



Contents

Strategic Plan Introduction	1
Vision	2
Mission	2
Core Values	3
Customer Satisfaction.....	3
People	3
Recognition	4
Responsibility.....	4
Milestones	5
Business Map	6
Business Goals	8
Nuclear Material Management and Disposition.....	9
High-Level Waste.....	10
Tritium.....	11
Environmental Restoration.....	12
Solid Waste.....	13
Non-Proliferation Technology and National Security.....	14
New Missions	15
Technology Engine.....	16
Critical Success Factors	17
Workforce.....	18
Infrastructure	19
Management and Conduct of Business	20



Customers and Stakeholders	21
Long-Term R&D and Technology Planning	22
SRTC Path Forward	23
Appendix A Business Map Perspective	23
Core Technologies.....	24
Enabling Technologies	26



STRATEGIC PLAN INTRODUCTION

SRTC continues to capitalize on a broad range of opportunities to make major contributions both to the leadership of new Site missions and the delivery of solutions to ongoing operational problems. Independent of changes that may occur with our parent corporation, we have a strong future that is intimately linked to SRS as well as driven by our continuing success in performing “work for others.” The development of this plan also reflects the partnering we have fostered with our major operations customers and DOE-SR. This was truly a joint effort built upon a mutual understanding of SRTC’s direction and objectives.

As the Site adjusts to ongoing budget constraints that force readjustment of priorities in continuing and developing missions, SRTC must also assimilate these changes and work to maintain core competency through funding diversification and teaming. We must focus on cost-effectiveness and cost-reduction, both through reengineering our own business and implementing technology in the operating divisions. We must earn the reputation for being the most technically innovative and cost-effective laboratory in the DOE Complex. At the same time, we must maintain a strategic focus and be the best in the conduct of research.

Our people will continue to be recognized for their individual and team contributions. Their creativity and innovation must be nurtured. It is essential that we maintain a safe working environment that enables their success. SRTC’s increased visibility and reputation are due to the successes of its excellent workforce. We need everyone’s continuing dedication to meet the aggressive goals of our Strategic Plan and ensure success at SRS.

Susan Wood



VISION

To be recognized as a world class center of excellence for the application of science and technology solutions vital to our customers' success.

MISSION

Lead in the development of unique, integrated science and technology solutions and opportunities that maximize value and enable the current and future success of our customers.



CORE VALUES

We reexamined our core values for this version of the Strategic Plan and determined that most remain unchanged from the previous plan. We added statements that affirm our commitment to the health and safety of each individual and to the environment. The training and development programs in shared leadership skills, principles, and paradigms outlined in last year's plan continue to be offered to SRTC managers and other key personnel to better equip them to model our core values and to nurture them in others.

CUSTOMER SATISFACTION

We value all of our internal and external customers and continually strive to anticipate their requirements and meet their expectations.

Our leadership culture ensures that each SRTC employee understands and acts upon his/her role in providing products or services recognized by the customer to be of exceptional value and quality.

PEOPLE

We have the highest regard for our people.

Our leadership culture empowers people and expects them to reach their highest potential and make significant contributions to the attainment of the SRTC vision.

We value each individual's personal health and safety.

Our leadership culture reinforces the belief that every accident is preventable and establishes a work environment that protects each individual.

We value each person's right to be treated with dignity, honesty, and respect at all times.

Our leadership culture is based on belief in the inherent worth of each individual. To that end, we establish policies and systems and encourage behavior consistent with this core value.



RECOGNITION

We value the right of our people to be appreciated and recognized for their contributions.

Our leadership culture fosters an environment where frequent, creative, and equitable forms of recognition of teams and individuals are practiced at all levels by the organization.

RESPONSIBILITY

We value the innovative and creative abilities of our people and their sense of ownership and accountability.

Our leadership culture encourages delegating responsibility to the lowest level possible, providing the authority that goes with it, and treating mistakes as valuable learning tools.

We value and respect the environment.

Our leadership culture ensures that we perform all work in a manner that protects the environment.



MILESTONES

SRTC continues to meet its goal of using the previous year's Strategic Plan as a guide for operational planning. We are beginning to see a return on our investment in the strategies defined within that document. Key milestones have been achieved, and we expect to continue to draw upon our strategic planning approach to realize more of our goals.

