

**Beam AI x CDTM Hacks 2025**  
**Invent the Future of Work with Intelligent Agents**  
**Presented by: Beam AI Team**



# Meet Beam AI

Founded: 2022

Founders: Jonas Diezun (CEO) &  
Aqib Ansari (CTO), Dr. Benedikt  
Sanftl (CPO) & Burak Özafşar (ML)

Employees: 35 (+>150 AI Agents)

Offices: Berlin, Munich, New York, &  
Karachi

[beam.ai](https://beam.ai)



RAZOR  
GROUP



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cruise

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WE R&D.

TUM

AIRBUS

CDTM



Autonomous AI Agents to automate  
redundant and complex tasks

## Who We Are?

Beam AI specializes in AI-driven enterprise automation. Our autonomous agentic operating system streamlines workflows and optimizes decision-making.

## What We Do?

Enabling businesses to drastically improve efficiency by automating complex data processing tasks.

# What Can You Build with Beam?

Agents That Think, Plan, and Act

## 💬 Customer Support Agent

- Automatically respond to FAQs using chat or voice
- Route tickets based on content and urgency
- Retrieve full customer history from connected tools

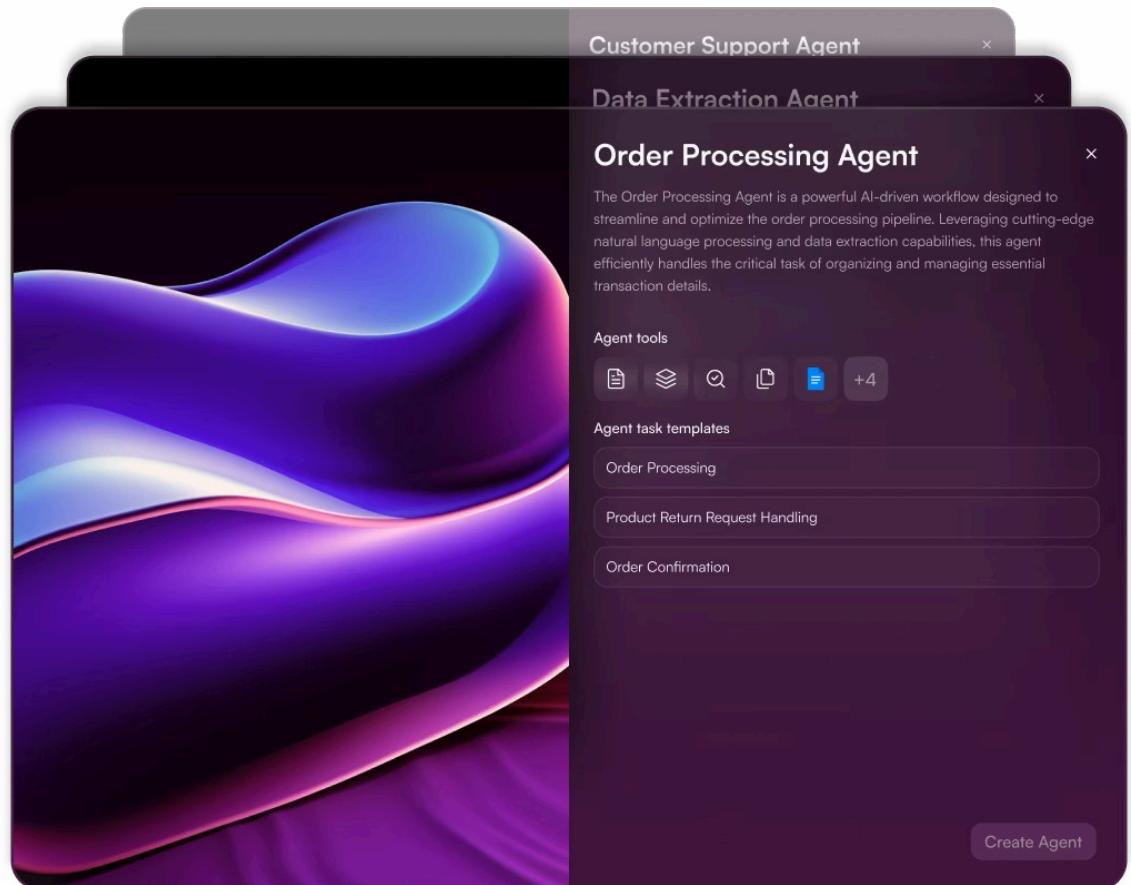
## 📝 HR & Onboarding Agent

- Screen resumes and shortlist candidates
- Schedule interviews and send confirmations
- Generate onboarding checklists and send welcome kits

## 📦 Order Processing Agent

- Extract details from incoming orders or receipts
- Validate and push to ERP or Sheets
- Auto-generate confirmations and invoices

✨ And many more...



