

Annex B

DOING BETTER IN BERMUDA



The Arnold Group, LLC
September 2005

Contents

Executive Summary	3
I Introduction	6
II Perceptions and Realities	6
III The Process	7
IV The Opportunities.	8
V The Numbers	9
V. The Current System – Strengths and Observations	11
A. Public Education	11
B. Employment Transition Services and Work Preparation	12
C. Training	12
D. Industry/Commerce	12
VII The Plan Overview	13
A. General Guiding Principles	13
B. Particular Areas of Concern	14
C. Elements to Consider for an Ideal Workforce Development System	14
VIII The Plan Flow	15
IX The Plan Components	16
A. Public Education	16
B. Employment Transition Services and Work Preparation.	20
C. Training	28
D. Industry/Commerce	31
X Cost Parameters	34
XI Conclusions	35
Appendix	39

Executive Summary

The Arnold Group, LLC, a national workforce development consulting firm from Rhode Island, USA, was commissioned by the Bermuda National Training Board to conduct a study on workforce issues in Bermuda and to subsequently draft a workforce development strategy for the Government of Bermuda.

As a significant part of Bermuda's Sustainable Development Initiative, the goal of this workforce development strategy is to maximise the potential of all Bermudians in all sectors and at all levels of the workforce, simultaneously meeting the needs of the citizenry and the employers of Bermuda.

Dr. Lee Arnold and Mr. Robert Palumbo, principals of The Arnold Group, LLC used a variety of methods to conduct a thorough analysis of present conditions in Bermuda so that recommendations for a workforce development strategy would be timely and responsive to the issues. These methods include:

- A visit to Bermuda in May 2005 to meet The Honourable Premier Alexander Scott, National Training Board Chairman Herman Tucker, Sustainable Development Project Coordinator Ross Andrews, and other government officials; to review a variety of background materials dealing with the Bermudian population and the economy; and to attend a public hearing on the Sustainable Development Initiative.
- A visit to Bermuda in June 2005 to interview twenty-two leaders from the public, private, and educational sectors of Bermuda on issues relating to education, workforce development, and economic development.
- A thorough and objective labour market data analysis arranged by The Arnold Group, LLC and conducted by the Center for Labor Market Studies at Northeastern University, Boston, Massachusetts, USA.

As a result of this study, The Arnold Group, LLC designed a workforce development strategy which identifies

- Public Education
- Employment Transition Services and Work Preparation
- Training
- Industry/Commerce

as the four cornerstones of Bermuda's strategic plan. This report addresses each of these cornerstones in detail citing current strengths and observations; suggesting recommendations for change including replicable models; and most importantly, outlining how all the pieces fit together in an effective and well coordinated manner.

It is our view that the Ministry of Education and Development is the logical entity to house

the implementation of this strategy; and as part of this Ministry, the National Training Board has a legislatively approved mission that is the core of this activity. With approval from the Premier and Cabinet, and consultation with the Central Policy Unit to ensure congruence of this plan with the sustainable development strategy, the National Training Board can convene major stakeholders and begin the process of discussion and implementing. We recognise that the final decision as to where the primary responsibility for this activity will reside rests with the Cabinet and the Civil Service Executive; regardless of that final decision, we feel it is imperative that the activity enjoy linkage and coordination with the Sustainable Development activity within the Central Policy Unit.

Workforce development by nature is intended to discern and address the deficiencies amongst those desiring employment. Such instruments as a workforce needs assessment and an economic assessment can go a long way in informing this imperative. By way of analogy, the value of such efforts may be seen in a review of the attached labour market analysis, found in the Appendix at Tab A. One of the points made in that analysis is that much of the unemployment in Bermuda can be attributed to skills mismatches and job search deficiencies.

Significantly, the recommendations in this report respond to a finding by the Center for Labor Market Studies (see Appendix, Tab A): “During the last decade employment of Bermudians and non-Bermudians increased; however, during the past four years non-Bermudians have become a substitute for Bermudian workers, in part because Bermudian workers lack the skills and abilities required to gain access to employment in high growth skills sectors that have become the mainstay of economic growth in the nation.”

Some actions can be taken immediately: strengthening the staff capacity of the National Training Board and augmenting the Committee structure of the National Training Board are two examples. Other actions can be implemented near-term: reviewing educational models and school-to-career systems can yield important insights.

Many actions listed under the rubric of the four cornerstones of the workforce development strategy can commence at once, and simultaneously. Once the appropriate organisational structure to lead and coordinate this effort is identified, then decisions can be made as to which elements are either to be explored or to be implemented and cost estimates can be secured. While budgeting for training grants will depend on the legislative cycle, the conversation about the components can begin now; we strongly encourage positive consideration of the proposed activity budget for the National Training Board. The review of specifics as suggested in this report’s Conclusions section will do much to guide the development of a specific action schedule.

A caveat is in order. We observed that there did not seem to be a catalog of all workforce development activities in Bermuda. We know that any report is a snapshot at a point in time.

Perhaps a wider distribution of, and response to, the interview instrument (see Appendix, Tab B) would have captured a more complete picture of current activities. Regardless of that reality, for those efforts that have been developed or are now underway that coincide with our recommendations, we commend them and urge their inclusion in such a catalog, so that those needing the services may become aware of them and avail themselves of the services that would be most apt to meet individual needs.

The need for change is undeniable if Bermuda is to sustain its prosperity in an international economy, and find a way for all Bermudians to have the opportunity to be a part of this growth. The Bermudian Government can level the playing field for their citizens by addressing the issues in this report and providing the guidance and resources to implement change.

I Introduction

To outsiders, Bermuda evokes positive images: warm, friendly people; hospitable climate; beautiful beaches; and general economic well-being.

Bermudians are justifiably proud of those images.

At the same time, Bermudians are acutely aware of other aspects of Bermuda at the start of this new century:

- an economy with two mainstays – international business, and tourism – where the best paid positions are occupied by non-Bermudians
- a cost of living that has economic and social implications
- a cost of housing that has outstripped the earnings capacities of many citizens
- a labour force that is one-quarter non-Bermudian.

The Government and citizenry of Bermuda recognise that their island nation is at a crossroads, and that a dialogue must commence in earnest to address these major issues. The context for that dialogue is the Sustainable Development Initiative.

A core element of that unfolding initiative is a plan to address the education and training needs of the citizenry. The goal is to maximise the potential of all Bermudians in all sectors and at all levels of the workforce, simultaneously meeting the needs of the citizenry and the employers of Bermuda.

II Perceptions and Realities

Some literature promoting Bermuda as a place to do business talks about Bermuda's high literacy rate. Taken at face value, that is a positive. When the educational system is explored, concerns arise.

1. Of the 10,900 young people in school¹, some 40% are in other than public schools.
2. There are varying standards among those schools
3. There is no standard diploma at the senior secondary level.

Employers have cited deficiencies among too many job applicants. Educators have cited attitudinal and social problems among too many students. Public officials have cited directional and motivational issues for too many youngsters. Finally, for young people, there seems to be an uphill climb to qualify for the best education, productive training,

¹ As of 2004; Source: Bermuda Online

decent employment opportunities, and a chance to prosper in this island community; for too many that feels like an unreachable dream.

Bermudians have welcomed people from many nations to their island, and to their workforce. Yet there is increasing concern about the relative scarcity of Bermudians among the top ranks and entry level positions for their two economic pillars, international business and tourism. Some feel that international businesses favour non-Bermudians in the most senior positions. Some feel that the hotel industry favours non-Bermudians, especially at entry-level and direct customer contact positions.

The key to making the outsider's perception of Bermuda a reality for Bermudians, within the context of sustainable development, is workforce development.

III The Process

The Government saw a need for a workforce development strategy to be created within the context of sustainable development. The National Training Board took the initiative to retain a firm whose principals had been leaders in the workforce development system in the United States and in their home state of Rhode Island, in the New England region.

Dr. Lee Arnold, President of The Arnold Group, LLC presented thoughts on approaches to designing a workforce strategy to Education Minister Terry Lister, former NTB Chairman Nalton Brangman, and NTB Executive Officer Michael Stowe in November 2004.

In May 2005, Dr. Arnold and his Vice-President, Mr. Robert Palumbo came to Bermuda to meet with Premier Scott and a variety of government officials, to meet NTB Chairman Herman Tucker, to attend a public hearing on the Sustainable Development Initiative, and to review a variety of background materials dealing with the population and the economy. Messrs. Arnold and Palumbo described a *workforce development system as an interconnected series of events that prepare people for their first job, a new job, or a better job; that simultaneously meets the needs of workers and employers; and that positions a geopolitical unit – be that unit a city, a state, a county, or a nation – to attend to the current and future well-being of its citizenry.* Based on this visit they developed guiding principles, voiced areas of concern, and cited examples of potential projects for Bermuda to consider.