Key Accomplishments

- ◆ Received discretionary strategic R&D funding for the first time.
- ◆ Augmented control over personnel hiring to maintain core technical capabilities and facilitate rapid response to unexpected customer needs.
- ◆ Continued to play a key role in supporting SRS operations such as DWPF startup and operations, Tritium reservoir programs, and Canyon startup and operations.
- ◆ Provided new mission technologies such as plutonium can-in-canister, automated vault MC&A, and spent fuel technologies.
- ◆ Established productive partnerships with National Laboratories that effectively support new missions programs such as APT and Plutonium Disposition.
- ◆ Developed and successfully deployed *in-situ* remediation technologies that reduce cleanup costs and shorten schedules, such as Geosiphon, Fenton's Chemistry, BaroBall, and Bioremediation.
- ◆ Assured support of core technologies by expanding work for others to 43 percent of SRTC funding.
- ◆ Initiated leadership training program for all managers and key personnel.
- ◆ Increased recognition through R&D 100 Awards, DOE Weapons Complex Awards of Excellence, and the Seaborg Award.
- ◆ Improved support of basic research through significant participation in the Enhanced Surveillance Program.



BUSINESS MAP

The Business Map is a composite of the current and projected SRTC business picture. It shows the areas of focus for our core technologies, the capabilities that enable the expertise of the core technologies, and finally, the key customers who provide our funding. (Funding support is indicated by the shaded boxes on the map.)

We define a core technology as a competency at which SRTC excels—one that is backed up by a depth of knowledge and expertise, is recognized as world-class by our technical peers, and is fundamental to the success of our customers. Our core technologies give us a clear competitive advantage in the subject field, and should be fully maximized at the Site.

The enabling technologies are more specific capabilities that support the broader core technologies. These capabilities provide essential cross-cutting support for several core technology business areas, but don't necessarily have end customers or support unique end-product research. If work in the related core competency business areas ends, the enabling technologies would no longer have any application and would therefore cease to exist.

Our core technologies, enhanced by the enabling technologies, allow us to support our customers with the planning strategies, operational support, and innovative technologies needed to successfully accomplish Site missions.

The concept of reciprocal support between SRTC and its customers, based on the core competencies, is illustrated on page 23, SRTC Path Forward. The key components of the Business Map are further defined in Appendix A.



Current and Target Funding Support by Customer					
	SRS	DOE-HQ Office of Science and Technology (OST)	Other DOE Customers (HQ Programs, GOCOs, National Labs, ALOO)	Federal Agencies	Commercial
Core Technology Business Areas					
Waste Processing	*	*			*
Remote Systems	*	*	*		
Environmental Remediation	*	*	*	*	*
Tritium/Hydrogen	*		*		*
Non-Proliferation Technology and National Security	*		*	*	
Vitrification	*	*	*		*
Instruments and Sensors	*	*	*	*	*
Actinide Processing	*		*		
Aluminum Reactor Fuel	*		*		
Key Enabling Technologies					
Analytical Chemistry	*	*		*	
Computation, Modeling, and Statistics	*	*			
Materials Technologies	*	*	*	*	*
Actual % FY 1997	57%	15%	22%	3%	3%
Budget % FY 2000	34%	9%	39%	10%	8%



BUSINESS GOALS

The SRTC business goals and strategies are aligned with and support those in the SRS strategic plan. They reflect the unique contributions we will make to help SRS fulfill its missions. Strategies from the previous plan were modified and new ones added to reflect progress and new opportunities.

A careful analysis revealed that several key strategies apply to virtually every goal:

- Through the SRTC Customer Offices, develop Technology Implementation Plans for all Site customers with an emphasis on long-term programs to ensure the viability of Site missions.
- Develop partnering agreements with other labs that result in scope documents. These documents will provide clear work definitions for the future.
- Maintain positive working relationships with key technology decision makers to ensure that SRS capabilities are recognized and maximized.

Implementing these strategies, and those listed with each goal below, is critical to the current and future success of the SRS mission.



NUCLEAR MATERIAL MANAGEMENT AND DISPOSITION

Become a center for nuclear material management and disposition well into the next century.

STRATEGIES

- ◆ Develop effective partnering agreements with LLNL.
- ◆ Participate with OST to provide key input as they develop plans for the future.
- ◆ Proactively support Defense Nuclear Facility Safety Board recommendations, including:
 - Actinide Packaging and Storage Facility
 - Americium-Curium stabilization project
 - Processing of Rocky Flats plutonium residue
- ◆ Supply technology that supports the long-term nuclear material stabilization and immobilization programs, such as plutonium vitrification can-in-canister.
- ◆ Provide technical support for selection of aluminum-based spent nuclear fuel disposition technology.

