



10 AI Use Cases to Launch Today

Here's how companies just like yours
are working smarter now

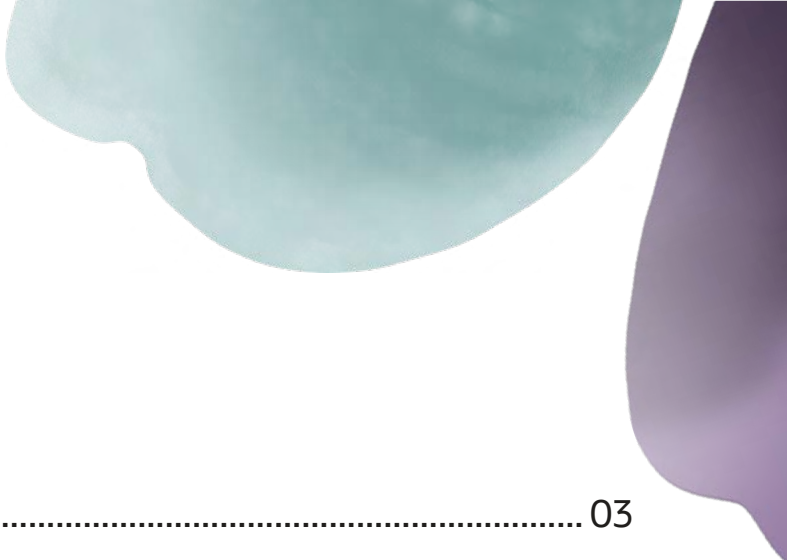


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Your next AI win starts here

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AI is moving from a one-off tool for tasks like summarizing and writing drafts to powering complex workflows that drive real bottom-line improvements. In these 10 use cases, we'll profile companies in a wide range of industries to illustrate how to assemble data architectures and create processes for achieving more with AI now. By combining your hard-won business expertise with the right mix of LLMs, vector databases, and your own data, you can support AI-driven decision-making and even launch proactive AI agents.

Ready to see what AI can do for your business today?



Generative AI: From LLMs to agentic workflows

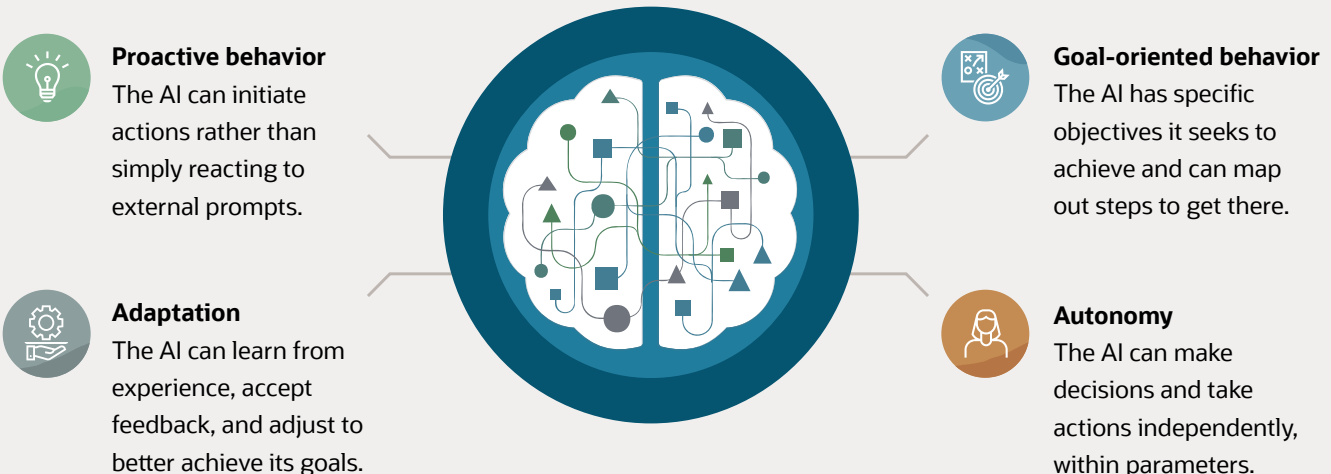
Like most business tools, AI can be wielded in different ways. Looking to be alerted when an anomaly is detected in a stream of transactions? Machine learning is your best bet. Want to summarize documents in a particular research topic? A fine-tuned LLM can do that. Or do you need the reasoning, communication, and decision-making abilities of AI to automate a complex workflow? That calls for an AI agent.

