



Capacity Building *-Building Talent Across Borders and Seas*

15th NIOHC Meeting
Muscat, Oman

Somnath Marthi
IIC Technologies
Limited, India

- IIC Academy reaching across borders
- Capacity building initiatives
- Our contributions: Recent Case Study



“Capacity building is essentially the development of human capital – that can occur at the individual, institutional and societal level – enhancing skills and knowledge – to achieve sustainable and measurable results.”

*– Gabrielle Groves
(Program Coordinator,
Asian Institute of
Technology)*

VISION

To be an **international** center of excellence in the geospatial sciences

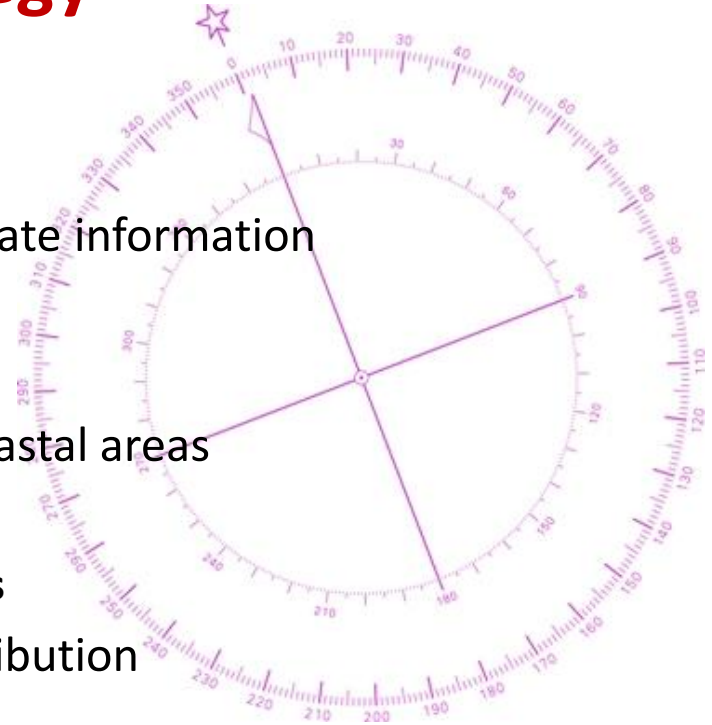
MISSION

To provide world-class accredited programs in the geospatial sciences, and undertake related, applied research that has significant societal and environmental impact



IHO's “Capacity Building” Strategy

- **Three phases of development**
 1. **Maintain existing charts & publications**
 - Improve infrastructure to collect/circulate information
 2. **Creation of a surveying capability**
 - Surveys of ports and approaches
 - Build survey capacity for offshore & coastal areas
 - Work toward hydrographic databases
 3. **Produce paper charts, ENCs and publications**
 - Production, updating, and maybe distribution
- **Four step process**
 - awareness, assessment, analysis and **action**



IIC can catalyze action... to build capacity aligned with IHO strategy

- Cartography
 - S8 Cat 'B' Marine Geospatial Information Course
 - The first S8 recognised course to be fully “portable”
 - Individual modules
 - Short customized courses
- Hydrographic surveys
 - S5 Cat 'B' Marine Geospatial Information Course
 - Individual modules
 - Short customized courses



