Media Briefings 2020

#3 Efficiency & Sustainability: Igniting Innovation

Catherine Kaye
EMEA PR Manager

12 May 2020
Media Briefing Series

‘Igniting Innovation’ a catalyst for the advancement of science and technology.

Showcasing the drivers of Innovation in today’s world:

• **Product innovation** advances in technology offering new approaches that work smarter and faster for the lab of the future

• **Sustainability** of the lab and operations

• **Collaborations and partnerships** that advance science
#3 Efficiency & Sustainability: Igniting Innovation

Today’s Agenda

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison Paradise</td>
<td><strong>Greening the laboratory</strong>&lt;br&gt;How innovation and changing the mind-set is key to a more sustainable science and reducing the impact of research</td>
</tr>
<tr>
<td>Marc Boreham</td>
<td><strong>Responding innovatively to the ever-evolving laboratory</strong>&lt;br&gt;Revolutionizing the lab, how to simplify and enhance lab operations to meet the complex demands of the modern lab, with a specific focus on efficiency and sustainability</td>
</tr>
<tr>
<td>Closing remarks session</td>
<td><strong>Audience Q&amp;A and briefing recap</strong></td>
</tr>
</tbody>
</table>
Greening the laboratory

Allison Paradise,
CEO, My Green Lab
Consequences of Following the Rules in Labs

- 10x More energy than office spaces
- 4x More water than office spaces
- 12b Pounds of plastic waste each year
My Green Lab’s programs:

- CEEL
- Green Chemistry
- My Green Lab Certification
- Freezer Challenge
- ACT: The Environmental Impact Factor Label
Our approach has led to:

- 30% Energy reduction
- 70% Water reduction
- 10% Waste diversion

# ACT.

Accountability, Consistency, Transparency.

## The Environmental Impact Factor Label

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Manufacturing Location</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Manufacturing</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Impact Reduction</td>
<td>6</td>
</tr>
<tr>
<td>Renewable Energy Use</td>
<td>No</td>
</tr>
<tr>
<td>Responsible Chemical Management</td>
<td>1</td>
</tr>
<tr>
<td>Shipping Impact</td>
<td>5</td>
</tr>
<tr>
<td>Product Content</td>
<td>10</td>
</tr>
<tr>
<td>Packaging Content</td>
<td>5.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>User Impact</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Consumption</td>
<td>15</td>
</tr>
<tr>
<td>Water Consumption</td>
<td>N/A</td>
</tr>
<tr>
<td>Lifetime Rating</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>End of Life</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging</td>
<td>5.1</td>
</tr>
<tr>
<td>Product</td>
<td>5</td>
</tr>
</tbody>
</table>

| **Environmental Impact Factor** | 54.3 |
| **Label Valid Through** | September 2020 |

---

**Energy and water consumption reported as daily values, all other values on a scale of 1-10; 1 indicates the least environmental impact and 10 indicates the greatest.**

---

**my green lab.**
Responding innovatively to the ever-evolving laboratory

Marc Boreham
Vice President, General Manager, Laboratory Enterprise Solutions division, Agilent Technologies
Laboratories are a necessary cost of our customers’ businesses. They must constantly improve productivity and quality while reducing expenses.
Agilent CrossLab Enterprise Services – How We Do It
A portfolio of services to drive asset, regulatory, and operational excellence

- Asset Lifecycle Management
- Compliance Assurance
- Operations Expertise
- Connected Lab

Global presence and technical expertise for over 40 years
Laboratory-wide service capability
#1 ranking in regulatory and compliance services
The Agilent Connected Lab
3 Innovation Vectors Addressing Customers’ Key Challenges

Key Trends
Remote Access
Digitalization
Centralization
Regulatory
Ease of Use
Productivity

Enable Data Access:
• Centralized/Secure Cloud storage
• Real-time data access – anywhere
• Compliance - cloud, paperless
• Deep analytics applications

Enhance Lab Productivity:
• End to end sample tracking
• Eliminate manual data re-entry
• Comprehensive asset management
• Centralized (core) lab management

Improve Time to Value:
• Reduce deployment time
• Online training & troubleshooting
• Remote Monitoring
• Predictive diagnostics
• Augmented reality assist

COVID-19 is a significant accelerator
Comprehensive Asset Management – The Opportunity
Critical Need to understand how instrument fleet is being used

You may be surprised to learn…

4% using utilization data
only 4% of lab managers are using utilization data for decision making*

35% average utilization
On average an instrument is being used only 35% of the time**

* Source: Agilent asset management survey of lab and operations managers
** Source: Utilization data from Agilent Asset Monitoring; blend across high-value Cat 1, 2, 3 assets in R&D and QC
Asset Monitoring
The key to driving the next evolution of lab productivity and sustainability

Keys to effective asset monitoring

- Automated
- Non-intrusive
- Vendor-agnostic
- Lab-wide
- Configurable
- Secure & IT friendly

If you do this right. Significant opportunity to reduce lab space, build-out costs, capital equipment expense, power and gases consumption, maintenance and compliance costs
CrossLab Connect Asset Monitoring

Utilization – the cornerstone for effective lab asset management

Connecting *every* instrument in the lab to the cloud

Early Access Customer Outcomes (examples)

**Customer 1**
- Fleet balancing – Preclinical retired 20% of fleet
- Reduced CapEx – Reducing lab footprint for site move

**Customer 2**
- Adding requirement of Agilent utilization data into CapEx purchase process

**Customer 3**
- OpEx control – Freezer power consumption validation
Laboratory Asset Management…What’s next?

Understanding utilization is just the foundation - with instrument connectiveness, ease of use, and instant and easy sharing of scientific data, a reimagining of the lab is possible.

Today the lab is still primarily where the scientist is, tomorrow:

Core (centralized) Lab

Vs.

In-line (at sample) testing
Questions & Answers
Please use the Q&A chat function or “raise your hand” to ask a question to our panelists.
Thank You!

Look out for your invitation to:

#4 Partnership & Collaboration: Igniting Innovation