Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

Canadian Food Inspection Agency

Evaluation of the Canadian Food Safety Information Network (CFSIN)

2025

Canada

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Executive summary

Background

A 2008 outbreak of listeriosis across Canada linked to ready-to-eat meat was an impetus for a significant review of and subsequent improvements to, Canada's food safety system. Following the outbreak, the Government of Canada appointed an independent investigator to examine the circumstances of the outbreak and make recommendations to strengthen the food safety system in Canada. This investigation highlighted both the complexity and the varied and overlapping roles that industry and federal, provincial and territorial food safety authorities played in responding to a foodborne illness outbreak. As such, the report recommended, among other recommendations, that an integrated network be created to better link organizations involved in food safety and their laboratories to ensure the timely sharing of data and information and to increase the efficiency of a foodborne illness emergency response. That recommendation led to the creation of the Canadian Food Safety Information Network (CFSIN).

The Canadian Food Inspection Agency (CFIA) was designated the lead agency to create CFSIN in collaboration with the Public Health Agency of Canada (PHAC), Health Canada (HC) and provincial and territorial partners. The CFSIN was developed over a 10-year period, in a phased approach, moving from planning and project definition to implementation and eventual launch in September 2020. The objective of the CFSIN is to better anticipate, detect and respond to food safety issues by connecting partners to share information and resources securely and quickly[Footnote 1]. The CFSIN aims to provide a shared food safety data repository, analytical tools to identify emerging issues and a platform for partners to share information and expertise securely and quickly during food safety incidents and emergencies. These tools aim to strengthen the ability of food safety authorities to work together to better protect Canada's food supply and in doing so, minimize the risk to the health and safety of Canadians.

Observations and recommendations

Office of Primary Interest (OPI): Science Branch
Supporting Branches: Operations Branch, Policy and Programs Branch, Digital Services Branch

The evaluation found the 5 digital tools that comprise the CFSIN are, for the most part, live, operational and aligned with the original intent of the CFSIN. Significant progress has been made to onboard account holders, develop user guides, deliver live demos, undertake pilots/mock food safety scenarios and develop data standards and terminology. In addition, some food safety data has been uploaded to the platform. For the most part, both external and internal account holders saw value in the CFSIN and viewed the opportunity to share information and collaborate on a single integrated platform dedicated to food safety as its greatest potential benefit.

Despite these efforts, there has been limited evidence to date to demonstrate that the CFSIN has contributed to its intended long-term outcomes to ensure the better detection and prevention of food safety risks and a more accurate and coordinated response during multi-jurisdictional food safety incidents. This is primarily due to lack of use which is attributed to numerous overarching factors. Included in these factors are:

- the CFSIN is not integrated with current CFIA processes/protocols

- duplication/overlap with federal tools
- benefit/functionality of some tools are not yet available/proven
- adoption is not mandatory
- lack of capacity/resources for uptake

Furthermore, there is limited food safety data available on the platform. Delays are attributable to the complexities of harmonizing disparate data sets and the requirement to negotiate agreements, via Memoranda of Understanding, between the CFIA and partners to ensure privacy/confidentiality. This particular finding has restricted the CFSIN from offering a pan-Canadian approach to food safety surveillance, which was one of the original intended benefits of the platform. Finally, CFSIN governance has minimal engagement from external partners and is not linked to internal CFIA governance, which is contributing to limited visibility, use and promotion of the CFSIN within the agency. This was seen as another inhibiting factor in uptake, as partners noted that if the CFIA is not prioritizing the use of the CFSIN, they would delay their own adoption.

In light of these observations, the evaluation recommends the following:

Recommendation #1

Given the identified utility and adoption challenges, it is recommended that an assessment be conducted to review challenges and opportunities for the way forward for each tool. This review should be undertaken in consultation with CFIA internal stakeholders and federal, provincial and territorial food safety partners. The following should be considered:

- identify key CFIA internal stakeholders and federal, provincial and territorial food safety partners who could participate in the review
- determine and document the current needs of internal stakeholders and partners
- undertake a gap assessment of current CFSIN capabilities versus identified needs of internal stakeholders and partners
- identify and prioritize which tools require attention first
- conduct a comparative assessment to other available tools/capabilities, both internal and external
- based on the analysis, determine the usefulness and way forward for each of the CFSIN tools
- recommend to senior management appropriate actions for redesign/reconfiguration of CFSIN and the emphasis/priorities (including formalizing the roles and responsibilities for implementation with the agency and partners) and
- formal written decision is made about the CFSIN direction for the way forward

Recommendation #2

Based on the outcome of Recommendation #1, it is recommended that a work plan be drafted to address the way forward as approved by senior management. This could include:

- results of gap assessment from Recommendation #1
- plans to address barriers and challenges
- steps involved to redesign/relaunch tools (this includes engagement with other federal and provincial partners) and
- performance management framework/dashboard to appropriately monitor the Network moving forward

Once the assessment from Recommendation #1 is completed, CFIA is recommended to:

- approach internal stakeholders, federal partners and, where appropriate, provincial and territorial partners to determine and action the best approach for integrating CFSIN tools into current CFIA/federal protocols/processes
- actively socialize and showcase the functionality/value of the CFSIN to all internal stakeholders and external partners

Recommendation #3

It is recommended that the performance and progress of the CFSIN be brought forward to CFIA senior management on a regular basis. It should be linked to internal agency governance to ensure appropriate accountability and action to gain support for the way forward and course correction in a timely manner.

1. Background

Every year Canada's food safety system, which is a shared responsibility of various government organizations across Canada, detects and prevents foodborne hazards from reaching Canadians. This is due to the work undertaken by inspectors, scientists, lab technicians and other food safety personnel across the country.

