

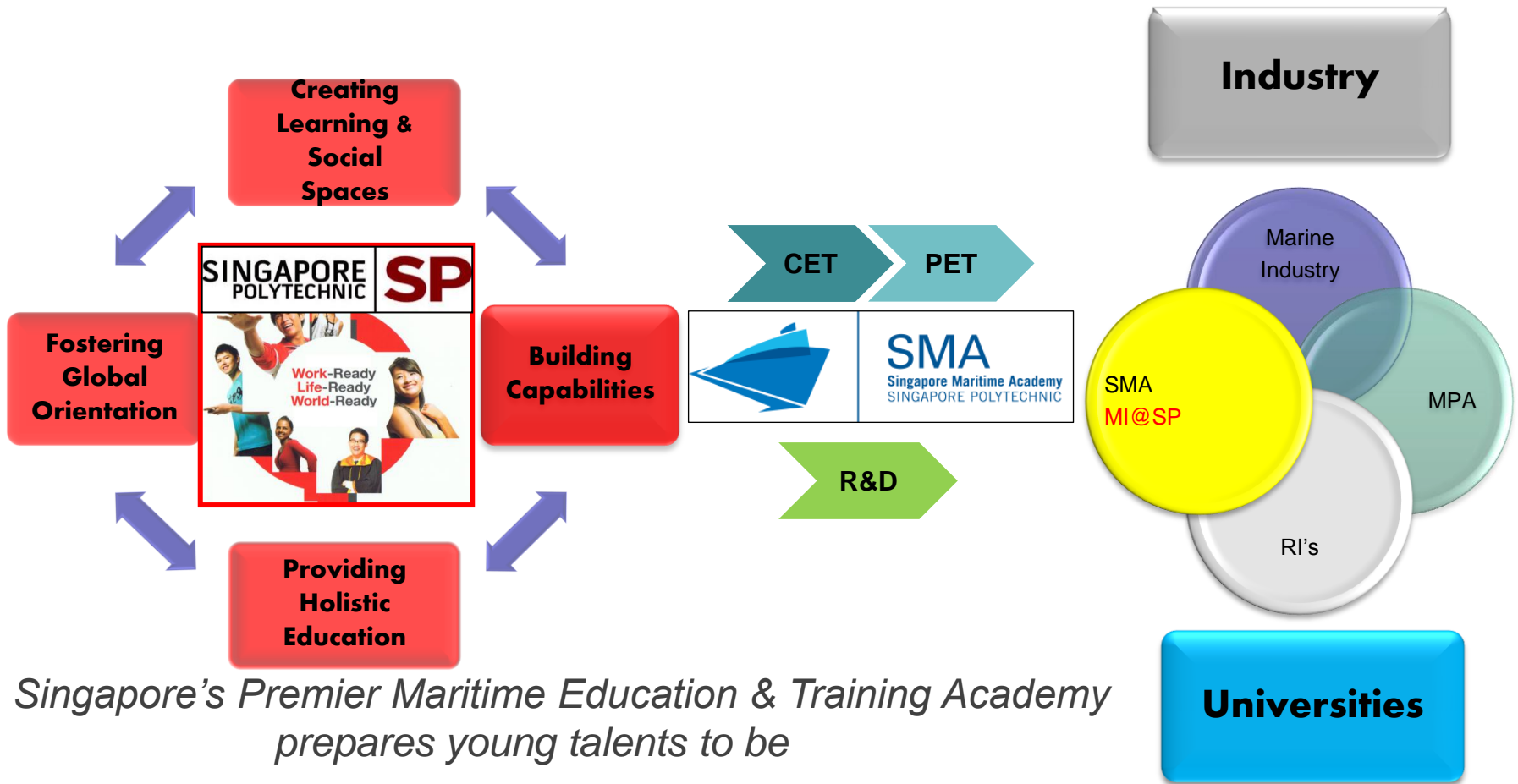


MI@SP



Our Frontier: ↗ Marine Education & Training
↗ Applied Research

Education and Training (Marine)



Singapore's Premier Maritime Education & Training Academy prepares young talents to be

Work-Ready, Life-Ready and World-Ready





Course Matters

SMA 3 diploma courses (PET):

- Diploma in Nautical Studies (DNS)
- Diploma in Marine Engineering (DMR)
- Diploma in Maritime Business (DMB)

Deck and Marine Engineer Officer Courses (CET):

- Certificate of Competency (CoC) – All Classes
- Chief Mates (Special Limits) Course
- STCW 95 & other short courses
- SSSTC (SMA –SMTC Safety Training Centre) – Offshore Safety Courses





Courses offered by SSSTC (SMA & SMTC Global Safety Training Centre)

- TBOSIET (Tropical Basic Offshore Safety Induction & Emergency Training) with EBS & TSBB
- BOSIET (Basic Offshore Safety Induction & Emergency Training) with TSBB
- TFOET (Tropical Further Offshore Emergency Training) with EBS & TSBB (offered weekly on demand basis)
- FOET (Further Offshore Emergency Training) with TSBB (offered weekly on demand basis)
- HUET EBS (Helicopter Underwater Escape Training , Emergency Breathing System)
- TSBB (Travel Safely By Boat)
- BOSIET BRIDGING





Training Tank @ Poly Marina



E-Learning @ SMA





Certificate of Competency (CoC) On-line Courses (e-CoC)


•Class 5
Marine Engineering e-CoC

•Class 3
Deck e-CoC.

