Digital Service Standard

25-Oct-18
Need for Digital Service Standard

- Rapid changes in technology landscape
- Fast pace of rise in computing power in the hands of the citizens
- Need for Governments to review, rationalize and enhance the existing e-Services, besides creating a new breed of digital services with a high ‘speed-to-market’.
- In absence of Standards for defining, designing, developing, delivering and measuring the value created by the digital services, it is likely that a plethora of uncoordinated efforts would ensue to produce a sub-optimal outcome.
- A variety of new institutional mechanisms, policy instruments and implementation methods have to be put in place if the promise of the Digital Service regime is to be realized.
Stage I: emerging information services - Government websites provide information on public policy, governance, laws, regulations, relevant documentation and types of Government services provided. They have links to ministries, departments and other branches of Government.

Stage II: enhanced information services - Government websites deliver enhanced one-way or simple two-way e-communication between Government and citizen, such as downloadable forms for Government services and applications. The sites have audio and video capabilities and are multi-lingual, among others.

Stage III: transactional services - Government websites engage in two-way communication with their citizens, including requesting and receiving inputs on Government policies, programmes, regulations, etc. Some form of electronic authentication of the citizen’s identity is required to successfully complete the financial or non-financial e-Transactions.

Stage IV: connected services - e-Services and e-solutions cut across the departments and ministries in a seamless manner. Information, data and knowledge are transferred from Government agencies through integrated applications. Governments have moved from a Government-centric to a citizen-centric approach, where eServices are targeted to citizens through life cycle events and segmented groups to provide tailor-made services.
A Working Group constituted by STQC, under the chairmanship of Shri J. Satyanarayana, developed the Digital Service Standard during Nov 2017 – March 2018.

Mandate of Working Group was to conduct necessary studies and make appropriate recommendations on Digital Service Standard so as to:
- define eService & digital service on an end-to-end basis,
- prescribe standards for design, development and delivery of services and
- recommend methods for effective monitoring of service delivery.

Vision:

“to define a National Standard, the adoption of which ensures Uniformity, Consistency, Comprehensiveness and Excellence in the Definition, Realization, Measurement and Governance of Digital Services.”

The Working Group has come up with a holistic framework of inter-related standards and principles that apply to all aspects of any digital service, through its life-cycle namely, Defining, Realizing, Measuring and Governing Digital Services.
A Government Service is one that is provided by a government agency to its constituents, including its employees and other government agencies, in any form of delivery.

An e-Service refers to the application of Information and Communication Technology (ICT) for delivering government services, broadly categorized as Government-to-Citizen (G2C), Government-to-Business (G2B), Government-to-Government (G2G) and Government-to-Employees (G2E).

Digital Services are Whole-of-Government (WoG) services built on highly secure, reliable, scalable, replicable and open technologies of the new age, seamlessly interfacing with a host of divergent delivery channels, and, most often, leveraging the power of API’s for interoperating with the rest of the eco-system.

An Integrated Digital Service is defined as the delivery of digital information or transactional service relating to multiple departments through a single interface/ device, basing on a single request made by the user.

DSS may be equated with Golden Standards of eServices Delivery
## eService vs. Digital Service

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Electronic Service</th>
<th>Digital Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maturity</strong></td>
<td>Service Request and Service Delivery are electronic.</td>
<td>The interaction is digital end-to-end</td>
</tr>
<tr>
<td><strong>Channel</strong></td>
<td>Predominantly web</td>
<td>All devices/ channels</td>
</tr>
<tr>
<td><strong>UX</strong></td>
<td>Generic / Common to all</td>
<td>• Personalized, Localized</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• AI-driven</td>
</tr>
<tr>
<td><strong>Integration</strong></td>
<td>Limited to an Application</td>
<td>Enterprise-wide integration</td>
</tr>
<tr>
<td><strong>Architecture</strong></td>
<td>Service Oriented Architecture</td>
<td>• Enterprise Architecture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Open API-based</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Micro-Services Architecture</td>
</tr>
<tr>
<td><strong>Technologies</strong></td>
<td>Internet</td>
<td>SMACI (Social, Mobile, Analytics, Cloud &amp; IoT)</td>
</tr>
<tr>
<td><strong>Scalability</strong></td>
<td>Finite</td>
<td>Infinite</td>
</tr>
<tr>
<td><strong>Interoperability</strong></td>
<td>Needs conscious effort</td>
<td>By default</td>
</tr>
<tr>
<td><strong>Dev Method</strong></td>
<td>Waterfall</td>
<td>Agile, DevOps</td>
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</table>
Life Cycle of a Digital Service