When there is reason to believe that food is unsafe, the Canadian Food Inspection Agency's (CFIA) role is to inform the public, oversee implementation of a voluntary recall by industry and verify that industry has complied or in exceptional cases, recommend to the Minister of Health that a food that poses a risk to human health be ordered recalled pursuant to section 19 of the *Canadian Food Inspection Agency Act*. The CFIA oversees approximately 164 recall incidents per year[Footnote 2]. In some cases, the recall comes too late to prevent an outbreak of a foodborne illness and at that point a coordinated multiple agency/jurisdictional response is often required to prevent further harm to the health of Canadians. Rapid communication, coordination and information sharing during a foodborne illness outbreak is critical to the success of reducing potential harm and illness. Although Canada has one of the best food safety systems in the world[Footnote 3], food safety incidents still occur and work is continuously underway to identify risks, improve capacity and build a more robust food safety system.

The impetus for the formation of the Canadian Food Safety Information Network (CFSIN) was a 2008 listeriosis outbreak linked to ready-to-eat meats that tragically claimed the lives of 22 Canadians. Following this outbreak, the Government of Canada appointed an independent investigator to examine the circumstances of the outbreak and make recommendations to strengthen the food safety system in Canada.

The subsequent *Report of the Independent Investigator into the 2008 Listeriosis Outbreak* (the Weatherill Report) expressed, among other key recommendations, that the creation of a nationally integrated network was necessary as the listeriosis outbreak revealed gaps in the existing laboratory system that contributed to delays in detecting the illness and notifying the public. Opportunities to confirm the food source of the outbreak sooner may have been missed since some provinces did not have the capacity to test food for Listeria and the few laboratories that had the certification and capacity to do so were not networked. Moreover, the absence of standardized sampling, cross-coding and testing methodologies resulted in time lost in reconciling results and identifying the link between the human infection and the source of the outbreak.

In light of those observations, the Weatherill Report stated that a nationally integrated network among federal, provincial and territorial (FPT) food safety partners would increase the efficiency of a foodborne illness event response. This would enhance coordination of testing and improve the integration of the data collection, further accelerating the analysis and decision-making necessary in the management of foodborne events. At that time, integrated networks existed in the areas of human disease and animal health, namely the Canadian Public Health Laboratory Network (CPHLN) and Canadian Animal Health Surveillance Network (CAHSN). These networks had proven beneficial for supporting early detection and rapid response to public health risks and animal disease threats; however, a similar network among food safety laboratories and authorities had not yet been established.

The CFIA was named lead agency to develop a nationally integrated network given its critical role in food safety inspection/laboratory data, recalls and incident response. Development of the platform was undertaken in collaboration with the Public Health Agency of Canada, Health Canada and provincial and territorial partners.

Since 2011, the CFIA has received funding to support the planning, development and eventual launch of CFSIN in September 2020.

2. Network development and launch

The CFSIN was developed over a 10-year period in a phased approach:

- **planning** (2011-2012 to 2015-2016): identification of information management and information technology (IMIT) requirements, methods and best practices as well as the creation of an overall blueprint for the CFSIN
- **project definition** (2016 to 2018): development of project activities, deliverables, resource requirements and work plans. This stage also defined how the system would be built and implemented
- **project implementation** (2018 to 2019 to September 2020): creation of the CFSIN platform including architectural design and development of a CFIA-led application suite leveraging open-source software. Capabilities would support collaboration, event management and data sharing and analytics
- **launch** (September 2020): CFSIN is officially launched
- **maintenance** (September 2020 and ongoing): transition from a project to an established CFSIN program that provides program management, governance and ongoing coordination and outreach to CFSIN partners

During all phases of CFSIN development, the CFIA engaged in extensive outreach with FPT partners to gather business requirements for the network. Partners also participated in testing and provided feedback on alignment of protocols and training plans.

The CFSIN FPT Steering Committee, which later became the CFSIN Management Board when the project launched and associated working groups, were also set up to guide work related to the CFSIN and ensure appropriate governance.

The objective of the CFSIN is to better anticipate, detect and respond to food safety issues by connecting partners to share information and resources securely and quickly[Footnote 1]. To accomplish this, the CFSIN platform offers a suite of 5 digital tools, which are housed on a secure web-based platform. The tools are designed to support both "preventive" and "response/reaction" activities and have the following functionalities[Footnote 4]:

Preventive

Environmental scanning tool provides an online search engine that makes it easier for FPT partners to stay up-to-date with emerging risks from global food hazards by allowing them to scan thousands of sources of information. The environmental scanning tool makes it easier to identify and analyze emerging risks from food hazards around the world.

Intelligence tool provides a repository of food safety surveillance laboratory testing data from CFSIN FPT partners integrated in one database. The Intelligence tool allows partners to view and analyze the data and produce reports based on the entire data set. With access to larger data sets, partners can get a more comprehensive picture of food safety risks across the country, look for gaps in oversight and make more informed decisions.

Collaboration tool provides FPT partners access to a community of food safety experts across Canada in a secure space and allows them to share information and expertise to work on common priorities, such as research and food safety surveillance. It is delivered via the MS Teams platform.

Response/Reaction

Event management tool provides FPT partners the ability to manage communication and actions during food safety events, including those occurring across multiple jurisdictions. Partners can rapidly and securely share key food safety information and laboratory test results as well as coordinate sampling activities.

Laboratory mapping tool provides an inventory of Canadian food safety laboratory profiles for FPT partners. The tool allows partners to quickly and conveniently identify laboratory locations, their testing capabilities, availability of surge capacity and contact details to support peer collaboration and response during food safety events.

Annex A presents an overview of CFSIN and the 5 tools on the platform.

3. Evaluation description

Evaluation objective and scope

The objective of the evaluation was to examine the extent to which the CFSIN is achieving its objective to anticipate, detect and respond to food safety issues by connecting partners to share information and resources securely and quickly.

This is the first evaluation of the CFSIN, which was mandated by Treasury Board and covers activities from the CFSIN launch in September 2020 to December 2022, with acknowledgement of progress to December 2023. The evaluation focused on the benefits of the CFSIN, the gaps it addresses and how well the network is working to support delivery of a preventive, risk-based and responsive food safety system. It also assessed the effectiveness and efficiency of the management of CFSIN activities.

Evaluation methodology and limitations

Evaluation evidence reflected in this report included a review of program documentation, performance and financial information, as well as interviews with 37 key informants, including 24 internal to the CFIA and 13 external stakeholders, such as provincial representatives and other federal departments. A strengths, weaknesses, opportunities and threats analysis was conducted to assess the CFSIN's functionality in terms of operational readiness, utility and adoption.

