

Artificial Intelligence

Fundamentals – Future Visions

Fundamentals – Myths – Future Visions

1. **Fundamentals**
2. **Where can AI be used?**
3. **How does GEMA use AI?**
4. **Where could the journey lead? –
Research at GEMA**

Out of Scope:

- Political developments & challenges
- Ethical & moral perspectives
- Use of AI tools (separate webinar!)

About me



Max Balluff

Role: Head of AI Engineering

Division: Data & AI, GEMA Digital

My focus

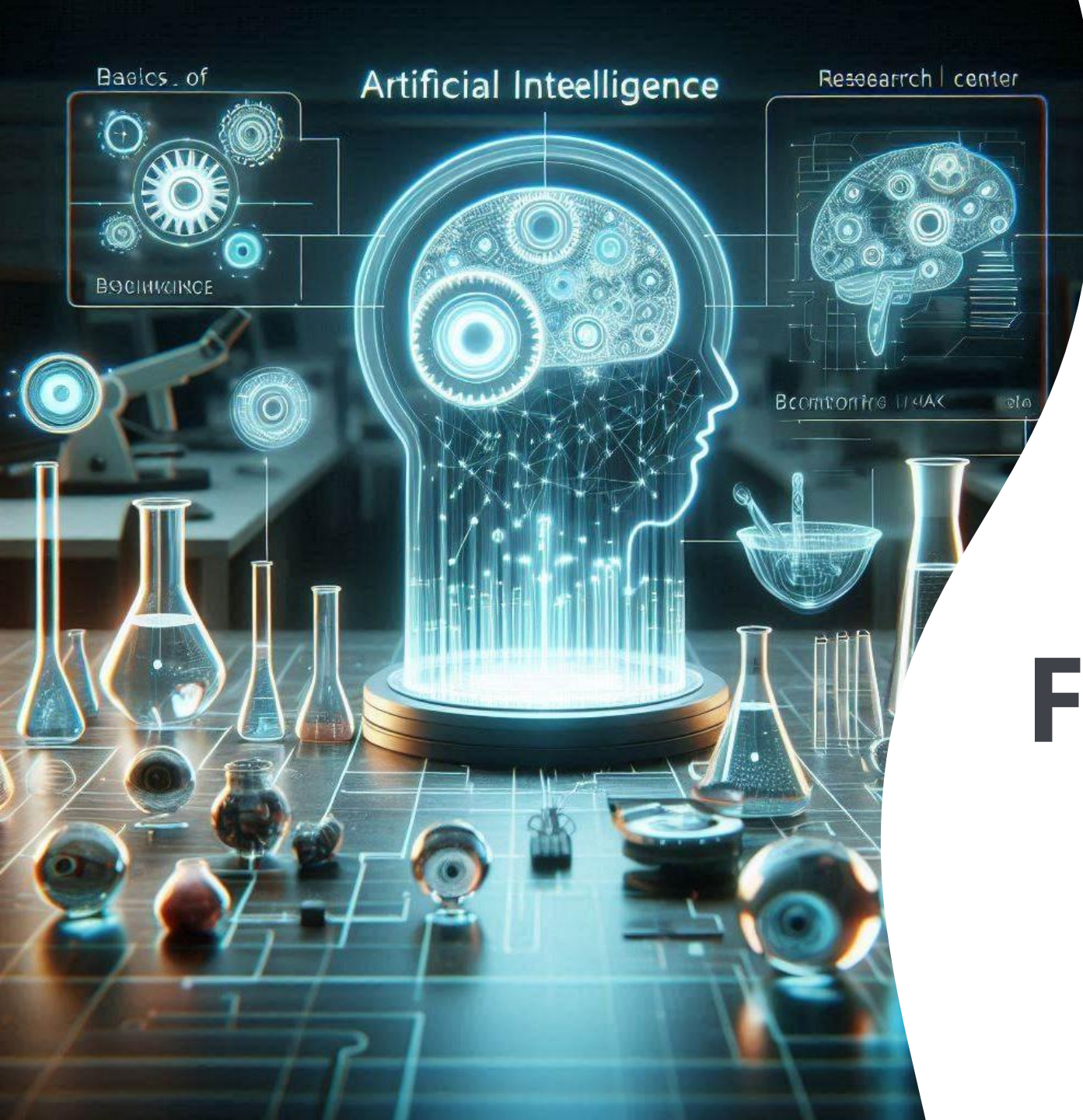
Moving AI from prototype into productive business processes.

