FFC

FARM OF THE FUTURE CLEARINGHOUSE

INVITATION TO SPECIALTY FOOD PRODUCERS, RESTAURANT GROUPS, MEAT PURVEYORS, AND OTHER INDUSTRY-LEADING FOOD BRANDS TO JOIN A NEW NON-PROFIT, MULTI-STAKEHOLDER ORGANIZATION COMMITTED TO TRANSFORMING THE WORLD OF MEAT PRODUCTION.

SPRING 2019

Overview

Farm of the Future Clearinghouse (FFC) is a non-profit membership community working to facilitate the transformation of meat production. FFC utilizes a proven technology platform to harmonize interests of meat buyers, meat producers and processors by mapping, visualizing and assessing supply chains.

Objective

FFC is establishing a "central tent" or community that advances differentiated meat produced with elevated standards. FFC members can use this platform for various stages of ethical sourcing practices and to work together to bring about faster and more sustainable change to the world of food.

FFC plans to:

▶ Engage with buyers to provide them an organized way to inspect their supply chains, and to use the leverage buyers have to accelerate supplier capacity building.

▶ Engage with producers and processors to help them identify how to do food production the right way profitably.

▶ Reward producers and processors that do things the right way with opportunities for more business.

▶ Engage with industry trade associations to help them contribute knowledge and energy towards a greater purpose, and to help them promote their members.

▶ Engage with food certification bodies to provide them better technology tools if they need them, and allow them to increase their visibility among buyers.

▶ Establish the proper IT architecture and organization of industry working groups to facilitate greater industry change.

Background

For the past fifty years the US meat industry has focused on efficiency. That efficiency has driven the concentration of work into larger factory farms, finishing feedlots, and into the hands of larger producers and processors. It has also resulted in unfortunate animal welfare practices, and the use of feed additives and antibiotics that are increasingly out of line with public health and consumer interests.

The world of US food production began to change with the publication of groundbreaking books like Michael Pollan's *Omnivore's Dilemma* published in 2006. Many restaurants and chefs were the first to pick up the call to action, and they created farm-to-table menus that rewarded producers doing things the right way. Since then, discriminating consumers have increasingly demanded food produced with elevated standards, and the market has responded. Today we have dozens of food quality certification schemes, alternative food sourcing and delivery choices, and more and more brands have declared elevated sourcing standards promising to bring about systematic and lasting industry change. Yet in reality, less than 90% of the pork sold in the United States is still raised in factory farms, and a majority of the beef produced in the United States is still finished on corn in concentrated feedlots. Producers and processors willing to raise animals the right way are often smaller family owned farms and ranches, and indeed have struggled to scale and grow beyond the niche market level. At the same time, consumer demand in meat and other foods produced the right way continues to skyrocket, leading more and more restaurant chains, food purveyors, farmer's markets, innovative home delivery services, and others to establish supplier codes-of-conduct, and to inspect producers and processors. This, along with the proliferation of food certification schemes, has led to uncoordinated and overlapping producer and processor inspections and audit fatigue.

There is no lack of passion to change the US food system, and every year there are dozens of conferences, symposiums and industry meetings dedicated to that very topic. Venture capitalists have taken notice to the increased interest in changing the world of food, and they have funded and are funding innovative companies and technologies with considerable promise to change the world of food. However, while there have been some notable examples where the development of technologies (such as the internet and personal computers) helped transformed industries, technology adoption cycles are often much longer than anticipated, and very often fall short on promise.

We believe industry leaders are needed to transform industries, and that the right IT architecture has to be established first in order to accelerate more rapid adoption of breakthrough technologies. Great cities did not happen by accident. They had architects and leaders that had a vision and an organized plan, and leaders worked together to implement a vision of a city rather than in a silo. Unfortunately, that is not where we are currently at in the US food production. There is no lack of good work taking place, but often this work and the related data this work produces resides in silos, and no one is addressing the overall IT data architecture, or organizing the leverage buyers can bring to transformation in a systematic and organized way. Faster and more sustainable transformation of the US meat industry will happen if meat buyers can help smaller and medium size producers identify areas for improvement and guide them with practical and cost-effective advice; and reward producers doing things the right way with more of their business.

The Fair Factories Clearinghouse is a multi-stakeholder initiative (MSI) (501(c)(3) tech platform – originally developed to improve complex consumer products supply chains.

www.fairfactories.org

- Over the last fifteen years, FFC has built almost a dozen industry focused clearinghouses and communities – each set to modernize diverse supply chains through layers of integrity.
- Collectively, FFC's work has impacted the lives of more than 20 million workers in a 150 countries.

We have spent the last two years researching the world of U.S. meat production, and we believe we have the knowledge from our successful work in other industries to make a meaningful and sustainable contribution to accelerating the pace of change to do U.S. meat production right. Transforming the world of U.S. meat production will not be an easy journey, but creating an environment where industry leaders can work together towards a common vision is a proven catalyst for faster and more sustainable change.

Non-profit & Multi-Stakeholder Initiative (MSI)

We've established Farm of the Future Clearinghouse as a non-profit multi-stakeholder initiative for the following reasons:

- A 501(c)(3) is a proven organizational approach to solving large, complex industry transformations that are too big for any one company to tackle on their own.
- A 501(c)(3) is mission based to bring about transformation, not profit focused to optimize commercial interests for shareholders or investors.
- A 501(c)(3) can establish the correct multi-stakeholder governance that will build trust among participants.
- A 501(c)(3) can de-identify individual company data and aggregate it for education and benchmarking purposes without fear it will be used commercially.
- A 501(c)(3) can attract grants and other foundation investments to help accelerate progress.
- A 501(c)(3) will significantly lower the cost of important and necessary industry developments and share them among participants, and a lower participation costs means a lower barrier to entry, allowing more companies to participate.
- A 501(c)(3) can employ talented architects and systems analysts to facilitate industry work groups to turn passion and energy to needed action.

Timeline

After two years of listening, assessment and planning, Farm of the Future V.1 will launch July 1, 2019. We have established plans to work with launch partners for version 1, and will enact an iterative approach to integrate the needs of different stakeholders involved in the initial release. We have developed a three-year product roadmap of concerning subsequent product releases that we believe will be the catalyst to transform the world of US meat production.

The Immediate Need

The current industry approach and IT architecture of distributed and uncoordinated farm databases is leading to duplicative efforts and farmer audit fatigue, and is still not resulting in fast enough and sustainable industry change.

a) The FFC configuration capability and core functionality are a very high functional fit to the US agricultural industry supply chain requirements and very few customizations are needed to allow companies to begin.

b) Elevating meat standards is an important catalyst for change, but the need for establishing control over supply chain and provenance applies to other food products.

c) FFC's non-profit organizational structure is a proven and effective method for industry leaders to join together, start fast and iterate significant progress over time and can create the technical foundation necessary for many organizations committed to improving food systems so they can collaborate.

Upcoming milestones

APRIL 2019 – Initial work has begun integrating current Farm of the Future build with anchor customers supply chain, sub-suppliers, buyers, and other 3rd party stakeholders.

JULY 2019 – Farm of the Future V.1 launches leveraging the framework of anchor customer supply chain and initial requirements.

SEPTEMBER 2019 – Farm of the Future launches V1.X including deeper integration with diverse stakeholders, and more supply chain nodes.

JANUARY 2020 – FFC will hold an industry summit of founding members to report on initial deployment results and to plan 2020 development priorities.

FARM & ANIMAL REGISTRY

FCC WE'RE **HERE** NOW

20% 60% 100%

Due Diligence | Technology | Users & Adapters | Farm Registry | Animal Registry

Long-Term Goal

51% OF ALL DOMESTIC MEAT SOLD within a decade to meet the differentiated standards of a balanced scorecard that includes animal welfare, soil health, human health, farm worker improvement, and environmental protection.

YOU'VE WORKED HARD TO BUILD YOUR FOOD BRAND AND DIFFERENTIATE IT BASED ON ETHICAL SOURCING STANDARDS, INTIMATELY KNOWING YOUR SOURCES OF SUPPLY...
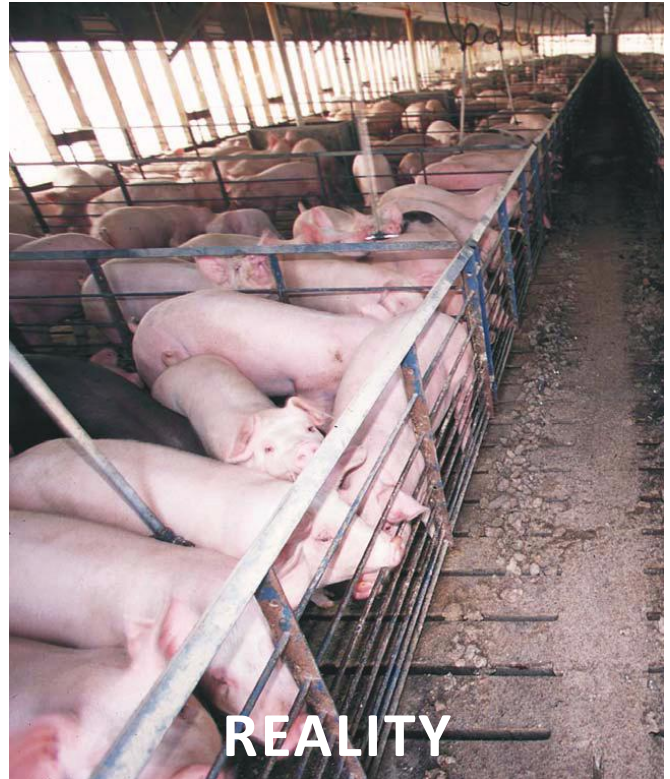
YOU'VE ESTABLISHED A DEMANDING SUPPLIER CODE OF CONDUCT, YOU PERIODICALLY INSPECT YOUR SOURCES OF SUPPLY, AND HOLD FARMERS ACCOUNTABLE TO YOUR EXACTING STANDARDS...

YOU PRIDE YOURSELF ON SUPPORTING THE FARM TO TABLE MOVEMENT AND DOING EVERYTHING YOU CAN DO HELP AND PROMOTE FARMERS THAT ARE PRODUCING FOOD THE RIGHT WAY...

