



Petfood Safety

Innovative Monitoring and Verification Technologies for Petfood Safety Management Systems



David Rosenblatt, D.V.M.
Sher Consulting & Training

Petfood Industry

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Sher Consulting & Training Ltd.
Quality • Safety • Environment





HACCP refresher: petfood safety hazard

“Biological, chemical or physical agent in petfood, with the potential to cause an adverse health effect”





Hazards can roughly be classified into two types:

Type I: Hazards originating from raw materials that must be eliminated or reduced to an acceptable level somewhere along the process





Hazards can roughly be classified into two types:

Type II: Hazards that can be introduced (or worsened) from the processing environment





control measure (CM)

“Action or activity that can be used to prevent or eliminate a petfood safety hazard or reduce it to an acceptable level”





CMs can also be classified into two types:

Type I:

CMs applied at control points (CPs) along the process; e.g. thermal kill measures, FB detection / removal measures, etc.

These CMs are generally used to control Type I hazards.



CMs can also be classified into two types:

Type II:

CMs applied at the process environment as general prerequisite programs (PRPs); e.g. pest control, personal hygiene, SSOPs, etc.

These CMs are generally used to control Type II hazards.



In the traditional HACCP methodology, the **management of CMs for Type I Hazards is risk based**, whereas the **management of CMs for Type II Hazards is not...**



Traditionally, a risk based assessment is used to identify which process control measures (Type I) are worthy of being managed as Critical Control Points:



CCP critical control point

“Step at which control can be applied and is essential to prevent or eliminate a petfood safety hazard or reduce it to an acceptable level”



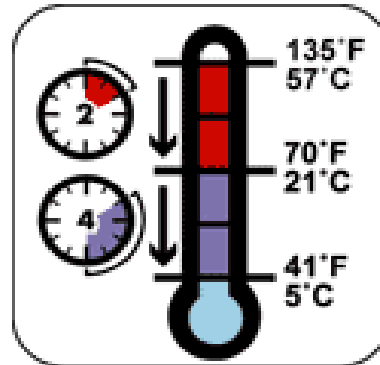


All other control measures (Type II), are expected to be in place in advance and are managed equally as prerequisite programs:



PRPs prerequisite programs

“Basic conditions and activities that are necessary to maintain a hygienic environment throughout the petfood chain”





CCPs are special in that compared to other process CMs, only they require very careful management attention including monitoring, verification, validation, etc.



The successful implementation of traditional HACCP has dramatically reduced the number food safety incidents caused by process failure ...

Currently, most incidents are associated with poor management of PRPs.



This was one of the driving forces behind the development of ISO 22000, which introduces the concept of the Operational PRP:





oPRP operational prerequisite program

“PRP identified by the hazard analysis as essential in order to control the likelihood of introducing petfood safety hazards to and/or the contamination or proliferation of petfood safety hazards in the products or in the processing environment”



Therefore...

ISO 22000 implementers must now devote special managerial attention to oPRPs and not only CCPs.

But...

How do we monitor and verify oPRPs (pest control, glass control, hand sanitizing, effectiveness of cleaning...?)



To the same extent that monitoring and verifying CCPs ensures that 100% of the products were effectively controlled....

We must be capable of monitoring and verifying oPRPs



Examples of oPRPs:

- **Equipment sanitizing**
- **Hand washing and sanitizing**
- **Pest control**
- **Glass control**
- **Control of loose machine parts**
- **Etc...**



Innovative monitoring and verification solutions:



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Smartphone e-monitoring
Remote pest monitoring
RFID hand sanitation
monitoring
Remote video monitoring
ATP Bio-Luminescent
verification of cleaning
effectiveness



e-monitoring of any inspection point:

-  **Glass audits**
-  **Plant maintenance**
-  **Housekeeping**
-  **Employee compliance**
-  **OSH and environment**
-  **Etc...**