• FT Diploma Courses -
“Blended Learning ”



Class 5 Certificate of Competency (CoC 5)



**WORLD CLASS COMPETENCY
CoC CLASS 5**

Class 5 CoC - e-Learning


e-Learning is a planned teaching/learning experience using a wide spectrum of technologies, mainly internet or computer-based, to reach learners at a distance. Maritime eLearning provides for seafarers and others employed in shipping and other maritime industries.

Highlights

- Learning wherever and whenever - 24/7
- Study at your own pace
- Up-to-date materials prepared by experts
- Blended learning using state-of-the-art technologies
- Access to e-Coaching
- Computer based testing when you're ready
- Thorough preparation for higher qualification
- Build your own electronic portfolio of progress
- Study in Singapore, THE maritime hub
- Become a Singapore Maritime Academy Graduate

Singapore Maritime Academy (SMA) was formed by the merger of the Maritime Technology and Transportation Department of the Singapore Polytechnic and the National Maritime Academy of the Maritime and Port Authority of Singapore.



Teledata Marine Solutions is the world leader in maritime products, services and solutions for training institutions, corporates, ship owners, ship managers, ports, administrations, freight forwarders and many more.




**SMA - TMS
eLearning Programme**

e-Learning certification solution

Question?
Email us today
enquiry@e-learning.com.sg
enquiry@teledatasolutions.com
Tel: 65 63 45 00
65 63 45 01



Class 3 Certificate of Competency (CoC 3)



**WORLD CLASS COMPETENCY
CoC CLASS 3**

Class 3 CoC - eLearning


eLearning is a planned teaching/learning experience using a wide spectrum of technologies, mainly internet or computer-based, to reach learners at a distance. Maritime eLearning provides for seafarers and others employed in shipping and other maritime industries.

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**SMA - TMS
eLearning Programme**

eLearning certification solution

Question?
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enquiry@e-learning.com.sg
enquiry@teledatasolutions.com
Tel: 65 63 45 00
65 63 45 01



E-Learning @ SMA



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Singapore Maritime Academy
SINGAPORE POLYTECHNIC

The Maritime Innovation & Development Centre aims to provide IT-related services to Maritime Industries. Emulators and computer based training are used by student and industry players.

**FEATURED EMULATORS / COMPUTER BASED / WEB
BASED TRAINING SOFTWARE**

SHIP HANDLING

STARTING AIR SYSTEM

OIL PURIFIER

STORM NAVIGATION



**SINGAPORE
POLYTECHNIC**



Some of SMA's Projects



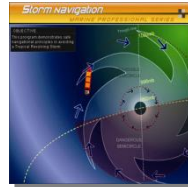
SMA
Singapore Maritime Academy
SINGAPORE POLYTECHNIC

Deck Officer's Training Programmes



Ship Handling

A comprehensive study of ship manoeuvres, propulsion, interaction, effect of wind, current and tugs on berthing & unberthing.



Storm Navigation

Storm navigation highlights the basic principles to be followed when navigating in or near a Tropical Revolving Storm.



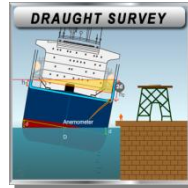
Deck Log Book

Explains the purpose of the deck log book and provides support to new watchkeeping and duty officers in updating the log book during their watch.



Magnetism

This program demonstrates abstract concepts on magnetism and the principles related to the correction of the ships compass.



Draught Survey

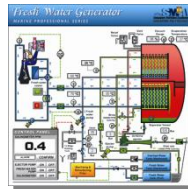
This program aims to train the user on how to effectively conduct Draught Survey and assists the surveyor with a Draught Survey Generator program.

Engineering Officer's Training Programmes



Starting Air System

Explains the manoeuvring of SMC engine, from remote and local control. It also includes a section on maintenance and troubleshooting.



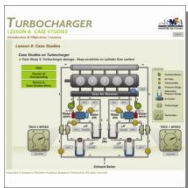
Fresh Water Generator

Explains the working principle of a fresh water generator. It includes a simulator that allows a user to start and optimise production of fresh water.



Engine Log Book

Explains the purpose of the engine log book and provides support to new watchkeeping and duty engineers in updating the log book during their watch.



