful smart technology projects

v. Carry out horizontal scaling of successful initiatives that were recognized and awarded in the last decade

vi. Develop a mechanism to leverage the experience of successful project champions in similar initiatives across the country

vii. Create a CIO cadre who will assist sector experts in providing technical support

viii. Leverage Data Analytics and Business Intelligence tools to do a demand assessment of the resources required to undertake need fulfilments
Assisted Service to Mobile First, If not Mobile Only
1. Assisted Service to Mobile First, If not Mobile Only

Digital disruption is happening in every industry. Current buzz word is mobility, but beyond 2020 would be an era of IOT and semantic based service delivery for providing advance services to the mobile users. Self-service delivery is commonly viewed as a process by which citizens access government services without direct assistance from or direct dealings with government personnel. It has resulted in governments stepping up when it comes to multichannel customer service including mobile based services. The penetration of mobile phones, increased use of smart phones and reasonable cost of data has enabled citizens to access Government services from anywhere.

The building blocks to self service delivery including mobile enabled services are the following:

i. Citizen centricity and simplicity in service delivery which requires extensive Business Process Re-engineering (BPR) of all service processes

ii. Knowledge of the kinds of Self-Service Technology (SST) innovations and practices that are available and that can be emulated – Mobility, Interactive websites, Kiosks, IVRS (Interactive Voice and Video Response Services), Virtual chats, UVOD (Use Your Own Device)

iii. Solid foundation of data on each service or program under consideration (e.g. use of Aadhaar based integration) may be utilized to deliver services

iv. Public organizations need to consider the extent to which their channel strategy contains appropriate plans and actions to foster a shift to the self-service channels - balancing the use of self services / assisted service for a particular service life cycle (initiation of a service, tracking and payments, resolution of a service).

v. Mobile applications need to be designed such that they are simple, easy to understand (in local languages) and light.

To really transform Governance, Government needs to set itself a goal of providing all services, including those that are transactional in nature, on mobile – this will force process transformation. Thus, moving from a CSCs model to digital self services using mobility and cloud or semantic based logic require immense amount of integration using technology advancement, seamless interoperable data, wise use of M2M or IOT devices, and addressing all concerns of security and related issues.

Some of the enablers for self-service mode are as follows:

i. Affordable smart phones

ii. Low cost of mobile internet and their increasing penetration in rural areas

iii. Availability of digital content and services In local languages

iv. Easy access to digital certificates from Digital Locker

v. Offline accessibility of the applications

Government of Haryana has been focused on technology enablement of its processes leading to transparency & improved productivity for citizens and government alike. The state has made some progress on this front in the first wave. Aadhaar and mobile will now drive the next wave of governance in the country. Government is also inclined towards promoting business opportunities that emerge out of this.”

Smt. Keshni Anand Arora, IAS, Addl. Chief Secretary to Govt. of Haryana

### The evidences of Mobile enabled self-service

<table>
<thead>
<tr>
<th></th>
<th>Sales of Smartphones in India (in Million)</th>
<th>Number of Indian Government services available through SMS &amp; Apps</th>
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</thead>
<tbody>
<tr>
<td>2012</td>
<td>15.4</td>
<td>585</td>
</tr>
<tr>
<td>2013</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>80</td>
<td></td>
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</tbody>
</table>

- 93% of internet subscribers in India are mobile users
- 35% of internet users in India are from rural areas
- Estimated increase in India’s e-Commerce market in 2015

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"The state has made some progress on this front in the first wave. Aadhaar and mobile will now drive the next wave of governance in the country. Government is also inclined towards promoting business opportunities that emerge out of this.”

Smt. Keshni Anand Arora, IAS, Addl. Chief Secretary to Govt. of Haryana"
1. Assisted Service to Mobile First, If not Mobile Only

The evidences of successful projects with mobile enabled services

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
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<tbody>
<tr>
<td><strong>Karnataka Mobile One</strong></td>
<td></td>
<td></td>
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<tr>
<td>i. Create a unified platform for private and government services which is 24X7</td>
<td></td>
<td></td>
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<tr>
<td>ii. Ability to bring the government services to masses on their devices</td>
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<tr>
<td>i. Launched the Karnataka Mobile one app with 4000+ services</td>
<td></td>
<td></td>
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<tr>
<td>ii. Both government and private sector services available on apps on all platforms</td>
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<tr>
<td>i. First of its kind in India to have unified private and government services.</td>
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<tr>
<td>ii. Payments on Mobile One can be made through debit or credit cards and online wallets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Platform is developed in public-private partnership mode and has been integrated with social media websites</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **HDFC Bank, the leader in Mobile Banking in India** |
| i. Reach to the rural customers |
| ii. Offering wide array of options to digital customers – Bill payment, ticket booking, phone recharge, mobile commerce, transfer of funds |
| i. HDFC bank introduced mobile banking to reach wider masses |
| ii. It also introduced PayZapp, a complete payment solution, |
| iii. It is planning to introduce digital wallet with NFC capabilities |
| i. HDFC Bank has emerged as the leader in mobile banking with 38.2% market share in FY15 |
| ii. Increased penetration in rural areas |

| **Estonia Mobile Governance** |
| i. With 144% mobile penetration in Estonia, mobile governance was the next leap for the leading eGovernment country in the world |
| i. First country to adopt a Mobile ID-enabled SIM card from mobile operator. |
| ii. No need to install any additional hardware or software, people can access secure systems and affix their signatures by simply typing PIN codes on their mobile phone |
| i. As on Jan 2015, between ID cards and mobile phones, more than a million Estonians have authenticated 230 million times and given 140 million legally binding signatures |
| ii. 170,000 plus Estonians use government services on mobile |
## Implications for Government

### Policy

| i. | The Electronic Delivery of Services Bill needs to be updated to consider latest technology and service delivery through mobile using Aadhaar |
| ii. | eService Bill must focus on institutionalizing of eGovernance projects by creation of governance structure and adequate capacities |
| iii. | Government must consider provisioning of low cost smart phones to economically weaker sections of the society so that the benefit of self-service is realized. One of the means to achieve this is by promoting manufacturing of low cost smart phones in the country under the Make in India program. |
| iv. | Under the BharatNet program Government should envisage provisioning of low cost internet services to every individual on mobile, to access critical government and private services (banking, medical, education, etc.) |

### Process

| i. | In order to provide services electronically, Government needs to overhaul its back end processes |
| ii. | Backend integration of systems is to be carried out for unified experience to users and to minimize redundant efforts |
| iii. | Government must support Horizontal transfer, making it mandatory for its ministries/ departments to learn lessons from best implemented eGovernance projects |

### Technology

| i. | A single mobile platform must be developed in which all services can be accessed |
| ii. | Mobile applications should be light, easy to understand (in local languages) and have simple design |
| iii. | Applications should be designed in such a way that they can even work offline |
| iv. | Since Aadhaar captures all the information, citizens need not fill already captured fields |
| v. | Omnichannel Experience - Citizen must have the same experience when accessing services through the online mode such as PC/Laptop and Mobile and offline mode such as face to face interaction |

### Initiatives

| i. | Government may need to develop more mobile friendly services in official languages of India |
| ii. | Government may facilitate initiatives such as citizens donating their used / old smart phones to poor people. It will increase adoption and reduce generation of eWaste |
| iii. | Government must create awareness among citizens about accessing Government services online |
| iv. | Citizens must be sensitized and incentivised for using online services |
Governance at your fingertips- Karnataka MobileOne

Project Overview
Karnataka Government is a pioneer in the use of ICTs in making Government services available to all the residents. In order to graduate to the next level in the evolutionary process of delivering citizen services and to make the state vision of Any Time, Anywhere and Any Device delivery of government services a reality, the Government of Karnataka endeavored to provide various citizen centric services on mobile and also integrate Mobile enabled service delivery system with the various National and State services. Several leading initiatives like Bangalore one has been a role model for the entire country to emulate. MobileOne has the unique distinction of being certified as India’s first and the world’s largest multi-mode mobile governance platform which provides over 4000 plus government and private services on a single window. Karnataka Mobile One can be availed on any phone through Interactive voice response (IVR), SMS, Web, USSD and smart client apps.

Implementation Strategy
It is a unified mobile platform for delivery of citizens’ services, both from the government and the private sector through an open platform, which can accept any service and is thus future-proof. These anytime, anywhere, anyhow services will be available 24x7x365 days at any location in India and the world (for App and website) on any mobile device. The services include G2C, B2C and G2B and the focus is on services for residents of Karnataka, but the services can be accessed on any network from anywhere in India using the same number, portal or app. Making services available at the fingertips of people across Karnataka has saved residents of Karnataka the time and trouble of having to stand in long queues in all-weather just to access government services like payment of taxes, utility bills, traffic violation fines, tracking applications pertaining to passports, birth certificates, University results, etc. MobileOne enables citizens to access the above services and more from anywhere and at any time through any device.

Key Learnings
Worlds largest multichannel mobile platform: The platform provides multi-mode (apps, IVRS, sms, webpage & USSD), multi-service (public & private) services and is the largest of its kind in the world, with social media integration

Integrated Payment: Payments on MobileOne can be made through net-banking, debit or credit cards and online wallets. The government is also planning to introduce a ‘Karnataka Wallet’, through which payments can be integrated.

Single window of access: The MobileOne platform is integrated across all the telecom operators across India and works on the concept of delivering all its services through the concept of One URL, One Short Code and One App. As such, citizens can avail all the services under one access point, thus eliminating the need to visit multiple websites and short/long codes.

UYOD (Use Your Own Device principle) enables high uptake: So far, there have been 83 lakh hits on the Mobile One platform, with about 1.6 lakh downloads of the Android app and over18,000 downloads of the iOSS app. Moreover, the Mobile One IVR number 161 has received over 56 lakh calls accounting for over 25 million minutes. Nearly, payments worth Rs.12.1 crore have been made on Mobile One, with an average payment of about 2.5 lakh happening per day towards payment of utility bills, mobile bills, KSRTC bookings, RC/DL extract download

“On-boarding various services from different departments was a challenge, but all departments cooperated well. The response from the citizens has also been very encouraging. More and more citizens are accepting and adopting Karnataka Mobile One. We have seen over Rs. 12 Crore worth of payments via MobileOne since its launch. MobileOne is transforming governance and service delivery while making the State Government’s vision of ‘Anytime, Anywhere, Anyhow’ (or Any device) delivery of government services a reality”

Dr. Rathna U Kelkar, IAS,
Chief Executive Officer, Centre for e-Governance, Govt. Of Karnataka

Consequences of change
Availability of More Online payment options
Multi-mode accessibility led to mass uptake of services
Case Study

Mobile Service delivery – Indian Banking Sector leads the race

The eGovernment usage trend in India has always been driven by the private sector digital trends. Hence it is advisable to look at the major trends in India on the self service delivery initiatives of certain sectors like banking which led the digital revolution.

