



STRATEGIC PLAN 2013-2018

ANALYSIS, IMPERATIVES, AND OBJECTIVES



BUILT ON A MARITIME HERITAGE - *FOCUSED ON THE FUTURE*

The Mission

Maritime College educates leaders to excel in the global maritime environment through an interdisciplinary approach to undergraduate and graduate studies in engineering, maritime studies, global maritime business, security and supply chain management, and environmental science; specialized programs are offered as pathways to US Coast Guard licensing or military accession and training.

The Vision

Be "First and Foremost." SUNY Maritime College is a premier institution recognized internationally for its expertise in global maritime research, development, education and training. Toward that end, the College delivers quality learning worldwide to meet the "any time, any place" needs of the maritime community.

Guiding Principles: Inspired Pursuit of Excellence

Our guiding principles are defined as inviolable commitments that express "who we are as an institution" and what principles or qualities should infuse all practices and activities within the institution.

- Inspire the pursuit of excellence in all things, developing the SUNY Maritime nation to seek the highest standards of intellectual inquiry, scholarly achievement, ethics and integrity, built on a foundation of strong character and a philosophy of service before self.
- Equip all students with the necessary foundation to reach their fullest potential, whether through participation in the Regiment of Cadets or the Civilian student experience.
- Challenge our students to develop analytical and communication skills that will enable them to dissect complex patterns in emerging issues, render reasoned judgments, and make wise decisions.
- Develop a community characterized by outstanding leadership, responsible citizenship and self-discipline.
- Foster an innovative, hands-on learning environment directed by a faculty empowered and devoted to creatively seeking new discoveries.
- Promote the development of an internationally recognized resource of maritime expertise that spans all the disciplines associated with the maritime industry and environment.
- Remain grounded in proven traditions and a unique heritage while embracing the opportunities and transformation required by an evolving and increasingly complex global maritime environment.

25 July 2013

MEMORANDUM FROM THE PRESIDENT

Subject: Strategic Plan 2013-2018

After a long process, spanning many months, and a tremendous interactive and collaborative effort which included the faculty, students, staff, administrators, alumni, industry partners and many others, I am delighted to report to you that the State University of New York, Maritime College's Strategic Plan for 2013-2018 has been approved by the College Council. The Plan's completion is very timely as a new buzz of activity resumes on campus and we celebrate the soon return of the Empire State VI, the newest class reporting to become Privateers and all of our faculty, students and staff returning energized for a fresh start.

The Strategic Plan includes a thorough analysis of the maritime industry, the higher education landscape, and SUNY Maritime College, in order to determine opportunities, challenges, and potential risks. Based on this analysis, we have defined overarching and broad strategic imperatives and subset objectives.

The document is a guide to achieving the next level of success and impact for the College, but it cannot simply be put on the shelf. The real effort will be in the development and execution of detailed supporting plans. These supporting plans will provide specific actionable steps and milestones, with assigned timelines, measurable outcomes and responsibilities required to reach the desired end state. Throughout the coming months and years the process of executing the essential actions will proceed through a methodology of using cross-functional teams. The teams will be comprised of key stakeholders from the faculty, students and staff who will help to develop, oversee and shepherd the individual plans and to execute actions which are intended to be holistic in their outcomes. Additionally, we will continue to draw upon such important resources as our Industry Advisory Boards and Waterfront Advisory Committee, as a complement to these efforts.

I want to extend my deep appreciation to the many people, both on and off the campus, who provided outstanding input and perspectives throughout the process and spent countless hours contributing to the drafting and review necessary to reach the final product. A wide net of individuals made exceptional contribution.

I now encourage your study of the Plan, which is appropriately titled "Built On a Maritime Heritage, Focused on the Future," and your involvement in the execution of the steps necessary to achieving our shared vision for the College.

Very best regards,



Wendi B. Carpenter
Rear Admiral, USN (Ret.)
President

Executive Summary

I. Introduction: “Built on a Maritime Heritage - Focused on the Future”

The Strategic Plan for SUNY Maritime College is primarily focused on producing measurable and achievable outcomes over the next five years. These outcomes will move the College to the next level of impact, deliver a high-quality, affordable education well into the future, and ensure our graduates are properly equipped to excel and lead in an ambiguous and rapidly changing global environment, no matter what their chosen career. This plan is a building block for a series of five year plans, ultimately leading to fulfillment of the long term vision of 25 to 30 years. Maritime’s Strategic Plan is aligned with the tenets of the SUNY strategic plan, “The Power of SUNY,” and the overall goals and metrics established for the SUNY system. Additionally, it recognizes and seeks to exploit the synergies offered in the SUNY concept of “Systemness.”

II. Maritime’s Mission, Vision and Enduring Commitments

SUNY Maritime College, dating back to 1874, is a unique institution with a high degree of complexity and impact. The College was the first of its kind to be founded in the United States, and although it is one of the smaller SUNY campuses, it is the largest of the six state maritime colleges located throughout the country. Graduates of the College enjoy a high level of success and are senior leaders, entrepreneurs and innovators, across many industries, in government and in the military, from seabed to space. The unique mission and general lack of public awareness regarding the maritime industry means the College does not enjoy a high level of appreciation outside of the maritime industry.

Among the hallmarks of the College’s long existence are: adaptability as an institution in the face of changing times and our consistent delivery of a high quality, affordable public education, which goes well beyond the average institution of higher learning with degree programs and experiential methods of delivering the education, equipping graduates for success, and the expectations placed upon students. The College has been on a continual path of internal growth and development since its inception, transitioning from a simple, nautical training school for seafarers, to a complex educational institution granting a range of undergraduate and graduate degrees. The full range of programs at the College are academically demanding, both in terms of semester course loads and requirements, forcing students to attain a high degree of self-discipline and excellent time management skills, if they are to be successful. Even as students are propelled to new levels academically, they are simultaneously acquiring practical technical competencies and developing leadership and judgment capabilities through classroom settings and an environment that actively promotes experiential learning.

More than 1,200 cadets are enrolled in the Regiment, pursuing degree programs that will lead to acquiring a U.S. Coast Guard license in engineering or deck related operations. Nearly one third of the student population, of almost 1,800, is experiencing a more traditional “civilian” college experience in programs such as undergraduate engineering, international transportation business, or graduate studies. Among the complex tasks of the College are melding the campus life of the Regimental structure with essential aspects required in offering equally challenging civilian programs. This requires a multi-faceted approach for the development of leadership and judgment competencies. While cadets acquire key skill sets and education

during the “at sea” periods, civilian program students are afforded significant experience through the completion of challenging internships within the academic curriculum. Also important to the proper equipping and educating of our students, is providing study abroad opportunities. Day to day interactions, which provide experiences with international cultures, will better equip them to function well in our global society.

The Strategic Plan for Maritime College recognizes that the foundation rests upon our Mission, Vision and Guiding Principles.

III. An Analysis

Two major trends exist, which increasingly impact the future of the College. The first trend is the nature of globalization, including the rapid advance of technology and fundamental shifts in many of the industries (not just the maritime) that typically employ our graduates. The second trend which bears close consideration is the markedly changing environment within higher education. These, particularly when combined with other factors, make a strong case for initiating and completing the new strategic plan.

Lifetime Career Preparation and Opportunity

We live in an increasingly globalized world where national economies are interdependent and inextricably linked, making us all more susceptible to market fluctuations and international events. Many industries will see dramatic and probably frequent swings in this volatile type of environment. Additionally, the emergence of technological advances makes communication and information sharing near ubiquitous. These areas of change make it increasingly important to regularly review how we equip and educate our graduates to excel and have career resilience in this new world. Providing non-degree programs that offer professionals the opportunity to acquire skills necessary to enhance career options and employability is also critically important.

The maritime domain remains a source of opportunity. Significant areas of growth exist for the foreseeable future in the maritime industry. In addition to the more traditional deep sea operations, significant prospects exist in the offshore, coastal, inland waterways, and western rivers sectors. Increased career opportunities will result for those wishing to be involved in the business of maritime and transportation, or utilize a USCG license that is coupled with a degree program. The increasingly complex nature of this work (and not just in technical areas) demands education, not simply training. For those choosing careers in the maritime or transportation industries, international and domestic regulatory requirements now levy increasing burdens upon owners and operators. Graduates require strong judgment, leadership and managerial capability at all levels. Importantly, in the future, mariners and those ashore, must be better educated and equipped to deal with an ever-changing business landscape.

A key footnote bears mentioning. We are dealing with an entirely new generation of students (labeled “Generation Y”) who have a totally different mindset about learning and what constitutes value in education and, as the “consumers,” have different expectations. In addition, they exhibit characteristics unlike the older work force now in place. This new generation is unlikely to remain in one job, with one company, or finishing a career in one place. As employees, they are less willing to endure separation from personal networks, and reduced communications. Those businesses seeking to recruit and retain licensed mariners will have to take this into account. It is likely that licensed graduates will want to transition ashore more rapidly than their predecessors or not go to sea at all. Some will elect not to sail on their license and immediately after graduation, seek shore-side jobs in maritime related or other industries where

opportunity abounds. This is also why there is increasing demand at the College for the civilian engineering and business programs (at the graduate and undergraduate level) and represents an area of growth in the future of the College. Demand continues to be strong for all of the College's graduates, across transportation and financial industry sectors and in engineering related enterprises, such as power plants and hospital facility management. This is true at entry level after graduation, as well as, for intermediate and senior management positions.

In light of these considerations about "Generation Y," providing the best education for a new generation demands that we routinely *examine not just what we deliver, but how we deliver education to a different type of learner*. Coupled with the volatility across the global environment this generation will face, the College should be a resource for important career support in non-degree "any time, any place" learning, which supports the alumni in transition between jobs, and movement to the next level of leadership, management and impact in a variety of chosen career fields.

The Higher Education Landscape

The higher education landscape has some interesting trends regarding students. Nearly half of the undergraduates graduating from four-year degree institutions today previously attended a two-year institution. Many of the students in higher education, known as "non-traditional students," are over the age of 25 and are full-time working adults. In 2011, the number of international students enrolling in U.S. colleges and universities reached a record high. The student population will also be more diverse with Hispanic and African American student populations in the U.S. increasing by 46 and 25 percent respectively. These trends have implications for where and how four-year schools recruit new students and how programs are shaped. Maritime must keep pace and adapt accordingly, recruiting and retaining greater diversity among the student body.

The priority of recruiting and retaining the right academically capable and motivated students goes hand-in-hand with the priority of recruiting, retaining, and developing a diverse, highly professional, top-notch faculty and staff. Demographics for faculty across higher education are changing. Examination of this factor is essential to understanding the strategy the College must employ to attract and retain the right complement of educators who are current and relevant in their fields. Among the faculty, there are key individuals who are approaching a time when the College must anticipate their retirements and be prepared to fill the void. While we have a core of traditional academics, we also have faculty who are technical experts in maritime related areas. Currency, relevancy and a balance of education and appropriate professional experience (depending upon the individual's teaching discipline) are essential in a faculty charged with innovatively delivering curriculum. Faculty must have the ability to connect with students and deliver education in a way that achieves the highest student learning outcomes. Of important consideration is the demand for online instruction capability (anticipated to grow). Maritime College must also be diligent in implementing a well-planned track to improve use of technology and simulation in all of its operations and for all programs.

