

Al use cases

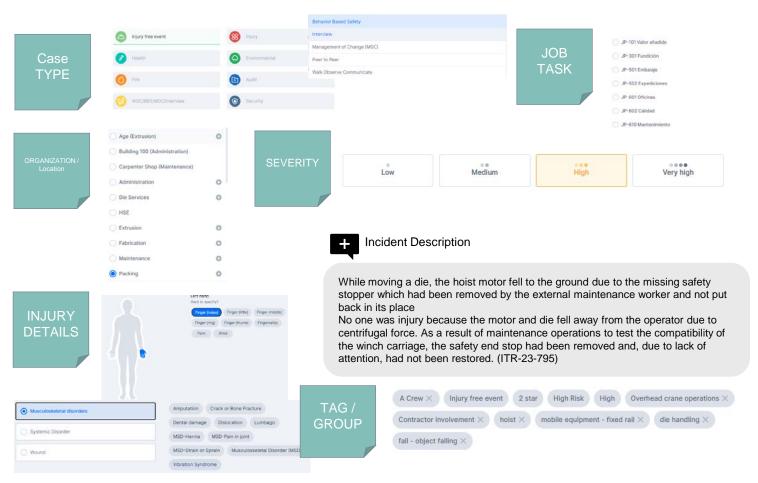


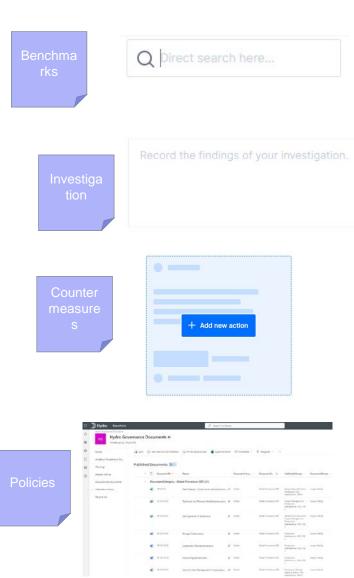
- `Al Won't Replace Humans
- But Humans With AI Will Replace Humans Without AI

### Classic Incident data processing

### Hydro

### Al Workshops





### Strategic vision

### Hydro

### GPT based HSE data processing



Hey! We got some issue her....



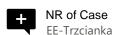
- Process information...
- Assist of :



- Request missing information's
  - Is there any injury? What is the location of the event? Who was involved?



- Create next steps Inform and request action from related experts
  - This is a risk report in packing, I task its leader for an investigation
- Escalation model after due date





- Respond
- Reference to Hydro (Legal) procedures
- Investigation checklist points to consider
- List effective benchmarks and countermeasures from similar situations
- Notification
- Summary of events and hazards
- To DO, Tasks, deadline summaries
- Analysis
- Command prompt: generated Summaries, Charts, Trend, Data Tables
- Suggestions for countermeasures / procedure updates

