

softserve

ENERGY INNOVATION WITH GENERATIVE AI

Prepared by SoftServe • August 2023



THE FUTURE OF ENERGY WITH GENERATIVE AI

The energy sector is currently in an active state of transition. The production and consumption of fossil fuels have been curtailed, and new developments and investments now flow toward renewable energy alternatives. Yet, renewables are not meant to replace, but instead complement and enhance, the portfolio of available and accessible energy resources that meet sustainability commitments and security requirements. Furthermore, it is the widespread adoption and application of the latest digital capabilities, such as Generative AI technologies, to better manage and operate existing and future business assets.

KEY CHALLENGES

- Artificial Intelligence Adoption
- Digital Twin Technology Adoption
- Enhancing Oil Recovery
- Subsurface Data Processing & Interpretation
- Intelligent Drilling and Completion
- Advanced Sensing Technologies Adoption
- Health & Safety Monitoring & Enhancement
- Carbon Capture, Utilization & Storage
- Greenhouse Gas Emissions Measurement & Reporting
- Energy Consumption Optimization
- Cybersecurity
- Robotics & Automation

GENERATIVE AI BUSINESS BENEFITS

Technological advancements have always been a defining feature of the energy industry. The scarcity of energy resources, volatility of the supply and demand balance, and supply chain disruptions require widespread adoption and utilization of emerging digital technologies.

Generative AI is a tool that facilitates re-assessment and re-evaluation of your existing data sets to improve efficiency, forecasting, safety, and sustainability of the energy industry. It is significantly important to available business assets and ongoing energy transition efforts. Presently, leading energy organizations have researched and incorporated the latest Generative AI capabilities into their workflows and business models across different stages of their value pipeline.

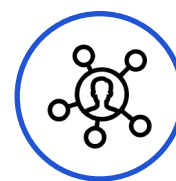
The level of positive impact that Generative AI can have on the energy industry is difficult to overestimate. SoftServe suggests you consider some of the most promising directions for the future.



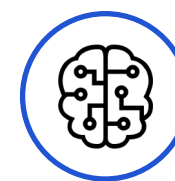
Automate tasks and scale processes



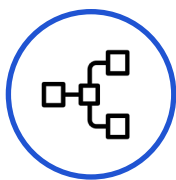
Reduce costs and increase efficiency



Enhance user experience and personalization



Accelerate innovation and AI adoption



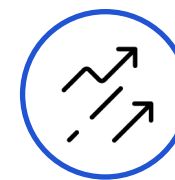
Optimize internal processes



Smart decision-making

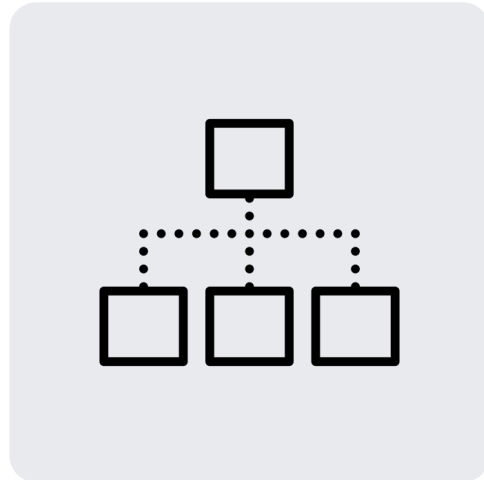


Improve customer satisfaction



Increase competitive advantage

MOST PROMISING GENERATIVE AI USE CASES

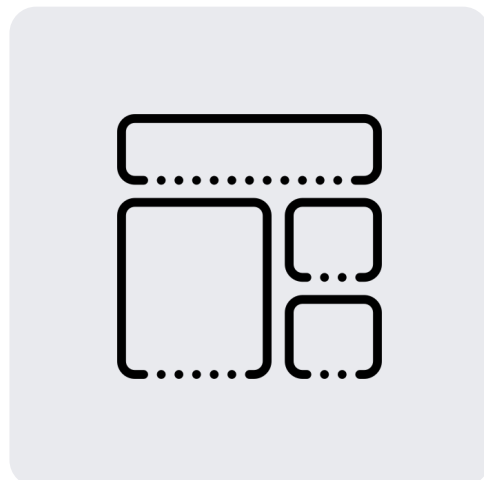
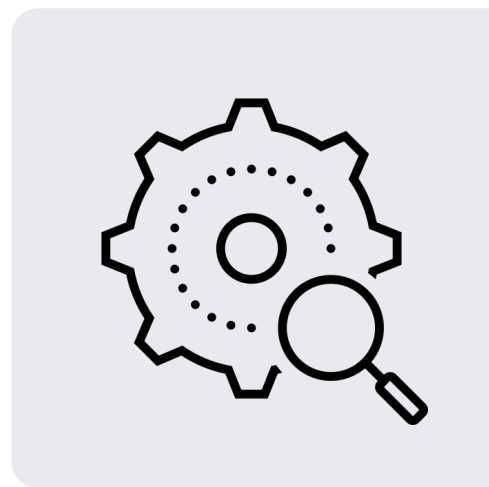
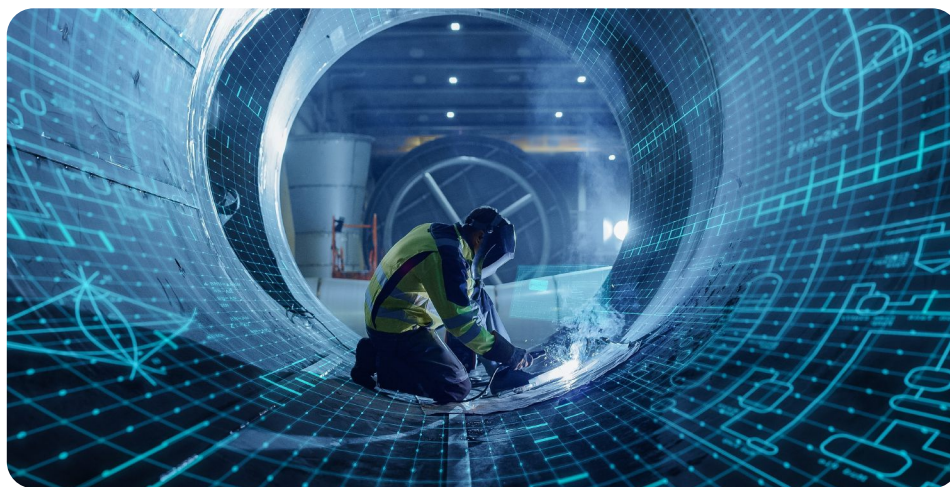


