

Testimony of Adam B. Aronson,
Chief Executive Officer of Arrowsight, Inc.,
before the
U.S. House of Representatives
Committee on Oversight and Government Reform
Subcommittee on Domestic Policy
After the Beef Recall: Exploring Greater Transparency in the Meat Industry
April 17, 2008

Chairman Kucinich and Ranking Member Issa, and Members of the Subcommittee, I thank you for the opportunity to testify before you today regarding the recent large meat recall. I am the founder and CEO of Arrowsight, Inc. (Arrowsight), a third party remote video auditing and technology company founded in 1998 to provide business process improvement services primarily to the food manufacturing, healthcare and food services sectors. Remote video auditing services consist of random live and retroactive sampling of one to two minute video examinations of individual worker activity combined with continuous statistics-based performance feedback. We have found that by combining random sampling with continuous performance feedback, there can be rapid and sustained impact on staff performance. Implemented effectively, clients can achieve a combination of strong financial gains, and increased control over high risk processes such as animal handling and food safety practices.

The recent meat recall has highlighted a subset of our services which focuses on animal handling solutions in the meat industry. For the last two and one-half years, Arrowsight has provided such services to FPL Foods LLC (FPL), a regional cattle processing company located in Augusta, Georgia. This client engaged Arrowsight to augment its existing animal handling plan that had been managed by an experienced management team and also was overseen by a team of USDA inspectors. During the time period in which Arrowsight services have been provided, FPL has achieved consistently high remote video audit performance scores for its animal handling practices and procedures.

FPL elected to have Arrowsight monitor its animal handling practices to ensure that employees follow the protocols of the American Meat Institute's (AMI) Recommended Animal Handling Guidelines. The AMI Guidelines were designed with assistance from Dr. Temple Grandin, a highly regarded expert on animal behavior sciences, who has also been an Arrowsight consultant since 2004. These guidelines prescribe numerical based auditing of five different plant areas to ensure proper handling and proper slaughter practices. According to the AMI guidelines, the five areas under observation include the truck unloading pen, the crowd pen, the chute, the knock box, and the shackles. For a full description of the AMI Recommended Animal Handling Guidelines, please visit www.animalhandling.org. Below is an example of how we perform an audit for the truck unloading area in accordance with these guidelines.

TOUR - Animal Welfare

CPF-SE1-GA - CPF-SE1-GA: Unloading Barn Stop 1 of 5

Not audited
 Pass
 Fail - Animal Welfare Non-Compliance
 [Enter video time and email plant manager. Email Mgr.] (email)
 Unknown
 No video

Count - Bellowing
 [Dial in and listen while watching 10 cows. Fail if 1 or more cows bellow. If fail, enter video time.]
 Count - Cow falling down
 [View 10 cows. Fail if 1 or more cows trip and knees or body hit the floor. If fail, enter video time. Email Mgr.]
 Count - Electric prod use
 [View 10 cows. Fail if electric prod used 1 or more times. If fail, enter video time.]
 Count - Movement non-compliance
 [View 10 cows. Fail if 1 or more cows are dragged or induced to move with something other than the rattle paddle. If fail, enter video time.]
 Count - Number of cows observed
 [Enter total number of counts viewed.]

Enter comments:

Next Stop

Arrowsight Extension of the AMI Guidelines

While Arrowsight follows the general animal handling protocols of AMI, we have extended the base protocols:

1. Rather than observing 100 cattle at each of the prescribed areas in one single session, we break the 100 head of cattle into groups of ten to twenty cattle that are randomly audited on a live basis throughout the entire shift.
2. We have been instructed by FPL to alert plant management immediately if we observe any animal handling breach. This random sampling technique, combined with continuous statistics-based performance feedback is the foundation from which our clients are able to improve and sustain business process performance.
3. After the recent recall, we have received many inquiries about our animal handling services. One critical area that our existing program did not address is to comprehensively identify completely non-ambulatory animals, which represent the highest food safety risk. Utilizing an existing Arrowsight video auditing feature, we have begun providing a solution for this challenge. By sampling still pictures every 30 minutes on a twenty-four hours a day basis, we are able to easily identify the majority of non-ambulatory animals and alert plant supervisors who can correct any improper handling compliance breaches for these rare instances. This new service is especially beneficial on the overnight shifts when cattle are unloaded and being managed by a smaller group of employees with much less managerial oversight. Below is an example of how this application works:

