MHS IM/IT STRATEGIC PLAN

2010 - 2015



Military Health System
Information Management / Information Technology









About the MHS

America's Military Health System (MHS) is a unique partnership of medical educators, medical researchers, and healthcare providers and their support personnel worldwide. This Department of Defense (DoD) enterprise consists of the Office of the Assistant Secretary of Defense for Health Affairs; the medical departments of the Army, Navy, Marine Corps, Air Force, Coast Guard, and Joint Chiefs of Staff; the Combatant Command surgeons; and TRICARE providers (including private sector healthcare providers, hospitals and pharmacies).

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EXECUTIVE SUMMARY

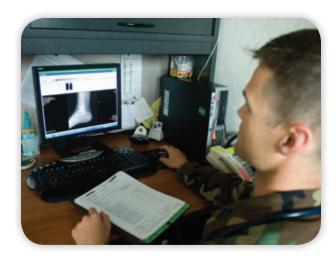
A TRANSFORMATION PLANTHAT PROVIDES DIRECTION FOR IM/IT OVER THE NEXT FIVE YEARS.

Background

In 2009, leaders from the Army, Navy, Air Force, Health Affairs (HA), TRICARE Management Activity (TMA), the Joint Chiefs of Staff, the Joint Task Force National Capital Region Medical (JTF CapMed), and the MHS Office of the Chief Information Officer convened for a series of offsite sessions to develop the MHS IM/IT Strategic Plan for 2010-2015. The strategic plan describes the ten IM/IT goals that MHS will focus on over the next five years, how these goals create mission value, measures of performance, and initiatives MHS will undertake to be successful. Importantly, the plan is a living document that IM/IT leaders will formally review on an annual basis.

Our Priorities

The demands placed upon our IM/IT community are many. The Congress, Secretary of Defense, and Service Secretaries (our investors) require increased readiness, an enhanced experience of care, improved population health, and optimal management of per capita cost. Combatant commanders, patients, providers, and health care support teams (our primary customers) need timely access to information that can help them make better decisions, particularly information that enables better health outcomes. The role of the MHS governance and leadership is to direct resources—including IM/IT—to the investments and projects that will meet the



needs of our customers and investors, and have the greatest impact on the performance of our system.

By endorsing this plan, leadership has asked IM/IT to place priority on two goals: redesigning our architecture and delivering a robust Electronic Health Record (EHR). Our architecture must enable responsive and reliable solutions and rapid delivery of new capabilities. Our EHR needs to be intuitive, aggregate data for each patient over time and across providers, operate in all care settings, and allow sharing of information with our health partners.

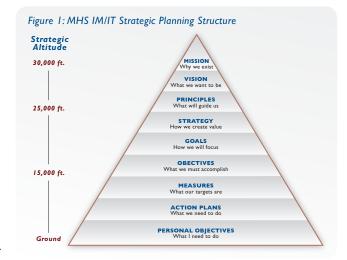


BRINGING THE PLAN TO LIFE.

As we make progress on these top two goals, we will be able to pursue two other important goals, the Personal Health Agenda and Enterprise Intelligence. With an emphasis on greater patient activation, our Personal Health Agenda will provide beneficiaries access to their own medical records, enable virtual visits, and allow them to complete online transactions such as appointing and medication refills. Finally, as we evolve into a learning health care system, Enterprise Intelligence will enable seamless sharing of knowledge and transfer of best practices, closing the gap between what we know and what we practice.

Investing in our Foundation

These priorities describe what we must deliver to our customers. How we develop our internal processes, governance, culture, and human capital to become an optimal IM/IT delivery team, represents our other strategic theme. We will make a significant investment in interoperability to enable integration of our system of systems and connectivity across the continuum of care. Through distributed development and innovation, we will create an environment that embraces the innovative capabilities and diverse perspectives of our MTFs and health partners. Investing in our portfolio management process will enable better decision making and eliminate waste that occurs through procurement of duplicative IT systems. Our matured governance will improve stewardship of resources and instill a culture of collaboration, transparency, and trust. Finally, by conducting a thorough analysis of our human capital needs, we will understand and nurture the job families most critical to our strategy.



Making the Plan Actionable

Whether commercial or government, private or public, there are countless examples of planning teams with the noblest intentions that develop a strategic plan, but stop short when describing how the strategy will be executed, who is accountable, and at what cost. To address this hurdle, we developed objectives for each goal and an initial set of measures describing how we will evaluate IM/IT performance over time. Further, we drafted a set of action plans that provide details on the anticipated outcomes, deliverables, and milestones for each of our strategic initiatives. Finally, we agreed to continually refine the IM/IT Strategic Plan and improve its usefulness as a decision making tool. On a quarterly basis, we will report progress to leadership via the MHS governance structure and refresh the IM/IT strategic plan on an annual basis.

MISSION & VISION

OUR MISSION AND VISION ARE THE FOUNDATION FOR OUR STRATEGY.

Mission

"Provide the right information to the right customers at the right time to improve and maintain the health status of our beneficiaries across the entire continuum of health care operations"

Vision

"Seamlessly deliver the power of information to our stakeholders"



To accomplish our mission and achieve our vision, we have a clear direction and well-communicated strategy that guide us to address today's issues and tomorrow's challenges.

GUIDING PRINCIPLES



OUR PRINCIPLES ARE EMBEDDED INTO OUR PROCESSES AND CULTURE.

Principles

- I. Support the Warfighters and their families
- 2. Promote innovation
- **3.** Adopt business process solution in concert with a technical solution
- **4.** Ensure information integrity and security
- **5.** Establish a consistent, integrated, aligned, agile and interoperable enterprise architecture
- **6.** Reduce complexity for the end-users
- **7.** Reduce time to implement functional capabilities
- **8.** Use industry standards and best practices



In order to achieve common goals, we are committed to a set of guiding principles that are essential to accomplishing success.

GOALS

IN THE NEXT 5 YEARS, WE WILL FOCUS RESOURCES AND MANAGEMENT EFFORTS ON OUR 10 STRATEGIC GOALS.

"10 for 10"

The heart of our strategy is articulated in our 10 goals. These 10 goals will be our focus for the next five years, beginning in 2010.

- I. Architecture and Processes. Evolve the current architecture and processes to enable rapid, affordable, secure delivery and life cycle support of IT products and services that meet the operational needs of the MHS and consistently exceed customer expectations.
- 2. Electronic Health Record. Improve the Electronic Health Record family of applications and support to create a comprehensive, fast, easy to use, and reliable system that meets the MHS goals of improving quality, safety, readiness, and customer satisfaction.
- **3. Governance.** Implement a governance structure and process that enables effective and efficient use of resources and gets products to users faster.
- **4. Enterprise Intelligence.** Enhance enterprise intelligence through the use of enterprise tools, data, and services in a way that makes information visible, accessible, understandable, and trusted.



- **5. Personal Health Agenda.** Advance the MHS personalized health agenda and enhance patient empowerment by providing easy, secure access to trusted health information and tools.
- **6. IT Interoperability.** Advance IT interoperability within the MHS and with all health, operational, and functional partners to create an accessible and complete virtual lifetime electronic record that supports improved care for our beneficiaries.



- 7. Maximize Portfolio Value. Maximize value of the IM/IT investments by providing visibility into the flow of funds from programming to execution, utilizing better cost estimating methodologies, and establishing a prioritization process that fosters strategic alignment and collaboration and improves decision-making.
- **8. Innovative Technologies.** Coordinate research, development, testing, evaluation, and insertion of innovative information and accessible technologies that further the goals and objectives of the MHS.
- 9. Human Capital Management. Improve Human Capital Management to ensure the right people with the right training and experience are in the right job succession planning at all levels.
- 10. Distributed Development. Embrace and incorporate the innovative capabilities of MHS and partner health care delivery organizations through a process of IT distributed development.



In order to achieve a common goal and strengthen our unity, we put aside our differences and uniqueness, and we are committed to adhering to common principles that are essential for accomplishing success.

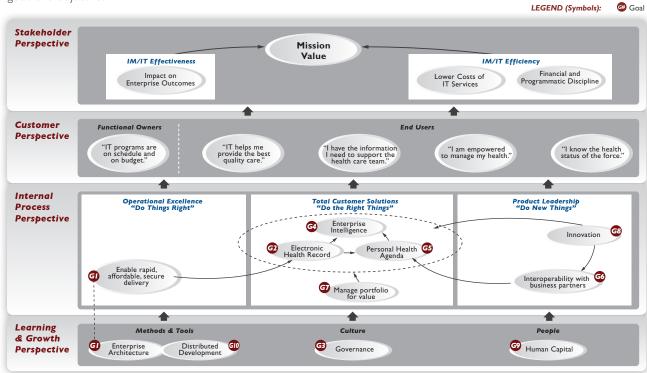
CREATING MISSION VALUE

OUR 10 GOALS WORK TOGETHER TO CREATE MISSION VALUE.

IM/IT Strategy Map

IM/IT leadership selected the strategy map as a tool to communicate how our 10 goals work together to create value for our stakeholders and customers. The IM/IT Strategy Map is a single-page, visual representation of our strategy which communicates at a glance the IM/IT strategic goals and objectives.

It tells a simple story, using cause and effect relationships which are explicit and testable. The following narrative accompanies the Strategy Map explaining assumptions, priorities, hypotheses, and other nuances that are best articulated in words.



