Partnerships at Work for IT Training:

Jamaica’s Information Technology Employment Creation Project – INTEC

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References
3. CIT Overview Document prepared by Michael Glover, Managing Director, CIT, 2000
1.0 The INTEC Project

In April 2000, the Ministry of Industry, Commerce and Technology launched the Information Technology Employment Creation Project (INTEC) in support of the National Strategic Plan for Information Technology. The plan puts information and communication technologies (ICT) at the center of Jamaica’s economic development as a dynamic industry and in support of the development of other sectors of the economy.

The decision to move in this direction is driven by worldwide trends and particularly projected industry and occupational growth and in our neighbour, the USA. The US Bureau of Labour Statistics in their latest release on new 1998-2008 employment projections indicate that the five fastest growing occupations are computer-related occupations, commonly referred to as information technology occupations (computer engineers, computer support specialists, systems analysts, database administrators and desktop-publishing specialists). These occupations have a projected growth rate of between 108% and 73% over the 10 year period. This obviously has significant implications for Jamaica, and certainly the strategic importance of IT as a growth factor for the economy.

1.1 Project Objectives and Strategies

The INTEC Project is a three year project which is intended to establish the framework for a knowledge-based society in an effort to foster and sustain long-term economic development. In order to achieve the goal of accelerated economic development, three basic objectives have become the drivers of the project:

- The creation of jobs to ensure short-term results
- The development of a knowledge-based society through training and retraining, and the strengthening of our human resource.
- The development of a local information technology industry.

The Human Resource Development component of the project has been defined to operate under the direction of a multi-agency HRD Committee and executed by the HEART Trust/NTA. This Committee oversees the expenditure of funds for education and training including instructor training, training grants to firms, and special training programmes for communities and special target groups.
Partners in this process include, Social Development Commission (SDC), National Youth Service (NYS), Workforce Development Consortium, Universities, Association of Community Colleges, Schools, Ministry of Education & Culture, and private sector investors and training providers.

In order to build an Information Technology industry, individuals will be required with various levels of technology skills compatible with the job opportunities that are created.

Over the three year life of the project, it is anticipated that job opportunities will be created in two main categories: **Medium to High Level IT Skills - Software Services** – Information Technology Consultants, Network Specialists, Programmer/Analysts, System Programmers, Web Engineers and Designers, Web Masters, Multi-Media Developers; and **Low Level IT Skills - Data Conversion/Teleservice** - Call Centre Operators, Telemarketers.

In fulfilling its mandate, the HEART Trust/NTA will be using a number of strategies including:

- The establishment of high-end software training facilities in public and private institutions through partnerships (for example, the Caribbean Institute of Technology)
- Recruiting and deploying local and overseas Information and Communication Technology (ICT) experts within the training network
- Upgrading local trainers and prospective trainers to participate in the ICT human capital creation
- Providing training grants to new and expanding firms that provide on-site training for their employees that is directly associated with the job creation objective
- Expanding the ICT training opportunities that exist through HEART Trust/NTA operated and supported training institutions and programmes
- Supporting community based ICT training initiatives and opportunities through arrangements with community based organizations including churches, NGO’s and schools
- Collaborating with agencies such as the NYS and SDC to provide ICT training opportunities to their target population
1.2 The Importance of Partnerships

Perhaps the most critical success factor for ensuring the effective implementation of the project is the establishment and maintenance of partnerships with a variety of stakeholders and beneficiaries. These include:

- Local and foreign private sector IT investors
- Educational institutions and training providers
- Funding agencies
- Non-governmental organizations and community based organizations
- Public sector agencies
- Media

This paper will examine the role of partnerships using three sub-projects as illustrations of how this has worked in a very practical sense.

2.0 Caribbean Institute of Technology (CIT)

The first example to be highlighted is that of the Caribbean Institute of Technology (CIT) in the Montego Bay Freezone as a high-end IT training provider. The development of CIT actually commenced prior to the start of INTEC, but has now been subsumed under the project as the programme converges with the INTEC project outputs and funding for CIT is therefore provided through this facility.