Turbocharger

Explains the working of a turbocharger, its maintenance, evaluation of its performance and an emergency operation if the turbocharger is damaged.



Steam Turbine

A comprehensive learning tool to understand the factors affecting a Steam Turbine Plant's efficiency and methods used to optimise it.



Air Compressor

A comprehensive performance support system for operation and maintenance of air compressor and its electrical control system.



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SMA Collaborations

(Companies)

MOUs / MOAs:

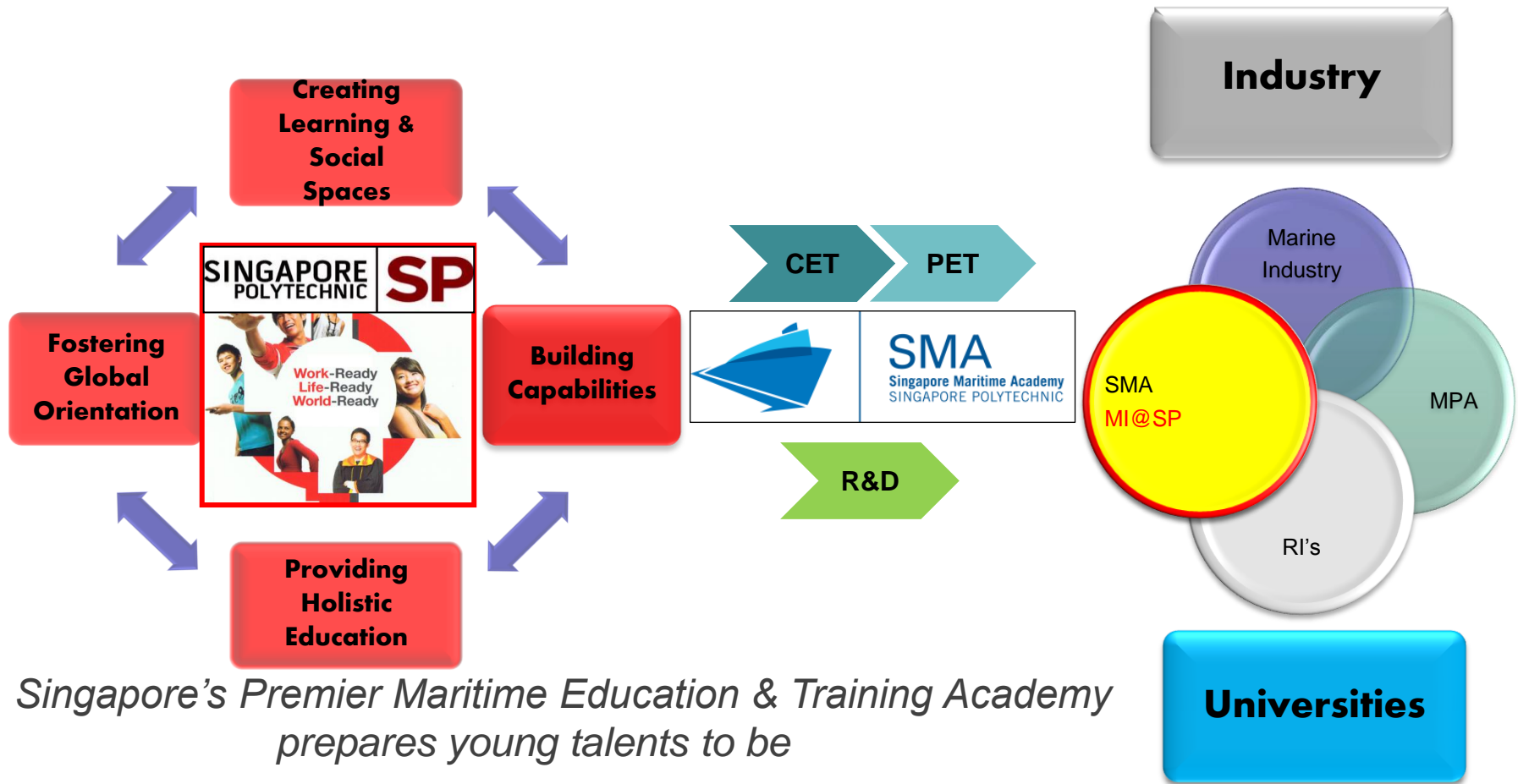
- SingTel Satellite (Singapore)
- SMTC Global Inc. (Brunei)
- FORCE Technology (Denmark)

MOUs / MOAs:

- Dalian Maritime University (China)
- Maritiem Instituut Willem Barentsz, MIWB (The Netherlands)
- Chung Ang University (Korea)
- Toba National College of Maritime Technology (Japan)
- Oshima National College of Maritime Technology (Japan)
- Tokyo University of Marine Science & Technology (Japan)
- Far Eastern State Technical Fisheries University (Russia)
- Aarhus Maskinmester Inst (Denmark)
- The State University of New York (USA)
- Plymouth University (UK)



