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IFSS Regulatory and Laboratory Training Strategic Plan

FDA U.S. FOOD & DRUG ADMINISTRATION

TABLE OF CONTENTS

PURPOSE

A fully integrated food safety system (IFSS) has seamless partnerships and operations among federal, state, local, territorial, and tribal (SLTT) agencies, as well as academic, foreign, industry, and consumer stakeholders ("strategic partners") to achieve the public health mission of a safer human and animal food (HAF) supply. The IFSS encourages interactions and collaborations with strategic partners, as their input and the lessons learned are critical to advancing this mission.

For more information on the IFSS, click here.

The foundation of the IFSS is an integrated workforce composed of federal and SLTT regulatory and laboratory officials. Regulatory and laboratory training is critical to the success of the IFSS integrated workforce. High-quality training enables the IFSS workforce to apply consistent investigatory and laboratory practices and stay abreast of and adopt current regulations and standards. IFSS regulatory and laboratory training further ensures that personnel have the skills and information to ensure a safe and secure HAF food supply. Because of the important role regulatory and laboratory training plays within the IFSS, the FDA and IFSS partners developed a five-year strategic plan to guide those who will operationalize regulatory and laboratory training with a shared vision and clear goals for attaining the vision due to the important role regulatory and laboratory training plays in achieving an IFSS.

The strategy principles below, which serve as the vision for the IFSS regulatory and laboratory training system (IFSS RLTS), are the foundation for the IFSS RLTS strategic plan.

> *The FDA and its partners will design and implement an optimal, sustainable, integrated national regulatory and laboratory training system that has the following principles and will advance domestic mutual reliance and support the goals of an IFSS:*
>
> A. *Built with full collaboration and support of the HAF regulatory and laboratory partners.*
>
> B. *Includes flexible and adaptable learning tools that incorporate advancements in instructional design, adult learning theories, and technology to ensure effective learning and knowledge transfer.*
>
> C. *Ensures course content is kept current and addresses emerging training needs.*
>
> D. *Standardizes job-specific competencies to ensure the consistency of training HAF regulatory and laboratory partners.*
>
> E. *Maximizes training capacity and access to meet the current and forecasted needs of HAF regulatory and laboratory partners.*
>
> F. *Leverages opportunities for HAF regulatory and laboratory partners to share in the responsibility of providing training.*
>
> G. *Ensures long-term sustainment of proficiency and knowledge to ensure effective and consistent application of job-specific competencies across HAF regulatory and laboratory partners.*

The following FDA offices and association partners ("project team") collaborated to develop the IFSS RLTS strategic plan:

- FDA/ORA/Office of Partnerships (OP)
- FDA/ORA/Office of Regulatory Management Operations (ORMO)
- FDA/ORA/ORMO Office of Training, Education, and Development (OTED)
- FDA/ORA/Office of Strategic Planning and Quality Management (OSPQM)
- FDA/ORA/Office of Human and Animal Food Operations-East (OHAFO-E)
- FDA/ORA/Office of Human and Animal Food Operations-West (OHAFO-W)
- FDA/ORA/Office of Human and Animal Food Operations (OHAFO)/Audit Staff
- FDA/ORA/Office of Regulatory Science (ORS)
- FDA/ORA/OHAFO/Office of State Cooperative Programs (OSCP)
- FDA/ORA/Office of Communications and Project Management (OCPM)
- FDA Center for Food Safety and Applied Nutrition (CFSAN)
- FDA Center for Veterinary Medicine (CVM)
- FDA Office of Food Policy and Response (OFPR)
- National Association of State Departments of Agriculture (NASDA)
- Association of Food and Drug Officials (AFDO)
- Association of Animal Feed Control Officials (AAFCO)
- National Association of County and City Health Officials (NACCHO)
- National Environmental Health Association (NEHA)
- Interstate Shellfish Sanitation Conference (ISSC)
- Conference for Food Protection (CFP)
- National Conference on Interstate Milk Shipments (NCIMS)
- Association of Public Health Laboratories (APHL)
- Partnership for Food Protection (PFP)

INTRODUCTION

A crucial element to the success of the overall IFSS is a well-trained workforce; providing the workforce with high-quality regulatory and laboratory training is paramount to food safety across the country. To ensure the development, delivery, evaluation, and support for IFSS regulatory and laboratory training is within the spirit of the IFSS, along with SLTT agencies, laboratories, and strategic partners, have developed the five-year IFSS regulatory and laboratory training system (RLTS) strategic plan "that will create and implement a world-class regulatory training system that leverages, integrates, and standardizes training with FDA's SLTT regulatory partners" (Sanchez-Contreras, 2022).