The evaluation encountered limitations related to availability of data. For details related to mitigation strategies and impacts of these limitations, see Annex B.

Evaluation issues

The evaluation was guided by the following questions:

What benefits does CFSIN provide and/or what gap(s) does it address in delivering a preventive, risk-based and responsive food safety system?

Is CFSIN working as intended to anticipate, detect and respond to food safety issues by connecting partners to share information and resources securely and quickly?

Is there appropriate governance and resources to ensure the effective/efficient management of CFSIN's ongoing activities?

4. Observations and recommendations

Observation 1

The CFSIN platform has delivered on some of its short-term outcomes; however, if current challenges are not addressed, the CFSIN is at risk of not being able to deliver on its intended long-term outcomes to help safeguard the Canadian food supply.

To monitor the success and progress of a government program, a performance measurement plan that defines short, intermediate and long-term outcomes is created. Performance indicators are used to monitor the achievement of these outcomes. In the case of the CFSIN, it has successfully delivered on its short-term outcomes[Footnote 5] (in other words, CFSIN is launched, CFSIN partners have access to the network) and there is additional evidence of progress related to network onboarding and program launch including:

- CFSIN partnerships have grown to include multiple FPT food safety related organizations, representing 35 organizations across all 13 provinces and territories
- more than 375 account holders have been onboarded since the network launch (CFIA and external partners combined)
- comprehensive user guides have been developed
- live demos have been delivered to internal and external CFSIN users
- monthly risk intelligence reports, generated using the CFSIN's environmental scanning tool, have been posted on the platform
- pilots and mock scenarios have been undertaken to test the event management tool with feedback and improvements incorporated

While some of the short-term outcomes have been achieved, the delivery on the CFSIN's long-term outcomes, where broader impacts are evident in terms of helping safeguard Canada's food supply, have not been realized. This is primarily due to lack of user adoption and challenges in harmonizing food safety data, which limit the ability to offer pan-Canadian surveillance, one of the original intended benefits of the CFSIN. These challenges and their connection to the performance of the CFSIN are further explained in subsequent observations.

The CFSIN program has 10 performance indicators that were developed to monitor CFSIN's performance and achievement of results. Three of these performance indicators link to long-term outcomes related to CFSIN strengthening Canada's food safety system. Although interim reporting on 2 of these performance indicators was expected between 2021 and 2023, there was no data available at the time of the evaluation. Interim reporting for the third long-term outcome performance indicator is not expected until 2025. Consequently, the following outcomes could not be fully reported on:

- faster detection and prevention of potential food safety risks and hazards
- faster response and resolution of food safety incidents and events

- increase in Canada's reputation as a producer and exporter of safe food products

While achievement of final outcomes (and the necessary performance data to report on them) is not required until later (between September 2025 and 2027), the CFIA needs to pay attention to the fact that if the current state of affairs is not altered and barriers addressed (as presented in the subsequent observations), it will not be able to achieve these long-term outcomes.

CFSIN scorecard

The CFSIN comprises 5 unique tools, all with a different purpose but delivered on the same digital platform. As such, a tool-by-tool approach was taken to understand and further investigate each tool's operational readiness, utility and level of adoption.

A scorecard was used (Figure 1) to demonstrate the assessment of each tool. For the most part, all tools are fully operational, meaning they are live and ready to be used. While the Intelligence tool is live, there has been some difficulty in incorporating food safety laboratory testing data to meet its intended purpose to provide pan-Canadian food safety surveillance. It should also be noted that, although the Event Management tool is operational, it is unproven as it has not yet been used to support the response to a food safety outbreak. Despite tools being operational, there were numerous areas of concern with both utility and adoption due to a few factors. These include overlap/duplication with other tools such as the Canadian Network for Public Health Intelligence (CNPHI), lack of integration with existing CFIA/federal processes/systems and limited content/use. These themes are expanded further in subsequent observations.

The score card also highlights opportunities moving forward, which vary depending on the tool in question. However, several themes emerged including the opportunity to (i) incorporate tools into existing processes/protocols thus leveraging their functionality more effectively, (ii) utilize tools to address broader applications than originally intended and (iii) explore technical solutions to make tools more easily accessible.

Conclusion: the CFIA needs to be aware that if the current barriers are not addressed, there is a significant concern that the Network will no longer be relevant. Furthermore, the ability to contribute to the following 3 ultimate outcomes[Footnote 5] is at risk:

- faster response and resolution of food safety incidents and events
- informed program design, risk-based decisions and strategic priorities related to food safety
- increase in Canada's reputation as a producer and exporter of safe food products

Figure 1: CFSIN Scorecard

CFSIN Tools	Operational	Utility	Adoption	Challenges	Opportunities and Way Forward
Laboratory mapping	●	◕	◕	• Potential duplication of existing inventories available from laboratory accreditation authorities	• Significant potential for use during a food safety event • Potential for inclusion in CFIA emergency protocols to increase lab mapping tool use • Consideration of use for non-emergency scenarios to access lab expertise/capacity
Environmental Scanning	●	◕	◑	• Overlap with other scanning tools that are available at the agency such as *Meltwater*, *HorizonScan*, *Decernis*, etc.	• Continue usage to support monthly *Situational Awareness Reports* generated by CFIA's risk intelligence group, these reports are available on the collaboration tool • Opportunity to promote internally to expand use by CFIA employees to support risk-based program design
Collaboration	●	◕	◑	• Minimal content posted or shared across the channels, generally low activity, most content posted by the CFSIN team • Partners outside the CFIA have to log in to a separate *MS Teams* connection to access "CFSIN" Teams, making its ease of use less ideal	• Explore potential technical solution(s) to allow external users to access MS teams without a separate login
Event management	●	◕	○	• This tool is not integrated with existing emergency management protocols including: Outbreak Incident Coordination Committee (OICC), Food Illness Outbreak Response Protocol (FIORP), Issues Management System (IMS) • PHAC, which leads in a multi-jurisdictional outbreak, has its own tools and is reluctant to adopt something new	• Could be applicable for single jurisdiction events as not all provinces have resources/systems to manage outbreaks. There is currently interest from some provinces • Consideration for use to support information sharing between CFIA and Health Canada during health risk assessment activities to determine appropriate mitigation actions e.g. food recall • Investigate potential of imbedding as a requirement in protocols for food safety outbreaks e.g. FIORP
Intelligence	◑	●	○	• Lacks current and historical pan-Canadian data • Significant investment required to align data	• Explore ways to expedite the upload of CFIA data to drive interest from both CFIA and partners and to allow users to benefit from pan-Canadian data • Continue to collaborate with partners to explore what external data could be feasibly added to the tool

