



iSURVEY

Provider of
survey and
positioning
services





iSURVEY

iSURVEY is a leading provider of survey and positioning services to the global oil and gas, telecommunications and offshore renewable energy sectors.

Our experienced team use their technical knowledge, together with industry-leading technology, to support a range of offshore activities, including marine construction projects, offshore cable operations, rig and mooring operations and seabed survey services.

Our people are world-leading specialists in their field, continually growing our reputation by offering a first class service and the highest quality technical expertise.

With our clients' needs at the forefront of all that we do, iSURVEY offers a fully integrated service of equipment, personnel and management. We work closely with clients to help them optimise costs and timescales across all stages of a project, never compromising on the standard of work.

QA-HSE

iSURVEY conducts all operations in a manner that prevents accidents and minimises risk to health, safety and the environment.

We strive to provide a safe, consistent service to clients that goes beyond the minimum requirements.

Our services are delivered to the highest level of quality, guaranteeing satisfaction from our clients and confidence in our ability.

Accreditations

iSURVEY has implemented an industry leading integrated quality assurance and health, safety and environmental management system.

The iSURVEY Group is certified to the following standards:

- ISO 9001:2015 - Quality Management Systems
- ISO 14001:2015 - Environmental Management Systems

The certificates are issued by DNV-GL.

iSURVEY entities are, in addition, certified to EPIM JQS, Achilles JQS, Utilities NCS, FPAL and Achilles UVDB, dependent on market association.

The iSURVEY group is compliant with OHSAS 18001:2007 – Occupational Health and Safety Management System.





Our Vision

To be the preferred provider of seabed seismic, offshore survey and offshore positioning services.

Our Mission

To always meet or exceed our customers' expectations, combining competent personnel and industry leading technology, in an open and honest culture.

Our Core Values mean that iSURVEY employees shall:

	Have the freedom to create
	Experience the joy of contributing
	Be honest and open
	Stay safe and healthy



OUR SERVICES

The iSURVEY team are world-leading offshore surveyors and project management specialists in their field, continually growing our reputation by offering a world class service, with our clients' needs at the forefront of all that we do.

iSURVEY offers survey and positioning services to support international marine construction projects, offshore cable operations, rig and mooring operations and seabed surveys.

The experienced iSURVEY team applies state of the art technology to provide:

- multi-vessel operation management;
- a complete range of subsea positioning solutions;
- survey data acquisition and processing; and
- support of AUV and ASV operations

Our Business Lines

Our expert technical knowledge together with our state of the art technology supports a range of offshore activities, divided into four business lines:

- Marine Construction
- Offshore Cable
- Rig & Mooring
- Seabed Surveys

Within these business lines, iSURVEY supports:

- marine construction operations, including pipeline and cable burial, pipelay and jacket / deck installation, ROV operations and subsea structure installations;
- offshore cable operations, including route surveys, cable installation, and Inspection, Repair & Maintenance (IRM);
- rig and mooring operations, including semi-submersible, jack-up, DP vessel drilling rig and FPSO operations, as well as remote rig moves; and
- seabed surveys, including site surveys, UXO surveys and subsea mapping

General Services

Several of the supporting services iSURVEY provides are common to many project types. For example, for accurate vessel and subsea positioning, a well calibrated vessel survey gyro and USBL system are essential. iSURVEY's experienced personnel provide a range of well-established and proven services to complement our other services, which include:

- Quayside vessel gyro and motion sensor calibrations
- USBL calibrations
- Dimensional control surveys, including offset measurements
- DGNSS verifications
- Reporting (including data processing)
- Geodetic consultancy
- CAD and GIS
- Video recording for documentation



ISURVEY OFFERS SURVEY AND POSITIONING SERVICES TO SUPPORT INTERNATIONAL MARINE CONSTRUCTION PROJECTS, OFFSHORE CABLE OPERATIONS, RIG AND MOORING OPERATIONS AND SEABED SURVEYS.



“

**SINCE 2015, iSURVEY
HAS SUPPORTED
THE INSTALLATION
OF NEARLY 300KM
OF PIPELINES AND
APPROACHING 50
JACKETS AND DECKS.***



MARINE CONSTRUCTION

iSURVEY provides accurate and precise surface and subsea positioning solutions to support both standard and advanced marine construction projects.