AI agents combine the language abilities and contextual understanding of LLMs with machine learning models and other tools to build a multistep workflow where a reasoning process is applied, decisions are made, and actions are taken.

For example, an AI agent can move documents through a process, such as employee onboarding or invoice vetting and payment, communicating with various participants, sharing detailed information, and making decisions along the way. Agents can combine existing AI technologies to achieve their assigned goals and are able to help improve multistep tasks in a range of roles—think drafting shift schedules in retail; compiling research, planning, and draft proposals in sales; or providing a smarter chatbot that won't frustrate customers more than it helps.

A side benefit? Agents are good at double-checking the work of individual LLMs.

What's Agentic AI?



The making of an AI agent

AI agents are planners by nature—they always start by establishing a plan and breaking down instructions into well-defined execution paths. The agent then assigns tasks as required to specialized, often multimodal, LLMs or lighter weight small language models, or SLMs, that make use of utilities, tools, or libraries; pull data from files; run code; or automate web navigation. Other LLMs can provide compliance checks or document analysis or do other AI-enabled jobs, like generating translations, summaries, or new content. All these tasks happen on an execution path. The final product might be an insightful suggestion offered in a human-in-the-loop workflow or simply a file logged when a multistep task is complete.

A human-in-the-loop, or HITL,

workflow strategically integrates people in the agentic execution path. At critical points, where AI might face uncertainty, require nuanced judgment, or need to handle sensitive information, the workflow pauses and routes the task to a human for review, validation, correction, or decision-making. The automated process then continues based on the HITL outcome. This approach combines the efficiency of AI with the contextual understanding of your own experts while remaining cognizant of scalability and cost.

How Do AI Agents Work?

As with new employees, agents don't start out with total autonomy—they earn it over time as they gain and prove proficiency and understanding.

The process generally looks like this.

1. Take in human-formulated goals

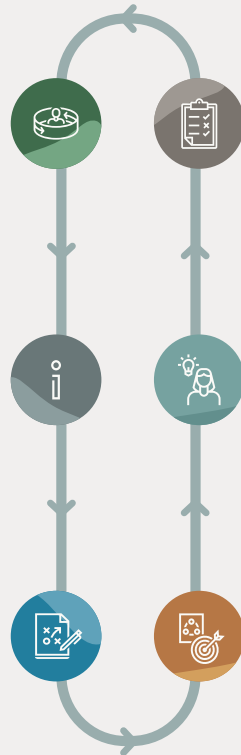
The agent is programmed with organization-defined objectives and optimal outcomes. For complex tasks, set priorities and determine the relative importance of each subtask.

2. Gather information

Identify and connect to sensors and a variety of internal and external data source. Agents can be configured to query your enterprise database directly with SQL, via an API, or using natural language processing.

3. Make a plan

Assess the current state and potential future states. Develop strategies to achieve the goal. Evaluate and choose the most suitable plan based on factors such as feasibility, cost, and risk.



6. Take action

Execute the plan, often doling out tasks to multiple agents. Monitor progress and track actions and their outcomes. Modify tasks as needed based on human feedback and changing circumstances.

5. Learn from actions

Assess success in achieving the assigned goals. Identify areas for improvement by analyzing performance data to identify weaknesses. Incorporate new information and human-provided feedback into the knowledge base.

