EXECUTIVE SUMMARY

Maryland's Labor Force Conditions:

TRENDS, CHALLENGES & OPPORTUNITIES

MARYLAND
GOVERNOR'S WORKFORCE INVESTMENT BOARD

BACKGROUND:

The State of Maryland's Workforce

Nationally, the search for skilled workers is becoming increasingly difficult due to demographic shifts, the aging of the U.S. population, skill set mismatches, a lack of general workforce preparation, and current and predicted labor shortages. The critical and increasing need to remain globally competitive presents yet another challenge. Maryland is faced with the implementation of new technologies which are automating many functions and rapidly rendering lower skill positions obsolete.[1] Ignoring these emerging shifts threatens the state's competitive edge and its ability to attract and grow jobs across all skill levels.

The quality of Maryland's current and future workforce is vital to the economic future of the state and the success of its residents. While Maryland currently enjoys a healthy, diverse business climate, many industries are facing shortages of skilled workers. Yet many Marylanders lack the basic education and skills necessary to succeed in the workforce. Maryland's challenge is to maintain its highly educated and skilled workforce while creating opportunities for all Marylanders to participate and succeed in the 21st century workplace.

In short, the challenge facing Maryland's government, business and workforce development professionals is to ensure that the state's workforce adapts to a wide range of emerging trends in a way that will translate into increased economic prosperity for all segments of the state's population.

This executive summary includes a series of 14 recommendations, centered around seven key trends in Maryland's labor force. The recommendations aim to address the critical issues and highlight promising initiatives and collaborative efforts already being planned or initiated. The recommendations also identify additional policies and initiatives that could be leveraged in an effort to address Maryland's emerging and future workforce challenges.

Maryland Governor's Workforce Investment Board (GWIB)

GWIB is the state's chief policy-making and strategic planning body on workforce development, as mandated by the federal Workforce Investment Act (WIA) of 1998. The board is a business-led group of leaders from industry, education and government who are charged with advising the governor on Maryland's workforce development needs.

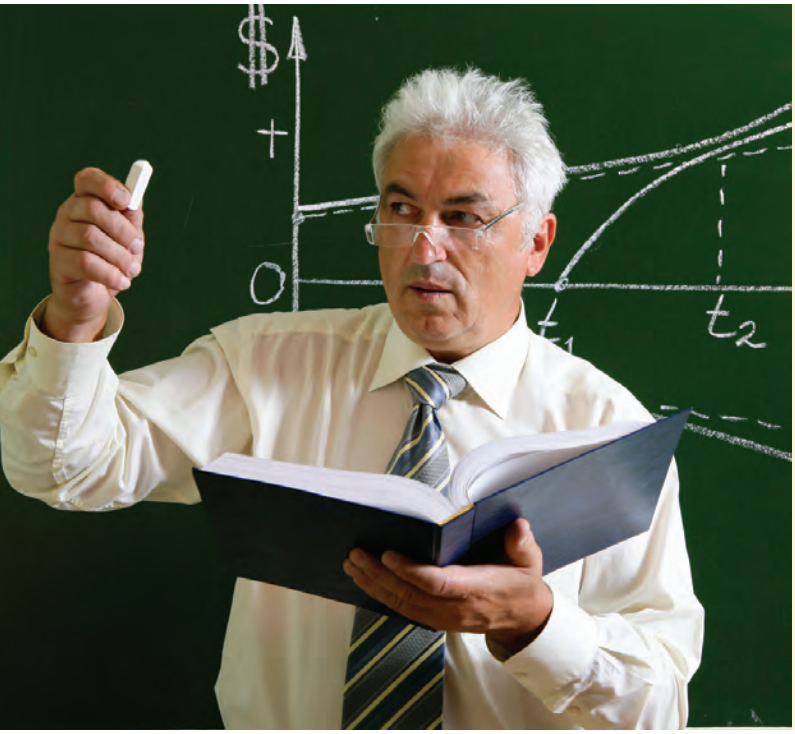
The full report, with more in-depth analyses of the trends, challenges and opportunities for Maryland's labor force can be found online at www.gwib.maryland.gov.