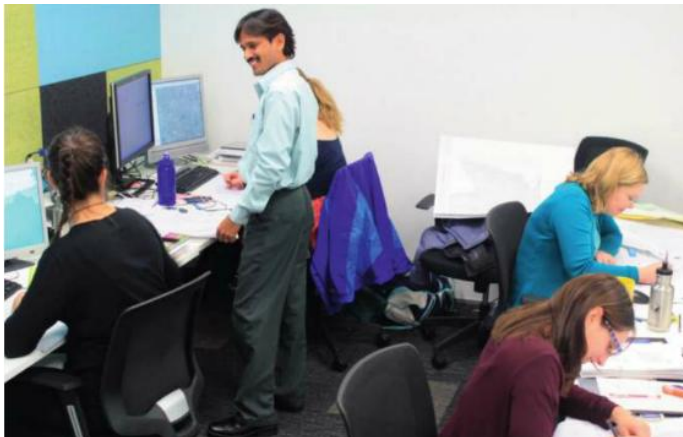
Courses



**S8 Cat 'B' course for Royal Navy Oman
Hyderabad, India**



ENC course at NOAA, USA



Module 4 Cartography, New Zealand



S8 Course KHOA, Korea

Recently completed MBES course, IHO's capacity building initiative



Our Contribution

1

2

3

4

5



Instructors trained
to teach across
backgrounds and
skill levels

Our Contribution

1

2

3

4

5



In-house
Multibeam lab for
initial orientation
prior to actual
survey

Our Contribution

1

2

3

4

5



Practical onboard
survey

Our Contribution

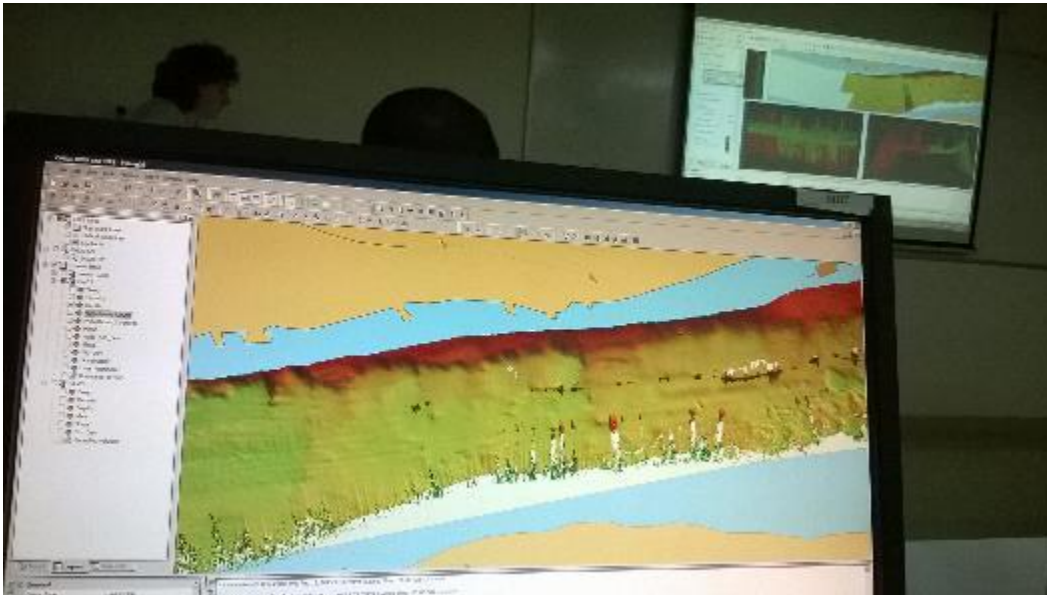
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Hands on data
analysis and QC

Our Contribution

1

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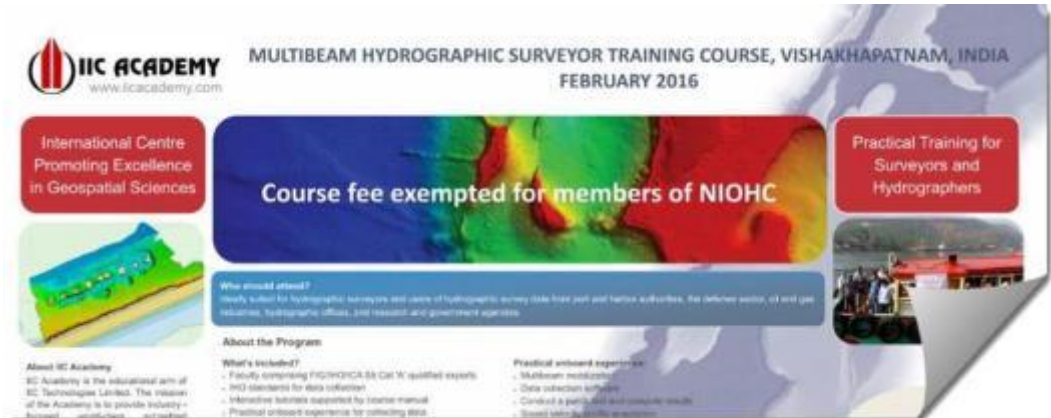


Creating networks,
Building bonds,
building sustainability

Our Contribution

We are committed to IHO's capacity building initiative
We can provide training but also ...