EXPECTATION

REALITY

BUT WHAT IS THE COST TO YOUR BRAND IF JUST ONE OF YOUR SUPPLY SOURCES IS FOUND TO BE NOT MEETING YOUR DEMANDING STANDARDS?

Do you have a record keeping system to document your supplier assessments in an organized way?

Can you easily flag farm issues and identify corrective actions to help the farmer get better and keep you as a source of supply?

Are you contributing to farmer audit fatigue by applying overlapping standards and uncoordinated farm visits?

Do you know if other brands source products where you do, and are you collaborating to get better results?

Can you map your supply chain to the level of details that consumers will eventually demand?

Can you report publicly on your efforts to support the things that consumers increasingly care most about: clean water, soil health, animal welfare, carbon footprint reduction, farmer livable wages?

Can you scale your business by easily finding new sources of supply that meet your demanding standards?

Are you overly dependent of distant sources of supply, and want to identify and develop more regional sourcing strategies that can meet your elevated standards?
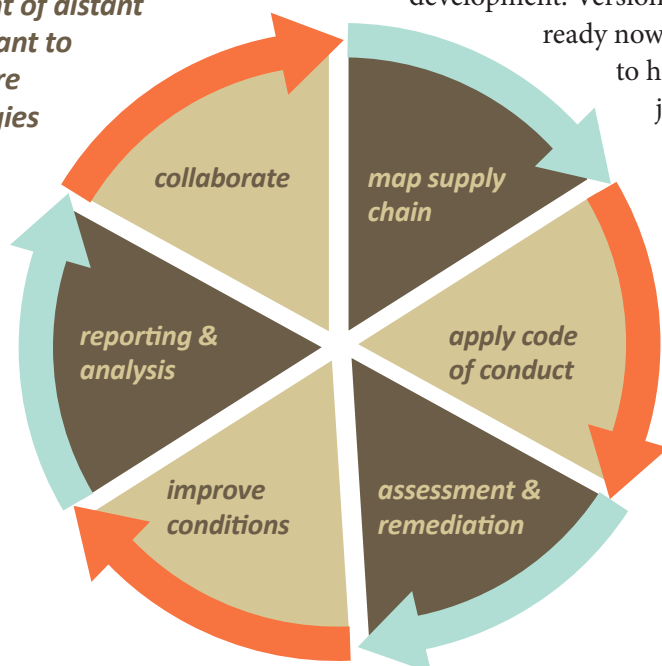
Out of the box supply chain monitoring

Farm of the Future (FFC) can offer brands that have already declared elevated standards for meat production an out-of-the-box solution to back up their supplier code of conduct with a proven supplier record keeping system, but FFC is much more than that. FFC is a non-profit multi-stakeholder organization with a mission to bring about significant industry change. We offer participants a way to work together to get greater and faster results both on their own in regards to their own supply chain, but also together as an industry. By applying technology already successfully deployed for years in other industries, Version 1.0 of the Farm of the Future clearinghouse is ready to jumpstart motivated leaders of elevated meat into action.

While FFC's community platform may have a simple to use interface and front end for all stakeholders, the behind the scenes sophistication of the platform evolved because brands in diverse industries worked together to get greater results. As a result, FFC is uniquely qualified to handle the most sophisticated and demanding supply chain challenges – quickly, and without years of additional up-front system development. Version 1.0 of Farm of the Future is ready now, and packed with capability to help brands accelerate their journey to improve the integrity and provenance of supply.

collaborate

map supply chain

reporting & analysis

apply code of conduct

improve conditions

assessment & remediation

Product details
(available in Version 1)

1. MAPPING THE SUPPLY CHAIN

The food supply chain can be complex and quite different depending on the type of products. Food buyers need an easy-to use tool to define their supply chains to the level of detail needed to monitor the risks to their brand reputation.

Supplier profile

A primary supplier is central to setting up and using FFC. This might be a farmer or rancher, but FFC's flexible architecture allows members to identify other types of primary suppliers that produce non-meat products like vegetables, fish, and shellfish. An FFC brand member may create supplier profiles for some or all of the primary suppliers that they source from. Brand members can create these supplier profiles on the system one at a time on-line, or they can upload their entire supplier list using a simple MS-Excel import tool.

When a brand member enters a new supplier, FFC will automatically check to see if the supplier is already in the database to prevent duplicate suppliers. This sophisticated computer matching establishes a linkage between suppliers and everyone that is actively working with that supplier. Members may individually decide if their company name is invisible (no other FFC member knows the brand is on the platform) or that the brand is hidden (meaning another brand member may contact a hidden brand in a double blind communication system.) However, no other FFC members will see where a brand sources products unless an FFC brand member chooses to be transparent about their sourcing locations.

Public supplier information

Every supplier profile on FFC is divided into public information and private information. Public information includes common supplier information similar to a yellow page directory. This might include supplier name and address, key contacts, and GPS

THE FOOD PRODUCTION CHAIN

Production

Processing & Distribution

Restaurant & Retail

Home & Restaurant Consumers
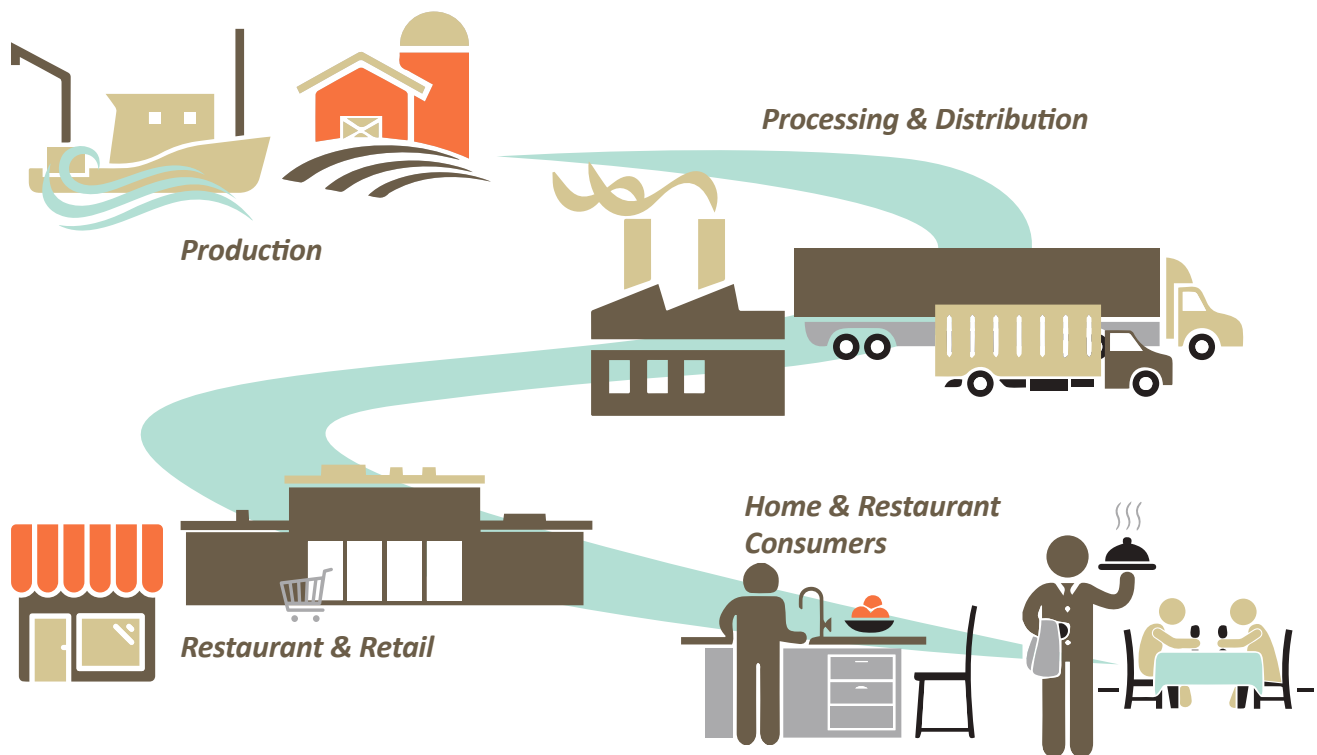
location. Over time suppliers might add additional yellow page information to their profile including a link to their web site, photographs and videos, documents that might show their products and explain more about their practices.

Member specific private information

Each FFC brand member may also store private information about any supplier and then control access to this information through configurable security permissions. Private information might include what the brand is buying from a supplier, other private contact details, and indicators of size of the relationship that might be useful for reporting. FFC brand members will often store the internal supplier ID they have assigned to this supplier that is from their ERP or purchasing system so they can generate reports using their internal supplier numbering system. In addition, there are numerous customizable fields that each member can use to easily collect other supplier attributes, and these can be turned on or off without programming.

FFC can support supplier segmentation strategies based on type of supplier or risk

We know that supply chains can be complex and suppliers are not at all the same. Brands work with different types of suppliers to source different products, and different products require different processes. We also know that suppliers have different levels of capability in meeting a brand's supplier code of conduct. Segmentation of suppliers can be an important way for FFC brand members to easily identify how suppliers are currently positioned in regards to their supplier monitoring program, or to allow them to easily alter their supplier inspection strategy and frequency based on supplier type, or perceived risk.

FFC brand members can easily classify suppliers by type, and apply member configurable supplier designations. For example this might include brand member unique designations such as new supplier, not yet approved, or supplier under probation. Designations can also be used to identify suppliers that have reached a higher level of compliance that could

reduce the frequency and type of ongoing assessments.

FFC lets you optionally establish and monitor interconnected supply chains

Once a FFC brand member has set up the primary suppliers they wish to monitor, they can stop there and keep the system simple, or they can decide to expand their supplier monitoring to interconnected upstream and downstream supply chain partners. The choice to go deeper into a supply chain is up to each brand member.

The FFC system is roles based, and when brand members want to extend their supply chain monitoring to deeper levels, they can create roles and permissions for new supply chain actors, and can do this with easy-to-use configuration tools. Some examples where this could be useful in meat production include: A FFC brand member could identify where a farmer gets their animal feed, and could use FFC to record and store feed supplier certifications for the animal feed. A FFC brand member could identify the farm's primary veterinarian, and use FFC to collect information on animal vaccinations and antibiotics used. A FFC brand member could identify a farm's primary and secondary slaughterhouses and use FFC to conduct and record inspections at those facilities. If a farm sources animals from another farm, a FFC member can identify the supplying farm as a sub-contractor, and use FFC to record any inspections at that farm. FFC supports the ability to easily create visible supply chains that link primary and secondary suppliers together, and inspections can be applied to every supplier in the network.