2.1 Rationale for Development

The decision to develop the Caribbean Institute of Technology was based on a variety of factors:

- An acute shortage of information technology workers worldwide and particularly in our neighbouring country, USA, is hampering the ability of companies to reach their potential in an information-based economy. Add to this the inability of the educational and training system there to produce sufficient numbers of competent personnel to meet the demand in the short term. ii
- Not surprisingly, given the shortages described above, many major U.S. corporations have been looking offshore to find scarce software development resources.
- Jamaica boasts an intelligent, literate, and conscientious workforce and the country has demonstrated is ability to adapt readily to modern industrial technologies. The
Jamaican secondary school system, like that in India, is based on the British model. With 2.5 million citizens, Jamaica is the largest English-speaking country in the Caribbean.

- Additionally, the Jamaica Digiport International (JDI), a subsidiary of Cable and Wireless has established Jamaica as the most sophisticated telecommunications market in the Caribbean, boasting a 100% digital network.
- Jamaica is also in close proximity to the U.S. and is in a shared time zone with the U.S. East Coast.

Since Jamaica does not have an adequate supply of trained software developers, nor a system for producing such a supply the primary rationale for CIT is to create a critical mass of trained software developers and put in place a system for producing larger numbers of such workers to fuel the growth of a software industry in Jamaica and to slow the “brain drain” of Jamaican professionals and talented youth to the U.S. and Great Britain.

It is clear, however, that the success of the project also lies in Jamaica’s ability to attract a portion of the US software development industry to establish off-shore operations here. Therefore local partners such as the Ministry of Industry Commerce and Technology and our national promotional agency, JAMPRO must work closely with CIT/HEART Trust in the marketing of Jamaica’s trained resources.

2.2 History of CIT and the Role of the Partner Groups

According to the documented history of the programme, the opening of CIT marked the culmination of a year’s discussions, explorations, forging of working relationships, planning, and work in three countries. In early 1998, discussions were begun involving the University of the West Indies in Mona, Jamaica, Furman University in Greenville, SC, the Jamaican government agency HEART/NTA Trust, the Ministry of Commerce and Technology of the Government of Jamaica, the Montego Bay Free Zone, the International Development Consortium (affiliated with the University of Hertsfordshire in London), and a software company, Indusa, LLC, in Atlanta, Ga, to explore the possibility of establishing a computer programming training institute in Jamaica. In the fall of 1998, the Caribbean Institute of Technology was established as a
collaborative venture among these seven partners. CIT’s mission is to design and deliver high-quality certificate-based computer programming training in Jamaica.\textsuperscript{iii}

Each partner played a specific role:

- Curriculum planning and development for CIT was coordinated by Furman University and the University of the West Indies. The professional instruction staff for the pilot offering was recruited from the U.S. and India by Indusa, LLC and Furman University.
- A new facility to house the Institute was identified in Montego Bay and build-out and computer equipment purchases were initiated by HEART/NTA to transform this space into a first-class teaching/learning environment.
- HEART/NTA also coordinated the advertising and recruitment of the first class of students, with Furman University and the University of the West Indies taking the lead in the interviewing, testing, and selection process for the class.

2.3 Impact and Development of CIT

The first class of 43 students graduated from CIT on December 5, 1999. On January 4, 2000, the second class of 101 students began their study at CIT. 81 students from this class graduated on November 10, 2000. The majority of them are employed at Indusa (outsourcing), Multivisual from Germany (e-marketing), Overdrive (e-publishing) and Jamaica Call Center (e-commerce). On January 2, 2001, the third class of 100 students began their study at CIT.

The initial pilot training programmes in Montego Bay mentioned earlier represent the first phase of a more ambitious three-phase project:

- Phase 1: Pilot CIT Offerings and Proof-of-Concept in Montego Bay 1999-2000
- Phase 2: Refinement of Curriculum and Deployment of the Curriculum in Web-Format – not yet concluded
- Phase 3: Expansion of CIT to Serve More Students in Other Locations in Jamaica.

Phase 1 of the CIT project has been very successful and has served to establish a productive working relationship among the seven partners. The two pilot offerings of the CIT training program in Montego Bay has produced a total of approximately 125 programmers as of November 2000. Phase 2 is expected to be completed in early 2001 when the Web deployment
of the CIT curriculum will be completed. The Core Curriculum component is complete now with work progressing on the remaining components. Phase 3 has already commenced with the opening of the three CIT satellite training centers in Kingston, EXED Community College on October 17, 2000, InfoServe on January 22, 2001 and Institute of Management and Production on March 26, 2001.