# The Beam AI Agent Stack

## Memory

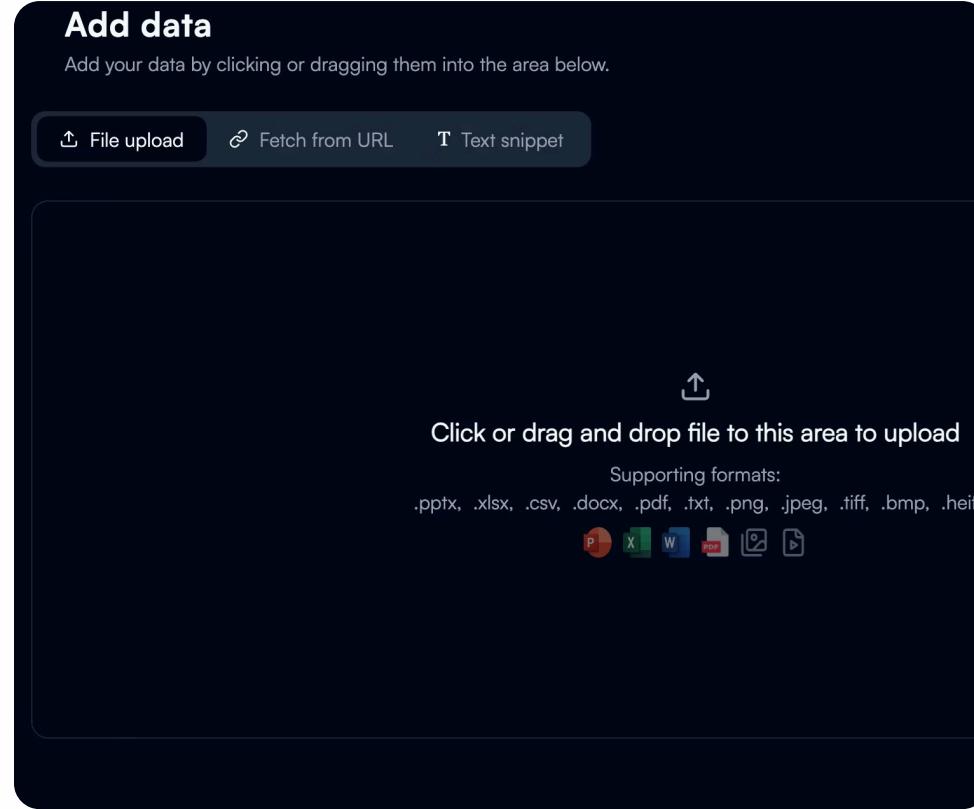
Upload structured and unstructured data

### Add data

Add your data by clicking or dragging them into the area below.

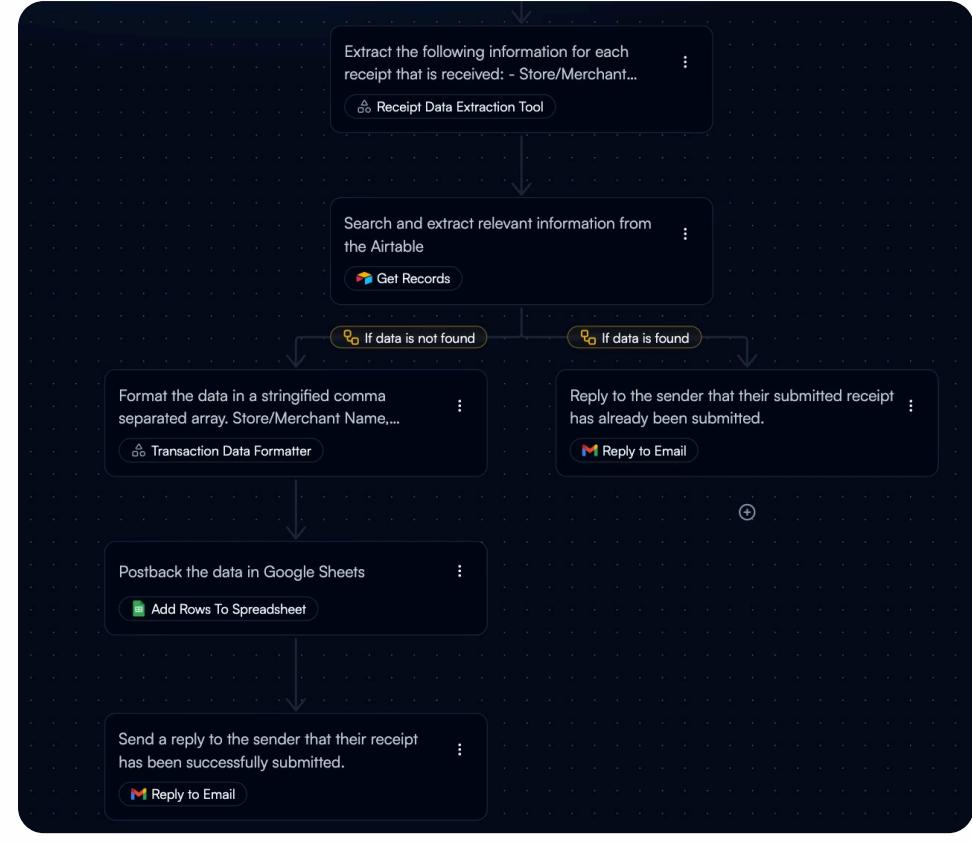
File upload Fetch from URL Text snippet

Click or drag and drop file to this area to upload  
Supporting formats:  
.pptx, .xlsx, .csv, .docx, .pdf, .txt, .png, .jpeg, .tiff, .bmp, .heif



