Information at the Point of Performance
The Hanford environmental cleanup mission is steadily reducing the active site footprint. Over the next few years the majority of the site work will be concentrated in the Central Plateau and Richland areas as the Tank Farms and Waste Treatment and Immobilization Plant (WTP) projects ramp up to produce vitrified waste. As a result, the site population, excluding PNNL, is forecasted to decline between 2012 - 2020. In parallel, the federal government has defined a “25 Point Implementation Plan to Reform Federal Information Technology (IT) Management” to achieve operational efficiency and improved management of Information Management (IM) programs. IM business models must adapt to support these transformations and support the Long-Term Stewardship (LTS) requirements associated with managing Hanford’s legacy.

Over the next 10 years, IM will focus technology infrastructure transformations in the Central Plateau and Richland areas, while ensuring full site access, supporting fixed and mobile computing. This will ensure that technologies, solutions, and innovations are aligned and right-sized with the projects’ missions to enable them to execute work safer, faster, and cheaper. To accomplish this, IM will reduce the cost of maintaining basic services, allowing a shift in investments toward initiatives that enable projects to increase work performance effectiveness and efficiency. This transformation strategy will take place in two key areas:

- **Goal 1: Increase IM Value to Projects**
  IM effectiveness occurs when investment decisions are aligned with the U.S. Department of Energy (DOE), the Mission Support Alliance, LLC, and site cleanup contractors’ planning and execution processes. IM will increase value to projects by working together to understand each other’s issues, optimize business processes, and create best-in-class solutions that improve project performance.

- **Goal 2: Decrease Information Delivery and Maintenance Cost**
  IM will converge, upgrade, replace, or remove legacy systems and infrastructure that no longer provide value. We will invest in technologies and systems that improve project execution and develop solutions that reduce the cost to deliver and maintain information. MSA will explore partnerships with others to find ways to spread investment costs over a wide base by leveraging emerging technologies to obtain and deliver IM solutions within and beyond Hanford borders.

Transformative technologies that change how IM provides, delivers, and controls the cost of services include leveraging community cloud computing and application services; cross agency shared solutions; thin client workstations; innovative mobile wireless computing; collaboration; and electronic workflows. In turn, these innovations in IM services also enable transformation in how projects meet their mission objectives. Delivery of these services will be streamlined, leveraging self-service channels and providing more agile, scalable, and timely service delivery.

Improving information management is achieved by finding innovative ways to capture, develop, process, and deliver information to or from the point of performance. This plan outlines the strategies and goals to achieve this end.

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**Executive Summary**

Everything we do here should advance the efficient, effective, and safe cleanup of the Hanford site.

– Ben Ellison, DOE-RL/ORP CIO

We should never forget why we are here. We must partner with our customers and strive to supply a product that helps make them successful. When we do that, we bring value. To that end, we are committed to finding innovative solutions, products, and support to the Hanford missions.

– Terry Wentz, MSA VP Information Management
Executive Summary

Vision
Be an essential partner to the Hanford project missions; be recognized by DOE as a “Center of Excellence;” and be a model for the complex.

Mission
Make the projects safer, more efficient, and effective by providing innovative ways to capture, manage, and deliver information to and from the point of performance.

Objective
Reduce the cost of maintaining basic IT services and increase IT investments over the next 10 years that enable projects to transform the effectiveness and efficiency of their work performance.

The information needed and generated to successfully execute the cleanup mission is significant. Becoming strategic business partners with our customers and providing “best-in-class” information management services and technologies to meet their goals and objectives are the foundation for everything we do. It is critical that we are nimble, agile, and responsive in meeting their needs in performing the mission here at Hanford.

– Ron Nelson, CHPRC CIO

My goal is to focus on technologies and innovations that allow our projects to accelerate the cleanup missions. I want to be able to support the mobile worker by providing them access to information at their fingertips so they can make informed and timely decisions.

– Joe Vacca, WRPS CIO

Year to Date Savings/Reductions $8.4M
(Reflects Site wide services. Excludes fixed unit rates & reliability projects)
Goal 1: Increase IT Value to Projects

Developing IT solutions that don’t align to project requirements is the same as inventing something in hopes the customer will eventually need it. Both scenarios have the same outcome—no customers.