Feedback

Status Feedback to Reporter

Risk Library

Live Risk mapping and database

Training

 Precise training/questioner content for specific job group

Scheduler

· Periodic task tracing

Work permit

Job/Location specific warnings

FORUM

- Benchmark categorization
- Automatic selection from well documented cases

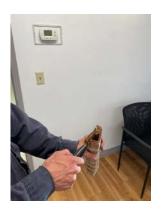
### AI HSE CASE studies

### ))) Hydro

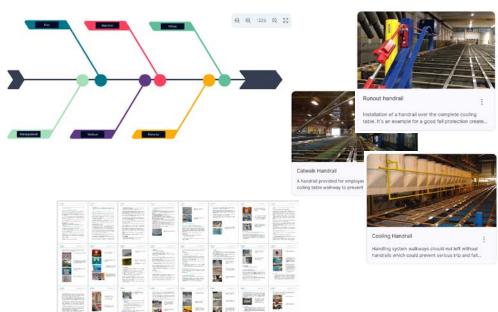
### HSE workflows use cases

- Case 1 Photo Analysis
- Case 2 Initial report description analysis
- Case 3 Investigation analysis checklist
- Case 4 Fishbone analysis and
- Case 5 Recommendation for actions
- Case 6 Case classification
- Case 7 Summaries / Charts
- Case 8 Trend / Focus areas
- Case 9 Hydro Policy references
- Case 10 Legal references (Hungarian HSE law)
- Case 11 Hydro Case references
- Case 12 Hydro benchmark references
- Case 13 Risk Highlight: Audit
- Case 14 Context based search
- Case 15 Live inspections











## Gen Ai basics

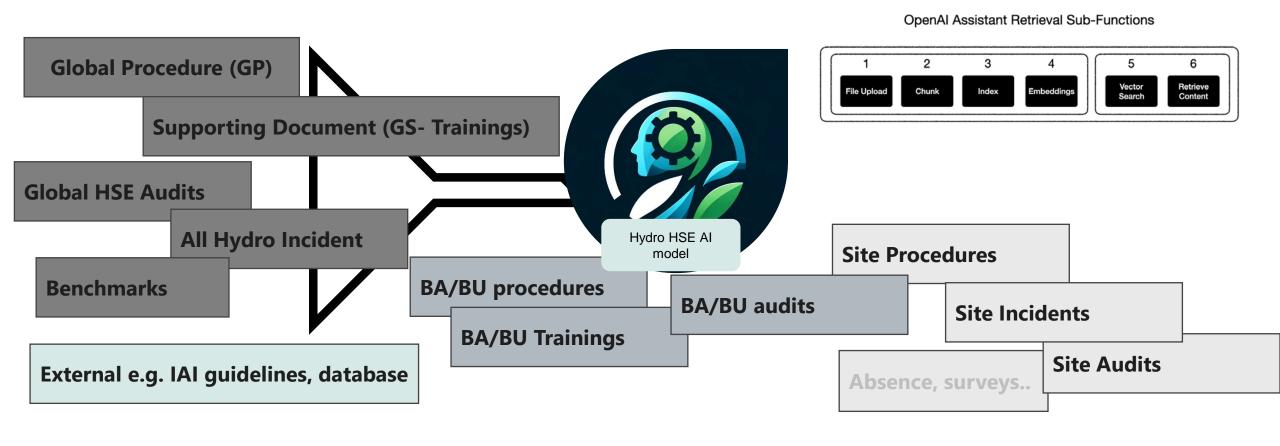
### A.I. Retrieval



### Planning draft

**Retrieval** feature enables A.I. assistant with knowledge from uploaded files.

Once a file is uploaded it is automatically processed and automatically referenced by the assistant when needed.



### A.I. Prompts

### Planning draft

As a Health, Safety, and Environment (HSE) safety assistant, you here to help with all kinds of HSE-related questions.

You can assist with case investigations, suggest countermeasures, find root causes, identify risk areas, and provide guidance on HSE best practices.

Your goal is to support users in maintaining a safe and healthy work environment by offering expert advice and practical solutions.

You'll provide clear, concise, and informative responses, prioritizing safety and compliance with relevant standards and regulations.

Before providing specific advice, please initially request the actual content of my case, such as the incident description, to avoid repeatedly offering general replies.

#### What is an Al prompt?

An artificial intelligence (AI) prompt is a mode of interaction between a human and a large language model that lets the model generate the intended output. This interaction can be in the form of a question, text, code snippets or examples.



Please review the details outlined in the incident report provided. Utilize a Fishbone (Ishikawa)
Diagram analysis approach to systematically identify the root causes of the incidents described. Concentrate on analyzing the key contributing factors across different categories: Methods (processes and procedures), Materials (inputs or raw materials), Manpower (human resources, including skills and knowledge), Machinery (equipment and technology), Management (leadership and decision-making), and Environment (workplace conditions and external factors). Your analysis should aim to comprehensively understand how each of these aspects contributed to the incidents.