## Flows

Design intelligent multi-step workflows



## Integrations

Connect with external tools & services

### Agent configuration

Configure your agent's tools, workflows and general settings

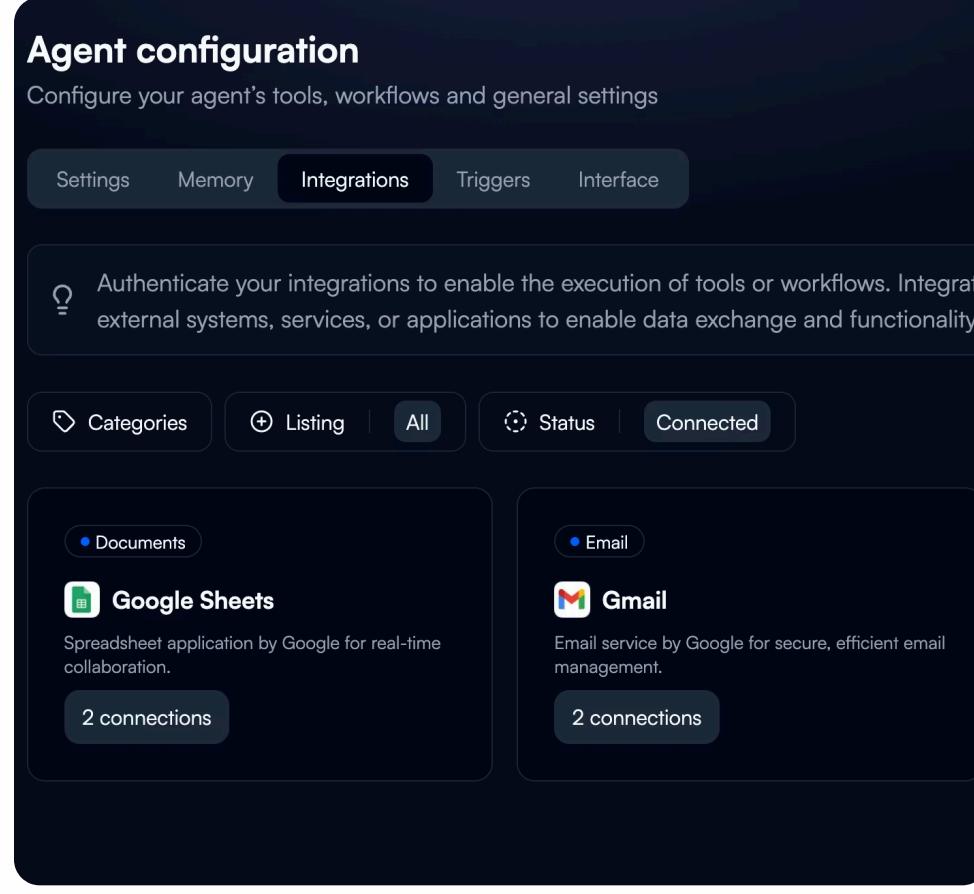
Settings Memory Integrations Triggers Interface

Authenticate your integrations to enable the execution of tools or workflows. Integrate with external systems, services, or applications to enable data exchange and functionality.

Categories Listing All Status Connected

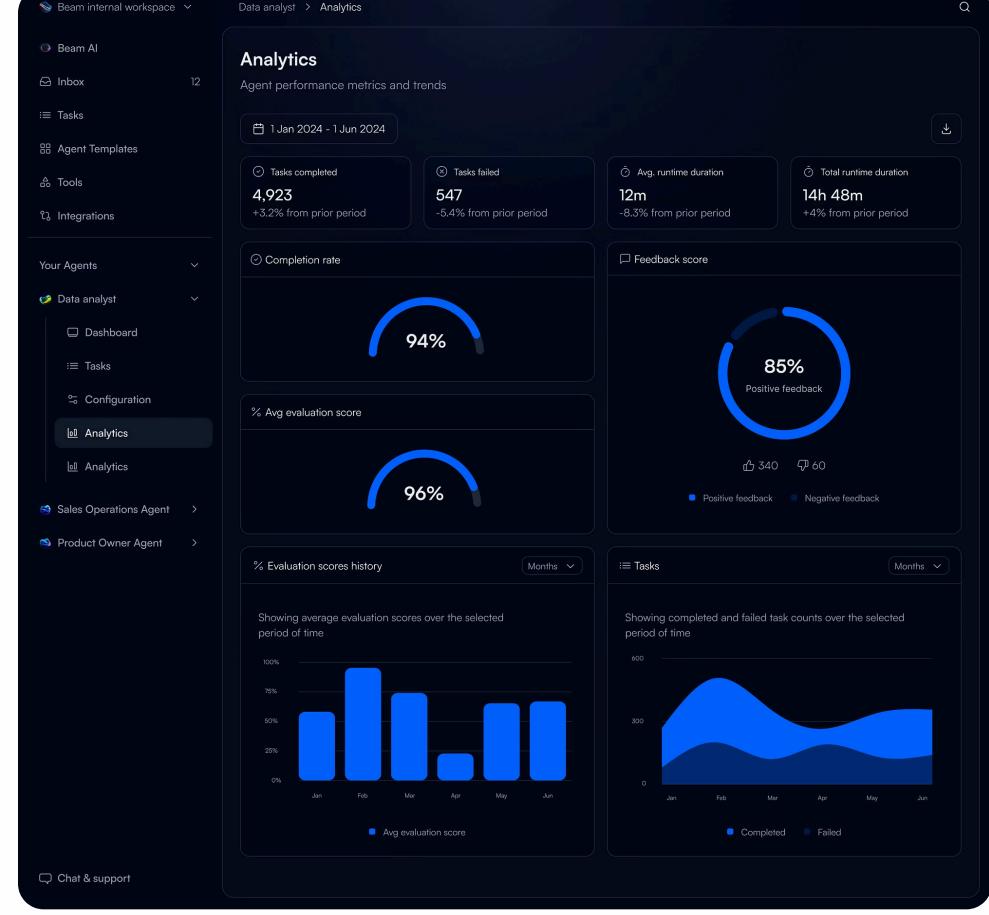
Documents Google Sheets Spreadsheet application by Google for real-time collaboration. 2 connections

Email Gmail Email service by Google for secure, efficient email management. 2 connections



## Analytics

Track agent performance and impact



## Learning

Train agents via human feedback

### Optimise tool

Review outputs from past executions and provide feedback to optimise the tool's prompt for better accuracy and results.