What I bring together

- AI engineering & production-ready services
- Business processes for licensing, matching and distribution
- Collaboration across Business, Product and IT

What matters to me

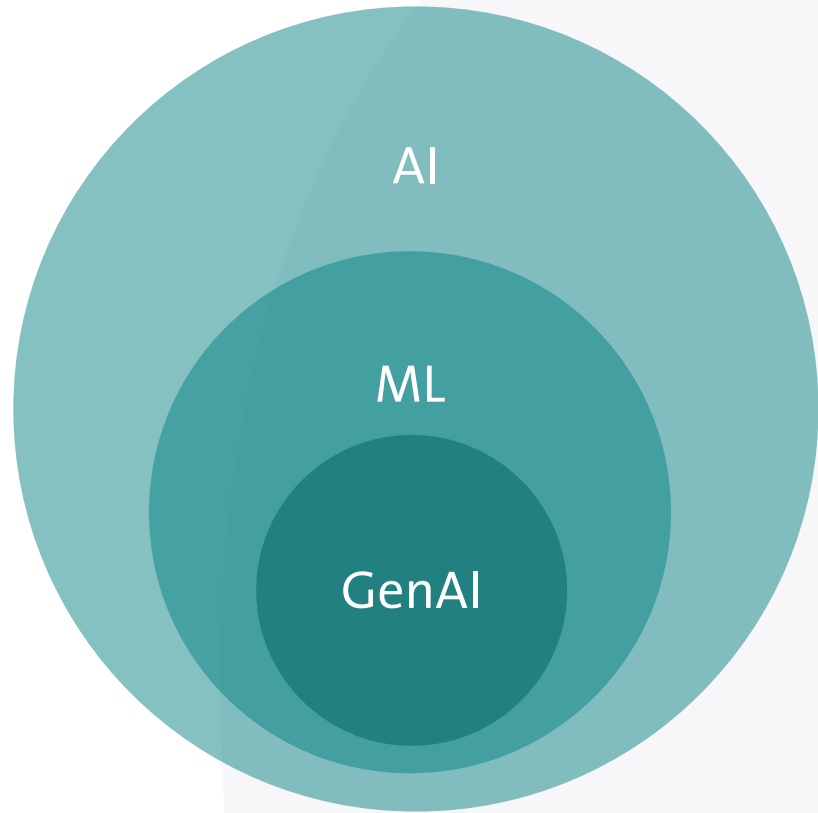
Not AI as a demo, but AI as a practical lever for better data quality, more automation and faster processes.



Fundamentals

What is artificial intelligence?

Definition



Artificial intelligence (AI) is a broad term for any technology capable of intelligent behavior—from simple algorithms that sort data to advanced systems that imitate human-like thought processes.

Machine learning (ML) is a subcategory of AI focused on developing algorithms that learn from decisions and use data to make predictions.

Generative AI, by contrast, is a specific type of AI focused on creating new content such as text, images or music. These systems are trained on large datasets and use machine-learning algorithms to generate new content similar to the training data.

Artificial intelligence—what exactly is it?

A field of computer science: machine learning vs. artificial neural networks

Traditional Programming

Features and explicit rules required.



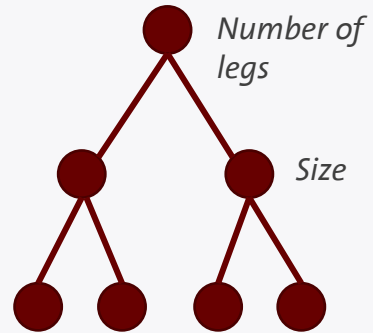
Examples:

- Exact process flows
- Calculations

Artificial Intelligence

Machine Learning

Only features required.

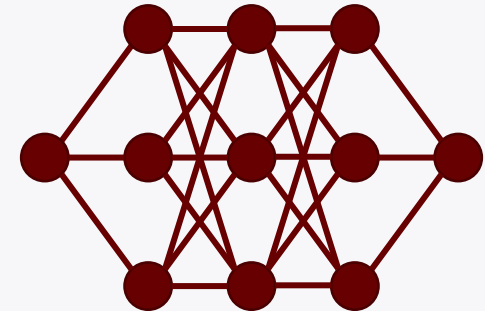


Examples:

- Classification
- Time-series forecasting
- Clustering

Artificial Neural Networks

Neither features nor rules required.



Examples:

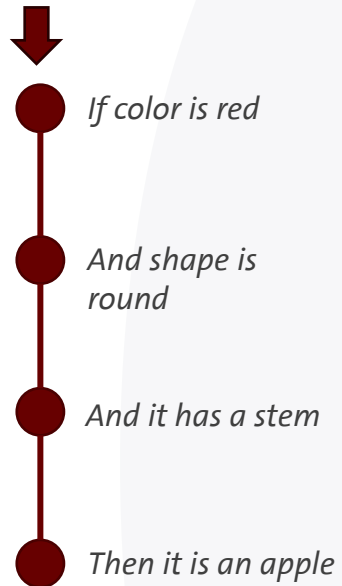
- Image recognition
- Natural language processing
- Translation
- ChatGPT

Artificial intelligence—what exactly is it?