The strategic plan is composed of high-level goals, objectives, and strategies designed to guide efforts toward training the combined IFSS RLTS workforce to meet the needs of all stakeholders involved.

To support this purpose, the FDA designs, develops, and delivers free training to FDA, other federal and SLTT HAF regulatory partners, including laboratories, associations, institutions of higher education, managers, and leaders across the following program areas: manufactured food, produce, eggs, animal food, state cooperative programs (including retail, Grade "A" milk, shellfish), and laboratory science. The strategic plan aims to improve and positively impact HAF regulatory and laboratory training and the learner's experience with it.

A collaborative team of HAF regulatory officials and strategic partners across the United States designed this strategic plan. The team, consisting of members of the FDA, SLTT agencies, laboratories, and professional associations, identified the plan's goals through an environmental scan of various levels of the food safety workforce. The team then used the insights gained from stakeholder surveys and interviews to create a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis to note patterns in the environmental scan data and identify priorities to develop the strategic plan.

The Strategic Plan results in a collaboratively governed design that will implement and evaluate the IFSS regulatory and laboratory training system. Once implemented, SLTT partners will have a regulatory and laboratory training system that ensures their needs are met and that sustains a well-trained, knowledgeable HAF workforce. Professional associations and institutions of higher learning will directly impact HAF regulatory and laboratory training by developing and designing coursework that meets the needs of their constituents. Finally, individual regulatory officials inside and outside of the FDA will be able to access the training they need through increased availability and training modalities. The collaborative thread woven throughout the plan is designed to result in cross-agency support, governance, and implementation. To make this a reality, stakeholders, including the FDA, SLTT regulatory partners, laboratories, institutions of higher learning, and associations, must act in the spirit of collaboration to bring the strategic principles and efforts within this plan to life.

STRATEGIC PLAN GOALS

The IFSS Regulatory and Laboratory Training Strategic Plan outlines the high-level goals and objectives to guide the FDA and IFSS regulatory partners in designing and implementing an optimal, sustainable, and integrated national regulatory and laboratory training system.

To have a successful IFSS RLTS, the FDA and its partners must be able to identify and capture the required competencies and translate the technical content into training materials, and ensure the training is delivered in a timely manner to the regulatory and laboratory staff throughout the IFSS. These three core functions (training content, training design, and training delivery) are targeted in the first three goals of this strategic plan. To ensure core functions are coordinated and managed for long-term success, there are two additional goals to ensure that the RLTS will meet current and future training needs. The other goals are management and maintenance of the IFSS RLTS and collaboration and consistency of delivery of the training content.

The five goals of the strategic plan are:

1. Training Content: Enhance and create training content so it can be adapted to learners and ensures the application of workforce competencies.
2. Training Design: Design flexible training that meets stakeholder needs.
3. Training Delivery: Deliver training to maximize access and meet the needs of stakeholders.
4. Management and Maintenance: Manage and maintain the IFSS regulatory and laboratory training system.
5. Collaboration and Consistency: Collaborate with stakeholders to ensure the effectiveness, consistency, and quality of training.

