

Vanni Institute of Technology

A project plan for a high-tech educational institute to be established in Vanni

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VanniTech Project Plan

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1 Executive Summary

The island nation of Sri Lanka had been going through a civil war for the last two decades. Most of its infrastructure in the North-East had been devastated and the people of the region had been severely affected and their education disrupted.

At present, the government of Norway is mediating between the warring parties and a ceasefire has been in place since February of 2002. The peace talks have started and the rehabilitation of North-East is in progress now.

The North-East region of Sri Lanka is technically behind in several technologies, especially in computer related technologies. While there are numerous Tamil technical professionals around the world, who are experts in the latest technologies and have access to them at their fingertips, the Tamils in the North-East of Sri Lanka are deprived of latest technologies and related professionals.

Realizing the role of the expatriates in re-building the livelihood of the people affected, an organization constituting the Tamil technical professionals around the world, has been created with the sole purpose of harnessing and channeling the technical synergy towards the educational and training related development activities.

The International Tamil Technical Professionals' Organization has been established, and currently functioning out of the Silicon Valley area of the U.S. It plans to coordinate with the Tamil expatriates, and other volunteers, living around the world and obtain their services for the technological development of the North-East.

As a first step, it plans to establish a high technological educational institute in Vanni. The institute - Vanni Institute of Technology (VanniTech), a non-profit, non-political educational institute, intends to teach and train qualified local students in high technology fields and work towards creating related employment opportunities. The first phase of the project calls for the establishment of the institute at a temporary location. Building a permanent campus for the institute will be the second phase. There is a volunteer- a computer professional, from the Silicon Valley area, willing to temporarily relocate to Vanni, to set up and run the Institute. The classes could begin in March of 2003.

The institute is expected to be established by the donation from the expatriates and other well-wishers. The estimated budget for the first year is U.S. \$ 99,700. This amount includes the capital cost of about U.S.\$ 65,900, and the recurring cost of about U.S.\$ 16,900 for every 6 months.

The institute will continue to operate indefinitely, although it is not expected to be run by the donations forever. If the students can be charged a competitive fee and the infrastructure improves, the institute can be self-sustaining for the second year and beyond.

2 Introduction

Due to the civil war during the last two decades, the North-East region of Sri Lanka had been severely affected and much of its infrastructure destroyed. More than 65,000 people had been killed and thousands more made homeless.

At present, Norway is engaged in the mediation between the warring parties in Sri Lanka. They have signed a ceasefire agreement in February of 2002 and currently the rehabilitation and rebuilding process has begun.

The Tamil people of the region were cut off from the rest of the world and as a consequence, they were deprived of technology related education and environment. The North-East of Sri Lanka is technically behind, generally in several fields, but in particular computer related technologies. Although there are plenty of potential talents and skills among the Tamils living in the North-East, they are not being given the opportunities for proper education and their talents are currently under exposed and under utilized. This is especially evident in the Vanni region, which was affected the most by the war.

While there are numerous Tamil specialist professionals in Australia, Canada, France, Germany, New Zealand, Norway, Sweden, Switzerland, U.K., U.S. and other countries, who have access to high technologies, their counterparts in the North-East region of Sri Lanka are deprived of similar technologies and related education. But with the present peace condition one could easily find Tamil expatriate professionals and other volunteers, who are willing to go to Sri Lanka and offer their services for brief period of time. Some volunteers wish to offer their services from their country of residence.

The plan is to establish a high technology educational institute in Vanni, and send volunteer professionals, even for a short period of time. Course materials and related equipment can also be arranged and coordinated, so that courses can be offered even without the volunteer professionals going to Vanni. Local Instructors will be hired and trained in the field of high technologies to sustain the teaching operations continuously, without any interruptions.

To coordinate the activities and to establish the institution within the North-East region of Sri Lanka, an international organization has been formed. The organization – International Tamil Technical Professionals' Organization (ITTPO) has been formed in September of 2002. It's a non-profit organization registered in the U.S. It's immediate objective is to establish and successfully operate the technical institute in Vanni.

Although, at the initial stages of the institute, the main focus would be software, hardware and computer network related technologies, other fields such as medical, civil, mechanical, agriculture etc. may be considered as volunteers come forward.

The first year operation of the institute is to be funded by the Tamil expatriates and other volunteers living around the world. The institute will continue to operate indefinitely, although it is not expected to be funded by donations forever.

