

Acknowledgements

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Introduction

- Background – the need for a new training paradigm in Hydrography
- Concept and Objectives of the Hydrographic Academy
- Team structure: who and why
- Education and Qualifications Models
- Practical training and Blended Learning
- Enterprise e-Learning
- Accreditation
- Planned timelines and HA launch
- Advantages and Disadvantages
- Summary

Background

- Accredited, formal hydrographic training has always been classroom-based
- Student has always required to go to the training
- Very few academic institutions conduct formal hydrographic courses
- Resource is forced into becoming an overhead, or lost altogether
- Damaging for an industry reliant on a high proportion of field staff:
 - They can seldom afford to lose people for protracted periods
 - Cost is not always the discriminator; time is
 - Lack of career professional development is very erosive
 - Leads to a high turnover of otherwise content staff
 - Expensive and disruptive
- The industry thus has a hard time keeping its people

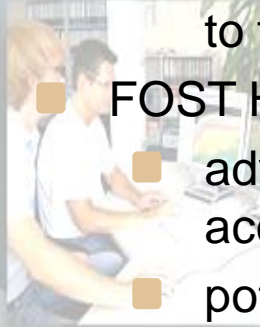
Concept – the Hydrographic Academy -



- Designed to meet the needs of the global Hydrographic industry
- NOT a Fugro-exclusive product!!
- Delivery of material from accredited courses primarily through distance and online learning techniques
- Academic credit linked for educational flexibility
- Undergraduate routes to IHO Cat B/Foundation degree (idc)
- Postgraduate routes to IHO Cat A/PG Diploma (idc)
- Industry, Academia and Governmental equal-share team partnership
- Designed to expand collaboration internationally
- Designed to be modular to suit both pure hydrography and needs for related disciplines and marine industries
- Cost-effectiveness is far reaching when all parameters considered
- Students may enroll individually but goal is for industry support for their staff

Teaming of Key Components

- A combination of academia (PU), Government (FOST-HM) and Industry (Fugro)
- PU provides:
 - personnel required to facilitate development of e-learning materials
 - produces e-learning material at an appropriate standard for academic and professional accreditation
 - formally registers students, and provides appropriate academic support to facilitate successful completion of their studies.
- FOST HM provides:
 - advice and assistance, particularly regarding gaining professional IHO accreditation for the courses where possible
 - potential to provide the resources necessary to deliver the practical training modules



Teaming of Key Components

- Fugro provides:
 - the technological platform access to the Mohive LPS
 - assistance with development and marketing of the courses
 - providing appropriate guidance from the industry's perspective
 - a small group of students for the 'pilot' of each academic module prior to full market offering
 - assistance with marketing and advertising as required