However, the planned roll-out of CIT satellites has not been as aggressive as originally planned, partly due to the slow realization of foreign investment in this sector and the resulting shortfall in employment of the graduates. (Approximately 35 graduates from the second batch were not immediately employed up to the time of writing this paper)

In spite of this, given the need to have a pool of trained persons in order to attract investment, the plan is to open two additional CIT satellites outside of Kingston by September 2001 at Moneague and Knox Community Colleges. Additional satellites will be rolled out as demand and resources indicate.

This summer, an instructor training programme will be mounted with funding provided from USAID and the HEART Trust/NTA.

3.0 The OverDrive/HEART Trust Partnership
Under the Training Grant facility of the INTEC project, commercial IT investors, as an additional incentive to establish or expand their operations in Jamaica, can apply for grant funding to recruit and train their initial workforce. In this case, Overdrive Jamaica Limited, a subsidiary of the American based OverDrive, Inc. with headquarters in Cleveland, Ohio, applied and was granted assistance to the tune of some US$105,000.00.

This e-Publishing company is positioned to capitalize on the worldwide interest in eBooks and digital publishing created by the release of Microsoft Reader with ClearType through its partnership with Microsoft Corporation for the development and release of Reader. It is also said to be the single best positioned Microsoft and major publishing house partner to capitalize on the explosion of commerce surrounding the release of Microsoft Reader and related eBook technologies.
OverDrive Jamaica Limited sought to collaborate with HEART Trust/NTA for the development and delivery of a skills training project in Electronic Publishing (ePublishing) primarily to provide workers for the start-up operations of the company. Individuals participating in the programme will be prepared for careers in Electronic Publishing (ePublishing) including Quality Control, Hyper Text Mark up Language (HTML) editor, Art and Children’s Book Specialist and Quark Specialist and Adobe Specialist. However, trainees will also be prepared to pursue further training in Web Mastering and Digital Design programmes to be established by HEART/NTA as well as for related job opportunities in for example, desk top publishing.

3.1 Project Goals and Objectives
The goals of the project are presented below:
   1. To expand training opportunities in Information Technology.
   2. To increase the number of trained persons available for employment in the sub-sector.
   3. To expand the involvement of industry in the development and delivery of training.

The objectives of the project are:
   1. To train 150 persons in e-Publishing skills.
   2. To train 8-10 instructors in the delivery of e-Publishing skills
   3. To facilitate the expansion of the information Technology sub-sector in Jamaica.
   4. To increase the pool of trained and certified individuals available for employment in the IT sub-sector.
   5. To place the successful completers in jobs in the IT sub-sector.

3.2 Description of the Project
The project consists of two components – the training of trainers and the training of entry level personnel. Both consist of institutional and in-plant components. For the entry level training, the institutional component will be offered over a duration of sixteen (16) weeks at the Montego Bay Community College. Thereafter, trainees will do four (4) weeks of in-plant training to be delivered at the company located in the Montego Bay Freezone. On successful conclusion of this internship, the trainees will be hired by OverDrive. Trainees may also be hired by the company after successful completion of the core 10 week programme. The project will allow the trainees to choose from a range of skill areas as well as the level of training they will pursue.
In regard to the instructor programme which was concluded in June, most of the instructors were drawn from institutions such as the Montego Bay Community College, Arianox and other IT training providers. A limited number of these instructors will be contracted by HEART to deliver the e-Publishing/related programmes and others will be hired by OverDrive as in-house trainers.

3.3 Role of Partner Groups
OverDrive Jamaica Ltd. and its parent company OverDrive, inc. will provide training materials and training for instructors as well as internships for the qualified trainees. The company will also work towards providing future areas of study in computer programming.

HEART Trust/NTA will be required to provide subsidies to underwrite the following costs:

- Training cost (materials, etc.)
- Cost of computers for training
- Software
- Salaries for Instructors
- Airfares for Trainers
- Additionally, the recruitment and selection of trainees and instructors will be the responsibility of the Trust, OverDrive and the Montego Bay Community College

Individuals who complete the course of training successfully will be certified by the NCTVET which is currently reviewing the course material to determine the level of the programme.

