**NAME OF CATEGORY- INNOVATIVE USE OF ICT BY STATE GOVERNMENT PSUs’**/ **COOPERATIVES/ FEDERATIONS/SOCIETIES**

**1.** **Coverage – Geographical and Demographic** :-

(i) Comprehensiveness of reach of delivery centres,

|  |
| --- |
| All office of GUVNL and its subsidiary companies. |

(ii) Number of delivery centres

|  |
| --- |
| Around 1500 office of all subsidiaries are availing these Information Security Management System (ISMS) services. |

(iii) Geographical

(a)National level – Number of State covered

(b) State/UT level- Number of District covered

33

(c) District level- Number of Blocks covered

Please give specific details:-

|  |
| --- |
| The entire geographical area of Gujarat state has been covered. |

(iv) Demographic spread (percentage of population covered)

|  |
| --- |
| 1.65 crore consumers, around 15000 employees of 7 subsidiary companies are enjoying the benefits provided by ISMS in protecting the security of data available with GuVNL |

2. Situation Before the Initiative (Bottlenecks, Challenges, constraints etc with specific details as to what triggered the Organization to conceptualize this project) :

|  |
| --- |
| There were cases of email IDs being hacked, desktops being infected with virus/malware, ERP access slowness due to unwanted network traffic, internet misuse by users etc, hence it was required to implement separate ISMS project to manage these things in a controlled manner. |

**3. Scope of Services/ Activities Covered** (Relevance of choice of application for clients/ PSU, extent of e-enablement in terms of number of processes/services, extent to which step in each service/process have been ICT- enabled #)

|  |
| --- |
| GUVNL has succeeded in maintaining availability of services, preservation of data confidentiality and integrity for GuVNL in order to prevent and minimize the impacts of security incidents. Following key features useful in end user interaction have been maintained by us:   1. Software based firewall installed at 29 locations in 30 ISA Servers to protect more than 1500 office locations & 20,000 computers state-wide. 2. Implementation of NIPS – DefensePro including distributed denial of service (DDoS) mitigation to fully protect applications and networks against known and emerging network security threats, application vulnerability exploitation, malware spread, network anomalies, information theft and other emerging cyber-attacks. 3. Configuration backup on daily basis of ISA Servers and Active Directory data. 4. Deployment of Open source tools for fetching inventory and remote desktop support. 5. Trend Micro Office Scan secures both physical and virtual endpoints with immediate protection against threats delivered through leading malware protection. 6. Trend Micro Inters Scan Messaging Security with enterprise-level protection with the highest spam and phishing detection rates for e-Mails. 7. Trend Micro Inters Scan Web Security Virtual Appliance, a secure web gateway that combines application control with exploit detection, anti-malware scanning, real-time web reputation, and flexible URL filtering to provide Internet threat protection. |

4. Strategy Adopted

(i) The details of base line study done,

|  |  |
| --- | --- |
| There were multiple incidents virus attacks, email hacking, network flood by malwares. Further vulnerability scan and network logs showed many potential security risks needed to be covered. GUVNL has large data base of state wide consumers, |  |

(ii) Problems identified,

|  |
| --- |
| Security vulnerabilities like email IDs getting hacked, desktops infected from internet/email virus/spyware/malware, these malwares sometimes used all available bandwidth in spreading malicious data to network resulting in network choking and production instance unavailability. |

(iii) Roll out/implementation model,

|  |  |
| --- | --- |
| First NIPS device put at internet facing end in GUVNL network to achieve maximum security from external attacks as well as internal attacks, then NIPS device kept in report only mode to study current traffic pattern and other statistics. Afterward One by one IP segments out in block and report mode. Initially there were false positive traffic blocking but after fine tuning required parameters device working satisfactory. |  |

(iv) Communication and dissemination strategy and approach used.):

|  |
| --- |
| NIPS device kept at Gateway level, there was no change required at end user level. Hence such communication was not required. Though when false positive traffic blocked by NIPS during implementation, email communication happened to understand problem and correction. |

5. **Technology Platform used-**

1. Description,

|  |  |
| --- | --- |
| Firewall, Active Directory, NIPS, Enterprise Antivirus Solution, Solarwinds NMS, Upgraded Mail Scanning and URL Filtering software on virtual platform with latest versions. |  |

1. Interoperability

|  |
| --- |
| NIPS device filters any network traffic, i.e. device independent, means it is compatible with approx 5726 existing GUVNL network devices. |

1. Security concerns

|  |
| --- |
| There were security concerns like data theft, hacking of servers, website and email account etc. GUVNL Data center has large central database of millions of consumers all over Guajrat State which is crucial information to protect. |

1. Any issue with the technology used

|  |
| --- |
| Initial hiccups like genuine traffic also getting blocked at NIPS faced, eventually after necessary fine tuning same is resolved. |

1. Service level Agreements(SLAs) (Give details about presence of SLA, whether documented, whether referred etc. #)

|  |  |
| --- | --- |
| SLAs defined and documented. SLA Uptime is 99% and above. 2.5% penalty of AMC value if uptime ranges from 98% to 99% and 5% penalty of AMC value if uptime less than 98%.  Response time required is 4 hours, resolution time is 8 hours. |  |

**6. Enhancement of Productivity** (Give details about impact on volume of transactions handled per employee, Productivity of machines/ resources#)

|  |
| --- |
| Productivity of users/resources increased by having higher availability of services/servers/network by eliminating malicious network traffic. |

**7. Efficiency Enhancement** (Give specific details about the following #)

1. Volume of transactions processed,

|  |
| --- |
| **Below are our ERP transactions supported by this ISMS project.**  **Avg. Trans. per month of one of the Distribution company .**  AP transactions : 70592  CRM: 1220345  HRMS: 57657  Inventory: 3283651  Projects: 3416  Purchase: 28654 |

