

ROV CURRICULUM WORKSHOP

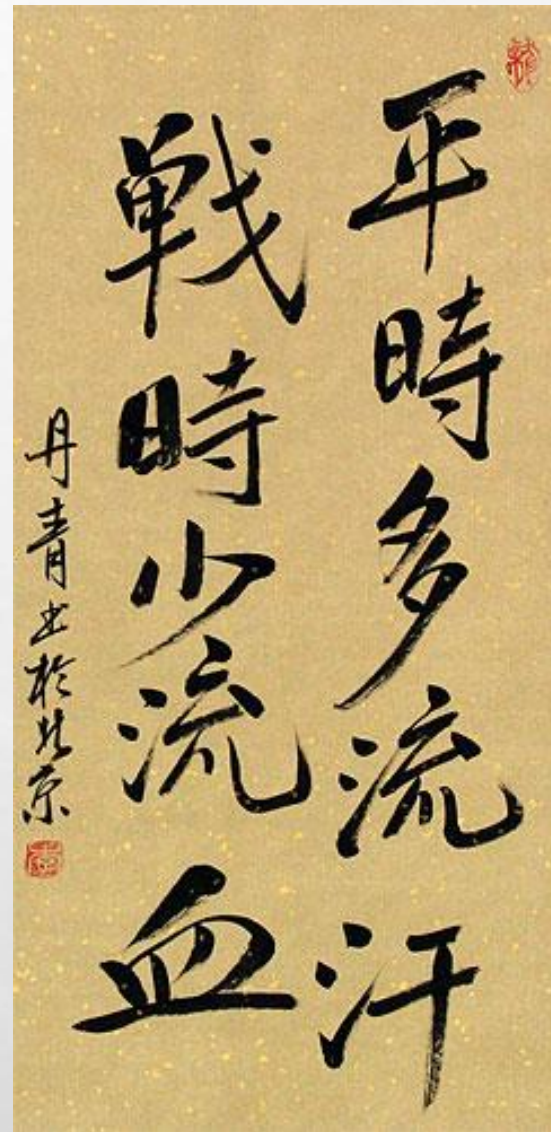
MATE

SEPTEMBER 19, 2014



CHINESE PROVERB:

- **MORE SWEAT IN TRAINING**
- **LESS BLEEDING IN BATTLE**



PREMISE

- **ROV INDUSTRY NEEDS WELL-TRAINED TECHNICIANS**

- **DISCUSSIONS WITH ROV OPERATORS**
- **IMCA REPORTS**
- **BRAZIL, WEST AFRICA, NORTH SEA...**
- **HIGH DEMAND**

- **INADEQUATE SUPPLY OF ROV TECHNICIANS**

- **JOB ADS**
- **LOW SUPPLY**



HIGH DEMAND + LOW SUPPLY



INADEQUATE LABOUR SUPPLY COSTS

- **INABILITY TO RESPOND TO OPPORTUNITIES IN TIMELY FASHION**
- **OVERTIME COSTS**
- **OVERWORK FOR A FEW**
- **HIGHER WAGES**
- **COMPANIES RAID EACH OTHER FOR SKILLED PERSONNEL**
- **LOWER PROFITABILITY**
- **LACK OF YOUNG BLOOD TO FILL GROWTH NEEDS**
- **POOR ADVANCEMENT PROSPECTS (NEED REPLACEMENTS)**

SOLUTION... TRAINING

- **TRAIN NEW ROV TECHNICIANS, INCREASE SUPPLY**
- **ISSUES**
 - **ATTRACT YOUNG PEOPLE TO INDUSTRY (MATE)**
 - **KNOWLEDGEABLE TRAINERS**
 - **FACILITIES**
 - **EQUIPMENT**
 - **MONEY**
- **“IT TAKES A VILLAGE “**
 - **ACADEMIA, GOVERNMENT, INDUSTRY**



STANDARD CAREER DEVELOPMENT PROCESS

School



```
graph TD; A[School] --> B[Specialized Education/Training]; B --> C[First Job in Field]; C --> D[Career];
```

The diagram illustrates a four-stage career development process. It begins with 'School' in a red box, followed by 'Specialized Education/Training' in a dark grey box, then 'First Job in Field' in a green box, and finally 'Career' in a teal box. Each stage is connected to the next by a downward-pointing arrow, indicating a sequential progression. The boxes are arranged in a descending staircase pattern from top-left to bottom-right.