How information is delivered and managed can have far reaching impacts on business efficiency. Just look at the past when Internet and electronic mail services were introduced, and consider the impact they have had on how we conduct business today. Technology such as cloud computing, mobile access, collaboration, and automated workflows require a rethinking of how information will be delivered and managed in the future. Over the next five years, MSA will be working with the projects to ensure both existing and new IT brings value to the projects.

Increasing IT value is finding innovative solutions to enhance and optimize information management. “Enhance and optimize” is not just finding new and creative ways to deliver information, it is finding solutions to ensure that ideas, tribal knowledge, and collaborative efforts are created, captured, modified, processed, and stored into consolidated and indexed information suites. IT optimization will increase IM’s contributions to the success of the Hanford cleanup mission.

IM will continually adjust the Hanford IT roadmap so it is aligned to the projects’ cleanup missions. This will
require working closely with the projects to assess and modify the current IT portfolio with enabling technologies for achieving IT alignment on a proactive basis.

Project executives will have a clear understanding of how emerging technology, solutions, and trends will improve their performance. MSA IT organizations will have defined expectations of how they are to contribute to reaching the business goals and objectives. This includes leveraging corporate reach-back abilities of its parent companies, vendor and service provider partnerships, and other DOE sites to find innovative ways for maximizing IT investments.

Correct, timely, and easily accessible information will result in measurable project execution successes and significantly improve the project’s bottom line.

**Strategies**
- IM investments fully aligned with site mission;
- Increase project efficiencies with innovative IM solutions; and
- IM viewed as a strategic partner to projects and a center of excellence by DOE.

*See pages 10 and 11 for more details*
Goal 2: Decrease Information/Delivery Maintenance Costs

Ideas, innovation, inventions, ingenuity, resourcefulness, and performance do not come from machines, they come from people.

Lowering information delivery and maintenance costs means finding better ways to capture, develop, process, and deliver information to or from the point of performance more cost effectively. The MSA team of IT professionals, vendors, and service providers collectively have the skills, and the leadership to reduce IT delivery and maintenance costs without impacting the project's ability to execute work safely, efficiently, and effectively.

MSA will strengthen its partnerships with the projects by working with them to understand and ensure the existing IT portfolio is aligned and providing value. Future IT investments will be directed to fix, replace, or retire underperforming IT systems and services.

Over the next five years, IM will focus technology infrastructure transformations on the Central Plateau and Richland areas while ensuring full site access through the use of fixed and mobile computing.

Part of the transformation will explore partnerships with other parts of DOE, other federal agencies, and the private sector that will lower the investment costs of information delivery and maintenance.

Leveraging community cloud computing and application services, cross agency shared solutions, thin and zero
Strategies

- Reduce the Site IT physical footprint;
- Better utilize DOE IT assets and services across the complex; and
- Use more cost-effective service delivery and cost recovery models.

See pages 10 and 11 for more details

Cloud computing creates an Infrastructure-as-a-Service (IaaS) and Software-as-a-Service (SaaS) environment that eliminates duplicate IT investments and leverages economy-of-scale pricing. Creating a cloud environment and IaaS/SaaS cost recovery models will allow projects to use a common infrastructure scaled to their requirements, yet still maintain autonomy for business sensitive information. It is a pay-by-the-drink approach for provisioning IT resources that requires a lower upfront investment by the user, yet is scalable should demand increase or decrease.

