



**INFORMATION TECHNOLOGY
DEPARTMENT**

**POLICY NOTE
2015 – 2016**

DEMAND NO. 31

Mukkur N. SUBRAMANIAN
Minister for Information Technology

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Government of Tamil Nadu
2015

INFORMATION TECHNOLOGY DEPARTMENT

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CHAPTER – I
INTRODUCTION

Tamil Nadu has made a mark as one of the foremost “Knowledge States” in the Country.

The Vision Document 2023 of the Government of Tamil Nadu as envisaged by the Hon’ble Chief Minister aims to transform the State as the “Innovation Hub and Knowledge Capital” of the country through creation of world class institutions in various fields and by utilising the human talent available in the State.

Tamil Nadu has been upgrading its information infrastructure in a dynamic manner, so as to facilitate speedy access to information and deliver the various services of the Government of Tamil Nadu to the citizens in a faster and efficient manner.

Tamil Nadu has become the Destination of Choice for the IT/ ITES sector by leveraging the skills of its human resources in Information Technology (IT) and Information Technology Enabled Services (ITES) sectors

such as Banking, Financial Services and Insurance (BFSI), Health Systems Management, Computer Aided Designing (CAD) and Computer Aided Engineering (CAE).

The Information Technology Department was set up to promote the IT industry in the State as well as give a fillip to e-Governance.

The objectives of the Information Technology Department are to -

- **Provide Government services, both informational and transactional, to Citizens, at their door steps through Internet;**
- **Bridge the digital rural-urban divide;**
- **Make Tamil Nadu, the Best State in IT enabled Governance;**
- **Substantially increase the software exports of Tamil Nadu;**

- **Provide Cable TV services to all households in Tamil Nadu at reasonable rates;**
- **Provide Tamil Education through the web and take Computing in Tamil to a higher level;**
- **Enhance the quality of life of citizens through Information and Communication Technology.**

CHAPTER – II

ELECTRONICS CORPORATION OF TAMILNADU LIMITED (ELCOT)

Electronics Corporation of Tamil Nadu Limited - a wholly owned Government of Tamil Nadu undertaking, that was registered under Indian Companies Act of 1956, for the promotion of electronics industry has transformed itself as the Information Technology arm of the Government of Tamil Nadu. ELCOT has been providing technical assistance to various Departments, Organizations, Boards, etc. of the Government of Tamil Nadu in the area of Information Technology. ELCOT is also the optional Nodal Agency for hardware procurement, software development, major turnkey IT projects of the Government of Tamil Nadu and major projects of the Department of Information Technology, Government of India. The Tamil Nadu State Wide Area Network (TNSWAN) and Tamil Nadu State Data Centre (TNSDC) have been established by ELCOT.

The Special Economic Zones created by ELCOT and branded as 'ELCOSEZ' have been facilitating the State of Tamil Nadu as the 'Destination of Choice' for IT / ITES investments.

INFORMATION TECHNOLOGY SPECIAL ECONOMIC ZONES (ELCOSEZs)

As per the policy initiative of Government of Tamil Nadu for the development of IT / ITES industry in Tamil Nadu, Special Economic Zones (ELCOSEZs) were established by ELCOT in Chennai & Tier-II locations viz. Coimbatore, Madurai (2 locations), Tiruchy, Salem, Tirunelveli and Hosur.

ELCOSEZ-SHOLINGANALLUR, CHENNAI

ELCOSEZ Sholinganallur has been established in an area of 377.08 acres. The total investment of ELCOT in this ELCOSEZ is around Rs.194 Crores, out of which, Rs.43.26 Crores has been spent for infrastructure.

Details of Lands leased to IT/ITES Companies	M/s.WIPRO	- 80 acres
	M/s.HCL	- 50 acres
	M/s.Satyam	- 50 acres

	M/s.Sutherland	- 15 acres	
	M/s.CTS	- 20 acres	
Present status of building constructed by the allottees and employment details	Name of the Company	Constructed area (Sq.ft.)	No. of employees
	WIPRO	19 lakhs	19,000
	HCL	22 lakhs	12,000
	SATYAM	6.25 lakhs 2.00 lakhs (Under Construction)	4,200
	CTS	28 lakhs (18,000 Seating Capacity)	3,500

ELCOSEZ-VILANKURICHI, COIMBATORE

ELCOSEZ – Vilankurichi – Coimbatore has been established in an area of 62 acres. The total investment of ELCOT in this ELCOSEZ is around Rs.70 Crores out of which Rs.19 Crores has been spent for infrastructure.

Details of Lands leased to IT/ITES Companies	M/s.WIPRO	- 9.50 acres
	M/s.Tidel Park Coimbatore Ltd.	- 9.50 acres

Present status of building constructed by the allottees and employment details	Name of the Company	Constructed area (Sq.ft.)	No. of employees
		WIPRO	3.5 lakhs
	Tidel Park Coimbatore Limited	17 lakhs (7.12 lakhs sq.ft. has been occupied by 26 IT/ITES companies and 16 SMEs)	6,000

ELCOSEZ - ILANDHAIKULAM, MADURAI

ELCOSEZ – Ilandhaikulam, Madurai has been established in an area of 28.91 acres. The total investment of ELCOT in this ELCOSEZ is around Rs.34.41 Crores, out of which Rs.24 Crores has been spent for infrastructure.

Details of Lands leased to IT/ITES Companies	M/s.Honeywell Technologies Ltd. – 4.50 acres		
	M/s.Chella Software Pvt.Ltd. – 2.25 acres		
	M/s.HCL Limited – 6.75 acres		
Present status of building constructed by the allottees and employment details	Name of the Company	Constructed area (Sq.ft.)	No. of employees
	Honeywell Technologies Limited	50,000	300

Space allotted to IT / ITES Companies in ELCOT IT Building	M/s.Galaxy Infotech Limited – 2,508 Sq.ft.	30
	M/s.AMBC Technologies Pvt. Ltd – 3,277 sq.ft.	15
	M/s.Sai BPO Services Limited – 15,181 sq.ft.	310
	M/s.Neeyamo Enterprises Solutions Private Ltd. – 30,120 sq.ft.	100

ELCOSEZ - VADAPALANJI, MADURAI

ELCOSEZ - Vadapalanji, Madurai, has been established in an area of 245.17 acres. (213.56 acres approved as SEZ and balance 31.61 acres Non SEZ). The total investment of ELCOT in this ELCOSEZ is around Rs.45 Crores, out of which Rs.14.99 Crores has been spent for infrastructure.

Details of Lands leased to IT/ITES Companies	M/s.HCL – 60 acres
	M/s.SATYAM – 50 acres
	M/s.Sutherland Global Services – 5 acres
	M/s. Caliber Point – 5 acres
	M/s.Health Plan Systems India Ltd. – 2 acres.

ELCOSEZ - NAVALPATTU, TIRUCHY

ELCOSEZ - Navalpattu, Tiruchy, has been established in an area of 147.61 acres. (123.23 acres approved as SEZ and balance 24.38 acres Non SEZ). The total investment of ELCOT in this ELCOSEZ is around Rs.60 Crores, out of which Rs. 33.21 Crores has been spent for infrastructure.

Details of Lands leased to IT/ITES Companies	
1. M/s.Assyst International Pvt. Ltd.	– 3 acres
2. M/s.Health Plan Systems (India) Pvt.Ltd.	– 2 acres
3. M/s.HCL Infosystems	– 2 acres
4. M/s.iWave Systems Tech. Pvt. Ltd.	– 5 acres
5. M/s.Unlimited Innovations India P. Ltd.	– 5 acres
6. M/s.Zylog Systems Ltd	– 5 acres
7. M/s.iLink Multitech Solutions Pvt. Ltd.	– 2 acres
8. M/s.WNS Global Services Pvt. Ltd.	– 5 acres
9. M/s.Vdart Technologies	– 2 acres

		No. of employees
Space allotted to IT/ITES Companies	M/s.iLink Systems Pvt. Ltd. – 6,668 sq.ft.	80
	M/s Scientific Publishing Co. – 12,941sq.ft.	220
	M/s.Fine Data Sciences Pvt. Ltd. - 3,643 sq.ft. (Yet to commence operations)	
	M/s. Vuram Technology Solutions Pvt. Ltd. - 5976 sq.ft. (Yet to commence operations)	

ELCOSEZ-GANGAIKONDAN, TIRUNELVELI

ELCOSEZ-Gangaikondan, Tirunelveli has been established in an area of 500 acres. The SEZ approval was obtained for an extent of 290 acres of land and balance 210 acres as Non SEZ area. The total investment of ELCOT in this ELCOSEZ is around Rs.52.85 Crores, out of which Rs.29 Crores has been spent for infrastructure.

Details of Lands leased to IT/ITES Companies	
M/s.Syntel International Pvt. Ltd.	– 100 acres
M/s.Deccan iServices	– 2 acres
M/s.A & D Cosmic Power	– 25 acres (in non-SEZ area)

Space allotted to IT/ITES Companies	M/s.Komposos Media Pvt. Ltd. – 9,338 sq.ft.
Present status of building constructed by the allottees and employment details	2.60 lakh sq.ft. IT building is under construction by M/s.Syntel International Pvt. Ltd.

ELCOSEZ-JAGIRAMPALAYAM, SALEM

ELCOSEZ – Jagirampalayam, Salem has been established in an area of 164.26 acres. (The initial development is for 53.33 acres only). The total investment of ELCOT in this ELCOSEZ is around Rs.33 Crores, out of which Rs.10 Crores has been spent for infrastructure.

Details of Lands leased to IT/ITES Companies	1.M/s.dB Professionals – 3.00 acres
	2.M/s.Vee Technologies – 9.49 acres
	3.M/s.Mahima Techs. Pvt. Ltd. – 3.00 acres
	4.M/s.GTP Infotech Solutions Ltd. – 2.50 acres
	5.M/s.Senovate Infotech (P) Ltd. – 1.25 acres

Present status of 50,000 sq.ft. ELCOT IT Building	Under Construction
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ELCOSEZ-VISWANATHAPURAM, HOSUR

ELCOSEZ – Viswanathapuram, Hosur has been established in an area of 174.47 acres. The total investment of ELCOT in this ELCOSEZ is around Rs.40 Crores, out of which Rs.39 Crores has been spent for infrastructure.

Details of Lands leased to IT/ITES Companies	M/s.Okaya Infocom – 10 acres
	M/s.CRM IT Solutions Pvt.Ltd. – 3 acres
	M/s.CRM Infotek India Pvt.Ltd. – 2 acres
Present status of 50,000 sq.ft. ELCOT IT Building.	Under construction

HARDWARE PROCUREMENT

Government has nominated Electronics Corporation of Tamil Nadu Limited (ELCOT) as the Optional Procurement Agency for all Government Departments to procure IT related products and services. ELCOT is procuring and supplying IT Hardware with latest configuration like Servers, Desktop Computers, Laptop Computers, Printers, Scanners and all the Network devices at competitive price to various Departments.

ELCOT is supplying all kinds of IT products to the major departments such as Revenue, Rural Development & Panchayat Raj, Forest, Health & Family Welfare, Agriculture, School Education, Higher Education, Commercial Taxes & Registration Department, etc.