SAVED VIDEO: STILL IMAGES - SEARCH RESULTS

Camera:	Start Date / Time: (HH:MM:SS)	Copy	Stop Date / Time: (HH:MM:SS)		
Crowd Pen	03/10/2008		03/10/2008		
2	00:00		2:30:00	PM	
					View
					Change Search

The image displays a series of 12 still images from a video recording, arranged in a 3x4 grid. Each image shows a crowd pen with several cattle. The images are timestamped as follows:

- Row 1: 2:00:00 PM, 2:02:00 PM, 2:04:00 PM, 2:06:00 PM
- Row 2: 2:08:00 PM, 2:10:00 PM, 2:12:00 PM, 2:14:00 PM
- Row 3: 2:16:00 PM, 2:18:00 PM, 2:20:00 PM, 2:22:00 PM

THE SERVICES

- Utilizing its proprietary Application Service Provider IT platform, Arrowsight can remotely access via the Internet Pan-Tilt-Zoom cameras located in monitored facilities; each camera can provide up to 64 different pre-set camera views.
- Video audits/tours are performed at Arrowsight's twenty-four hours a day, seven days a week Network Operations Centers in Huntsville, Alabama and at a partner's firm in Viskhapatnam, India.
- Remote Video Auditing services consist of random live and retroactive (where machine alarm events are typically used as triggers) sampling of one to two minute video audits of individual workers or specific plant area activity.
- Every video examination is scored Rating 1 or Rating 2 (i.e. the equivalent of compliance or non-compliance) and in many applications, assigned a numerical rating. Individual worker identifications can be included at the customer's request. Each video examination is configured with rules-based software tools that allow for audits/tours to be automatically presented into web based operator queues for Arrowsight auditors to perform their monitoring tasks.
- As the remote video audits are performed, all worker compliance data is automatically stored in Arrowsight's central database. It can be accessed to create a wide range of customizable compliance scorecard reports generated for facility managers and executives (the data can also automatically interface with customer Enterprise Resource Planning (ERP) reports).

- These electronic scorecard reports allow executive stakeholders to monitor individual line/shift manager and worker performance methodically and continuously in a way that has never previously been possible. These electronic reports also include hyperlinks to all examined video events.
- Additionally, Arrowsight provides in-depth consulting services to identify and drive process improvements using a team of food and general manufacturing specialists. This team is lead by Mark Moshier, who spent many years as a senior executive in engineering and operations at Tyson Foods and Keystone Foods.

