



# *AI in Procurement Ups and Downs*

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	TYU division			FRT division		
GHT	254	550	254	274	154	415
RDW	650	320	754	273	825	154
TRG	241	450	144	364	954	174
RTG	254	650	874	657	125	274
WEF	784	145	124	752	741	759
HRT	453	784	954	241	741	345

Revenue growth divisions.

Hypothesis 1:

# AI in Procurement can improve efficiency by more than 80%.

**NO:**

"AI in procurement can improve efficiency by more than 80 %" is too ambitious and likely optimistic in many real-world settings today. While leading organizations may reach productivity boosts in that ballpark (e.g. The Hackett Group cites a 54 % productivity increase for "Digital World Class" procurement with Gen AI) most procurement teams report more modest gains—often in the 5–25 % range as pilots scale.



Hypothesis 2:

# AI in Procurement can extent the scope, quality and service portfolio.

YES:

” AI in Procurement can extent the scope, quality and service portfolio.” is definitely the big lever besides the good efficiency gain. First examples are showing how procurement can transform to a much stronger digital driven organization with the right use and application of AI. But this needs a plan.



# AI in Procurement: where?

## Main Challenges.

## Knowledge and Complexity.

## Ups and Downs.

## Examples.

## Recommendations



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# AI in Procurement: where?

AI can be applied in different ways and with different “AI – maturity” levels

## Spend analytics & category insights

- AI can automatically analyze historical spend to detect patterns, maverick spending, consolidation opportunities, supplier overlap, and forecast demand. That helps negotiate better rates or reduce supplier base.

## Supplier evaluation, risk & performance management

- Use AI models to assess supplier financial stability, delivery performance, compliance risk, ESG metrics, and flag at-risk suppliers proactively.

## Contract lifecycle management / contract drafting & review

- Automate clause extraction, obligation tracking, renewals, anomaly detection, or even draft standard contracts to reduce legal review time.



# AI in Procurement: where?

AI can be applied in different ways and with different “AI – maturity” levels

## Sourcing and bidding / RFx optimization

- AI can help generate optimal RFP language, automatically score supplier bids (based on multi-criteria), and suggest negotiation strategies.

## Order processing, invoice matching & accounts payable automation

- Automate purchase order creation, invoice matching, discrepancy handling, approval routing, reducing manual intervention, errors, and cycle time.

## Demand forecasting & inventory optimization

- Predict future demand more accurately, optimize reorder points, safety stock levels, avoid overstock or stockouts.



# AI in Procurement: where?

AI can be applied in different ways and with different “AI – maturity” levels

## Tail-spend / low-value purchase automation

- AI agents or bots can autonomously handle small-value purchases under policy, freeing human buyers to focus on strategic categories.

## Supplier collaboration and negotiation support

- AI assistants can suggest alternative sourcing when cost rises, negotiate discounts, propose contract amendments, or model “what if” pricing scenarios.



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# Main Challenges

AI can be applied in different ways and with different “AI – maturity” levels

## Spend analytics & category insights

- **Data fragmentation:** Spend data often resides across multiple ERP, finance, and procurement systems in inconsistent formats.
- **Poor data quality:** Missing or mislabeled suppliers, duplicate records, and non-standard category structures reduce AI accuracy.
- **Change resistance:** Category managers may distrust AI-generated insights if not transparent or explainable.

## Supplier evaluation, risk & performance management

- **Limited data availability:** Supplier risk data (especially ESG or Tier-2/3) is often incomplete or unstructured.
- **Dynamic risk factors:** Economic and geopolitical conditions change faster than models can be retrained.
- **Bias and fairness:** Algorithms can unintentionally favor certain suppliers if training data is biased.



# Main Challenges

AI can be applied in different ways and with different “AI – maturity” levels

## Contract Lifecycle Management (CLM)

- **Unstructured legal language:** Contracts are complex and vary widely in wording; extracting consistent data is difficult.
- **Integration hurdles:** Linking AI contract analysis with ERP or CLM systems requires deep process integration.
- **Compliance risk:** Automated clause suggestions may miss legal nuances, requiring careful human oversight.

## Sourcing & Bidding Optimization

- **Model explainability:** Procurement teams and suppliers may not trust opaque bid-scoring algorithms.
- **Ethical / fairness issues:** AI-driven scoring must be transparent to avoid supplier disputes.
- **Adoption barriers:** Buyers are used to manual negotiation tactics; trust in AI-generated negotiation advice takes time.