STAKEHOLDER PERSPECTIVE



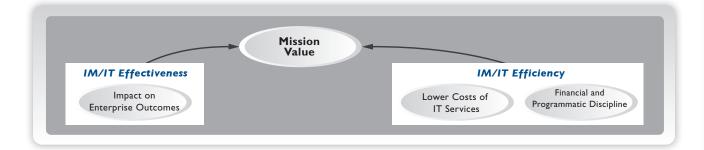
WE HAVE TO ACHIEVE THE RIGHT BALANCE BETWEEN EFFECTIVENESS AND EFFICIENCY.

Our Stakeholders

At the top of our Strategy Map is the ultimate measure of success: that IM/IT contributes to the mission outcomes and the breakthrough performance of the organization. Our contribution to such performance improvement is accomplished through **IM/IT effectiveness** that is delivering systems that specifically and demonstratively create value for the MHS. Senior MHS leadership defines "value" through the MHS Strategic Plan and Value Measures Dashboard, a set of more than 50 mission-focused outcome measures. Precisely quantifying IM/IT impact on these value measures may not always be straightforward, but pursuing alignment with mission outcomes is the basis for the strategic alignment of IM/IT.

Today, these value creation opportunity areas include developing patient-centered models such as the medical home; continuing excellence in casualty care; enabling coordinated, continuous care from point of injury to rehabilitation and reintegration; and transforming the MHS into a learning organization.

The second element contributing to breakthrough performance is more modest but no less important. **IM/IT efficiency** encompasses I) the delivery of basic IT services at a reasonable cost, and 2) the financial management and programmatic discipline we must have throughout the IM/IT lifecycle to ensure scope and costs are contained.



CUSTOMER PERSPECTIVE

CREATING VALUE FOR THOSE WE SERVE.

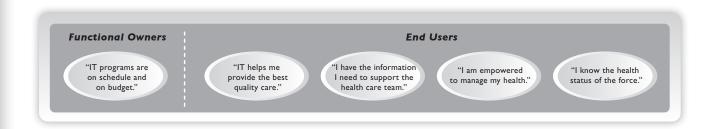
Our Customers

Our customer perspective describes how we want to be perceived in the eyes of our customers. Like any IM/IT function, our customers can be broadly categorized as *functional owners* and *end-users*.

We know that our functional owners, the functional sponsors and stewards of IM/IT investments, are under intense pressure to deliver new and improved IM/IT capabilities to their communities. They need to consistently deliver these capabilities on-time and on-budget. The primary end-users include providers, the healthcare support team, combatant commanders and MHS beneficiaries.

Providers need complete information, knowledge, and evidence accessible via a reliable and intuitive tool in order to improve the health of their patients.

Providers are a particularly important customer since their adoption and use of the electronic medical record impacts the value of downstream activities such as research and continuous quality improvement initiatives. **Health care support teams** (e.g., patient administrators, coding and compliance) need to access information and the ability to quickly and accurately complete transactions. Our beneficiaries need to stay healthy which increasingly means becoming an active participant in the management of their health. They need 24 hours per day, seven days per week access to providers of care, their health record, benefits information, and health educational materials. **Combatant Commanders** need to win the fight. They must know the health status of the force and maintain situational awareness.



INTERNAL PROCESS PERSPECTIVE

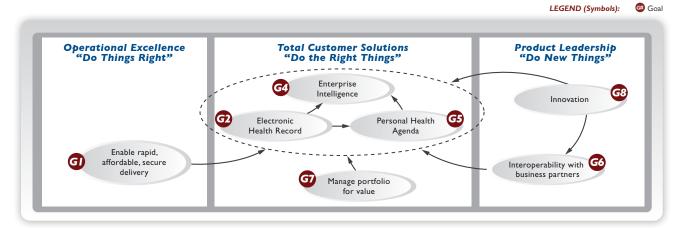


OUR KEY INTERNAL PROCESSES ARE ORGANIZED INTO THREE THEMES.

Our Internal Processes

While the customer and stakeholder perspectives set the context for our strategy, the internal process and learning and growth perspectives describe how our strategy will be implemented. Our internal process perspective describes the critical few internal processes that we must excel at in order to deliver outstanding value to our customers. While there are literally hundreds of processes we perform, the Strategy Map describes the ones that are most important to delivering our strategy.

Our internal process perspective contains three strategic themes— **Operational Excellence** (i.e., low-cost IT provider), **Total Customer Solutions** (i.e., serving as a trusted advisor to the business), and **Product Leadership** (i.e., cutting-edge IT solutions). These themes illustrate the balance that we must maintain: be competent at basic, necessary services while collaborating with the business by offering customized services, solutions, and technologies that advance their strategies. The relationship between business and technology must be clear: business needs drive the prioritization of IM/IT resources and timing of technology insertion. At the same time, technology informs the business of what can be done, the maturity of available products and innovations, and the true costs and risks that organization will bear. Above all, trust and transparency are needed to make these internal processes effective in delivering customer value.



OPERATIONAL EXCELLENCE

DOTHINGS RIGHT.

Operational Excellence

Our operational excellence theme focuses on ensuring functional participation and continuity, and reengineering processes to enable the most efficient and timely path from concept to capability. The MHS does not have a single process, or a coordinated set of processes, supporting the end-to-end IM/IT lifecycle. Today there are hundreds of steps in this process which involve a large number of stakeholders (military, civilian, contractor) and produce an inordinate amount of documentation.

This patchwork of activities generates waste, contains activities that do not produce commensurate value, and hinders MHS' ability to deliver IM/IT products to end users quickly. While important efforts have been made to optimize discrete sub-processes, we must perform a critical examination of the full IM/IT lifecycle and implement the necessary changes to maximize throughput and improve quality. (Goal #1)



TOTAL CUSTOMER SOLUTIONS



DOTHE RIGHT THINGS.

Total Customer Solutions

Our Total Customer Solutions theme focuses on supporting an integrated healthcare delivery system that provides tailored IM/IT solutions to meet the unique needs of military medicine.

This basic philosophy is core to our strategy and illustrated in our "way ahead" approach for the Electronic Health Record. In the next two years, we will deliver on commitments to "heal the EHR", making it more responsive and usable, introducing a few new functions, and modernizing the underlying architecture. This strategy will allow us to rebuild credibility with our providers while developing an infrastructure capable of delivering new EHR capabilities that our leadership is in the process of defining. (Goal #2)

The Personal Health Agenda goal encompasses the tools that patients and their families will interact with to access personal health information, schedule office visits, participate in e-visits, engage in secure patient-provider messaging, and discover other information that will enable them to stay healthy and be better-educated consumers. (Goal #5)

Enterprise Intelligence supports the MHS goal of transforming the enterprise into a learning health care system that generates and applies the best evidence for the collaborative health care choices of each patient and provider; drives the process of discovery as a natural



outgrowth of patient care; and provides information for improving decisions to enhance business and clinical performance. (**Goal #4**)

We will focus on establishing and maintaining total visibility into all IM/IT spending and ensure that the investments we make with our funding provide the greatest value to our customers. In the future, our IM/IT portfolio will be born from our enterprise strategic plan, directly supporting strategic themes, transformational initiatives, and mission outcomes, rather than being "mapped" back to strategy after-the-fact. (Goal #7)

PRODUCT LEADERSHIP

DO NEW THINGS.

Product Leadership

Our innovation goal is focused on the effective introduction of innovative technologies that allow the enterprise to do new things. This includes formalizing research and development (R&D) lifecycle management processes that provide visibility into the R&D portfolio, identifying leading edge industry advancements that are ready for mainstream use, optimizing the technology transfer process, and providing tools to foster innovation at the local level. Consistent with the MHS strategy, we will pursue product leadership opportunities in combat medicine and casualty care, areas we must continuously develop and deploy distinctive new solutions to meet the unique IM/IT requirements of our operational customers. (Goal #8)

The need to exchange information and coordinate processes across organizational boundaries is inherent to who we are (i.e., the MHS is itself a matrix of DoD and partner organizations) and, for this reason, we consider interoperability to be part of our Product Leadership strategy. As shown in our Strategy Map, our interoperability goal actually spans two themes. The part in the Total Customer Solutions theme represents our ongoing need to exchange essential health information with the VA and information sharing efforts with other Federal health agencies to improve population health, and exchange health



information with the civilian sector. The Product Leadership portion of this goal encompasses our joint efforts with the VA to develop a Virtual Lifetime Electronic Record (VLER) and the seamless operation of joint Federal Health Care Centers. Product leadership in information interoperability also includes our commitment to collaborating and leading at the national level in areas such as health information technology (HIT) standards and the National Health Information Network (NHIN). (Goal #6)

LEARNING & GROWTH PERSPECTIVE



INVESTING INTOOLS, CULTURE AND PEOPLE.

Learning & Growth Perspective

The Learning and Growth perspective encompasses the methods, tools, culture, and people needed to support our internal processes and the specific strategies we identified in each theme.

Architecture is a vital enabler for all three strategic themes. It enables our Operational Excellence theme, by making development more predictable and cost effective. Architecture supports our Total Customer Solutions theme by increasing agility and responsiveness through the creation of an open environment that allows the insertion of plug-and-play components that best meet the needs of our customers. It also fuels our Product Leadership theme by allowing innovators the necessary freedom provided that they conform to predefined architecture guidelines that will ease technology transfer. (Goal #1)

Distributed development is a specific way to implement the architecture using DoD internal and external health care partners, and was significant enough to call out as a separate goal.