Concurrent with these changes, all institutions of higher learning are facing significant budget pressures and must find ways to become more efficient and effective in the business of education, exercising good stewardship of every dollar the College receives, no matter the source. This also sets the imperative for pursuing strategic partnerships, alternative revenue streams and areas of development that will place the College in a financially stronger position for the long term.

SUNY Maritime College: Strengths, Challenges, Opportunities, and Risks

SUNY Maritime College possesses a number of core strengths, which will be important to overcome challenges and reach for new opportunities. Among the many strengths of the institution, is the

technology based curriculum that supports a 21st century workforce and facilitates immediate employment at a high wage, with a recognized strong “return on investment.” The small campus environment and relatively small class size that promotes positive faculty - student interaction and a feeling of belonging that can contribute to student success is another strength. In addition, Maritime’s having 18 varsity sports teams is impressive in view of the small size of the campus and student body. Our athletic programs promote cohesion, leadership, teamwork and a focus on lifetime health and wellness. Approximately 32 percent of men and 42 percent of women compete in varsity sports; this represents an opportunity for recruitment of a more diverse student body and one already accustomed to the higher level of self-discipline and focus, which is required to succeed at Maritime.

Location is a major strength of SUNY Maritime College. New York City is a recognized international hub of maritime-related businesses including banking, insurance and investment, and critical services needed to drive the global maritime industry and which, in turn, are affected by it. Top maritime businesses locate their North American headquarters in the New York-New Jersey Region. Thus, from a strategic standpoint, the College’s link to the maritime and its location in New York City, near one of the nation’s busiest and largest ports, is indeed fortuitous. Additionally, the proximity to arguably the world’s most important financial center sets SUNY Maritime College in an enviable position to achieve new levels of name recognition and influence within this great nexus of global business, financial markets and significant maritime activity. Opportunities abound enabling Maritime to seek both additional revenue sources and make significant impact across a wide range of industries through delivery of benchmark education and the offering of other programs which serve the citizens of this region and beyond. All of this potential is in our own backyard – imagine the opportunities still untapped with synergy in so many areas.

The fact that more than 90 percent of the world’s commerce continues to move by sea and impacts each of us daily, is an indicator that the nation – founded as a maritime nation – fundamentally remains one. The maritime and transportation industries and infrastructures are now experiencing growth and resurgence, but there is a missing link. That missing link is the lack of recognition by many – our citizens and even senior political leaders and policy makers – that of great importance to the nation’s strength and commercial viability (as well as its security) is the strength of the maritime industry, the capability of our marine industrial base and the quality and education of the associated work force. The challenge lies in educating policy makers, senior political officials and potential students, in the significance of the maritime and intersecting industries. These industries help to create a healthier economy, not only through enabling the fundamentals of the free market movement of goods, but through compounding direct and indirect effects.

In addition to our role in higher education, this College, due to its unique mission, its central and pivotal location and its place in history as the oldest and largest maritime college in the United States, has an opportunity to collaborate with other entities and assume a de facto role as a policy messenger and advocate for advancing a coherent national maritime strategy. The establishment of the Global Maritime Center for Research, Development, Education and Training, formed in 2012, under the College’s University Relations department is well suited to contribute in this manner.

Inherent in any operation is risk. Understanding the nature of it and proactively managing and mitigating that risk is an essential and primary duty of senior leadership. The most prevailing and difficult risks which face the College fall into two main categories.

The first is related to future financial health of the College. Increased budget pressures both at the federal and state level could result in significant revenue loss and which would have a major negative impact on the College’s ability to operate effectively. This uncertainty calls for the College to place a much higher level of focus and effort upon developing alternative revenue sources in order to reach a more secure level

of long term financial health. These sources may be through corporate or collaborative business-like partnerships, grants, or philanthropic sources, including friends and alumni of the College.

The second major risk is the non-availability of a dedicated and viable training ship for an extended period. This would negatively impact fully two-thirds of our students and could result in an inability to fulfill the maritime industry demand signal and those of other industries that seek licensed graduates (such as hospitals and power companies.) Beyond the requirement to accumulate sea days, the value and necessity of the continued experiential learning that is associated with the dedicated availability of an adequate training ship is hard to overstate. Availability of the ship influences the conduct of daily labs and ability to develop key familiarity with procedures, processes and routine pier side ship board operations which serve as important foundation learning for the “at sea” periods. Although many parallel evolutions can be accomplished through simulation (which likewise is a key priority and will be driven by the strategic plan), or the use of smaller vessels and cadet shipping experience with commercial vessels, the dedicated availability of a primary training vessel for unlimited tonnage licensing, is a key component of the entire education, not just training and skill development, for these students. Furthermore, given the age of the current vessel, increasing restrictions on its operations relative to national and international environmental regulations, as well as the costs of operations and maintenance, the importance of acquiring a more modern, efficient and suitable vessel is increasing. *The acquisition of a new training vessel (Empire State VII) is a major focus and strategic undertaking by the Office of the President.*

IV. The Strategic Plan 2013-2018: Imperatives and Objectives

Based on the foregoing analysis and in pursuit of the mission, vision and guiding principles of the College, we have identified four strategic imperatives. Achieving these are integral to the long term strength and viability of SUNY Maritime College, will provide increased flexibility and agility in the changing world of higher education, and give us the ability to equip our students with the key educational, intellectual, leadership and character attributes which make them the employees of choice in a highly competitive global environment. The imperatives are:

- (1) Achieve new levels of academic and professional excellence in the student body, faculty and staff.
- (2) Provide world class waterfront programs with the right complement of training vessels. This includes programs for educational, recreational and marine research pursuits, and the acquisition of the new vessel(s), which ensure our capability to deliver the required aspects of maritime education and training.
- (3) Build a physical and virtual environment that fully promotes learning and development, which is aesthetically pleasing, environmentally friendly, and increases the capacity and quality of student services across the full range.
- (4) Increase the number and quality of mutually beneficial strategic partnerships, as well as develop alternative streams of revenue and increase philanthropic giving to the College. These measures will enhance the ability of the College to broaden its educational impact, contribute in new ways to our employers and the community beyond, and better secure the long term financial health and future of the College.

The four overarching strategic imperatives link to ten main objectives and supporting actionable plans (such as Technology, Simulation, Waterfront and Student Excellence). Designated leads who are specifically assigned responsibility for execution will give focus and accountability to ensure outcome-driven efforts.

This process will be completed collaboratively, utilizing cross-functional teams and complemented with insights from industry and alumni advisory teams.

Conclusion

We will constantly be reviewing our course, but the destination will be unchanged: a well-deserved reputation as the flagship institution of maritime colleges, with world-wide impact in the delivery of an outstanding education which equips students to rise to the highest levels of leadership in a globalized environment and tackle some of the most important issues of our time. A SUNY Maritime diploma should truly be the key that opens a door of enormous lifetime opportunity, because of what it represents: excellence in education, coupled with the development of strong character, judgment and leadership. Maritime alumni should be recognized and well respected for exceptional intellectual capability, knowledge and technical expertise and be the choice of employers for the maritime and other related industries and career fields.

The strategic plan is not the end; it is the starting point. The execution of actionable steps designed to achieve data driven outcomes is the requirement to reach the long term vision. A few of the key benchmarks and measurable outcomes include such things as: increased retention rates, increased graduation rates, increased levels of giving from alumni and friends of the College, especially with respect to endowments or unrestricted funds, and continued high salaries and employment rates for all graduates. Ultimately, the steps ensure the delivery of a world class education, in a world class student-centric learning environment, through an exceptional faculty and staff.

We invite you to read further to gain essential background and understand the full details and key aspects of the Strategic Plan. And then join us, as friends and partners, as we embark on the journey to take SUNY Maritime College to the next level.

Warm regards,

A handwritten signature in black ink, appearing to read "Wendi B. Carpenter". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Wendi B. Carpenter
Rear Admiral (USN RET)
President SUNY Maritime College

I. INTRODUCTION

The New Strategic Plan

The “voyage plan” for SUNY Maritime is laid out in this document. This strategic planning process was initiated by the President of SUNY Maritime College in early 2012, along with a series of “first steps,” including the drafting of expanded mission and vision statements. Our mission, vision and guiding principles all acknowledge our long maritime heritage, but future orientation is required. We acknowledge the foundation of heritage and traditions, while embracing opportunities that are more expansive than the original concept of simply training mariners, all the while exploring new and better ways to accomplish the business of education.



More than ever before, with the nature of the dynamic and uncertain global environment, organizational relevance, impact, and even survival, is driven by the ability to assess and adapt. Key to the process of leading change is the development and implementation of a strategic plan which can help to guide actions and correctly prioritize the use of resources in the realization of vision and goals. No strategic plan is the end of the planning process; it is the starting point for developing and executing a series of plans and implementation steps that will enable achievement. This plan cannot be a document that simply goes to the shelf. Critical to success is the implementation or “execution” required to achieve the desired end state. Specific feedback loops and regular analysis of the plan will help to hold us all accountable for outcomes.

A forward thinking organization will also understand that plans are sometimes adjusted based upon rapidly evolving circumstances in the environment. As the famous military strategist Carl Von Clausewitz noted, “No plan survives first contact with the enemy.” So, some may then say, “Why plan at all?” The planning process itself is highly instructive and brings valuable insights, *often outside of the normal frames of reference*, because of the necessity of stepping back from the day to day organizational environment. In examining possible alternative futures and selecting the most desirable and feasible one, objectives and steps are detailed which enable achievement of the desired future. In developing the plan, important insights are gained which guide sequel planning, if required.

Additionally, in developing any plan, certain assumptions must be made. The following are key assumptions for the SUNY Maritime Strategic Plan:

- The College’s mission, vision and guiding principles, are the foundational components for the plan.

- The plan must be student centric and focused on providing an exceptional learning environment, as well as, enhancing student learning outcomes and development.
- Institutional assessment and data analysis for academic and administrative functions are essential aspects of ensuring a high performing organization, effectiveness in execution, and the pursuit of excellence in all aspects of the College's mission and life.
- SUNY Maritime must continue a long pattern of adaptability, change, and development to continue to attract outstanding students, maintain the best value proposition on behalf of those we are entrusted to educate, and remain focused on currency and relevancy.
- Budgets at the state and federal level will remain under some degree of pressure for the foreseeable future, with competition for scarce resources.
- A large community of SUNY Maritime alumni, industry partners and friends of the College are well positioned in key areas to assist the College; the regular and robust engagement of this broad and diverse population is an integral part of moving the College forward.
- The College's Strategic Plan must remain aligned with the tenets of the SUNY strategic plan, "The Power of SUNY," and the overall goals and metrics established for the SUNY system. While Maritime College is unique within the SUNY system, benefits accrue to Maritime as a part of this larger system. Therefore, our efforts must be in an alignment to maximize the synergies created by "Systemness."

We have approached this strategic plan through an inclusive and broad process (Figure 1) which includes extensive input and shaping from a wide range of internal and external stakeholders and partners - all of whom have a great and unique interest in the success of Maritime College, as well as key insights to share.

The overarching theme is to consider the "what" based on the "why." Ends, ways, and means are critical to identify. We have conducted a thorough analysis of the maritime industry, the higher education landscape, and Maritime College to determine opportunities, challenges, and potential risks. Based on this analysis, and in light of our strengths, we have defined overarching and broad strategic imperatives and subset objectives, along with areas where more detailed supporting plans will be developed. The supporting plans will provide specific actionable steps and milestones, with assigned timelines, measurable outcomes and responsibilities required to reach the desired end state.