# Main Challenges

AI can be applied in different ways and with different “AI – maturity” levels

## Order Processing & Invoice Automation

- **Data exceptions:** AI can handle 80–90 % of cases but struggles with exceptions (e.g., partial deliveries, custom payment terms).
- **Legacy system integration:** Many procurement backbones still rely on old SAP or Oracle setups not AI-ready.
- **Governance:** Over-automation may bypass internal controls or approval hierarchies if not well-configured.

## Sourcing & Bidding Optimization

- **Data volatility:** Market disruptions (e.g. COVID, geopolitical events) break historical forecasting patterns.
- **Cross-functional coordination:** Procurement must align with production, sales, and logistics data sources.
- **Model drift:** Forecast accuracy deteriorates over time if models aren't continuously retrained..



# Main Challenges

AI can be applied in different ways and with different “AI – maturity” levels

## Tail-Spend Automation

- **Policy constraints:** AI bots must operate within strict procurement policies and approval limits.
- **Accuracy of classification:** Misclassifying a strategic purchase as “tail” can cause compliance risks.
- **User trust:** Employees may bypass AI tools if they perceive them as slow or unreliable.

## Supplier Collaboration & Negotiation Support

- **Context awareness:** AI may lack understanding of relationship history or strategic supplier nuances.
- **Cultural and linguistic differences:** Negotiation tone or suggestions may not fit local business culture.
- **Data privacy:** Sharing sensitive negotiation data with AI systems raises confidentiality concerns.



# Main Challenges

AI can be applied in different ways and with different “AI – maturity” levels

## Missing Challenges

- The majority of AI approaches in procurement are improving analysis of data and increase the efficiency of processes and workflow.
- The challenges which are mainly mentioned are reflecting gaps in data, data quality, governance, system integration gaps, of legal restrictions
- But there are more challenges for making use of the full power of AI:
  - **Tordomation-Ratio**
  - **Convergence**
  - **Knowledge Integration**



# Impact of Missing Challenges

The hype of AI leads often to an unreflected use and too optimistic judgement of the benefits.

>90%\*

Of users of AI in procurement to not measure or monitor the impact of result validation (todormation ratio). – Too strong belief in the black box.

>80%\*

Of companies using AI for procurement process do not think about the risk of convergence of the processes, data and outcomes.

>85%\*

Of companies neglect the huge chance to extend the scope of the solution by connecting to external knowledge sources.



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Hypothesis 3:

# Knowledge and Experience need to be encapsulated into AI solutions.

## WHY:

”Just using available data is the right approach for a large quantity of possible workflow, process and analytics task which get dramatically more efficient with AI. But the limits of just using available data getting a pain, when it comes to processes and task which need long year experience and knowledge. In this case the encapsulation of knowledge into AI solutions (e.g. as knowledge database) is a key success factor.



# AI for Target Cost in Procurement

Knowledge and experience boost speed for procuremet target cost



Source of schematic illustration: <https://kuzmaindustrial.com/product/pressure-die-casting/>

## 1 Subconscious mind:

- Part Name
- Application
- Function
- Material
- Manufacturing Technology
- Location in usage

< 10sec

## Routine based cost modelling

- Process description
- Data selection (e.g. machines, locations..)
- Process time calculation
- Validation etc.

< 60min

Novice /  
Outsider

	Division			FRT division		
GHT	254	550	254	274	154	415
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x 360

