



Building the Evidence Base for Dietary Exposure Assessment in Luxembourg

A feasibility pilot for a national food consumption survey

Farhad Vahid, PhD

Luxembourg Institute of Health (LIH)



ALVA Annual Conference on Research in Food Safety

28 September 2026 | Luxembourg

Sponsor:

LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Agriculture,
de l'Alimentation et de la Viticulture

Administration luxembourgeoise vétérinaire
et alimentaire



MTS:

NutriHealth

DopH

PHE

CICE

CCMS

DMA



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Agriculture,
de l'Alimentation et de la Viticulture



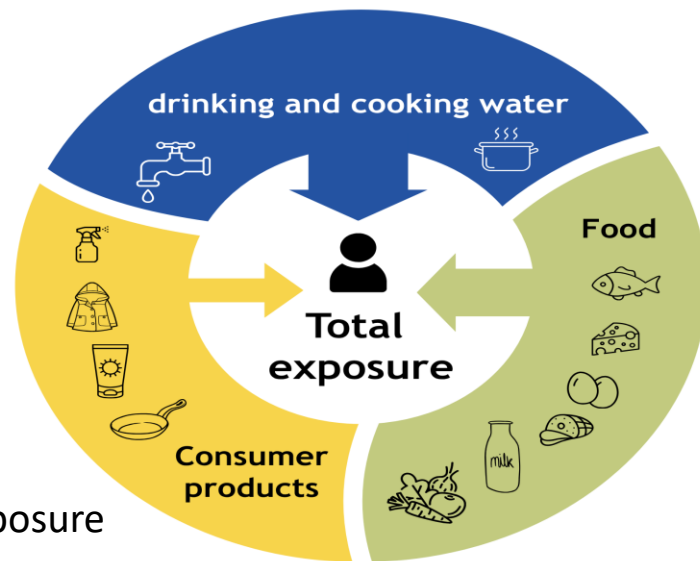
LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de l'Agriculture,
de l'Alimentation et de la Viticulture

Administration luxembourgeoise vétérinaire
et alimentaire



Why Food Consumption Data Matter for Food Safety and Health

- ✓ **What people eat determines what they may be exposed to**
 - Dietary exposure > chemical and biological hazards.
- ✓ **Two complementary components:**
 - **What is present in food?**
 - **What and how much do people consume?**
- ✓ **Reliable consumption data are therefore essential for:**
 - Dietary exposure assessment
 - Risk characterization
 - Identification of population groups at higher exposure
 - Food-safety and nutrition policy



Luxembourg Needs Better Dietary Intake Data

Where are we today?

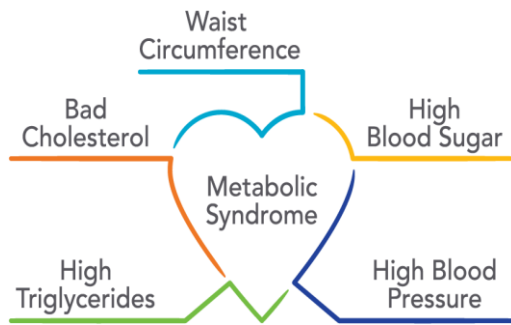
Luxembourg

- A highly diverse population
- A population of approximately **691,000 inhabitants**, around **47% foreign nationals**

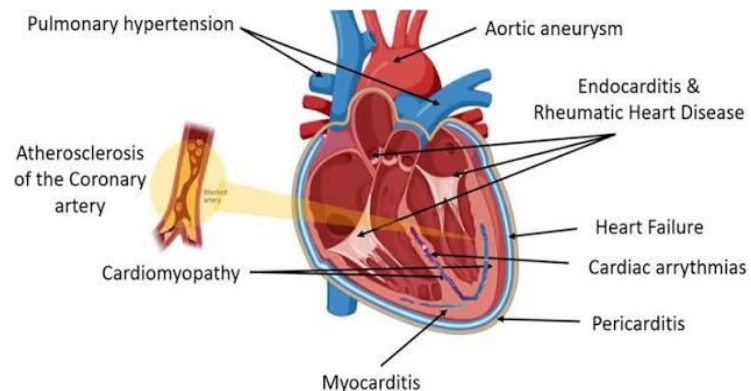
Cardiometabolic Health in Luxembourg:



20% of adults!



30% of adults!



Causes 29% to 32% of all deaths in Luxembourg!