Digital Service Life-cycle

A. Define
1. Description
2. Classification
3. Prioritization

B. Realize
4. Design
5. Development
6. Delivery

D. Govern
9. Governing DSS
10. DSS Strategies

C. Measure
7. Measurement
8. Assessment

Digital Service Standard spans all the 4 Phases and the 10 Steps
Taxonomy of DSS

Top Mgmt - Identify goals, priority, status and impact of various digital services
Aligns with SDLC - also measurement and governance of eServices
Tasks that the concerned teams need to undertake
Component of digital service on which a Standard or Principle has to be specified
Standards, Principles and Guidelines comprising the DSS

* Partially populated
Framework for Defining a Digital Service

Objectives:

- Define the taxonomy of the digital service
- Describe and detail the standards/principles for all the attributes identified

Integrated online service delivery
- Process re-engineering
- Outcome-oriented
- Define acceptance criteria, charges
- Relevant steps visible
- Notifications
- Rejection Reason
- Adaptive interface
- Enable bespoke services
- Empathize via citizen service journey map
- Ideate
- Prototype
- Single Sign-on
- EA based
- Collaborate
- Re-engineer back-office
- End-to-end
- Understandable

Service Level
- TAT

G2C
- G2B

National G2C
- G2B

Service Level
- TAT

Direct
- Indirect

Web
- Kiosk
- Mobile

Public
- Private

Identify
- Adopt KPI

Connectivity req.
- Degree of existing automation

High / Medium / Low
- Stakeholders impacted
- No. of Transaction
- Geographical

High / Medium / Low
- Involved external agencies
- Constraints
- User satisfaction
- Prioritize based on visibility and complexity

High / Medium / Low
- Replicability
- Knowledge
- Innovation
- High / Medium
- Identify forms, document, workflows, regulatory requirements
- High / Medium / Low
- Identify forms, document, workflows, regulatory requirements
- High / Medium / Low
- Identifying forms, document, workflows, regulatory requirements
- High / Medium / Low
- Involved external agencies
- Constraints
Framework for Realizing Digital Services

**Phase**

**Realizing Digital Service**

**Activity**

**R1 Design**
- R1.1 Identify target group
- R1.2 Analyze user needs through Questionnaire, Interview, Focus Group Discussions, Workshops, Past Data Analysis
- Towards cashless, contactless & paperless
- Minimize tasks, forms, workflows
- Integrate
- Automate
- Change related Acts, Rules and Regulations
- Single-window
- Identify reusable services - build repository
- User Experience e.g. follow accessibility
- Smoothening Interaction
- Optimizing

**R2 Development**
- R2.1 Service Development
- R2.2 Maintenance
- All Browser support
- All mobile browsers
- Appstore, MeitY
- Establish (Toll free, IVRS, SMS, Chat, e-mail)
- Language support

**R3 Delivery**
- R3.1 Delivery Channels
- R3.2 Grievance Handling
- R3.2.1 Unified Contact Centre
- R3.1.2 Mobile
- R3.1.3 Assisted

**Attributes**
- User Experience e.g. follow accessibility
- Smoothening Interaction
- Optimizing
- Explore IndEA
- Explore Low-code development platforms
- MDDS Standards, MeitY
- Biometric Standards, UIDAI
- LGD Directory
- IndEA technology standards
- ISO 27001 security
- ISO/IEC certified cloud
- Security Audited
- Mobile Render able
- Refer IndEA security model
- IT Act 2000 e.g. PIIs
- Aadhaar Act 2016
- Open API Ecosystem i.e. Repository and Gateway
- Ref. eg.
- Unicode
- Document Lifecycle as per ISO Standards
- Documentation comply with ISO/IEC 26514:2008
- Versioning
- Ref ISO/IEC 2000-1
- Identity and Access Management Solution
- Monitoring tool e.g. NMS
- Plan Downtime
- Agile Development
- All platform and browser support
- Mobile Browsers, Appstore, MeitY

**Standards/Principles**
- Document Lifecycle as per ISO Standards
- Documentation comply with ISO/IEC 26514:2008
- Versioning
- Ref ISO/IEC 2000-1
- Identity and Access Management Solution
- Monitoring tool e.g. NMS
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- Mobile Browsers, Appstore, MeitY
Objectives:
- To enable an effective management
- Promote alignment of the service with the user needs
- Compare performance qualitatively and quantitatively, as pre-defined
- Compare with global benchmarks and promote continuous improvement.