Definitions	
Operational	Tool is live Functional *(in a technical sense)*
Utility	Fulfills a gap Meets a need Deemed useful
Adoption	User engagement Partner uptake

Legend	
●	On target
◕	Opportunities for continuous improvement and/or relevancy assessment should be considered
◑	Significant work required to address issues
○	Below target Underlying risks to achieve objective

Observation 2

There is a lack of use of the CFSIN within the CFIA and by external partners which puts at risk the continued relevance and viability of the Network.

Since its launch in September 2020, the CFSIN team has worked diligently to promote the use of the CFSIN and provide ongoing support, both within the agency and with external partners. The team was generally recognized as well-informed, dedicated and responsive. Despite these efforts, the evaluation found the adoption and utilization of the Network was lacking. More specifically, the lack of prioritization within partner organizations, embedment into current processes and general awareness within the agency are key contributing factors to the lack of use.

Some external partners have not been able to prioritize the use of the CFSIN within their organizations. Numerous barriers were identified including, limited capabilities, capacity and resources to integrate a new tool into current systems. This was found to be particularly true for provincial/territorial partners that also have a shared responsibility for public health. It was also noted that provincial and territorial governments are required to undertake additional coordination because responsibilities for food safety are fragmented across multiple departments (provincial and territorial departments include: Agriculture, Health and, Environment) making it difficult difficult to gain momentum and use. Finally, it is challenging to get FPT partners to adopt a program that is not a regulatory requirement. Involvement in the CFSIN and use of the tools is not mandatory, therefore without the CFIA's leadership role in adopting the CFSIN tools for agency use and subsequent demonstrated benefits, many external partners have chosen to delay their own adoption.

CFSIN's tools are also not embedded in the CFIA and its partners' regular systems/standard operating procedures. Since existing siloed systems are in place to manage food safety outbreaks and laboratory data, CFIA personnel and federal partners are reluctant to adopt new tools and are not always convinced of the merits of the CFSIN. For example, the event management tool, which is designed to streamline communication and sample coordination during a multi-jurisdictional food safety event, has not yet been utilized to manage an outbreak. This is primarily due to a lack of integration with existing emergency management protocols including: Food Illness Outbreak Response Protocol (FIORP), Outbreak Incident Coordination Committee (OICC) and Issue Management Systems (IMS). However, an opportunity was identified to use the event management tool to support single jurisdiction events, as not all provinces have the resources/capacity to manage food safety outbreaks and there is currently interest from some provinces to pursue this application. Furthermore, the CFSIN is not aligned with the CFIA's current laboratory data systems including Laboratory Sample Tracking System (LSTS) (microbiological) and MS Access (chemical) databases creating challenges in harmonizing data.

User uptake and awareness within the agency on how and when to use CFSIN has also proven to be a challenge. Specifically, for the collaboration and environmental scanning tools, it was noted in some cases that users were not sure what should be shared or that they get their information from other sources instead (for example, HorizonScan, International Food Safety Authorities Network (INFOSAN). Furthermore, when a sample of CFSIN internal account holders were contacted to participate in an interview to discuss their use of the CFSIN, the majority did not respond and for those that did, they indicated they do not use the CFSIN on a regular basis.

Conclusion: while all of the 5 CFSIN tools are live and ready for use, the lack of user adoption has led to limited use and uptake. Lack of uptake of the Network's toolkit can be attributed to numerous overarching factors including:

- lack of capacity/resources for uptake
- adoption is not mandatory
- lack of integration with current processes/protocols
- duplication/overlap with existing tools and
- the benefits of some of the tools are not yet available/proven

Lack of user adoption is threatening the ongoing viability/relevance of the Network. Given that the Network was launched 3 years ago, there is an urgency to address barriers, leverage CFSIN value and gain momentum with users.

Observation 3

Significant data challenges are restricting the ability to provide timely pan-Canadian food safety surveillance.

Sharing of food safety surveillance data was noted by many as a key potential benefit of the CFSIN. This collaboration was seen as valuable as it provides access to larger and more varied data sets, giving partners a more comprehensive and accurate picture of food safety risks across the country. Although the bulk of the data on the platform will be from the CFIA (approximated to be 70%), it was noted that provincial/territorial food safety authorities may test foods/hazards not within the scope of CFIA sampling programs (in other words, at the farm level, provincially regulated establishments and retail). Interviewees expressed the importance of working together and sharing information related to food safety. This would ultimately allow for a more informed and preventive approach to food safety and earlier detection of risks.

While the potential benefit of integrated data available on one digital platform was noted throughout the evaluation, minimal progress has been made to achieve this. To date, there is limited food safety data available on the platform (as part of the Intelligence tool) to undertake pan-Canadian trend analysis or support risk intelligence. Although significant work has been undertaken by the CFSIN team to develop data standards and terminology (in other words, a data dictionary) and negotiate agreements with FPT partners to facilitate access/sharing of data, the lack of food safety data being uploaded to the platform continues to be a significant challenge.

Currently, provincial data is available from only 2 partners, with some additional data available from federal partners. At the time of the evaluation, the CFIA was in negotiation with numerous other provinces to obtain additional data for inclusion in the CFSIN. The lack of food safety data uploaded to the platform has significantly hindered the Network's ability to offer users entire data sets to view and analyze, look for gaps in oversight and make more informed decisions.