It represents a shift from an environment where MHS acquired monolithic systems to one where we will

encourage decentralized development of selected components of the architecture. The inherent modularity of distributed development will ensure that we build in small, reusable components which will make the MHS a more agile organization. (Goal #10)

Governance promotes a culture of partnership and teamwork among the various functional and organizational entities that share responsibility for deciding how to best use MHS IM/IT resources to support our customers. MHS IM/IT governance will clarify what decisions need to be made, who will make them, and how those decisions will be executed and monitored. **(Goal #3)**

Our Human Capital goal ensures the availability of skills, talent, and know-how to perform the critical internal processes. We will embark on a systematic evaluation of IM/IT human capital readiness: the strategic job families needed to support the strategy, the number of those positions required, and the current "competency gap." (Goal #9)



CONCLUSION

DELIVERING ON OUR PROMISE THROUGH DEDICATION, COMMITMENT, AND TEAMWORK.

Our Way Ahead

Through these goals, MHS IM/IT leadership has identified the ten areas where we will concentrate resources and management efforts over the next five years. Our hypothesis is that attainment of these goals will allow us to deliver value on two fronts. First, by delivering on Enterprise Intelligence, Electronic Health Record, Personal Heath Agenda, and Interoperability, the MHS will have the IM/IT capabilities needed to become a knowledge-based, patient-centered, systems-minded organization. Second, we will have built the necessary culture, processes, tools, and human capital to transform into an optimal IM/IT delivery team.

In our current environment, a critical missing component is a shared strategic plan—a roadmap to guide our investments, to unify our efforts, to inspire our people, and to foster healthy debate. It is our intent that this strategic plan represents a defining moment for the IM/IT community, a time when we embrace our challenges as opportunities and translate strategy into action.



APPENDIX



2010-2015 IM/IT STRATEGIC PLAN

(A) Objectives by Goal	20
(B) Measures	30
(C) Action Plans	36

GOAL #1: ARCHITECTURE & PROCESSES

Evolve the current architecture and processes to enable rapid, affordable, secure delivery and life cycle support of IT products and services that meet the operational needs of the MHS and consistently exceed customer expectations.

Objective I.I – Develop and maintain a standards-based architecture that translates MHS vision and strategy into people, process, and technology solutions. MHS business and IT stakeholders will collaborate to develop a future state architecture focusing on the strategic imperatives of the MHS. The architecture will be complemented by a transition plan which describes the method, schedule and resources required to achieve the future state.

Objective I.2 – Establish a robust, coordinated and integrated IT infrastructure. MHS will establish an IT infrastructure that supports short-term operational and long-term strategic needs. The MHS IT infrastructure will enable a service-oriented approach to designing and delivering capabilities to the enterprise. The infrastructure will support the identification of common services and the acquisition of capabilities using a distributed development methodology.

Objective I.3 – Establish enterprise architecture governance. MHS will develop enterprise architecture governance that is integrated with the broader MHS IM/IT governance structure. EA governance will assign decision rights and accountability to appropriate stakeholders across the MHS and ensure alignment to other DoD and

external architectures such as the Federal Health Architecture, DoD Business Enterprise Architecture, and the Joint DoD/VA architecture.

Objective I.4 – Establish enterprise architecture policy and procedures. MHS will develop a single EA methodology encompassing the development, maintenance and use of the MHS EA. Additionally, MHS will develop and update existing policies to communicate roles and responsibilities of stakeholders involved in the MHS EA effort.

Objective 1.5 – Refine requirements management process to improve product quality and time-to-market. MHS will improve the requirements management process to enable greater functional participation and design of smaller increments. This will improve the value, quality, timeliness and stakeholder ownership of the resulting systems. To achieve this, MHS will enhance the requirements development methodology and employ staffs that are capable of providing training sessions to all participants. In addition, different types of requirements (e.g, GUI requirements, web services requirements, and data requirements) should be addressed separately, but reviewed collaboratively to ensure alignment."

GOAL #2: ELECTRONIC HEALTH RECORD

THEALTH STORM

Improve the Electronic Health Record family of applications and support to create a comprehensive, fast, easy to use, and reliable system that meets the MHS goals of improving quality, safety, readiness, and customer satisfaction.

Objective 2.1 – Provide a comprehensive, longitudinal electronic health record for all beneficiaries and care settings. MHS will provide a complete medical record for all venues and environments to include outpatient, inpatient, dental, specialty, theater, emergency, trauma, in-transit, and private sector care. Providers need access to current and comprehensive patient information at the point of care. As such, MHS will define the data required to care for patients, identify the authoritative data sources, and ensure availability of that data in a timely manner.

Objective 2.2 – Improve speed, both in terms of response time and the time it takes to perform user functions. MHS will continuously identify and resolve issues that degrade system responsiveness and introduce design changes that enable providers to more efficiently enter and retrieve information.

Objective 2.3 – Provide intuitive and easy-to-learn EHR. MHS will provide an EHR that complements clinical workflow and is configurable at the user level.

Objective 2.4 – Provide a dependable, reliable, available, and secure EHR. The MHS EHR will be available 24 hours per day, seven days per week and contain information that is current, reliable, and protected. The availability of the system cannot disrupt business operations nor impact the quality and accuracy of the information.

Objective 2.5 – Enhance customer service and IT support structures. MHS will provide responsive helpdesk services and effective training to improve the overall user experience. MHS will also deploy a more comprehensive program that increases functional involvement and visibility into the system change request (SCR) and system incident request (SIR) processes.

GOAL #3: GOVERNANCE

Implement a governance structure and process that enables effective and efficient use of resources and gets products to users faster.

Objective 3.1 – Implement a new IM/IT governance structure for unified portfolio management. MHS will design and implement a governance structure that promotes trust and a culture of collaboration across all functions and organizations involved. The governance will enable higher transparency, clearer accountability, and integrated capability-based portfolio management.

Objective 3.2 – Formalize the IM/IT governance processes. MHS will deploy IM/IT governance processes that enable IM/IT assets to be strategically aligned and jointly managed by the functional and technical communities. Decisions will need to be driven by the MHS strategic plan, made by the appropriate governance body, and coordinated across all boards and working groups.

Objective 3.3 – Establish standard and consistent governance products that support the needs of decision makers. MHS will define a complete set of decision support products required by boards and working groups for effective investment management and program

oversight. MHS will review the effectiveness of the decision support products, eliminate products with limited value, and invest in those that are enhancing the quality of decisions.

Objective 3.4 – Integrate IM/IT acquisition and governance process. MHS will establish coordinating mechanisms and take advantage of opportunities to integrate portfolio management and acquisition structures. MHS will ensure that information including changes to cost, scope, or schedule are known and communicated to all appropriate IM/IT decision making bodies so that the full impact of decisions is taken into consideration.

GOAL #4: ENTERPRISE INTELLIGENCE

THEALTH STORE A

Enhance enterprise intelligence through the use of enterprise tools, data, and services in a way that makes information visible, accessible, understandable, and trusted.

Objective 4.1 – Ensure strategic definition and alignment to enable performance based management and to enhance the quality of decision making. MHS enterprise intelligence efforts will support knowledge management, best practice transfer, and value creating activities that are linked to the MHS strategy. Enterprise intelligence will provide trusted and actionable knowledge at the executive level to drive strategic change and on the front lines to enable the best decisions at the point of use.

Objective 4.2 – Establish data governance to improve data quality, data consistency, and user confidence. MHS will increase information management and stewardship through governance and supporting processes. The MHS will develop an inventory of data assets, identify authoritative data sources, assign data stewards, and establish necessary policies and service agreements to support information delivery and use.

Objective 4.3 – Foster enterprise-wide adoption by developing enterprise intelligence tools that are intuitive and provide users with efficient access to information resources. Users at multiple levels of the MHS must leverage information and perform analysis needed to drive performance and create mission value. MHS will establish competency teams that provide education, support, communication, advanced analytics, and other functions to support evolving MHS business intelligence goals and objectives.

GOAL #5: PERSONAL HEALTH AGENDA

Advance the MHS personalized health agenda and enhance patient empowerment by providing easy, secure access to trusted health information and tools.

Objective 5.1 – Implement a comprehensive, MHS-wide patient portal and personal health record.

MHS will provide patients and family members with access to personal health information to increase patient activation. The portal will deliver secure, easy to use tools that conform to nationally recognized interoperability standards and can draw information from multiple sources.

Objective 5.2 – Provide beneficiaries with tools to conduct online transactions. MHS will provide convenient online capabilities such as online appointing and medication refills.

Objective 5.3 – Provide beneficiaries access to trusted health information. MHS will provide relevant and easy-to-understand health information to enable beneficiaries to make healthier choices and become better consumers of health care.

Objective 5.4 – Provide beneficiaries with access to patient/provider messaging and self-administered diagnostic tools. MHS will provide communication tools that enable virtual visits and enhance patient-provider interactions. The MHS will develop and

implement appropriate communication mechanisms (e.g., secure messaging/email, e-visits, blog posts, etc.) and monitor the effectiveness and impact of each. MHS will provide and support patient administered diagnostic tools for items including blood pressure, pulse, temperature, blood sugar, and other information.

Objective 5.5 – Implement processes and technologies that allow easy beneficiary authentication. MHS will establish authentication processes to provide information only to those who should see it, while not unnecessarily impeding or complicating online access. The user experience will be seamless and comply with privacy and security guidelines for protected health information

GOAL #6: IT INTEROPERABILITY



Advance IT interoperability within the MHS and with all health, operational, and functional partners to create an accessible and complete virtual lifetime electronic record that supports improved care for our beneficiaries.