Example: identifying types of fruit from an image

Traditional Programming

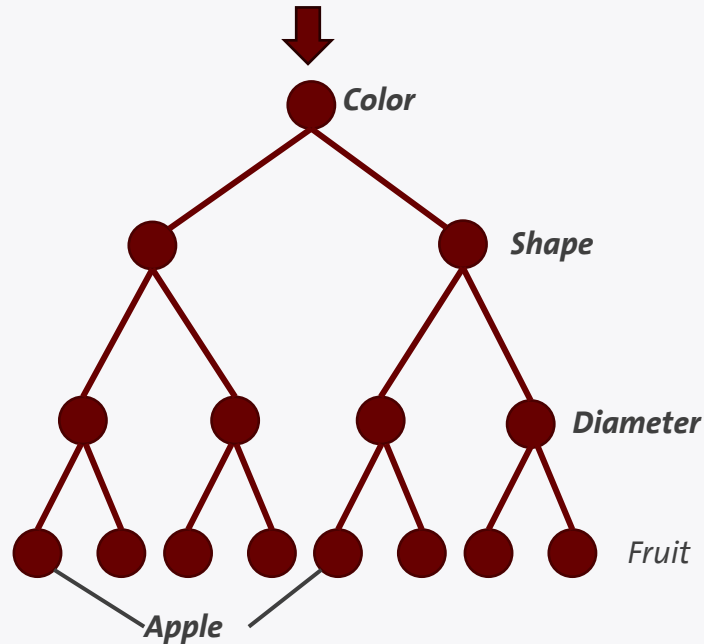
Features: color, shape, diameter



Artificial Intelligence

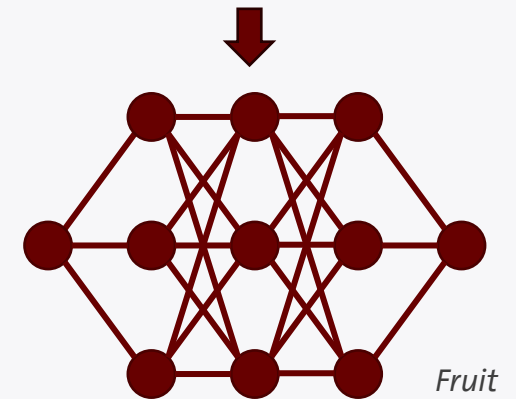
Machine Learning

Features: color, shape, diameter



Artificial Neural Networks

Image (pixels)



How does an AI model learn?

There are three different types of learning.

Supervised Learning
(supervised)



Unsupervised Learning
(unsupervised)



Reinforcement Learning
(reinforcement)



How data-driven systems support decisions, processes and customer interaction

GEMA already uses AI in these areas

IMPROVED DECISION-MAKING

AI algorithms help analyze data and make informed decisions.



EFFICIENCY GAINS THROUGH AUTOMATION

Reducing backlogs.
By automating repetitive tasks, employees can focus on more complex work and use their time more efficiently.



PERSONALIZED CUSTOMER INTERACTION

AI helps us understand customers better and offer more individualized services, including personalized recommendations, tailored offers and improved customer support.



PREDICTING TRENDS AND RISKS

AI can identify future trends and potential risks at an early stage. This allows us to act proactively and prepare more effectively for change.



