

FINDING WHAT WORKS IN THE LAST MILE

Kopernik Annual Report 2017



» KOPERNIK FINDS WHAT WORKS TO REDUCE POVERTY IN THE LAST MILE

At Kopernik, we believe that with more innovation, collaboration and experimentation of ideas, we can create the kind of change that will mean people in the last mile can live a dignified life free of poverty. We work hard to bring about this change through our lean experimentation, experimentation with clients, and technology distribution projects.

» Lean experimentation

Kopernik conducts lean experiments and rapid prototyping, testing ideas to find the best solutions to alleviate poverty.

» Experimentation with clients

Kopernik works with a range of private and public sector partners, conducting experiments with clients to develop products and services to address the needs of people living in the last mile as part of its Last Mile Consulting service.

» Technology distribution

Through our Wonder Women network, Kopernik distributes simple life-changing technology to communities in the last mile. Distribution is driven by data and incorporates experimentation elements.

Drawing on and Disseminating our Findings

We recognize that there's more to effective development assistance than just ticking off projects. We believe that in order to affect even greater positive change for people living in the last mile we need collective effort and to share more ideas and evidence about what works and what doesn't.


For this reason, we continue to share findings from our program and research work with our peers in the development sector in bite-sized visual form through our K-Insights series. We published seven **K-Insights** in 2017.



I. COMMITMENT TO INNOVATION AND LEAN EXPERIMENTATION: KOPERNIK'S SOLUTIONS LAB

Kopernik's Solutions Lab's experimentation projects are conducted using lean research principles that promote low-cost and small-scale tests of ideas. While the data may not be significant in size, it does send strong signals about the viability of the experiment. Being evidence and data-driven positions us to validate -or invalidate- the hypothesis in our experiments.

Kopernik is at peace with failure in terms of publishing information on what doesn't work as an equally valuable tool to proving what does work. For example, we learned from our mistakes in one of our first [solar dryer](#) designs, modifying it accordingly to re-test in [our second phase](#) Solar Drying Solutions project. We conducted extra research to provide a stronger context around our series of solar drying projects, which will lead to two follow up publications in 2018: A "Drying Considerations Cheat Sheet" and another including economic modelling across different dryer designs and the commodities we examined.



We **completed** six experimentation projects this year:

- ❖ [Solar Desalination](#); [↗](#)
- ❖ [Haze Emergency Kits](#); [↗](#)
- ❖ [Solar Drying Solutions](#); [↗](#)
- ❖ [Grain Storage](#); [↗](#)
- ❖ [Cacao Beans](#); [↗](#)
- ❖ [GG Pads](#) [↗](#)

»KEY PROJECTS FROM A YEAR OF EXPERIMENTATION

Solar Drying Projects:

Kopernik built on the knowledge gained through our **Unmet Needs** Research- exploring more widely the considerations required for smallholder farmers to decide whether solar drying leads to a higher selling price or not.

Haze Emergency Kit:

The haze emergency kit Kopernik developed does reduce PM2.5 levels arising from haze emergencies to safe levels in Palangka Raya, Central Kalimantan in cement housing. More work needs to be done to adapt this solution for wooden housing.

Reusable Menstrual Pads:

Pricing was an issue for the adoption of reusable menstrual pads, and while the women Kopernik worked with were excited by this technology, **the cost** would need to compete with their current practice of using disposable menstrual pads before there could be a behavioural shift. We are addressing this by developing a more affordable reusable menstrual pad prototype that can be manufactured locally.

Solar Desalination:

We disseminated findings from Kopernik's solar desalination project with the **insight** that while the technology did meet the drinking requirements of the family, the technology is too expensive to be adopted on a household basis.



II. EXPERIMENTATION WITH CLIENTS: **KOPERNIK'S LAST MILE CONSULTING**

Our professional advisory services team - Last Mile Consulting - collaborates with corporations and the public sector to develop products and services that serve the needs of people in the last mile.

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multinational corporations, multilateral agencies, social enterprises, and international organisations engaged Kopernik's Last Mile Consulting (LMC) team in 2017.



