

What Lies Behind Food & Beverage Safety?

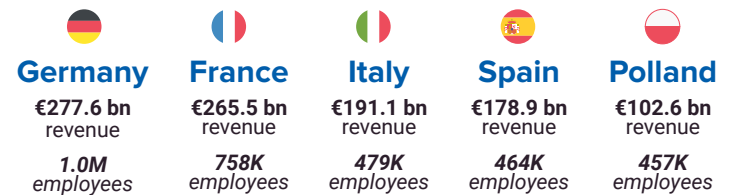
Across Europe, 4.7 million people keep Food & Beverage Manufacturing moving every day. Their decisions - often made across shifts and around heavy machinery - shape safety, quality and continuity.



F&B Manufacturing in Europe at a glance:

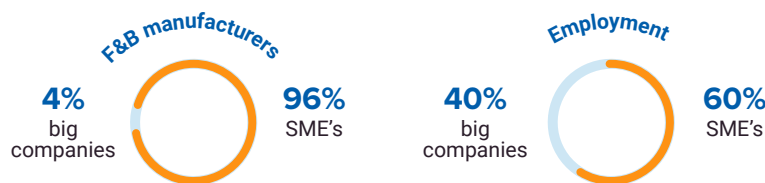


Leading EU F&B Manufacturers ¹



A sector built on SMEs in the EU

(Small and medium-sized companies) ¹



Nearly 2.8 million people work in small and medium-sized F&B manufacturing companies across Europe.

From production and cleaning to maintenance and changeovers, their everyday decisions help to keep operations safe, efficient and moving.

Workplace accidents highlights

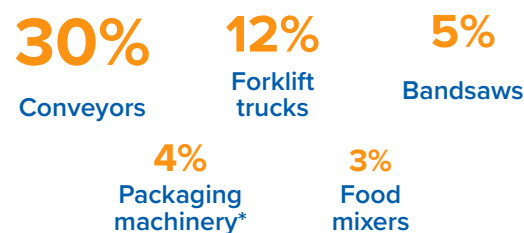
(F&B manufacturing companies in EU) ²



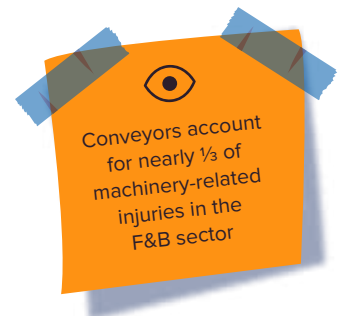
*Occupational accident statistics are based on the latest harmonised Eurostat data available (2023).

When machinery is involved

Analysis of injuries investigated by HSE in the F&B companies (4-year period): ³



*Includes thermoform, palletising and strapping machines.



90%

of conveyor injuries occur during normal, foreseeable operations like: ³



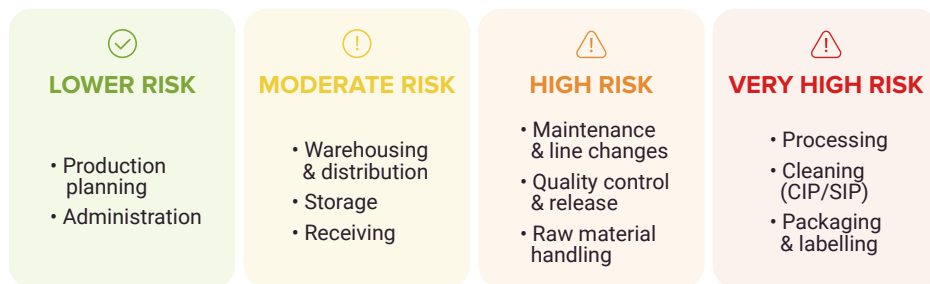
Routine can reduce our perception of risk.

Repetition, familiarity and changing demands can affect attention. When people are working around moving equipment, a small lapse can have serious consequences.