In June 2005, Dr. Arnold and Mr. Palumbo returned to Bermuda and interviewed 22 individuals from the public, private, and educational sectors of Bermuda. Prior to their visit they had developed an interview instrument and shared it with Mr. Stowe, who in turn provided that interview instrument to individuals who agreed to be interviewed. Some interviewees responded point-by-point to that instrument, while others chose to use it as

a point of departure for discussion purposes. Based on those interviews and subsequent brainstorming, The Arnold Group, LLC prepared draft thoughts in the areas of public education, employment transition services and work preparation, training, and industry/commerce, and for each area cited strengths and observations.

In July 2005, Dr. Arnold and Mr. Palumbo met with Mr. Stowe during Mr. Stowe's visit to Rhode Island. In addition to providing a verbal report to Mr. Stowe about their June visit, and a copy of their draft thoughts, The Arnold Group, LLC was given authorization by Mr. Stowe to use the services of the Center for Labor Market Studies based at Northeastern University in Boston, Massachusetts, USA to conduct a thorough and objective labour market data analysis.

With simultaneous analysis and options reviews in process, The Arnold Group, LLC proceeded to develop a draft plan for consideration by the Government of Bermuda.

IV The Opportunities

The National Training Board, by providing people with opportunities to develop credentialed skills through educational offerings, changes peoples' lives. With a workforce development plan that is part of a sustainable development strategy, which is popularly supported and properly funded, Bermudians have the chance to shape the course of their beautiful island nation.

Opportunities can be created to give young people enhanced guidance and direction, to ensure that senior secondary graduates can successfully compete for excellent education and employment slots, and to certify that the Bermudian workforce can match the skills of any workforce.

With Bermuda at a crossroads, this is a good time to step back, assess the situation, and understand the range of choices and the implications of selected decisions. In terms of the workforce, people can pretend or prepare. The actions taken can mean the difference between hope or despair, direction or drift, vitality or stagnation.

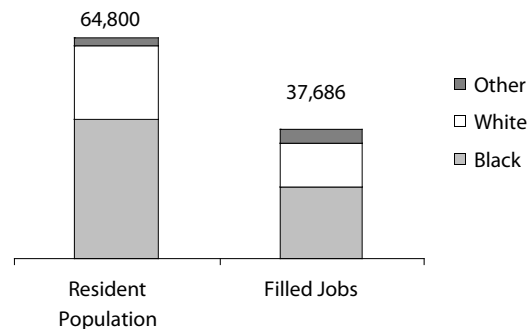
V The Numbers

To understand the workforce challenges it is helpful to place some numbers in context.

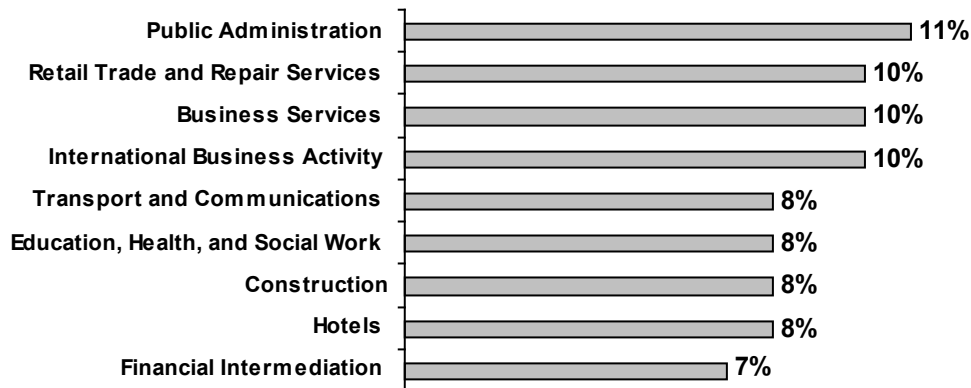
Bermuda’s resident population was estimated at 64,800 in 2004. Most residents (about 50,500) were born in Bermuda and are Bermudian². There are over 39,500 voters. The majority population (63%) is “black, of African heritage, Afro-Bermudians” (Bermuda-online). The largest minority group (about 33%) is Caucasian – white.

The June 2004 *Employment Briefs*³ estimated total filled jobs as of the last week of August 2003 to be 37,686. Of that number, Bermudians held an estimated 27,346 or about 73% of the total. Males comprised 52% of the job market.

For total filled jobs by race, blacks accounted for 55%, whites comprised 35%, and mixed/other races were at 10%.



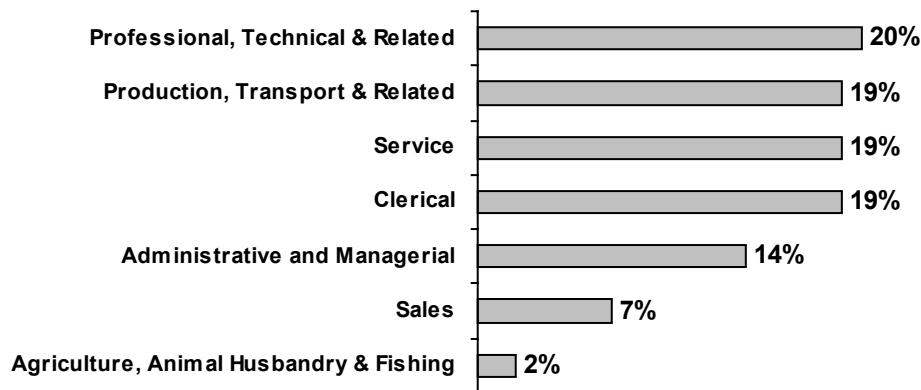
While international business and tourism are regarded as the two main pillars of the Bermudian economy, employment is spread fairly evenly over a number of major economic activities, as shown in the following chart. Those activities collectively represent 29,649 jobs, or nearly 80% of total filled jobs.



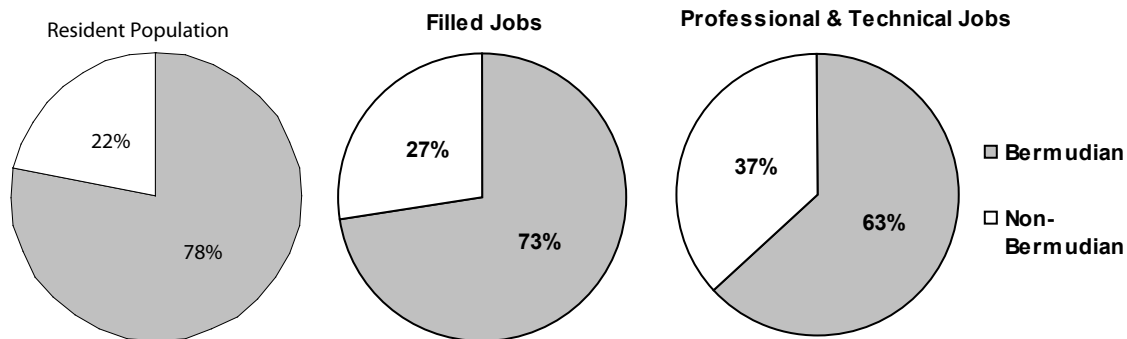
² Source: <http://www.bermuda-online.org/population.htm>

³ Bermuda Government Department of Statistics

The major occupation groups, in descending order, are shown on the following chart.



Non-Bermudians accounted for 37% of the Professional, Technical and Related positions, and were generally important to all the major occupation groups, constituting just over one-fourth of the workforce. Many service workers are non-Bermudian, and are especially prevalent in the hotel and restaurant areas.



Quoting from the June 2004 *Employment Briefs*, “Examples of positions that await suitably qualified Bermudians include qualified accountant, physician, senior secondary school teacher, underwriter, pharmacist and architect.”⁴

One concern stems from a finding of the Northeastern University Center for Labor Market Studies: “while non-Bermudians accounted for about one-fifth of the nation’s overall population they represented one-third of the 20 to 44 year old population of the nation – a considerable proportion of the nation’s potential human resource capacity.”⁵

⁴Bermuda Government Department of Statistics

⁵Northeastern University Center for Labor Market Studies

The challenge presented by the numbers is to determine the best way to introduce the world of employment possibilities to young people, to equip those of or approaching working age with the skills and education necessary to take their place in the Bermudian economy, and to bolster the capacities of Bermudians more generally so that they may more readily adapt to the changing needs of employers and the changing conditions in the economy.