The process of integrating disparate data sets for upload to CFSIN is complicated and involves significant undertaking and investment of time and expertise. This has resulted in delays entering data into the CFSIN. There are numerous reasons for this complexity:

- the CFIA's internal food safety databases (in other words, Access and Laboratory Sample Tracking System (LSTS) do not always align with CFSIN classification systems; this is problematic as it is expected that 70% of CFSIN data will be derived from the CFIA
- partners use their own unique food/hazard classification coding which does not always integrate easily with the CFSIN
- data context (in other words, rating scales, units of measures, definitions, etc.) is often not the same for all data sets. A thorough understanding of this context is required to ensure alignment and avoid errors
- expertise in both data science and food safety is required and the CFSIN team is not always well equipped to lead and support the data harmonization task

For external data, partners are responsible for mapping their own data to the CFSIN standards, supported by an automated process that flags errors and subsequently validates and transfers the data to the CFSIN platform. This process is monitored and overseen by the CFSIN team. For CFIA internal data, the CFIA's Science and Digital Services branches work together to request the data from internal databases and subsequently extract, review, harmonize and upload the data. Annex D provides a detailed overview of the steps and roles and responsibilities involved in the data upload process.

In addition, a Memorandum of Understanding is required for both data sharing and access, which further complicates the process and there have been delays in signing these agreements. This is due to numerous factors including:

- privacy and confidentiality requirements
- Memorandum of Understanding fatigue, meaning partners have many requests and may not see the value in taking the time to negotiate a new one
- complexity with multi-departmental involvement in food safety at the provincial level which requires additional coordination

Furthermore, some partners indicated they do not have food safety data to share; however, the CFSIN team is working with these partners to explore what might be available and feasible.

Conclusion: data availability and harmonization issues are resulting in the CFIA and partners not being able to share, view and analyze larger data sets; therefore, they are not able to benefit from a more comprehensive picture of food safety risks across the country. There is a pressing need to resolve data challenges and expedite the data upload process as the sharing of food safety data, which provides richer and more varied insight to support trend analysis and risk intelligence, was seen as one of the key intended benefits of the Network.

Recommendation #1

Given the identified utility and adoption challenges, it is recommended that an assessment be conducted to review challenges and opportunities for the way forward for each tool. This review should be undertaken in consultation with CFIA internal stakeholders and federal, provincial and territorial food safety partners. The following should be considered:

- identify key CFIA internal stakeholders and federal, provincial and territorial food safety partners who could participate in the review
- determine and document the current needs of internal stakeholders and partners
- undertake a gap assessment of current CFSIN capabilities versus identified needs of internal stakeholders and partners
- identify and prioritize which tools require attention first
- conduct a comparative assessment to other available tools/capabilities, both internal and external
- based on the analysis, determine the usefulness and way forward for each of the CFSIN tools
- recommend to senior management appropriate actions for redesign/reconfiguration of CFSIN and the emphasis/priorities (including formalizing the roles and responsibilities for implementation with the agency and partners) and
- formal written decision is made about the CFSIN direction for the way forward

Recommendation #2

Based on the outcome of Recommendation #1, it is recommended that a work plan be drafted to address the way forward as approved by senior management. This could include:

- results of gap assessment from Recommendation #1
- plans to address barriers and challenges
- steps involved to redesign/relaunch tools (this includes engagement with other federal and provincial partners) and
- performance management framework/dashboard to appropriately monitor the Network moving forward

Once the assessment from Recommendation #1 is completed, CFIA is recommended to:

- approach internal stakeholders, federal partners and where appropriate, provincial and territorial partners to determine and action the best approach for integrating CFSIN tools into current CFIA/federal protocols/processes

- actively socialize and showcase the functionality/value of the CFSIN to all internal stakeholders and external partners

Observation 4

The CFSIN governance structure has been implemented; however, there is minimal engagement by CFSIN board members and limited integration within the CFIA governance framework.

The CFSIN Management Board, which comprises CFIA officials and FPT partners, was established as the strategic and operational committee charged with providing integrated FPT leadership, guidance and decision-making authority for the maintenance and expansion of CFSIN[Footnote 6]. The Board is also responsible to ensure that the maintenance, improvement and expansion of the CFSIN is reflective of the needs of the various jurisdictions involved, including existing laboratory and surveillance networks. Individual members of the CFSIN Management Board also serve as the primary points of contact within their organizations for discussions regarding CFSIN activities.

The CFSIN Management Board is well managed, has defined roles and responsibilities and a terms of reference and meetings occur on a quarterly basis. It also has official representation from all provinces, territories and key federal partners and it brings forward work planning priorities and updates on activities underway. There was evidence that CFSIN Management Board reports regularly to the external FPT Food Safety Committee[Footnote 7] for information sharing and to report on CFSIN progress. The evaluation found evidence that Committee members are supportive of the CFSIN's intent and encourage members to use it.

While there is a defined structure to the CFSIN Management Board, not all CFSIN Board members are actively engaged due to a lack of capacity, resources, priority and/or level of interest. In some cases, the provincial members may not be the appropriate person due to multi-departmental involvement in food safety, or the representative may not have the appropriate seniority or decision-making authority within their organization; therefore, it could be difficult for some members to raise the profile and the potential benefit of using the CFSIN within their organizations.

The CFSIN Management Board is also not linked to the CFIA internal governance such as the Food Business Line Management Board (FBLMB) which may be contributing to limited visibility and promotion of the CFSIN and to the lack of internal engagement. For example, a review of the Records of Decision (RODs) for the FBLMB from September 2020 to December 2022 indicated that only 2 RODs referenced the CFSIN and only once was it the primary topic. The evaluation team did the same exercise for Business, Innovation, Policy and Planning Committee[Footnote 8] (BIPP) RODs from September 2020 to December 2022. CFSIN was a primary topic in BIPP RODs numerous times during the launch period; however, there have been no references since January 2021. The lack of integration and visibility at the senior management level coupled with limited user adoption has made it difficult to build momentum.