INFOWIRE



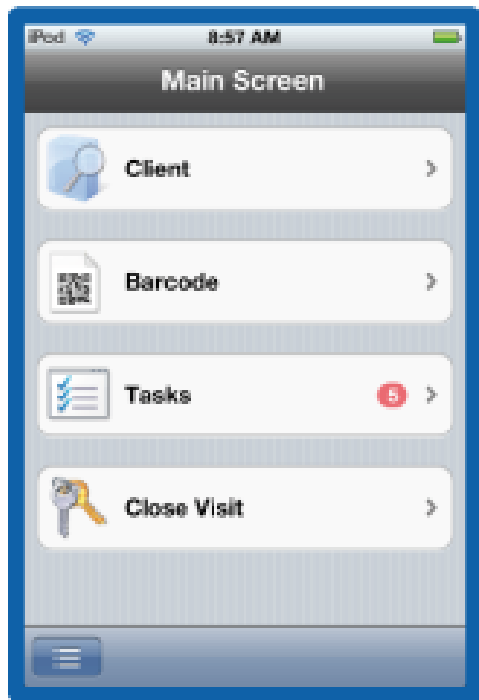
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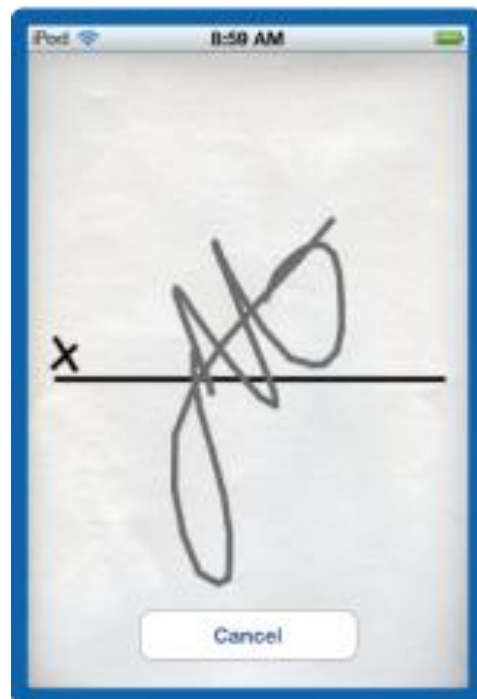
MAIN SCREEN



AUDITING



CLIENT'S SIGNATURE



INFOWIRE



Visit Report

Client: [Name] **WEB**

Client Address: [Address]

Reported by: [Name]

Start Date: 21/08/2011 12:00 End Date: 21/08/2011 12:00 Code: [Code]

Notes: [Text]

Barcode Data

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Audit Data

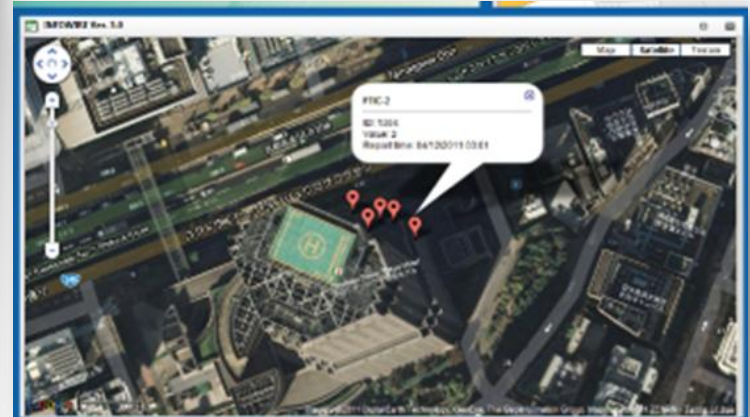
Question	Answer	State
Shops M2 Top	11	OK
Shops M2 Bottom	11.0	OK
Field activity	0.7%	with green heads OK

Message Data

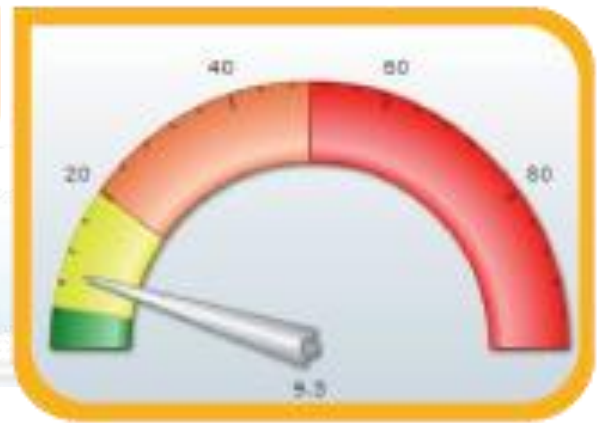
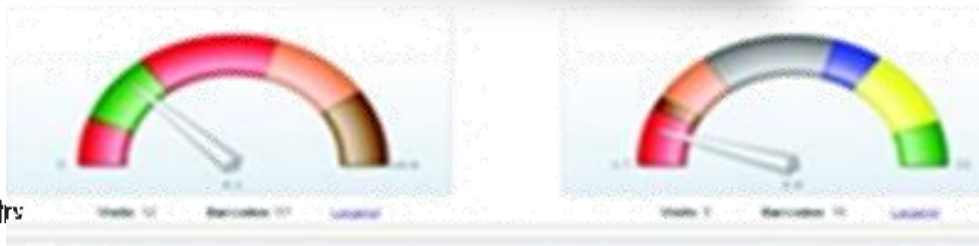
Name	Type	Value	State
Location	Audit Message	11.00	OK Head