FFC supports off-line and on-line supplier engagement

Some FFC members prefer to work with suppliers off line delivering them a professionally prepared inspection reports noting any inspection findings and issues. FFC has an easy-to-use PDF report configurator for each brand member to tailor and brand their supplier inspection reports. These members may then use their own staff or third parties to update the FFC system as

to supplier corrective actions. Other FFC members prefer to bring suppliers on to the system to view inspection reports and report progress on corrective actions that have been identified.

When a brand member wants to bring a supplier online, the supplier will have a single FFC system log in regardless of how many FFC brand members might be sourcing products from them. When the supplier signs in they will identify the FFC brand member they want to connect with, and once they connect with that brand member, their access screen and system permissions dynamically change to perform the specific work that that a particular FFC brand member wants them to do. The supplier single sign-in approach greatly reduces supplier training and on-boarding when and if a brand members wants to invite a supplier to engage directly on the FFC system.

FFC recognizes the value of getting the suppliers engaged and on-line, and so we do not charge suppliers a software license fee to come on-line to engage with a buyer. FFC also plans to offer information and tools for producers to encourage them to be active participants in the community over time. See more discussion about this in the product roadmap.

FFC supports the creation of a universal supplier directory that we believe is a necessary foundational building block for greater industry change

When brands use FFC to manage and monitor their own supply chains they produces an immediate and powerful side benefit. The meat industry currently lacks a single, trusted industry supplier directory, and there is no single place where a producer can post important information about their capability and easily share it with interested buyers. Sure, a brand can find what farmers are certified organic by looking at organic certification databases, or possibly looking at the farmers own website. A brand can find out what farmers are certified for different animal welfare schemes by looking at the databases operated by animal welfare certification groups. However, while these special purpose databases

Numerous credible meat certification schemes

- *Currently, certification schemes rely on audits and farm inspections*
- *Many are narrowly focused on one or two dimensions – e.g. animal welfare*
- *There are few global standards, many are national, but there are some that are regional and at the state level*
- *Farm of the Future seeks to create a structure to leverage current best practices*

do good work, they are information silos, with no attempt to harmonize supplier master data, and are not designed to support greater industry collaboration outside of their specific area of specialty. One of our initial goals is to make the Farm of the Future Clearinghouse a trusted and universal producer and processor directory, where producers and processors have just a single long in. Also, because FFC was designed as a sharing and collaboration community from the ground up, producers and processors can use FFC as a way to share important information efficiently. This will take on even greater importance when FFC adds additional producer record keeping features in the future. And, since Farm of the Future is a multi-stakeholder community, every participant can contribute to the supplier yellow pages directory and help it grow as additional brands, certification groups, trade associations and others join FFC.

FFC lets you search for a current or new supplier

One important FFC brand member benefit is searching for existing and potential new suppliers. Supply chains can be very large especially when they have been extended to include subcontractors and other supply chain partners.

FFC supports multiple ways to search for current and potential future suppliers, including interactive maps, and useful search wizards with powerful search filters. FFC brand member can also easily identify frequently used suppliers as favorites and add them directly to their home page dashboard to provide even easier access.

Number of active farms by country between Jan 2019 to Mar 2019 - 49

United States of America: 4 Farms

Hover over a country in a map widget, and the number of producers in the database appears.

List of farms in United States of America

Account Id ▲	Account Name	Account Type ⇕	Supply Chain ⇕
7800	Brown Boar Farm		⌣
7875	Excalibar Farm		⌣
7894	Happy Goats Farm		⌣
8156	Cluck Cluck Chicken Farm		⌣

10 records per page   Search: Print PDF Copy CSV Excel

Showing 1 to 10 of 750 entries   Previous 1 2 3 4 5 ... 75 Next

Click on the popup and a list of producers in the country appears. This list can easily be printed, or exported to MS-excel. This is just one of the ways to search for producers.

Product details
(available in Version 1)

2. APPLYING A CODE OF CONDUCT

As a brand, you have probably taken the time to define supplier code-of-conduct principles that represent what your brand believes in. These principles might include commitments to soil health and regeneration, organic practices, humane treatment of animals, and protection of workers and the environment. These supplier codes of conduct are at the heart of a brand's pledge to their customers, and they represent the backbone of a brand's supply chain monitoring. The pledge a brand makes to their customers may be totally unique to their company as a way to differentiate their brand, or they may be based on some industry standard supplier inspection standards.

FFC is used to working with industry brand leaders that push the expectations of acceptable supplier practices. From day one, FFC decided to be standards agnostic and support any and all supplier inspection methods and standards. As a result, FFC invented and maintains an easy-to-use assessment creation tool that allows FFC members to envision and implement any number of easily configurable audit and assessments instruments without programming. This powerful tool allows members to easily fit FFC to their existing supplier inspection processes rather than having to re-engineer existing processes to fit a new system.

Example of user configurable assessment instruments without programming.

FFC has an open architecture to support unstructured and structured assessment data side-by-side

FFC is a supplier data repository that must support every type of data a member wishes to collect about a supplier. We do this by providing tools that let members create and manage structured and unstructured data types.

Unstructured data: When a brand visits a producer or processor, they may take photographs, collect maps and proof of certifications, write trip reports with observations, and gather other important documents like licenses, and production records. FFC provides easy-to-use tools to properly tag and store these unstructured data types, and attach them to the brand specific supplier private area where they can be searched, shared, and compared over time. Imagine how much easier a brand's ongoing supplier data collection work could become when a producer or processor has their own system log-in to a common directory and they can post and maintain some of this background information themselves. It would also free the producer from having to provide similar documentation for every brand that they work with.

Structured data: While FFC excels at managing unstructured data types, it really differentiates itself by letting brand members create and manage unlimited special-purpose data collection questionnaires without the need for programming. Structured data formats are the key to getting better results because each and every data element can be queried, tabulated, analyzed and used for value added work. Structured data formats can also support automated workflows, generate messages and alerts, and allow for logic to support follow up actions. Brand members can translate their supplier codes of conduct into standard assessment instruments that can be used for supplier inspections; and FFC's assessment building tool can help brand members create structured data formats for many other data collection purposes. FFC also supports any number of out-of-the-box assessment scoring scenarios, and specializes in "Smart Audits" where the assessments can change dynamically in

Unstructured data

structured data

response to answers to earlier questions. Assessment questions can be easily organized and grouped into categories and subcategories that are useful for reporting and data analysis.

FFC can support supplier self-assessments as the first step in a supplier qualification process

Many brands like to qualify a new supplier by asking them to complete a supplier self-assessment as the first step in the supplier qualification process. These formats can be very specialized and help establish background information on a supplier. FFC has supplier self-assessment tools available out of the box for the members that want them.

FFC can support internal and external inspection teams

Some FFC brand members have employees that con-

An example of user configurable assessment question grouping categories.

duct supplier assessments. Other FFC members use external companies to conduct supplier assessments, while other members use a combination of internal and external inspectors. The good news is FFC has a complete assessment scheduling system that allows brand members to assign assessments to internal or external staff.

Some external audit firms will prefer to use their own system to conduct supplier assessments and they delver the results to brands in the form of a PDF report. FFC brand members can create an audit header for these documents so they can be tagged for searching and load them to the FFC platform. However, because they are unstructured documents they are not easily used in reporting, or data analysis. If an external audit firm system can produce an output of a supplier inspection in structured file format such as MS-Excel these audits could be loaded to FFC as structured assessment providing full reporting and data analytics. Finally a member can create a role for an external auditor and request that the auditor conduct the supplier assessments using the structured

questionnaires developed on the FFC system. Similar to suppliers, external auditors have just a single sign-on to FFC regardless of how many brand members they might do work for.

FFC can support unlimited and simultaneous assessment types

As stated earlier, supply chains can have different supplier types for different products, and suppliers can be at different levels of sophistication in regards to meeting a brand member's code of conduct. Through supply chain segmentation and supplier designations, brand members can easily apply different and simultaneous inspection instruments to meet specific needs. For example, a brand member might want to use a more rigorous inspection instrument for a new supplier, or they may have a standard questionnaire for all suppliers and then additional chapters for specific supplier types. The flexibility lets members deploy supplier inspection strategies that are practical and appropriate for specific supplier types.

An example of simultaneous assessment instruments to select from.

FFC can provide flexible ways to score assessment results

FFC provides flexible assessment scoring approaches. Members can use simple pass/ fail inspection questions, or develop more sophisticated overall scoring approaches. While defining scoring options for each question, member may identify responses as remediable or not, correct or not. At runtime, the system will automatically generate a corrective action plan entries for each area of non-compliance. FFC can also provide scoring tools to allow brand members to rate the overall assessment that include (but are not limited to) weighted scoring, threshold setting, grade score calculation and much more.

FFC can support collecting data beyond supplier compliance inspection assessments

FFC's assessment configuration tool allows brand members to create as many supplier structured data formats as needed. Want to record training that took place at a supplier detailing the training that took place? No problem. Just self-build a new data collection record type without programming. Want to store soil analysis? No problem. Just self-build

a data collection format to contain soil measurements. However, another benefit of participating in a multi-stakeholder initiative is the availability of working groups to create new standardized data collection types rather than each brand member having to tackle them by themselves. Working groups will become even more important as new technologies are introduced to using sensors to continuous supplier monitoring. Working groups can define interface standards that support automated data integration.

FFC can support supplier inspections as frequently or as infrequently as you want

FFC brand members decide how frequently they want to conduct supplier assessments, and how deep in the supply chain they want to go. FFC provides easy-to-use scheduling tools and workflows to assist in the inspection process. These workflows can have automatic follow up dates for ongoing monitoring.

