



Sustainable  
Island  
Development  
Initiatives

# SIDI Profile & Progress of Maratua Group

Sutopo Purwono Fitri (ITS)  
4 March 2014

# Why SIDI?

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- Plenty of islands ... 17.500 islands, most are small in size
- Plenty of potentials:
  - Tourism
  - Agriculture
  - Fishery
- Plenty of challenges:
  - Environment
  - Poverty
  - Fresh water
  - Energy
  - Healthcare
  - Education



# Objectives

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- ▶ To develop concepts of sustainable developments of small islands → wealth, environment, human
- ▶ To help implement them

Through:

- ▶ Research
- ▶ Activities/ empowerment programs, involving inhabitants, students, companies, local authorities and universities.



# Two Small Islands

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- **Maratua**

- Berau Regency, East Kalimantan
- 3500 inhabitants
- At country border: Malaysia, Philippines
- Potential: marine tourism
- Challenges: water, energy, healthcare, education, transport, ...

- **Poteran**

- Sumenep Regency, East Java
- One of 48 inhabited islands from 126 scattered islands in Sumenep
- About 100 km east of Surabaya
- Potential: organic agriculture of medicinal herbs
- Challenges: pollution, dense population, transportation, ...



# Status of SIDI

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## ▶ 10 Nov 2012:

- ▶ MoU: ITS – Ministry of Marine Affairs & Fisheries
- ▶ MoU: ITS – Berau Regency
- ▶ MoU: ITS – Hochschule Wismar

## ▶ Nov – Dec 2012:

- ▶ Berau Regency has invited ITS and Hochschule Wismar to visit Maratua
- ▶ Potential industry partners approached

## ▶ 7 – 9 January 2013:

- ▶ Joint fact finding mission of ITS and Hochschule Wismar

## ▶ 13 – 18 November:

- ▶ SIDI Week 2013
  - ▶ Kick-off meeting ITS-Wismar-Industry partners-Government
  - ▶ Promote Student Research and Development Teams (SR&DT) to ITS students
  - ▶ Site visit to Maratua and Poteran



# Perjanjian Kerjasama ITS-KKP

## PERJANJIAN KERJA SAMA

### ANTARA

DIREKTORAT JENDERAL KELAUTAN, PESISIR DAN PULAU-PULAU KECIL,  
KEMENTERIAN KELAUTAN DAN PERIKANAN REPUBLIK INDONESIA

### DAN

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

NOMOR: 04/KP3K/KKP/PKS/XI/2012

NOMOR: 40/PKS/ITS/2012

### TENTANG

PENGELOLAAN PULAU-PULAU KECIL  
DI KABUPATEN SUMENEP PROVINSI JAWA TIMUR

Pada hari ini Sabtu, tanggal sepuluh, bulan November, tahun dua ribu dua belas, (10-11-2012), bertempat di Surabaya, yang bertanda-tangan di bawah ini :

1. Nama : SUDIRMAN SAAD  
Jabatan : Direktur Jenderal Kelautan, Pesisir, dan Pulau-Pulau Kecil,  
Kementerian Kelautan dan Perikanan Republik Indonesia  
Alamat : Jalan Medan Merdeka Timur Nomor 16, Jakarta Pusat 10110,

dalam hal ini bertindak untuk dan atas nama Direktorat Jenderal Kelautan, Pesisir, dan Pulau-Pulau Kecil, Kementerian Kelautan dan Perikanan Republik Indonesia, berkedudukan di Jalan Medan Merdeka Timur Nomor 16, Jakarta Pusat 10110, untuk selanjutnya disebut **PIHAK KESATU**;

2. Nama : TRI YOGI YUWONO  
Jabatan : Rektor Institut Teknologi Sepuluh Nopember  
Alamat : Kampus Institut Teknologi Sepuluh Nopember, Keputih-

# MOU ITS- Pemkab Berau



NOTA KESEPAHAMAN  
PEMERINTAH KABUPATEN BERAU  
Dengan  
INSTITUT TEKNOLOGI SEPULUH NOPEMBER  
NOMOR: 180/1E-PRJJ/HK/2012  
45/MoU/ITS/2012



Dengan Rahmat Tuhan Yang Maha Esa,

Pada hari ini Sabtu tanggal Sepuluh bulan Nopember tahun 2012, bertempat di Surabaya, dilandasi rasa tanggung jawab dan keinginan bersama untuk saling menunjang dalam melaksanakan tugas pembangunan bangsa dan negara, maka yang bertandatangan dibawah ini.