» KEY PROJECTS FROM A YEAR OF COLLABORATION

No Lean Season:

In partnership with the Abdul Latif Jameel Poverty Action Lab Southeast Asia (J-PAL) and Evidence Action, Kopernik completed a [randomized control trial](#) pilot study in East Nusa Tenggara province. By providing an innovative cash transfer program as the intervention, the project investigated ways of encouraging farmers to seek alternative work during the 'lean season' - the period between harvests where household cash flow is generally limited and consumption drops.

Sembuh App:

With funding provided by JICA, Kopernik's Last Mile Consulting team completed a project with Otsuka Pharmaceutical to test [a mobile technology designed for Tuberculosis \(TB\) patients](#). TB has been included in the 2015 Sustainable Development Goals agenda to be eradicated by 2030. The app aims to increase patient adherence to TB treatment. Throughout the project implementation, Kopernik has provided assistance in desk research, rapid assessments and application testing, while working closely with TB patients, family members, and healthcare providers.

Integrated Community and Home Protection (ICHP):

Kopernik partnered with TRANSFORM to develop and test disruptive **market-based solutions for improved mosquito control** in Myanmar.

TRANSFORM is a joint initiative between the UK's Department for International Development and Unilever, with the aim to improve the health and well-being of 100 million people in Africa and South Asia by 2025. Addressing the high prevalence of malaria and dengue in urban and rural Myanmar, the ICHP program aims to provide an innovative multi-pronged approach to help combat insect borne diseases. A range of safe and effective products, treated with World Health Organization-approved insecticides will allow users to protect their homes and families from mosquitos.

Promoting interactive curriculum in Indonesian classrooms:


Funded by JICA, a Japanese educational content production company, NHK Educational Corporation engaged Kopernik's Last Mile Consulting to **improve the quality of education in Indonesia**. The initiative introduces interactive videos that stimulate student's critical thinking processes in science classes. In coordination with Universitas Pendidikan Indonesia (Indonesian University of Education), and the Ministry of Education and Culture, Kopernik has been facilitating teacher workshops and mock classes to ensure that these videos are being implemented correctly in local contexts.



III. TECHNOLOGY DISTRIBUTION IN THE **LAST MILE**

Our founding concept of connecting simple, affordable technologies with the people who need them the most has been realized in a number of initiatives in 2017. These include our award-winning Wonder Women Program, customized distribution with corporate partners, and technology distribution projects with our local partners. Additionally, in 2017, Kopernik played a central role in connecting vital emergency supplies to evacuees of the Mount Agung eruptions, alongside several other Bali-based organizations and individuals.


SINCE 2010, KOPERNIK HAS DISTRIBUTED



163,206
TECHNOLOGIES



REACHING
565,182
PEOPLE



CO2
105,061
TONNES OF CO2 REDUCED

This is roughly equal to the emissions produced by driving a passenger car on 539 round trips to the moon and back!

» WONDER WOMEN - EASTERN INDONESIA

The Wonder Women Eastern Indonesia program connects clean energy technology with communities living in the last mile. This project increases the quality and standard of living for women micro social entrepreneurs while targeting low-income households through the distribution and scale-up of clean energy technologies. Distribution is data-driven and includes experimentation elements, such as Kopernik testing **two different sales campaigns** to promote the sale of clean energy technologies in eastern Indonesia.

IN 2017 ALONE KOPERNIK'S WONDER WOMEN DISTRIBUTED



17,112

TECHNOLOGIES



REACHING

87,409

PEOPLE

What do the Wonder Women say?

85%

fulfilled their aspiration to improve lives in their community through clean energy technologies.

78%

used their additional income to fulfill household needs.

32%

spent their additional income to support their children's education.

14%

increase in monthly savings.

*Our longer serving Wonder Women increased their income by **21%** on average.*

What do the technology users say?

96%

are satisfied with the technology purchased.

91%

are satisfied with the post-sales service.

96%

perceived a life improvement as a result of using the technology.

65%

use the technology purchased daily.

*We estimate customer fuel savings of **US\$1,933,343** over the product lifespan for technologies distributed between 2014 and 2017.*



Working with youth

As part of our partnership with Plan International, Kopernik established a **Youth Change Agents' initiative**. The program focuses on youth in the remote island of Lembata in East Nusa Tenggara, where job prospects for local youth remain limited. Participants received intensive training, individual mentorship, and competed in an 80-day technology distribution challenge.