Key Learnings
The below are the five things that reveal the fast growing trend on the use of mobile banking in India

1. **Mobile banking customers**: The number of mobile banking users has jumped to 3.55 crore in 2013-14. In 2012-13, there were 2.25 crore mobile banking users. This number was merely 59.6 lakh in 2010-11. There is still a long way to go though with the total number of mobile phone users in India reaching 90 crores.

2. **Transactions surge**: The number of mobile transactions has surged dramatically as a result. There were 9.4 crore transactions as a result of the sharp rise in mobile banking users in 2013-14. A year ago, the number of transactions was only 5.3 crore. This means more and more people are increasingly relying on mobile transactions.

3. **Value rising too**: The value of mobile transactions jumped more than four times in just one year. Mobile users have found convenience in the use of mobile phone to transfer money. They are transferring more money through mobile phones than ever before.

4. **Mobile for cost-saving**: The RBI deputy governor has pointed out that banks should see mobile banking as an avenue of cost-saving rather than revenue generation. This means, the cost of bank transactions should go down sharply making it convenient for more people to use the banking system. This probably aligns with the government’s agenda of financial inclusion.

5. **Electronic payments**: There is an increasing trend towards electronic payment. According to RBI data, the National Electronic Fund Transfer or NEFT transactions grew over 60% in volume in 2013-14. The usage of debit cards has grown 28% during the same period. This shows an interest in making electronic payments by individuals. If Aadhaar is used for verification by mobile phone companies and banks, it could boost mobile banking usage.
Project Overview
Dubai Police app is an excellent example in promoting self service. The app provides multiple services to UAE residents that enables them to independently complete activities without visiting the police station and without any manual intervention. The app is well balanced in terms of delivering the right content to the end user, and the services that affects a user’s life. The app has improved the coordination between police department and residents of Dubai. It has also increased the transparency in the functioning and processes of Dubai police.

The app offers variety of services, these are mentioned below:

Traffic services: It includes fine payments, driver license verifications, issuance of traffic clearance certificate and road status notification

Security Services: Application for Good Conduct Certificate, tourist security (tourist enquiry and complaints addressal)

Community Services: SOS (Emergency Calls), police leaders at your service (allows the citizens to reach department managers for inquries & comments)

Other Services: News, Events, Scheduling appointments, eSurvery, Hospitals in Dubai, Issued Document Authentication, etc.

The app uses location services, to identify users position in case of emergencies, and to inform users about the nearest police stations.

The app allows users to check the number of customers waiting at each police station including the average waiting time. Users can also get a token issued before reaching the station to avoid standing in line.

The app has an option called the ‘drive mode’, through which users receive instant information on traffic accidents, including the traffic status.

Consequences of change

994,442 people have carried out transactions via the app on both Android and iOS platforms as on Nov 2015

Users can now take a video of a traffic offence, write alongside it a complaint, which will immediately be transferred to Dubai Police along with the exact location from where the complaint is made.

People paid over Dhs. 17 million worth of traffic fines using the app and through the mobile site

Dubai Police app won the award for the Best M-Government Service at the Government Summit in 2014
Solutions for Departments/Ministries to Solutions for Citizens /Businesses
2. Solutions for Departments/Ministries to Solutions for Citizens/Businesses

Citizens elect a single Government, however, they are required to interact with multiple departments for fulfilment of various services. These departments are often “inward” focused i.e. they are driven to meet internal SLAs without paying much attention to the ease and effectiveness of service delivery to citizens. Citizens and businesses expect transparent and time-bound delivery of services and a single Government interface, so that they don’t have to run from pillar to post.

Across the world, Governments have realized the benefit of integrated and connected governance for developing citizen centric solutions. Countries such as Canada, Singapore and Australia are good examples of Connected Government, which have taken a lead in this direction.

Punjab Bureau of Investment Promotion (Bureau) has been set up by the Government of Punjab as the single point of contact for regulatory clearances and fiscal incentives approvals for investors who are looking to set up a business in Punjab.

Citizens today want Governments to use innovative mechanisms for developing solutions geared to their needs. A coming together (“Convergence”) of various Government departments / various sub-departments within a Department is required to address the challenges currently being faced.

Convergence can be both physical and digital. While physical convergence would involve provision of the same type or family of services by multiple departments under the same roof, digital convergence would involve provision of multiple services by various departments through a common digital platform. A business process reengineering exercise is required to ensure that the convergence is effective in meeting its intended objectives.

Governments should employ connected governance to achieve maximum cost savings and improved service delivery. Such convergence results in various internal efficiencies including:

i. avoidance of duplication
ii. simplification of bureaucratic procedures
iii. better coordination and communication between agencies
iv. more transparencies and cost efficiencies

External benefits include
i. fast service delivery
ii. less confusion for citizens and
iii. greater citizen empowerment and participation

“Synergy must be brought among various government departments. IT and administrative departments need to collaborate to enable reforms”

Shri. Prakash Kumar
CEO, GSTN

“Enterprise thinking, Mobility, Process Transformation and Analytics-based decision-making will be the drivers of e-Governance over the next decade. The Citizen and the Business, and not the official, will be at the centre stage in the proliferation of the value-added services.”

Shri. J. Satyanarayana, IAS (Retd.)
IT Advisor, GoAP
E-Governance, Electronics and IT
2. Solutions for Departments/Ministries to Solutions for Citizens /Businesses

The evidences of successful projects where the focus was on developing citizen centric solutions:

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Lack of transparency and accountability in functioning of KDMC</td>
<td>&quot;MAINet&quot; – Integrated suite of Applications for Municipal Corporations</td>
<td>i. Multi Channel Citizen-centric Service Delivery</td>
</tr>
<tr>
<td>ii. Delays in service delivery</td>
<td>i. Re-engineering 400 business processes</td>
<td>ii. Improvement in Citizen Services with defined service levels and turnaround time</td>
</tr>
<tr>
<td>iii. Citizens, businesses making repeated visits to offices to get work done</td>
<td>ii. Single Window Citizen facilitation centers</td>
<td>iii. Integration of all departments of KDMC with rich MIS for decision</td>
</tr>
</tbody>
</table>

Digital property ownership record system in Survey Settlements and Land Records Department, Government of Karnataka

Outdated systems of maintaining urban land records
I. Land records maintained through city survey offices in the form of physical maps and sketches
II. Challenges in record archiving, retrieval and management
III. Lack of transparency in urban property management and property ownership records

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Digital Urban Property Ownership Record (UPOR) on web using modern survey and geo-spatial technologies</td>
<td>I. Single window facility for all kinds of G2G, G2B, G2C services</td>
</tr>
<tr>
<td></td>
<td>Comprehensive property details with spatial details, area of the land, rights of the property and history of transactions</td>
<td>II. Faster and effective services related to property ownership</td>
</tr>
<tr>
<td></td>
<td>Updated and management of property records, including biometrics for better safety</td>
<td>III. Mutations &amp; changes certified through PKI / biometric mechanism</td>
</tr>
<tr>
<td></td>
<td>Effective querying and resolution mechanisms</td>
<td>IV. Increased transparency in property management and administration</td>
</tr>
<tr>
<td></td>
<td>Web based app for service delivery &amp; commercial transactions</td>
<td></td>
</tr>
</tbody>
</table>

Tech-enabled Smart City planning and administration, Surat Municipal Corporation

Develop an effective mechanism to deliver better quality services to citizens
I. Rapid growth in city resulting in increasing pressure on city infrastructure
II. Requirement to streamline and integrate various citizen services
III. Expectation from citizens to deliver services in an effective manner

<table>
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<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>CityNext – proprietary Smart City initiative</td>
<td>I. Surat rated #1 on citizen satisfaction and perception of local government, according to Janagraha (NGO)</td>
</tr>
<tr>
<td></td>
<td>Automated monitoring and control for several of city’s basic services</td>
<td>II. First city to roll out a comprehensive Smart City initiative in India</td>
</tr>
<tr>
<td></td>
<td>Waste management vehicle tracking system</td>
<td>III. Improved citizen satisfaction towards government services through ‘Anytime-Anywhere’ access</td>
</tr>
<tr>
<td></td>
<td>Real time automated bus arrival information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OCR based examination for government recruitment</td>
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</tbody>
</table>
### Agenda for the Government

| Policy                                                                 |                                                                 |
|                                                                      | i. Government should enable collaborations between multiple departments/sub-departments within a department for developing citizen centric solutions |
|                                                                      | ii. Government should facilitate adherence to interoperability standards/criteria and ensure that eGovernance applications adopt these standards irrespective of the vendor supplying the technology |
|                                                                      | iii. Government to consult and seek feedback from citizens and businesses prior to conceptualization of applications/projects |
| Process                                                               |                                                                 |
|                                                                      | i. Business process reengineering should be undertaken with the objective of meeting and exceeding citizen requirements |
|                                                                      | ii. Convergence of services by multiple departments is expected to require considerable effort and time. Hence, integration should be done step by step in various phases. |
|                                                                      | iii. SLAs should be signed with internal stakeholders/internal agencies to ensure that each department successfully implements internal reforms required for convergence and provides any given service within a stipulated time frame. Strict punishments should be imposed in the case of non-compliance. |
| Technology                                                            |                                                                 |
|                                                                      | i. All departments should be encouraged to put citizen’s certificates in Digital Locker |
|                                                                      | ii. Common technology and standardized software are required among integrating departments to facilitate smoother interaction in least amount of time and with minimal costs |
|                                                                      | iii. Technology should also facilitate single window access of multiple services |
| Initiatives                                                           |                                                                 |
|                                                                      | i. Unique Identification Number of citizens, businesses and NGOs is a prerequisite for connected Government. All the necessary information required from users will be captured at once and will be saved against the unique number. Users will not have to provide the same information again and again for different services. The user can use it across different departments to access various services such as transport, health, education, skill, security and municipal services |
|                                                                      | ii. Government should allow the creation of an independent body for dispute management/resolution for inter-departmental disputes occurring during or after their convergence, to ensure timely delivery of services |
|                                                                      | iii. Vocational training programs should be conducted, not only in terms of technical knowledge required for convergence, but also in terms of personality development for interaction with citizens/other employees. |
|                                                                      | iv. Regular surveys to be conducted with citizens so as to understand whether they are getting the benefits of the new citizen centric solutions |
Case Study

Transparency in IP filing through eGovernance

Project Overview
Few years ago, a visit to any of the four Patents and Trademarks offices in India would see all the clichés of the great Indian bureaucracy play out in spectacular fashion. The person who wished to file a patent had no idea if he was scheduled for a hearing. He would have to come and wait in a line day-after-day and hope that it would be his turn today. If his paperwork was not in order — and very often it wasn’t because there was no detailed matter available on how to file a patent — he would have to go back and waste a few more days getting his paperwork done. Mr. P H Kurian led a major IT initiative to automate the full filing process.