x 5

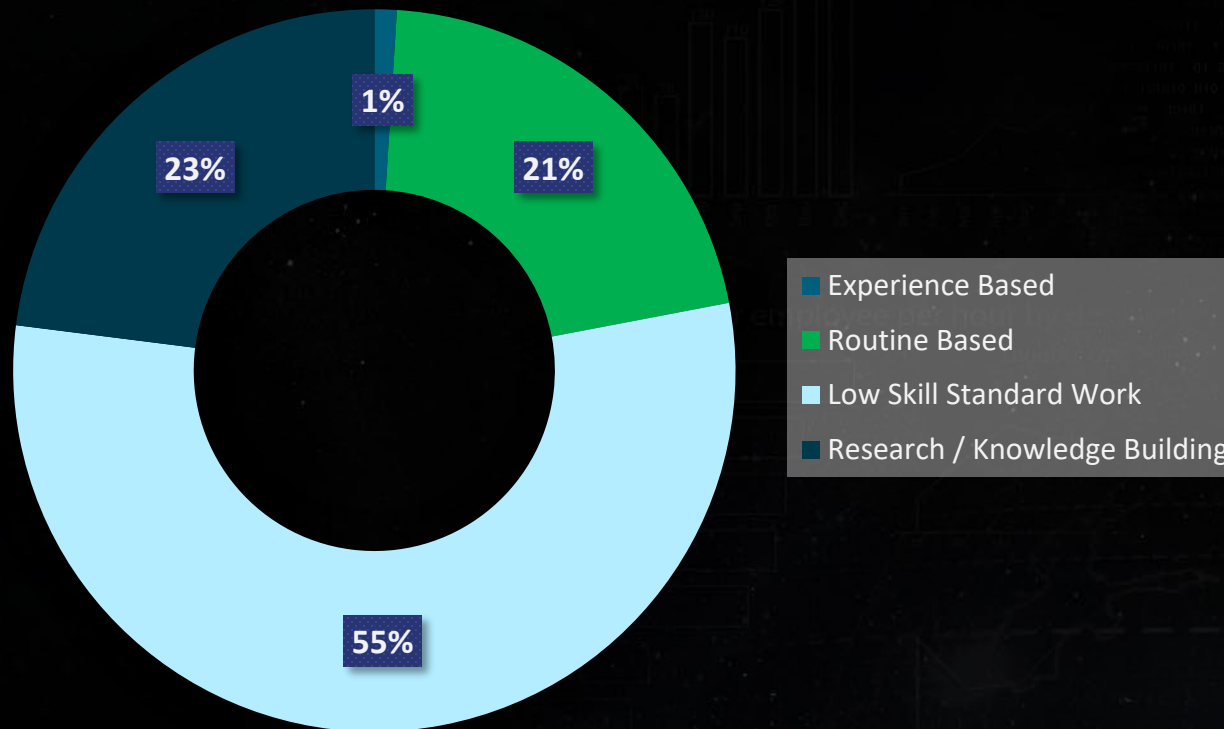
> 300min



# The Cost Analysis Process Efforts

The cost analysis process has strong dependency on experience data availability

## Effort Distribution



The challenge for AI and standardization is to get access to the experience and routine driven information which are the basis for the efficiency improvement in low skill and standard work.

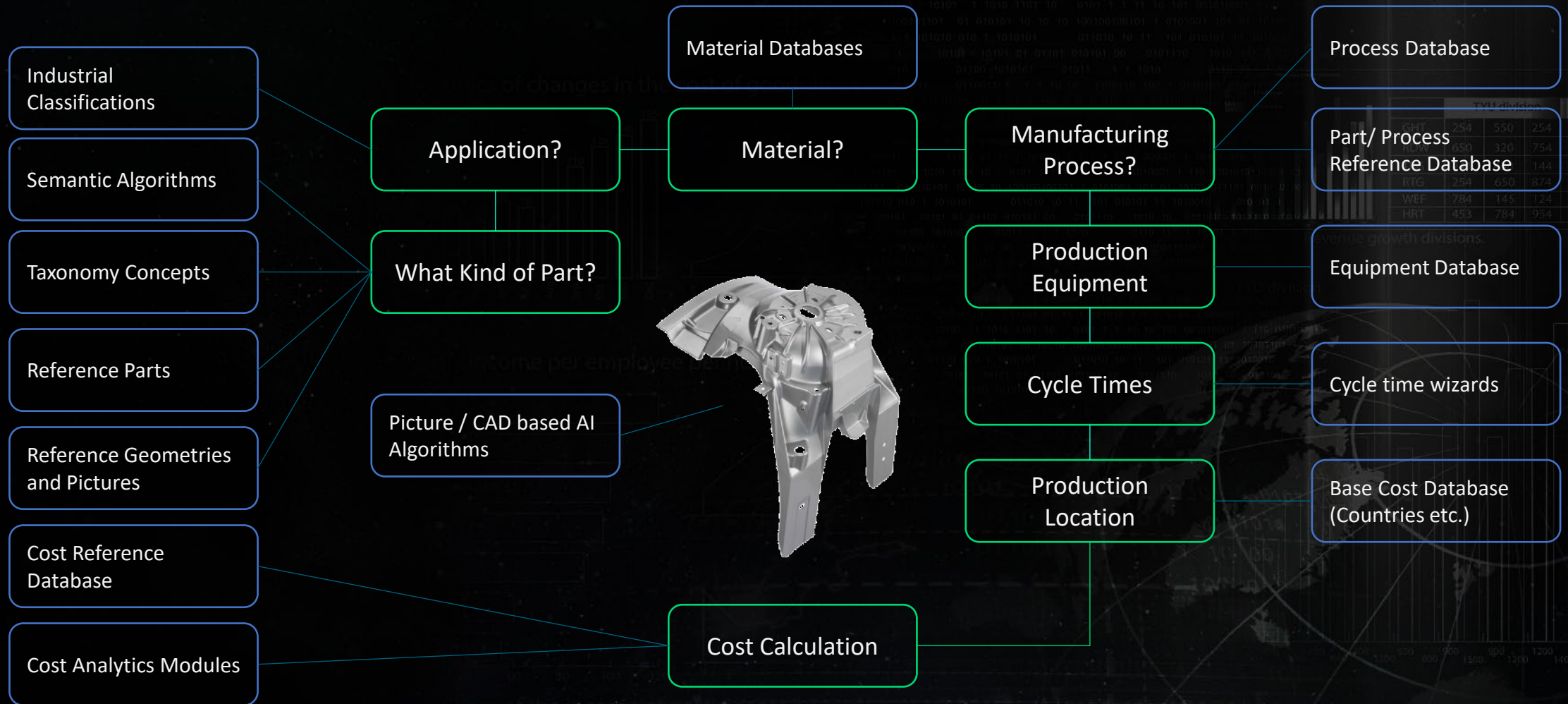
In other words:

“Without having a sophisticated knowledge base comparable to a skilled and experienced cost analyst any AI approach will fail”



# Requirements for AI in Cost Analysis (excerpt)

To use AI in cost analysis different information databases and modules are necessary



# Challenge of Knowledge Driven Processes.

Target cost analysis for procurement depends on strong experience and massive knowledge

## Cost Reference Data Bases

Base: Cost Analysis data for countries, material, equipment, reference data, benchmark data, market data.

## Industrial Experience

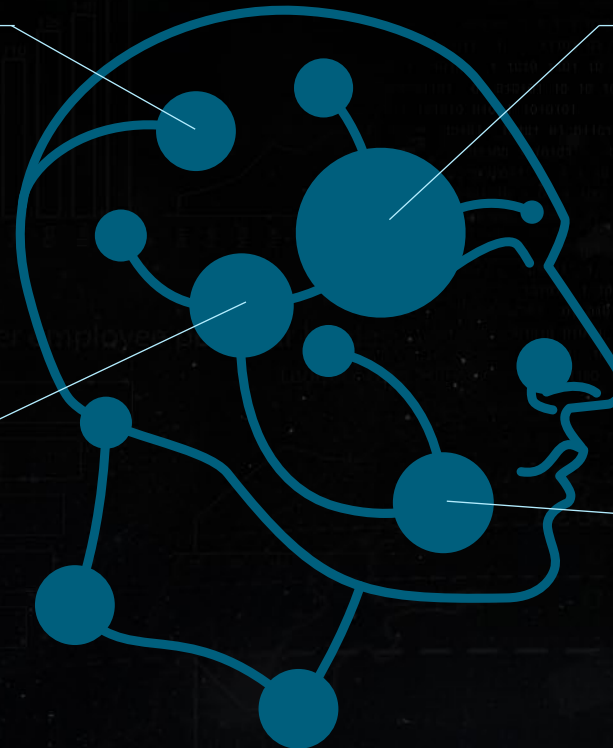
Specific experience in industrial processes and products including development and production processes.

## Algorithms

Calculation algorithms for machine learning, pattern recognition analysis, prediction engines and knowledge management.

## Analytics Knowhow

Mature knowledge in Cost Analysis Methods and the analysis process to define manufacturing and production processes.