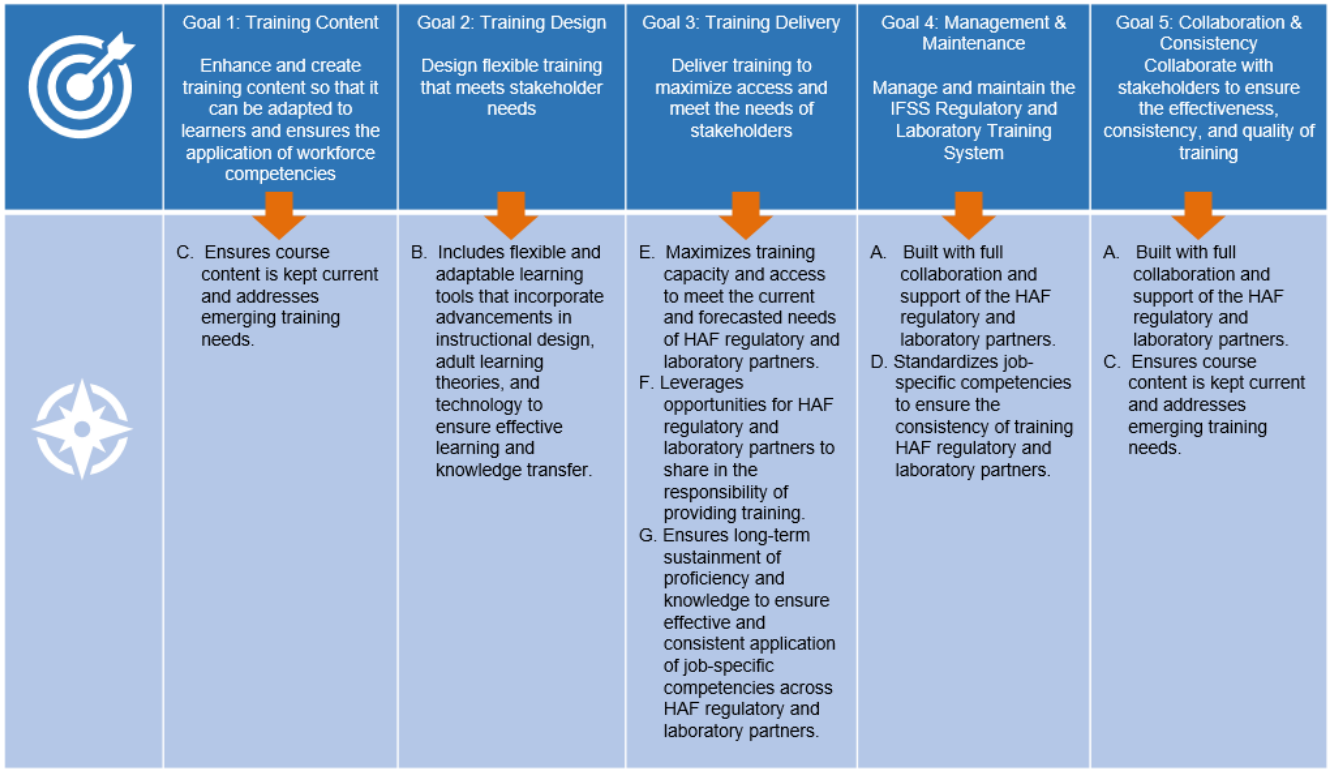

Fig 1: Alignment of strategic plan goals with strategy principles

The following sections will outline the objectives and strategies of each goal and demonstrate their alignment with the strategy principles listed above.

Goal 1: Training Content

Enhance and create training content so it can be adapted to learners and ensures the application of workforce competencies.

This goal aligns with the following strategy principle:

C. Ensures long-term sustainment of proficiency and knowledge to ensure effective and consistent application of competencies across HAF regulatory and laboratory partners.

Public health partners across the IFSS have diverse regulatory and laboratory training needs. Fundamentally, the knowledge and practices delivered through training must be flexible to meet the learner's requirements related to their role in the food safety system and their learning styles and preferences. Efforts toward making training accessible to all types of learners across the country, tribal lands, and territories and ensuring training content keeps pace with industry trends must be shared by the FDA through partnerships with SLTT regulatory and laboratory partners, institutions of higher learning, and associations. By combining the knowledge of all stakeholders, the IFSS RLTS can be built upon a body of expertise that when combined, is greater than any single entity operating by itself.

- **Objective 1.1:** FDA and SLTT regulatory and laboratory partners collaboratively identify training needs and continually improve regulatory and laboratory training.

  A deliberate process should be established to continually identify training needs and opportunities to enhance learner knowledge. To meet the training needs of IFSS stakeholders the IFSS RLTS must establish a process that collects partner requirements and prioritizes training needs based on the most public health impact for the IFSS. To ensure the identification of the most important training needs, every stakeholder must have an active voice to influence the prioritization process. Training needs must be treated as dynamic and remain flexible to regulatory environment changes. The IFSS RLTS will produce content that successfully transfers knowledge, regulatory requirements, policies, and best practices to the field or lab by combining, sharing, and harnessing that knowledge.

  To engage stakeholders in identifying training and learner needs to produce effective content, the IFSS RLTS will employ the following strategies:

  Strategies:

  1.1.1 Establish processes and timelines for regular communication between FDA and SLTT regulatory and laboratory partners to assess learner needs.
  1.1.2 Establish specialized training tracks and refresher courses based on the demands of the regulatory and laboratory environments.
  1.1.3 Evaluate prerequisite requirements for training and explore alternative paths (such as test-out opportunities) to ensure the learner has the prerequisite knowledge needed before acceptance into courses.

- **Objective 1.2:** Share responsibility for training content development among FDA, SLTT regulatory and laboratory partners, institutions of higher learning, and associations.