VI The Current System – Strengths and Observations

The review of materials and direct interviews provided The Arnold Group, LLC with insights that can be discussed and structured into assignments. A later section will make recommendations regarding how some of these insights can be acted upon, and by whom. For now, those insights will be presented in list form, without elaboration.

A. Public Education

Strengths:

- Recognition by all for a need to change and improve
- Solid primary school reputation
- Committed teachers
- Industry willingness to participate
- Availability of resources and physical structures

Observations:

- Need to improve literacy and numeracy rates
- Need for more and better student academic assessments, starting at the middle school level
- Need to develop universal standards for high school graduation and work readiness skills
- Need to develop vocational as well as academic tracks
- Need to have more and varied teacher externships
- Need to structure a formal school-to-career system, to include job shadowing, internships, day release, and the like
- Need to develop a formal mentoring system for youth
- Need to incorporate more parental involvement
- Need to look at different educational models as appropriate
- More and better career counselling
- Better information and guidance on tertiary education opportunities

B. Employment Transition Services and Work Preparation

Strengths:

- Recognised need by all stakeholders
- Some structures are in place – e.g., the National Training Board, the Department of Labour & Training, the Bermuda College, the Commission for Unity and Racial Equality and the Human Rights Commission

Observations:

- No structured programme for early school leavers (i.e., those who leave school prior to obtaining a high school diploma)
- No standards for many industry clusters
- Little information and/or direction for career development
- Need for better connections for continual learning at Bermuda College
- Lack of customer service skills, life skills, and team building skills
- Little or no job preparation and career counselling centres
- No electronic job matching system
- No identified entity to champion this transition piece

C. Training

Strengths:

- National Training Board
- Industry/Education partnerships and collaboratives
- Bermuda College potential
- Some industry standards, especially in technical areas

Observations:

- Standards missing for most occupations
- Technical training limited to relatively small numbers of people
- Structured training lacking in many industry clusters
- Management training opportunities are suspect in terms of preparing Bermudians for the better jobs

D. Industry/Commerce

Strengths:

- Plentiful employment opportunities
- Willingness by private industry to engage in all aspects of the Bermudian community
- Industry/Education collaboratives, such as BTEC

- Some internal training, such as the Insurance Institute
- Summer jobs programme in the banking industry

Observations:

- Large non-Bermudian workforce, particularly in higher paid and lower paid jobs
- No structured career ladders in some industries
- Perception of a “glass ceiling” for Bermudians
- No housing subsidies for Bermudians in the restaurant/hotel industry
- Perceived and/or real lack of management development training for Bermudians
- Insufficient direct involvement in middle schools and high schools

VII The Plan Overview

This review of the main elements of the current system suggests the need for a coordinated workforce development system.

The cited strengths provide confidence that the workforce development system will build upon a strong foundation. The evolution, accomplishments, and legislative parameters of the National Training Board provide the confidence that this effort can be successfully coordinated. With additional staffing and an augmented Committee structure, the National Training Board can carry out the work required of this comprehensive effort. The status of the Central Policy Unit provides the mechanism for reporting, guidance, and integration with the sustainable development initiative.

Some recommended activities can be implemented relatively quickly; some will take a while to implement; others are long-term in nature, but nonetheless critical to the ultimate achievement of **the goal:**

to maximise the potential of all Bermudians in all sectors and at all levels of the workforce, simultaneously meeting the needs of the citizenry and the employers of Bermuda.

A. General Guiding Principles

Seven principles characterise a successful workforce development model:

1. It must touch education and commerce
2. It needs industry buy-in and leadership
3. It must show a structured career path for people of all skills and education levels

4. Connections must be made for all essential resources and services
5. Resources need to be catalogued and understood, strengthened when necessary, and built on individual stakeholder strengths
6. Clear vision and mission statements should be articulated
7. Employment preparation centres (physical and virtual) for youth and adults should be available; branding heightens awareness and use

B. Particular Areas of Concern

Some of the areas of concern have been touched upon in the introductory paragraphs. To highlight some particular areas of concern, we share the following observations:

1. Too many young black males being lost to productive society
2. Over-dependence on work permits, especially for high skill, high paying jobs
3. No apparent structured system to help young people make the transition from school to career
4. No apparent structured post-school workforce preparation system
5. No apparent formal mentoring system for youth, despite laudable ad-hoc efforts
6. Skill mismatches for too many Bermudians relative to demand occupations

C. Elements to Consider for an Ideal Workforce Development System

During the interview process in June 2005, elements of an idealised workforce development system were suggested to the interviewees for discussion purposes. Those who commented on those elements were supportive. Here is the list of elements characterising an idealised workforce development system, as presented to the interviewees:

1. Has a clear and accepted mission statement
2. Not overly bureaucratic
3. Easy to administer
4. Easy to use
5. Emphasis not on process but on purpose, as long as the process is known, followed, and facilitates the purpose
6. Industry-driven
7. Reflective of the aspirations of the workers (current and potential)
8. Links education, labour and training, and economic development
9. Measurable outcomes

10. Financial (grants, tax credits, tuition offsets, etc.) and non-financial support (items that require staff time but not necessarily large additional expenditures – such as assessments, job fairs, some school-to-career activities and the like)
11. Standards benchmarked to “best in class” (may be ISO certification, industry certifications, a national certification, a certificate of workforce readiness, some kind of skills warranty, etc.)

VIII The Plan Flow

The Ministry of Education and Development contains units that are at the heart of potential solutions for maximising the potential of all Bermudians in the long run, and the Minister’s Portfolio includes the logical entity with a legislatively approved mission that is at the core of this activity. That entity is the National Training Board.

With approval from the Premier and Cabinet, and consultation with the Central Policy Unit to ensure congruence of the workforce development plan with the sustainable development strategy, the National Training Board will convene major stakeholders to discuss workforce development plan components and to begin the implementation process.

A collection of musicians, each with different instruments, different sets of sheet music, and no leader does not constitute an orchestra. For Bermuda, the desired outcome is not dissonance, but a symphonic presentation by trained musicians following the direction of a talented conductor. The National Training Board can be that conductor.

A new committee structure for the National Training Board, combined with partnership agreements with a variety of entities and a reporting arrangement with the Central Policy Unit, will give the national workforce development plan a central point of attention and responsibility. The National Training Board will have operational responsibilities as well as coordination responsibilities.

One of the important partners envisioned in this flow is the Commission for Unity and Racial Equality, which can take major steps in education programmes, monitoring, and reporting to help attain the goal of equal employment opportunity for all Bermudians.

The outcomes for this arrangement should include the development of a visual depiction of the workforce system; clear, non-overlapping roles for units of government and education; and known ways for employers to access training support and find qualified Bermudians to fill positions.

IX The Plan Components

A. Public Education

The Northeastern University Center for Labor Market Studies says that “. . . most economists agree that the productive capacity of a nation is . . . heavily influenced by the level of educational attainment of the working age (16 years of age or older) population.” That report goes on to say that “. . . Bermudians were 1.8 times more likely to have only a secondary qualification or less compared to the non-Bermudian working age population” and that “. . . non-Bermudians were 2.6 times more likely to have earned a four year college degree compared to their Bermudian counterparts.” That report notes that “the large disparity in the level of educational attainment that exists between the Bermudian and non-Bermudian population suggests substantial segmentation in the Bermudian job market, with Bermudians less able to supply labour to the nation’s expanding high end array of occupations that require high levels of academic qualifications.”⁶

Clearly the pipeline that ultimately produces people with Bachelor’s degrees and advanced degrees is long. The process that leads to that outcome, however, can effect some changes rather quickly that are more likely to produce that ultimate result.

As noted earlier, in the section called “The Current System – Strengths and Observations”, a noted strength is wide recognition for a need to change and improve. When Dr. Arnold worked with Rhode Island agencies to effect changes and improvements to a state-funded vocational school, he found motivation from the words of Dr. Willard Daggett from New York State who had led similar reforms there. Dr. Daggett said that “if you love your kids more than you love your schools, you’ll change your schools.”

More and better student academic assessments can help pinpoint deficiencies in reading and math and inform educators as to which tools might best help overcome those deficiencies. Standards for high school course offerings, for senior year projects, and for work readiness skills training, together with an agreed-upon diploma, will help put all students on an equal footing when considering post-high school options.