Objective 6.1 – Partner with VA to develop a Virtual Lifetime Electronic Record (VLER) and to enable integration of Joint Federal Health Care Centers. MHS will collaborate with VA to develop processes and technologies that will streamline the exchange of health records between the two organizations. MHS will also support interoperability efforts for DoD/VA joint facilities and develop integration methodologies that can be applied across all joint federal health centers.

Objective 6.2 – Establish interoperability with private sector healthcare organizations and other business partners. MHS will develop policies, business rules and information exchange services that will enable better integration of direct care and private sector care.

Objective 6.3 – Establish interoperable data and information structures. MHS will define the data and information exchange structures and approaches to enable technical and semantic interoperability among health and other functional domains. This will enable a common view of data that supports force readiness and promotes

quality of care for all MHS beneficiaries. MHS will develop standards and policies in concert with DoD and national efforts and engage in DoD, national, and international standards development initiatives.

Objective 6.4 – Define and develop data translation services and system adaptors. MHS will define an integration strategy with the National Health Information Network (NHIN) initiative. This will support interoperability across healthcare domains with current and future partners. MHS will leverage industry best practices to define and develop data translation services and system adaptors.

GOAL #7: MAXIMIZE PORTFOLIO VALUE

Maximize value of the IM/IT investments by providing visibility into the flow of funds from programming to execution, utilizing better cost estimating methodologies, and establishing a prioritization process that fosters strategic alignment and collaboration and improves decision-making.

Objective 7.1 – Ensure visibility and transparency into the entire MHS IM/IT Portfolio. MHS will achieve total visibility of the IM/IT portfolio to include all Defense Health Program (DHP) and DoD-VA Joint Investment Fund (JIF) projects as well as transparency across the entire IM/IT lifecycle. As a result, MHS stakeholders will be able to avoid redundant investments, trace the flow of funds from programming to execution, and create more opportunities for collaboration across organizational boundaries.

Objective 7.2 - Enhance cost estimating integrity.

MHS will overhaul its approach to cost estimation, placing emphasis on tracking actual cost expenditures at the level for which estimates were originally developed. This will provide the ability to compare and reconcile estimates versus actuals, build a repository of historical cost estimating information, and support a culture of continuous improvement. Trained and certified cost estimators will be paired with functional and engineering experts to ensure that estimates account for the full range of IM/IT costs.

Objective 7.3 – Establish a value-oriented portfolio process. MHS will improve the quality of the information in the portfolio management repository to provide decision makers a more complete understanding of strategic alignment, benefits, risk and costs. The IM/IT portfolio is critical to the success of the MHS and must be carefully managed to maximize mission and business value. As such, MHS will ensure all IM/IT capabilities are registered, value and costs are fully captured, and the decision making processes are driven by the strategic priorities of the MHS.

GOAL #8: INNOVATIVE TECHNOLOGIES



Coordinate research, development, testing, evaluation, and insertion of innovative information and accessible technologies that further the goals and objectives of the MHS.

Objective 8.1 – Establish an Innovation Lifecycle Management process that aligns IT innovation with MHS strategy and converts innovations into practice. MHS will develop a coordinated innovation management process to identify, research, develop, test, and evaluate innovative solutions that benefit the MHS enterprise. MHS IT innovation will reflect the strategic vision and the areas of the MHS that can benefit from technology insertion. MHS will also improve the ability to assimilate IT innovation into the organization by ensuring that programmatic elements such as funding, time and other key resources are set aside for the organization to implement the innovation.

Objective 8.2 – Establish the policy, organization, structure, process, funding mechanisms, and metrics for Innovation Lifecycle Management.

MHS will ensure that the necessary governance processes and evaluation measurements are developed, adopted, and implemented.

GOAL #9: HUMAN CAPITAL MANAGEMENT

Improve Human Capital Management to ensure the right people with the right training and experience are in the right job – succession planning at all levels.

Objective 9.1 - Increase MHS IM/IT Human

Capital Readiness. MHS will increase IM/IT human capital readiness in support of IM/IT goals and objectives. MHS will achieve this by identifying strategic job families, the number of required personnel in each job family, assessing current staffing levels, and developing and executing a plan to fill the gaps.

Objective 9.2 – Develop attractive career paths and succession plans to retain required IM/IT

talent. MHS will develop career tracks to make critical positions more attractive and competitive. Succession plans will be developed to ensure that a pipeline of future leaders is in place.

Objective 9.3 – Develop and maintain a high quality IM/IT workforce. MHS will develop a comprehensive career development program to include formal training, rotational programs, and more opportunities

to gain exposure to different settings and career paths.

MHS will align individual performance goals to establish a
direct link between IM/IT goals and individual performance.

Objective 9.4 - Enhance IM/IT recruiting process.

MHS will develop an effective and efficient recruiting process to identify and employ required talent for the IM/IT workforce. MHS will review the current recruiting process, compare the process with industry best practices, identify gaps, and design and develop a comprehensive recruiting program.

GOAL #10: DISTRIBUTED DEVELOPMENT



Embrace and incorporate the innovative capabilities of MHS and partner health care delivery organizations through a process of IT distributed development.

Objective 10.1 – Develop processes, guidance, and standards for development and integration of distributed services and applications. MHS will define the rules of engagement for the development community so that time and money are spent on products that can be delivered to the users rapidly and with a minimum amount of modification. To achieve this, MHS will develop an internal process to manage distributed development and publish a Developer's Kit which includes tools, standards, and guidance.

Objective 10.2 – Establish governance for distributed development including agreements, transparency and knowledge management. MHS will provide oversight of distributed development activities to minimize unnecessary duplication, promote knowledge sharing, and enforce policy.

Objective 10.3 – Establish an MHS development environment that mirrors production. MHS will provide an environment for developers to test ideas and prototypes for all phases of development, testing, and production. Development and testing will be configured to ensure that there is no adverse impact on MHS production systems.

Objective 10.4 – Develop and manage a process for defining, identifying, creating, and leveraging COEs for IM/IT development. MHS will define COE requirements and publish a list of certified COEs. Additionally, MHS will ensure that COEs produce reusable services, functions, data and methods that can be leveraged across the MHS.

Our Approach

Through two additional working sessions, the MHS IM/IT strategic planning workgroup developed a draft set of "big dot" performance measures that track progress towards our strategic goals. As will be described later in the IM/IT Strategy Map, our measures are directly aligned to our 10 goals. The annual refinement, adoption and management of these IM/IT performance measures will be imperative to the success of our strategic plan. In tandem with our 13 action plans (some of which are already underway - see Appendix C) these performance measures help transcend our strategic plan from something that sits on a shelf to a living document that the IM/IT community can leverage to translate strategy into action. Specifically, by measuring IM/IT performance, MHS leadership can assess the value of IM/IT initiatives. In doing so, leaders can make decisions on the initiatives that are having the most significant impact on progress towards our strategic goals. It is important to note that these measures remain in "draft" mode and – upon approval of the IM/IT Strategic Plan – the planning team will initiate a formal process to validate and confirm all official IM/IT measures.

Our Draft Measures

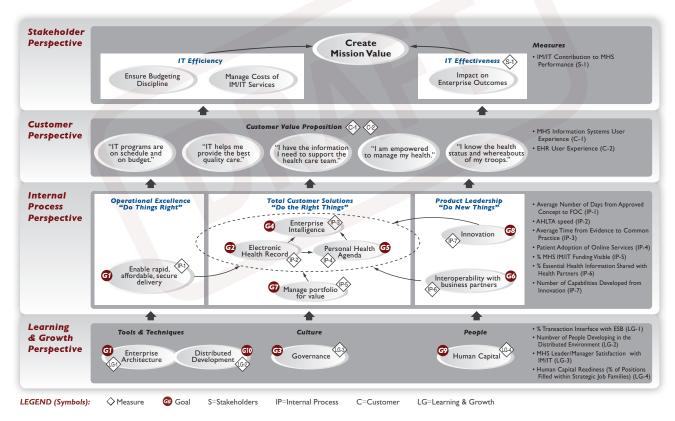
- AHLTA Speed
- EHR User Experience
- MHS Information Systems User Experience
- Patient Adoption of Online Services
- % of Essential Health Information Shared with Health Partners
- % MHS IM/IT Funding Visible
- Number of People Developing in the Distributed Environment
- IM/IT Contribution to MHS Performance
- Number of Capabilities Developed from Innovation
- Human Capital Readiness (% of Positions Filled within Strategic Job Families)
- %Transaction Interface with ESB
- MHS Leader/Manager Satisfaction with IM/IT
- Average Number of Days from Approved Concept to FOC
- Average Time from Evidence to Common Practice



Updating the IM/IT Strategy Map

As documented in the "Creating Mission Value" section of the plan, IM/IT leaders elected to use a strategy map to show our 10 strategic goals, their relationship to one other and how they come together to deliver value to our customers and in investors. In the Strategy Map shown below, our ten most critical goals are shown in the Internal Process and Leaning & Growth perspectives. There are performance measures

assigned to each, in order to have at least one indicator established for assessing progress towards that specific goal. The measures at these two levels of the strategy map are leading indicators of customers and stakeholders outcomes. As reflected in the strategy map, there are measures for both the stakeholder perspective (IM/IT Contribution to MHS Performance) and the customer perspective (MHS Information Systems User Experience; EHR User Experience).