Luxembourg Needs Better Dietary Intake Data

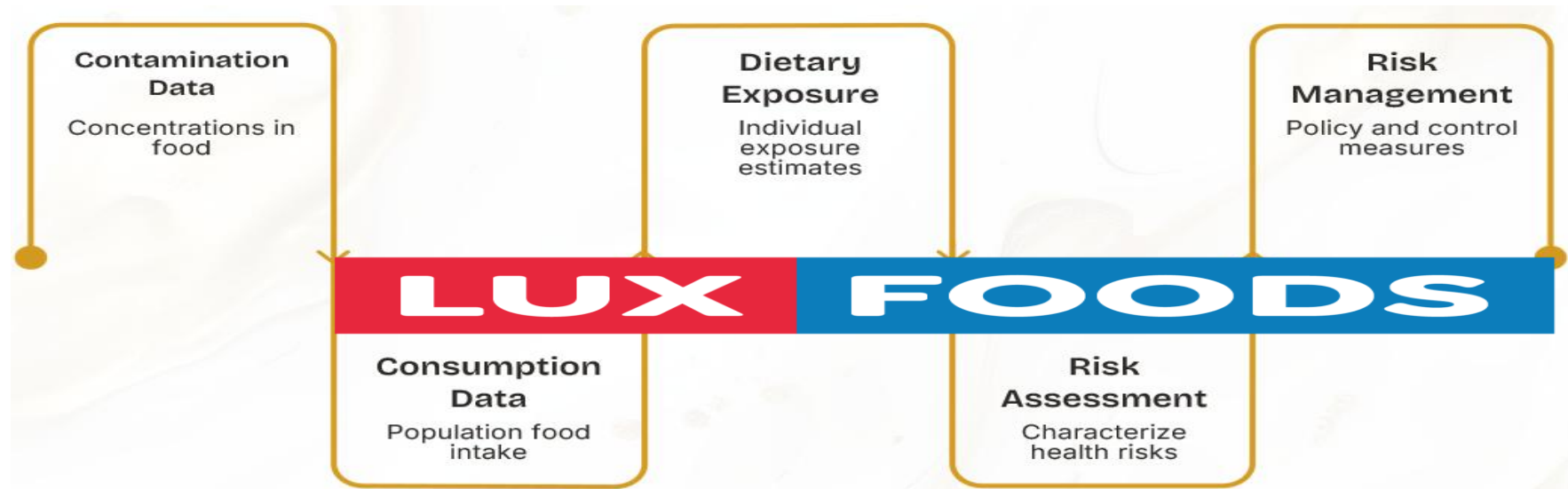
- Luxembourg currently lacks a nationally representative food-consumption survey
- aligned with the EFSA EU Menu methodology.
- ❖ Existing studies e.g., **ORISCAV**
- ✓ **The gap:**
Need a systematic picture of what people eat.



From Food Consumption to Exposure Assessment

LuxFoods addresses the second essential component:

- ✓ What does the Luxembourg population consume?



What Is LuxFoods?

A feasibility pilot for a future national food-consumption survey

Develop and test the methodology required to collect high-quality individual food-consumption data in Luxembourg.

The pilot **study** will test:

- Dietary assessment methodology
- Sampling and recruitment procedures
- Digital dietary assessment tools
- Data collection procedures
- Food classification and coding
- Participant burden and acceptability
- Quality-control procedures
- Complementary anthropometric measurements
- Operational feasibility



LuxFoods → National survey readiness → Harmonized Luxembourg dietary database.



LUX FOODS

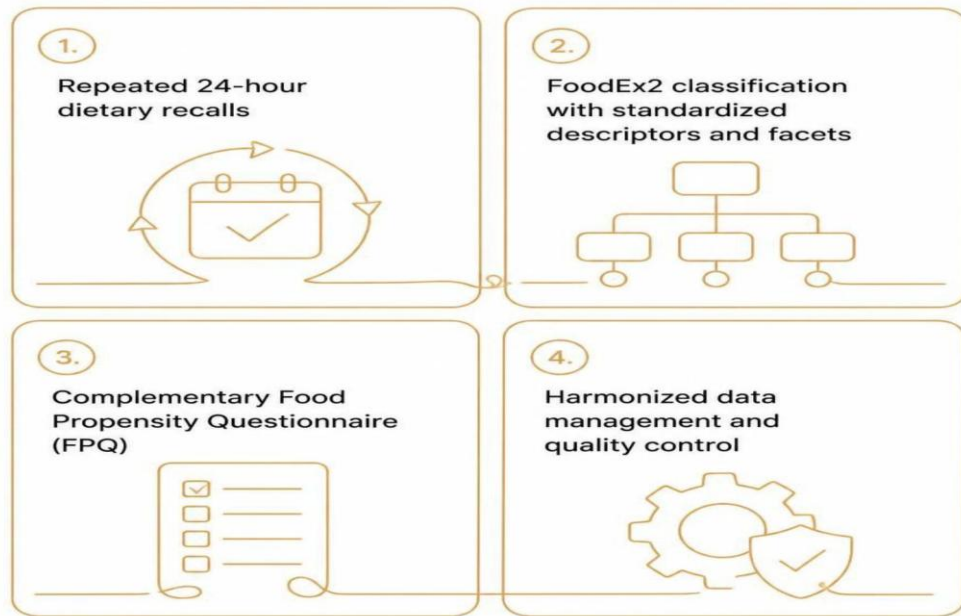
Designed for European Harmonization

Aligning Luxembourg with the EFSA EU Menu approach/methodology.