ELCOT has also procured Internet Protocol (IP) Camera Surveillance System for implementing in Government Offices. ELCOT has successfully completed supply of Laptops to Village Administrative Officers (VAOs) and Firka Revenue Inspectors (RI). ELCOT also supplied Hardware for about 500 Arasu eSevai Centres all over Tamil Nadu.

SCHEME FOR DISTRIBUTION OF LAPTOP COMPUTERS

The Government of Tamil Nadu is implementing the scheme of distribution of laptop computers to the students studying in Government and Government-aided schools and Colleges in the State to facilitate their acquiring better computer skills. Government in Special Programme Implementation Department, have issued orders for the procurement of Laptop Computers to ELCOT.

In First Phase, 8,98,866 Laptop Computers were procured for the year 2011–12. In the Second Phase, 7,56,000 Laptop Computers were procured for the year 2012–13.

In Phase-III, 5,65,000 Laptop Computers were procured and supplied for the year 2013-14.

For Phase-IV and Phase-V (2014-15 and 2015-16), Government have issued orders for procurement of 11 lakhs Laptop Computers. Action has been taken for procurement and distribution. It is expected that the supply of the Laptop Computers for Phase IV (2014-15) would be completed by October 2015

and the supply of the Laptop Computers for Phase-V (2015-16) would be completed by December 2015.

Arasu eSevai Centres

The objective of operating Arasu eSevai Centres across the State of Tamil Nadu is to provide multiple Government services under a single roof, closest to the citizen, with a delightful citizen experience. The Arasu eSevai Centres have been envisioned as the front-end delivery channel for providing State Government, private and other services to citizens. The idea is to develop a platform that can enable State Government, private and other organizations to integrate their services at a single point for the benefit of the Citizens.

At present, Arasu eSevai Centres have been established by ELCOT in the following 345 locations across the State of Tamil Nadu in urban and rural areas of which 101 centres were inaugurated on 15.07.2015 by Hon'ble Chief Minister of Tamil Nadu.

District Collectorate	-	32
Taluk Office (Tiruvallur & Kanchipuram District)	-	18
Corporation of Chennai (Within Chennai limit)	-	50
Metro Water	-	7
Commissionerate of Municipal Administration	-	102
Rural Development & Panchayat Raj	-	100
District RI Quarters	-	36
Total No. of locations	-	345

So far the total number of transactions is 4,65,123 and the amount collected through Arasu eSevai centres is around Rs.3 Crores.

IMPLEMENTATION OF “CLOUD AND WEB HOSTING SERVICES TO STUDENTS AND YOUNG ENTREPRENEURS”

For the benefit of students and emerging young entrepreneurs, it has been proposed to set up a Government Cloud. Orders have been passed for Rs.50 Lakhs to manage Cloud services such as Web-hosting on a self-service mode at a nominal cost.

- A Work Order has been issued to C-DAC for establishment of Cloud environment.

- ICTACT is taking action for the selection of students and young entrepreneurs.
- C-DAC has created a web portal for providing Cloud environment to students and young entrepreneurs. Online Registration form for selecting young entrepreneurs and students has been prepared to make it online. The service charges for operational cost are being worked out.

Rural Business Process Outsourcing (BPO)

An Enhanced Rural BPO Policy was released by the Government to train and employ rural youth from poor socio-economic background and to prevent migration of youth to the cities.

As announced by the Hon'ble Chief Minister of Tamil Nadu, a 50 seater Rural BPO Centre has been established at Navalur-Kuttapattu Village, Srirangam in Trichy District. This BPO Centre has been set up by M/s.Sutherland Global Services (BPO Company) at Shivani Institute of Technology (Institution) based on the facilitation and Coordination by ELCOT.

In addition, letter of acceptance has been issued to M/s.Annai Women Development Agencies for establishing Rural BPO's at three locations.

CHAPTER – III

INFORMATION TECHNOLOGY

INFRASTRUCTURE

Information Technology (IT) Infrastructure is the integrated framework upon which digital network operates. The IT Infrastructure includes Data Centre, Computer networks and Database Management devices. Tamil Nadu is one of the few States in India to have a full fledged Wide Area Network and State Data Centre. Tamil Nadu has the following IT infrastructure at its disposal:-

- 1) **Tamil Nadu State Wide Area Network (TNSWAN)**
 - a) Vertical Connectivity
 - b) Horizontal Connectivity
 - c) Redundant Connectivity
- 2) **Broadband Connectivity / Internet Leased Line**
- 3) **Tamil Nadu State Data Centre (TNSDC)**
- 4) **Server Farm**
- 5) **National Knowledge Network (NKN)**
- 6) **Disaster Recovery Center (DRC) & Nearline DRC**
- 7) **Cloud Computing Set up at TNSDC**
- 8) **e-Mail Solutions**

1. Tamil Nadu State Wide Area Network (TNSWAN)

State Wide Area Network has been identified as one of the core e-Governance infrastructure by National e- Governance Action Plan (NeGP). Government of India (GoI) has issued guidelines for setting up of State Wide Area Network and has also extended partial financial support to the States. GoI approved the TNSWAN proposal of Tamil Nadu during April 2005 for the project. It is a shared scheme between the State and Central Governments at a revised estimated cost of Rs.140.25 Crores (GoI share is Rs.55.73 Crores and state share is Rs.84.52 Crores).

1 (a) Vertical Connectivity

TNSWAN core network has 708 nodes (POPs- Points of Presence), which were created at the Secretariat, Rajbhavan, DGP office, Commissioner of Police, Corporation of Chennai, Government Complexes such as DPI, DMS, Ezhilagam, Panagal Building and Kuralagam at Chennai and at the Collectorates, Revenue Divisional Offices, Taluk offices and Block Development offices. This Network provides a link to all the Government

departments by providing Voice, Data and Video connectivity for improving the delivery of services to the public, for improving the response-time and transparency and to enable the Government Departments to access their servers hosted at TNSDC. The Build, Own, Operate and Transfer (BOOT) Operation of the Network was completed on 30.11.2012. Now Phase-II is under operation over a period of 3 years from 09.09.2013 to 08.09.2016. The State Government accorded Administrative Approval for a sum of Rs.74.69 Crores towards TNSWAN Phase-II operations which is fully funded by the State. Strict Service Level Agreement (SLA) is being adhered in Vertical Connectivity on 24x7 basis

The following services are provided to Government departments through TNSWAN.

- Secured Intranet Application Access
- Secured Internet Access
- Closed User Group Voice Services
- Video Conferencing Services

TNSWAN and NKN are being integrated at District Headquarters level as per the guidelines of Department of

Electronics and Information Technology (DeitY, Government of India. With this integration, the bandwidth at DHQ has been upgraded to 34 Mbps / 100 Mbps / 1 Gbps as per requirements.

1 (b) Horizontal Connectivity

Government Offices have been connected to TNSWAN POPs for availing intranet facility for rolling out the Department's applications that are hosted at TNSDC including services such as Voice, Data, Internet, Video Conferencing etc. Horizontal Connectivity has also been made available through TNSWAN Points of Presence (PoPs) to Government Departments beyond TNSWAN.

So far, Horizontal Connectivity has been provided to more than 2000 offices of Government Departments namely Commercial Taxes, Tamil Nadu Water Supply and Drainage Board (TWAD), Tamil Nadu Health Systems Project (TNHSP), Treasuries & Accounts, Registration, Employment & Training, Forest, Transport, Tamil Nadu e-Governance Agency (TNeGA), State Health Society, Tamil Nadu Housing Board (TNHB), Survey and

Settlement, Tamil Nadu Cement Corporation Limited (TANCEM), Tamil Nadu Civil Supplies Corporation, etc.

1 (c) Redundant Connectivity

TNSWAN vertical connectivity is provided to all Districts, Taluks, BDOs and RDOs by using the bandwidth provided by NKN/BSNL. In order to ensure uninterrupted connectivity at the Districts, Taluks, BDOs and RDOs a secondary 2 Mbps MPLS-VPN (1:1) redundant connectivity has been implemented. Provisioning of 146 links has been completed and 50 links are under process.

2. Broadband Connectivity / Internet Leased Line

Broadband is a high speed data transmission facility which can carry a large amount of data by offering more bandwidth. ELCOT is providing Broadband connectivity to Government Offices at a competitive rate. About 25,000 Government offices including schools have been provided with Broadband connectivity.

Internet leased Line connectivity is being offered at 2 mbps to 45 mbps speed to the departments dealing with large amount of dynamic data. At present, Leased Line

Connectivity is being provided to various departments such as Metro Water, Corporation of Chennai, Director of Rural Development, Archaeology, Tamil Nadu Pollution Control Board, etc.

3. Tamil Nadu State Data Centre (TNSDC)

Tamil Nadu State Data Centre (TNSDC) is one of the core e-Governance infrastructure under National e-Governance Action Plan (NeGP). It is a shared scheme between State and Central Governments as per the State Data Centre (SDC) Guidelines of Department of Information Technology (DIT), Government of India (GoI), at an estimated cost of Rs.60.80 Crores (GoI share Rs.55.80 Crores & State Share Rs.5.00 Crores). Tamil Nadu is the first State in the country to obtain the ISO Certification for the Data Centre operations and for Management of Information Security which is an important milestone in the operation of TNSDC. TNSDC has now obtained upgraded ISO certifications ISO/IEC 20000-1:2011 and ISO/IEC 27001:2013.

TNSDC is housed at ELCOT, Perungudi Complex and is being maintained with a strict Service Level

Agreement (SLA) for ensuring 24x7 operation. TNSDC is a highly secured infrastructure in which the Government departments can host their applications. About 39 applications of Government Departments are Live from the TNSDC. Some of the Government applications which are operational in TNSDC are as follows :

- i) HMS & HMIS of Tamil Nadu Health Systems Project
- ii) e-Governance and e-District applications of SSDG
- iii) Crime and Criminal Tracking Network and Systems (CCTNS)
- iv) e-Payment System of IGR
- v) ERP of Chennai Corporation
- vi) Document Management system of Chennai Metro Rail Project
- vii) College Management System of Dr. MGR Medical University
- viii) Enterprise Resource Planning (ERP) for Priceless Fan-Mixie-Grinder and Priceless Laptop scheme etc.

The TNSDC is currently serving the complete requirements of various Government Departments and has currently reached 100% of its maximum capacity in terms of space. Hence, ELCOT has entered into a Memorandum of Understanding with BSNL for availing Server rack space as Co-location Services to address the immediate requirements of the departments.

Currently, ELCOT is also in the process of Expansion of TNSDC with additional 21 racks to cater to the needs of departments.

4. Server Farm

In order to provide common test-bed facility like Load balancer, Antivirus, Firewall etc., to the departments while hosting applications at TNSDC, a 'Server Farm' has been created at TNSDC with necessary hardware, software and testing tools. This will allow the departments to comply with Vulnerability Assessment and Penetration Tests before hosting applications at TNSDC.

5. National Knowledge Network (NKN)

National Knowledge Network (NKN) is a national level high speed Network established by Government of India. NKN provides a common platform to the scientists, researchers, doctors, scholars and students to work together for advancing human development by connecting the academic institutions across India and the global scientific community.