3 Project Plan

The plan is to establish a non-profit, non-political, high-tech educational institute in the town of Killinochchi, in the Vanni region of Sri Lanka. The institute - Vanni Institute of Technology (VanniTech) will teach software, hardware and computer networking related technologies. The courses will be selected based on the immediate need of the people, and at the same time the classroom works will be selected such a way that they can be deployed in the field immediately.

The first phase of the project is to establish the institute in a temporary complex, and the second phase is to work towards building a permanent campus.

A volunteer – a computer professional, from the Silicon Valley area, will temporarily be relocating to Vanni, to set up and run the institute. He is expected to be there for a year.

The International Tamil Technical Professionals' Organization will function as the international headquarters and parent organization for the institute. It will do the personal networking and coordination work for the institute. It will also identify potential volunteers and find donors.

4 Goals

The goals of ITTPO/VanniTech are the following:

- ❑ Identify expatriate and other volunteer technical professionals and channel their technical expertise to help the people of North-East of Sri Lanka
- ❑ Make the people of North-East technically competent
- ❑ Bring the North-East of Sri Lanka to be technically par with other countries
- ❑ Provide resources to start up business ventures and create technical employment opportunities

5 Feasibility Study

Feasibility related trip was conducted by myself between September 15 and November 09, 2002. Major part of the trip was spent in the Vanni region, particularly in Killinochchi. Other places were Jaffna and Colombo.

5.1 Feasibility Study Trip and Purpose

The purpose of the trip was to do the feasibility study for the VanniTech and to explore the need for such an institution under the present political, social, and economic conditions.

The Feasibility trip was also expected to give us some feel for what the technical needs of the Tamil people were and what VanniTech could and should be teaching. It would help us prepare the course requirements, and to find out the availability of local lecturers, students and to evaluate their qualifications.

During the trip I had the opportunity to meet several people including high-ranking political, academic and administrative officials, and representatives from other non-governmental agencies.

5.2 Feasibility Study Result

The feasibility study was a success and confirmed beyond any doubt that the need for VanniTech is real and the implementation of our proposed plan was essential without any delay. The support for the VanniTech was overwhelming and the request for such an institution was unanimous.

The trip helped to identify a temporary location for the institute, and adjust the budget to reflect the current costs. It was also felt that there were lot more students available than the VanniTech could accommodate for the proposed programs.

6 Institute

The institute will be located in the town of Killinochchi in a temporary building complex. The complex is situated within the Killinochchi town area by the main A9 highway. The complex houses classrooms, labs, offices, cafeteria, and student accommodation.

The VanniTech would be comparable to a local university in terms of its facilities. By placing newspaper advertisements and by other means, qualified students will be selected. For those coming from distant places, arrangements will be made for their accommodations at their expenses. For most of the students, accommodations will be provided within the complex.

There will be regular classes and lab instructions. Examinations will be conducted on a regular basis and the students will be expected to do assignments and class projects.

Since most of the coordination work and other related activities would be done online, the institute will have an Internet connection. This will also provide easy access to numerous resources, and other Tamil professionals worldwide.

There will be living quarters for the officials. These will be remodeled buildings or rented houses with basic but convenient facilities.

Once the VanniTech achieves a measured success, opening up branches of the institute or starting similar institutes at different locations may be considered.

Picture below is the temporary future home of the VanniTech. The second floor of the two-story building could make the classrooms and labs (first floor is not available). The one story building could house the offices.



Figure 1 - Temporary Future Home of VanniTech

Within the same complex situated a cafeteria and a 16-room accommodation facility that can be used as the hostel.

6.1 Facility

The institute will consist of the following:

- ❑ Offices
- ❑ Classrooms
- ❑ Labs
- ❑ Library
- ❑ Living quarters for the officials and visiting Instructors
- ❑ Student accommodation

6.2 Study Program Detail

Vanni Institute of Technology would offer courses that are focused on the latest technologies that can be put to use immediately to meet the local needs. It is also important to emphasize that VanniTech is not a computer-training center. It plans to teach university/industry level courses.

6.2.1 Program of Study

The immediate focus of education will be on software, hardware, and computer networking related fields. There will be four programs of study. These programs have been found the most useful under the present situation and they are:

- ❑ Database Application Development
- ❑ Web based App Development
- ❑ Computer Communications
- ❑ Electronics

Each Program will have several courses, and some Programs may have common courses. A Student is admitted for only one Program.

Some of the software courses will be structured so that at the end of the course the study project can directly be put to use. The PDA applications can be developed to exclusively meet the local needs and it could offer a cheaper alternative to PCs.

The hardware courses will focus on the debugging technologies and usage of scopes and signal generators etc. Other projects may include programming of Programmable Logic Controllers and building small devices that may spark the creative usage of that technology for different local needs.

