

# Campden BRI Hungary

# Campden BRI Magyarország Nonprofit Kft.

**Overview**

January 2020

# Summary

**Campden BRI Hungary Office**

Campden BRI (Hungary site)  
1096 Budapest, Haller Str 2

Tel: +(36) 1 433 14 70  
Fax: +(36) 1 433 14 80  
campden@campdenkht.com  
www.campden.hu



Campden BRI  
food and drink innovation

**Skills and activities**

Analysis and testing

Operational support

Knowledge management

Membership

Research and innovation



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**Listeria management**



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**What is Industry 4.0?**

- "Industry 4.0 (I4.0) is a collective term used around the world to describe the convergence of IoT-driven technologies, augmented decision making and advanced automation" (KPMG, 2017)
- It is also buzz word heaven
  - IoT
  - Big data
  - AI & Machine learning
  - Additive manufacturing/3D printing
  - Robotics & automation




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**Resource efficiency improvement and cost reduction potential in the food industry**




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**Sensory and consumer services**



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# Company overview

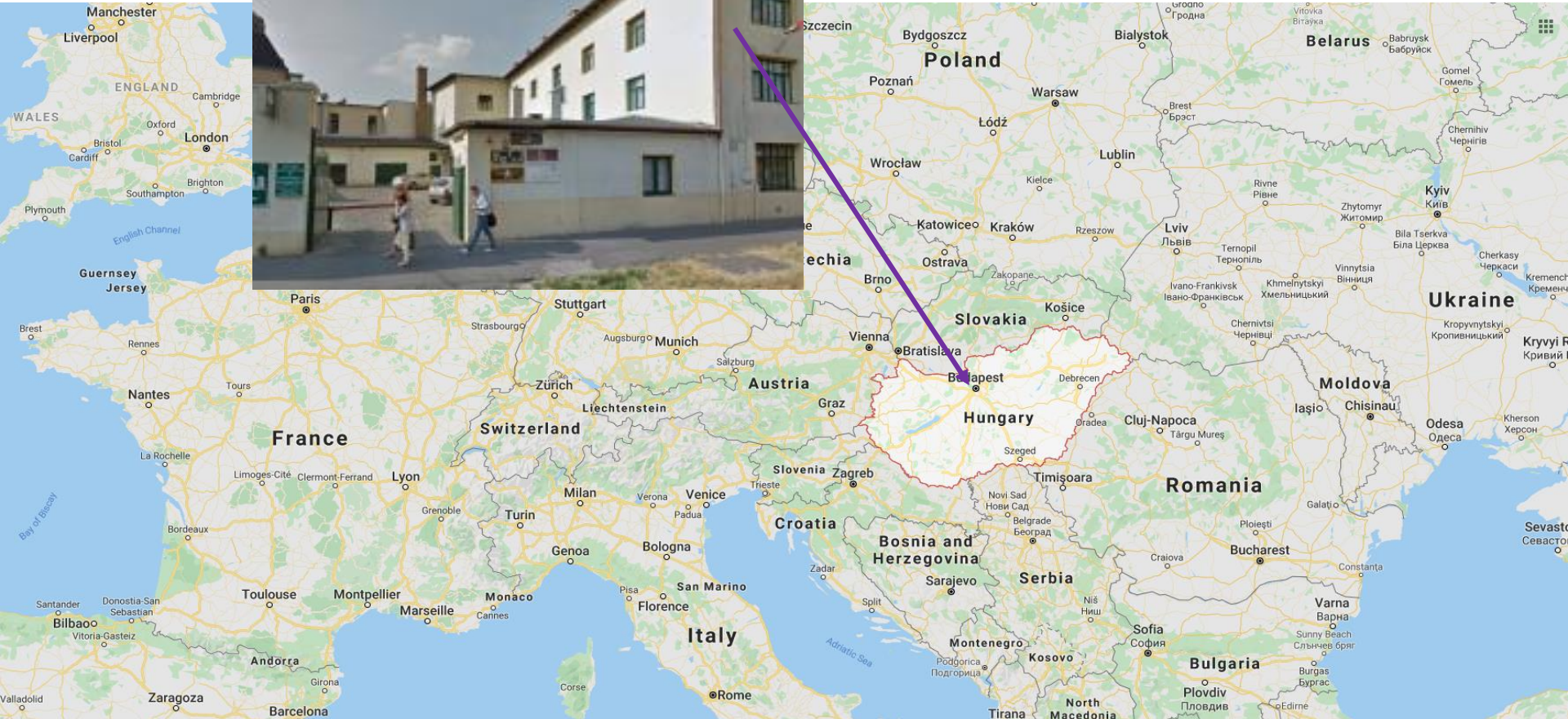
- An independent, non-profit food industry R+D+I organisation serving the needs of the food businesses and allied stakeholders
- Registered in Budapest, Hungary
- An entirely owned subsidiary of Campden BRI, UK
- Practical, technical, scientific, regulatory and information support for the food and drink supply chain