33%

perceived
a significant increase
in their communities' trust
in them.

67%

perceived
a significant increase
in their families' trust
in them.

Working with local government

Kopernik partnered with local government in East Nusa Tenggara province in the expansion of the "Electricity for the Poor" program facilitated by The National Team for the Acceleration of Poverty Reduction (TNP2K) and the Ministry of Energy and Mineral Resources. The program distributed solar lights to 100 of the poorest sub-districts in Indonesia including those in East Nusa Tenggara. One of Kopernik's Wonder Women became TNP2K's implementing partner and became responsible for managing the distribution of 170 Solar Home Systems.

» TECHNOLOGY DISTRIBUTION: CORPORATE PARTNERSHIPS

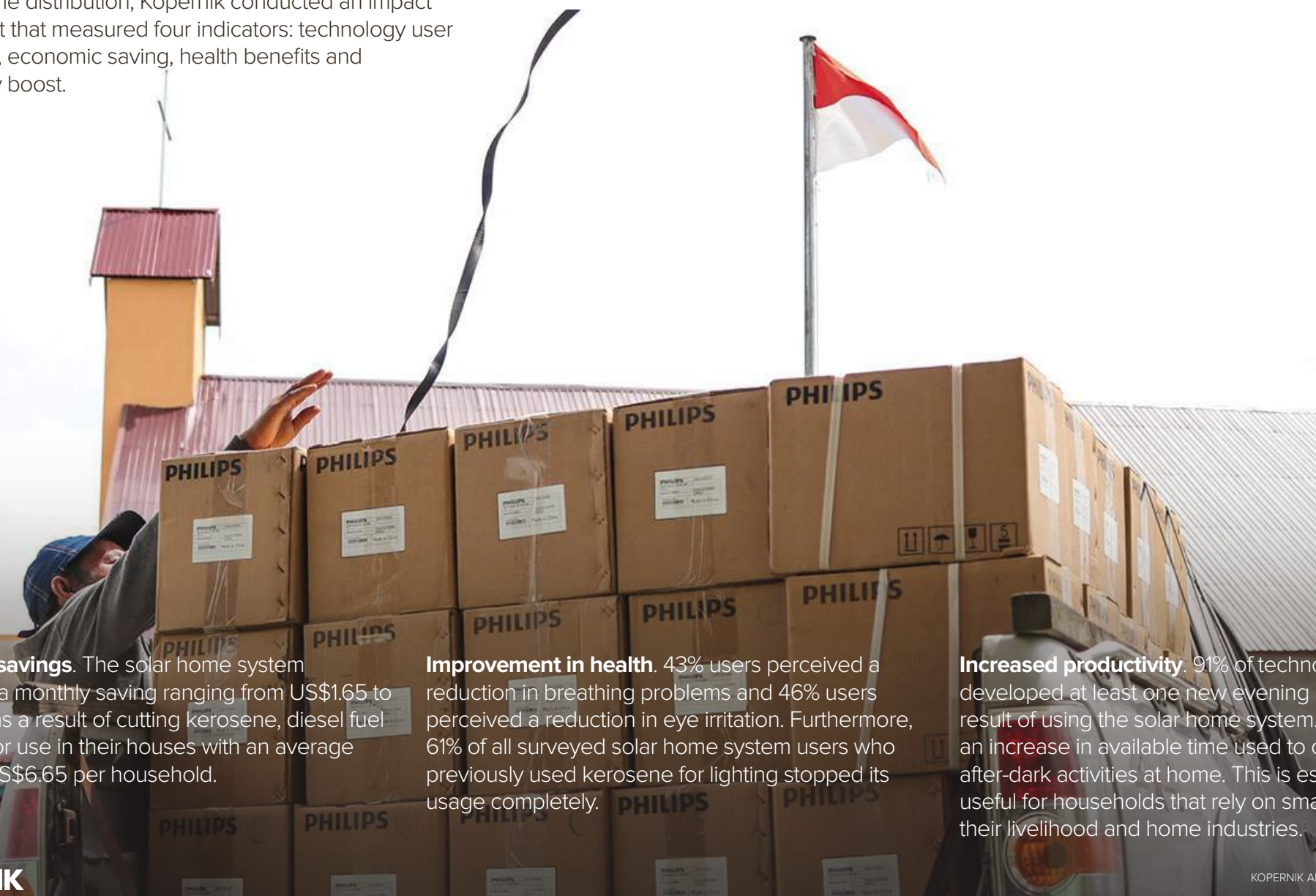
Kopernik designs and implements customized technology distribution projects with corporate partners that further their CSR/CSV goals, in alignment with our own mission. In this capacity we have delivered technologies to public institutions such as schools and clinics as well as to people who would otherwise not be able to access these products.