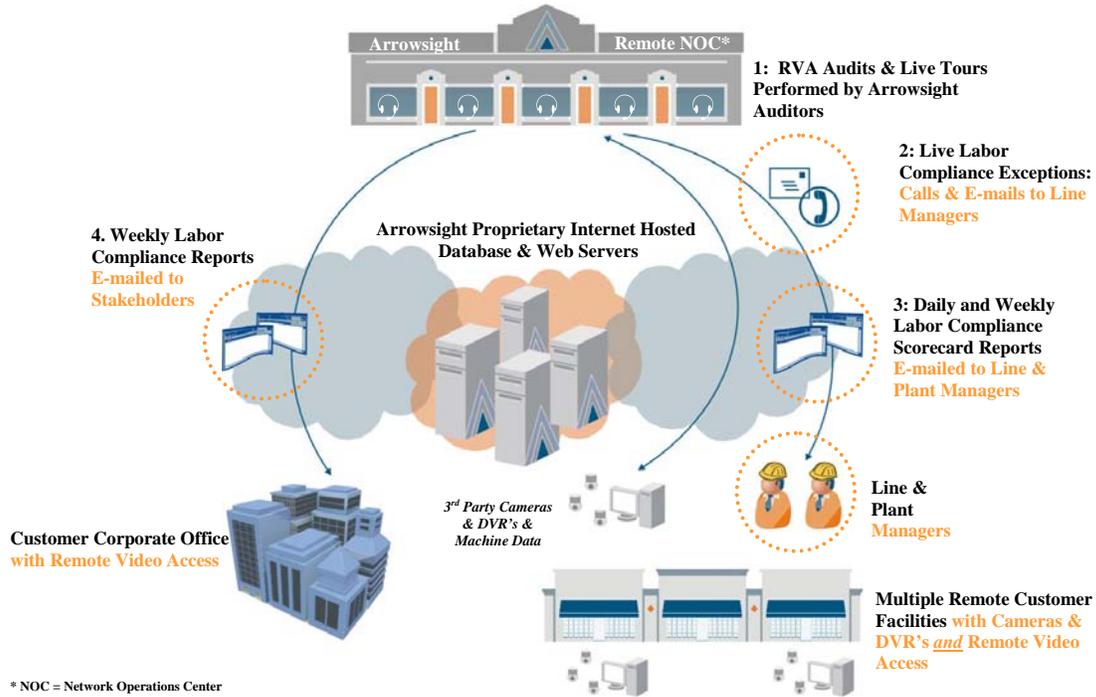
THE TECHNOLOGY

Arrowsight's central server based platform is designed to take data outputs of standard third-party digital video recorders and cameras, to send such data over the Internet and to assemble and organize such data in various ways. Additionally, Arrowsight's open architecture integrates easily with most existing client enterprise software. The Arrowsight remote video auditing technology platform allows for multiple parties to fully operate all essential Network Operating Center (NOC) administrative and video auditing feature applications.

Key Features Include:

- Administrative tools that enable customers to control remote user's access to locations, cameras, and features.
- Pan-Tilt-Zoom cameras that can be used for up to 64 different continuous live tours per camera.
- Audit/Tour set-up tools that allow for rules-based video applications that link to a comprehensive reporting platform.
- Reporting tools that allow for quality assurance checklist and edit capabilities, as well as electronic scorecard reports that include statistical summaries and hyperlinks to all examined video events.
- Back-end administrative technical support tools that allow for remote diagnostics and upgrades of new features.
- Open architecture that allows for integration of third-party hardware or software.

REMOTE VIDEO SERVICES WORKFLOW DIAGRAM



Sample Remote Video Audit Report

Arrowsight FOOD & BEVERAGE

ANIMAL WELFARE VIDEO AUDIT REPORT VIEWS

Audited video is summarized in formal video audit reports that are delivered daily, weekly or monthly. Reports provide hyperlinks to be examined by auditors. By clicking the hyperlinks you have immediate access to actual video of each incident.

Overview Table

Plant	Current Period Compliance 01/06/2008-02/12/2008	Previous Period Compliance 01/01/2008-02/05/2008	Average Compliance 01/16/2008-02/12/2008
Plant Rating #1			
Plant 1	93%	96%	93%
Average Score	93%	96%	93%
Plant Rating #2			
Plant 2	77%	77%	77%
Average Score	77%	77%	77%
Total Average Compliance - All Plants	85%	87%	85%

Top line statistical scores for each production plant. This can include a summary of scores from all audit procedures conducted in the most processing plant.

Audit Category Summary

Plant	Category Procedure	Current Period Compliance 01/06/2008-02/12/2008	Previous Period Compliance 01/01/2008-02/05/2008	Average Compliance 01/16/2008-02/12/2008
Plant 2				
	Crowd Pen Compliance	70%	70%	70%
	Unloading Compliance	75%	75%	75%
	Chute Compliance	90%	90%	90%
	Knock Box Compliance	85%	85%	85%
	Average Category Score	80%	80%	80%
	Total Average Category Compliance	88%	89%	88%

Category summary scores for each audit procedure. This can also include a summary of scores by each audit procedure within a single plant.

Audit Category Details

Category	Plant	Audit Procedure	Current Period Compliance 01/06/2008-02/12/2008	Previous Period Compliance 01/01/2008-02/05/2008	Average Compliance 01/16/2008-02/12/2008
Crowd Pen Compliance	Plant 2				
		Use of Electric Feed While Unloading	80%	70%	80%
		Unloading	70%	70%	70%
		Movement Non-Compliance	80%	70%	70%
		Cow Felling Down	80%	70%	80%
		Average Category Score	81%	80%	81%

Break-down of scores by audit procedures.