Pipeline and Cable Burial Operations

iSURVEY uses well proven technology and software to provide customers with the data to assess burial depths, free span analysis and more. Using and integrating a wide range of sensors, such as multi-beam echo sounders, digital video recording, depth sensors, altimeters, cable and pipe trackers and USBL / LBL / INS positioning, iSURVEY can provide high-quality data to the client.

Pipelay & Jacket / Deck Installations

iSURVEY provides positioning and survey support for rigid and flexible pipelay installation operations, along with jacket/deck installations.

We provide integrated solutions of USBL (ultra-short baseline), Gyro USBL, LBL (long baseline) and/or INS (inertial navigation system) depending on the type of pipe, flexible or platform/jacket installation, either in shallow or deep water.

Since 2015, iSURVEY has supported the installation of nearly 300km of pipelines and approaching 50 jackets and decks*, mainly within SE Asia, East Asia, Turkey and Africa.

USBL & Gyro Calibrations

For high accuracy vessel and subsea positioning, a well calibrated vessel survey gyro and USBL system is essential.

To secure the required calibration quality, the experienced iSURVEY personnel provide a well proven service, including:

- Quayside vessel gyro calibrations
- Installation, vessel and rig gyro, and USBL system calibrations
- On-line gyro verifications
- Relevant documentation

ROV Operations

Focusing on survey and positioning services allows iSURVEY to support ROV contractors in a variety of operations, from standard subsea positioning during intervention or basic visual inspection, to more complex installations, measurements and marine support operations.

Subsea Structure Installations

iSURVEY provides accurate and precise subsea positioning solutions for subsea template and structure installations. Using appropriate subsea positioning systems (e.g. USBL, Gyro USBL, LBL and/or INS), our track record includes the installation, calibration and utilisation of these subsea positioning systems.

Where the subsea position, heading, inclination and/or height of a wellhead, guidebase or other subsea structure (e.g. Conductor Anchor Nodes, etc.) is required, iSURVEY is able to provide the following services:

- High accuracy positioning using LBL systems for positioning of wells/wellhead guidebase in deeper water
- LBL arrays of typically 4-5 transponders
- Topside system on rig/drilling vessel
- Position reference is obtained from range-range geometry from the transponder locations

* As of February 2020



OFFSHORE CABLE

iSURVEY provides support services for the full cycle of an offshore cable, performing route surveys to assess seabed suitability, supporting laying operations and burial operations (including the provision of post-lay surveys), and providing inspection, repair and maintenance (IRM), and operations and maintenance (O&M) services.

Route Surveys

iSURVEY utilise multi-beam echo sounder (MBES), side scan sonar (SSS) and sub bottom profiler (SBP) systems to carry out route surveys prior to cable and pipeline laying operations, or subsea construction projects.

Supporting all elements of data acquisition both during seabed mapping and route surveys, iSURVEY offers data processing, charting and reporting of the acquired data. We provide customers with the tools and personnel needed to perform data processing, either on-board the vessel or using iSURVEY office facilities.

Cable Installation Support

iSURVEY can provide survey and positioning support for the full cable installation process. Prior to operations, we can perform route surveys; the results of which help to inform suitability for laying operations. During laying operations we can assist with real-time calculations of cable parameters. Post-laying, we can provide as-laid surveys to record the pipeline/cable status and position immediately after it is laid.

iSURVEY supplies ROV mounted cable and pipe trackers together with subsea positioning, video and/or multi-beam echo sounders, all with easy integration to GIS (Geographical Information Systems).

iSURVEY supplies in-house hardware and software to provide real-time calculations of cable parameters during cable lay operations. Our cable lay software, iCABLE®, uses catenary calculations and provides simultaneous calculations of cable parameters based on one or all of the following:

- Tensioner on chute
- Cable inclinometer
- ROV monitoring of touchdown

The derived cable parameters are:

- Tension on chute (max tensions)
- Tension on seabed
- Minimum bending radius
- Length of cable catenary

In addition, iSURVEY supplies cable counter systems including simple eventing for the cable operator. The cable counter is an in-house developed system and includes both hardware and software. iSURVEY also supplies in-house developed cable inclinometers.

iSURVEY has well established routines and very experienced surveyors to support any cable lay operation.