A partnership with Philips

In partnership with Philips, we assisted with the implementation of their *Kampung Terang Hemat Energi* project in North Sumatra. Kopernik identified villages in remote areas with insufficient power supply where technology will benefit communities most in need and then distributed 164 Philips solar home systems and 10 Philips solar street lights, reaching 1,588 people in Langkat and Deli Serdang regencies.

Following the distribution, Kopernik conducted an impact assessment that measured four indicators: technology user satisfaction, economic saving, health benefits and productivity boost.



Economic savings. The solar home system generated a monthly saving ranging from US\$1.65 to US\$37.25 as a result of cutting kerosene, diesel fuel or generator use in their houses with an average saving of US\$6.65 per household.

Improvement in health. 43% users perceived a reduction in breathing problems and 46% users perceived a reduction in eye irritation. Furthermore, 61% of all surveyed solar home system users who previously used kerosene for lighting stopped its usage completely.

Increased productivity. 91% of technology users developed at least one new evening activity as a result of using the solar home system. 52% report an increase in available time used to conduct after-dark activities at home. This is especially useful for households that rely on small kiosks as their livelihood and home industries.



US\$6.65

*Average household saving
(economic savings)*

43%

*clean lighting technology users
perceived a reduction
in breathing problems
(improvement in health)*

91%

*users reported at least one
new evening activity after
receiving clean lighting technology
(increased productivity)*

Benefits outside of the home

Through interviews with eight village chiefs in the villages where LED solar road lighting technology were installed, all the village chiefs reported satisfaction with the LED solar road lights. The solar road lighting technology contributes to a brighter and safer outdoor village environment, and has provided an opportunity to continue economic activities after dusk and to engage in more outdoor social and income-generating activities.

» TECHNOLOGY DISTRIBUTION: LOCAL PARTNER

- We distributed solar lights to evacuees from the **Sinabung** and the **Mt. Ile Lewotolok** volcanic eruptions.
- Through the International Office of Migration, Kopernik provided two Solevolt enterprise energy systems and two home systems to provide 24 hour medical care during the diphtheria outbreak in **Cox's Bazar**.
- 155 Nazava water filters were provided to **Puspadi Bali** to provide clean drinking water to people with disabilities in Eastern Bali.





Emergency Response in Bali: Mount Agung Relief

Mount Agung Relief (MAR) is the coordination platform comprising of Kopernik, partner organizations and individuals responding to Bali's Mount Agung emergency evacuations. Formed in September 2017, MAR provided humanitarian support to evacuated residents living within several kilometers radius from the volcano's crater. Throughout the emergency period, MAR received donations from 912 donors totaling US\$133,693.

68,697 individuals in **17,173** households
supported through Mount Agung Relief effort

Photo credit: Sonny Tumbelaka/Agence France-Presse

Kopernik's Key Emergency Activities

- **55,095 N-95** masks distributed in **52** evacuation locations.
- **576 Nazava water filters** distributed to **102** evacuation locations reaching **9,216** individuals.
- We improved and built **water and sanitation facilities**, including **26 toilets** and two bathrooms, in the three sub-districts of Les, Tianyar Timur and Amed.

The work of our partners

- Mount Agung Relief partner **IDEP Foundation** distributed **53 family packages** to four evacuation locations. Family packages consisted of cooking and eating utensils, sanitary and personal care products, and preserved food products.
- MAR partner **Bumi Sehat** provided **on-call medical support** to vulnerable people, including pregnant women, children and the elderly.
- As part of disaster preparedness and education, **IDEP Media** distributed **educational kits and disaster risk reduction kits** in 13 locations (nine evacuation centers and four primary schools) that benefited 2,461 persons, of which 375 are children. IDEP Foundation conducted **disaster preparedness training** for 718 local leaders. The content of the training focused on identifying types of risk, and how to prevent and protect families before, during and after eruption.