MSA will develop a Hanford Federal Cloud computing environment that allows both infrastructure and applications to be built once and used by many. MSA also will leverage other IT investments across the DOE complex to provide best value to the projects.
2010 – 2015 Hanford Mission Milestones

River Corridor
- Complete waste site remediation per interim records of decision for 100 Area and 300 Area
- Obtain records of decision
- Commence site remediation per records of decision
- Complete surplus facility removal in 100 and 300 Areas
- Complete installation of final groundwater remedies in all areas
- Complete transition of eight surplus production reactors to interim safe storage configuration
- Remove sludge from K West Basin
- Complete transition of Fast Flux Test Facility to surveillance and maintenance

Central Plateau
- Complete removal of Plutonium Finishing Plant complex
- Complete construction and begin operation of 200 West Area groundwater treatment system
- Implement groundwater remedies for 200 West Area
- Initiate cleanup of Outer Area
- Continue retrieval, packaging, and offsite shipment of retrievable-stored transuranic materials
- Complete decision documentation for Inner Area, Outer Area and groundwater

Tank Waste
- Continue construction of Waste Treatment Plant (WTP)
- Complete waste retrieval from C-Farm tanks
- Maintain and upgrade Tank Farm infrastructure
- Develop waste feed delivery infrastructure
- Mitigate impacts from past tank leaks

IT Supporting Mission
- Converge voice and data networks
- Expand wireless to support remote and mobile workforce
- Reduce IT facilities from 29 dedicated buildings to 11
- Reduce IT power consumption by ~800 kilowatts per year
- Establish a new certified records storage facility
- Reduce the number of redundant applications
- Complete the consolidation of 11 data centers to 2
- Develop and deploy thin client standard
- Establish a Hanford Federal Cloud (HFC)
- Reduce the footprint in cultural sensitive area
- Upgrade document management & training systems
- Upgrade network, heating, ventilation, and air conditioning (HVAC), and land mobile radio
- Right-size IT infrastructure in support of LTS
River Corridor
- Transition areas for which cleanup has been completed to LTS
- Maintain reactors in interim safe storage condition
- Continue surveillance and maintenance of Fast Flux Test Facility
- Demolish K West Basin
- Achieve groundwater and aquatic protection standards for all areas where practicable

Central Plateau
- Complete remediation of Outer Area waste sites
- Complete demolition of U Plant canyon and cleanup of first Inner Area geographic zone
- Start cleanup of additional Inner Area zones
- Operate and maintain groundwater remediation systems
- Initiate implementation of remedies for deep vadose zone contamination
- Start construction and operation of solid waste treatment capability

Tank Waste
- Complete WTP construction
- Complete WTP startup and commissioning
- Close C-Tank Farm; demonstrate closure methods and approaches for future single shell tank farms
- Implement waste feed delivery systems and tank infrastructure to support WTP operation
- Initiate supplemental low-activity waste treatment

IT Supporting Mission
- IT support of cleanup efforts, tank farm operations, WTP transition to production (IT infrastructure, applications, and records) and LTS
- Key support areas:
  - Infrastructure: physical & wireless networks, radios, telecommunications, emergency preparedness, and weather station systems and services
  - Unclassified Cyber: viruses, threats, vulnerabilities, and compliance support services
  - Information Systems: align, operate, develop, enhance, modernize, and right-size systems, databases and applications
  - Records Management: physical and electronic storage and retrieval systems and services with integrated electronic records workflow support
  - Information Support Services: correspondence, forms, geospatial, mapping, and media systems and services
# Strategic Goal 1