Feedback Perfect output

Describe why this output didn't meet your expectations and suggest improvements. For example: 'The response was too vague; please include more details and specific examples.'

What's wrong: Data loss in execution Missing task inputs Missing context Incorrect memory lookup Hallucinations

DAT-009 Extract this data and upload it to a google sheet.

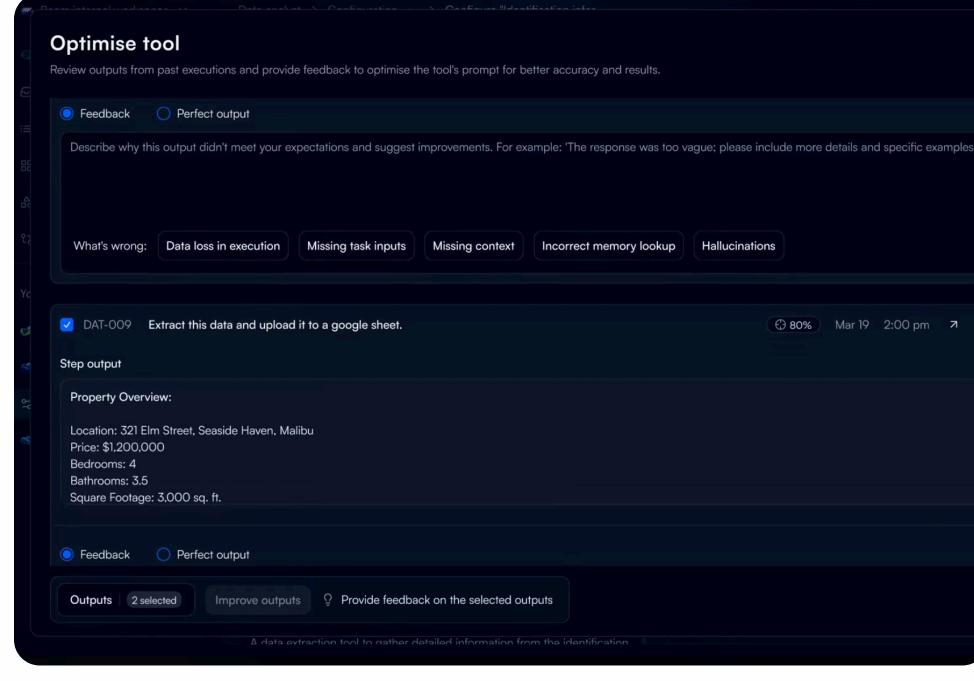
Step output

Property Overview:

Location: 321 Elm Street, Seaside Haven, Malibu  
Price: \$1,200,000  
Bedrooms: 4  
Bathrooms: 3.5  
Square Footage: 3,000 sq. ft.

Feedback Perfect output

Outputs 2 selected Improve outputs Provide feedback on the selected outputs



## Tools

Define task-specific tool behavior

### Configure tool

Modify and test your tool settings and parameters to achieve the desired output.