4. Initiate a feedback loop

Gather feedback from users. Adjust behavior, actions, or strategies based on the feedback. Iterate to continuously improve performance.

The easiest way to start with agentic AI is by embracing the workflows that show up in quarterly updates to the as-a-service business applications your company likely already uses. Cloud application builders live and breathe the best practices of your business functions and are always seeking to add value to their offerings. These tools complement the expertise of your people, working alongside them in human-in-the-loop experiences, such as automated analytics processes, or in hands-off agentic automations for document flows.

Beyond AI in business applications, your team can design and build workflows with a generative AI service that provides a platform for vetting, training, and combining LLMs into agents that improve business efficiency and outcomes.

How does that work? The 10 use cases outlined below will help paint the picture.

Four consumer-facing use cases

Retailers operate in a complex, interconnected world of customers, partners, suppliers, products, services, and markets. AI agents can maximize efficiency while helping employees delight customers.



1 | Car rental: Enhanced call center experiences

The business: A car rental company with a busy reservation hotline.

The challenge: The call center manager wants to give every customer a great experience while minimizing the number of calls placed on hold or transferred to supervisors.

The AI solution: Various AI technologies can be combined into an AI agent that acts as an invisible assistant for human agents. Companies can offload tasks, such as transcribing each call in real time or performing sentiment analysis to understand a caller's mood and either triggering an action or advising human agents through onscreen information displays and chatbot-like windows.

For example, speech recognition AI can detect essential information, such as the customer's name, the rental car city, the account number, and the rental policy number, and display this information for the agent so customers won't need to repeat themselves. A generative AI system, underpinned by an LLM and a knowledge database, can understand many common questions and generate useful responses. Can't find the rental desk at your airport? The AI agent can create directions and text you a map. In an accident? Upon receipt of an automated

alert from the rental car, the AI might trigger 911 responses while prompting a human agent to ask the essential questions.

The result: An overall better company, agent, and customer experience. AI technology might assist the agent by assessing the caller's emotional responses and proactively offer suggestions for de-escalating a potentially confrontational situation, perhaps by prompting the agent to offer discounts, upgrades, bonus frequent-renter points, or other accommodations. After the call, the AI system can help rate the call quality and deploy a customer satisfaction poll to gather feedback so the company can assess the work of the agent and the manager and be notified if a longtime or high-value customer is unhappy.

Oracle solutions for this use case

- ☑ [OCI Language](#)
- ☑ [OCI Speech](#)
- ☑ [Oracle Analytics](#)
- ☑ [OCI Data Science](#)
- ☑ [Oracle Digital Assistant](#)



2 Technology services: Question-answering chatbot for employees or customers

The business: A high-tech firm seeking to offer an AI-driven question answering service to a wide range of clients.

The challenge: Provide clients with an AI system that can reliably answer at least 80% of questions about their businesses, whether from employees or customers—and depending on the client, take action to solve a problem.

The AI solution: Develop an AI system that combines machine learning services, generative AI models, and [retrieval-augmented generation, or RAG](#), to provide answers by referencing knowledge found in the client's documents, databases, and ERP and other business systems.

There are three keys to making the system work for many different clients. First, get the data and documents into a form that the RAG system can digest and return as part of trustworthy answers. Next, keep the data architecture simple and cost-effective. Storing many data types, including relational data, documents, graphs, and vector data, together in the same database simplifies both operations and development. For example, a customer's original documents stored in Oracle AI Database could be indexed with vectors that are stored and searched by a RAG system.



The next step is to develop individual solutions using an AI-enabled low-code environment. This lets the vendor, or a client's in-house experts, quickly create a bespoke graphical user experience. The low-code platform, in this case [Oracle APEX](#), offers a Select AI feature that suggests data models, application code, and interface options. That democratizes development and allows for a highly customized interface design.

The result: The simplicity of the data architecture around the LLMs and RAG system plus the AI-enabled development environment let the software provider's developers, data scientists, data architects, and analysts work quickly to provide each client with trusted, cost-effective answers from their own data stores.