The computer communication courses will focus on computer networking and system administration.

The courses would cover the following, but not limited to:

- ❑ Software - Programming
- ❑ Database, Windows
- ❑ PDA Application
- ❑ Computer Networking
- ❑ System Administration
- ❑ Intranet/Internet Technology
- ❑ Electronics Hardware
- ❑ Digital Hardware Debugging
- ❑ Programmable Logic Controllers
- ❑ Wireless Communications

6.2.2 Student Enrollment

Once the institute starts to function smoothly there could be quarterly enrollment of students. However, before the quarterly enrollment can be implemented, the issue of accommodation, instructors, and equipment will have to be addressed adequately.

When there is more than one batch of students enrolled, some selected senior students could act as Teaching Assistants to their juniors.

6.2.3 Number of Students

For the first batch, approximately 50 students are expected to be admitted. However future enrolments could be higher.

6.2.4 Program Duration

The students will go through a nine-month crash course program in one of the four programs of study. The first 6 months will focus on the core study and the last 3 will focus on Field Deployable Projects related to classroom works or similar hands-on projects.

6.2.5 Student Fee

There will be a small fee. This fee could act as a commitment from the students. The amount will be determined before placing the advertisement on the newspaper(s) for the admission. At the initial stage of the institute, the collection of this fee may not make much difference in the overall budget of the institute.

VanniTech is planning to charge students much less than, for example, charged in a computer-training center. This, we hope, will attract several applicants from which we will be able to select the best.

The goal is eventually to make the institute a self-sustaining organization by charging students their fair share.

6.3 Staff of the Institute

The staff consists of the following:

- President
- Administrators/Employees (4)
- Local Instructors (3)
- Visiting Instructors

6.3.1 President

The president, who will be the volunteer going from the U.S., will run the institute. His services will be offered free of any fee or charge. He is expected to teach as well. A suitable replacement will be found at the appropriate time.

6.3.2 Administrators/Employees

Four full time employees will be hired at the initial stages. Their functions include administrative, maintenance, security and operational related works.

6.3.3 Local Instructors

Three local instructors will be hired and trained. The Visiting Instructors can train the local instructors or the course materials and related equipments can be provided to them and be guided.

6.3.4 Visiting Instructors

The arrangements to send Visiting Instructors from the U.S., and other countries will be coordinated by the institute and ITTPO. The Visiting Instructors are volunteers free of any fee. In the absence of finding any volunteers for certain specialized technologies, attempt can also be made to send paid instructors for a minimal fee that may cover their travel expenses. The duration of instruction by the Visiting Instructors could be anywhere from a week to several weeks depending on their availability and their course materials.

Visiting Instructors will be provided with food and lodging.

7 Employment Opportunities

The students of the institute can start contributing to the community as soon as they have finished their course works. The institute will try to assist them by creating employment opportunities.

The hardware courses, and the exposure to digital debugging could provide great deal of understanding of electronic chips and other hardware. This could create related job opportunities.

The institute may offer free software or other services for selected institutions and may arrange a venture to maintain it, thus creating another sector of possible employments.

7.1 Employment Forecast

There are three sectors where employment opportunities can be created or found.

- ❑ Local Government and Non-Governmental Organizations
- ❑ Private Sector
- ❑ New Business Ventures

In the field of software, the development of database applications can be used in numerous places, such as medium size businesses, NGOs, local government offices etc.

VanniTech will make every attempt to identify the areas that can be computerized in the local government and private business offices and create opportunities for the new “graduates.”

The new business ventures could provide the following services:

