# **Paradigm**<sup>®</sup>

# Services, Support and Training

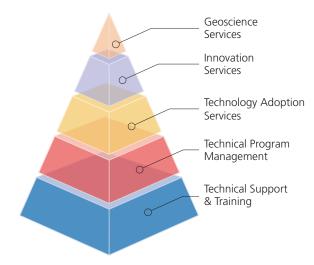


# Paradigm Services, Support and Training

With years of global experience, extensive local knowledge, and our own highly integrated leading-edge technology, Paradigm Technical Services, Support and Training deliver exceptional results.

For over thirty years, Paradigm has been recognized for its industry-leading integrated technology and exceptional people. Our products have played a major role in finding and developing some of the largest oilfields in the world. Paradigm Technical Services and Support are designed to help Paradigm customers more quickly realize value from their investment in software.

Paradigm Technical Services and Support provide a diverse set of capabilities designed to enhance our customers' ability to gain tangible business benefits from our advanced science software solutions. Our comprehensive offering consists of:



# **Geoscience Services**

Combining unparalleled R&D strength and software interoperability with expert implementation, the Paradigm Geoscience Services team collaborates with clients to provide complete service solutions, from seismic and wellbore field data, to prospects and drilling targets. Whether using proven and field-tested methodologies or new, innovative solutions, our best and brightest geoscientists deliver a highly collaborative, interactive and quality service offering. The advanced technologies offered by our Services group deliver more insights into the subsurface, enabling you to make better informed, timelier and more accurate decisions.

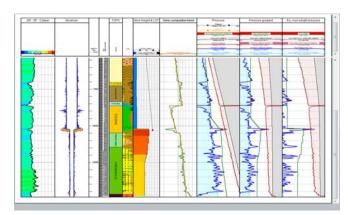
# Science-based integrated solutions

Of the leading global service providers to the oil and gas industry, only Paradigm offers services based exclusively on its integrated software solutions. These are universally acknowledged as the industry leaders for subsurface imaging, reservoir characterization, volume-based interpretation and well planning.

The expertise of our geoscientists, combined with our global presence, local experience and industry-leading technologies, ensures a level of service that meets the most demanding challenges of oil and gas exploration and production. Our R&D professionals, including over 60 PhD's in the fields of geoscience and computer science, work seamlessly with our Services Group to ensure that project objectives are met and the latest developments are immediately available through regular technology updates. Our product interoperability ensures a smooth and uninterrupted workflow between seismic processing, imaging, interpretation, petrophysical analysis and well planning, maximizing throughput efficiency while reducing cost, cycle time and risk.



Exceptional people deliver exceptional results



Pore pressure prediction outputs include results in pressure gradient and equivalent mud weight

# We specialize in global problem solving

The Paradigm Geoscience Services Group is well-acquainted with geological and geophysical conditions in most regions of the world, and has extensive experience with projects around the globe. These include highly challenging tasks, such as subsalt imaging in the Gulf of Mexico and the North Sea, permafrost in Russian oil fields, overthrust imaging in the Canadian and US Rockies and in South America, and fault shadow imaging, reef imaging, carbonate fracture determination, and comprehensive sweet spot analysis in unconventionals worldwide.

Our list of successfully completed service projects covers every oil and gas producing region in the world.

Western Hemisphere	Europe, Africa & Middle East
Offshore/Onshore United States	North Sea
Offshore/Onshore Canada	Adriatic Sea
Caribbean Sea	Western Africa
Gulf of Mexico	North Africa
Offshore Brazil	Nile Delta
Venezuela	Eastern Mediterranean
	Persian Gulf
	Bahrain
CIS & Russia	Asia Pacific
Western Siberia	Offshore/Onshore India
Caspian Sea	Malaysia
China	Indonesia
	Offshore/Onshore Australia

# Our customers as partners

Our commitment to on-time, high-quality project delivery is based on much more than just technology. Our project teams have expertise in every major land and marine play around the world. We assign dedicated teams throughout the duration of your project, so you work with experts you know and trust, who understand the geology of your region and the goals of your project.