The Montego Bay Community College will provide the classroom facilities and on-site day-to-day management of the programme, while the overall project will be administered by a tripartite management committee comprising representatives from HEART Trust, OverDrive and the Montego Bay Community College that will be responsible its implementation and management in accordance with the established terms and conditions. The on-site day-to-day management of the project will be undertaken by the Montego Bay Community College.
4.0 The Digital Design Programme

The Digital Design programme had its genesis in a request from the ITC Department at the HEART Trust for the development of a curriculum in Graphic Arts in the summer of 2000. This resulted in five modules being developed locally focussing on Basic Computer Skills, Introduction to Graphic Art and Artwork, Digital PrePress and Illustration, Introduction to Time Based Media and Introduction to Graphic Arts for Interactive Multi-media. Discussions began in earnest with a number of potential local training partners: Creative Production and Training Centre Ltd. (CPTC), Edna Manley School for the Visual and Performing Arts and a small private training provider Media Services Ltd. to provide expertise and training sites.

4.1 Rationale for the Programme

All IT programmes up to this point have focussed on more traditional areas such as programming, networking and web-design. However, Jamaica is well known for its creativity and talent in the arts and it was felt that these innate gifts, coupled with new emerging technologies, could combine to produce a new niche for local and overseas investment as well as additional career prospects for trained personnel.

In defining the multimedia industry, in its narrowest sense it refers to the production of compact disks and materials for diffusion over the worldwide web. They can be further categorized as games, interactive stories, educational and self-help materials, business aids, advertising and the application of computer graphics, particularly in the fields of animation and special effects. In terms of jobs, it includes, in the core sector, those related to motion pictures, television, video, special effects, animation, software design, consulting and training, advertising, telecommunications, graphic design, printing and publishing. Jamaica’s diverse, multi-cultural history and population along with the country’s natural beauty, makes the development of a variety of multi-media productions an opportunity for anyone with the right skills and entrepreneurial flair. The training programme being developed is envisaged to provide just the tools to jump start the multi-media industry in Jamaica.

4.2 Project Goals and Objectives

Project Goal: To provide the competency building tools to kick start the expansion of the local multi-media industry
Project Objectives:

- Equip a 20-station computer laboratory for the delivery of the digital design programme
- Develop a curriculum in Digital Design taking into account the local context
- Train a core of local digital design instructors

4.3 Partner Roles and Responsibilities

The HEART Trust/NTA, through the INTEC project will be providing the leadership and guidance for the project as well as the funding of the computer laboratory, the payment of instructors and the provision of the required materials.

It is expected that the Creative Production and Training Centre (CPTC) will provide the main training site along with specialized audio and video production equipment. Additionally, in-house expertise as well as the recruitment and selection of trainees. On-site day-to-day management of the training programme will be provided by CPTC. Eventually, it is planned that the programme will become self-sustaining and be financed through student fees, donor grants and industry.

It is anticipated that the Edna Manley School for Visual Arts, will contribute teaching resources for the more traditional and fundamental design modules of the programme as well as provide representation on the project management committee.

A new partner in the project, the German Agency for Technical Cooperation, GTZ, is providing funding for the curriculum development and instructor training activities by contracting the services of a technically competent overseas training consultant. It is anticipated that the programme in Digital Design will begin in September 2001.

5.0 Lessons Learnt

In the course of developing and implementing these projects, working with a number of different personalities and agencies, there have been countless opportunities for learning and growing as individuals and as organizations. Some of the more important lessons are mentioned below.
5.1 How to Ensure Successful Partnerships (and Projects!)

- If you can, always choose partners who stand to gain something by participating in the partnership. This may sound trite, but if agencies and individuals are not clearly able to see “what’s in it for me” then it is unlikely they will contribute the necessary time, talent, and resources to make the partnership work. Sometimes, the gains to be received (or perhaps some of them) are not very apparent and need to be articulated by the project manager. Making a list of all the benefits that will accrue to all partners is a good place to start the dialogue. In the ensuing discussions you might even be surprised at some of the gains that your prospective partners identify.