IV. SPECIAL INITIATIVES

» COLLABORATIVE PROJECTS FOR SOCIAL IMPACT: PACKARD FOUNDATION

In July 2017, Kopernik partnered with [the David & Lucile Packard Foundation](#) to evaluate gaps in support that [Indonesian emerging environmental leaders](#) currently face. Kopernik designed a leadership program that would address the identified challenges. Over the course of the research, Kopernik conducted interviews with a range of respondents that included potential leadership program candidates, past leadership program participants, leadership program implementers, funders and potential host organizations.



» WONDER WOMEN - WESTERN INDONESIA

The 'Wonder Women' economic empowerment initiative supports women to become successful entrepreneurs by providing mentoring and opportunities to participate in various business and leadership trainings. Participants receive guidance on accessing markets and strengthening networks with financial institutions, government, and buyers.

The program creates access to new markets for our aspiring entrepreneurs across creative as well as food and beverage businesses. Kopernik also provided an opportunity for the Wonder Women to introduce their businesses to the Department of Industry and Commerce of East Java. For food businesses, entrepreneurs focussed on improving the quality and packaging of the products. Participants received health and safety certification from local government health offices that allowed them to access larger supermarkets in Bojonegoro and Tuban in East Java.

Creative businesses that uphold traditional arts and crafts demonstrated particularly positive results. Kopernik introduced the Gersikharjo artisan batik group (that previously used synthetic dyes) to [Sukkha Citta](#), an exclusive high-end batik exporter. Sukkha Citta trained the group on the use of natural dyes in order to improve the quality of their batik products. Gersikharjo artisans are included as a partner on Sukkha Citta's site ([One Village One Collection page](#)).



**47% program participants
now have access to wider
markets.**

More than half of the women were able to fulfill their aspirations of extended personal networks, gaining additional income and learning how to run a business.

More than half of the women reported using the extra income to fulfill general household and personal needs as well as to pay off debt.

V. COMMUNICATIONS AND OUTREACH

» NATIONAL & INTERNATIONAL MEDIA COVERAGE

Kopernik's work has been widely reported across an array of reputable national and international media outlets, ranging from BBC and Tech in Asia to Kompas TV and Kompas daily newspaper



Non-evacuees may be forced to leave area [↗](#)



How to scale your business across Indonesia's remote islands [↗](#)

KOMPAS

Berdaya dengan Energi Bersih [↗](#)

KOMPAS TV
INDEPENDEN | TERPERCAYA

Tak Ada Listrik, Warga Lembata Pakai Lampu Tenaga Surya [↗](#)



Haze-proofing in Indonesian Borneo [↗](#)

24 international publications

111 Indonesian publications



» INTERNATIONAL MUSIC TOUR: MUSIC & TECHNOLOGY FOR CHANGE

In November 2017, Kopernik collaborated with Balinese band Navicula on a shared mission; to devise a different way to engage audiences in social and environmental issues in Indonesia. Together, Kopernik and Navicula spread awareness about the role of music and technology in improving peoples' lives and reducing poverty through an [Australian music tour](#).

Kopernik constantly seeks innovative ways to share important messages with wider audiences. We look forward to exploring in greater depth how music, art and film can be instrumental in raising awareness and effecting positive social change during 2018.



"Kopernik works with many different types of partners to achieve our goals, from artists such as Navicula to the private sector and academia. We believe these cross-sectoral collaborations allow for greater impact in addressing current social and environmental issues."

Ewa Wojkowska, Co-Founder and COO of Kopernik.

» EVENT ATTENDANCE AND SPONSORSHIP

Kopernik has engaged in a number of regional and national speaking opportunities such



28 international & national events



Lana Kristanto, SIT's senior analyst, presented a talk at TEDx Ubud titled **"Why Perfect Solutions Don't Guarantee Perfect Decisions"**, where she talked about how behavioral science is utilized to better understand and subsequently design solutions in development contexts that override our erroneous decision-making tendencies.