Different students have different learning styles and different interests. For example, academic instruction may equip young people with the capacity to continue their formal education beyond high school, but it should be acknowledged that vocational education does not preclude continuation of formal education beyond high school. There can and should be vocational offerings for students whose primary interest and learning style are mostly academic in nature; likewise, there are excellent examples of “academic” subjects such as language and mathematics being presented successfully within the context of a vocational format. In fact, when vocational education is done well, the outcome is multiple job opportunities as well as additional formal education options for the graduates

⁶Northeastern University Center for Labor Market Studies

of secondary level vocational education. One is not better than the other; they are simply different.

For academic and vocational students alike, course work needs to have both rigor and relevance. In addition to setting standards for course content, it is important to have classroom augmentation opportunities, both for teachers and for students.

Teacher externships are an approach worth considering. Here, companies agree to place a teacher into a temporary position during the break between school years. By way of example, a math teacher was placed in a manufacturing company. While there, the teacher helped employees learn the math needed to operate numerical control equipment. When that teacher returned to the classroom in the fall, that teacher was able to respond to students' questions as to why they needed to learn a particular concept, and was able to share actual examples of how math was used in a work environment.

As part of a school-to-career system, students can be involved with a day release programme. Here, students are placed in a company that does something matching the student's interests – which run the gamut of employers from agriculture to zoology and everything in between. Some examples: one student was placed at a city zoo, and worked with the trainers to learn how to care for animals, while another student was placed at the zoo to work with the design staff which used computer programmes to develop safe but exciting habitats for the animals. Students were required to report on their experiences and to do research on the occupations to which they were exposed. It was not uncommon to see these experiences lead to job opportunities and to decisions regarding further education.

Sometimes a student will reconnect with the formal learning process with the aid of an adult mentor. This can mean a retired person agreeing to spend an hour or two per week with a student at a school, or an employee given permission by that employee's company to spend time at a school either as a guest lecturer or as a direct mentor for an individual student. In an economy where nearly everyone is working, and where multiple job-holders are not uncommon, students may not otherwise have meaningful regular contact during the school day with adults other than teachers. Such contact can help students understand better the importance of learning, and see that there is someone who cares about what happens in their lives.

Bermuda's primary schools enjoy a good reputation. One factor that seems to be present at the primary level is parental involvement. That condition seems to change once students leave primary school. Mechanisms that encourage and expect parental involvement beyond the primary grades would be positive.

Programs for guidance counsellors that assist with their understanding of the economy and employer needs and expectations would help students with improved career decision

making and would give them a better grasp of education and job opportunities beyond high school. Such programmes could occur in a classroom setting and be augmented by tours. Student and parental access to information about careers and continuing education would be useful, as would access to interest inventories and similar instruments that can help students achieve some focus in their future planning.

In the United States, former Secretary of Labor Elizabeth Dole was involved in something called SCANS – the Secretary’s Commission on Achieving Necessary Skills. The Commission was convened in 1990 to examine the demands of the workplace and to determine the capacity of the current and future workforce to meet those demands. The Commission identified five competencies (skills necessary for workplace success) and three foundations (skills and qualities that underlie competencies).

The workplace competencies:

1. Resources: allocate time, money, materials, space, and staff
2. Interpersonal Skills: work on teams, teach others, serve customers, lead, negotiate, works well with diversity
3. Information: acquire and evaluate data, organise and maintain files, interpret and communicate, use computers to process
4. Systems: understand social, organisational, and technological systems; monitor and correct performance, design or improve systems
5. Technology: select equipment and tools, apply technology to specific tasks, maintain and troubleshoot equipment

The foundation skills:

1. Basic Skills: reading, writing, arithmetic and mathematics, speaking and listening
2. Thinking Skills: ability to learn, to reason, to think creatively, to make decisions, and to solve problems
3. Personal Qualities: individual responsibility, self-esteem and self-management, sociability, and integrity

The workplace competencies and foundation skills can be made part of structured day release and other school-to-career efforts.

The Bermuda Chamber of Commerce, various business associations, and the companies in Bermuda are natural and willing allies of the education system. Through their participation in career days and sponsorship of a variety of events they have shown they can be solid partners in the efforts to connect learning to life. This good will can be made more meaningful if these events are approached as learning events and placed within a framework of introducing students to the world of work.

One way to structure school-to-career efforts is to develop age appropriate activities throughout a child's educational experience. The foundation skills can be emphasized in the classroom setting, and the workplace competencies can be developed during the day release experiences. At the conclusion of these efforts, during the senior secondary experience, the ACT Work Keys system might be considered. Students scoring at the upper levels of the Work Keys tests are generally considered able to meet the demands of 85% of all catalogued occupations. When augmented by materials from such companies as KeyTrain and WIN Career Solutions, students can take the tests in a group setting or even on their own, either formally or informally. Test results show the student where some improvement might be needed, and then direct the student to the materials that will help bring about those improvements.

Educators and workforce system leaders would do well to view some educational models that could give them ideas of use to the Bermuda public education system. There are four model schools in Rhode Island, USA that deserve a visit: The William M. Davies Career and Technical School in Lincoln, the Metropolitan Career and Technical Center in Providence, the Cranston Construction Career Academy, and the Exeter Job Corps Academy. In each case, industry is involved, students are actively engaged in learning, teachers help students understand and make the connection between what they are learning and what they will do upon graduation, and the outcomes are excellent. While it would be unusual to see an entire model be fully suitable and adaptable to another nation, it is the case that some of these models have been replicated both elsewhere within the United States and in other countries.

Public higher education on the island is limited to the Bermuda College, which is a two-year degree granting institution. The course offerings tend to attract a predominantly female student body. Recalling the excerpt from the June 2004 *Employment Briefs* cited in "The Numbers" section earlier in this report, "Examples of positions that await suitably qualified Bermudians include qualified accountant, physician, senior secondary school teacher, underwriter, pharmacist and architect." None of those occupations are available to people whose highest formal education attainment is an Associate's Degree. Bermuda College is beginning the process of reaching out to the business community to determine needs, and the short-term certificate programmes may well meet some employer needs. This activity is necessary but not sufficient.

If the determination is made that the critical mass does not exist on the island to support a four year degree-granting institution, a positive activity that could be performed by the Bermuda College is arranging articulation agreements with the island's high schools, and with four year degree-granting academic and technical institutions off the island. In this way, high school students would understand which courses they would need to take to ultimately become the accountants, physicians, teachers, underwriters, pharmacists, and architects of the future; would be able to take introductory courses for those professions

at the Bermuda College; and would then be able to transfer to a four year degree-granting institution outside of Bermuda to continue their studies in preparation for those occupations. The articulation agreements would be designed to assure Bermuda College graduates that the credits they earned at Bermuda College would be recognised and accepted by the four year degree-granting institution. Perhaps there could also be advanced courses offered at high schools that could be accepted for credit by Bermuda College, if those courses are foundational for some of these occupations; there could even be times when it would be desirable to offer such advanced courses to high school students at the Bermuda College, to give students a sense of what it means to be on a college campus and in an atmosphere of advanced learning.

B. Employment Transition Services and Work Preparation

The public education system can be a solid contributor in preparing youth for the world of work through a myriad of interventions, including structured school to career opportunities, a strong mentoring programme, and candid educational and vocational assessments. While these opportunities may exist in some fashion and to some degree in Bermuda, there is a vital need to assist Bermudian youth in bridging the gap between secondary school and a full, rewarding participation in the workforce. This rings especially true for those young men and women who choose not to continue their education beyond high school. As stated in Dr. Harrington's research, "63% of the Bermudian working age population reported that they had no more than a secondary qualification".⁷ Given this statistic, it becomes critical to provide structured employment transition services dedicated to work preparation.

Our recommendation to address this challenge is to create a one-stop career centre system for Bermuda. This model for workforce activity has been highly successful in the United States and the US Department of Labor proudly states "America's One-Stop Career Center System is an exciting innovation that connects employment, education and training services into a coherent network of resources at the local, state and national level for its' customers...job seekers and employers." Mr. Palumbo served as the State lead in building Rhode Island's one-stop career centre system entitled netWORKri – *Where People and Jobs Connect*. He brought together local and state partners with disparate views regarding education, training and economic development and through consensus developed a statewide employment and training delivery system. We believe that this model, properly modified to address the specific needs of Bermuda, will be an organising vehicle to provide integrated service delivery for job seekers and employers.

Simply stated, a one-stop career centre attempts to place as many work preparation activities and as much labour market information as possible in one convenient location to connect job seekers to education, training and employment opportunities. The intent is to bring together in a coordinated fashion those stakeholders who provide these services

⁷Northeastern University Center for Labor Market Studies

and to supplement these services when gaps are identified.