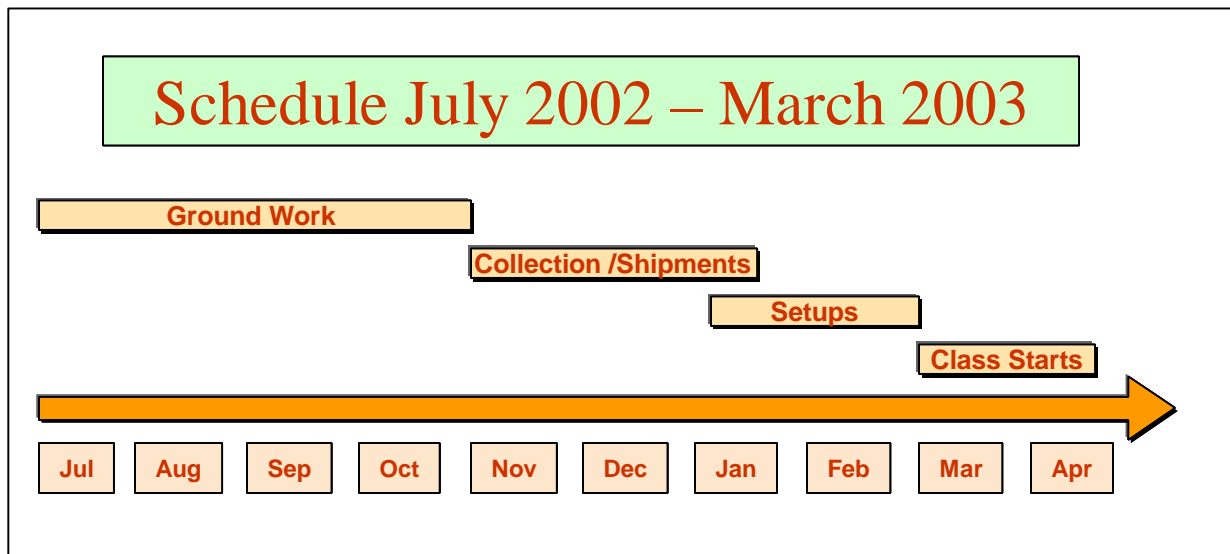
- ❑ System Administration - configuration of Computers/Printers
- ❑ Setting up and administering of computer networks
- ❑ Customization of database application
- ❑ Web page/site development
- ❑ Hardware debugging and fixing

7.2 Other Opportunities

Educating the local entrepreneurs about the importance of having a website and being able to expose the local products to the international expatriates and other communities would lead to web development and Internet related opportunities. This could be the start of an expansive E-Commerce economic growth for the North-East of Sri Lanka. The new ventures could create software that can be sold for the Colombo market as well. The development of web pages for the Tamil expatriate communities could well be the first international market.

8 Timeline

According to the present schedule, the classes could start by March of 2003.



9 Funding

The cost for the first phase of the VanniTech is expected to be met by donations from the Tamil expatriates living around the world, and other volunteers that have an interest in the development of North-East of Sri Lanka.

The second phase of the VanniTech project would be to build a permanent campus for the institute.

Foreign governments, non-governmental organizations, and other philanthropical agencies are also invited to help establish the VanniTech and participate in the rehabilitation and reconstruction work of the North-East of Sri Lanka.

10 Budget

The estimate for the first phase of VanniTech is based on a temporary location and admitting a limited number of students.

During the first year, students are not expected to pay high fees for the tuition, however, for the second year and beyond, they can be charged higher fees.

The income from the students' tuition fee for the first year can be used for any unexpected expenses during the first year, and any leftovers can be carried over to cover the expenses for the second year and beyond.

The budget comprises capital expenses and monthly recurring ones. The capital expense includes the setting up cost of the institute and the equipments.

The monthly cost includes salary for the local employees, utility charges, and any other rental and other miscellaneous charges.

It is possible for the institute to operate self sufficiently without any financial donation after the first year. But if the standard of the institute and the student enrollments are to be improved, then it will need financial investments for sometime.

10.1 First Year

The first year budget includes the capital expense and the monthly expenses. During the first year the students are not expected to be charged a high tuition fee, hence the income from it, is not significant.

Following is the breakdown of the estimate for the first year.

First Year Total Estimated Budget (U.S.\$)			
<i>Description</i>	<i>First 6 Months</i>	<i>Second 6 Months</i>	<i>First Year Total</i>
Capital Expenses	(\$65,900)	-	(\$65,900)
Recurring Expenses	(\$16,900)	(\$16,900)	(\$33,800)
First Year Total (deficit)	(\$82,800)	(\$16,900)	(\$99,700)

The first year budget is expected to be met entirely by donation.

10.2 Second Year and Beyond

It is expected the first president of the institute, a volunteer with no salary, will relinquish his duties after the first year. Beyond that, a paid president will have to be hired, and hence the recurring cost will go up slightly.

With an assumption of the same scenario as the first year; the number of students and lecturers, location and equipments remain the same, and no equipments breakdown and no upgrade of the institute, the budget for the second year will be the same as the recurring expenses of the first year plus an additional salary for the president of the institute.

The amount needed for the second year can be met, if the students are charged the same fee as at a computer-training center in Colombo. A slight increase in the student enrollment could also be considered to bring in more revenue.

If the outcome of the institute during the first year is satisfactory, then it will certainly attract several students that may be willing to pay a higher fee.

If the conditions are not conducive to charge the students higher fee, then the institute will need to be subsidized.