The bandwidth through NKN is being provided by Government agencies such as Bharat Sanchar Nigam Limited (BSNL), PowerGrid Corporation of India Limited (PGCIL) and RailTel. NKN also provides Network platform for National e-Governance Projects (NeGP) for their roll out at national level. The NKN consists of an ultra-high speed core, starting with multiple 2.5/10 Gigabits per second and progressively moving towards 40/100 Gigabits per second (Gbps) connectivity. 1 Gbps speed line from NKN has been terminated in TNSDC with 100 Mbps Internet Connectivity.

Through the NKN connectivity all the TNSWAN & TNSDC users can also access the applications that are

hosted at the national level. The applications can be accessed through NKN at a very high speed internet bandwidth which is several times faster than the earlier speed.

6. Disaster Recovery Centre (DRC) & Nearline DRC

The Tamil Nadu State Data Centre (TNSDC) enables the State Government and the Departments to host their applications and services on a common, redundant, secured and controlled environment, which leads to integration and resource optimization. However risks due to natural disasters such as Tsunami, earthquakes, floods etc, pose a herculean challenge to any Data Centre and hence establishment of a Disaster Recovery Centre (DRC) becomes mandatory to ensure the business continuity of the e-services provided by the departments. ELCOT has been nominated as the implementing agency for setting up of Disaster Recovery Centre (DRC) in a phased manner. ELCOT is in the process of Selection of Disaster Recovery Centre Operator (DRO) for Supply, Installation, Configuration, Testing, Operations and Management of Disaster

Recovery Centre (DRC) for Tamil Nadu State Data Centre (TNSDC) through an Open Tender. Now, the National Data Centre (NDC), Pune has been enabled as DRC for TNSDC under National DR Scheme.

To address the synchronous replication requirements, as a Nearline Disaster Recovery Centre, ELCOT has entered in to an Memorandum of Understanding (MoU) with Central owned Data Centres of STPI and BSNL in Chennai.

7. Cloud Computing Set up at TNSDC

Tamil Nadu State Data Centre (TNSDC) has been equipped with infrastructure to enable State departments with seamless, highly reliable / robust, shared and secured infrastructure with scalable capacity. For better and optimal utilization of the computer infrastructure and for utilizing the same infrastructure amongst multiple applications, adoption of Cloud Technology components in TNSDC is essential. This technology will also drive consolidation of IT resources resulting in power savings which will be a significant step towards adopting Green technologies.

Cloud based service delivery is being leveraged in the TNSDC, which will provide better utilization of IT resources, dynamic scalability, and appropriate disaster recovery of applications and data. This Cloud set up will drastically reduce the hardware, software and maintenance charges payable by departments. The Cloud solution provides the ability for departments to automatically provision the services via a Web Portal. This solution also provides all the necessary components / modules which are necessary to provide (a) Infrastructure as a Service (b) Platform as a Service. A small scale Cloud set-up was established in co-ordination with C-DAC with the infrastructure of TNSDC. Saree-Dhoti application deployed successfully in Cloud at TNSDC and public access is enabled for this application. ELCOT Enterprise Resource Planning – Facility Management Service (ERP - FMS) module was hosted as Proof of Concept (PoC) in Cloud and access has been enabled. Applications of Tamil Nadu Electrical Inspectorate (TNEI), Museum e-Book, e-learning and e-office application of TNeGA are under implementation under the Cloud set-up.

ELCOT is now in the process of establishing full fledged Cloud facility at TNSDC with shared allocation of funds from the Government of India and Government of Tamil Nadu.

8. e-Mail Solutions

The provisioning of e-Mail Services is an essential component of e-enabling of Government functioning. The existing email services have been extended to 3100 users, namely officers and departments within Secretariat, Officials in Districts and Taluks of few departments, MLAs and Hon'ble Ministers. In order to provide seamless desktop connectivity, as well as to adhere to the regulations with respect to storage and archival of email as official record of business process, a full-fledged “e-Mail Solution” has been mooted. The e-mail Solution has been launched through NIC-Secretariat and is operational.

CHAPTER – IV

DIRECTORATE OF e-GOVERNANCE AND TAMIL NADU e-GOVERNANCE AGENCY

Vision of Hon'ble Chief Minister as part of Vision Tamil Nadu 2023

“Tamil Nadu will nurture a culture of responsive and transparent governance that ensure progress, security and equal opportunity to all stakeholders.”

1. Introduction

Tamil Nadu e-Governance Agency (TNeGA), as a State Nodal Agency has been formed to support and drive all e-Governance initiatives of the Government of Tamil Nadu. TNeGA is implementing various e-Governance projects with the objective of making all Government services, wherever feasible, accessible to the common man in an efficient and transparent manner.

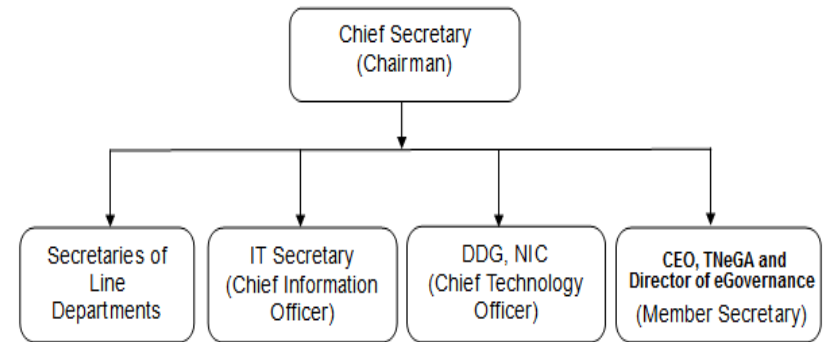
e-District, Common Service Centres in Rural and Urban areas, Capacity Building (CB) in Information and Communication Technology (ICT) & Tools, Geographical Information System (GIS), State Resident Data Hub (SRDH), State Services Delivery Gateway (SSDG) are some of the important projects under implementation by TNeGA.

The Tamil Nadu e-Governance Agency aims to fulfill the above Vision of the Hon'ble Chief Minister, through use of Information Technology in Governance and delivery of services to public at their doorsteps.

The Directorate of e-Governance has been established and is functioning along with TNeGA with the objective of playing an advisory role to State Government in e-Governance initiatives and implementing ICT projects across the State.

2. Institutional Framework

The Institutional Framework (Figure 1) available for e-Governance activities at State Level is as follows:



Apex Committee (TNeGA)

Figure - 1

2.1 State Apex Committee

The implementation of Mission Mode Projects (MMP) of National e-Governance Plan (NeGP) at all levels of Government is driven by the Apex committee headed by the Chief Secretary. It oversees and provides policy direction to State e-Governance initiatives and MMPs and ensures Intra Departmental co-ordination. It is supported by **State e-Governance Group (SEG)** for providing standardization and consistency through Programme Management of the e-governance initiatives.

2.2 TNeGA Board

The Tamil Nadu e-Governance Agency Board consists of the Secretaries of the 11 Mission Mode Departments to guide the Tamil Nadu e-Governance Agency in its e-Governance activities and deliver the services to citizens. It was recently reconstituted.

2.3 Organizational structure and IT Cadre

As more and more Departments are implementing ICT projects, it is essential to strengthen the organizations that are acting as nodal departments / agencies in e-Governance to guide, standardize and implement, an integrated secure IT environment. This role is being performed by the Directorate of e-Governance.

To meet the above need, an IT Cadre has been sanctioned by Government with 2 Joint Directors (Technical), 5 Senior System Analysts / Senior System Engineers, 15 System Analysts / System Engineers, 60 Assistant System Analysts / Assistant System Engineers under the Technical Wing along with an Administrative wing consisting of one Deputy Director, 1 Chief Accounts Officer, 2 Assistants, 2 Junior Assistants, 1 Office

Assistant. Under the Technical Wing, the feeder category would be Assistant System Analysts / Assistant System Engineers.

The following chart depicts the organizational structure of the Directorate of e-Governance / Tamil Nadu e-Governance Agency:

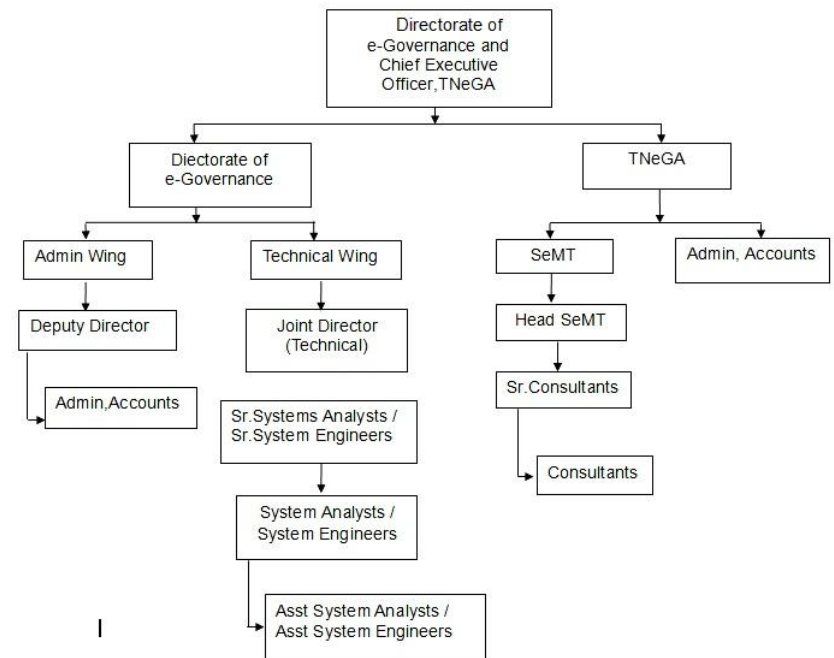


Figure – 2

2.4 State e-Governance Mission Team (SeMT)

A State e-Governance Mission Team (SeMT) is deployed in TNeGA. It comprises a group of IT Consultants in Programme Management, Technology Management, Financial Management and Change Management areas. The SeMT Consultants are handholding the Departments in their e-Governance initiatives and support the implementation of **Mission Mode Projects** (MMPs) of NeGP. The Consultants act as an internal advisory body to the State Government Departments and help them to create department level ICT Roadmap and awareness.

2.5 District e-Governance Society (DeGS)

The Government have ordered the formation of District e-Governance Societies (DeGS) in all the Districts for implementing the e-Governance projects. Accordingly, District e-Governance Societies (DeGS) have been formed in all the Districts. The District e-Governance Society is headed by the District Collector, except in Chennai, where the Commissioner, Corporation of Chennai is the Head. The district level officials of all

service delivery Departments are the members of the Society. The DeGS is responsible for the implementation of the ICT projects at District level. The DeGS will play a key role in the post-implementation and operations of the e-Governance Programme at District level.

For smooth functioning of the DeGS, a sum of Rs.10 lakhs is being provided by the Government as seed money assistance to each DeGS.

3. Projects, Programmes and Schemes

3.1 e-District Programme

e-District is one of the State MMPs under NeGP, which aims at electronic delivery of identified high volume citizen centric services through Arasu e-Sevai Centers, Facilitation Counters, PACCS etc., by leveraging the common infrastructure of SWAN, SDC, and SSDG.