Critical to strategic planning is the implementation or "execution" required to achieve the desired end state. Execution of this strategic plan is the major key to ensuring that the College and its team are: global leaders and innovators of maritime education; consistently delivering the "employees of choice" to our wide range of industry partners; and, viewed as a "college of choice" with a high return on investment by a new generation of students.

"Strategy without process is a little more than a wish list."
Robert Filek

Specific feedback and regular analysis of the metrics are essential to ensuring this is a continual and dynamic process that holds us accountable as an institution and individually. Throughout this process we have sought, and will continue to actively seek, input from our stakeholders and partners.

Strategic Planning Process



Figure 1: Strategic Planning Process

II. MARITIME'S ENDURING COMMITMENTS

Maritime College's Uniqueness

Essential to the proper context of any strategic plan, is the “core” of who we are, and having full insight into the ties that bind us together - the mission, vision, and guiding principles. Simply put, SUNY Maritime College is a unique institution. No other schools within the SUNY system have such a combination of attributes, provide similar programs, or have a similar global impact. Only six state maritime colleges currently exist in the United States. Founded in 1874 with a specific mission that linked it with the maritime environment and industry, this core mission of Maritime College has been a constant and includes the robust link with the Navy through a vibrant ROTC program.

“Change is good, but first know what should never change.”

Jim Collins, co-author of Built to Last

With the maturing of the original concept, and a natural progression to a degree granting and accredited institution, the College's mission widened to embrace related disciplines. A range of undergraduate and graduate degree programs have been built, reaching beyond the technical skill sets imparted with the USCG license program, to include a broader set of capabilities. Undergraduate degrees remain largely focused in the areas of Science, Technology, Engineering, and Math (S.T.E.M.). However, related to the maritime focus and the operational aspects of that industry is the development of business and management acumen, so other appropriate degrees were designed to fulfill this requirement. Additionally, Maritime College offers a Master's degree in International Transportation Management which can be completed online or on-campus. In the pipeline is the approval of a Master's Degree in Facilities Engineering and a Masters in Maritime Studies which will round out our offering of advanced degrees for those ready to move beyond operational to the management and senior leadership levels.



By law, all students pursuing a USCG Merchant Mariner's License – deck or engine – must be a member of the Regiment of Cadets. All other students, however, have the option of joining the Regiment, and many do so for the development of leadership skills which make them more marketable to employers. Today over two-thirds of the student body participates in the Regiment of Cadets.

Outside the Regiment, SUNY Maritime has a wide range of student activities that are an essential part of teaching life-skills, teamwork, and leadership. Over 32 percent of men and 42 percent women participated in varsity athletics in Fall 2012. We have over 30 student organized clubs on campus.

Our strong maritime focus, experiential learning environment, and leadership development have resulted in nearly 75 percent of our graduates being employed in some aspect of the maritime industry upon graduation. Historically, our graduates have enjoyed nearly 90 percent employment within just a few months after graduation and earn very high salaries, exceeding those of new Harvard graduates as reported by PayScale.Com and ABC News. The other ten percent are usually those who elect to continue their post graduate education immediately after graduation. The “Return on Investment” for the cost of the education is well noted. PayScale.Com recently reported that based on an analysis of 40 million career profiles examination, the return on investment at over 1,000 colleges and universities, SUNY Maritime College was ranked #5 nationally as having the best return on investment.

Building on the uniqueness of Maritime College, in 2012 a totally new concept was introduced with the establishment of the Global Maritime Center for Research, Development, Education, and Training (GMC RDET). This strategic initiative is a vehicle to coordinate efforts across a variety of mission components. The Global Maritime Center is a bridge for external outreach to partners. The structure and business model of the GMC offer potential alternative revenue streams, as well as the ability to engage more easily in areas which intersect the overall mission of the College, but may not be purely academic in nature and so would not fall under the normal degree and license granting arm of Academic Affairs. The GMC RDET focuses research, development, education, and training outreach efforts related to the maritime industry, marine technology, and the marine environment by leveraging the College’s own unique maritime related expertise and in its business model, facilitates the opportunity to capture the expertise of partners and external organizations that are similarly aligned in mission and goals.

III. An Analysis

Our mission, vision and guiding principles all acknowledge that Maritime College is firmly vested in our maritime heritage. However, as we look toward future opportunities, review the changes within the maritime industry, the higher education landscape, and budgetary realities, we must analyze and understand factors which will impact the direction we take to achieve our missions. This section provides an analysis of the maritime industry, higher education landscape, and SUNY Maritime College.

The Maritime Industry: From Global to National to Local

A Global Perspective

Most individuals acknowledge we are now living in an increasingly globalized world with national economies evermore interdependent and linked.

Consider just a few facts:

- Water covers more than 70 percent of the earth's surface.
- About 80 percent of the world's population lives within 200 nautical miles of the sea.
- The oceans and seas, as well as inland waterways are vital sources of protein and food for the growing world's populations; strong evidence suggests that this resource is being depleted rapidly, with subsequent negative ecological and environmental impacts which may be irreversible.
- More than 90 percent of all international trade travels by sea.
- New trade routes are now opening in the arctic regions, requiring proactive international and national governance and structure to manage the expansion; this will be an area of increased competition as countries and companies position themselves to access resources and seize emerging opportunities.



Seaborne trade has increased considerably since the 1970's and is the most economical and environmentally friendly method of transportation. Even with the economic downturns in 2009, recovery has moved beyond the levels of 2011 and continues to grow, albeit at a slower rate. As trade has increased, so too has the world fleet in both numbers and tonnage. With a growth of almost ten percent annually, the largest tonnage growth is in dry bulk carriers.

With respect to shipbuilding, there has been a drastic downturn for new orders following the global economic crisis. However, as a result of orders placed prior to the world economic crisis, an oversupply of ships represents a serious challenge for ship owners, driving down prices for importers and exporters who benefit from the ample supply of shipping capacity for the international seaborne trade.

Currently nearly half the world shipping tonnage is owned by shipping companies from four countries: Greece, Japan, Germany, and China; but ownership does not necessarily mean that the respective country operates or controls the shipping operations, which are frequently managed by shipping operators based in other countries. Furthermore, over 70 percent of the world tonnage operates under a different flag than that of their owner. So while approximately 42 percent of the world's fleets are registered in Panama, Liberia, and the Marshall Islands, expansion in other sectors of the maritime industry means demands for the College's graduates is still strong.

A National Perspective

The United States was founded as a maritime nation and fundamentally remains a maritime nation. It draws much of its global power from its maritime strength. Our Navy and Coast Guard are without equal anywhere in the world and their strategic importance is unquestionable. However, what many fail to recognize is that the maritime and related transportation industries are critical enablers of a strong U.S. economy, with direct and indirect ties to security down to the local level. The importance of an overarching strategy, the need for holistic policy and investment is underappreciated and there is increasingly a clarion call for a national dialogue and action to be taken. Any such strategy and policy (or lack thereof) could have far-reaching impacts for the College.

Despite appropriate concerns about the reduction in deep sea vessel capacity and the declining capacity in the U.S. shipbuilding base (both of which are a concern for national security), the United States does have strong areas of the maritime transportation industry and infrastructure that is growing. Although only 192 ocean-going ships (10,000 DWT or greater) are registered in the U.S. flag fleet, the industry also includes a very diverse compliment of off-shore, coastal, inland, Midwest river vessels, as well as, operations at port facilities (e.g. bunkers, and terminals) finance, shipping, cargo, brokerage, equipment suppliers, ship building and repair, agents, owners and operators, crews, laborers, unions, government agencies, and more.

The American tugboat, towboat and barge industry is an important and growing element in the nation's intermodal transportation network, and contributes to the American economy, environment, national security and quality of life. The tugboat, towboat and barge industry comprises the largest segment (fully 60 percent) of the U.S. flag fleet. Today's fleet of 5,546 tugboats and towboats and nearly 27,000 barges moves over 800 million tons each year of raw materials and finished goods. On our nation's inland waterways and coasts, America's tugboat, towboat and barge industry transports:

- 20 percent of America's coal – enough to produce ten percent of all electricity used each year in the U.S.
- Most of New England's home heating oil and gasoline.
- Over 60 percent of U.S. grain exports, helping American farmers compete with foreign producers.

This industry allows the United States to take advantage of one of its greatest natural resources - the 25,000 mile waterway system - and adds more than \$5 billion a year to the U.S. economy. Additionally, waterways transportation is the most economical mode of commercial freight transportation. This is due to the enormous capacity of a barge. For example, a typical inland barge has a capacity 15 times greater than one rail car and 60 times greater than one semi-trailer truck. Waterways transportation is also the most environmentally-friendly mode of commercial transportation. The greater fuel efficiency of tugboats and towboats results in cleaner air.

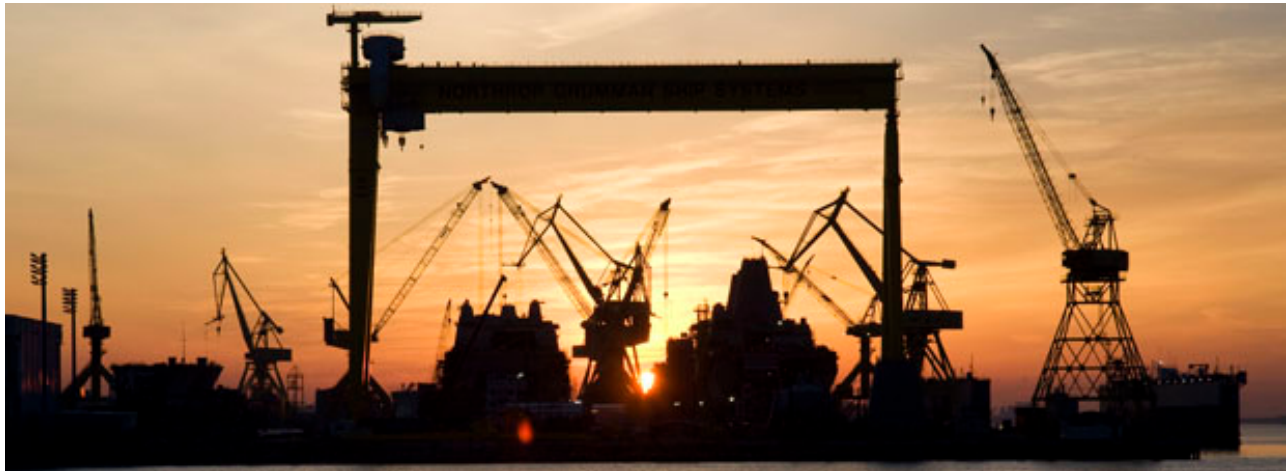


Approximately 530 commercial sea and river ports are actively at work in the U.S. today. These ports are key to the overall health of the economy and the ability of the U.S. consumer to enjoy goods and services from both the global economy and domestic production. Each of our 50 states relies on at least 15 seaports to handle its imports and exports, which total some \$3.8 billion worth of goods moving in and out of U.S. seaports each day. These ports are responsible for moving nearly all of the country's overseas cargo volume: 99.4 percent by weight and 65 percent by total economic value. U.S. ports and waterways handle more than 2 billion tons of domestic and import / export cargo annually. By 2020, the total volume of cargo shipped by water is expected to be double that of 2001 levels. Seaports also support the employment of more than 13 million people in the U.S. The classic investment multiplier generates additional growth through mushrooming effects. *This means that investments in ports, roads, railroad systems and airports are particularly relevant. Figures have shown steadily over a long period of time that the demand for transport services increases 1.5 times as quickly as the GDP itself.*

Considering the above facts, it should not be difficult to recognize that port and waterway security represents a strategic national security imperative. The impact and value of the maritime industry in the United States should be obvious, but this is an area long taken for granted and underappreciated by the population at large and even with key policy makers and legislators.