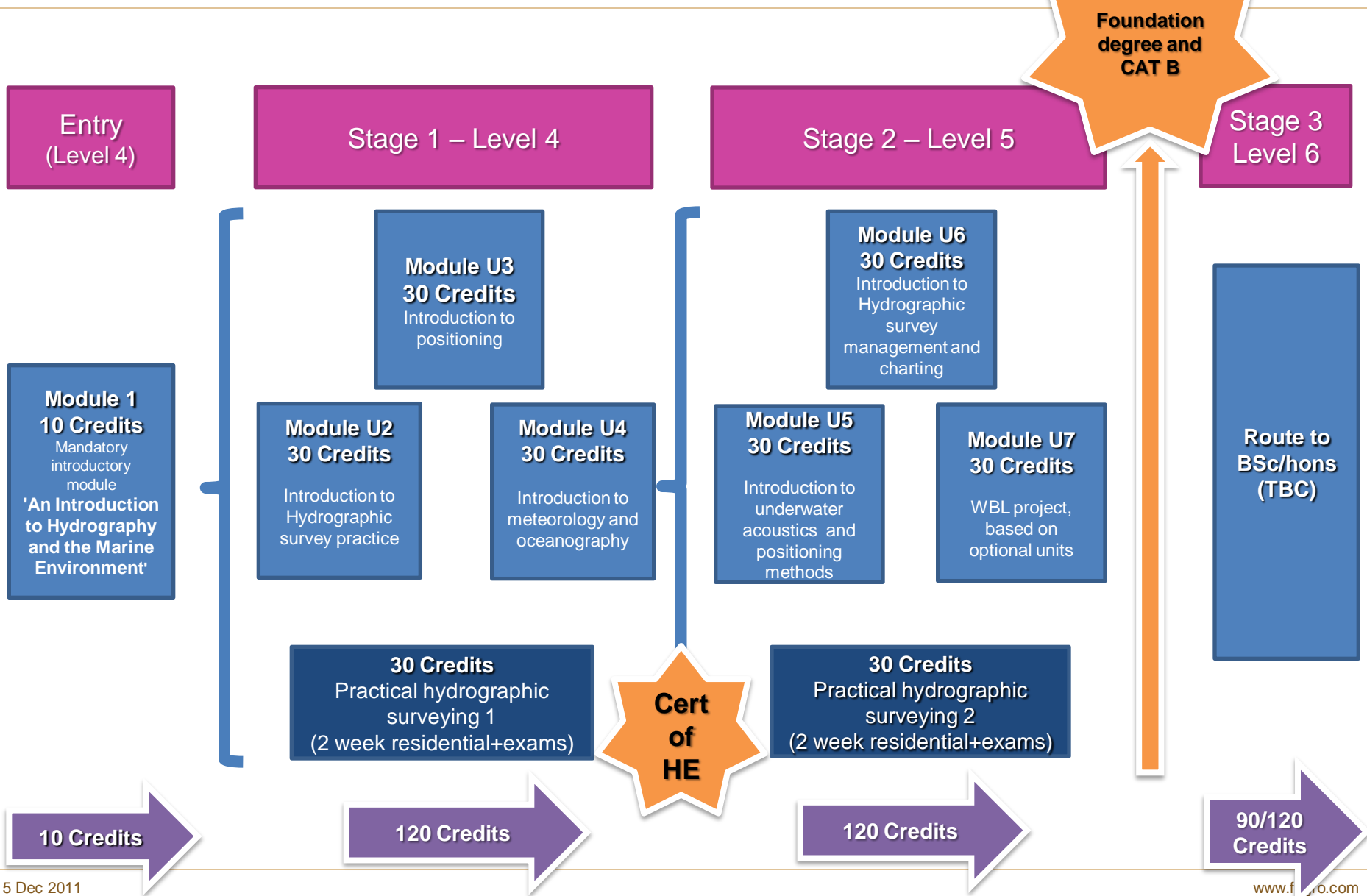
Objectives of the HA Project

- To establish a tight, small team of internationally-recognised organisations to provide:
 - a fully developed programme of e-learning modules
 - practical training and supervised final exam preparation, conduct and accreditation.
- To develop and deliver a web-based e-learning programme based in part on the already-established Fugro Academy.
- To capture a 'student' market within the hydrographic industry that is not currently being provided for with regard to structured education, qualification and CPD.
- To market the educational package and certification industry-wide.