Implementation Strategy
The first thing to do was to have a comprehensive process mapping for the filing activity. Appointment was given to visit the office. The next step was digitization. He made sure that all forms of documentation were uploaded online. After patent applications went online, people knew who was next in line to get their application examined. This brought down the level of jumps in the queue, which was another area where people could bribe their way through. The solution was implemented with the help of NIC.

Key Learnings

Transparency: The bureaucratic hurdles and middle men were completely avoided and a first come first serve basis was adopted.

Process Transformation – A complete overhaul of the processes was done at the initial stage of the project to support the digital platform. Changes in processes were also done in order to support the re-engineering.

Focus on improving Quality of Service to Citizens– The project aimed at providing simple, easy and accessible services to the patent filing community. As a result the number of patents filed in India increased drastically

International Recognition- The initiative was acknowledged across the globe by Forbes, IPO Association etc.

“I have put in place an electronic system that pushes the overall system to move in a certain direction. For me, it was exciting to improve it administratively to create a credible system. That is a challenge in itself and it is possible, provided you get out of all these hurdles”

Shri. P H Kurian,
Principal Secretary, IT, Govt. of Kerala

Consequences of change

Technology-led transformation led to more transparency
Reduction in cycle time led to easy filing and also approvals
Case Study

MEE SEVA14

Project Overview
Government services were largely provided at government offices through manual processes. Citizens had to face long queues, unfriendly employees and inefficient services. The objective of Mee Seva was to provide citizen centric and effective governance to citizens and businesses. This initiative attempted to provide better services through shared governance model by breaking the siloed approach of departments on an integrated service delivery platform.

Implementation Strategy
The project started with conceptualization, designing and implementation of processes, which led to launching of 10 services in November 2011. The government departments with high public interface were identified, which included revenue dept., police, urban local bodies, health, education, etc. Issues and problems faced by the citizens to access information, services and other benefits from these departments were identified.

Key Learnings
i. Inter department coordination- All the concerned departments were taken in to confidence and were brought on board. It helped in better coordination among different departments in providing better solutions for citizens.

ii. Business Process Reengineering- All the processes were thoroughly analysed in order to simplify service delivery. The processes were reformed in order to improve the efficiency of officials.

iii. Centralizing databases- Data from all the concerned departments were purified and ported to the central department database servers co-located at the State Data Center

iv. Digital Inclusion of everyone- Apart from providing services through CSCs and eSeva centers, many services were provided online as well to citizens; thereby achieving digital inclusion of citizens.

v. Focus on improving Quality of Service to Users– The project helped in improving the delivery time of services and reducing the cost of services.

vi. Incentives for Good performance- A new system was followed, in which good performance was rewarded with good marks and penalty was given for bad performance to officials and operators.

“eGovernance has expanded exponentially earlier in the combined state of Andhra Pradesh and now in the state of Telangana. The state has been an early adopter and a pioneer in the area of eGovernance.”

“Mee-Seva is the flagship programme through which G2C services are delivered. While it took 2 years to reach the first 10 million transactions in Mee-Seva, the next 10 million took 18 months, and the cycle became smaller and smaller. The 5th 10 million mark was reached in just 7 months.”

Shri. Jayesh Ranjan, IAS
Secretary IT, Government of Telangana

Consequences of change

Mee Seva will deliver 60 services through Online portal, by March 2016, 150 services to be delivered

Number of authorized Mee Seva centers - 4804

As on December 2015 - 81,486 users downloaded Mee Seva mobile application

10 Million transactions in 7 months
Case Study

Service Canada, Canada

Project Overview
The traditional approach to service delivery in the Government of Canada has been to provide service through many departments, each with its distinct programs and delivery channels. The result was different levels of service for both citizens and businesses and a complex and fragmented array of programs and services. In the year 2005, the federal government announced that Service Canada would be established for providing single-window service through in-person, telephone and Internet channels. The creation of Service Canada provides a clear point of accountability for service in the federal government. Departments will remain accountable for the policies and programs under their mandates. Service Canada is accountable for how programs and services are delivered.

Implementation Strategy
Service Canada operates according to a citizen-centred business model. Service Canada aims to provide high-quality and efficient service to Canadians through a citizen-centred, multi-jurisdictional and multi-channel delivery system. Service Canada’s implementation strategy includes:

i. Bringing the delivery of Government of Canada programs and services together into a single service network.

ii. Collaborate with other federal departments and levels of government.

iii. Strengthen regional access to federal points of services and relevance across the country.

iv. Realize significant savings in both operations and program spending.

v. Improve accountability, transparency, effectiveness, and efficiency in service.

Key Learning

Focus on the Citizen: A citizen-centered organization connects people to the programs, services and information they need, regardless of who delivers them.

Deliver One-stop Government Service: One-stop service ensures that government is easy to find, easy to access and easy to deal with.

Integrate Citizen Information: Instead of asking for the same information every time a person accesses government and processing this information over and over, a citizen-centered organization asks for the information once and remembers it in the future while enhancing privacy protection, accuracy, and transparency of citizen information.

Collaborate and Partner: One of the most important elements of citizen-centred service is the need to bring services together in a way that is easy and integrated.

Consequences of change – Service Canada

It has 22,000 employees delivering more than $190 million in benefits each day

The Service Canada website receives 22 million visits each year; there is one-click access to 90% of the most requested government programs and services

It receives more than 55 million telephone calls each year (that is 80% of all government non-tax related calls)

It conducts over 500,000 interviews with citizens regarding services and programs each year
3

Management Driven Policy to Enabling Inclusive Decision Making
Public participation has always been the cornerstone of Indian democracy, the largest democracy in the world. Our constitution lays out Panchayat model of self-governance at villages which is a prime example of Public Participation at grassroots level.

Historically, public participation was limited as it was difficult to publish drafts of policies and seek inputs from public at large. However, technology has removed all these physical barriers. Technology is being increasingly used to reach out to citizens and citizens are also equally leveraging technology to access public institutions. Laws like Right to Information have further enhanced public participation by making information widely available to citizens.

Governments across the world are seeking greater citizens / communities involvement as it fosters the success, effectiveness and sustainability of government initiatives. UK Government has adopted Code of Practice on consultations which sets out detailed approach that the Government should take for a formal, written, public consultation exercise.

In India, there are several examples where eGovernance initiatives have not met the desired outcomes as they were conceptualized and implemented with an inward focus. End user’s participation and inputs were not solicited which led to low levels of adoption and accessibility. Some examples include: Online Driving Licenses that still require middlemen, Online grievances portals-Though citizens file grievances online they are not aware on status/ backend processing.

Therefore, it is imperative for India to encourage greater participation by implementing technological interventions for greater involvement of citizens.

Internationally, Governments are focusing on building efficient e-participation frameworks for encouraging greater citizen participation. United Nations (UN) regularly ranks countries on their progress in e-participation. It has developed an E-Participation Index that measures the country’s progress in e-information, e-consultation and e-decision making.

Newer methods of participation like crowd sourcing, mobile polling, social media, open data, etc. should be explored and implemented. Through e-participation, citizens can be empowered to lead the social, economical and political development of our country.

"Government is now more accessible than ever before; however quality participation is missing. Government should make available detailed reports as well as a summary of findings to users seeking inputs on specific crucial issues and take action on user’s inputs”

Shri. Prakash B Rane
MD, ABM Knowledgeware

Three components of e-Participation

- **e-information**: Enabling participation by providing citizens with public information and access to information without or upon demand
- **e-consultation**: Engaging citizens in contributions to and deliberation on public policies and services
- **e-decision-making**: Empowering citizens through co-design of policy option and co-production of service components and delivery modalities

India ranked 40 in e-participation in UN eGovernment survey 2014. We need to strive to become one among the top ten countries.
3. Management Driven Policy to Enabling Inclusive Decision Making

The evidences of citizen consultation for inclusive decision making

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
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<tbody>
<tr>
<td><strong>e-decision making: “We the people” portal of Whitehouse</strong></td>
<td></td>
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<tr>
<td>i. Low involvement &amp; ownership of citizens in policy making</td>
<td>i. We the People portal was implemented by US government so that citizens can create petitions. ii. Other citizens can vote for the petitions, and the ones that secure 100,000 votes within 30 days is reviewed</td>
<td>i. So far, this has resulted in more than 210 such petitions receiving Government response, demonstrating to citizens that when they participate, the government listens</td>
</tr>
<tr>
<td>ii. Poor trust among citizens with reference to government listening to their issues</td>
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</tbody>
</table>

| **e-consultation: “Aaple Sarkar” portal of Government of Maharashtra** | | |
| i. Non-solicitation of citizens opinions and inputs on key policy matters | i. Aaple Sarkar provides a platform for government to consult citizens and for citizens to voice their opinions involving key public policies and governance. | i. Actively being used by citizens for providing suggestions / complaints ii. In “People participation for budget” citizens can win Rs. 10 lakhs if suggestion is accepted |
| ii. Poor trust among citizens with reference to government listening to their issues | | |

| **e-information: “I suggest to the government”, Slovenia** | | |
| i. Lack of access to information to citizens thereby not including their inputs in key policy matters | i. An online tool ‘predlagam.vladi.si’ is managed by the Government Communication office ii. If citizens have any problems, questions or constructive suggestions for improving the functionality of online tools, citizens can e-mail and call the Government Communication Office | Online tools available for citizens include: i. Facilitating publication of new proposals ii. Informing the competent authority that the ‘predlagam.vladi.si’ will open a debate on a proposal and ask the relevant party to take active part in it iii. Publishing responses to the competent authorities. |
| ii. Lack of involvement / engagement of government authorities with citizens | | |
## Implications for Government

### Agenda for the Government

| **Policy** | i. Develop e-participation policy to ensure government ministries / departments promote e-information, e-consultation and e-decision making. E-participation to be integral part of policy making.  
ii. Set up a Public interface unit in each ministry / department that will be one-stop shop for all interactions with the public. The public interactions will be proactive as well as reactive. |
<table>
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</thead>
<tbody>
<tr>
<td><strong>Process</strong></td>
<td>i. Processes should be focused on ensuring citizen engagement throughout all stages of project/policy development and implementation</td>
</tr>
</tbody>
</table>
| **Technology** | i. Use of mobile technology, social media, websites/portals, online polls to encourage inclusive decision making  
ii. Government to establish common platforms which can be leveraged by various ministries / departments for enhancing e-participation |
| **Initiatives** | i. Digital Literacy programme to be implemented earnestly to educate citizens on usage of Information and Communication Technology  
ii. Government employees to be sensitized on importance of inclusive decision making and e-participation |
Case Study

My Gov Portal

Project Overview
MyGov portal launched in July 2014 encourages participatory governance by creating a platform for healthy exchange of ideas and views involving citizens and experts. The major attributes of MyGov includes Discussion, Tasks, Talks, Polls and Blogs on various groups based on the diverse governance and public policy issues.