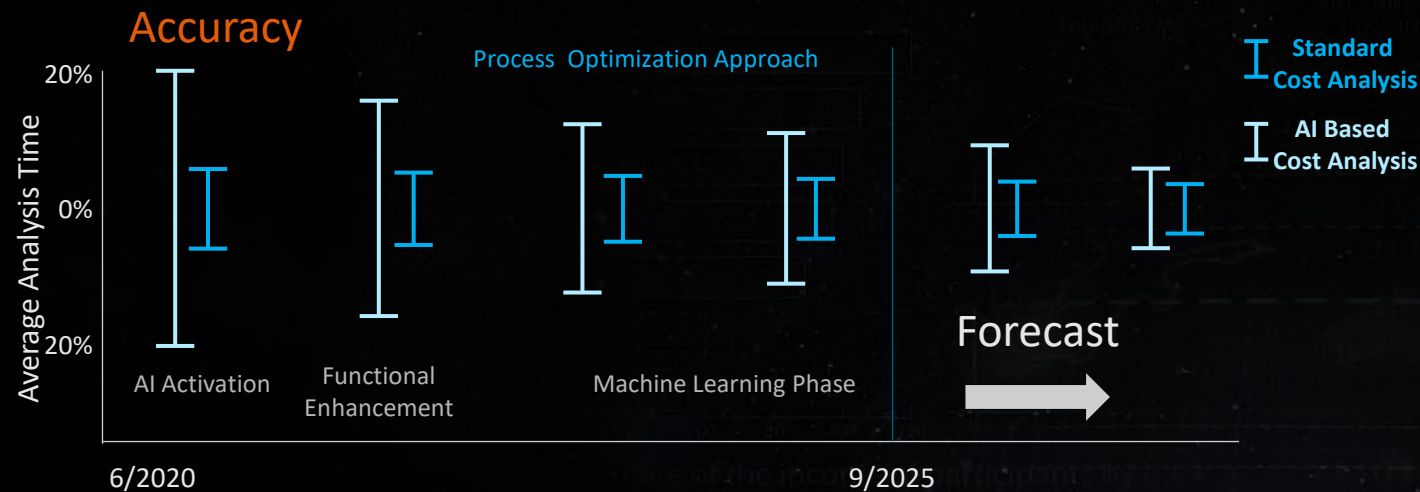
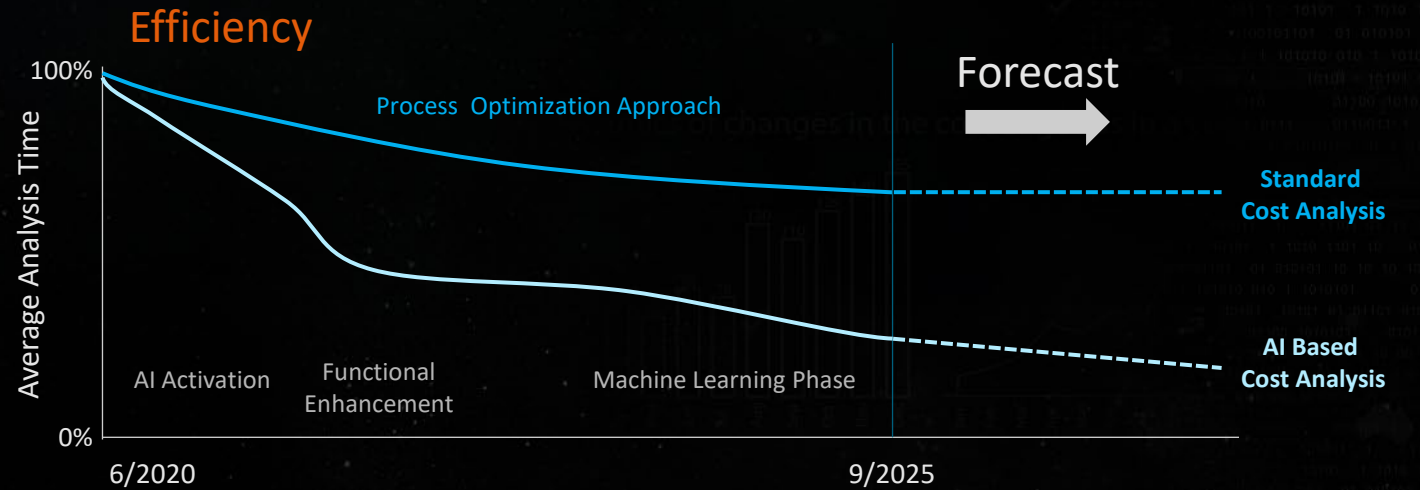


AI and Machine Learning systems for Target Cost Analysis need to combine complex data structures, data lakes and smart algorithms with knowledge based systems.



# Promising Results.

A first implementation of AI and Machine Learning concepts for Cost Analysis led to promising results.



After developing the concept of AI and ML based Cost Analysis, following steps were conducted for the first implementation:

- Framework development for AI and ML
- Data-Modell and Data-Architecture definition
- Basic development of the components
- Big Data approach for data analysis and data preparation
- Gathering data
- Definition of reference parts for Cost Analysis
- Parallel testing of conventional Cost Analysis effort (in spent time) and AI driven Cost Analysis.