- Percentage of DS delivery
- TAT
- KPIs
- DSS Template
- Data from applications
- Real time
- Sample DSS
- KPIs – eTaal, Dashboard
- Identify improvement areas
- Link KPI O/P vs target using GIS
- Measure Total cost of ownership (OPEX + CAPEX)
- Stakeholder involvement
- Obtain Feedback
- Define SOPs
- Escalation mechanism
- Measure periodically
- DSS Template to measure and monitor KPIs

- Degree of Conformance
- Annual / Bi-Annual
- For a Group of Services
- By 3rd Party
- DSS Template
Framework for Governing Digital Service Standard

- **Objectives**
  - Establishment of **institutional** mechanisms at Central/State levels
  - Provide for periodic enhancements to DSS
  - Create frameworks for audit and certification of organization
  - Facilitate the adoption of DSS
  - Annual review
  - Assess continuously
  - Evaluate impact
  - Version control

- **Establishment** of institutional mechanisms at Central/State levels
- **Provide for** periodic enhancements to DSS
- **Create** frameworks for audit and certification of organization
- **Facilitate the adoption of** DSS

- **Annual review**
- **Assess continuously**
- **Evaluate impact**
- **Version control**
DSS Certification

**DSS Level 1:** MUST be compliant with the following:

- D1.1.2 Transparency
- D1.3.1 Quantitative Service Levels/KPIs
- D2.1.1 Taxonomy of Digital Services
- D2.1.2 Service Metadata
- R1.1.1 User Needs Analysis
- R1.1.2 Process Re-engineering
- R1.2.1 User Experience
- R1.2.2 User Interface
- R1.3.2 Compliance to Standards
- R1.3.3 Security & Privacy
- R2.1.2 Local Language Interface
- R2.1.3 Documentation
- R2.2.1 Change Control

**DSS Level 2:** MUST be compliant with the following, in addition to the requirements of Level 1:

- M1.1.1 Quality / Outcome KPIs
- M1.3 Analysis & Dashboards for measurement of Quantity/Output KPIs
- M1.3.1 Cost-effectiveness of the Service
- G1.1.1: Institutional Mechanisms
- G2.1.1 Change Management
- G2.3.1 Capacity Building
DSS Audit

- Establish a process for empanelment of professional companies to undertake audit of digital services projects for compliance with DSS.
- Establish and notify the formats and templates for the DSS audit
- Audited for adherence to
  - Regulatory requirements applicable to the digital service
  - Data Standards published by MeitY (http://egovstandards.gov.in)
  - Data Privacy & Security
  - Service Level Agreements
  - Infrastructure
  - Security Policy Guidelines
  - Testing
  - Documentation
Framework for Governing Digital Service Standard

- **Objectives**
  - Establishment of institutional mechanisms at Central/State levels
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  - Facilitate the adoption of DSS

  **Impact-constraint matrix**
  - Consultative approach
  - Risk Assessment
  - Budget Requirements
  - SLA based
  - User Feedback
  - Rewards & Penalties
  - Panel of Auditors
  - Define Team
  - Alerts for Corrective Action
  - Dashboard
  - Leadership
  - Business Process Re-engineering
  - Digital Service Teams
  - FAQs
  - Training
  - Active citizen participation
Institutional Mechanism for Governing DSS

Government

DSS Governance Board

IT Governance Board

- A Structure
- Roles & Responsibilities

- DSS Capabilities
- DSS Development
- Adoption of DSS
- Enhancement of DSS
- DSS Repository

- Reviews
- DSS Compliance & Audit

- Is Responsible for
- DSS Certification

- Manages
- Migration of Legacy Applications to target DSS
- Incumbent System Integrators

- Manages
- Green Field Projects to conform to DSS
- New System Integrators

- Reports Performance to
- Reports DSS Compliance to

- Participates in
- Provides DSS Vision to
- Provides Approvals & Resources to

- Reports Progress of Adoption to
THANK YOU