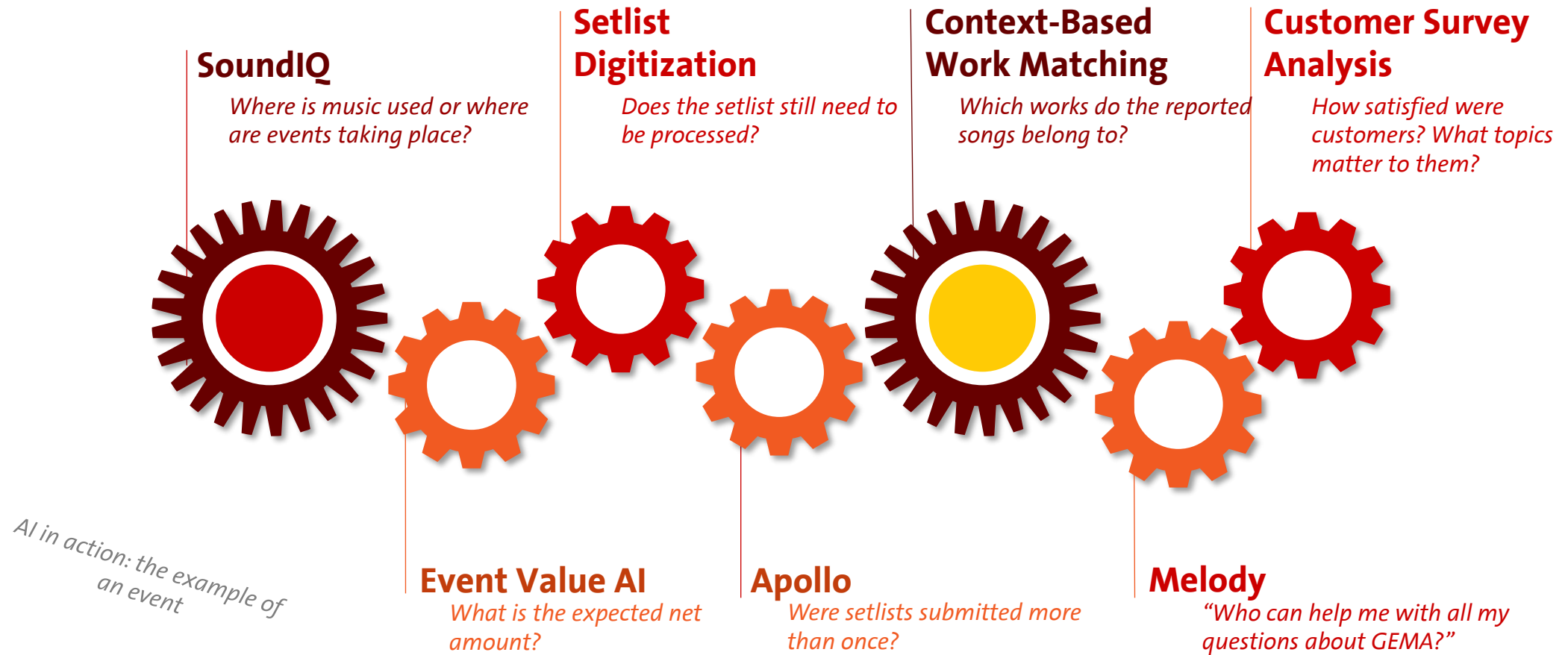
QUALITY CONTROL & ERROR DETECTION

AI-based systems help improve product or service quality by identifying errors faster and recommending appropriate action.



Optimizing core processes across the event value chain

Use of AI in the live events domain



AI-powered places crawling identifies new usage locations and converts them directly into qualified sales leads

Systematic identification of new licensing-relevant usage locations



1

Automated search for usage locations

Analysis of areas and places to identify potential music usage locations



2

Comparison with the existing GEMA licensing database

AI-based matching with GEMA data to identify previously unlicensed businesses



3

Prioritization by music relevance

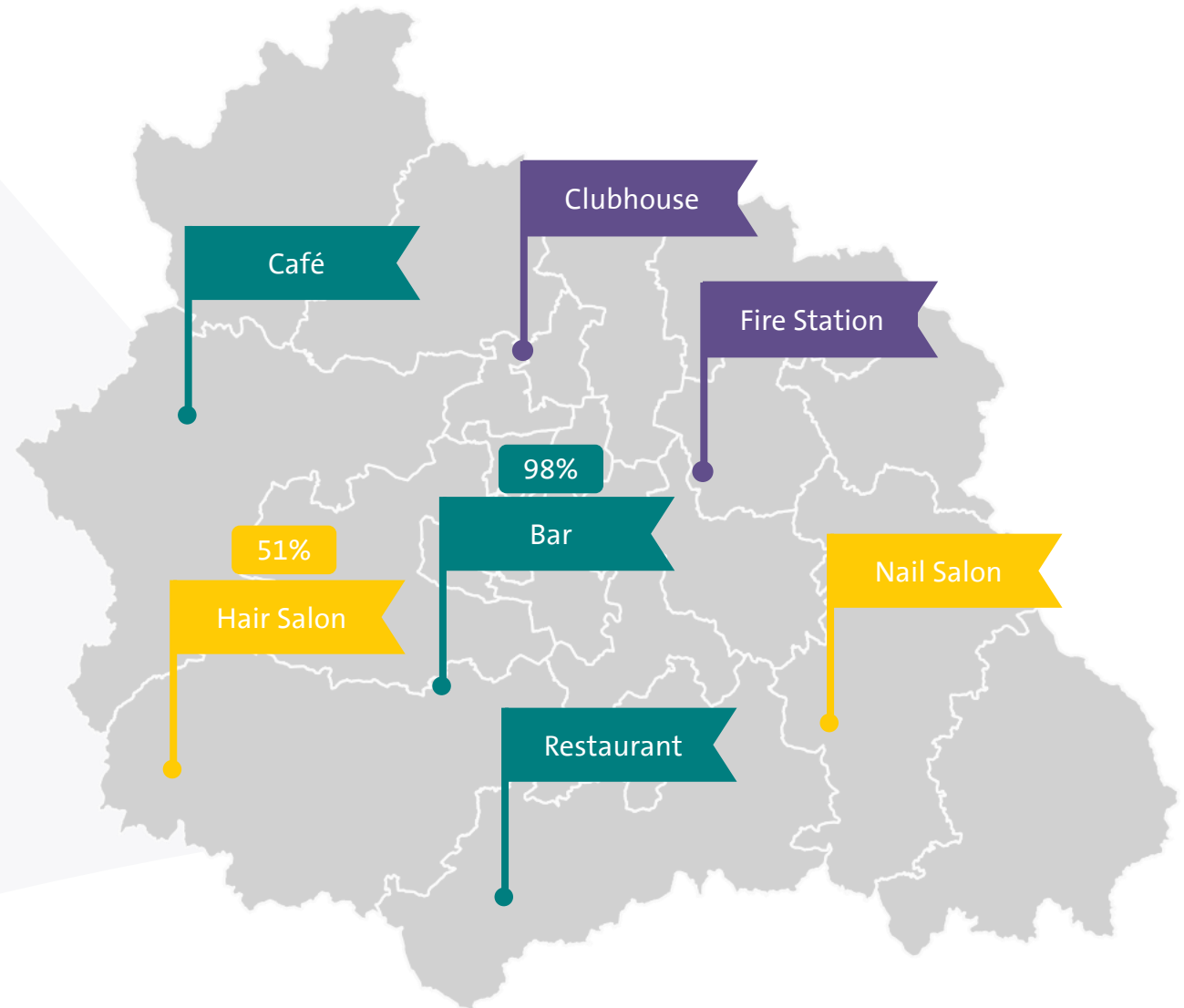
AI scoring model evaluates locations by the likelihood of actual music use