We can provide support and supplementary capacity,
mentoring and advice to support the NIOHC CB Plan



IIC ACADEMY
www.icacademy.com

MULTIBEAM HYDROGRAPHIC SURVEYOR TRAINING COURSE, VISHAKHAPATNAM, INDIA
FEBRUARY 2016

International Centre Promoting Excellence in Geospatial Sciences

Course fee exempted for members of NIOHC

Practical Training for Surveyors and Hydrographers

Who should attend?
Ideally suited for hydrographic surveyors and users of hydrographic survey data from port and harbor authorities, the defence sector, oil and gas industries, hydrographic offices, and research and government agencies.

About the Program

What's included?

- Faculty comprising FIG/NOCSA SA Cat 'A' qualified experts
- IMO standards for data collection
- Interactive seminars supported by lecture material
- Practical onboard experience for collecting data

Practical onboard experience

- Multibeam mobilization
- Data collection software
- Conduct a particular area soundings cruise
- Speed vector and depth corrections

About IIC Academy
IIC Academy is the educational arm of IIC Technologies Limited. The mission of the Academy is to provide industry-focused, practical, and cost-effective training.

Marine Spatial Data Infrastructures For practitioners



IIC offers a one week course

- based on the IHO guidelines in C-17
- based on the content and syllabus from IIC's recognised S8 course



INTERNATIONAL HYDROGRAPHIC ORGANIZATION



**Spatial Data Infrastructures
"The Marine Dimension"**



**Marine Geospatial Information Course
(Portable) S8 Category B Recognised**

FIG/IHO/ICA International Board on
Standards of Competence for Hydrographic Surveyors
and Nautical Cartographers -FBSC.



CERTIFICATE OF RECOGNITION

The FIG/IHO/ICA International Board on Standards of Competence for Hydrographic Surveyors and Nautical Cartographers, having reviewed the programme "Marine Geospatial Information Programme (Portable Delivery)" submitted by the IIC TECHNOLOGIES ACADEMY (INDIA) against the "Standards of Competence for Nautical Cartographers" 5-A (2nd edition) and being satisfied that it meets the requirements prescribed for a category B programme with Specialism 2 "Photogrammetry and Remote Sensing", hereby awards this certificate of recognition for a period of six (6) years.

Signed at Monaco

Prof. Dr. Nicolas Trépo

Chairman of the Board

This day the 17 of April 2014

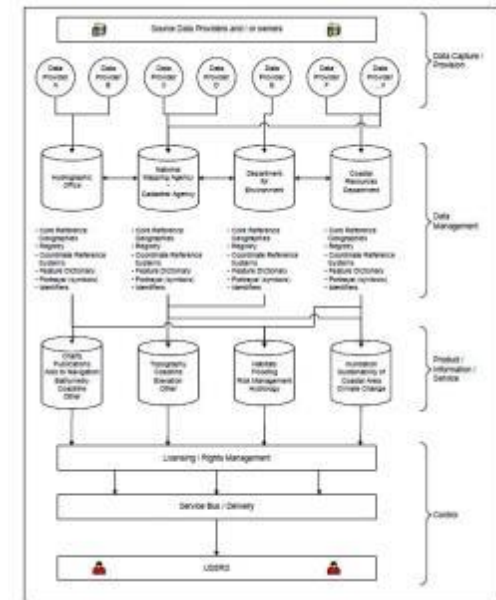
Course Content

Based on IHO Guidance

- C17 recommendations on training (updated to include latest revisions)
- The full C17 workflow
- Relevant subject matter from S8 Standards of Competence
- Exercises in the practical application of implementing an SDI

Case Studies based on live IIC Projects

- National level implementation project
- Regional level implementation
- Port and approaches data management
- Geoid referencing and reconciling datums
- National coastal zone mapping project
- Examples from IIC's topographic projects
- Web serving data



**To be held at the Academy
Early 2016**

Course fee exempted for members of NIOHC



Thank You

