"QUALITY BY DESIGN"

How to tackle safety, sustainability and quality issues in Food



ON TODAY'S MENU

Our agenda

Food safety, quality and sustainability
Short overview of status and trends

Quality by design
Start designing safety and sustainability into your products

Why PLM?
How a streamlined, tool-supported process can help



Christian Maurer Senior Consultant F&B



Safety, Sustainability, Quality

Different domains, one goal – Good Food

FOOD SAFETY

Risks and current status of food safety worldwide

Impact on people

Almost 1 in 10 people in the world fall ill after eating contaminated food and 420 000 die every year



Impact on economy

USDA estimates that foodborne illnesses cost the United States more than \$15.6 billion each year



No. of Food Product recalls

Approx. 300 food recalls in 2021 in the US, with Italy having the highest share of recalls worldwide



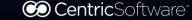
Recall reason

Sources: www.who.com; www.cdc.gov

Main reason for food recalls is a wrong or missing declaration on the label...







FOOD SUSTAINABILITY

Much more than "just" managing packaging waste...

Sustainable food aims to avoid damaging or wasting natural resources. It minimizes the contribution to climate change due to optimized farming, processing and/or supply chains. Sustainability categories could include:

- Renewability
- Resilience
- Healthfulness
- Equity
- Diversity
- Inclusion
- Interconnectedness







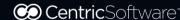












FOOD QUALITY

"Purposely composed" – food quality is a heterogeneous field

Quality Management

Global markets and supply chains, different requirements across countries, different tastes



Recipe and Formulation requirements

Fast changing consumer and seasonal demands, regional differences, new living and working norms



Exhaustive Packaging variety

Different SKU types in different markets, individual material and tax requirements



Financial pressure

Price pressure on the markets, cost pressure in production, E-grocery, digital placements





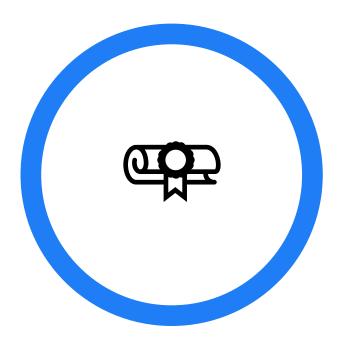


"Quality by design"

Why the NPD process is important for food safety

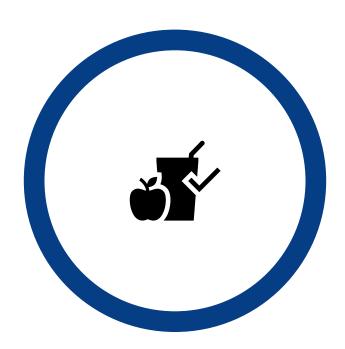
WHAT HAPPENS IF ALL THIS COMES TOGETHER?

The "department" view



Food Safety

- Handled by QA and Legal
- Based on regional regulations
- Changes regularly



Food Quality

- Handled by R&D and prod.
- Based on customer demands and product briefs
- Changes regularly



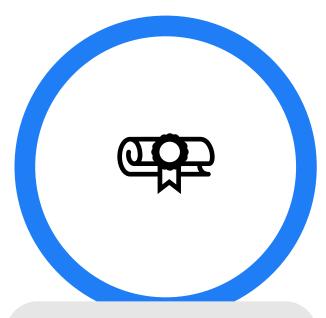
Food Sustainability

- Handled by sustainability officer and prod.
- Based on laws and demands
- Changes regularly



WHAT HAPPENS IF ALL THIS COMES TOGETHER?

The "company" view



Complexity

Domains have overlays and are interconnected at many points, not really independent.



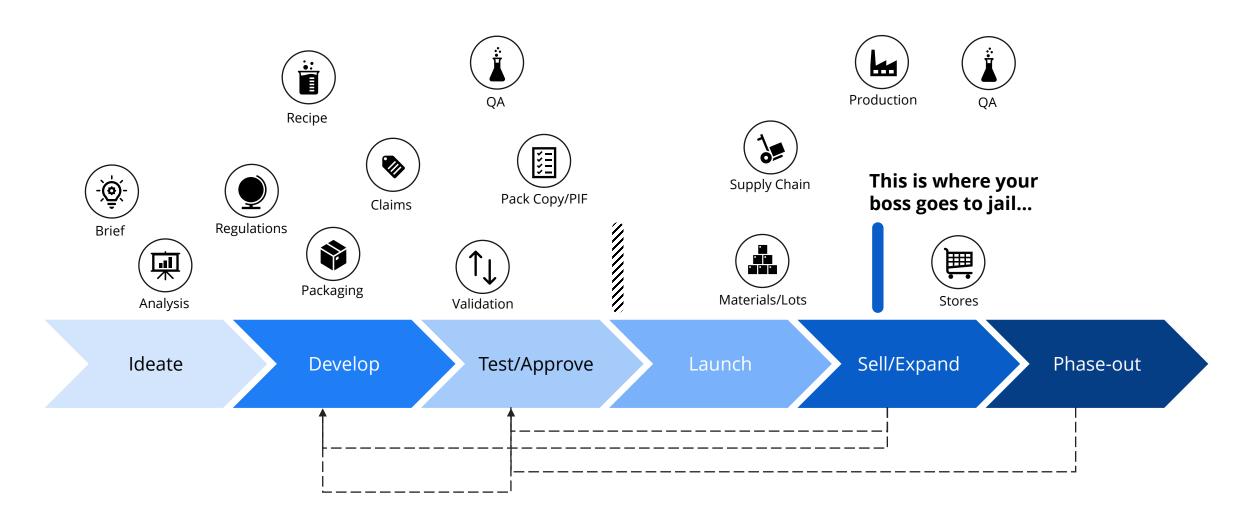


Collaboration

This requires efficient and continuous collaboration between stakeholders internally and externally.

DIFFERENT STAGES OF THE LIFECYCLE

Issues arise in different stages and are connected through the entire lifecycle





Why PLM?

How PLM can support the food safety journey and assess sustainability

WHY PLM?

Meeting market challenges with PLM



Optimization

Optimize product development with workflows and dashboards



Collaboration

Streamline sourcing requests and collaborate with suppliers



Time-2-market

Speed up new product introductions and recipe development



SKU Management

Automatically create detailed specs for different SKU's



Planning

Plan and manage complex and growing product portfolios



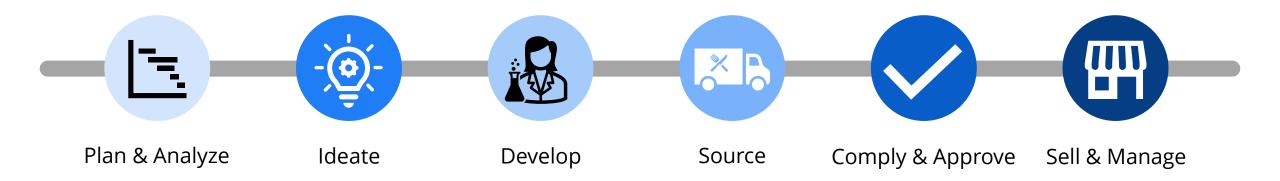
Compliance

Reduce quality and compliance risks with greater visibility and control



FAST TIME-TO-VALUE. STRONG ROI.

One platform for end-to-end product management





Thank you!

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