A listing of potential services offered through a one-stop career centre at no cost to the customer (job seeker and employer) could include:

Services for job seekers:

- A resource area with computers which access the internet and host software packages like Microsoft Word; a potential Bermudian job bank; fax machines; copy machines; and telephones for job search activities
- Current information about the Bermudian job market
- Current information about accredited four year degree-granting institutions
- Resource material on resume writing, job interviewing skills and other job seeking activities
- Information on quality education and training programmes
- Initial screening for training opportunities
- Career testing and assessment (Work Keys utilisation)
- Job preparation workshops (e.g., life skills, interviewing techniques, understanding customer service, team building, human rights)
- Career counselling
- Vocational planning
- Networking groups for peer support
- Basic computer classes
- Job referral and placement
- Trained staff to assist customers
- An electronic job matching system

Services for employers:

- Recruitment assistance and pre-screening of qualified applicants
- Labour market information
- Job and industry growth trends and forecasts
- Compliance information (e.g., immigration regulations, human rights)
- Information on worker upgrading assistance (to be addressed later in this report)
- Job fairs
- Downsizing assistance

Although some pieces of a one-stop career centre system exist in Bermuda, these pieces

are scattered throughout the community, not catalogued, and not coordinated. The pieces currently available in Bermuda are necessary but not sufficient; attention should be given to developing the elements currently unavailable. A telling example of this condition is the lack of a structured job bank in which employers can list employment opportunities for Bermudians to access. Consequently, if an electronic job bank existed, then a job matching system for Bermudians could be implemented.

A one-stop career centre system is not limited to just secondary school graduates. The centres are built for anyone who needs guidance and preparation for work. Bermudians who are looking for their first job, a new job, or a better job would all be welcome to visit a centre and utilise whatever services are appropriate for them. Middle school and secondary school students would find helpful career guidance activities and information. Working and non-working adults could access education and training opportunities. Early high school leavers would find the one-stop system especially invaluable as they may need these services more than any other group. As we further address the needs of early school leavers, there is a very successful training and education model entitled Job Corps which will be introduced in greater detail in the next section. The services exemplified by the Job Corps could be of tremendous benefit to these young people.

Now is the right time to create a system which equips Bermudians with all the necessary skills and knowledge to succeed in the workplace. Under the leadership of the National Training Board, and as part of the Sustainable Development Initiative, a Bermudian one-stop career centre system can grow and develop. Committed stakeholders (NTB, Training and Employment Services, CURE, Bermuda College, the employer community, and others) can be brought together to build a system wherein their resources and expertise are vital to success. Along with changes in the public education system, this transition model will enhance the economic future of all Bermudians.

Education and Workforce Preparation Models

For Bermudians without a high school diploma, and without a certified skill, the hope of earning a living must be daunting indeed. The best remedy is to structure secondary and senior secondary schools in a way that meets the needs and preferences of students. Such a structure should equip those young people to confidently enter the world of employment or to continue their academic or technical training so that they may take their rightful place in Bermuda's economy. Students emerging from such a structure would be sought after by Bermuda's employers.

A number of Bermudians are familiar with the New England region generally, and with the State of Rhode Island particularly, in the Northeastern section of the United States, due to a variety of education and training connections. In the State of Rhode Island there are a number of educational innovations that could offer insights for Bermudian education

officials. We will highlight three secondary level innovative schools and one academy designed for young adults who may not have obtained a high school diploma as a result of attendance at a more traditional secondary school.

William M. Davies, Jr. Career and Technical High School

In the late 1980s, Dr. Arnold was asked to be part of a team to review secondary vocational education offerings in Rhode Island. Working with business volunteers from the state's Workforce 2000 Council and the state's Board of Regents for Elementary and Secondary Education, and with workforce and education staff support, this team agreed to look at the one vocational school in Rhode Island that was owned by the state.

They looked at what was then called the Davies Vocational-Technical School, located in the Town of Lincoln in the northern part of the state. It was an 800 seat facility with 300 vacancies. Student outcomes were not overly flattering and the business community, while sympathetic, was not truly a partner at the school. As a result of the review, Dr. Arnold worked with the volunteers and officials to draft legislation to begin to effect changes at Davies. He coauthored legislation to address such issues as business leadership, advance funding, and student expectations.

Now, with well over a decade of results under the new format, the Davies Career and Technical High School is a success story. Not only are there 800 students enrolled, there is a waiting list of over 150 students who wish to attend. Davies students have increasingly distinguished themselves in national competitions, and emerge with multiple job opportunities and advanced education opportunities. Their literature proclaims their essence: "Educating a Technical Workforce for Rhode Island." Their overview – "The Davies Model" – provides this description:

"Davies students master transferable technical skills and competencies from industry-standard curricula, and participate in 4 years of challenging academics. On-site business-sponsored training centres offer students access to the most current technology and equipment in the industry. Business/industry-based learning opportunities – job shadows, paid and unpaid internships – extend the technical curriculum by allowing students to apply classroom theory and develop new skill sets. In this way, Davies provides a growing pool of technical employees for Rhode Island's industry growth clusters." ⁸

Davies officials cite as the elements of the Davies Model the following items:

- Business-led, autonomous Board of Trustees
- Strong, visionary leadership, a strategic operating plan, and site-based management team

⁸ Davies Career and Technical School

- Strategic business/community partnerships
- Committed teachers
- High standards
- Admissions policy
- Professional development opportunities
- Industry-standard programmes
- Comprehensive support services
- Technology-rich learning environment
- Employability or SCANS skills

A report issued in October 2001 includes these excerpts:

“The school atmosphere is welcoming, and the faculty, staff, and school administrators cultivate a safe and secure learning environment.”

“. . . the strength of the faculty lies in the way it embraces and takes ownership of its culturally diverse student body.”

“The students are well behaved, respectful of each other and the school staff. They recognise and appreciate how hard the faculty, support staff, and administrators work on their behalf. Students are proud of their school and are focused on their future.”⁹

The people at the William M. Davies, Jr. Career & Technical High School look forward to receiving a delegation from Bermuda, and imparting their experiences.

Metropolitan Regional Career and Technical Center

Business, workforce and education leaders were pleased with the results of the transformation of the Davies Career and Technical High School, and worked together again to support an innovative approach to high school education that was proposed by a non-profit educational entity called The Big Picture Company.

Dr. Arnold, as Executive Director of the state’s Human Resource Investment Council, was pleased to host the Big Picture leaders as they presented their thoughts to the Human Resource Investment Council, and pleased that the Council chose to champion this innovative approach and provide substantial early funding for the effort. The Metropolitan Regional Career and Technical Center was quickly dubbed “The Met.”

⁹ (from The SALT Visit Team Report, Rhode Island Department of Elementary and Secondary Education, 19 October 2001 Final Report)

The Met is located in the capital city of Providence. State Education Commissioner Peter McWalters has been quoted as saying that “The Met puts into action everything that we know works for kids.”

From the school’s literature comes this description:

“The Metropolitan Regional Career and Technical Center (The Met) began in September 1996 as a bold new school, with a student-teacher ratio of 15:1, high standards, and strong family engagement. By 2005 The Met will house 110 students at each of its six small schools throughout Providence. In addition to its learning centres, The Met now has a state-of-the-art athletic facility, a performance centre, a culinary kitchen, a technology centre, and a school-based health centre.”

“At The Met, each student works with an advisor, a parent or guardian, and a workplace mentor to design a personalized curriculum based on the student’s interests. Students work at internships in community businesses and organisations two days each week, learning academic skills through real-world problem solving.”

“The Met aims to empower students to take charge of their learning, gaining the skills and knowledge necessary to achieve success beyond high school, and to become life-long learners.”

“The Met has seen nearly every graduate accepted to college, since the first class graduated in 2000. Collectively, our graduates have earned over a million dollars in scholarships and financial aid. In 2002, we began a longitudinal study of our graduates and created an alumni office to support them as they pursue higher education and other career paths.”¹⁰

The elements of the Davies Model were listed earlier. The Met talks about its philosophy, and then lists its guiding principles: “A good school is small and personalised; has passionate, hard-working teachers; is led by strong leaders; engages a diverse community; and provides real-world learning experiences.”¹¹

Their guiding principles:

- Small schools
- Personalised education, one student at a time
- Family engagement, one family at a time
- Real world learning
- Authentic assessment

¹⁰The Metropolitan Regional Career and Technical Center

¹¹The Metropolitan Regional Career and Technical Center

- Building a community, one student at a time
- Education is everyone's business
- Culture for change

The Met model has been replicated in several areas in the United States, has been adopted in other English-speaking countries, and may well have ideas that could be attractive for Bermuda. The Met leadership would welcome a delegation from Bermuda.