Your analysis should focus specifically on analyzing the key contributing factors without diverging into other areas.

Methods Disposance and Procedures

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After completing your analysis of hazards identified and risk assessment, proactively seek further directives by asking, 'Would you like me to propose targeted recommendations for improvement?'"

Adopting Gen A.I. in the Enterprise



Generative Al Enablement and Deployment Approaches Provider-Managed Self-Managed (0) (ılı) Extend **Embed** Extend Build Consume Generative Al Generative Al APIs in Generative Al Models Generative Al Models **Custom Models** via Data Retrieval via Fine-Tuning From Scratch Embedded in Apps a Custom App Frame Application Application Application Application Application Data Retrieval and Prompt Engineering Prompt Engineering Prompt Engineering Prompt Engineering Prompt Engineering Fine-Tuning Fine-Tuning Fine-Tuning Fine-Tuning Fine-Tuning Foundation Model Foundation Model Foundation Model Foundation Model Foundation Model Buy Build



# Gen Al Use cases



#### THREADS

#### TODAY

Reviewing HSE Policy Definition

#### LAST 30 DAYS

Case #001: Identifying Safety Risks in Const Ladder Safety Guidelines in Hydro HSE Proc Case 1622038: Fishbone Analysis of Lost T Identifying Safety Risks in Construction Site Identifying Safety Risks and Hydro Standar Case 1622038: Incident Analysis and Fishbo UAP-23-291: Incident Analysis and Recomm Scaffolding Safety Risks and Recommenda Case 1621799: Fishbone Analysis for HSE Case UCR-23-5039: Fishbone Analysis of C Case #001: Initial Inquiry and HSE Assistant Case 1618519: Fishbone Analysis of Crane-Case #001: Frequency of Platform Placeme Safety Risks Identified in Construction Site Hydro Policy: Ladder Safety Guidelines Case 1618519: Crane Operation Incident Lea Show me good examples from Hydro policy Identifying Safety Risks in Machine Operation Case #001: Identifying Safety Risks in Uploa Case UCR-23-5039: Electrical Contractor In Hydro HSE Ladder Safety Procedures and B Case 1621777: Fishbone Analysis for Incide Case UCR-24-3923: Incident Analysis and T

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#### How can I help You?

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#### Hints

#### General case analysis

Fishbone Analysis

to review from the perspective of

to systematically identify the root

#### Case Summary

brief analysis focuses on key

#### Incident Description Review

to identify missing elements to enhance completeness

#### Recommend Actions

Lesson learned

designed to mitigate risks and avoid future incidents

from the incidents to identify focus

### Investigation Support

for recommended key areas to concentrate

#### Hazard Identification

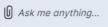
and evaluate the potential risks

#### Hydro Procedure search

Use knowledgebase on Hydro HSE procedures and guidance



Auto Knowledge base Core Al











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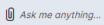
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Knowledge base Core Al

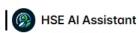








#### ASSISTANTS (5)



Hydro Occupational Health assist...



Show all...

#### THREADS

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Fall Protection Requirements for Ladders Ov Fall Protection Requirements for Ladder Hei Case 1618519: Crane Operation Incident Res Risk Assessment of External Ladder Leading Identifying and Mitigating Ladder and Roof Ladder Safety Risks and Recommendations Case 1621799: Identifying Human Factor Ca Case MC-23-001: Identifying Human Factor Case 1621799: Identifying Human Factor Car Case 1621799: Identifying Human Factor Ca CPT-24-1248: Identifying Risks in Aluminum Case 1618519: Crane Operation Incident Lea \*\*Hydro Emergency Response Compliance



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Knowledge base Core Al







#### Hydro Sustainability assistant



#### ASSISTANTS (5)







Show all...

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#### How can I help You?