At present, under e-District Programme, the following 36 services are offered by leveraging the common infrastructure of SWAN, SDC, and SSDG. Out of which first 11 services mentioned below are offered through Arasu eSevai Centres.

Category of Services	Department	Service Name
Certificate Services	Revenue	1. Income Certificate
		2. Nativity/ Residence Certificate
		3. Community Certificate
		4. First Graduate Certificate
		5. Deserted Women Certificate
Social Welfare Schemes	Social Welfare & Nutritious Meals Programme	6. Marriage Assistance
		7. Orphan Girl Marriage
		8. Widow Daughter Marriage Assistance
		9. Inter-Caste Marriage Assistance
		10. Widow Re-Marriage Assistance
		11. Girl Child Protection Scheme I & II
Scholarship Schemes	Adi-Dravidar & Tribal Welfare	12. Gol Post matric Scholarship for SC Students
		13. Gol Post matric Scholarship for ST Students
		14. State Special Scholarship for Post matric Students
		15. High Education Special Scholarship Scheme
	Backward Classes, Most Backward	16. Issuance of Post Matric Scholarship
		17. Educational Assistance to the students in Professional Courses

	Classes, Minorities Welfare and Denotified Communities	18. Educational Assistance to Graduates
		19. Educational Assistance to Polytechnic Students
Social Security and Pensions Scheme	Revenue	20. Indira Gandhi National Disability Pension Scheme (IGNDPS)
		21. Indira Gandhi National Old Age Pension Scheme (IGNOAPS)
		22. Indira Gandhi National Widow Pension Scheme (IGNWPS)
		23. Destitute Deserted Wives Pension Scheme (DDWPS)
		24. Destitute Widow Pension Scheme (DWPS)
		25. Physically Handicapped Pension Scheme (PHPS)
		26. Unmarried Woman Pension Scheme (UWPS)
APNA CSC Services	10 services including Election, AADHAAR Passport and Pan-Card related services.	

Tamil Nadu is one of the States Chosen for Pilot implementation of e-District Project. Six Districts viz., (Ariyalur, Coimbatore, Krishnagiri, Perambalur, The Nilgiris and Tiruvarur) were chosen as Pilot e-Districts and

5 Revenue services, 6 Social Welfare services were initially rolled out. Subsequently, the existing 11 services of the pilot phase have been rolled out to the remaining 26 districts in the State and are operational since the last one year.

The System Integrator for e-District roll out has been selected and 92 services of various Departments have been identified for implementation and the development of software is under progress.

3.2 Arasu eSevai Centres

The Government, realizing the basic needs of the common man, has taken steps to provide Government Services in electronic mode to the common man in his locality through Arasu eSevai Centres. As of now, the Arasu eSevai Centres are delivering e-District services and as well as other services that are useful to the common citizen. Considering the usefulness of the Rural CSCs, the Scheme has been extended to urban areas. Arasu eSevai Centres are functioning in urban areas with the objective of providing unified access to e-services of

different Government Departments at a common point in the urban and semi-urban areas of the State.

Arasu e-Sevai centres run by Primary Agricultural Co-operative Credit Societies (PACCS), Village Poverty Reduction Committee (VPRC) formed under Pudhu Vazhvu Project, TACTV and ELCOT are delivering the e-services.

The Pilot for the Urban Arasu eSevai Centres Scheme was launched in Chennai by the Hon'ble Chief Minister of Tamil Nadu on 24.02.2014 in the following 14 places :

Taluk Offices	–	3
Corporation of Chennai (Zonal Offices)	–	3
Chennai Metro Water Supply & Sewerage Board (CMWSSB) (Depots)	–	2
Urban Co-operative Credit Societies	–	6

Subsequently 678 Arasu eSevai Centres have been established by ELCOT and TACTV and currently there are 10,034 centres functioning across the State.

3.3 State Portal / State Services Delivery Gateway (SSDG)

The State Portal is a one-stop access to Tamil Nadu Government Information and e-Services. The State Portal provides features like integration of e-District services, Content Management System, links to all Department services, mobile compliance, citizen registration etc.

The Portal has been tested thoroughly by STQC for functionality, performance and Security. This was inaugurated by Hon'ble Chief Minister on 24.02.2014. It is being implemented successfully.

3.4 Capacity Building

Capacity Building Scheme aims to develop IT expertise and skills at various levels of Government to achieve the following :

1. Bringing standardization and consistency across initiatives
2. Change Management and training requirements
3. Government Process Reengineering

4. Optimizing cost and resource utilization
5. Leveraging external resources
6. Implementing best practices followed elsewhere.

As part of the Capacity Building, the following Courses / Training programs are undertaken by TNeGA for the benefit of Government employees:

- Basic IT orientation Training
- e-District Application Training
- E-Governance Orientation Training
- Specialized Training on e-Governance (STeP) Program
- Soft Skills Training
- Hardware and Networking Courses
- Database Management Courses
- Internet Protocol version 6 (IPv6) Training
- Change Management Training
- Government Process Engineering Training
- Project Management Courses
- Application Software Training

In October 2014, 60 Government officials from state of Tamil Nadu participated in STeP eGLC conducted by NISG at Hyderabad.

DSC training program was conducted during September 2014 in 6 major regions. About 381 Government officials participated.

As on today 9397 Government officials have been trained on e-District application software.

So far, 41,556 Government employees have been given various types of training. The following chart describes the Training programmes conducted by TNeGA from the year 2009 to July 2015 :

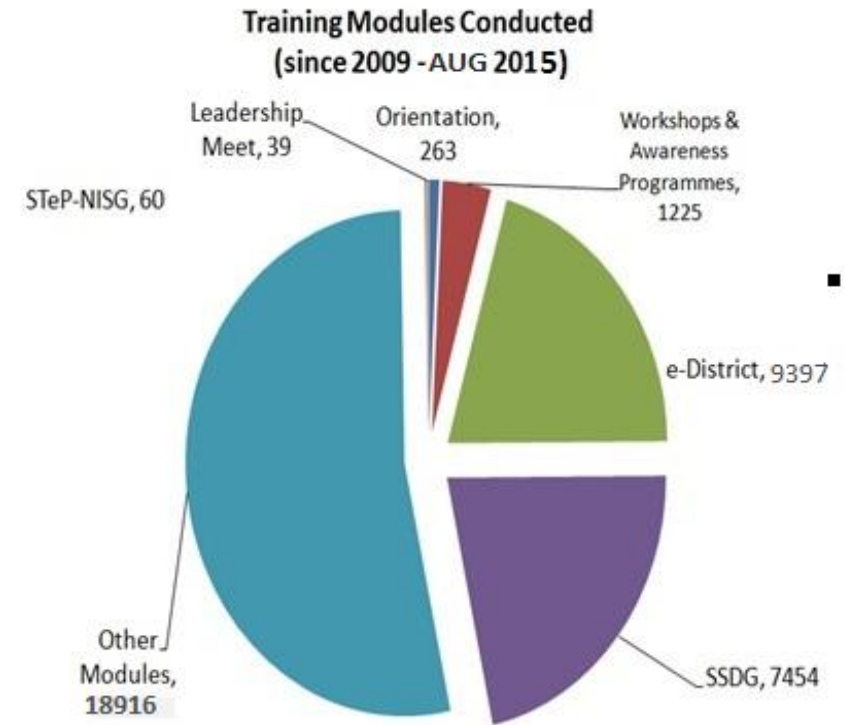


Figure - 3

In the month of May 2015, the ICT week for students covering all 32 districts was conducted in 4 batches at Chennai. In total, 339 students have participated in the ICT-Week programme.

3.5 Tamil Nadu Geographical Information System (TNGIS)

Considering the urgent necessity to bring about a point of convergence for Geographical Information System users through a focused development environment and avoid disorientation and wastage of resources, it was felt that a common platform for Tamil Nadu State Spatial Data Infrastructure (TNSSDI) needed to be established in the Tamil Nadu Geographical Information System (TNGIS) and a Tamil Nadu Geographical Information System Policy be evolved.

Orders have been issued for this purpose and a sum of Rs.132.80 Lakhs has been approved administratively.

- A Technical Team has been formed with representatives from user Departments.
- Design and Development of Metadata Framework in progress by the Implementing Agency (NIC)
- A comprehensive design is proposed to take care of the diverse set of spatial data including :

- ✓ Multiple Departments
- ✓ Multiple Areas of interest viz. State, Districts, Blocks, Taluks, Corporations, etc.
- ✓ Layers on Multiple Scales (Admn Boundary in 50K, 10K, 1K, etc)
- ✓ Multiple roles / users in Multiple Departments/Districts
- ✓ Multiple privileges (Intra / Inter / Public) for various layers

- Initiated GIS Services based Web Interface based on Metadata Framework

So far eight departments / organizations have shared their respective layers.

- NIC is preparing a solution with the standards mentioned in the proposal.
- Identification and classification of layers and segregation of layers for Public / Government Domain including authentication mechanism.

- Sharing of base layers procured from Survey of India (Sol) to collate and consolidate layers from various departments at appropriate scales and to study the requirements and appropriate integration etc.,
- An infrastructure for proper access and usage of GIS across various departments is being developed.
- Standards based Web GIS shall be adopted as the technology to provide interface for the various datasets, keeping in mind the large numbers of users who would show interest to view the same.

3.6 State Resident Data Hub (SRDH)

State Resident Data Hub (SRDH) is a unified AADHAAR enabled Data base of all citizens. This repository will be accessed by and be available to all departments which deliver services to citizens. It will help the Government in better targeting, effective service delivery, greater accountability and more efficient monitoring of schemes. The estimated cost for this project is Rs.30.25 Crores.

The SRDH aims to enable the State to:

- Manage complete State Level Resident Data in a digitized, centralized and secured manner.
- Utilise AADHAAR number to uniquely identify citizens (the beneficiaries of different schemes implemented by Government).
- Integrate AADHAAR enabled National Population Register (NPR) data with Departmental utility Databases on a real time basis.
- Incorporate AADHAAR authentication into various applications.

Consulting agency is in place to support the project implementation and the System Integrator has been identified who will implement and support the project.

3.7 Facilitation for Mission Mode Departments

The Government Departments have been implementing e-Governance projects for the past few years. For delivering of services to the citizens, the Government of Tamil Nadu has prioritized the services of

14 Departments as State Mission Mode Departments (MMDs). The Information Technology Department is facilitating these Departments with common infrastructure namely, Tamil Nadu State Wide Area Network (TNSWAN) and Arasu eSevai Centres for enabling electronic delivery of services. ELCOT and TNeGA are involved in providing technical guidance and project implementation support for the Mission Mode Departments.

CHAPTER – V

HIGHLIGHTS OF THE YEAR 2014-15

1. Hon'ble Chief Minister's Award for Excellence in e-Governance for Government Departments

Government of Tamil Nadu announced that as a mark of recognition and encouragement, the Departments which strive towards e-Governance successfully will be awarded the "Chief Minister's award for Excellence in e-Governance" every year.

For the year 2015-16, the nominations are invited for all the 3 categories from the Government departments & Districts.