Conclusion: CFIA senior management awareness and promotion of the Network is critical to help integrate CFSIN into regular CFIA activities, drive improvements and ensure the CFSIN meets user needs, both internally and with partners. In addition, without linkages to internal CFIA governance, there is a risk that emerging areas of concern are not elevated to the appropriate authority for response or decision in a timely manner. Furthermore,

lack of engagement in the CFSIN Management Board by external partners has limited the Network's profile and momentum in provincial/territorial organizations.

Recommendation #3

It is recommended that the performance and progress of the CFSIN be brought forward to CFIA senior management on a regular basis. It should be linked to internal agency governance to ensure appropriate accountability and action to gain support for the way forward and course correction in a timely manner.

CFSIN financial analysis

The evaluation team conducted an analysis of resource allocation of the CFSIN planned versus actual spending for fiscal years (FY) 2020 to 2023. The majority of the funding was distributed to 2 branches within the agency. To verify detailed expenditures, a financial audit would be required. The table below outlines the planned and actual expenditures for the CFSIN funding.

Fiscal year	Planned pay and EBP	Planned non pay	Total planned spending	Actual pay and EBP	Actual non pay	Total actual expenditures	Variance
2020 to 2021	$397,393	$1,000,509	**$1,397,902**	$156,047	$724,380	**$880,427**	**$517,475**
2021 to 2022	$397,393	$1,199,691	**$1,597,084**	$397,383	$1,412,200	**$1,809,583**	**-$212,499**
2022 to 2023	$916,059	$932,707	**$1,848,766**	$916,051	$932,700	**$1,848,751**	**$15**

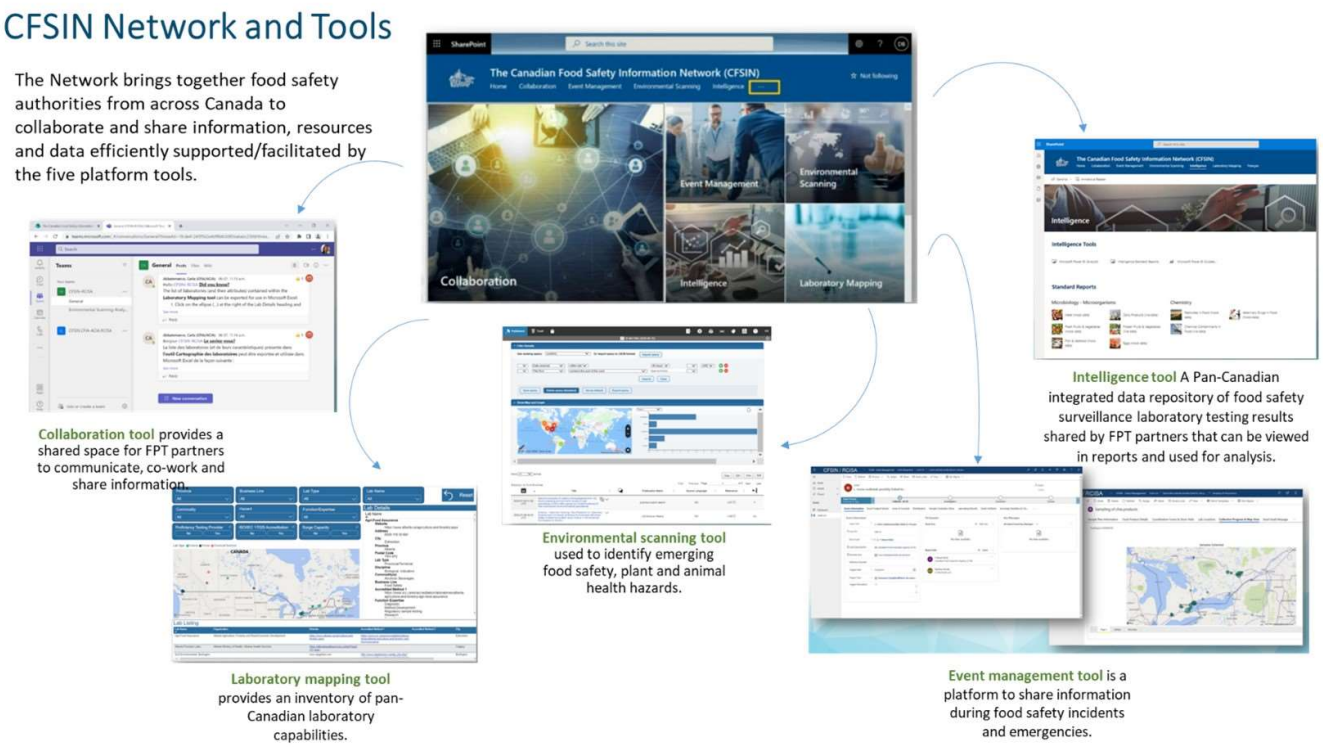
The noted variance in FY 2020 to 2021 was due to a late receipt of funds in that fiscal year and, as a result, there was a carry-forward of $212,499 from FY 2020 to 2022. This covered the shortfall in 2021 to 2022. The remaining variance from 2020 to 2021, $304,976 became part of the general carry forward allocation of the CFIA.

In FY 2020 to 2021 and FY 2021 to 2022, Science Branch was providing funding to cover pay expenses for the CFSIN team in Science Branch, in addition to program funding. For 2022 to 2023, a decision was made to permanently reduce expenditures for CFSIN consulting and use these savings to cover the expenses for the CFSIN team in Science Branch.

5. Overall conclusion

While the CFSIN launched in September 2020 and the tools are live and ready to use, there are some key challenges preventing the CFSIN from achieving its long-term outcomes. These challenges include CFSIN user adoption, food safety data integration, integration with the processes of the CFIA and its partners and raising the CFSIN profile and visibility throughout the agency and through governance. If these challenges are not addressed the ability of the CFSIN to contribute to long-term outcomes is at risk.