Following is the breakdown of the estimate for the second year if the students are charged a high tuition fee of about S.L. Rs. 6,000.00 per month.

Second Year Total Estimated Budget with High Student Fee (U.S.\$)			
<i>Description</i>	<i>First 6 Months</i>	<i>Second 6 Months</i>	<i>Second Year Total</i>
Recurring Expenses	(\$18,400)	(\$18,400)	(\$36,800)
Income	\$18,400	\$18,400	\$36,800
Second Year Total	\$00	\$00	\$00

If the current peace talks continue to progress, then it is possible that there will be electricity, phone, and Internet link in Killinochchi during the second year. This would bring down the monthly recurring expenses for the institute.

Following is the breakdown of the estimate for the second year with low student fee of about S.L. Rs. 3000.00 per month, and improved infrastructure.

Second Year Total Estimated Budget with Low Student Fee and Improved Infrastructure (U.S.\$)			
<i>Description</i>	<i>First 6 Months</i>	<i>Second 6 Months</i>	<i>Second Year Total</i>
Recurring Expenses	(\$13,400)	(\$13,400)	(\$26,800)
Income	\$9,200	\$9,200	\$18,400
Second Year Total (deficit)	(\$4,200)	(\$4,200)	(\$8,400)

This deficit of the budget can further be significantly reduced, if a permanent home can be found for the second year. Therefore the possibility exists for the VanniTech to become self-sufficient and be able to operate without much or even any financial help after the first year.

11 VanniTech Future

There are three issues affecting the future of the institute - the need for a permanent home, the financial sustainability, and the management of the institute.

11.1 Permanent Home

The first phase of the VanniTech project will start to function in a temporary campus. But it would work toward achieving the goal of building a permanent structure for the institute within a year or two. It would work towards finding a gracious donor or donors for this task. It would explore foreign governments, non-governmental agencies, and philanthropists.

11.2 Future Funding

The institute must become a self-sustaining institute without depending on any assistance for its recurring expenses such as employee salary and equipment related costs, within a short period of time. This can be achieved by charging students a tuition fee that covers such expenses. The current peace talk is also providing an environment where the infrastructures are being improved and this will soften the budget.

The ITTPO believes VanniTech can be self-sustaining after the first year if needs to be. But it is expected that more proposals may come forward to improve the standard of the institute and the student enrollment capacity. And for this, more financial assistance will be needed in the future.

11.3 Future Management

Although, at the beginning, the VanniTech is to be run by the volunteer going from the U.S., the plan is to hand over the operation to a Board when he relinquishes his duties. A charter will also be created for the institute.

12 Challenges

There are several challenging tasks VanniTech will face at the beginning, and we believe they can be met successfully. This section lists some of the challenges.

Although there are several potential students longing for high-tech education within the North-East region, their educational background could make VanniTech's teaching a possible uphill battle.

Some of the challenges could be the following:

- ❑ Students' prior computer experience / familiarity
- ❑ Students' fluency in English
- ❑ Matching students with the right Program of Study
- ❑ Finding Visiting Instructors on a timely manner and allocating classroom time to match their trips

13 Risks

There are few factors that can determine the success of the institute. One of the major factors is the ground situation. If the peace process collapses and the war resumes, there could be a situation that the institute may not be run as planned. Therefore the possibility exists for the termination of operation of the institute under extreme conditions. However, just the mere resumption of hostility does not mean the closure of the institute.

The other factor, although within all of our control, cannot be ignored. If the budget cannot be met on time, there will have to be changes to the plan.

14 Measurement of Success

Once the students finish their studies at the institute, and if the majority of them actively engage in the field of technology on a full time basis for living in North-East Sri Lanka, then it can be considered a success. This reflects employment opportunities, sharing of information, and using of the technology.

15 Conclusion

If the Vanni Institute of Technology can be organized, funded, established and properly run, it will certainly tap into the talented section of the society and provide them with the most needed technical direction and guidance and jumpstart the era of technology to the people of North-East of Sri Lanka. It will lead the rehabilitation of a society that has been severely disturbed by years of war, and bring them out of poverty and misery and change their standard of living.

If the project can be funded on time, then the plan can be executed as expected and make the VanniTech a reality. The VanniTech along with ITTPO will be an international coordinating power plant that channels, distributes and shares the resources that are scattered around the world without any synergy.

It will expand the knowledge base, generate employment opportunities and bring technology to the doorstep of the people of North-East of Sri Lanka. This could be the seed for the 'Silicon Valley' and the 'Bangalore' of the Tamils.