Education and Training (Marine)



Singapore's Premier Maritime Education & Training Academy prepares young talents to be

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Our Organisation



Our Workplan

	Technology area	Sub-focus	Year 2013				Year 2014				Year 2015			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Simulation	Simulation													
		Motion Platform Simulator												
		Risk Management & Human Factor												
	Ship Modeling													
	Policies & Guidelines													
		Vessel's Behavior in Congested Waterways												



MI@SP – ISC/SMART Centre



ISC

One Stop Centre
for
Maritime Simulation
based
Research & Development
and
Training



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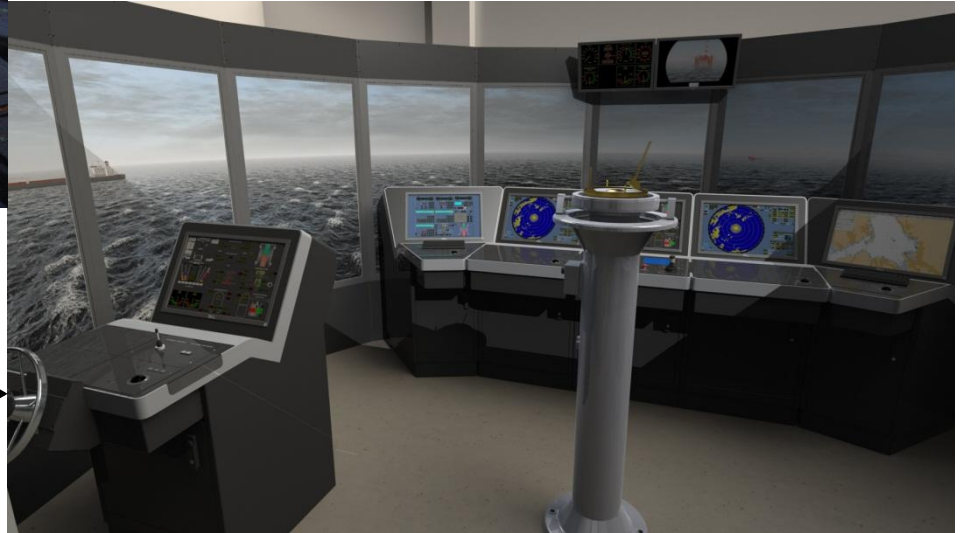


Upgrading of Navigation / Ship Handling Simulation Bridges



Limited Field of View

Enhanced Field of View to support R&D



Upgrading of DP Simulation Bridge



Limited to Certification Training



Able to support full spectrum of Offshore assets in support of Operational R&D



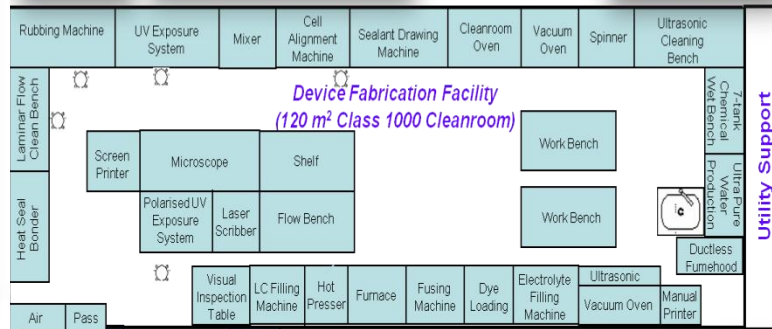
	Technology area	Sub-focus	Year 2013				Year 2014				Year 2015			
			Q1*	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Engineering Research	<u>Advanced Materials</u>													
		Anti-fouling paint and coating												
	Composites for marine applications													
	<u>Energy & Technology</u>													
		Micro-Grid power management system												
	Engine performance													
	<u>Green Engineering Research</u>													
		Fuel management												
		Pollution Control												
	<u>Robotics & Automation</u>													
		Port Automation												
	<u>Intelligent/ Engineering Systems</u>													
Security and Safety														