	FW	HS	SO	SS	FT	FT division
FW	281	320	34	173	825	154
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SO	784	145	24	52	741	759
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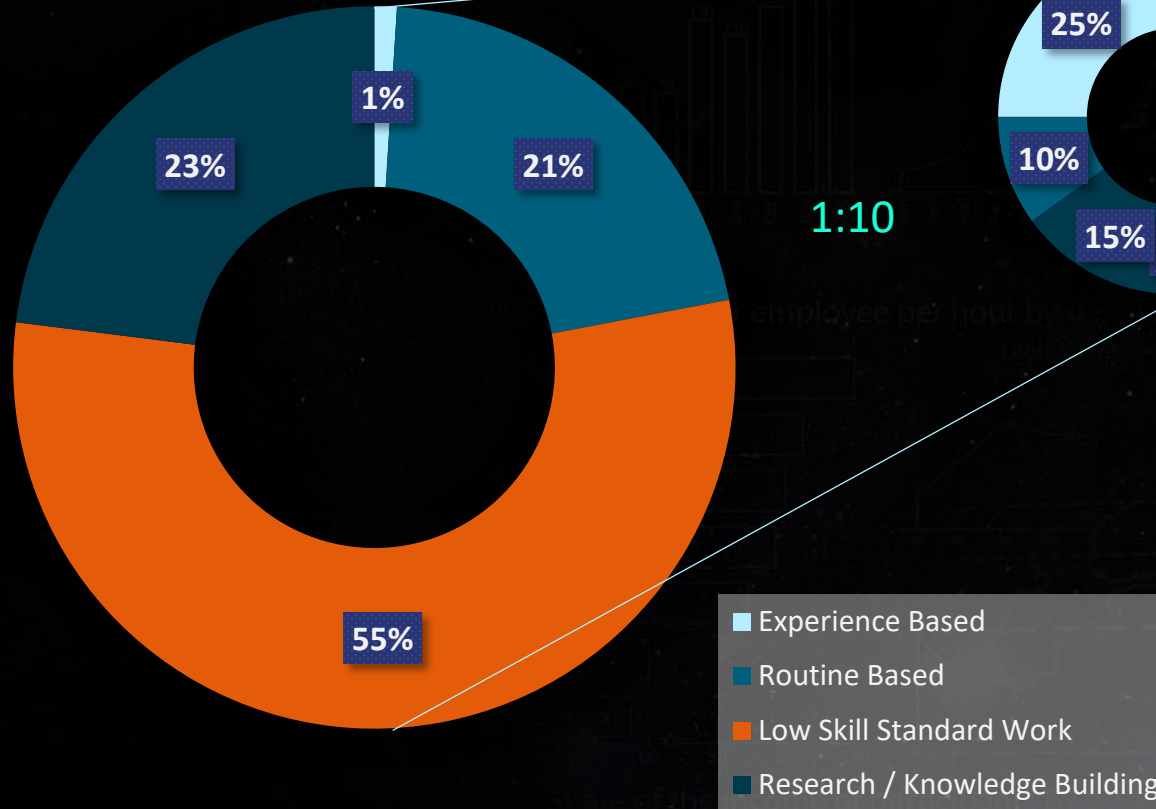
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FW	274	154	415			
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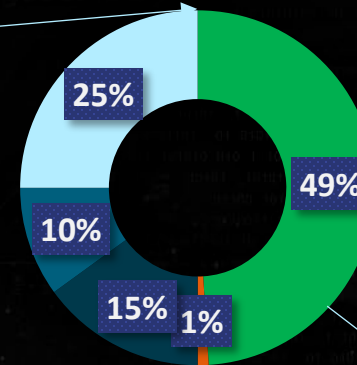
# Benefits in all Directions.

The main benefits are releasing expertise and increase impact.

## Effort Distribution



## AI based Effort Distribution Increase Impact by:



1:10

Released Capacity

- Expand Cost Analysis to automatic screening
- Support early stage target costing
- Extend coverage of Cost Analysis
- Support Cost Engineering activities
- Improve predictions
- Reduce routine and standard work



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# Ups and Downs.

The use of AI in the past month shows ups and downs. Some are surprising.

## Productivity & cycle-time gains

Gen-AI can lift procurement productivity materially; reported 40–50% staff-productivity potential, while vendors see shorter cycle times from automated intake, RFX drafting, and invoice matching. Gains are strongest where processes are already standardized.

## Better decisions & spend visibility

CPO surveys rank “enhanced decision-making” and “improved productivity” as the top Gen-AI value drivers, ahead of cost optimization. AI-assisted analytics surfaces maverick spend and consolidation opportunities faster than manual methods.

## Cost savings via sourcing & negotiation

Reports estimate AI can streamline manual work by up to ~30% and cut overall costs ~15–45% across source-to-pay. Individual case studies (e.g., AI-assisted supplier negotiation) report large category-specific savings.

## Operational quality & throughput

AI-enabled procurement outsourcing reported big improvements in data management and intake throughput (e.g., >50% automation gains), reducing rework and exception handling. These improvements compound downstream in AP and supplier management.

