

Yth. Bapak Dekan Fakultas Ekonomi dan Bisnis Universitas Udayana
Di
Tempat

United Nations Global Pulse adalah sebuah prakarsa inovatif di bawah Kantor Eksekutif Sekretaris Jenderal Perserikatan Bangsa-Bangsa (PBB) di bidang *Big Data* dan Revolusi Data. Pulse Lab Jakarta adalah sebuah proyek bersama antara PBB dan Pemerintah Indonesia melalui UN Global Pulse dan Badan Perencanaan Pembangunan Nasional (Bappenas).

Saat ini, Pulse Lab Jakarta tengah mempersiapkan sebuah acara riset bernama *Research Dive* yang mengangkat tema *Trade dan Competitiveness*. Kami mengundang para peneliti bertatar belakang **ekonomi perdagangan, logistik dan supply chain** untuk bersama menginisiasi ide-ide penelitian serta membahas hasil penelitian pada:

Hari/Tanggal : Minggu-Rabu, 6-9 Agustus 2017

Tempat : Pulse Lab Jakarta, Wisma Nusantara, Lantai 5, Jl. M.H. Thamrin Nomor 59, Jakarta Pusat

Pulse Lab Jakarta akan memilih **15 peneliti** muda untuk berpartisipasi dalam acara ini yang memiliki kriteria sebagai berikut:

- Peneliti dengan gelar Master dengan (a) 2-7 pengalaman penelitian yang relevan atau pengalaman mengajar di area yang berkaitan dengan *research tasks* (b) dua atau lebih scientific/technical publications, atau
- Peneliti yang sedang menempuh pendidikan gelar dalam bidang ekonomi/teknik industri/logistik dengan dua atau lebih scientific/ technical publications dalam bidang yang berkaitan dengan *research tasks*, atau
- Peneliti bergelar doktoral di bidang terkait, dengan tidak lebih dari enam tahun pengalaman menyanggah gelar doktoral

Untuk informasi lengkap dan TOR kegiatan *Research Dive* ini dapat dilihat pada link berikut <https://tinyurl.com/rd4-info>.

Untuk informasi kegiatan *Research Dive* yang sudah pernah kami lakukan, Bapak/Ibu dapat merujuk kepada link berikut: <http://rd.pulselabjakarta.id>.

Apabila Bapak/Ibu serta kolega Bapak/Ibu berminat, mohon untuk mengisi Expression of Interest selambat-lambatnya pada 14 Juli 2017 pada <http://tinyurl.com/rd4d-eoi>, serta melengkapi aplikasi pada <https://easychair.org/conferences/?conf=rd4d-4> selambat-lambatnya pada 24 Juli 2017 pukul 23.59 WIB.

Pulse Lab Jakarta akan menanggung biaya transportasi, konsumsi, serta akomodasi selama acara berlangsung.

Besar harapan kami agar Bapak/Ibu dapat mendukung acara ini dengan **menyebarkan undangan ini kepada kolega Bapak/Ibu yang memiliki latar belakang ekonomi perdagangan, logistik, dan supply chain.**

Apabila ada pertanyaan, Bapak/Ibu dapat menghubungi staf kami, Dikara Alkarisya atau Zakiya Pramestri melalui email ke plj-proposals@un.or.id atau telepon di [+62 21 3983 8473](tel:+622139838473).

Demikian informasi ini kami sampaikan, atas perhatian Bapak/Ibu kami ucapkan terima kasih.

