Enhancing warehouse operations through process mining and intelligent management
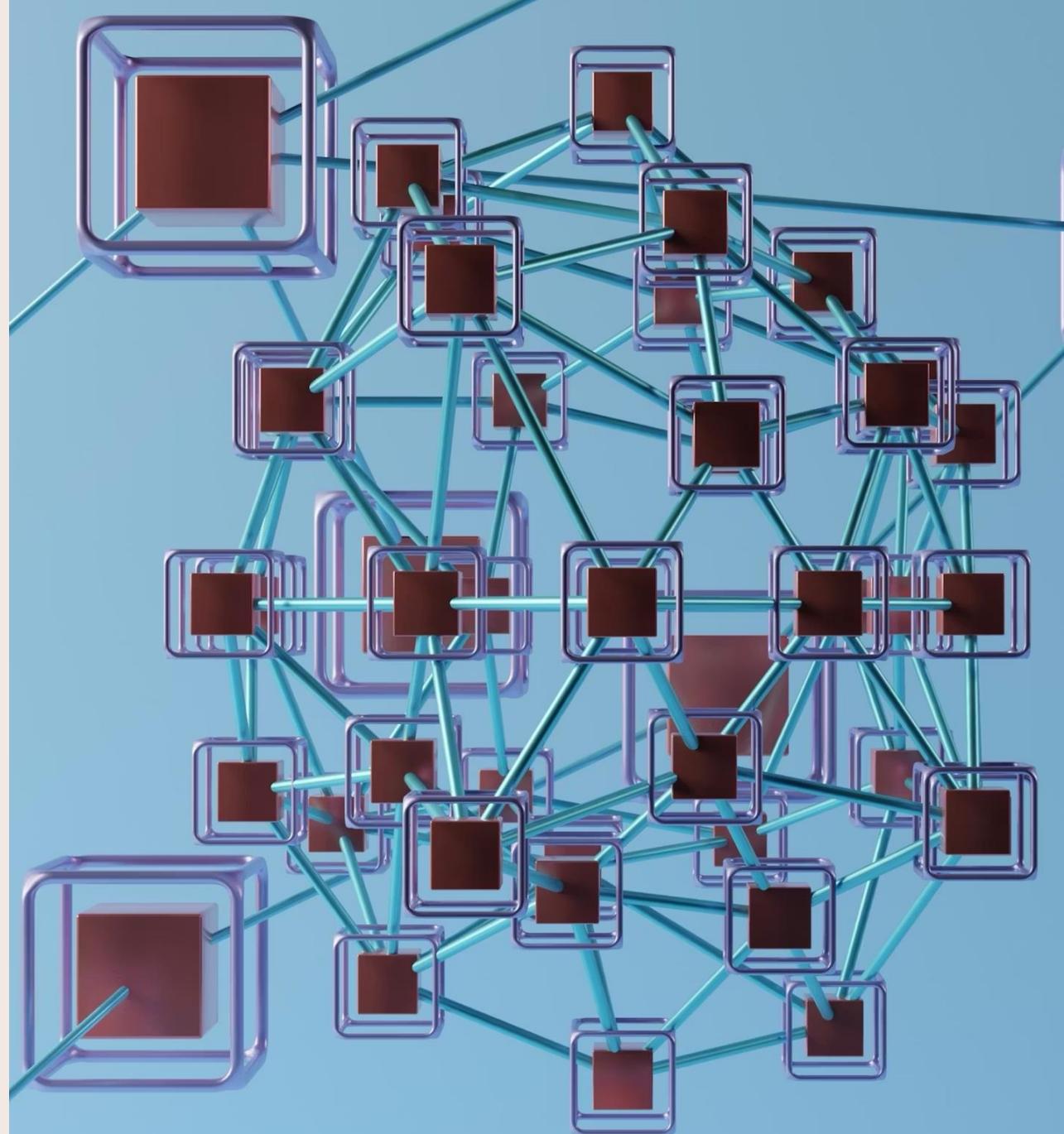
Process mining for analysing warehouse material movement

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What is warehouse material movement process mining?

Process mining shows how material actually moves through your warehouse based on real system data.

It helps you:

> see how work is actually done across processes
> find delays and bottlenecks
> understand the root cause

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How you can use process mining

Process mining is not limited to a single snapshot in time.
Its true power lies in continuous, conclusive analysis, where key metrics are monitored over time.