4

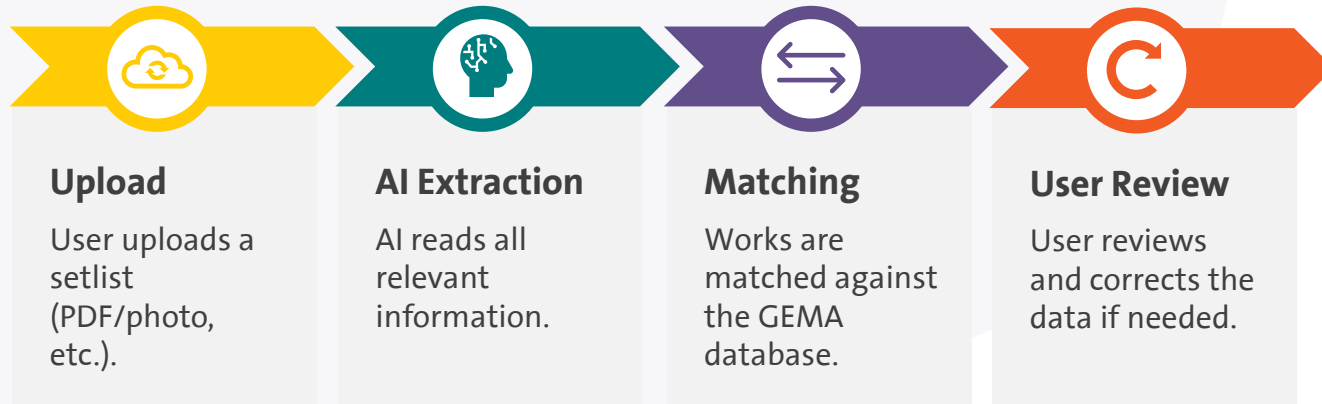
Transfer of qualified leads to Sales

Structured leads provide the basis for targeted acquisition campaigns



AI service in the GEMA Portal has been in production since 08/2025

Upload setlists instead of typing them: AI captures the data



- **50,000+ uploaded setlists**
- **1.3 million recognized titles**
- A significantly more user-friendly and efficient submission process

Setlist einreichen

Veranstalter/-in ✓ Veranstaltung ✓ Interpret/-in ✓ **4 Setlist** 5 Übersicht

Titeleingabe

Werke suchen **Datei laden (Beta)** Excel laden Vorlage laden Manuell erfassen

Hinweis: Diese Funktion befindet sich aktuell in der Testphase. Es kann zu temporären Änderungen oder Einschränkungen kommen. Wir verbessern die Funktion fortlaufend und freuen uns über Ihr Feedback.