We offer our customers a truly collaborative experience, including participation in each step of the project and ongoing updates. Close communication and feedback are accomplished through several channels:

 Frequent project reviews with our service staff at the location of your choice.

 Seismic facies classification services for better understanding of facies distribution and compartmentalization

- Project sharing: You can choose to share the project with us by using our software products to perform part of the job yourself. This truly collaborative approach maximizes both your contribution and that of Paradigm, and results in enhanced productivity, reduced turnaround time and higher quality.
- Project deliverables: When required, digital, interactive files of the project allow you to access and utilize the knowledge stored in the Paradigm Epos® project database.

# A broad range of Geoscience Service Offerings Paradigm offers the following dedicated services:

# **Seismic Processing and Imaging**

- High-Resolution Broadband Processing and Quantitative Seismic Interpretation
- Converted Wave Processing
- Single, Multi, or Full Azimuth Tomography and QC (VTI/TTI) Full-Azimuth Imaging in Depth

# **Velocity Modeling**

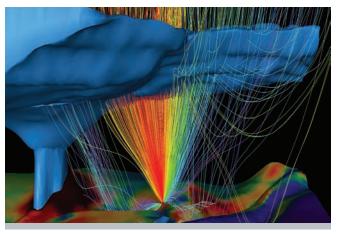
- Velocity Model Confirmation
- Building Geologically-Constrained Velocity Models
- Time-to-Depth Conversion and Redepthing

#### Reservoir

- Prospecting for Direct Hydrocarbon Indicators in the Local Angle Domain
- Pore Pressure Prediction
- Seismic Facies Prediction and Modeling
- Integrated Rock Typing and Prediction of Lithofacies with MICP Cluster Analysis
- Reservoir Modeling
- Reservoir Characterization
- Attribute Generation

#### **Asset Based**

- Shallow Geohazard Studies
- Imaging and Prospecting in Subsalt Regimes
- Full-Azimuth Fracture Characterization



 EarthStudy 360 Illumination services to resolve interpretation ambiguities

# **Technology Adoption Services**

Paradigm Technology Adoption Services are designed to simplify the business processes associated with use of our software. Paradigm consultants help build a customized plan to ensure that Paradigm is deeply integrated in both process and technology as part of a plan for broad adoption and utilization, with services such as Workflow & Business Process Assessments, Technical Audits of Infrastructure and Plans, and Data Management Plans.

Consultants from Paradigm can help customers better integrate Paradigm solutions and workflows into business processes by introducing best practices that come from years of helping the world's largest operators integrate Paradigm as a foundational platform of their G&G workflows.

# **Technical Program Management**

Technical Program Managers (TPMs) are dedicated contact people assigned to provide expertise and support, to ensure customers get the most out of their Paradigm software. They do this by:

- Centralizing issue management and coordinating response planning and prioritization
- Helping to build internal adoption plans to ensure full use of purchased software
- Participating in rollout plans for new versions and roadmap planning

TPMs are assigned to address the specific challenges within their assigned account. By serving as a point of coordination for feature requests, issues, training and roadmap planning, the TPM helps minimize the administrative tasks associated with broad utilization of enterprise software.

# **Paradigm Innovation Services**

- Do you have sufficient confidence in the tools you use for the decisions you're making?
- Does your current technology force you to take shortcuts or develop workarounds to fit your requirements?
- Are you frustrated with the rate at which solutions are provided by vendors?

- Do you feel like you are compromising your workflow by including unsuitable or incomplete solutions?
- Do you have proprietary code that you wish was integrated so that users could stay within a single environment?

Paradigm Innovation Services offer quick and effective solutions to all of these problems, which are increasingly challenging oil and gas companies. Our Innovation Services staff works with you to modify Paradigm technologies and/or develop proprietary workflows, providing solutions that are tailored to your needs and environment. Our solutions increase your geoscientists' productivity and give them added confidence in their exploration, production and drilling decisions.