**Specialized
Education/Training**

First Job in Field

Career

STANDARD CAREER DEVELOPMENT PROCESS

School



```
graph TD; A[School] --> B[Specialized Education/Training]; B --> C[----- GAP -----]; C --> D[Career];
```

The diagram illustrates a four-stage career development process. It begins with 'School' in a red box, followed by 'Specialized Education/Training' in a dark grey box. A white box labeled '----- GAP -----' indicates a transition period. The final stage is 'Career' in a teal box. Red arrows connect the boxes in a downward sequence. The entire process is set against a background of a mountain range.

**Specialized
Education/Training**

----- GAP -----

Career



MIND THE GAP

- **CATCH 22...**
 - **NO JOB WITHOUT EXPERIENCE BUT CAN'T GET EXPERIENCE WITHOUT JOB**
- **BARRIERS**
 - **GOVERNMENT PROTECTIONISM AFFECTS A GLOBAL INDUSTRY**
 - **LIMITED BERTH SPACE**
 - **PENNY-WISE, POUND-FOOLISH (COSTS TOO MUCH TO TRAIN PROPERLY)**

HOW DOES A YOUNG PERSON GET STARTED IN ROV INDUSTRY?

- **AGAIN, IT TAKES A VILLAGE**
 - **ACADEMIA**
 - **GOVERNMENT**
 - **INDUSTRY**
- **WHO GAVE YOU A BREAK FOR YOUR FIRST JOB?**



ROV TECHNICIAN SKILLS

- **ROVS INCORPORATE A BROAD RANGE OF SYSTEMS**
 - **ELECTRICAL/ELECTRONICS MAINTENANCE/REPAIR**
 - **MECHANICAL/HYDRAULIC MAINTENANCE/REPAIR**
- **ROV OPERATIONS**
- **TEAMWORK**
- **COMMUNICATION SKILLS**
- **ATTITUDE**
 - **SAFETY**
 - **CAN-DO!, ENTHUSIASTIC**
 - **GET ALONG WITH OTHERS – PERSONALITY**
- **MUCH MORE THAN JUST PILOTING!**