FFC can support different organizational approaches to supplier monitoring

FFC has experience in working with very small brand members that have just a single part-time vendor compliance staff member, or with very large global companies with many brands, hundreds of products, and dozens of internal and external supplier assessors. FFC provides tools to allow members to establish vendor compliance strategies that fit their organizational structure now and in the future. Want to organize supplier inspection by country? No problem, this can be done through configuration. Want to organize supplier inspection by product type and geography. No problem, this can be done through configuration! Want to organize supplier inspection by brand with the exception of certain products? No problem, this can be done through configuration.

Product details
(available in Version 1)

3. ASSESSMENTS & REMEDIATION

Once a FFC brand member has established the supplier data collection and assessment tools they wish to use, they may begin to schedule and conduct supplier visits. FFC provides an easy to use calendar tool to allow each member to schedule supplier visits. Visits can be announced or unannounced (supplier does not know you are coming) and visits can be for various reasons. As stated earlier, internal staff or external hired assessment specialists can conduct supplier assessments. FFC handles all of the work-flows related to the scheduling.

Working in the field and remotely

FFC's software dynamically scales to fit a computing device screen size so our software can operate on desktops, laptops, tablets and smart phones. However, reliable internet access is not always available when working remotely, so FFC has designed two tools to optimize the work of supplier inspections.

Offline alternative audit methodology: This tool allows a field worker to download a brand member's assessment instrument to MS-excel and to complete the assessment off line at the supplier location. When completed, the field worker may upload the results in an easy and secure file transfer and the inspection results are posted directly into the FFC database as if the assessment was conducted on-line.

IOS and Android native applications: FFC also supplies specially developed tools for field workers using Android and iPad mobile platforms. These tools use native tablet technology to create an easier-to-use field worker experience.

Collecting supplier background information and evidence of out of compliance situations

When a field worker visits a supplier they might want to document general supplier information. They can post photographs, videos and other supplier general information to the brand member private area for the supplier. If an supplier inspection uncovers a supplier practice that is out of line with a member's code of conduct, a field worker may want to collect evidence of the non-compliance, and attach it to the specific assessment question. This evidence might be a photograph, or video, a voice recording or another document type.

Professional inspection reports delivered to the supplier

Once the field worker has completed a supplier assessment and the results are posted to the FFC platform, each FFC brand member can decide how they want to engage the supplier in seeing the results of a assessment. Many FFC members will want to produce a professional assessment inspection report and FFC provides a easy-to-use PDF report writer to produce a standardized inspection report. This includes the brand member's company logo, a summary of their supplier code of conduct, and the inspections results including any failed conditions, evidence, and corrective action plans expected. These reports can also include brand member specific assessment scoring. Some brand members download failed inspection conditions and corrective action plans to an excel file and deliver that to the supplier.

Optionally, FFC can also provide ways for the supplier to come directly onto the platform to view an assessment report and respond to corrective actions.

Example of the configuration tool each brand can use to customize the appearance of their supplier inspections.

Example of the customized PDF assessment report to give to the producer or processor.

Product details
(available in Version 1)

4. IMPROVING SUPPLIER CONDITIONS

The reality is no supplier is perfect in every way. A brand member may be working with a new supplier that is not familiar with the brand's expectations. Or perhaps a brand member has an existing supplier that has slipped backwards. When a supplier assessment uncovers supplier conditions that do not meet a brand member's defined supplier code of conduct, each brand member will need to make a decision as to what they are going to do.

Brands in the meat industry work hard to find and develop suppliers that can meet their stringent supplier codes of conduct, and there is a shortage of good suppliers so this may be in a brand's best interest to work with a supplier to help them correct deficiencies that have been identified. On the other hand, a supplier inspection might have uncovered threshold issues so severe that a brand member may want to put the supplier on probation, or exit the relationship completely. FFC's flexible assessment scoring can help guide brand members. If a brand member chooses to put a supplier on probation or exit the relationship the supplier designation status can quickly change to remove the supplier from active sourcing locations. If a brand member chooses to work with a supplier to help them build their capacity to meet their standards, a corrective action plan (CAP) is a useful tool to do so.

FFC tools have been used to conduct tens of thousands of supplier audits and assessments, and so have many corrective action plans features to help brand members treat a supplier fairly, but firmly to bring them back into compliance to your company specific supplier code of conduct. Failed conditions are grouped into common categories useful for reporting and tracking, and remain open until they can be verified that any issues have been resolved. FFC can also record root cause analysis so members can create proper supplier training to reduce and

eliminate the actual situations that are leading to out of compliance situations.

Example of an automatically generated corrective action plan.

Document repository (in V1)

To assist members with supplier capacity building, FFC offers a document repository for brand members to store and share useful information with their supply chain partners. If a brand member has a supplier code of conduct written in several different languages, each language version can be stored in the document manager and suppliers be given access rights to down load. If a brand member has created a supplier power-point presentation or training video, brand members can store these materials here as well as share them with their supply chain participants.

Example of user configurable document repository.

Product details
(available in Version 1)

5. REPORTING AND ANALYSIS

FFC offers a variety of reporting tools to meet the experience levels and sophistication of brand members. Brand member supply chain assessment data stays in the system as long as the brand member wants to keep it there. As brand members collect more supplier assessments over time, they can use reporting and data analytics to determine common issues across many suppliers, and root cause issues. Many existing FFC members us FFC as a way to collect, report and share with the investment community the progress they are making in their supply chain sustainability efforts. This includes progress they are making under the UN strategic development goals (SDGS). However, to produce reports with this level of public understanding it is important to collect data in ways that can be reported easily.

FFC reporting tools consist of tools consist of three types:

Widgets: Widgets are interactive data displays that FFC develops for brand member dashboards so every brand member regardless of size and number of staff, can have some basic dashboards if they want them. Each member system administrator can decide to turn widgets on or off, and delegate further to their users. These data displays might be real time, or might include historical time series data comparisons. Widgets are usually based on once a month data summarizations, and they appear automatically providing all members with some level of visual data display. Widget data can be exported to MS Excel for additional analysis.

User configurable reports (UAT): FFC provides an easy to use reporting tool that systems administrators and others can use to produce on demand reports from their data. All results can be exported to MS-excel for future analysis. These reports can be stored in a library and reused over and over. They can also be scheduled to run at specific times every month. Users can easily select the data elements in the database they want to report on, establish data filters with ease, and choose data sort orders and presentation orders all without programming. UCR is one of FFC's most used and popular features because it lets brand members respond immediately to any unanticipated reporting need.

Embedded data analytics: FFC also includes an embedded industry leading data analytics environment from Logi Analytics for members that want to conduct even more sophisticated data analysis.
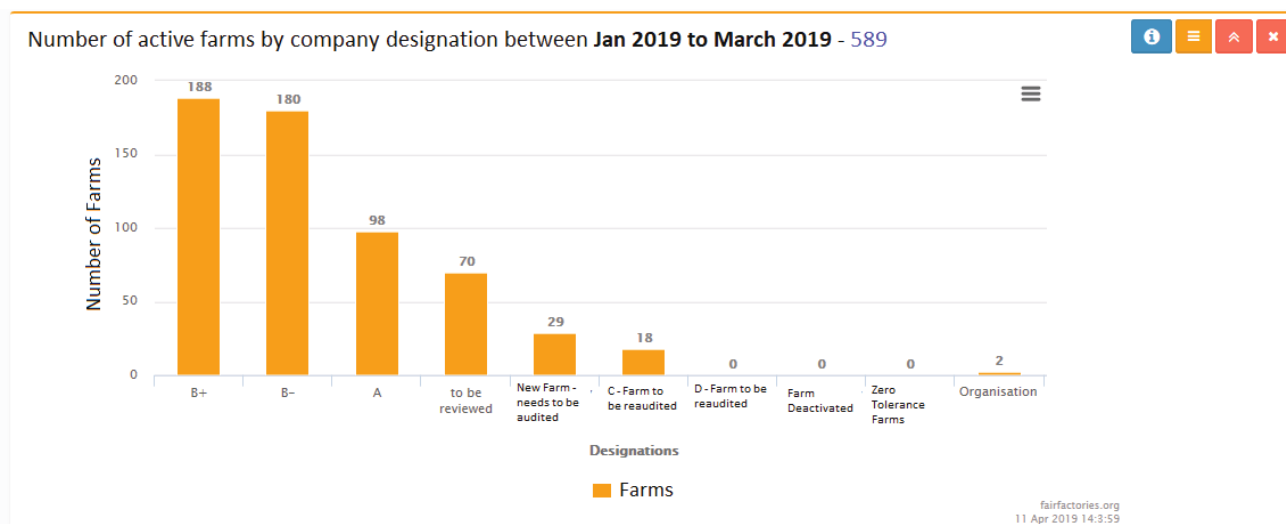
Example of a widget that is included on a user's dashboard.

Example of how a user creates a real-time custom report. Data elements available for reporting are selected in the left box and show in the right box.

VISUAL OVERVIEW TO YOUR COMPLIANCE ACTIVITIES

As a FFC brand member's supply chain monitoring expands, the number of details and activities brands members need to manage increases. FFC has more than a decade of experience helping brands efficiently manage supplier compliance, and has developed effective dashboards, and communications strategies to help compliance staff stay productive and focused on the most important things they need to do to be effective.

User roles and security

Underlying the FFC Platform is a comprehensive system of roles-based administration (RBA) that governs the rights of all logins. At the very top is the member super user administrator that becomes the security roles manager for each brand member's entire user community within the system. The super user administrator can control, at a very granular level, the access rights to specific data (such as assessments) by policy on a large scale, as well as by exception on a very fine scale. The super user administrator can control access to data types by security role (e.g., employee, manager, auditor, supplier, etc) and can then further control access to specific data using an additional system of data access control.

Dash boards

Every user on FFC has a dashboard specific to their role and system permissions. As permissions for systems roles change, the FFC look and feel for specific users changes dynamically for them to do their job. This creates user interfaces that are uncluttered and specific to user roles. Every screen and data element is designed intuitively to support occasional and frequent users, and offer context sensitive help. User dashboards include only the menu items a role will need to do their job.

Dashboards can also contain favorite suppliers to short cut look-ups for frequently used contacts, and will contain frequently used reports and data displays.

Broadcast messages

FFC or member super user administrators may send broadcast messages to all or part to their supply chain participants. These broadcast messages will appear on each users dashboard.