VI. KOPERNIK'S CONTRIBUTION TO THE SUSTAINABLE DEVELOPMENT GOALS

In our organizational mission, we seek to influence the development sector and increase collaborative and collective efforts to alleviate poverty. Through our work in lean experimentation, we hope to influence and contribute to the Sustainable Development Goals.

	<ul style="list-style-type: none"> ■ Wonder Women Western Indonesia ■ Wonder Women Eastern Indonesia ■ Solutions Lab Project: <i>Light Up Kailali, Nepal</i>
	<ul style="list-style-type: none"> ■ Solutions Lab Project: <i>Drink Up Karangasem, Indonesia</i> ■ Wonder Women Eastern Indonesia ■ Emergency Response Project: Mount Agung Response
	<ul style="list-style-type: none"> ■ Wonder Women Eastern Indonesia ■ Customized Tech Distribution Project with Philips Indonesia
	<ul style="list-style-type: none"> ■ Emerging Environmental Leaders Project with the David & Lucile Packard Foundation
	<ul style="list-style-type: none"> ■ Kopernik's Last Mile Consulting ■ Kopernik's Solutions Lab ■ Emerging Environmental Leaders with the David & Lucile Packard Foundation ■ Customized Technology Distribution/Philips

**SUSTAINABLE
DEVELOPMENT
GOALS**



VII. FINANCIAL REPORTING

KOPERNIK SOLUTIONS ACTIVITY STATEMENT *

JANUARY - DECEMBER 2017

	2016	2017
REVENUE	in USD	
Donations and Grants		
Individual	35,760	101,824
Corporations	26,020	11,250
Foundations and Nonprofits**	2,066,149	974,472
Subtotal	2,127,929	1,087,546
Others		
Consultancy/Honorarium	36,628	183,851
Investment gain and interest	1,118	61,771
Subtotal	37,746	245,623
Revenue total	2,165,675	1,333,169
EXPENSES		
Projects		
Awards and Grants***	853,757	525,029
Technology incl. shipping	75,507	36,038
Project staff and consultants	36,123	90,770
Subtotal	965,386	651,837
Fundraising	74,190	51,646
Travel and Meetings	17,898	66,145
Operations		
Salaries and related	67,844	59,913
Internet & Comm & Mail	20,698	15,056
Bank fees	5,740	5,332
Audit, legal and Tax	20,931	19,217
Miscellaneous	5,285	15,359
Exchange rate loss	12,252	13,574
Subtotal	132,750	128,451
TOTAL EXPENSES	1,190,224	898,079

* Financial Statements for Yayasan Kopernik can be found on their website

** Includes transfers from Kopernik Japan

*** Grants for projects implemented in Indonesia

Source: 2016 totals as per audited financial statements,
2017 as per financial statements still subject to changes by the auditor