Hon'ble Chief Minister's Award for Excellence in e-Governance for Students

Government of Tamil Nadu has announced Chief Minister's Award for Excellence in e-Governance" to encourage and create an awareness on e-Governance among the youth, Students and e-Governance enthusiasts.

For the year 2015-16, nominations have been invited to participate in all the categories.

Tamil Nadu e-Governance Award for MSME

Government of Tamil Nadu has announced the e-Governance Award for Micro Small and Medium Enterprises (MSME). It aims at recognizing and promoting outstanding e-Governance (ICT) Solutions and applications, thereby encouraging innovation and excellence among Tamil Nadu ICT Talents and enterprises in their constant pursuit for creative and better solutions to meet social needs.

For the year 2015-16, nominations have been invited to participate in all the categories.

2. IT Security Auditing

In order to protect the Government websites and IT applications from defacement and hacking, IT Security Auditing of 93 websites and IT applications for the amount of Rs.1,76,41,000/- are being conducted in a phased manner. ELCOT has empanelled Security Audit Agencies and departmental web applications are being audited by them.

3. Online Demonstrative Services Directory

Government of Tamil Nadu announced that an “Online Demonstrative Services Directory” will be created which will contain the name of the e-Services, Website address, Links to the Services and a demonstrative user guide made available to the public. The software has been developed, tested and deployed in the cloud environment at ELCOT data centre.

4. Scheme Monitoring Software

In order to measure the effectiveness of the schemes and to improve the delivery of the benefits to the public, a “Scheme Monitoring Application Software” has been announced. This tool will enable the Departments to review and monitor the progress of the schemes on a near real-time basis and help in decision making.

The software has been developed, tested and deployed in the cloud environment at ELCOT data centre.

5. e-Learning content for Government Employees

In order to improve employees' ICT skills and to expedite e-Governance implementations in the State, an online training software has been developed to implement e-learning solution.

The software has been developed, tested and deployed in the cloud environment at ELCOT data centre.

6. e-Governance Initiative Fund

To deliver various services of Government Departments through e-Governance, 14 Departments have been selected as Mission Mode Departments (MMDs) and these departments are being computerized. In order to support the non-Mission Mode Departments which intend to deliver integrated services through e-Governance, an e-Governance Initiative Fund has been created for encouraging their e-Governance initiatives. A sum of Rs.10 Crores (Rupees Ten Crores only) has been sanctioned.

7. SMS based Service Tracking Facility

In order to utilize the mobile phone penetration in the State, the Government of Tamil Nadu has accorded administrative approval for a sum of Rs.1,20,50,000/- to enable the citizens to track the applications submitted through e-District Application using SMS facility. The application development is under progress.

8. Centre of Excellence (CoE) for Capacity Building

To address the needs of Capacity Building in ICT skills and tools, the Government of Tamil Nadu has decided to establish a Centre of Excellence for Capacity building. This centre will address the growing need of ICT skilled manpower in the Government Departments that are implementing e-Governance projects to provide citizen centric e-services. This will act as a facility to enhance the Information Communication Technology skills of Government employees by creating capacity building in Information Technology. Orders have been issued sanctioning Rs.131.42 lakhs for establishment of CoE.

The CoE is proposed to be established at TNeGA premises and the work is under progress. C-DAC has been addressed to deploy manpower to establish the cloud for CoE. For the first year operation, financial sanction of Rs.94.15 lakhs has been sanctioned by Government. Expression of Interest (Eoi) was invited for and 7 companies participated in the Eoi for CoE.

CHAPTER - VI

ACHIEVEMENTS FOR THE YEAR 2014-15

1) Chief Minister's Best Practices Award 2015

The service rendered to the citizens by the Arasu eSevai Centres has been recognised and awarded with the Best Practices Award for Good Governance by the Hon'ble Chief Minister during the Independence Day Function, 2015.

2) eTaal

eTaal is a web portal for dissemination of **e-Transaction** statistics of Central and State level Projects including Mission Mode Projects. It receives transaction statistics from web based applications periodically on near real time basis. Based on the statistics, the States / Projects are ranked on National Basis. After continuous efforts of TNeGA and with the coordination of several Government Departments, the State has been placed among the top three States in overall e-transactions in the "State Government Projects" category over the last two years.

3) e-District

Ninety Two Services have been identified under e-District Programme covering various Departments. Out of which so far, 26 Services are live.

The Number of Transactions made under the e-District Programme for Revenue & Social Welfare departments are given below :-

Year	No. of Transactions	Cumulative Transactions
2011-12	83,046	83,046
2012-13	1,98,353	2,81,399
2013-14	9,85,353	12,66,752
2014-15	24,75,890	37,42,642
Apr-July 2015	37,74,488	75,17,130

Table-3

4) “WEB RATNA” Award 2014

The Web Portal of Government of Tamil Nadu, www.tn.gov.in has won the “**Web Ratna Award 2014**” in “**Gold Icon**” category. The Award category aims to acknowledge the State/UT of India which has displayed exemplary initiative in establishing comprehensive web

presence. The selection criteria include the overall quality and quality of web based initiatives, the spectrum of sectors/Departments having good web presence and the level of responsiveness towards web based queries by citizens. Aspects of usability and accessibility is also considered. The Award was presented by Department of Electronics & Information Technology, Government of India.

CHAPTER – VII

ICT ACADEMY OF TAMIL NADU

ICT Academy of Tamil Nadu (ICTACT) is a joint initiative of Government of India, Government of Tamil Nadu and Industries. ICTACT is a not for profit autonomous organization focusing on improving the quality of students graduating from various institutions in Tamil Nadu, for making them industry ready and immediately employable in the ICT industry.

ICTACT is governed by an autonomous Board of Governors with representation from the State Government of Tamil Nadu and leading companies in the ICT industry.

ICTACT is a pioneering venture under the Public - Private - Partnership (PPP) model that endeavors to train teachers in the higher education sector and students in the areas of Information & Communication Technology, thereby making the students industry ready.

During the year 2014-15, ICTACT has actively pursued the following initiatives:-

- Trained 2,566 Higher Education Faculty members by conducting 98 Faculty Development Programs in the state benefitting college students.
- Trained 2,538 School Faculty members by conducting 80 Faculty Empowerment Programs in the state benefitting School students.
- Entrepreneurship Awareness campaign conducted for 30,000 students of 107 colleges as part of the project of EDI, Government of Tamil Nadu
- Published 147 research articles in its 5 ICTACT International Research Journals.
- Conducted 7 Industry Institute Interaction conferences (ICTACT Bridge) in 6 cities and conducted 34 Technical Seminars (ICTACT Power Seminars) for students, 3 ICTACT Conclaves for academicians across the state of Tamil Nadu.
- ICT Academy of Tamil Nadu has successfully completed 5 Government projects during the year 2014-2015.

ICTACT Partnerships

- ICTACT has partnered with Rajiv Gandhi National Institute of Youth Development, Government of India. The purpose of this partnership is to ensure collaborative effort in training activities by both parties to create jobs, revitalize communities, commercialize new technologies, and create wealth.
- VMware has partnered with ICTACT to provide VMware IT Academy programs, online handholding on labs, video classes, faculty training etc. VMware will deliver VMWARE faculty development programs and student skill development programs for Computer Science / Information Technology and Computer Application streams. In addition ICTACT will be the regional IT Academy for VMWARE and will set up VMware IT Academies in 100 colleges across India.
- ICTACT has partnered with K7 Computing to jointly conduct 12 power seminars on cyber security across multiple locations in Tamil Nadu and also celebrate ICT Awareness Week in 6 regions of Tamil Nadu namely Chennai, Coimbatore, Madurai, Trichy, Salem and Tirunelveli.

- Autodesk has Partnered with ICTACT to provide free access to Autodesk Software Suites, Learning resources and Training and Global certification to ICTACT member institutions in the state of Tamil Nadu.
- Hortonworks has partnered with ICTACT to provide access to the Hortonworks materials and also to purchase books directly from their vendor. In addition, optional certification exams will be available for ICTACT.
- EMC academic Alliance and ICTACT have partnered to establish 50 Centers of Academic Excellence in the state during the year. These Centers of Academic Excellence will be set up in leading IT institutes as identified by ICTACT across the state to provide students with an opportunity to learn and practice key skills in the areas of Cloud, Data Science, Analytics, IT Infrastructure and other leading technologies. EMC through its Academic Alliance initiative will offer the technical expertise, resources, and study materials required for setting up the centers.

1. Government Projects completed in 2014-15

Having developed its training capabilities, ICT Academy has been servicing the Government Departments on providing training to its employees specifically in the areas of ICT and e-Governance. ICT Academy has been involved and is part of various Government Projects. Some of the projects undertaken for the Year 2014- 2015 are as follows:

Sl. No.	Name of the Project	Department
1	Basic Computer Course Training of ITI Students	The Department of Labour and Employment, Government of Tamil Nadu
2	Training for 100 girls at Social Welfare Homes	Department of Social Welfare and nutritious meal program
3	Basic Computer Course assessment and certification.	DGET, Government of India
4	Soft Skills/IT Skills Training to 100 students	Tamil Nadu Institute of Labour and Studies, Chennai
5	Project to Identify Manpower	Department of Employment and Training

2. ICTACT International Research Journals

ICT Academy of Tamil Nadu has been publishing peer reviewed scholarly Journals, with an objective of creating Indian-based Journals of International quality. ICTACT Journals exists (launching year: 2010) as a platform for Scientists, Researchers, Academicians and Engineers to publish their original research. ICTACT Journals is committed to quality and relevance and it is reflected by the tremendous growth and reach of the Journals Internationally. ICTACT publishes the following peer-reviewed International Journals (quarterly issues):

- ICTACT Journal on Communication Technology (IJCT)
- ICTACT Journal on Image and Video Processing (IJVP)
- ICTACT Journal on Soft Computing (IJSC)
- ICTACT Journal on Microelectronics (IJME)
- ICTACT Journal on Management Studies (IJMS)

The Index Copernicus Value (ICV) for ICTACT International Research Journals are – 6.15 for IJCT, 6.35 for IJSC and 6.23 for IJVP. The Global Impact Factor (GIF) for ICTACT International Research Journals is –

0.679 for IJCT, 0.612 for IJSC and 0.651 for IJIVP. To maintain the quality of the Journals, ICTACT works alongside some of the prominent and experienced Academicians in various disciplines across the Globe. ICTACT Journals are indexed in internationally recognized databases – Directory of Open Access Journals (DOAJ), Index Copernicus, Inspec (IET), EBSCO, Google Scholar, J-Gate, CiteFactor, Research Bible, etc

3. ICTACT Conferences, Conclaves and Seminars

During 2014-15, ICT Academy has conducted 6 ICTACT BRIDGE conferences in Chennai, Coimbatore, Madurai, Trichy, Tirunelveli and Salem. ICTACT has conducted 34 power seminars for students.