KNOWLEDGE MINING

Process large non-structured data sets of industry reports, technical documents, and research papers to discover critical insights about reservoir performance and equipment conditions.

DATA-DRIVEN WELL PROFILE ADVISORY

Organize and optimize well construction design by using historical data from drilled wells for improved efficiency and safety.



ARTIFICIAL LIFT RECOMMENDATION AND TROUBLESHOOTING

Accelerate the design and prototyping of artificial lift systems for increased fluid production from existing and future assets that satisfy operational and subsurface constraints.

STAFF ONBOARDING AND TRAINING

Interactively and rapidly conduct onboarding procedures for various job types and roles. Conveniently examine staff knowledge and awareness.



FIELD OPERATION AI ASSISTANCE

Facilitate and provide real-time AI assistance to field workers, so they can quickly address daily operational challenges. Ensure adherence to health and safety protocols.

GET STARTED ON YOUR GENERATIVE AI JOURNEY

LET SOFTSERVE ACCELERATE YOUR GENERATIVE AI JOURNEY WITH 3 OFFERINGS

Don't get left behind in the race to harness the disruptive innovation of Generative AI. SoftServe's defined [Generative AI adoption patterns](#) are designed to help you navigate the complexities of this emerging technology. SoftServe will help you select an appropriate adoption pattern or a combination of them to build custom solutions that meet your business enterprise's unique needs. Expedite your journey on a path to a new way of productivity and creativity with SoftServe's Generative AI offerings, and position your business as an industry leader.



AI DISCOVERY

*From Interest to Discovery:
Generative AI Ecosystem and
Implications for My Business*

- ✓ Use Cases & Business Impact Priorities
- ✓ Data Quality & Availability
- ✓ Technology Trade-offs and Architecture
- ✓ Technical Feasibility with POC



AI LAUNCHPAD

*Launchpad to Innovation:
Evidence-Based Exploration
and Deployment*

- ✓ Generative AI Lab
- ✓ AI Launchpad Program for Rapid Experimentation
- ✓ Value Stream Mapping & Use Cases
- ✓ POC/POV Pipeline



AI ADOPTION

*From Insight to Impact:
Rapid Scaling and Adoption
in My Organization*

- ✓ Generative AI Adoption Roadmap
- ✓ Technology Strategy
- ✓ Data Strategy
- ✓ Change Management & AI Governance

- ✓ Generative AI Solution Development
- ✓ Generative AI in Product & Engineering Teams

It's urgent and the time to start is now. But you know that Generative AI is not a deployment sprint. With SoftServe's experts to address your unique enterprise needs and guide you through possible adoption options, you will move past the hype and harness its benefits for your business enterprise.

Learn more about SoftServe's Generative AI Lab, POVs, offerings, and partners. Visit us at our [Generative AI website page](#).

