

# ***Sustainability Index - an Applied Methodology for Evaluation of Heterogeneous Telecenter Networks***

*Niranjana Meegammana*

Team Leader, Sri Lanka Telecenter Community, 27<sup>th</sup> NITC '09 Conference

## **ABSTRACT**

*Sustainability Index (SI) is a new methodology used in M & E to assess sustainability position in 60 Nenasala Telecenter Network in Uva province, Sri Lanka. Sustainability Index defined as Telecenter, Zonal and Regional Network ranking system derived by monitoring quantitative and qualitative indicators of Nenasala performance, which helped directing M & E Team to initiate appropriate Network Actions for technical support, content & services deployment, capacity building and advocacy resulting Nenasala Network sustainability Index improvement from 2.8 to 5.1 in one year. This paper describes Sustainability Index, It's application and discusses results to suggest It is a useful methodology for M & E of Telecenter Networks, requiring further research to be developed as a standard instrument to evaluate Telecenter Networks.*

## **1.0 INTRODUCTION**

Sustainability Index (SI) is a new methodology designed to evaluate the performance and sustainability of a heterogeneous Telecenter Networks. This methodology designed through research and development to assist in an M & E process done by e fusion private ltd, on an assignment given by Information and Communications Technology Agency (ICTA) to improve the sustainability of Nenasala Telecenter Network in Uva province, which had faced critical sustainability issues.

The Uva province is situated south east of Sri Lanka, (see figure 2.0) challenged with transportation, communications, and highest poverty. The 60 Nenasala are distributed across region. "Nenasala in Uva are quite common in infrastructure but unique by location, ownership and technology skills and the community they

serve has a special significance in their uniqueness." (Niranjana M, Impact Monitoring & Evaluation for Developing of Sustainable Tele Center Networks, 2009)

## **2.0 MATERIAL AND METHODS**

The objective of SI was to provide a unique performance indicator for each Telecenter, Zone, District and Region to monitor and assess the changes resulted from the network development process implemented by the M & E Team. The research model designed took the network itself as the base learning model to monitor and capture periodic data on performance to understand issues and initiate collaborative network action based on shared strategies developed with evaluated community.

## **2.1 SUSTAINABILITY INDEX**

Sustainability Index (SI) describes 10 levels Telecenter capacity of sustainability assessed from monitoring data. Based on learning from sustainable Telecenters A SI of 6 is targeted as minimal proof of Telecenter Sustainability.

SI	Description
1	Telecenter is operational
2	Has Management Capacity
3	Telecenter Communicates
4	Has Technology Skills
5	Initiates Social Change
6	Reached Financial Sustainability
7	Takes Zonal Network Leadership
8	Takes Regional Network leadership
9	National Network leadership
10	Global Network leadership

(See figure 1.0)

## 2.2 ASSESING SUSTAINABILITY

SI for each Telecenter derived by monitoring sub characteristics of five key areas of Network participation, content and services, service quality, quantity served and revenue generated. Number of workshops participated, collaboration with network members, technology skills, management, service quality, number of users, community involvement, revenue and costs were some sensitive characteristics measured to asses the financial and social sustainability of Telecenter and forming Network.

## 3.0 ANALYSIS

During the period of 1 Year Uva Nenasala Network SI grew from 2.8 to 5.1 (figure 4.0) and the poor performing Nenasala reduced from 32.5% to 18.3%. This resulted from many Nenasala becoming operational with Shilpa Sayura e learning deployment. Talakumbura, Thanamalwila, Siyambalanda and Girandurukotte Nenasala used e learning effectively improve their social sustainability and financial profitability.

Talakumbura Nenasala which was not operational at the beginning grew to SI of 7.0. is resulted from Technical, management, leadership training, deployment of Shilpa Sayura e Learning and involvement of the community which lead to improving financial profitability. Haldumulla Nenasala with M & E process developed as a National network leader obtained SI of 9.0.

At the same time Olagangala, Perahettiya, Kabillegama stayed at SI of 1.0 due to poor performance, lack of management and network participation. The SI was found to be much sensitive to availability of a capable Nenasala operator. The continuation of the same operator for a longer period improved Nenasala with M & E and effected performance when they leave. This situation improved by training a second row of operators. The Technology training on Virus care, Hardware maintenance, Sinhala Unicode and online communications, business planning, project development, Web designing and School ICT improved Telecenter as well as

impact on the average network SI. The zonal leadership in Thanamalwila, Mahiyangana, Buttala, Madagama and Haliela improved the zonal SI and overall network performance. (See Table 1.0 and Table 2.0.)