Maryland's Workforce Key Trends & Recommendations:

1. Growing Maryland's Pool of Science, Technology, Engineering and Mathematics (STEM) Workers:

Cultivating the state's base of STEM workers has emerged as a major priority. The expected move of thousands of jobs to Maryland as a result of the Base Realignment and Closure (BRAC) process makes this need all the more pressing.

The STEM industries face a looming retirement cliff as skilled baby boomers begin to retire and separate from the workforce. The state's aerospace industry serves as a prime example. As of 2006, nearly eight out of every 10 Maryland aerospace workers was age 51 or over. Fifty percent of the current aerospace workforce is set to retire by 2020.



RECOMMENDATION: Increase opportunities for young people to become aware of and enter STEM careers.

One way to meet the need for workers in STEM careers is to expand middle- and high school-level students' interaction with STEM professionals through expanded internship and mentorship programs. The GWIB's Aerospace Committee identifies the need to encourage STEM-related field trips and industry participation in classrooms and school activities.

RECOMMENDATION: Expand and enhance pre-college programs such as Project Lead the Way.

Project Lead the Way (PLTW) is a national pre-engineering program which aims to increase high school students' preparation for higher education engineering programs. Forty-seven (47) Maryland high schools and 15 Maryland middle schools in 18 school systems participate in the program, which allows students to enroll in such courses as: Principles of Engineering, Computer Integrated Manufacturing, Civil Engineering and Aerospace Engineering. Eight school systems in Maryland will offer the newly-launched PLTW for a biomedical sciences curriculum in 2008-2009. An aerospace PLTW program also is in the planning stages.

2. Faculty/Teacher Shortages:

Particular subjects facing current and future shortages include technology education, computer science, English as a Second Language (ESL), foreign languages, mathematics, science and special education.

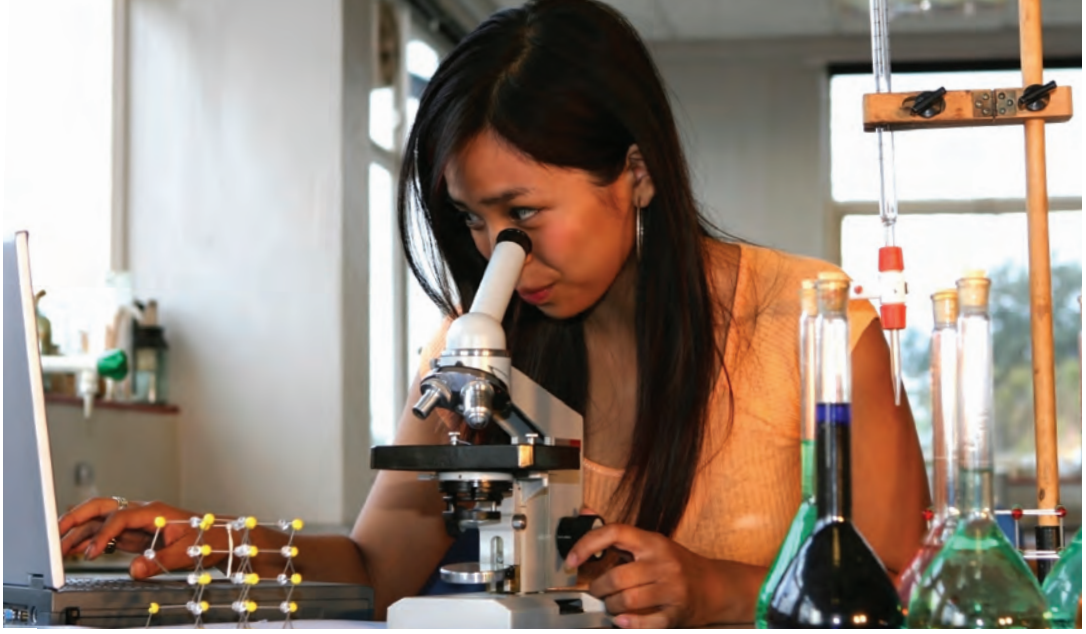
The state continues to confront shortages among teachers and faculty. Maryland's need for teachers outstrips the state's ability to produce and retain them. In 2005, 4,350 beginning new teachers were hired to work in Maryland's public schools. Only 1,439 (33%) of the beginning new teachers had graduated from Maryland colleges and universities.[1]