Oracle solutions for this use case

- ☑ [OCI](#)
- ☑ [Oracle APEX](#)
- ☑ [Oracle AI Database 26ai](#)
- ☑ [Oracle SQL Developer Data Modeler](#)



3 | Hospitality: Customer feedback analysis

The business: A hotel chain that depends on positive ratings on social media and review websites.

The challenge: Management needs to keep track of online reviews, but there are too many postings, comments, and hash-tagged mentions for customer service staff to track, analyze, and address in a timely manner.

The AI solution: The hotel creates a large data set that collects tens of thousands of relevant online reviews from sites such as Yelp, TripAdvisor, and booking websites, as well as comments scraped from social media. An AI system performs sentiment analysis across that entire data set to determine a baseline that can be periodically reevaluated and used to spot trends.

Taking it up a notch, business analysts could build a system that correlates those messages—and their sentiments—against a hotel location’s operational data, such as occupancy levels, staffing on specific dates, and other factors, such as weather. Cloud-based data science platforms can give business analysts all the tools and AI model options they need to accomplish these tasks.

The result: Generative AI extracts valuable suggestions and insights from both positive and negative comments, whether about parking, room cleanliness, breakfast, or any other factor. AI can categorize those comments and determine trends, even if the phrasing isn’t identical. The AI system can then suggest responses from a list of approved remedial actions or escalate certain alerts to corporate headquarters, helping the chain improve its guest experiences and, thus, reviews.

Oracle solutions for this use case

[!\[\]\(3b71157eab31889e641f7620692f0b92_img.jpg\) OCI Data Science](#)

[!\[\]\(4d25d87d94191bbe34f0046ad604e903_img.jpg\) OCI Language](#)

[!\[\]\(735ceeed4e566aa93749bb6365185b00_img.jpg\) OCI Enterprise AI](#)

[!\[\]\(67b99c4d964e257c5482ff1b2462b204_img.jpg\) Oracle Analytics](#)



4 | Retail: Supply chain optimization

The business: A retail clothing line with dozens of brick-and-mortar stores.

The challenge: Maintain optimal inventory levels in stores and regional warehouses.

The AI solution: An advanced data management system that integrates information from point-of-sale and inventory management systems with historical sales data to develop AI-driven forecasts and modeling. Most ERP-based forecasting systems can produce these sophisticated reports. But an LLM can add sophistication by creating custom, plain-language summaries tailored for each store. In addition, the system can help bring unique, valuable insights to key suppliers and all levels of employees—store managers, warehouse staff, front office analysts, and others—by letting them directly query the data using natural language prompts.

The result: A chatbot that lets employees ask questions about shipments, sales volumes, forecasts, and more as they work in a fast-moving physical environment. AI agents can also use this information proactively. For example, they might alert the retailer that sales of certain items are exceeding the ability to restock in some locations and suggest fixes, such as transferring stock or using promotional offers to redirect customers to other products.

Oracle solutions for this use case

[OCI Data Science](#)

[OCI Enterprise AI](#)



Two health sciences use cases

Healthcare companies are at the forefront of using AI in novel ways, moving beyond early use cases like basic diagnostics and administrative tasks. There's a dual focus on patient care and maximizing staff time via, for example, AI-powered clinical decision support systems that provide real-time, context-aware recommendations for more personalized, efficient, and proactive healthcare delivery.

1 | Health sciences: Tackling antibiotic resistance

The business: A biotech firm at the forefront of personalized therapies.

The challenge: Reduce the time it takes to identify infections and determine resistance profiles in patients. Delays can be deadly, but a lack of data often leads to a misdiagnosis. Scientists at such a firm must radically cut the time needed to sequence DNA and identify the specific bacteria present in a sample.