Cranston Construction Career Academy

As is the case with Bermuda, construction skills are in great demand in the State of Rhode Island. The Cranston Construction Career Academy is a manifestation of the desire to properly introduce and prepare young people for career opportunities in the construction trades.

The New England Region of the Laborers' International Union of North America worked with the Cranston Public School System in Rhode Island to develop a Charter School that would "provide students in grades 9–12 with a solid academic foundation in an authentic learning environment in order to prepare students interested in exploring career options in the construction trades and environmental sciences and to become ethical, productive, responsible citizens of the global society." ¹² As part of their programme, the students have an academic curriculum, a construction technology curriculum, and a career awareness/world of work curriculum. The students have an opportunity to gain hours in an approved apprenticeship programme, and as graduates they are fully prepared to enter the workforce as Construction Craft Labourer Apprentices. Because of the academic component, the students are also prepared to continue their education beyond high school if they choose not to enter the workforce immediately upon graduation from the Cranston Construction Career Academy.

This is a relatively new effort, modelled after a successful effort established by the New England Laborers and the Medford School District in Medford, Massachusetts USA. It may be helpful for Bermudian officials to visit this school to get a sense of how such efforts get started. The officials at the Cranston Construction Career Academy would welcome such a visit.

Exeter Job Corps Academy

Established in 1964, Job Corps is the United States' oldest and largest federally funded job training and education programme for economically disadvantaged youth ages 16 through 24. Since its inception, Job Corps has trained and educated more than 2 million young people and serves more than 65,000 young adults each year, enabling them to attain

¹² from the Cranston Construction Career Academy Mission Statement

educational advancement and long-term earning potential.

Job Corps offers students the opportunity to learn a trade, earn a high school diploma or GED, and receive assistance finding a job once they complete the programme. Since it is a self-paced programme and lengths of stay vary, students may remain enrolled for up to two years. Students are exposed to diverse situations and experiences, learn what to expect in the workplace, and gain important social skills that are essential to success. While enrolled in Job Corps, students receive housing, meals, basic medical care, and biweekly living allowances. Job Corps provides a structured yet nurturing environment while maintaining a strict zero tolerance policy for drugs and violence. The result: more than 90 per cent of Job Corps graduates get jobs, enlist in the military, or pursue a college degree.

As of the year 2000, there were approximately 115 Job Corps centres located in 46 states, the District of Columbia, and Puerto Rico. Unfortunately, Rhode Island was one of only four states which had no centre. Dr. Arnold was commissioned by then Governor Lincoln C. Almond to take the lead in developing a plan which would bring a Job Corps centre to Rhode Island. Dr. Arnold, working with staff from Rhode Island's Congressional delegation, staff from appropriate State offices, and Exeter local town officials, presented a detailed proposal to the United States Department of Labor. This plan was subsequently approved; construction on the site began; and, on 9 November 2004 the Exeter Job Corps Academy conducted its grand opening ceremony.

The Exeter Job Corps Academy is located approximately 20 miles from Providence in the town of Exeter, RI. Four buildings house administrative offices, educational and vocational classrooms, a dormitory, a dining hall and recreation facilities. Set in a rural environment, many young people from urban areas reside at the centre and are given the opportunity to learn and grow without pressure from troubled environments at home. Camaraderie among students soon develops and the concept of teamwork takes root. Students are assessed academically and then provided with the necessary resources to raise their literacy and numeracy levels appropriate for success in their chosen occupation.

The Exeter Job Corps Academy offers six vocational areas to approximately 200 students each year: Business Technology, Construction Technology, Culinary Arts, Health Technology, Information Technology, and Manufacturing Technology. Students follow a curriculum which takes them through classroom, hands-on training, internships, and ultimately jobs with career ladders. Counsellors guide students in helping them make good decisions, teaching them the value of commitment, and preparing them for the world of work.

The business community is very involved in the centre by providing internship opportunities to students and also by helping design various vocational curricula. Business support is also evident as it provides membership to the Exeter Job Corps Academy Industry Council.

This Council, whose membership includes Mr. Palumbo, was established to provide advice, guidance and encouragement to the Academy and to its students.

A Job Corps centre contains many elements which could be beneficial to those young Bermudians who have lost their way and have become unproductive in Bermudian society. The Exeter Job Corps Academy in Exeter, Rhode Island would welcome a delegation from Bermuda to visit its facility and learn more about its programmes and message.

C. Training

Education is at the heart of any long-term workforce development strategy. Workforce preparation and transition services are proven bridging strategies to move people from the classroom to the workforce. Training strategies which are industry-responsive and industry-driven are key to shorter-term strategies that are important to the well-being of those already in the workforce.

Training strategies can touch those who are out of the educational system but not yet employed, those who need additional education to obtain suitable employment, and those who are already employed but who could do better with the advantage of additional and job-specific training. Training strategies can also support elements of the workforce development system with the goal of reaching as many people as possible, and providing as many opportunities as possible.

With the passage of the National Training Board Act 1997, which was subsequently updated with the National Training Board Amendment Act 2002, Bermuda took a giant step forward in workforce development. Building on the solid ground of apprenticeship training, the Act positioned the National Training Board to be the core agency in workforce development.

Two functions of the Board as authorised by Section 4 of the 1997 Act bear highlighting:

“(a) to take such measures as it considers necessary for ensuring an adequate supply of trained manpower in occupations in all branches of economic activity in Bermuda;”

“(b) to take such measures as it considers necessary for improving the quality and efficiency of training for apprentices and trainees.”¹³

The work of the National Training Board since the passage of the 1997 Act has been exceptional. It is time now to build on that strong foundation. In cooperation with other agencies and other stakeholders, and as part of the Sustainable Development Strategy, the National Training Board can lead the way to a brighter economic future for Bermudians.

The existing group of activities serves the Board well and can be expanded. To the existing

¹³ National Training Board Act

activities sponsored by the National Training Board and others The Arnold Group, LLC encourages an approach that can reach Bermudian employees individually, in groups within a single employer, and in numbers from small to large that may be spread across several employers within an industry cluster.

For those who are out of the educational system but not yet employed, an electronic job matching system, a one-stop career centre system, and counselling from Training and Employment Services personnel should be helpful.

For those who need additional education to obtain suitable employment, a comprehensive assessment system - perhaps available at the one-stop career centre system - and interaction with the National Training Board and the Bermuda College could be helpful.

For those who are already employed but who could do better with the advantage of additional and job-specific training, the National Training Board can encourage employers to participate in a proposed array of training grants.

Section 4(1)(f) states, as a function of the Board, “to take such measures as it considers necessary to promote, encourage and assist employers in providing on-the-job training for employees.”¹⁴ To assist Bermudians in obtaining entry-level positions, and to provide an incentive to employers to hire Bermudians, we recommend an entry-level on-the-job training programme that would offer subsidies to employers who provide bonafide training to new entrants. The employer would be required to prepare a training plan summarizing the skills to be imparted, and potential opportunities for upward mobility. Reimbursement to the employers would be pegged to a percentage of the salary paid to the individual during the training period, with the length of approvable training tied to the skill level of the position. Invoices for reimbursement would be processed after the new employee has been on the job for a specified period, with those parameters to be determined by the Board.

For individuals or very small numbers of employees, Upgrade Grants can be fashioned to enable employers to invest in their employees, for the sake of improving productivity and individual capacities. The grants can be performance-based, with costs paid to the company on a reimbursement basis at the conclusion of the training. The training could be classroom-style, use an on-the-job training approach, or combine those two forms of training. The Board should set an upper limit, for example \$10,000, for such grant awards, and should consider requiring an employer match (either cash or in-kind).

For whole companies, or whole sections within companies, Competitiveness Improvement Grants can help companies stay current with best practices and keep them competitive in this regional and global economy. Companies would submit training proposals in response to a public invitation, and would specify the need for the training, the elements of the

¹⁴ National Training Board Act

training, and the expected outcomes, along with a proposed budget. The Board could consider restricting the publicly funded portion of the budget to benefiting Bermudians, and could require a statement from the proposing company that shows how the company will ensure inclusiveness for training opportunities. A maximum award amount perhaps in the area of \$35,000 per company would be reasonable, and a company match – cash or in-kind – would be appropriate.

