

Insights from CSI e-Governance Knowledge Sharing Summit

On 12th December 2014, CSI e-Governance Knowledge Sharing Summit (KSS) has happened at Jawaharlal Nehru Technological University (JNTU) Campus in Hyderabad. The author has attended this convention and thought of sharing the insights from this convention in this article from. Many of the e-governance initiatives taken by the Telangana and Kerala governments are discussed. Some of the IT initiatives of Karnataka and Maharashtra governments are also pop up in the discussions. The CSI-SIGeGov has brought the practitioners, industry experts, academicians, management consultants and government representatives onto the same platform. Many useful discussions and deliberations have happened. Technology trends in the market are discussed. This article brings in the highlights from the KSS summit.

Digital Governments

In the discussion titled "Digital Telangana - The Road Ahead" the agenda set for the discussion include IT infrastructure, citizen services, impact of budgets on e-governance projects, the state of e-governance in Telangana and Andhra Pradesh states. The moderator expressed that there should be maximum governance and minimum government. A.S.Ramesh, Director, IT, Telangana government has presented about the technologies Telangana government is using, innovative approaches they are following, their g-government strategies, and the priority sectors for citizen services. The highlight for Telangana state is the *innovation*. Internet of things, cloud computing and big data are entering into the e-governance applications. The priorities for Telangana state include connectivity between road, water and savage, digitizing the citizen services and providing drinking water for common man. Using MBR technology they would like to provide clean water. MBR technology has been used successfully in Singapore. The Director also highlighted the establishment of Telangana Academy of Knowledge and Sciences. As part of National Cyber Security Policy initially they would like to train 1,00,000 young people for cyber security. There is also

future need of 5,00,000 cyber security professionals for Telangana. The non-availability of manpower in this area is also highlighted. Establishment of aero defence summit based at Adibatla in Hyderabad, Telangana is going to create another 2,00,000 jobs in future.

The governments have stated sharing certain amounts of data to the citizens. However, they are concerned about usable of business intelligence tools and misuse of information. Telangana IT team has the capabilities of mathematical modelling, designing complex algorithms, hardware and analytics. They would like to have the product patent orientation. Large parts of Hyderabad are going to have Wi-Fi connectivity. As part of this journey, 10 square kilo meters area around High-Tech city and outer ring road has already Wi-Fi enabled. Telangana is a prosperous state. They would like to provide healthcare services or support to rural areas using mobility and remote technologies. They have the Fibre optic infrastructure. They would like to connect all the universities in Telangana state. Telangana is going ahead to compare with other states by thinking about Right to Investor Act in addition to Right to Information Act. They would like to provide the details asked by the investors as well. Telangana has SCADA technology based control systems for power monitoring and management.

All the government representatives and industry experts expressed that the major challenge is the cyber security. Prof. M.P.Gupta of IIT, Delhi has expressed that the Andhra Pradesh and Telangana states are showing the path to e-governance in India. Earlier united AP was the early mover towards e-governance by providing services such as e-Seva. The governmental representatives have also expressed the challenges they are facing with respect to integration of systems, data, and recency of data. For example, if a young nuclear family has 2 members in 2011 in census data. The same family is having 4 members in Aadhar data in 2014. Joining this data and verification of this data are the major challenges governments are facing today.

The important factors in e-governance are collaborative governance, connectivity, digital India, motivating the team, reach of services to citizens and co-creation with citizens such as crowdsourcing. The summit has highlighted the benefits of websites such as www.challenge.gov which brings entrepreneurs, bureaucrats, researchers, and academicians onto the same platform. Different countries have the open data such as census data, geographical data, social security data, vehicle registration data, welfare schemes data, political data and elections data. Government of India has open data policies and NIC (National Informatics Center) is driving some of the initiatives.

Biju Kadapurath of PriceWaterhouse Coopers (PWC) expressed that Whitehouse, USA has the digital governmental initiatives. They are thinking about using technology to improve the quality of life of everybody. The important segments for digitization include Government-to-Government, Government-to-Citizen, Government-to-Business and Government-to-Employee. They need to build the capacity through training. The first priority for governments across the world is opening up of some of the data to public. The best e-governments across the world include Singapore and Amsterdam, which have made the right investments. The governments have to leverage mobile technologies and provide touch points to the investors.

Drivers of e-Governance: The main drivers of e-governance include online/mobile adaptation, citizen awareness, stakeholder expectations, social change, and emerging technologies.