Cable Burial Operations

iSURVEY uses well proven technology and software to provide customers with the data to assess burial depths, free span analysis and more. Using and integrating a wide range of sensors, such as multi-beam echo sounders, digital video recording, depth sensors, altimeters, cable and pipe trackers and USBL/ LBL/ INS positioning, iSURVEY can provide high-quality data to the client.

Inspection, Repair & Maintenance (IRM) Operations & Maintenance (O&M)

Inspection, Repair, Maintenance (IRM) is becoming a bigger element of many existing fields, and iSURVEY is well placed to support such operations. These tasks can be provided stand-alone or as part of an integrated service to the end client.

IRM and O&M (operations and maintenance) services are in increasing demand, particularly in existing, more mature fields. iSURVEY has an exceptional track record in both of these areas, and we can confidently support such operations.



“

**iSURVEY PROVIDES
SUPPORT SERVICES
FOR THE FULL CYCLE
OF AN OFFSHORE
CABLE.**



RIG AND MOORING OPERATIONS

With over 1000* rig-related positioning projects completed over the last 10 years, iSURVEY has developed advanced and robust survey and positioning solutions to support the complete range of offshore rig and mooring operations.

iSURVEY's staff of offshore surveyors and project managers have extensive international experience ranging from shallow to deep water rig operations.

Jack-up Rig Moves

iSURVEY has a long track record of positioning jack-up rigs alongside existing structures and in open locations. We have well proven, standardised solutions based on Global Navigation Satellite System (GNSS) positioning, in combination with relative positioning systems.

Prior to a rig move, iSURVEY can also offer a full dimensional control survey, prism installation and datum point establishment on existing structures/platforms.

Standardised mobilisation reports and rig move survey reports are provided, containing calibrations, verifications and as-built data to guide the client with easy access to necessary data and positions.

Semi-sub Rig Moves

iSURVEY has well proven, extensive experience in positioning semi-submersible rigs safely on to location. As with jack-up rigs, we offer effective solutions based on GNSS to navigate the rig in a safe and controlled operation.

The increasingly common technique of pre-installing anchors using an AHV (Anchor Handling Vessel) complete with ROV, prior to the actual rig move, is fully supported.

A standardised mobilisation report and rig move survey report are provided, containing required calibrations, verifications, as-built data and anchor catenary calculations.

FPSO & Mooring Operations

In relation to FPSO mooring operations, or if rigs are skidding their position on existing moorings, the following services are provided:

- Unmanned rig position monitoring systems (iMON®)
- Rig gyro calibrations
- Survey and positioning support during FPSO installations

Remote Control Rig Moves

iSURVEY offers remote positioning control during rig moves and associated vessel operations. For remote control of the navigation system on board an offshore unit, iSURVEY has developed the iCONTROL® system.

By installing iCONTROL® on board a rig or vessel, the following offshore operations can be executed from the iSURVEY onshore control room:

- Run rig move navigation remotely from shore
- Log data for final positioning or log position of any other interfaced dynamic object (e.g. ROV)
- Stream data to shore / to client, such as navigation displays and ROV video
- Change project related data (e.g. geodesy, background charts, target position, etc.)
- Perform sensor verification (e.g. gyro and DGNSS verifications)
- Change information in the navigational display upon request (e.g. create new waypoints, run lines, display lines, track plot, add information like range / bearing, speed, new charts)

* As of February 2020



“

**OVER 1000* RIG-
RELATED POSITIONING
PROJECTS COMPLETED
OVER THE LAST 10
YEARS.**



“ **ISURVEY IS ONE OF
A SMALL NUMBER OF
SURVEY CONTRACTORS
WITH THE EXPERIENCE
AND EXPERTISE TO
UNDERTAKE MARINE SITE
SURVEYS FOR GEOHAZARD
INVESTIGATION.**



SEABED SURVEYS

iSURVEY provides a wide range of geophysical, geotechnical and environmental survey solutions for a range of applications.