The issue of faculty shortages extends to higher education as well, and is affecting a number of Maryland industries, including the healthcare sector, as evidenced by student waiting lists for nursing schools.[2] Nursing programs report an increase in the number of qualified nursing applicants being turned away due to a dearth of faculty and classroom/clinical space.

RECOMMENDATION:

Enhance teacher retention through the expansion and enhancement of faculty/teacher retention programs.

Faculty/teacher retention, especially at the primary and secondary levels, can be improved through access to quality programs which aim to enhance and improve teacher quality through continuous professional development. A study of one such program in Maryland found that its teacher retention rate was 71%, compared with retention rates of 35%-44% for similar groups of teachers who did not participate in such programs.



3. Immigrant Population Growth and Diversity:

These trends emphasize the need for increased investment in English as a Second Language (ESL) programs.

Population shifts are impacting the demographic makeup of the state in ways that will have dramatic impacts on employer needs and workforce development. Between 2000 and 2006, immigrants accounted for more than half (51.6%) of Maryland's population growth. As of 2006, immigrants made up 12% of the state's population.[3]

RECOMMENDATION: Enhance and support initiatives and partnerships that encourage a broad spectrum of education opportunities for immigrant populations.

Many of Maryland's foreign-born workers are highly educated and possess applicable skills; however many of Maryland's immigrants are at the opposite end of the educational spectrum. As of 2006, 43% of Maryland's immigrants held at least a Bachelor's degree, compared with 34% of U.S. natives in Maryland. At the same time, 18% of immigrants in Maryland did not have a high school diploma or its equivalent, compared to 12% of U.S.-born Maryland residents.[4] Improving these worker's English skills and connecting them with high demand jobs strengthens Maryland workforce and provides a competitive edge.

RECOMMENDATION: Enhance and expand access to community English as a Second Language (ESL) programs.

There is a need to improve access to ESL programs, and to enhance the quality of these programs. In 2005, Maryland's adult education programs offered 40 hours of instruction per student, which is inadequate for beginner or even intermediate English learners to become proficient. The Maryland State Department of Education (MSDE) notes that a program that offers more than 100 hours of classroom time would better meet the needs of this population.

RECOMMENDATION: Coordinate efforts to promote Maryland's access to seasonal immigrant (H-2B) and skilled immigrant (H-1B) workers.

Seasonal immigrant worker shortages have adversely affected Maryland businesses for some time. In recent years, the annual national cap of 66,000 H-2B visas, which allow foreign nationals to temporarily enter the U.S. and engage in seasonal or peak load employment opportunities, has filled within the first few months of the federal fiscal year. As a result, many of Maryland's seasonal businesses were prevented from applying for the estimated 7,000+ temporary workers needed.

Improving statewide coordination efforts should increase the availability of H-1B workers. The H-1B visa program targets highly-skilled internationals who work in professional fields such as computing, finance, law and healthcare, among others. The national cap for H-1B visas has fluctuated in recent years, jumping from 65,000 in the late 1990s to 195,000 in 2000 and then dropping back to 65,000 in fiscal year 2003. As with H-2B visas, annual quotas are met early in the year. According to the Migration Policy Institute, one out of every five doctors in the U.S. is foreign born. Two of every five medical scientists, one of every five computer specialists and one of every six persons in engineering or science fields are foreign born. Given current and expected shortages among the science, technology,engineering and mathematics (STEM) fields, it makes sense to explore expanding the H-1B visa option.

The full report, with more in-depth analyses of the trends, challenges and opportunities for Maryland's labor force can be found online at www.gwib.maryland.gov.

4. Increasing Labor Force Participation and Meeting Adult Learning Needs:

There is an opportunity to address this issue by tapping into Maryland's underutilized and low-skilled adults, and ensuring they receive the training they need to become more productive members of the workforce.