Implementation Strategy
As part of Government’s “Surajya” strategy for good governance, MyGov portal was developed, promoting citizen participation and establishing mechanisms that allow continuous monitoring of user satisfaction. The key objectives of the portal are:

i. Pro-active citizen participation in policy making;
ii. Citizen participation in governance tasks; and
iii. Volunteer participation to achieve synergy in the ideas and discussions in online world with action on the ground.

Key Learnings
i. Leverage technology for reaching out to large number of citizens – Through the portal, government can reach out to a large audience for consultations and seeking inputs

ii. Enhance citizen participation - Policy to implementation – Citizens involvement is solicited in policy making as well as implementation of initiatives. This increases the ownership and commitment of citizens towards implementation and success of these schemes

iii. Crowd sourcing of Ideas– Ideas suggested by users have been incorporated successfully. For example: provision to order food online at the time of booking of tickets through IRCTC, integrating popular private food chains with the pantry network of railways, etc.

"In today’s connected world, technology offers an unprecedented opportunity for participatory governance and inclusive decision making. The Government of India’s citizen engagement platform mygov.in has seen a hugely positive response with over 2.6 million comments in 474 discussion themes”

Shri. Gaurav Dwivedi
CEO, MyGov

Consequences of change

1.82 M registered members providing about 2.61 M comments in 480 discussion themes

Suggestions by Citizens being implemented by Government

Citizens participated in issues such as Clean Ganga, Girl Child Education, Skill Development, Healthy India, etc.
Case Study

Fishbowl Government, Columbia

Project Overview
Colombia leverages its national portal to engage citizens in decision-making and to enhance transparency at all levels. The national portal promotes good governance and provides enhanced access to information, online services, encourages citizen participation in policy-making and pursues anti-corruption strategies.

These efforts are integral part of the “fishbowl policy” of the government which is imbibed in the National Development Plan 2010–2014, intended to promote prosperity for all through the eight pillars - economic growth, regional development, equal opportunity, innovation, peace consolidation, environmental sustainability, good government and international relevance.

Implementation Strategy
As part of the Government’s online strategy to promote the delivery of services via electronic media, promote citizen participation and establish mechanisms that allow continuous monitoring of user satisfaction, an online public consultation site “urna de cristal” is developed. It provides ongoing coverage of current affairs, use of social media and publication of open data across ministries.

Key Learning
The online public consultation site has provided an interface to effectively promote and manage the following:

I. Efficiency and innovativeness of government entities by:
   i. Instilling a culture of efficiency and responsibility in the use of public resources
   ii. Conforming institutional networks or clusters for the articulated and coordinated development of strategic issues
   iii. Formulating policies related to enhanced efficiency
   iv. Establishing execution directed at results
   v. Developing initiatives for the organizational design of entities

II. Implement strategic programs for Good Government in:
   i. Execution of assets
   ii. Public contractual execution
   iii. State legal execution
   iv. Information systems
   v. Supervision and control
   vi. Services to citizens

Consequences of change

The world sees Colombia in a different light! Europe opens its doors, Citizens do not need visa to go to 30 countries in Europe

Police plans to secure the peace on new year festivities - 184,000 policemen attend the requirements of citizens, to ensure the security of Colombians

Citizens participated in issues such as prevention of forest fire, measures to be taken in case of drought, etc.
Large and Stand-alone Systems to Smart and Integrated Systems
4. Large and Stand-alone Systems to Smart and Integrated Systems

In India, technological advancement has drastically changed the way eGovernance is perceived and carried out. However, there is still a need to move towards “Innovative solutions leveraging Collaborative technologies”. Therefore the next phase should look at the adoption of smarter technologies as opposed to a complex large system with a need for business-IT alignment through enterprise architecture.

The government, one of the largest provider for G2C, G2G and G2B services, remote infrastructure services as well as business process outsourcing services, has been investing on many applications for various services over the last decade. This has led to an array of complex solutions of loosely coupled disparate applications (interfacing through point-to-point communication) in heterogeneous platforms.

These solutions are difficult to manage, integrate, scale-up and interoperate, reducing operational efficiency.

Across the world there has been a focus on Government Enterprise Architecture (GEA) and appreciations thereof of the values delivered. The objective of these initiatives has been to design, develop, deploy and use the GEA and e-Government Interoperability Framework (e-GIF) for better strategies, processes, plans, structures, technologies and systems across the government.

In many eGovernance projects, legacy systems are used. Hence, policy makers and technical experts prefer to continue with the legacy systems supplied by the proprietary vendors. At the same time, there is a little awareness among the decision-makers from public agencies regarding the potential benefits of smart technologies and ways to overcome the issues faced during the adoption of advanced technologies. Further, Government organizations are locked with long-term (spanning 5/10 years) conventional contracts / deals on procuring ICT systems.

While proposing new solutions, it must be kept in mind that the proposed new solution should be able to harness the advantages of legacy technology (servers, software, devices etc.) while be able to upgrade to newer systems.

This would enable low cost – optimal utilization of resources. The solution should be able to acquire, sort and store the legacy data that has been accumulated for the service being provisioned through multiple ICT solutions.

**Indicators of usage of Smart Technologies**

<table>
<thead>
<tr>
<th>Adoption of cloud technology in at State Levels</th>
<th>2010</th>
<th>J&amp;K</th>
<th>Maharashtra</th>
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<tbody>
<tr>
<td></td>
<td>2012</td>
<td>Maharashtra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31%</td>
<td>30%</td>
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</tbody>
</table>

Growth expected in Indian cloud service by end of 2015; making India one of the fastest growing countries in Gartner’s cloud forecast.

Also the solution should support easy migration of legacy data through utilities which allow for data entry, extraction and submission of data into the proposed solution.

What is critical to the transformation of the government is the adoption of an innovative and incremental strategy for the implementation of government enterprise architecture. Also critical is the formulation of an architecture implementation roadmap that shows incremental progress from the baseline to the target through a series of transition architectures that delivers continuous business value.

In this context Government needs to explore rationalization of initiatives, recommending improvement opportunities as well as solution options leveraging best practices, and the use of emerging technologies (such as SOA, cloud, mobile government and social media, unified communications, open government and big data) wherever applicable in order to improve business value and agility. Also, it is crucial to prioritize opportunities and identify quick wins.
4. Large and Stand-alone Systems to Smart and Integrated Systems

The evidences of adoption of Smart Technologies

<table>
<thead>
<tr>
<th>Challenge</th>
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<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Low efficiency and satisfaction in solid waste management leading to poor image and health/sanitation issues</td>
<td>i. Vehicle tracking and waste disposal monitoring using latest technologies</td>
<td>i. Reduction in paper work and more transparency</td>
</tr>
<tr>
<td>ii. Manual monitoring of vehicles for solid waste and 'bins' management</td>
<td>ii. Adoption of technologies such as GPS, GIS, GSM etc.</td>
<td>ii. Real-time web-based tracking and monitoring of vehicles</td>
</tr>
<tr>
<td>iii. Poor/ineffective tracking of dust bin pick ups and movement of vehicles</td>
<td>iii. Real-time monitoring and control system for the vehicles through GPS and radio fencing</td>
<td>iii. Ease of monitoring and control to target better hygiene and cleanliness</td>
</tr>
<tr>
<td>iv. Manual and sub-optimal route planning for vehicles resulting in poor pick ups and reduced hygiene</td>
<td>iv. Drivers, equipped with PDAs, take pictures at collection centres - data transferred to central server through GPRS</td>
<td>iv. Reduction of direct cost and enhanced productivity</td>
</tr>
<tr>
<td>v. Daily reporting and dashboards to analyse effectiveness</td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Curate educational online videos for students in accordance with textbooks and syllabus</td>
<td>i. Video books to augment textbook experience</td>
<td>i. Made textbooks more engaging by presenting highly relevant videos, aiding comprehension</td>
</tr>
<tr>
<td>ii. Required infrastructure of specialized educational software systems and tools</td>
<td>ii. New age SMAC solution built on open standards</td>
<td>ii. 200,000+ users from primary school to professional courses</td>
</tr>
<tr>
<td>iii. Cloud-based system for storage, computing, communication</td>
<td>iii. Intuitive interface to make learning easy from primary level to higher education</td>
<td>iii. Improved teacher efficiency by focusing on problem solving aspects</td>
</tr>
<tr>
<td>iv. Availability of numerous devices for Internet access</td>
<td>iv. Higher engagement of text book material through videos</td>
<td>iv. Easy integration with other learning solutions providing 24x7 delivery</td>
</tr>
<tr>
<td>v. Devices with simpler and intuitive interfaces</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement for high-end simulation and modeling tools</td>
<td>i. ‘HPC’ - High performance computing platform</td>
<td>i. Augmented ISRO’s research and development capabilities</td>
</tr>
<tr>
<td>i. Need for high performance computing platform</td>
<td>ii. Enhanced scalability, resource utilization and load balancing of various applications</td>
<td>ii. Significant reduction in cycle time by enabling and executing complex simulations using HPC</td>
</tr>
<tr>
<td>ii. Aspiration to improve effectiveness of climate modeling simulations</td>
<td>iii. Automated daily weather forecast system</td>
<td>iii. Optimized workflows and improved automation</td>
</tr>
<tr>
<td></td>
<td>iv. Ensured data security and secure access</td>
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</table>
## Implications for Government

### Agenda for the Government

#### Policy

<p>| | |</p>
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<tbody>
<tr>
<td>i.</td>
<td>Need to identify and design Enterprise Architecture at the Centre and State Level</td>
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<tr>
<td>ii.</td>
<td>Government must design policies for adoption of newer technologies</td>
</tr>
<tr>
<td>iii.</td>
<td>Government must regulate its policies related to cyber security and must consider latest forms of cyber attacks while formulating policies</td>
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<td>iv.</td>
<td>Government needs to design incentive packages for using smart technologies</td>
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#### Process

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<tr>
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<tbody>
<tr>
<td>i.</td>
<td>Cost-benefits to be considered in identifying projects</td>
</tr>
<tr>
<td>ii.</td>
<td>Business architecture drives the development of subsequent application and data architecture. Re-engineering of ICT system should not be done without determining the business requirements and the business value it will provide</td>
</tr>
<tr>
<td>iii.</td>
<td>Government must provide incentive and financial support to private players, NGOs and entrepreneurs, who use APIs or latest technologies in order to find innovative solutions for problems in society</td>
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<tr>
<td>iv.</td>
<td>Awards and recognition to be instituted for successful smart technology projects</td>
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#### Technology

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<tbody>
<tr>
<td>i.</td>
<td>Newer technology needs high speed internet network. Government must take quick decisions to provide high speed internet.</td>
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<tr>
<td>ii.</td>
<td>Government needs to provide incubation centers for technology start-ups</td>
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#### Initiatives

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<tbody>
<tr>
<td>i.</td>
<td>The government should act as a regulator and promote &amp; incentivize the use of smart and new technologies by start-ups and other private firms</td>
</tr>
<tr>
<td>ii.</td>
<td>Government should provide viability gap funding for such initiatives</td>
</tr>
<tr>
<td>iii.</td>
<td>Centre of excellence to be developed to nurture innovation in the sector</td>
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<tr>
<td>iv.</td>
<td>Skill development to be promoted in smart technology entrepreneurship</td>
</tr>
<tr>
<td>v.</td>
<td>Government may assist and promote smart technology players to replicate their success across various regions</td>
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**Case Study**

**e-Pragati Program**

**Project Overview**
e-Pragati is the country’s first state-wide Enterprise Architecture program envisaged by the Government of Andhra Pradesh, that seeks to bind together the projects and services being run by the State Government in a holistic approach that ensures coherence and synergy. By adopting a mission centric approach in its design and implementation, e-Pragati seeks to realize the Vision of Sunrise AP 2022 by delivering citizen-centric services in a coordinated, integrated, efficient and equitable manner. Through the implementation of e-Pragati, Andhra Pradesh seeks to replace the siloed and hierarchical systems of Government 1.0 with the integrated and collaborative model of Government 2.0. The Government will strive to deliver personalized services through multiple delivery channels with transparent, outcome-driven procedures that involve active participation of the citizens in the governance process.