Our Measures

The table below provides additional information on the metrics depicted in our Strategy Map. Specifically, for each measure, the planning team documented what is being measured, as well as the rationale for measuring it.

Ref	Measure	What are we measuring?	Why are we measuring this?
S-1	IM/IT Contribution to MHS Performance	• We are measuring the impact IM/IT has on the overall performance of the MHS.	• It is the ultimate measure of IM/IT strategic alignment.
		 Leadership has described performance goals through the MHS value measure dashboard, a set of 50+ measures that evaluate the extent to which we are achieving 19 mission outcomes. 	Quantifies potential and current IM/IT impact on MHS performance.
		• To measure IM/IT contribution, we will identify which value measures that IM/IT impacts and develop cause-and-effect hypotheses for how IM/IT will "move the dials" (i.e. IM/IT capabilities needed to improve performance).	
		• This will produce a list of strategic IM/IT capabilities and we will measure the % of those that are outstanding.	
C-I	MHS Information Systems User Experience	• We are measuring end-user satisfaction with IM/IT products and services. This covers all users.	• IM/IT is striving to achieve maximum use and satisfaction of its services and products to all users across the MHS.
C-2	EHR User Experience	 We are measuring clinicians user experience with our EHR. We will employ a validated survey method such as a Questionnaire For User Interaction Satisfaction (QUIS) which measures user satisfaction in various domains (i.e., Overall User Reaction, Screen Design and Layout, Terminology and System Messages, Learning, and System Capabilities). Adding demographic data to QUIS would enable MHS to drill into data (e.g., ascertain what aspects of our EHR and what user sub-populations are problematic). 	 Usage and satisfaction (particularly with physicians) are critical success factors in realizing the full potential of an EMR. While other strategic measures are possible (see below), in the near term it is most important to gain provider confidence that IT can in fact help them get their job done. Other measures that articulate strategic value of our EHR include: avoidance of duplicate labs and radiological images, adherence to formularies, improved quality/safety, increased IMR, etc.



Ref	Measure	What are we measuring?	Why are we measuring this?
IP-I	Average Number of Days from Approved Concept to FOC	This measures the overall time (days) from when a concept is approved by the IM/IT governance (i.e., Integrating Councils) to when it reaches full operating capability (FOC). Additionally, the cycle time of the following subprocesses will be measured separately: Requirements development Investment certification Contract award Development (Build) Testing Deployment	 Measures agility and responsiveness to business needs. Serves as an overarching measure for LSS/ CPI efforts aimed at cycle time reduction and streamlining IM/IT processes.
IP-2	AHLTA Speed	• The response time (speed) of AHLTA is measured by the time it takes an AHLTA function/transaction to run as measured from actual AHLTA user's workstations.	 AHLTA users have not been satisfied with system speed.
IP-3	Average Time from Evidence to Common Practice	 Average number of days it takes for an evidence based practice endorsed by clinical/FHP board to be made available to appropriate providers/patients (based on decision support rules) in EHR/patient portal systems. 	 Reduces time (gap) between "what we know" and "what we practice" (e.g., U.S. = 17 years). Brings best evidence to patients and providers at the point of care to improve quality and safety, and reduce costs.
IP-4	Patient Adoption of Online Services	 Higher patient activation results in better outcomes (Becker, Roblin) Adoption has two components: registration and actual usage (Silvestre, Sue, Allen) Registration is a straight forward measure of unique registered users. Usage will be broken into different service categories (e.g., prescriptions refilled, appointment transactions, health encyclopedia visits, lab tests viewed, email messages sent to provider team, etc.) to better understand patient activities and preferences. 	 Patient adoption of online services increase patient activation (i.e., engagement) which in turn results in better outcomes. Higher adoption also reduces costs (i.e., due to reduction in in-person visits).

LEGEND (Symbols):

IP=Internal Process

Ref	Measure	What are we measuring?	Why are we measuring this?
IP-5	% MHS IM/IT Funding Visible	 We are measuring the percent of MHS funding that is made visible to appropriate users (i.e. people from HA/TMA, Services, etc that should see information). % MHS IM/IT Funding Visible = (Funding with capability description that is understandable) / (Total Funding: DHP + JIF + Congressional + R&D). 	 Financial visibility (this measure) and strategic alignment (measure (SI) enables portfolio value to be maximized. Transparency enables all investors (central, Services, JTF CapMed) to see how resources are being used, thus allowing for integrated and coordinated portfolio management.
IP-6	% Essential Health Information Shared with Health Partners	 We are measuring the % of essential data that is shared with identified partners. Some progress has been made by the DoD-VA Interagency Clinical Information Board (ICIB) to identify critical data domains and data elements to be shared between two agencies. As we engage other partners in active data sharing, further data sets will be identified for exchange. 	This gives us a measure of continuity of care through continuity of information.
IP-7	Number of Capabilities Developed from Innovation	 To avoid potential unintended consequences of using a single innovation measure, we developed measures in three categories: Input, Process, and Output. Input: Number of ideas generated stratified by source. Process: Ratio of successful ideas to ideas submitted. Output: Number of capabilities developed. 	 The first measure tells us whether we are getting ideas from multiple sources (is our net cast wide enough). The second measure gives us information on our ideation, and screening processes. The third measure tells us how many capabilities are ultimately born from innovative thinking.
LG-I	% Transaction Interface with ESB	We are measuring the usage of enterprise services bus and common services.	• This allows us to track progress of the MHS common services approach (which in turn will provide benefits such as reduced market time, greater interoperability, and reuse).
LG-2	Number of People Developing in the Distributed Environment	 In the early stages of the distributed development, as a leading indicator, we are measuring how many developers are actively using the tool set within the distributed environment. As the environment matures, we will develop specific measures for time and cost to determine. 	This measure lets us know how much distributed development is catching on.

LEGEND (Symbols): IP=Internal Process LG=Learning & Growth



Ref	Measure	What are we measuring?	Why are we measuring this?
LG-3	MHS Leader/ Manager Satisfaction with IM/IT	 A validated survey instrument for measuring trust will be used to evaluate the various dimensions of trust within the organization: competence, integrity, openness and honesty, concern for employees, control mutuality, satisfaction, and commitment, etc. Based on survey results, initiatives will be designed to strengthen selected areas. 	 Our governance goal is about fusing business and IT, and Services & HA/TMA into a cohesive unit that collaboratively makes decisions about (and provides oversight) of IM/IT. The number one success factor identified by the working group was trust among the various people and organizations that work in our federated/matrixed setting.
LG-4	Human Capital Readiness (% of Positions Filled within Strategic Job Families)	 Measures the % of positions filled within strategic job families. A position is considered "filled" only if there is a person with the knowledge, skills, and values identified in the competency profile. 	 This lets us know if we have the employee skills, talent, and know-how to perform the internal processes critical to the strategy's success.

LEGEND (Symbols): LG=Learning & Growth

Summary

We have an initial set of measures to evaluate progress against 10 goals, and each action plan has been drafted to impact one or more of these measures. The updates to and management of these measures will be an iterative process, and other operational measures will need to be developed to track the underlying inputs, processes, and outputs that lead to these outcomes. As explained in the "Action Plan" appendix, it may be necessary to develop these lower level measures at the action plan level.

Next Steps

In the months ahead, the planning team in general and action plan owners specifically need to refine and validate the draft measures on a couple of levels. First, there is a need to review the IM/IT measures and determine how

these measures link to the broader MHS Value Measures dashboard. In other words, what IM/IT measure is having an impact on one or more of the MHS-level measures managed by the Office of Strategy Management (OSM)? Second, staying within the IM/IT construct, there is a need to review our draft measures and determine if these are the correct measures to use. The quality of the data source and the data itself needs to be assessed. Essentially, the team does not want to measure something only because data is available, and not measure something because data is not available—rather, what should be measured is what's needed to accurately assess our performance. To this end, the IM/IT strategic planning team will work with OSM to apply the same methods and template used for the MHS value measures dashboard (e.g., data sources, performance thresholds, monitoring frequency, expected outcomes, etc.).

ACTION PLANS

Moving from Strategy to Action

Developing and executing a successful strategy requires initiatives that will close the gap between our current state and our future state vision. During our strategic planning workshops, functional and technical leaders of the IM/IT community drafted over 60 action steps needed to achieve the 10 strategic goals. These action steps were subsequently consolidated into 13 actions plans.

Each action plan was assigned to a specific executive owner and action plan owner. The action plan owners developed an initial set of activities, milestones and strategies for each of these 13 action plans under the following assumptions:

 a) additional initiatives will be identified as we further mature our objectives under each goal and adapt to changes in the environment;

- b) refinement to these plans would be necessary upon adoption of the overall plan; and
- c) to develop a realistic and strategic focus for each plan, the individual action plans must address the following question: "how will we know if we get there?"

The remainder of this Action Plan appendix provides a summary statement for each action plan (page 37), as well as a preliminary goal alignment matrix (page 38) that shows how the 13 action plans support the goals and objectives outlined in this strategic plan. In addition, pages 39-51 provide one-page summaries that include a description of the action plan, anticipated outcomes, potential measures, and alignment points to the overall plan's goals and objectives.