The AI solution: By combining the latest genetic sequencing techniques with generative AI models and vector search, the firm can more quickly identify complex patterns and suggest diagnoses. Fine-tuned GenAI will enable an intelligent recommendation engine, similar to those used by retailers or entertainment streaming sites but with a massive library of genetic data. The models, which can be trained on data from many hundreds of thousands of bacterial genomes, can be combined with highly scalable cloud infrastructure to sequence DNA and quickly map the genetic material to the family of bacteria it comes from.

The result: The time needed to diagnose antibiotic resistance can drop from nearly a week to less than four hours in some cases. This use of AI and processing power can vastly change the dynamic of patient care when antibiotic resistance is involved by giving physicians a chance to quickly offer more accurate life-saving diagnoses.

Oracle solutions for this use case

[!\[\]\(2020723f97c3fe13d8ecf52b30807736_img.jpg\) OCI Cache](#)

[!\[\]\(f024d36410e36011059c73f7d7908105_img.jpg\) OCI Enterprise AI](#)

[!\[\]\(1a2e9c86c2a63dd0890db1012b677415_img.jpg\) OCI Database with PostgreSQL](#)

[!\[\]\(7a315dbd5736d1ca324577d88145843b_img.jpg\) Oracle AI Vector Search](#)

2 | Health sciences: Pharmaceutical research

The business: A biotech firm seeking to develop new treatments more quickly and cost-effectively.

The challenge: Researchers at biotech companies must integrate prior research, papers in peer-reviewed journals, academic work still in progress, formal clinical trials, patent applications, and more. Having a full grasp of relevant data can help researchers avoid trying something that has already failed. And the corpus of knowledge can be used to support the findings of their research and development teams.

The AI solution: A huge amount of information is already in digital form: online journals, patents, and clinical trial data—some formatted as complex documents, often with detailed layouts and embedded diagrams. AI document understanding, as well as image processing and even language translation, can work with generative AI to summarize those papers, extract relevant information, and determine applicability to a particular project. The documents can also be collected into a large data model that can be mined for insights. By implementing a data architecture that includes RAG, GenAI models can work with researchers to find relevant information, summarize it, and even explain how outside data relates to their current work.

The result: A system that can help pave the way for breakthroughs or warn of potential concerns, such as side effects. Plus, RAG is good at showing where the AI model sourced its information, letting researchers more easily provide the sources of their claims to governing bodies. Given the high cost of this research and the time-consuming nature of reviews, AI assistance can be a game changer—and even, in some cases, a lifesaver.

Oracle solutions for this use case

🔗 [OCI Data Science](#)

🔗 [OCI Document Understanding](#)

🔗 [OCI Enterprise AI](#)



Four critical industries use cases

Although these use cases focus on specific industries, in many cases the ideas are transferable. GenAI create personalized learning experiences for employees, perform content moderation, analyze traffic patterns for route optimization, and much more. If you have an employee time suck, odds are AI can help.

1 | Financial services: Fraud detection

The business: A regional bank needs to detect fraud more quickly and effectively.

The challenge: Fraud can creep into any part of a bank's operations. Branches may encounter fake documents being used to open accounts and stolen checks being deposited. Fraud can happen with online transactions from a phone or browser, at offsite ATMs, or even among staff.

The AI solution: Fraud detection starts by feeding transactions into an anomaly detection model that calculates the statistical risk of fraud within seconds. If the risk is too high, alerts trigger automated actions, such as placing a hold on withdrawals, prompting the customer to provide additional forms of identification or methods of confirmation, or otherwise temporarily delaying the transaction pending a manual review by a risk assessment specialist. AI models can be fine-tuned with millions of past transactions to sniff out ever-more subtle fraud.

The result: Fraud detection assistance that's fast and reliable and helps minimize false positives or negatives. AI-enabled automated triggers and explanations can facilitate a rapid, manual risk assessment within needed timeframes to help satisfy government banking regulations, without inconveniencing honest customers.