1. **Drs. H. MAKMUR, HAPK, MM.**, BUPATI BERAU, dalam hal ini bertindak untuk dan atas nama Pemerintah Kabupaten Berau berkedudukan di Jalan APT. Pranoto, No. 1 Tanjung Redeb, Kabupaten Berau, Kalimantan Timur, selanjutnya disebut **PIHAK PERTAMA**.
2. **Prof. Dr. Ir TRI YOGI YUWONO DEA.**, REKTOR INSTITUT TEKNOLOGI SEPULUH NOPEMBER, dalam hal ini bertindak untuk dan atas nama Institut Teknologi Sepuluh Nopember berkedudukan di Jalan Arief Rahman Hakim Kampus ITS Sukolilo Surabaya, selanjutnya disebut **PIHAK KEDUA**.

**PIHAK PERTAMA** dan **PIHAK KEDUA** sepakat untuk menandatangani Nota Kesepahaman dalam bidang Peningkatan Sumber Daya Manusia, Pemanfaatan Sumber Daya Alam Yang Berwawawasan Lingkungan Serta Pengembangan Pariwisata Daerah, yang meliputi kegiatan:

- a. Pendidikan
- b. Penelitian
- c. Pengabdian Kepada Masyarakat

Hal-hal yang menyangkut tindak lanjut Nota Kesepahaman ini akan diatur dalam Perjanjian Kerjasama tersendiri, yang dapat dibuat oleh perwakilan yang ditunjuk oleh masing-masing pihak.

Nota Kesepahaman ini berlaku untuk jangka waktu tiga (3) tahun sejak ditandatangani dan dapat diperpanjang berdasarkan kesepakatan kedua belah pihak.

Demikian Nota Kesepahaman ini dibuat dalam 2 (dua) rangkap di atas kertas bermeterai cukup, ditandatangani oleh kedua belah pihak pada hari, tanggal, bulan, dan tahun sebagaimana tersebut di atas, dan 1 (satu) diantaranya dipegang oleh masing-masing **PIHAK**.





# MOU ITS-Hochschule Wismar



**MEMORANDUM OF AGREEMENT  
between  
INSTITUT TEKNOLOGI SEPULUH NOPEMBER  
and  
HOCHSCHULE WISMAR UNIVERSITY OF APPLIED SCIENCES  
on  
THE SUSTAINABLE ISLAND DEVELOPMENT INITIATIVES (SIDI)**

**41/PKS/ITS/2012**

To follow up the existing Memorandum of Understanding, Institut Teknologi Sepuluh Nopember and Hochschule Wismar University of Applied Sciences agree to formally establish the collaborative works in research and education under the principle of equality and mutual benefit in the area related to the Sustainable Island Development Initiatives (SIDI). The agreement comprises as the following:

**1. Joint Research and Implementation**

Both parties shall actively cooperate to drive and participate in research and implementation activities, such as mutual visits, collaborative research, joint workshops and conferences related to the SIDI. In particular, the parties will establish a joint strategic working group for the SIDI being assigned to develop the long-term R&D program and to derive projects from this program. To ensure project finance, both parties will actively explore and contribute suitable support facilities. Both parties will establish joint policies for the mutually beneficial protection and exploitation of the research results.

**2. Student and Lecturer Exchange Program**

Both parties agree to adopt an exchange program for undergraduate, graduate, and post graduate students and lecturers. This may also include the establishment of joint Master and Ph.D working groups related to the projects. Eligibility for participation in the program shall be based on mutual consultation and governed by the policies and procedures at each institution.

**3. Effective Period of the Memorandum**

This cooperation agreement shall become effective as soon as the authorized representatives of both sides agree on it for a period of two years. In case that any party wants to terminate the agreement, a written declaration shall be issued in advance six months prior to the termination date.

**4. Financial Considerations**

Costs required for the implementation of the activities will be negotiated considering the availability of funding of each party.