Action Plans	
Alignment with MHS Strategy	Develop a method, process and measures that result in better alignment of the IM/IT portfolio with the MHS Strategy.
Distributed Development	Define and implement a distributed development toolbox (DDT) and a common development environment (CDE).
Electronic Health Record	Stabilize the current system while transitioning to a suite of EHR applications and supporting infrastructure that will improve reliability, speed, user interface, data integrity and achieve higher satisfaction from all users.
Enterprise Intelligence	Enterprise Intelligence (EI) encompasses the best practices, tools/technologies and applications used to organize, access, and analyze information for improving decisions and managing performance to achieve business objectives.
Governance	Define and implement a governance structure that encompasses all IM/IT governance areas identified through the strategic planning off-sites: a) IM/IT portfolio, b) architecture including common services/SOA, c) data, d) interoperability, e) distributed development, and f) innovation.
Human Capital	Acquire and nurture the human capital needed to support the goals of the IM/IT strategic plan, and to establish the structures and processes necessary to foster ongoing IM/IT human capital alignment.
Infrastructure and Technical Architecture	Action Plan in Progress
Innovation	Address resolutions to these challenges that will result in a transformed process where innovation is the result of enterprise wide collaborative planning and central program adoption is a seamless, anticipated, much less disruptive and more continuous set of activities.
Interoperability	Agree on all the components of the definition of interoperability and determine the MHS interoperability future vision, define its way ahead towards that vision and develop an appropriate implementation plan.
Maximize Portfolio Value	Create the structures, policies and business practices necessary to improve the transparency and value of the IM/IT portfolio to improve the understanding of true capability costs and benefits, reduced duplication of IM/IT investments and enhanced realization of value across MHS IM/IT investments.
Personal Health Agenda	Design and implement the MHS patient portal strategy. This includes whether the patient portal solution will be tightly or loosely linked to EHR; what features will be included; the acquisition strategy (COTS/GOTS/Custom); and associated policy decisions.
Requirements and Business Architecture	Develop business architecture and requirements for strategic priorities such as EHR way ahead, VLER, PCMH (etc) and improve the current architecture requirement management processes.
Streamline IM/IT Lifecycle	Perform a critical examination of the full IM/IT lifecycle and implement the necessary changes to maximize throughput and improve quality beginning with the identification and validation of user needs and ending with the disposal of the system.

Goal Matrix Alignment

The Goal Alignment Matrix is a visual representation that illustrates how each Action Plan maps to the goals and objectives in the IM/IT Strategic Plan. The solid circles represent primary goal alignment and the hollow circles present secondary goal alignment. This is a draft matrix and as Action Plans are executed alignment points are subject to change.

			Action Plans													
			Alignment with MHS Strategy	Distributed Deelopment	Electronic Health Record	Enterprise Intelligence	Governance	Human Capital	Infrastructure and Technical Architecture	Innovation	Interoper- ability	Maximize Portfolio Value	Personal Health Agenda	Require- ments and Business Architecture	Streamline IM/IT Lifecycle	
	I. Architecture and Processes	1.1		•	•				•			•	•	•	•	
		1.2		•	•				•		•			•	•	
		1.3			•	•	•		•					•	•	
		1.4			•		•		•					•	•	
		1.5			•		•		•					•	•	
	2. Electronic Health Record	2.1		•	•	•	•		•	•	•	•	•	•	•	
		2.2			•				•							
		2.3			•									•		
		2.4			•				•		•					
		2.5			•			•	•						•	
		3.1			•		•			•	•	•	•	•	•	
	3. Governance	3.2		•	•	•	•			•		•	•	•	•	
		3.3	•		•	•	•		•	•		•	•	•	•	
		3.4			•		/ • /		•	•		•	•	•		
	4. Enterprise Intelligence	4.1			•	•										
		4.2			•	• \	•		•		•					
		4.3		•	•	\ • \			•	•	•	•	•	•	•	
	5. Personal Health Agenda	5.1		•	•				•	•	•	•	•	•	•	
Goals		5.2		•					•	•		•	•	•		
o o		5.3			•	•					•		•			
G		5.4		•	•				•	•		•	•	•		
		5.5					•		•	•	•		•			
	6. IT Interoperability	6.1			•				•	•	•	•		•	•	
		6.2				•			•	•	•	•	•	•		
		6.3			•	•	•		•		•			•		
		6.4			•				•	•	•	•		•	•	
	7. Maximize Portfolio Value	7.1		•	•	•	•		•	•		•	•	•	•	
		7.2										•				
		7.3	•	•	•	•	•	•				•	•	•	•	
	8. Innovative Technologies	8.1		0	•		•		•	•		•	•	•	•	
		8.2					•		•	•				•	•	
	9. Human Capital Mgmt.	9.1		•	•		•	•								
		9.2						•								
		9.3						•								
		9.4					•	•								
	10. Distributed Development	10.1		•			•		•		•	•	•		•	
		10.2		•			•			•					•	
		10.3		•	•				•	•	•				•	
		10.4		•			•			•		•			•	

Primary alignment point for action plan with objective from IM/IT Strategic Plan

Secondary or indirect alignment point for action plain with objective from IM/IT Strategic Plan



Action Plan: Alignment with MHS Strategy

Description:

The MHS strategy is documented through the MHS Strategic Plan to ensure that all supporting units are aligned. Recently the MHS leadership has endorsed a new strategic vision referred to as the Quadruple Aim, which is the simultaneous and balanced pursuit of four outcomes (see Anticipated Outcomes below). The purpose of this action plan is to develop a method, process and set of measures that result in better alignment of the IM/IT Strategic Plan and IM/IT portfolio with the MHS Strategic Plan.

Anticipated Outcomes:

- I. IM/IT contribution to MHS performance (i.e. the Quadruple Aim)
 - Readiness (个)
 - Patient Experience (个)
 - Health of the Population (个)
 - Cost (√)
- 2. Investor confidence (个)
- 3. Customer satisfaction (个)

Potential Measures:

1. IM/IT Contribution to MHS Performance (IM/IT Effectiveness)

Key Milestones and Deliverables:

- Establishment of Strategic Alignment Integrated Process Team (IPT)
- Completion of Guiding Principles
- Completion of Strategic Alignment Matrix
- Completion of hypotheses of how IM/IT will impact value measures
- · Recommended prioritized list of capabilities

Alignment to Goals and Objectives

Primary Goal Alignment:

None

Secondary Goal Alignment:

- 3. Governance
- 7. Maximize Portfolio Value

- 3.3 Establish standard and consistent governance products that support the needs of decision makers
- 7.3 Establish a value-oriented portfolio process

Action Plan: Distributed Development

Description:

The purpose of this action plan is to define and implement a distributed development toolbox (DDT) and a common development environment (CDE). This action plan will result in decreased time-to-market of applications and systems while increasing quality in final products through collaboration, reuse, and common understanding of standards and requirements.

Anticipated Outcomes:

- 1. Cut development to deployment time by 50% (\checkmark)
- 2. Reduce cost of application development by 60% (ψ)
- 3. Increase plug-n-play of new deployments and upgrades to >95% problem free (♠)
- 4. All applications smoothly transition from DDT to a PM with funding and into the PfM structure

Potential Measures:

1. Number of People Developing in the Distributed Environment

Key Milestones and Deliverables:

- Study Telemedicine & Advanced Technology Research Center's (TATRC) CDE for use by MHS Toolbox customers
- DDT usage guidance, policy, template Memorandum of Understanding (MOU)
- Develop and deploy web- based DDT knowledge management system
- Create Communications/Marketing plan to publicize the DDT and CDE
- Create a Change Management Plan to move all MHS development stakeholders to the DDT/CDE process
- Create a DDT/CDE content management function to ensure continued value and viability of the knowledge management system and development environment
- · Create a program transfer function that facilitates successful program from the DDT/CDE to the fielding phase

Alignment to Goals and Objectives

Primary Goal Alignment:

10. Distributed Development

Secondary Goal Alignment:

- I. Architecture and Processes
- 2. Electronic Health Record
- 3. Governance
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 7. Maximize Portfolio Value
- 8. Innovative Technologies
- 9. Human Capital Management

- 10.1 Develop processes, guidance, and standards for development and integration of distributed services and applications
- 10.2 Establish governance for distributed development including agreements, transparency, and knowledge management
- 10.3 Establish an MHS development environment that mirrors production
- 10.4 Develop and manage a process for defining, identifying, creating, and leveraging COEs for IM/IT development



Action Plan: Electronic Health Record

Description:

The current suite of EHR applications and underlying infrastructure do not support the challenges of the rapid evolution of today's healthcare practices. The purpose of this plan is to stabilize the current system while transitioning to a suite of EHR applications and supporting infrastructure that will improve reliability, speed, user interface, data integrity and achieve higher satisfaction from providers and the DoD healthcare community at large.