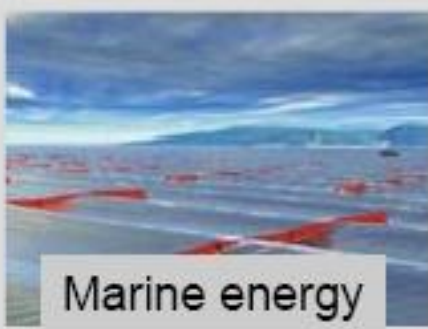
Advance Material Technology Center



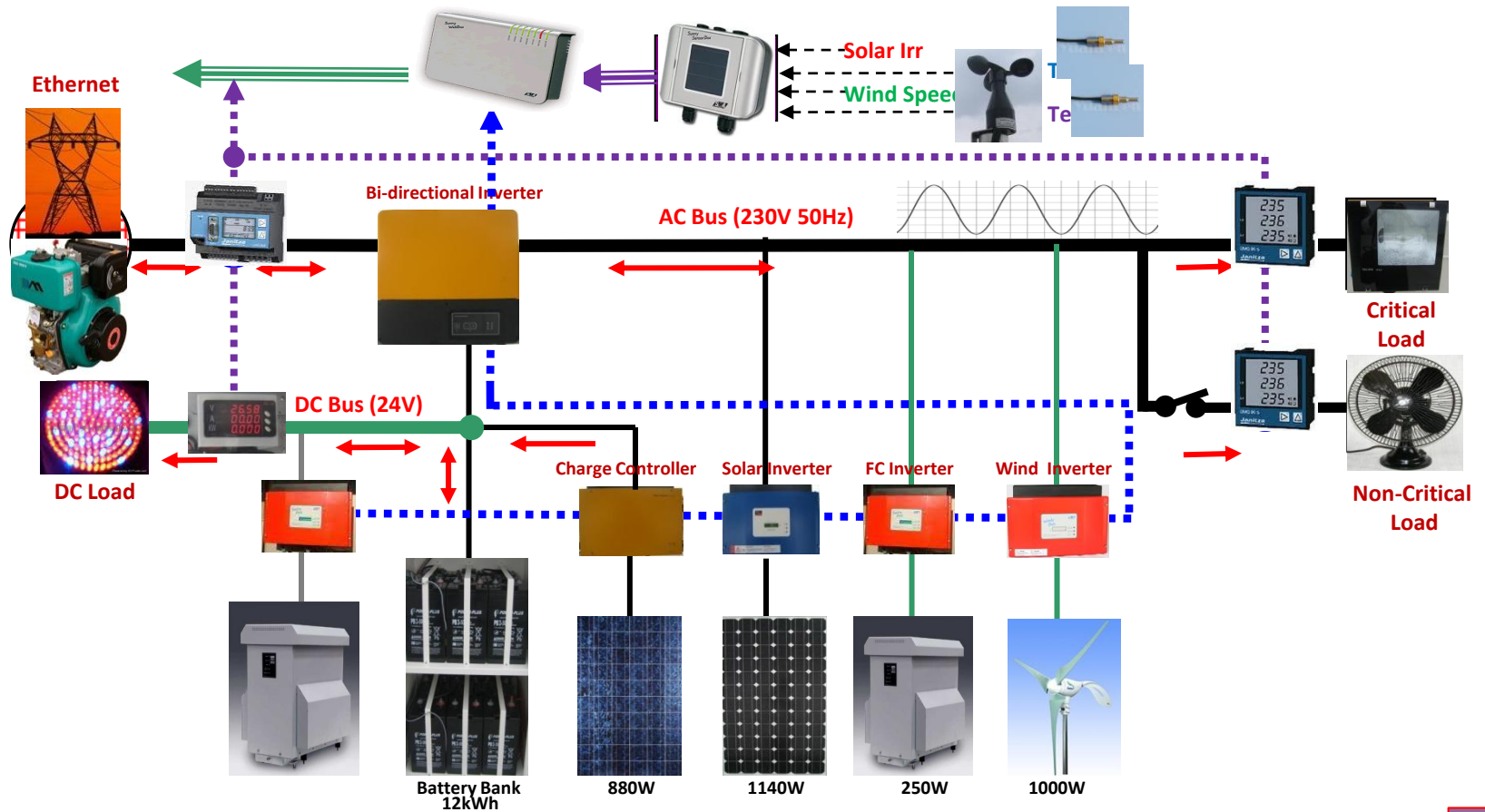
Micro-fabrication Suite



Micro-Grid – various sources



Micro-Grid





PUB PV system



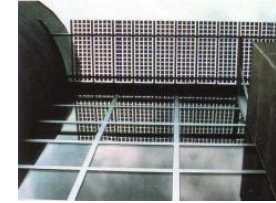
BCA PV system



HDB PV system



N'park system



**Data Centre
At Singapore
Polytechnic**



SP PV system



Airport T3 system

SP PV system