Where Food & Beverage Risks Begin

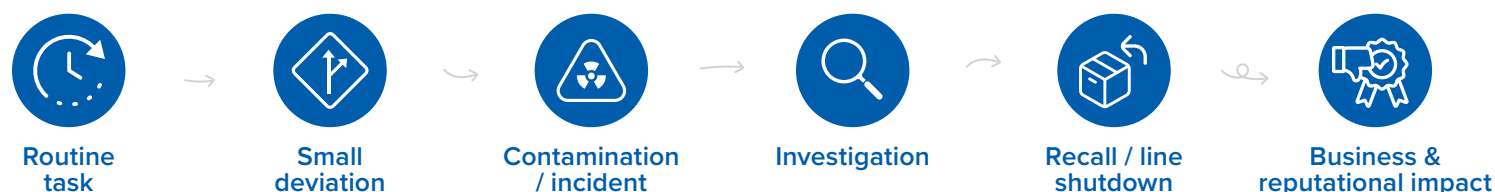
Risk is not confined to one point in the value chain. It rises wherever people must make fast, repeated decisions - **particularly in processing, cleaning, packaging and labelling.**

Risk level at different operational phases:



**Adapted from EFSA HACCP & Risk Analysis frameworks and European Commission RASFF data.*

Small deviations can escalate: ⁴

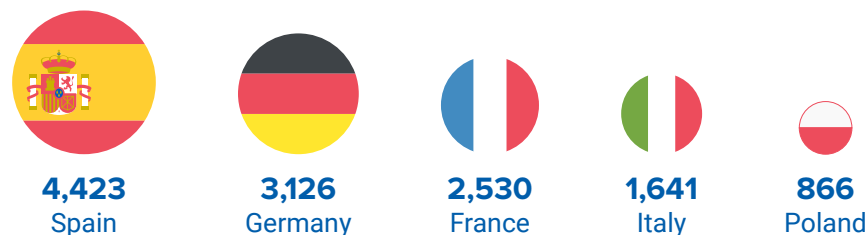


A missed step, unclear handover or unnoticed change...

...can move quickly from routine task to incident, contamination, recall, shutdown and reputational damage.

Worker Safety

Non-fatal F&B accidents per 100,000 workers (2023):

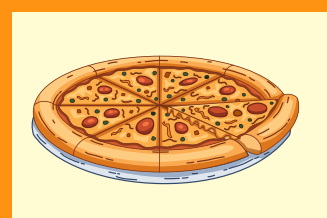


Rates vary significantly between countries, but **workplace accidents remain a reality across major European F&B markets.**

**Incidence rates are calculated by using Eurostat ESAW non-fatal accident data from 2023, and Eurostat Structural Business Statistics (persons employed, NACE C10+C11).*

Product Safety

E.Coli contamination in frozen pizzas (2022): ⁵



≈ **€250M civil claims**
(not awarded)

€100M estimated financial cost
+ long-term reputational impact

9 months plant closed*

56 cases of severe illness

2 fatalities in children

Recall of entire product range

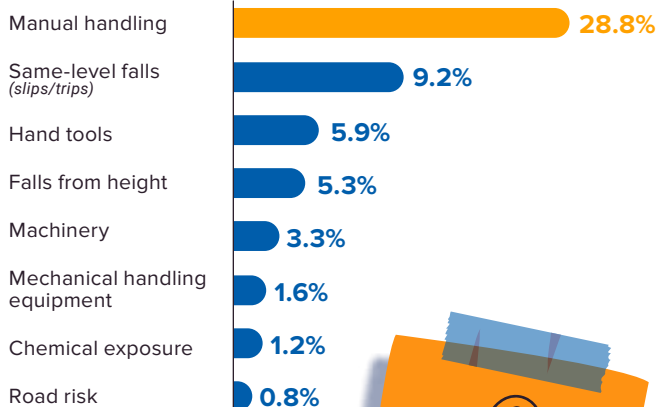
Investigation identified:

- Contamination of pizza dough
- Poor hygiene conditions
- Work environment contamination

**Refers to the production suspension period prior to the plant's authorised reopening.*

Most common causes of injury in F&B Manufacturing, France

(Share of all accidents, 2023) ⁶



Some of the most important risk factors are harder to see

Visible risks are only part of the picture.