Calendar, messages and alerts

FFC offers a user specific calendar as a visual overview of upcoming activities, and a centralized messaging area to consolidate all emails, system messages and system-generated alerts. FFC includes built in workflows for important processes, and FFC user do not have to sign into FFC to receive important system messages. Users can self-configure that FFC messages can be forwarded to another email and the messages can be configured to take the user directly to FFC to perform an action.

Example of personalized calendar that is available to schedule tasks, display upcoming activities, and alerts. Colors can depict different types of activities.

Product details
(available in Version 1)

6. COLLABORATE

FFC was designed from the ground up to be a collaboration and sharing community. FFC knows from years of experience that supplier auditing is not foolproof, as audits by definition are a snap shot in time, and very few brands have the resources to visit every supplier frequently. We also know that suppliers are already feeling audit fatigue with buyers, and certification bodies visiting them with uncoordinated inspection instruments.

One of the major benefits of Farm of the Future is to bring this brand member auditing under a common umbrella and have it done in a more coordinated way. Buyers have the most significant leverage to bring about positive market changes with suppliers, and that leverage increases when buyers collaborate together with common goals and purpose.

FFC's experience in other industries tells us that collaboration among Farm of the Future brand members will not be an immediate priority. Before brand member collaboration can take place, buyers need to define their supply chains, and begin to conduct assessments, and they have to become comfortable with their own compliance program before they will actively engage with other brands.

However, in other industries we have worked with, FFC has seen brand collaboration go through several evolutionary phases, and we fully expect the meat industry will be no different.

Phase 1: Baby steps towards collaboration

Collaboration often begins when compliance staff at member companies are given the opportunity to meet and interact with compliance staff from other brands. FFC hosts an annual user meeting and our member survey feedback consistently reports networking with other companies as one of the greatest FFC benefits. Just the simple sharing of best practices among members leads to harmonization of approach over time providing suppliers with a more consistent inspection expectations. FFC version 1 has tools for members to share best practices and communicate with each other.

Phase 2: Focus on 'low hanging fruit'

Once FFC communities are built and are active, participants might focus on tackling the easiest issues first. Any one that has ever been involved with group work knows that collaboration with others takes time and effort and if not properly facilitated, a group's efforts can lead to frustration and abandonment if the collective effort does not produce tangible results.

Low hanging fruit is a way for communities to test the water on working together to see if working together can be effective. FFC has experience on facilitating working groups and project methodologies to help working groups stay on track. Examples of low hanging fruit might be, creating a more universal supplier self-assessment so it can be completed once by a supplier and shared with interested buyers, rather than each buyer initiating this work in a different format.

Phase 3: Increased industry collaboration and new ways of working

When communities and working groups see tangible results from 'low hanging fruit,' they build confidence and start to recognize that they can tackle even bigger challenges. As said earlier, effective supplier auditing is necessary to protect the reputation of any brand that is built on elevated supplier standards. However, we know from years of experience that supplier auditing on its own will not bring about significant sustainable industry change. In fact, uncoordinated auditing can produce negative industry effects like supplier audit fatigue. Reducing audit fatigue and redundant auditing requires greater harmonization of approach and sharing of inspection results, and yet the very nature of competition gets in the way of greater progress. Companies do not readily want to share where they source products for proprietary or other very valid reasons. The good news is that increased industry collaboration does not require increased transparency about where buyers source their products; but increased collaboration does benefit when buyers do their supplier assessments in the same community and the IT architecture is designed from the ground up to support different types of data sharing schemes.

When each FFC member submits and maintains their supply chain on the FFC, FFC matches supply chains to ensure that the same supplier is not duplicated in our database. Then FFC builds a confidential relationship between each supplier and the FFC brand members that source with that supplier. It is this relationship between buyers and suppliers that

starts with the implementation of V1.0 and that is the foundation of new ways of working. Instead, since FFC can confidentially see relationships between brands and suppliers, we can do two things immediately to help reduce audit fatigue, and improve efficiency. We can help suppliers collect and share information with all of the brands they do business with and can inform industry working groups about the degree of supplier overlap that exists in their supply chains, and propose new ways of accomplishing the same inspection results. FFC supports many different ways that members can introduce more effective ways to conduct and share supplier assessments including joint audits and corrective action plans. To facilitate this type of work, FFC has established well-documented protocols for direct competitor collaboration that have been reviewed and approved by the U.S. Department of Justice in a business review letter that allow direct competitors to collaborate to on improve workplace conditions.

Phase 4: Invention and adoption of new technology

Bigger industry transformation challenges will often require the development of new technologies and processes. FFC has already developed a product roadmap for future releases of Farm of the Future, but more importantly FFC is establishing a community of industry leaders. Understandably, industry leaders are the most effective group to lead the implementation of new technology. The key to effective technology is very often not the invention, but the rate and success of an invention's adoption. To transform the world of meat will require appropriate technology that can and will be implemented, and a willingness of the industry to work on foundational elements of IT architecture like a common supplier directory, and digital messaging standards. As mentioned earlier, venture capitalists are accelerating the pace of investment into new companies and technologies that can help transform the world of food, but these VC's are not working on the overall architecture to build a great city, and unfortunately they are often creating a technology that is looking for a need.

Plus, they are often working on proprietary solutions to build profitable and sustainable companies, and that does not always lead to rapid industry transformation. Twenty-five years ago the retail industry underwent a fundamental transformation when the personal computer became the new electronic cash register, and dozens of new auxiliary devices were invented to handle everything from reading bar codes, to printing consumer receipts. However these inventions were proprietary, costly to upgrade, and were not interoperable with systems from other companies. It took the retail industry over fifteen years to finally layout and enforce IT architecture and messaging standards, to make new inventions fit easily into a rapidly changing digital world. A non-profit multi-stakeholder initiative with no interest in building and selling commercial technologies can bring industry leaders together to identify and prioritize important industry requirements, and then help industry leaders determine when investments in common infrastructure and standards for the benefit of all are best, or where the for-profit competitive environment is the best way to accelerate the pace of change.

Phase 5: Supplier and processor capacity building

There is one thing about the US meat Industry that everyone can agree on: it is a model of efficiency that has enabled producing more meat at a lower cost. However a single focus on efficiency has had serious consequences: overuse of antibiotics and growth stimulants, inhuman treatment of animals, air and water pollution, this only naming a few. Other industries have accelerated transformation when they focused on a properly balanced score card for production; and buyers encouraged producers and processors to build capacity to do things the right way, yet still maintain their profitability.

A balanced score is the opposite of a singular focus on efficiency. Yes, efficiency is important to maintain profitability, but measuring suppliers with a balanced scorecard considering animal welfare, soil health, environmental protection, worker wellness and other

categories is an important ingredient to reversing the industrialization of agriculture. There are a number of organizations creating new and aspirational standards that define what "good is," relative to production and processing of food. Since FFC can support any number of simultaneous assessment instruments to be applied to producer and processor inspections, we plan to work with standard setting bodies to ensure that their aspirational balanced scorecard standards are available for buyers to use as inspection instruments in FFC. Since FFC can support simultaneous and different inspection instruments at the same time, FFC is the ideal place for brands to experiment with and pilot aspirational supplier inspection standards without having to switch over their entire supply chain at the same time.

Everyone knows that there are not enough producers raising food animals according to a balanced scorecard today, nor is there enough regional processing capability to handle those animals. FFC version 1 comes with already developed tools to support brands that want to improve the effectiveness of their communication, as well as training with their producers and processors to help them address root cause issues to improve their performance.

FFC's technology can also be used to provide a central clearinghouse for producers and processors to obtain and share best practices and knowledge in their own community. FFC's product road map does include plans for new tools directed specifically at producers and processors.

Phase 6: Supplier ownership

The ultimate goal we seek is when the majority of meat in the United States is raised and processed the right way with elevated standards. This can only happen when enough farmers and processors have taken ownership of their own compliance to elevated standards, and they can produce product profitably to compete with the efficiency of factory farms. We believe that a non-profit multi-stakeholder community of industry leading brands may be an important catalyst creating this industry shift.

FFC IMPLEMENTATION GUIDE AND IMPLEMENTATION SERVICES

FFC's goal is to get new brand members up and running quickly, so they can begin to get the full value from FFC's tools. To do that, FFC has a standard implementation methodology.

Each new brand member will be assigned an FFC account manager fully experienced in how FFC works. The account manager will work with the member to configure the FFC product according the goals that each brand member has for their compliance program – now and in the future. The nice thing about FFC's flexible configuration tools is brand members can apply FFC to their current processes and terminology, and evolve from there. The FFC platform can be easily changed over time to reveal more features and sophistication when the brand member is ready for more features and sophistication. FFC's annual membership fees include a defined number of account manager support hours to encourage members to discuss additional ways to take advantage of new features that FFC has developed. As stated earlier, since FFC is a community of brands working in a collaborative community, brand members often exchange information on best practices with other members.

There are six typical steps in on-boarding new FFC members:

1. Kick off meeting
2. Configuration specific to each member
3. Import master data
4. Establish inspection instruments and other data collection requirements
5. Training
6. Start up and then ongoing monitoring of progress

Most new FFC members will be up and running in a matter of weeks, once master data has been set up and the system has been configured the way each member wants to use it. All that is needed to access the FFC is any one of the common Web browsers.

FFC offers training and support from day one, as well as throughout your membership. Members will want to assign a point-person to be your super user administrator, FFC will work with them to build their knowledge and expertise.

FARM OF THE FUTURE PRODUCT ROADMAP

Version 1.0 of Farm of the Future is just the start and is – already a robust technology that can help brand members make an immediate step up in monitoring their supply chains. However, FFC is more than a platform. It is an industry focused multi-stakeholder initiative that can help industry leaders collaborate together to bring about long-term and sustainable industry change.

Our three-year product roadmap includes the following three priorities:

Priority 1:

FFC's first priority in launching Farm of the Future Clearinghouse is to recruit at least fifteen forward thinking industry leaders. Ideal farm of the future founding members do not need to be the biggest companies in the industry, but they should have already declared some of the highest elevated meat standards, also be motivated to bring about sustainable industry change. Founding members should be willing to work with FFC to make initial changes to the platform, to optimize meat supply chains. Founding members can use the FFC platform to monitor any kind of product sourcing and supply chains, but they should have an interest in improving meat practices.