YOUR PARTNER FOR THE FUTURE

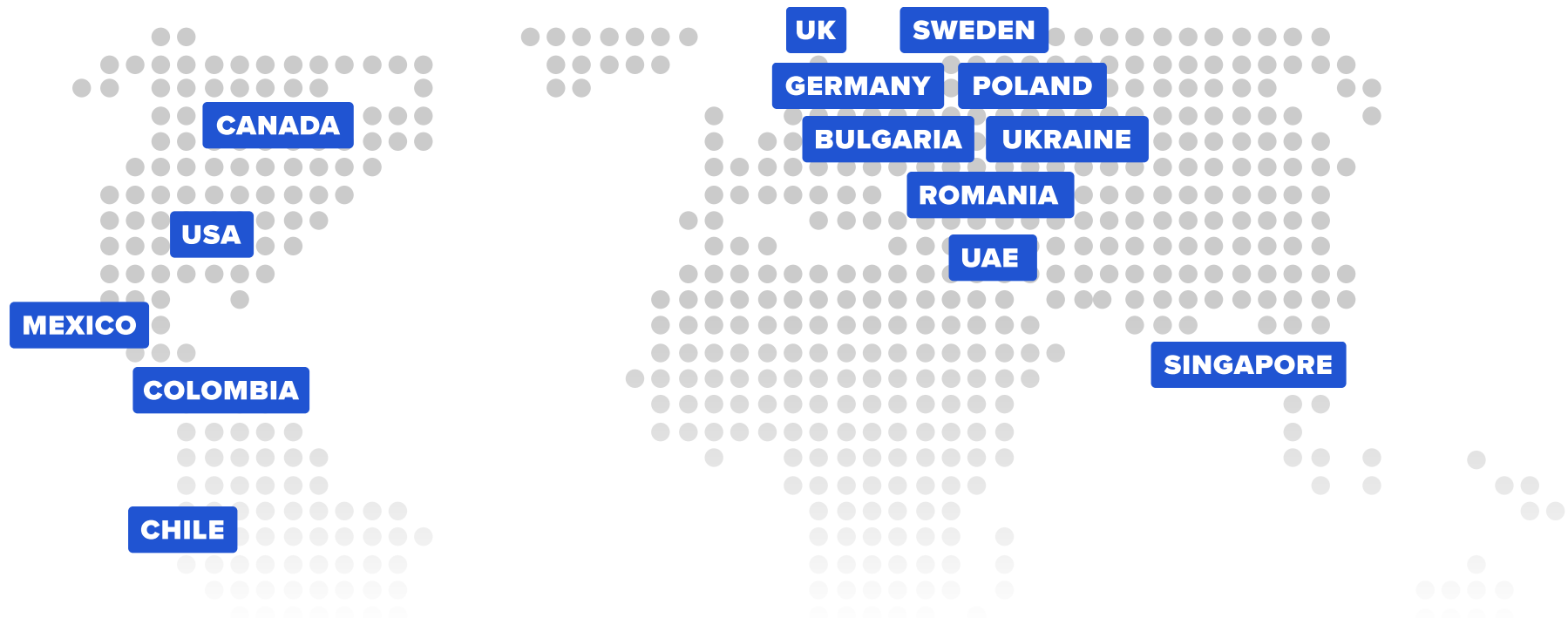
DIGITAL ADVISORS, SOFTWARE INNOVATORS, AND EXPERIENCE BUILDERS

30 Years of Experience

98% Client Retention

14 Countries of Operations

58 Offices Worldwide



GOOGLE CLOUD EXPERTISE

As a Google Cloud Partner and the winner of the 2020 Google Cloud Partner of the Year Award for Machine Learning, SoftServe is committed to helping customers solve their most pressing business challenges. SoftServe utilizes Google Cloud's AI ecosystem, including tools such as Google Cloud Vertex AI and Generative AI App Builder. [Learn more](#)

120+
GCP Enabled Customers

690+
GCP Certified Resources

100+
Data Science Experts

3
Anthos Fellows



AMAZON WEB SERVICES

As an APN Premier Services Partner, SoftServe acts as an exceptional cloud guide, vastly decreasing the time to achieve cloud value. By doing so, SoftServe ensures that your AI initiatives unleash the full potential of AWS Machine Learning services, such as Amazon Bedrock and SageMaker, and that they are deployed in accordance with AWS Well-Architected best practices. [Learn more](#)

500+
AWS Certified Resources

100+
AWS Certified Solution Architects

50+
AWS Professional Certifications

11
AWS Competencies



MICROSOFT

Innovate with purpose, rationalize costs, and drive efficiencies with Microsoft Azure's open and flexible cloud computing platform. Leverage Azure OpenAI and Machine Learning services to deliver next-generation AI solutions. As a Gold Microsoft Partner, SoftServe enables your business to build and deploy on your terms — both today and in the future. [Learn more](#)

250+
Azure Certified Professionals

19+
Years as a Microsoft Partner



NVIDIA

As an NVIDIA Service Delivery Partner, SoftServe harnesses NVIDIA's cutting-edge technologies, like GPU-accelerated compute infrastructure, to deliver robust AI solutions. Leveraging NVIDIA's NeMo Service, SoftServe streamlines the development of Generative AI products, driving rapid digital transformation. [Learn more](#)

softserve

DEEP TECHNOLOGY EXPERTISE IN AI/ML

**HUMAN-FIRST APPROACH TO DESIGNING
EFFECTIVE EXPERIENCES**

**INDUSTRY EXPERTISE AND PARTNERSHIPS
WITH CLOUD SOLUTIONS PROVIDERS**

LET'S TALK



BUSINESS OPPORTUNITIES

Some of the more specific use cases where we envision Generative AI can be a game-changer in the world of energy can be found below.

