

MARITIME EDUCATION, TRAINING, RESEARCH & INNOVATION (METRI) VIRTUAL SUMMIT: *IMPLICATIONS FOR EDUCATION, WORKFORCE DEVELOPMENT AND TRAINING*

SESSION 1 REPORT OUT

1. NED MORAN/KELLY CURTIN

- SHORESIDE:
- SUPPLY CHAIN LOGISTICS
- INTERNET OF THINGS (IOT) - INCLUDING INTEGRATION, DATA ANALYSIS AND DECISION MAKING
- AFLOAT:
- THE BASICS OF IOT
- ENGINEERING TECHNOLOGY
- TUGBOAT DECK OPERATIONS
- SMALL BOAT HANDLING EXPERIENCE
- INTEGRATED ELECTRONICS TRAINING AND WHEELHOUSE (BRIDGE) SKILL ASSESSMENT



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- BOTH SHORESIDE AND AFLOAT PERSONNEL:
- CYBER SECURITY
- AUTOMATION – REMOTE OPERATION
- RISK ASSESSMENT, RISK ANALYSIS AND DECISION MAKING
- SAFETY MANAGEMENT SYSTEMS AND AUDITING
- BEHAVIOR BASED SAFETY
- INTERPERSONAL RELATIONSHIPS, LEADERSHIP, TEAM-WORK, AND COACHING IN A NEW-VIRTUAL WORLD



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2. DR. ELIZABETH C. MCNIE

SUMMARY: AUTONOMOUS & REMOTE OPERATIONS TRAINING AND RESEARCH AT THE US MARITIME ACADEMIES

- VERY LIMITED USE OF A&RO TECHNOLOGY
- TRAINING/COURSES IN INFANCY
- RESEARCH (DECK SIDE) LIMITED BY RESOURCES AND FOCUS ON TEACHING
- CURRENTLY MORE BARRIERS TO A&RO THAN SUPPORT FOR IT

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- NEED FOR GREATER INVOLVEMENT BY MARAD
 - RESEARCH AND TECHNOLOGY GRANTS
 - TESTING GROUNDS, TEST CENTERS
 - EDUCATION, CONFERENCES
- US ACADEMIES PERCEIVED TO BE 'BEHIND' PEERS
- COOPERATION BETWEEN ACADEMIES VERY LIMITED - IF ANY



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3. GREGG TRUNNELL

- THE TRADITIONAL MARITIME CLASSROOM MAY WELL BE A THING OF THE PAST WITHIN THE NEXT 5 YEARS.
- NEW METHODOLOGIES OF TRAINING SUCH AS
DISTANCE LEARNING,
BLENDED LEARNING,
COMPUTER BASED TRAINING,
CLOUD SIMULATION,
AND VIRTUAL REALITY, WILL SOON DOMINATE THE MARITIME TRAINING LANDSCAPE.



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- WITH THE TECHNOLOGICAL ADVANCES, WE WILL NEED TO NOT ONLY TRAIN UTILIZING THE NEW TOOLS, WE WILL NEED TO BE TRAINED ON THE MOST EFFECTIVE WAY TO WORK WITH THOSE TOOLS.
- THIS WILL BE EXTREMELY APPARENT, AS WE MOVE FORWARD WITH AN AUGMENTED REALITY AND EVENTUALLY AN AUTONOMOUS BRIDGE.
- WITH THESE INCREDIBLE TOOLS AT OUR DISPOSAL, WE IN THE MARITIME EDUCATION COMMUNITY, NEED TO POOL RESOURCES AND COLLABORATE. A TOOL IS ONLY AS GOOD AS THE USER OR THE CONTENT. LET'S WORK TOGETHER TO DEVELOP CONTENT THAT WILL UTILIZE THE TECHNOLOGY TO ITS FULLEST POTENTIAL AND MAKE A SIGNIFICANT IMPACT ON THE COMPETENCY OF TODAY'S MARINER.



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4. STEVEN POLK

- VIRTUAL REALITY (VR) / AUGMENTED REALITY (AR)
- ARTIFICIAL INTELLIGENCE (AI) / DECISION SUPPORT TOOLS
- SHARING RESOURCES / MODELS, DATABASES, EXERCISES
- VESSEL CREWS WILL NEED STRONG IT SKILLS
- TRAIN ANYWHERE AND AT ANYTIME