**Salam hangat,
Pulse Lab Jakarta**

Zakiya Aryana Pramestri
Research Assistant
Pulse Lab Jakarta

Wisma Nusantara
Jl. MH. Thamrin No. 59
Jakarta 10350 - Indonesia
Phone: [+62-\(0\)21-3983-8473](tel:+62-021-3983-8473)
Mobile: [+62-852-1684-7075](tel:+62-852-1684-7075) | [+62-811-2541-668](tel:+62-811-2541-668)

<http://unglobalpulse.org/jakarta>
Twitter and Facebook: @pulselabjakarta



PULSE LAB JAKARTA

Wisma Nusantara 5th Floor
Jl. MH Thamrin No. 59
Jakarta 10350 - Indonesia

Terms of Reference

RESEARCH DIVE FOR DEVELOPMENT

Theme: Trade and Competitiveness

(August 6-9, 2017, Jakarta)

1. INTRODUCTION

United Nations Global Pulse¹ is a special innovation initiative of the UN Secretary-General on big data and the data revolution.² It tests new approaches using big data and machine learning, to inform public policy across different sectors such as urban dynamics, trade and competitiveness, climate change and humanitarian action. Pulse Lab Jakarta (PLJ) is a joint project of the United Nations and the Government of Indonesia, through UN Global Pulse and Indonesian Ministry of National Development Planning (Bappenas), respectively.

As part of its network catalyst function, Pulse Lab Jakarta strives to build links between academic communities, policy analysis and new technologies. Towards this objective the Lab hosts three *research dives for development* each year on different themes and methods in collaboration with universities and public authorities. The events bring together mid-career researchers for a four-day hackathon-style research collaboration.

As the fourth industrial revolution continues to create new industries as well as transform legacy sectors, it is important for Indonesia to acquire more sophisticated productive capabilities. The upcoming research dive for development on trade and competitiveness hopes to make a contribution to this cause by enhancing the familiarity of researchers with, as well as extracting insights from several datasets, including, global marine vessel automatic identification system data, e-commerce data and postal data, among others. The research dive plans to generate insights on maritime infrastructure improvements, trade connectivity, and e-commerce.

2. RESEARCH DIVE FOR DEVELOPMENT

A research dive for development is not a competition but a "collaborative" research event where a small group of researchers together explore and analyze the given datasets within the four-day event. The datasets are related to development and humanitarian issues in Indonesia. Upon finalised the research, each group is encouraged to write the extended abstract in terms of the research results. The extended abstract from each group is then compiled into a technical report.

More information on previous research dives for development and their technical reports is available here: http://rd.pulselabjakarta.id/previous_dives.

2.1. PARTICIPANTS

PLJ intends to invite about **15 mid-career researchers** from Indonesian universities or research institutions. In particular, we are interested in the following profiles:

- Researchers with a postgraduate degree (Master) with (a) two to seven years of relevant research or teaching experience in areas related to the research tasks, highlighted below, and (b) two or more scientific/ technical publications; or,

¹ <http://unglobalpulse.org>

² <http://undatarevolution.org>



PULSE LAB JAKARTA

Wisma Nusantara 5th Floor
Jl. MH Thamrin No. 59
Jakarta 10350 - Indonesia

- Researchers pursuing doctoral degree in economics or industrial engineering/logistics, with two or more scientific/ technical publications in fields related to the research tasks, below; or,
- Researchers with a doctoral degree in related disciplines but no longer than six years experience post-doctorate.

2.2. RESEARCH TASK

Pulse Lab Jakarta has secured access to the following datasets, which participants will have the opportunity to analyse if they are willing to enter into non-disclosure agreements:

- Global marine vessel automatic identification system data
 - Timeframe: April 2015;
 - This dataset is collected from ship-location-trackers that contain information about ship ID, speed, direction of ship, location information (in geo format) and time information (in millisecond format).
- E-commerce data from one e-commerce platform
 - Timeframe: November 2014 - July 2017;
 - This dataset is collected from an e-commerce site in Indonesia. It contains two main information groups: supply and demand. Supply data contain information about the product advertised, such as the category of product, product description, price and product location (at the city level). In addition, the advertisement also contains the anonymous seller profile such as gender, age and location (at the city level). From the demand side, the information available includes anonymous user profile data, and their search queries.
- Regional postal data (exchanges between ASEAN member states)
 - Timeframe: October 2010 - June 2015
 - This dataset contains the information about postal package at the country level. It includes origin country and destination country, category of packages such as letter, parcel, ems, others and normalized value of package count and weight. An example analysis of international postal network data can be found at <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0155976>.