Since World War II the U.S. has seen a marked decrease in the number of commercial oceangoing ships built domestically. Since 1953 we have lost over 300 commercial and naval shipyards. The decline in shipbuilding capacity is directly linked to the decline of the U.S. Flag oceangoing commercial fleet. Today, six active major shipbuilders in the U.S. operate fully developed, large shipyards building large naval combatants and/or deep-draft, oceangoing merchant ships. Another 20 mid-sized to large shipyards are capable of building mid-sized to large merchant ships, mid-sized to large naval vessels, offshore drilling rigs and high-value, high-complexity smaller vessels. There are another 82 relatively small shipyards, capable of building the simpler types of smaller commercial vessels, such as tugs, towboats, offshore service vessels, fishing vessels, ferries and barges.

In 2012 these shipyards delivered 11 large deep draft vessels, 28 Off-shore Service Vessels (OSVs), and 118 tugs and towboats. In December of 2012, NASSCO and TOTE announced that they executed a contract for the design and construction of two 3,100-TEU liquefied natural gas (LNG) powered containerships, with



options for three more. Harvey Gulf, an operator of offshore vessels for the oil and gas industry has ordered six LNG fueled vessels. Washington State Department of Transportation is considering conversion of some of their ferries to LNG fuel. This new and cleaner fuel could be a harbinger for the U.S. shipbuilding industry.

The nation's shipyards support \$36 billion in gross domestic product, according to a report "The Economic Importance of the U.S. Shipbuilding and Repairing Industry," issued by the U.S. Department of Transportation's Maritime Administration (MARAD). The report notes that in 2011, the nation's more than 300 shipyards directly provided more than 107,000 jobs, \$7.9 billion in labor income to the national economy and contributed \$9.8 billion in Gross Domestic Product (GDP). In addition, the average income for these industry jobs, \$73,000, is 45 percent higher than the national average. On a nationwide basis, including direct, indirect and induced impacts, the industry supported 402,010 jobs, \$23.9 billion of labor income and \$36 billion in GDP.

The Local New York Perspective

Similar to the importance of the maritime industry on a global and national level, the impact at the state and regional level is significant. New York's waterways transportation system, ports, and maritime transportation industry are a key part of the nation's economy and essential to daily life in this region, ensuring safe, efficient and cost effective movement of goods, services and people.

The Port of New York / New Jersey is the third largest in the country. In 2010, the New York-New Jersey Port Industry supported:

- 170,770 direct jobs,
- 279,200 total jobs,
- nearly \$11.6 billion in personal income,
- more than \$37.1 billion in business income,
- almost \$5.2 billion in federal, state and local tax revenue:
 - Local and State Tax Revenue: \$1.6 billion
 - Federal Tax Revenue: \$3.6 billion

The cruise industry within New York City is now experiencing a significant resurgence. In 2011, the total economic impact of New York City's cruise industry alone was \$239 million. Passengers and crew spent an estimated \$149.8 million while ashore in 2011, exceeding the \$144.6 million spent in 2010. These trends are expected to continue and additional plans are in work to expand capability at local piers.



New York City is also a recognized international hub of maritime-related businesses including banking, insurance and investment, critical services needed to drive the global maritime industry, which in turn are affected by it. Many top maritime and international transportation businesses locate their North American headquarters or branch offices in the New York, New Jersey and Connecticut Region. For graduates working ashore, this is an ideal location for seeking management and leadership opportunities which intersect the maritime related educations delivered by SUNY Maritime.

The other major ports in New York State (which experience significant maritime traffic and by extension, provide added tax revenues and contribute to economic vitality) include Buffalo and Albany. Annually, more than 80 million tons of domestic freight moves on the waterways of New York. The Port of Buffalo holds a substantial place in the maritime realm, ranking 28th among all U.S. seaports and seventh of the Great Lakes ports. It is the United States' *busiest inland port and its second largest rail center*. The Port of Albany is the northern end point of the Hudson River deep-water channel where goods are moved between ocean-going vessels to the routes of the New York State Canal System and the Great Lakes. With traffic moving from the Hudson River to the state's far-reaching canal system and quick access to road and rail networks, the Port of Albany also occupies a strategic position in the future development of the region.

The Marine Environment

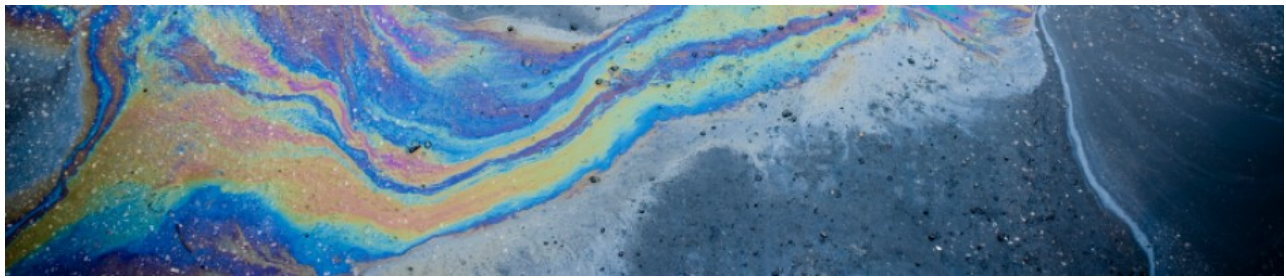
Our oceans are reaching a point of crisis. Pollution, over-fishing, and climate change are some of the most significant problems and will have substantial implications for the maritime industry, our economy, national security, and our planet's well-being. Research indicates among the most significant marine environmental issues is over-fishing. Multiple decades of destructive fishing practices and old-style management are fundamentally and perhaps permanently altering ocean ecosystems. The Environmental Defense Fund recounts the following facts of marine environmental issues:

- Up to 90 percent of large fish like tuna and swordfish have been removed from the oceans. Fisherman must go further from land and fish deeper to find the once abundant varieties of fish.
- 87 percent of global fisheries are fully exploited or overexploited now to a point of major jeopardy.

- More than 1 billion people worldwide rely on fish as an important or primary source of animal protein.

These issues must be addressed as they have significant implications reaching well beyond the impact on the marine environment.

Even though shipping transports around 90 percent of global trade and provides the principal mode of transport for the supply of raw materials, consumer goods, essential foodstuffs and energy to the global population, as compared to land-based industries, shipping is a comparatively minor contributor, overall, to marine pollution from human activities. Land-based activities constitute the largest sources of pollution in the marine environment. Recall that 80 percent of the world's populations live within 200 miles of the coast. In the U.S. alone, every eight months, nearly 11 million gallons of oil runs off our streets and driveways into our waters — the equivalent of the Exxon Valdez oil spill. Increasing development and population growth along the coasts significantly impacts the marine environment. Educating and equipping the next generation to understand and tackle these issues is a key intersection with the mission of the College.



In shipping, major concerns include oil pollution arising from ship groundings and collisions, as well as marine pollution from hazardous and noxious substances (HNS), ballast water discharge and antifouling paints. In 1973, IMO adopted the International Convention for the Prevention of Pollution from Ships, now known universally as MARPOL, which has been amended by the Protocols and kept updated with relevant amendments. MARPOL has greatly contributed to a significant decrease in pollution from international shipping. As of May 2013, 152 states, representing 99.2 percent of the world's shipping tonnage, are parties to the convention.

All of this points to the importance of the education and research in marine environmental science and the requirement for building challenging programs to educate future workers who will study these issues, and develop viable solutions. Such trends call for a focused effort by SUNY Maritime to expand capability and enhance the overall Marine Environmental Science Program with the end result of producing more graduates, as well as conducting key research.

The Job Markets

Personnel surveys are still predicting officer shortages in the international maritime industry. If the global pool of competent, properly qualified and certified seafarers is to meet the predicted demand, then seafaring must be seen as a viable and professional career choice for young people of the right caliber. According to the Department of Labor, overall employment of water



transportation occupations is projected to grow 20 percent from 2010 to 2020, faster than the average for all occupations (14 percent). Employment of captains, mates, and pilots is projected to grow 20 percent and employment of ship engineers is projected to grow 18 percent. Median annual wages for water transportation occupations in May 2010 were \$65,880 for ship engineers and \$64,180 for captains, mates, and pilots of water vessels.

Although jobs in the open-ocean shipping sector may continue to decline, as more companies use foreign vessels to transport goods internationally, there are several mitigating factors:

- Current federal laws and subsidies are designed to ensure at least some level of ships with U.S. flags.
- International regulations require stricter compliance with IMO Standards of Training Certification and Watchkeeping; this means there will likely be an increased demand for professional mariners trained by certified and reputable maritime institutions.
- The increasing popularity of cruises as a type of vacation. Vessels operating between U.S. ports are legally required to be U.S. flagged, a growing market in cruises to Alaska and Hawaii should lead to more opportunities on cruise ships.
- Historically many U.S. licensed deck officers and engineers only sail a few years on their licenses before coming ashore and many “baby boomers” are approaching retirement age, which will mean opportunities for a steady flow of licensed mariners from all sources.

As the economy recovers, and demand for commodities such as coal, grain, and petroleum increases, the need for coastal, inland, and Western River freight shipping will grow. Accordingly more workers in these sectors will be essential. Moreover, new inspection requirements for vessels and greater regulation mean increasing job opportunities for our graduates in these segments of the U.S. maritime industry. Each year we are seeing more recruiters at our career fairs and more of our graduates being offered and seeking jobs with tug, barge, and towing companies. As the transportation system is highly interconnected, there will also be an increase in demand for intermodal shipping professionals, and this presents opportunities for those educated in fields related to intermodal logistics and transportations, and intersecting businesses.



Another segment where there is increasing opportunity for our graduates is the offshore energy industries which are seeking more maritime professionals to crew offshore platforms, drilling ships, and off-shore supply vessels (OSVs). Dynamic positioning or “DP” is a rapidly maturing technology related to the off shore oil and gas exploration industry and research vessels. DP is a computer-controlled system which allows the operator to very precisely maintain a vessel's position and heading by use of its own propellers and thrusters. In 1980 the number of DP capable vessels totaled about 65. It is estimated that today there are over 2000 DP vessels and the number will continue to grow. As such there will be an increased demand for certified operators. DP systems have become more sophisticated and complicated, as well as more reliable. As of January 2013, there are only seven certified DP centers and they are located in Louisiana and Texas. As reported in the International Dynamic Operators Association Spring 2012 journal: “With so many new OSVs coming equipped with DP, and many older ones having systems retrofitted, there is a high stakes race developing to safeguard the supply and capabilities of qualified DP operators globally. Employers are left struggling to find the very best new people.”

The U.S. Navy and U.S. Coast Guard offer outstanding careers of service, both reserve and active duty, which are of interest to many Maritime graduates and are in line with the full span of educational programs offered by the College. Such opportunities vary from year to year and are tied to service personnel projections. With current reductions in force, acceptance rates will continue to be highly competitive.