## Increase IT Value to Projects

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Objective</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM Investments Fully Aligned with Site Mission</td>
<td>Develop and implement an MSA IM portfolio &amp; investment alignment strategy to include LTS support</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<td></td>
<td>Build a OCRWM* and NQA-1 compliant records storage facility</td>
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<td>Modernize legacy applications required to support mission, and retire those no longer needed</td>
<td>✔️</td>
<td>✔️</td>
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<td>Demonstrate an optimum balance of cyber security &amp; business requirements</td>
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<td></td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Increase Project Efficiencies with Innovative IM Solutions</td>
<td>Improve site knowledge management with development, modernization or enhancements of search engines, collaboration and electronic record capabilities</td>
<td>✔️</td>
<td>✔️</td>
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<td>Enhance information reporting with application integration capabilities, portals, and dashboards</td>
<td>✔️</td>
<td>✔️</td>
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<td></td>
<td>Improve data accessibility and collaboration across Hanford Site network boundaries and to stakeholders</td>
<td>✔️</td>
<td>✔️</td>
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<td></td>
<td>Implement automated forms and digital signature processes workflows</td>
<td>✔️</td>
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<td>Establish a multi-media library as the common repository for accessing site wide media assets</td>
<td>✔️</td>
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<tr>
<td></td>
<td>Establish a geospatial clearinghouse environment for the storage and distribution of site geospatial data</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
<td>✔️</td>
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<td></td>
<td>Demonstrate Green IT through assessments, independent ratings and awards</td>
<td>✔️</td>
<td></td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>IM Viewed as Strategic Partner to Projects &amp; Center of Excellence by DOE</td>
<td>Foster cross-contractor and DOE complex relationships</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td></td>
<td>Demonstrate corporate reach-back capabilities</td>
<td>✔️</td>
<td>✔️</td>
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<td>✔️</td>
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<td></td>
<td>Demonstrate a project mission-focused culture through integrated project teams and planning processes</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td></td>
<td>Develop a “Records Readiness for Transition of Information Plan” to include support of Long-Term Stewardship</td>
<td>✔️</td>
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<td></td>
<td>Promote innovations and empower individuals to challenge status quo</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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<tr>
<td></td>
<td>Demonstrate development or acquiring of professionals with the skills required for mission success.</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
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</tbody>
</table>

*Office of Civilian Radioactive Waste Management*
## Decrease Information Delivery & Maintenance Cost

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Objective</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce the Site IT Physical Footprint</strong></td>
<td>Pilot and establish Hanford Federal Cloud to provide IT Infrastructure-as-a-Service (IaaS) across the site</td>
<td>✓</td>
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<tr>
<td></td>
<td>Evaluate eliminating IT presence on Gable Mountain</td>
<td></td>
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<td>✓</td>
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<tr>
<td></td>
<td>Converge Network, Telephone, Mobile, and Telecommunication (Special Circuits) Infrastructures</td>
<td>✓</td>
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<tr>
<td></td>
<td>Reduce the generation &amp; storage of paper records by increasing electronically-stored records</td>
<td></td>
<td>✓</td>
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<tr>
<td></td>
<td>Reduce site printing and duplicating costs through new convenience copier contract and implement Printer Optimization Plan</td>
<td></td>
<td>✓</td>
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<tr>
<td></td>
<td>Repurpose or eliminate dedicated telecommunication facilities.</td>
<td></td>
<td>✓</td>
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</tr>
<tr>
<td><strong>Better Utilize DOE IT Assets and Services Across the Complex</strong></td>
<td>Centralized common management of DOE Site IT assets, standards, and unclassified cyber security</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provide Infrastructure-as-a-Service (IaaS) to other DOE Sites and Federal Agencies</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demonstrate increase in Hanford sharing and using IT assets across the DOE complex</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demonstrate reduction in the site IT application portfolio across projects</td>
<td>✓</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td><strong>Use More Cost Effective Service Delivery and Cost Recovery Models</strong></td>
<td>Align site IT costs and rates to comparable industry or market rates</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop and execute a thin client desktop strategy and rate structure</td>
<td>✓</td>
<td>✓</td>
<td></td>
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<tr>
<td></td>
<td>Establish Software-as-a-Service (SaaS) usage-based rate model</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establish Infrastructure-as-a-Service (IaaS) usage-based rate model</td>
<td>✓</td>
<td></td>
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<tr>
<td></td>
<td>Identify and implement a better cost distribution model for emergency services assets</td>
<td></td>
<td>✓</td>
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<tr>
<td></td>
<td>Develop and implement a records management usage-based cost recovery model</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

✓ Completed project, phase or milestone for identified objective
✓ Planned ➾ “Best Effort” with FY12 funding constraints

1 Also supports Strategic Goal 1: Increase IT Value to Projects
2 Also supports Strategic Goal 2: Decrease Information Delivery and Maintenance Cost

The execution of these strategies will result in increased mission efficiencies. MSA will work with DOE and site contractors to ensure that the tactical plans for the major functions within Information Management are available throughout each fiscal year and updated periodically to align with funding levels and site mission milestones.
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Information at the Point of Performance