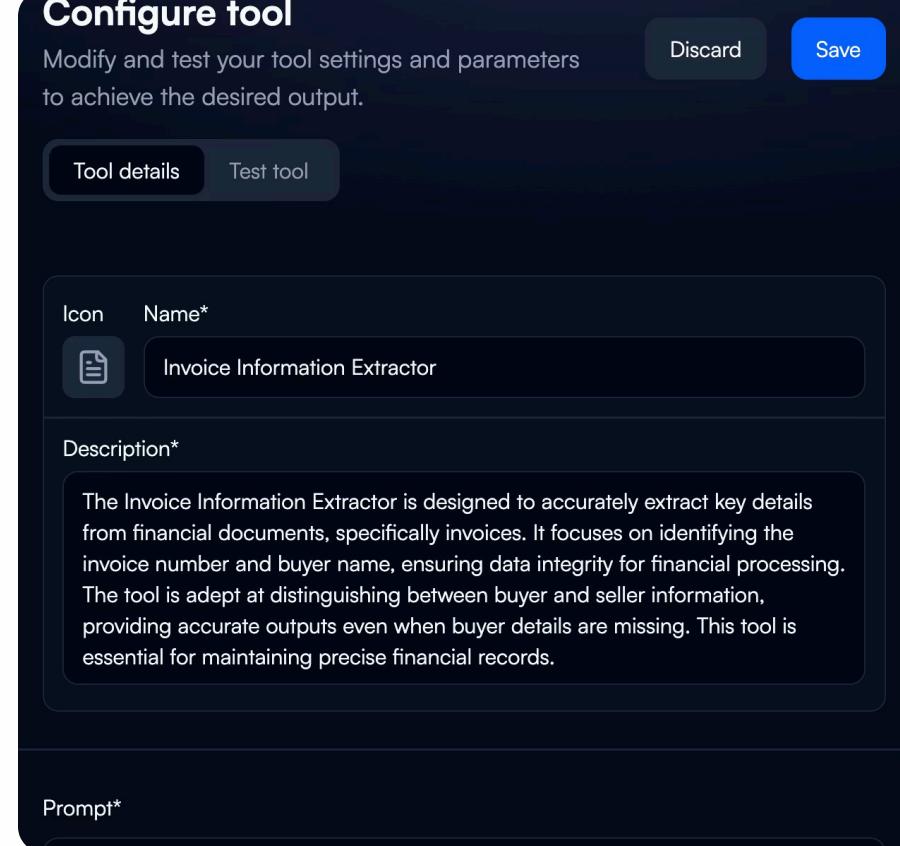
Discard Save

Tool details Test tool

Icon Name\*  
 Invoice Information Extractor

Description\*  
The Invoice Information Extractor is designed to accurately extract key details from financial documents, specifically invoices. It focuses on identifying the invoice number and buyer name, ensuring data integrity for financial processing. The tool is adept at distinguishing between buyer and seller information, providing accurate outputs even when buyer details are missing. This tool is essential for maintaining precise financial records.

Prompt\*



# Agenda



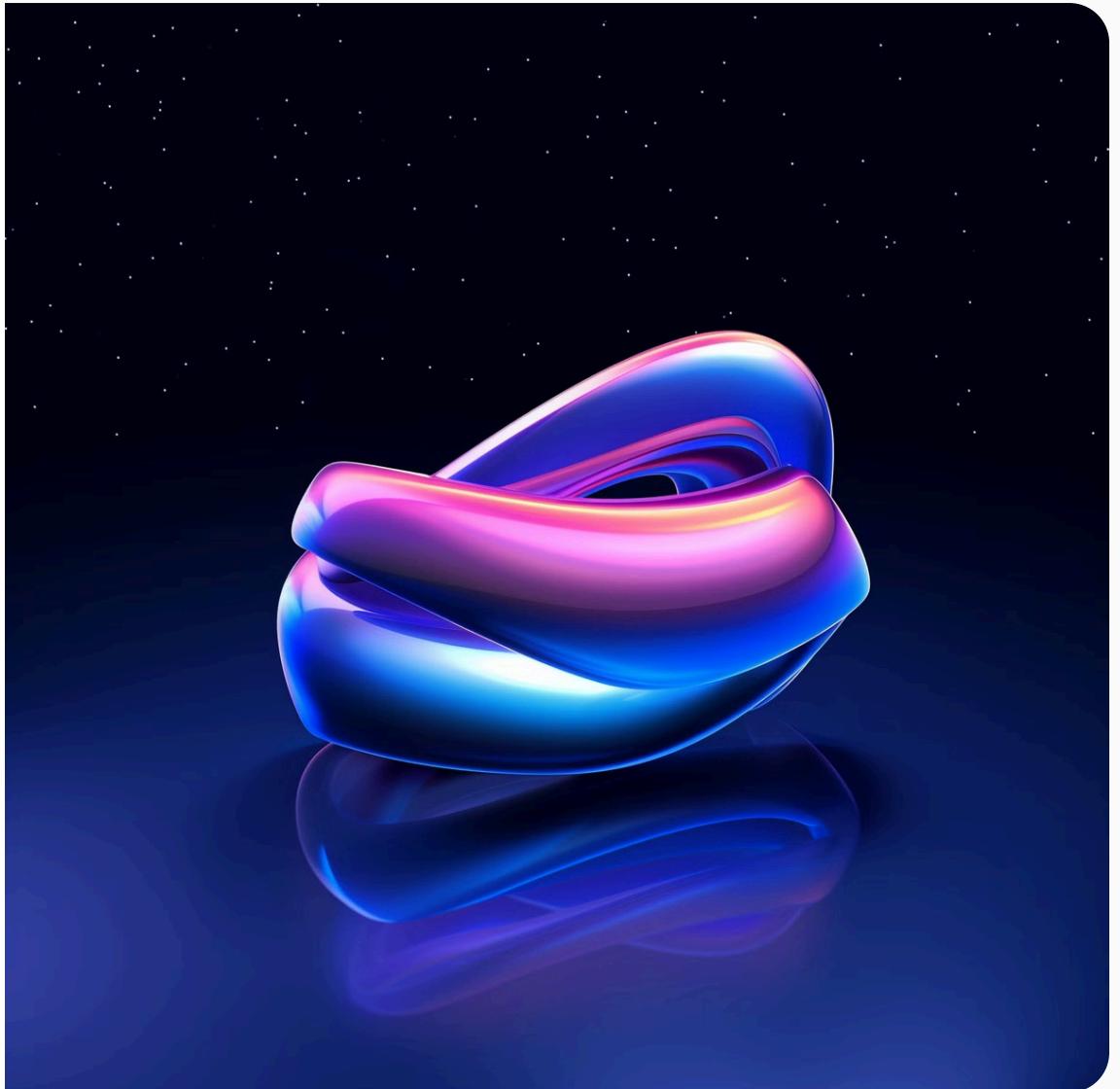
## Your Challenge

- Meet PedalWorks: The Case Overview
- Where You Can Make an Impact
- Your Hackathon Challenge
- How You'll Be Assessed



## Resources & Approach

- Your Build Blueprint
- Your Starter Kit
- Plug Into Anything, Build for Everything
- Final Tips Before You Start