Picture Data

Picture: [Image of yellow corn kernels]



DASHBOARD



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pest e-monitoring





Hand washing and sanitizing monitoring systems





Smart ID badges (RFID)

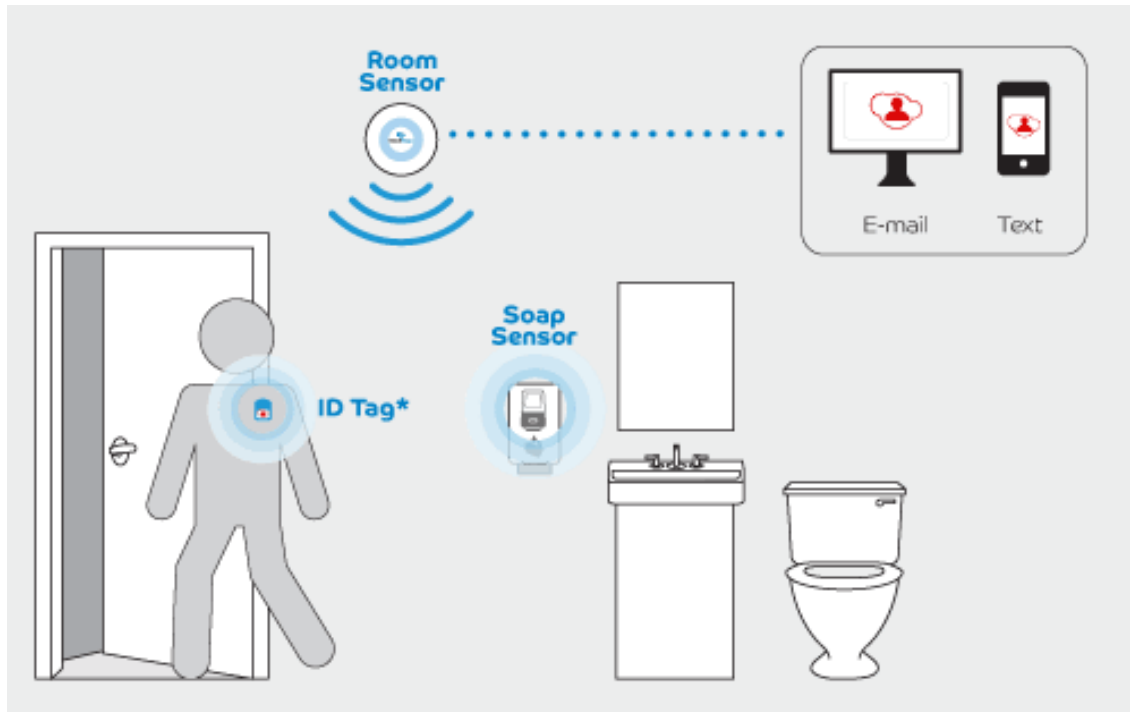
Hand sanitizing monitoring by location and or interval

Real time intervention





CloudClean



Receive instant alerts when your employee fails to wash their hands!

- 1** An employee leaves the bathroom without washing their hands!
- 2** CloudClean devices communicate with each other.
- 3** Instant alerts sent via e-mail or text!



UltraClenz

Touchfree



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Remote Video Monitoring

<https://www.youtube.com/watch?v=toVuil1rV2w>



Remote Video Monitoring

Hand washing behavior
Ingredient addition
Metal detection behavior
Sieve inspection compliance
Use of protective garments
And more...



ATP Bio-luminescence cleanliness monitoring

<https://www.youtube.com/watch?v=tnad-UfGI5c>



Thank You!

*Because what you
don't know, can
harm you*

David Rosenblatt, D.V.M.

Sher Consulting & Training

david@2sher.co.il

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