Employment of marine engineers and naval architects is expected to grow 17 percent from 2010 to 2020. Employment of marine engineers and naval architects will be driven by the need to modify existing ships and their systems to meet international and national requirements such as MARPOL standards and safety requirements. Additionally, the demand for and adoption of alternative energy sources, such as offshore wind turbines and tidal power generators, will in turn drive a demand for these competencies.

Electrical Engineering, Facilities Engineering, and Mechanical Engineering graduates can also expect full employment upon graduation, albeit the percentage growth in employment will most likely not be as strong for Marine Engineering and Naval Architecture.

The ever increasing visibility on environmental compliance in the maritime environment with heightened public awareness and interest in the hazards facing the environment, as well as the increasing stress placed on the environment by population growth, are expected to spur a need for environmental scientists and specialists. As such, employment of environmental scientists and specialists is projected to grow by 19 percent from 2010 to 2020. The median annual wage of environmental scientists and specialists was \$61,700 in May 2010.

The Higher Education Landscape

Students

The higher education landscape has some interesting trends regarding students. The National Postsecondary Student Aid Study for 2007–2008 (the most recent data available), revealed that 45.7 percent of undergraduates attend a public two-year college, forming by far the largest segment for post-secondary education. In 2010-2011, 45 percent of Four-Year Degrees went to students with previous

enrollment in a two-year Institution. Clearly this has implications for where and how four year schools recruit new students and how programs are shaped.

The National Center for Education Statistics published the following predictions for 2009-2020:

- The number of high school graduates is predicted to decrease slightly.
- Total numbers in post-secondary degree granting institutions are expected to increase 13 percent.
- Enrollment in post-secondary degree granting institutions is projected to increase nine percent for students who are 18-24 years old and 21 percent for students who are 25 to 24 years old. Source: National Center for Education Statistics (2011).
- First-time freshman enrollment is projected to increase 11 percent overall; six percent for men and 15 percent for women.
- Enrollment is projected to:
 - Increase one percent for students who are White.
 - Increase 25 percent for students who are Black or African American.
 - Increase 46 percent for students who are Hispanic.
 - Increase 25 percent for students who are Asian/Pacific Islander.
- Enrollment is projected to increase 12 percent for undergraduate students and 18 percent for post baccalaureate students. Of significance, the highest numbers of students will come from the South, Midwest and West.

Another trend that should not be ignored is the increase of the “non-traditional student” population. This demographic is typically used to refer to those over 25 who are working full-time. Today, these “non-traditional” students are the majority of the student population in higher education. More than 60 percent of students enrolled are now over 25 and more than 60 percent of students are now working full-time while pursuing their education.

In 2010-2011, the number of international students enrolling in U.S. colleges and universities reached a record high of 723,277. The increase was primarily due to two countries: China and Saudi Arabia. Colleges also sought new markets, like Brazil, where the government has pledged to provide scholarships for more than 100,000 undergraduates to study abroad.

The aforementioned trends and demographics will impact where and how SUNY Maritime College attracts, recruits, and retains potential students.

Academic Curricula and Degree Programs

The above statistics regarding student demographics also have implications for academic curricula and degree programs. For the first time, a majority of students complete a degree by attending more than one institution, many by attending more than two. Given this fact and the fact that in 2010-2011, nearly 45 percent of four-year degrees were awarded to students who had been previously enrolled in a two-year institution, governments, parents, and colleges are looking for increased “student portability.” They want the assurance that what a student learns at one institution provides a consistent and predictable foundation which is easily transferrable to another institution. Pressure will increase for consistency in learning outcomes.

For both two-year and four-year colleges in the current globally competitive, highly dynamic environment, job preparation is more important to students. The general education curriculum is still considered essential for broadening the mind and being considered an “educated” person.

Traditional public and private post-secondary schools will face competition from “for profit” and other new entrants into the realm of higher education. In the same way that the development and growth of community colleges in the 1960s and 1970s expanded the range of choices in higher education, the recent explosion in the number and extent of “for-profit” institutions has further differentiated higher education. For-profits have already begun to offer more than just career training and associate's degrees, moving into the bachelor's and graduate degree markets. Additionally, some predict that for-profits may enter the realm of research as a way to increase profits and improve their reputability as academic institutions.

Other non-traditional new comers are also entering the higher education space. Some major companies have set up training programs that offer credit to students through partnerships with universities and colleges. In fact, one major U.S. corporation in Europe received accreditation for its management training program from a university, thereby leading to a de facto associate's degree from the corporation (with a bachelor's degree to follow). What had been an internal training program for managers is now an accredited program with a degree that these managers can take to other jobs. The training programs of large corporations could present an attractive alternative for students and companies that are not satisfied with traditional higher education.

Academicians will increasingly partner with corporations to ensure graduates meet the expectations with regard to technical knowledge, as well as other attributes expected of a college graduate. While technical skills and experience gained through work or internships are becoming increasingly important, companies are looking to hire college graduates with well-developed writing, oral communications, and interpersonal skills and with global cultural awareness and understanding regardless of the student's degree program and major. Feedback from our own groups of employers routinely goes down this path of discussion.

An emerging sense from employers is that general education must be also focused on the key attributes including critical thinking, writing, speaking, arguing, researching, and mathematical reasoning. The continuing trend is that people will have a number of jobs before middle age. Many of these jobs have not yet been conceived or developed. Graduates will need to understand that these skills along with *lifelong learning* will be the key to remaining employable and promotable.

With these factors in mind, many institutions are establishing "knowledge partnerships" which span the timeframes well after graduation and seek to provide a continuing integration. For example, all graduates of Wharton will have the opportunity to return every seven years for a free, one-week executive-training professional development. This could provide a model for the future where the student remains a part of the network of professional relationships and education that the institution represents. Students could pay a lifelong tuition fee to belong to this network and will receive what amounts to "service after sale" after graduation. This could be especially attractive for SUNY Maritime professionals who need to renew or upgrade licenses or decide to change jobs. In addition to professional education and training, career counseling and access to a network of available jobs and professionals who have gone through similar transitions could be available.

Faculty

Faculty remains the backbone of higher education. Demographics for faculty are changing and therefore examination of this factor is essential to understanding the strategy the College must employ to attract and retain the right complement of educators who are current in their chosen discipline and able to meet the demands of educating future graduates. Strategic hiring of new faculty for key growth areas will be essential.

About 70 percent of the instructional faculty at all colleges is *off the tenure* track, whether as part-timers or full-timers (a proportion that has crept higher over the past decade). This trend of course has advantages and disadvantages. Part-time faculty members have certain advantages in bringing "real world" and current technical experience. This is important for technically oriented curricula where it is difficult to hire full time faculty at competitive salaries that are offered in particular sectors. The disadvantage is that adjuncts are not as available as full-time professors, since they often have other jobs. Surveys of parents and students indicate that they are largely satisfied with this trend, however, because the relevancy of the material and "in the trenches" experience are a particularly important part of education. Compared with constrained costs and workforce relevance, tenured and full-time faculty, are not strongly valued by parents and students. *The key measure of effectiveness for them is employment after college or acceptance into an advanced degree program.* But these are not the only considerations, for as with any organization there should be "investment" in its future; and, there is governance work of the faculty, such as course development, assessment and curriculum design, which must still be accomplished; too many adjuncts places a burden on full time professors, or may mean the long term health of the institution is not a primary concern; this must be carefully balanced.



Important in the use of adjunct faculty is careful mentoring and inclusion in such programs as campus orientations. Whether new faculty is adjuncts or tenure-track, they will greatly benefit from guidance from those with vast teaching experience and institutional memory. *The students ultimately benefit from faculty success and professional development.*

According to the Bureau of Labor Statistics, the number of professors ages 65 and above has more than doubled between 2000 and 2011. Over the next decade the U.S. will see increasing numbers of "baby-boomers" leaving the work force. This is true for college professors, even if they may do so at a later age. At Maritime College we must attract, retain, and professionally develop exceptional teaching and research faculty (full time and adjuncts) with appropriate levels of real world experience and strong academic credentials within their discipline, in order to ensure the students have the finest levels of instruction and a range of educational experiences. *This will necessitate strategic hiring in key areas over the next five years.*

Technology

In the past 25 years, the rapid pace of technology advancement has fundamentally reshaped much in our daily lives and certainly educational institutions has impacted the way we will provide education, how students will learn, and how we will assess learning outcomes. *The strategic use of technology at the College will be very important in ensuring success in many areas, including attracting the best and brightest students and in how we educate them through such capabilities as online learning, mobile applications, and simulation. All of these technologies are pointing toward more immersive and interactive learning.*

The Almanac of Higher Education 2012 reported that professors have been slow to significantly reshape their teaching, despite hefty investments by colleges in "smart classrooms" and wireless Internet systems. Only a minority of professors use the latest technology very effectively in their teaching. However, students say they want more technology in the classroom. They arrive on campuses with an arsenal of gadgets that could be used in education. Eighty-seven percent now own laptops, and a majority – 55

percent, and rising rapidly — have smartphones that provide access to the Internet. In his book the “Mobile Wave,” technologist Michael Saylor predicts that the current technological trend is a “mobile” phenomenon, the total impact of which will be hard to measure. *This is especially true for education.*



Considering the changing demographic of the faculty, it will be important for administrators to provide the tools and encouragement to faculty to assist them in keeping pace with technology and recognizing it is a major asset in the classroom. It will also be critical for IT departments to assist technologically challenged professors and younger colleagues.

Many institutions recognize this divide. Some of the world's best-known universities are experimenting with new models of online learning, in which students watch short video lectures, take automatically graded quizzes, and use online communities to work through concepts they do not understand. The hope is that professors will use technology to deliver basic concepts to students online before class, instead of using class time to lecture, thereby leaving more time in classrooms for face-to-face discussions and hands-on exercises. This could be a more effective and efficient way of achieving learning outcomes. This new form of “technical pedagogy” is being used in a growing number of secondary schools as well. Kahn Academy is a good example of the way this method is being used in some schools.

As the popularity and demand for online course instruction increases and accreditation authorities require assessments that provide measurable learning outcomes, higher education institutions must ensure systems support instructional requirements, students, faculty members, and accrediting authorities. Colleges are re-evaluating their choices of learning-management systems (LMS) — the software that supports teaching online, including those which are “open source,” such as *Moodle*, which give programmers on campuses more power to make modifications.

A harbinger for the future may be the multitude of new technology companies springing up to support what their founders see as a coming teaching (or perhaps learning) revolution. Investments in education-technology companies nationwide tripled in the last decade. “The investing community believes that the Internet is hitting education, that education is having its “internet moment,” said Jose Ferreira, founder of the interactive-learning company Knewton.

As with many new adaptations, the challenge, however, will be budgets: the demand for new technology comes at a time of serious budget pressure. More than half of public universities faced cuts to their technology budgets in 2011. Administrators will have to provide a business case analysis that can articulate off-setting costs for new technology and identify the “return on investment.”