**Implementation Strategy**
33 departments, 315 agencies and 745 services will be included in e-Pragati. These will be grouped into 14 packages and 72 projects and will be developed in four waves. The first wave will focus on primary sector mission, education and core technology; second wave on health, performance and citizen engagement; third wave on industry, rural development and urban development; and the final wave on IT infrastructure, productivity, establishment and safety. The major components of e-Pragati revolve around 7 missions (primary sector, industry sector, services sector, knowledge & skills, infrastructure, social empowerment and urban development), 5 grids (water, power, gas, road and fiber grids) and 5 campaigns (health & sanitation, school, water & trees, agriculture & technology, and poverty alleviation).

**Key Learnings**

i. Re-usability of applications that have functionalities used in several departments will be a key component of e-Pragati in terms of reducing cost and complexity.

ii. Open standards based service oriented architecture will be deployed to ensure interoperability of software for seamless exchange of data between departments, which will in turn increase the efficiency of government activities.

iii. Active participation of all organizational departments is necessary so that right information management decisions are taken to accomplish service objectives.

---

**Consequences of change**

- Improved efficiency and effectiveness of government services.
- Increased productivity of sectors of the state’s economy.
- Scope of revenue from premium services.
- Simplified, personalized services through multiple delivery channels will increase citizen satisfaction.
Case Study

G-Cloud, UK

Project Overview

G-Cloud is UK government’s programme to change the way the public sector procures and operates ICT by the adoption of cloud computing services.

By using cloud technology, the Government enables smaller ICT suppliers and newer technologies to be part of the procurement platform. The G-Cloud programme has the following goals:

i. Achieve large, cross-government economies of scale
ii. Deliver ICT systems that are flexible and responsive to demand
iii. Deliver faster business benefits and reduce cost
iv. Meet environmental and sustainability targets
v. Allow government to procure in a way that encourages a dynamic and responsive supplier marketplace

Implementation Strategy

G-Cloud established framework agreements with a large number of service providers and then listed their services on a publicly accessible portal known as the Digital Marketplace. Public Sector organisations can select the services listed on the Digital Marketplace without needing to go through a full tender process. The government established a “Cloud First” approach to IT procurement, mandating government organizations to purchase IT services through the cloud unless it can be proven that an alternative is more cost effective.

Key Learning

The key learnings of the initiative are mentioned below:

i. Prior to considering procurement of new or existing services, public organisations must consider and fully evaluate potential cloud solutions before they consider any other option.
ii. Government owns the intellectual property rights of any product produced, so the product can be reused within government.
iii. The procurement process is significantly simpler, less time-consuming and cheaper than a traditional open tender process.

Consequences of change

After plans were announced in March 2011, the government aimed to shift 50% of new government IT spending to cloud based services. This resulted in savings in time and cost in procurements.

G-Cloud has the potential to reach an estimated 30,000 buyers across the public sector.
Individual Initiatives to Institutional Initiatives
During the last decade of e-Governance we have seen many initiatives undertaken by various Ministries and Departments at the Centre and State level to deliver services to citizens and businesses using ICT. However, a trend has been noticed where these e-Governance initiatives have been largely “individual driven” efforts rather than “institutional driven”. Every successful eGovernance project in India has an eChampion whose commitment, passion and ownership has resulted in the required change. eGovernance projects have failed when there is a frequent change of project leadership and key stakeholders. Change in project implementation teams results in change in requirements, understanding and scope which delays or stalls the overall implementation of the project. An example of the same is provided below. Hence, it is important to segregate “leadership sponsorship” with “individual initiatives”. While leadership sponsorship provides strength to a project, individual initiative makes the project / change brittle.

In 2000, Madhya Pradesh Government set up a chain of computer kiosks to help provide citizens better access to government information and services in one of its districts - Dhar District. Gyandoot was one of the projects that made an effort to assist disadvantaged groups. Gyandoot was awarded the Stockholm Challenge award for 2000 in the Public Service and Democracy category. It was projected at an early stage when e-Governance had just started evolving in the country. Gyandoot failed because the eChampion (District Collector of Dhar district) left the district. In fact, the project was so closely identified with the previous eChampion that the successor had no interest in implementing it further.

There is a need to institutionalize effort by identification, deployment and ensuring continuance of project leaders who have passion to serve communities through better delivery of services using ICT. Government needs to identify the project leader and also ensure project sponsorship for a affixed duration, at-least 5 years, till a point it becomes stable and institutionalized to be run independently. The project leaders could be from the Government or Private Sector, who has the required technical and sector expertise to implement eGovernance projects. An example of Government sponsorship and continued support can be seen in the example below:

In Singapore, after putting in some amount of service in the government, the civil servants are given a contract for five more years wherein they are given targets and goals which are measurable and objective. After the afore mentioned tenure, performance of the civil servant is measured against the targets and if she has performed well another contract of five years is given.

Going forward the Government will need to look into a more “sectoral approach” rather than a “generalist approach” for eGovernance projects wherein sectoral experts are brought in for implementation of these projects. Also, Civil Servants should specialize in a specific sector and eventually provide insights on improving the sector. There is also a need to define a fixed tenure, outcomes and goals for all project leaders to be able to measure their performance at the end of the tenure.

The government needs to evaluate the cost-benefit of the transfers being done by the Government across various sectors i.e. the cost of movement to the civil servant including the disruption of the project, loss in institutional memory and the individual’s experience of local conditions versus the benefit of the new position needs to be critically evaluated. Hence, there needs to be a fixed tenure and outcomes defined for all officials for all government transformation projects to ensure high rate of success in e-Governance in India.
### 5. Individual Initiatives to Institutional Initiatives

The evidences of successful projects wherein there was commitment or stability of the project sponsor/leadership

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
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<tbody>
<tr>
<td><strong>Department of Finance (Govt. of Andhra Pradesh)</strong></td>
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</tbody>
</table>
| Inadequate transparency and accountability coupled with inefficient delivery of government schemes | i. 'CFMS' - Single source of truth for financial information  
ii. Fully integrated across stakeholders for seamless interface  
iii. Efficient electronic information sharing with external stakeholders  
v. Modules include budget management, receipt management, expenditure management, etc. | i. Increased efficiency, responsiveness and transparency  
ii. Improved public, financial & HR management  
iii. More secure financial transactions  
v. Auto reconciliation with stakeholders |
| i. Lack of reliable financial information on a real-time basis  
ii. Archaic processes due to limited GPR  iii. Reconciliation consumes significant time and resources | | |
| **UIDAI** | | |
| i. Unique identification number for all Citizens of India  
ii. Integration across all databases  
iii. Capturing biometric data of all citizens | i. Dedicated team and sector experts brought in from the Industry  
ii. Separate institution with a project leader from the Industry created | i. As on 30 November 2015, more than 940 millions Aadhaars have been issued.  
ii. Govt. Programs such as PDS, Fertiliser and LPG subsidies, Education, IAY, ICDS, Scholarships and Pensions to be benefited from through integration with Aadhaar |
| **Government of Maharashtra- Automation of post-metric scholarship disbursement in Maharashtra** | | |
| i. Delay in disbursement of e-scholarships to the backward class students  
ii. Large number of ineligible students/colleges applying for scholarships  
iii. Time consuming manual processes at colleges and department level  iv. Lack of timely information making it difficult to monitor and track disbursements | i. Automated e-Scholarship solution for disbursing post-metric scholarship  
ii. Bilingual user interface- in English and Marathi  
iii. Direct link to student’s bank account for funds transfer with system-generated SMS confirmations  
v. Integrated solution monitoring and analyzing scholarship suspension, renewal and cancellation | i. First state in India to implement such a system across 35 districts  
ii. Zero defect pay-out to over 1.7 Mn eligible students and colleges  
iii. –US$ 65 Mn saved annually by preventing disbursement to invalid courses  
v. More effective identification of students, timely disbursal and reduced complaints |
## Implications for Government

### Agenda for the Government

| Policy | i. Need to fix the tenure and outcomes of project leaders for at-least 5 years in eGovernance project or till an appropriate break point in project life is achieved  
| ii. Performance linked to the successful outcomes of the project for the Project leaders  
| iii. Design an incentive mechanism linked to productivity in Government transformation projects  
| iv. Sector experts to be brought in from the Industry for a fixed duration to lead critical projects  
| v. Creation of a CIO cadre in Government who will support the sector experts in providing technical support  
| vi. Successful project champions to devote time in mentoring future |
| Process | i. All Digital Government Transformation Projects to be monitored and reviewed at the PMO level. At state level it should driven by the CMO level  
| ii. Develop a mechanism to link project outcomes to the performance of the project leaders  
| iii. Mechanism to map the project competency requirements with the potential public/private individual’s competency  
| iv. Mechanism to leverage the experience of successful project champions in similar initiatives across the country |
| Technology | i. MIS/Dashboard on the performance of individuals across different e-Governance projects.  
| ii. E-Learning modules to build capacity of the project champions and team to keep enhancing their technical and project management skills |
| Initiatives | i. CIOs must be selected through competitive competition (same as IAS and IPS)  
| ii. Incentives/ Rewards / Recognition for successful project leaders.  
| iii. Creation of Centre of Excellence or Leadership Academy for capacity building of Government Officials in Project Management, Vendor Management etc. All officials who are involved in managing e-Governance projects should undergo this training  
| iv. Agencies such as National Institute of Smart Government (NISG) may identify the capacity building requirements and design a roadmap for implementation across all levels of the officials.  
| v. E-learning modules can be developed for different domains such as Project Management, Vendor management, SLA Monitoring etc. This could be used for training large number of officials online  
| vi. Framework for continuous up-gradation of technical knowledge of the public servants needs to be established. Ever year all public servants should earn a minimum number of learning points through relevant training programmes to keep themselves up-to-date of the new technologies |
Case Study

Passport Seva Project

Project Overview
Passport Seva Project (PSP) under the NeGP is focused on reforming passport services in India. The growing Indian economy and increasing globalization have increased the demand for passports and related services by around 10 percent annually. Ministry of External Affairs (MEA) launched the PSP in May 2010 to improve delivery of passports and related services to Indians. The project created a nation-wide network for efficient and transparent delivery of passport services and was considered to be India’s largest mission critical e-Governance project.