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## Analysis and testing

- Problem micro-organisms
- Contaminants
- Composition and authenticity
- Sensory, consumer and quality
- Ingredient functionality
- Packaging performance



## Operational support

- Safety assurance
- Quality management
- Processing and manufacturing
- Product innovation
- Sustainability
- Laboratory systems



# Skills and activities



## Knowledge management

- Training and events
- Legislation and information
- Websites and social media
- Specialist websites
- Publications



## Membership

- Easy access to experts
- Member service accounts
- Networking
- Discounts
- Research
- Members' websites



## Research and innovation

- Safety
- Quality and value
- Nutrition, health and well-being
- Resilience and efficiency
- Environmental sustainability
- Skills and knowledge



# Campden BRI Hungary – skills and key activities

- Regular partner in **EU and national research and innovation projects, networks, expert groups, initiatives**
  - Food Drink Europe Research and Innovation Expert Group (leadership)
    - Links to food industry federations throughout Europe
  - European Collaboration of National Food Technology Platforms
  - EIT Food Network Partner and EIT Food Hub in Hungary
  - EIT Digital Partner
  - ETP Food for Life Advisory Board
  - Cluster collaborations
  - Involvement several EU and other international projects
    - e.g. 7 H2020 projects
    - FP6 and FP7

# Campden BRI Hungary – skills and key activities

- **Training and KT** experience, education activities targeting
  - established companies
  - food control authorities
  - intermediaries, students, entrepreneurial talents
  - start ups, spin-offsin food and related knowledge as well as solution providers and supplier sectors
- **Transdisciplinary innovation activities** for the food industry  
Representing the food industry on innovation and food safety issues at government expert bodies in Hungary and in the EU.