Our immediate goal is to get 2019 founding members up and running successfully, and to prioritize

any potential system changes founding members may require to apply FFC to food supply chains. In early 2020, FFC plans to convene a meeting of founding members to report on the 2019 results and to plan 2020 developments. If there are no further systems enhancements required by founding members, FFC will then begin recruitment of additional brand members.

Priority 2:

We have designed FFC to be a multi-stakeholder community providing additional services to other multi-stakeholder groups. This could include industry trade associations and supplier certification groups. Another feature of FFC's well-developed technology platform is that we can establish private multi-stakeholder communities within the larger Farm of the Future community. These private communities can have their own areas of focus, and use FFC's technology to help them accomplish their work. One of FFC's goals is to create a trusted central supplier directory and to bring together a more holistic view to a supplier's total capability. As stated earlier, there is a lot a good industry work going on being performed by other multi-stakeholder groups. This includes activities such as organic certification, and certification to animal welfare. FFC has developed other membership categories for trade associations, and certification bodies if they want to use the FFC platform and tools to manage their own com-

munities, or just develop an electronic interface to FFC to increase industry visibility to their important work. We will be coming out with another brochure to describe FFC's product offering and fees for other multi-stakeholder groups.

When FFC is successful in engaging these other multi-stakeholders, it will provide a way for these organizations to display producer and processor certifications and accreditations in the larger FFC community. That can increase the visibility of their work, as well as providing an easier way for brand members to validate this information.

Example of producer profile showing public yellow pages information, private information maintained by brand members, and affiliations and certifications all brought into a single view.

Priority 3:

FFC plans to develop new technologies and platform extensions to help suppliers and processors build capacity. As a non-profit, FFC is mission based to bring about sustainable change in the meat industry. There is already a lot of innovative technology being introduced for producers and processors, and FFC encourages this innovation to continue. However, (as stated earlier) individual technology innovators are not in the easy position to creating industry standards or common infrastructure to facilitate greater industry change. A non-profit multi-stakeholder organization is in that position, and has an obligation to work on infrastructure changes that can enable even greater common good.

Some potential further improvement areas that FFC will discuss and prioritize with brand members:

- An optional animal registry so interested producers can maintain electronic records related to a specific tagged animals. These electronic pedigrees can more easily identify meat animals that have been raised with elevated standards, and can become the foundation of a bi-modal supply chain where producers and processors can command a greater market value.

- Development of standard data interfaces to support greater data collection from farm sensor data and better individual producer mapping.

- Implementation of new data collection types related to carcass observation and meat quality data collection at processing facilities (like slaughterhouses) can be a more effective measure of certain producer practices than producer assessments on their own.

- Introduction of block-chain ledger standards to support track and trace of meat products.

- Creation of industry wide data analysis by de-identifying individual producer and processor identity, and aggregating industry wide data for educational purposes.

END GAME: BI-MODAL SUPPLY CHAIN

Menu or Meat Package

Rancher

Website

Veterinary Record

Feed Analysis

With RFID of the animal at the time of slaughter and by matching to the data contained in the Farm of the Future Clearinghouse, it will be possible to produce a "certified" (and electronic) record of any registered animal:

- Information on the producer and practices
- Where the animal was born and every place it went
- Where and how the animal was raised
- Information on what the animal ate
- Information on what medicines it received and when
- Analysis of the meat quality

FARM OF THE FUTURE BOARD OF ADVISORS

The FFC board of advisors is made up of industry thought leaders that believe in the FFC mission. They all have unique skills that can help FFC research topics and create strategies to meet the needs of our members. We are creating a specific advisory board related to the agricultural industry. FFC is pleased to announce two industry luminaries as founding advisory board members.
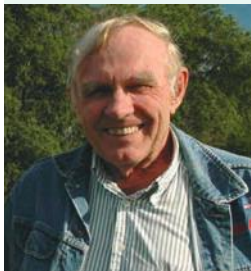
Fred Kirschenmann

Fred Kirschenmann is a Distinguished Fellow for the Leopold Center at Iowa State, and is president of the board at Stone Barns Center for Food and Agriculture in Tarrytown, NY. Fred has been promoting the benefits of soil health, and the values of regenerative agriculture for over a half century. He is a founding father of American Organics, and remains a visionary for its future. We're lucky to have Fred's trusted voice helping us architect a modern supply chain built on values.

Bill NIman

Bill Niman is the founder of Niman Ranch. As a leader in producing meat with elevated standards, Bill has transformed consumer expectations of transparency and quality. An advisor to many large brands committed to sourcing better food, Bill's influence in producing differentiated meat has reshaped domestic markets. Bill is well-regarded for his commitment to healthy animals, healthy consumers, and a healthy planet.

PRODUCT STEERING COMMITTEE & PRODUCT ROADMAP

One of the benefits of participating in a multi-stakeholder initiative is reducing the risk of future developments and enhancements, and networking with industry peers. As FFC is a multi-stakeholder membership organization and a software development organization; we continually enhance our solutions based on member changing requirements, and marketplace changes.

Normally FFC releases product improvements in quarterly sprints, and release major enhancements twice per year.

We do conduct an annual member satisfaction survey, and have a twice per year member voting process for system enhancements. The highest priority enhancement requests are developed and provided to all members at no additional cost.

Members may also request custom developments specific for their own company use.

The FFC product steering committee made up of volunteering members and industry experts from our advisory board, help FFC prioritize near term development priorities and the creation of new working groups to refine new requirements.

BRAND MEMBERSHIP PRICING

FFC is creating Farm of the Future as a very large tent to bring together brands, standard setting organizations, processors, farms, ranches, trade associations, certifiers and others into one big community. Inside that big community, we can also establish private communities that can work as their own neighborhoods with their own purpose and members.

The primary members of Farm of the Future are brands that have defined codes of conduct for their suppliers to follow.

Brands can include specialty food producers, restaurants with farm-to-table connections, meat purveyors, and many others. Brands and retailers become members of FFC by signing a standard membership agreement, and they pay an annual fee for the use of the system. They may choose to continue their membership annually, but there is no obligation for them to continue.

The fees for a brand to access the system are based on number of supply chain nodes each brand wants to monitor. A node could be a farm or ranch, it could be a slaughterhouse or processor, or it might be another service provide such as a transportation company. FFC is a role-based system, and members are free to create as many roles and system permissions without programming.

FFC's fee structure is simple to understand. A brand determines how many supply chain nodes they would like to monitor each year. If they go over in a year and they wish to continue in the following year, their fees will increase to the correct fee level. Each brand will pay a one time set up fee for FFC to help them establish their initial data. Each FFC member is assigned an account manager, and each level of supply chain nodes comes with a number of support hours from the account manager that is built into the cost. This includes helping each member with system configuration and training and ongoing support.

If a brand member wishes to engage with FFC for additional support, or custom development, they may chose to do so at very cost effective FFC service fees.

FULL MEMBERSHIP ANNUAL MEMBER DUES SUPPORT HOURS

Number of Supply Chain Nodes	Annual Dues	Setup Fee	Total First Fiscal Year	Support Hours
1-50	$3,000	$1,000	$4,000	8
51-100	$6,000	$1,500	$7,500	15
101-200	$12,000	$2,000	$14,000	31
201-500	$20,000	$3,000	$23,000	52
501-1000	$30,000	$5,000	$35,000	77
1001-2000	$45,000	$8,000	$53,000	108
2000+	$65,000	$10,000	$75,000	154

SUMMARY OF BENEFITS OF BEING A BRAND FARM OF THE FUTURE MEMBER

Farm of the Future Clearinghouse (FFC) V1 is a unique non-profit multi-stakeholder community that offers a great amount of software functionality for diverse stakeholders.

Some of the key benefits include:

- Flexible out-of-the-box tools for state-of-the-art supply chain compliance that allow FFC brand members to easily fit FFC to their current processes.

- FFC is a highly secure data repository to house and protect the most sensitive company confidential information.

- The configurability of FFC's platform makes the system suitable for brands of all sizes and level of sophistication.

- FFC's non-profit operating structure provides the lowest cost of entry and ownership, and annual membership does not lock a brand into a long-term service if they do not want to continue.

- FFC's solutions helps brand with elevated sourcing standards protect their brand reputation by putting a proven system behind their stated supplier codes of conduct.

- FFC helps brands organize record keeping so they can report to their own stakeholders on their compliance activities and success.

- FFC provides tools so brands can help their suppliers build capacity.

- The FFC community is an on-ramp to future developments like bi-modal supply chain.

- The FFC community allows brands to interact with and learn from diverse stakeholders that care about the values of regenerative and authentic agriculture.

- FFC holds an annual member conference to discuss future strategies, provide updates on products, and allow members to network and share best practices. In addition, FFC facilitates member working groups to allow members to work together to create further industry improvements.

GENERAL FAQS

- **How long has FFC been in business?**

We were founded in 2006.

- **Who provides FFC governance?**

FFC has an external Board of Directors, and an external Advisory Board. Our annual financial statements are audited by an independent external auditing company. Our tax returns are filed in the state of New York. The FFC meets all regulatory filing requirements as dictated by the U.S. Federal Government and the State of New York.

- **What is the source of FFC's funding?**

FFC has several sources of funding:

1. As a nonprofit, FFC qualifies for grants and donations from the government, foundations and individuals that are interested in supporting our mission.
2. FFC receives in-kind support through individuals or business partners that provide pro bono services or donations to help FFC achieve its mission.
3. FFC members pay an annual license and hosting fee to access the FFC systems and services.
4. Other non-profit clients pay FFC for private database development and operation.

MEMBERSHIP FAQS

- **Do I have to pay extra for future system upgrades or new features?**

Not usually. All system improvements are included as part of the annual membership fees. Members do not have to pay for any enhancements that are integrated into the standard FFC tool and available for all members to use. FFC uses a periodic member voting process to help prioritize member suggestions for improvements. FFC can also provide member specific enhancements on, at a reasonable development cost.

- **How often do you release upgrades to the FFC system?**

FFC regularly supports four minor development sprints per year, and two major enhancement releases per year.

- **Does FFC have user meetings or conferences?**

Yes. Monthly webinars are held to discuss various topics, functionality or future enhancements. Training webinars are also offered on a monthly basis. FFC hosts an annual user group meeting, and this would apply to Farm of the Future members.