The complexities of the HAF industries make it challenging to develop universal training that ensures that regulatory knowledge and practices can be consistently applied across diverse environments. As a result, the IFSS RLTS will share responsibility for developing training content among the FDA, SLTT regulatory and laboratory partners, institutions of higher learning, and associations with a to-be-developed clear approval authority for training content development, management, and maintenance. The FDA, including the governing body of the IFSS RLTS, and external training partners will work collaboratively to establish how training will be developed, approved, delivered, maintained, and hosted.

To systemically share responsibility for training content development, the FDA and regulatory partners will engage in the following strategies:

Strategies:

1.2.1 Establish a governing body (see 4.1.1) to develop procedures for using external training content.
1.2.2 Establish transparent and timely approval processes for determining equivalency/alignment to externally developed training content.

- **Objective 1.3:** Develop new and revise existing training efficiently to reduce the time-to-market and ensure training stays relevant and up to date with the current needs.

The food safety landscape is constantly evolving. With each change in the food safety environment, food safety investigators, leaders, and laboratory staff perform the arduous task of ensuring public health through rigorous inspection, laboratory analyses, and enforcement of regulatory compliance of HAF facilities such as factories, farms, and retail outlets. Each niche within the foods industry has its own machinery, production, and packing methods, and therefore, different complex processes exist where various regulations apply. Training must stay current and relevant so that personnel have the knowledge and tools to apply regulatory requirements to the unique situations they face across the industry.

To develop and maintain an up-to-date training catalog that meets the needs of the workforce, the FDA and regulatory and laboratory partners will engage in the following strategies:

Strategies:

1.3.1 Create and maintain up-to-date training topics through resource sharing under a confidentiality agreement if necessary.
1.3.2 Leverage available association and institutions of higher education training resources.
1.3.3 Leverage available SLTT training resources.

- **Objective 1.4:** Develop and maintain the IFSS Food Protection Professionals National Curriculum Standard and the Food and Feed Laboratory National Curriculum Standard (NCSs).

The IFSS regulatory and laboratory training system will develop and maintain the competencies for the workforce contained in the NCSs so that there is consistency in competency expectations for all participants using the NCSs. The NCSs provide a consistent framework of competencies that the IFSS workforce needs to perform their jobs. By basing training development on the NCS' competencies, regulatory agencies and laboratories can ensure that their workforce possesses the skills required to operate effectively in the field or lab. Furthermore, ongoing maintenance of

the competency framework is essential to keep up with advances in technology, changes in regulations, and use of IT systems supporting IFSS activities such as SAFHER, ORA DX, FERN Portal, etc., ensuring that the IFSS workforce remains current and competent.

To systemically develop and maintain the NCSs, the FDA and its regulatory and laboratory partners will engage in the following strategies:

Strategies:

1.4.1 Buildout the NCSs.
1.4.2 Create tactical plan(s) for how the NCSs will be used in the design, delivery, and evaluation of the IFSS regulatory and laboratory training.
1.4.3 Systematically review and update the NCSs to ensure that they remain current and relevant.
1.4.4 Align training programs with the identified competencies to ensure that the workforce is equipped with the necessary skills and knowledge to perform their job duties effectively.

Goal 2: Training Design

Design flexible training that meets all stakeholder needs.

Training is developed so that learners can enhance their current knowledge and apply new skills. The training content must meet the learners' practical career and learning needs to impact their applied field or lab practices. The training content must provide scientific context for adopting new practices or knowledge, be relevant to the learners' day-to-day work in the ever-changing food safety landscape and be easily accessible across geographically dispersed locations and diverse types of learners.

This goal aligns with the following strategy principle:

B. Includes flexible and adaptable learning tools that incorporate advancements in instructional design, adult learning theories, and technology to ensure effective learning and knowledge

- **Objective 2.1:** Reflect learners' practical needs within the training design.

  The career level of the learner, the logistics of their job duties, and their employer resources all impact how a learner will receive training and what training content they will receive. As a result, the design of IFSS regulatory and laboratory training will accommodate career-focused learning in alignment with the NCSs. Training will focus on the practical application of skills needed to fulfill the requirements of the learner's job-specific duties.

  To facilitate relevant, career-focused training, the IFSS RLTS will employ the following strategies:

  Strategies:

  2.1.1 Design training compliant with section 508 of the Rehabilitation Act (29 USC 794d) as amended in 1998, where required.

2.1.2 Identify and use learners' current competency needs so that training planners and developers can meet organizational needs.
2.1.3 Design training to accommodate the competency needs of career-focused learning.

- **Objective 2.2:** Design training to bridge the gap between scientific understanding and field or lab application.