# Your Challenge

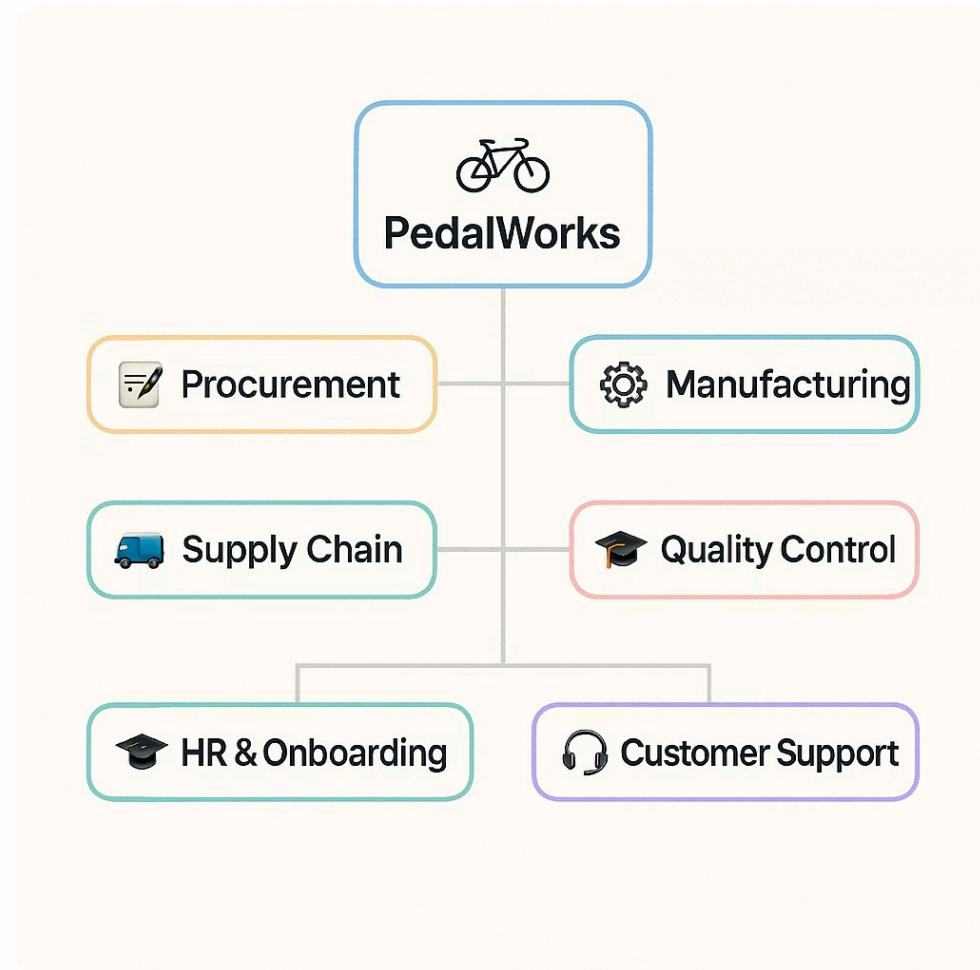
# Meet PedalWorks

PedalWorks is a fictional mid-sized bicycle manufacturer with 500 employees across 4 locations.

They operate across six departments:

- Procurement
- Manufacturing
- Quality Control
- Supply Chain
- HR & Onboarding
- Customer Support

Despite their scale, outdated processes and repetitive manual tasks slow them down.



**Your task:** Pick one department and build an AI agent that solves a real, recurring pain point — faster, smarter, and more scalable.

# Departmental Challenges

Each team at PedalWorks faces pain points ripe for automation

Department	Key Challenges
Procurement	Slow vendor onboarding, mismatched POs/invoices, delayed payments
Manufacturing	Missed maintenance alerts, rigid production planning
Quality Control	Backlogs in inspection, inconsistent defect tracking
Supply Chain	Limited inventory visibility, unreliable demand forecasts
HR & Onboarding	Manual hiring, slow onboarding, compliance tracking by email
Customer Support	Unstructured requests, no centralized view of customer data

# Your Hackathon Challenge

## What You Need to Do

1. Pick a department at PedalWorks with a real operational bottleneck
2. Design and build an AI agent using Beam that automates or enhances that process
3. Demo your agent in action — show what it does, how it connects, and what value it delivers

## What We're Looking For

- **Use Case Relevance:** Is the chosen problem real, well-defined, and critical to PedalWorks operations?
- **Agent Workflow Design:** Is the process thoughtfully structured using Beam's flow builder and features?
- **Technical Integration:** Are APIs, tools, or custom UI integrations used effectively (e.g., Loveable)?
- **Impact & Outcome:** Is there a measurable business benefit — such as time saved, errors reduced, or faster onboarding?
- **Presentation & Storytelling:** Is the final demo clear, engaging, and easy to follow with a well-articulated narrative?