SP PV system



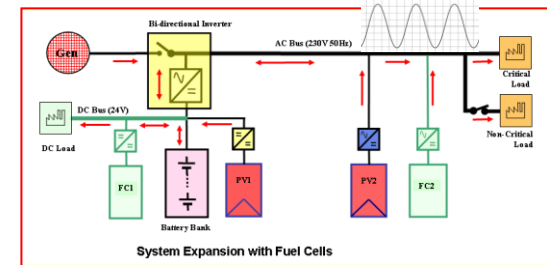
Other PV system



Other PV system



Micro-Grid Development



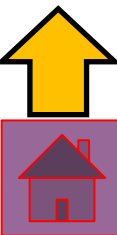
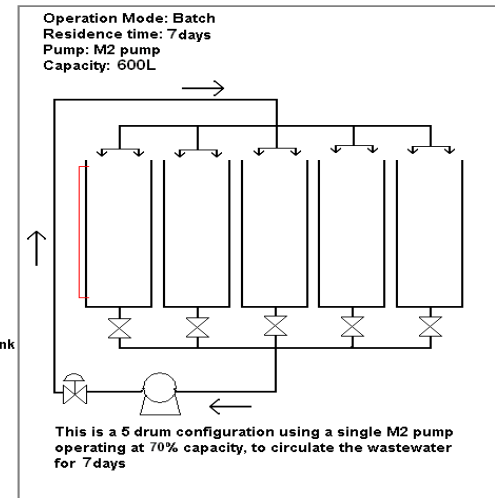
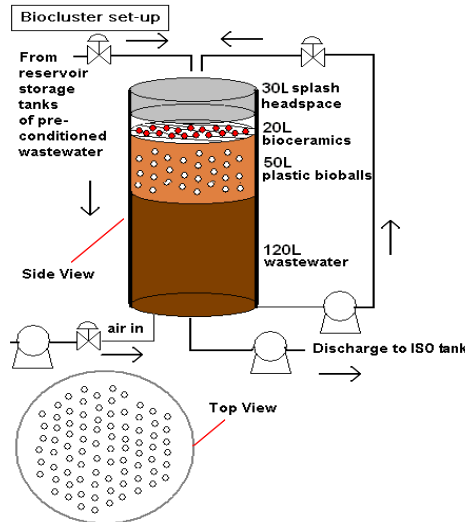
Hybrid VOC Bio-Filtration System

Team

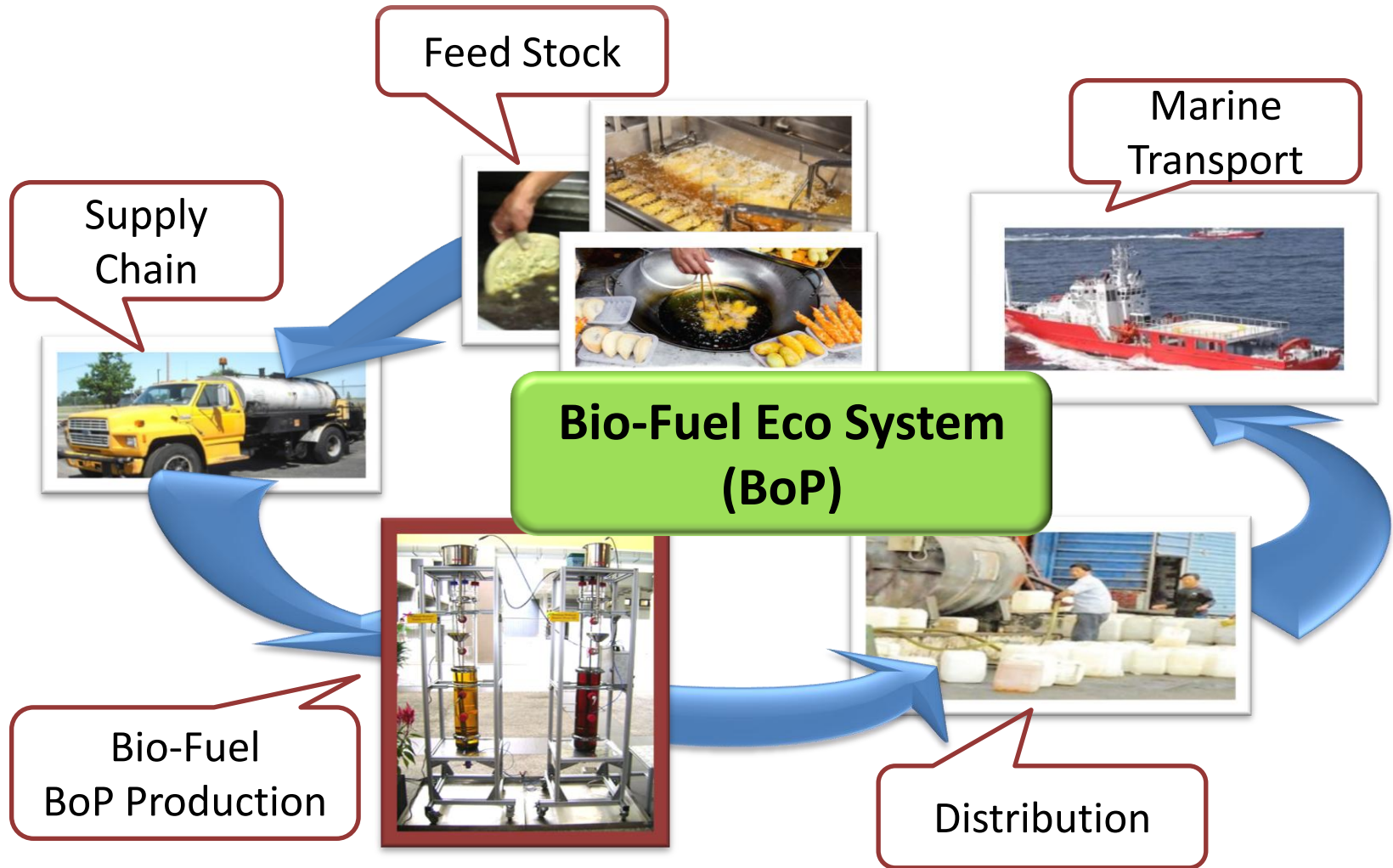
LeongMK PI
 Greg Poi CLS
 Ken Lee CLS
 Hendra MAE
 Lin Yun SMA
 Shawn Lim SMA