**Prof. Norbert Grünwald**  
Rector  
Hochschule Wismar University of  
Applied Sciences

**Prof. Dr. Ir. Tri Yogi Yuwono, DEA**  
Rector  
Institut Teknologi Sepuluh Nopember

Date: November 10, 2012

Date: November 10, 2012



# Partnership Agreement: ITS-Hochschule Wismar

## PARTNERSHIP AGREEMENT

Between the Lead Partner and its Project Partner

Having regard to the regulations of the German Academic Exchange programme (DAAD), stipulating the responsibility of a lead beneficiary to lay down the arrangements for its relation with the beneficiaries participating in this project, the following partnership agreement (hereafter referred to as "Agreement") is concluded between

Wismar University, University of Applied Sciences in Technology, Business and Design,

Philipp-Muller-Str. 14, 23966 Wismar, Germany

hereafter referred to as "Lead Partner"

and

Institut Teknologi Sepuluh Nopember ("ITS")

Kampus ITS Keputih - Sukolilo Surabaya 60111, Jawa Timur, INDONESIA

hereafter referred to as "Project Partner"

for the implementation of the project „**Innovation through Cooperation: Encouraging University-Industry Partnership starting with Students' Research and Development for Small Islands (SRD-SI)**“ that will be applied within the University-Business-Partnership Programme of DAAD.

### Article 1

#### Subject of the Agreement

Subject of the Agreement is the organization of the partnership and the stipulation of provisions in order to implement the project.

### Article 2

DAAD • Postfach 200404 • D-53 134 Bonn

Hochschule Wismar  
Prof. Dr. Norbert Grünwald  
Robert-Schmidt-Institut  
Philipp-Müller-Straße 14  
23966 Wismar

Ansprechpartnerin: Ursula Hardenbicker  
Telefon: (0228) 882-471  
Fax: (0228) 882-9471  
E-Mail: [hardenbicker@daad.de](mailto:hardenbicker@daad.de)  
Unser Zeichen: 434-uh

Bonn, den 11. Juli 2013

**DAAD-Programm „Praxispartnerschaften zwischen Hochschulen  
und Unternehmen in Deutschland und in Entwicklungsländern“**

**Ihr Antrag (ID 57046912) zur Kooperation mit Indonesien**

Sehr geehrter Herr Professor Grünwald,

anlässlich der diesjährigen Ausschreibung des Programms gingen 29 Anträge ein. Die Auswahlkommission, die sich aus Hochschullehrern verschiedener Fachrichtungen zusammensetzt, hat die Anträge nach den in der Ausschreibung genannten Kriterien geprüft. Es wurden 8 Vorhaben zur Förderung ausgewählt und 2 Vorhaben in die Reserveliste aufgenommen.

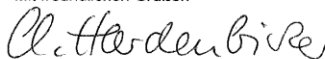
Ihr Vorhaben „Innovation through Co-operation (SRD-SI)“ wurde zur Förderung ausgewählt, jedoch macht die Auswahlkommission die Förderung von folgenden Auflagen abhängig:

- Bitte erläutern Sie die Nachhaltigkeitsstrategie für das Projekt, um eine Fortführung nach Auslaufen der Förderung Ende 2016 sicherzustellen.
- Bitte erläutern Sie, woher die angegebenen Eigenmittel in Höhe von 30.000 EUR pro Jahr stammen. Handelt es sich hier tatsächlich um belegbare Einnahmen?

Nach Erfüllung der Auflagen und abschließender Prüfung des Finanzierungsplans - Frau Visarius wird sich hierzu noch mit Ihnen in Verbindung setzen - kann ein Zuwendungsvertrag für 2013 bis 2016 ausgestellt werden.

Wir bedanken uns vorab für eine kurzfristige Stellungnahme zu den genannten Punkten bis zum **26.7.2013**. Für Rückfragen und ergänzende Informationen stehen wir gerne zur Verfügung.

Mit freundlichen Grüßen



Ursula Hardenbicker  
(Referatsleiterin)

# Letter of Intent: EKONID



## Letter of Intent

Hiermit erklären wir, das Wisma Jerman in Surabaya, die Bereitschaft zur Mitarbeit im Projekt „Innovation through Co-operation; Encouraging Industry-University Partnerships (IC-EUIP) starting with Student Research and Development Teams“ der DAAD Programmlinie „Praxispartnerschaften zwischen Hochschulen und Unternehmen in Deutschland und den Entwicklungsländern“ der Hochschule Wismar, University of Applied Sciences; Technology, Business and Design, Wismar, Deutschland in Zusammenarbeit mit dem Institut Teknologi Sepuluh Nopember, Surabaya, Indonesien, sowie deutschen und indonesischen Wirtschaftspartnern.

Surabaya, 08. April 2013

A handwritten signature in blue ink, appearing to read "Birgit Steffan".

Birgit Steffan

Direktorin Wisma Jerman Surabaya

# Letter of Intent: PT SEES

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- ▶ PT SEES, Jakarta
- ▶ LED Lightings

University – Business Partnership Program

## Letter of Interest

We hereby declare our interest to participate in the project:  
„Innovation through Co-operation; Encouraging Industry-University Partnerships (IC-EUIP)  
starting with Student Research and Development Teams“  
of Hochschule Wismar (Germany) and ITS Institut Teknologi Sepuluh Nopember (Indonesia)  
together with German and Indonesian industry partners, that will be applied within the  
DAAD University – Business Partnership Program.