Continuous data analysis

One-time data analysis

No data analysis

- Process mining can be used for continuous and conclusive analysis, where you monitor something over time.
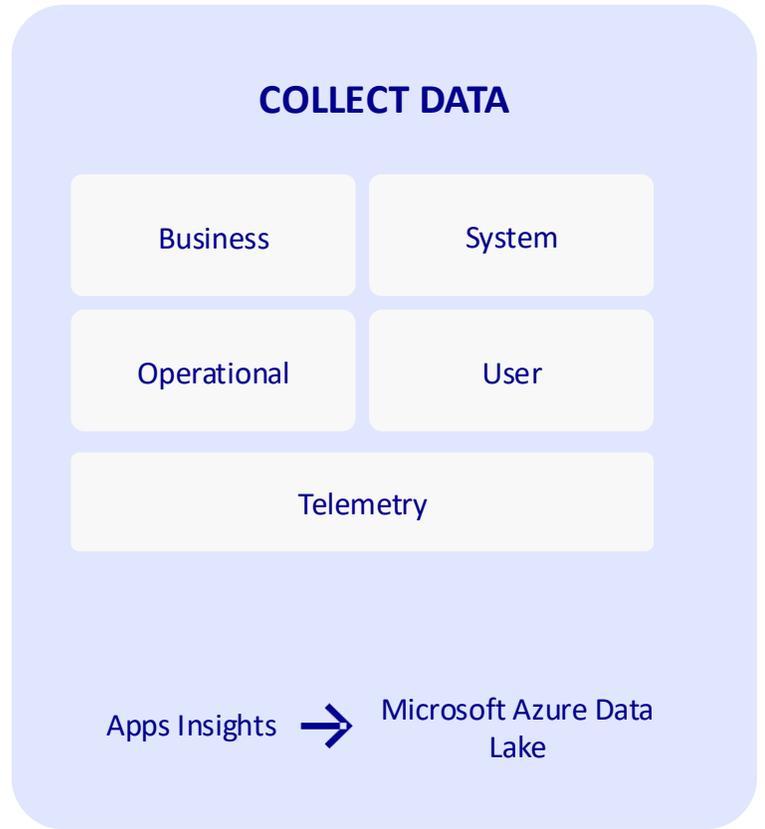
- Process mining can be used for One-time analysis on a minor dataset to analyze a specific problem.
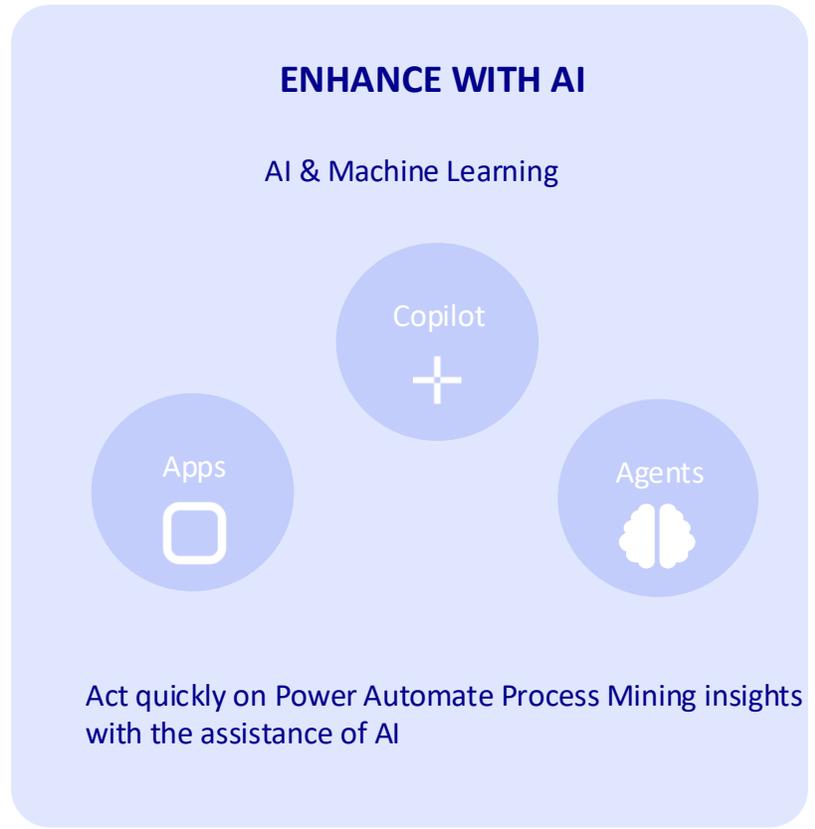
- Analysis done without the help of process mining.