Funding

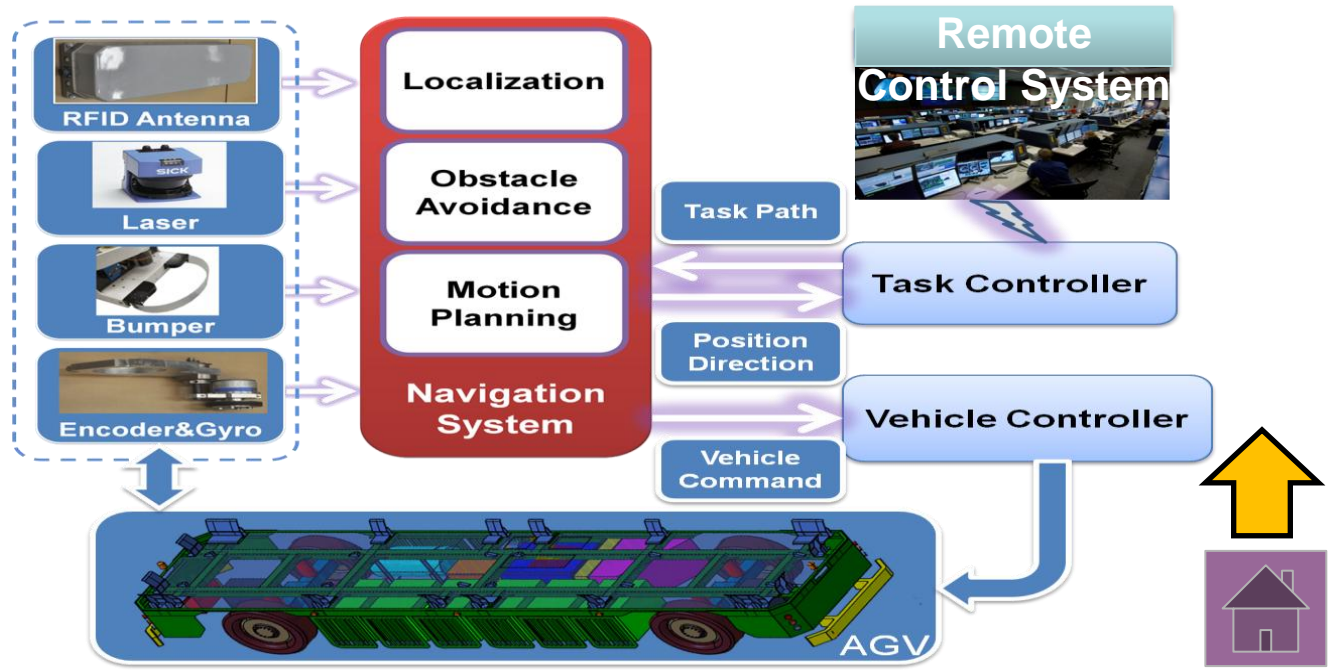
Manpower
 Equipment
 (Prototype) +
 (Construction) +
 (Testing)



Bio-Fuel Eco-Value Chain



- Radio-Frequency Identification (RFID)
- Light Detection and Ranging (LIDAR)
- Vision



2012

2013

2014

2015

2016

RFID Nav Sys

- Develop Vehicle Control Unit (VCU)
- Develop RFID antenna & tags

Indoor Nav Sys

- Develop Lidar based System
- Develop Vision based System

SP-STK ROBOTICS LAB

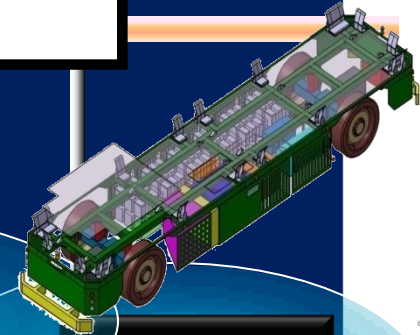
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A company of ST Engineering