For employers with similar training needs, either because they are in the same type of industry or employ personnel with similar skill needs, Cluster Grants can make sense. With an upper award limit of between \$50,000-\$60,000 per proposal, to be matched collectively by the group of companies either on a cash or in-kind (or combination) basis, such an approach can take advantage of economies of scale and can enjoy the support of an industry association, if one exists that is pertinent to the proposing companies. For Cluster Grants, the proposing group can designate a lead company from within that group to attend to administrative matters relating to the grant, or an industry association can perform those functions for the group of companies, and receive compensation from the grant award for those purposes or let their time and expenses related to performing such administrative functions be counted toward the required match.

Concerning the Committee structure, the 1997 Act provides, in part, that “The Board may, with the prior written approval of the Minister . . . appoint such other additional committees as the Board considers appropriate for the purpose of assisting the Board in the performance of any of its functions.”¹⁵

Because of the grant activities just proposed, the Board may need to consider the establishment of a Grant Proposals Review Committee; this could be accomplished by drawing from the Occupation Advisory Committee, or by establishing a separate committee. Given the demand for certified skills, the Board should consider expanding the role of the Standards and Test Committee to become Standards, Tests, and Certifications. Recognising the key role that public education can play long-term in the economic well-being of Bermudians, the Board is also encouraged to consider establishing an Education Innovations Committee. Committee work can be time-demanding, especially for volunteers who are taking time from their livelihood to assist with this public service. The Board is encouraged to consider drawing from the broader community to help fill committee positions.

As for training support efforts, the Board should consider earmarking funds that could enhance community-based training efforts as well as providing support to significant industry associations. Community-based organisations and industry associations can also be helpful in making individuals and companies aware of grant support opportunities.

One aspect of training that warrants attention relates to public service. The June 2004

¹⁵National Training Board Act, 1997, Section 5

Employment Briefs point out that approximately 11% of Bermuda's working population are employed in the public administration sector. The National Training Board has done some commendable work in supporting sponsored training in a number of Government departments. Yet, in speaking to a number of public officials, there appears to be a need for additional training, government-wide succession planning, and overall public employee career development.

When Dr. Arnold and Mr. Palumbo conducted interviews on their June 2005 visit to Bermuda, a number of senior public officers stressed the need for succession planning, shared some of their thoughts on this subject, and in some cases have taken some steps to begin such a process. We applaud these efforts and any other programmes which benefit the Bermudian Government and its employees.

Dialogue should be encouraged concerning entry-level training, on-going training, and general staff development in Government departments. Some consideration should also be given to the establishment of a Bermuda Public Administration Institute to further education and promote improvements in the art and science of public administration as practiced in Bermuda.

D. Industry/Commerce

A reiteration of the strengths of this sector, as presented earlier in this report, is helpful:

- Plentiful employment opportunities
- Willingness by private industry to engage in all aspects of the Bermudian community
- Industry/Education collaboratives, such as BTEC
- Some internal training, such as the Insurance Institute
- Summer jobs programme in the banking industry

Bermuda is known for its hospitable climate, and in many cases for its hospitable business climate as well. Within this favorable climate, the private sector provides opportunities and creates wealth. Many businesses have shown themselves to be good corporate citizens as well. The hope is that public-private collaboration will continue, and that new avenues will be explored.

One avenue to explore is an effort to create or depict career ladders for the major industries. Once developed, career ladders can be made known to students, teachers, and counsellors in the education system. That can provide the basis for academic and vocational guidance so that students are properly prepared for industries and occupations of their choosing, and the employers of Bermuda can have an impact in that preparation in structured and creative ways. Job shadowing, day release programmes, internships for students, externships for

teachers, and scholarships can be organised around industry clusters and occupational groupings. During the interviews conducted by The Arnold Group, LLC in June 2005 in Bermuda, the ACT Work Keys system was described to several employer representatives, who expressed interest in this concept described earlier in the Public Education portion of this section of the report. As a way of determining a student's readiness for the variety of occupations offered by an employer, this may be one way of identifying potentials and deficiencies, and better preparing the student for a specific area of endeavor.

Management development training can also be pursued around the framework provided by industry associations or clusters, as well as around occupations. Guided in part by developed career ladders information, this kind of training can assure the continued strength of companies in Bermuda with the development of a steady stream of capably trained individuals who know the island and its people.

While non-Bermudians can provide companies with qualifications and experiences not always readily available in the native-born workforce, a number of activities taken together can do much to lessen the reliance on non-Bermudians to fill the skilled positions required by employers. Reducing such cost factors as housing subsidies, overseas recruitment, and turnover may be sufficiently attractive to major employers to embrace such approaches as career ladder development and awareness; school-to-career activities; new employee guidance; continuing education support; and management development training.

While the major employers on the island may have the advantage of resources to engage in some of these recommended activities, it is the case that all 5,000 employer units in Bermuda can be part of creating opportunities for the current workforce and hope for the future workforce. The innovative grant support activities recommended for the National Training Board's consideration can touch the entire spectrum of employers - from the very large to the very small - in Bermuda.

Perhaps working in conjunction with the Small Business Development Center and the Bermuda College, in cooperation with the National Training Board and various industry associations, business leaders and retired business executives might get involved with micro-enterprise training, entrepreneurial training, and small business creation guidance. If the entrepreneurial spirit of Bermudians can be informed and developed, there is no reason for dreams not to come true. In generations past, Bermudians showed sparks of creativity that led to the establishment of fishing and farming enterprises, of rum and perfume enterprises, even of Bermuda shorts! For five centuries, Bermudians have lived with the absence of reservoirs and fresh water lakes and streams; they found creative uses for a natural substance – limestone – and created roofing systems to capture rain water.

Brainstorming and “fresh air thinking” as problem solving approaches can be taught. This kind of thinking can spur lots of interesting and potentially money-making ideas. Some

examples:

- It is not uncommon for half of the energy consumed by a country to be used either to heat or to cool buildings. How much could be saved if the windows were chemically treated to darken somewhat during the heat of the day to reduce the interior impact of the sun's rays, similar to the action of Polarized sunglasses?
- It is unusual for Bermuda to have many days together without sun. How much energy could be produced by solar panels? How much water could be heated by solar energy?
- If Bermuda is blessed with ocean breezes, is it possible to find a non-intrusive off-shore location to locate wind propellers to generate electricity? Is there potential for the ocean currents that wash Bermuda's beautiful beaches to generate power?
- The beautiful waters and natural harbors and inlets of Bermuda attract powerboats and sailboats of all sizes and descriptions. How many of those watercraft are designed in Bermuda? How many are made in Bermuda? How many are restored in Bermuda? How many are repaired or maintained by Bermudians? How many come to Bermuda as part of an organised event?
- Cruise ships account for a growing share of tourists. Could it be possible for a retiring cruise ship to permanently berth in Bermuda waters and be converted to marine condominiums?
- With development space limited, can any of the smaller islands be developed in innovative ways? Can artificial islands be created to accommodate people?
- With interest around the world in "green" technologies, can scientists and construction industry innovators be brought together for "green" symposia? Can they interact with Bermuda government officials to promote the use of "green" technologies and designs in public buildings and new construction?
- In Rhode Island there have been interesting experiments with using the undersides of docks to cultivate shellfish that, when more developed, are relocated to shellfish beds in Narragansett Bay. In Hawaii and off the island of Culebra in Puerto Rico there are high technology spar nets being used in conjunction with aquaculture. Given the demand for seafood in Bermuda, and the pressures on natural stock from offshore fishing by non-Bermudian fleets, is it possible that opportunities exist for an aquaculture industry in Bermuda?

As part of the interaction of businesses with the school children of Bermuda, perhaps there can be the encouragement of creative thinking, contests promoting creative problem solving, and awards for innovative ideas. The approach can be engaging, fun, and potentially productive.

Because of the potential for industry and occupational associations to be catalysts for some of these activities, it would be appropriate for the National Training Board to set aside

funds each year to consider proposals to promote the awareness of young Bermudians in their fields of endeavor, and to develop mechanisms for their involvement and growth. Likewise, it would be appropriate for the National Training Board to invite industry and occupation associations to submit proposals for support to engage in continuous learning and management development training for Bermudian employees.

