Using Assessment Data to Make Effective Risk Based Food Safety Decisions

July 8, 2021

Organized by: The Food Safety Assessment, Audit, and Inspection PDG

Sponsored by the

Moderator: Andrew Clarke, Loblaw Companies, Canada

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Today’s Participants

Andrew Clarke
*Loblaw Companies Limited, Canada*
Andrew is the Senior Director Quality Assurance at Loblaw Companies Limited, a seasoned food safety professional holding a BSc Food Technology and an MSc Food Safety Management, a Fellow of the Institute of Food Science and Technology and a 10+ year member of the International Association for Food Protection (IAFP). Currently co-chair for the GFSI Stakeholder Advisory Forum and an active contributor to the BRC Global Standards North America Advisory Board for many years. In 2020 the recipient of the IAFP Harold Barnum Industry Award, awarded for dedication and outstanding service to the public, IAFP and the food industry.

Michael Wilson
*BRCGS, UK*
Michael Wilson has worked in the assurance service industry for more than 20 years where he has worked with the worlds’ leading brands; manufacturers and retailers helping them measure, understand and effectively manage risk within their own business and their extended supply chain. With a background in primary production, Mr Wilson has traversed the value chain working with stakeholders literally from “farm to fork”. During this time, he has helped develop rigorous programs to mitigate risk and secure trust between the key role-players in the production; supply and sale of food around the world. Along with expertise in food safety management, Mr Wilson has also developed programs to address ethical trade and environmental stewardship within the global food and FMCG supply chains.

Mr Wilson is currently the Global Business Development Director for BRCGS, a leading provider of rigorous assurance services.
Today’s Participants

Jennifer Lott

*BSI, USA*

Jennifer Lott is the Senior Service Delivery Director for Food, Retail, and Customized Audits at BSI Group supporting Certification and Tailored Solutions.

Jennifer’s is an accredited Lead Auditor and Trainer with over 25 years’ experience GMP, Codex Alimentarius, FSSC 22000 Manufacturing and Packaging, RSPO, 21 CFR 111, 21 CFR 117, 21 CFR 210-211, ICH Q7, WHO GDP, EudraLex, ISO 15378, ISO 22716, BRC GS Consumer Products, BRC GS Storage & Distribution, BRC GS Packaging, BRC GS Agents & Brokers and is also a BRC ATP.

Jennifer received her B. Sc. Chemistry from the College of Mount St. Joseph in Cincinnati, Ohio and has worked with L’Oréal, Givaudan Flavors

Lone Jespersen Ph.D

*Cultivate SA, Switzerland*

Lone Jespersen is principal and founder of Cultivate SA, an organization dedicated to helping global food businesses make safe, great-tasting food through cultural effectiveness. She has significant experience with manufacturing, having previously spent 11 years with Maple Leaf Foods leading the execution of the company’s food safety strategy and operations learning strategy and prior to that engineering and operations roles in the global automobile industry. Lone holds a Master’s degree in mechanical engineering from Syd Dansk University, Denmark, a Master of Science in food science from the University of Guelph, Canada and a Ph.D. in culture enabled food safety with Dr. Mansel Griffiths at the University of Guelph, Canada. She led the Global Food Safety Initiative (GFSI) technical working group “A Culture of Food Safety”, currently the chair of the International Association of Food Protection (IAFP) professional development group “Food Safety Culture”, and the technical author on the BSI PAS320 “Practical Guide to Food Safety Culture.”
The Power of Data

Using Assessment Data to make effective risk-based food safety decisions

Science for a safer world.

Mike Wilson
Global Business Development Director

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Using Assessment Data to make effective risk-based food safety decisions

PART I – WHY?
- Introduction
- Establish some context
- Set the scene

PART II – WHAT & HOW?
- What data do we currently have access to?
- How are we using it?

PART III – Where are we now and Where do we want to get to?
- Current status
- Future vision

KEY QUESTION:
How do we use assessment data to provide actionable insight and drive positive impact?
WHY is this important?
Some context...

Number of worldwide air traffic fatalities from 2006 to 2020*

The burden of foodborne diseases is substantial

Every year foodborne diseases cause:
- almost in10 people to fall ill
- 33 million healthy life years lost
- Foodborne diseases can be deadly, especially in children <5
- Children account for 1/3 of deaths from foodborne diseases

FOODBORNE DISEASES ARE PREVENTABLE.
EVERYONE HAS A ROLE TO PLAY.