MEASURES

- ◆ Complete a comprehensive, high-impact process-improvement Technology Implementation Plan.
- ◆ Meet technology milestones to prepare SRS for new materials disposition missions.
- ◆ Complete selection process for aluminum-based spent nuclear fuel disposition technology.



HIGH-LEVEL WASTE

Ensure the success of HLW missions.

STRATEGIES

- ◆ Lead development of new technologies to help the HLW program achieve the following goals:
 - Reach and exceed the design attainment
 - Reduce operating cost
 - Develop second-generation process flowsheets
- ◆ Provide real-time technical support for ITP startup operations and DWPF post-startup operations.
- ◆ In partnership with the Tanks Focus Area, aggressively pursue and demonstrate OST-funded technologies that clearly benefit the HLW mission.
- ◆ Provide the leadership and resources to mature the technology team to solve large, short-term problems encountered by HLW.

MEASURES

- ◆ Meet or exceed Annual Operating Plan (AOP) milestones.
- ◆ Meet or exceed HLW system plan objectives.
- ◆ Increase SRS percentage of available OST support.
- ◆ Decrease life cycle costs through the implementation of new technology.
- ◆ Identify other cost-effective technologies to enhance the DWPF flowsheet.



TRITIUM

Ensure the success of current and future tritium missions.

STRATEGIES

- ◆ Develop partnering agreements with LANL.
- ◆ Anticipate and pursue hydrogen technology developments to ensure the quality, efficiency, and cost effectiveness of current and future tritium missions.
- ◆ Develop the new technical skills necessary to support future missions, such as the International Thermonuclear Experimental Reactor (ITER).
- ◆ Ensure that the Hydrogen Center of Excellence (HyTech) continues to play a key role in the development and deployment of a diverse set of hydrogen technologies.

MEASURES

- ◆ Meet or exceed AOP milestones and budget targets.
- ◆ Meet or exceed project milestones (such as APT, CLWR, TEF, NNR, and RSO).
- ◆ Grow HyTech business by 10 percent.



ENVIRONMENTAL RESTORATION

Enable the success of the Environmental Restoration (ER) Program through application of the Technology Engine.

STRATEGIES

- ◆ Develop, deploy, and optimize innovative environmental technologies that accelerate cleanup and reduce risk and cost.
- ◆ Maintain the high level of customer integration achieved by the ER Technology Panel. Add ER and DOE line organization representatives to the panel.
- ◆ Continue to identify and implement technologies that clearly benefit the ER mission.
- ◆ Partner with the ER Program to achieve the goal of a \$1 billion life-cycle cost reduction for cleanup of SRS. Thirty percent of the goal should result from the application of innovative technologies.

MEASURES

- ◆ Complete a comprehensive, high-impact process-improvement Technology Implementation Plan.
- ◆ Complete and implement a method to determine the benefit derived from technology applications.
- ◆ Measure progress toward reducing the ER baseline cost.



SOLID WASTE

Enable the success of the Solid Waste (SW) Program through application of the Technology Engine.

STRATEGIES

- ◆ Maintain the high level of customer integration achieved by the SW Technology Panel. Ensure that the panel continues to include SRTC, SW, and the DOE line organization representative.
- ◆ Provide real-time technical support for the Solid Waste, CIF, and Saltstone operations.
- ◆ Continue to develop technologies that support the improved processing of current and future waste streams.

MEASURES

- ◆ Complete a comprehensive, high-impact process-improvement Technology Implementation Plan.
- ◆ Complete and implement a method to determine the benefit derived from technology applications.



NON-PROLIFERATION TECHNOLOGY AND NATIONAL SECURITY

Continue to be a national resource for non-proliferation technology and national security.

STRATEGIES

- ◆ Actively support non-proliferation and national security programs to ensure that SRTC continues to play a leadership role in the deployment of new technologies.
- ◆ Work with DOE-SR to support emerging national security needs at SRS.
- ◆ Maintain SRS presence at DOE-HQ and other Federal agencies.