# Campden BRI Hungary – skills and key activities

## Key activities of CBHU include:

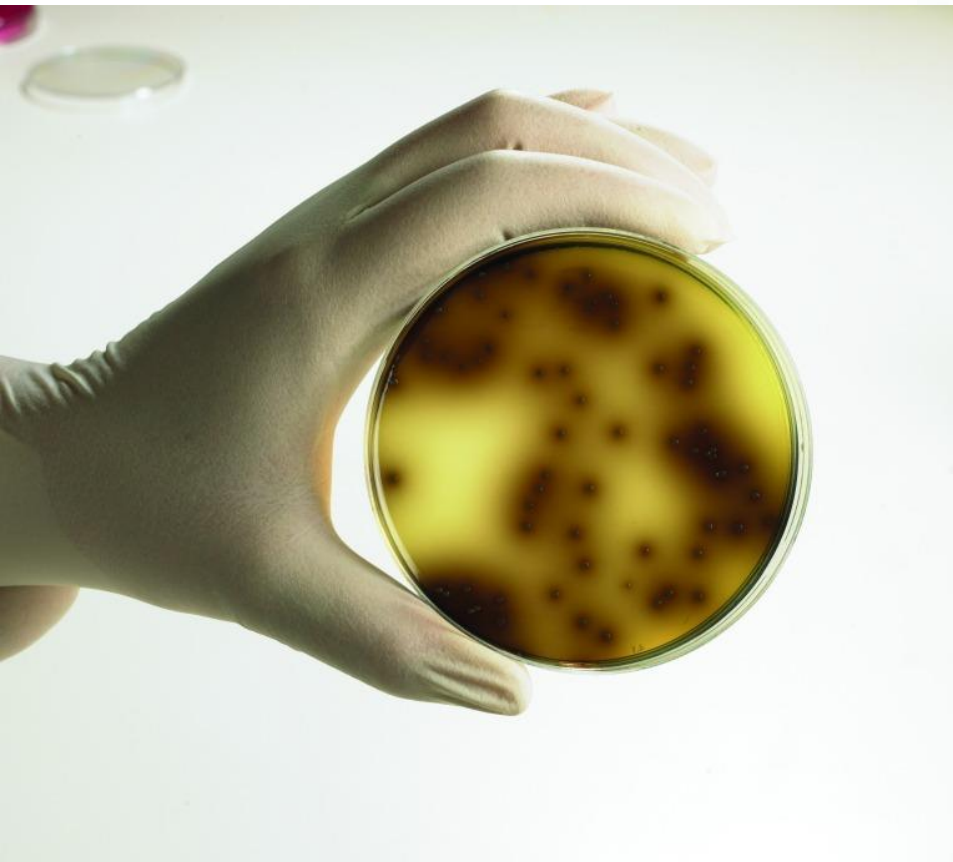
- food technology: R&D&I and related troubleshooting and problem solving (food safety, quality, microbiology, efficiency, cost saving, legal compliance, etc.) in many branches of the food industry (in particular frozen food, heat preserved food, meat and poultry processing, ready meal, bakery, drink, etc.)
- value chain management
- consumer and sensory testing
- product development, especially products with health benefits
- food safety management and food safety risk assessment, food safety auditing
- knowledge transfer and training
- advice on food legislation and legality of product labels
- assistance in R+D+I projects in EU and Hungary

## Special expertise:

- Frozen foods
- Listeria management
- Industry 4.0, digitisation and automation
- Cost reduction, energy and waste management in the food industry
- Fermented dry meats
- Food and non-food product (packaging) benchmark test
- International and region specific regulatory advice
- EIT Food Hub in Hungary



# Listeria management



## An audit scheme for Listeria management Adjusted to specific requirements of frozen vegetable and fruit processing

Evaluation of the efficient control measures for medium risk areas.



Campden **Listeria audit scheme** helps businesses to meet their requirements by

- Offering a practical, independent, third party assessment;
- Regularly appraising the Listeria Management Plan;
- Means for verification;
- Providing specialist knowledge.



Requirements based on

- HACCP principles (Gaze, 2009);
- Listeria Management Plan (Holah, 2018).



Application experience in other sectors:

- Low risk: fresh meat;
- High care: dried meat;
- High risk: cheese and dairy, cooked meat.

Based on

- more than 20 years experience in auditing for BRC, IFS, SQMS;
- more than 50 years experience in frozen food production.

### In addition you will receive:

- A written summary of the visit's findings on completion of the audit;
- A full report of the audit;
- A certificate on satisfactory results of the non-conformances.

Contact: Campden BRI Hungary Ltd.  
Attila Berczeli, E-mail: [a.berczeli@campdenkht.com](mailto:a.berczeli@campdenkht.com)  
András Sebök, E-mail: [a.sebok@campdenkht.com](mailto:a.sebok@campdenkht.com)

Campden BRI Magyarország Nonprofit Kft. 1096 Budapest, Haller u. 2.  
Tel: (36 1) 433 1470; Fax: (36 1) 4331480; e-mail: [campden@campdenkht.com](mailto:campden@campdenkht.com) [www.campdenbri.hu](http://www.campdenbri.hu)

# Training on Listeria management

General, site and product specific practical training on Listeria management for:

- Operational management
- Operators
- Maintenance staff
- Quality assurance staff
- Senior management

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# Opportunity

The food industry is the largest manufacturing sector in the EU

Many I4.0 technologies offer solutions to Food industry challenges

Awareness of I4.0 technologies needs to be raised and bespoke solutions developed for the food industry

Knowledge and solution providers need to be made aware of the challenges and the related constraints of the food businesses where their solutions can be used and adapted

# Current Campden BRI Hungary

## I4.0 activities - Research

- Sweetveg EU project on precision agriculture – just completed
- INCluSilver EU project on NPD for older consumers - ongoing
- Connsensys – EU smart sensor project – ongoing
- S3 Food- H2020 – Innosup project on application of I4.0 ongoing
- GLOPACK – EU project on smart packaging – ongoing

### Research in the UK

- 3D food printing project just completed
- AI dough mixing project just completed
- AI powder blending project - starting
- BirdEase – acousto/optic sensor project just completed
- PouLLS animal welfare monitoring project just completed
- New Technologies MFR project - ongoing
- Blockchain MFR project - ongoing

# Current Campden BRI Hungary

## I4.0 activities - other

- Organiser of 2 S3 Central European cooperation workshops in Smart Specialisation supported by the DG Regio:
  - - Modernisation of the food industry through application of Industry 4.0 and Digitisation, Budapest, (2019);
  - - Application of ICT and Advanced Manufacturing Solutions in the Food Supply Chain”, Budapest (2018),
- Special project: Practical implementation of I4.0 in food processing
- Hackathon on Application on Digitisation and industry 4.0 in Food Processing – EIT Food Hub, Budapest November 2019
- New co-funded EIT Digital project to develop and deliver food industry specific Industry 4.0 training
- EIT Digital partner
- Consultancy services
  - Defining user requirements and constraints
  - Technology validation
  - Building communities for food industry & I4.0 supplier dialogue



# Resource efficiency improvement and cost reduction potential in the food industry





# Reduction of energy, water, raw and packaging material usage, and human labour

## Reduction of energy usage:

- Optimization of technologies in the food industry – in compliance with food safety requirements and maintaining the sensory attributes of the product:
- Validation of heat treatment (cooking, baking, sterilization, pasteurization)
- Reduction of energy usage for high energy demand technologies.
- Optimization of refrigeration systems in food industry – in frozen, dairy, meat processing and beverage industries.

## Reduction of water consumption in sectors with high water usage:

- Water mapping, water use and hotspot monitoring.
- Optimization of cleaning and disinfection technologies and processes.
- Review / screening of the cleaning system.

## Efficient use of raw materials and packaging solutions:

- Waste reduction.
- Optimization of technologies for
- food processing, cleaning and disinfection technologies;
- use of advanced sensor systems and IT solutions.



# Sensory and consumer services



# Consumer and Sensory services and research

## Consumer services

- A wide range of consumer testing methods
- Expert consumer panel
- Tailored consumer tests in a business-to business environment
- Access to a large Hungarian consumer panel
- Tailored consumer panels by demographic properties
- Trained and screened consumer panel (150-200 people) for basic taste
- Integrated approach: sensory analysis and market research in line with product quality check, product development and product optimisation

## Sensory services

- ESN (European Sensory Network) membership
- Descriptive analysis and hedonic consumer tests accredited to MSZ EN ISO/IEC 17025:2005.

# Consumer and Sensory services and research

## Consultancy and training

- Bespoke and scheduled training courses
- “Pick up” option to select and customise course elements

## Research interest

- Health and diet
- Attitude and behavioural studies
- Cross cultural studies and collaboration research
- Consumer tests in business-to business environment
- Product innovation
- Understanding the relationship between instrumental and sensory data

# Campden BRI Hungary

*'The partner of choice for the development and application of technical knowledge and commercially relevant solutions for the food and drink supply chain'*

[www.campdenbri.co.uk](http://www.campdenbri.co.uk)

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Contact: Campden BRI Hungary  
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