Annex A: CFSIN overview



Annex B: Evaluation limitations and mitigation strategy

Limitation	Mitigation strategy	Implications
Data on achievement of ultimate outcomes related to the CFSIN are not yet available.	The evaluation team spoke with both internal and external stakeholders to get their opinions regarding whether the CFSIN is on track to meet ultimate outcomes. Interviewees were asked to explain their answers whenever possible.	The evaluation did not state whether the CFSIN is meeting ultimate outcomes, rather it focused on whether CFSIN is on track to meet ultimate outcomes. Where appropriate the evaluation has recommendations for corrective actions.
The evaluation team was unable to do mini case studies as there were limited examples of CFSIN tools being used by stakeholders for food safety activities.	The evaluation team asked stakeholders why they had not adopted CFSIN tools. The answers to these questions became part of the findings.	The lack of adoption became a key finding for the evaluation and was taken into consideration for the recommendations.
The building of the CFSIN began in 2011. It was not possible to talk to all employees who worked on the CFSIN because they were no longer working at the CFIA.	The evaluation team included documents from the planning phase of the CFSIN into the document review. These documents provided useful context for the creation of the CFSIN.	The evaluation focused on the September 2020 to December 2022 time period. Information from before this time period was included to provide the reader context but was not used to generate findings.

Annex C: CFSIN logic model

The CFSIN Logic Model outlines the progression from initial activities to ultimate outcomes.

1. Activities

- Engage FPT food safety authorities through CFSIN working groups
- Describe FPT laboratory profiles
- Identify relevant open sources (websites and social media) to monitor food safety concerns
- Define CFSIN data structure and standards and map partners' data to CFSIN standards
- Design tools for effective implementation (for example, Organizational Change Management (OCM) plan and training materials)
- Create predefined reports

2. Outputs

- Environment for collaboration
- Inventory of current laboratory capacity, capabilities, and accreditation
- Environmental scanning results
- Data dictionary
- Environment for emergency response
- Arrangements and protocols for data and information sharing

3. Immediate outcomes

- CFSIN partners are aware of and have access to the network
- Integrated food safety laboratory capacity across Canada through a centralized inventory of food safety laboratories
- Enhanced awareness of food safety risks and hazards supported by analytical and visualization tools
- CFSIN partners are aware of and actively participate in CFSIN governance
- Timely communication and sharing of food safety surveillance data among partners through a centralized pan-Canadian food safety forum

4. Intermediate outcomes

- Increase in CFSIN partners and use for collaboration

- Coordinated response to food safety multi-jurisdictional events through event management and laboratory mapping tools
- Proactive detection and prevention of food safety risks and hazards

5. Ultimate outcomes

- Increase in Canada's reputation as a producer and exporter of safe food products
- Informed program design, risk-based decisions, and strategic priorities related to food safety
- Faster response and resolution of food safety incidents and events

Annex D: Data upload process

The CFSIN Data Upload Process is organized into 3 main categories. Each represents different types of data with specific steps indicating the sequence of actions required (according to the stakeholder).

1. External data

- Partners align their own data to CFSIN standards (External Partners)
- Data is uploaded to the platform via secure folders, automatically generating error reports (External Partners)
- Partners make necessary revisions and re-upload adjusted data as required (External Partners)
- Data is validated and transferred to the CFSIN Database upon successful, error-free upload (Both Science and Digital Services Branch)
- Dashboards in the CFSIN Intelligence tool are automatically refreshed nightly, with new data made available after midnight (Automated Process)

2. Internal data – Chemical

- Request is made for internal CFIA chemical data (Science Branch)
- Chemical data is extracted from MS Access database using an automated extract, transform, load process customized to meet data harmonization requirements (Digital Services Branch)
- Data is stored in the enterprise warehouse and data files are generated for review (Digital Services Branch)
- Data is checked for compliance with extract, transform, load requirements to ensure accuracy (Digital Services Branch)
- Data is aligned to CFSIN standards (Science Branch)
- Data is uploaded to the platform via a secure folder, automatically generating an error report (Science Branch)
- Adjusted data is re-uploaded to the platform as necessary (Science Branch)
- Data is validated and transferred to the CFSIN Database upon successful error-free upload (Both Science and Digital Services Branch)
- Dashboards in the CFSIN Intelligence tool are automatically refreshed nightly, with new data made available after midnight (Automated Process)

3. Internal data – Microbial

- Request is made for internal CFIA microbial data (Science Branch)
- Microbial data is extracted from CFIA's Laboratory Sample Tracking System (LSTS) compiled from annual monitoring and targeted survey reports (Science Branch)
- Data is aligned to CFSIN standards with occasional assistance from the CFIA team responsible for microbial data (Science Branch)
- Data is uploaded to the CFSIN platform via secure folders, automatically generating error reports (Science Branch)
- Adjusted data is re-uploaded to the platform as necessary (Science Branch)
- Data is validated and transferred to the CFSIN Database upon successful error-free upload (Both Science and Digital Services Branch)
- Dashboards in the CFSIN Intelligence tool are automatically refreshed nightly, with new data made available after midnight (Automated Process)

Annex E: Management Response and Action Plan

Recommendation #1

Given the identified utility and adoption challenges, it is recommended that an assessment be conducted to review challenges and opportunities for the way forward for each tool. This review should be undertaken in consultation with the Canadian Food Inspection Agency (CFIA) internal stakeholders and federal, provincial and territorial (FPT) food safety partners. The following should be considered:

- identify key CFIA internal stakeholders and federal, provincial and territorial food safety partners who could participate in the review
- determine and document the current needs of internal stakeholders and partners
- undertake a gap assessment of current CFSIN capabilities versus identified needs of internal stakeholders and partners
- identify and prioritize which tools require attention first
- conduct a comparative assessment to other available tools/capabilities, both internal and external
- based on the analysis, determine the usefulness and way forward for each of the CFSIN tools
- recommend to senior management appropriate actions for redesign/reconfiguration of CFSIN and the emphasis/priorities (including formalizing the roles and responsibilities for implementation with the agency and partners) and
- formal written decision is made about the CFSIN direction for the way forward

Expected deliverables

The CFSIN Team is in the process of implementing a strategy to increase use of CFSIN, focusing on Event Management and Intelligence tools, which offer the most value to CFSIN partners.

