Modern day offshore survey operations rely on the collection and processing of high quality data sets. These data sets are obtained from precise high accuracy surface and subsea survey systems. The survey engineer is involved with all aspects of real time positioning and data acquisition.

Some of the activities where survey engineers are involved are:
- fossil fuel exploration
- geohazard identification
- offshore engineering and construction
- rig positioning
- charting the seas and oceans
- ports, harbours and coastal engineering operations
- trans-oceanic telecommunication cables
- similar work in lakes and inland waterways
- environmental studies

Survey engineers install, configure, operate and maintain state of the art survey instrumentation and technology to ensure the integrity of the survey spread.

IMCA members include organisations that employ survey engineers and other marine technology specialists.

**Education and Qualifications**

A college qualification in an appropriate engineering subject such as electronic, electrical or mechanical engineering is desirable. However persons with strong backgrounds in IT, networking or instrumentation may also qualify.

The other route into the industry is via a military career in a relevant discipline or appropriate industrial experience.

Survey engineers are also encouraged to gain a professional qualification by joining an appropriate professional body or institution.

**Skills and Training**

Working in the offshore industry involves a continuous programme of training, development and competence assessment. Some of this will be provided 'on the job' while some of the more formal training in specific subjects will be delivered in-house or by external specialists.

On-going training and assessment of survey engineers within the offshore industry is enhanced by the IMCA guidance on competence assurance and assessment which can be found on the IMCA website.
The framework sets out competence criteria for specific survey engineer roles in the offshore industry. These roles include:

- Survey Engineer Grade II
- Survey Engineer Grade I
- Senior Survey Engineer
- Party Chief

To work offshore in any capacity it is necessary to complete a basic offshore safety induction and emergency training (BOSIET) course. This generally includes first aid, safety at sea, the basics of fire and fire fighting and helicopter underwater escape training (HUET). Many survey contractors will supply this training on gaining employment.

- **Medical Fitness**

Offshore workers must undergo and pass a special medical examination. These requirements may vary from country to country, but usually involve a medical leading to a certificate which may be valid for one or more years. The requirements are not unduly onerous for fit and active people but certain common conditions, or previous injuries, can be prohibitive. If in any doubt, interested persons should consult a doctor knowledgeable about offshore standards before they seek work or embark on a course of training.

- **Working Conditions and Prospects**

Survey engineers can expect to work on projects in the offshore industry all over the world. They have to be resourceful, resilient and be able to work both in a team environment and independently.

The most senior post in surveying offshore is often that of Party Chief. The Party Chief has overall responsibility for data acquisition and delivery as well as responsibility for all survey personnel involved in the offshore project. Survey engineers may also move into managerial and technical support roles. Prospects for moving up through the ranks are good and, for the ambitious, there is no limit to what can be achieved.

- **Further information**

IMCA members include organisations that employ survey engineers/technicians and other marine technology specialists.

Find out more about the range of careers available in the offshore survey industry by reading other factsheets in this series and by visiting our website at www.imca-int.com/survey.