



जं दकं तके -
द ज्ञतचतेपे म । तवी पञ्जबज्जतम
for
द व अमतदं द बम

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Presentation Outline

- Context Setting
 - E-Government Today
 - e-Government Desired
 - Transformation Process
- IEG Approach in Andhra Pradesh
- Observations and Suggestions
- Way Forward



A View of e-Governance Today

- Technological Determinism
- Chaos of e-Governance discourse
- Development in Silos/ Lack of Interoperability
- Inconsistent architecture and ad-hoc implementation
- Oblivious to transformation and citizen centricism
- Lack of vendor and technology agnosticism
- Not conducive to
 - Efficient Change Management
 - Process Re-engineering
- 85% e-Gov initiatives fail -1st Generation



Characterization of E-Government

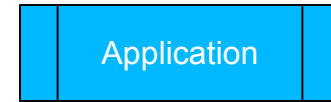
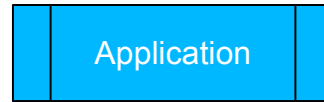
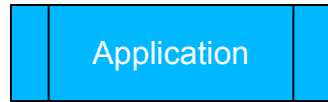
- Government as a single entity - A Unified View
- Supports transformation of services without affecting the citizen interface
- Ability to deliver a richer citizen experience by adding new services without adding to back end activities
- Free from lockups - Vendor, Technology, etc
- Inbuilt capability for transformative change
 - Separation allows us to discard and add parts with only controlled disturbance to the total system

Government Today → E-Government Transformation Process

- Open Systems for avoiding lock ups
- Support for Change Management
- Consistency
- Security and Privacy
- Persistence
- A Framework for smooth transition



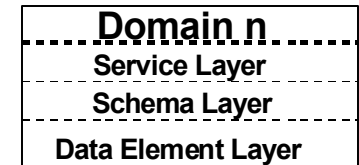
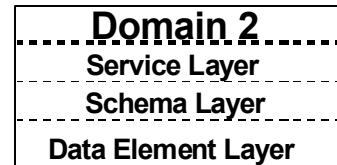
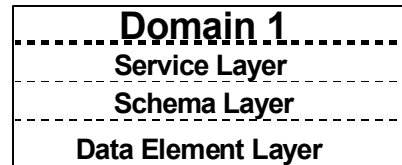
Architectural e-Governance Utopia



Personalization Layer

e-Gov Services Layer

Business Layer



Service Oriented Layer



System Software --- [O.S + DATABASES + Common PROTOCOLS]

Common Computing Hardware

Computing + Storage

Access Devices

Communication Layer

Government Today → E-Government

Elements of the Framework

- Enterprise Architecture
- Interoperability framework
 - Identity management
 - Ownership and Authentication
- Standards



E-Government Enterprise Architecture

- Alignment of present and future IT Infrastructure to the goals and the mission of the Government.
- e-Governance is pervasive in all the institutions of our Democratic society
- EA at individual Governmental and Departmental levels follows the Architecture of the Society itself
- GAF

Interoperability

- What?
 - Unity in Diversity
 - Evolving a common interface
 - Diverse Solutions to solve the same problem
- Why?
 - Savings in time and resources
 - Consistency
- How to achieve?
 - Forming bridges and translators
 - System Design for loosely coupled interoperable solutions
 - Design for Interoperability
 - Interoperability as an operational issue to be met – Paradigm shift
- Levels of Abstraction
 - Data
 - Function
 - Specifications – Services, Processes
 - Implementation sharing

E-Government Standards



- Data and Metadata standards
- Interface and service definition standards
- Protocol standards
- Process standards
- Architectural standards
- Service delivery standards
- Security standards

Paradigm of Enforceability



- Synergy among the institutions of Academia, Government and Industry
- Widest plausible acceptance
- Enforcing regime
- Enlightenment and sensitisation
- Structuralism vs creativity



IEG Approach in Andhra Pradesh

- Institutional mechanism for developing, evolving and standardizing Government data, metadata, processes and services
- Capacity building to support institutional structures – developing a cadre of CIOs(180) and 20,000 associates
- Analysis of existing Services for defining service interface, extracting data elements and cataloguing by type-ing (32 departments 250+services 11,000 data elements)
- Developing a Service layer encapsulating the fundamental abstractions defined in xml schemas
 - With generic definitions of government services
 - Separation by context
 - Clear ownership
- Establishing a developing methodology



Experience, Observations and Lessons Learned

- A proper blend of domain experts and technical experts to work together in order to capture the essence of domain knowledge comprehensively
- Discovered the need for tools for cataloguing, typing and classifying the elements and defining the service interfaces
- Developed such tools and used in updated methodology
- Initiated the implementation vehicles in GIGA and Standards LAB
- Discovered the need for clear distinction between the service definition and implementation which led to the collaboration with [OKI,MIT](#)

Recommendations

- Institutional Mechanism
- Capacity building
- Follow the methodology and use the tools developed
- Participate in the initiatives of GIGA and Interoperability Lab

Way Forward

- EA at macro level
- Interoperability at operational level
- A formal syntactic methodology



more at

www.ieg.gov.in/APDataStandards

www.ieg.gov.in/eGIGA