VIII. PARTNERS & SUPPORTERS

» PROJECT PARTNERS

Puspadi Bali ↗

Empower Generation ↗

Caritas Keuskupan Sibolga ↗

Barisan Pemuda Karo ↗

IDEP Foundation ↗

Bumi Sehat ↗

the Green School Parents ↗

BPO Data Exchange ↗

IOM ↗

BPBD Lembata ↗

Yayasan Pusaka Indonesia ↗

CleanBirth.org ↗

SeaTrek ↗

Koperasi Puna Liput ↗

Rumbia ↗

Senoesa Forest Honey Production
Cooperative ↗

UNICEF Indonesia ↗

Pulse Lab Jakarta ↗

Ranu Welum ↗

Big Red Button ↗

Muhammadiyah Disaster Management Center ↗

Precious Plastic Indonesia ↗

Universitas Palangka Raya -
Rony Teguh Ph.D ↗

Besipa'e (TTS) ↗

Plan (Lembata & Sabu) ↗

Dompot Dhuafa ↗

IRGSC ↗

Rumah Kreatif Oebobo ↗

CIS Timor ↗

Exxon Mobil Cepu Limited (EMCL) ↗

Sukhacitta ↗

Navicula ↗

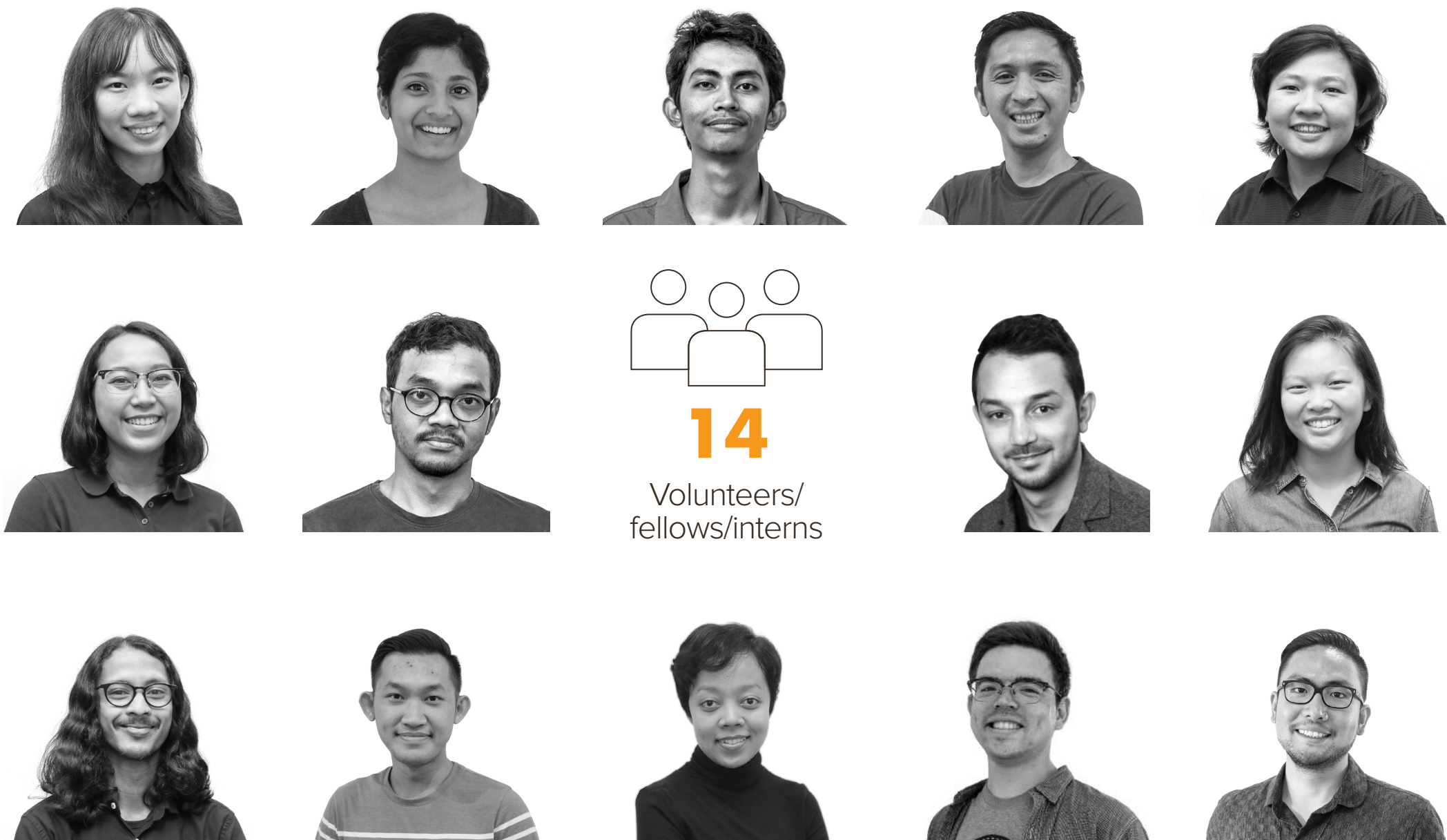
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» FUNDING PARTNERS