## 3.1 CHALLANGES

The unavailability of Internet and poor quality services hardware services, non availability resources like Multimedia projectors, Notebooks, replacement hardware and non corporation of some Nenasala impact Network SI falling behind anticipated level of 6.0.

## 3.2 IMPCT OF SUSTAINABILITY INDEX

SI was a unique indicator and helped early identification of Network issues to initiate appropriate *Network Actions* to direct technical support, content & services, capacity building and advocacy in M & E Process as well as indicated the effectiveness of strategies and lead to process and policy changes which improved the sustainability of Uva Nenasala Network. (See Figure 3.0)

## 4.0 CONCLUSIONS

Sustainability Index is useful methodology to evaluate the results of M & E for developing of Telecenter Networks and It could be applied to study Network growth directions and requires further research to be develop an instrument to measure National Telecenter Networks sustainability.

## 5.0 ACKNOWLEDGEMENTS

ICTA, UVA Nenasala and E fusion RIT.

## 6.0 REFERENCES

- 1.) Meegamma N., Sampath R., "Impact Monitoring & Evaluation for Developing of Sustainable Tele Center Networks", Sri Lanka Evaluation Association, April 2009
- 2) .Gómez R. and Hunt P., "Telecentre Evaluation a global perspective", Report of an International Meeting on Telecentre Evaluation, IDRC, 1999
- 3.) ICTA UVA RIT Assignment Reports, 2009

