SAP Business Al Use Cases:

Boosting Efficiency in Manufacturing, Oil & Gas and **Transportation Logistics and Supply Chain**



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SAP Business AI Use Cases in the Manufacturing Industry

Business Function (Process)	Tasks/Intents	SAP Business Al Activity	Expected Outcomes
Smart Production Planning	Optimize demand forecasting and production schedules	AI predicts production demand trends, adjusts schedules dynamically	Reduced delays, improved efficiency in resource allocation
Resilient Supply Chain Management	Monitor supply chain disruptions and improve transparency	Real-time tracking and predictive analytics identify risks and suggest mitigation	Enhanced supply chain resilience, reduced downtime
Intelligent Quality Assurance	Detect defects and predict maintenance needs	Al uses computer vision for defect detection and IoT for predictive maintenance	Higher product quality, minimized downtime
Dynamic Inventory Optimization	Optimize inventory levels and reduce overstock	SAP AI recommends inventory replenishment levels and avoids surplus	Reduced carrying costs, better stock availability
Strategic Procurement Automation	Automate supplier evaluation and optimize procurement processes	AI evaluates supplier risks and automates purchase order creation	Faster procurement cycles, reduced costs
Innovative Product Development	Innovate and optimize product designs	Generative AI creates optimized prototypes based on performance simulations	Faster time-to-market, reduced R&D costs
Predictive Maintenance Operations	Predict maintenance schedules and automate work order prioritization	SAP AI identifies critical systems requiring immediate attention based on sensor data	Lower repair costs, increased operational reliability





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Energy Efficiency Management	Optimize energy usage and detect anomalies	Al tracks energy patterns and flags inefficiencies	Reduced energy consumption, lower utility costs
Proactive Worker Safety & Compliance	Monitor workplace safety and enforce compliance	Real-time video analytics detect hazards and ensure safety protocols	Safer work environments, reduced compliance penalties
Smart Sales & Order Execution	Automate order tracking and recommend personalized products	Al analyzes customer data to recommend products and update order statuses	Improved customer satisfaction, higher sales
Optimized Logistics & Delivery	Optimize delivery routes and track shipment in real-time	SAP AI provides route optimization and real- time updates for delivery schedules	Faster delivery times, reduced fuel costs
Agile Workforce Management	Schedule workforce efficiently and analyze skills gaps	Al creates dynamic workforce schedules and identifies training needs	Improved productivity, better workforce engagement
Sustainable Manufacturing Practices	Track environmental impact and optimize resource utilization	Al analyzes carbon footprint data and recommends greener alternatives	Lower environmental impact, improved sustainability goals
Production Line Performance Optimization	Monitor production performance and resolve bottlenecks	Al evaluates line performance in real-time and suggests process adjustments	Improved throughput, minimized production delays
Data-Driven Sales Enablement	Identify high-value leads and optimize sales strategies	SAP AI predicts customer preferences, identifies top leads, and suggests upselling opportunities	Increased sales pipeline efficiency, higher revenue





SAP Business AI Use Cases in the Oil and Gas Industry

Business Function (Process)	Tasks/Intents	AI-Enabled Activity	Expected Outcomes
Exploration & Production	Optimize drilling operations, predict equipment failures, and monitor exploration activities	Predicts maintenance needs, analyzes seismic data, and optimizes drilling strategies	Increased productivity, reduced downtime, and cost efficiency
Reservoir Management	Analyze reservoir data, forecast production, and optimize recovery methods	Utilizes AI models for reservoir simulation, production forecasting, and recovery optimization	Enhanced resource utilization, increased recovery rates, and reduced exploration costs
Supply Chain Management	Streamline logistics, manage inventory levels, and optimize procurement	Automates supply chain workflows, predicts demand, and enhances supplier collaboration	Improved supply chain visibility, reduced operational costs, and on-time delivery
Health, Safety, and Environment	Monitor compliance, track safety incidents, and ensure environmental sustainability	Identifies risks, analyzes safety trends, and ensures adherence to environmental regulations	Enhanced safety, reduced environmental impact, and regulatory compliance
Maintenance and Asset Management	Predict asset failures, optimize maintenance schedules, and track equipment performance	Automates maintenance workflows, monitors IoT-enabled equipment, and predicts failures	Improved asset reliability, reduced operational downtime, and maintenance cost savings
Finance and Accounting	Manage cost control, optimize budgeting, and improve financial reporting	Automates financial forecasting, generates real-time insights, and ensures compliance with financial regulations	Faster decision-making, improved financial accuracy, and enhanced transparency
Production Operations	Monitor refinery operations, optimize energy usage, and ensure process efficiency	Predicts anomalies in production, optimizes energy consumption, and automates operational workflows	Enhanced production efficiency, reduced energy costs, and minimized operational disruptions
Human Resources	Enhance workforce management, track employee performance, and improve recruitment	Screens candidates, automates onboarding processes, and monitors employee satisfaction	Improved talent acquisition, enhanced workforce productivity, and reduced HR overhead