Textbook publishers also believe their industry is on the verge of a digital revolution. While it is estimated that electronic textbooks currently represent three to six percent of course-materials sales by the Follett Higher Education Group, a major college-bookstore company, it predicts that proportion to grow to more than 15 percent in the next five to seven years. “In a nationwide pilot project, several colleges are requiring students in some courses to pay a course materials fee to cover the cost of e-textbooks — meaning that the colleges buy the books rather than leaving the purchase to students. College leaders say they get a better deal by buying in bulk, and publishers sell more copies. By doing this, universities will drive an e-textbook model to evolve that is advantageous to our students and their interests.” There are some who predict that even this model will not survive and the textbooks could eventually be free, as they generate revenue from advertisements and data collection regarding the reader.

For the maritime industry one of the most notable aspects for eLearning was the coming into force of the Manila amendments. These amendments specifically recognize the use of eLearning for training and assessment. Although the guidance is new and quite limited in scope and depth, it constitutes official recognition of eLearning as a valid approach to maritime education, and provides some guidance of how it should be implemented.

One emerging concept, now regularly in the news for education, is Massive Open Online Courses (MOOCs). This is a type of online course aimed at large-scale participation and open access via the web. MOOCs are a recent development in the area of distance education, and a progression of the kind of open education ideals suggested by open educational resources. Much like social media, ways to derive profit from this concept have not yet been fully determined, thereby creating a degree of risk regarding their return on investment (ROI). While this is a relatively new concept being experimented with by institutions and systems (including SUNY), key features appear to include:

- Open access - MOOC participants do not need to be a registered student in a school to "take" a MOOC, and are not required to pay a fee if not taken for credit.
- Scalability - Many traditional courses depend upon a small ratio of students to teacher, but the "massive" in MOOC suggests that the course is designed to support an indefinite number of participants.
- Using MOOCs as a way to advise degree programs and colleges, recruit potential students, and matriculate students into a degree program.
- Using MOOCs to make students aware of career opportunities within a particular field.

Many questions remain to be answered regarding educational technologies and online courses:

- How can these technologies be best applied?
- Where can they improve outcomes and reduce costs?
- What parts of training can be offered totally online, what will be blended approaches with online and classroom, and what requires pure face-to-face or hands-on approaches?
- With respect to accrediting agencies or licensing what policies concerning instructional delivery vehicles may be approved by the USCG?

Seemingly ever more rapid pace of change in the emergence of technology, increasing capability and availability, the reliance of students on ubiquitous access and the emerging technologies of the shipping and maritime industry are but a handful of the considerations of which we must remain mindful. Considering the uncertainty associated with technology — or maybe even *because of* the degree of uncertainty and all this is happening almost daily — the College must be diligent in implementing a well-planned track to improve use of technology in all of its operations, develop and embrace new concepts for instruction and must provide a method by which to help faculty and staff to effectively keep evolving in this area. *“Leading edge” in this particular area is a strategic imperative for the College and will require significant investment of resources, as well as the development of key external partnerships over the next few years.*

Budget

Nationally, the Chronicle of Higher Education reported that college finances have recovered slightly after several years of budget cuts. Over this period there is increased accountability at colleges and universities by government, the accreditation authorities, and taxpayers: “In this uncertain climate, legislators and accreditors are focusing more and more on completion rates as a quantitative measure of an institution's

success.” There has also been an increased emphasis on retention and graduation rates. Many states, including New York, are increasingly focusing on those two issues by directly linking state appropriations to completion rates and these are now central to federal education policy.

As the federal and state government budget pressures have protracted, and costs continue to rise, every college must find operational efficiencies and develop alternate funding streams. Maritime College has a campus infrastructure in need of renovation and replacement in a number of areas, as well as specific and unique requirements for maritime capability platforms, such as the training ship, marine vessels and simulators. An enormous and tireless focus must be consistently placed upon innovatively presenting the compelling case for government and private sector investments in the College.

In 2012 the SUNY Administration announced a proposed new budget model for allocating resources, intended to more effectively distribute available funds. The new data driven allocation model is designed to optimize the limited state operating support appropriated to the State University by embodying the following principles:

- responsiveness to strategic goals,
- acknowledgement of and sensitivity to campus differences,
- recognition of campus retention of tuition,
- and usefulness for long term planning.

Based on these principles, SUNY developed a model built around the following components:

- **Enrollment and Cost:** In partnership with economic development officials and employers across New York, SUNY is mapping academic resources and building capacity to meet workforce needs in key industries. Under strategic enrollment, enrollment growth will prioritize high need and high demand academic programs, targeted to specific fields and regional economic needs. SUNY used a national study to create estimates of undergraduate and graduate costs at technology colleges, comprehensive colleges, and doctoral/research institutions. In addition, as part of the effort to simplify the components of the model, the number of campuses receiving mission adjustments was reduced, in part by increasing the funding for specific disciplines with exceptionally high costs, like Maritime College due to additional STCW course requirements associated with USCG licensing. These licensing requirements, result in students taking up to 30 hours of additional course work (as overloads) compared with similar degree majors. These costs cannot be passed onto the students through increased tuition. The student pays a maximum of the full-time tuition rate of 12 hours.
- **Research Funding:** The research enterprise is central to reaching SUNY’s central strategic goal of driving economic growth and revitalization for the state. SUNY seeks to promote economic development by bringing research funding into the state through competitive federal grants, and recognizes the importance of research in all fields of study. The establishment of the Global Maritime Center in early 2012 poises the College to take its place in this important area.
- **Academic Mission Funding:** Under a proposed new model, Maritime is one of the three campuses that will qualify for funding driven by extraordinary expenses integral to unique mission-related expenses. This funding is based on four criteria:
 - Centrality to mission, where a core academic function or program defines the institution’s identity and purpose,
 - Uniqueness, where the program is unique within SUNY or the region,
 - Materiality, where the program’s costs represent a significant proportion of the campus budget, and

- Available revenue, where costs exceed any available associated revenue stream or other income, or possible cost saving measures such as program collaboration or shared services.

With the strong focus on science, mathematics and engineering, the result is a significant level of additional cost (in comparison to our SUNY counterparts) in order to properly educate our students. Until the last 18 months, many of the expenses unique to Maritime College went unrecognized and were not adequately communicated within the SUNY system for ensuring full budget allocations. This is especially the case with those requirements associated with the granting of the USCG license which requires the overhead costs associated with the Regiment of Cadets and the operations of the training ship and related vessels. Additionally, given tuition policies at the state level, students are not paying for “beyond full time” work (defined as 12 credit hours) and yet, are often enrolled in up to 20 or more credit hours. Today over two-thirds of the student body is in the Regiment of Cadets and is in pursuit of a USCG license. The cost of this additional course load (in terms of faculty and staff) is absorbed by the College and not passed to the student in the form of tuition. But, it is also not fully compensated for in state or federal allocation funding models.

While the Academic Mission Funding recognizes the extraordinary expenses integral to our unique mission-related expenses, it does not fully cover them, especially when considering that costs have continued to rise across essential operational requirements, such as fuel procurement.

State funds are only part of the budget story for the SUNY Maritime. Nationally, the share of all students receiving financial aid has continued to rise. According to the U.S. Department of Education, more than four out of five full-time freshmen in college for the first time in the 2009-10 academic year had grants or loans. The College Board reported that grant aid became more common in the 2010-2011 academic year, going to roughly two out of three full-time undergraduates. Almost three-quarters was federally funded reflecting the rapid growth in the Pell Grant program, education benefits for military veterans, and tuition tax credits.

Of great concern to the public, educators, and lawmakers is the increasing number of students with loans. About two-thirds of all students have received loans, and the average amount of debt per borrower rose to more than \$25,000 for the Class of 2010. As total outstanding student-loan debt hit the \$1 trillion mark, federal officials scrambled to ease the burden on borrowers and has required colleges to disclose more about the full student cost of attendance and financial-aid awards.

As public colleges seek increased donations to support scholarships and increased state and federal aid is made available, better measures are being implemented to judge how institutions distribute aid and scholarships. Donors and tax payers want to know they are getting the most for their investment. SUNY Maritime has taken specific internal measures to ensure a consistent process is followed to ensure accuracy and full accountability of all scholarship fund awards.

Across the board, colleges are seeking to develop revenue from other sources and tuition/fee increases. In 2011, the return on investments for college endowments rose by an average of 19.2 percent, an increase of 11.9 percent from the previous year. Private donations to colleges and universities increased by 8.2 percent.

With pressures on state and federal budgets, and the cost of remaining at the forefront of maritime education, SUNY Maritime College must actively seek to enhance education with funding from alternative sources such as public-private and corporate partnerships, research grants, and other donations *for all aspects of supporting the business of education*. Development must be done with a balanced approach recognizing the need for scholarships (to attract the very best and brightest, while granting on the basis of need in order to enhance opportunity and prevent excessive debt accumulation). However, it is paramount

increase giving to general unrestricted funds areas which give the College flexibility to determine the funding priorities which vary from year to year. *A scholarship will benefit one student; a gift to the unrestricted fund (which may be used in combination with other gifts to improve simulator capability, for example) may impact 1,500 or more students a year, for many years.*

We must do both.

Maritime College: Strengths, Challenges, Opportunities, and Risks

SUNY Maritime's mission rests squarely at the nexus of the key areas of demand for a 21st century workforce: Technical skills and S.T.E.M. related education coupled with hands-on experiential learning and interwoven with student programs designed to ensure development of character, leadership, critical thinking, and self-discipline is an unbeatable combination, opening many doors for the future of each graduate.

As the cost of college education has increased dramatically along with the amount of debt students accumulate by the time they graduate, employment is vitally important to students and their parents. According to *PayScale.com*, which tracks college graduates' starting median salaries, SUNY Maritime College was listed as one of the 12 colleges which will beat the average salary of the latest Harvard University graduates. This report indicates SUNY graduates can expect to earn an average of \$57,300 vs. \$54,100 from Harvard. (Internal data from the College shows the actual figure as even higher, at over \$62,000 average starting salary). Additionally, licensed and non-licensed graduates historically all enjoy



nearly 90 percent employment within just three months after graduation. Furthermore, our alumni continue to enjoy high paying jobs throughout their careers.

An increase in demand for graduates of S.T.E.M. related degree programs will continue through the foreseeable future. A strategic imperative is educating the general public and our K-12 youth about the importance of the maritime industry (and related industries), the environment, and career opportunities. This is being accomplished through a regular and systematic outreach via summer programs and partnerships with industry, non-profits, and schools.

As the largest institution in the area of the Port of New York and New Jersey equipped to train professional mariners, SUNY Maritime is in a unique position to offer training programs and individual courses for those who are already in the maritime industry and seek advancement, continuing education courses that meet the regulatory and industry demand for advanced training; and training programs and individual courses to

facilitate entry into the merchant marine at the support and operational levels. Furthermore, our instructors can also provide on-sight and customized courses of varying lengths.

The Regiment of Cadets, open to all students, is mandatory for all students seeking a USCG license. Through the Regiment, the College imparts high standards for character, leadership, teamwork and self-discipline which are in keeping with the demands of the profession and the finest traditions of the sea going services. The qualities the Regiment instills are highly desired by not only the maritime industry, but by employers in general. The Regimental system offers a vehicle for developing the leadership skills of the cadets, supports the professional training of the cadets, and provides a framework for safely managing a large number of cadets at sea on the training ship.