MEASURES

- ◆ Meet or exceed AOP milestones related to non-proliferation technology and national security programs.
- ◆ Measure contributions to non-proliferation technology and national security programs by monitoring funds and number of programs supported.
- ◆ Schedule quarterly program status reviews with DOE-SR.
- ◆ Maintain four SRTC employees on staff at DOE -HQ and other Federal agencies.



NEW MISSIONS

Attract new missions to the Savannah River Site.

STRATEGIES

- ◆ Garner national and international recognition for the technical expertise that resides in SRTC, especially as it relates to new missions.
- ◆ Partner with other labs, universities, and commercial entities to help ensure that new missions can be achieved:
 - Proactively pursue new technology initiatives in support of accelerator production of tritium, spent fuel, and plutonium storage and stabilization missions

MEASURES

- ◆ Measure the dollar value of new SRS missions.
- ◆ Create repeat-customer database.



TECHNOLOGY ENGINE

Continue to enhance SRTC's capability to serve as the Technology Engine for SRS.

STRATEGIES

- ◆ Maintain the vision of SRTC as a center of excellence for cutting-edge science and technologies.
- ◆ Focus on application of the most effective state-of-the-art technologies available to ensure the current and future success of SRS missions.
- ◆ Identify and develop or acquire new technologies that ensure the current and future cost effectiveness of SRS.
- ◆ Develop and implement new safety and environmental technologies to maintain SRS's leadership role as the safest site in the DOE Complex.
- ◆ Ensure that SRTC personnel stay actively involved in technological solutions from development through field deployment.

MEASURES

- ◆ Track the impact of technology deployment on the life cycle costs of the operating divisions at SRS.
- ◆ Complete comprehensive and customer-specific Technology Implementation Plans.
- ◆ Increase strategic R&D funding base to \$3 to \$4 million.



CRITICAL SUCCESS FACTORS

Significant progress has been made on activities identified as critical success factors in earlier versions of the SRTC Strategic Plan. To ensure the long-term viability of our business goals, we must continue to move the following strategies forward. SRTC senior management recognizes the critical importance of the success factors, and teams have been formed to champion their advancement. A crucial factor not previously addressed has been added: the continued need to conduct long-term R&D and technology planning.



WORKFORCE

Attract and retain a highly qualified, motivated, diverse, and flexible workforce that is aligned with SRTC business objectives.

STRATEGIES

- ◆ Provide a safe environment that fosters creativity, innovation, and open communication, and provides growth opportunities to motivate the workforce to achieve world-class performance.
- ◆ Develop and implement a plan to enhance the national and international reputation of the workforce and increase recognition of SRTC's technical accomplishments. This plan will include programs to ensure that the technical staff is given adequate time to present and publish significant technical achievements.
- ◆ Create a staffing process that ensures that SRTC business initiatives are supported by a technically skilled yet diverse workforce.
- ◆ Develop effective partnering relationships with universities and subcontracting organizations to create a mechanism to fulfill short-term staffing needs.
- ◆ Continue to provide formal leadership training for SRTC managers and senior professionals and develop mechanisms to measure progress in the area of leadership effectiveness.
- ◆ Enhance teaming within SRTC as a means to foster workforce diversity, creativity, employee growth, and job satisfaction.
- ◆ Evaluate a program to establish joint appointments with local and regional universities as a means to attract top caliber personnel with natural and international reputations in areas aligned with SRTC business goals and objectives.
- ◆ Ensure maintenance of critical-skill positions. Include specific development programs that focus on rotational assignments and formal mentoring.
- ◆ Maintain a vigorous work-for-others program that supports maintenance of core competencies and is aligned with the Site mission.



INFRASTRUCTURE

Ensure an infrastructure that cost effectively supports the SRTC business enterprise.

STRATEGIES

- ◆ Develop a prioritized, core-competency-aligned plan to address SRTC's long-term building and R&D requirements. Obtain support from senior SRS and DOE management to achieve timely infrastructure improvements.
- ◆ Increase partnering with local and regional universities to develop facilities that support the SRTC business enterprise and university education and research mission.
- ◆ Evaluate opportunities for laboratory consolidation to maximize sharing of infrastructure resources and minimize the cost of their operation.
- ◆ Develop a process for prioritizing the availability of facilities consistent with the strategic priorities of the business enterprise.
- ◆ Enhance the customer and supplier relationship with support organizations to promote shared accountability for SRTC's business goals.
- ◆ Evaluate the use of alternate facilities to support SRTC non-nuclear activities.