To avoid overburdening the CFSIN program and partner resources, consultations with CFIA internal stakeholders and federal, provincial, and territorial CFSIN partners, and assessment of each tool will be conducted in a staged approach, tool by tool.

CFSIN tools and implementation date

- 1.1 Event management
    - April 2025
- 1.2 Intelligence
    - April 2026

- 1.3 Laboratory mapping
    - April 2026
- 1.4 Environmental scanning
    - April 2027
- 1.5 Collaboration
    - April 2027

Complete the following steps **for each of the 5 CFSIN tools**:

A. conduct consultations with stakeholders and partners on each tool

B. prepare assessment of each tool, including challenges and opportunities

C. develop recommendations for path forward for each tool and seek approval from senior management (Food Business Line and Senior Management Committee (SMC))

Implementation plan

- Develop consultation materials
- Consult CFIA internal stakeholders and federal, provincial, and territorial CFSIN partners on their needs, the usefulness of each tool, and challenges
- Document the results of consultations
- Assess each tool, including consideration of other available tools
- For each tool, draft path forward and seek feedback from CFSIN partners
- Seek approval on proposed path forward from senior management (Food Business Line Committee (FBLC), Food Business Line Management Board (FBLMB) Senior Management Committee (SMC))

Recommendation #2

Based on the outcome of Recommendation #1, it is recommended that a work plan be drafted to address the way forward as approved by senior management. This could include:

- results of gap assessment from Recommendation #1
- plans to address barriers and challenges
- steps involved to redesign/relaunch tools (this includes engagement with other federal and provincial partners) and

- performance management framework/dashboard to appropriately monitor the Network moving forward

Once the assessment from Recommendation #1 is completed, CFIA is recommended to:

- approach CFIA internal stakeholders, federal partners, and where appropriate provincial and territorial partners, to determine and action the best approach for integrating CFSIN tools into current CFIA/federal protocols/processes
- actively socialize and showcase the functionality/value of the CFSIN to all internal stakeholders and external partners

Expected deliverables and implementation date

Develop a work plan based on outcome of recommendation #1

- 2.1 Event management
    - September 2025
- 2.2 Intelligence
    - September 2026
- 2.3 Laboratory mapping
    - September 2026
- 2.4 Environmental scanning
    - September 2027
- 2.5 Collaboration
    - September 2027

These activities below will be initiated for each tool after completion of deliverables 2.1 to 2.5 for that specific tool.

- 2.6 Integrate CFSIN into work processes as appropriate
    - December 2025 to December 2027
- 2.7 Socialize value of CFSIN tools to users
    - December 2025 to December 2027

Implementation plan

- Draft work plan for path forward for each tool and share with partners for feedback
- Consult with CFIA and federal partners on processes where CFSIN could be integrated
- Support integration of CFSIN into processes
- Prepare presentation to showcase value of CFSIN

Recommendation #3

It is recommended that the performance and progress of the CFSIN be brought forward to CFIA senior management on a regular basis. It should be linked to internal agency governance to ensure appropriate accountability and action to gain support for the way forward and course correction in a timely manner.

Expected deliverables and implementation date

- 3.1 Proactively integrate with CFIA Governance by providing executive committees with regular updates, and seeking guidance and support as needed
    - October 2024 and ongoing
- 3.2 Prepare dashboard for quarterly performance and progress reporting
    - December 2024

Implementation plan

- Liaise with secretariats and request regular CFSIN presentations on meeting agendas/forward agendas
- Seek input from committees on information to be included in the dashboard
- Draft dashboard and share with committees for feedback
- Finalize dashboard and share with committees

Targeted groups:

- Food Business Line Committee (FBLC)
- Food Business Line Management Board (FBLMB)
- Ops Food Business Line Strategic Committee (FBLSC)
- Senior Management Committee (SMC)

Management response

CFIA management agrees with the recommendations.

Accountability

Lead

Vice President, Science Branch

Support

- Operations Branch
- Digital Services Branch
- Policy and Programs Branch

Contact for deliverables

Director, Food Science Advice and Intelligence Division

Annex F: Acronym list

BIPP

Business, Innovation, Policy and Planning Committee

CAHSN

Canadian Animal Health Surveillance Network

CFIA

Canadian Food Inspection Agency

CFSIN

Canadian Food Safety Information Network

CNPHI

Canadian Network for Public Health Intelligence

CPHLN

Canadian Public Health Laboratory Network

FBLC

Food Business Line Committee

FBLMB

Food Business Line Management Board

FBLSC

Ops Food Business Line Strategic Committee

FIORP

Food Illness Outbreak Response Protocol

FPT

Federal, Provincial and Territorial

GFSI

Global Food Security Index

HC

Health Canada

IMIT

Information Management and Information Technology

IMS

Issues Management System

INFOSAN

International Food Safety Authorities Network

LSTS

Laboratory Sample Tracking System

MS

Microsoft

OCM

Organizational Change Management

OICC

Outbreak Incident Coordination Committee

OPI

Office of Primary Interest

OPS

Operations Branch

PHAC

Public Health Agency of Canada

ROD

Records of Decision

SMC

Senior Management Committee

Footnotes

Footnote 1

As per Evaluation Terms of Reference (accessible only on the Government of Canada network)

Return to footnote 1 referrer

Footnote 2

Statistics: Food recall incidents and food recalls

Return to footnote 2 referrer

Footnote 3

Global Food Security Index (GFSI)

Return to footnote 3 referrer

Footnote 4

Canadian Food Safety Information Network (CFSIN)

Return to footnote 4 referrer

Footnote 5

CFSIN logic model Annex C

Return to footnote 5 referrer

Footnote 6

CFSIN Management Board Terms of Reference

Return to footnote 6 referrer

Footnote 7

This committee aims to strengthen Canada's food safety system by enhancing FPT government leadership and partnership in food safety in a forum that encourages open dialogue and consultation between members. Membership includes 4 federal departments (Health Canada, Agriculture and Agri-Food Canada, Public Health Agency of Canada and the CFIA) as well as 13 provincial/territorial members from both health and agriculture portfolios.

Return to footnote 7 referrer

Footnote 8

The BIPP committee was disbanded in December 2022.