As part of the research dive for development, each team will be assigned to one of the datasets. A dataset with standard economic indicators will be available, but we encourage participants to source their own secondary data for 'ground truthing'. Specific to each of the datasets, the following research tasks are proposed, and will need to be refined to four key questions, one for each team:

- Task 1 - Analysis of port network connectivity, national or ASEAN-wide, using global marine vessel automatic identification system data
- Task 2 - Analysis of inter-city connectivity in Indonesia, using e-commerce data
- Task 3 - Analysis of proxies in e-commerce data for city-level and national economic trends and shocks
- Task 4 - Analysis of correlations between postal network data and trade network data within ASEAN

2.3. APPLICATION

Each applicant is encouraged to submit:

- an Expression of Interest (optional but recommended) by **14 July 2017** at <http://tinyurl.com/rd4d-eoi>, and
- an application (**one PDF**) by **23.59 WIB on 24 July 2017** at: <https://easychair.org/conferences/?conf=rd4d-4>
 - Curriculum Vitae in English (without any certificates);
 - A recommendation letter in English from anyone familiar with the applicant's research skills; and,



PULSE LAB JAKARTA

Wisma Nusantara 5th Floor
Jl. MH Thamrin No. 59
Jakarta 10350 - Indonesia

- A one page document in English that explains the applicant's first and second preference among the four tasks, highlighted above, covering (a) the applicant's relevant research experience and (b) her/his ideas for potential approaches to tackle the tasks of interest.

PLJ will select the final list of participants (about 15 individuals), based on (a) academic background, (b) research experience including publication records, and (c) the quality/relevance of the applicant's suggested approaches to data analysis.

PLJ will cover participants' expenses including transportation (from outside-Jakarta only), meals and snacks, and accommodation for the duration of the event, **however, PLJ will not extend an invitation if a candidate cannot attend the full duration of the event.**

Should you have any inquiry, feel free to contact.

- plj-proposals@un.or.id
- Office phone: +62 21 3983 8473 (Ms. Dikara/Ms. Zakiya)
- PLJ Research Dive: <http://rd.pulselabjakarta.id>
- Additional Information Package: <https://tinyurl.com/rd4d-info>

2.4. EXPECTED OUTPUTS

As part of the research dive for development, each team is invited not only to present their results at the end of the event, but also to publish their findings as part of the Technical Reports and their methodologies and toolkits used for producing the results. PLJ strongly recommends the participants to publish the results in academic journals, conferences or workshops.



PULSE LAB JAKARTA

Wisma Nusantara 5th Floor
Jl. MH Thamrin No. 59
Jakarta 10350 - Indonesia

3. SCHEDULE

(EN) : Programme in English

(ID) : Programme in Bahasa Indonesia

DATE	TIME	ACTIVITY	VENUE
Aug 6 (Sun)		Participant Arrival and Hotel Check-in	Holiday Inn Wahid Hasyim
	16:00 - 16:10	Registration	
	16:10 - 16:30	(EN) Greeting & Induction	
	16:30 - 18:30	(ID) Group Brainstorming on Methods	
Aug 7 (Mon)	08:00 - 10:00	(EN) Opening & Security Briefing (15 mins) (EN) Domain Advisor Presentation (30 mins) (EN) Sharing Session on Methods (15 mins / Group)	Pulse Lab Jakarta Office
	10:00 - 21:00	(ID) Research Dive	
Aug 8 (Tue)	08:00 - 09:30	(EN) Sharing Session on Updates (20 mins / Group)	
	09:30 - 21:00	(ID) Research Dive	
	13.30 - 16.30	(EN) Mini-workshop (20 mins / advisor)	
Aug 9 (Wed)	08:30 - 11:00	(EN) Final Presentation (30 mins / Group)	
	11.00 - 11:10	Closing	