SAFESTART

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:

304,000 manufacturers companies

€1.2 T annual revenue

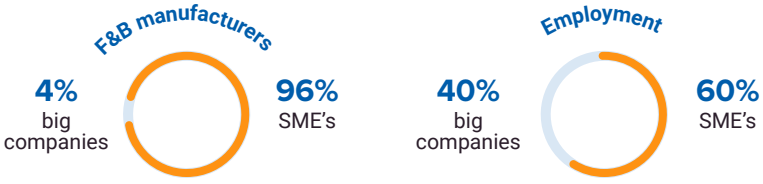
4.7 M employees

Leading EU F&B Manufacturers [1]

Germany	France	Italy	Spain	Poland
€277.6 bn revenue	€265.5 bn revenue	€191.1 bn revenue	€178.9 bn revenue	€102.6 bn revenue
1.0M employees	*758K employees*	*479K employees*	*464K employees*	*457K employees*

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]

94,783 non-fatal accidents in F&B

Represents **20% of the total (522,735)** in the EU manufacturing sector.

69 fatal workplace accidents in F&B

Equivalent to **13.8% of the total** in the EU manufacturing sector.

**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

30% Conveyors

12% Forklift trucks

5% Bandsaws

4% Packaging machinery*

3% Food mixers

**Includes thermoform, palletising and strapping machines.*

Conveyors account for nearly ⅓ of machinery-related injuries in the F&B sector

90%

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

- Routine interactions with machinery
- Clearing blockages
- Cleaning
- Production activities

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:

LOWER RISK
- Production planning
- Administration

MODERATE RISK
- Warehousing & distribution
- Storage
- Receiving

HIGH RISK
- Maintenance & line changes
- Quality control & release
- Raw material handling

VERY HIGH RISK
- Processing
- Cleaning (CIP/SIP)
- Packaging & labelling

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

Small deviations can escalate: [4]

Routine task → Small deviation → Contamination / incident → Investigation → Recall / line shutdown → Business & reputational impact

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):



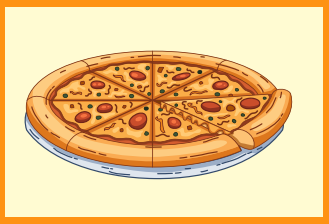
4,423 Spain
3,126 Germany
2,530 France
1,641 Italy
866 Poland

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



9 months plant closed*
56 cases of severe illness
2 fatalities in children
Recall of entire product range

≈ €250M civil claims
(not awarded)

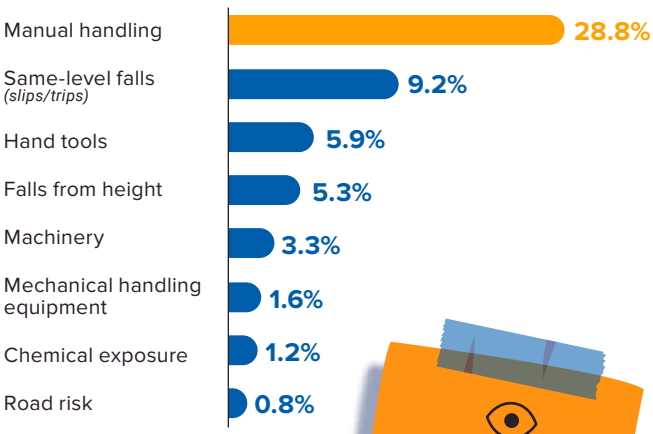
€100M estimated financial cost
+ long-term reputational impact