Oracle solutions for this use case

- ☑ [OCI Data Science](#)
- ☑ [OCI Enterprise AI](#)
- ☑ [Autonomous AI Database](#)
- ☑ [Oracle Fusion Cloud Applications Suite](#)

2 | Utilities: Preventative and predictive maintenance

The business: An electricity grid operator with a service area spanning thousands of square miles.

The challenge: The operator owns a vast array of equipment: pylons and substations, long-distance transmission lines, underground cables, poles, transformers, and more. The objective is to perform maintenance as cost-effectively as possible, reducing travel time while meeting service uptime delivery and safety requirements.

The AI solution: With intelligent scheduling, anomaly detection, and forecasting based on past data, AI can help the operator anticipate failures and get early warnings of potential issues, which maximizes equipment uptime and helps control maintenance costs. To support AI-driven alerts and scheduling, relational databases and geographic information systems store each device's location, maintenance and trouble history, and recommended service intervals. Drone imagery can capture trouble points on remote power pylons and help avoid the risk of fire by assessing whether vegetation in the right of way needs clearing. Meanwhile, sensors in transformers and other devices can broadcast data points, including operating temperature, power fluctuations, and other telemetry.

The result: With this logged information and timestamped telemetry fed into an AI system that determines a baseline for normal operations, the LLM can detect anomalies based on real-time data from devices to predict failures, as well as determine severity and, if connected to the scheduling system, proactively schedule maintenance.

Oracle solutions for this use case

☑ [OCI Data Science](#)





3 | Manufacturing: Visual quality inspection

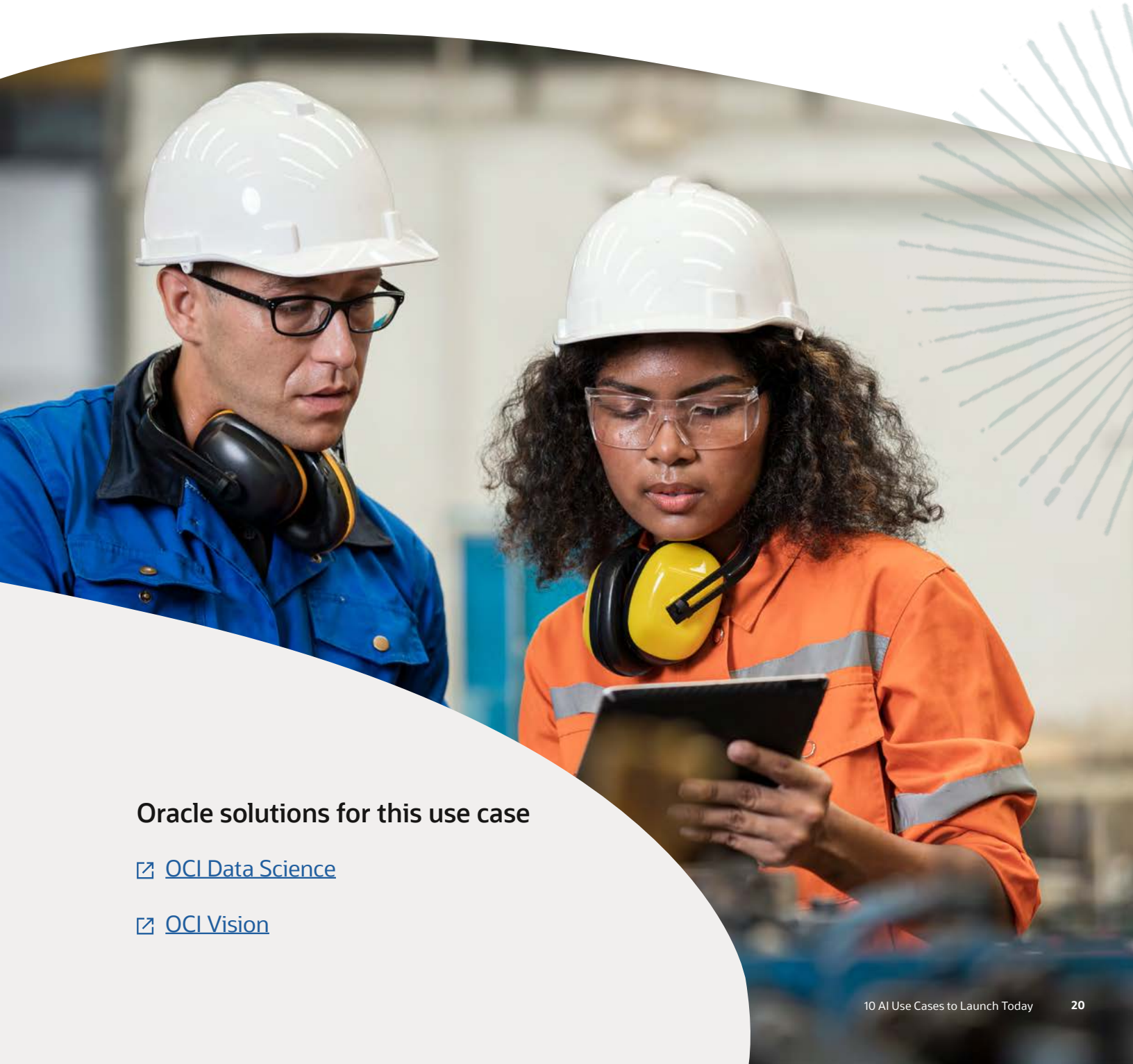
The business: A contract manufacturer of metal parts and other products used in shipbuilding, construction, and other applications.