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Stage 1

Stage 2

Stage 3

COLLECT DATA

Business	System
Operational	User
Telemetry	

Apps Insights → Microsoft Azure Data Lake

CREATE INSIGHTS

Business scenarios

Process insights

Monitor, report and visualize business processes

ENHANCE WITH AI

AI & Machine Learning

Copilot

Apps

Agents

Act quickly on Power Automate Process Mining insights with the assistance of AI

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Use-cases

understand how work is actually done

- ~~analyse time spent on picking,~~ put-away and movements
- compare performance across zones and employees
- identify frequent items and optimise their placement
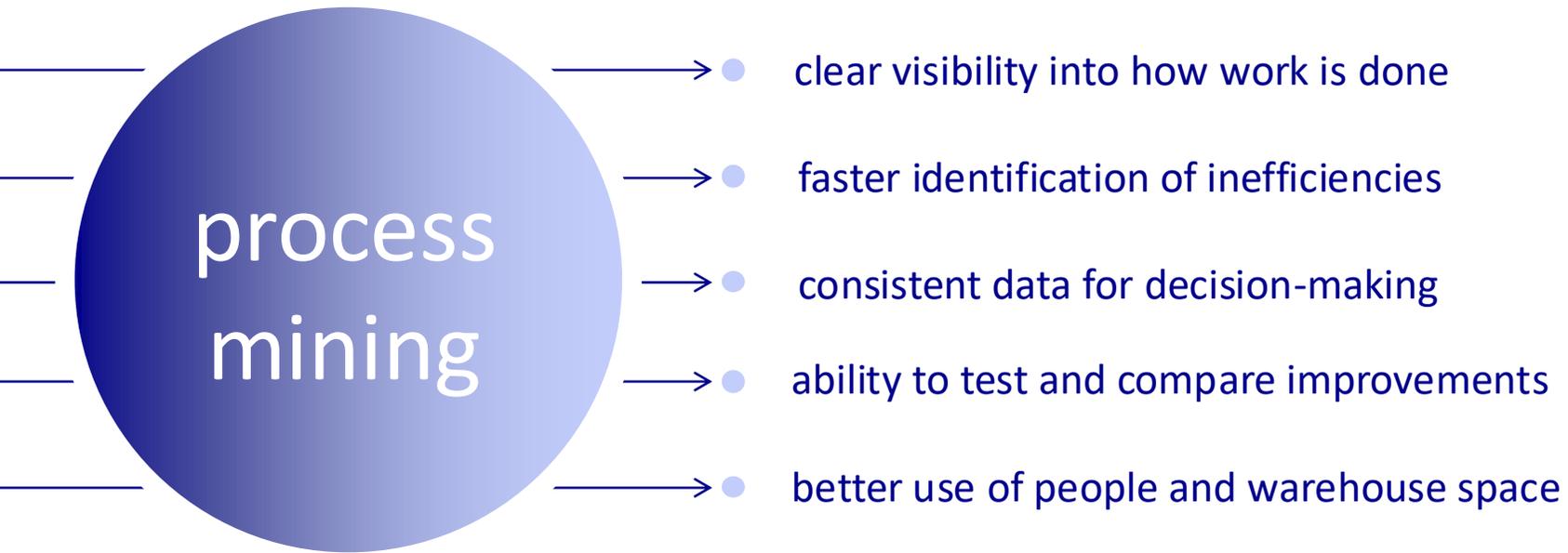- detect rework, short picks and replenishment issues

compare ways of working

- single vs cluster picking
- single vs split responsibilities
- use of staging areas vs direct flow

see what works best in practice

- reduce unnecessary movement
- improve flow across the warehouse
- use time and resources more efficiently

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Benefits

process mining

- clear visibility into how work is done
- faster identification of inefficiencies
- consistent data for decision-making
- ability to test and compare improvements
- better use of people and warehouse space

The power of process mining with Power Automate

With Microsoft Power Automate Process Mining, both task and process mining features are available.

This enables warehouse and operations managers to:

- Visualize inventory movements within the warehouse.
- Detect and address inefficiencies in workflows.
- Promote ongoing performance improvements.

Dynamics 365 Supply Chain Management enhances this further through the "Warehouse material movement analysis" template for Power Automate Process Mining.

This ready-to-use template allows for straightforward configuration, supporting deep analysis of material movement and process optimization

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The end