According to a report released recently by the U.S. Census Bureau, roughly 20.6 percent of Maryland's adult population (or 730,000) was eligible for adult learning services as of 2000. Specifically, this population includes those adults age 16 or older who lack a high school diploma and who are not enrolled in school and adults who speak English as a second language and who have rated their ability to speak English as "well," "not well," or "not at all."[5]

RECOMMENDATION: Enhance opportunities for adult learning (i.e., basic literacy, GED services, and ESL services).
Despite the pressing need for adult literacy services, demand continues to severely outstrip supply. According to MSDE, funding constraints dictate that only three to five percent of annual demand for these services is being met, resulting in waiting lists of up to 5,000 persons. The majority of those on waiting lists include people seeking ESL instruction and Adult Basic Education (ABE).

RECOMMENDATION:
Future study is necessary to identify the education and related needs of additional adult population segments.
While the needs of Maryland's lower literacy population have been identified, there is a lack of comprehensive information on other population segments which may not be participating fully in the state's workforce. A thorough study is needed to identify the demographic, economic and social characteristics of each Maryland population segment that is not fully represented in the workforce.

RECOMMENDATION:
Create a statewide resource network to advance basic skills.
The top occupations in Maryland (in terms of the need for replacement workers) require basic skills such as active listening, speaking, writing and reading comprehension.

For example, the majority of occupations in the Hospitality and Tourism sector require basic skills and on-the-job training, yet employers are having difficulty finding workers with good active listening skills, service orientation and cultural awareness and sensitivity. To address these issues, the report recommends creating a statewide resource network to advance basic skills.

5. Developing a Base Realignment and Closure (BRAC) Worker Pipeline:

Not all of the current BRAC personnel will move to Maryland along with their jobs. If incoming BRAC jobs go unfilled, they could very well be lost. The challenge for workforce development officials is to ensure that Maryland realizes as many potential BRAC jobs impacts by ensuring that new positions are filled quickly.

The average age of civilian DoD workers is 45 years old. As a result, many current workers impacted by BRAC will approach retirement in the near future. The size and scope of the BRAC units moving to Maryland could be influenced by future and current workforce availability.

RECOMMENDATION: Actively recruit retired government personnel and veterans to fill vacant BRAC positions.
Fort Monmouth is currently actively recruiting up to 2,000 Maryland workers to fill BRAC positions by 2011. Retired government personnel and veterans (especially those with security clearances) stand out as a potential labor pool worth cultivating in order to help the bases meet recruitment needs and fill any foreseeable gaps in the immediate future.

RECOMMENDATION: Increase interest, recruitment and retention in BRAC-related fields.
Since many of the BRAC jobs will require an educational background in science, technology, engineering and mathematics (STEM) fields, and since graduation levels in many of these fields have been flat to negative in Maryland, students must be introduced to these fields before entering college. Maryland has developed several new or planned initiatives at the high school level that, if proven successful, could serve as models to be duplicated elsewhere to ensure that Maryland is developing an adequate pipeline of BRAC workers.

RECOMMENDATION:
Identify labor and education needs for spin-off BRAC jobs.
The influx of BRAC personnel and contractors to Maryland will result not only in significant construction activity, but also increased demand for personal services. According to a report produced by RESI in 2006, for every direct, on-base job[6] that comes to Maryland, 1.96 additional spin-off jobs will be created.[7] Specifically, Maryland will experience a rapidly growing demand for workers in construction, day care and hospitality, among others.