  The IFSS regulatory and laboratory training landscape is rich with subject matter experts (SMEs) with specialized knowledge in niche areas. Training that includes these experts is critical to ensuring learners can explain the regulations their organization must implement and better understand their jobs' contribution to protecting public health. Regulatory and laboratory training must continually reflect current scientific principles and apply them to the needs and daily tactical skills of the IFSS workforce. Regulatory training will provide scientific context as to the "why" behind the regulatory requirements so learners can apply the skills and knowledge with an understanding of its importance on the impact on public health. Additionally, adult learners are goal-oriented and learn best when they understand the practical application of their learning (Urban & Jirsáková, 2022). Therefore, portions of training should be delivered in environments that would foster the application of the science and its translation to the learners' practices takes root.

  The IFSS RLTS will work with stakeholders and SMEs to bridge the gap between science and field application and provide the most effective and efficient learning experiences through the following strategies:

  Strategies:

  2.2.1 Use real-life settings, examples, equipment, and case studies as strategies in training where appropriate and possible.
  2.2.2 Leverage appropriate SMEs for complex food safety, regulatory inspection/investigation, and laboratory science concepts, processes, and technologies.

- **Objective 2.3:** Meet the specialized needs of learners across commodity areas and regions throughout the IFSS.

  The IFSS is geographically dispersed, with learners responsible for different food commodities and in different time zones, states, territories, and tribal lands. The IFSS workforce is comprised of multi-generational staff at varying stages in their careers, including new hires, seasoned experts, managers, scientists, and laboratory personnel. Meeting the specialized needs of each of these learners requires careful consideration of training design and how the choice of delivery method fits into that design. Virtual, In-Person, Hybrid, Synchronous, and Asynchronous training options fit different needs across the spectrum of learners. Thus, training developers should carefully choose delivery methods by weighing the benefits of a delivery method with the complexity of the content and the learners' location, training needs, learning styles, and abilities. When selecting a delivery method, the developer should design the training for the specific method. For example, suppose the content drives an in-person delivery method; in that case, the developer should consider designing training to maximize the knowledge of SLTT SMEs to generate real-world examples and practical hands-on learning activities, which include learner collaboration and connection, and involve people being in the same room at the same time. Likewise, if virtual training is selected, the developer should consider creating activities that lend themselves to a virtual environment and provide screen breaks, break-out groups, real-time polls, chat and Q&A tools, and other virtual

best practices to engage the learners in active participation. Maximizing the capabilities of a variety of delivery methods intentionally chosen to deliver the best outcomes is a critical component of the IFSS RLTS.

Additionally, food safety organizations at different levels should be able to rely on each other's assessments of an individual's attainment of regulatory practices across the IFSS. IFSS regulatory and laboratory training helps to promote consistency and reliability in food safety practices and procedures and promotes mutual reliance between different levels of food safety organizations. Therefore, the IFSS RLTS may benefit from a credential so that the transportability of a learner's competencies is universal across the IFSS.

To ensure that instructors design training that considers the best delivery method for the content and learners involved, the IFSS RLTS will employ the following strategies:

Strategies:

2.3.1 Include adaptable training examples and content that can be modified to represent diverse industries, geographical regions, and situations.
2.3.2 Utilize in-person, virtual, or hybrid delivery based on the method that can best achieve the application of course content in the field or lab.
2.3.3 Assess the merits and feasibility of instituting an IFSS-wide credentialing/certification system.

Goal 3: Training Delivery

Deliver training to maximize access and meet the needs of stakeholders.

The future of training incorporates multiple methods of training delivery based on course material and objectives, organizational needs and limitations, and learner needs. Traditional classroom delivery methods allow the learners to have questions addressed immediately, get personalized instructor feedback, and cooperatively work with and learn from their peers. COVID-19 triggered a revolution in how training objectives can be met using multiple delivery methods. To maximize the value of training, the IFSS must select training delivery methods to maximize the impact of the training. The RLTS must remain flexible enough to support multiple training delivery systems to ensure that regulatory officials and laboratory staff across the United States can access the training they need.

This goal aligns with the following strategy principles:

- ***E. Maximizes training capacity and access to meet the current and forecasted needs of HAF regulatory and laboratory partners within the IFSS.***
- ***F. Leverages opportunities for HAF regulatory and laboratory partners to share in the responsibility providing training.***
- ***G. Ensures long-term sustainment of proficiency and knowledge to ensure effective and consistent application of competencies across HAF regulatory and laboratory partners.***

Both in-person and virtual delivery methods have pros and cons, and learners and instructors have come to know each method's opportunities and weigh them against the drawbacks. Now, the IFSS RLTS can utilize the best of both methods (or combinations of them)

and select delivery methods that will consider the likely success of knowledge transfer and make the training available to the broadest audience.