Please appoint a meeting with us to discuss the details of cooperation and to prepare a  
Partnership Agreement.

Company: PT Surya Energy Solution (SEES)

Address: Edugate Building, 1<sup>st</sup> Floor  
Jalan Raya Fatmawati No 99  
Jakarta 12430  
Indonesia

Contact: Haklem Rachman

Place, Date: Jakarta 12 April 2013

Signature:



# Invitation to Kakanoo Enterprise



Kepada  
Krisnan Kusmana  
Kakanoo Marine Enterprise  
Jakarta  
Indonesia

10 April 2013

## University – Business Partnership Program Letter of Interest

Yth. Bapak Krisnan,

Wismar University and ITS Surabaya will launch a joint program "University – Business Partnership". We are searching for interested industry partners in Indonesia as well as in Germany.

Subject of the joint activity will be the formation of "Student Research & Development Teams (SR&DT)". These teams shall work on practical tasks of the industry partners; the task ideas being proposed by the company. This can be the further development of a company technology, product, service or process, the analysis of a potential market segment, the development of a design or requirement specification etc. – tasks being already on the company's agenda but pending due to lack of capacity.

What are the benefits?

- The students will for at least 6 months directly participate in the company's working process, guided by a member of the company staff and supported by qualified researchers from Wismar University and from ITS.
- Company and university will jointly select the student team while involving various faculties according to their fitness for the specified task.
- The team will present and hand-over their R&D reports and deliverables to the company as her proprietary outcome.
- The both universities will, in cooperation with the company, generalize the experiences from the project in order to improve the curriculum, making it better matching to the needs of the labour market.
- The students will earn credits for their study course and they will develop valuable practical insights and problem solving capabilities.

- ▶ Kakanoo Enterprise, Jakarta
- ▶ Boat builder, marine consultant,



# Activities & Research Program



# Program#1 Poteran

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# Goals

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- ▶ To empower the population by producing valuable tropical herbal extract products → value added process
- ▶ To fulfill demand for tropical herbal extracts for cosmetics, pharmaceutical and nutrition industries



# Status

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- Departments of Chemistry and Biology (ITS) has completed an initial research to investigate sites, vegetation, antioxidant content of herbs. Presented 28/8/2013.
- Marine Research Centre conducts research on spatial and socio-economic aspects of small Islands around Madura.
- DAAD grants Wismar University of Applied Sciences to jointly conduct a students' R&D program in partnership with local industry, and ITS. Topic I: Potteran (2013-2017).



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# Poteran SR&DT Research Topics

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# Bidang: Perencanaan wilayah dan kota

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## ► Tema:

- Penetapan Kawasan Budidaya Pertanian Berbasis Komoditas Unggulan Di Wilayah Pesisir dan Pulau Kecil.
- Strategi Pengembangan Kawasan Budidaya Pertanian di Pulau Kecil dengan Pendekatan Sistem Land Sharing.
- Peningkatan Daya Saing Pulau Kecil melalui Partisipasi Masyarakat.
- Distribusi Infrastruktur Air Bersih sebagai Pendukung Pulau Kecil Mandiri.
- Distribusi Sarana Pendidikan Menengah sebagai Pendukung Pulau Kecil Mandiri.
- Strategi Reduksi Emisi Gas Rumah Kaca dalam Pengembangan Kawasan Budidaya/Industri Sektor Pertanian/Perikanan/Perkebunan di Wilayah Pesisir dan Pulau Kecil.
- Resiliensi Ekonomi Pulau Kecil Mandiri di Poteran, Kabupaten Sumenep.
- Ecological Footprint Pulau Kecil Mandiri di Poteran, Kabupaten Sumenep.



# Bidang: Biologi# 1

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## ► Tema:

- Aplikasi pupuk hayati berbasis mikoriza lokal pulau poteran untuk peningkatan produktivitas tanaman unggulan kabupaten sumenep, Madura.
- Studi pemanfaatan buah cabai jamu (*Piper retrofractum*) sebagai kandidat potensial antialergi.
- Optimasi produksi metabolit sekunder tanaman kelor dengan menggunakan teknologi kultur jaringan.
- Uji aktivitas antioksidan buah caba jamu (*Piper retrofractum*) secara in vitro.
- Studi potensi tanaman-tanaman lokal pulau poteran sebagai biopestisida.
- Pengaruh sistem jarak tanam pada pertumbuhan vegetatif tanaman kelor (*Moringa oleifera*).