Source: World Health Organization
Additional Information: Worldwide, 2006 to 2020

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Giving data meaning
Making sense of it all…
Knowledge Pyramid
Turning Raw Data into Actionable Insight

Raw Data: 63°Celsius

Translation: The cooking temperature of the oven has dropped.

Context: The temperature needs to remain at or above 70°Celsius to remain safe.

Application: I’d better check the oven and turn up the temp.
Giving Data Meaning
Key Characteristics of Data

- **Data**
  - **Context**: The circumstances relevant to the event. E.g., Cooking 50kg’s of Chicken in an electric oven Vs. 5kg in a pot or on a grill.
  - **Content**: The event to which the data relates. E.g., Cooking Chicken.
  - **Constant**: Useful Information

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Some Examples…
Context – Sources of data across spectrum of value chain

1996
BRC Global Standards was set up to reduce audit duplication by UK retailers

2000
Food Safety first standard to be recognised by GFSI

2003
Consumer Products first published

2006
Storage and Distribution first published

2014
Agents and Brokers first published

2015
Food Safety Culture Excellence launched

2017
Food Safety Culture Excellence launched

2018
Acquisition of the Allergen Control Group Inc. (AGC) New Service package launched

2019
START! Global Markets Food Safety Published

2020
Ethical Trade and Responsible Sourcing Published

Plant-based Standard Published
Tell BRCGS Confidential Reporting launched

Offices opened in USA and India
Acquired by LGC Group
Retail first published

Issue 3 Gluten-Free published

BRCGS Branding Launched February 2019

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Some Examples…
Over 30k Sites Worldwide – Global Context

3,611
North America

11,058
Europe

4,480
United Kingdom

3,033
East Asia

2,521
Asia & South Asia

1,625
Eastern Europe

753
Mena

552
Africa

616
Oceania

97
Russia

1,106
Latin America

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Some Examples…
Sources of Data – Where does our CONTENT come from

<table>
<thead>
<tr>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,000</td>
<td>certificated sites</td>
</tr>
<tr>
<td>9</td>
<td>core schemes</td>
</tr>
<tr>
<td>7</td>
<td>locations</td>
</tr>
<tr>
<td>185,000</td>
<td>corrected non-compliances</td>
</tr>
<tr>
<td>1,840</td>
<td>auditors</td>
</tr>
<tr>
<td>6</td>
<td>Annual Audit Days</td>
</tr>
<tr>
<td>10,127</td>
<td>professional delegates</td>
</tr>
<tr>
<td>18</td>
<td>food safety categories</td>
</tr>
<tr>
<td>57%</td>
<td>unannounced visits</td>
</tr>
<tr>
<td>94%</td>
<td>satisfaction with auditors</td>
</tr>
<tr>
<td>13,217</td>
<td>trained by BRCGS academy</td>
</tr>
<tr>
<td>77</td>
<td>number of delivery partners</td>
</tr>
<tr>
<td>171</td>
<td>compliance site visits</td>
</tr>
<tr>
<td>130+</td>
<td>operating countries</td>
</tr>
</tbody>
</table>

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Making Data Accessible...

Now we’ve got it; what do we do with it?
How do we currently use this data?
Turning data into actionable Insight

DASHBOARD
AUDITOR ANALYSIS

Analyze trends in Non-Conformities and auditor performance
- Average NCs per auditor (Top 20 by volume)
- Volume of audits by NCs
- NCs by country

Clause List – Instantly find the clause reference.

Non Conformity Report

BENEFITS
- Data is highly portable and can be scheduled to be sent to key internal stakeholders
- KPI’s and statistics perfect for compliance checks and measuring auditor calibration
- Data mining opportunities for training and publishing. Segment data by scheme, country and tell prospective sites of likely problem areas
- Marketing can use rich content to create valuable insights to generate leads
- Brand owner assurance – demonstrate how your auditor experience is consistent globally
How do we currently use this data?
Turning data into actionable Insight

DASHBOARD
BENCHMARK & KPI

Performance Benchmark compares
- Audit KPI’s
- Non-conformity clause occurrence vs ROW
- Grade volume vs ROW
- Audits by standard vs ROW

BENEFITS
- Create your own value-add benchmark report by offering common non-conformities, grade profiles and site numbers by scheme, country and category
- Potential additional revenue charge for the benchmarked audit report
- Market Position – A real point of difference for a CB that uses data to drive new business and increase renewals
Where are we now & Where do we want to get to?