- **Objective 3.1:** Deliver training that is both accessible and available to learners throughout the IFSS.

  To ensure effective training can be delivered to all regulatory partners, the FDA must utilize knowledge of the logistical and learning style diversity across the IFSS when planning for training delivery to maximize opportunities for learners to get the training they need. However, it is equally important for the IFSS workforce to have the opportunity to learn in venues and through methods that will optimize their ability to absorb and translate what they learn into actionable, high-quality practices as they perform their jobs. Virtual delivery is often convenient but requires careful planning and thoughtful execution to provide opportunities to engage with others, develop connections, and learn cooperatively. Classroom instruction provides opportunities to fine-tune training to the current learners in the room. Still, it is sometimes impractical due to logistical issues such as location, SLTT policies, and travel budgets. Training developers and IFSS stakeholders should collaborate in weighing the pros and cons of delivery methods to inform decisions about which method(s) will meet the needs of the greatest magnitude of learners. Also, joint training that includes both FDA and SLTT partners has been beneficial as it provides opportunities to share best practices and experience among IFSS partners.

  Additionally, learners and their employers will need to be made aware of the training that is planned in a given time period and know how the training will be delivered so that they can secure funding to attend and make adjustments to work schedules. As part of the training delivery strategy, the IFSS RLTS should create a comprehensive training plan listing all trainings offered, including delivery methods in a given time period, so that learners and their management can take appropriate steps to ensure the employee gets the training they need.

  To choose training delivery methods, IFSS stakeholders and partners will employ the following strategies:

  Strategies:

  - 3.1.1 Create periodic training plans and opportunities in collaboration with IFSS stakeholders.
  - 3.1.2 Deliver training to accommodate diverse learning styles and learning paths with respect to IFSS RLTS needs.
  - 3.1.3 Develop training that can be delivered in multiple modes and by multiple instructors.
  - 3.1.4 Utilize in-person, virtual, hybrid, synchronous, and asynchronous delivery based on the complexity of course content to ensure the application of the content in the field or lab during food safety regulatory activities.

- **Objective 3.2:** Maximize the availability of high-quality training opportunities through collaboration with IFSS stakeholders to meet IFSS regulatory partners' organizational needs.

  The IFSS is a collaborative effort; therefore, regulatory and laboratory training must also be collaborative. It will take intentional and planned collaboration and communication among stakeholders to capitalize on that talent and knowledge across the food safety field. While training must meet criteria established by the IFSS RLTS, there should also be flexible pathways within the system to design and deliver training, thus increasing the accessibility to high-quality training in the field or lab. By establishing new and leveraging existing partnerships with university

programs, industry, associations, and other stakeholders, the training system can broaden the availability of training to the IFSS workforce.

To provide training, the IFSS RLTS will need to develop processes for sharing information on available trainings, training requirements met by learners, and continuing collaborations among stakeholders to optimize the use of trainers and SMEs.

To increase accessibility and availability to high-quality training through collaboration with SLTT regulatory partners, institutions of higher learning, and associations, the IFSS RLTS will employ the following strategies:

Strategies:

3.2.1 Facilitate ongoing sharing of training opportunities among the FDA and IFSS stakeholders to provide options on availability.
3.2.2 Develop a process for sharing expertise, trainers, and responsibility for training delivery among the FDA, regulatory partners, and associations.
3.2.3 Provide training in real-world environments where appropriate and possible.
3.2.4 Facilitate collaboration among IFSS stakeholders to create various training modalities and delivery methods based on the complexity of the course content to optimize learner options.

Goal 4: Management and Maintenance

Manage and maintain the IFSS regulatory and laboratory training system.

Collaboration is a critical element of managing and maintaining the IFSS RLTS. Collaborative work among regulatory partners ensures stakeholder representation and efficiency in content development and design and maintains consistency of training quality for trainers and learners. By managing this system together, regulatory partners can share their input and lessons learned and provide an effective learning environment to advance food safety. Governance and management of this system in a collaborative way is imperative to ensuring that the IFSS RLTS remains a driver of foundational regulatory information for the workforce.

This goal aligns with the following strategy principles:

A. Built with full collaboration and support of the HAF regulatory and laboratory partners within the IFSS.

D. Standardizes job-specific competencies to ensure the consistency of training HAF regulatory and laboratory partners.

- **Objective 4.1:** Create a governance structure for the IFSS RLTS to ensure accountability.

  There is a need to form a governance structure for developing and maintaining a standardized curriculum and evaluation system to ensure training consistency and determine its effectiveness.