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





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

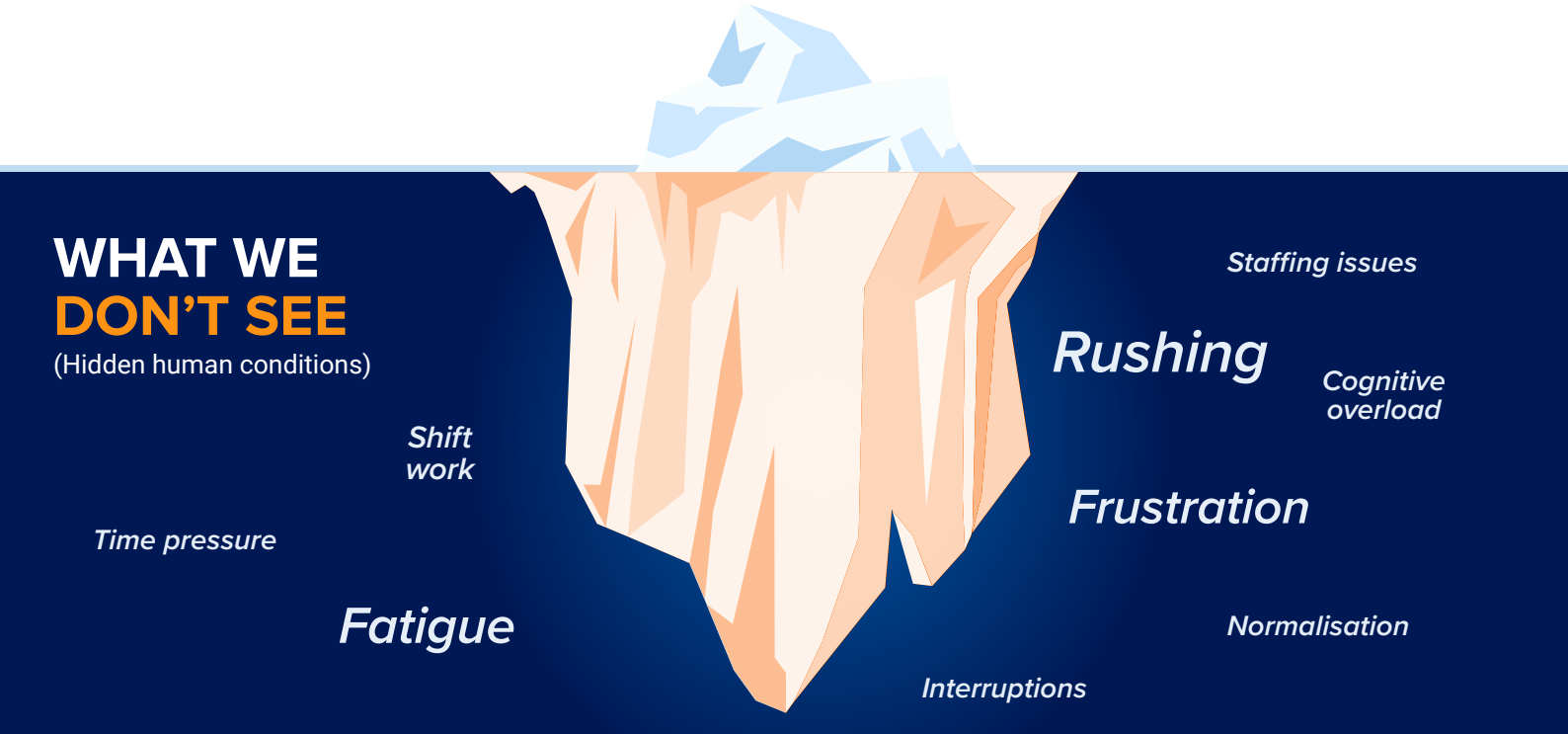
20%
Slips, trips and falls

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)

Staffing issues
Rushing
Cognitive overload
Shift work
Frustration
Time pressure
Fatigue
Normalisation
Interruptions
Complacency
Production pressure
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

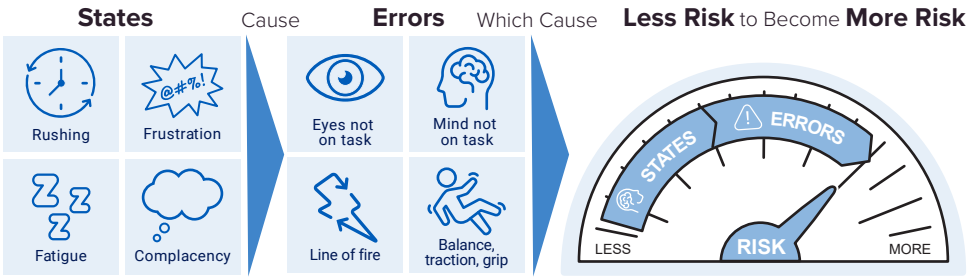
Rotating shifts, fatigue & delivery pressure
increase exposure to
critical errors

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.



SAFESTART®

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

Schedule a presentation

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Sources:

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