Audit Procedures

Plant	Audit Procedure	Date	Wed 02/05/2008	Thu 02/10/2008	Fri 02/15/2008	Sat 02/20/2008
Plant 2	Sub	02/06/2008				
	Crowd Pen Compliance - Evaluating Calf Handling in Unloading Area	Rating #1	Rating #2	Rating #1	Rating #2	Rating #1
	Movement Non-Compliance - Observe for Openers in Crowd Pen Area	Rating #1	Rating #1	Rating #2	Rating #1	Rating #1
	Cow Felling Down - No Downers Observed	Rating #1	Rating #1	Rating #2	Rating #1	Rating #1

Hyperlinks to video examined by auditors. By clicking the hyperlinks you have immediate access to actual video of each incident.

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Plant	Current Period Compliance 01/06/2008-02/12/2008	Previous Period Compliance 01/01/2008-02/05/2008	Average Compliance 01/16/2008-02/12/2008
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	Unloading Compliance	75%	75%	75%
	Chute Compliance	90%	90%	90%
	Knock Box Compliance	85%	85%	85%
	Average Category Score	80%	80%	80%
	Total Average Category Compliance	88%	89%	88%

THE BUSINESS PRODUCT

Four Main Services	Description
1. Remote Video Auditing	Electronic Scorecard Reports from rules-based video examinations of historical events using existing processes or 3 rd party data triggers
2. Live Video Tours	Electronic Scorecard Reports from rules-based live video examinations that include live alerts to customer line managers
3. Video Alarm Verification	Live email video alerts and Electronic Scorecard Reports integrated with GE's top alarm monitoring software platform
4. Self-Service Video	Administrative and video monitoring tools that enable customers to remotely view and manage video

CUSTOMER EXAMPLES

Arrowsight has borrowed time-tested coaching methods from professional sports and leveraged the basic principals of game film analytics to deliver significant return on investment results to its business customers through driving operational process optimization with remote video auditing services.

- **Food Manufacturing:** Arrowsight has delivered roughly \$1.25 million in annualized net savings to a large turkey processing plant. The page below depicts these savings that were gained by improving the yield rates on a turkey breast trimming process.
- **Quick Service Restaurants:** Arrowsight has improved customer service times by about twenty-five percent in a chain of twelve quick service restaurants owned by a highly regarded national operator. The initial stores have experienced significant sales growth, as well as decreases in both labor and food costs, leading to a four-fold return on investment.
- **Healthcare:** In an ambulatory surgery center in Georgia, Arrowsight has improved baseline hand hygiene compliance rates from 38% to over 90% in fewer than five weeks and has sustained these high rates for over twelve months. Based on this success, Arrowsight has begun providing its hand hygiene services to a large US hospital system. This client has also expressed interest in a broader range of patient safety solutions offered by Arrowsight, including Intensive Care Unit and Operating Room critical care services.

EXAMPLE OF LABOR PERFORMANCE IMPROVEMENT

- Given the low margin nature of the meat industry, Arrowsight has focused its sales efforts primarily on financially beneficial operational process improvements inside the plants. The example below demonstrates recent advances in digital video technology. These four video images are pre-programmed camera pre-set views from a single Pan-Tilt-Zoom camera. These cameras can each have up to 64 pre-set camera view positions, which enable observation of many work stations with a relatively small number of cameras.



- In the lower left hand corner video image above, the worker is supposed to be carefully trimming the edges of this turkey breast, but instead has trimmed too deeply into the piece of meat. This worker's actions are costly to his firm because the trim portion of the meat will become ground turkey which is worth only 35-45% of the value of the breast meat.
- Annualized return on investment of roughly \$1.25 million for this one discreet business process was realized through rapid, steep and sustained improvements by the lowest performing workers.