Incidents, contamination and operational failures show us where risk surfaced. Preventing them also means understanding the conditions that influence how people work, react and make decisions.

Understanding the conditions Behind Risk

Every incident has
contributing factors.

Human and workplace conditions
can shape how people think, act,
and respond long before an event occurs.

60%+



of manufacturing workplace
accidents are linked to causes
involving human actions.⁷

Most common non-fatal workplace accident causes in EU (2023):⁸



19.7%

Body movement
under physical stress



20%

Slips, trips
and falls



21.7%

Loss of control
of equipment



Many of the most common
workplace accidents involve
human actions. **Understanding
the human factors behind those
actions is essential to reducing risk.**

WHAT WE SEE

(Visible consequences)



Workplace
injuries



Contamination
events



Product
recalls



Production
downtime



Product
waste



Brand
damage

WHAT WE DON'T SEE

(Hidden human conditions)

Shift
work

Time pressure

Fatigue

Complacency

Production pressure

Staffing issues

Rushing

Cognitive
overload

Frustration

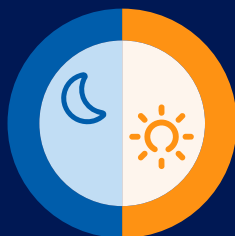
Normalisation

Interruptions

Distractions

How Human Factors Shape Risk

Shift work, fatigue and production demands **can affect human performance** at the moments when attention matters most.



THE SHIFT-WORK FACTOR

30 - 40%

of employees in EU F&B manufacturing work in shift systems (manufacturing average is 20 - 25%).

9x more likely

to experience a lost-time occupational accident than non-shift workers. ⁹

Shift-work risks:



Fatigue



Reduced alertness



Circadian disruption



Time pressure



Distraction



Stress



Less recovery time

After long periods awake, **cognitive performance can be impaired.**

The highest error probability occurs in the early hours
- precisely when tiredness, production demands and machinery risk can overlap.

Fatigue & Performance (when alertness falls, error exposure rises)

17 hours awake

can impair cognitive performance similarly to alcohol ¹⁰

Highest error probability occurs between

2am – 5am

Rotating shifts, fatigue & delivery pressure increase exposure to

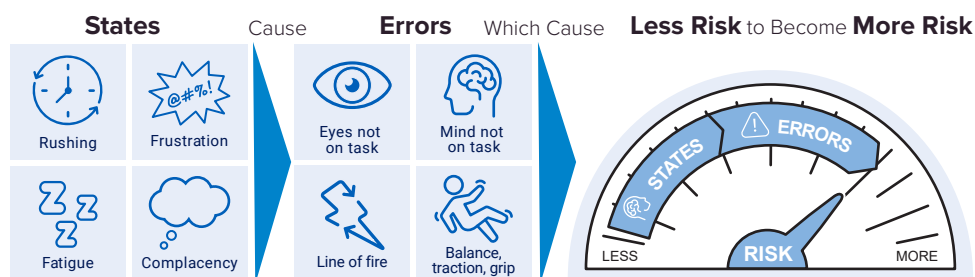
critical errors

Human performance directly influences:

- Product quality
- Worker safety
- Compliance
- Business continuity
- Client trust

The pathway to critical errors

It's the everyday human states that contribute **to critical errors** and increase exposure to risk.



Human factors are **not random.**

Fatigue, rushing, frustration and complacency are manageable human conditions, not isolated incidents.

Beyond procedures, compliance and training, **people remain at the center of every outcome.**

When people learn to recognise human factors they can **reduce the errors, incidents and operational risks** they contribute to.



helps organisations **strengthen awareness, improve habits and build safer human performance** before incidents happen.

Schedule a presentation

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Sources:

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7 - Eurostat. Accidents at Work – Statistics on Causes and Circumstances (ESAW).

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