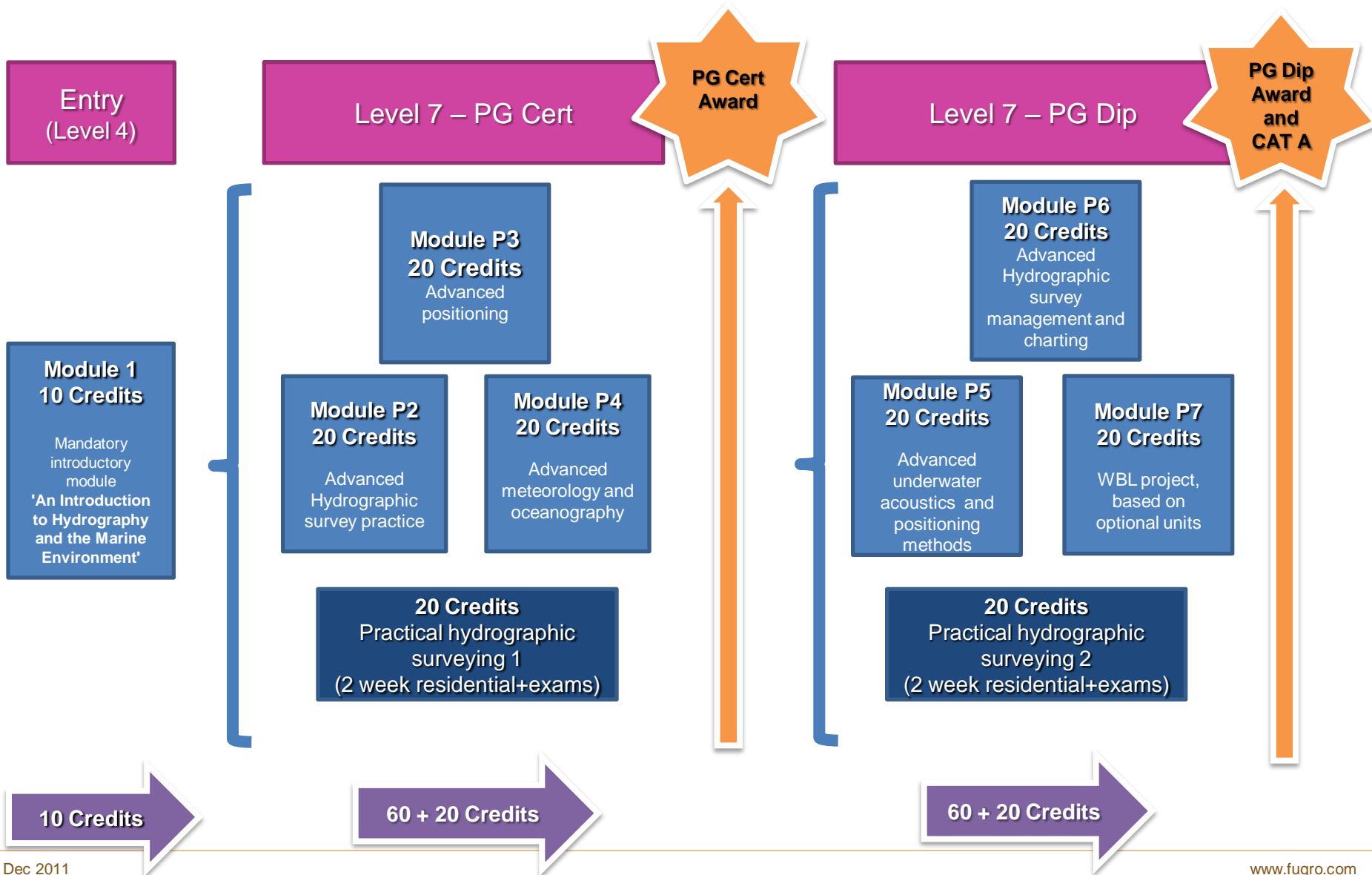
Education and Qualifications Model

- Based on the IHO S5 syllabi
- A progressive model allowing students to participate and advance according to their domestic and work situation
- Modular throughout the structure with key stage development phases
- Undergraduate and postgraduate routes
- Interrogative enrollment process to establish student's background and pre-course experience/abilities
- Common introductory module
- Not any degree warrants a postgraduate route:
 - Preferably earth-science or maths based
 - Arts based degree students will be ranked regarding their current and previous employment/experience in the industry