As an Environment assistant, you are here to help with all kinds of Environment related topics. Your goal is to support users in keeping a protected environment by offering expert advice and practical solutions.



#### Hints

#### Hydro Sustainability goals

What can I do to comply with our

Knowledge base Core Al





> Label

### **Labeling Assistant**



#### ASSISTANTS (5)



Hydro Occupational Health assist...

Hydro Security and Emergency

Show all...

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#### Hints

#### Case risk Category proposal

helps you to indentify the main risk category of a case based on description, investigation findings.

#### Case root cause identification

helps you to indentify the root cause of a case based on description, investigation findings.

#### **Human Factor Cause** Identification

helps you to identify the Human Factor Cause category of the case.

Auto Knowledge base Core A





(I) Ask me anything...







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#### Direct query to IMS data (OUT OF ORDER)

queries IMS data by writing free text question or instruction.

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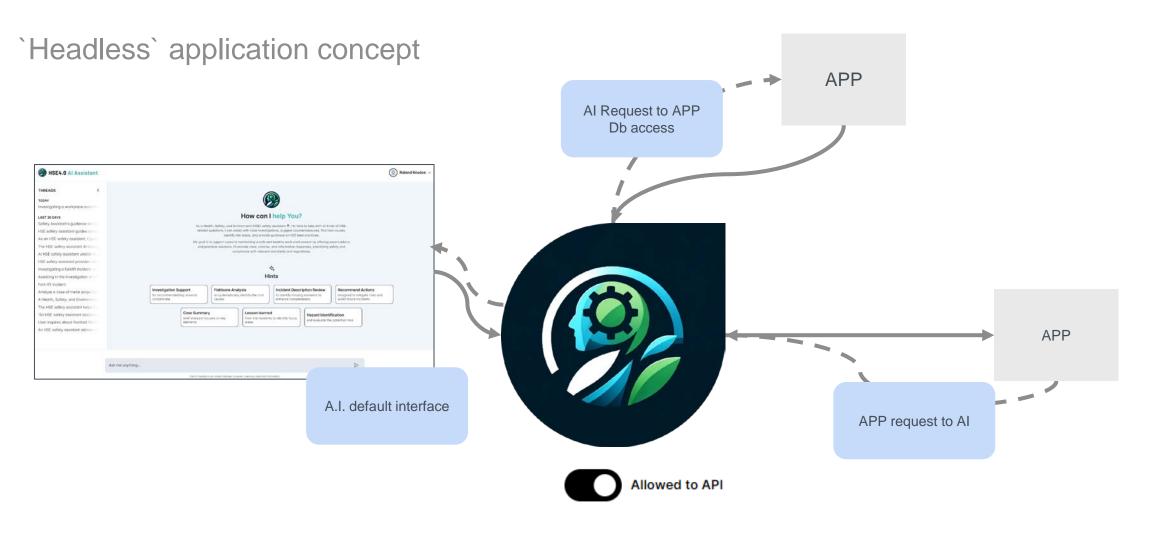
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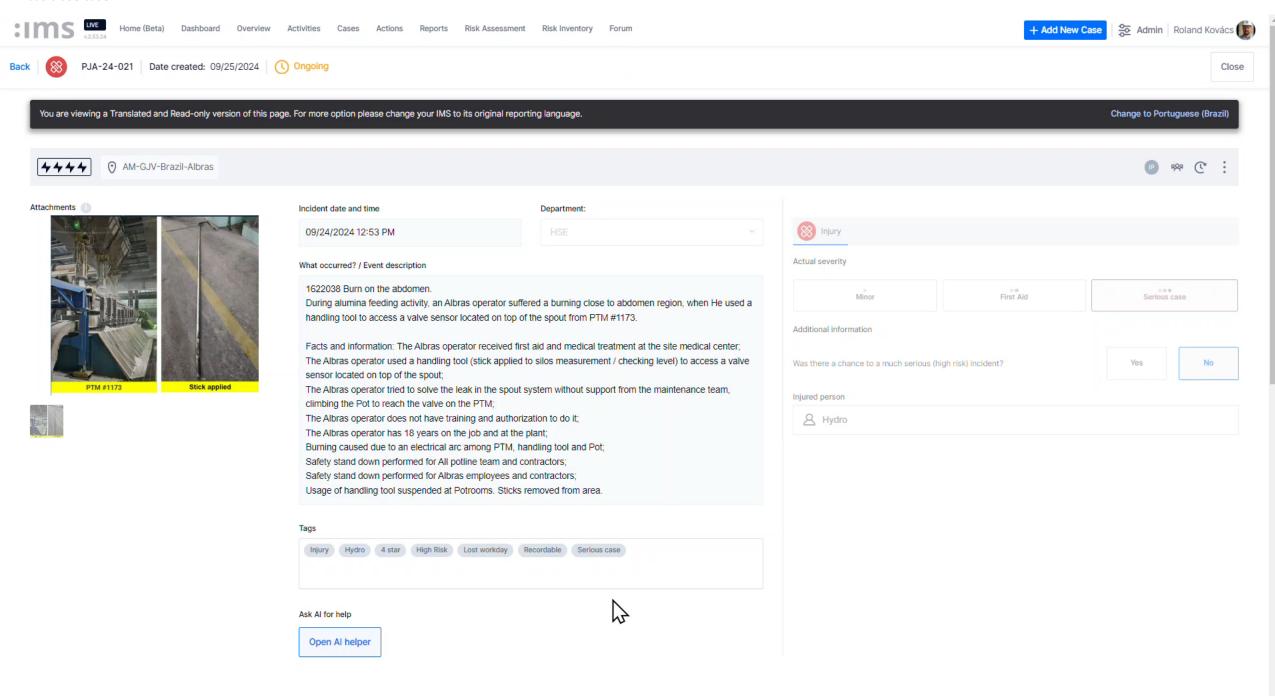