SAP Business AI Use Cases in the Oil and Gas Industry

Business Function (Process)	Tasks/Intents	AI-Enabled Activity	Expected Outcomes
Marketing and Sales	Target customers effectively, forecast market trends, and manage campaigns	Suggests marketing strategies, forecasts pricing trends, and personalizes customer experiences	Improved market penetration, higher sales conversions, and enhanced customer satisfaction
Legal and Compliance	Manage legal documentation, ensure compliance, and mitigate risks	Drafts contracts, identifies legal risks, and ensures adherence to industry-specific regulations	Faster contract approvals, reduced legal risks, and enhanced compliance
Procurement	Optimize vendor selection, manage purchase orders, and track supplier performance	Compares vendor quotes, automates procurement workflows, and monitors supplier performance	Faster procurement cycles, reduced procurement costs, and improved supplier relationships
Digital Transformation	Integrate advanced technologies across business units	Leverages predictive analytics, real-time data visualization, and IoT for connected operations	Improved cross-functional collaboration, accelerated innovation, and competitive advantage
Risk Management	Analyze operational risks, ensure disaster recovery readiness, and mitigate hazards	Identifies potential risks, optimizes disaster recovery plans, and monitors risk mitigation activities	Reduced operational risks, improved disaster preparedness, and increased resilience
Energy Management	Monitor energy consumption, reduce waste, and optimize energy sources	Tracks real-time energy usage, suggests alternative energy sources, and optimizes consumption patterns	Reduced energy costs, enhanced sustainability, and improved energy efficiency
Project Management	Plan and execute large-scale infrastructure projects	Automates project scheduling, monitors budgets, and ensures timely completion	Faster project delivery, reduced delays, and cost optimization
Data Analytics and Reporting	Leverage historical and real-time data for decision- making	Automates data analysis, generates dashboards, and provides actionable insights	Improved decision-making, faster reporting, and better strategic planning





Business Function (Process)	AI-Enabled Tasks/Intents	SAP Business Al Activity	Expected Outcomes
Fleet Management (Logistics Manager)	Monitor fleet health, predict maintenance needs, and optimize usage	Analyzes vehicle telemetry, schedules maintenance, and optimizes fleet allocation	Reduced downtime, optimized fleet utilization, and lower operational costs
Inventory Management (Supply Chain Manager)	Track inventory levels, predict shortages, and manage restocking	Forecasts demand, updates inventory in real- time, and automates reorder processes	Avoided stockouts, better inventory turnover, and reduced waste
Route Optimization (Transportation Planner)	Generate optimized delivery routes based on real-time traffic data	Uses geospatial data to optimize routes and reduce transportation costs	Shorter delivery times, improved fuel efficiency, and enhanced customer satisfaction
Order Tracking (Customer Service Representative)	Provide real-time order updates and resolve tracking queries	Automates customer query handling and provides proactive status updates	Higher customer satisfaction, reduced query resolution times, and improved loyalty
Vendor Management (Procurement Manager)	Automate vendor communication, compare pricing, and negotiate terms	Automates RFP processing, evaluates vendor performance, and tracks KPIs	Reduced procurement cycles, cost savings, and improved vendor relationships
Warehouse Management (Operations Supervisor)	Monitor warehouse operations, predict delays, and optimize storage	Generates insights on space utilization, workforce productivity, and operational efficiency	Increased operational efficiency, reduced delays, and optimized storage capacity
Shipment Tracking (Logistics Coordinator)	Track shipments in real-time, predict delays, and notify stakeholders	Integrates with GPS data to monitor shipments and update schedules proactively	Improved shipment visibility, reduced delays, and better stakeholder communication





Business Function (Process)	AI-Enabled Tasks/Intents	SAP Business Al Activity	Expected Outcomes
Demand Planning (Supply Chain Analyst)	Analyze historical data to predict demand and adjust inventory strategies	Analyzes trends and integrates market data to adjust demand forecasts	Accurate demand forecasts, improved stock availability, and reduced overstock
Freight Optimization (Freight Manager)	Optimize freight loads and carrier selection for cost and efficiency	Optimizes freight schedules and reduces empty miles using AI algorithms	Lower freight costs, better carrier utilization, and higher on-time delivery rates
Risk Management (Compliance Officer)	Monitor compliance with regulations and identify potential risks	Identifies compliance risks using predictive analytics and automates audits	Improved regulatory compliance, reduced legal risks, and efficient reporting
Returns Management (Customer Support Agent)	Automate returns processing and provide instant refunds or exchanges	Streamlines return workflows, updates inventory, and notifies customers	Enhanced customer satisfaction, reduced processing times, and lower operational costs
Sustainability Monitoring (Environmental Analyst)	Track carbon emissions and suggest eco- friendly transportation alternatives	Provides sustainability insights, tracks CO2 emissions, and generates reports	Reduced carbon footprint, better sustainability reporting, and eco-friendly operations
Supply Chain Visibility (Supply Chain Director)	Provide end-to-end visibility into supply chain processes and bottlenecks	Integrates data from multiple sources to provide actionable supply chain insights	Improved process transparency, reduced bottlenecks, and higher efficiency
Transportation Analytics (Data Analyst)	Analyze transportation performance and identify areas for cost-saving opportunities	Generates reports on delivery times, costs, and performance metrics	Enhanced decision-making, reduced transportation costs, and better performance





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