Site Survey & Geohazard Investigation

iSURVEY is one of a small number of survey contractors with the experience and expertise to undertake marine site surveys for geohazard investigation. Site survey data can be applied to a number of uses including rig emplacement, drilling geohazard investigation or wind farm development.

Since 2018, we have carried out several worksopes where we have been responsible for full-service provision of vessel, survey, geophysical, geotechnical and environmental services, and we are fully prepared to deliver a turnkey solution for this scope of work.

All clients benefit from a wealth of survey and positioning expertise supplemented by experienced in-house engineering, reporting and GIS personnel.

iSURVEY offer a range of site survey options and take pride in being flexible with equipment specification to meet the needs of the client and achieve the best results in the chosen survey environment.

A typical iSURVEY site survey solution includes (though is not limited to):

- High and ultra-high resolution 2D seismic
- Multi-beam echo sounder
- Side scan sonar
- Sub-bottom profiler
- Magnetometer
- A range of geotechnical options (CPT, vibrocore, gravity core, etc.)
- ROV for inspection or environmental applications

Pipeline Inspection Services

iSURVEY provides a wide range of survey & inspection services to support pipeline inspection as well as other IRM operations. As well as positioning services, we support all digital data acquisition and processing from HD video through to multi-beam echo sounder and side scan sonar.

Additional inspection services in the form of CP (Cathodic Protection) and FMD (Flooded Member Detection), can be included and managed by onboard inspection engineers and coordinators. iSURVEY also have long-term frame agreements with ROV partners onboard permanent vessel spreads, supporting yearly pipeline inspection campaigns and other inspection, repair and maintenance related survey support.

UXO Surveys

iSURVEY offer an integrated service to locate and identify unexploded ordnance located in the vicinity of a proposed renewables development.

We acquire gradiometer data combined with multi-beam echo sounder, side scan sonar and sub bottom profiler data to assess seabed and seabed conditions.

A typical UXO survey solution includes:

- Multi-beam echo sounder
- Side scan sonar
- Sub-bottom profiler
- EIVA Scanfish Katria 3D ROTV (Single or Dual)
- Geoacoustics G882 Magnetometer
- Optional - UHR Boomer/Sparker



SEABED SURVEYS

Seabed Mapping

Bathymetric Data Acquisition

iSURVEY has a long track record of collecting bathymetric data, using the latest multi-beam echo sounders, whether it be hull-mounted, ROV-based or over-the-side pole-based systems. Offshore applications such as trenching (pre-cut, pre-lay, post-lay and intermediate surveys), dredging (pre-, post- and real-time surveys), sonar/acoustic pipeline inspection, site surveys, or any requirement for a map of the seabed, can be supported with a suitably designed mapping system.

Using versatile, flexible sensors and software, we can provide clients with specialised system set-ups, covering everything from vessel navigation systems, subsea positioning, ROV instrumentation, digital video recording systems, tidal corrections and time synchronisation, all needed to gather high-quality data.

iSURVEY specialises in providing systems that can be used on a wide range of platforms, with short mobilisation time, and we are capable of doing the necessary calibrations and verifications to provide a well-integrated system. iSURVEY listens to our clients' needs and requirements, and delivers data in most known data formats, whilst also providing support with data interpretation.

Route Surveys

Geophysical Data Acquisition

iSURVEY specialises in the acquisition of high-quality side scan sonar (SSS), multi-beam echo sounder and sub-bottom profiler (SBP) data to support the planning and engineering of submarine cables and pipelines.

Such data is used to provide highly detailed imagery of the seabed and sub-seabed conditions to identify any potential debris and assess sediment conditions for burial or trenching.

General

Geotechnical Data Acquisition

iSURVEY offer ground truthing of geophysical data in the form of Cone Penetration Testing (CPT), Vibrocore, Gravity/Piston core, box core and grab sampling. Geotechnical acquisition is offered as an integrated or independent service to suit our clients needs.