In the fall of 2009, MHS leadership developed a multi-year plan to redesign the supporting infrastructure and to incrementally deliver key functionality. As part of this plan, a phased development and testing approach will be used as per the following seven spirals:

- Spiral 0: Pre-Program Risk Reduction
- Spiral I: Wounded III & Injured
- Spiral 2: Health Readiness

- Spiral 3: Practice Management
- Spiral 4: Ancillary

- Spiral 5: Documentation tools
- Spiral 6: Theater Documentation

Anticipated Outcomes:

- 1. Right Information (comprehensive, integrated, interoperable, intuitive, accurate) (1)
- 2. Right Community (health care team, patients, commanders, VA, nation) (1)
- 3. Right Plan (global presence, theater ops, contingency ops, mobile ops, etc.) (1)
- 4. Right Time (fast, dependable, clinical workflow, highly available, time to market, innovative) (个)

Potential Measures:

- I. EHR User Experience
- 2. AHLTA Speed

Key Milestones and Deliverables:

- Modernize Computing, Communications and Security Infrastructure
- Improve Alignment of Military Health System Clinical Workflow
- Implement Enterprise Service Bus to Enable Seamless Data Sharing
- · Wounded, III and Injured
- Enhance and Modernize Current EHR Back End Infrastructure Using Service Oriented Architecture Principles
- Improved Clinical Decision Support
- Enable Enterprise Patient Portal
- Common EHR Services
- Integration

Alignment to Goals and Objectives

Primary Goal Alignment:

- I. Architecture and Process
- 2. Electronic Health Record

Secondary Goal Alignment:

- 3. Governance
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 7. Maximize Portfolio Value
- 8. Innovative Technologies
- 9. Human Capital Management
- 10. Distributed Development

- 1.2 Establish a robust, coordinated and integrated IT infrastructure
- 2.1 Provide comprehensive, longitudinal electronic health record for all beneficiaries and care settings
- 2.2 Improve speed, both in terms of response time and time it takes to perform user functions
- 2.3 Provide intuitive and easy-to-learn Electronic Health Record
- 2.4 Provide dependence, reliable, available, and secure Electronic Health Record
- 2.5 Enhance customer service and IT support structures

Action Plan: Enterprise Intelligence

Description:

Enterprise Intelligence (EI) encompasses the "best practices, tools/technologies and applications used to organize, access, and analyze information for improving decisions and managing performance to achieve business objectives." The critical success factor for EI is that it drives breakthrough performance of the MHS as described by the MHS Value Measures. This plan will: I) Specify criteria that will enable MHS to focus EI efforts on the decisions that will have the greatest impact on MHS performance; 2) Develop the technical and non-technical infrastructure needed for an effective EI program; 3) Develop the information model needed to provide actionable, high-value, timely, and accurate information to decision makers at the strategic and operational levels; 4) Acquire the enabling technology; and 5) Train and educate end-users.

Anticipated Outcomes:

- I. Improved MHS performance (个)
- 2. Strategic/operational decisions supported by best evidence (个)
- 3. Increased decision maker confidence (个)
- 4. Higher provider satisfaction with knowledge at point-of-care (个)
- 5. Reduced time between "what we know" and "what we practice" (ψ)

Potential Measures:

I. Average Time from Evidence to Common Practice

Key Milestones and Deliverables:

- Attend Knowledge Management Best Practice Conference
- Complete El Opportunity Matrix
- Complete Business Case
- Complete Infrastructure Evaluation
- Complete IM/IT Requirements
- Complete Acquisition Documentation
- Acquire Capability
- Stand-Up Competency Center
- Test Hypotheses

Alignment to Goals and Objectives

Primary Goal Alignment:

4. Enterprise Intelligence

Secondary Goal Alignment:

- L.Architecture and Process
- 2. Electronic Health Record
- 3. Governance
- 5. Personal Health Agenda
- 6. IT Interoperability
- 7. Maximize Portfolio Value

- 4.1 Ensure strategic definition and alignment to enable performance based management and to enhance the quality of decision making
- 4.2 Establish data governance to improve data quality, data consistency, and user confidence
- 4.3 Foster enterprise-wide adoption by developing enterprise intelligence tools that are intuitive and provide users with efficient access to information resources



Action Plan: Governance

Description:

The purpose of this action plan is to define and implement a governance structure that encompasses all IM/IT governance areas identified through the strategic planning off-sites: a) IM/IT portfolio, b) architecture including common services/Service Oriented Architecture (SOA), c) data, d) interoperability, e) distributed development, and f) innovation. Through this action plan, we will determine the key IM/IT decisions that must be made for each governance area, identify appropriate decision-making bodies, develop tailored products to support our decision makers, and establish a process by which those decisions will be executed and managed.

Anticipated Outcomes:

- I. Effectiveness of IM/IT resources (个)
- 2. Increased trust across business and IT; Services and HA/TMA (个)
- 3. Reduced risk (\downarrow)
- 4. Decision-making cycle time (\downarrow)
- 5. Greater transparency of IM/IT resources (个)
- 6. Clearer ownership and accountability (↑)

Potential Measures:

- 1. IM/IT Contribution to MHS Performance (IM/IT Effectiveness)
- 2. MHS Leader/Manager Satisfaction with IM/IT

Key Milestones and Deliverables:

- Complete Governance Accountability Matrix
- · Complete Decision Rights Matrix
- Create Decision Support Products
- · Develop new or updated charters as required by the Decision Rights Matrix
- Determine Performance Measures
- Develop Implementation and Monitoring Plan

Alignment to Goals and Objectives

Primary Goal Alignment:

3. Governance

Secondary Goal Alignment:

- I. Architecture and Process
- 2. Electronic Health Record
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 6. IT Interoperability

- 7. Maximize Portfolio Value
- 8. Innovative Technologies
- Human Capital Management
- 10. Distributed Development

- 3.1 Implement a new IM/IT governance structure for unified portfolio management
- 3.2 Formalize the IM/IT governance process
- 3.3 Establish standard and consistent governance products that support the needs of decision makers
- 3.4 Integrate IM/IT acquisition and governance process

Action Plan: Human Capital

Description:

MHS IM/IT customers receive value through a number of internal processes. These internal processes require specific skills and competencies spanning IM and IT, HA,TMA, Services and the Joint Staff. The purpose of this plan is to acquire and nurture the human capital needed to support the goals of the IM/IT strategic plan, and to establish the structures and processes necessary to foster ongoing IM/IT human capital alignment.

Anticipated Outcomes:

- I. Increased IM/IT human capital readiness (个)
- 2. More talented labor pool resulting in better execution of IM/IT initiatives (1)
- 3. Higher customer satisfaction (个)
- 4. Decreased reliance on contractor support when appropriate (\downarrow)
- 5. Smoother transition during successions
- 6. Higher % of employees who have the requisite technical competencies (个)
- 7. Lower % of turnover among high performing employees (ψ)
- 8. Lower % of open job requisition in strategic job families (ψ)

Potential Measures:

I. Human Capital Readiness

Key Milestones and Deliverables:

- Human Capital Readiness Report: Supported by identification of strategic job families, definitions of competency profile, and gap analysis
- IM/IT Staffing Plan: Supported by Human Capital Readiness Report; will outline initiatives to close competency gaps
- · Human Capital Development Program: Career paths and development programs created to attract top talent
- · Recruiting: Plan developed to support top talent in the strategic job families; promotion of human capital development efforts

Alignment to Goals and Objectives

Primary Goal Alignment:

9. Human Capital Management

Secondary Goal Alignment:

- 2. Electronic Health Record
- 7. Maximize Portfolio Value

- 9.1 Increase MHS IM/IT Human Capital Readiness
- 9.2 Develop attractive career paths and succession plans to retain required IM/IT talent
- 9.3 Develop and maintain a high quality IM/IT workforce
- 9.4 Enhance IM/IT recruiting process



Action Plan: Infrastructure and Technical Architecture

Description:

TBD

Anticipated Outcomes:

TBD

Potential Measures:

TBD

Key Milestones and Deliverables:

TBD

Alignment to Goals and Objectives

Primary Goal Alignment:

I. Architecture and Processes

Secondary Goal Alignment:

- 2. Electronic Health Record
- 3. Governance
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 6. IT Interoperability
- 7. Maximize Portfolio Value
- 8. Innovative Technologies
- 10. Distributed Development

- 1.1 Develop and maintain an architecture that translates MHS vision and strategy into people, process, and technology solutions
- 1.2 Establish a robust, coordinated and integrated IT infrastructure
- 1.3 Establish enterprise architecture governance
- 1.4 Establish enterprise architecture policy and procedures

Action Plan: Innovation

Description:

In the MHS, much of the innovation originates in the decentralized components of the organization and much of the benefits accrue to these decentralized components. It has historically proven difficult to efficiently and cost effectively leverage decentralized innovation for the timely benefit of the entire MHS. This action plan will address resolutions to these challenges and will result in a transformed process where innovation is the result of enterprise-wide collaborative planning where central program adoption is a seamless, anticipated, much less disruptive and more continuous set of activities.

Anticipated Outcomes:

- 1. Fast (\uparrow) and low cost (\downarrow) solution delivery
- 2. Innovation adoption (个)
- 3. MHS wide collaboration (个)

Potential Measures:

1. Number of Capabilities Developed from Innovation

Key Milestones and Deliverables:

- · Approval and resourcing of this plan
- Establish and charter a unified MHS Innovation Management Governance Process
- · Charter an organization with clear authority and responsibility for coordination of MHS innovation
- Develop and implement metrics to measure innovation management progress
- Establish an Innovation Lifecycle Management process
- · Establish a funding mechanism for innovation
- · Develop and implement policy necessary to establish and execute the Innovation Lifecycle Management Process
- Select, acquire and implement an automated tool to support transparency of and collaboration on MHS innovation activities

Alignment to Goals and Objectives

Primary Goal Alignment:

8. Innovative Technologies

Secondary Goal Alignment:

- 2. Electronic Health Record
- 3. Governance
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 6. IT Interoperability
- 7. Maximize Portfolio Value
- 8. Innovative Technologies
- 10. Distributed Development

- 8.1 Establish an Innovation Lifecycle Management process that aligns IT innovation with MHS strategy and converts innovations into practice
- 8.2 Establish the policy, organization, structure, process, funding mechanisms, and metrics for Innovation Lifecycle Management



Action Plan: IT Interoperability

Description:

To achieve interoperability, MHS must agree on the definition and all the components of interoperability. This action plan will determine the MHS interoperability future vision, define its way ahead towards that vision and develop an implementation plan. The MHS interoperability future vision includes determining our business partners (i.e., NHIN), defining data domains, data dictionary and reaching an agreement on the level of semantics for internal/external interoperability.