A consolidated governance structure will facilitate consistency and collaboration among regulatory and laboratory partners while establishing a system for accountability.

The IFSS RLTS will implement the following strategies to create a consolidated governance structure that facilitates accountability:

Strategies:

4.1.1 Establish a governance structure using public-private partnership options or similar among federal agencies and SLTT regulatory and laboratory partners to ensure accountability of the IFSS RLTS.
4.1.2 Integrate the governance of the IFSS RLTS among federal and SLTT regulatory and laboratory partners to facilitate collaboration and ensure consistent planning and implementation.

- **Objective 4.2:** Build sustainability into the leadership structure of the IFSS RLTS.

Sustainability is an important feature to ensure the success of the IFSS RLTS. The IFSS RLTS should be a consistent, dependable body for regulatory and laboratory training regardless of changes within the governance of any one part of the system. Considering the range of partners involved in the management and maintenance of the training system, it is essential to build sustainability into the leadership structure of the regulatory and laboratory training to maintain consistency, relevancy, and longevity.

To ensure that the leadership structure of the training system is sustainable, the IFSS RLTS will enact the following strategies:

Strategies:

4.2.1 Identify and implement qualities desired for sustainable governance of the IFSS RLTS.
4.2.2 Create succession plans for leadership within the IFSS RLTS.

- **Objective 4.3:** Establish processes for efficient management of personnel and fiscal resources.

The IFSS RLTS will establish processes, in alignment with other objectives under this goal, to support the efficient management of personnel and fiscal resources. Subject Matter Experts (SMEs) in the federal and SLTT regulatory agencies and laboratories have multiple facets to their job, and training is just one of many tasks requiring time and attention. The IFSS RLTS will be strategic about what it asks of stakeholders and individuals working within the IFSS RLTS to develop and deliver training. Frequent pulse checks to ensure that training duties do not overburden SMEs and have adequate time to devote to their daily job duties is imperative in developing a sustainable IFSS RLTS. Likewise, fiscal resources that support the workforce in attending training must be maintained and deliberately allocated as a priority. The efficient and responsible management of all resources will support a governance structure that facilitates accountability while ensuring that the leadership structure of the system remains sustainable.

The IFSS RLTS will accomplish this objective through the implementation of the below strategies:

Strategies:

4.3.1 Provide SLTT SMEs to supplement training with local expertise.
4.3.2 Establish a budgeted timeframe for SMEs to commit to training.

4.3.3 Increase the frequency of delivery so that training is available for learners as needed to complete their assignments effectively and efficiently.

4.3.4 Deliver training by selecting methods and delivery options that maximize cost effectiveness and learner attainment of training content.

Goal 5: Collaboration and Consistency

Collaborate with stakeholders to ensure the effectiveness, consistency, and quality of training.

High-quality training and sufficient workforce competence are critically important across the IFSS RLTS. To ensure that success, the IFSS RLTS must collaborate with stakeholders to produce consistent, high-quality training and produce objective measures of proof that the training has the desired impact of increasing competencies among the IFSS workforce. Where possible, training content should reflect alignment between local and federal regulations and that training follows established guidelines and requirements for content, design, and delivery. Additionally, training is effective only if the learners apply it in the field or lab. Therefore, evaluating training must have a measure of field or lab application to determine its effectiveness and create continual opportunities to improve regulatory and laboratory training. Furthermore, to measure training effectiveness and be best positioned to make continual improvements to increase learning quality, both long- and short-term training assessment measures must be deployed through a robust and objective training evaluation process.

This goal aligns with the following strategy principles:

A. Built with full collaboration and support of the HAF human and animal food regulatory and laboratory partners within the IFSS.

D. Standardizes job-specific competencies to ensure the consistency of training HAF regulatory and laboratory partners.

- **Objective 5.1:** Incorporate SLTT SMEs into training to identify and explain differences in relevant state regulation(s).

Connecting the dots between state and federal regulations has been an ongoing challenge. While FDA training should be – and is – built upon federal regulatory requirements, the SLTT investigators are responsible for working with both SLTT and federal regulations. To support learners in applying the training meaningfully, the IFSS RLTS will utilize SLTT SMEs, when available, during training where alignment of regulations would be helpful to assist training participants see where there are connections and differences between federal and SLTT regulations.

To support the learner's understanding and application of federal regulations along with their SLTT regulations, the IFSS RLTS will employ the following strategies:

Strategies:

5.1.1 Establish processes to draw connections between similar or complimentary federal and SLTT regulatory requirements when possible.

5.1.2 Develop tools and guidance to support training developers in identifying similar and complimentary federal and SLTT regulatory requirements.