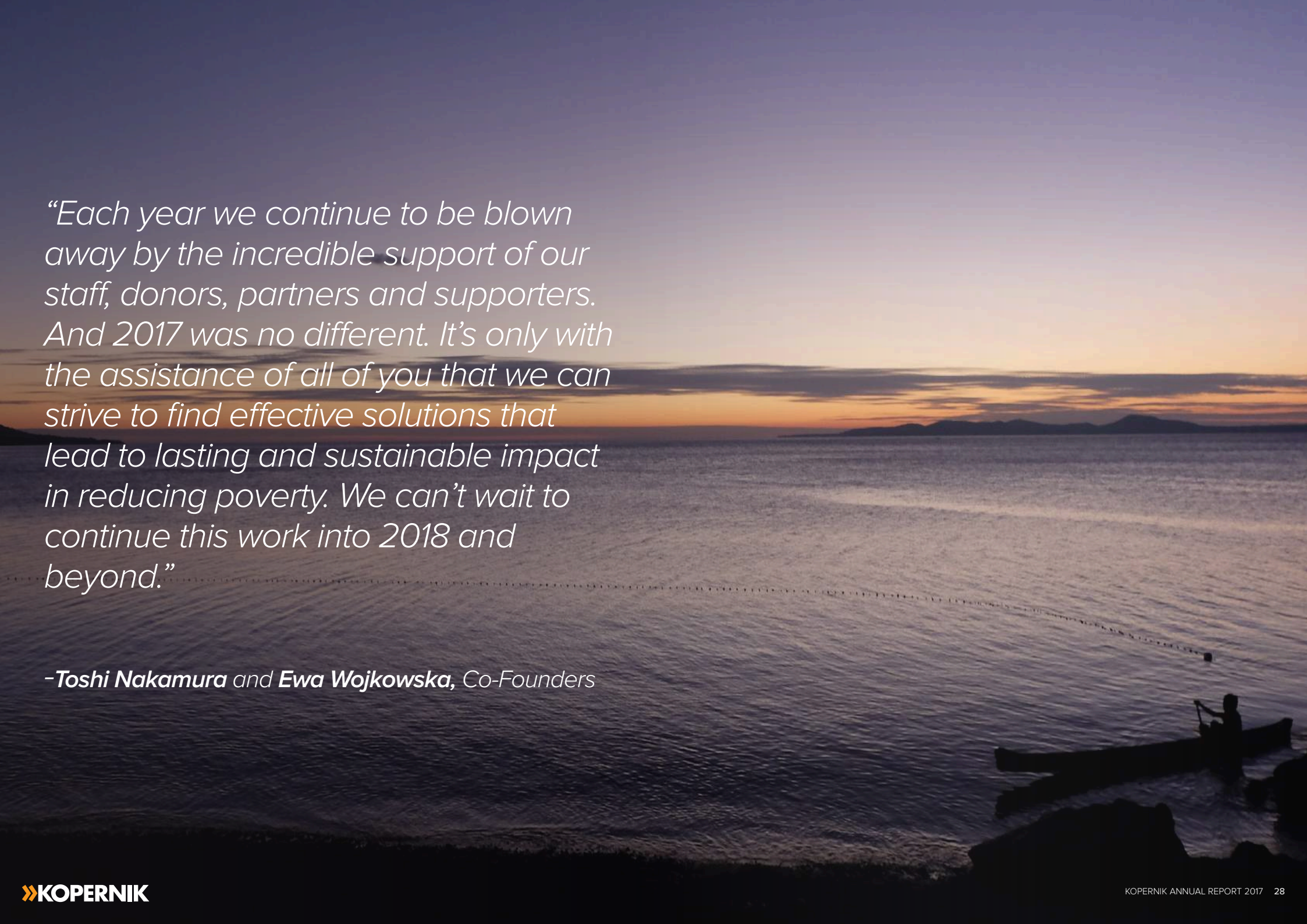


» VOLUNTEERS/FELLOWS/INTERNS



K-TEAM



A full-page background image showing a sunset over a calm body of water. The sky transitions from a deep purple at the top to a bright orange near the horizon. In the foreground, the dark silhouette of a person in a canoe is visible on the right side, near some rocks. The water reflects the colors of the sky.

“Each year we continue to be blown away by the incredible support of our staff, donors, partners and supporters. And 2017 was no different. It’s only with the assistance of all of you that we can strive to find effective solutions that lead to lasting and sustainable impact in reducing poverty. We can’t wait to continue this work into 2018 and beyond.”

–Toshi Nakamura and Ewa Wojkowska, Co-Founders