CONSIDERATIONS FOR IMPLEMENTING VIDEO SERVICES PROGRAMS

In the ten years we have provided video services, we can point to several important implementation techniques that result in customer successes. The first is working with management to produce a positive reinforcement approach. By openly recognizing top performing workers instead of focusing only on the poor performers, staff morale is enhanced rather than deflated. We have statistically observed that overall poor performance scores for specific processes are usually caused by a minority of workers. It is very rare in any work environment that a strong performer will report a weak performer to their manager, as it can cause untenable friction amongst the workers. By having continuous performance feedback focused on positive reinforcement, the weakest performers tend to have rapid and sustained improvements, which enhance overall morale and productivity.

Another important technique we implement is to direct most of the performance feedback on and to front line management. This approach is valuable because the performance level of individual workers and the rapidity and sustainability of corrective action will be greatly enhanced by improving the information flow to these frontline supervisors. This methodology also dramatically reduces the number of individual workers that need to be directly contacted by Arrowsight or by client senior management.

The combination of random sampling and continuous feedback has been very effective in improving results for clients with engaged and committed management. Used proactively and positively by customers, the video auditing services can emulate having the best shift manager present at all work stations, on all shifts.

We believe that without sampling, performance feedback and management support, most video programs will fail to adjust employee behavior and allow poor practices and habits to persist. The reason we believe this is that in providing our video services, we consistently observe sub par performance during the baseline data collection period. It is only when performance feedback is initiated, that there are sharp increases in compliance rates. The critical consideration for any prospective client is that physical video systems alone do not generally improve and sustain staff performance and that continuous employee feedback is the only true means to achieving enhanced results. For clients who are not willing to thoroughly engage with a video services program, an alternative, but less optimal option would be to increase the number of front line managers in high risk areas such as animal handling pens.

ADDITIONAL HIGH RISK AREAS: FOOD SECURITY AND HEALTHCARE

While food safety is the highest priority for both suppliers and regulators, we believe that there is already a very substantial degree of plant quality assurance and USDA management and that there are additional high risk areas that do not have the same level of plant or regulatory oversight. For example, we believe there are opportunities to improve internal plant security with a bio-security program we have designed called Hot Zones. This program focuses on identifying high risk storage areas that store raw and finished materials, where a single deliberate act of contamination by a rogue or disgruntled employee could cause widespread sickness or death. By installing bio-metric palm readers at the entry ways of all high risk areas, a smaller subset of workers could be screened for higher clearance access to these storage areas. An overlay of video services would enable management to be alerted anytime that an unauthorized employee entered the storage area. Proper implementation of a bio-security program would provide an extra measure of internal plant security to help mitigate the risks of adverse events.

In healthcare, we have focused our attention on improving hand hygiene compliance and other critical care applications. The US healthcare system has a significant problem with hospital acquired infections (HAI). This results in two to three million patients per year being affected by HAI. Tragically, approximately 90,000 patients per year die from HAI and other preventable medical errors. Despite the implementation of protocols to improve hand hygiene in hospitals throughout the country, compliance by health professionals is poor and rates of HAI continue to remain elevated. The conventional methods simply do not provide process data necessary to measure rates of compliance with the protocols and to understand where and why protocols fail. Other data collection efforts have not been sustainable. Similar to the food security risks outlined above, the proper implementation of a carefully planned and executed video monitoring program has the potential to drive a reduction in patient injuries and HAI.

CONCLUSION

Since the recent meat recall, Arrowsight has been approached by many large and medium size companies to learn more about our animal handling programs. An industry-wide movement to improve practices in this area appears to be under way. In all of our meetings with prospective clients, we have also been requested to profile facilities for process optimization applications that will drive financial savings. In most cases, these savings will more than cover the costs of the animal handling services. Most sectors of the food production industry are low margin businesses that have been adversely affected by the recent sharp increases in fuel and grain prices. These difficult market conditions have made it important for us to incorporate animal handling applications into a comprehensive solution that can also generate strong financial returns through improved plant operations.

In closing, we appreciate the opportunity to testify before you today. As a company, we are honored to be in a position to serve the nation's meat suppliers with a range of Arrowsight Remote Video Auditing solutions that can combine safety, welfare, and security solutions, with financial gains achieved by improving plant operations.

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