Undergraduate Route

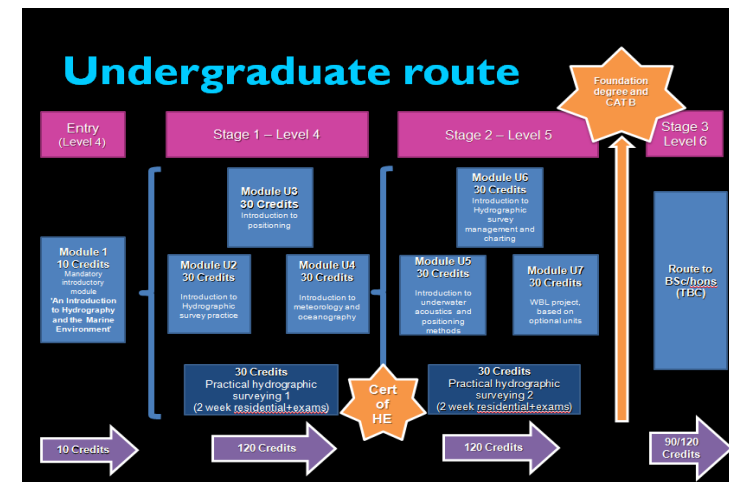


Postgraduate Route



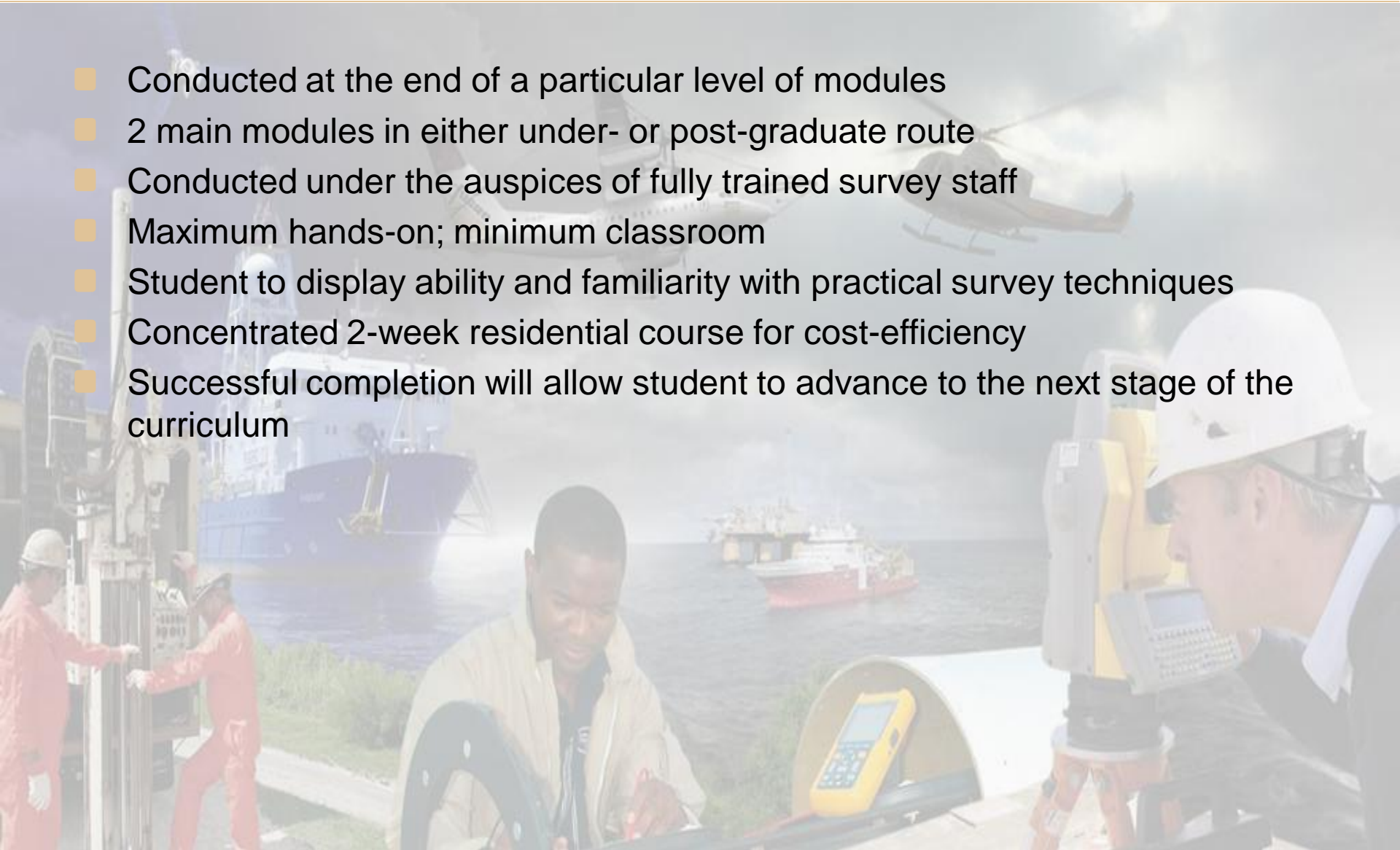
Education and Qualifications Model

- Modules designed to promote interaction with nominated tutors for a particular course
- Entry Module is mandatory irrespective of qualifications or background
 - Contains non-technical, e-learning instructional techniques and introduction to the learning process
- Levels referred to are based on national guidelines followed by the PU:
 - Level 4 are undergraduate studies
 - Level 5 are national academic and professional diploma-level tuition
 - Level 6 are advanced professional diploma levels
 - Level 7 are postgraduate studies