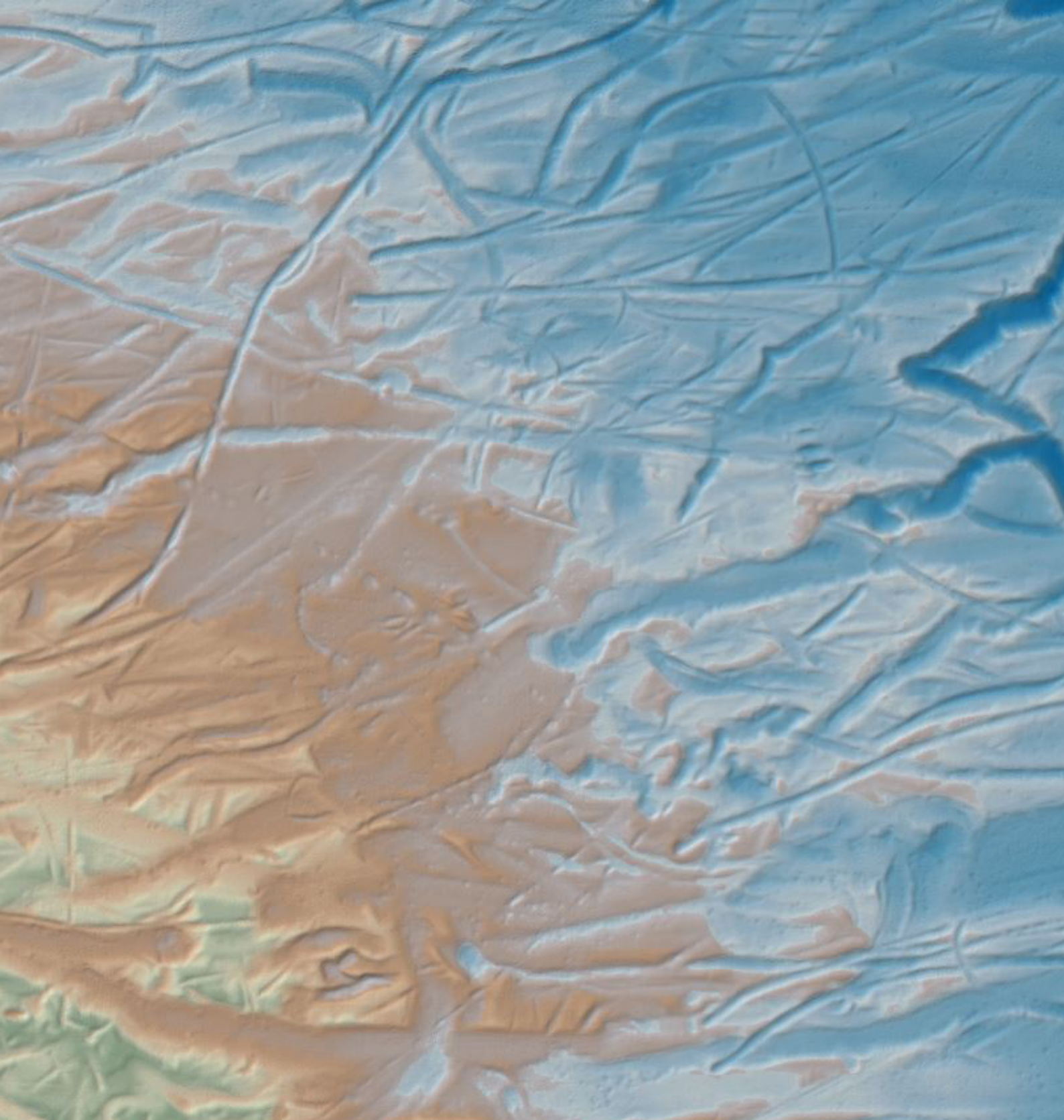
Environmental Data Acquisition

Environmental data acquisition services comprise; stills camera / video and seabed sampling to meet our clients environmental baseline and habitat assessment requirements.

Data Processing, Charting and Reporting

Supporting all elements of data acquisition both during seabed mapping and route surveys, iSURVEY offers data processing, charting and reporting of the acquired data. We provide clients with the tools and personnel needed to perform data processing, either onboard the vessel or using iSURVEY office facilities.

iSURVEY uses the Eiva NaviSuite, Sonarwiz, Oasis Montaj and IHS Kingdom together with supplementary tools such as ArcGIS, QGIS and CAD-based charting, all to industry standards. We can provide USBL and DVL positioning post-processing, powerful INS post-processing and automated multi-beam echo sounder data cleaning, all tools which increase the quality of data and increase efficiency to save valuable time.