NOW...
- What Happened?
  - Descriptive Analytics

NEXT...
- Why did it Happen?
  - Diagnostic Analytics
- What will Happen?
  - Predictive Analytics

LATER...
- How can we make it happen / stop it from happening?
  - Prescriptive Analytics

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Brand Confidence Starts With A Conversation.

At BRCGS, our definitive Global Standards underpin brand reputation through compliance. To instil greater confidence in your brands and manage your risks in rapidly changing times, start a rewarding conversation with us.

Start the conversation:
+44 (0)20 3931 8150
contactus@brcgs.com
Using Data & Information From Audits and Inspections to Improve and Advance Food Safety

Jennifer Lott
Senior Service Delivery Director – Food, Retail, and Customized Audit
July 8, 2021
## From Short Term to Major Shift

- Great Depression
- Military-Industrial Complex
- Identified Risks
- 9/11 Attacks
- COVID-19 Pandemic
Assurance Types

Traditional Assurance
- Quality is a separate function
- Focus catching issues
- Data is disjointed, separate systems

Immersive Assurance
- Quality is everyone’s job
- Focus on identification, isolation, and mitigation
- Continuous Improvement
- Data is better harmonized and organized

Continuous/Predictive Assurance
- Embedded connected technologies will model, assess, and predict improvement opportunities.
## Assurance Tools

<table>
<thead>
<tr>
<th>Immersive Assurance Tech to Auditor &amp; Consultant</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>• Smart Wearables</td>
<td></td>
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<tr>
<td>• Remote Audit</td>
<td></td>
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<tr>
<td>• Connected Auditor/Consultant</td>
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<tr>
<td>• Audit Mobility Application</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Continuous Assurance Tech to Tech Audit</th>
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</thead>
<tbody>
<tr>
<td>• AI Based Management System auditing</td>
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<tr>
<td>• Cognitive Technology assessments</td>
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<tr>
<td>• AI based image recognition &amp; computer vision</td>
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</table>

<table>
<thead>
<tr>
<th>Continuous Assurance Tech to Client</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>• Smart Factory &amp; Connected Supply Chain</td>
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<tr>
<td>• Sensor / Smart Wearable Monitoring</td>
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<tr>
<td>• Cognitive Analytics / Monitoring</td>
<td></td>
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<tr>
<td>• Auto Reporting</td>
<td></td>
</tr>
<tr>
<td>• Immersive Operations support and call center</td>
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Spatial Solutions Overview

- conducts assessments through drone and LiDAR technology that helps visually identify hazard exposures, nonconformities, compliance concerns, and anomalies
- This technology provides high-resolution visuals to assess progress or change, identify anomalies, assist in site planning, and help ensure regulatory compliance
- Consultants/auditors can quantifiably assess sites through tools such as area and linear distance measurements.
- BSI tags and prioritizes each finding including the applicable regulation and recommended remediation measures
2020 BSI Immersive Review

122,000+
Days delivered remotely in 2020

33,000+
Days delivered remotely delivered in 2021 Q1

166
Number of countries delivered remotely in 2020
Let’s Co-Innovate

Jennifer Lott
Senior Service Delivery Director – Food, Retail, and Customized Audit
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Does your data make your food safer?

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Organisational culture and risk visibility

Adaption from “Quality Improvement and TQC Management by Sydney Yoshida – The Iceberg of Ignorance”
Data process

Collect  Record  Transfer  Analyze  Visualize  Take Action
So...

Does your data make your food safer?

It depends ...
Case
Case

• U.S. based meat company with multiple manufacturing sites.
• Regular environmental monitoring positives at all sites.
• Leaders were found to anchor their low estimation of food safety risks in the ‘few’ EMP findings and review of customer complaints.
• Food safety risks were only discussed in the HACCP teams and not in management or executive meetings.
HACCP proficiency

- HACCP Team proficiency range 33-66%

Reference: “Rethinking HACCP” Prof. Carol Wallace, 2012
Change Focus

Leadership behaviours
Data process and Rhythm
HACCP Proficiency
Building measurable proficiency

Virtual 4 week learning program

30-minute sessions with in-plant homework

Team learning

Norms focus

Source: Cultivating HACCP by Teaching Smart People to Learn (Jespersen and Wallace), 2021 In Review
November 2020
HACCP proficiency (retest)

- HACCP team proficiency range 59-83%

Reference: “Rethinking HACCP” Prof. Carol Wallace, 2012
In summary
So...

Does your data make your food safer?

It depends ...
To get better value from your data...

Behaviours  Data process  Rhythm  Proficiency
Thank you

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Questions?

Questions should be submitted to the presenters via the **Questions section** at the right of the screen.
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