# Bidang: Biologi#2

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## ► Tema:

- Efektivitas metode pengeringan rumput laut terhadap rendemen dan kualitas karaginan.
- Pengembangan metode deteksi dini kualitas rumput laut.
- Bioteknologi dalam upaya mereduksi limbah pertanian di Pulau Poteran.
- Analisis indeks kualitas tanah pertanian di kawasan pesisir Kab. Sumenep.
- Aplikasi teknologi pengelolaan lahan berbasis Sistem Integrasi Tanaman ternak (SIIT) untuk peningkatan kualitas tanah.
- Restorasi kawasan penambangan batu di Pulau Poteran sebagai upaya konservasi sumber air.





# Bidang: Biologi#3

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## ► Tema:

- Mikropropagasi tanaman Kelor (*Moringa Oleifera*)
- Eksplorasi microbe dan pemanfaatannya dalam peningkatan produktivitas tanaman Kelor
- Karakterisasi aksesori tanaman Kelor dengan marka molekuler
- Karakterisasi senyawa aktif tanaman Kelor pada daerah yang berbeda
- Pengembangan tanaman Jagung pada lahan marginal
- Pengembangan uji GMO's free product berbasis marka molekuler



# Bidang: FTK, Teknik Industri, Teknik Sipil

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## ► Tema:

- Supply chain dan logistik untuk pulau kecil di Sumenep (P.Poteran)
- Studi Perbandingan pemilihan jembatan atau kapal untuk penyeberangan rute Poteran-Kalianget dengan metode tertentu dan dilihat dari aspek tertentu
- Studi Kelayakan Studi Kelayakan Kapal Penumpang untuk penyeberangan rute Poteran-Kalianget
- Desain Konseptual Kapal pengangkut barang dan manusia antar pulau kecil (P.Poteran – Kalianget/surabaya/internasional)
- Studi Kelayakan dan Desain konseptual untuk pelabuhan di Pulau Kecil (P.Poteran)
- Desain Ruang Muat Kapal untuk pengangkut hasil pertanian (Pelayaran lokal atau internasional)
- Infrastruktur (jalan) transportasi di Pulau Kecil (p.Poteran)



# Program#2 Maratua

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# Status

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- ▶ DAAD grants Wismar University of Applied Sciences to jointly conduct a students' R&D program in partnership with local industry, and ITS. Topic I: Maratua Island (2013-2017).



# Maratua Vision

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- ▶ **Future marine tourism:**
  - ▶ How should marine tourism in Maratua look like?
- ▶ **Likely desirable shape of tourism:**
  - ▶ Not a mass tourism
  - ▶ Nature-based, not culture
- ▶ **People:**
  - ▶ What role could they play?

# Challenges

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- ▶ Today's challenges:

Energy, water, education, transport, healthcare

- ▶ Future challenges:

derived from projected future marine tourism

Addressing today's challenges must be in line with the vision for the island

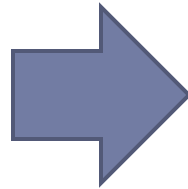


# Challenges

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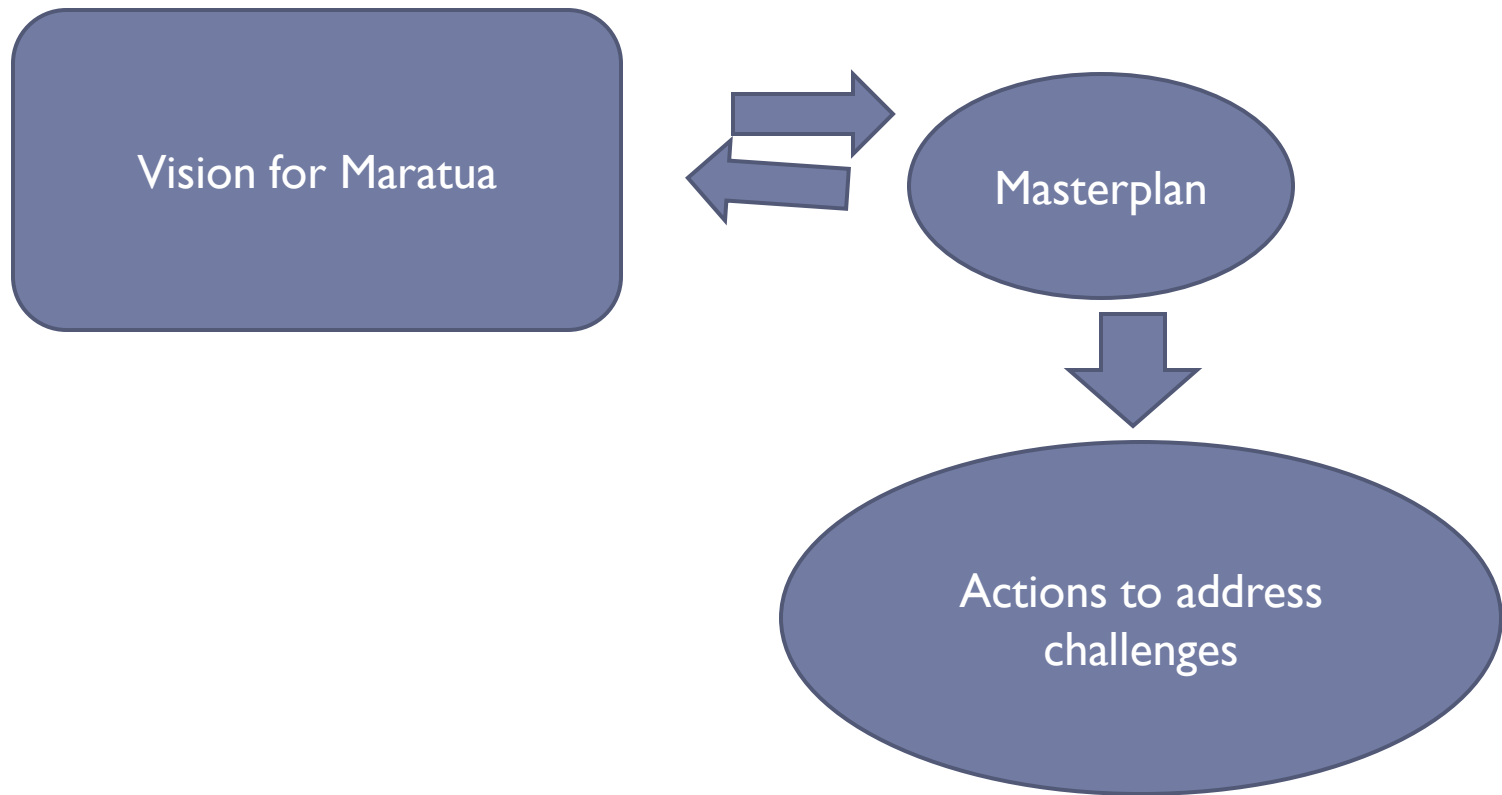
## TODAY

- ▶ Water
- ▶ Energy
- ▶ Housing
- ▶ Hotel
- ▶ Transport service
  - ▶ Vehicles
  - ▶ Seaports
- ▶ People
  - ▶ Education
  - ▶ Health
  - ▶ Economy