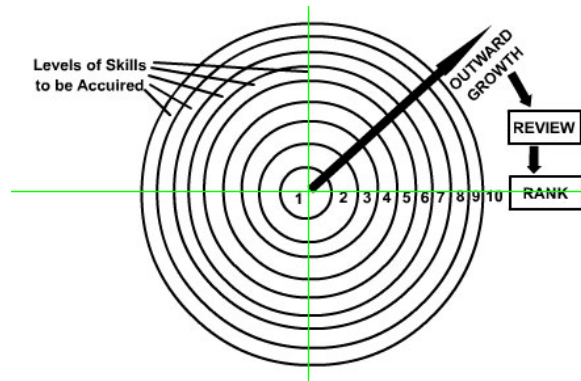


Figure 1.0 : *Sustainability Index*



Figure 2.0 : Uva Province, Sri Lanka

### Uva Province RIT M & E Progress June 2008 - May 2009

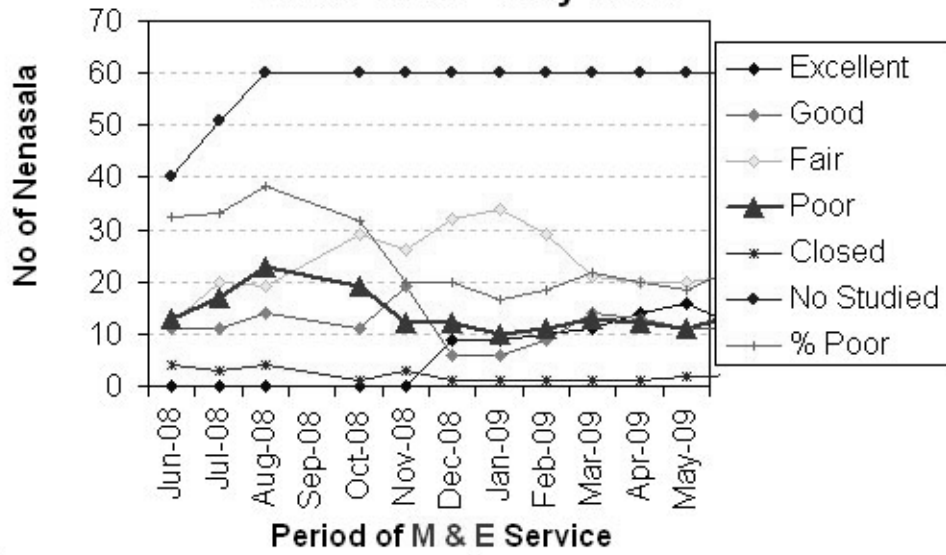


Figure 3.0 : Using *Sustainability Index* to measure impact of M & E

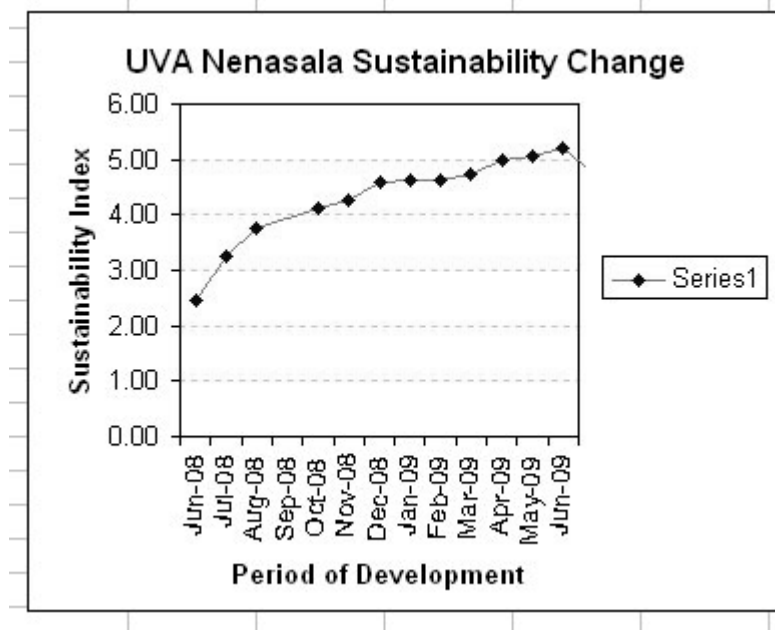


Figure 4.0 : Network *Sustainability Index* Change

**Table 1.0** Top Performers February 2009

Model	TC	SI	WS	Int	SS	EVS	PCs	MM	Users	Rev	Cost
Private	Heeloya	6	1	1	1	1	4	48	180	34600	12600
Temple	Mapakadawewa	6	5	1	1	1	3	25	166	12275	7320
NGO	Kariwila	6	2	1	1	1	4	44	153	18345	19010
Temple	Katharagama Kv	6	1	1	1	0	6	50	99	2800	2500
CBO	Mahagama	6	3	1	1	0	4	45	249	16950	9950
NGO	Badulla Town	7	4	1	1	1	2	40	240	69500	22400
Private	Bandarawela	7	3	1	1	1	4	48	207	42000	16810
Temple	Haldummulla	7	4	1	1	1	2	39	400	3980	7300
NGO	Etampitiya	7	6	1	1	0	3	24	124	15910	9250
NGO	Higurukaduwa	7	6	1	1	0	3	26	132	24500	12800
Temple	Bibile	7	5	1	1	0	2	33	280	87400	32300
Private	Monaragala	7	4	1	1	1	4	46	415	29090	27350
Private	Sevanagala	7	0	1	0	1	4	45	430	59400	45500
Private	Kandiyapitawewa	7	5	0.5	1	1	4	45	105	13298	6785
		<b>6.6</b>	<b>3.5</b>	<b>1.0</b>	<b>0.9</b>	<b>0.6</b>	<b>3.5</b>	<b>39.9</b>	<b>227.1</b>	<b>30718</b>	<b>16563</b>

**Table 2.0** Worst Performers February 2009

Model	TC	Sus	WS	Int	SS	EVS	PCs	MM	Users	Rev	Cost
3	Wedihiti Kanda	0	0	0	0	0	2	22	0	0	0
3	Bhuddhappriya	2	2	1	0	0	2	20	0	0	0
3	Olangangala	2	0	0	0	0	3	25	0	0	0
4	Kebellegrama	2	2	0	0	0	3	25	0	0	0
3	Nugathalawa	2	2	1	0	0	3	23	0	0	0
2	Badalkumbura	2	2	0	1	0	3	22	12	0	0
3	Therulla	2	2	0	0	0	3	24	0	0	0
2	Medagama	2	2	0	0	0	3	22	0	0	0
3	Yalkubura	2	0	1	0	0	2	33	0	0	0
3	Warakadanda	3	1	1	1	0	2	38	79	4060	875
4	Perahettiya	3	1	0.5	1	0	3	25	6	1180	1300
4	Ethimale	3	2	0	0	0	2	37	28	540	1800
		<b>2.1</b>	<b>1.3</b>	<b>0.4</b>	<b>0.3</b>	<b>0.0</b>	<b>2.6</b>	<b>26.3</b>	<b>10.4</b>	<b>482</b>	<b>331</b>