(continued on back)

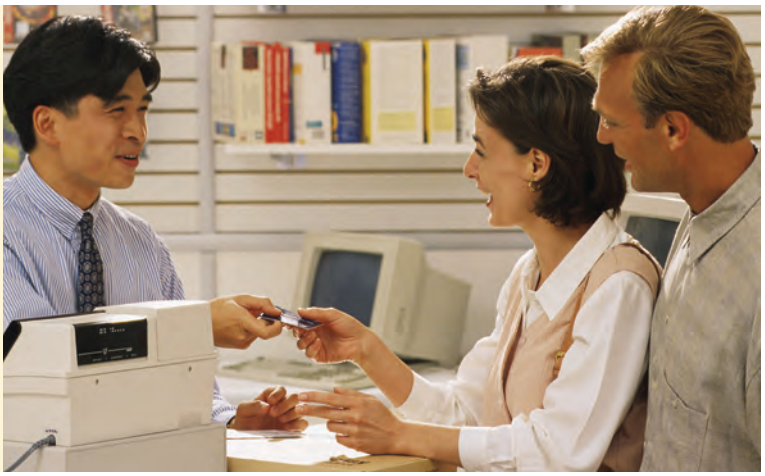
6. The Security Clearance Process:

The lengthy security clearance process leaves positions unfilled for months.

The number of positions requiring security clearances, as well as the level of security clearances required for existing contracts, has increased dramatically since September 11, 2001. The impacts are particularly strong among government agencies, science and security industries, and other jobs associated with BRAC.

RECOMMENDATION: Create awareness, establish a pre-screening model and expand internship opportunities.

The issue of security clearance is problematic, since the process is federally driven and thus largely outside the State's control. Still, Maryland can begin to address the issue of security clearance by conducting an awareness campaign targeting high school and college students. A pre-screening model could be developed in which college students begin the security clearance process prior to graduation. Expanded internship opportunities represent another way to get the word out and encourage student interest in positions that require security clearances.



7. The Need for Skilled Professionals:

Maryland needs to ensure that the pool of skilled professionals grows in step with employer demand.

A review of emerging and expected labor force conditions in Maryland makes it clear that there is a need for the state to grow, attract and retain skilled professionals of all types, not just STEM and BRAC-related workers. In a single fiscal year (2005-2006), 25,000 residents exited Maryland and were replaced by 21,000 immigrants.[8] In addition, the state's rate of population growth is slowing. The trend in migration, coupled with the state's slowing population growth, aging population and increasingly tight labor market conditions, all point to the same conclusion. Maryland needs to ensure that our pool of skilled professionals grows in step with the demand.

RECOMMENDATION:

Launch a campaign to attract and retain skilled professionals.

Survey data suggest that nearly four out of every 10 Bachelor's degree graduates of Maryland institutions elect to work outside the state. Other cities, states and nations have made concerted efforts to not only grow and retain skilled professionals, but to entice these workers to return to their home cities/states/nations. A campaign should be developed to attract and retain skilled professionals in Maryland.

A public-private coalition is recommended to spearhead such a campaign, which would target skilled professionals of all ages.

RECOMMENDATION:

Expand career and technology education.

Formerly known as vocational-technical education, career and technical education (CTE) has been transformed and now prepares students for higher education and/or direct entry into high-skill, high-wage, high-demand careers. CTE programs integrate challenging academic, career and technical instruction; provide direct linkage from K-12 to higher education programs of study. Focused around 10 career clusters, CTE provides students with skills to excel in 21st century jobs. CTE programs are currently offered at about 200 Maryland high-schools and all 16 of Maryland's community colleges.

[1] Maryland State Department of Education, 2006
[2] Charting New Directions, Governor's Healthcare Workforce Summit, page 13
[3] U.S. Census Bureau
[4] U.S. Census Bureau, 2006 American Community Survey, calculations based upon Maryland residents age 25 and over
[5] U.S. Census Bureau. *Profiles of the Adult Education Target Population, Information from the 2000 Census.* December, 2005
[6] Direct on-base positions include civilian DoD positions as well as embedded, private defense contractors
[7] RESI of Towson University, Maryland Department of Business & Economic Development, 2006
[8] U.S. Census Bureau
[9] National Governor's Association, Retooling Career Technical Education

MARYLAND
GOVERNOR'S WORKFORCE INVESTMENT BOARD

1100 North Eutaw Street, Room 108 Baltimore, MD 21201
Phone: 410-767-2408 or 1-866-408-5487 (toll free)
www.gwib.maryland.gov