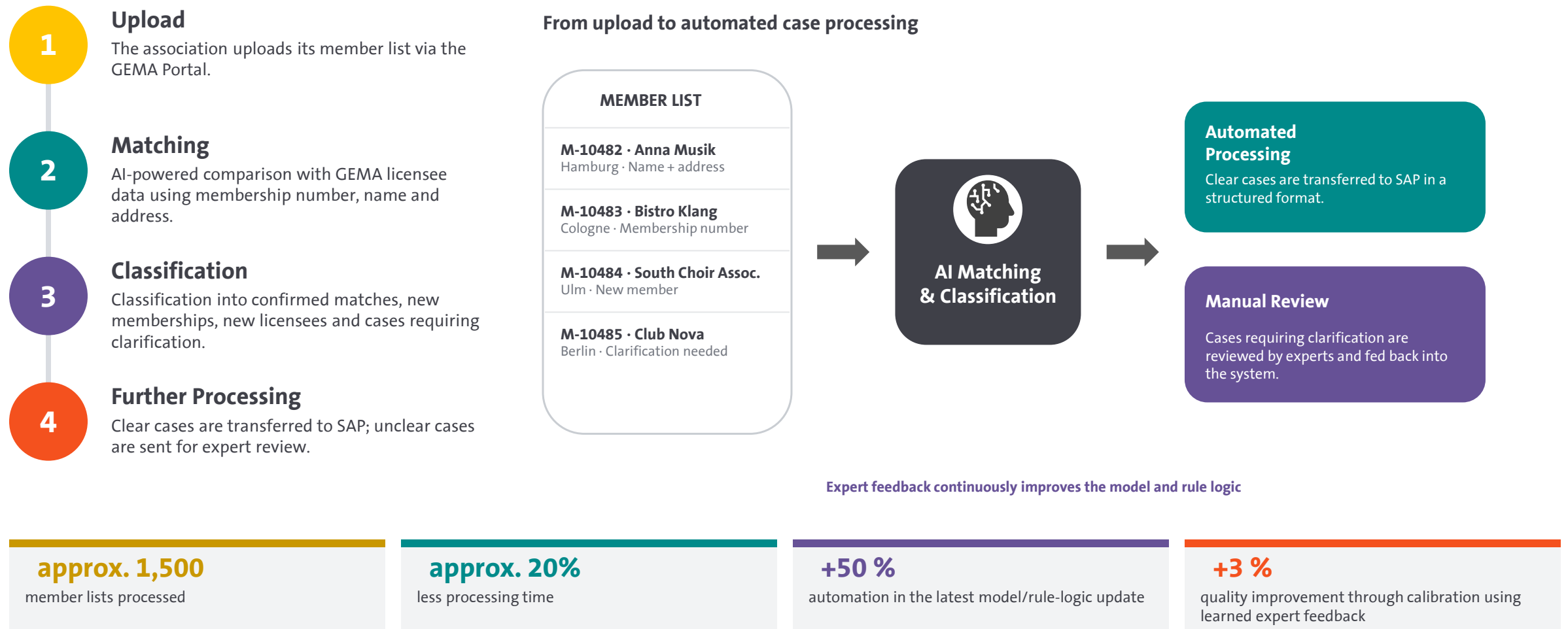
Datei auswählen
Laden Sie Ihre Setlist als PDF, Bild oder Excel hoch – entweder per Drag and Drop oder über „Datei auswählen“.
Akzeptierte Formate: PDF, JPEG, TIFF, PNG, WebP, Excel.

Zum Hochladen ziehen Sie die Datei auf dieses Feld (Drag&Drop) oder klicken Sie auf „Datei auswählen“.

Datei auswählen

Associations regularly submit member lists for blanket agreements. The AI-powered matching service automatically compares this data with GEMA licensee records, classifies each case and uses expert feedback to continuously improve matching quality.

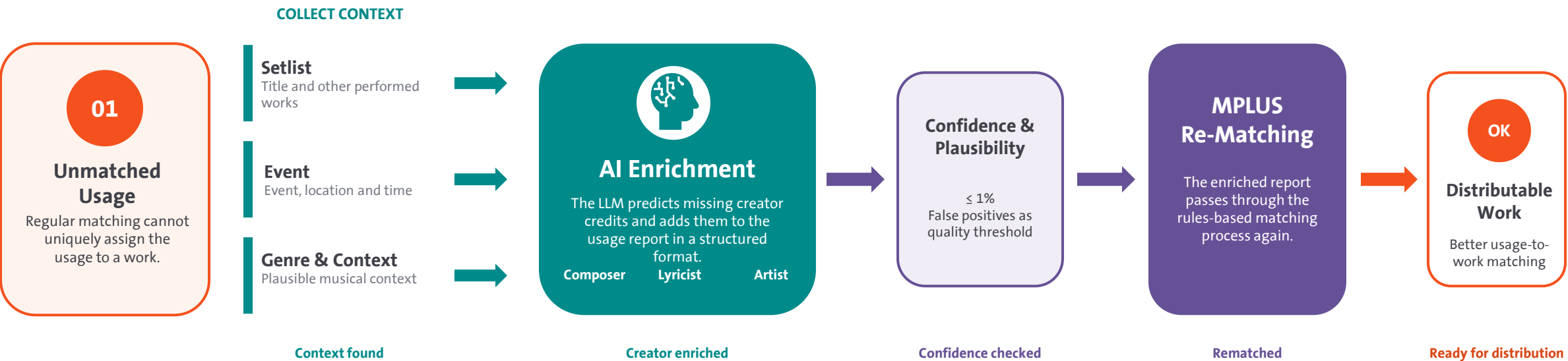
Automatically match blanket-agreement lists: AI learns from feedback and reduces manual review