Key Success Factors for e-Governance: The key success factors for e-governance or digital governance include digital infrastructure, digital literacy, electronic service delivery, and inclusion.

Handling huge growth is a challenge in several sectors of digital governance.

What is e-Gov 2.0?

Before discussing e-Gov 2.0 let us know what is e-Gov 1.2? According to

Dr. Jaijit Bhattacharya of KPMG, eGov 1.2 takes existing processes and converts them into computer processes. Business Process Reengineering (BPR) is missing in eGov 1.2. Whereas, e-Gov 2.0 is about next generation government. Different departments of the governments need to be well connected. Important areas for India include education, agriculture and healthcare. The foundations of good governance include improved security and reduced costs.

Drivers for Next Generation Governments: The drivers for next generation governments include outcome based governance, personalized based governance, participatory based governance, informed based governance and service oriented administration. These drivers should evaluate the political return on investment.

Data is very important to run a country. Survey based decision making is proven for governments. Misuse of data is the major challenge governments are facing today. Governments should use analytics such as urban analytics and rural analytics and find patterns in data. Some of the advanced countries are using services based revenue model instead of tax based revenue models. The e-governments should use models such as business models, operational models, financial models, and technological models. Traffic planning is also an area digitizing governments should think about where there is maximum urban population.

The current PC (Personal Computer) penetration rate is 7%. 14 million PCs are sold in 2013 in India. Mobile penetration is surpassing PC penetration. The e-government IT architecture consists of the data centre architecture and servers architectures.

Prof. Ajit Rangnekar of Indian School of Business has expressed that the e-governments should think about how the poor, uneducated and rural sectors can be served. While designing IT systems, design thinking based on user perspective can make the project success. For mobile applications, back up and security are major concerns. Data security is major risk. Security has to be tightened while providing access to personal data. E-government services provided by the governments in English are not reaching the local language speaking population.

However, the IT implementers of Kerala expressed that there are some technical challenges in translations from one language to another using computers. According to Prof. Ajit, governments should have one or two telephone numbers for all citizen services. Education, health, security, and serving poor should be able to achieve using digital governance. Measuring success of e-governance is still evolving. It should measure things such as how many people fall sick in certain region or state and how many school age children are going to school, etc. The students of ISB are building a wearable device for women so that at the press of a button they can get the help in case of emergencies.

Technology Trends: Lalith Choudary, Director at Cisco has presented the technology trends for e-Gov 2.0. The trend is moving towards networks and network of things using Internet. The role of networking is changing in the world. The current buzzwords in the industry are innovation and disruption and the connection between these two. With the growth and evolution of Internet, video calls and social networking are possible. 90% of the things in the world are not connected. However, human beings are connected.

In general, in the world, volume of data is increasing day by day. Whereas, the life of data is reducing drastically, sometimes to minutes even. Particularly in manufacturing sector, data life is reducing. In current days, applications, clouds, data centres and intelligent networks are all connected to each other. To increase the flexibility in networks, Cisco Open Network Environment (ONE) separates the data and control planes. The governments should have the technology road map. The future can be the Internet of Things.

Integrating E-Governance Applications

Analytics, data mining, data protection and increased compliance are dominating the e-governance applications. Mohammed Safirulla, Director, KSITM has explained the e-governance framework of Kerala state. The e-governance vision of Kerala includes providing effective, transparent and efficient services to citizens. Major IT projects of Kerala include Core IT infrastructure consisting of Cloud, e-services delivery framework, and common applications.

Kerala is connected to National Optical Fibre Network (NOFN) and

National Knowledge Network (NKN). They have integrated panchayats and districts. The best practices of digital governance include sending audit requests to data centres and following the advice of cyber cell for security. They have a citizen call center in Kerala. E-procurement is implemented in Kerala. The challenges in implementing e-governance applications include incompatibility in databases, integration of different databases, linkage to Aadhar, regional language translations, income mismatches in databases, and comparing databases. E-governance of Kerala is also moving into finance domain by partnerships with banks and financial institutions. Kerala state has already shared forest and spatial data. Being technologically innovative, areas of improvement for them include sharing election data and breach of privacy.

Recently, Maharashtra government has enabled the cloud based e-governance. They have launched digital locker system to save/keep certificates or applications of citizens.

Technologies for Governments: Governments can use social media, internet of things, analytics and mobility. Governments are going for smart waste management as part of smart city development. There are many advantages with Internet of things such as reduced transport costs and reduced supply-chain expenses. While using devices, technology exceptions, interventions and events are originated by human beings. According to the research firm Gartner, India would be the late adapter to Internet of things. US and Singapore are early adapters of internet of things.