Common System Architecture
 Common Vehicle Control Unit

Small Class Platform



Crew Class Platform



Power Class Platform

Integration & Validation on Actual Platform



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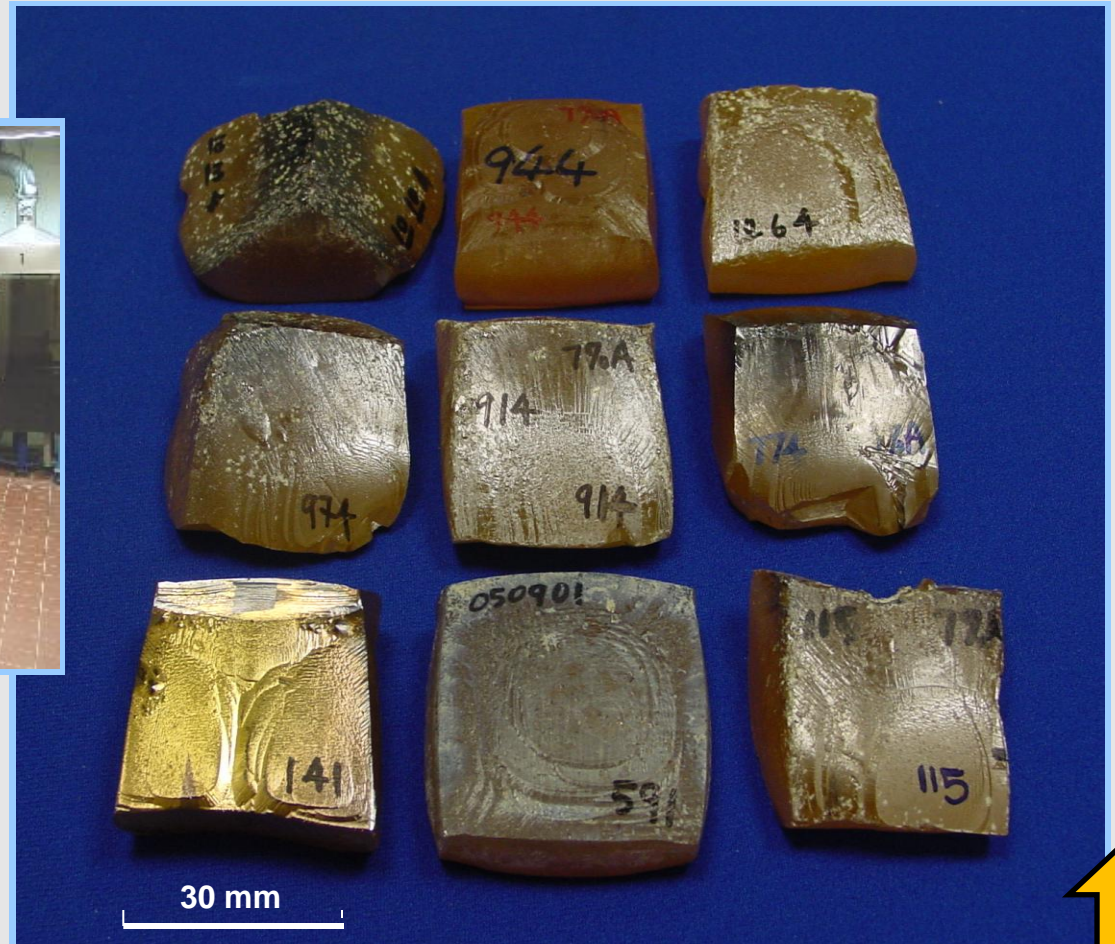


Flux Growth of PZN-PT single crystals

- A Singapore's edge



Crystal growth facility



As-grown PZN-PT single crystals



Technology Dev Office

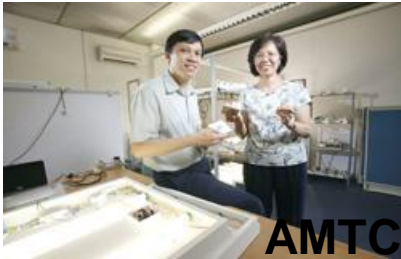
Our Facilities



SMA



MAE



EEE



CLS



AMTC

Advanced Materials Technology Centre (AMTC) integrates advanced materials, industrial chemistry and nanotechnology R&D activities.



ARICC

Advanced Robotics and Intelligent Control Centre (ARICC) carry out R&D work in the areas of Advanced Robotics and Intelligent Control.



CAET

Centre for Applications in Environmental Technology (CAET) partners the industry on R&D projects in environmental and water technology.



CBLS

Centre for Biomedical and Life Sciences (CBLS) aims to develop a vibrant applied R&D culture and support technology development in the biomedical and life sciences.



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