The AI service uses setlist and event data to enrich live-usage reports that cannot be uniquely matched and are missing creator credits. The improved reports then run through the regular MPLUS matching process again.

When context makes the difference: AI adds missing creator data for better work matching

GUIDING PRINCIPLE AI adds missing context and structured data; MPLUS remains the rules-based decision-maker.



Better context data increases direct distribution—MPLUS continues to perform the regular assignment.

>80 % successful matching for AI-enriched works	≤ 1 % False-positive rate as a key quality criterion	Seconds Matching instead of manual case-by-case review	Apr 9, 2026 in production since this date
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AI is already part of GEMA's operational system today



Automation of Core Processes

AI already performs tasks such as setlist digitization, work matching and the identification of new music usage.

Human-in-the-Loop Minimizes Risks

AI supports the work, while critical steps remain reviewable and under human control.

Production Use Instead of Experimentation

Several AI services are already in operational use and provide the foundation for further automation.

**MUSIK
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Any questions?



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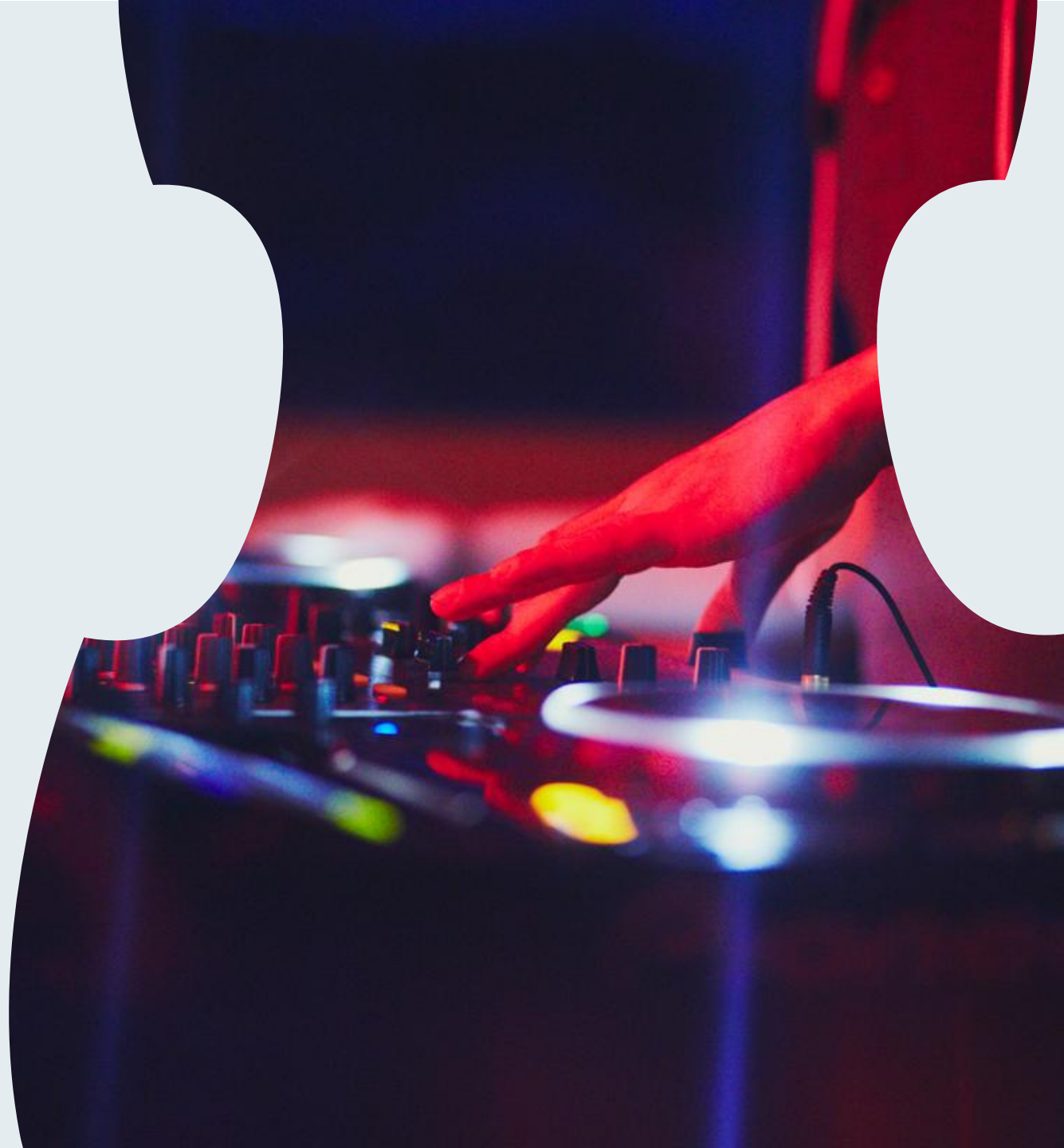
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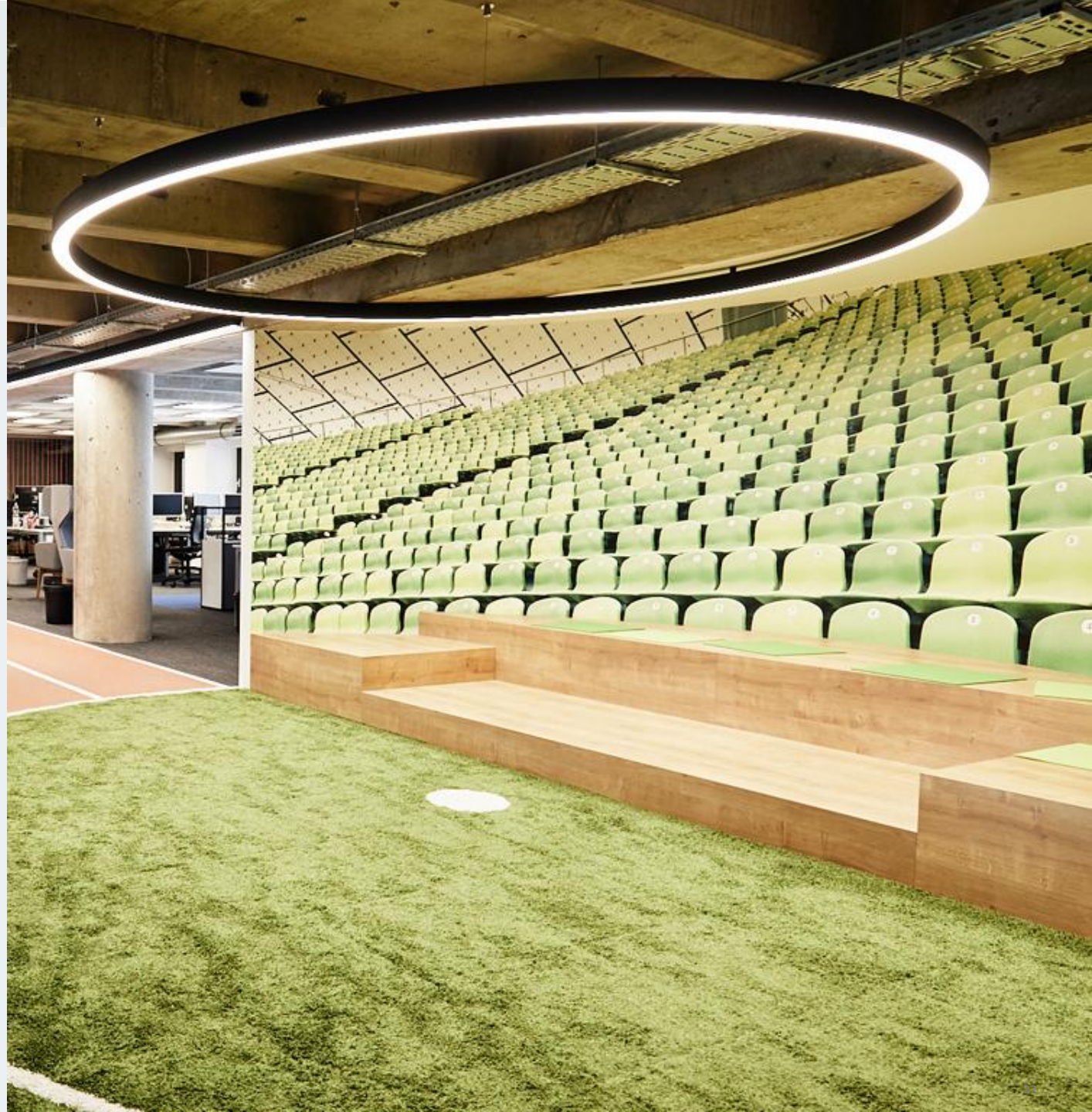
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Trennfolie

Titel der Präsentation

Untertitel



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