E-governance business processes should be integrated with social media. According to social media, the business processes should be tailored. The e-governance systems should monitor and manage the social media. Also e-governance applications include certain workflows. The technologies used in e-governance applications include DBMS, ERP, Web Services and EAI (Enterprise Application Integration).

The mobility in applications is also growing. For example, ICICI bank has implemented mobility in their instant KYC (Know Your Customer).

Defining E-Governance: According to Dr. Sateesh Reddy, Director, RCI, DRDO e-governance is defined as

E-governance = Government + Technology + Transformation

RCI has implemented e-governance applications such as project management, procurement, finance, etc. The differences between traditional and e-governance applications include speed, security, cost of transaction and speed of service to citizens. E-governance application development involves reengineering and restructuring the processes. The applications should have strategy, policies, standards and laws. The underlying infrastructure, architecture, communication and security are major considerations for e-governance applications. One has to have integrated view of all the services.

Challenges in Integration of E-governance Applications: The

challenges faced in integration of e-governance applications include non-standard data models, diversified IT systems, legacy systems, integrating data from several sources, and application development on different platforms.

Thomas Mathew, VP at SAP has given business perspective to e-governance applications by stating that e-governance applications should be cost effective.

5-Pillars for E-Governance

Applications: The pillars for e-governance applications include user requirements, community engagement, user empowerment, innovation in services and performance.

Some of the e-governance initiatives

of Government of India include digitization of land records and election data. E-governance applications are mostly data driven rather than process driven. They do not include CRM (Customer Relationship Management) applications.

Conclusion

It is very difficult to measure the success of e-governance projects. Stakeholder involvement should be from the initial stages of the project. Using mobility, cloud, analytics and big data, the cost of transactions can be reduced and the time taken for each transaction can also be reduced. The speed of providing services has increased drastically using technology. The availability and reliability of information and data are also increasing using digitization of governance. ■

About the Author



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CSI SIG-BDA

About CSI SIG-BDA: Formed in 2014, CSI Special Interest Group on Big Data Analytics (BDA) aims to promote BDA activities, including training programs and workshops at national and international levels.

Introduction: This workshop will provide hands-on learning of some popular Big Data Applications with Hadoop and R software for data analytics usage. Big Data Applications with Hadoop and R software is an active sector today and at the end of this workshop, the participant will gain practical knowledge about managing, extracting, transforming, cleaning and visualizing data using data analytics with Hadoop and R software.

Who Should Attend? Analytics, business intelligence or data warehousing professionals, software engineers, data analysts, statisticians and anyone interested in learning about BDA and R. No prior programming or statistics knowledge is necessary.

Course Content

- ❖ Introduction to Big Data Analytics & Basics of Data Science ❖
 - ❖ Statistics and Data Mining ❖
 - ❖ Distributed Computing Frameworks ❖
 - ❖ Operational Databases for Big Data ❖
 - ❖ Big Data Applications and Case Studies ❖
 - ❖ Lab session - Data Analytics in R ❖
 - ❖ Lab session - MapReduce and Hadoop Ecosystem ❖
 - ❖ Lab session - Demonstration of Big Data Applications ❖

BIG DATA ANALYTICS (Three-day Workshop)

on 25th July (Sat.), 1st Aug. (Sat.), & 8th Aug. (Sat.), 2015

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Registration fee / Terms & Conditions:

■ **CSI Member Rs.12,000/- Per Participant** ■ **Non CSI Member Rs.15,000/- Per Participant** (including one year Membership Fee). The payment instructions will be emailed directly to participants after they pre-register. All pre-registered participants must show their photo id for identification. The mentioned fee is inclusive of all taxes and charges. Registration fees covers courseware, lunch, tea/coffee.

Pre-registration deadline : July 15th 2015.

Admission by pre-registration only. Number of participants is limited.

For pre-registration, contact by email:

Prof. C. Sudhakar & Dr. D.V. Ramana

Conveners, CSI SIG-BDA 3-day Workshop, 2015. ☎ +91 97048 62148 ✉ csi.sig.bda@gmail.com

- The interested participant must email by July 15th to csi.sig.bda@gmail.com his/her specific details (Name, Present Affiliation, Position, Qualifications) and must include the email Subject line: **"2015 Workshop Registration"**
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