- **Objective 5.2:** Establish standardized requirements for training content, design, and delivery.

The IFSS RLTS seeks to create a unified, consistent, and collaborative training system that serves the needs of the IFSS workforce and, ultimately, the public by ensuring food safety. While collaboration allows the system to ensure that the training content, design, and delivery functions are mutually supportive and combines the strengths of all stakeholders, it also requires stakeholders and partners to commit to jointly upholding recognized universal standards to ensure that all system members who are developing and delivering regulatory and laboratory training are held accountable to the same high standards. Establishing these standards creates a framework for the entire IFSS RLTS. Consistent application of universal standards for training content, design, and delivery helps ensure the use of adult learning practices and that high-quality training is measured by objective evaluation, including the application of each learner's post-training practices in the field or lab.

To establish standards for training content, design, and delivery, the IFSS RLTS will employ the following strategies:

Strategies:

5.2.1 Establish requirements for training content by leveraging the NCSs.

5.2.2 Develop defined standard delivery practices for training instructors to use during instruction that will enhance the learners' retention of course content.

- **Objective 5.3:** Establish a robust training evaluation process.

Continual improvement is a critical component of regulatory and laboratory training. Evaluation data supports continual improvement, ensures learners get what they need from the training, and are prepared to perform their jobs at the required level of proficiency. Short-term evaluations, such as surveys and anecdotal evidence acquired before, during, and at the end of – or directly after – a training event, are essential to measuring the learner's immediate feedback and engagement, provides a progress snapshot, reflecting any changes in individual learner knowledge and competencies, and identifies potential areas of improvement for future iterations of the training. Long-term evaluation is also necessary because it will inform training developers and instructors as to whether the knowledge was applied and demonstrated in the learner's follow-on field or lab practices. The RLTS must effectively balance short- and long-term evaluations and maximize the return on investment for both the learner and the organization. Collecting data before, during, and immediately after training provides valuable insight at specific time points in the learner's progression of knowledge. These must be balanced with long-term evaluations which can identify gaps and trends to help determine to what degree the training resulted in effective field or lab practical applications.

The IFSS RLTS will conduct long and short-term evaluations that measure application in the field or lab and return on investment by using the following strategies:

Strategies:

5.3.1 Develop performance measures to determine the effectiveness of individual courses and delivery methods.
5.3.2 Develop performance measures to determine the effective and consistent application of competencies across regulatory and laboratory partners.
5.3.3 Develop performance measures to determine whether the strategic plan meets the IFSS's needs.
5.3.4 Conduct short-and long-term training evaluations of the performance measures.

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GLOSSARY

CAREER-FOCUSED LEARNING

Acquiring academic and technical skills to prepare for and advance in a chosen defined learning path.

CONTENT

Knowledge, practices, and ideas to be transferred to learners.

CURRENT

Present state in time.

DELIVERY

Methods by which training is made available to learners.

DESIGN

Creating training materials and activities and planning for delivery.

Equivalency/Alignment

Course is designed to ensure learning goals, assessments, and course learning activities are correlated.

FDA

United States Food & Drug Administration

FERN Portal

Food Emergency Response Network Portal

HAF

Human and Animal Food

IFSS
Integrated Food Safety System

MANUFACTURED FOOD
Raw food commodities that are transformed into products for intermediate or final consumption by applying labor, machinery, energy, and scientific knowledge. (USDA, 2023)

NCS
Establishes the standard(s) for national training program content and identifies the knowledge, skills, abilities and other attitudes or attributes (KSAO) as well as expected levels of performance to be able to conduct specific job activities or tasks. It also identifies defined learning paths that are pertinent for each of the jobs in the curriculum framework. There are two standard frameworks for regulators and laboratorians, respectively: The IFSS Food Protection Professionals National Curriculum Standard and the Food and Feed Laboratory National Curriculum Standard.

RLTS
Regulatory and Laboratory Training System. Refers to regulatory and laboratory training materials (content, platforms), instructors, developers, and the systems, policies, and procedures built by the governing body to support effective regulatory and laboratory training to support the goals of an IFSS.

ORA
Office of Regulatory Affairs

ORA DX
Office of Regulatory Affairs Data Exchange

OTED
Office of Training, Education & Development

RESOURCE(S)

Human, fiscal, time resources, facilities, materials, and any other items, locations, etc., that the organization has the capacity to share as defined by their internal policies and collaborative agreements with other agencies.

SAFHER
System for Agriculture, Food, Health, E-Inspections, and Registration

SLTT
State, Local, Tribal, Territorial

SME
Subject Matter Expert