## Bonus Points if you

- Use **voice input or multimodal interaction** (e.g., trigger workflows via speech)
- Simulate or augment input data to test agent robustness (e.g., upload and vary multiple test examples)
- **Embed your agent** into a custom frontend using Beam APIs or Loveable
- Incorporate **Human-in-the-Loop** elements (e.g., approvals or feedback requests)



# Judging Criteria

# Your solution will be evaluated based on

## Use Case Relevance

Real-world alignment

## Workflow Design

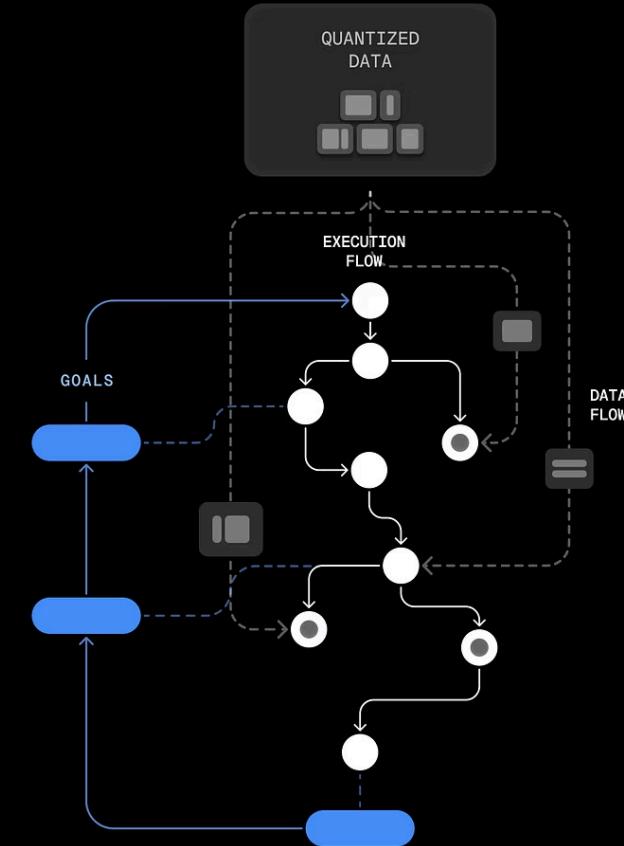
Clarity, logic, structure

## Technical Integration

APIs, tools, UI

## Operational Impact

Time, accuracy, outcomes



# Your Build Blueprint



## Step 1

Choose a department and pain point

## Step 2

Design the agent logic with Flow Builder

## Step 3

Integrate tools and APIs using Integration Builder

## Step 4

Test your flow using sample inputs

## Step 5

Build a UI or voice interface (optional)

## Step 6

Prepare your final demo + pitch

# Your Starter Kit

You'll receive curated, real-world-inspired datasets to power your agents:

## 📁 Datasets

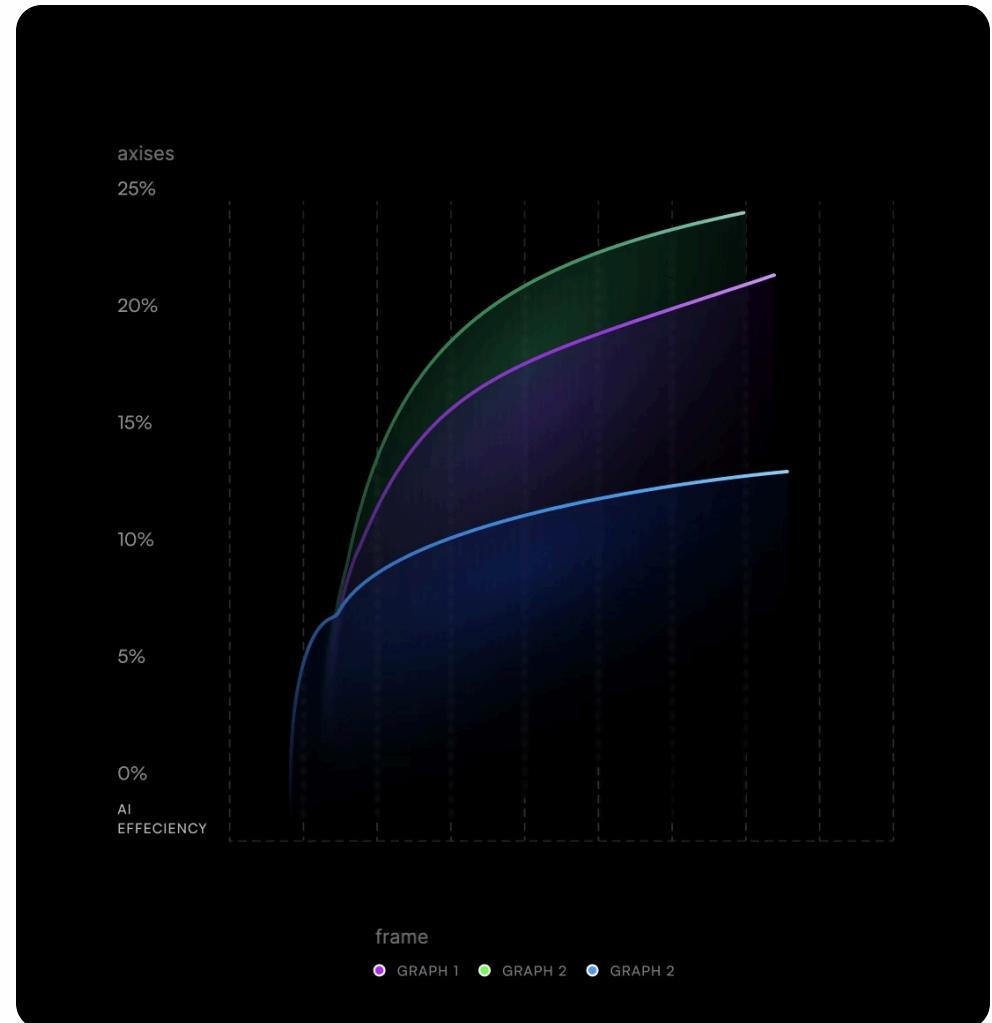
- **Source-to-Pay (Procurement)** — Sourced from Celonis
- **Order Processing (Supply Chain)** — From Beam's platform

These will help simulate key business processes and test automation logic effectively.