- **My company has some unique ideas about how we want to run our supplier management program. Can FFC be customized easily to satisfy unique company requirements?**

The FFC platform is flexible and customizable. You may be surprised to find that the application already supports your company's specific needs through table setting and configuration with no programming required. When we encounter new requirements we have not seen before, we most often poll members to see if a new member requirement would be useful for all members. If there is interest in a new feature we form a working group around the new requirement, and by multiple companies helping to design a new feature it often becomes an even more powerful solution for all members. FFC develops these multiple member solutions for no charge as part of our product research and development budget. If a member specific requirement is unique to a single member, we do offer programming customization, at a very cost effective development rate.

- **My company has many brands and subsidiaries. Does FFC require a different license for each brand or subsidiary?**

No, a member can establish a single membership under a corporate organization, and then offer the FFC solution to all of their brands and subsidiaries to

use without the need to have individual companies have their own membership agreement. The FFC configuration and set up tools also allow companies to fit the FFC to their processes and the way they want to do supplier monitoring. Members may chose to allow each brand to run their own compliance programs, but our ability to match supply chains to identify companies that source in the same location can help companies with multiple brands coordinate compliance work so two or more brands are sharing results and not conducting redundant audits of the same supplier. Members can also establish sourcing groups that might do purchasing for specific products categories across all brands. Let us assure you we have seen and met the needs of every possible organization permutation companies want to implement, since we have been doing this work for over a decade.

• **Does this mean that I can use the FFC to monitor all of the compliance activities of all of my brands, subsidiaries and divisions?**

Yes. We can support a centralized approach for all brands and subsidiaries, or a decentralized approach with a corporate overview, and a blend of the two based on products or other criteria. As said earlier, because of the flexible FFC assessment question management tool, FFC members can have many different assessment types in the same system. They can also have different tools that can be applied to different types of products or subsidiary companies.

• **What happens if my company should sell a brand or division that was part of my overall company membership?**

That brand would no longer be included under the company membership, but we would welcome that brand or division to join the FFC as with own membership. We can also provide services to help the divested brand configure their own membership and use of the FFC and migrate what data they may wish to split off from their former parent organization.

• **If I choose to no longer be an FFC member can I**

take my data with me?

While we would be sad to see you leave, all member data belongs to the member, and FFC will work with the member to export the data into a file format that would allow them to take their with them. There could be a reasonable service fee to perform this work.

• **We are a global company and my compliance team is scattered all over the globe. Can FFC help me improve communication with my team?**

FFC offers multiple ways to improve global team communication. Our alerts and notifications settings enable improved workflow throughout the platform, from scheduling to audit completion. We have document management tools where companies can store all of their compliance documents in one place, and then share them with their teams using the FFC. We support an internal messaging system where members can communicate with their own teams and with other members, and these messages can be exported into a members' internal email system. Multi-language support is also available to create internal documentation and procedures in any language. Member super user administrators can have special reports that help them monitor staff activity and system use.

• **I am a small brand. Would FFC be a good fit for me?**

Yes, smaller member companies will benefit from access to resources that they will not have on their own. The collaboration aspects of FFC help them interact with and learn from larger brands that have very successful compliance programs.

SUPPLY CHAIN MANAGEMENT FAQS

• **How do I import my suppliers into the FFC?**

FFC has an import utility available for bulk imports. For creation of a single supplier, the online interface allows for quick and easy supplier identification.

Since Farm of the Future will be a new industry vertical the number of farms and ranches will initially be limited, but as more brands, processors, certification bodies, and trade associations join FFC, we expect the farm and ranch directory will build rapidly.

• What happens if I find out later that one of my suppliers is already in the FFC system under a different supplier number?

FFC has a merge utility available to combine two supplier accounts when they are confirmed as duplicates, and this merge creates a historical cross reference to the former supplier records.

• I can see how a common factory file can benefit all members, but what happens when I think I have some new information about the supplier that is more accurate than what is in the supplier master record?

The FFC maintains an "owner" for common supplier master data, such as name and address. This may be the member that entered this supplier for the first time. FFC does not allow overriding of "yellow pages" type information, without enabling a discussion with the current owner or the FFC. You may request ownership of the supplier record and if granted make the changes you want. Each FFC member also has a private area in each supplier record, where they may record and modify the information as they see fit.

• Does FFC have any geographical mapping capability?

Yes. FFC does provide a standard display of where a supplier can be found on a geographical map. This is available as a standard system dashboard. In addition, a member could add a static farm map as a document type to the farm private information. However, since protecting the water and soil is an
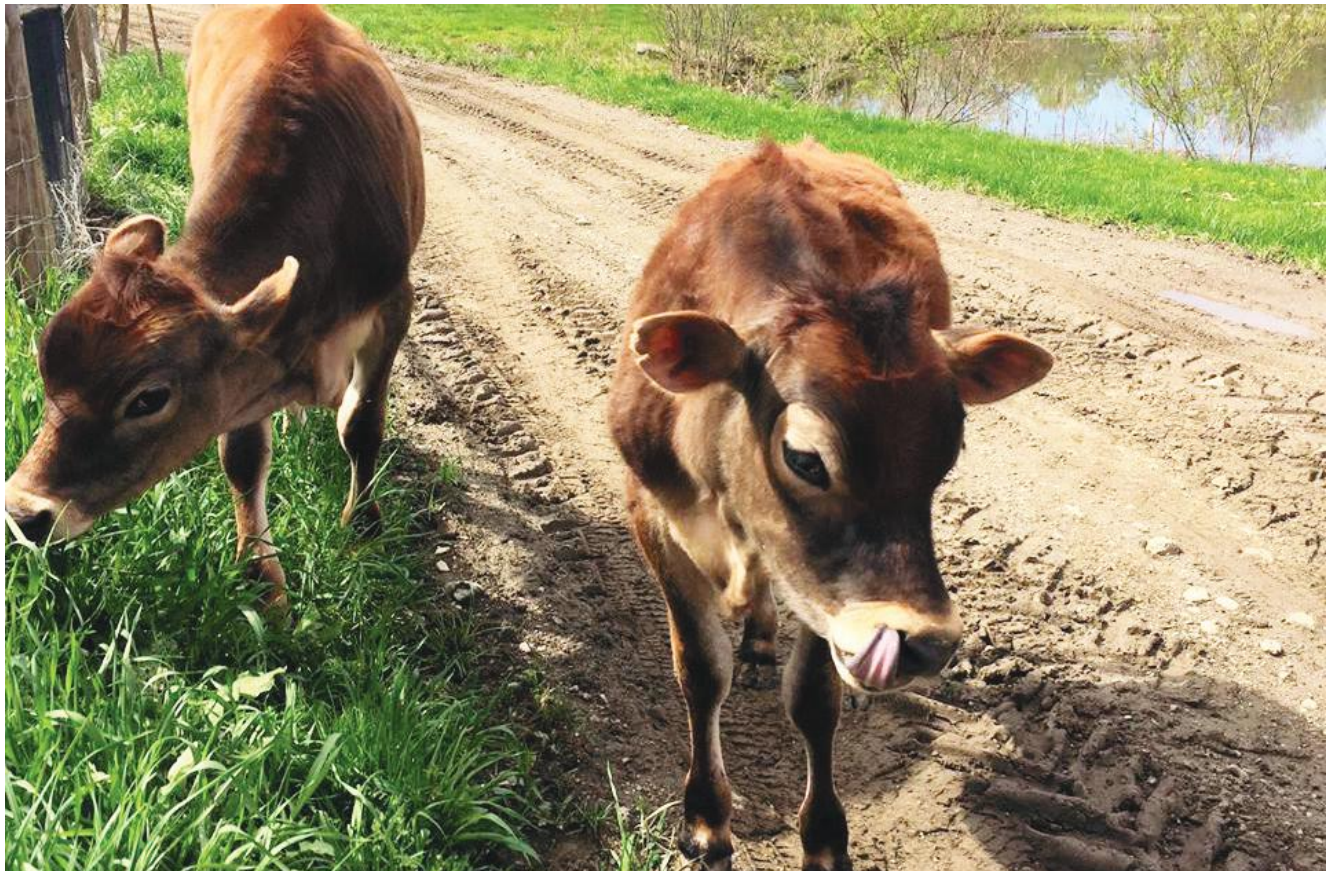
important element of regenerative agriculture FFC believes additional farm mapping features will be important future development for the Farm of the Future development roadmap.

• **Does FFC have the ability to connect farm sensor data to a map or to collect and store farm measurement data?**

In theory, sensor data types can then be developed as individual assessment types, and the data from sensors collected in this manor. It will be possible to tie sensor data to farm geological maps but this will require future development.

COLLABORATION & SHARING WITH OTHER FFC MEMBERS FAQS

• **Will FFC be able to help me determine if another member is working with the same supplier I am?**

Yes, there is a standard view of your supply chain that will display the name of any other FFC member that has chosen to be transparent about what suppliers they work with. Each FFC member can chose to be invisible (no other FFC members knows they are using the FFC system,) or they may chose to be "hidden" at a supplier (they may be contacted through a double blind communication system to explore possible collaboration opportunities.)

• **Can I easily communicate with other FFC members on the platform?**

Yes. FFC offers an internal messaging system to exchange non-competitive information concerning factory compliance with other members.

• **Does that mean I have to sign on to the FFC to see and respond to messages and alerts?**

No. You also have an option to forward internal messages to your own external email account.

• **Can other members see my supply chain?**

No. Each member only has access to their own supply chain. However, if another member chooses to be transparent in their supply chain then you will see

their name as active at the same supplier as you.

• **Will FFC be able to facilitate industry-working groups?**

Yes. FFC can facilitate working groups via webinars, enabling global discussions. We also can provide private communities for groups of companies that want to work together to collaborate on particular issues even though they are not regular FFC members. Feel free to contact us to discuss your particular group needs.

INTERFACE TO OTHER SYSTEMS OUTSIDE FFC FAQS

• **Can I use the FFC to consolidate information from other systems so I can have one supplier dashboard from multiple sources?**

Yes. With a web services interface, data can be shared between FFC and other systems. Please contact us to discuss your requirements, as the interface you may want has already been developed.