1. Coping with transaction volume growth

|  |
| --- |
| The NIPS device is ASIC based hardware appliance providing better throughput performance and stability. |

1. Time taken to process transactions,

|  |
| --- |
| NA |

1. Accuracy of output,

|  |
| --- |
| By blocking internal and external threats at gateway level by malicious activities in network reduced at great extent. |

1. Number of delays in service delivery

|  |
| --- |
| NA |

**8. Service Delivery** – Business/ Client Centricity (Give details about improvement in interaction with clients and outcome for clients, relevance of access points, Length and Breadth of services provided online etc. #)

|  |
| --- |
| ISMS has helped to support the key IT applications being used by GuVNL such as the ERP solution implemented in-house. Due to better network availability, transactions in ERP are implemented faster and hence public grievances have reduced as a result. |

**9. Citizen Centricity** (Give specific details on the following#)

(i)Impact on effort, time and cost incurred by user,

|  |
| --- |
| Turnaround times reduced after ISMS because of better network availability. |

(ii) Feedback/grievance redressal mechanism,

|  |
| --- |
| NA |

(iii) Audit Trails,

|  |
| --- |
| Security events/logs recorded for predefined interval. |

(iv) Interactive platform for service delivery,

|  |
| --- |
| ISMS Project is managed by GUVNL IT department with help of local IT Departments and those can have access to its features. |

(v) Stakeholder consultation

|  |
| --- |
|  |

10. **User convenience** (Give specific details about the followings #)

1. Service delivery channels (Web, email, SMS etc.)

|  |
| --- |
| Better availability of ERP, email and web services with unwanted traffic/content being blocked by firewall/proxy/NIPS. |

1. Completeness of information provided to the users,

|  |
| --- |
| As required. |

1. Accessibility (Time Window),

|  |
| --- |
| 24x7 |

1. Distance required to travel to Access Points

|  |
| --- |
|  |

1. Facility for online/offline download and online submission of forms,

|  |
| --- |
|  |

1. status tracking

|  |
| --- |
| Real time status tracking though console. |

**11. Innovation** (Give details on how the usage of technology is exemplary, any use of new and emerging technology, impact on number of steps required, identification and removal of bottlenecks/ Irrelevant steps etc. #)

|  |  |
| --- | --- |
| There were security concerns in respect of vulnerability to the Data center equipments as well as threats to the applications and confidential information. Productivity of users/resources increased by having higher availability of services/servers/network by eliminating malicious network traffic. Network bottlenecks in some cases due to unwanted traffic removed. |  |

**12. Defined and Achieved outcomes** (Give details about extent of improvement in terms of organizational objectives, output targeted in the beginning of the project and output achieved, extent to which the project is able to reach/ fulfill the requirements of planned beneficiaries etc. #)

|  |
| --- |
| 1. Prompt detection of data leakage and fast reaction  2. Better Securing confidentiality, integrity and availability of information.  3. Credibility, trust and confidence of users.  4. With NIPS being used, it is also possible to prevent intrusion in comparison to the old system where intrusion could only be detected. |

**13. Sustainability** (Give details about sustainability w.r.t. technology (technology used, user privacy, security of information shared- Digital Signature/ Encryption etc. #), Organization (hiring trained staff, training etc#), financial (Scope for revenue generation etc. #)

|  |
| --- |
| ISMS Project cost was Rs 8.11 crore. ISMS project being maintained by third party vendor at approx annual cost of Rs 1 crore. Also training and capacity building to help people understand ISMS and use it helped sustaining. |

**14. Adaptability Analysis**

1. Measures to ensure adaptability and scalability

|  |
| --- |
| Regular training conducted for user awareness. |

1. Measures to ensure replicability

|  |
| --- |
| ISMS project can be replicated in similar large setups where large no of users/desktops needs to be managed. |

1. Restrictions, if any, in replication and or scalability

|  |
| --- |
|  |

1. Risk Analysis

|  |
| --- |
| Vulnerability scan done. |

15. **Result Achieved/ Value Delivered** to the beneficiary of the project-(share the results, matrices, key learning’s, feedback and stakeholders statements that show a positive difference is being made etc):

1. **To organization**

|  |
| --- |
| Better Manageability, Access, control and visibility over end user services. Secure and fast network availability. |

1. **To citizen**

|  |
| --- |
| Better Public services via better availability of ERP in all over state delivery centers achieved via ISMS Project. |

1. **Other stakeholders**

|  |
| --- |
|  |

16. Extent to which the Objective of the Project is fulfilled-(benefit to the target audience i.e.G2G, G2C, G2B, G2E or any other, size and category of population/stakeholder benefited etc):

G2G, G2C, G2B

|  |
| --- |
| The project has had an indirect benefit for citizens because with the implementation of ISMS, better security measures have ensured that the system is available for the rightful use. This has been achieved by establishing an infrastructure that eliminates malicious activities within the GuVNL network. Due to improved network capacity, now the ERP system has better performance leading to faster outputs and transaction processing |

17. Comparative Analysis of earlier Vs new system with respect to the BPR, Change Management, Outcome/benefit, Change in legal system, rules and regulations

|  |
| --- |
| Network availability increased after ISMS project. Improvement in transactional speed from earlier system. Reduction in malicious attacks in the system. |

18. Other distinctive features/ accomplishments of the project:

|  |
| --- |
| Bagged CSI-Nihilent e-Governence Award 2008-09 |

# This is just an indicative list of indicators. Applicant can add on more information based on suitability of the project nominated.