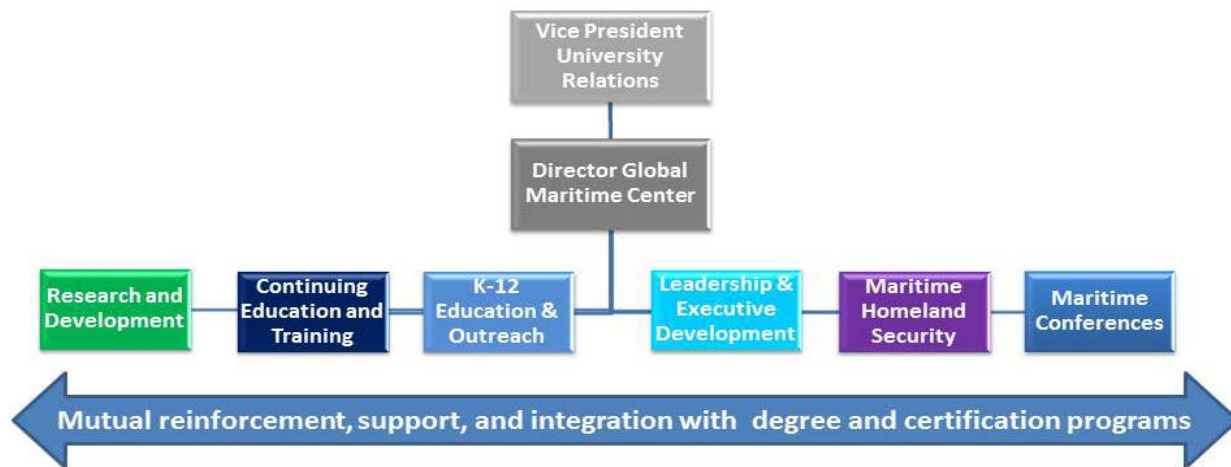
The Regiment has nearly doubled in size over the last decade, thereby requiring the College to hire additional Regimental staff officers and chief petty officers to provide the appropriate level of mentorship and role models for our cadets. Our total student population has also grown to almost 1,800. We are still a relatively small SUNY college, but our small campus environment is also an advantage in that we know our students and provide more individual attention. This also helps form strong bonds with classmates and a close relationship with the College, thereby promoting a strong professional network and sense of belonging which extends throughout the lives of our graduates.

Our students benefit from relatively small class sizes and low instructor to student ratios. While we have a core of traditional academics, we also have faculty who are technical experts in maritime related areas to include: marine transportation, marine operations, maritime regulations and enforcement, port operations, cargo and shipping, marine engineering, naval architecture, etc.

Additional plans to strengthen and provide opportunities for our faculty include:

- Bringing doctoral students to our campus to conduct research with Maritime College faculty and students through cooperative agreements with doctoral degree-granting institutions within SUNY and beyond.
- Encourage the faculty to move from a purely teaching focus to a focus that all includes applied research, and assisting faculty to dramatically increase the number of proposals submitted for grants. Drawing students into research areas will provide additional learning and open additional opportunities for employment following graduation.
- Establish corporate or company exchange programs.

With the establishment of the Global Maritime Center for Research Development and Education in 2012 we are more adequately poised to take advantage of the expertise of our faculty and support faculty research, as well as to help promote external partnerships and areas of important focus.



While there are significant benefits to being a relatively small and unique college within the SUNY system, Maritime College has unique challenges associated with the campus location. Located on 52 acres on a peninsula, in New York City, in the Bronx, our campus footprint is physically constrained. This restricts our ability to grow our on-campus student population. We also have an aging infrastructure (one of the oldest in the SUNY system) with the least amount of square footage per student. A well-planned and visionary effort must be applied to both renovate and replace key buildings over the next decade, in order to provide a more student - centric atmosphere and promote a better all-around learning environment in key mission areas. The challenge is not only to secure adequate funding for capital projects and critical maintenance, but to develop innovate “fusion” projects, carefully phased, in order to maximize resources and geography, while minimizing the negative effects and distractions associated with construction. *It is a strategic requirement to maintain our current on-campus student population during any new construction or renovation.*

We must embrace innovative ways to expand both our physical and “virtual” footprints. The ideal location in New York City coupled with the art of the possible, need not be a limiting factor to the growth of Maritime. For graduate education and certificate programs, alternative site locations such as downtown New York City, must be explored and secured to allow flexible and easy access by students. Certificate programs, continuing education courses, and Global Maritime Center seminars and conferences should be brought to customers at their ideal locations. Articulation agreements for both graduate and undergraduate degree programs with other SUNY campuses may also provide us an opportunity to offer dual degree programs or courses on other campuses.

As the demographics clearly show, “non-traditional students” are increasingly important. This consideration requires the College to consider the methods to attract and serve this population. The emerging concept and technology associated with Massive Open Online Courses (MOOCs) may provide an opportunity to offer a limited number of courses free for no credit, in order to increase the awareness of the general public about maritime and transportation career opportunities, market our degree programs, and matriculate more students to on campus and online degree programs.

As the International Maritime Organization (in the 2010 Manila Amendments) has opened the door to the use of online technology, SUNY Maritime should also explore using online technologies or “hybrid” models to offer our STCW courses. The learning management systems in place at Maritime College may offer a promising method to more effectively deliver online technology to cadets, as well as provide training to current maritime professionals seeking additional certifications. All of our Professional Education and

Training courses must be reviewed to determine feasibility in view of USCG regulatory requirements, and to consider new offerings.

Another major and unique challenge for Maritime College is the replacement of the Training Ship Empire State VI. Empire State VI is now over 50 years old and must be replaced very soon with a modern, environmentally friendly, and fuel efficient vessel. The Training Ship is absolutely vital to ensuring cadets receive the requisite training required by the USCG and based upon the Standards of Training, Certification, and Watchkeeping (STCW) of the International Maritime Organization. Cadets not only accumulate the required at sea training time, but also use the ship as a laboratory for required STCW courses and acquire important hands-on skill and proficiency through by daily maintenance programs when the ship is in port. As Hurricanes Sandy and Katrina have clearly demonstrated, these ships are essential for providing disaster support by emergency responders. The MARAD training ships at the state maritime academies provide alternative platforms to DOD seaborne assets, which are expensive in terms of personnel and the impact on operational tempo of forces. Opportunities exist to leverage training ships for use across a number of federal agencies such as the Departments of Transportation, Homeland Security, Defense, and Health and Human Services.

Hand-in-hand with the replacement of the Empire State VI is ensuring we have the access to state of the art laboratories and simulators to support the hands-on learning experience that is essential in maritime education. Simulators must support a wide range of training and be reflective of the current technology and propulsion systems. Simulators must be periodically refreshed, updated or replaced requiring periodic capital investment.

As discussed previously in “Analysis of the Higher Education Landscape,” Maritime must rely primarily on tuition and fees from students and funding from the State of New York. Year to year, approximately, 45 percent of the College’s operating budget comes from the State of New York. Some limited amount of funds are provided by the Maritime Administration for the Ship operations.

Due to the continued uncertainties associated with the state and federal budgets in the coming years, the College can no longer depend entirely upon these historical sources. *It is a strategic imperative to build additional or alternative funding streams, continue to build collaborative partnerships and also conduct focused effort in development so we have a solid foundation for the future and mitigate fluctuations in government funding sources.* Alternative sources include:

- Expanding efforts of the Global Maritime Center in the areas of research, development, education, and training to generate revenue.
- Increasing online courses and certificate programs.
- Increasing development activities including focused campaigns to yield endowments, major gifts and special funds. Key to this will be establishing relationships with individual donors and corporations with a vested interest in Maritime College and its graduates.

While predictions can be made regarding future trends in the maritime industry and in higher education, there is uncertainty in these predictions, as they are built on assumptions regarding the economy, certain demographic trends and emerging technologies. The plan must be regularly reviewed to see if the strategy is still sound or must be adjusted, especially if these assumptions are found to be incorrect. Since a strategic plan is not an end-point, but a starting point, a vital element is developing supporting plans to outline and implement the steps needed to achieve the desired end state or vision.

IV. The Strategic Plan 2013-2018: Imperatives and Objectives

In pursuit of the College's Guiding Principles, and seeking inspired excellence in all endeavors, we have identified four strategic imperatives that will assist us in moving forward. Achieving these are integral to the long term strength and viability of Maritime College and helps ensure the ability to fully equip our students with the technical skills and the educational, intellectual, leadership and character attributes which make them the employees of choice in a highly competitive global environment. The four strategic imperatives are:

- Achieve New Levels of Academic and Professional Excellence.
- Provide World Class Waterfront Programs with the Right Complement of Training Vessels.
- Build a Physical and Virtual Environment Which Fully Promotes Learning and Development.
- Increase the Number and Quality of Mutually Beneficial Strategic Partnerships.

I. Achieve New Levels of Academic and Professional Excellence

Academic and professional excellence **MUST** be the hallmarks of our institution. Excellence attracts students to Maritime College and, excellence is the reason our graduates remain in high demand for employment by the maritime industry and other sectors. This goes beyond ensuring our students are successful academically. Excellence means that students have a quality hands-on experience; our courses are relevant to the changing employment environment, and that they leave Maritime equipped with resilience and ability to lead and innovate in an ambiguous global environment. *Quite simply, excellence means leaving no stone unturned in the pursuit of the highest standards in all aspects of the Maritime College experience.*

Academic excellence begins with recruiting students who can handle the rigorous curriculum at Maritime and who genuinely are interested in the life of challenge and unique opportunity. Recruiting a diverse student population that has the S.T.E.M. background required to successfully complete undergraduate programs at Maritime is essential. As such, we must look beyond the closest shores and expand our efforts to recruit more students from well outside the local region and better diversify our student body with race, gender, background and culture. The College should reflect the global nature of the maritime. This starts with educating K-12 students about the maritime industry, career opportunities and paths, and requirements for admission to Maritime College. As a growing number of students completing bachelor degrees now first attend two year institutions, it is important that our admissions programs increase their focus on recruiting transfer students and programs are structured in a way that accommodates their advanced academic status. Considering the natural appeal of our graduate programs, we should reach beyond the recent tendency to recruit students just out of college and must seek professionals from a worldwide audience who recognize the value of the advanced degree or certificate and are ready to advance their careers through a challenging "anytime anyplace" or executive delivery concept.

We can increase international recognition of our programs by increasing the number of international students attending Maritime College for both undergraduate and graduate studies, as well as developing

transnational corporate partnerships. International students will eventually be leaders in maritime industry in their own countries.

One mark of institutional excellence is a faculty committed to excel in the classroom, as well as publishing and research. Maritime must attract the most qualified faculty, while concurrently changing the culture from almost a strictly teaching focus to a balance of teaching, research, and professional mariners as faculty members. This will help ensure that our faculty work to keep alignment of our curriculum and the current and emerging trends in industry. Educating such a broad and diverse population - local, regional and international – means the College has a pivotal role in shaping the leaders of tomorrow and the global industries which intersect the maritime.

Our students must be equipped with the knowledge and skills required to achieve academic success. But beyond having the most relevant courses, quality faculty, supportive staff, and state-of-the-art-facilities, our students must also be steeped in important character attributes of integrity, honor and service, as well as being equipped with key life skills of decision making, critical thinking and good judgment.

We must foster activities outside the classroom that build team players, good citizens and outstanding role models and leaders. These activities include club activities, community activities and athletics.

Academic excellence, student success, and faculty excellence are the foundations for any institution of higher learning.