Practical Training Integration

- Conducted at the end of a particular level of modules
- 2 main modules in either under- or post-graduate route
- Conducted under the auspices of fully trained survey staff
- Maximum hands-on; minimum classroom
- Student to display ability and familiarity with practical survey techniques
- Concentrated 2-week residential course for cost-efficiency
- Successful completion will allow student to advance to the next stage of the curriculum



Blended Learning

- Students in e-learning risk being or feeling isolated
- Blended Learning principles will be applied
- Encourages regular student-tutor and student-student interaction
- Student is made to feel part of the University/Academy culture
- Provides additional site access to 'feel' part of the regular student base
- Shown in studies to improve:
 - Overall academic achievement
 - Retention rates
 - Completion of courses of study
 - Overall student satisfaction with the learning experience
- Study timetables will be flexible enough to allow fully employed students to adequately pace their progress
- Academic credits for some modules available through work-based learning (WBL)

Enterprise e-Learning

- Fugro has invested already in enterprise software and web services
- E-learning in Fugro Academy comprises 2 main elements:
 - Course authoring software package
 - Learning Management System (LMS)
- Fugro's experience in this field was highly valuable to PU
- Pages on the PU's own server will provide access to the student base
- 'Badging' on the HA website will highlight the academic partner aspects of the program
- Staff permissions will be created for access to more materials as reqd.

Course Authoring Package

- Web-based collaborative package
- Allows project team to design and manage modular e-learning
 - Templates for easy course pages, ingestion of multimedia etc
 - QC functions include logic and audit trails to ensure correct study workflow is followed
 - Flash-based delivery format affords better content security
- Similar technology is used for common online questionnaires and quizzes from industry, media and academia

Learning Management System

- Allows access to subscribed modules only for the student
- Dual-aspect has module participation and monitoring functions which provides:
 - both student and tutor portals
 - Managerial oversight
 - Student support from nominated tutor
 - Student assessment/evaluation
 - Financial administration
 - Formal examinations
 - Built-in tracking facilities



Accreditation – Professional Body

- Accreditation with the IHO is a principal objective
- Currently ongoing; hoped to have in place before first students qualify
- HA presents unique challenges to traditional hydrographic professional bodies
- Various proofs need to be demonstrated beyond that required for classroom
- Very positive response received to date however includes:
 - Royal Institute of Chartered Surveyors (RICS)
 - Institute of Marine Engineering, Science and Technology (IMarEST)
 - Chartered Institution of Civil Engineering Surveyors (ICES)
- ... all of whom run their own accreditation schemes/welcome formal education for the offshore industry

Accreditation - Academic

- Modules will be offered on a rolling basis as they are designed
- Fugro has invested in a cadre of student 'guinea pigs' to complete and conduct a critical appraisal of each module prior to general distribution
- Also designed to gain rapid PU academic approval
- Every module carries internationally-recognised academic credits
- High catch net irrespective of professional accreditation
- Students will attain Foundation degree (undergrad) or PG Dip (postgrad)
- Students wishing to complete only one or two modules will still receive their credits for those modules

HA Program Advantages

- Resources remain as resources to their employers
- Hugely cost-effective approach to the alternatives
- Available to a very large potential student population
- Attractive for buy-in by other marine-related organisations
- Model can be used by other industry disciplines with similar high field staff %ages
- Ditto Military and associated agencies
- Degree of travel, accommodation and expenses kept to an absolute min
- Practical training concentrated and very specific/pertinent to course
- E-learning material also available to the academic partners for their own inclusive student bases
- Wide range of material available through mutual collaboration



HA Program Disadvantages

- Its new
- Its different
- It could be perceived as a threat by established academic institutions
- It could be perceived as a device for educating one's competitor's workforce
- It will rely on the enrollment of the right student with the right approach
- It will rely on acceptance by industry as the way to use their training margins effectively
- It will rely on industry buy-in to invest in their people



Summary

- Continuous Professional Development is the key rationale
- We (the industry) are not very good at it currently
- CPD is people investment and will arrest loss of our best young people (the future)
- Approved structure; modular approach is key to gaining recognition and building a large student base
- Student base for HA are the ones NEVER likely to have the chance to attend formal hydrographic education
- Web-based scheme with physical backups designed to reach maximum catchment
- Taking the education to the student is enormously more cost-efficient for all
- HA will be available globally
- Our most valuable resources do not become overheads for their employers



The
Hydrographic Academy

Play video

HA promotional video