4. ICTACT New Initiatives for 2015-16

ICT Academy has been initiating various new initiatives for the year 2015 – 16. The initiatives are :

4.1. New Government Projects for 2015-16

- 1) The Rajiv Gandhi National Institute of Youth Development (RGNIYD), Government of India in

association with ICTACT, has taken up a “National Level Youth Entrepreneurship Development” an initiative aimed at identifying and training young graduating students in colleges across the country on “**Entrepreneurship**”, thereby helping them pursue their entrepreneurial dreams. The Program is implemented in select 12 states across the country through the NSS Officers of colleges. In each state around 25 NSS officers from 25 institutions were trained for benefitting 40 students in each institution, thereby benefitting 12,000 students across the country.

- 2) The Rajiv Gandhi National Institute of Youth Development (RGNIYD), in association with ICTACT has taken a novel initiative of providing structured career guidance for the school students, parents & teachers with an objective of creating awareness among them on various career choices available after school education. RGNIYD through ICTACT is conducting Career Guidance Program in 10 states across India.

- 3) ICT Academy of Tamil Nadu is under taking training of 2000 Unemployed youth of on Banking and Financial Services Industry (BFSI) sector skills there by making them employable in BFSI Sector through Tamil Nadu Skill Development Corporation.
- 4) ICT Academy of Tamil Nadu is facilitating the recruitment of IT Skill trainers at 44 ITI's across Tamil Nadu through Department of Employment & Training.
- 5) ICT Academy is undertaking training of 100 girls in 5 Social Welfare Homes on IT Literacy & Soft Skills through Directorate of Social Welfare.
- 6) ICT Academy of Tamil Nadu is undertaking training of 93 graduating students in Tamil Nadu Institute of Labour Studies on IT and Soft Skill training through Tamil Nadu Skill Development Corporation.
- 7) Entrepreneurship Development Institute, Government of Tamil Nadu is implementing Entrepreneurship Development Program through ICT academy of Tamil Nadu for 20000 graduating

students in the state of Tamil Nadu. The program aims at providing entrepreneurship awareness among students in colleges across Tamil Nadu and to identify students with the potential to become an entrepreneur.

4.2. School Initiatives

ICTACT under its school initiatives has implemented a range of training programs with focus on enhancing the skill set of teachers in the K-12 sector. ICT Academy of Tamil Nadu contributes to School Empowerment through its training, services, events, workshops, competitions etc for the school teachers and students, thereby benefitting the students at the schools.

4.3. ICTACT Youth

ICTACT is starting ICTACT Youth, an initiative to enhance Employability Skills in students which has become an ever existent issue in making them industry ready. ICTACT Youth will address specific issues on communication and leadership skills among students, which has been a long time gap found by the Industry.

Under ICTACT Youth, ICTACT has launched two first-of-its kind student competitions ICTACT Youth TALK and ICTACT Youth PRESENT, in our state which is conducted every year, to nurture and develop the communication, presentation and leadership skills among students.

The ICT Academy will be organizing “ICTACT Youth Summit” a first of its kind annual summit focused on the youth community and in specific to the higher education students.

ICTACT is forming ICTACT Youth Circle in colleges with an objective of enhancing the communication skills of graduating students and platform to practice speaking. The ICTACT Youth Circle’s mission is to help students to improve the skills of speaking, listening and thinking, through a relaxed, friendly and supportive environment. Every member has the opportunity to develop communication and leadership skills, which in turn foster self-confidence and personal growth.

4.4. ICTACT WORLD

ICTACT WORLD, an initiative by ICTACT will provide a global platform to unveil and exchange innovative research archival results and share experiences among global academicians, research scholars, educators and practitioners in the recent trends and developments of Computing, Signal Processing, Information and Communication Systems.

The first edition of ICTACT World, “**International Conference on Signal, Computing and Communication Systems 2016 (ICSCCS 2016)**” is to be held at Chennai from February 4–6, 2016.

ICSCCS 2016 aims to provide the opportunity for effective networking and offers a unique insight into the recent research and developments. It is another step towards accomplishing India vision – 2020.

The Technical Advisory & Executive Committee of ICTACT World is composed of eminent academicians and leaders from across the globe with wide range of interests

to provide strategic advice & offer guidance into overall development of ICSCCS 2016.

4.5. ICTACT DIGITAL INDIA PLEDGE 2015

The “**ICTACT Digital India Pledge 2015**” campaign is aimed to trigger and inject vigor to the Nation's vision to empower at least one person per household with crucial digital literacy skills by 2020. A total of 255 Educational Institutions and Corporate took part in this noble initiative.

The Government's vision is to touch lives of more than 5 million individuals in the next four years. The ICTACT “Digital India Pledge 2015” is an initiative under the ICTACT Digital Literacy Mission, which is helping people develop the skills required to interact in the digital world. This pledge will be a collaborative initiative of Institutions and corporate in India, that is expected to make more than 25,000 individuals with low technological literacy to become digitally literate by 2015.

CHAPTER – VIII

TAMIL VIRTUAL ACADEMY

1. Introduction

The Tamil Virtual University (TVU) was established as a Society by the Government of Tamil Nadu on 18th May 2000 to provide Internet based resources and opportunities to the Tamil Communities living in different parts of the globe, as well as others interested in learning Tamil and acquiring knowledge of the History, Art, Literature and Culture of the Tamils. Later Tamil Virtual University has been renamed as Tamil Virtual Academy.

2. Vision

The Tamil Virtual Academy aims at providing Internet-based resources and opportunities for the Tamil communities living in different parts of the globe as well as other language speakers to know Tamil, Science, Technology, Tamil Computing software and acquiring knowledge of the history, art, literature and culture of the Tamils and to identify, establish, maintain and promote the solutions for the Tamil computing requirements of Tamil

Diaspora, Government, Educational, Media and Business institutions.

3. Mission

- To develop the solutions for Tamil Computing solutions.
- To develop and deliver Internet based learning material for Tamil language, literature and culture to the global Tamil Communities and others involved in Tamil.
- To develop and deliver customised programmes to meet the cultural needs of the Tamil Communities in different parts of the world and help them to retain heritage.
- Compile the knowledge resources developed by the Tamils who are living around the world, and to probagate the same.
- To provide lessons on Tamil language, literature and culture

- To provide the opportunities to acquire knowledge or learn or get the certificate/Diploma/Degree through Tamil University, Thanjavur.

4. Activities

a) Academic Programmes

- To organise and provide academic programmes from basic levels to Research programme.

b) Tamil Computing

- To carry out fundamental research and develop a database required for Tamil Software Development.

c) Digital Library

- To Develop Digital Library for the use of students and others.

d) Tamil Software Development

- To develop Tamil software through Tamil Software development fund, provided by the Government of Tamil Nadu and to test and certify the software developed by others.

e) Documentation and Archiving of Tamil Art & Cultural activities

- Cultural activities of Tamils are documented and uploaded in the website for dissemination and knowledge sharing

certificates, 123 higher certificates, 381 Diplomas and 214 Higher Diplomas and 161 Degrees were awarded so far. 77 Study Centres situated in 19 countries across the world are providing these Academic programmes.

5. Academic Programmes

1. At present, Tamil Virtual Academy is offering Academic Programmes like Primary Education, Certificate Course, Diploma, Higher Diploma and Degree (B.A. (Tamilology)).

3. For the benefit of students and others TVA has developed and released CD's for Primary, Basic, Intermediate and advanced level students under the captions, Learn Tamil, Tamil Karpom, Thirukkural and Technical Glossary

Primary Course	Certificate Course	Hr.Certificate	Degree
Introducing Alphabets and Rhymes for Beginners	Basic level (1-2 Std)	Grade-1 (7-8 Std)	Diploma
	Intermediate level (3-4 Std)	Grade -2 (9-10 Std)	Higher Diploma
	Advanced level (5-6 Std)	Grade -3 (11-12 Std)	Degree (B.A. Tamilology)

2. 15213 candidates from 72 Countries have registered for different courses and 4579

6. Infrastructure

- In the Tamil Virtual Academy, a Tamil Computing Lab, Studio, Auditorium and Incubation centre have been inaugurated on 22.09.2014 by the Hon'ble Chief Minister of Tamil Nadu. The Details are given below:
- A Tamil computing lab measuring 1085 sq.ft with 24 modular work stations with internet & air-conditioning facility have been developed utilizing the amount of Rs.20 lakhs sanctioned

under the Part – II Scheme for the year of 2012 – 2013.

- In order to visualize the Tamil Virtual Academy's internet lessons related programmes and virtual classroom lectures, an air-conditioned studio has been established in 2274 sq.ft with a control room for audio and video facilities.
- To conduct the academic programmes, monthly lectures and educational related programmes, an air-conditioned auditorium has been established at TVA in 2274 sq.ft with a capacity of 150 seats. The Government of Tamil Nadu, sanctioned Rs.17 lakhs to the interior works for the studio and the auditorium under the Part II scheme for the year 2011-2012.
- TVA has established an Incubation Centre to develop Tamil Software measuring 1682 sq.ft utilizing Rs. 45 lakhs sanctioned under the Part – II Scheme for the year of 2013 – 2014. which includes a library, server room and 13 air-

conditioned rooms (each 64 sq.ft) with latest computers and internet facilities.

- In Virtual classroom, Dr. M. Nannan teaches Tamil through Tamil medium under the caption Tamil Karpom. Prof. T.B. Siddhalingiah teaches Tamil through English. Mr. Samicannu Gillbert teaches Tamil through French.

7. Thagavalarrupadai

The Hon'ble Chief Minister made a statement on the floor of the Legislative Assembly on 11.08.2014, under the Rule 110, that a comprehensive and collaborative Repository of Tamil Language, Literature, Art, etc., containing details of all the achievements of the Tamils and Tamil language and literature would be created by Tamil Virtual Academy and for this a sum of Rs.20 lakhs would be sanctioned for the first phase of the project. Accordingly in G.O.Ms.No.4, Information Technology Department, dated 20.2.2015 a sum of Rs.20 lakhs was sanctioned. In order to implement the above project a technical expert committee has been formed and the work is in progress.

8. Visual Thesaurus, e-Learning Portal, Digital Library

The Hon'ble Minister for Information Technology while moving the demand (No.31) for the Information Technology department for the year 2014-15 has made announcements regarding the implementation of the Visual Thesaurus for Tamil, e-Learning Web Portal and Digital Library. The details are given below:

8.1. Visual Thesaurus

The Hon'ble minister has announced that Visual Thesaurus for Tamil shall be developed in which the words with same meaning shall be grouped and their pronunciation and description will be available. For the above works, a sum of Rs.27.42 lakhs have been sanctioned by Govt. In G.O.Ms.No.16, Information Technology Department, dated 03.09.2014. The database has been developed for the purpose of machine translation. This Visual Thesaurus is different from dictionary. Till date, there are 1000 headwords have been entered.

8.2. e-Learning Web Portal for Tamil Virtual Academy

The Hon'ble Minister has announced that a e-learning web portal will be developed to help the students to learn Tamil easily. Accordingly for first phase of the works Rs.12.26 lakhs have been sanctioned by Government In G.O.Ms.No.15 dated 03.09.2014. In the first phase, students can search their particulars in the web portal. This work is under progress. In the next stage, all the concepts available in the lessons will be developed with audio and video facilities.