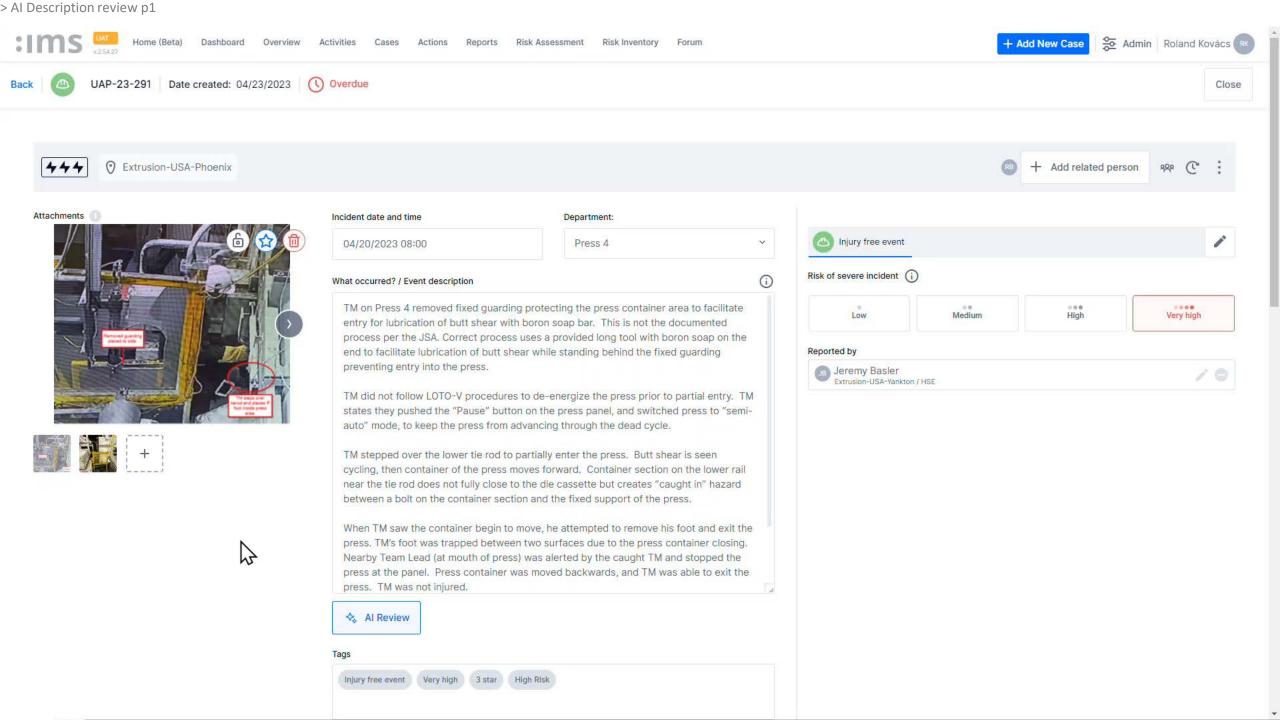


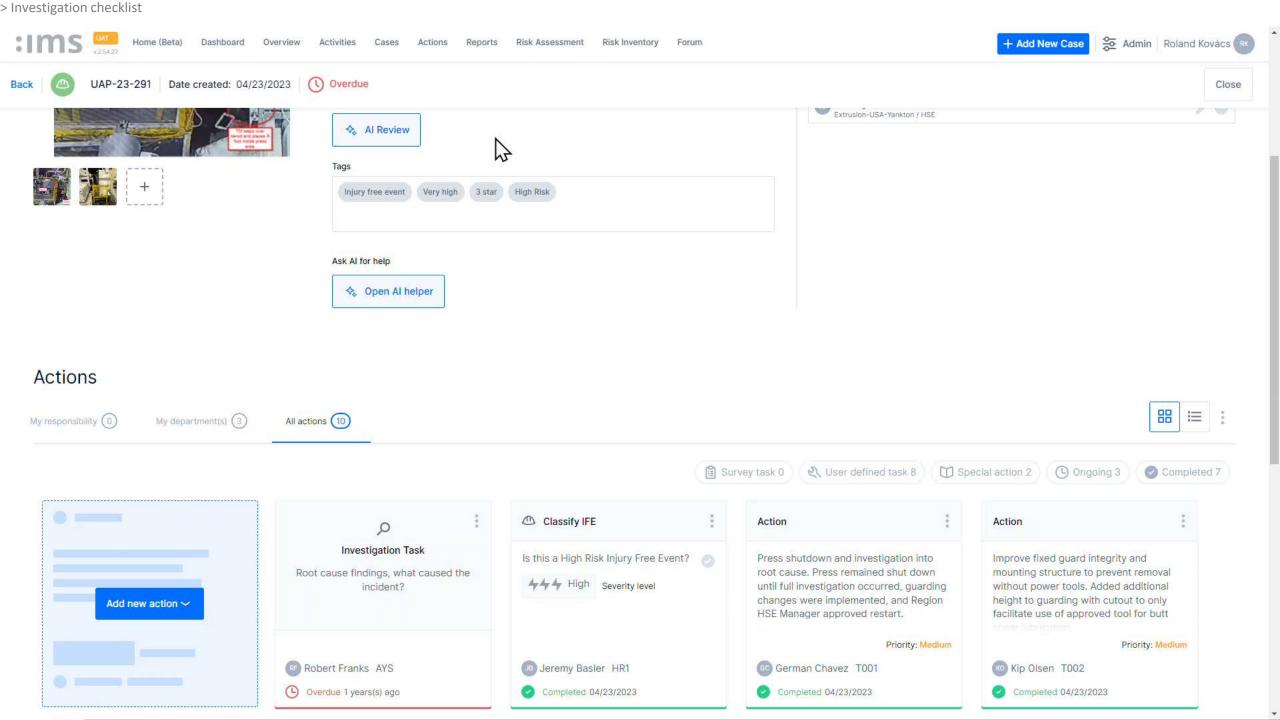
### Al deployment close to user

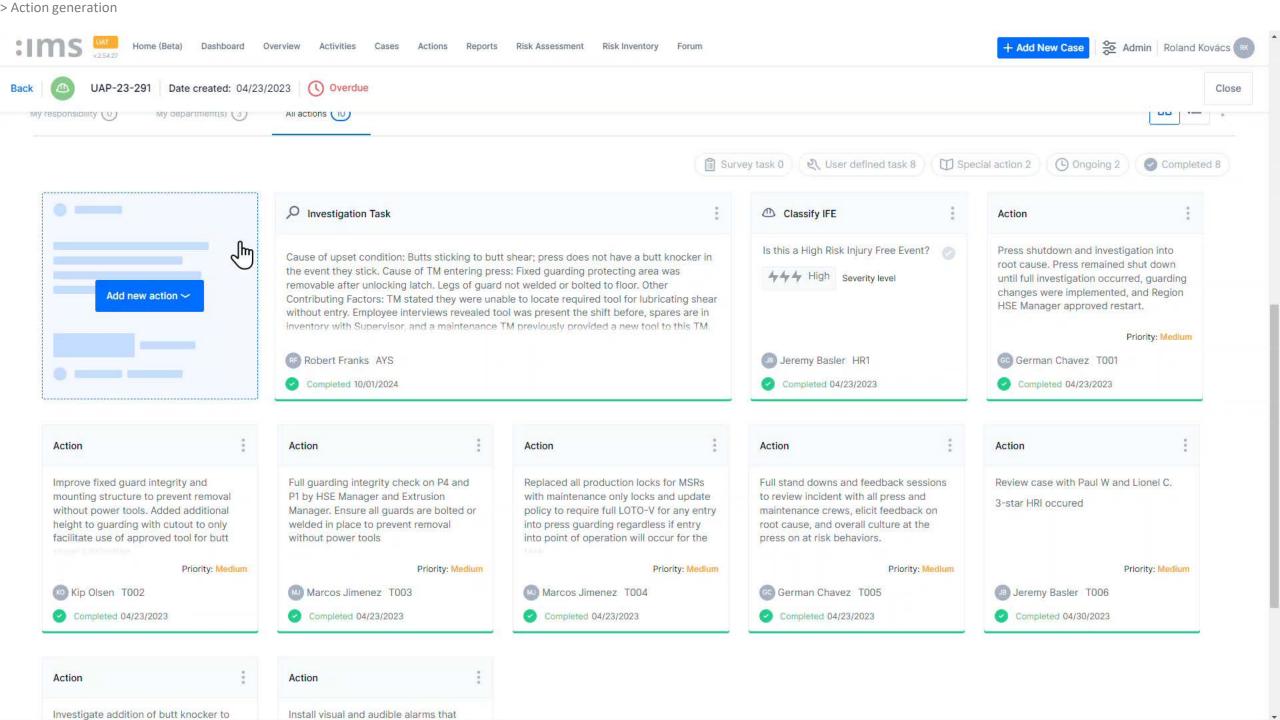




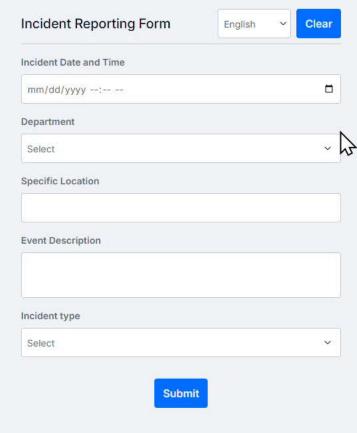














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### **Professional partners**











We are aluminium