Anticipated Outcomes:

- I. Successful and seamless information exchange (个)
- 2. Incremental levels of interoperability (个)
- 3. Documented architecture and processes for architecture reviews (1)
- 4. Structured process for identifying intra and inter Department evolving requirements and changes in business processes that must be accommodated for interoperability (个)
- 5. Established accountable entities to ensure continuous focus on interoperability (个)

Potential Measures:

I. Essential Health Information Shared with Health Partners

Key Milestones and Deliverables:

- Ensure that interoperability is identified within the charters for MHS Governance Bodies as a specific and important set of criteria that impact and drive governance decisions
- Develop briefing and training materials that explain interoperability from a MHS perspective
- · Identify and document the interoperability requirements for each class of MHS business partner
- Fully integrate, document, review and approve a single MHS architectural approach which includes the Enterprise Architecture infrastructure and the NHIN interoperability architecture
- Review the formats of the various MHS architectural artifacts and modify as necessary to ensure that business process and information systems will be have appropriate levels of interoperability
- Develop and implement a strategy for MHS participation in standards development efforts Expose the harmonized and aligned MHS business processes clinical decision support
- · Identify, approve, fund, staff and fully implement requisite organizational structures and processes
- Support MHS data strategy with content specific to interoperability

Alignment to Goals and Objectives

Primary Goal Alignment:

6. IT Interoperability

Secondary Goal Alignment:

- I.Architecture and Process
- 2. Electronic Health Record
- 3. Governance
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 9. Human Capital Management
- 10. Distributed Development

- 6.1 Partner with VA to develop a Virtual Lifetime Electronic Record (VLER) and to enable integration of Joint Federal Health Care Centers
- 6.2 Establish interoperability with private sector healthcare organizations and other business partners
- 6.3 Establish interoperable data and information structures
- 6.4 Define and develop data translation services and system adaptors

Action Plan: Maximize Portfolio Value

Description:

This action plan outlines the process to create the structures, policies and business practices necessary to improve the transparency and value of the IM/IT portfolio. Success will require processes conducted at multiple levels of the enterprise including enterprise architecture, capability requirements, reporting processes, portfolio management tools as well as governance level decision making and strategies. This action plan will result in improved understanding of true capability costs and benefits, reduced duplication of IM/IT investments and enhanced realization of value across MHS IM/IT investments.

Anticipated Outcomes:

- I. Increase in documented value realized from IM/IT investments (个)
- 2. Decrease in cost overruns for capability implementation (Ψ)
- 3. Decrease in average time for approved portfolio requirements to become viable capabilities for our customers and stakeholder (funded capability to OT&E) (ψ)
- 4. Decrease in average duration of governance portfolio review and approval (ψ)
- 5. Demonstrated alignment with IM/IT guiding principles and strategic goals
- 6. Demonstrated process maturity, documentation and transparency of decisions

Potential Measures:

1.% MHS IM/IT Funding Visible

Key Milestones and Deliverables:

- Develop Portfolio Management Process and Tool Analysis
- Refine Requirements Management Process
- IM/IT Portfolio Inventory
- Incorporation of Innovation and Research
- Develop Value-Based Decision Framework
- Define accountability for Ongoing Quality Control
- · Implement Training and Execution

Alignment to Goals and Objectives

Primary Goal Alignment:

7. Maximize Portfolio Value

Secondary Goal Alignment:

- I. Architecture and Process
- 2. Electronic Health Record
- 3. Governance
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 6. IT Interoperability
- 8. Innovative Technologies
- 10. Distributed Development

- 7.1 Ensure visibility and transparency into the entire MHS IM/IT Portfolio
- 7.2 Cost estimating integrity
- 7.3 Establish a value-oriented portfolio process



Action Plan: Personal Health Agenda

Description:

While there have been many lessons learned from various efforts on PHR, there is no single enterprise strategy for a patient portal solution for the MHS. The purpose of this action plan is to design and implement the MHS patient portal strategy. This includes whether the patient portal solution will be tightly or loosely linked to EHR; what features will be included; the acquisition strategy (COTS/GOTS/Custom); and associated policy decisions.

Anticipated Outcomes:

- I. Improved decisions at point of care (个)
- 2. Improved access to care (个)
- 3. Improved patient satisfaction (个)
- 4. Increased patient awareness of their health, treatment options and overall health knowledge (个)
- 5. Support for MHS patient centered strategy (e.g., medical home concept)

Potential Measures:

I. Patient Adoption of Online Services

Key Milestones and Deliverables:

- Develop MHS Patient Portal AoA
- Develop Patient Portal IRD Initiative
- Create MHS Patient Portal Implementation Plan
- Determine Patient Portal Policy
- Develop MHS Patient Portal Future Vision

Alignment to Goals and Objectives

Primary Goal Alignment:

5. Personal Health Agenda

Secondary Goal Alignment:

- I. Architecture and Process
- 2. Electronic Health Record
- 3. Governance
- 4. Enterprise Intelligence
- 6. IT Interoperability
- 7. Maximize Portfolio Value
- 8. Innovative Technologies
- 10. Distributed Development

- 5.1 Implement a comprehensive, MHS wide patient portal and personal health record
- 5.2 Provide beneficiaries with tools to conduct online transactions
- 5.3 Provide beneficiaries access to trusted health information
- 5.4 Provide beneficiaries with access to patient/provider messaging and self-administered diagnostic tools
- 5.5 Implement processes and technologies that allow easy beneficiary authentication

Action Plan: Requirements and Business Architecture

Description:

The purpose of this action plan is twofold. The first is to develop business architecture and requirements for strategic priorities such as EHR way ahead, VLER, PCMH, etc. The second is to improve the current architecture requirement management processes. This includes making modifications to accommodate common services, distributed development, and joint DoD-VA initiatives.

Anticipated Outcomes:

- I. End-user satisfaction (个)
- 2. IM/IT alignment (个)
- 3.Throughput (个)
- 4. Enterprise wide visibility into requirements (个)
- 5. Duplication of efforts (\downarrow)

Potential Measures:

- 1. Number of Days from Approved Concept to Full Operating Capability (FOC)
- 2. MHS Information Systems User Experience

Key Milestones and Deliverables:

- As strategic priorities are approved by the appropriate governance body, requirements and business architecture will be developed for such initiatives. Examples in the near-term for FY2010 include:
 - Electronic Health Record (EHR)
 - Patient-centered medical home
 - -Virtual lifetime electronic record (VLER)
 - Enterprise Intelligence

- Develop approach for "Common Services" requirements
- Support Requirements Management & Traceability Policy
- Develop Decision Rights Matrix
- Update Requirements Definition Process Documentation
- Develop MHS IM/IT Transition Plan
- Determine Data Management Strategy
- Develop Information Management Repository

Alignment to Goals and Objectives

Primary Goal Alignment:

I. Architecture and Processes

Secondary Goal Alignment:

- 2. Electronic Health Record
- 3. Governance
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 6. Interoperability
- 7. Maximize Portfolio Value
- 8. Innovative Technologies

- I.I. Establish a robust, coordinated and integrated IT infrastructure
- 1.4 Establish enterprise architecture policy and procedures
- 1.5 Refine requirements management process to improve product quality and time-to-market



Action Plan: Streamline IM/IT Lifecycle

Description:

The scope of this action plan encompasses the entire IM/IT lifecycle, beginning with the identification and validation of user needs and ending with the disposal of the system. During this study, a value stream analysis will be performed to document the MHS IM/IT lifecycle, leading to the discovery of waste, identification of activities that do not produce commensurate value, and the design of a future state IM/IT process.

Anticipated Outcomes:

- I. Improved cycle time (个)
- 2. Increased value of delivered products (个)
- 3. Increased customer satisfaction (个)
- 4. Standardized and understandable 'to-be' processes (个)
- 5. Improved transparency and traceability (个)
- 6. Increased flexibility and interoperability (↑)

- 7. Increased quality (个)
- 8. Reduced redundancies and rework (↓)
- 9. Reduced human dependencies through process automation ($\sqrt{}$)
- 10. Improved communications (个)
- 11. Established Measurement System
- 12. Established Repeatable and Reproducible Process

Potential Measures:

1. Number of Days from Approved Concept to Full Operating Capability (FOC)

Key Milestones and Deliverables:

- Completed End-to-end Value Stream Mapping (As-Is) of the entire IM/IT Lifecycle process
- Completed value streams for each organizational sub-process
- Completed Waste Analysis of each VSM sub-process
- ID current improvement efforts
- Completed selection and prioritization of improvement opportunities
- · Completed integration of current improvement efforts into the selection and prioritization of improvement opportunities
- Complete development of Implementation Plan of Improvements
- · Complete execution of planned improvements

Alignment to Goals and Objectives

Primary Goal Alignment:

I. Architecture and Processes

Secondary Goal Alignment:

- 2. Electronic Health Record
- 3. Governance
- 4. Enterprise Intelligence
- 5. Personal Health Agenda
- 6. IT Interoperability
- 8. Innovative Technologies
- 10. Distributed Development

Primary Objective Alignment:

I.I Develop and maintain an architecture that translates MHS vision and strategy into people, process, and technology solutions