# What do Paradigm Innovation Services offer?

- Customized workflows
- Accelerated development
- Customer proprietary tools or workflows with Paradigm algorithms embedded in their back end
- Highly efficient experts with intimate knowledge of Paradigm technologies
- Direct access to source code
- Development training
- Integrated plugins from proprietary or non-proprietary code

#### What are the unique benefits of Paradigm Innovation Services?

- The ability to develop whatever you need and package it for your specific environment
- The **speed** to deliver solutions according to your timetable
- The agility to adapt to any functionality, including proprietary tools and graphic user interfaces
- Enhanced confidence in your decision-making process
- The ability to guide the development of commercial solutions



#### Who are our customers?

The ideal partners for Paradigm Innovation Services are companies that are both early adopters and fast followers. Companies looking to solve tough problems today partner with Paradigm to find innovative and unique solutions for their company.

Current users of Paradigm Innovation Services include leading supermajors, NOCs and major oil and gas companies.

Paradigm Innovation Services provide added value at every level:

- **Geoscientists**: Looking for solutions that can be incorporated into their everyday work
- Asset Managers: Looking for customized workflows that will achieve more accurate results and reduce cycle time
- IT Managers: Looking for customized solutions that will increase the value of the company's software investment
- CEOs and VPs: Looking for unique and innovative solutions that will
  provide a competitive advantage over their peers and increase ROI

# How are Paradigm Innovation Services delivered?

Paradigm Innovation Services can be provided in a number of frameworks:

- Co-Development: Provides a comprehensive and differentiating tool that has a shared IP for both the customer and Paradigm.
- Accelerated Development: Provides an avenue for customers to receive a product before the original delivery date. Exclusivity terms are negotiable.
- **Proprietary Development**: Provides development of tools solely designed for the customer.
- Consulting: Provides consultation and guidance to customers developing their own tools using Paradigm DevKits.

Each project is negotiated on an individual basis, attuned to the needs of the customer.

# **Technical Support & Training**

The Paradigm Technical Support & Training offering is designed to address the day-to-day issues and concerns that customers may have when using our software. Our Global Support Organization strongly believes that "one size does not fit all". We know that our success is directly linked to that of our customers, and achieving unified success requires that we deliver exactly the support and training our customers need, when and where they need it.

# Support

The Paradigm support organization provides clients with direct access to our technical experts for assistance in diagnosing issues and optimizing use of our software. Our professionals are available to deliver a diverse set of services and training, through on-site consultations, by phone or by email at support@pdgm.com. We also make a Web-based Customer Portal available to users, where they can:

- Log and monitor support incidents
- Download the latest releases, patches and software documentation
- Search the knowledge base for frequently asked questions
- Access online tutorials and training

# **Training**

Paradigm training courses provide students with an opportunity to experience and explore many sources of knowledge and information, using real data and depicting real geologic scenarios. We offer multiple training options, from introductory "how to" courses, to advanced workflow training aimed at the expert user. Courses are offered through structured instructor-led classes at our training facilities or the customer site, or using quick, targeted eLearning modules through the Paradigm Online University.

#### **Instructor-Led Courses**

Paradigm instructor-led training courses provide active, hands-on learning in technologies that are relevant to customer needs. You can choose among several classroom training options:

- Public and private instructor-led courses
- Customized training and mentoring sessions
- · Individualized training

Our instructors are highly competent, certified and knowledgeable professionals, who have undergone extensive training on our applications. They are effective at making each class an enjoyable and educational experience for students.

We can tailor training courses to meet your unique business needs, and we encourage customer collaboration in the planning of all training programs. Your program can vary from standard offerings to highly tailored programs using your company's own data.



Customized training courses from industry experts

# **Paradigm Online University**

This Web-based, eLearning tool, offered free of charge to active Paradigm customers, provides a convenient way to learn our technology. Our eLearning courses utilize a variety of instructional techniques adapted to the different ways in which adults learn. These include:

- Videos for those who learn by listening and watching
- Text for those who learn by reading
- Hands-on, workflow-driven exercises for those who learn by doing
- Quizzes that measure comprehension and retention

Our Video Learning Library contains over 30 two-hour multimedia courses, ideal for those who prefer short, interactive training sessions. Overviews of new functionality and workflows are available in 3-5 minute clips. You can use the Video Learning Library to create a "learner-centric" training portfolio of online courses and videos that can be accessed multiple times. You can learn at your own pace - anytime, anywhere.



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