X Cost Parameters

The cost for some recommended actions cannot yet be determined unless and until those items are approved in concept. In some cases this would also require on-site reviews by designated Bermudians. Items requiring these additional steps include the following:

- An electronic job-matching system
- One-stop career counselling centre system
- A School-to-Career system
- Education Innovations
- ACT Work Keys/KeyTrain-type testing and instruction

For training strategies as outlined above in Section IX of this report, we recommend the following new components for the National Training Board:

- \$300,000 for entry-level on-the-job training (e.g., average of \$4,000 reimbursement to companies per employee; would support subsidies for 75 new employees)
- \$450,000 for upgrade grants (e.g., average of \$6,000 reimbursement to companies per employee; would support subsidies for 75 incumbent employees)
- \$250,000 for competitiveness improvement Grants (e.g., average award of \$25,000 per company for 10 companies; number of employees impacted determined through the proposal process)
- \$250,000 for cluster grants (e.g., average award of \$50,000 per cluster, for a total of five clusters; number of employees impacted determined through the proposal process)
- \$150,000 for community-based training and industry association support (with the number of Bermudians impacted determined through the proposal process)
- \$100,000 for education innovations committee and standards/tests/certifications committee support (to facilitate exploration of recommended models, and selection of those most appropriate for Bermuda)

The total of the recommended new components for the National Training Board is \$1,500,000. While it is not possible to know precisely how many Bermudians would enjoy training support without first seeing proposals from companies, it would not be

unreasonable based on experience to anticipate the following:

National Training Board Programme Augmentation Recommendations

Activity	Impacted Employees
Entry-Level On-the-Job Training	75
Upgrade Grants	75
Competitiveness Improvement Grants	150 (average of 15 per company)
Cluster Grants	150 (average of 30 per cluster)
Community-Based Training & Industry Association Support	100
TOTAL	550 Bermudian Employees Impacted

This new training dimension for the National Training Board would average \$2,545 per person; when the sum recommended to support the new committee is factored in, the average per person training investment would be \$2,727. We think that is a reasonable investment.

XI Conclusions

The workforce development strategy presented in this document is a very comprehensive and ambitious plan, one that will result in schools, job-seekers, employees and businesses, doing better in Bermuda. It is a plan which, if properly supported, guided and financed, will afford *all* Bermudians the opportunity to take their rightful place in their island's growing economy.

It is our view that the Ministry of Education and Development through its National Training Board is the logical entity to oversee and coordinate this plan with direct reporting requirements to the Central Policy Unit and the Sustainable Development Project Team. However, as noted in the Executive Summary, it is understood that the final decision as to who coordinates this project rests with the Cabinet and the Civil Service Executive.

This report has identified four areas of focus – **Public Education, Employment Transition Services and Work Preparation, Training** and **Industry/Commerce** – and has presented recommendations for each. The recommendations are detailed in this document, but for the sake of brevity they are presented here in outline form.

Public Education

- More and better student academic assessments beginning in middle school and conducted on an annual basis
- Standards for high school course offerings, for senior year projects, and for

work readiness skills training, together with an agreed upon diploma

- Vocational education offerings with strong academic components
- Teacher externships to augment classroom activities
- A formalised school-to-career system for students
- A structured adult mentoring programme
- Mechanisms that encourage and expect parental involvement
- Programmes for guidance counsellors that assist with their understanding of the economy and employer expectations
- Better student and parental access to information about careers and continuing education
- Utilisation of the ACT Work Keys system to test and assess occupational competencies to be followed with instructional programming
- Review of materials and visits to four educational models in Rhode Island, USA (William M. Davies Career and Technical School, Metropolitan Regional Career and Technical Center, Cranston Construction Career Academy, and Exeter Job Corps Academy)
- Articulation agreements between Bermuda College and Bermuda's high schools granting college credit for advanced high school courses, and agreements between Bermuda College and outside four-year degree-granting institutions accepting Bermuda College course credits

Employment Transition Services and Work Preparation

Bring stakeholders together to establish a system of one-stop career centres to provide job seeker and employer services. Examples of such services follow:

- A resource area with computers which access the internet and host software packages like Microsoft Word; fax machines; copy machines; and telephones for job search activities
- A Bermudian job bank
- An electronic job matching system
- Career counselling
- Career testing and assessment
- Job preparation workshops
- Information on quality education and training programmes
- Networking groups for peer support
- Basic computer classes
- Employer recruitment assistance and pre-screening of qualified

applicants

- Labour market information
- Workplace compliance information including human rights expectations
- Job fairs
- Downsizing assistance

Training

- Restructuring or expansion of the National Training Board to include a Grant Proposals Review Committee; a Standards, Tests, and Certifications Committee; and an Education Innovations Committee
- An entry-level on-the-job training programme which offers subsidies to employers who provide bonafide training to new Bermudian employees
- For individuals or very small numbers of employees, Upgrade Grants enabling employers to invest in their employees for the sake of improving productivity and individual capacities
- For whole companies or whole sections within companies, Competitiveness Improvement Grants to help companies stay current with best practices and keep them competitive in the regional and global economy
- For employers with similar needs, Cluster Grants initiated through business groups to provide their employees with appropriate and up-to-date skills
- Community-based training and Industry Association support
- Establishment of a Bermuda Public Administration Institute to further education and promote improvements in the art and science of public administration as practised in Bermuda

Industry/Commerce

- Career ladders identification and/or creation for the major industries
- Assistance in developing occupational standards for Bermuda's industries
- Utilisation of the ACT Work Keys system to ascertain potential employees' strengths and deficiencies
- Management development training framed by industry associations or clusters as well as by occupations
- Increased employer support for public education through such activities as school-to-career, mentoring and partnerships
- Addressing the "glass ceiling" issue for Bermudians through increased

support of career awareness activities in the school system and financial assistance to Bermudians for tertiary education

- Consideration of food and housing assistance for Bermudians who enter the restaurant and hotel industries
- Business leadership in micro-enterprise training, entrepreneurial training, and small business creation guidance
- Support for brainstorming and “fresh-air thinking” as problem solving approaches for school children through contests promoting creative thinking in problem solving and awards for innovative ideas

The recommendations outlined by The Arnold Group, LLC are starting points for discussion among all the stakeholders listed in this report. Whether these recommendations are accepted in whole or in part, they represent a response to the many observations, to the objective research, and most importantly to the candid dialogue between this consulting firm and numerous leaders in the Bermudian community.

When the organisational structure to be responsible for this effort is identified, the actions recommended in this report can be reviewed by the broadest possible audience. Once the actions to be pursued are selected, decisions can be made as to the point of specific responsibilities, and cost estimates for particular actions can be secured. Activities can commence in all four cornerstone areas simultaneously, or can be sequenced.

Change is always difficult but the opportunities created through change can be extraordinary. With the proper leadership and support, Bermuda can adapt to the ever-changing global economy, continue its growth, and provide opportunities for all Bermudians to share in this prosperity.

APPENDIX

Tab A *The Bermuda Labour Market and the Demand for Higher Educational Qualifications for Bermudians*, a Report prepared for The Arnold Group, LLC by the Center for Labor Market Studies, Northeastern University, Boston, Massachusetts, USA (September 2005)

Tab B Interview Questions, prepared by The Arnold Group, LLC and used during the week of June 20-24, 2005 at the offices of the National Training Board of Bermuda

Tab C Education and Workforce Preparation Models
William M. Davies, Jr. Career & Technical High School
The Metropolitan Regional Career and Technical Center
Cranston Construction Career Academy
Exeter Job Corps Academy

Tab D KeyTrain
Descriptive materials prepared and copyrighted by Thinking Media, a division of SAI Interactive, Inc.

Tab E Summary Vitae
Dr. Lee H. Arnold
Mr. Robert P. Palumbo, MBA

Acknowledgments

We wish to thank Education Minister Terry Lister, National Training Board Chairman Herman Tucker, and National Training Board Executive Officer Michael Stowe for their courtesies, insights, and friendship, and for all that the National Training Board staff has done to make this a most fulfilling assignment.

We are deeply grateful for the openness and forthrightness of the people who were kind enough to grant us interviews and respond to our questions. In this context, we are especially appreciative of the insights shared by Mr. Ross Andrews and Mr. Charles Clarke regarding the Sustainable Development Project.

We also want to thank the people of Bermuda for giving us a warm, friendly welcome. We hope this report and action plan will meet the needs of these wonderful people, and serve them well.

Most sincerely and respectfully submitted, September 2005

The Arnold Group, LLC

Dr. Lee H. Arnold, President
Mr. Robert P. Palumbo, MBA, Vice-President

The Arnold Group, LLC
p. 401.383.8113
747 Pontiac Avenue, Suite 204
f. 401.383.8115
Cranston, Rhode Island 02910
w. www.thearnoldgroupllc.com
USA

This report has been prepared for the National Training Board of Bermuda by The Arnold Group, LLC and may be cited and quoted with normal attribution.