MANAGEMENT AND CONDUCT OF BUSINESS

Develop practical methods to manage and conduct the business more flexibly, efficiently, and cost effectively.

STRATEGIES

- ◆ Implement a viable program management system to provide efficient cost and schedule tracking systems that support SRTC's diverse customer base.
- ◆ Establish an action plan for cost improvements.
- ◆ Track action plan results quantitatively with respect to our current baseline and the Site objective to become the recognized leader in the DOE Complex for cost-effective development and deployment of advanced technology solutions.
- ◆ Emphasize intellectual property management in the SRTC technology marketing plan.



CUSTOMERS AND STAKEHOLDERS

Retain and build a broad base of satisfied customers and stakeholders.

STRATEGIES

- ◆ Maintain and enhance the relationship with Site customers.
- ◆ Develop and maintain a DOE-SR and DOE-HQ technology communications strategy and establish strong single-point contacts and advocates at DOE-SR and DOE-HQ levels.
- ◆ Maintain and strengthen a “presence” at DOE-HQ and off-site locations to ensure our technology assets are recognized and used to address national issues and problems.
- ◆ Evaluate the creation and marketing of integrated technology “packages” that provide comprehensive technical and engineering solutions to problems within the DOE Complex.
- ◆ Continue effective technology business planning through the business council.



LONG-TERM R&D AND TECHNOLOGY PLANNING

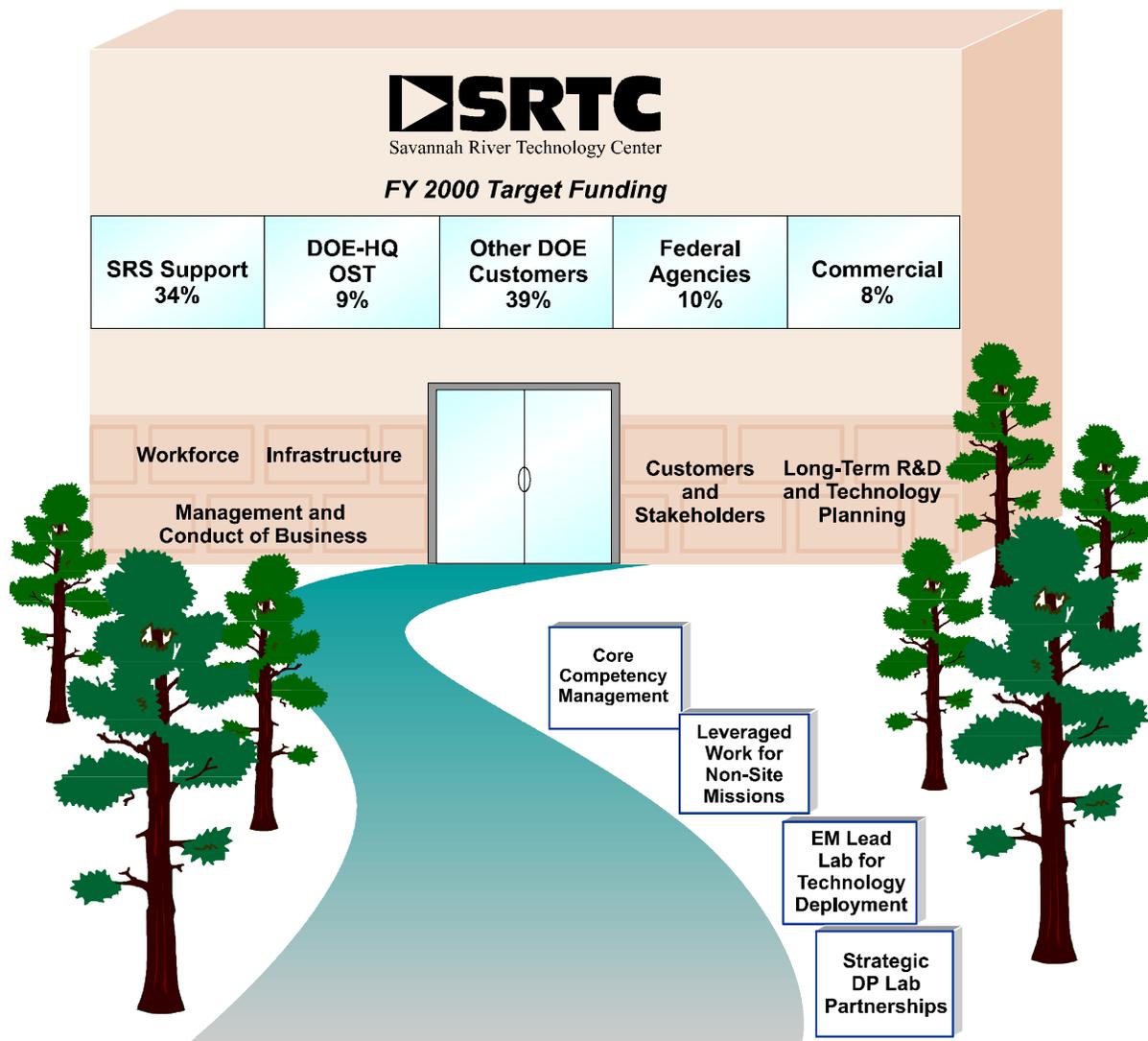
Develop systems and processes that promote long-term technology development to ensure the continued success of our customers and support DOE Complex reconfiguration strategies.