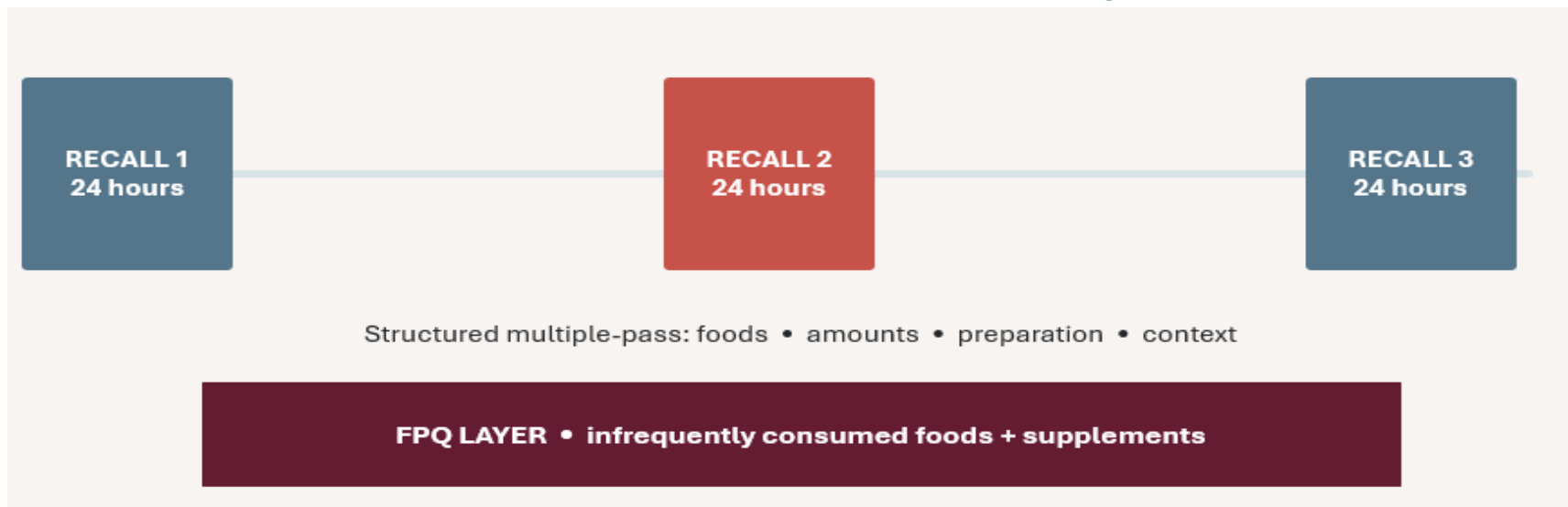
Why harmonization matters

It allows Luxembourg data to become:

- Comparable with other European datasets
- Suitable for food-exposure assessment
- More useful for EFSA-level analyses
- Relevant for future European dietary surveillance



How Will We Measure What People Eat?



- ✓ **Each recall captures:**
 - Foods and beverages consumed
 - Amounts/portion sizes
 - Preparation and relevant food descriptors
 - Contextual information
 - Additional details required for food classification