The challenge: Many manufacturers work under strict requirements and quality controls, often dictated by industry regulations or contract terms. The company seeks to maximize profits and throughput by shipping as much good material as possible while minimizing waste by detecting and handling defects early.

The AI solution: A quality assurance process that uses visual and X-ray images. Drones can capture images in places that are hard to reach for human workers. This data can be interpreted by computer vision, which can learn to identify cracks and other weak spots after being trained on a large data set. Defects can be categorized based on their size, shape, and quantity. Problematic or ambiguous data can be highlighted for human experts, who will be the final arbiters of the QA inspection. In this way, machine learning based on large data models, real-time telemetry, and computer vision can assist with analyzing data and make recommendations for approving, disposing of, or repurposing each product.

AI can also be used to explore the growing corpus of data on products and facilities to identify common sources of and reasons behind defects.

The result: By storing relevant data in a vector database and combining it with a RAG system and fine-tuned LLMs, managers can explore data in new ways using semantic searches that can highlight nuances and add more confidence to decisions by simply asking a question with a human language prompt.



Oracle solutions for this use case

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[!\[\]\(5f2ad55541d1c76614ad618336f6fa7b_img.jpg\) OCI Vision](#)

4 | Defense: Identification document analysis

The business: A government site requiring tight access control.

The challenge: Security personnel at a minimum-security defense installation need to quickly determine which individuals should be granted access, often using documents, such as passports, national ID cards, or a driver's license. These documents come in a wide range of sizes, shapes, and designs and with unique authenticity markings, making it difficult for security staff to spot fakes. It can also be challenging to automate the process of extracting information from those IDs to check against databases and records in visitor logs.

The AI solution: A multistep agentic system that can read and interpret physical IDs, extract data, and submit image and text information to databases that detect fraud and vet individuals. Checkpoint scanners can quickly submit ID cards into a large AI model that has been trained to recognize various types of identification documents and check them against both implicit security controls and a large sample of forged or otherwise fraudulent documents. Beyond the appearance of the ID itself, document understanding algorithms can then parse and extract data, even when that data is unlabeled. For example, an ID with several items that appear to be dates may have an issue date, an expiration date, and the individual's date of birth—none of which are clearly labeled.

The result: Once data has been extracted from the ID and a fraud determination reached, the system can compare that individual against those who are explicitly authorized to enter the facility; those who may have implicit authorization, such as contract employees; and those who should be deferred for a closer screening.