“

**WE LISTEN TO OUR CLIENTS
NEEDS AND REQUIREMENTS
AND DELIVER DATA IN MOST
KNOWN DATA FORMATS,
WHILST ALSO PROVIDING
SUPPORT WITH DATA
INTERPRETATION.**



iSURVEY PRODUCTS

iNAV

The iNAV® vessel positioning suite is a “modularised” technology for effective positioning and survey support during all offshore drilling, marine and survey projects.

Master Vessel and Rig Positioning System:

- Dual online navigation system using Eiva NaviPac
- Redundant DGNSS
- Helmsman’s displays
- AIS (Automatic Identification System) input

Extensions to iNAV®

- **Multi vessel operations**
 - iSAFE for tracking AHVs
 - iSURVEY’s TMS (tug management system)
 - iBUOY for anchor tracking
- **iROV® for ROV support**
 - ROV helmsman’s displays
 - Interface to ROV sensors
 - Digital video interface
 - SVP/CTD profiling
- **Subsea positioning**
 - USBL and LBL positioning
 - Subsea telemetry communications
- **iMAP® for seabed mapping**
 - Pipe and cable tracking
 - ROV-mounted MBES
 - Over-the-side mounted MBES
 - ROV-mounted or towed SSS
 - Data acquisition and processing suite
- **iCONTROL® for remote access**
 - Secure site-to-site VPN link between vessel and office
 - For updates of iNAV®
- **Miscellaneous**

iROV®

Integration and effective use of ROVs for survey applications.

Used to interface any ROV sensors, typically:

- ROV heading, pitch, roll, depth and altitude (FOG & DVL)
- Bathymetric system
- Video overlay
- Optional Sprint INS

iSAFE®

Complete tug positioning and display system for multi-vessel operations.

iSAFE® is a system for remote vessel survey which consists of a UHF radio modem, DGPS and a computer. The NaviPac™ software supplied by EIVA is used as the navigation software suite and supports multi-vessel operations, including USBL interfacing for positioning of subsea units and AIS heading from AHVs.

The iSAFE® system provides graphical as well as numerical online information about the AHV's own position, and is user friendly for the crew as everything is prepared by iSURVEY personnel onboard the rig before commencing the multi-vessel operation.

iCABLE®

Specialised survey module for offshore cable installation projects.

The iSURVEY cable calculation software is based on a basic catenary calculation with an extension for cable lay on slope.

The software covers three calculation methods:

- Angle meter mounted on stern chute
- Angle meter mounted on subsea object
- Touchdown monitoring by subsea object

iMAP®

Survey solution for seabed mapping projects including bathymetry and integrated video.

Bathymetry

iSURVEY delivers multi-beam echo sounder and side scan sonar solutions for ROV and surface vessels, creating bathymetric maps and 3D models and visualisation.

Video Survey

ROV-mounted cameras provide an optimal visualisation with full geographic reference. This is ideal for inspection surveys, with possibility for playback and video integration to GIS.

This can be combined in NaviModel together with MBES surveys for complete documentation.

Cable & Pipe Survey

iSURVEY supplies ROV-mounted cable and pipe trackers together with subsea positioning, video and/or multi-beam echo sounder, all with easy integration to GIS systems.

iMON®

Robust module for online rig position visualisation and rig crawl calculations during drilling operations.

The iMON® position monitoring system offers a graphic display including pipelines and waypoints, numeric object position, range and bearings, alarms, anchor data, manual measurements in map display, online rigcrawl calculations and more.

iBUOY (patent pending)

Transponder based ruggedised anchor positioning.

iBUOY consists of a transponder encapsulated in a flotation device, which provides protection against possible rough handling during deployment and recovery of the anchors.