Sources: Deloitte, BCG, Hackett, Reuters, CARDO, RENNET, EY



# Ups and Downs.

The use of AI in the past month shows ups and downs. Some are surprising.

## Data quality & integration hurdles

Poor, fragmented data and legacy ERP landscapes blunt model accuracy and slow rollout; leaders cite data quality as a top barrier to AI in procurement. Remediation (taxonomy, enrichment, MDM) often becomes the critical path.

## Hype, overestimation & project attrition

Over half of procurement leaders worry about overestimating Gen-AI benefits, and Gartner expects >40% of “agentic AI” projects to be scrapped by 2027 due to unclear value and cost overruns. Expect rigorous use-case selection and staged pilots.

## Compliance, bias & financial risk

A 2025 survey of large firms found most experienced initial financial losses tied to AI deployments—often from compliance failures, flawed outputs, or bias. Responsible-AI controls correlate with better cost and satisfaction outcomes but take time to build.

## ROI timing & adoption gap

Many CPOs are still in planning/assessment phases, so benefits arrive unevenly; near-term gains are often reinvested rather than hitting the P&L immediately. This creates a perception of “slow ROI” despite productivity improvements.

Sources: Deloitte, BCG, Hackett, Reuters, CARDO, RENNET, EY



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# Example 1: Spend Analysis

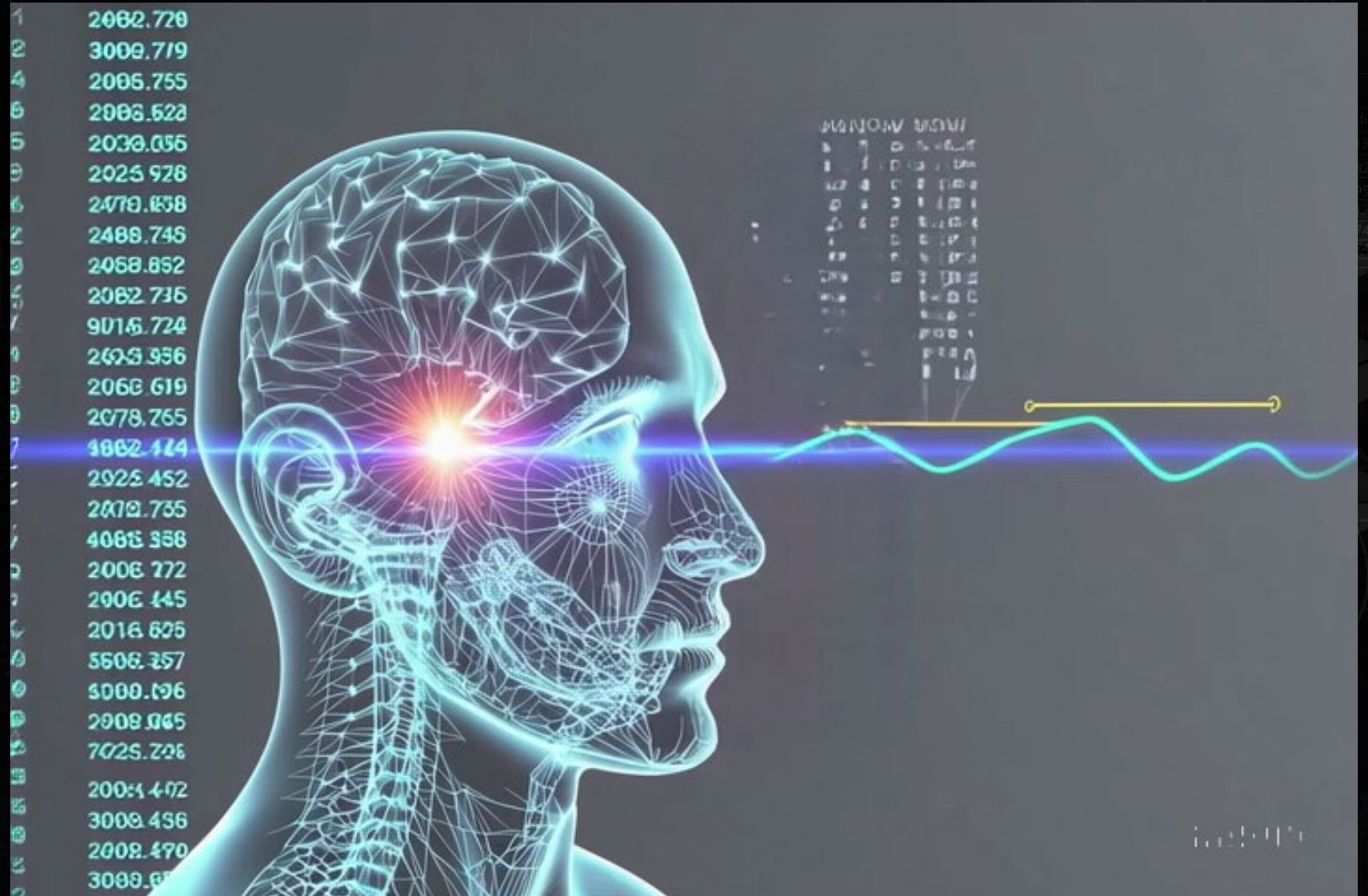
AI is the perfect companion to analyse mass of complex data.