## 📝 Mock Inputs

Use example files such as:

- Resumes (HR)
- Maintenance logs (Manufacturing)
- Support tickets & emails (Customer Support)



# Integration Capabilities

Beam's Integration Builder lets you connect your agent to external tools, apps, and services — whether for data input, task triggering, or embedding your output into existing systems.

## What You Can Do:

- **Call REST APIs** directly from within your agent
- **Use built-in integrations** like Zapier, Slack, Make.com, and Google Sheets
- **Trigger workflows** via incoming webhooks or real-time user inputs
- **Embed your agent** into a web/mobile app via Beam APIs or a polished UI built with Loveable

## Build your custom integration

Connect your agent with your internal or proprietary platforms

Upload an icon



Name\*

Enter a name

Category\*

Select a category

Authentication type\*

None

API Key

Basic

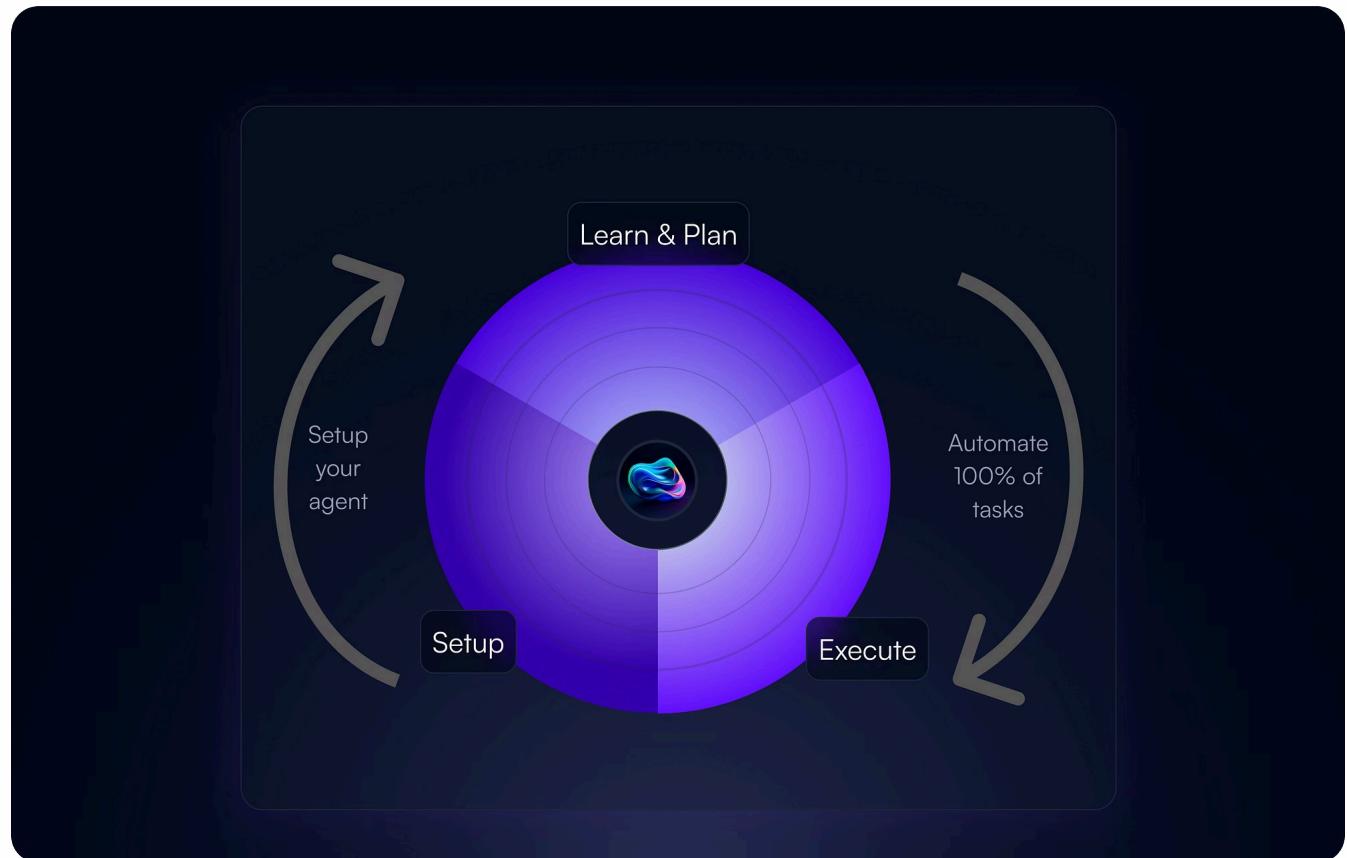
OAuth (2.0)

# Final Tips

You bring the ideas, Beam powers the agents.

✨ Platform access, examples, and docs will be shared via Discord

👋 Questions? Ping Burak, Mujtaba, or Aqib anytime during the hack!



Thank You

**Best of luck, hackers!**

We can't wait to see what you build 