Oracle solutions for this use case

☑ [OCI Data Science](#)

☑ [OCI Document Understanding](#)

☑ [OCI Vision](#)



The future is at hand

The AI use cases shown in this ebook represent the tip of the iceberg—these technologies can be applied throughout industries, such as financial services or manufacturing, and across common areas, such as human resources and customer service.

What will AI help you do next?





Why use AI technology from Oracle?

Oracle's AI technology is a family of accelerated infrastructure, artificial intelligence, and machine learning (ML) services. For AI training and inferencing, Oracle's AI infrastructure offers ultralow latencies for standalone graphics processing units (GPUs) and clusters with thousands of nodes. Using AI services, developers can add prebuilt models to applications and operations. With ML services, data scientists can build, train, and deploy models with their favorite open source frameworks or benefit from the speed of in-database machine learning.

And, of course, one of the key components of AI success is connected and trusted data for training. Oracle's proven data management layer is the power behind many of today's most powerful AI services.



OCI Enterprise AI

OCI Enterprise AI brings together the capabilities needed to build, manage, and deploy AI workloads by combining AI models and inferencing, the ability to act with agents and tools, and built-in governance and security. Whether your team is pro-code, prefers low-code tools, or a mix of both, OCI Enterprise AI helps you move from experiments to production with flexibility, extensibility, and unified governance.

[🔗 Learn more](#)



AI infrastructure

OCI Supercluster provides ultrafast networking and storage as well as OCI Compute bare metal instances. OCI Supercluster is ideal for training generative AI, including conversational applications and diffusion models. With support for up to tens of thousands of NVIDIA GPUs, OCI Compute bare metal instances and VMs can power applications for computer vision, natural language processing, recommendation systems, and more.

[🔗 Learn more](#)



Oracle ML services

Oracle's machine learning services, geared toward data scientists, make it easier to build, train, deploy, and manage custom machine learning models. These services deliver data science capabilities with support from open source frameworks or through in-database machine learning and direct access to cleansed data.

- **OCI Data Labeling:** A service for building labeled data sets to train AI and ML models more accurately. It applies labels to text or images and then uses those labels to customize models and build shared catalogs.
- **OCI Data Science:** A managed, end-to-end environment for building, deploying, training, and managing machine learning models
- **Machine Learning in Oracle AI Database:** A complete data science environment that's optimized for performance in Oracle Autonomous AI Database or Oracle Autonomous AI Lakehouse.



Oracle AI services

With a range of OCI AI services, developers can train custom models, deploy ready-made ML, and enhance applications and solutions with AI capabilities, without needing to be machine learning experts. Oracle's AI services come with advanced pretrained models, which can be customized by domain and customer data. They include:

- **OCI Document Understanding:** Extract text, tables, and other key data from document files through APIs and command-line interface tools.
- **OCI Language:** Prebuilt models trained on industry data perform sophisticated text analysis at scale.
- **OCI Speech:** Turn audio conversations into textual data across multiple languages.
- **OCI Vision:** Visual and text technologies can understand scanned documents, PDFs, video stills, and photographs.
- **Oracle Digital Assistant:** Create conversational experiences for employees and customers through text, chat, and voice interfaces.

How Oracle can help

If you're already an Oracle customer, a range of our AI capabilities are available to you today. They'll only improve as we continue building out our solutions portfolio to better serve cutting-edge use cases and harness the latest emerging technologies.

Organizations large and small have made tremendous inroads using GenAI and AI agents, and although it may be hard to believe, we're still at the very beginning of this journey. Imagine what you'd like AI to do. Chances are, you can make it a reality now. As you set your AI strategy, we invite you to discover use cases across a wide range of industries—and to dream big.

Explore Oracle AI solutions

Discover more AI use cases

Connect with us

Call +1.800.ORACLE1 or visit oracle.com

Outside North America, find your local office at oracle.com/contact

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