• **Can I export the results of reports to Microsoft Office tools like Excel?**

Yes. All FFC reports and data displays have a built in export to MS Excel option.

• **Can you summarize the status of suppliers and export that to my ERP system so my buyers can see the status?**

Yes. FFC offers several methods for exporting data from the application, and if needed can work with you to develop an interface to your ERP system.

• **Are there any other external system interfaces planned?**

Yes, FFC plans to build interfaces to certification bodies where there is interest.

• **What do I do to have FFC consider adding another interface to another system I use?**

Contact us at information@fairfactories.org to discuss the details.

IMPLEMENTATION FAQS

• Do I need someone in my company to be an expert in the FFC?

No prior experience is necessary. FFC offers training and support from day one, and throughout your membership. You will want to assign a point-person to be your administrator, but we will work with them to build their knowledge and expertise.

• Is FFC hard to implement?

No, most new members will be up and running in a matter of weeks once master data has been set up and the system has been configured the way each member wants to use it. All that is needed to access the FFC is any one of the common Web browsers.

We will work with you to discuss each of these items and help you configure the system to meet your specific needs.

• How long does it take a new member to get benefit from the FFC?

Usually between one and four months, depending on how complex a member's current system is.

• How does FFC do member training?

We offer regularly scheduled webinar trainings, online help documentation and training videos, and one-on-one account management.

• If I become an FFC Member what can I do with my existing audit data from my current system?

Depending upon the data structure of your existing audits, you can either upload documents such as PDFs or MS Word documents, and post them the your private area of the FFC for viewing. FFC can also custom develop data conversion import utilities to migrate historical data as long as the source system has this information in actual field-by-field data formats.

• Does FFC offer any kind of supplier training?

Normally, FFC trains the member administrators on how to use the system. The member administrators develop training programs for other users including suppliers as we have found it is best to have this end user training come from a company representative who can explain both process and system requirements. However, we do provide tools and on online help documents and training videos for member administrators and some of these documents can be customized to provide member specific training to end users.

If a member would like FFC to conduct actual supplier training, we can do this as a custom service

• Can I put any kind of documentation and e-learning I have developed for my suppliers on the FFC site for them to access it?

Yes. There is a permissions-based document repository available to share documentation with your organization's users, both internal and external.

• When I am implementing FFC, how do I request improvements or enhancements to the system?

FFC maintains an on-line ticketing system called Jira. Each member is given a login to this system. You may make enhancement requests directly, post questions, and see other enhancement requests. Before FFC develops enhancements, we take into consideration your requests and work with you and other members to gather detailed requirements. Enhancements for the benefit for all members are developed by FFC for free as part of our ongoing product development effort. Since FFC is creating Farm of the Future as a new industry vertical, we expect that there will be some useful enhancements that FFC can make to benefit all members. For example, we believe that an animal registry will be an important development to advance the transparency and traceability of specific animals in the supply chain. One of the benefits of participating in a Multi-stakeholder initiative like FFC is the joint development of work like this across many member companies. This will reduce development risk and cost.

• Can I see what other FFC members are looking for in future enhancements?

Yes. You will be able to view other members' tickets in the Jira system, and FFC does conduct a member voting process on all future enhancements that includes workshops to discuss ideas that other members have requested. One of the biggest benefits of FFC membership is networking with other members about practical ideas to improve their supply chain compliance efforts.

• How does FFC support me after I am live?

You will be assigned an FFC Account Manager who can assist you with any detailed support needs and can submit requests to our help desk. Online help documentation and training videos are available. Live webinars for both training and user group discussions are scheduled on a regular basis.

• What are the hours of operation of FFC's help desk and how does it work?

We have an online help desk accessible 24 hours through Jira. The help desk is monitored live via email or phone during the hours of 11:00am-7:00pm IST and 8:30am – 5:30pm EST. We also support a chat line available 24 hours a day.

• How does FFC respond to any serious system defects or bugs?

Our service level agreements in our standard member agreement spell out our commitment to fixing any identified issues. Any bugs are classified by severity and are transparent to members in our Jira system. We are happy to show these logs to any prospective members as the FFC is proud of our record of software quality.

INFORMATION TECHNOLOGY FAQS

• How secure is my company data on the FFC?

The FFC Audit Production web applications are accessed via HTTPS, a combination of HTTP and SSL/

TLS protocols to encrypt communication between the end user's computer and FFC applications and to securely identify the network web server. All of our servers are secured behind a Cisco firewall. We contract with external security experts to continually monitor all of the FFC servers against external threats.

• Where are the FFC data centers?

The FFC network and servers are hosted in a Sun-Gard SAS70/SSAE16 data center in Philadelphia, Pennsylvania.

• My company is based in Europe. Do you provide EU data protection safe harbor assurances as part of your contract?

Yes, we can do this on request.

• Can my internal security team speak to someone at the FFC about system security?

We would be happy to discuss any questions concerning security with your internal team.

• **If I work on a large monitor does FFC automatically scale to fit completely on my screen?**

Yes.

• **What web browsers does FFC support?**

FFC supports IE, FireFox, Chrome, Safari and several other popular browsers.

• **How does the FFC ensure that any electronic interfaces with my internal system follow Security best practices?**

Any web services that we develop for specific members will follow best practices to multiple layers of authenticity verification.

• **How does FFC monitor response time in different countries around the world?**

Yes, we use standardized tools to monitor response time from different countries.

• **How does FFC protect my company's data. What is your back up approach and is my back up information stored offsite?**

SunGard manages networks and server equipment of some of the world's largest financial institutions. All FFC production servers use RAID 5 mirrored disks, a failure of any drive will automatically roll over to mirrored drives with no loss of access to data until the failed drive is repaired or replaced. FFC conducts database logging on all production databases so all transactions are saved. Daily differential database backups are performed and incremental transaction logs are backed up every 2 hours. Once per week, a FFC full database backup is written. Over and above this, complete disk backups are taken every day by SunGard and stored off-site for a one-week retention period at a profession external storage company called Iron Mountain. All backups are verified and logged by the network and communications staff. A recovery test (historical recovery) is carried out on a semi-annual basis, with a one-day-old backup.

• **Is this a cloud application sharing hardware with others?**

No, all software developed and maintained by FFC is hosted on servers that are owned by the FFC and not shared with any other company.

• **What is FFC's scheduled production hours of operation?**

The FFC production environment is available 24 hours a day, 7 days a week, except for scheduled maintenance release times and these are announced in advance.

• **What has been FFC's system availability record in the last 3 years?**

Our service level agreements are spelled out right in our member agreement and we have met or exceeded our SLA's since our inception.

• **How does FFC test new system features and changes and prevent bugs from getting into production?**

The production and evaluation/QA-UAT/demo platforms are accessible by members. Evaluation platforms allow FFC and Members to perform final QA and further test proposed software releases after they have passed initial QA but before they have been promoted to the production environment. The "development" instances are only accessible by FFC developers and FFC QA personnel.

• **My company requires that server provider source code kept in escrow in the event of the service provider failure? Can FFC comply with this?**

FFC source code is also stored at a third party offsite escrow service for those FFC customers that require this. We update this escrow source service each time there is a change to production software. All production software is identified with a formal release number. There are formal procedures and sign-off required to promote any changes to production software, and release notes are issued to document any changes to production. The standard FFC agreement spells out the details of the escrow agreements.

PETER BURROWS

Executive Director, Fair Factories Clearinghouse, www.fairfactories.org

Co-founder of Farm of the Future and owner of Brown Boar Farm LLC, www.brownboarfarm.com

Peter Burrows has more than 40 years of IT executive management in diverse industries including consumer goods, footwear and apparel, and high-tech electronics and manufacturing industries. Peter's technology innovations have been written about in textbooks, and many business publications, and he is the recipient of many industry technology innovation awards.

The original concept for a comprehensive IT system to help companies manage their Corporate Social Responsibility initiatives developed when Peter was Chief Information Officer (CIO) for Reebok International, a recognized Industry leader in the area of business and human rights. The Reebok "Human Rights Tracking System" was identified in the year 2000 as one of the world's most groundbreaking new technologies by Computerworld and the Smithsonian Institution, and a complete description of the Reebok system and why it was so innovative was placed in the Smithsonian Institution's permanent history collection to help document the world's most significant technology developments.

In 2002, Peter and others volunteered their time to transform the Reebok technology into a new system that could help other companies improve their commitment to human rights and collaborate on supplier capacity building. By 2004, with the assistance of a grant from the US Department of State, Peter co-founded the nonprofit Fair Factories Clearinghouse (FFC). Peter was the Chief technical architect for the new platform, and has served on the FFC Board since the founding of the organization. When Peter retired as CIO of the Adidas Group in 2010, he became the FFC Executive Director.

In addition to directing the activities of FFC, Peter launched Brown Boar Farm with his children as a personal commitment to help reverse the industrialization of meat production in the United States. Brown Boar farm has become a recognized leader in producing meat the right way; and the experience of running a family-owned farm has given Peter great insight into the challenges medium sized producers face to change the world of food.

Peter balances his time with friends and family, enjoys travel to far-flung exotic destinations, and is passionate about applying innovative technology to some of the world's greatest social challenges.

AARON NIEDERHELMAN

Founding partner at OneHealthAg & Farm of the Future Clearinghouse.

Aaron Niederhelman is CEO and co-founder of OneHealthAg. He hosts the widely listened to podcast: SourcingMatters.show; and is a fishmonger set on preserving the many values of his native New England waters with HingeLine (monger.fish).

A life-long advocate of healthier and cleaner food, Niederhelman was selected as a 2015 Eisenhower Fellow to explore the impact of good and bad management practice on an ever shrinking planet. Aaron previously co-founded the EAF Agrarian Fund – an innovative financing vehicle developed to encourage more collaboration amongst diverse regional stakeholders. Those efforts to promote economic growth from well sourced food with integrity and backstory is what's brought Aaron to today. Along with his efforts to modernize meat supply through OneHealthAg and non-profit Farm of the Future, Niederhelman cofounded HingeLine (monger for a modern world) to advocate for North Atlantic seafood. Aaron enjoys spending time with his family and participates in initiatives and boards for passions ranging from food security, climate change and social responsibility.

FFC is an IRS recognized 501(c)(3)

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