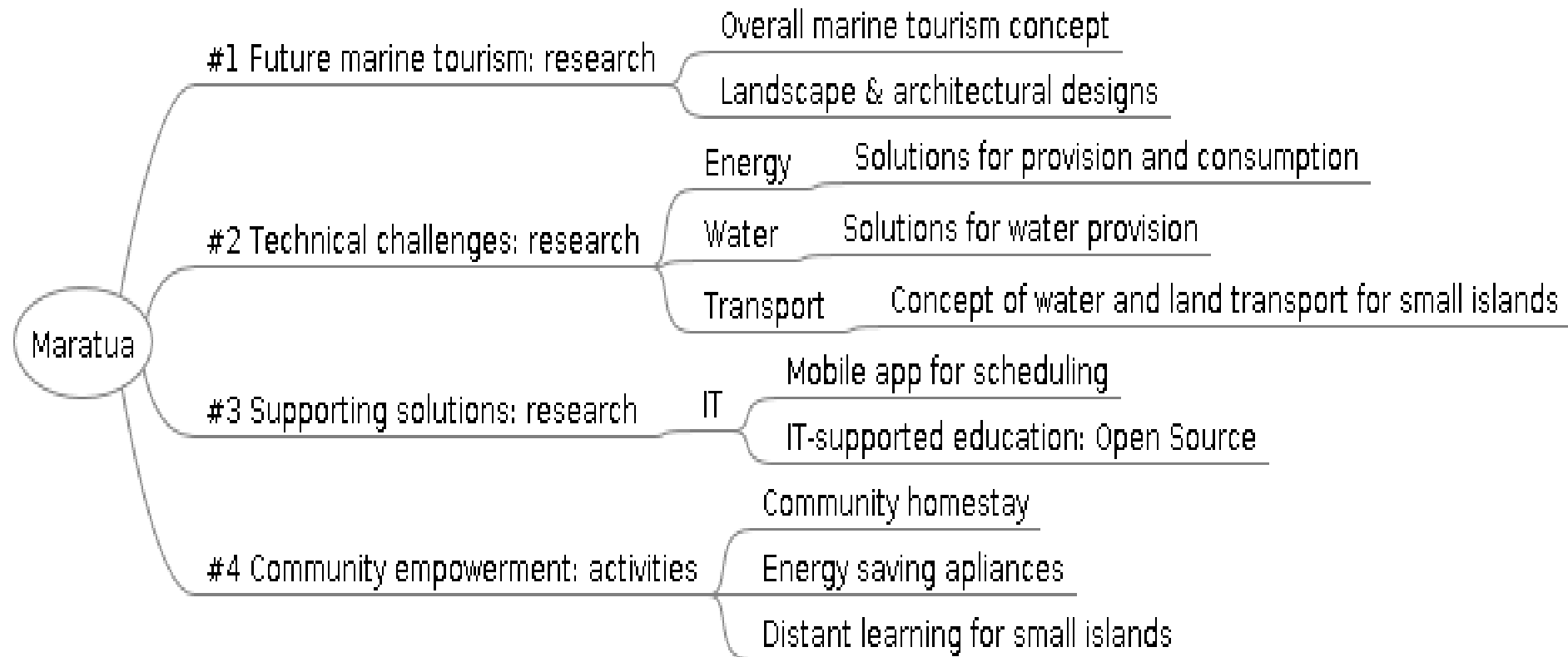
## FUTURE

- ▶ Water
- ▶ Energy
- ▶ Waste
- ▶ Housing
- ▶ Hotel
- ▶ Transport service
  - ▶ Vehicles
  - ▶ Seaports
  - ▶ Airports
- ▶ People
  - ▶ Education
  - ▶ Health
  - ▶ Economy



# Overall Scheme

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# Branch #1

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- ▶ **Research:** “How marine tourism should look like in the future?”
- ▶ Available doc: Masterplan of Maratua



# Branch #1

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## ► Objectives:

- To develop (system dynamics) scenarios for tourism development of Maratua, considering population, nature, economy: *Dept. of Industrial Engineering, Biology, Statistics, Environmental Engineering*
- To develop commercial ideas of future tourism: *School of Business Management, Marine Transport*
- To develop architectural/ landscape concepts of future marine tourism (Code:ALMT): *Dept. of Architecture, Industrial Design, Urban Planning*
  - Objective: To develop concepts and designs of landscape, houses, resorts, public facilities for the future marine tourism of Maratua Island.



# Branch #1

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## ▶ **Output:**

- ▶ Overall concept of marine tourism. Keywords: role of community, high-end marine tourism, urbanization, networks
- ▶ Architectural & landscape design of future marine tourism. Keywords: designs of infrastructure, designs of resorts and home stays

## ▶ **Partners:**

- ▶ Berau Regency
- ▶ KKP
- ▶ Kakanoo Enterprise
- ▶ Existing resorts: Nabucco, Paradise (to be approached)

## ▶ **Local industry:**

- ▶ Berau Coal
- ▶ United Tractors
- ▶ ...





## Branch #2

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- ▶ **Research:** “How to address specific today’s & future’s technical core challenges?”



# Branch #2

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## ► Objectives:

- Energy: Energy generation, Energy consumption (Code: EGEC): *Dept. of Electrical Engineering, Mechanical Engineering, Engineering Physics*
- Water: Solutions for water provision: *Dept. of Environmental Engineering, Geomatics, Engineering Physics*
- Transport: Concepts of water and land transport for small islands: *Dept. of Marine Transport, Civil Engineering*
- Waste: Concepts of waste management in the future marine tourism: *Dept. of Environmental Engineering, Biology*



# Branch #2

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## ▶ **Output:**

- ▶ Energy: Solutions for energy provision and consumption
- ▶ Water: Solutions for water provision
- ▶ Transport: Concepts of water and land transport for small islands
- ▶ Waste: Concepts of waste management in the future marine tourism

## ▶ **Partners:**

- ▶ PT. SEES
- ▶ Kakanoo Enterprise



# Branch #3

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## ► **Research:** “Supporting solutions?”