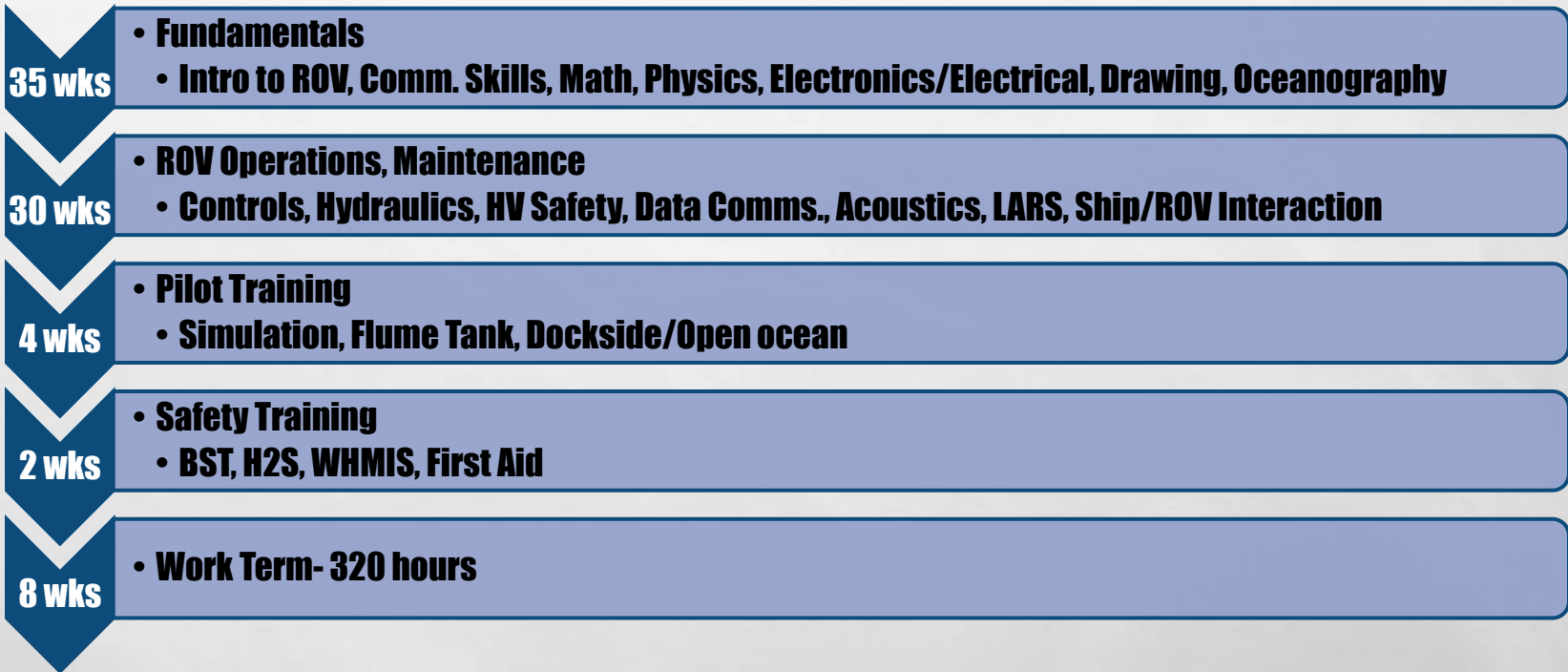


EDUCATION, TRAINING, OR BOTH

- **ENGINEERING TECHNICIAN TRAINING IN CANADA**
 - **TYPICALLY TWO YEARS**
 - **INTERNATIONALLY RECOGNIZED ENGINEERING TECHNICIAN CERTIFICATION**
 - **DUBLIN ACCORD - AUSTRALIA, CANADA, IRELAND , KOREA, NEW ZEALAND, SOUTH AFRICA, UNITED KINGDOM, UNITED STATES.**
- **PRACTICAL SKILLS COUPLED WITH THEORY**



MI ROV TECHNICIAN TRAINING (2-YEARS)



MI ROV TRAINING PROGRAM STATUS

- ✓ **OPERATIONAL SINCE 2006**
- ✓ **FACULTY, FACILITIES, EQUIPMENT, GOVT. SUPPORT**
- ✓ **30-40 NEW STUDENTS EACH YEAR**
- ✓ **INTERNATIONAL STUDENT BODY**
- ✓ **LADDERING TO BACHELOR/MASTERS DEGREES**
- ✓ **SEEKING ACCREDITATION/CERTIFICATION**
- ✓ **POSITIVE RESPONSE ON PLACED GRADUATES**
- **CHALLENGE: WORK TERM PLACEMENT**
 - **NEED COOPERATION... ACADEMIA, INDUSTRY, GOVERNMENT**



ROV TRAINING VISION...

- **ESTABLISH A GLOBAL STANDARD FOR ROV TECHNICIAN TRAINING**
- **ESTABLISH A NETWORK OF ACADEMIC INSTITUTIONS DELIVERING ROV TRAINING**
 - **SHARE CURRICULUM**
 - **SHARE BEST PRACTICES**
- **WORKING WITH INSTITUTIONS IN BRAZIL, USA**
- **IN DISCUSSION WITH UK, NORWAY**



BRAZIL EXAMPLE

- **LARGE OFFSHORE DEVELOPMENT (PRE-SALT)**
 - **DEEP WATER (ROV INSTALLATION & MAINTENANCE)**
- **BRAZIL WANTS TO MAXIMIZE LOCAL CONTENT BUT...**
 - **INSUFFICIENT TRAINED ROV TECHNICIANS**
- **APPROACH**
 - **PARTNER WITH USP FOR JOINT PROGRAM DELIVERY**
 - **TECHNOLOGY TRANSFER TO ENABLE USP TO DELIVER WHEN READY**
- **STATUS**
 - **AWAITING FUNDING CONFIRMATION**



DISCUSSION/QUESTIONS