- Document the project proposal defining the project goals, objectives, phases, partner responsibilities and costs to be borne by the various agencies. Ensure that all parties sign off on the agreement. It is easy in the excitement of the initial stages of the project to forget seemingly minor steps and their associated costs. For example, if you overlook the need to advertise your programme to recruit trainees, the unanticipated costs for this activity alone could make the project come to a grinding halt before it has even got out of the starting blocks. There may be also some less obvious costs for which someone must pay such as utility costs for operating the computer laboratory, which can be quite high over the life of the project and therefore need to be accounted for. However, while the project document is a useful guide, it is important not to become its slave. Remember that while ensuring that the letter of the law is met, it is in the spirit that true meaning is usually found.

- Building a team takes time and usually a lot longer than you think! In order for your project to be successful, there must be continuous open dialogue amongst all the partners. You will find that even in the best planned project, there will be circumstances and events which were not anticipated and certain modifications may need to be made along the way. Ensuring that everyone on the team has up to the minute, accurate information on which decisions can be made is certainly a challenge. Most team members have limited time to attend meetings and sometimes may be unavailable for face-to-face interaction due to physical distance. This means that the project manager must use every technological facility to provide on-going communication between partners. The use of e-mail and intranets where documentation can be posted for immediate and simultaneous feedback from
partners is essential to ensure the most efficient and effective use of our most expensive resource – time!

- Very often project managers are so involved with the nitty gritty business of day that the area of public relations is forgotten. The role of the media in providing the wider public and perhaps some of your beneficiaries with information to encourage on-going project support can be likened to the baking powder in the batter – without it the cake will not rise! Get your in-house communications department (if you have one) to attend some of your meetings, send them regular project up-dates. If you do not have the luxury of in-house assistance, contact your local press and send them releases and photographs of historical events which are sure to excite media interest. Be sure to include them on the guest list for launches and other key occasions – remember, they are looking for good stories to tell, so why not help provide them with the content?

- Although each project is discrete and has its own set of goals and objectives, very often there are synergies and relationships that can be advantageously developed between projects. For example, in the case of the OverDrive training programme and the Digital Design programme, the former can be used to prepare students for entry into the latter. Additionally, aspects of graphic software design and development may well be another area of speciality that will be introduced in the CIT curriculum, through the focus on the Digital Design programme.

- In the case of training programmes, true success is really only measured when graduates have been successfully employed into the industry for which they have been trained. This, of course, is not generally within the total control of the training provider. This means that the training provider/project manager must work very closely with industry in order to ensure that first of all, the competencies which are being developed match the needs and requirements of industry and, secondly that other partners, such as those seeking industry expansion, are fully aware of the availability of trained resources and use this information to attract investment from the matching industry.
This list is certainly not exhaustive, but includes some of the more important lessons learnt through the first year of the INTEC project. The key one to remember is that no one agency or individual can make a project successful – it means constantly sharing ideas and building trust through open and on-going communication between all parties. Partnerships are all about people working together to realize common goals; finding the right balance between focussing on the end-product (the goal) and the process (working with people) is critical to building a team that will ensure that expected (and even unplanned) benefits accrue to all stakeholders.

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ii There seem to be differing views on whether there is really a problem of a worker shortage – companies believe that there are not enough people in the IT occupations to meet the growing demand while employee groups and advocates for employees believe that there are enough trained technical professionals in the USA, but that industry has not tapped into the existing labour pools. – “The Digital Workforce: Building Infotech Skills at the Speed of Innovation” Principal Authors Carol Ann Meares and John F. Sargent, Jr., US Department of Commerce, Technology Administration, Office of Technology Policy, June 1999.
iii Extract and information taken from CIT Overview Document prepared by Michael Glover, Managing Director, 2000

iv "Multimedia and digital visual effects: an emerging local labor market" by Allen J. Scott, Monthly Labor Review, March 1998

v The GTZ, funded by the Federal Republic of Germany, deals with a wide range of issues and tasks. They include, for example, protecting the tropical forest in Indonesia, AIDS prevention in Kenya, and advisory services to governments of countries. The primary goal of GTZ’s work is to improve the living and working conditions of people in the partner countries and sustain the natural basis for life. They have been assisting the GOJ since 1995, through the HEART Trust/NTA in the development of the Vocational Training System.