Implementation Strategy
The project is being delivered in Public Private Partnership (PPP) between MEA and M/s. Tata Consultancy Services (TCS). The PPP model meant that the sovereign and fiduciary functions including verification, granting and issuing of passports and ownership and control of data/information were retained by the MEA and rest of the services delivered by TCS.

The pilot project was launched at 4 PSKs in Karnataka in May 2010 and 3 more pilot PSKs were introduced in Chandigarh, Ambala and Ludhiana in August 2010. After which Nation-wide roll-out plan was then firmly up by the MEA and TCS in January 2011 after receiving the required certification from the Standards, Testing & Quality Certification (STQC).

Key Learnings
i. Focus on improving Quality of Service to Citizens: The project aimed at providing simple, easy and accessible services to the citizens. Queue management and Appointment system was implemented to ensure that waiting time was reduced from more than 4 hours to less than 45 minutes. 77 Passport Seva Kendras (PSKs) have been designed in such a manner, that they are accessible and friendly to differently abled and senior citizens.

ii. Process Transformation: A complete overhaul of the processes were done at the initial stage of the project to support the digital platform. Changes in rules and regulations were also done in order to support the process re-engineering.

iii. Continuity of Project Leader and Team: The project leader has been there for implementation of the project from Pilot Stage to Rollout for last 5 Years.

iv. Government Sponsorship: Commitment from both Political and Bureaucratic leadership was seen on this project. The project was implemented in a mission mode with provision of adequate budget and resources. For the first time Productivity linked Incentive scheme was also implemented in a Government department.

Consequences of change

i. Win-Win Public Private Partnership Model: The project had clearly defined transaction based revenue model and Service levels to monitor the progress of the implementation partner.

ii. Adopting to Technology Advancement: The project has been keeping in pace with the changing technology requirements to address citizen requirements. Mobile based alerts on the status of application has already been implemented. 24X7 Call Centre has been set-up to provide real time status in 17 Languages to the Citizens. Online Payment system and Central Print Facility have also been implemented.

Shri. Muktesh K. Pardeshi, IAS
Joint Secretary (Passport Seva Project) & Chief Passport Officer
Ministry of External Affairs, Government of India

Quote
"e-Governance should focus on delivering easy, simple and inclusive citizen services leading towards i-Governance i.e integrated governance. In this context, the PPP model provides a win-win opportunity."

i. Integration with external stakeholders (Police, India Post, etc.) to reduce cost

ii. Central passport print facility

i. 19000+ calls handled daily through contact center in 17 languages

ii. 77 passport centers rolled out with >13 Million passports issued
Case Study

Transforming Government ICT – New Zealand

Project Overview
As part of the Government ICT Strategy and Action Plan, the Government of New Zealand has mandated the Government Chief Information Officer (GCIO), to integrate the plans of all agencies, to recommend collaboration and consolidation wherever advantageous, and to direct government departments to adopt all-of-government initiatives.

Implementation Strategy
The GCIO will lead the ICT implementation and benefits management and will be responsible for improving services and service delivery, generate efficiencies across departments, develop expertise and capability across the Public Service, and ensure business continuity. The GCIO will report to the Government ICT Ministerial Group. Governance arrangements to increase inter-agency participation are also defined to institutionalize the GCIO’s organization structure.

Guiding Principles

**Centrally led, collaboratively delivered:** The Strategy and Action Plan will be led by the GCIO and delivered in collaboration with agency chief executives.

**Customer centricity:** Customer insights must inform service design and delivery. Customers should be shielded from the internal complexities of government.

**Trust and confidence:** Build public trust and confidence in government’s ability to maintain the privacy and security of information. This underpins our ability to use digital channels.

**Simplify by design:** Remove complexity, fragmentation and duplication, and re-engineer business processes end-to-end.

**Share by default:** Capabilities must be shared by default rather than by exception.

**Openness and transparency:** Non-personal information is a public asset that must be open by default for economic and social benefit.

Consequences of change

Increase engagement with agencies and industry to strengthen collaboration and system delivery.

Establish a virtual Information and Technology Leadership Academy to build business leadership of ICT at all levels. Utilise existing capabilities

Systematise the reporting of the successes and benefits delivered by all-of-government ICT initiatives.

Increase efficiency and support joined-up service delivery through expanding the suite of common capabilities available to agencies.
Multiple Download of Information to Need fulfilment of G2C Services Online
6. Multiple Download of Information to Need fulfilment of G2C Services Online

Governments across the world are realizing that they are not in the business of providing services, rather, proactively identifying the needs of citizens and fulfilling them.

As an example, a person need not apply for an “Old Age Pension”, but the Government should be able to profile the person and approach him / her and tell that he / she is eligibility for the Schemes and take his / her concurrence to start providing the Pension.

Through databases from income, biometrics, passport, ration card, income tax, municipality records etc., a person can be profiled using Data Analytics and Business Intelligence and the need can be fulfilled proactively.

During the Business Process Re-engineering (BPR) for eDistrict services, it was observed that the BPR carried out during the pilot phase for these services led to nothing but automation of current processes. Since e-Governance projects provide a lifetime opportunity to drastically improve processes, DeitY published a report for Model BPR for various services\(^2\) wherein BPR was suggested at two levels – Incremental BPR and Aspirational BPR. The Aspirational BPR aims to fulfil the need of a citizen and is based on the following pillars – Aadhaar and linked Bank account, SSDG/MSDG, workflows and various databases.

Key Elements for Need Fulfilment

1. **Quality Database:** For Government to identify citizens, there is a need for reasonably good quality databases.

2. **Business Intelligence:** Data Analytics and Business Intelligence will help the Governments to analyze information from various sources and identify eligible citizens. Given the huge volume of data and multiplicity of information in various sources, Data Analytics and Business Intelligence are the tool to rely on.

3. **Sharing of data amongst Municipality, State Govt. Department and Central Govt. Department:** Since the information is placed in various databases, it is important to ensure exchange of information between them. DeitY (GoI) has laid down standards for data exchange on Portals and Mobile.

4. **Electronic address of Citizens:** While the Government can do all of the above, there needs to be a single electronic address for citizens. A few countries have already made the electronic addresses of citizens as legally acceptable address for communications.

5. **Resources to fulfil needs:** After doing all of the above, the Government also needs to have sufficient resources to fulfil the needs of citizens.

“eGovernance transforms the relationship between Government and Citizens - makes Government accessible to citizens - Government reaches out to people rather than people struggling to get services-makes democracy real and empowers people and makes Governance transparent and accountable.”

Shri Abhishek Singh, IAS
Executive Director, Food Corporation of India
## 6. Multiple Download of Information to Need fulfilment of G2C Services Online

The evidences of successful projects wherein the trend towards service fulfilment can be established

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<tr>
<th>Challenge</th>
<th>Solution</th>
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<tbody>
<tr>
<td><strong>Department of Posts (DoP)</strong></td>
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</tr>
<tr>
<td>i. Implementation of complex ERP, core banking and rural ICT solutions</td>
<td>i. Service oriented architecture offering flexibility and scalability</td>
<td>i. Increase in product/services portfolio fulfilling needs of the targeted consumer</td>
</tr>
<tr>
<td>ii. Implementation challenge given wide geographical coverage with over 100,000 post offices in rural areas</td>
<td>ii. Channel agnostic design to ensure DoP services can be used across delivery channels</td>
<td>ii. Enhanced customer satisfaction</td>
</tr>
<tr>
<td>iii. Need for improvement of service quality, speed of delivery and reliability</td>
<td>iii. Multiple access channels used including internet, call center, mobile, enterprise desktop, ATMs, etc.</td>
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<td><strong>Income Tax Department, Ministry of Finance</strong></td>
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<tr>
<td>i. Highly complex and vast scope encompassing a wide range of activities</td>
<td>i. Enabled complete reconciliation of collection and claim of tax at source</td>
<td>i. More than 250 Mn digital TDS certificates downloaded since FY13</td>
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<tr>
<td>ii. Low productivity and efficiency of current returns processing system</td>
<td>ii. Solution supports end-to-end ‘Anytime-Anywhere’ access</td>
<td>ii. Substantial reduction in processing time – from 1 year to 3 days</td>
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<td></td>
<td>iii. Complete ownership of training and knowledge management solution</td>
<td>iii. ~100% growth in revenue from FY2011</td>
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<tr>
<td><strong>eHealth Centres, Multi Agencies</strong></td>
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<tr>
<td>i. Inadequate coverage esp. in rural areas</td>
<td>i. Integrates across health records, medical devices, telemedicine</td>
<td>i. Rapid deployment – fully functional in &lt;6 weeks</td>
</tr>
<tr>
<td>ii. Poor accessibility to affordable healthcare</td>
<td>ii. Remote access and ubiquitous delivery using cloud</td>
<td>ii. &gt;100,000 patient visits in about 2 years</td>
</tr>
<tr>
<td>iii. Non existent health records</td>
<td>iii. Real time analytics and dashboards</td>
<td>iii. &gt;40 e-healthcare centres established across multiple states</td>
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<tr>
<td>iv. Isolated systems, processes</td>
<td>iv. Easy access to data – patients, hospitals and doctors</td>
<td>iv. Reduced cost of care</td>
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<tr>
<td>v. Short supply of equipment, medicines &amp; manpower</td>
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<td>v. Improved accuracy of healthcare</td>
</tr>
<tr>
<td>vi. Lack of control and supervision</td>
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</table>
## Implications for Government

### Agenda for the Government

| Policy | At a policy level, there is a requirement of harmonizing the citizen data available with various Government entities. There is a need for policy intervention to review current databases and how they can be leveraged to assess the needs of citizens and the resources required to meet them. |
| Process | For fulfilling citizen requirements, the Government needs to leverage Data Analytics and Business Intelligence tools to do a demand assessment of the resources required to undertake need fulfilments. |
| Technology | For fulfilling citizen requirements, the Government needs to leverage Data Analytics and Business Intelligence tools to do a demand assessment of the resources required to undertake need fulfilments. |
| Initiatives | Capacity Building needs to be done by engaging the services / hiring of “Data Scientists” within each Department whose jobs should be to review the data existing with the Department and how it can be leveraged using Data Analytics and BI tools |
Case Study

E-DISTRICT

Project Overview
E-District was conceptualized as one of the 27 Mission Mode Projects (MMPs) under the NeGP. This project is being implemented by all 29 States and 7 UTs which are under various stages of implementation. The primary objective of the e-District project is to enable service delivery (through a workflow by the district administration) to citizens in an efficient and transparent manner.