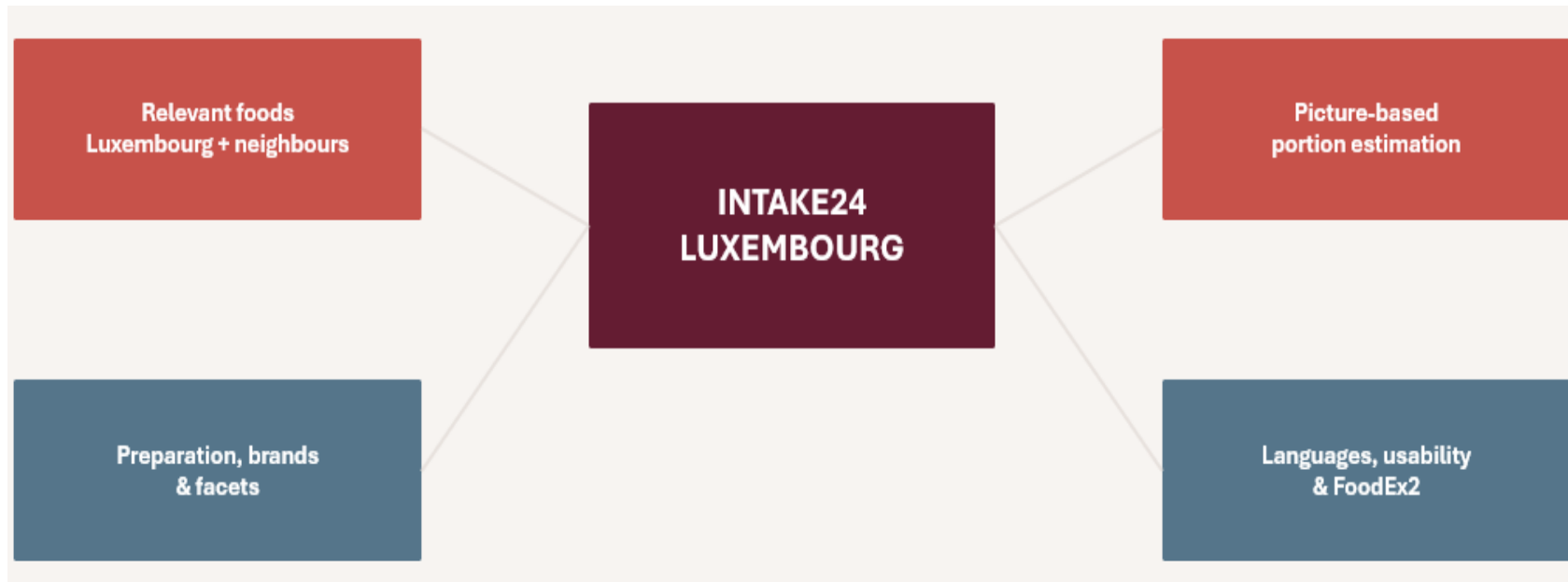
- ✓ Digital dietary assessment using an adapted Intake24 platform



Intake24

Making Intake24 Fit Luxembourg

A digital tool needs local adaptation





Who Will Participate?

Adults aged 18–64 years

Pilot target

~75 participants recruited > ~60 expected completers

assuming approximately **80% completion**

Recruitment considers:

- **Sex**
- **Urban/rural residence**

The pilot will evaluate:

- Recruitment rate
- Response rate
- Completion rate
- Dropout
- Representativeness of recruitment across predefined strata

The pilot is **not** intended to estimate national intake — it tests whether the methodology can a future national survey.



Beyond Dietary Intake



Anthropometry

Weight, height, WC, TC



Body Composition

Bioelectrical impedance assessment



Cardiovascular

Blood pressure measurement



Biological Samples

Blood and urine may be collected

e.g., inflammation, oxidative stress, lipid profile

Why this matters:

Diet → exposure → health-related characteristics



What Will We Learn From the Pilot?

- ✓ Feasibility is the central outcome
- ✓ Recruitment
- ✓ Dietary assessment
- ✓ Data quality
- ✓ Participant experience
- ✓ Operational workflow
- ✓ Technical performance
- ✓ Field staff experience



From Pilot to National Survey

LuxFoods is a learning cycle



The ultimate objective

A robust, harmonized and sustainable system for dietary surveillance in Luxembourg.

Why This Matters for Food Safety and Health

Building the missing link in Luxembourg's exposure-assessment infrastructure



Final message

To understand dietary exposure, we need to know what people eat.

WHY THIS MATTERS TO ALVA & FOOD SAFETY

A NATIONAL DIETARY DATABASE CAN CONNECT TWO WORLDS



LuxFoods strengthens the connection between food monitoring and population exposure assessment.



THE LONG-TERM VISION

A LUXEMBOURG DIETARY EVIDENCE PLATFORM

POLICY & RISK MANAGEMENT

Food safety
Nutrition policy
Dietary guidelines

EXPOSURE & HEALTH RESEARCH

Dietary exposure
Population groups
Diet–health relationships

HIGH-QUALITY DIETARY DATA

Individual consumption
FoodEx2
Harmonized methodology
Quality control



- 
- ✓ WE NEED TO KNOW WHAT PEOPLE EAT.
 - ✓ WE NEED TO MEASURE IT IN A HARMONISED WAY.
 - ✓ WE NEED DATA THAT CAN CONNECT CONSUMPTION WITH EXPOSURE.

LUX FOODS IS BUILDING THAT FOUNDATION FOR LUXEMBOURG.





Thank You...