STRATEGIES

- ◆ Increase annual funding base to \$3 to \$4 million for non-task-oriented R&D, and develop systems and measures to track program success.
- ◆ Through the SRTC Customer Offices, establish a shared technical stewardship of the process flowsheets for each Site customer. Emphasize long-term programs to ensure continued viability of Site missions.
- ◆ Enhance the basic research component of the work portfolio through increased participation with Energy Research and Energy Efficiency.

SRTC PATH FORWARD

SRTC believes that implementing the strategies associated with each critical success factor will provide a sound foundation for our current and future business. We have identified as our goals the milestones shown along the path below: partnerships with Defense Programs (DP) and Environmental Management (EM), as well as strategic lab partnerships and leveraged work for non-site missions. Meeting these goals will ensure ongoing improvement in the development and application of unique, integrated science and technology solutions that is key to our success and the success of our customers.





APPENDIX A BUSINESS MAP PERSPECTIVE

The following paragraphs define several key components of the SRTC Business Map.

CORE TECHNOLOGIES

A core technology is a competency at which SRTC excels—one that is backed up by a depth of knowledge and expertise, is recognized as world-class by our technical peers, and is fundamental to the success of our customers. Our core technologies give us a clear competitive advantage in the subject field, and should be fully maximized at the Site. The SRTC core technologies identified in the Business Map, and the special areas of expertise within each field, are listed below:

- Waste Processing
 - Liquid effluent and process treatment
 - Solid waste processing including decontainerization, containment, and encapsulation
 - Modeling and process evaluation
 - Waste packaging design and certification
 - Radioactive material storage technology
- Remote Systems
 - Mobile robots
 - Vision systems
 - Custom remote tooling and sensors
 - Pipe/wall crawlers
 - Special engineered equipment systems
- Environmental Remediation
 - Environmental biotechnology
 - Groundwater remediation systems



- Treatment and stabilization of secondary wastes
- Risk-based ecological remediation
- Field screening and technology demonstrations
- Special sensors
- Tritium/Hydrogen
 - Hydride systems
 - Tritium/hydrogen processing
 - Molecular and process modeling
 - Tritium effects on materials
 - Packaging and transport technology
- Non-Proliferation Technology and National Security
 - Ultra-low-level radiation detection and analysis
 - Ultra-low-level radionuclide analysis
 - Classified programs
 - Environmental monitoring
 - Atmospheric modeling
- Vitrification
 - Custom glass formulation
 - Actinide chemistry and processing
 - Analytical chemistry
 - Off-gas system design
 - Integrated vitrification systems
- Instruments and Sensors
 - Fiber optic spectroscopy
 - High sensitivity analytical instruments and sensors



- High resolution non-destructive imaging using ultrasonic and digital radiography (NDE)
- Coulometry/Calorimetry/Density (NDA)
- Advanced instrument system integration and packaging
- Actinide Processing
- Aluminum Reactor Fuel
 - Corrosion
 - Tritium effects
 - Welding/joining
 - Failure analysis

ENABLING TECHNOLOGIES

The enabling technologies are more specific capabilities that support the broader core technologies. These capabilities provide essential cross-cutting support for several core technology business areas, but don't necessarily have end customers or support unique end-product research. If work in the related core competency business areas ends, the following enabling technologies would no longer have any application and would therefore cease to exist:

- Analytical Chemistry
- Computation, Modeling, and Statistics
- Materials Technologies