8.3. Digitization of Nationalized books

The Hon'ble Minister for Information Technology Department has also announced that the Digitization of 2211 nationalized books with search facilities shall be implemented by Tamil Virtual Academy. Accordingly in G.O.Ms.No.5, Information Technology Department, dated 20.02.2015, Rs.10 lakhs have been sanctioned to digitize 178 nationalized books in the first phase. The works are now in progress.

9. Tamil Virtual Academy - Part-II Scheme Projects

i) Annotated Corpus for Tamil literature

TVA is undertaking an “Annotated Corpus for Tamil Literatures” project. In G.O.2(D). No.19, Information Technology Department, dated 18.11.2011 - Rs. 25.00 lakhs have been sanctioned for this project. In the first phase, 56 books have been taken from its digital library which includes, Sankam period, Post Sankam period, Epics, Bhakthi and Minor literatures for assigning the grammatical category for each word. Separate software is also being developed for this. There are 7 types of searches available. In this corpus, there are 36 grammatical categories given on linguistics basis. This corpus is designed for Machine Translation purpose.

ii) Speech Database

In order to develop a Speech Database for Tamil computing purpose, words have been collected from e-lectures and training to the computer being given. In G.O.2(D). No. 20, (Information Technology Department, dated 18.11.2011 - Rs. 10.00 lakhs have been sanctioned

for this project. In this project, Dragon and Sphinx3 softwares have been used. Further, 1. Acoustic Models, 2. Language Model files, 3. Word Dictionary, 4. Filler Dictionary like files has been created.

iii) An Electronic dictionary with pronunciation

TVA is developing an “Electronic Dictionary with Pronunciation for Tamil”. To get the meaning of a word in the dictionary, one can type a word or pronounce the same and the meaning will be displayed in the monitor. This dictionary is divided into three parts. They are: 1. Meaning, 2. Paradigm, 3. Inflected form. For which, 9 types of descriptions have been given. They are: headword, phonetic transcription, phonemic transcription, Tamil meaning etc. In the history of Tamil dictionary, for the first time phonetic transcription is given. Till date there are 3000 headwords have been entered. Pronunciation has been given for 100 words. In G.O.2(D). No.5, Information Technology Department, dated 11.06.2012 - Rs. 30.00 lakhs have been sanctioned for this project.

iv) Syntactically and Semantically Annotated Tamil corpus

For computer translation, TVA is developing a “Syntactically and Semantically Annotated Corpus” to identify the phrases and semantical aspects. For Syntax, there are 15 types of phrases like: subject, predicate, noun, phrases, clauses etc., have been assigned and for Semantics, there are 7 types of grammatical descriptions like: denotations, connotations have been assigned initially for 22 literatures along with the meaning for each word. Separate software is also being developed. In G.O.2(D). No.6, Information Technology Department, dated 11.06.2012 - Rs. 25.00 lakhs have been sanctioned for this project.

10. Documentation and Archiving of Tamil Art & Culture

The Hon'ble Minister for Information Technology has announced that a monthly lecture series on Tamil Heritage, Art & Culture shall be organised in TVA by the Scholars and Experts and the same shall be recorded and webcast in TVA website. Every month, a renowned

scholar will deliver a special lecture on Sculptures, Language and Ancient Culture of Tamils and it will be recorded and webcast in TVA website.

11. Symposium on Tamil Computing

Tamil Virtual Academy has organized a symposium on 8th and 9th of August 2015 in its campus to obtain the views of experts to develop Tamil computing. More than 300 scholars from different fields from Tamil Nadu, Kerala, Andhra, Karnataka and West Bengal have participated. Some scholars from Foreign countries have also participated through Internet and have given their valuable suggestions.

The symposium was divided into four major headings. They are: 1. Digitization, 2. Computational Linguistics and Language Technology, 3. Open source, Media and Out-reach, 4. E-Learning and Teaching. The co-ordinators of symposium have given their recommendations. The projects of TVA shall be formulated on the above recommendations for implementation in future.

12. TAMIL VIRTUAL ACADEMY'S NEW PLAN OF ACTION

- To promote the development of Tamil computing across the world as well as to create a conducive environment and vibrant eco system to benefit Tamil Scholars, public servants, students and general public, the Government of Tamil will soon formulate an exclusive policy for Tamil Computing. A High Level Committee consisting of renowned Tamil Scholars, experts from linguistics & Tamil Computing fields and representatives from software industry, will be constituted to formulate such a policy.
- With a long-term aim to develop Tamil Computing and ensure the future generation to realize its significance, it has been decided to establish "Kani Tamil Peravai" (Forums for Tamil Computing) in all the colleges in the State. Tamil Virtual Academy will provide seed money to encourage these Forums for Tamil Computing.

- Under the ongoing "Thagavalarruppadai" Scheme, which is the comprehensive, collaborative repository of Tamil language, literature, art and others, major projects will be undertaken to digitize rare and nationalized Tamil books, archival documents, inscriptions, palm-leaf manuscripts and paintings.
- Tamil Virtual Academy shall evolve universal standards and guidelines for digitization with necessary technical assistance from the renowned organizations in Tamil Nadu as well as from across the world. This scheme will be jointly executed along with the private and non-government organizations which have significant and unique collections of rare Tamil books and other documents.
- Necessary steps will be taken to ensure wider acceptance and usage of Tamil99 key board, Unicode/TACE formats in Government offices and also by the general public.

- Necessary steps will be consistently taken to ensure the websites of Government departments and other organizations to adopt bi-lingual format and usage of Unicode/TACE formats by them.
- Tamil Virtual Academy will undertake long term Research and Development Programmes on Tamil Language Technology and Natural Language Processing (NLP) with an aim to update the existing software tools like word processor, spell checker and OCR as well as to create various new tools such as text recognizer, text summarization, speech recognizer, automatic translator. To aid the on-going Tamil linguistic research in a major way, a massive corpus development and e-dictionary will be created.
- Necessary software applications will be developed to promote the usage of Tamil in computers, cell phones, smart phones as well as all kinds of electronic gadgets. To assist the development of Tamil software, programming in Tamil will be promoted.

- Modern Language Development tools to assist students, teachers will be developed.
- Tamil Virtual Academy will suitably revise its syllabus so that the Tamil Language can be effectively taught as a second language and as a foreign language to the Tamil people living across the globe.
- Considering the lack of formal teacher education of the volunteers who impart Tamil education to the children living in other countries, a new Diploma Course on Tamil Teaching Education will be introduced.
- A new Learning Management System (LMS) encompassing a state of the art universal language assessment tool, e-learning platform through multi-media contents, virtual class rooms and interactive learning will be launched. To attract the younger generation in a major way, mobile applications compatible with cell phones, smart phones to impart Tamil lessons, grammar and dictionary with multi-media content will be created.

- The website of Tamil Virtual Academy will soon be re-launched with rich content of rare Tamil books and much more useful information meant for Tamil diaspora. In addition to that, Tamil Virtual Academy will launch a monthly News Letter as well as a quarterly International Research Magazine.
- To promote usage of Tamil Language in Internet, Tamil Virtual Academy will collaborate with non-profitable organizations such as Wikipedia to undertake various campaigns to reach out to students studying in schools and colleges in the State and conduct various contests to enhance the Tamil Computing skills of the younger generation.
- Necessary steps will be taken, to ensure the Creative, educational & scientific content, products and the relevant processes created and hosted by Tamil Virtual Academy be given universal access to everyone. Those contents, product and processes will be made available under “Creative Commons“ format.

CHAPTER – IX

TAMIL NADU ARASU CABLE TV CORPORATION LIMITED (TACTV)

1. Introduction

The Incorporation of Arasu Cable TV Corporation was done on 04.10.2007 with the objective of providing high quality cable TV signals to the public at an affordable cost. Digital Head Ends were commissioned at 4 places viz., Thanjavur, Tirunelveli, Coimbatore and Vellore. Due to various reasons thereafter the Corporation became defunct.

The Hon'ble Chief Minister of Tamil Nadu, after assuming office in May 2011 revived and revamped Arasu Cable TV Corporation and renamed it as Tamil Nadu Arasu Cable TV Corporation Ltd (TACTV). The Hon'ble Chief Minister of Tamil Nadu made an announcement on the floor of the Assembly on 30.8.2011, that Tamil Nadu Arasu Cable TV Corporation would provide quality services at an affordable cost with Rs.70/- being the monthly subscription payable by the subscribers to the

Cable TV operators of which Rs.20/- would be paid to Tamil Nadu Arasu Cable TV Corporation per month per subscriber by the Cable Operators.

The Hon'ble Chief Minister of Tamil Nadu inaugurated the Cable TV services all over Tamil Nadu (except Chennai) on 2.9.2011.

2. Vision

Tamil Nadu Arasu Cable TV Corporation was revived with a vision to provide quality services to the public at an affordable cost.

3. Background and growth

Before the advent of TACTV, the Cable TV sector in Tamil Nadu was totally unorganized, with very few Multi System Operators (MSOs) in the field, and the Local Cable Operators as well as the public were forced to pay exorbitant amount as subscription fee. The public were paying Rs.150 to Rs.250 to the Local Cable Operators to avail the Cable TV services.

The revival and revamping of TACTV has helped to provide quality Cable TV services at an affordable cost of Rs.70/- per month. At present TACTV is transmitting 90-100 Channels, including Free-to-Air Channels, Pay Channels and Private Local Channels.

The service being provided by the TACTV is a welfare step taken by the Government in the interest of the public and Cable TV Operators. The response from the Local Cable Operators and the public is overwhelming; more and more cable operators and the general public have started to come into TACTV's fold and are using the signals.

This is evident from the fact that the subscriber base of TACTV which was 4.94 lakhs on 02.09.2011 has risen to 70.52 lakhs connected through 26,246 Local Cable Operators as on 1.8.2015.

4. Infrastructure

Tamil Nadu Arasu Cable TV Corporation has established additional infrastructure utilising the Head Ends of willing erstwhile private Multi System Operators

(MSOs) in 27 Districts on lease apart from revamping its existing Digital Head Ends in four Districts. Thus, as on date TACTV Corporation has under operation 83 Head Ends including those utilised on lease from the erstwhile MSOs. TACTV Corporation has established connectivity to 26,246 Local Cable Operators from these 83 Head Ends across the State.

5. Organization Structure

TACTV is headed by a Chairman and a Managing Director. There are two General Managers in the cadre of District Revenue Officer supported by four Managers in the cadre of Deputy Collector, 2 Deputy Managers in the cadre of Tahsildar with 54 supporting staff at Headquarters to manage the entire operations in the State. Each District has one Deputy Manager in the Cadre of Tahsildar who is supported by One Field Assistant (Revenue), One Technical Assistant and 3 Assistant Technicians. The technical wing is headed by two Chief Technical Officers supported by One Assistant Technical Officer, 3 Technical Assitants and the Finance

wing is headed by a Financial Advisor and Chief Accounts Officer.

6. Inauguration of Cable TV Services in Chennai

The Hon'ble Chief Minister of Tamil Nadu inaugurated the Cable TV Services of TACTV in Chennai Metro on 20.10.2012. TACTV is now providing Analog and Digital signals to the Local Cable Operators in Chennai Metro Area.