## Branch #3

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- ▶ Objectives: to explore usage of (including non-conventional) tools to support addressing main problems of Maratua
- ▶ Information Technology
- ▶ IT can be viewed as soft infrastructure to improve 'hard' sectors
  - ▶ How can IT help improve quality of education?: *Dept. of Informatics, Information System*
  - ▶ How can IT improve quality of transport, health, shopping, gov't services (Code: ITIS): *Dept. of Informatics, Information System, Marine Transport*



# Branch #3

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## ▶ **Output:**

- ▶ Distant learning for small islands' schools
- ▶ Mobile app for scheduling to support transport, hotels, healthcare and gov't services

## ▶ **Partners:**

- ▶ Berau Regency
- ▶ Berau Coal





## Branch #4

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- ▶ **Activity, NOT research:** "How to empower community?"





## Branch #4

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- ▶ Of utmost importance to embrace and empower people
- ▶ Objectives:
  - ▶ Tourism: “How do we develop a community-based home stay?”
  - ▶ Education: “How do we develop a distant learning course?”
  - ▶ Energy: “How to better use electricity by usage of energy-saving appliances?”
  - ▶ Waste: “How to educate people concerning waste management & environment protection?” (Code: EPWWM)



# Branch #4

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## ▶ **Output:**

- ▶ Activities to establish a prototype of a community-based home stay
- ▶ Activities to implement a distant learning course for small islands
- ▶ Activities to better use electricity by usage of energy-saving appliances
- ▶ Activities to educate people concerning waste management & environment protection?

## ▶ **Partners:**

- ▶ KKP
  - ▶ Berau Regency
  - ▶ PT. SEES
- ▶ Berau Coal



# Methodology #1: Research

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- ▶ Research shall be undertaken as a BSc Thesis, with above topics.
- ▶ Supervision: industry partners, ITS & Hochschule Wismar, government
- ▶ Duration: 6 months, starting from June 2014 till Dec 2014.
- ▶ Field research at Maratua Island:
  - ▶ Length of stay 2 weeks, departure 1 June, return 14 June 2014



# Methodology #1: Research

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## ▶ Group ALMT

### ▶ Architecture:

- ▶ Landscape conceptual designs, develop 2-3 scenarios
- ▶ Resorts/ home stays conceptual designs

### ▶ Industrial Design:

- ▶ Elevate local handicraft, apply modern techniques to it
- ▶ Conceptual designs of public facilities such as: signage, park facilities, etc.

## ▶ Group EGEC

### ▶ Engineering Physics:

- ▶ Explore some renewable energy sources (biomass, solar, wind, current,) which is/are best suitable for Maratua Island.

### ▶ Electrical Engineering:

- ▶ Develop energy saving devices.



# Methodology #1: Research

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## ▶ Group ITIS

### ▶ Informatics & Information System:

- ▶ Develop mobile app to check ship schedules
- ▶ Develop mobile app to inform the location of health centers, shopping spots (also what they sell, opening & closing time, etc.)

### ▶ Marine Transport:

- ▶ Co-develop mobile app to check ship schedules: study the business process of local ship operators/ owners, and help them improve the quality of service by analyzing the optimum scheduling, optimum ship size/ capacity



# Methodology #2: Activities

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- ▶ Activities will be done continuously
- ▶ Supervision: industry partners, ITS & Hochschule Wismar, government
- ▶ Duration: 6 months, starting from June 2014 till Dec 2014.
- ▶ Field research at Maratua Island:
  - ▶ Length of stay 2 weeks, departure 1 June, return 14 June 2014
  - ▶ Group EPWM
    - ▶ Provide an understanding to the community about the importance of waste management and its impact to the environment
    - ▶ Provide training on waste management
    - ▶ Initiate the establishment of environmental friendly waste processing facilities



# Partners

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- ▶ DAAD
- ▶ Berau Regency
- ▶ Ministry of Fishery and Ocean Affairs
- ▶ Kakanoo Enterprise
- ▶ SEES, Jakarta
- ▶ Berau Coal
- ▶ Paradise Resorts
- ▶ Nabucco Resorts



# SIDI Contribution

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- ▶ SIDI aims to contribute in further elaboration of the Masterplan, on:
  - a. Sustainable marine tourism concepts
  - b. Solutions on today's and future challenges: energy, water provision, transport.
  - c. Innovative solutions deploying IT as a soft-infrastructure.



Thank you

[snugroho@na.its.ac.id](mailto:snugroho@na.its.ac.id)