Implementation Strategy
The key tenet of implementation strategy was to focus on service fulfilment. To accomplish that, the implementation strategy was to build on the current stage of e-Governance implementation status (SDC, SWAN, SSDG, CSC, legacy application) in any State and use it for rapid replication, while ensuring basic standards. For various services, the “Aspirational BPR” was suggested in a long term to address citizen needs.

Key Learnings
i. **Focus on Service fulfilment:** While the project was started as a conventional e-Governance project, it was realized that unless the citizen feels the impact, this project will not meet the intended objective. Hence “No. of Transactions” was introduced as a key metric to be tracked by all stakeholders, i.e. DeitY, State / UT, National Program Management Unit, State Program Management Units and System Integrators. “eTaal” - a dashboard for all eGovernance enabled transactions (http://etaal.gov.in/etaal/auth/login.aspx) was created and started getting monitored across India.

ii. **Providing flexibility to States/UTs for implementation to ensure basic level of service fulfilment:** Most often projects get delayed due to numerous dependencies like enabling infrastructure, absence of standards/policies, etc. The eDistrict project provided the flexibility to States/UTs to choose appropriate architecture depending on their readiness. While the “end State” was defined, each State was given the flexibility to decide on key issues within broadly set outlines.

Consequences of change
23 States/UTs have already launched eDistrict project
494 districts are already providing various services
10 categories of most common services covered
In one year ending 31st December 2015, more than 25 Million transactions were carried out under this project

Shri. Ramendra Verma
Partner, Government Advisory, KPMG
Former eDistrict NPMU Head
Online transactional services at the forefront of government transformation, New Zealand

**Project Overview**
New Zealand’s public service is committed to offer easy access to government services in an online environment. The Government aims to have all new services offered online by 2017. At the same time, it continues to recognize the importance of face-to-face interaction for those without Internet access.

Collaboration among departments, supported by strong leadership in the form of a Government Chief Information Officer, is seen as crucial to make transactional services online and has been the core of national plan to transform public sector ICT.

**Implementation Strategy**
The key components of the implementation strategy includes the following:

i. **Leveraging common standard technology platforms**, procured ‘as-a-service’ to drive scale efficiencies

ii. **Re-using existing** functionality components from across the system wherever possible, to reduce duplication and fragmentation

iii. **Supporting end-to-end business processes** rather than stopping at agency boundaries focusing at need fulfilment

iv. Alignment with government priorities driving a more joined-up service delivery model are delivered on time and to budget, and generate the expected benefits

**Key Success Factors**

**Providing clarity:** It is crucial that scope, governance and operating models for ICT functional leadership are well understood from the outset. Boundaries will be made clear, including the extent that the strategy will drive the Public Service, State sector and local government.

**Committed leadership:** Ministers, agency chief executives and agency leadership teams must be committed to and support the strategy.

**Sector CIOs:** Sector Chief Information Officers will be appointed and will be responsible for leading the development and establishment of a cluster business model and investment plan, taking on some delegated responsibilities from the GCIO

**Funding:** The Treasury to establish sustainable funding mechanisms that will support the delivery, operation and agency adoption of common capabilities.

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**Consequences of change**

Information and services joined-up and are easier to locate and access.

Government’s identity assurance capabilities for digital service delivery are fit for purpose and build trust and confidence in government.

Unified access for transacting with government
Outsourcing and Deferred payment to Shared Services and PPP
7. Outsourcing and Deferred payment to Shared Services and PPP

It has been observed that the Governments across the world have been moving towards Shared Services and PPP model. The key difference of this model as compared to Outsourcing and Deferred payment model is purely the element of “Partnership”. While the outsourcing and deferred payment is purely seen as Supplier/Vendor vs. Purchaser relationship, the trending model is focused towards risk sharing and hence “Partnership”.

It has been painstakingly learned that traditional models lead to rigidity in the terms and conditions decided at the time of tendering. However, in recent times, things are much more dynamic and unless institutional mechanisms to deal with the dynamisms are established, large projects cannot succeed.

“Shared Services and PPP projects not only address the financial constraints of Government, they also provide an opportunity to consolidate all the processes at one location thereby making it amenable to standardize and improve the processes”

Shri R. K. Srivastava, IAS
Chairman, Airport Authority of India

Public-private partnerships (PPPs) are a mechanism for governments to procure and implement public infrastructure and/or services using the resources and expertise of the private sector. Where governments are facing ageing or lack of infrastructure and require more efficient services, a partnership with the private sector can help foster new solutions and bring finance.

PPPs combine the skills and resources of both the public and private sectors through sharing of risks and responsibilities. This enables governments to benefit from the expertise of the private sector, and allows them to focus instead on policy, planning and regulation by delegating day-to-day operations.

The Key principles of Shared Service and PPP are as follows:

1. Understand the goals of the Partners and mutually respect them: The government has responsibilities towards social betterment and public accountability. The private partner has the goal of profit generation for its shareholders. For implementing a long duration project, a partnership approach needs to be followed.

2. Risk Sharing: For a long duration project, the project is likely to witness various situations which were not foreseen at the inception stage. Hence these situations are broadly categorized and the party that is best placed to address the risk shoulders the responsibility to take the risk.

3. Rewards to be commensurate with risks and costs: The party that takes the risk also gets a reward commensurate to the risk shouldered. All situations wherein one party takes a risk without commensurate rewards need to be eliminated.

4. Issue resolution mechanism: The issue resolution mechanism needs to be made robust, transparent, neutral and efficient. As during the course of the project, situations do arise which need to be addressed. The basic philosophy is that the project financials (revenues, costs, assets and liabilities) are shared in a transparent manner. Any impact of an unforeseen issue on the financials, needs to be addressed in a manner which is non adverse to the project.

“Government-industry collaboration at the e-governance project conceptualization stage can bring in the required innovation both in technology solutions as well as in the business models. Reforming existing ICT procurement rules and practices can facilitate an effective government-industry partnership to ensure absorption of emerging technologies in government service delivery.”

Dr. Lovneesh Chanana, Ph.D.
Director (Government Relations)
SAP India Pvt Ltd.
## 7. Outsourcing and Deferred payment to Shared Services and PPP

The evidences of successful projects wherein the trend towards Shared Services and PPP can be established

### eMitra, Government of Rajasthan

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lacking a one-stop facility for efficient service delivery to citizens</td>
<td>e-Mitra - unified e-Service offering for citizen</td>
<td>i. Real-time information accessibility to serve ~22 Mn citizens</td>
</tr>
<tr>
<td>ii. Lack of standard reporting mechanism leading to low transparency</td>
<td>ii. Front-end service delivery through Kiosks and back-end managed through advanced ICT</td>
<td>iii. ~2 Mn citizens accessing over 40 services from various departments/ providers</td>
</tr>
<tr>
<td>iii. Low satisfaction levels among citizens given multiple visits to government offices</td>
<td>iii. Web-based, real-time content update system, backed by 24x7 helpdesk</td>
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### CPC ITR, Income Tax Department

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Expediting the processing of returns and issue of refunds, thereby encouraging tax payers to e-file returns</td>
<td>i. Created the solution for transitioning the process from local location to the Created CPC solution for receipt of electronic returns directly to CPC</td>
<td>i. Reduced more than 70 percent throughput time</td>
</tr>
<tr>
<td>ii. Developing software to process income tax returns and tax accounting</td>
<td>ii. Created technological infrastructure for execution of activities linked to preliminary assessment and processing of returns</td>
<td>ii. Savings by reduction in interest payments due to processing speed</td>
</tr>
<tr>
<td>iii. Data entry of income tax returns filed electronically and manually</td>
<td>iii. Over 15 million transactions processed every year</td>
<td>iii. 15 percent of process efficiency improvement achieved over 3 years of operations</td>
</tr>
</tbody>
</table>

### Integrated Emergency Response and Management for timely emergency care (Multiple States)

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Solution</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of adequate emergency response healthcare infrastructure</td>
<td>End-to-end emergency management solution</td>
<td>Over 750+ million population covered</td>
</tr>
<tr>
<td>i. Delays in access to timely care resulting in high causalities</td>
<td>i. Single number (108) for timely emergency medical support and care</td>
<td>i. 22,000+ emergencies attended daily</td>
</tr>
<tr>
<td>ii. Low number of healthcare facilities and poor ambulatory facilities</td>
<td>ii. Shared services for</td>
<td>ii. Over 1.2 Mn lives saved since 2005</td>
</tr>
<tr>
<td>iii. Delays in emergency care leading to loss of lives</td>
<td>iii. Multilingual contact center</td>
<td><strong>Rapid emergency response:</strong></td>
</tr>
<tr>
<td></td>
<td>iv. GIS-GPRS based tracking</td>
<td>i. 160s seconds to dispatch ambulance</td>
</tr>
<tr>
<td></td>
<td>v. ePatient records and disease surveillance</td>
<td>ii. Call pick up within 3 rings</td>
</tr>
<tr>
<td></td>
<td>vi. Fleet management system</td>
<td>iii. 18 minutes to reach site</td>
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<tr>
<td></td>
<td>vii. Ambulance design</td>
<td></td>
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</table>
## Implications for Government

### Agenda for the Government

### Policy

| i. While Ministry of Finance (GoI) has a different guidelines / policies notified for PPP project for Infrastructure sector, there are no guidelines/policies notified for eGovernance Projects. There is an urgent need for notifying a policy on PPP projects in eGovernance domains. |

### Process

| i. Various MNCs which have created Shared Services for their processes, look at two other objectives apart from costs saving:  
| a. Strengthening controls  
| b. Standardization of processes  
The Government should focus on above aspects while conceptualizing PPP Projects  
| ii. Government should lay down procedure / guidelines for allowing financing of PPP projects on the lines of Infrastructure projects |
Case Study

MCA 21 Project

Project Overview
MCA21 was the first Mission Mode Project implemented under the NeGP by the Ministry of Corporate Affairs (MCA), GoI in 2006. The services provided include Registration and incorporation of new companies; Filing of annual returns, balance sheets and forms denoting change of names/address/director’s details; Registration, modification and verification of charges; Inspection of public documents; Applications for various statutory services offered by the ministry; and Issue of certified copies, and Grievance Redressal for investors.