7. Digitalization background

The Government of India, Ministry of Information & Broadcasting in the Ref.No.9/32/2007-BP&L dated 02.04.2008 issued Multi System Operator License to the Tamil Nadu Arasu Cable TV Corporation in the Conditional Access System (CAS) areas of Chennai Metro. As per the Cable TV Network Amendment Act, 2011, the entire Cable TV Services in the Country are to be digitalized within a time frame i.e., by 31.12.2016. In the first phase, four Metros including Chennai were to be digitalized on or before 31.10.2012. TACTV applied for MSO License for the DAS notified areas of Chennai Metro on 05.07.2012 and on 23.11.2012 for the Rest of Tamil Nadu (RoTN)

both of which are pending with the Ministry of Information & Broadcasting (MIB), Government of India.

8. 'Digital Addressable System' (DAS) License for Chennai

The issue of MSO License for the DAS notified areas of Chennai Metro is pending with MIB, Government of India. The Ministry referred the matter to TRAI which had reiterated its earlier stand of not allowing Central/State Government/PSUs/Government funded bodies into broadcasting activity. But TRAI's recommendation is yet to be accepted by the GOI and the GOI has formed an Inter-Ministerial Committee (IMC) on 03.01.2013 to look into the recommendations of TRAI and the IMC has not yet submitted its report.

The Hon'ble Chief Minister of Tamil Nadu had written to the then Hon'ble Prime Minister of India on 16.12.2012 requesting the Ministry of I&B be advised to issue DAS License to TACTV. Further, the Madurai Bench of Hon'ble Madras High Court in W.P. No.11649 of 2012 had given an interim order dt.06.12.2012 that "the process of issue of license to the respondent (TACTV) may go on

and license may also be issued. But issue of license is subject to the outcome of the writ petition".

TACTV also filed a Writ Petition (W.P.34213/13) against Telecom Regulatory Authority of India (TRAI) challenging its press release No. 91/2013 dt.10.12.2013 which termed transmission of Analog signals in Chennai Metro Area as illegal. The Hon'ble Madras High Court restrained TRAI from disconnecting TACTV's subscriber signals and further directed the Ministry of Information & Broadcasting to immediately take a decision upon TACTV's application for DAS license dated 5.7.2012. Hon'ble Chief Minister met Hon'ble Prime Minister on 3.6.2014 and presented a memorandum in which the issue of DAS license to TACTV was among the points highlighted. A detailed letter was sent by Hon'ble Chief Minister to Minister of State, Information and Broadcasting (Independent Charge) on this issue. Hon'ble Chief Minister has subsequently also written a letter to Hon'ble Prime Minister on 5.7.2014 regarding the issue of DAS license to TACTV. On 7.8.2015 Hon'ble Chief Minister has presented a memorandum to Hon'ble Prime Minister in

which the issue of DAS License was once again reiterated.

9. Steps taken by TACTV for Digitalization in Chennai

TACTV has taken steps to digitalize the Cable TV Services in Chennai Metro and in order to do this TACTV had floated a Tender for the supply, installation, testing and commissioning of Digital Cable TV Head End with Conditional Access System (CAS), Subscriber Management System (SMS) and 10 Lakh Set Top Boxes (STBs) on rate contract basis for one year on 25.09.2012. Orders were placed and an initial lot of 50,000 Set Top Boxes were procured. Out of this, 28752 Set Top Boxes have already been distributed to 383 Local Cable Operators. TACTV has invested Rs.20.72 Crores towards upgradation of Digital Control Room, purchase of Set Top Boxes, CAS, SMS and other items required for establishment of Control Room at Chennai.

TACTV is providing 90-100 Channels with quality and clarity to the subscribers in Chennai Metro Area through the Local Cable Operators at an affordable cost of Rs.70/- per month. At present TACTV has connected

3.40 Lakhs subscribers through 820 Local Cable Operators in Chennai Metro Area.

10. Arasu eSevai Centres of Tamil Nadu Arasu Cable TV Corporation Ltd.

As per the announcement made by Hon'ble Minister of Information Technology, Tamil Nadu Arasu Cable TV Corporation has started the Arasu eSevai Centres in 264 Taluks all over Tamil Nadu. In the first Phase, Arasu eSevai Centres were started in 12 Taluks in Tiruvallur and Kanchipuram District in December 2014. In the second phase, Arasu eSevai Centres have been started in February 2014 in 224 Taluks. Subsequently, TACTV has started Arasu eSevai Centres in the remaining 28 Taluks and also in Chennai Corporation's Head Office and 15 Zonal Offices in June 2015. Another 51 Arasu eSevai Centres were inaugurated by the Hon'ble Chief Minister in Chennai Corporation Area which includes Secretariat also. Further, TACTV is operating 2 Arasu eSevai Centres in Regional Passport Office Chennai and Madurai. As on date, TACTV operates 333 eSevai Centres all over Tamil Nadu. There is overwhelming

response from the public for the Arasu eSevai Centres run by TACTV Corporation and so far 11.12 lakh persons have benefited from the services of these Arasu eSevai Centres within this short time and the Arasu eSevai Centres have netted a revenue of Rs.5.55 Crores till now as service charges.

11. Internet Services

The Hon'ble Chief Minister on 11.08.2014 had announced in the Tamil Nadu Legislative Assembly under Rule-110 that Tamil Nadu Arasu Cable TV Corporation will provide Broadband and other Internet Services through Local Cable Operators throughout Tamil Nadu at an affordable cost.

As per the announcement made by the Hon'ble Chief Minister, Tamil Nadu Arasu Cable TV Corporation has entered into a Memorandum of Understanding (MoU) with RailTel Corporation of India in order to provide Broadband and Internet services through the Local Cable Operators throughout Tamil Nadu. As a pilot project through 35 Local Cable Operators around 1000 Internet connections have been provided and the service quality is

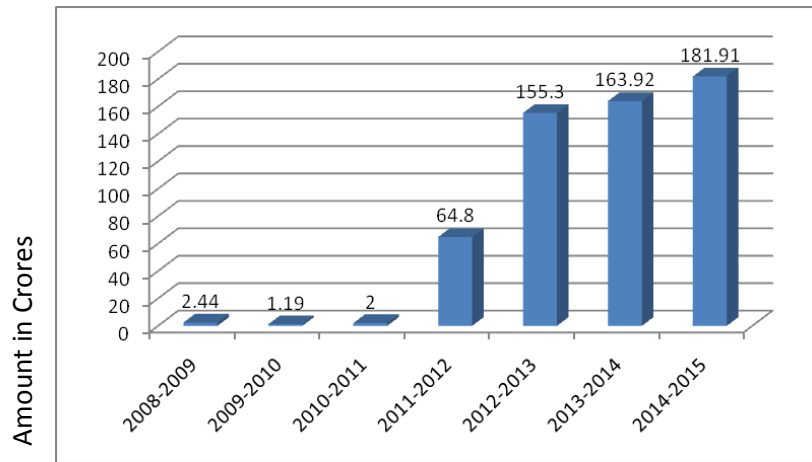
being closely monitored. Steps are being taken to popularize the Internet Service among the LCOs so as to increase the Internet connections on a large scale.

TACTV was granted "Unified License-ISP Category "B" - authorization for service area Tamil Nadu" by the Department of Telecommunications, Ministry of Communication and Information Technology. Further action is being pursued.

12. Financial performance of TACTV

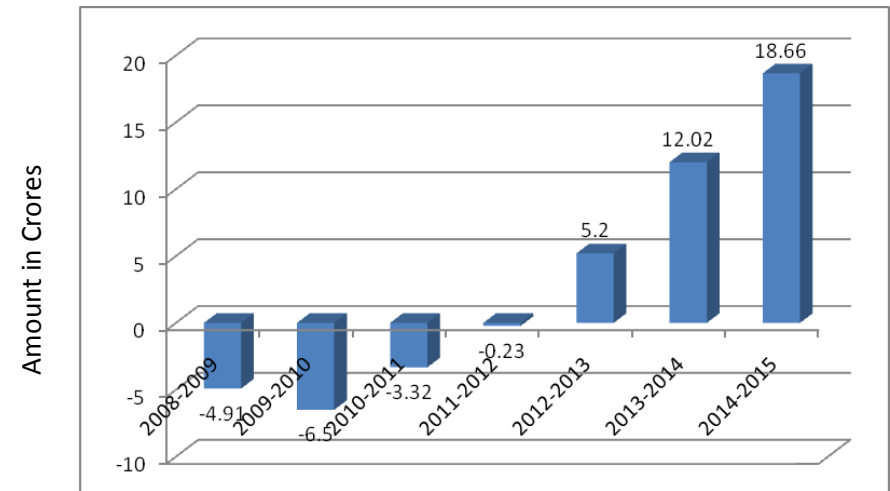
TACTV was started with Government's share capital of Rs 25 Crores. TACTV also received Rs.33 Crores from Government as term loan. TACTV's revenue has increased from Rs.2.44 Crores in the year 2008-09 to Rs.163.92 Crores in 2013-14. The revenue has reached Rs.181.91 Crores during 2014-15.

TACTV REVENUE DETAILS



TACTV was incurring losses till 2011-12 and subsequently TACTV has increased its subscriber base and tapped revenues from Private Local Channels resulting in profits for the years 2012-13, 2013-14 and 2014-15.

PROFIT AND LOSS AMOUNT IN CRORES



PERFORMANCE HIGHLIGHTS

2013-14

TACTV achieved a net profit for the first time after its inception during the financial year 2013-14 after wiping out the accumulated losses of previous years.

Several steps were taken to increase the revenue from all the sources, the most important of which was increasing the subscriber base which was 62.31 Lakhs (as on 01.04.2013) to 65.93 Lakhs at the end of the financial year 2013-14.

Further, revenue was also generated by giving allotment orders to more Private Local Channels selected through Tender cum Auction process and also through inviting Expression of Interest. Due to these measures, the Revenue of the Corporation increased from Rs.155.34 Crores during 2012-13 to Rs.163.92 Crores during 2013-14.

Further TACTV was paying Rs.15.78 Crores towards broadcaster's subscription fee amounting to Rs.189.36 Crores per annum but the annual receipts were around Rs.163.92 Crores resulting in a huge deficit.

Hence TACTV took expenditure control and revenue augmentation measures including obtaining discounts to the tune of Rs.38.40 Crores from the Pay Channel Broadcasters for the year 2013-14.

All the above said measures resulted in TACTV attaining a net profit of Rs.12.02 Crores during the year 2013-14.

After wiping out the accumulated loss of Rs.9.83 Crores, TACTV had a surplus fund of

Rs.2.18 Crores during 2013-14 and out of this, an amount of Rs.1.50 Crores was paid as dividend to the Government.

2014-15

During 2014-15, the subscription rates of various Pay Channel broadcasters were further reduced through negotiations thereby leading to a saving of Rs.8.59 Crores per year.

The revenue of the Corporation during 2014-15 was a Rs.181.91 Crores as against Rs.163.92 Crores achieved during 2013-14.

During the financial year 2014-15, the Corporation has made a Profit of Rs.24 Crores before Tax and a Net Profit of Rs.18.66 Crores after Tax.

Mukkur N. Subramanian
Minister for Information Technology