Compared with the methods most commonly used for anchor positioning today, the iBUOY anchor tracking system provides reliable online information of

the anchor position during deployment and after the anchor is landed on the seabed. In addition, an indication of the drag length can be calculated.

iCONTROL®

Remote control of offshore survey systems through secure internet connection.

iCONTROL® allows full remote control of offshore survey systems at any time, from any place.

iCONTROL® can minimise the time and personnel resources required, by giving iSURVEY's onshore experts a visual overview of the situation, which can be corrected if necessary.

iCONTROL® can communicate via the internet or SOIL. SOIL is a global network for oil and gas companies, ensuring a high level of security via a closed member-only network. SOIL differs from the internet in that the network is managed and controlled by higher operational levels.

iLINK™

iLINK™ allows video data to be transferred between marine vessels, rigs, etc, for applications such as:

- **Cable Laying**
 - Bellmouth video transferred to vessel and pull-in winch
- **Subsea Positioning**
 - Multi-vessel operations with video distribution needs
- **Seabed Mapping**
 - Multi-vessel operations with video distribution needs
- **Remote Control Vessel Survey System**
 - Live video image transferred to shore via iCONTROL®
- **Miscellaneous**
 - Any SD and HD video image to be transferred from A—B



“

THE
DEVELOPMENT
OF OUR PEOPLE
IS OF CRITICAL
IMPORTANCE TO
iSURVEY.



OUR PEOPLE

iSURVEY employ a multinational, multi-skilled workforce, all of whom are committed to meeting, and exceeding, the expectations of our customers.

The development of our people is of critical importance to iSURVEY, both to maintain, and to enhance, our employees' skills.

Induction Training

All new employees, regardless of experience, are inducted in our systems and our ways of working.

The course, known as the Offshore Staff Basic Program (OSBP) is run by one of our Senior Surveyors, in the employee's local iSURVEY office. The course length depends on the experience of the new employee, but covers the same essential topics.

The course provides an introduction for new employees to our systems, both administrative and project-based. This allows new employees to become familiar with our ways of doing things, as well as our expectations, before being sent offshore.

Discipline Training

We provide training for our employees in various different specific disciplines, applicable to our work.

Since 2014, iSURVEY have invested significantly in training courses to ensure the knowledge of our employees is as up-to-date as possible.

Examples of training courses include multi-beam acquisition training, data processing training (using the EIVA suite), and a week long training event with multiple stations including, land survey techniques, LBL, cable laying and INS.

eLearning

We provide access to an eLearning portal to support a variety of learning and to supplement the training we provide.

Our eLearning courses are used as material for our competence recording, while we also provide standalone eLearning courses on a variety of subjects.

Gatherings

Every year, each of iSURVEY'S regional offices host employee gatherings, bringing as many offshore employees as possible into their respective offices for training and social activities.

In 2019, for the first time, we held a European gathering in Oslo, with offshore and onshore staff from both our UK and Norway offices meeting for a week, with a focus on training.

Our gatherings serve as a great way for all of our staff to meet, socialise and share ideas.

Competence Scheme

iSURVEY is keen to ensure that the competence of our personnel is assessed and mapped to industry standards, both for the development of our staff and for the peace of mind of our customers.

Our competence scheme aligns with the IMCA (International Marine Contractors Association) framework, to ensure complete standardisation.

Employee competence is assessed internally, by externally trained senior surveyors, with certificates of competence being issued by an external assessor, MTCS.

Marine Construction

Pipeline and cable burial operations
Pipelay & jacket / deck installation
ROV operations
Subsea structure installations
USBL & gyro calibrations
CAN installations

Offshore Cable

Route surveys
Cable installation support
Cable burial operations
Inspection, Repair & Maintenance (IRM)
Operations & Maintenance (O&M)

Rig & Mooring

Jack-up rig moves
Semi-sub rig moves
FPSO & mooring operations
Remote control rig moves

Seabed Surveys

Site survey and geohazard investigation
Pipeline inspection services
UXO surveys
Seabed mapping
Route surveys



NORWAY

iSURVEY Group AS
iSURVEY AS
Billingstadsletta 14
NO-1396 Billingstad
Norway
+47 4541 4100
norway@isurvey-group.com



UNITED KINGDOM

iSURVEY Offshore Limited
7 Kingshill Park
Venture Drive
Aberdeenshire
Westhill
AB32 6FL
United Kingdom
+44 (0)1224 418210
uk@isurvey-group.com



SINGAPORE

iSURVEY Pte Ltd
22 Pandan Road
Singapore 609274
+65 6513 0589
singapore@isurvey-group.com