Implementation Strategy
The National Institute for Smart Government (NISG), as conceptualizing and designing the MMP. MCA21 leveraged the best practices from experiences drawn from Australia, Canada, New Zealand, the United Kingdom and Singapore.

Key Learnings
i. Efficiency in Service Delivery: With the implementation of MCA21, citizens can access services in an easy and transparent manner. Services such as Name availability, incorporation, Issuance of Director Identification Number (DIN) and changing registered office address, which used to take up to 60 days earlier, can now be done with 1-3 days. Integration with key systems like PAN, Trademark has also helped in improving service delivery.

ii. Process Transformation: A complete overhaul of the processes were done at the initial stage of the project to support the digital platform. Changes in rules and regulations were also done in order to support the process re-engineering. For example complete paper less process for service delivery with the help of Digital Signatures, Straight Through Process (STP), mandatory XBRL filings for Companies with paid up capital greater than or equal to Rs. 5 crore were introduced.

iii. Government Sponsorship: Commitment from both Political and Bureaucratic leadership was seen on this project. The project was implemented in a mission mode by providing adequate budget and resources.

Consequences of change
Business community to register a company and file statutory documents quickly and easily
Proactive and effective compliance with relevant laws and corporate governance
Easy access to relevant records and grievances redressed effectively

The MCA 21 project was implemented as part of the MCA’s vision: “To be a leader and partner in initiatives for Corporate Reforms, Good Governance and Enlightened Regulation, with a view to promote and facilitate effective corporate functioning and investor protection.”
Department of Education, Australia | Department of Employment – Shared Services Centre (SSC)27

Project Overview
The SSC is an innovative approach to harness improvements and efficiencies within corporate functions delivered by the former Department of Education, Employment and Workplace Relations. The SSC supports customers by providing a range of corporate services, ranging from payroll to financial processing, application hosting to integrated desktop technology solutions, graphic design and website development to property and facilities and security.

Implementation Strategy
The SSC offers an integrated ERP solution to organisations using ERP software. Its ERP system, called “Connect”, provides access to human resources, finance, procurement and reporting information. In line with expectations that the Australian Public Sector becomes should be more modern and effective, Connect is helping the Australian Public Service Commission (APSC) make better informed business decisions based on significantly improved data accuracy and integrity and reduced manual intervention and errors.

Key Learnings
i. Political drive to implement shared arrangements is essential to overcome issues such as a few stakeholders appear to lose their political sovereignty.
ii. Officials were concerned that a move to shared services would prohibit them from specifying different levels of service from their partners.
iii. A small trade off that the APSC faced was the loss of some entity-specific system customisation. However, further benefits from the shared services arrangements will be realised by the APSC when access is made to the wider range of systems and processes available through Connect and the SSC information network.

Consequences of change

Shared corporate services for the partner departments of Education and Employment;
Deliver cost savings
Economies of Scale
Enhanced controls
Way Forward

Our review of the last decade, vision for the future and the seven transformational changes expected over the next five years clearly necessitates a number of actions. Actions that need to be taken by the centre, state and individual agencies as they plan and execute their eGovernance projects.

While, the report itself provides a way forward to the next five years of eGovernance, there are some specific actions that need to be taken up at appropriate levels to make sure that the vision laid out is actually achieved. To that extent we have proposed a 10 point action plan.

**Action plan 1:** Migration plan of successful NeGP and State Projects (these could be Award Winners in the last decade) to align them to the seven emerging paradigms. This 2.0 approach will ensure that we can quickly migrate and demonstrate success under a new paradigm.

**Action plan 2:** Strengthen Independent M&E. One of the big learnings of the last decade has been the need for effective design and implementation of Monitoring and Evaluation (M&E) systems for NeGP. It may be worthwhile to look at creating an Office of Quality and Customer experience at DARPG whose task will be to provide independent and continuous feedback on projects instead of postmortem that really does not provide any benefit for course correction.

**Action plan 3:** Develop models for increased competition leading to improved Quality and focus on customer experience e.g. capability to rate quality of service and create competition within > 1 public offices of a given service – this would mean having more than one agency deliver a service and having quality and market forces determine the winner. This would end the monopoly service delivery agencies have today.

**Action plan 4:** Every State / department needs to develop a common enterprise view from the lens of their customers (citizens/businesses/residents) and develop an application portfolio that is integrated with other departments and agencies for providing end-to-end services

**Action plan 5:** Build Accountability – While we build institutions to sustain eGovernance initiatives, we need to keep in mind the basics - that would mean not taking up any project till a project leader is appointed with a dedicated project team, who agrees on a detailed action plans with measurable and verifiable milestones. This would allow holding the mission leaders accountable for making progress and incentivize them for the success of the project.

“The vision of Digital India is an extremely powerful one. If all the components of Digital India are implemented in a time bound manner it will transform the governance of the country”

Shri R S Sharma, IAS (Retd.)
Chairman TRAI

“It is important to completely redefine and implement government transformation by implementing digital by default.”

Tanmoy Chakrabarty
Vice President and Head, TCS Government Solution
Way Forward

**Action plan 6:** Process Reform – Given the focus on Mobile First, it is important that we completely relook at processes from the perspective of a) How to deliver every service (including transaction) through Mobile; b) Eliminate Certificates (especially where the consumer of the certificate is also Government) and c) Look at end-to-end service reform.

**Action plan 7:** Create single citizen / business repository linked to Mobile No., Aadhar, PAN, Passport (if issued) and Bank A/c, for creating a single source of truth for identification of beneficiaries and providing personalized services.

**Action plan 8:** Create dedicated capacity at the level of Centre and State with capable CIOs and CTOs – this could begin with common CIOs and CTOs for interrelated ministries

**Action plan 9:** Create the roadmap for NeGP 2.0 leveraging the vision provided in this report

**Action plan 10:** Restructure / Realign the Vision and Mission for Centre / State Technical / IT agencies/ organizations, wherein they work as advisors – CIOs/CTOs to government departments and ministries as opposed to advisors, evaluators, developers and monitors.

The action items suggested in the report, if implemented, can truly help India in transforming Governance. In order to achieve this the government needs to think radically different and evolve. The solutions for the complex problems will come from citizens, private players and NGOs. Government will need to manage the change through bold vision, powerful leadership, strong regulation, supported by dynamic teams.

Finally, we want to once again highlight and underscore that eGovernance is more about reforms in governance, than about information & communication technologies and related infrastructure, which are enablers.

“We believe that every country, city and business is becoming digital. Over the last decade, e-governance in India has steadily evolved with the government implementing initiatives that embrace transparency, service orientation and citizen centricity. The Prime Minister’s unveiling of the Digital India program in 2015 was a powerful accelerator for e-governance, focusing on how the government can deliver governance and services to citizens digitally, build broadband highways, enable digital inclusion and deliver information for all. We believe that India’s well on its way to becoming one of the largest digitized countries in the world.”

Dinesh Malkani
President, Cisco India & SAARC
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>BPR</td>
<td>Business Process Reengineering</td>
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<tr>
<td>CIO</td>
<td>Chief Information Officer</td>
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<tr>
<td>CPC</td>
<td>Centralize Processing Centre</td>
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<tr>
<td>CTO</td>
<td>Chief Technology Officer</td>
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<tr>
<td>CPGRAMS</td>
<td>Centralized Public Grievance Redress and Monitoring System</td>
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<tr>
<td>CSC</td>
<td>Common Services Centre</td>
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<tr>
<td>DARPG</td>
<td>Department of Administrative Reforms and Public Grievances</td>
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<td>DeitY</td>
<td>Department of Electronics &amp; Information Technology</td>
</tr>
<tr>
<td>DIN</td>
<td>Director Identification Number</td>
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<tr>
<td>e-GIF</td>
<td>e-Government Interoperability Framework</td>
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<tr>
<td>G2B</td>
<td>Government to Business</td>
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<tr>
<td>G2C</td>
<td>Government to Citizen</td>
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<tr>
<td>G2G</td>
<td>Government to Government</td>
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<tr>
<td>GATI</td>
<td>Governance with Accountability, Transparency and Innovation</td>
</tr>
<tr>
<td>GCIO</td>
<td>Chief Information Officer</td>
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<tr>
<td>GEA</td>
<td>Government Enterprise Architecture</td>
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<tr>
<td>GoAP</td>
<td>Government of Andhra Pradesh</td>
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<tr>
<td>GoI</td>
<td>Government of India</td>
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<tr>
<td>GSTN</td>
<td>Goods And Services Tax Network</td>
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<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
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<tr>
<td>IOT</td>
<td>Internet of Things</td>
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<tr>
<td>ISRO</td>
<td>Indian Space Research Organization</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
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<td>ITD CPC</td>
<td>Income Tax Department Centralized Processing Centre</td>
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## ACROYNMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>KDMC</td>
<td>Kalyan Dombivli Municipal Corporation</td>
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<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<td>M2M</td>
<td>Machine to Machine</td>
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<tr>
<td>MCA</td>
<td>Ministry of Corporate Affairs</td>
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<td>NCeG</td>
<td>National Conference on eGovernance</td>
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<td>NeGP</td>
<td>National eGovernance Plan</td>
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<tr>
<td>NFC</td>
<td>Near Field Communication</td>
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<tr>
<td>NGO</td>
<td>Non-Government Organization</td>
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<td>NIC</td>
<td>National informatics Center</td>
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<tr>
<td>NISG</td>
<td>National Institute for Smart Government</td>
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<tr>
<td>OCR</td>
<td>Optical Character Recognition</td>
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<tr>
<td>PAN</td>
<td>Permanent Account Number</td>
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<td>PKI</td>
<td>Public Key Infrastructure</td>
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<td>PPP</td>
<td>Public Private Partnership</td>
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<td>PSK</td>
<td>Passport Seva Kendra</td>
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<td>RTI</td>
<td>Right to Information</td>
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<td>SLA</td>
<td>Service Level Agreement</td>
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<td>SOA</td>
<td>Service Orient Architecture</td>
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<td>SSDG</td>
<td>State e-Governance Service Delivery Gateway</td>
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<tr>
<td>SSDG</td>
<td>State Service Delivery Gateway</td>
</tr>
<tr>
<td>SST</td>
<td>Self-Service Technology</td>
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<tr>
<td>STP</td>
<td>Straight Through Process</td>
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<tr>
<td>SWAN</td>
<td>State Wide Area Network</td>
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<tr>
<td>TCS</td>
<td>Tata Consultancy Service</td>
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<tr>
<td>UPOR</td>
<td>Urban Property Ownership Record</td>
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<tr>
<td>UYOD</td>
<td>Use Your Own Device</td>
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<tr>
<td>XBRL</td>
<td>eXtensible Business Reporting Language</td>
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Bibliography

9. https://www.mobile.karnataka.gov.in
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