II. Provide World Class Waterfront Programs With the Right Complement of Training Vessels

At Maritime College, central to what we do is our waterfront. Most noticeably, it is the “homeport” for our training ship (and potentially other training vessels). Our waterfront supports our Engineering, Marine Transportation, and Maritime Environmental Science curricula, and is the bed-rock for our waterfront sports and recreation programs.

The Training Ship Empire State VI (TSES) is now well past its prime. Its advanced age means most of its systems are well out of date, problematic and costly to replace or maintain, and the vessel is not now capable of meeting many important environmental restrictions or operating with any level of efficiency. In cooperation with the other state maritime academies, a focused strategic effort is underway to secure new multi-purpose training vessels for all of the academies. This effort will be a long term one and involves developing appropriate relationships and collaborative efforts with industry partners and labor groups with a vested interest in the effort, or whose missions closely intersect. Collectively, we are pursuing a broad and deep legislative agenda to educate decision makers, secure language and funding for the next generation of training ships. This is an imperative for the educational and training requirements of the maritime academies and contributes to a strategic national security requirement to ensure an adequate number of mariners. In time of crisis, these ships offer service for a variety of missions to support our citizens, or even internationally augmenting the efforts of other government agencies.

The programs offered by the waterfront directly contribute to Maritime’s mission. Small boat skills and programs build better mariners, team players, and leaders. We have already held a Waterfront Visioning Workshop. This workshop included both internal and external stakeholders.

The vision is Maritime College’s waterfront will be recognized nationally as among of the finest anywhere, with exemplary facilities and resources which contribute broadly and deeply to the College’s mission, as

well as to development, expanding partnerships and the overall student experience. In order to accomplish this SUNY Maritime College will re-invigorate the Waterfront Advisory Committee to develop a supporting plan for the Waterfront which will include all aspects of the waterfront: facilities; boats and vessels; athletics; training, recreational, and academic programs; community outreach; K-12 outreach and S.T.E.M. programs; research support; leadership development; and alternative revenue streams for the Waterfront.

Key to building a hallmark waterfront program is the expansion and renovation of our current waterfront facilities to include, building space, ramps, and additional piers. This will require close collaboration and work with the U.S. Navy (whose Reserve center occupies space adjacent to the College) and city entities.

III. Build a Physical and Virtual Environment Which Fully Promotes Learning and Development

Our physical and virtual facilities must foster learning and support our student's professional and personal development. Research has shown that today's students apply to many more institutions than previous generations, and it is not atypical for students to apply up to six schools that offer similar majors and opportunities. Campus facilities play a significant part in a student's college decision. Colleges can no longer assume that their academic programs and cost will be the deciding factors for college selection. In 2010, SUNY system completed a detailed study of the campus facilities and developed a detailed and complex Master Facilities Plan for the College. This plan identified significant deficiencies in classroom space, student life facilities, athletic facilities, and waterfront facilities. It did not take into account the aging dormitory infrastructure which also will require extensive renovation or replacement within the next ten years. Another review is now being conducted to update the plan in view of anticipated budget constraints, but also with a different way of viewing potential solutions in order to develop "fused" or "hybrid" approaches.

We must maximize the use of our existing facilities, replace or renovate inefficient aging structures, and build greener plant facilities for our campus (that may also provide a learning environment for our facilities engineering degree program(s)).

As a substantial number of our students participate in athletics, and the Regiment of Cadets requires physical fitness for 1,200 cadets, we must have adequate facilities that will help recruit the scholar athlete we seek. Replacing the current athletic facility is a priority. New dormitory and student activity spaces must be incorporated into the athletic facility design and construction in order to allow us to start replacement of our oldest and most inefficient dormitories in a long term, phased approach.

Space for our extra-curricular student activities is insufficient. This includes space for recreational activities, meeting areas, and spaces that support and encourage the arts (music, theater, film, etc.). If we are to increase both the quality and number of applicants, we must have a range of activities and facilities that support the interests of a broader population. Additionally, we must have facilities that support a growing student body that comes from outside the New York City and Long Island areas and is seeking meaningful campus life and activities on the weekends.

Since our campus space is at a premium given our current location, in addition to online course offerings, we must consider alternative sites for delivering graduate degree programs. This will be increasingly important as we start new graduate programs in Naval and Maritime Studies and Facilities Management Engineering Degrees. These facilities must be convenient for the targeted audience and promote student learning.

As we upgrade our facilities, we must also innovatively pursue information technology (IT) infrastructure solutions that support online delivery of courses and course material, research, and simulator technology. Our facilities (not just classrooms), faculty and students must have the technology that supports online and hybrid delivery of course materials, and recognizes that we are becoming a more mobile student body and workforce. Learning can and will take place in a much broader area than the classroom.

As part of our facility upgrades, we must also consider major capital improvements to our simulators and laboratories to enhance student learning outcomes. One of the major selling points of our graduates is the hands-on experience they acquire as students not just during summer sea term cruises on the training ship, cadet shipping on commercial ships, and during summer internships, but also as part of their academic experience in simulators and laboratories. Our simulators and laboratories for deck and engineering licenses, as well as for Marine Environmental Science, must reflect state-of-the-art technology that is being used in the maritime sector. This may require reconfiguration of existing facilities in order to fully support the needed expansion of capability. *This is not an inexpensive investment* and, as such, we must seek innovative methods of funding through capital campaigns, development opportunities, and partnerships with industry and other organizations.

In addition to the Training Ship Empire State, simulators and laboratories will allow greater effectiveness in the delivery of STCW related academic courses and count partially towards required sea time for deck and engineering licenses. Although simulators cannot completely replace actual shipboard and vessel training, they can be used to accelerate learning and save fuel costs associated with actual underway training evolutions. Furthermore, simulation provides the opportunity to experience a wider range of scenarios, geographic areas, weather conditions, and vessel operations in a safe environment. It is important that these and labs reflect current level of technology that our graduates will encounter upon graduation, in order for them to be “industry ready” for employment. This will ensure our graduates remain competitive in the workforce.

IV. Increase the Number and Quality of Mutually Beneficial Strategic Partnerships

Fundamental to achieving all our strategic imperatives is increasing, developing, and strengthening the number of Maritime College’s partnerships. This is the thread which binds all others. Partners include the maritime industry, maritime related organizations, maritime and S.T.E.M. focused schools, our alumni, and parents. It also includes partnerships within the SUNY system, other state maritime academies and international maritime schools, our elected and other key governmental officials, and MARAD.

The Global Maritime Center will be a primary venue by which we can expand the footprint of the Maritime Nation and establish new partnerships. The GMC will serve as the portal to support faculty and graduate student relevant applied research and development. Partnering with other SUNY institutions, government, businesses and organizations, we will seek to leverage the uniquely maritime expertise and focus to provide innovative solutions to difficult problems that face us as local and global citizens. Strong and healthy partnerships will help us ensure we have world-class degree programs which are relevant for an ever-evolving 21st century workforce.

Conclusion

The conclusion of this strategic plan is really not the “Conclusion.” The strategic plan is not the end of the planning process; it is the starting point. In order to achieve our overarching strategic imperatives, we have identified 10 intersecting objectives:

- **Attain Academic Excellence in All Programs:** Ensure the highest academic standards of quality and excellence in all programs, facilitated by well-designed institutional policies and correct investment in personnel, technology, facilities and instruction.
- **Attract and Retain High Quality Students:** Implement a well-defined strategic enrollment plan to attract and retain quality students with strong academic potential and outstanding character. This and other initiatives will result in improved graduation rates across all programs and build the reputation of SUNY Maritime College as a premier institution of higher education.
- **Promote Faculty Excellence:** Attract, retain and professionally develop exceptional teaching and research faculty (full time and adjuncts) with appropriate levels of real world experience and strong academic credentials within their disciplines, in order to ensure the students have the finest levels of instruction and a range of educational experiences.
- **Attain Key Modernized and Essential Capabilities:** Acquire, improve or modernize essential capabilities including waterfront programs and training vessels, campus facilities, cyber and information technologies, or other equipment which will support elevated student learning outcomes and to ensure the College will be “leading edge” in all categories and for all programs.
- **Enhance Financial Stability:** Enhance the breadth and depth of the financial foundation of the College and increase the level of available resources in order to promote the overall long-term stability of all programs and advance the College in key areas.
- **Maximize Student Achievement:** Integrate diverse academic and student life experiences which will maximize student achievement across the full range, encourage holistic development and contribute to lifelong success.
- **Establish a Compelling Brand and Institutional Identity:** Develop and implement a compelling brand and institutional identity in order to attract the finest students, enhance their opportunities following graduation and allow the College to forge new partnerships.
- **Increase and Enhance Partnerships:** Positively and proactively engage alumni, industry partners and friends of the College for mutual benefit, in order to improve the quality of education, strengthen the financial position of the College, and most fully prepare our graduates to enter a 21st century workforce.
- **Encourage Greater Innovation and Diversity.** Enhance the culture of adaptability; innovation and diversity in order to fully realize the true potential of our student body, faculty and staff who will deliver significant contributions to the betterment of our world, at both a local, regional, and global level.
- **Transform into a High Performing Organization.** Transform the College into a high performing organization characterized by efficient and effective operations and a strong customer service approach.

Each of these objectives has supplemental supporting actionable plans with specific goals. The execution of actionable steps, designed to achieve data driven outcomes, is the requirement to reach the long term vision. A few of the essential benchmarks and measurable outcomes include such things as: increased retention rates, increased graduation rates, increased levels of giving from alumni and friends of the

College, especially with respect to endowments or unrestricted funds, and continued high salaries and employment rates for all graduates. *Ultimately, the steps ensure the delivery of a world class education, in a world class student-centric learning environment, through an exceptional faculty and staff. These objectives along with the actionable plans contribute to each of the strategic imperatives and set the correct course for the future.*

Throughout the coming months, supporting plans will be developed by cross-functional teams which will be composed from a range of key stakeholders. Presidential Memorandums delineating responsibilities and composition of the cross-functional teams will be promulgated and subsequently the plans themselves, with assignment of accountability for execution.

As Larry Bossidy (well-known and successful CEO) and his coauthor Ram Charan (organizational consultant), note simply in the book, Execution: The Discipline of Getting Things Done: "Execution is the hardest thing." The authors emphasize the need for understanding the essence of planning and the imperative of good execution: "People think of execution as the tactical side of business. That's the first big mistake. Tactics are central to execution, but execution is not tactics. Execution is fundamental to strategy and has to shape it." Thomas Edison put it this way: "Vision without execution is hallucination."

"However beautiful
the strategy, you
should occasionally
look at the results."
Winston Churchill

Specific feedback and regular analysis of the metrics will be essential to ensuring this is a continual and dynamic process that holds us accountable as an institution and individually. Without accountability, the plan will have no effect and so become quickly irrelevant, as important decisions will not be made at the appropriate level.

We will constantly be reviewing our course, but the destination will be unchanged: *a well-deserved reputation as the flagship institution of maritime colleges, with world-wide impact in the delivery of an outstanding education which equips students to rise to the highest levels of leadership in a globalized environment and tackle some of the most important issues of our time.* A SUNY Maritime diploma should truly be THE key which opens a door of enormous lifetime opportunity, because of what it represents — excellence in education, coupled with the development of strong character, judgment and leadership. Maritime alumni should be recognized and well respected for exceptional intellectual capability, knowledge and technical expertise and be the choice of employers for the maritime and other related industries and career fields.

Join us, as friends and partners, as we embark on the journey to take SUNY Maritime College to the next level.

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