The **Quick Wins** using AI are definitely in the field of data analytics.

Example:

For a **spend volume** of appr. **200Mio€** with more than 100 main categories, more than 2000 products, approximately 3000 suppliers and 10 production sites it takes:

**10 days** to setup a complete AI base spend analysis including live dashboard and to create more than **7 Mio€ first saving measures** indications.



# Example 2: Supplier Search

AI in knowledge based mapping for supplier search.

UPPID Part / Supplier Matching Engine (BETA), LLM: GPT5.0

Wo sollen wir anfangen?

+ I need th

The UPPID/Part2Supplier Engine is implemented with GPT 5.0 in this case.

(c) 2025 by RENNET GmbH

[Request a demo](#)



# Example 3: Price Estimates

AI in knowledge based cost estimation for first rough cost targets or price checks..

procuremetric About Support DE

Price Check Demo (restricted content)

Challenge your current purchase prices and act if too high!

Step 1: Define your Product  
Product Type: Sheet Part Deep Draw

Step 2: Select a Material Group  
Material Group: Aluminium Sheet

Step 3: Enter the weight  
Weight [kg]: 3,5

Step 4: Enter your current cost  
Current Cost [EUR]: 15,0

Minimal Target Cost: € 10,92  
Expected Target Cost: € 14,33  
Maximal Target Cost: € 17,74

100 %  
105 %  
80 % 130 %

Your Annual Volume [pcs/year]  
1 10 100 1000 10000 25000 50000

Microsoft Power BI

Request a demo



# Example 4: Raw Material Market Prices

AI in for price monitoring e.g. for rare earth or high alloyed materials.

## AI driven Raw Material Cost and Supply Risk Monitoring

The Raw Material

Start A

Brief description

procuremetric

Material weights / alloys

Manufacturing costs in euro

Erhöhung Abnahme Gesamt

Alle auswählen

BR 4 414487

BR J3F 9034396

BR J3F 9034512

BR3 375630

BR3 375631

BR3 9036109

BR14 1238220

BR4 369443

2.00

0.50

0.32

0.21

0.60

Fe

Cr

Co

Mn

W

Ni

Please select an index.

material index

procuremetric

Material index

Alle auswählen

BR 4 414487

BR J3F 9034396

BR J3F 9034512

BR3 375630

BR3 375631

BR3 9036109

BR14 1238220

BR4 369443

Indizierte\_Kosten nach Year und Index\_Name

Index\_Name

Market\_Ni

Market\_Chrome

Market\_MetalPr...

Market\_Metals

Market\_X45...

Market\_X5...

RTIC\_Cr

RTIC\_Ni

Year

Index_Name	2016	2018	2020	2022	2024
Market_Ni	500	1000	1500	1800	1500
Market_Chrome	500	600	700	1200	800
Market_MetalPr...	500	600	700	1000	800
Market_Metals	500	600	700	1000	800
Market_X45...	500	600	700	1000	800
Market_X5...	500	600	700	1000	800
RTIC_Cr	500	600	700	1000	800
RTIC_Ni	500	600	700	1000	800

Request a demo



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# Recommendation

Transform procurement department successful to innovative AI supported departments.

- Create a clear transparency in your company where AI solutions creates the best benefit – and do not focus only on efficiency but also extending the service portfolio.
- Use the implementation of AI solutions to clean data prior or during implementation.
- Try to combine internal data with public external and dedicated knowledge driven data to avoid working in an ivory tower.
- Use the time released by AI driven or supported solutions to work on a next level of excellence, new methods and scope of work
- Treat AI tools and solutions as tool like a knife in a kitchen. You are still the chef and you drive quality and innovation.



# Procurement will not work without AI anymore.



# But it depends on you how to use AI.



# Thank you.

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